

**Government of  
Democratic Socialist Republic of Sri Lanka**

**Ministry of Power**

**CEYLON ELECTRICITY BOARD**

**Request for Proposals**

**Development of 100 MW<sub>AC</sub> Solar PV Power Plant on Build, Own and Operate (BOO) Basis and  
Construction of 132 kV Transmission Facility on Turnkey Basis**

**REQUEST FOR PROPOSALS**

**(APPENDIX 3-A)**

**PLANS AND DRAWINGS (TRANSMISSION LINE)**

**APPENDIX 3-A**

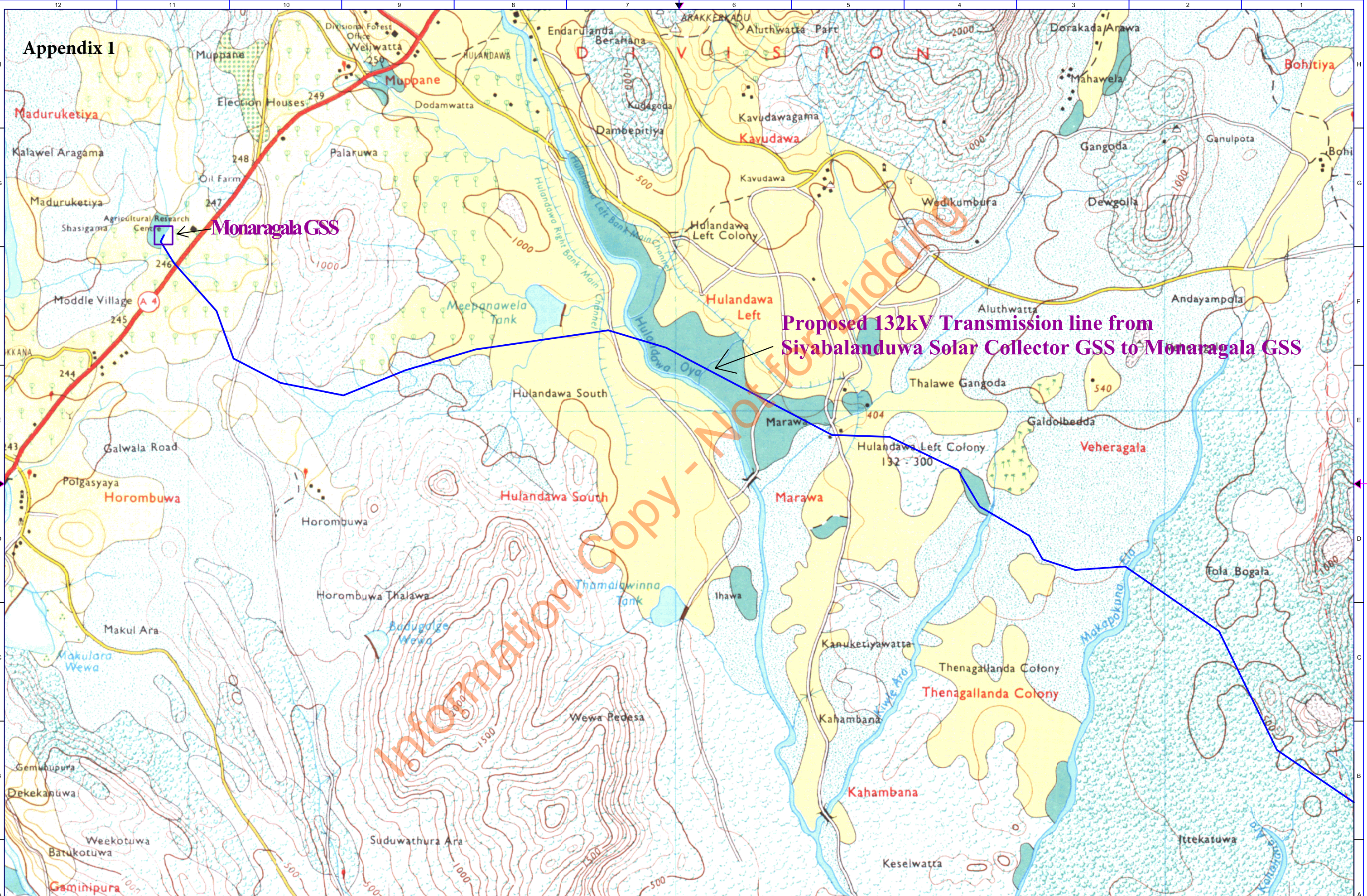
**PLANS AND DRAWINGS  
TRANSMISSION LINE**

Information Copy - Not for Bidding

## CONTENT

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Appendix 1



Proposed 132kV Transmission line from Siyabalanduwa Solar Collector GSS to Monaragala GSS

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Revision Record					
Rev. No.	Date	Description	Drawn	Checked	Approved

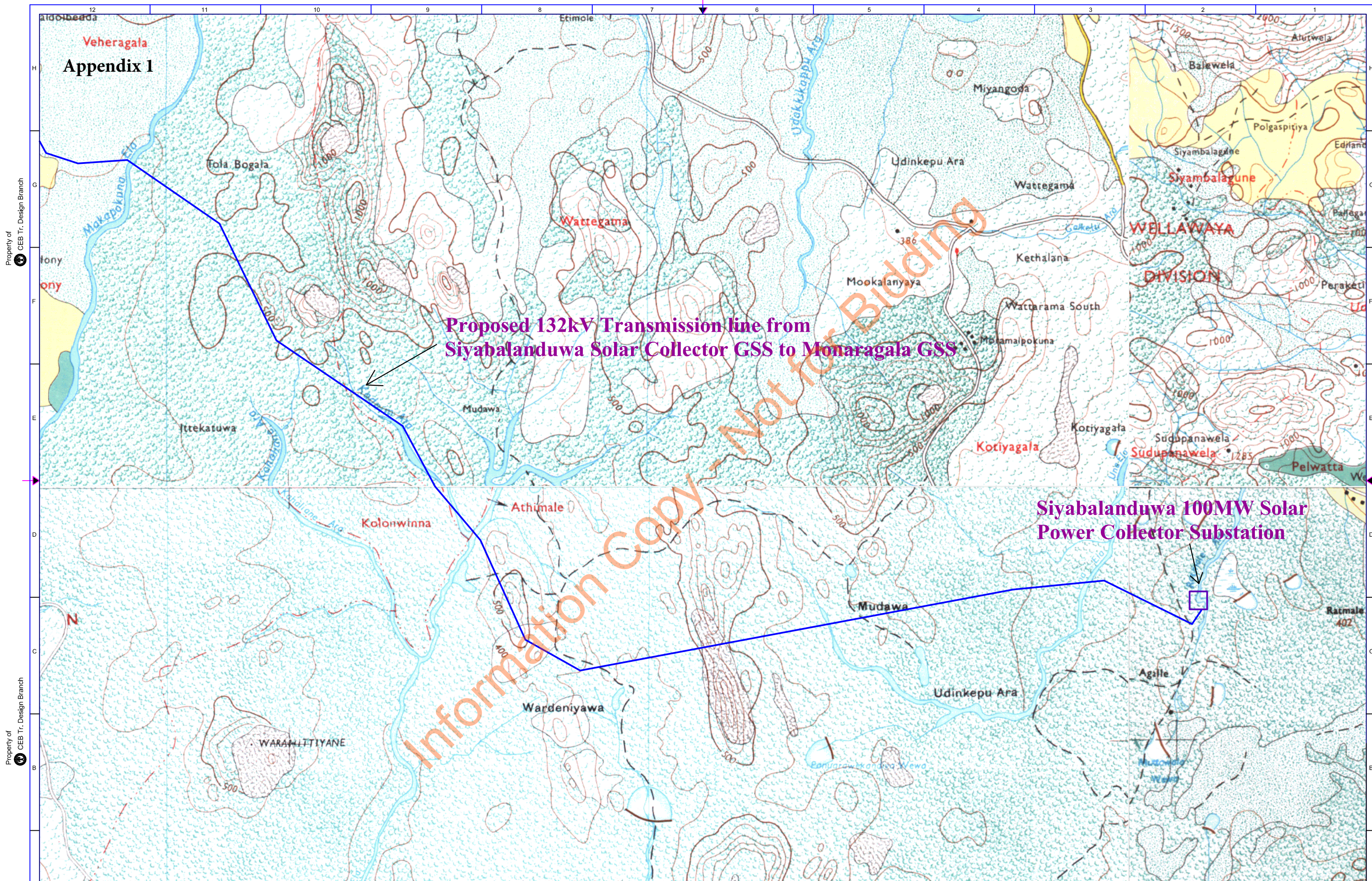
**CEYLON ELECTRICITY BOARD**  
TRANSMISSION DESIGN

Project Title  
**TRANSMISSION FACILITY OF SIYABALANDUWA  
100MW SOLAR PARK**

Funding Agency

Drawing Title  
PROPOSED 132kV TRANSMISSION LINE ROUTE FROM SIYABALANDUWA SOLAR COLLECTOR GSS TO MONARAGALA GSS

Scale - NTS	Rev. Date	Signature	Date
Size - A3			25.02.2021
Sheet 01 of 02	Rev. 0		
Dwg. No. TD/CE/197/D/01/01-A			
		Tendering	
		Construction	



**Veheragala**  
**Appendix 1**

**Proposed 132kV Transmission line from  
Siyabalanduwa Solar Collector GSS to Monaragala GSS**

**Siyabalanduwa 100MW Solar  
Power Collector Substation**

Revision Record					
Rev. No.	Date	Description	Drawn	Checked	Approved

**CEYLON ELECTRICITY BOARD**  
TRANSMISSION DESIGN

Project Title  
**TRANSMISSION FACILITY OF SIYABALANDUWA  
100MW SOLAR PARK**

Funding Agency

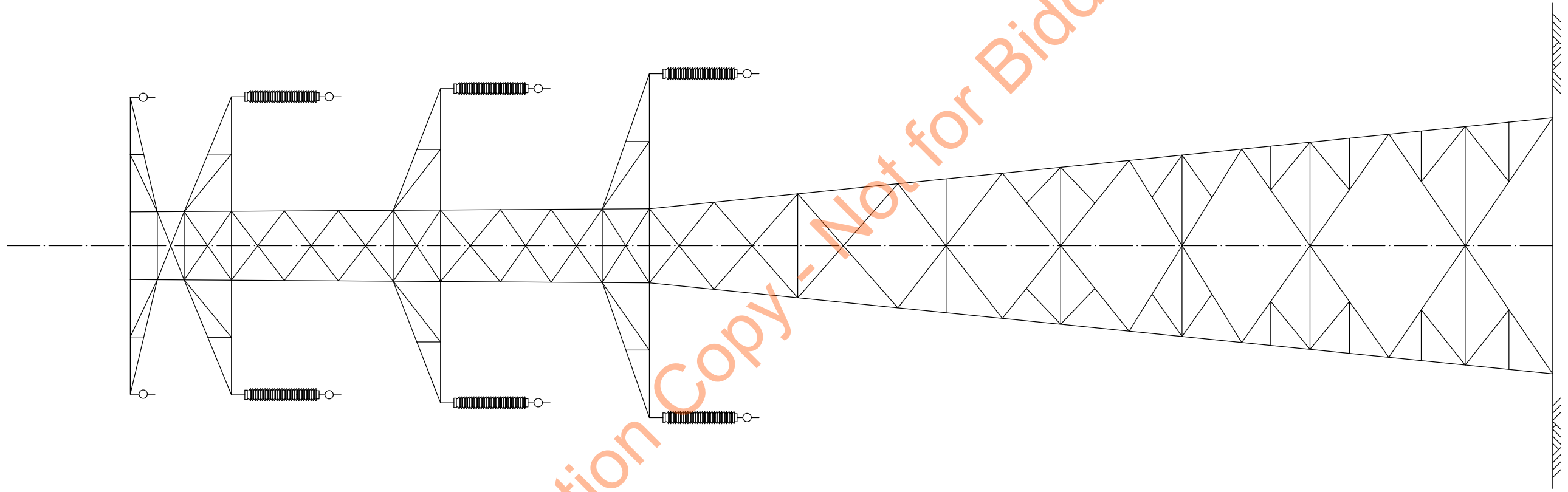
Drawing Title  
PROPOSED 132KV TRANSMISSION LINE ROUTE  
FROM SIYABALANDUWA SOLAR COLLECTOR GSS  
TO MONARAGALA GSS

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Size - A3			25.02.2021
Sheet 02 of 02	Rev. 0		
Dwg. No. TD/CE/197/D/01/01-B			
		Tendering	
		Construction	

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Project Title  
RFP FOR SIYAMBALANDUWA SOLAR PV POWER PLANT

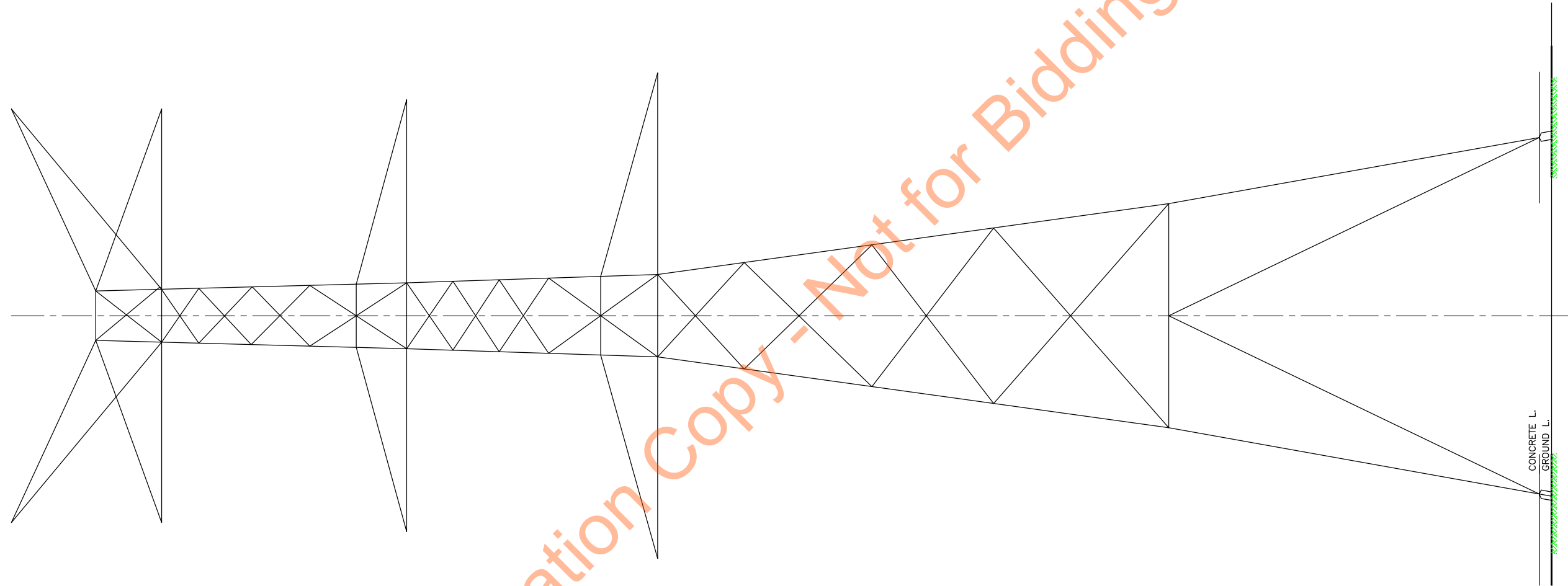
Funding Agency

Drawing Title  
TYPICAL OUTLINE DRAWING FOR 132 kV  
DOUBLE CIRCUIT SUSPENSION TOWER

Scale - NTS	Rev. Date	Signature	Date
Size - A3		Drawn Ranjana	02.06.2022
Sheet 1 of 1	Rev. 1	Checked Dayan	
Dwg. No. TD/CE/197/D/TYP/01		Approved	
		Released for Tendering	
		Construction	

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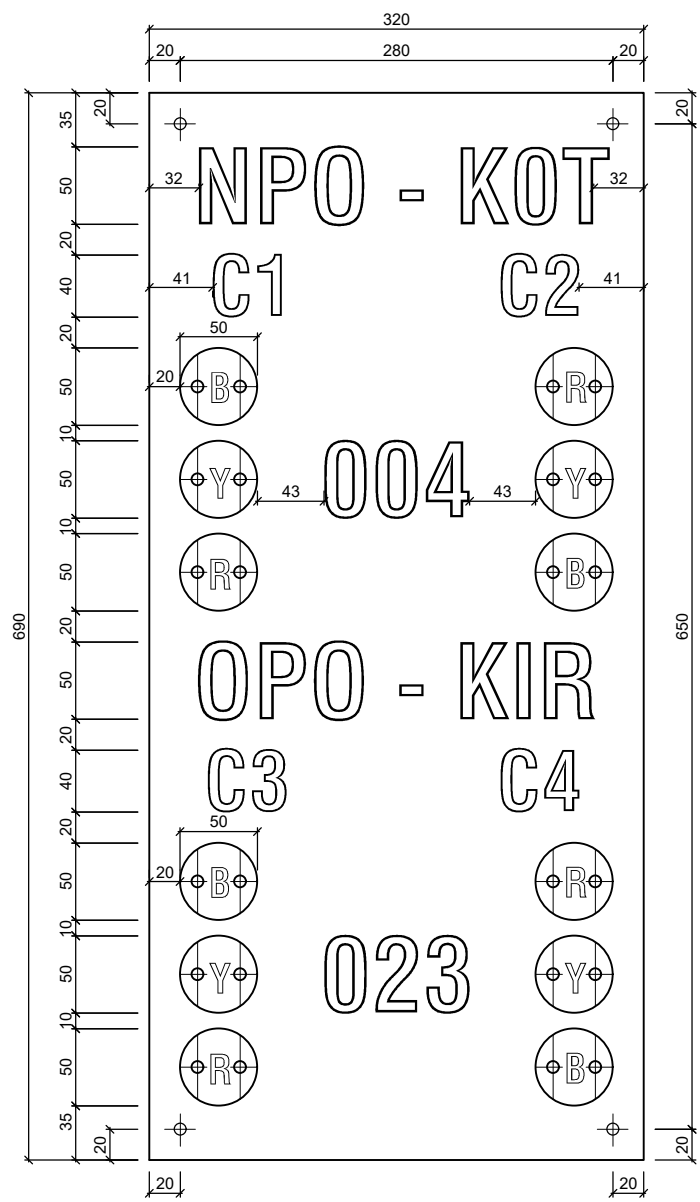


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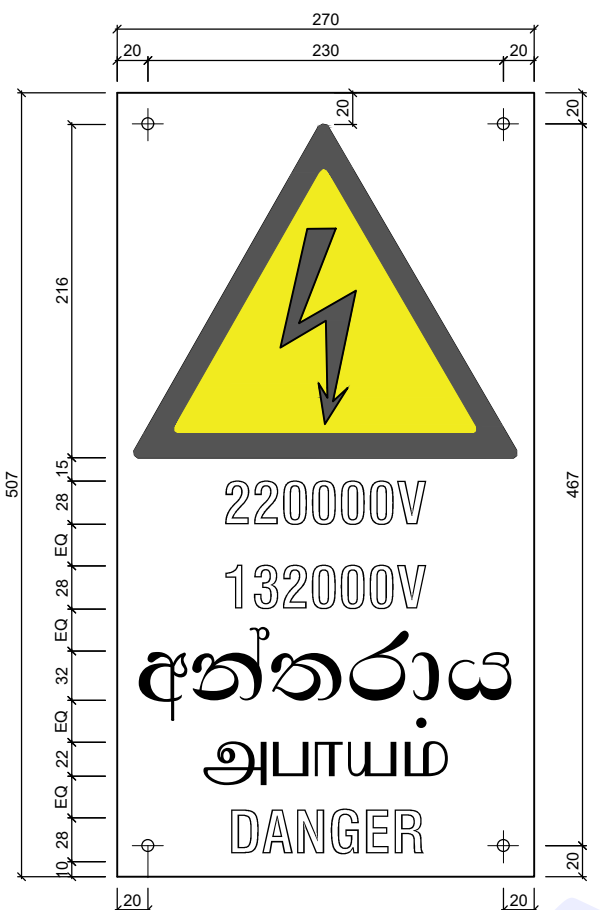
Funding Agency

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DOUBLE CIRCUIT ANGLE TOWER

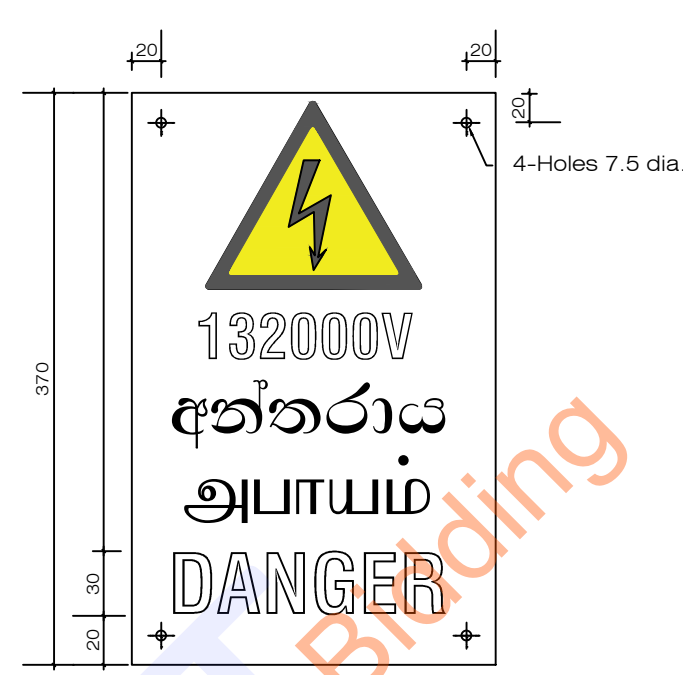
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		Released for Tendering	
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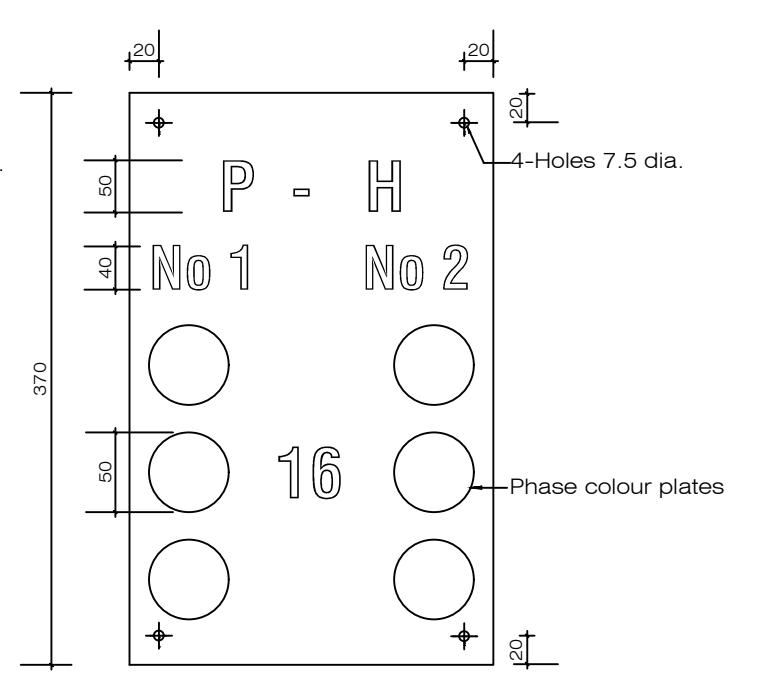
NUMBER PLATE (FOUR CIRCUIT)



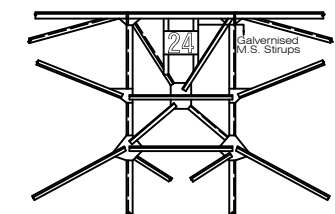
DANGER PLATE (FOUR CIRCUIT)



DANGER PLATE (DOUBLE CIRCUIT)

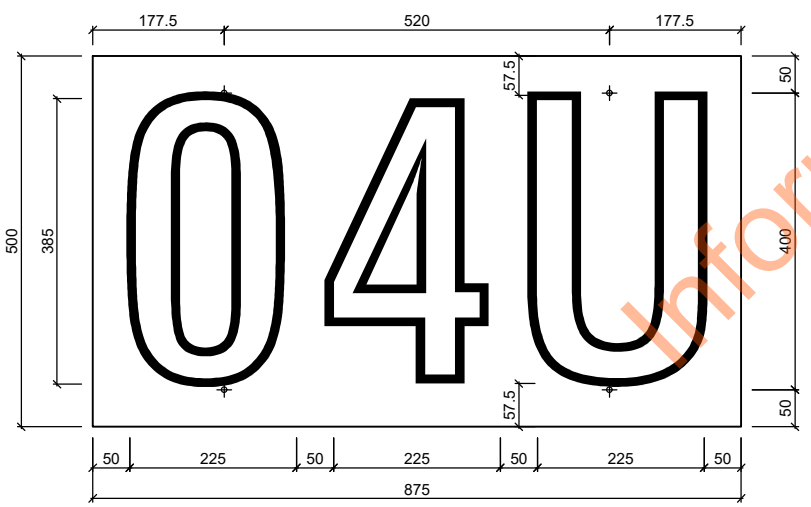


NUMBER PLATE (DOUBLE CIRCUITE)

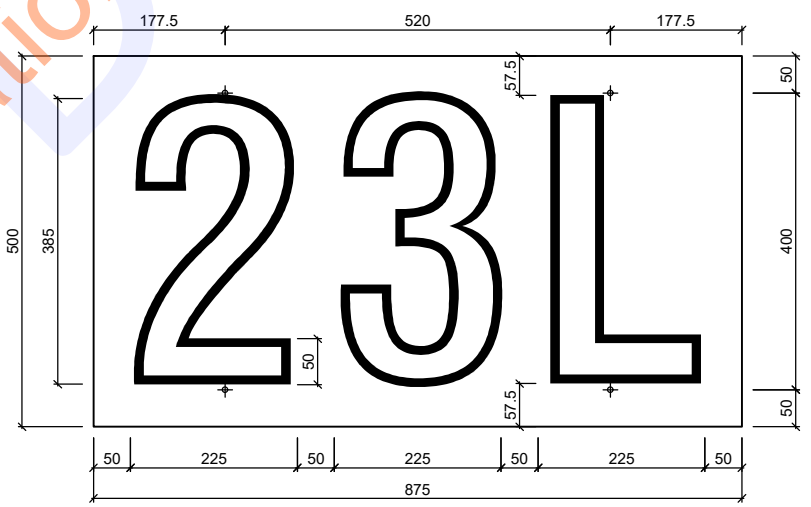


**NOTES**  
Red numbers on white background  
Dimension x= 600 for 1 or 2 digits  
x= 675 for 3 digits

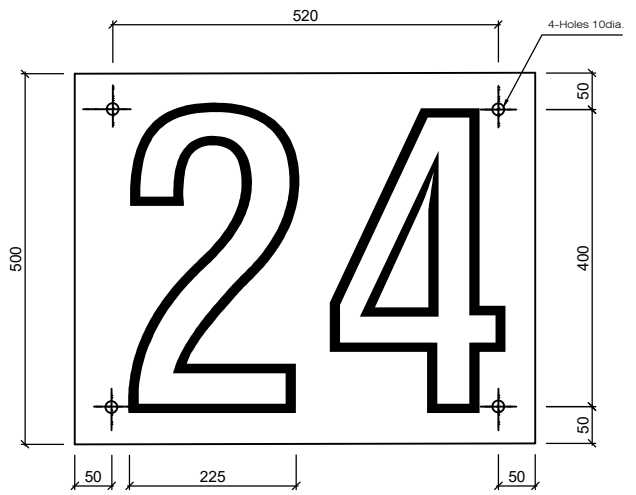
**NOTES**  
1. THIS DRAWING IS NOT TO SCALE  
EXCEPT WHERE OTHERWISE INDICATED  
2. ALL DIMENSIONS ARE IN MILLIMETRES



TOP NUMBER PLATE



BOTTOM NUMBER PLATE



TOWER TOP NUMBER PLATE FOR AIRBONE OBSERVATION

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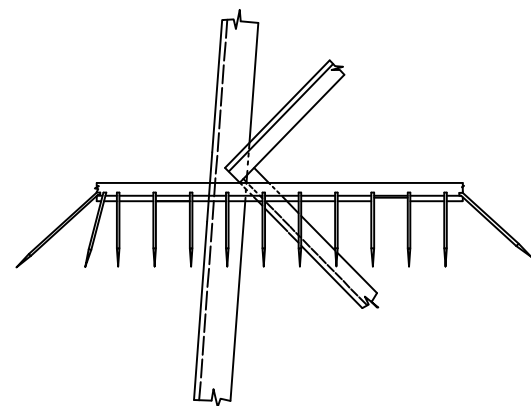
Project Title  
RFP FOR SIYAMBALANDUWA SOLAR PV POWER PLANT

Funding Agency

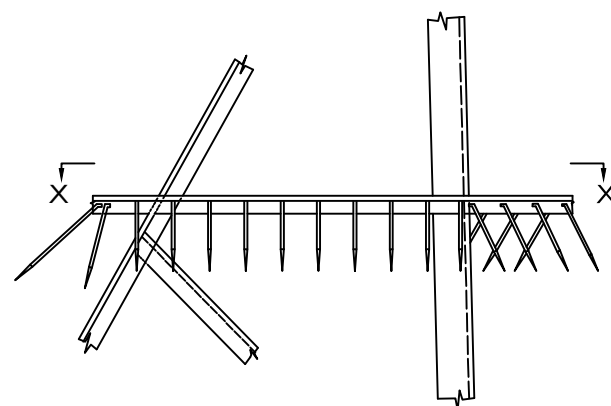
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TOWER ACCESSORIES - 1

Scale - NTS	Rev. Date	Signature	Date
Size - A3			02.06.2022
Sheet 1 of 1	Rev. 1		
Dwg. No. TD/CE/197/D/TYP/03-A			
		Tendering	
		Construction	





LONGITUDINAL FACE

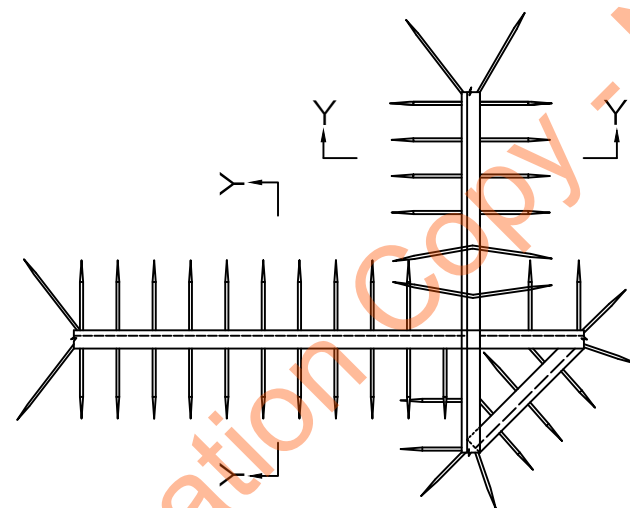


TRANSVERSE FACE

Spikes 10mm dia. mild steel rod  
Approximately 250mm  
Developed length



SECTION Y - Y



VIEW ON X - X



PLAIN WASHER



AC1  
ROD

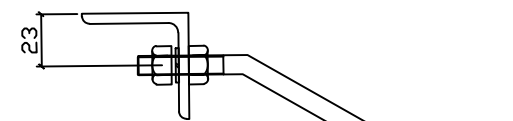
SPRING WASHER  
HOT DIP GALVANISED.

PLAIN WASHER  
HOT DIP GALVANISED.

