



SC Habsev GRUP SRL
Uzinelor 90

Republica Moldova

Contact person:

Phone: +37369107286

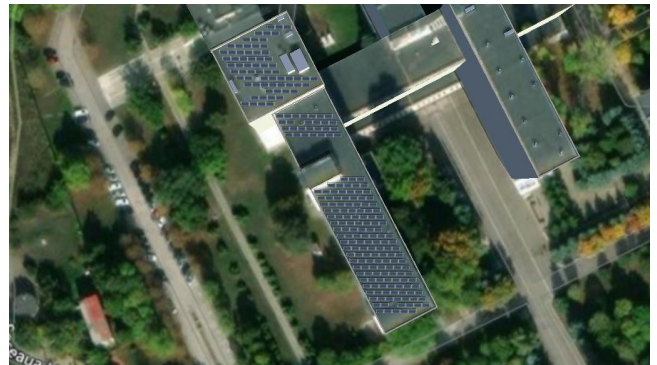
E-Mail: office@habsev.md

18.03.2024

Your PV system from SC Habsev GRUP SRL

Address of Installation

Tabara militara nr.123, mun. Chișinău



Project Overview



Figure: Overview Image, 3D Design

PV System

3D, Grid-connected PV System

Climate Data	Chisinau, MDA (1991 - 2010)
PV Generator Output	140,42 kWp
PV Generator Surface	665,3 m ²
Number of PV Modules	238
Number of Inverters	2

