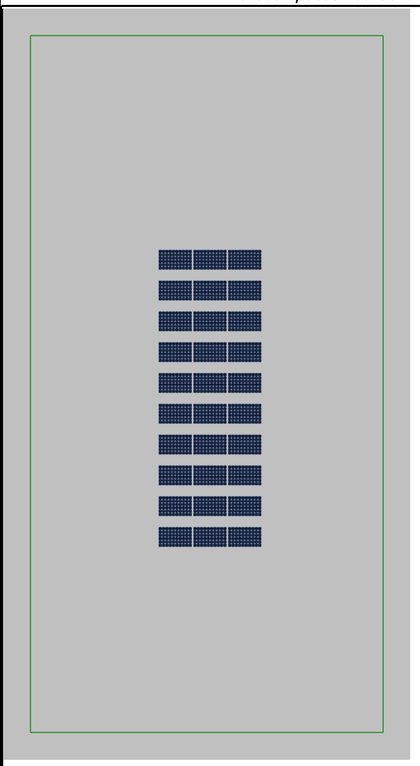

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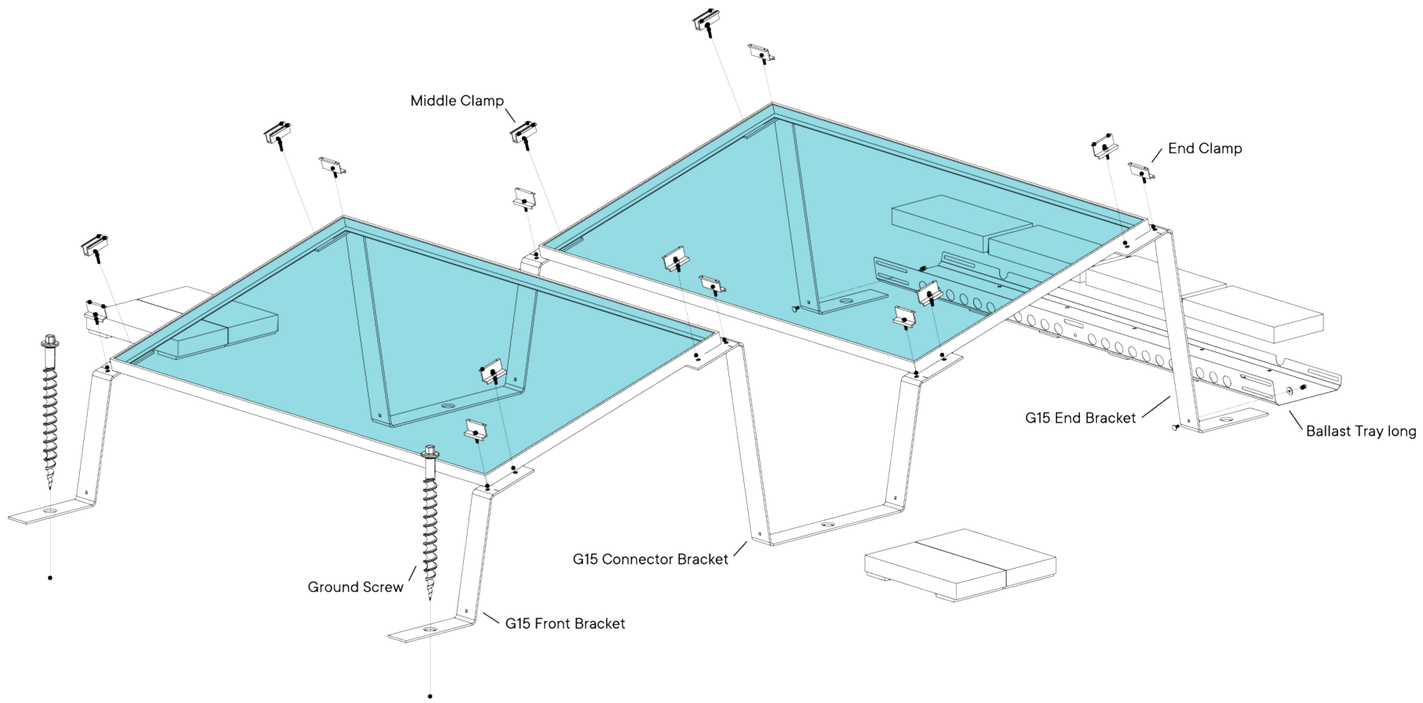

Design Parameters

building code	ASCE 7-10
wind exposure	Exp. C
building height	0 ft
occupancy	I
snow load	20 psf (ground) 20 psf (roof)
basic wind speed	105 mph (region)
wind load	20.37 psf (roof)
surface type	Ground mount
friction coeff.	0.5

