

# **Introduction**

Thank you for your dedication to ensuring student growth and achievement through the management of this SkillsUSA state competition event. The SkillsUSA state director and the national SkillsUSA organization appreciate your commitment to preparing America’s future workforce. The purpose of this document is to equip you with the necessary competition specifications that will allow you to host a successful state competition.

# **Competition Technical Standards**

The state director will provide the state technical committee with a copy of the current SkillsUSA Championships Technical Standards. The Technical Standards are the official competition guide/rules for the national SkillsUSA Championships. SkillsUSA Championships clothing requirements included in the technical standards have been established for the National Leadership and Skills Conference.

# **Disclaimer**

***The state project information is confidential. To ensure fairness and integrity in all competitive events, please do not share this packet with teachers or students.*** The following suggested SkillsUSA State Skill Performance Project is intended as a supplement to the guidance found in the SkillsUSA Championships Technical Standards. While most state competitive events are modeled after the national Technical Standards, rules for state events may vary from the national guidelines based on the time and/or equipment available at the state level. It is crucial that all student competitors understand any state specific requirements which should be communicated as state competition updates.

# **State Competition Update - Optional**

Definition:A competition update is anything that is not already listed in the SkillsUSA Championships Technical Standards that a competitor and/or advisor needs to be aware of and/or bring for the upcoming state competition.

State specific competition updates may include a list of materials the competitor must bring, state specific scorecard, and/or clothing allowances. Please be sure to check the “Supplied by the Technical Committee and Competitor(s)” section in the SkillsUSA Championships Technical Standards and adjust these requirements as necessary. The state technical committee, working with the state director, should establish any additional requirements needed to successfully complete the state-level competition.

**The following items should be reviewed, and a State Specific Competition Update posted if applicable:**

1. Supplied by the State Technical Committee:
2. Supplied by the Competitors:

# 

# **Competition Site Logistics**

**Materials (and quantity):**

Written tests, worksheets, water, snacks, print items for the judges including clipboards, pens/pencils, score sheets**.**

**Tools (and quantity):**

Boards/planks, traffic cones, marking paint, buckets, pallets, stone or soil piles, grade stakes, calculators, and personal protective equipment (PPE) for competitors (hard hats, reflective vests, etc.)

**Equipment (and quantity):**

The competition should include a variety of different pieces of equipment, including at least five different types of the following machines and support pieces (such as dump trucks):

* Backhoes
* Skid-Steer Loaders with bucket and forks
* Compact Track Loaders with bucket
* Wheel Loader / Crawler Loader
* Mini/Compact Excavators
* Articulated Dump Trucks/Tri-Axle Dump Trucks
* Hydraulic Excavators
* Bulldozers
* Vibratory Soil Compactors
* Pad laser and tripods (1 each)
* Story poles, laser receivers and calculators (2 each)

Additionally, the competition should require the competitors to perform surveying and have experience using global positioning systems. The following items should be available for that event:

* Pad laser and tripods (1 each)
* Story poles, laser receivers and calculators (2 each)
* In-cab 2D or 3D global positioning systems.

**Electrical needs (voltage & amperage):**

It is possible to conduct the competition without utilities, just think about what contingencies might be needed (portable restrooms, portable power). Please adjust the power requirements based on the specific equipment and facility utilities/rules.

**Competition utility requirements (water, plumbing, etc.):**

It’s always beneficial to have access to water at the competition site, as it may be needed for some of the events or to clean the equipment prior to returning it.

**Estimated overall cost per competitor:**

$0

**Additional:**

Required documents: proof of training (safety) competition specific liability release.

**Download Separate State Project Resource Files**

National Technical Committee Resources -Heavy Equipment Operation Start Up Kit (includes sample station detailed judges’ scorecards)

# **Sample State Competition Schedule**

As you develop your overall competition schedule, the SkillsUSA state director will provide information about how the written knowledge test will be offered in your state.

|  |  |  |
| --- | --- | --- |
| **Time** | **Item** | **Item Description** |
| 8:00 a.m. | Welcome/Orientation | Welcome competitors to the competition and go through a brief review of the competition. |
| 8:30 a.m. - 12:00 p.m. | Skill Performance Begins | Competitors rotate through stations, (time limit will be determined by competition coordinator, ensure equal amount of time per competitor per station) |
| 12:00 p.m. | Lunch |  |
| 1:00 p.m. - 3:00 p.m. | Skill Performance continues | Competitors rotate through stations until each has completed all available stations |
| TBD | Written Knowledge Test | State will determine when test will be given: pre-conference or onsite |

# **Competition Layout Details**

The competition can be held at a variety of locations such as equipment dealerships, Career & Technical schools or just about anywhere there’s enough room to allow for the operation of the equipment. It’s preferable to hold the competition at a location where digging below grade can take place to allow the events to better replicate “real world” scenarios, such as digging trenches, although it’s not required to conduct a competition. Ideally, this location will be close to the SkillsUSA state competition so it can take place in conjunction with the other competitions.

Note: if the competition will involve digging below grade on an area that isn’t an established excavation site, One Call (811) should be contacted to verify there are no utilities in the area.

# 

# **Competition Project**

Below are examples of tasks competitors could perform during the competition:

* Heavy equipment written test
* Backhoe operation (trenching or backfilling)
* Hydraulic Excavator (trenching or backfilling/grading)
* Compact Excavator operation (crossing obstacles)
* Wheel Loader operation (truck loading)
* Skid-Steer Loader operation (changing attachments, maneuvering – driving course)
* Compact Track Loader operation (backfilling and grading)
* Articulated Dump Truck operation (maneuvering – driving course, backing)
* Surveying and grades (set-up instrument, determine elevations, calculate cuts and fills)
* Component and control identification (Hydraulic Excavator)
* Pre-operational inspection (Bulldozer)
* Vibratory compactor operation (compacting trenches)

The above list may vary based on equipment availability. To qualify as an “official competition”, the event should consist of a written test, surveying, and at least five events which directly involve the equipment, such as equipment operation, parts and control identification, and/or pre-operational inspections of the equipment. At least four of the events should include operation of equipment.

Develop a competition rotation and corresponding map of stations:

* Machine operating stations (minimum of four i.e., trenching, loading, grading, compacting, navigating obstacles)
* Additional occupational skills station(s), recommend requiring survey station (e.g., surveying, hand signals, identifying aggregates, identifying machine components, pre-operation equipment inspection)
* Written component (i.e., test, resume)
* Oral component (i.e., interview, customer consult)

# **Competition Modification Suggestion**

**Modification #1:**

Additional stations that score competitors on widely taught skills can also be added.

**Modification #2:**

The included scorecards can be repurposed for your event but may need to be updated based on the national technical standards.

**Modification #3:**

The included scorecards offer multiple station options for running the competition. You will need to adjust the scorecard skill descriptions to match the equipment/stations you select. The scorecard is a combination of eight stations (100 points each), written test (125 pts), professional development test (25 pts), and an oral assessment (50 pts).

**Sample Heavy Equipment Operation Competition Proof of Training Form**

*Note: Failure to complete this form will disqualify the competitor from the competition. Two copies will be required. A copy shall be provided to the competition Chairperson at orientation or on the day of the competition. Review the state competition updates for instructions. One copy should be placed in the competitor’s name badge holder.*

|  |  |
| --- | --- |
| Competitor’s Name |  |
| Division | *(High School or College)* |
| School |  |

Both the instructor and the competitor certify that by registering for this competition, the competitor has received instruction and has satisfactorily passed examination on the safety and operation of the following tools/equipment and performance of the job skills which may be included as part of the competition. Training must cover all equipment categories to meet safety and eligibility requirements. Further, both the instructor and the competitor agree that SkillsUSA [insert state association name], the state SkillsUSA Championships technical committee and judges are released from all responsibility and liability relating to personal injuries resulting from its use. Competitors will be removed from competition if proper training has not been provided and/or they are using the equipment in an unsafe manner. Initial below to certify the competitor’s training covers safety and operation for all of the following tools/equipment listed below that may be used in the competition:

|  |  |  |
| --- | --- | --- |
| Student Initial | Teacher Initial | Tools and Equipment |
|  |  | Crawler Tractors (Bulldozers) |
|  |  | Back-Hoe Loaders |
|  |  | Articulated Wheel Loaders |
|  |  | Hydraulic Equipment |
|  |  | Skid-Steer Loaders |
|  |  | Excavators |
|  |  | Crawler Loaders |
|  |  | Related Shop Tools and Equipment |

|  |  |  |  |
| --- | --- | --- | --- |
| Title | Print Name | Signature | Date |
| Competitor |  |  |  |
| Instructor |  |  |  |
| Administrator |  |  |  |