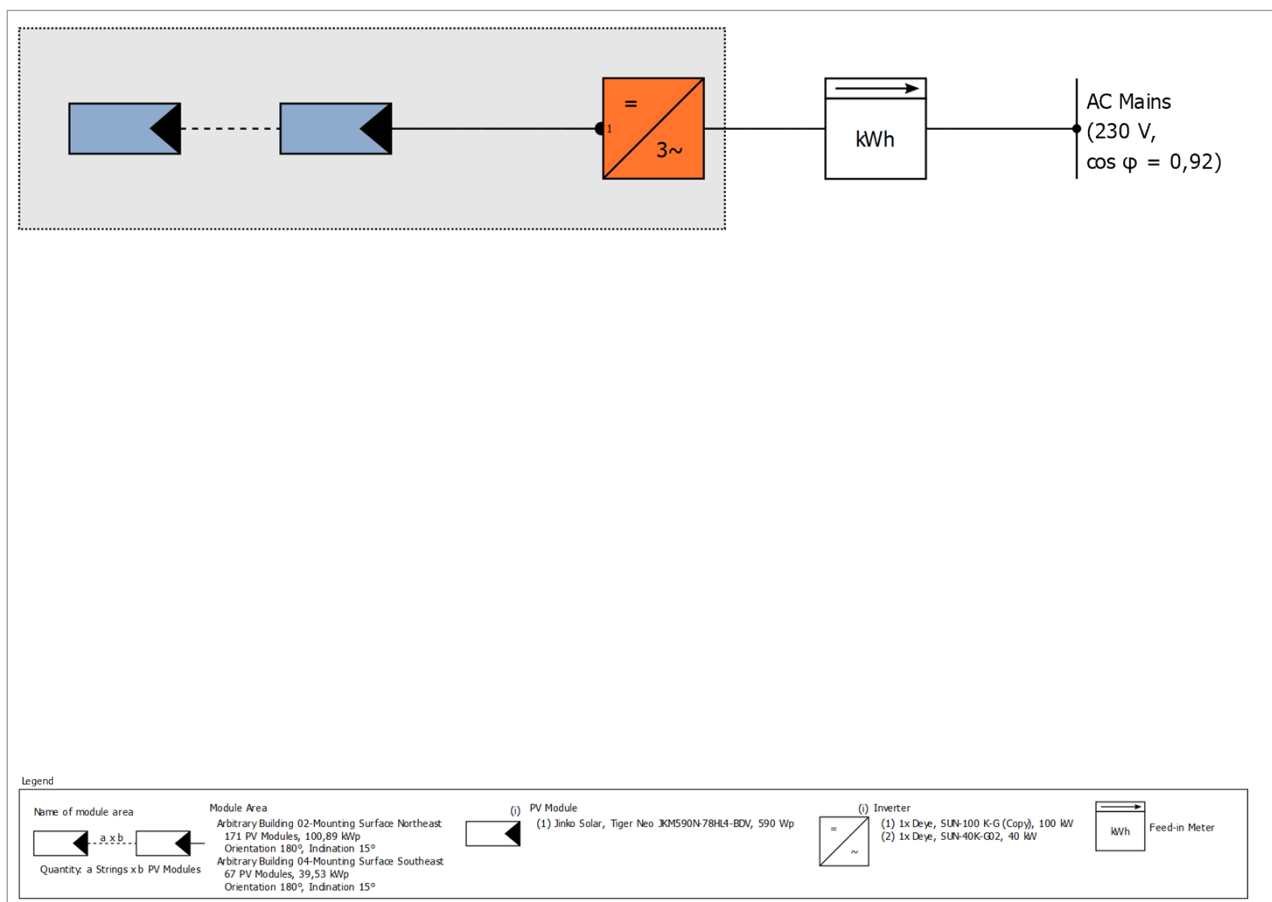


Figure: Schematic diagram

The yield

The yield

PV Generator Energy (AC grid)	162 584 kWh
Grid Feed-in	162 583 kWh
Down-regulation at Feed-in Point	0 kWh
Own Power Consumption	0,0 %
Solar Fraction	0,0 %
Spec. Annual Yield	1 157,02 kWh/kWp
Performance Ratio (PR)	80,1 %
Yield Reduction due to Shading	6,7 %/Year
CO ₂ Emissions avoided	76 360 kg / year

The results have been calculated with a mathematical model calculation from Valentin Software GmbH (PV*SOL algorithms). The actual yields from the solar power system may differ as a result of weather variations, the efficiency of the modules and inverter, and other factors.

Set-up of the System

Overview

System Data

Type of System	3D, Grid-connected PV System
Start of Operation	12.03.2024

Climate Data

Location	Chisinau, MDA (1991 - 2010)
Resolution of the data	1 h
Simulation models used:	
- Diffuse Irradiation onto Horizontal Plane	Hofmann
- Irradiance onto tilted surface	Hay & Davies

Module Areas

1. Module Area - Arbitrary Building 02-Mounting Surface Northeast

PV Generator, 1. Module Area - Arbitrary Building 02-Mounting Surface Northeast

Name	Arbitrary Building 02-Mounting Surface Northeast
PV Modules	171 x Tiger Neo JKM590N-78HL4-BDV (v1)
Manufacturer	Jinko Solar
Inclination	15 °
Orientation	South 180 °
Installation Type	Mounted - Roof
PV Generator Surface	478,0 m ²



Figure: 1. Module Area - Arbitrary Building 02-Mounting Surface Northeast

2. Module Area - Arbitrary Building 04-Mounting Surface Southeast

PV Generator, 2. Module Area - Arbitrary Building 04-Mounting Surface Southeast

Name	Arbitrary Building 04-Mounting Surface Southeast
PV Modules	67 x Tiger Neo JKM590N-78HL4-BDV (v1)
Manufacturer	Jinko Solar
Inclination	15 °
Orientation	South 180 °
Installation Type	Mounted - Roof
PV Generator Surface	187,3 m ²



Figure: 2. Module Area - Arbitrary Building 04-Mounting Surface Southeast

Inverter configuration

Configuration 1

Module Area	Arbitrary Building 02-Mounting Surface Northeast
Inverter 1	
Model	SUN-100 K-G (Copy) (v6)
Manufacturer	Deye
Quantity	1
Sizing Factor	100,9 %
Configuration	MPP 1: 2 x 15 MPP 2: 2 x 15 MPP 3: 2 x 14 MPP 4: 2 x 14 MPP 5: 2 x 14 MPP 6: 3 x 9

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Configuration 2

Module Area	Arbitrary Building 04-Mounting Surface Southeast
Inverter 1	
Model	SUN-40K-G02 (v1)
Manufacturer	Deye
Quantity	1
Sizing Factor	98,8 %
Configuration	MPP 1: 2 x 12
	MPP 2: 2 x 14
	MPP 3: 1 x 15