Module Layout

PV Modules

manufacturer	Mission Solar Energy, LLC
type	MSE345SX5T
power	345 W
dimensions (l x w x h)	68.82 in x 41.5 in x 1.57 in
weight	44.75 lbs
total number	30 pcs
DC output	10,350 W
arranged in	1 arrays
array size	30 - 30 modules

Mounting System

COMPACTGROUND G15/20

row spacing	22 in
orientation	Parallel to edge
azimuth	180 °

Roof Loading

modules	1,342.62 lbs
racking	1,766.08 lbs
ballast	5,120 lbs
Total	6,886.08 lbs

(not including snow load and downforce by wind)

Project **[Robert_Atkinson_G15]**

building	Building	roof	Ground mount

Design Summary

Project Site

address	16400 Dove Meadow Road, Canyon Texas 79015 USA
location	35.0415 °N / -101.976 °W
elevation	44,094.49 in
inclination	0 °
total area	8,584.2 ft²
DC output	10,350 W

revision no.	modifications made	date

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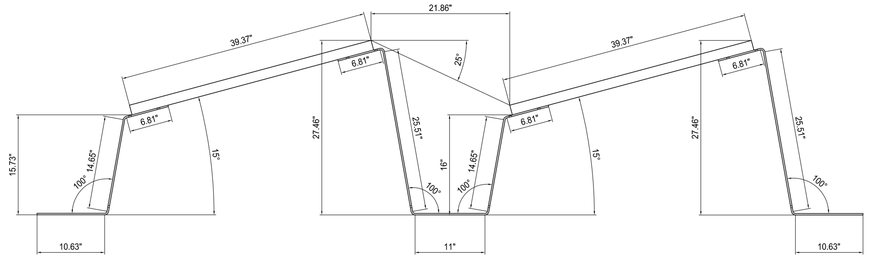
Side Profile of PV Array

module length	68.82 in
gap between modules	0.79 in
max. modules in a row	3
max. array length	597.48 in



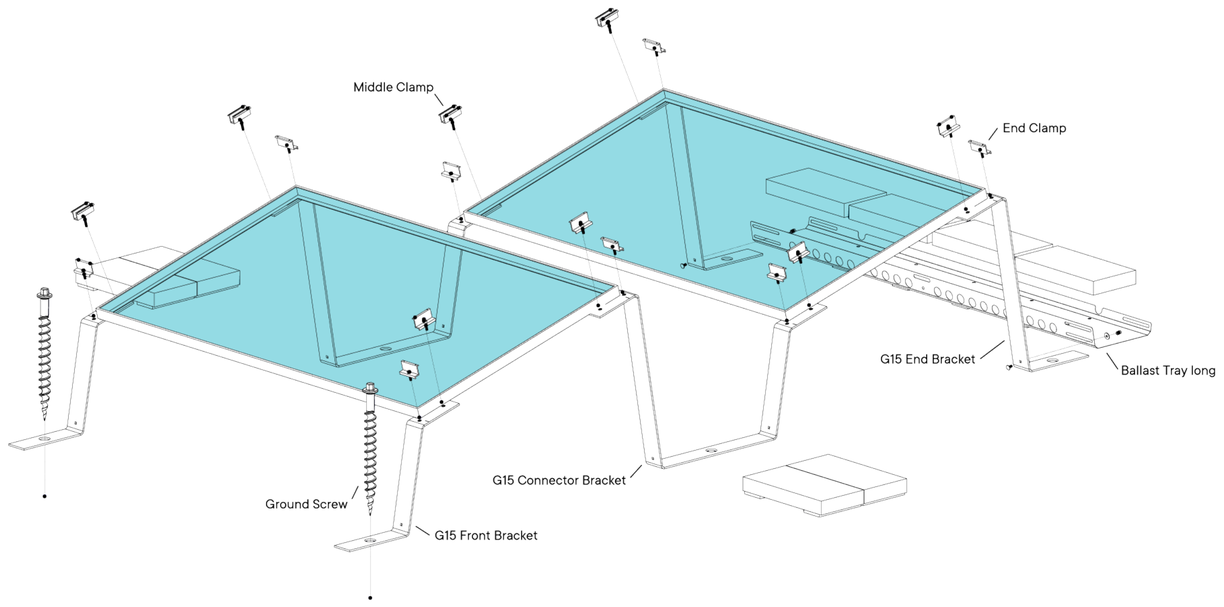
max. Array Size

192	modules
863.16 ft²	
10,350 W	

Mounting System

COMPACTGROUND G15/20

row spacing	21.85 in



Project **[Robert_Atkinson_G15]**

building	Building	roof	Ground mount

System Dimensions

Notes

Please Note:
Heavy oversizing of module arrays may cause major thermal expansion/contraction movement of PV systems vs. the roof surface, eventually damaging the roof's waterproofing.

