**SkillsUSA NC Welding Fabrication State Competition Update – 2025**

Each team will design a welding shop-related item using material that is readily available to them.

Teams will be required to brainstorm and design a project. **Prints for this project theme will be required this year.**

**The project your team designs is an item that will be used in a welding lab/shop**.

* This project will be built at your team’s location. This will allow the fab team more time to complete the project than normal.
* Contestants are allowed six hours to build the project and make the required welds and cuts.
* Material prep-time will not count toward build time.

**Items that must be supplied by Teams:**

* All Personal Protective Equipment
* Hearing and/or ear protection
* Welding helmet with appropriate filter plate/lens and protective cover plate/lens in a flip or slide front. Auto darkening shields are permissible
* Spare spatter and filter lenses/plates for arc welding helmet and oxyacetylene goggles
* Blueprints – See “Blue print requirements” below
* Résumé (for all contestants on a team).
* Teams must bring own hand tools needed to complete the project.
* See Welding Fabrication National Standards for more information.
* Two pieces 4”x 8”x 1/4” or 3/8” flat bar for on site SMAW and OFC requirements.

**Minimum Project Requirements:**

* 4 Individual GMAW Welds of 3” or greater (One 3F vertical up welds required)
* 4 Individual GTAW Welds of 3” or greater (One 3F vertical up welds required)
* 4 Individual SMAW Welds of 3” or greater (This will be required on site and does not have to be included on the project)
* 2 Individual OFC Cuts of 3” or greater (This will be required on site and does not have to be included on the project)

**Project Theme for Prints: (Team prints will be graded on this concept)**

* Shop accessory. Anything that can be used in a Welding Lab.
* Teams will demonstrate knowledge of the blueprint and welding symbols during the interview.

**Guidelines for Design:**

* Designed for Welding Lab.
* Maximum width 48”, maximum length 48”, and maximum height 48”.
* Carbon steel material must be used to complete required welds and cuts. Additional material will be accepted with no points awarded.
* Teams can use any equipment they have to complete the project. (No points awarded)
* Design the project for six hours of building time. (No points for design)
* Teams need to be able to safely move the project on site.

**Blue Print Requirements:**

* Teams need to bring one set of prints **of their project**, printed on 11” x 17” paper printed in the Landscape mode (for grading)
* Title block in lower right-hand corner with space titled Team #.
* Max of 10 pages – You must have overall dimensions of the finished product included within the drawings you submit.
* All Welds MUST have appropriate weld symbols included to show where the required welds and weld processes will be used on the parts
* All vertical welds shall be noted
* A blueprint can be neatly hand drawn if the team does not have access to design software.
* An electronically scanned pdf copy is suggested for all prints.
* Contestants will demonstrate knowledge of blueprints, welding symbols, line types, and general fabrication requirements of project during the interview. Blueprints do not have to be drawn by the contestants.

**Safety:**

* Face shields must be worn while grinding
* Helmets or oxyacetylene goggles must be worn while cutting
* Welding jackets must be worn while welding
* Safety glasses must be worn at all times
* Hearing protection must be worn at all times
* Only one welding machine may be used at time as there is only one piece of environmental equipment. Two grinders may be used in conjunction with the use of the one welding machine.
* Grinding sparks on the welding equipment and/or other people will result in a point deduction.
* Environmental equipment must be always used when welding. Points will be deducted for improper use.

**Other Information:**

* Projects must be brought to the Greensboro Coliseum for judging on April 10.
* There will be an onsite Cut & Weld at the state contest.
* Interviews will be conducted randomly at the contest site on contest day.
* High School contestants can use the same project for regional and state contests or complete a different project based on judges’ suggestions /remarks from regionals.