



# Installation Basics Training (IBT) Certificate Program Skill Set Personal Tracking Sheet

Name: \_\_\_\_\_

**Directions:**

- This tracking sheet is for you to keep track of the skills you master for the different certificates.
- You do not have to complete the skills in order.
- A Solar Installation Supervisor (SIS) will evaluate you and sign off on these skills.
- Once signed off on the required skills for a certificate, you'll be verified in the portal to received that certificate.
- You can print the certificate using the Volunteer Portal on the My Profile tab at [volunteer.gridalternatives.org](http://volunteer.gridalternatives.org).
- For Safety Certificates the online quiz will be available to you after the other skills have been verified in the portal.

**Installation Basics Trainee requirements for someone not in a job training program:**

- Potential IBT trainees must participate in at least one GRID Alternatives installation as a volunteer.
- After an initial install, take the Installation Basics Training orientation.
- During subsequent installs demonstrate competence in the skills listed below.

<b>Installation Basics Training (IBT) Orientation Attended</b>	<b>Date:</b>	<b>Verified in Portal</b> <input type="checkbox"/>
--	--------------	--

## Array Installation Basics Certificates and Required Skills

Job Site Safety	Date:	Verified in Portal	
Notes			
Demonstrate and encourage adherence to Heat Illness Prevention Plan			SIS Initials
Demonstrate proper use of PPE consistently			SIS Initials
Set up and explain OSHA requirements of proper ladder use			SIS Initials
Demonstrate and explain proper use of Power Tools			SIS Initials
Demonstrate and encourage compliance w/ site safety plan during install			SIS Initials
Job Site Safety Quiz (take online)			
Fall Protection	Date:	Verified in Portal	
Install, under supervision, fall protection to manufacturer's specifications			SIS Initials
Demonstrate and encourage fall protection safety during the install			SIS Initials
Fall Protection Quiz (take online)			
Array Layout	Date:	Verified in Portal	
Translate array layout plan to roof/ground considering setbacks and shade			SIS Initials
Mark layout for array and racking installation			SIS Initials
Locate rafter center and mark misses			SIS Initials
Racking Installation	Date:	Verified in Portal	
Maintain weatherproofing and watershedding integrity			SIS Initials
Install stand-offs and flashings to manufacturer's specifications			SIS Initials
Cut and splice rails to manufacturer's specifications			SIS Initials
Install and align rails to manufacturer's specifications			SIS Initials
Bond racking according to manufacturers specifications			SIS Initials
<i>Circle install types:</i> Asphalt shingle   Tile   Ballasted   Ground   Parapet			
Module Level Power Electronics (MLPE) Installation	Date:	Verified in Portal	
Install MLPE to manufacturers specifications			SIS Initials
Ensure trunk cable is properly terminated and watertight (micros)			SIS Initials
Ensure proper electrical connetion in MLPE circuit or string			SIS Initials
Wire management - Properly dress and secure cabling			SIS Initials
Homerun installation, identification, labelling, and termination			SIS Initials
Module Installation	Date:	Verified in Portal	
Install and align modules to manufacturer's specifications			SIS Initials
Manage module leads/wires			SIS Initials
Ensure end and mid-clamps are properly seated and torqued			SIS Initials

**Note:** 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 Training (IBT) Certificate Program Skill Set Personal Tracking Sheet

Name: \_\_\_\_\_

## Electrical Installation Basics Certificates and Required Skills

Job Site Safety (same as Array - only pass once)	Date:	Verified in Portal	
Notes			
Demonstrate and encourage adherence to Heat Illness Prevention Plan			SIS Initials
Demonstrate proper use of PPE consistently			SIS Initials
Set up and explain OSHA requirements of proper ladder use			SIS Initials
Demonstrate and explain proper use of Power Tools			SIS Initials
Demonstrate and encourage compliance w/ site safety plan during install			SIS Initials
Job Site Safety Quiz (take online)			
Electrical Safety	Date:	Verified in Portal	
Identify electrical hazards and how they can be removed or controlled			SIS Initials
Test components with a multi-meter (A vs. V, DC vs. AC)			SIS Initials
Understand causes of arc flash and how and when to wear PPE			SIS Initials
Demonstrate electrical safety plan during all phases of the install			SIS Initials
Electrical Safety Quiz (take online)			
Electrical Layout and Mounting	Date:	Verified in Portal	
Read and translate single-line diagram to wall			SIS Initials
Plan and install electrical Balance of Systems			SIS Initials
Install box fittings and bushings			SIS Initials
Conduit Bending and Installation	Date:	Verified in Portal	
Cut and ream conduit			SIS Initials
Measure and bend conduit for 90 degree angle			SIS Initials
Measure and bend conduit for offsets and kicks			SIS Initials
Measure and bend conduit for saddle bend			SIS Initials
Install flashing for stub up to manufacturer's specifications			SIS Initials
Install conduit to Code including appropriate strapping and fittings			SIS Initials
Ensure conduit is properly supported on blocks			SIS Initials
Electrical Wiring	Date:	Verified in Portal	
Prepare and execute wire pull			SIS Initials
Strip wire cleanly without "rings" or knicks			SIS Initials
Terminate wire to appropriate torque			SIS Initials
Wire and bond equipment grounding conductor at rails and boxes			SIS Initials
Wire junction box			SIS Initials
Wire AC disconnect			SIS Initials
Wire production meter			SIS Initials

### Installation Basics Training Reminders

- 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.
- This sheet is for personal tracking and personal documentation of training experience only. The official record is kept online.
- Contact your local Workforce/Volunteer Coordinator if you feel there are discrepancies in your personal tracking sheet and the official record found in the Volunteer Portal on the My Profile tab at [volunteer.gridalternatives.org](http://volunteer.gridalternatives.org).

**Additional Training Resources:** <https://www.gridalternatives.org/get-training/installation-training-programs/resources>