AC Mains

AC Mains

Number of Phases	3
Mains Voltage (1-phase)	230 V
Displacement Power Factor (cos phi)	+/- 0,92

Simulation Results

Results Total System

PV System

PV Generator Output	140,4 kWp
Spec. Annual Yield	1 157,02 kWh/kWp
Performance Ratio (PR)	80,1 %
Yield Reduction due to Shading	6,7 %/Year
Grid Feed-in	162 583 kWh/Year
Grid Feed-in in the first year (incl. module degradation)	162 583 kWh/Year
Standby Consumption (Inverter)	115 kWh/Year
CO ₂ Emissions avoided	76 360 kg / year

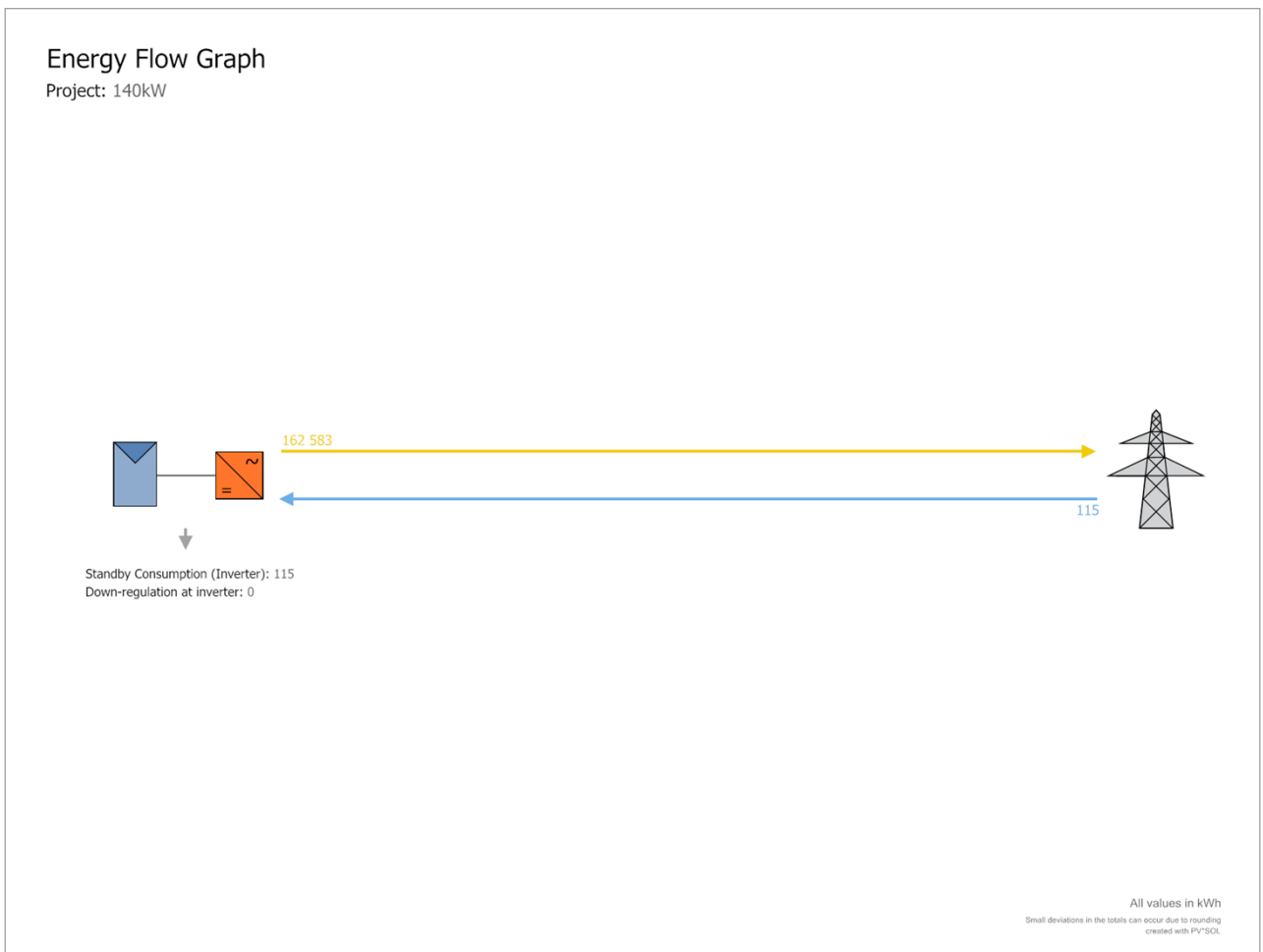
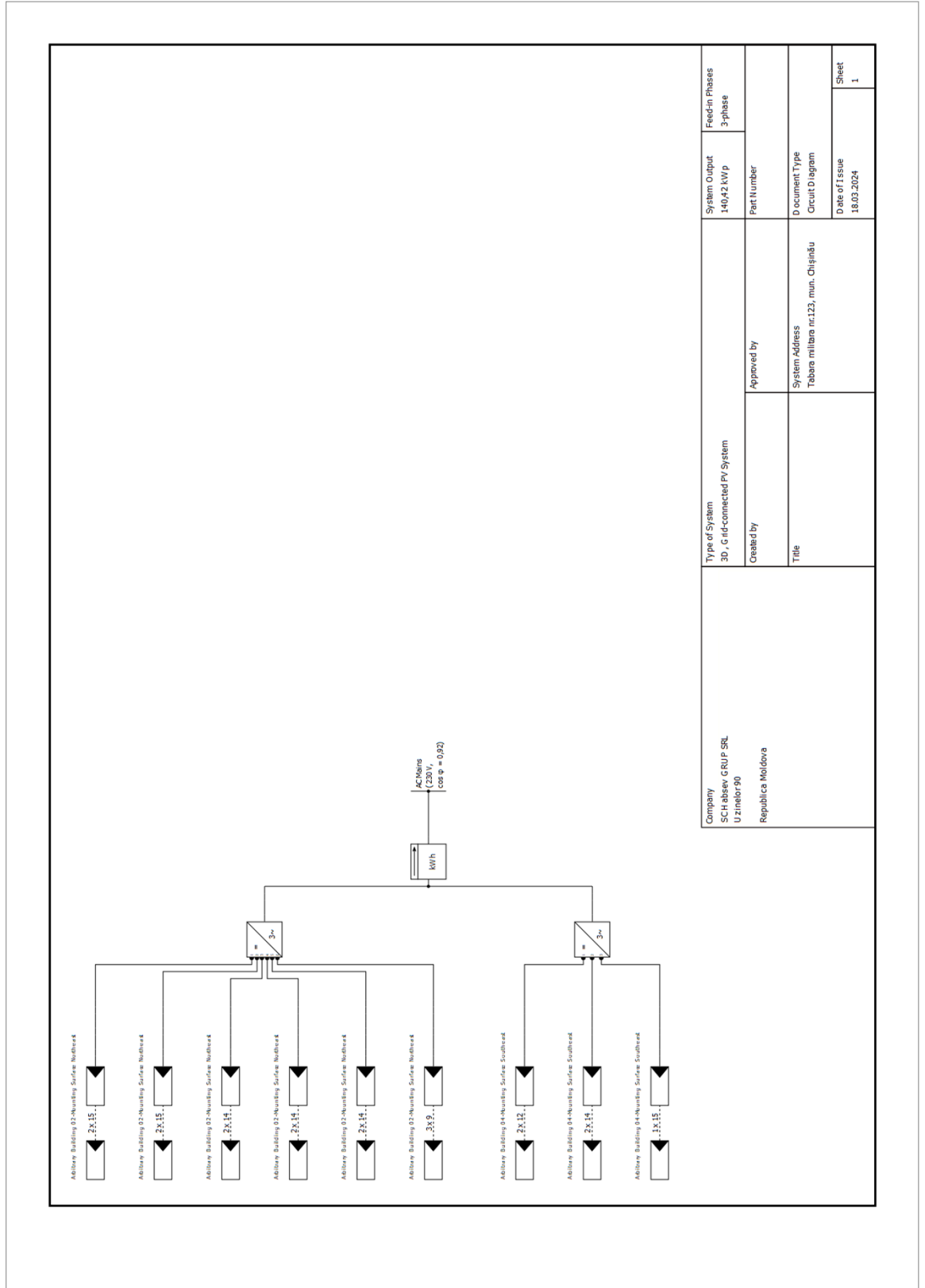


Figure: Energy Flow Graph

Plans and parts list

Circuit Diagram



Company SC Habsev GRUP SRL U zănelor 90 Republica Moldova	Type of System 3D / Grid-connected PV System	System Output 140.42 kWp	Feed-in Phases 3-phase
	Created by	Approved by	Part Number
Title		Document Type Circuit Diagram	Date of Issue 18.03.2024
		System Address Tabara milibare nr.123, mun. Chişinău	Sheet 1

Figure: Circuit Diagram

Dimensioning Plan

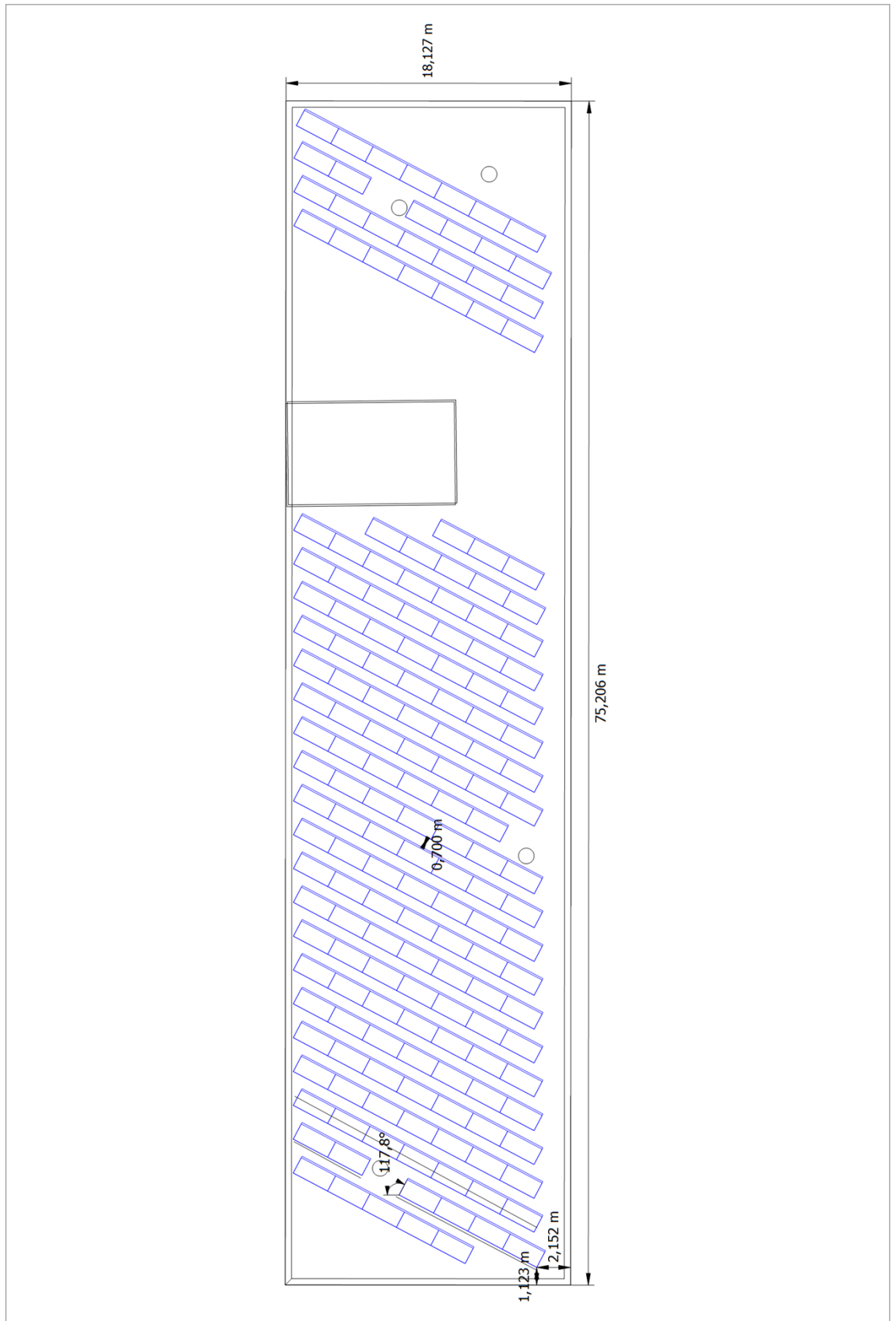


Figure: Arbitrary Building 02-Mounting Surface Northeast

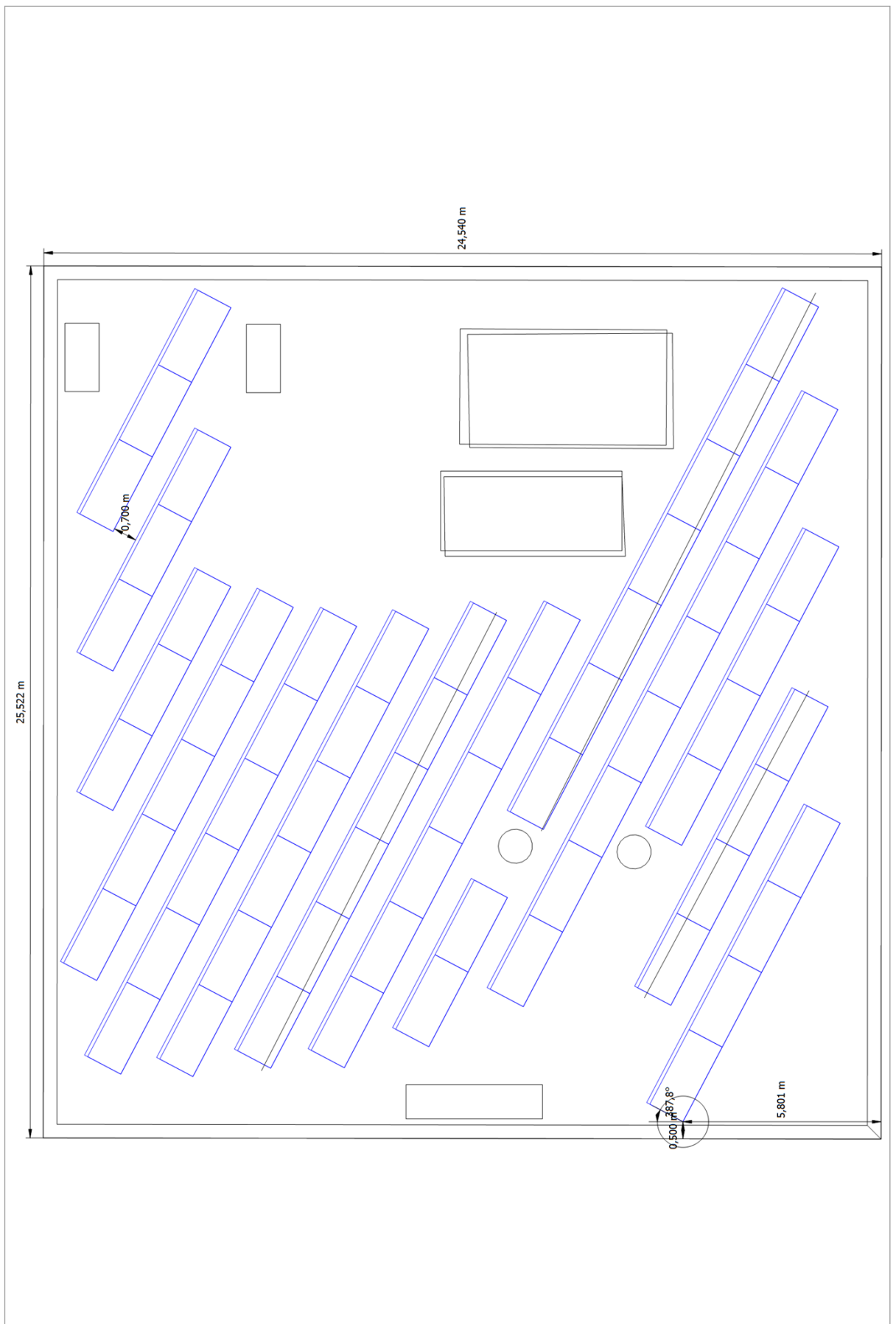


Figure: Arbitrary Building 04-Mounting Surface Southeast

String Plan

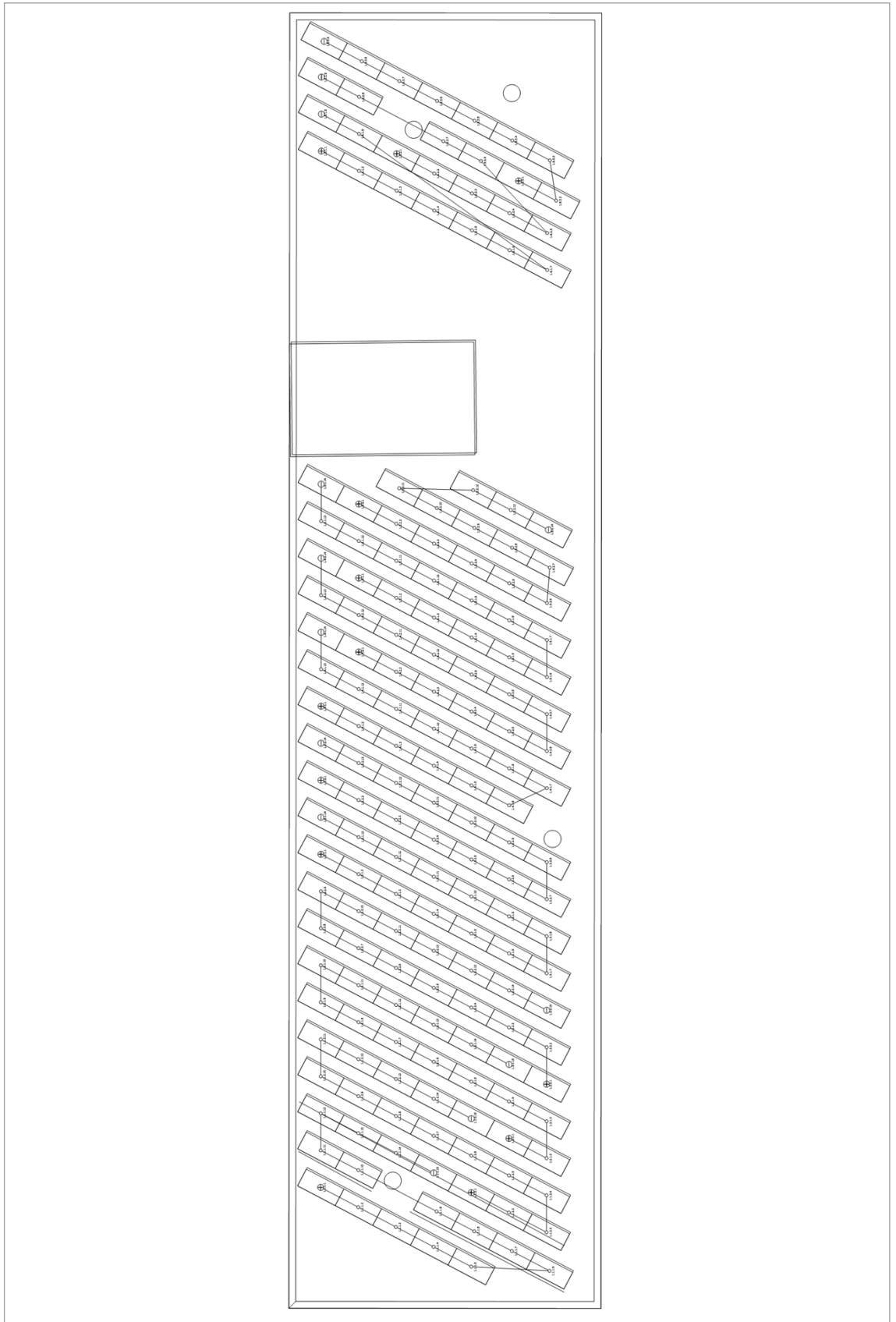


Figure: Arbitrary Building 02-Mounting Surface Northeast

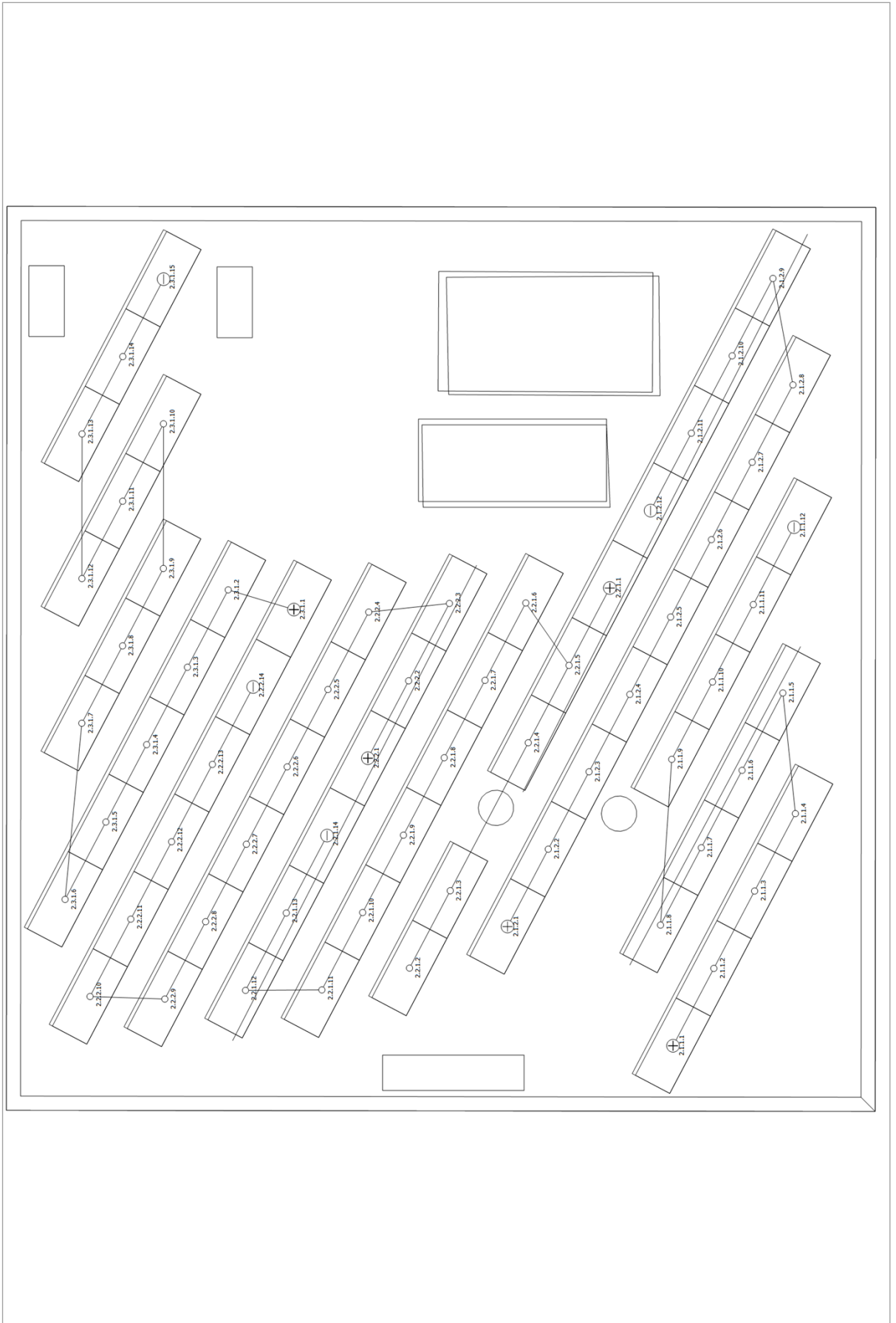


Figure: Arbitrary Building 04-Mounting Surface Southeast

Parts list

Parts list

#	Type	Item number	Manufacturer	Name	Quantity	Unit
1	PV Module		Jinko Solar	Tiger Neo JKM590N-78HL4-BDV	238	Piece
2	Inverter		Deye	SUN-100 K-G (Copy)	1	Piece
3	Inverter		Deye	SUN-40K-G02	1	Piece
4	Components			Feed-in Meter	1	Piece