



GRID Alternatives Installation Basics Training Certificate Program Skill Set Personal Tracking Sheet

Directions: Skills must be assessed by the Solar Installation Supervisor (SIS). Once competence in all skills within a Certificate have been demonstrated, that Certificate will become available to print through the Volunteer Portal on the My Profile tab at volunteer.gridalternatives.org.

It typically takes more than one attempt to have a skill signed off so please expect and accept constructive criticism from the Solar Installation Supervisor. Please respect these requirements so that we may maintain a high standard of quality work and training. Installation Basics Trainees typically log more than 100 volunteer hours in order to complete their skill set checklist. Ultimately skill check off is at the discretion of the SIS and can take three or more installs for a single skill.

Installation Basics Trainee Requirements:

- Potential IBTrainees must participate in at least one GRID Alternatives installation as a volunteer (unless job training program specifies otherwise).
- After these installs, attend an Installation Basics Training orientation.
- During subsequent installs attain and demonstrate competence in the skills listed below.
- Competency includes being able to teach other volunteers and computer based quizzes.
- Team Leader Certification requires all certificates within Array or Electrical be earned, attending a Team Leadership Workshop, and completion of two test installs where the volunteer performs the duties of a Team Leader.

Array Installation Basics	Name:	SIS Initials
Installation Basics Training (IBT) Orientation Attended	Date:	Verified in Portal <input type="checkbox"/>
Certificate and Required Skills	Notes / Things to Work On	
Job Site Safety	Date:	Verified in Portal <input type="checkbox"/>
Job Site Safety Quiz	Date:	Verified in Portal <input type="checkbox"/>
Demonstrate and encourage adherence to Heat Illness Prevention Plan		
Demonstrate proper use of PPE consistently		
Set up and explain OSHA requirements of proper ladder use		
Demonstrate and explain proper use of Power Tools		
Demonstrate and encourage compliance w/ site safety plan during all phases of the install		
Create a Job Site Safety Plan <i>(Optional)</i>		
Fall Protection	Date:	Verified in Portal <input type="checkbox"/>
Fall Protection Quiz	Date:	Verified in Portal <input type="checkbox"/>
Install, under supervision, fall protection to manufacturer's specifications		
Demonstrate and encourage fall protection safety plan during all phases of the install		
Array Layout	Date:	Verified in Portal <input type="checkbox"/>
Read and translate array layout plan to roof/ground considering setbacks and shade		
Mark layout for array and racking installation		
Locate rafter <u>center</u> and mark misses		
Racking Installation	Date:	Verified in Portal <input type="checkbox"/>
Maintain weatherproofing and watershedding integrity throughout installation process		
Install stand-offs and flashings to manufacturer's specifications		
Cut and splice rails to manufacturer's specifications		
Install and align rails to manufacturer's specifications		
Bond racking according to manufacturers specifications		
<i>Circle install types: Asphalt shingle Tile Ballasted Ground Parapet</i>		
Microinverter Installation	Date:	Verified in Portal <input type="checkbox"/>
Install trunk cable and manage wire		
Ensure trunk cable is properly terminated and watertight		
Install microinverters to manufacturer's specifications		
Module Installation	Date:	Verified in Portal <input type="checkbox"/>
Install and align modules to manufacturer's specifications		
Manage module leads/wires		
Ensure end and mid-clamps are properly seated and torqued		
Team Leadership Workshop Attended	Date:	Verified in Portal <input type="checkbox"/>
Array Leadership Test Install One	Date:	Verified in Portal <input type="checkbox"/>
Array Leadership Test Install Two	Date:	Verified in Portal <input type="checkbox"/>
Engage volunteers to ensure everyone is working		
Maintain a professional demeanor		
Lead Safety Talk		
Demonstrate and encourage compliance w/ site safety plan during all phases of the install		

Electrical Installation Basics		Name:	SIS Initials
Installation Basics Training (IBT) Orientation Attended	Date:	Verified in Portal	<input type="checkbox"/>
Certificate and Required Skills	Notes / Things to Work On		
Job Site Safety	Date:	Verified in Portal	<input type="checkbox"/>
Job Site Safety Quiz	Date:	Verified in Portal	<input type="checkbox"/>
Demonstrate and encourage adherence to Heat Illness Prevention Plan			
Demonstrate proper use of PPE consistently			
Set up and explain OSHA requirements of proper ladder use			
Demonstrate and explain proper use of Power Tools			
Demonstrate and encourage compliance w/ site safety plan during all phases of the install			
Create a Job Site Safety Plan (Optional)			
Electrical Safety	Date:	Verified in Portal	<input type="checkbox"/>
Electrical Safety Quiz	Date:	Verified in Portal	<input type="checkbox"/>
Identify electrical hazards and how they can be removed or controlled			
Test components with a multi-meter (A vs. V, DC vs. AC)			
Understand causes of arc flash and how and when to wear PPE			
Demonstrate electrical safety plan during all phases of the install			
Electrical Layout and Mounting	Date:	Verified in Portal	<input type="checkbox"/>
Read and translate single-line diagram to wall			
Plan and install electrical Balance of Systems			
Install box fittings and bushings			
Conduit Bending and Installation	Date:	Verified in Portal	<input type="checkbox"/>
Cut and ream conduit			
Measure and bend conduit for 90 degree angle			
Measure and bend conduit for offsets and kicks			
Measure and bend conduit for saddle bend			
Install flashing for stub up to manufacturer's specifications			
Install conduit to Code including appropriate strapping and fittings			
Ensure conduit is properly supported on blocks			
Electrical Wiring	Date:	Verified in Portal	<input type="checkbox"/>
Prepare and execute wire pull			
Strip wire cleanly without "rings" or knicks			
Terminate wire to appropriate torque			
Wire and bond equipment grounding conductor at rails and boxes			
Wire junction box			
Wire AC disconnect			
Wire production meter			
Create and properly crimp homeruns (Optional)			
Wire string inverter (Optional)			
Monitoring and Communication (Optional)	Date:	Verified in Portal	<input type="checkbox"/>
Provision communication device			
Mount communication device			
Commission system with communication device			
Team Leadership Workshop Attended	Date:	Verified in Portal	<input type="checkbox"/>
Electrical Leadership Test Install One	Date:	Verified in Portal	<input type="checkbox"/>
Electrical Leadership Test Install Two	Date:	Verified in Portal	<input type="checkbox"/>
Engage volunteers to ensure everyone is working			
Maintain a professional demeanor			
Lead Safety Talk			
Demonstrate and encourage compliance w/ site safety plan during all phases of the install			

Installation Basics Training Reminders

- Early in the install, before or after the Safety Talk, alert the SIS to your status as an IBTrainee and discuss what skills and certificates you would like to work on.
- When you feel ready to demonstrate competency, inform the SIS and follow their instructions. Remind SIS to document competency in the official online record.
- During your training you will be asked to engage and guide other volunteers. These interactions should be professional, positive, and safe.
- A GRID Alternatives staff person will be on site at all times to answer questions and provide overall supervision and quality control.
- You are not required to do anything that makes you feel unsafe or uncomfortable.

Additional Training Resources: <http://www.gridalternatives.org/trainee-resources>

This sheet is for personal tracking and personal documentation of training experience only. The official record is kept online and populated directly by SIS in the field. Contact your local Workforce/Volunteer Coordinator if you feel there are discrepancies in your personal tracking and the official record found in the Volunteer Portal on the My Profile tab at volunteer.gridalternatives.org.