

Project Details			
Name	Taylor Watson	Date	03/13/2023
Location	341 Southern Place, Lillington, NC 27546	Total modules	32
Module	Mission Solar Energy: MSE395SX9R (40mm)	Total watts	12,640
Dimensions	Dimensions: 75.08" x 41.5" x 1.57" (1907.0mm x 1054.0mm x 40.0mm)	Attachments	70
ASCE	7-10	Rails per row	2

System Weight	
Total system weight	1,779.0 lbs
Weight/attachment	25.4 lbs
Racking weight	227.0 lbs
Distributed weight	2.5 psf

Load Assumptions	
Wind exposure	C
Wind speed	117 mph
Ground snow load	15 psf
Attachment spacing portrait	4.0'

Roof Information			
Roof Material Family	Comp Shingle	Roof material	Comp Shingle
Building height	15 ft	Roof attachment	Flashfoot2
		Staggered attachments	Yes
Roof slope	27 °	Attachment hardware	Square
Risk category	II		

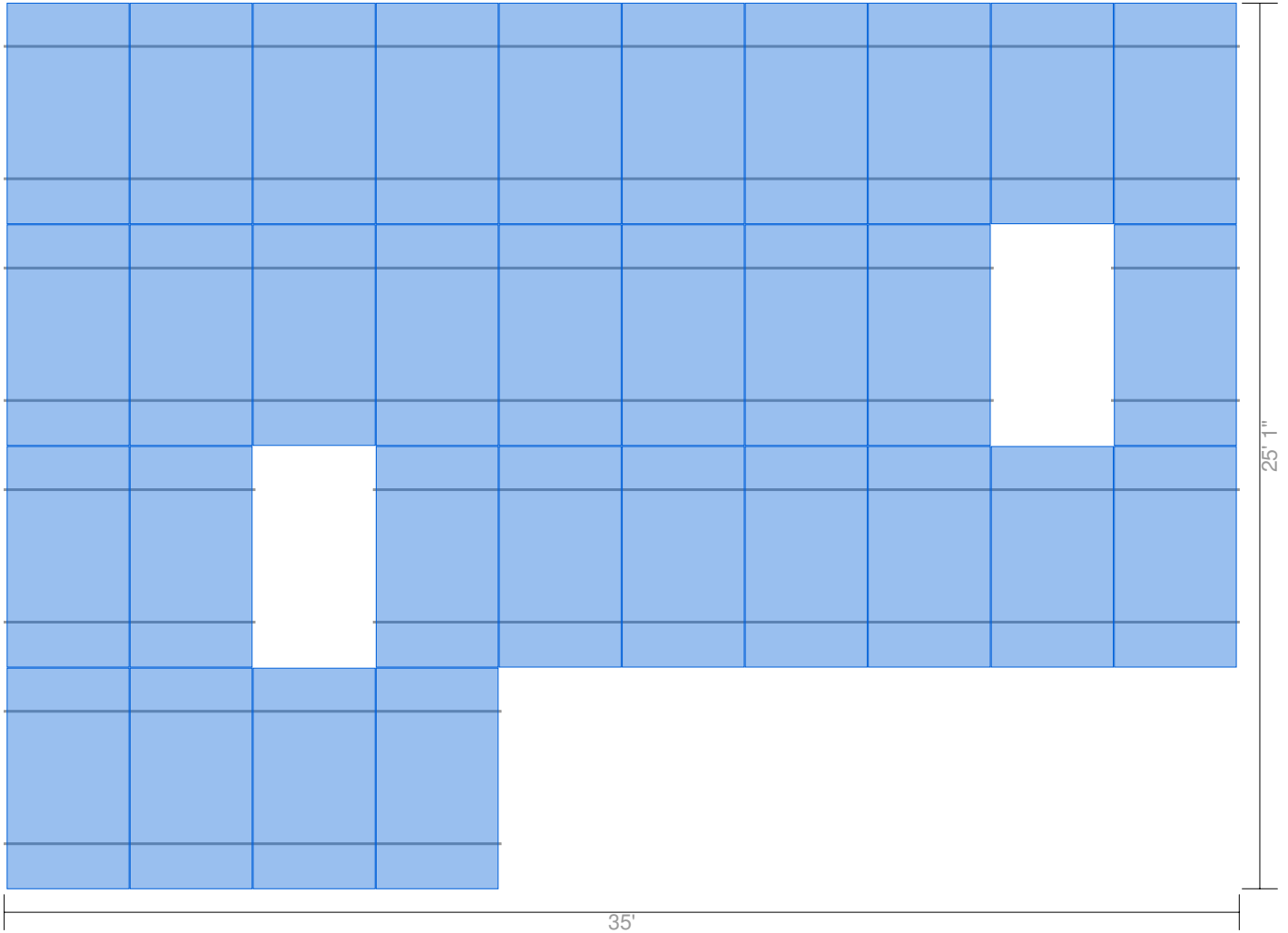
Span Details XR10 - Portrait		
Zone	Max span	Max cantilever
1	5' 11"	2' 4"
2	5' 6"	2' 2"
3	4' 5"	1' 9"

Reaction Forces XR10 - Portrait			
Zone	Down (lbs)	Uplift (lbs)	Lateral (lbs)
1	200	148	68
2	200	298	68
3	200	469	68

Roof Section 1

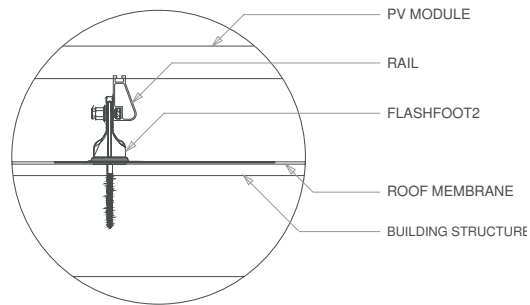
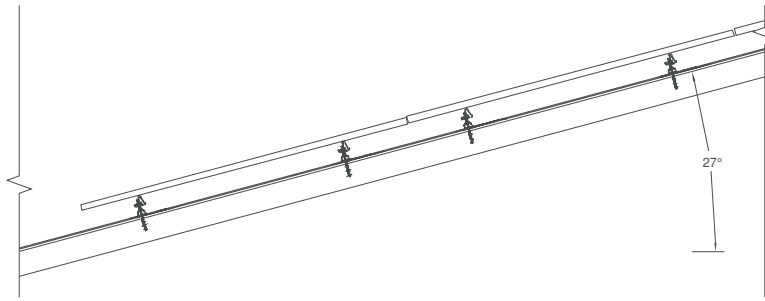
Details		Weights
Panels: 32	Provided rail: 336' [24 x 168"]	Total weight: 1,779.0 lbs
Rail orientation: East-West	Attachments: 70	Weight/attachment: 25.4 lbs
Panel orientation: Portrait	Splices: 12	Total Area: 703.8 sq ft
Entry type: Graphical	Clamps: 76	Distributed weight: 2.5 psf

Diagram

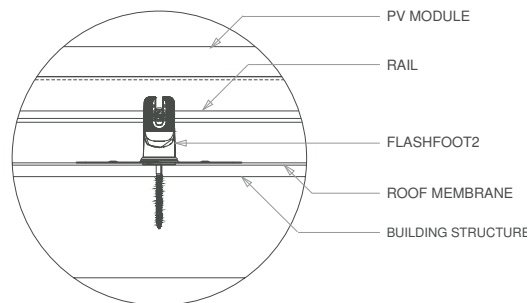
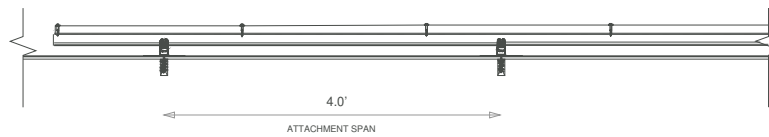


