

FOR CONSENT ONLY
NOT FOR CONSTRUCTION

No.	Revision	By	Chk	Appd	Date
2	OIL TANK AND BUILDING LOCATION UPDATED, STOCK FENCE REMOVED	AAN	KF	MJ	11.23
1	FIRST ISSUE	AAN	KF	MJ	10.23

Original Scale (A3)	N.T.S				
Design	A. van Zyl	10.23	Approved For Construction*		
Drawn	A. Nazarloo	10.23			
Dwg Verifier	K. Friesen	10.23	N/A		
Drg Check	K. Friesen	10.23	Date	N/A	
* Refer to Revision 1 for Original Signature					

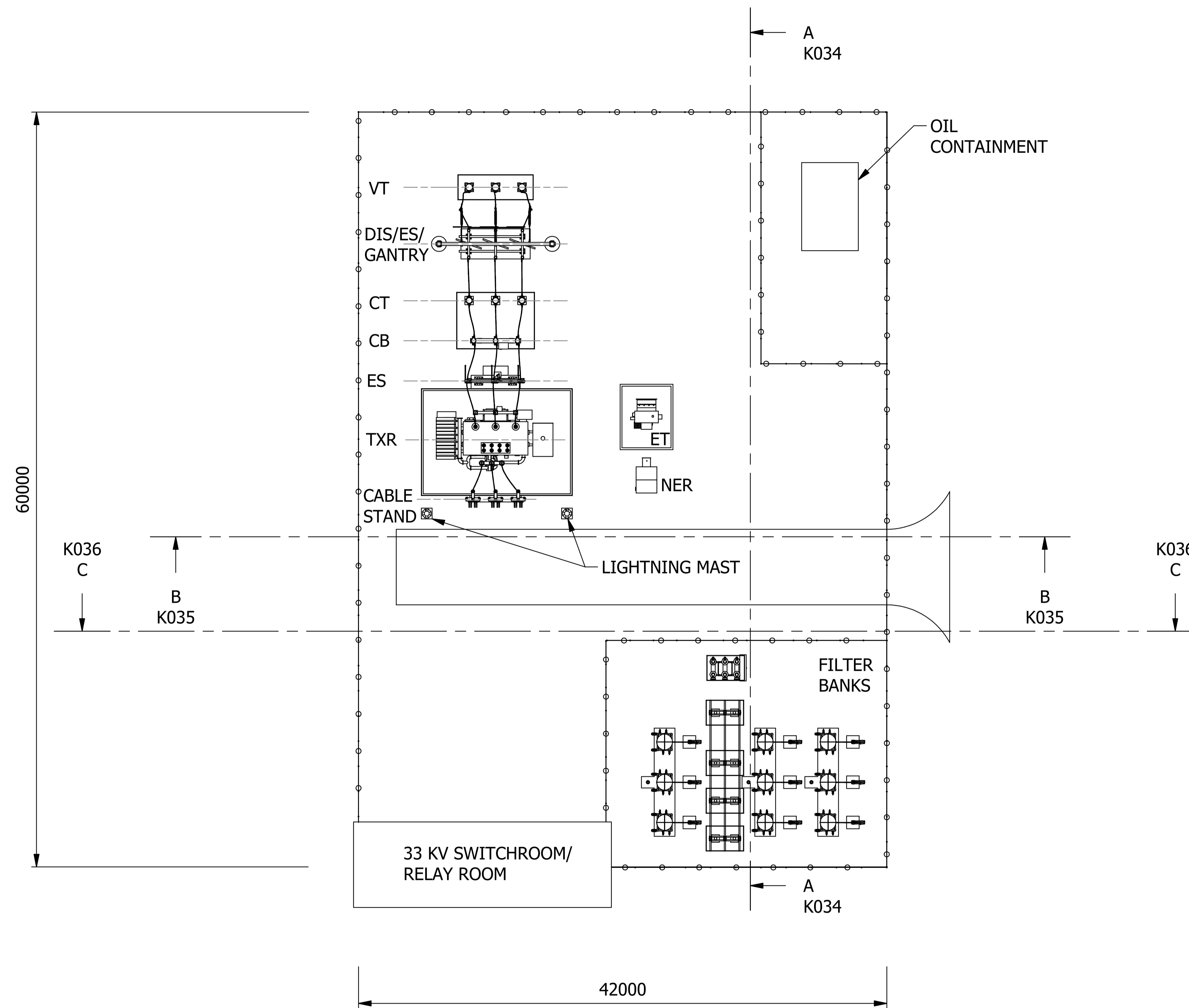


Client: **HELIOS ENERGY LIMITED**

Project: **ONGAONGA SOLAR FARM**

Title: **110/33 kV COLLECTOR SUBSTATION ISOMETRIC (CONCEPT DESIGN)**

Discipline	PRIMARY	
Drawing No.	Beca Project Number: 2867737	Rev.
2867737-UP-K032		2



- LEGEND:**
- VT = VOLTAGE TRANSFORMER
 - DIS = DISCONNECTOR
 - CT = CURRENT TRANSFORMER
