venture solar®

2/2/2023

Alfred Matoshi
306 5th Street
Mamaroneck, New York 10543

Re: Solar Panel Installation

Dear Mr./Ms. Matoshi,

At your request, Patrick Bussett of Venture Solar LLC (NY license #105278), has carefully reviewed the existing roof framing and the proposed connection of the panels to the roof for the building referenced above.

The following building codes were used in conjunction with the 2020 building code of New York State to generate pertinent design criteria:

ASCE 7-10 – Minimum Design Loads for Buildings and Other Structures
International Building Code 2018 Edition (IBC)
National Design Specification for Wood Construction 2015 Edition (NDS)

Design Criteria:
Design Gravity Load: Snow/Live Load = 30 lbs/ft^2, Dead Load = 12 psf
Design Wind Load: V_{ult} = 117 mph; Exposure B, Risk Category II
*Wind loads exceed seismic loads and therefore govern the design

Field observations identified the following conditions:

The new solar panels will impose an additional dead load of approximately 3 psf. Roofs A, B, and C consist of asphalt shingles over plywood sheathing supported by 2x8 rafters at 16" o.c. The rafters are sloped at a 7° pitch and have a maximum projected horizontal span of 12'-0"±. Roofs D and E consist of asphalt shingles over plywood sheathing supported by true size 2x4 rafters at 20" o.c. The rafters are sloped at a 42° pitch and have a maximum projected horizontal span of 6'-0"± between supports. The framing is assumed to be Douglas Fir #2 graded or better.

The calculations determined that the existing framing has adequate capacity to support the PV panels as shown in our PV panel layout plan with no structural upgrades required. I therefore certify that this installation complies with the applicable codes and is acceptable for approval. Please feel free to contact me if you have any questions or concerns.

Best,

Patrick Bussett, PE
Email: patrick.bussett@venturesolar.com