Segments								
Identifier	Columns	Row length	Rail length	Cantilever	Rail	Attachments	Splices	Clamps
A	10	35'	35'	1' 6"	84' [6 x 168"]	19	4	22
B	8	28' 1"	28' 1"	0"	84' [6 x 168"]	17	4	18
C	1	3' 8"	3' 8"	0"	28' [2 x 168"]	5	0	4
D	2	7' 1"	7' 1"	1' 7"	28' [2 x 168"]	5	0	6
E	7	24' 7"	24' 7"	3"	56' [4 x 168"]	15	2	16
F	4	14' 1"	14' 1"	1' 1"	56' [4 x 168"]	9	2	10

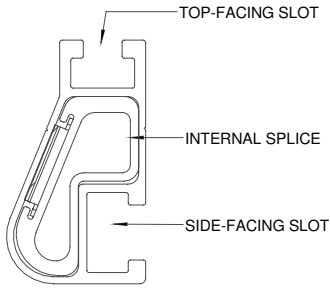
Side View (portrait)



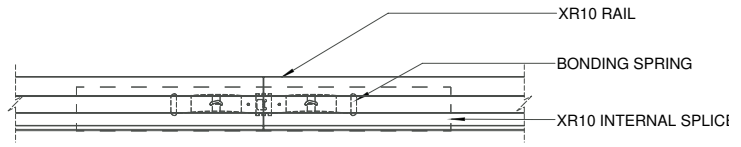
Front View (portrait)



Splice Details

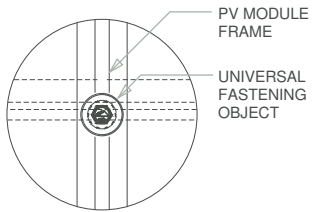


XR10

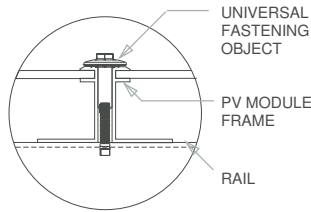


Splice Connection

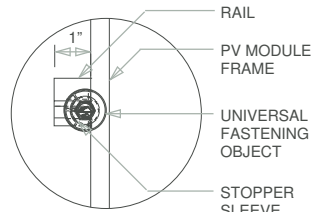
Clamp Detail



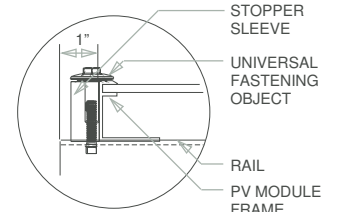
Mid Clamp, Plan



Mid Clamp, Front

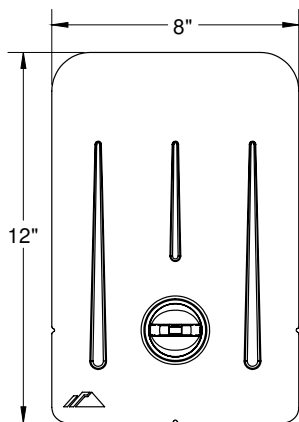


End Clamp, Plan

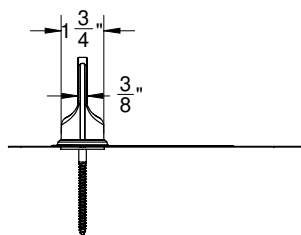


End Clamp, Front

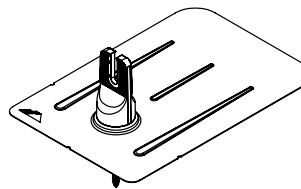
FlashFoot2 Detail



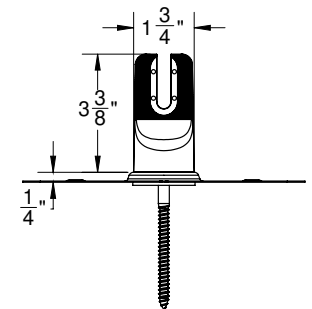
Plan View



Side View

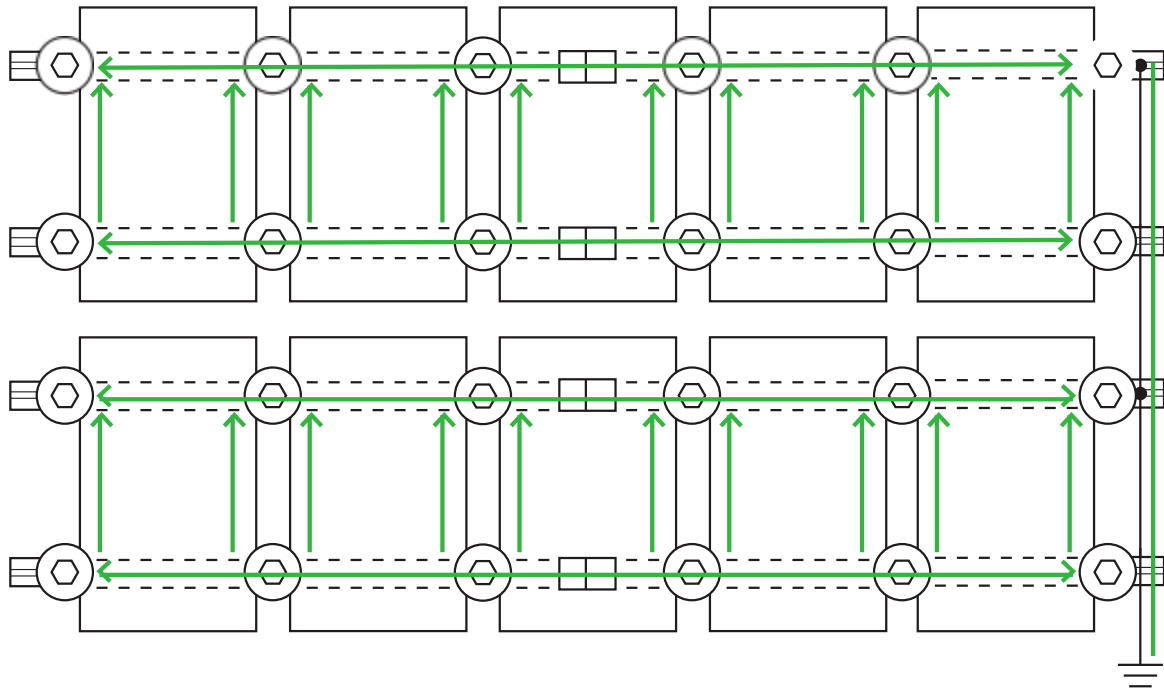


Perspective View




Front View

Grounding Diagram



 UFO Clamp

 Fault Current Ground Path

 Grounding Lug *

 Min 10 AWG Copper Wire *

 Bonded Splice (Rail Connection)

* Grounding Lugs and Wire are not required in systems using Enphase microinverters.

Bill of Materials

Part	Spares	Total Qty
Rails & Splices		
XR-10-168B XR10, Rail 168" (14 Feet) Black	0	24
XR10-BOSS-01-M1 Bonded Splice, XR10	0	12
Clamps & Grounding		
UFO-CL-01-B1 Universal Module Clamp, Black	0	76
UFO-STP-40MM-B1 Stopper Sleeve, 40MM, Black	0	24
XR-LUG-03-A1 Grounding Lug, Low Profile	0	6
Attachments		
FF2-02-B2 FlashFoot2, Black	0	70
BHW-SQ-02-A1 Square-Bolt Bonding Hardware	0	70