NUTS  
ISO-898-2

THREADED PORTION

SPIKE



FIXING DETAIL OF SPIKE

ANTI - CLIMBING GUARD

Revision Record					
Rev. No.	Date	Description	Drawn	Checked	Approved

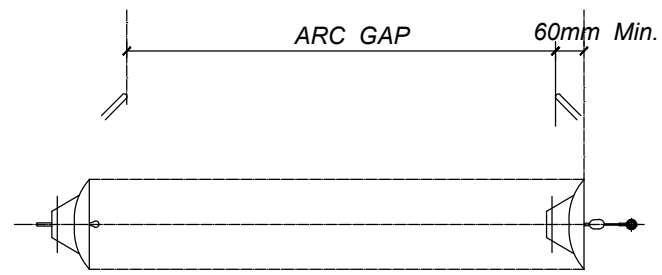


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RFP FOR SIYAMBALANDUWA SOALR PV POWER PLANT

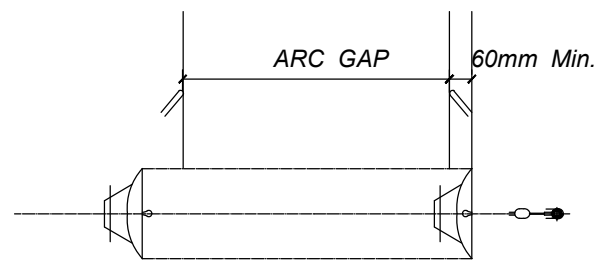
Funding Agency

Drawing Title  
TOWER ACCESSORIES - 2

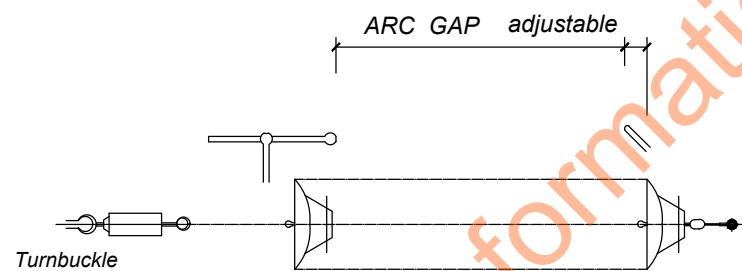
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Size - A3		Drawn Designed Checked Approved	02.06.2022
Sheet 1 of 1	Rev. 1		
Dwg. No. TD/CE/197/D/TYP/03 - B		Released for Tendering Construction	



**NORMAL TENSION SET**

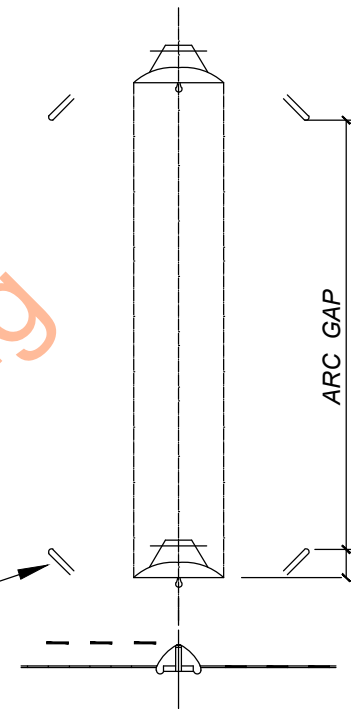


**UPRIGHT LIGHT DUTY TENSION SET**

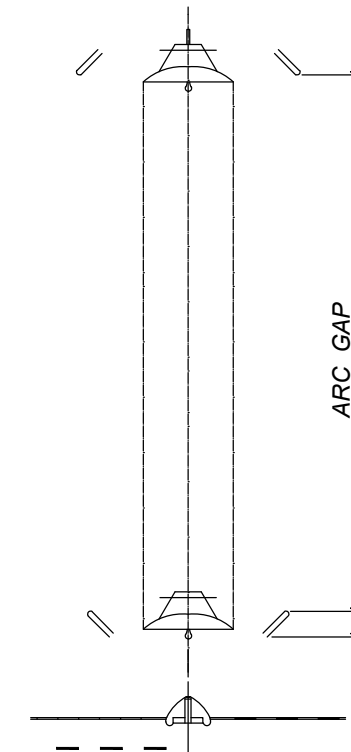


**INVERTED LIGHT DUTY TENSION SET**

Archorns & other fittings  
of same geometry as normal  
suspension set



**HEAVY SUSPENSION SET**



**NORMAL SUSPENSION SET  
& JUMPER SET**

Revision Record					
Rev. No.	Date	Description	Drawn	Checked	Approved



Project Title  
RFP FOR SIYAMBALANDUWA SOLAR PV POWER PLANT

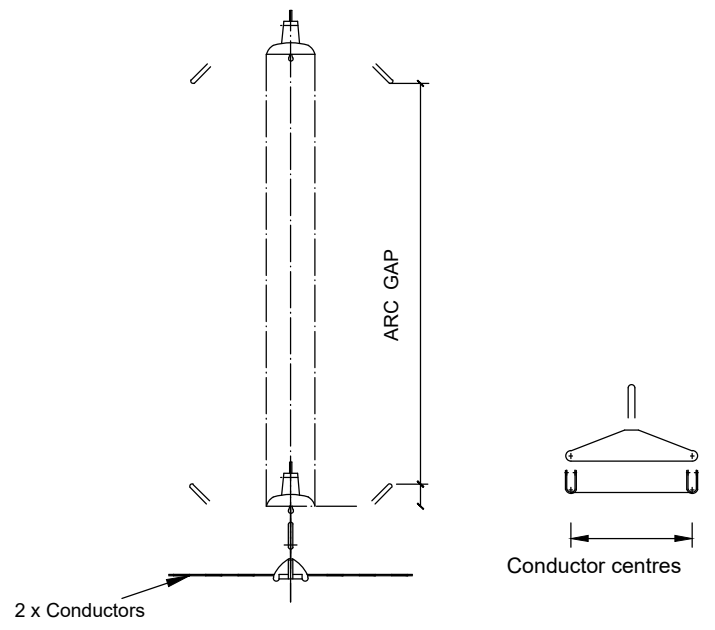
Funding Agency

Drawing Title  
INSULATOR SETS

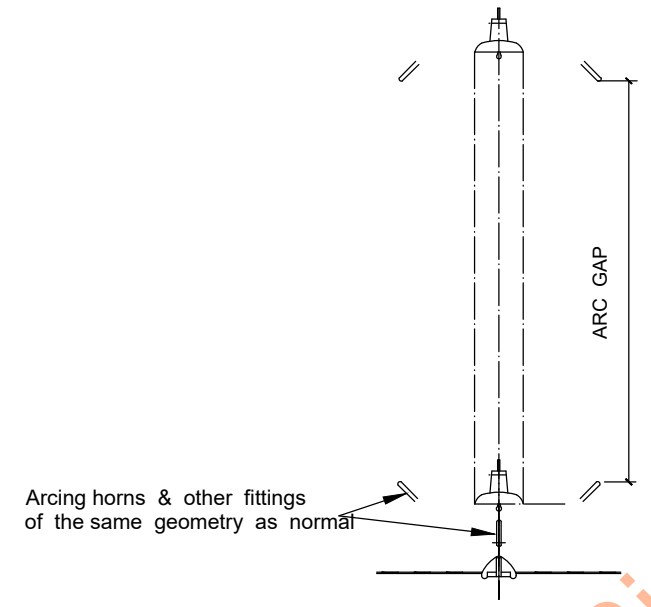
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Sheet 1 of 1	Rev. 1	Checked Dayan	
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		Released for Tendering	
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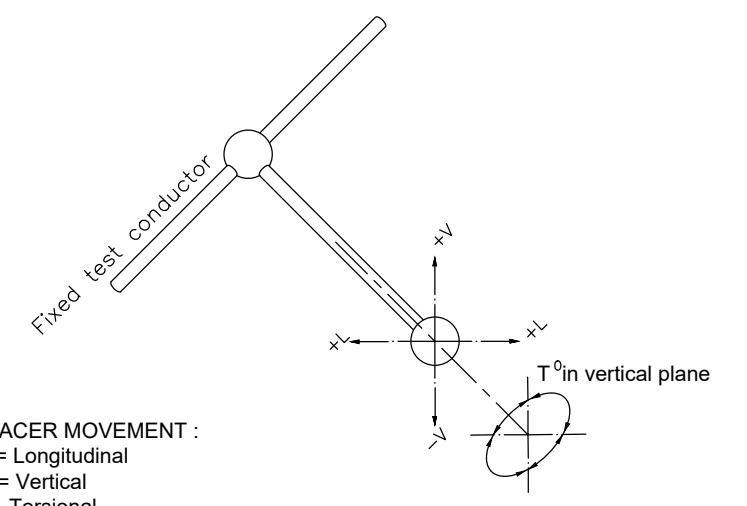
Property of  
CEB Tr. Design Branch



NORMAL SUSPENSION SET & JUMPER SET

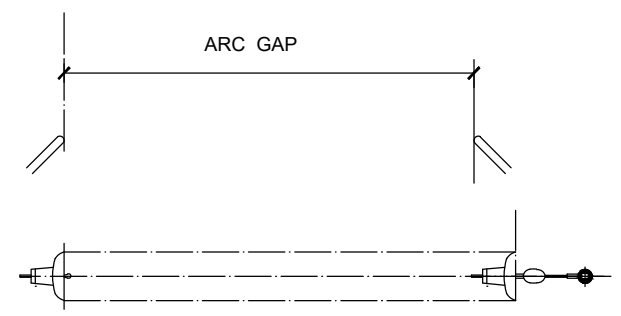


HEAVY SUSPENSION SET

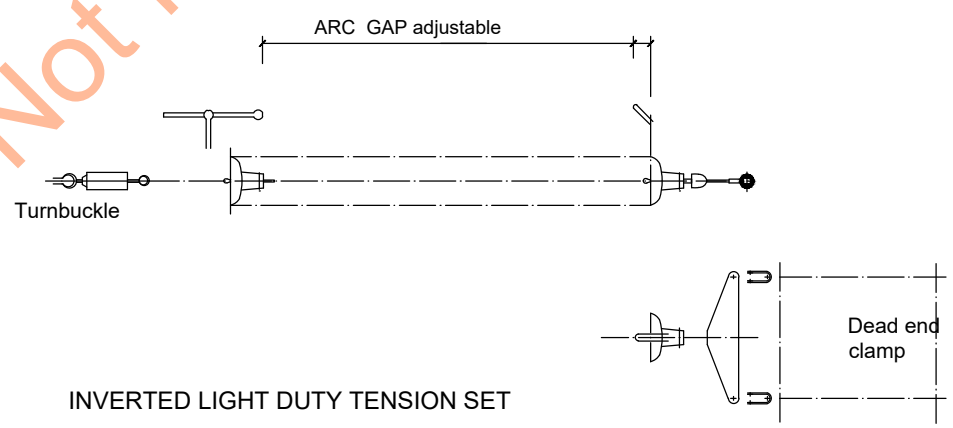


SPACER MOVEMENT :  
L = Longitudinal  
V = Vertical  
T = Torsional

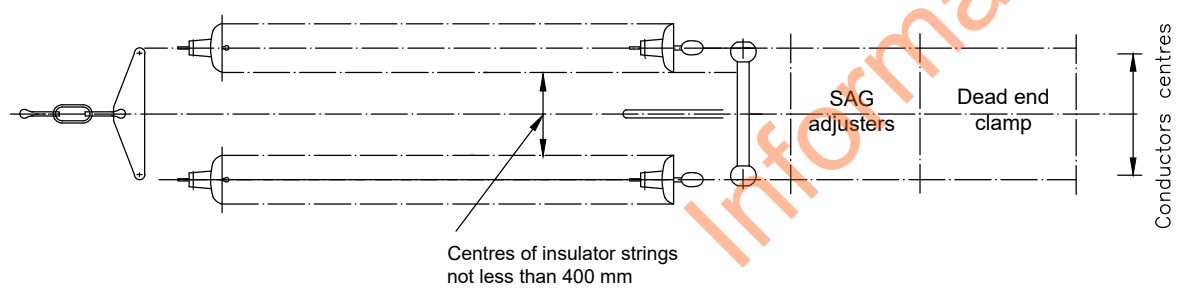
SPACER DYNAMIC TEST - DEFLECTION MEASUREMENT



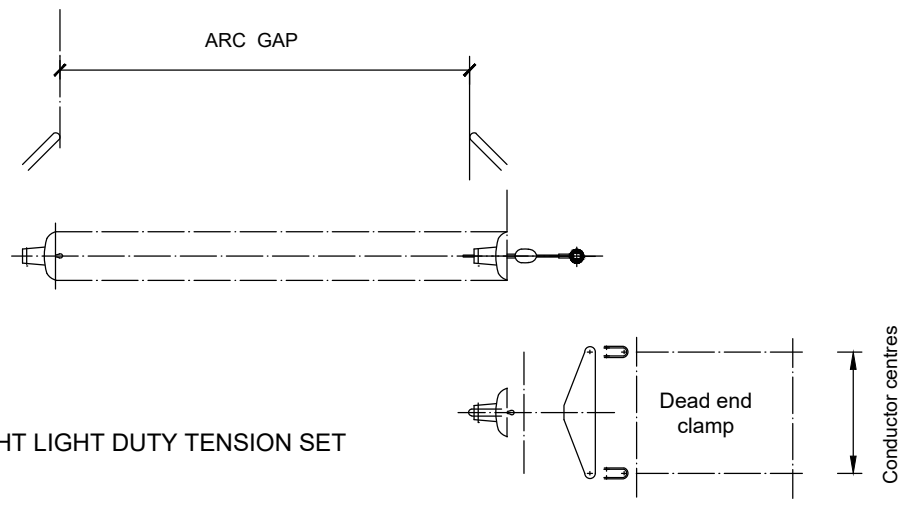
NORMAL TENSION SET



INVERTED LIGHT DUTY TENSION SET



NORMAL TENSION SET



UPRIGHT LIGHT DUTY TENSION SET

Revision Record					
Rev. No.	Date	Description	Drawn	Checked	Approved

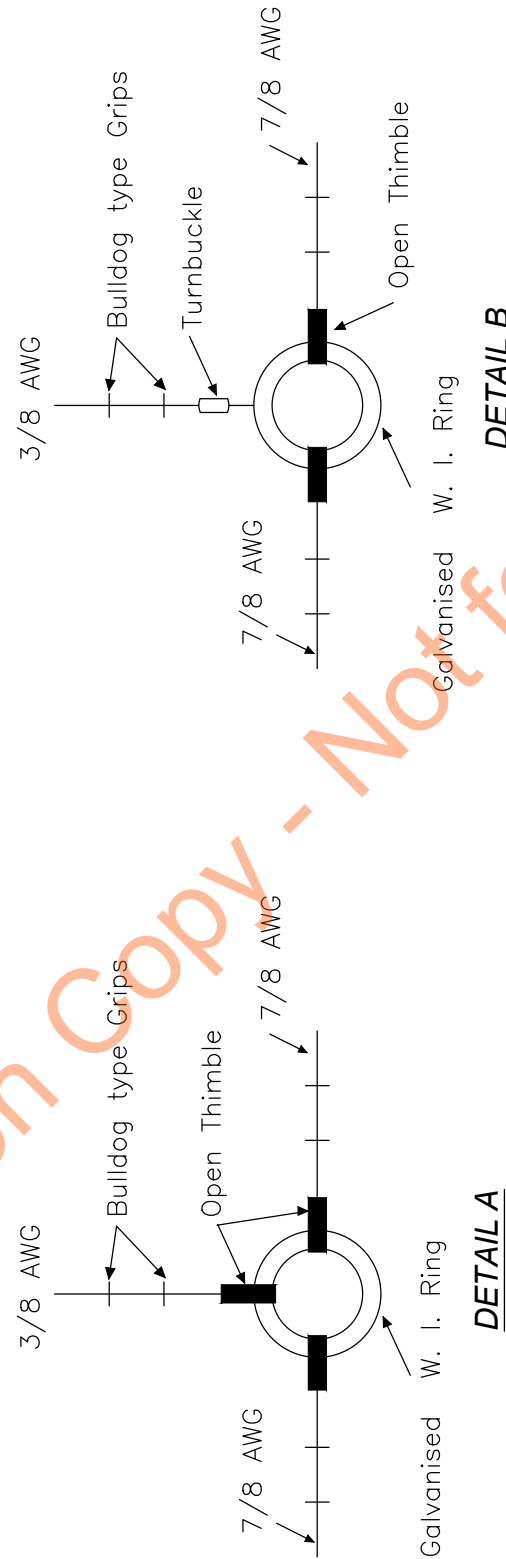
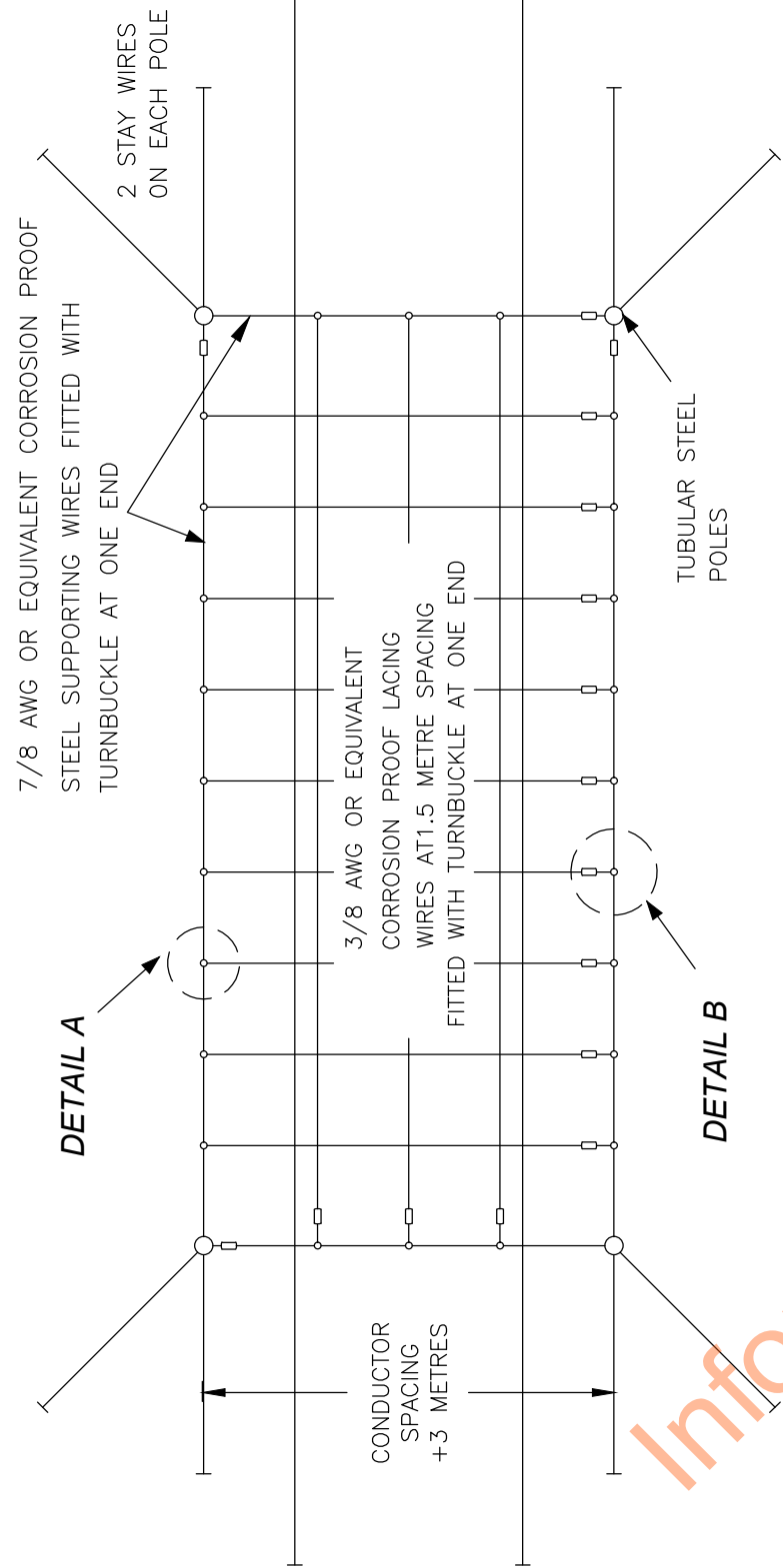


Project Title  
RFP FOR SIYAMBALANDUWA SOLAR PV POWER PLANT

Funding Agency

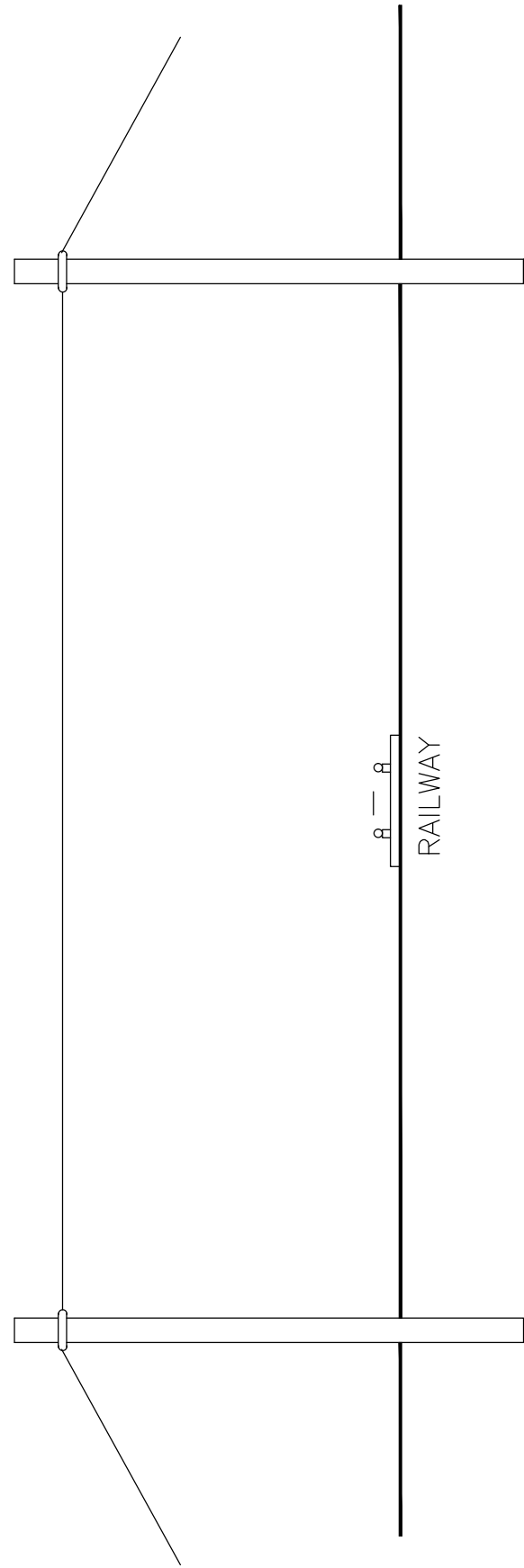
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REQUIREMENTS OF INSULATOR SETS

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Sheet 1 of 1	Rev. 1	Checked Dayan	
Dwg. No. TD/CE/197/D/TYP/05		Approved	
		Released for Tendering	
		Construction	



Line Conductors

4 Metres Minimum



Revision Record

Rev. No.	Date	Description	Drawn	Checked	Approved
12					
11					
10					



**CEYLON ELECTRICITY BOARD**  
TRANSMISSION DESIGN

Project Title

RFP FOR SIYAMBALANDUWA SOLAR PV POWER PLANT

Funding Agency

Drawing Title

GENERAL ARRANGEMENT OF CRADLE GUARDS  
OVER RAIL CROSSINGS

Scale - NTS

Size - A3

Sheet 1 of 1

Dwg. No. TD/CE/197/D/TYP/06

Rev. Date

Rev. 1

Signature

Drawn Ranjana

Checked Dayan

Approved

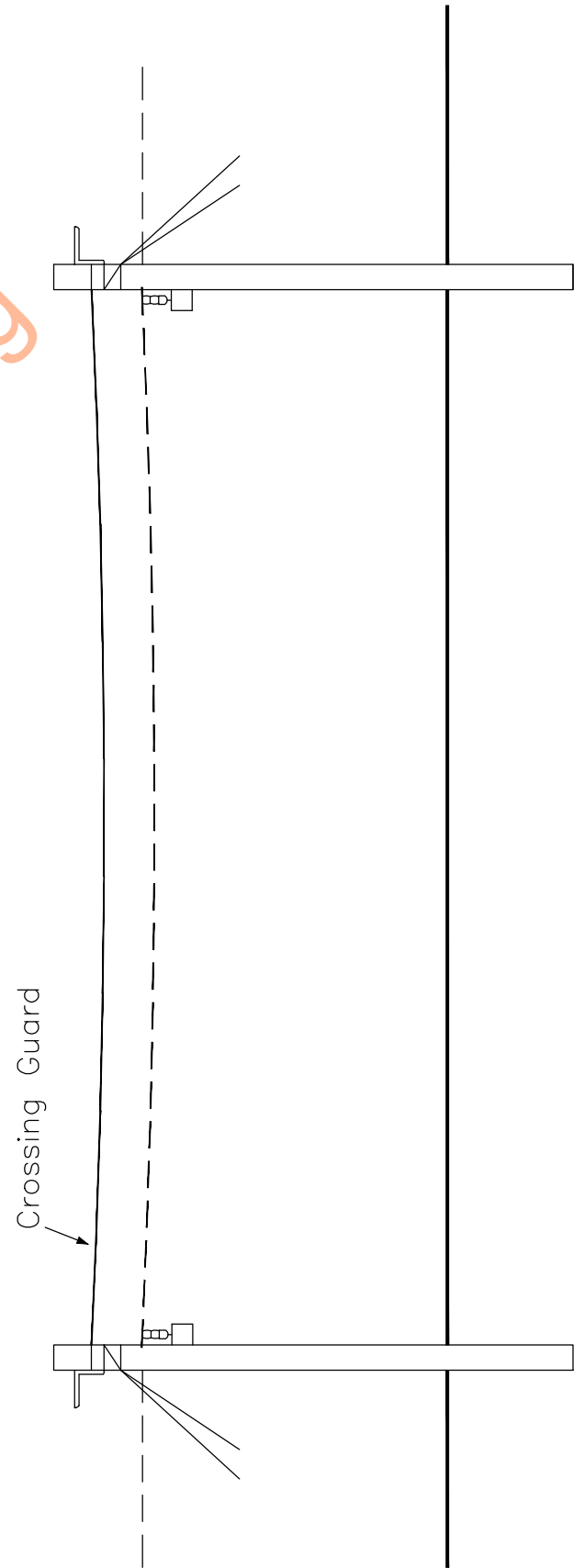
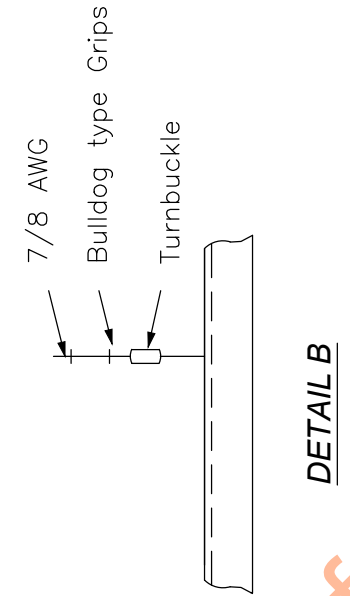
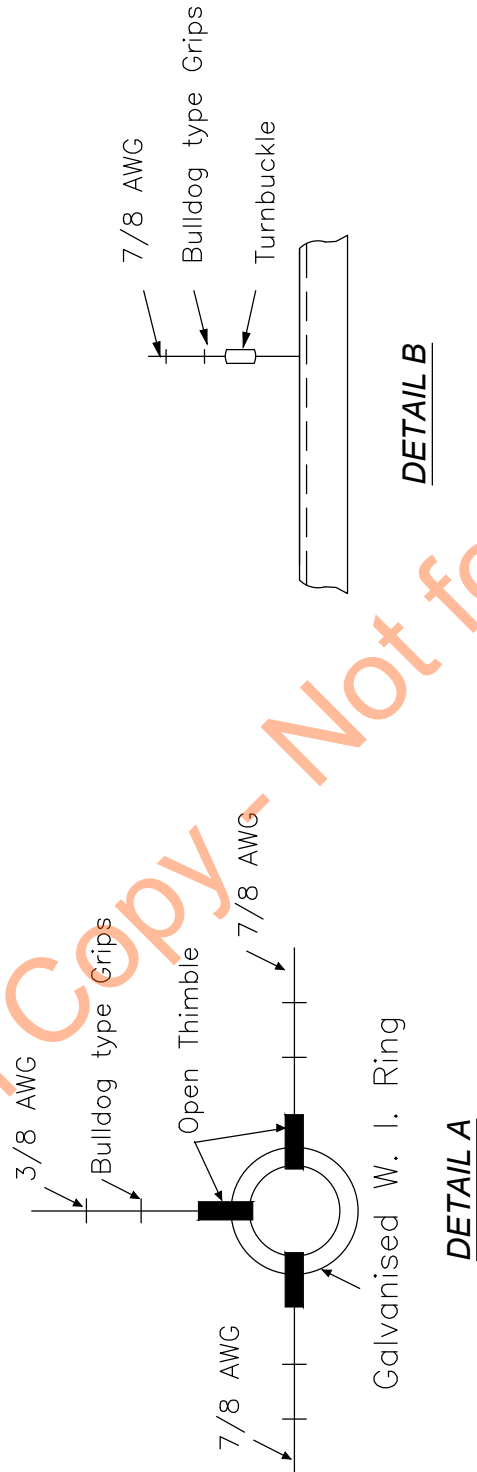
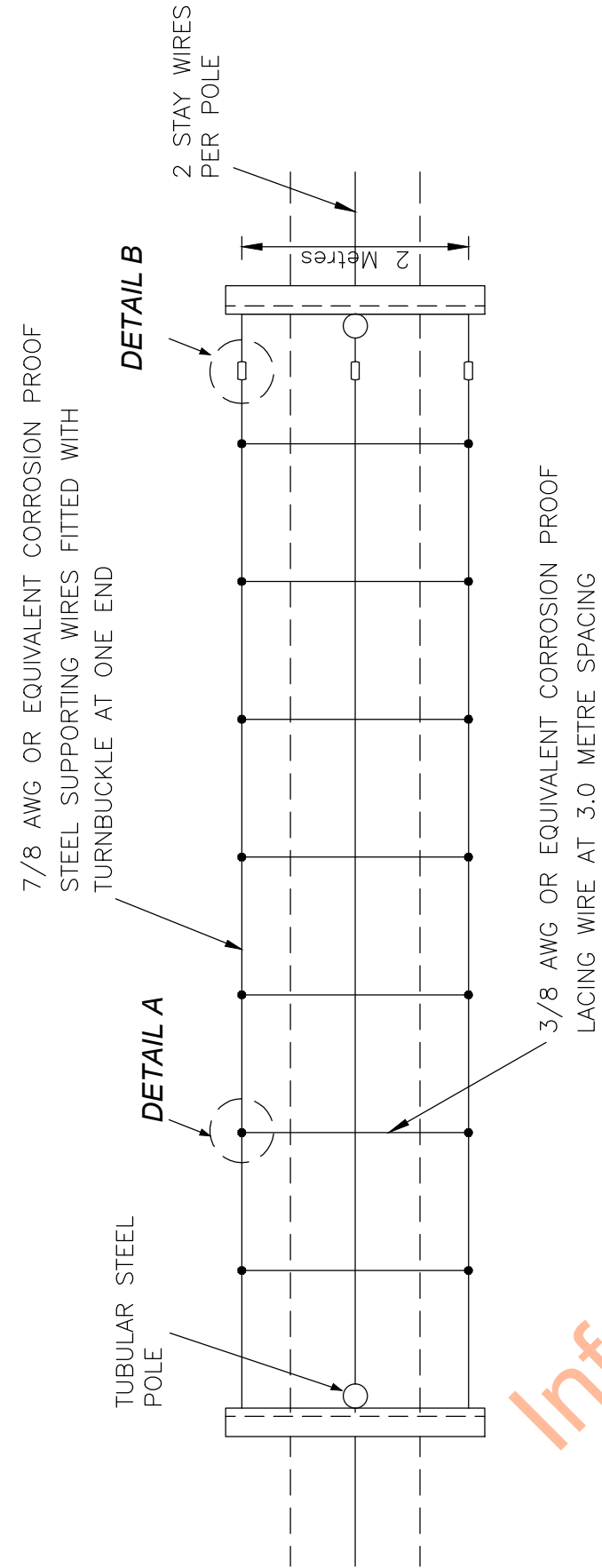
Date

02.06.2022

Released for Tendering

Construction

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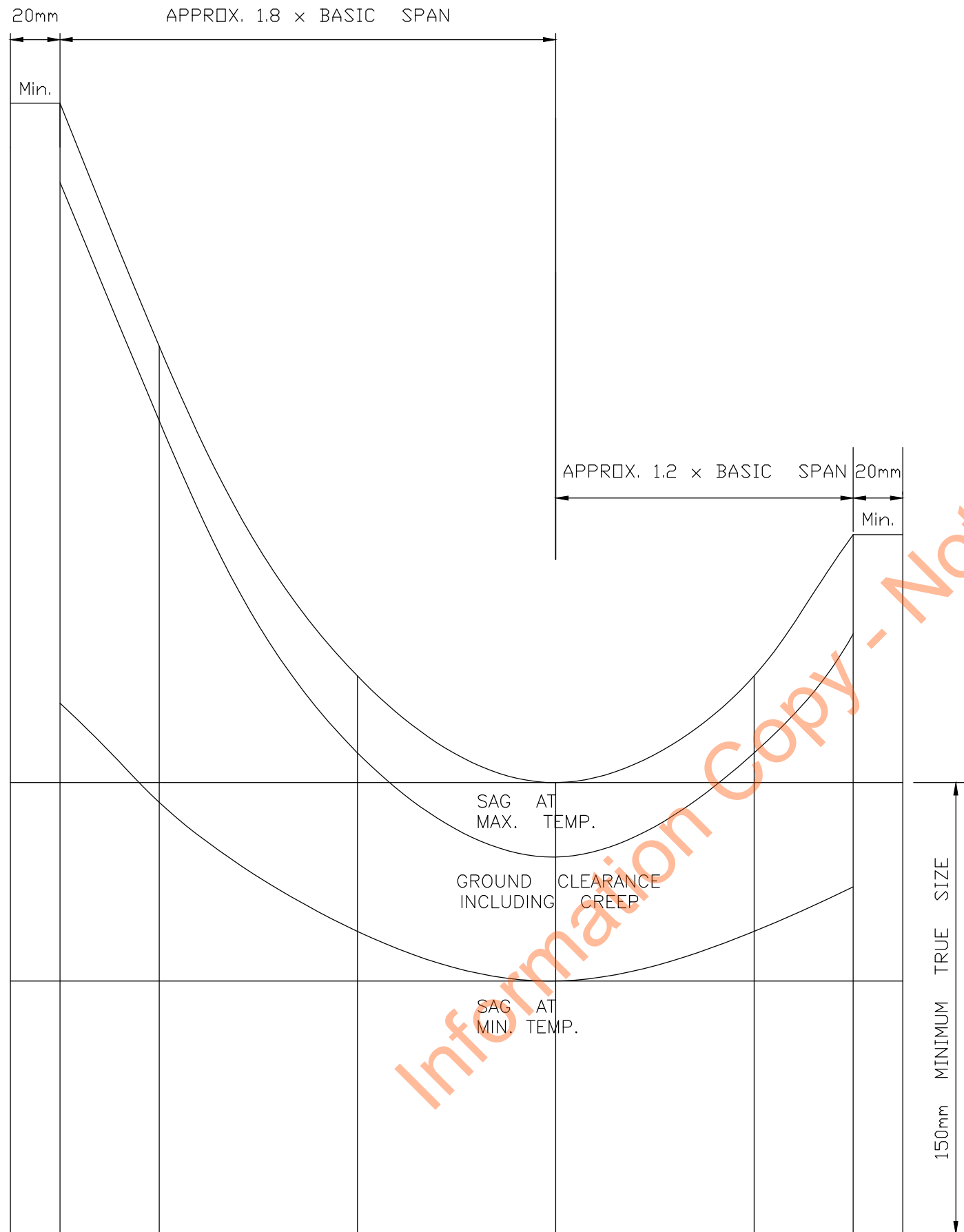
**CEYLON ELECTRICITY BOARD**  
TRANSMISSION DESIGN

Project Title  
RFP FOR SIYAMBALANDUWA SOLAR PV POWER PLANT

Funding Agency

Drawing Title  
GENERAL ARRANGEMENT OF CRADLE GUARDS  
OVER TELECOM CROSSINGS

Scale - NTS	Rev. Date	Signature	Date
Size - A3			02.06.2022
Sheet 1 of 1	Rev. 1		
Dwg. No. TD/CE/197/D/TYP/07			
		Tendering	
		Construction	



**CONSTRUCTION**

MATERIAL TO BE PERSPEX OF BETWEEN 2mm AND 3mm THICKNESS WITH A MINIMUM BASE DEPTH OF 150mm AS INDICATED MATERIAL TO BE STABLE IN COUNTRY WHERE LINE IS CONSTRUCTED.

ALL LINES & CURVES TO BE CLEARLY ENGRAVED ON THE REVERSE FACE OF MATERIAL & ARE NOT TO EXCEED 0.25mm IN THINCKNESS.

ALL NOTES SHALL BE CLEARLY ENGRAVED ON EITHER FACE AS CONVENIENT.

CURVES ARE TO BE MARKED WITH RELEVANT WORDING GIVING SAG & TEMPERATUTE OR GROUND CLEARANCE VALUE.

ALL ENGRAVING TO BE PERMANENTLY FILLED WITH BLACK PAINT.

**TITLE BLOCK**

THE TITLE BLOCK MUST BE LOCATED IN THE LOWER RIGHT HAND CORNER OF THE TEMPLATE & CONTAIN THE FOLLOWING INFORMATION.

EQUIVALENT SPAN IN LARGE PRINTING CONDUCTOR DATA SUCH AS NAME & STRANDING

SAGGING BASIS GIVING DESIGN PARAMETERS SUCH AS TENSIONS, TEMPERATURES & WIND.

SCALES AS USED ON PROFILE

CLIENT'S NAME

ROUTE TITLE INCLUDING VOLTAGE

CONTRACTOR'S NAME

Revision Record					
Rev. No.	Date	Description	Drawn	Checked	Approved

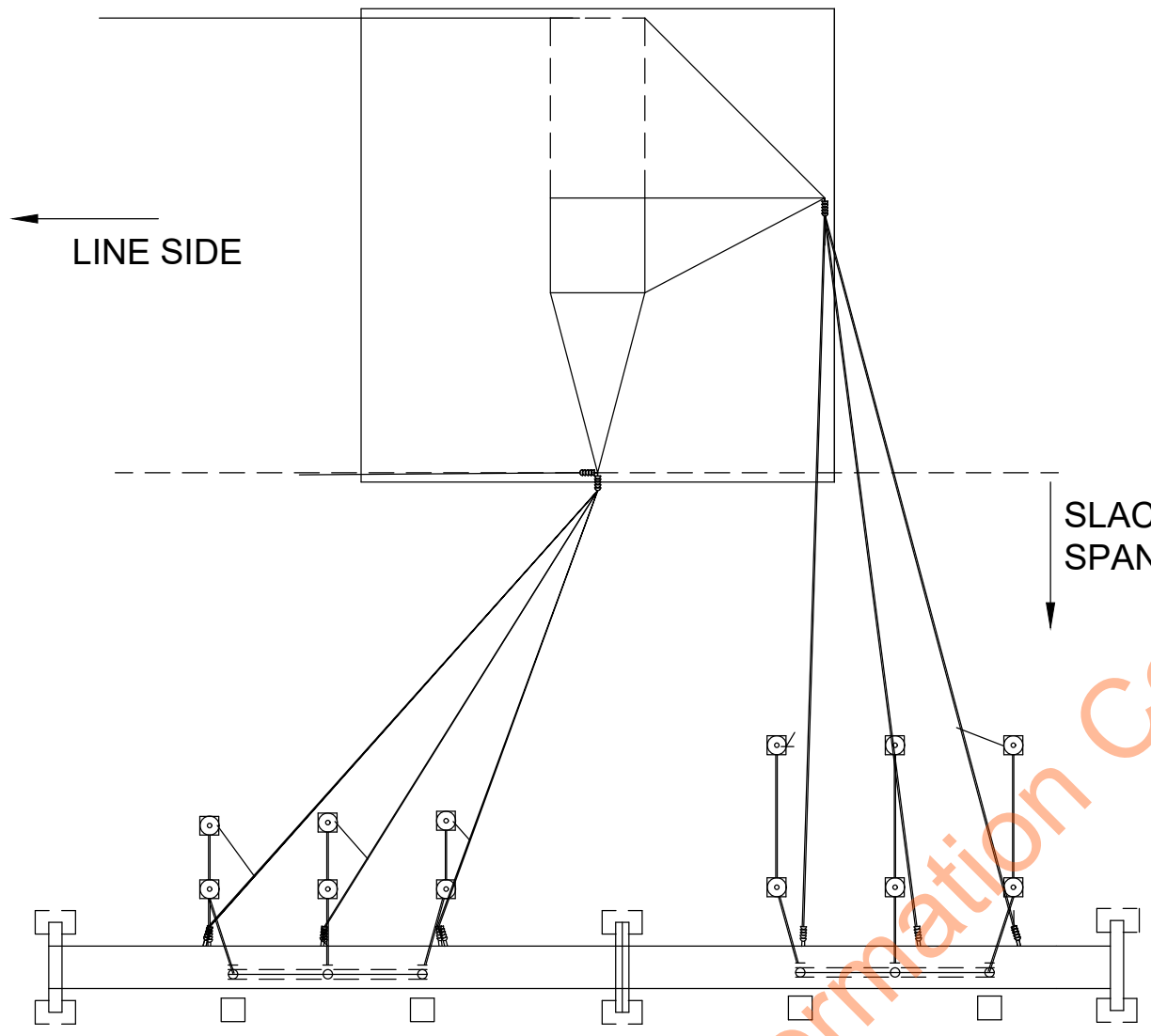


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RFP FOR SIYAMBALANDUWA SOLAR PV POWER PLANT

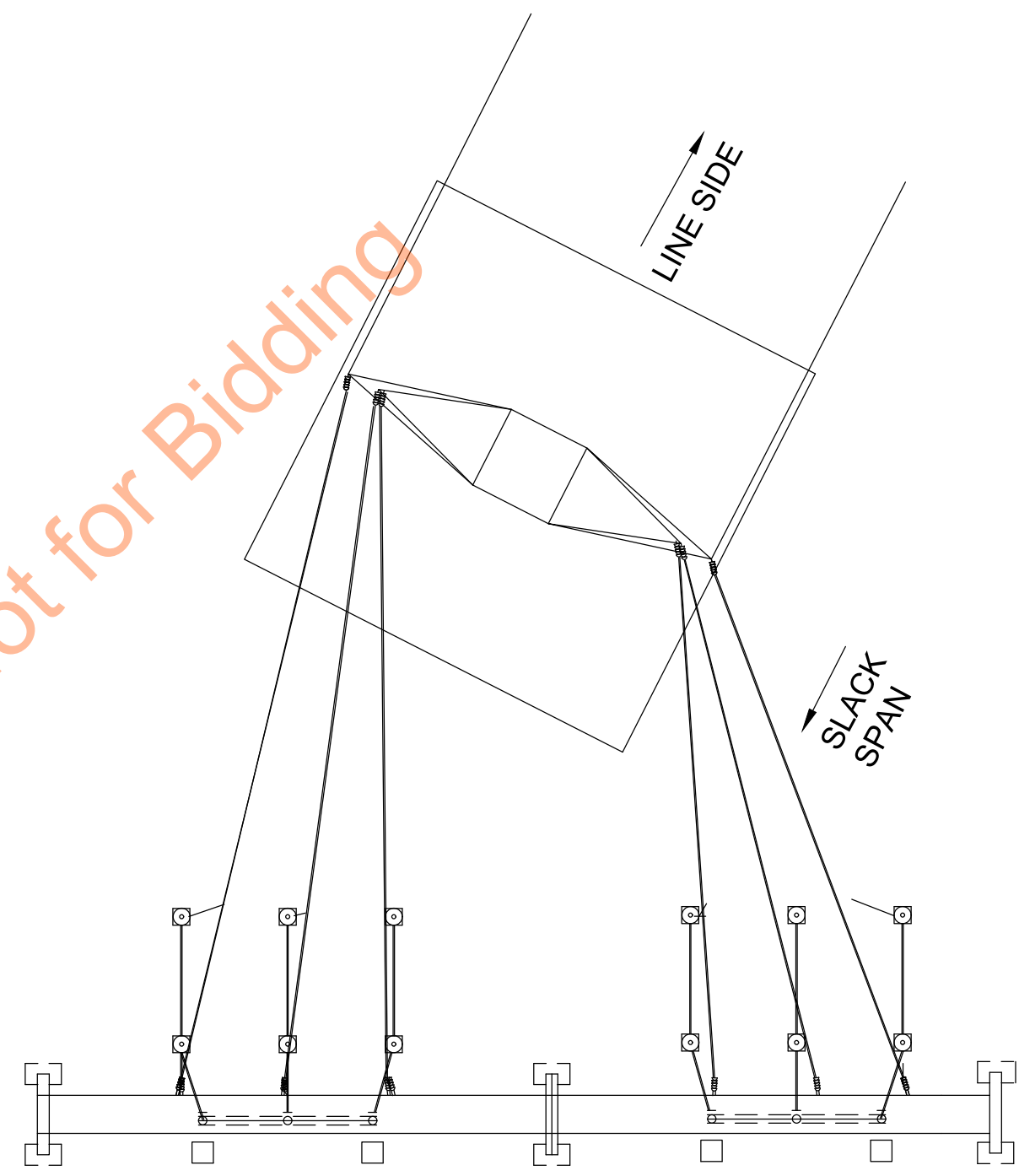
Funding Agency

Drawing Title  
TYPICAL SAG TEMPLATE

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Sheet 1 of 1	Rev. 1	Checked Dayan	
Dwg. No. TD/CE/197/D/TYP/08		Approved	
		Released for Tendering	
		Construction	



LINE TERMINATION AT GANTRY (TYPE 1)



LINE TERMINATION AT GANTRY (TYPE 2)

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Revision Record					
Rev. No.	Date	Description	Drawn	Checked	Approved



Project Title  
RFP FOR SIYAMBALANDUWA SOLAR PV POWER PLANT

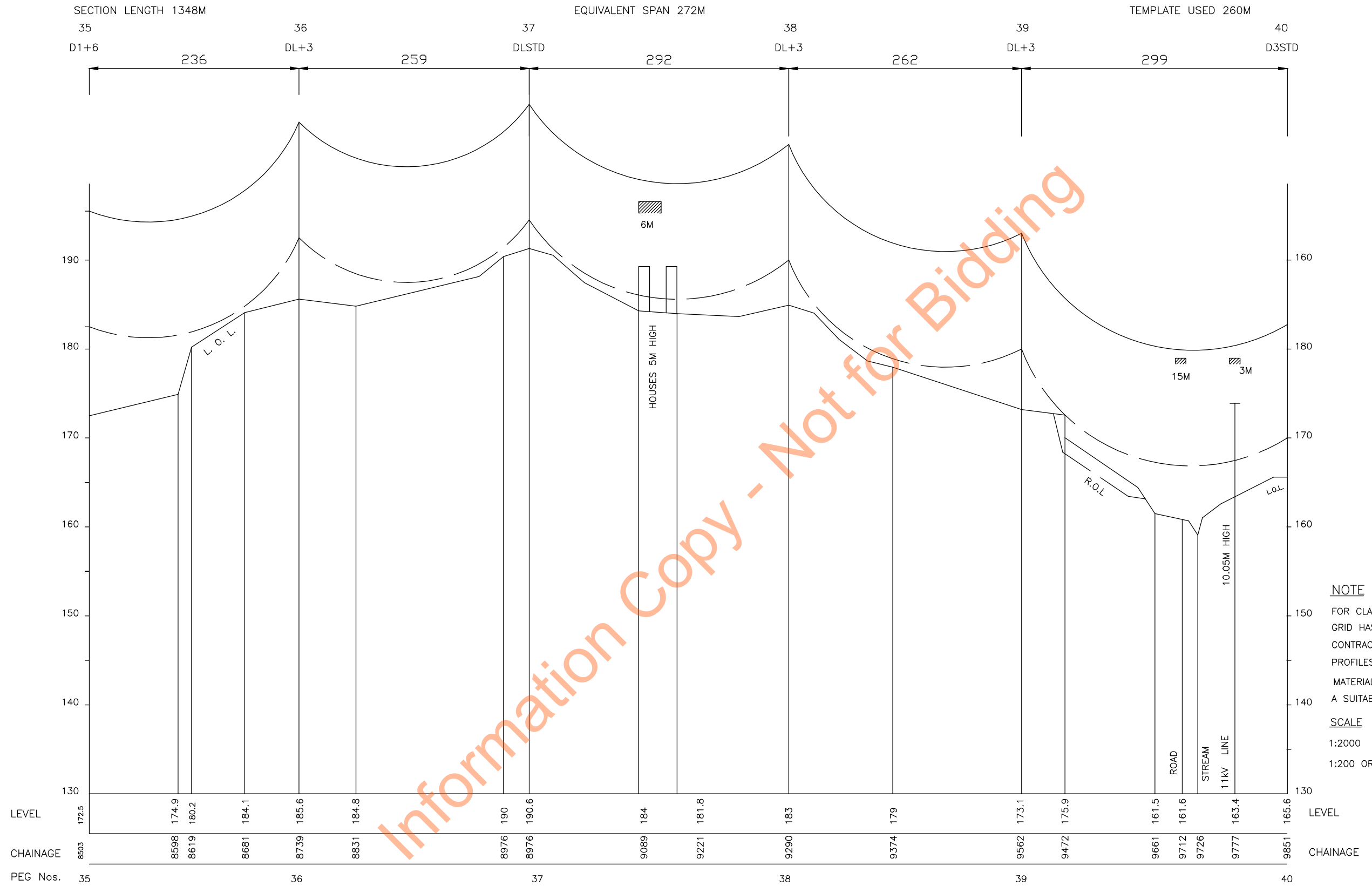
Funding Agency

Drawing Title  
TYPICAL LINE TERMINATION ARRANGEMENTS

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Size - A3		Drawn Ranjana Dayan	02.06.2022
Sheet 1 of 1	Rev. 1	Checked 	
Dwg. No. TD/CE/197/D/TYP/09		Approved 	
		Released for Tendering Construction	

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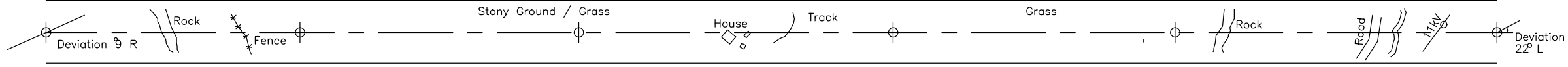
Property of  
CEB Tr. Design Branch



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**NOTE**  
FOR CLARITY BACKGROUND GRID HAS BEEN OMITTED CONTRACTOR TO PREPARE PROFILES ON TRANSPARENCY MATERIAL INCORPORATING A SUITABLE GRID.

**SCALE**  
1:2000 HORIZONTAL  
1:200 OR 1:400 VERTICAL AS APPROPRIATE.



Revision Record					
Rev. No.	Date	Description	Drawn	Checked	Approved



Project Title  
RFP FOR SIYAMBALANDUWA SOLAR PV POWER PLANT

Funding Agency

Drawing Title  
TYPICAL PROFILE

Scale - NTS	Rev. Date	Signature	Date
Size - A3		Drawn Ranjana	02.06.2022
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Dwg. No. TD/CE/197/D/TYP/10		Approved	
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		Construction	

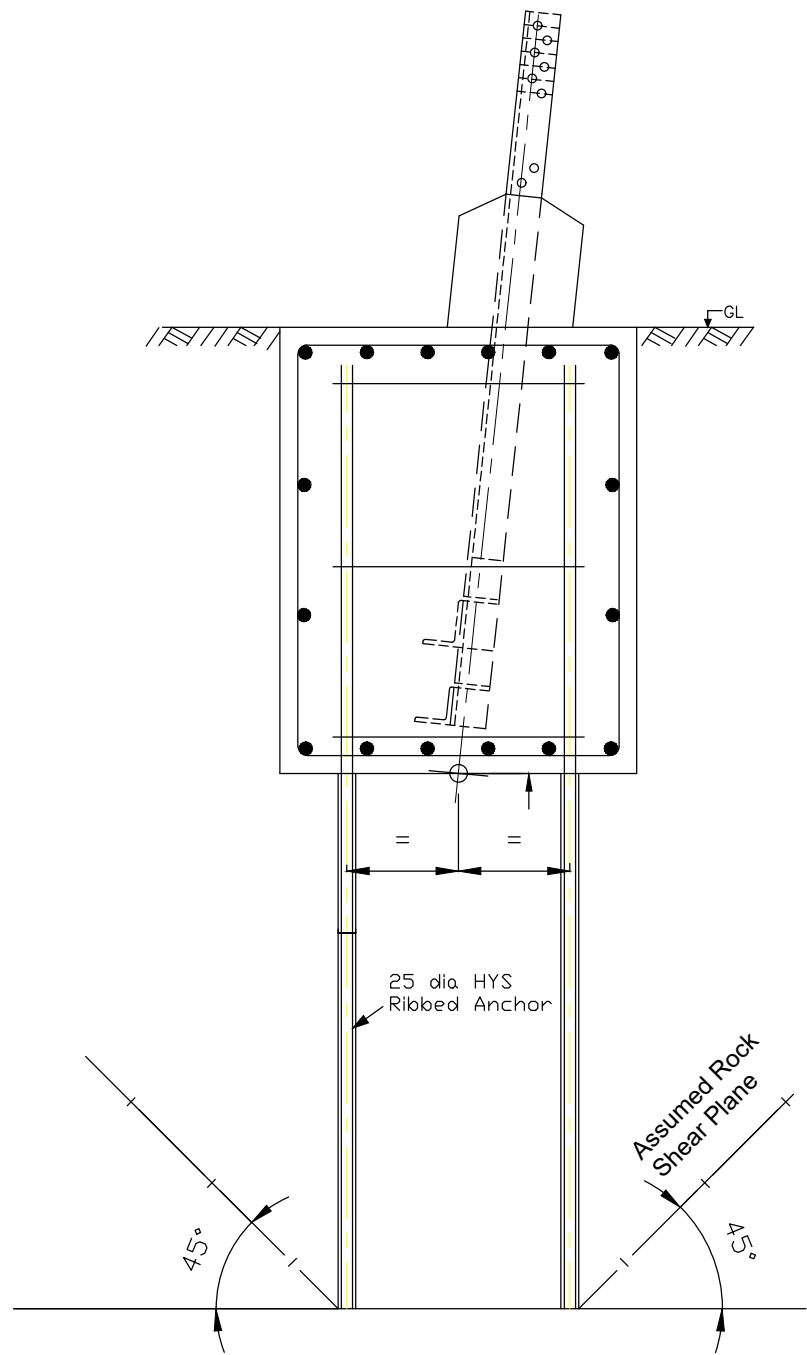
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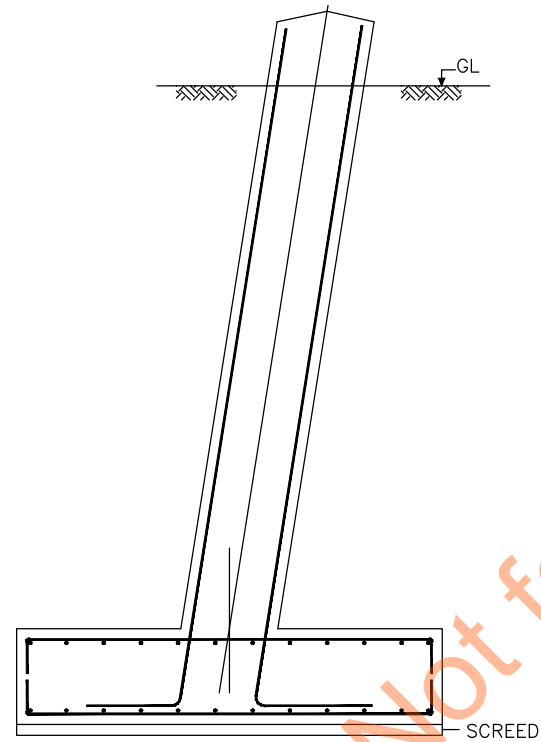


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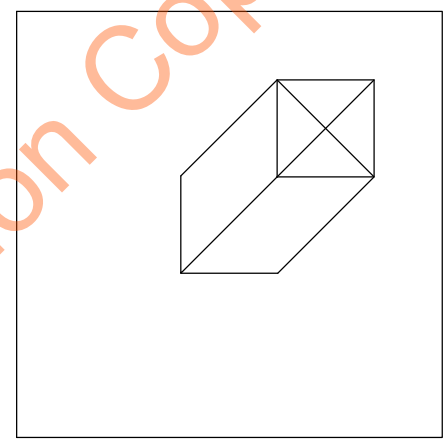
Property of  
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TYPICAL ROCK ANCHOR FOUNDATION

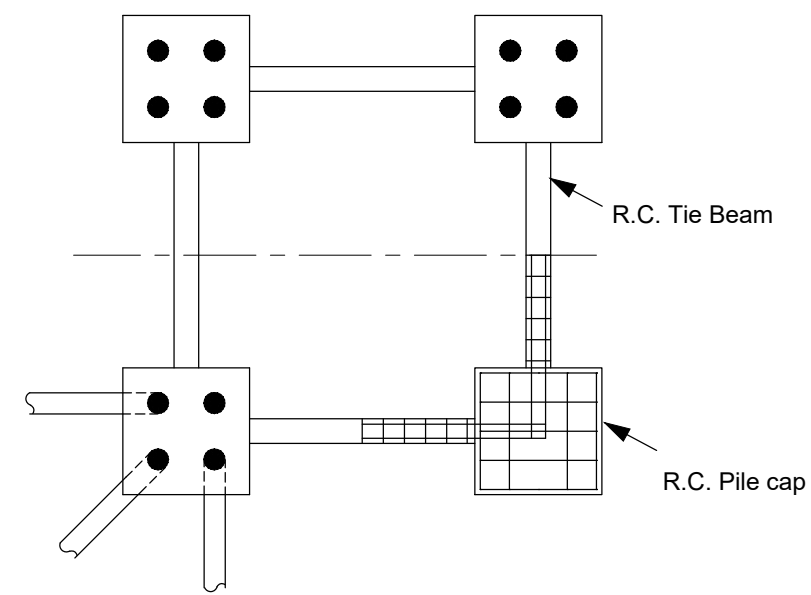
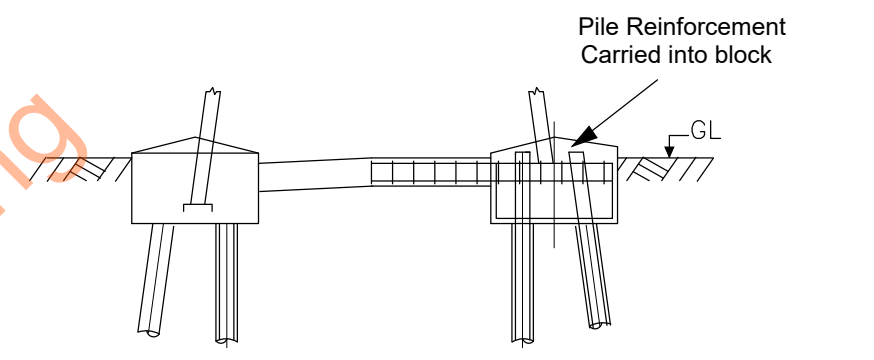


SECTION A-A



PLAN

TYPICAL PAD & CHIMNEY FOUNDATION



TYPICAL PILED FOUNDATION

Revision Record					
Rev. No.	Date	Description	Drawn	Checked	Approved

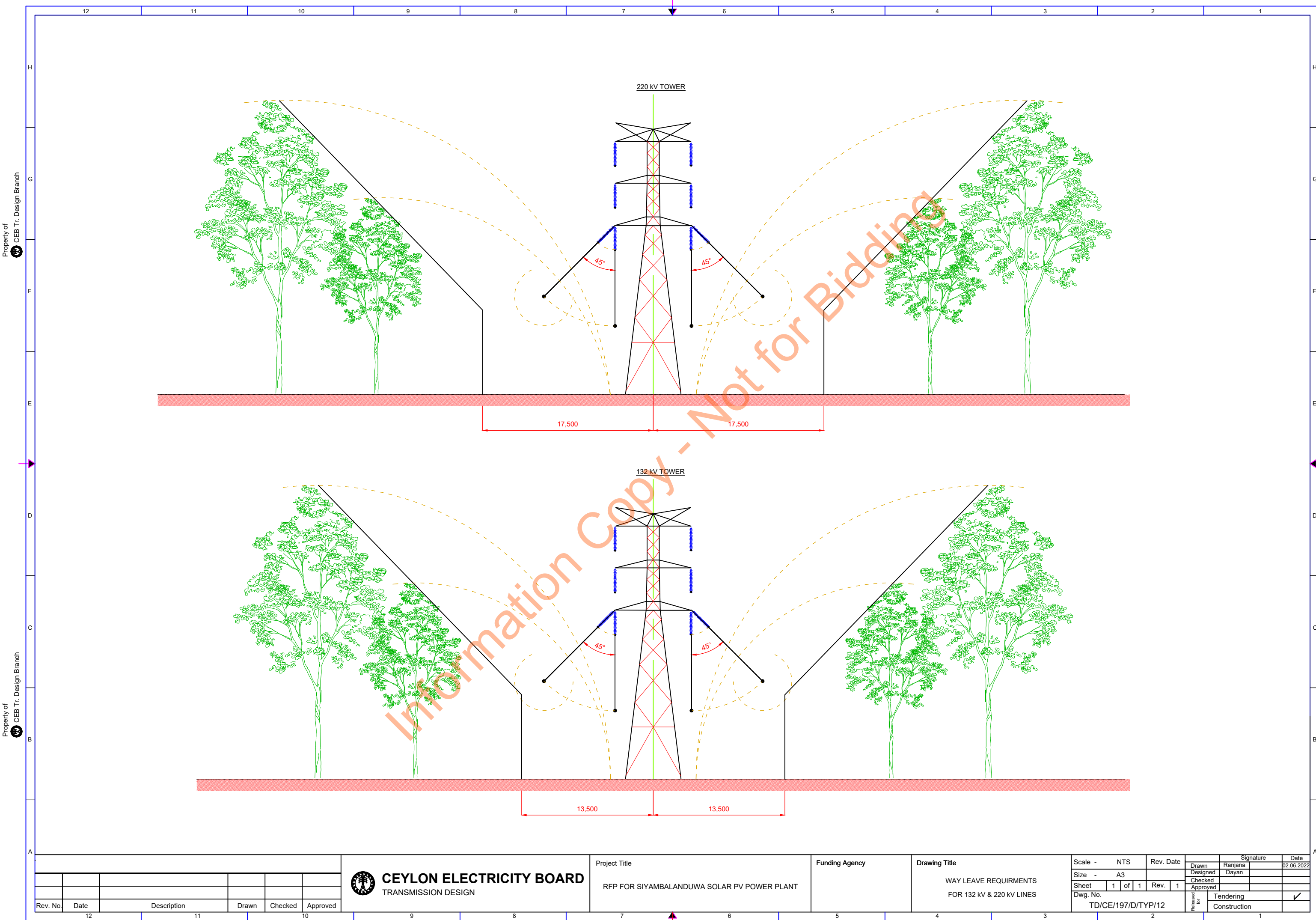
**CEYLON ELECTRICITY BOARD**  
TRANSMISSION DESIGN

Project Title  
RFP FOR SIYAMBALANDUWA SOLAR PV POWER PLANT

Funding Agency

Drawing Title  
TYPICAL FOUNDATION TYPES

Scale - NTS	Rev. Date	Signature	Date
Size - A3		Drawn Ranjana Dayan	02.06.2022
Sheet 1 of 1	Rev. 1	Checked 	
Dwg. No. TD/CE/197/D/TYP/11		Approved 	
		Released for Tendering	
		Construction	



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CEB Tr. Design Branch

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**CEYLON ELECTRICITY BOARD**  
TRANSMISSION DESIGN

Project Title  
RFP FOR SIYAMBALANDUWA SOLAR PV POWER PLANT

Funding Agency

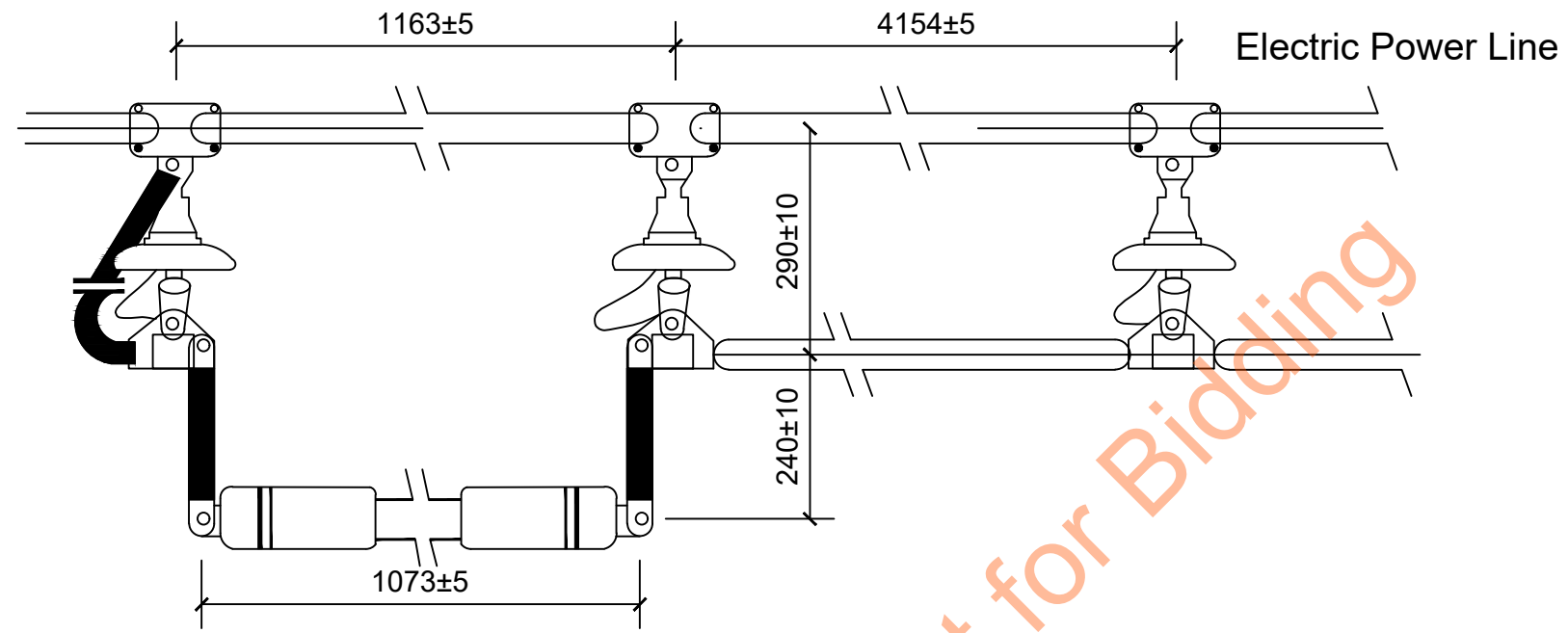
Drawing Title  
WAY LEAVE REQUIREMENTS  
FOR 132 kV & 220 kV LINES