Reducing the suggested gaps between PV module arrays may complicate installation and maintenance work or even cause collisions between modules, system parts, and ballast.

Standard array sizing, spacing, and positioning may not fully account for extreme environments and impacts from in- or outside the roof unknown to or neglected by designers.

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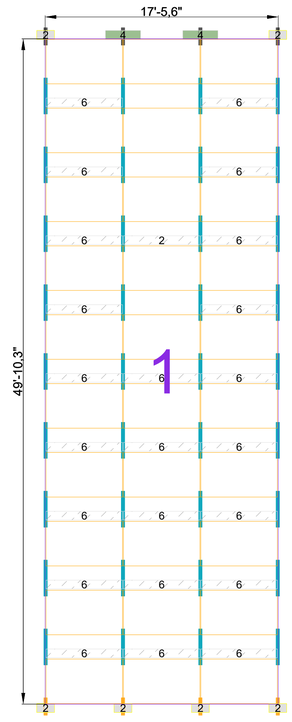

∑Total Upl.: 4,339.51 lbs
∑Total Sli.: 5,284.48 lbs
∑Total Ballast blocks 160 x 32 lbs = (5,120 lbs)
∑Total ballast components 191.98 lbs

Project **[Robert_Atkinson_G15]**

building	Building	roof	Ground mount

Installation Plan

Section Roof Overview

PV module quantity:	30 @ 345 W	ballast block quantity:	160 @ 32 lbs
DC output	10,350 W	ballast weight	5,120 lbs

Ballast elements are generally not provided by Aerocompact.
The person in charge of providing the ballast blocks needs to
- make sure that the blocks match the designed values in
length, width, height, and weight,
- make sure that the cement / concrete is well hardened
to avoid severe alkaline leaching,
- make sure that the block material exhibits a long-term
compressive strength of 3,000 psi.

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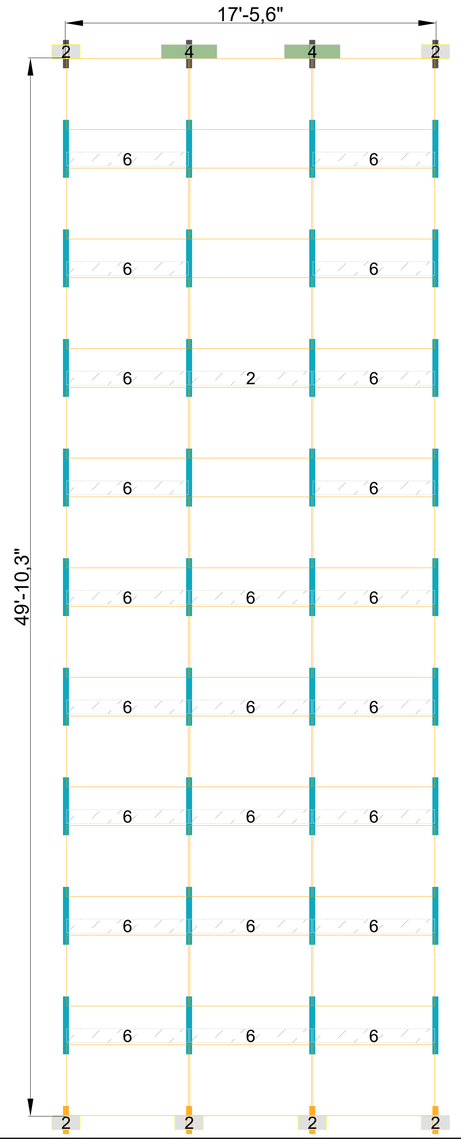

item no.	description	pieces
821539	G15CNS Connector G15/25	36
821525	G15EB End bracket G15	4
821515	G15FB Front bracket G15	4
706001-1800	BT-1800 Ballast tray long 1800mm (70.9")	24
820302-30-50VP2	CLMG10 Middle clamp ground mount 30-50mm	40
82030540	CLEG10-40 End clamp ground mount 40mm	120

Project **[Robert_Atkinson_G15]**

building	Building	roof	Ground mount

Installation Plan

Array no. 1

overall length	597.48 in
overall width	208.03 in
surface covered	863.16 ft²
PV modules	30
DC output	10,350 W
ballast blocks	160
ballast weight	5,120 lbs
system weight	6,886.08 lbs
roof loading	7.98 psf

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