 - CB = CIRCUIT BREAKER
 - ES = EARTH SWITCH
 - ET = EARTHING TRANSFORMER
 - NER = NEUTRAL EARTH RESISTOR
 - TXR = TRANSFORMER
 - SWITCHYARD FENCE

SUBSTATION LAYOUT
SCALE 1 : 400

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Original Scale (A3)	Design	Drawn	Dwg Verifier	Dwg Check	Approved For Construction*
N.T.S	A. van Zyl	A. Nazarloo	K. Friesen	K. Friesen	N/A
					Date N/A

* Refer to Revision 1 for Original Signature

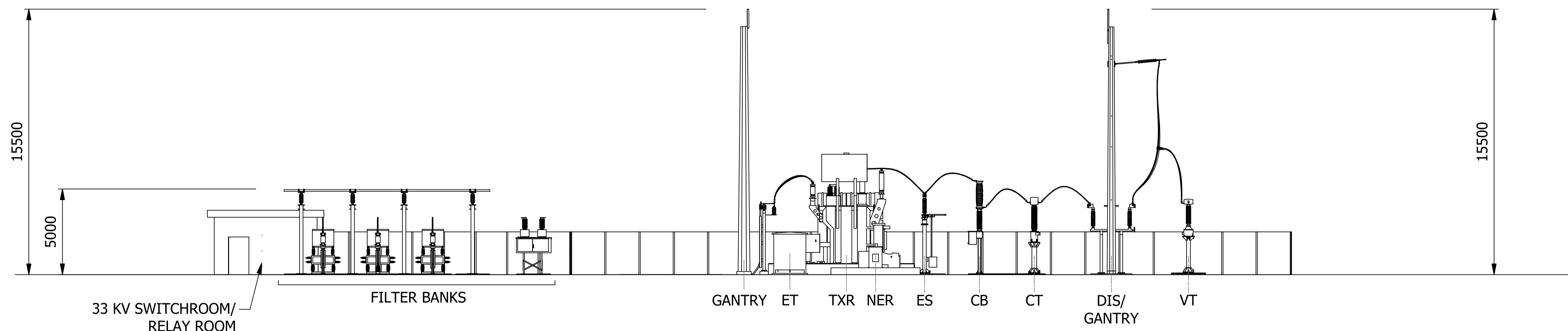


Client: **HELIOS ENERGY LIMITED**

Project: **ONGAONGA SOLAR FARM**

Title: **110/33 KV COLLECTOR SUBSTATION LAYOUT (CONCEPT DESIGN)**

Discipline	Drawing No.	Beca Project Number	Rev.
PRIMARY	2867737-UP-K033	2867737	2



SECTION A-A
SCALE 1 : 250
2867737-UP-K033

LEGEND:

- VT = VOLTAGE TRANSFORMER
- DIS = DISCONNECTOR
- CT = CURRENT TRANSFORMER
- CB = CIRCUIT BREAKER
- ES = EARTH SWITCH
- ET = EARTHING TRANSFORMER
- NER = NEUTRAL EARTH RESISTOR
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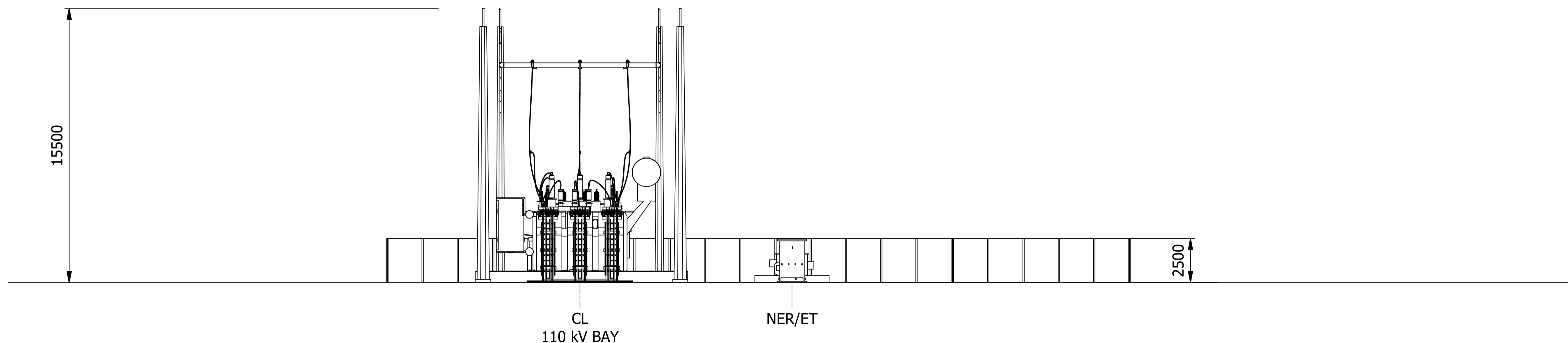
Original Scale (A3)	Design	Drawn	Dwg Verifier	Drg Check	Approved For Construction*
N.T.S	A. van Zyl	A. Nazarloo	K. Friesen	K. Friesen	Approved For Construction*
					N/A
					Date N/A

* Refer to Revision 1 for Original Signature



Client: HELIOS ENERGY LIMITED
Project: ONGAONGA SOLAR FARM

Title:	Discipline:
110/33 COLLECTOR SUBSTATION SECTION A-A (CONCEPT DESIGN)	PRIMARY
Drawing No. 2867737-UP-K034	Rev. 2



SECTION B-B
 SCALE 1 : 250
 2867737-UP-K033

LEGEND:
 ET = EARTHING TRANSFORMER
 NER = NEUTRAL EARTH RESISTOR

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1	FIRST ISSUE	AAN	KF	MJ	10.23

Original Scale (A3)	Design	Drawn	Dwg Verifier	Drg Check	Approved For Construction*
N.T.S	A. van Zyl	A. Nazarloo	K. Friesen	K. Friesen	N/A
					Date N/A

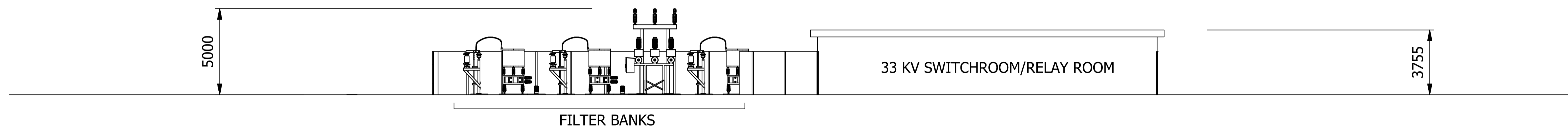
* Refer to Revision 1 for Original Signature



Client: HELIOS ENERGY LIMITED
 Project: ONGAONGA SOLAR FARM

Title: 110/33 kV COLLECTOR SUBSTATION
 SECTION B-B
 (CONCEPT DESIGN)

Discipline	Primary
Drawing No.	2867737-UP-K035
Rev.	2



SECTION C-C
SCALE 1 : 250
2867737-UP-K033

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1	FIRST ISSUE	AAN	KF	MJ	10.23