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Size - A3  
Sheet 1 of 1  
Rev. 1  
Dwg. No. TD/CE/197/D/TYP/12

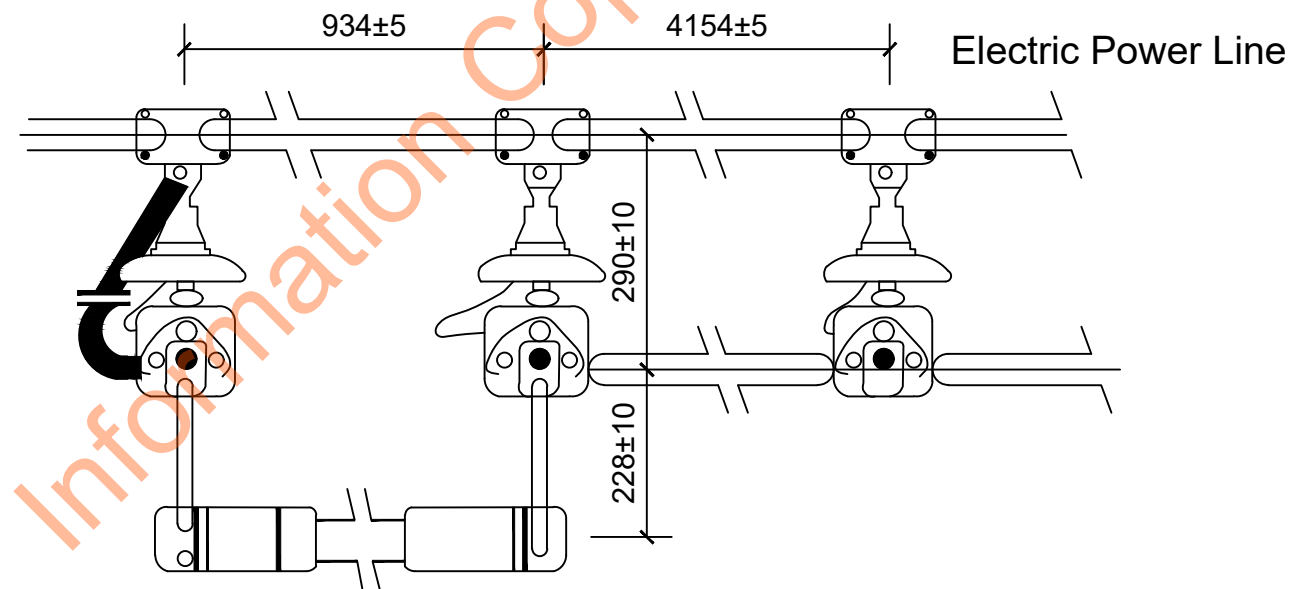
Rev. No.	Date	Description	Drawn	Checked	Approved

Rev. Date	Signature	Date
	Ranjana Dayan	02.06.2022

Released for	Tendering	
	Construction	✓



a). Configuration no. 01



b). Configuration no. 02



**CEYLON ELECTRICITY BOARD**  
TRANSMISSION DESIGN

Project Title

RFP FOR SIYAMBALANDUWA SOLAR PV POWER PLANT

Funding Agency

Drawing Title

OBSTACLE LIGHTS  
ON OVERHEAD WIRES

Scale - NTS

Rev. Date

Signature  
Date

Size - A3

Drawn  
Designed  
Checked  
Approved

Sheet 1 of 1 Rev. 1

Dwg. No. TD/CE/197/D/TYP/13

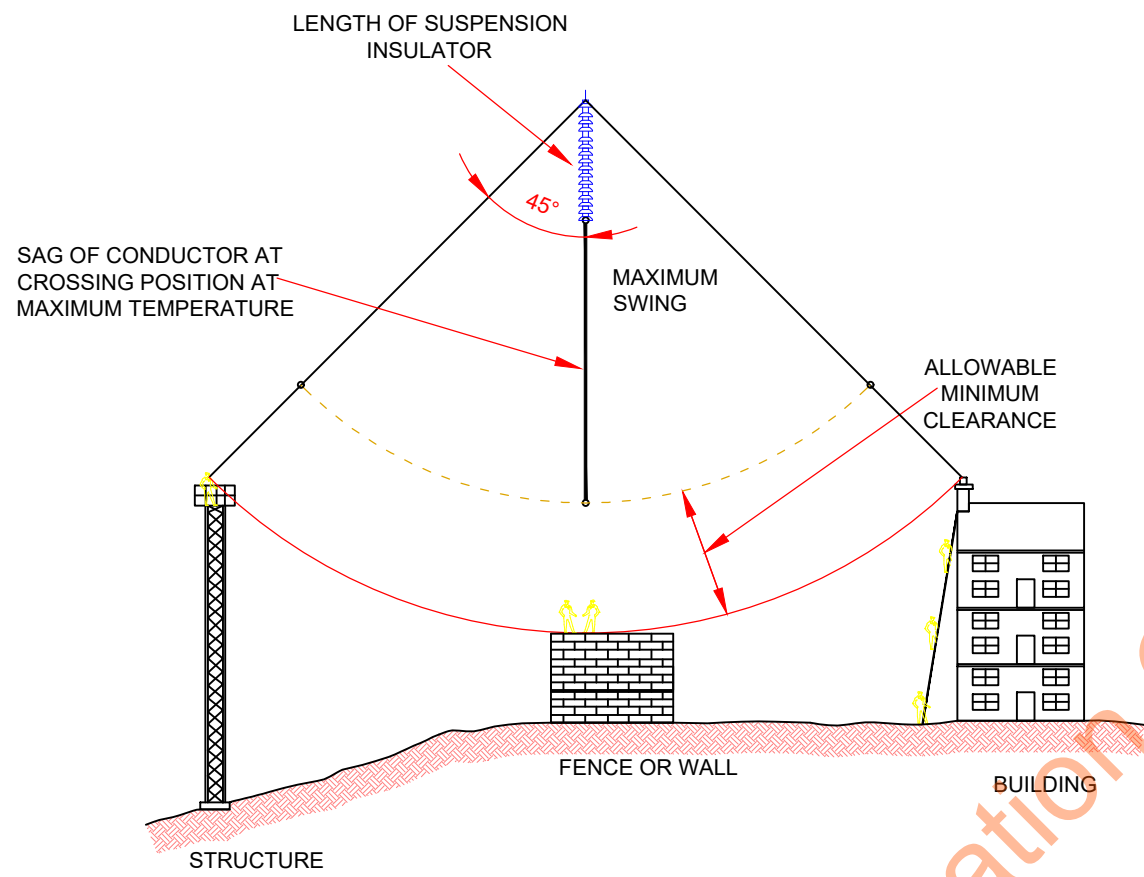
Tendering  
Construction

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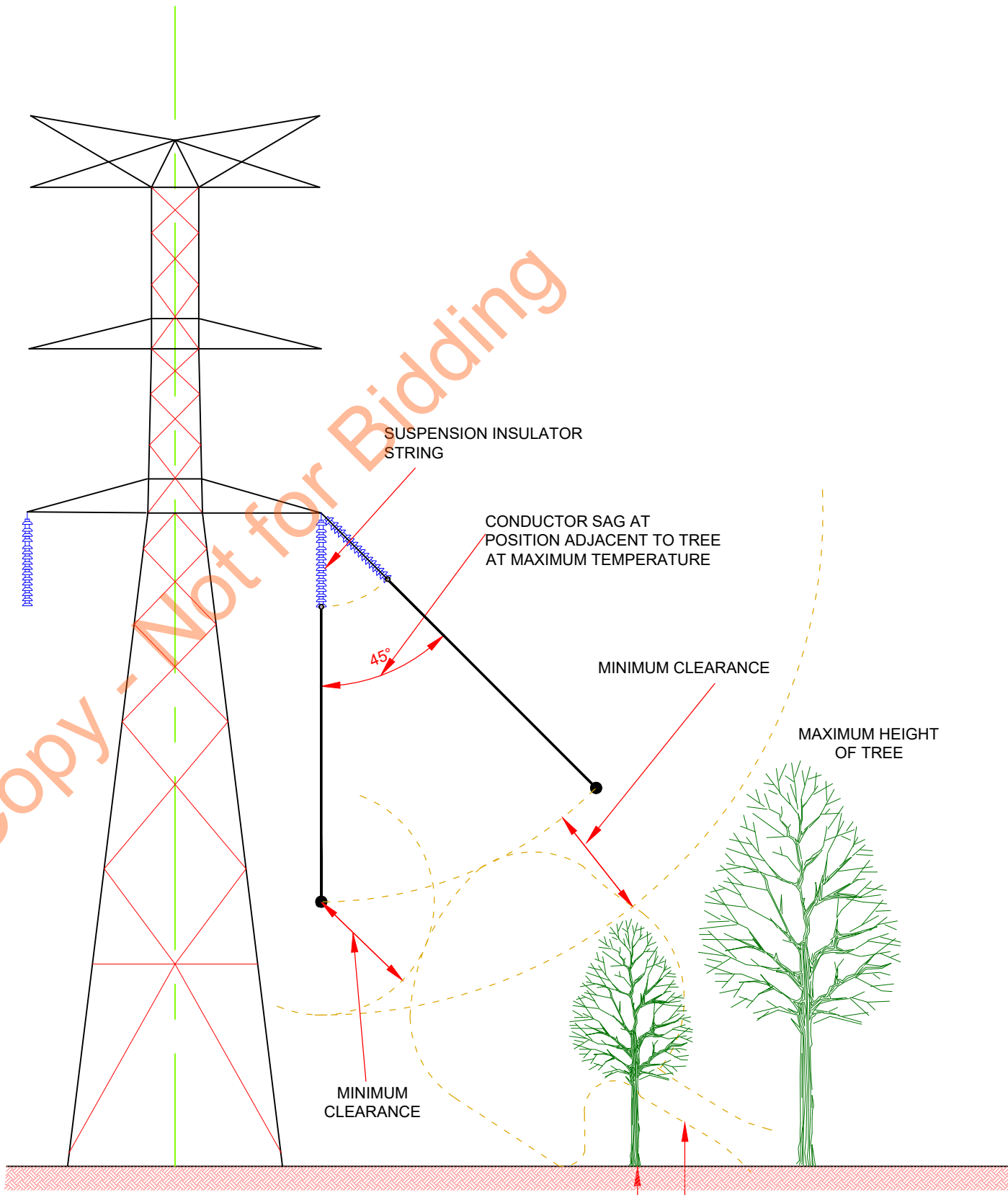
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H  
G  
F  
E  
D  
C  
B  
A



CLEARANCE TO OBJECTS (ON WHICH A PERSON CAN STAND)



CLEARANCE TO TREES

Information Copy - Not for Bidding

Rev. No.	Date	Description	Drawn	Checked	Approved

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TRANSMISSION DESIGN

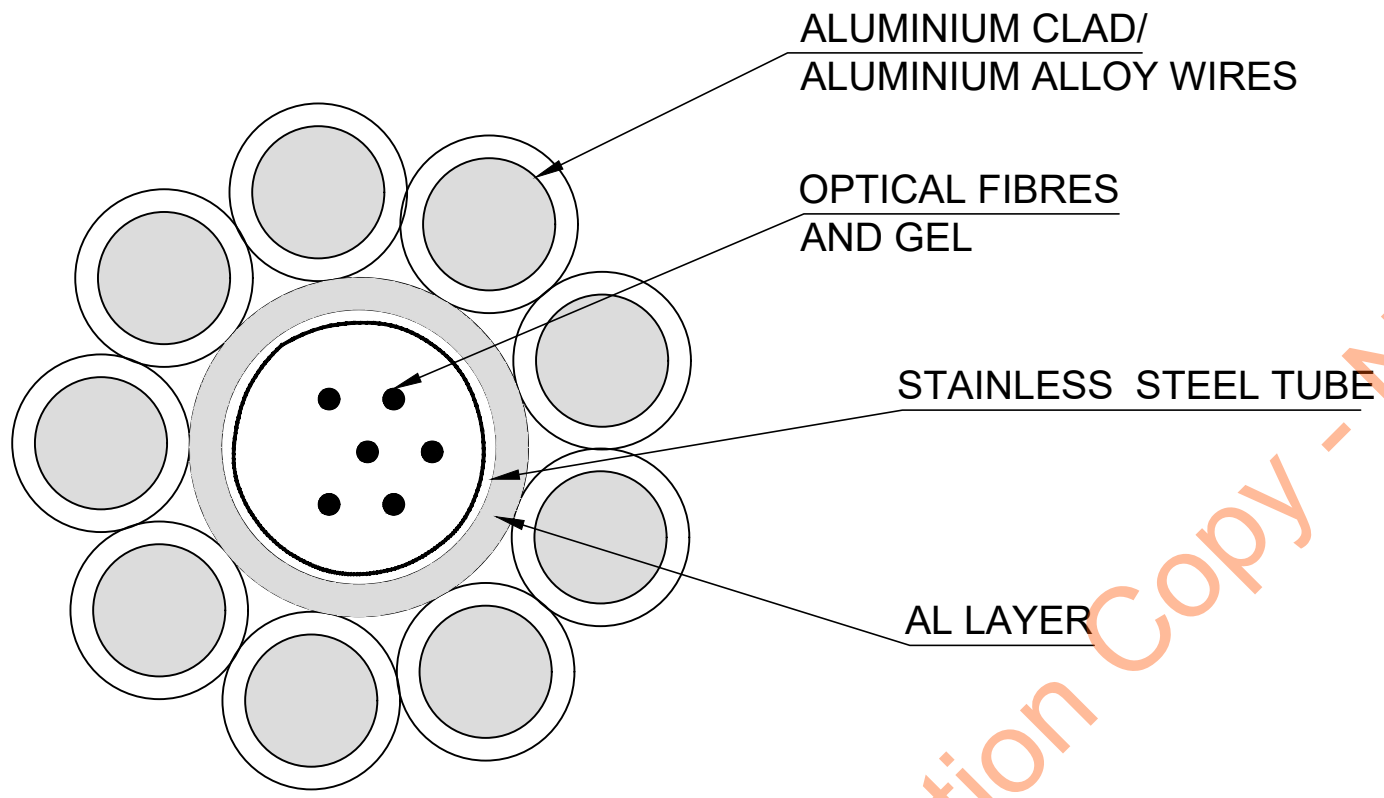
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RFP FOR SIYAMBALANDUWA SOLAR PV POWER PLANT

