

PROJECT No: 103.502 Heliotropic Technologies
 PROJECT Name: Allagash Brewery
 50 Industrial Way, Portland, ME 04103

PARAMETERS

Wind Speed (3 second gust)	90 mph
Exposure Category (per ASCE 7)	B
Occupancy Category (per ASCE 7)	II
Importance Factor	1.00
Terrain Features	No
Parapet Height	3
Roof height	30 ft
Angle of array	25 degrees
Module	SolarWorld 285
module weight	39.5 lbs
module weight (adjusted for 5' length)	35.9 lbs
	x2 = <u>71.9 lbs</u>
solar dock weight	40 lbs
dock and module weight	112 lbs
row spacing	6.00 ft
global footprint	60.0 sq. ft.
dock width	3.28 ft
local footprint	32.8 sq. ft.

BALLAST REQUIREMENTS

area	decription	dock & module lbs	ballast lbs	total weight lbs	local weight psf	global weight psf
1	>=114 modules	112	153	265	8.1	4.4

Notes:

- Total weight and required weight of ballast shown is specific to the rows and areas indicated. Modification of the array will require additional evaluation and revised ballast requirements.
- Number of ballast blocks, sandbags, etc. is not indicated as individual unit weight varies. Total ballast weight per row can be determined by multiplying required ballast per dock by the number of docks and partial docks in individual row. Number of ballast blocks, sandbags, etc. can be determined by dividing the total ballast weight per row by the weight of the individual block, sandbag, etc. Recommended weight of individual ballast block, sandbag, etc. shall not exceed 50 pounds each. Ballast shall be evenly spaced along length of row unless noted otherwise. Maximum spacing shall not exceed 10'-0". Provide minimum of one ballast block, sandbag, etc. per dock when ballast is required.
- The building owner shall engage a structural engineer to review the capacity of the existing structure. The engineer, hereafter referred to as Engineer of Record (EOR) for the project, shall evaluate the increase in gravity and lateral forces including both wind and seismic effects. Existing building roof structure and lateral force resisting system shall be evaluated for compliance with local code requirements. Unless otherwise notified, it is understood that the building structure is sufficient for increased loading and no attachments are required.
- The EOR shall review building seismic design category (SDC). SolarDock arrays are intended to be installed on buildings of SDC A, B, or C. Additional engineering and roof attachments are required for buildings of SDC D, E, and F.
- A minimum 6' setback from roof edge is required. When this requirement cannot be met, the wind speed shall be magnified in proportion to the increase in edge and/or corner zones relative to field zone per ASCE 7 flat roof requirements.