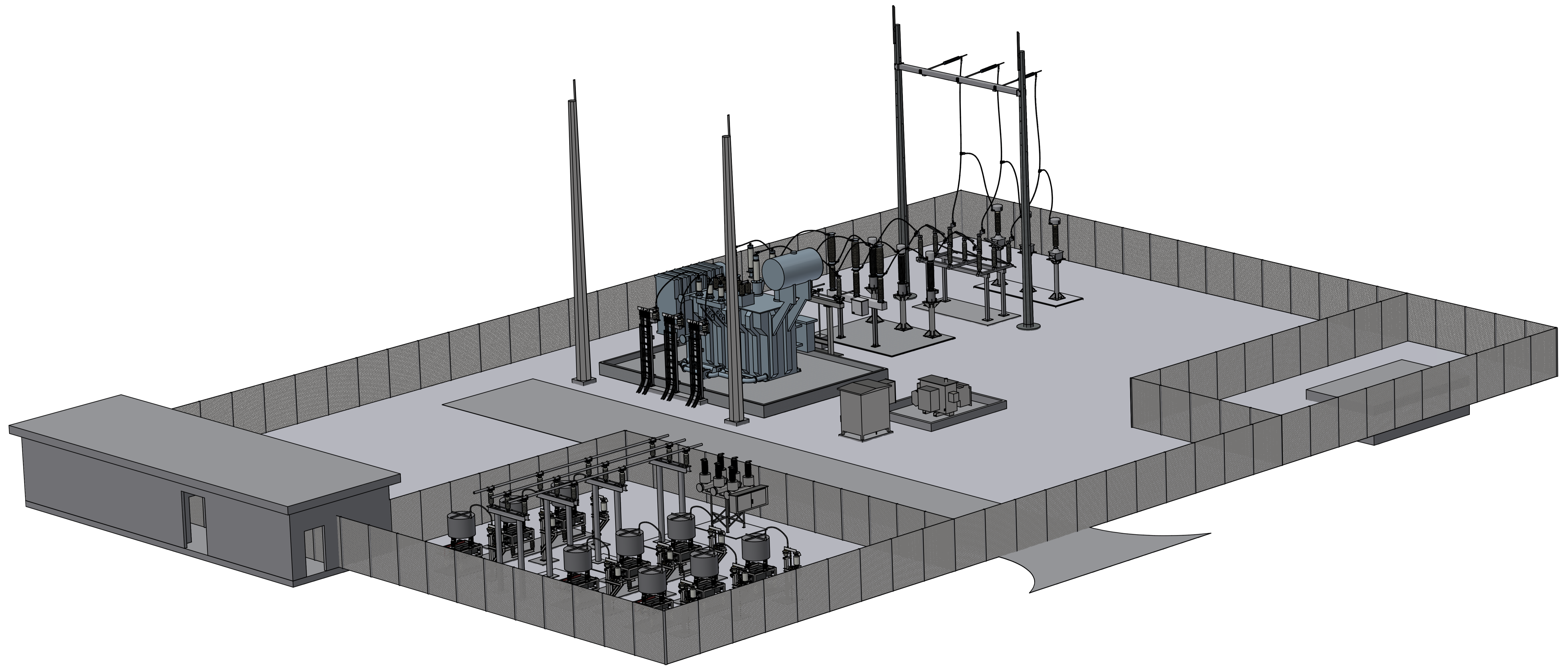
Original Scale (A3)	N.T.S
Design	A. van Zyl 10.23
Drawn	A. Nazarloo 10.23
Dsg Verifier	K. Friesen 10.23
Drg Check	K. Friesen 10.23
Approved For Construction*	N/A
Date	N/A
* Refer to Revision 1 for Original Signature	



Client: HELIOS ENERGY LIMITED
Project: ONGAONGA SOLAR FARM

Title: 110/33 KV COLLECTOR SUBSTATION
SECTION C-C
(CONCEPT DESIGN)

Discipline	PRIMARY
Drawing No.	2867737-UP-K036
Beca Project Number: 2867737	Rev. 2



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N.T.S	A. van Zyl	A. Nazarloo	K. Friesen	K. Friesen	N/A
					Date N/A

* Refer to Revision 1 for Original Signature



Client: **HELIOS ENERGY LIMITED**

Project: **ONGAONGA SOLAR FARM**

Title: **110/33 kV COLLECTOR SUBSTATION PERSPECTIVE (CONCEPT DESIGN)**

Discipline	Rev.
PRIMARY	2

Drawing No. **2867737-UP-K037** Beca Project Number: 2867737