Funding Agency

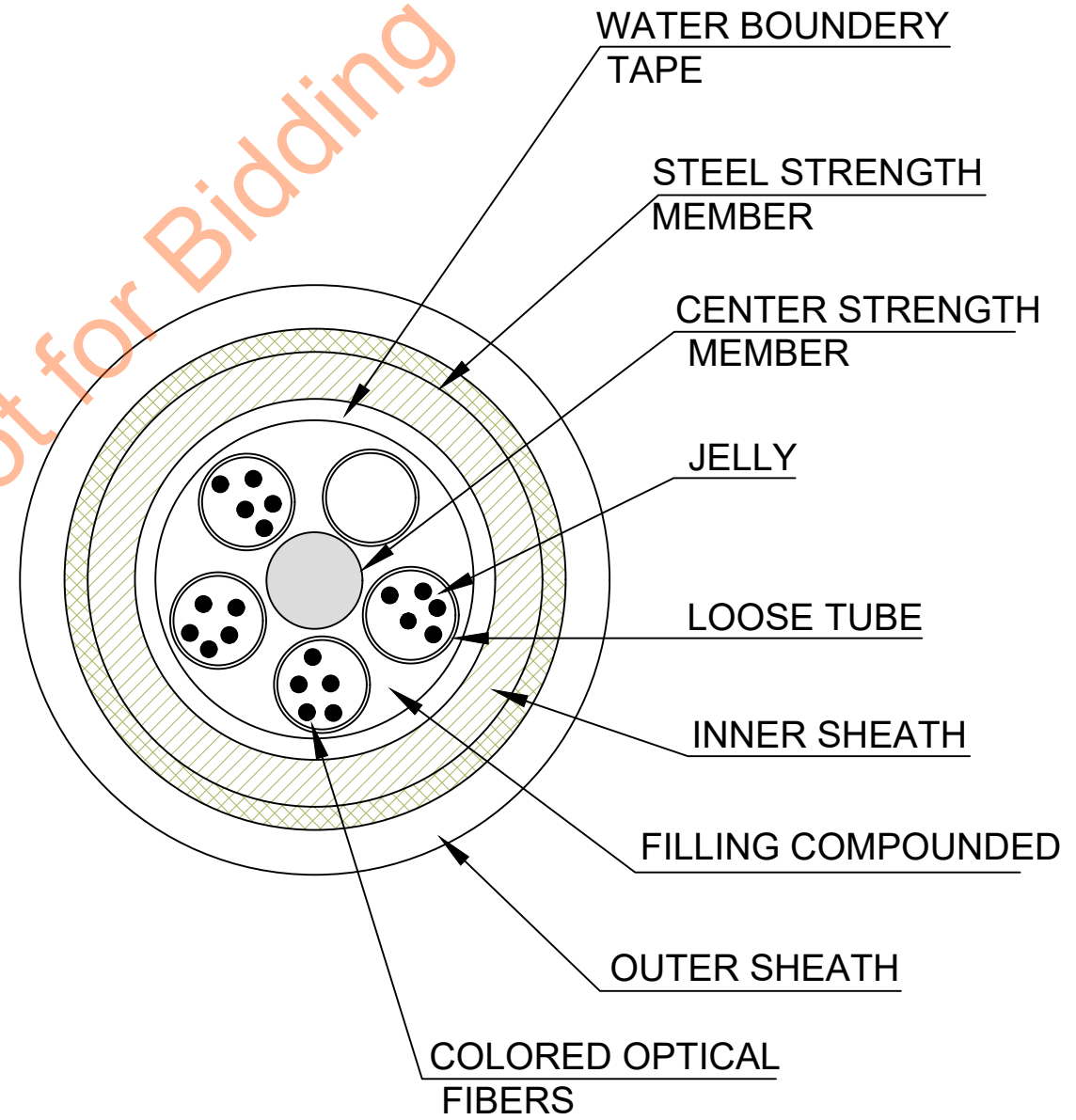
Drawing Title  
SAFE CLEARANCES

Scale - NTS	Rev. Date	Signature	Date
Size - A3		Drawn Ranjana	02.06.2022
Sheet 1 of 1	Rev. 1	Checked Dayan	
Dwg. No. TD/CE/197/D/TYP/14		Approved	
		Released for Tendering	
		Construction	

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OPGW STRUCTURE



OFAC STRUCTURE

Information Copy - Not for Bidding

Revision Record					
Rev. No.	Date	Description	Drawn	Checked	Approved



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TRANSMISSION DESIGN

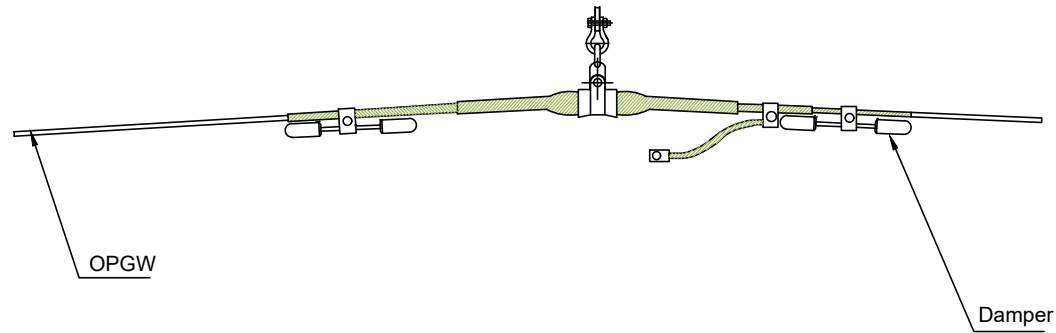
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RFP FOR SIYAMBALANDUWA SOLAR PV POWER PLANT

Funding Agency

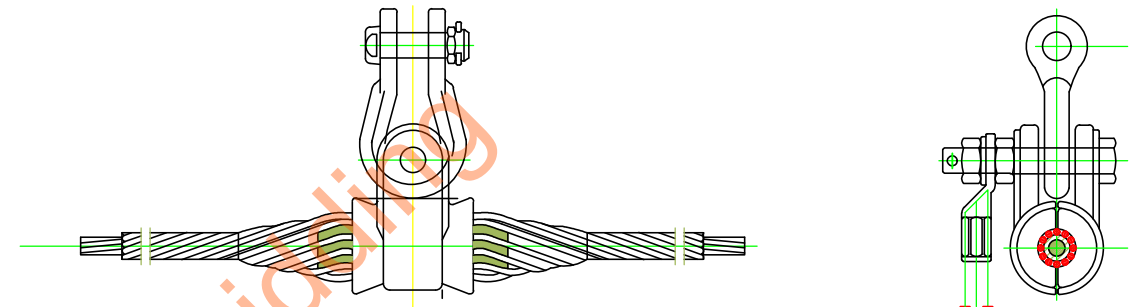
Drawing Title  
TYPICAL OPGW STRUCTURE

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Size - A3		Drawn Ranjana	02.06.2022
Sheet 1 of 1	Rev. 1	Checked Dayan	
Dwg. No. TD/CE/197/D/TYP/15-A		Approved	
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		Construction	

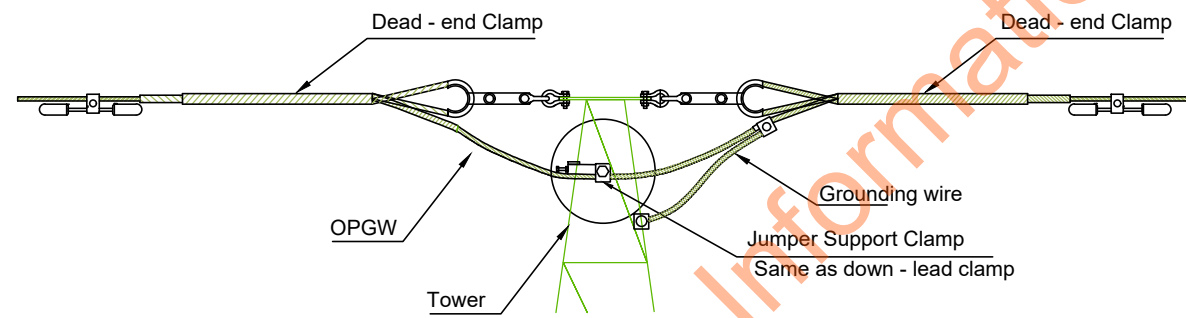
Suspension Set



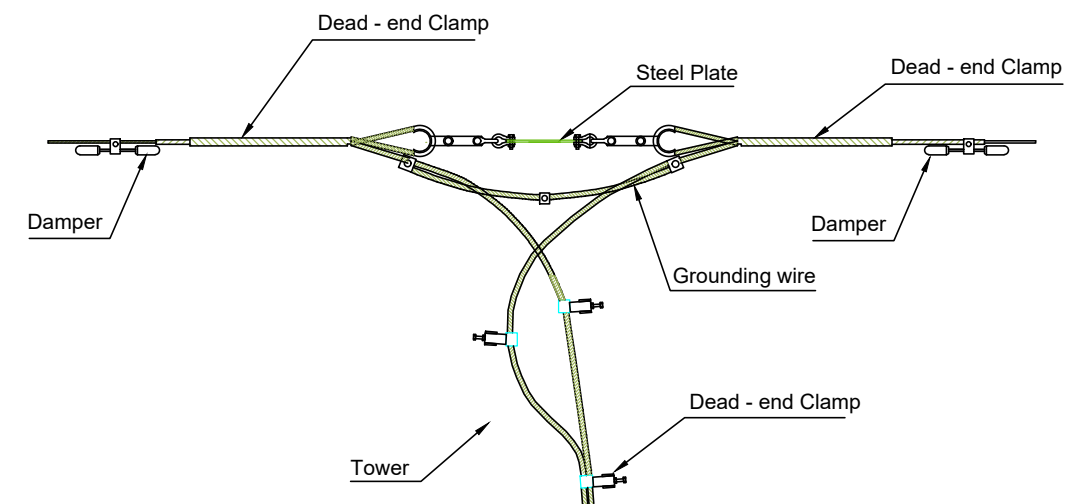
Suspension Clamp



Tension Set without Joint Box



Tension Set with Joint Box



Revision Record					
Rev. No.	Date	Description	Drawn	Checked	Approved

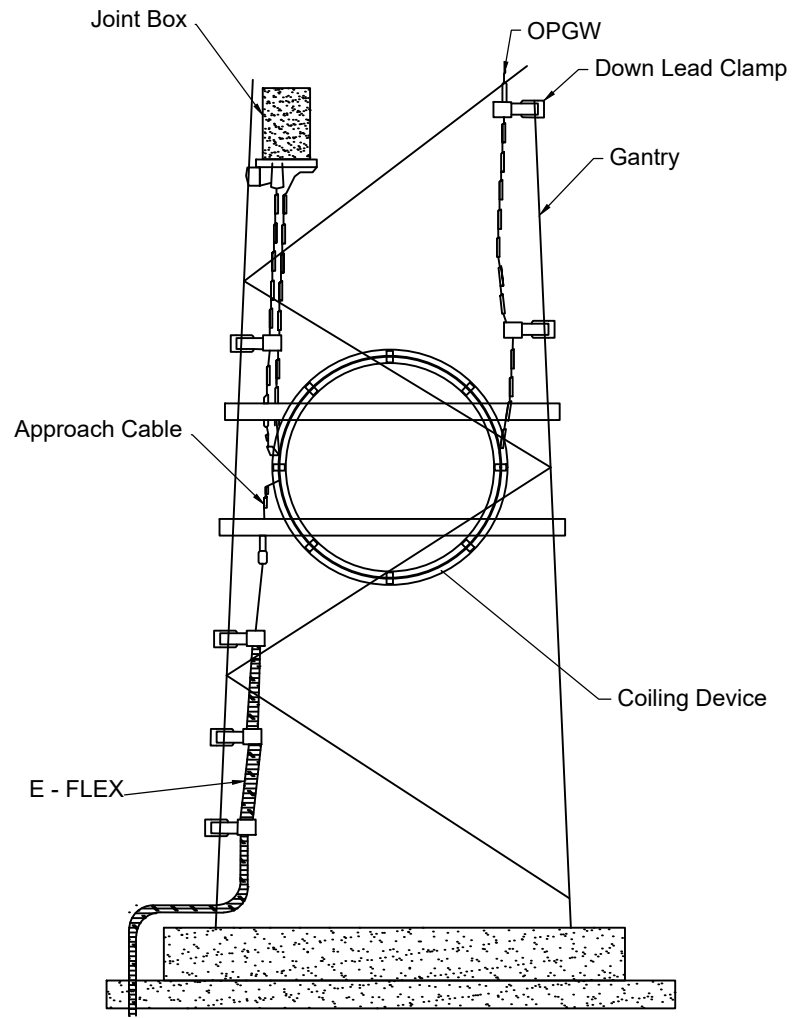


Project Title  
RFP FOR PSIYAMBALANDUWA SOLAR PV POWER PLANT

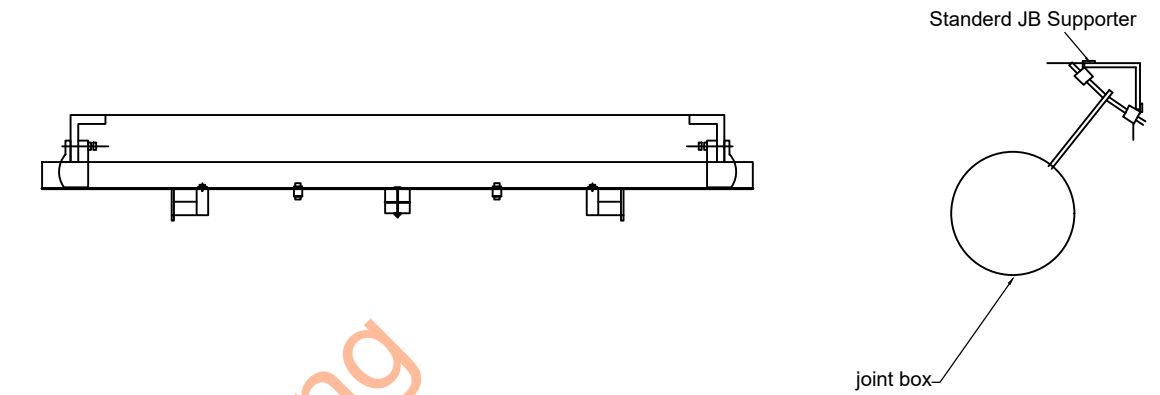
Funding Agency

Drawing Title  
TENSION & SUSPENSION FITTINGS  
FOR OPGW

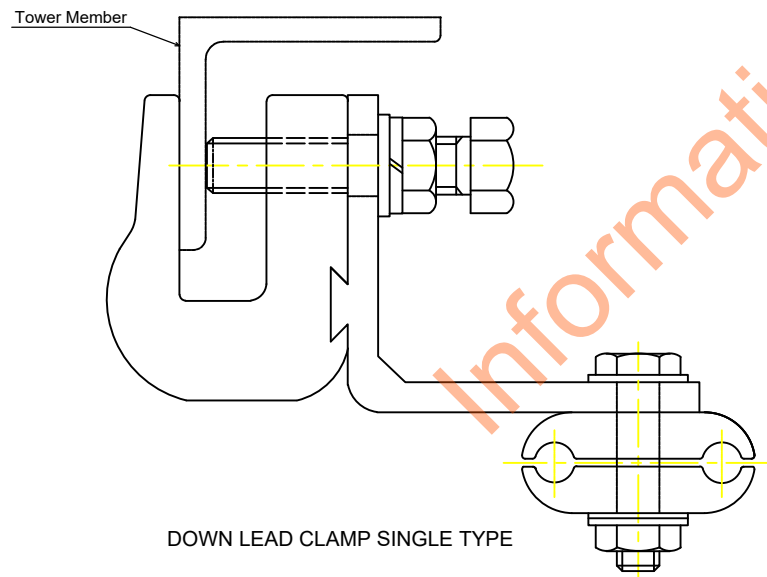
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Size - A3		Drawn Designed Checked Approved	02.06.2022
Sheet 1 of 1	Rev. 1		
Dwg. No. TD/CE/197/D/TYP/15-B		Released for Tendering Construction	



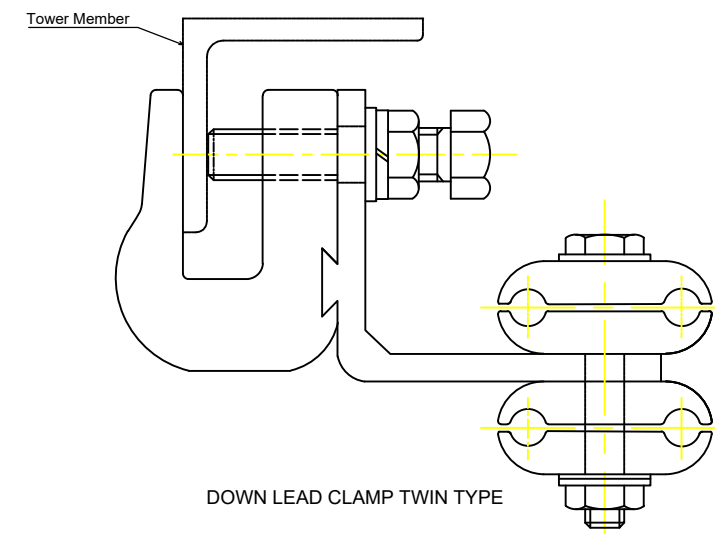
COOLING DEVICE & JOINT BOX FIXING ARRANGEMENT



COOLING DEVICE G



DOWN LEAD CLAMP SINGLE TYPE



DOWN LEAD CLAMP TWIN TYPE

Revision Record					
Rev. No.	Date	Description	Drawn	Checked	Approved



Project Title  
RFP FOR SIYAMBALANDUWA SOLAR PV POWER PLANT

Funding Agency

Drawing Title  
OPGW ACCESSORIES

Scale - NTS	Rev. Date	Signature	Date
Size - A3		Drawn Ranjana	02.06.2022
Sheet 1 of 1	Rev. 1	Checked Dayan	
Dwg. No. TD/CE/197/D/TYP/15-C		Approved	
		Released for Tendering	
		Construction	