SOLAR INSTALLATION PLAN SET

Project: Residential Solar Installation

Property Address: 123 Sunshine Avenue, Solar City, CA 94123
Customer: John & Sarah Anderson
System Size: 8.4 kW DC / 7.2 kW AC
Panel Count: 24 x 350W Modules
Inverter: SolarEdge SE7600H-US
Mounting System: SnapNrack 100

SITE LAYOUT - ROOF PLAN
Page 1 of 3: System Overview & Site Plan
This plan set contains the engineering drawings and specifications
for the solar photovoltaic system to be installed at the above address.
All work to be performed in accordance with NEC 2020, local building codes,
and manufacturer installation guidelines.

SYSTEM SPECIFICATIONS:
- Azimuth: 180´° (South)
- Tilt: 22´° (Roof Pitch 5:12)
- Annual Production Estimate: 12,870 kWh
- Module Type: Monocrystalline, 350W

ELECTRICAL SINGLE-LINE DIAGRAM

Project: Residential Solar Installation

ELECTRICAL SPECIFICATIONS:

- String 1: 12 modules (North Array)
- String 2: 12 modules (South Array)
- Module Voc: 40.2V
- Module Isc: 11.3A
- Max System Voltage: 600V DC
- Max String Voltage: 482.4V (at -10´℃)
- Inverter Max Input Voltage: 500V DC
- Inverter Max Current: 20A per MPPT

INTERCONNECTION:

- Main Service Panel: 200A, 120/240V Single Phase
- Backfeed Breaker: 40A 2-pole
- Available Bus Rating: 200A
- Load Side Connection
- Rapid Shutdown: Module-level via SolarEdge Power Optimizers
- AC Disconnect: Integrated in Inverter
- Grounding: #6 AWG Copper to GEC

STRUCTURAL CALCULATIONS & NOTES

Project: Residential Solar Installation

ROOF INFORMATION:

- Roof Type: Composite Shingle
- Roof Age: 8 years
- Roof Material: Asphalt Shingle, Class A
- Roof Pitch: 5:12 (22.6 degrees)
- Rafter Spacing: 24" O.C.
- Rafter Size: 2x8

LOADING CALCULATIONS:

- Dead Load (Existing): 10 psf
- Dead Load (Added): 3.5 psf
- Live Load: 20 psf
- Snow Load: 0 psf
- Wind Speed: 110 mph
- Exposure Category: B
- Array Weight: 834 lbs
- Attachment Point Count: 48
- Load per Attachment: 17.4 lbs