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237 COFFMAN STREET, UNIT A
LONGMONT, COLORADO 80501
970-376-5716

June 2, 2014

Sol Attach, LLC
Attn: Kevin Stapleton
16238 Bear Run
San Antonio, TX 78247

Reference: Solar Mounting System for Pitched Rooftops in California with Sol Attach and Sol Attach Max

To Whom it May Concern:

We have reviewed the Sol Attach Roof Mounting System for the design assumptions outlined below, and we have concluded that the Sol Attach Roof Mounting System is in compliance with the following codes/standards.

1. 2010 California Building Code
2. ASCE 7-05 –Minimum Design Loads for Buildings and other Structures, by ASCE/SEI, 2005
3. ASCE 7-10 – Minimum Design Loads for Buildings and other Structures, by ASCE/SEI, 2010

Design Assumptions:

- Maximum mean roof height of no more than 30'-0" as defined by ASCE 7-10/ASCE 7-05
- Importance Factor of no more than 1.0 as defined by ASCE 7-10/ASCE 7-05
- Dry service conditions
- Array may be located within roof zones 1, 2, or 3.
- Analysis of the mount is based upon the maximum effects of either the largest dead/seismic loads, or wind uplift loading under load combinations as defined in Section 16, 2010 CBC
- Fasteners installed per manufacturer specifications
- When using Sola Attach, four PV mounts per PV module such that adjacent modules share two PV mounts.
- When required to use three Sol Attach mounts on each side for a total of six PV mounts per PV module so that adjacent modules share three PV mounts. Mounts must be placed 1'-0" from pot and bottom of module with one mounts placed at mid span.
- Use two Sol Attach per side unless noted otherwise (See charts below).
- Seismic spectral response acceleration at short periods of no more than S_{DS}=1.7
- Snow load = 0 psf.

Product Specifications:

- Aluminum alloy is 6061-T6
- Kwikseal II Woodbinder Screws. The screws must penetrate the sheathing fully and have a minimum of three threads exposed.

Module Specifications:

- Modules may be installed in landscape or portrait orientation.
- Modules may have a maximum short side dimension of 39.1"
- Modules may have a maximum long side dimension of 77.1"
- Modules may be a maximum of 59.5 lb.

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Roof Pitch: 7-27°

Wind Speed, (V_{ult})	Wind Speed, (V_{asd})	Exposure	Fastener Req'd per Sol Attach w/ 7/16" OSB	Fastener Req'd per Sol Attach w/ 5/8" PLY.
180 mph ≥ x > 168 mph	140 mph ≥ x > 130 mph	D	(3) Sol Attach Max per side w/ (8) Screws ea.	(6) Screws
168 mph ≥ x > 154 mph	130 mph ≥ x > 120 mph	D	(3) Sol Attach per side w/ (6) screws ea.	(6) Screws
154 mph ≥ x > 142 mph	120 mph ≥ x > 110 mph	D	(8) Screws w/ Sol Attach Max	(4) Screws
142 mph ≥ x	110 mph ≥ x	D	(6) Screws	(4) Screws
180 mph ≥ x > 168 mph	140 mph ≥ x > 130 mph	C	(8) Screws w/ Sol Attach Max	(6) Screws
168 mph ≥ x > 154 mph	130 mph ≥ x > 120 mph	C	(8) w/ Sol Attach Max	(4) Screws
154 mph ≥ x	120 mph ≥ x	C	(6) Screws	(4) Screws
180 mph ≥ x > 142 mph	140 mph ≥ x > 110 mph	B	(6) Screws	(4) Screws
142 mph ≥ x	110 mph ≥ x	B	(4) Screws	(4) Screws

Roof Pitch: 27-45°

Wind Speed, (V_{ult})	Wind Speed, (V_{asd})	Exposure	Fastener Req'd per Sol Attach w/ 7/16" OSB	Fastener Req'd per Sol Attach w/ 5/8" PLY.
180 mph ≥ x > 168 mph	140 mph ≥ x > 130 mph	D	(6) Screws	(4) Screws
168 mph ≥ x	130 mph ≥ x	D	(4) Screws	(4) Screws
180 mph ≥ x	140 mph ≥ x	C	(4) Screws	(4) Screws
180 mph ≥ x	140 mph ≥ x	B	(4) Screws	(4) Screws

Please see attached data sheets for the Sol Attach Roof Mounting System specification sheet.

The Sol Attach Roof Mounting System was evaluated for pull-out resistance of the fasteners and punching shear in the sheathing. Review of any building element is outside the scope of this letter.

Let me know if you have any further questions regarding this matter.

Sincerely,

Ansel Design & Engineering

Matthew B. Davidson, PE
Principal Engineer

Reviewed by: