

General Information

Safety is held paramount in all activities related to the university, and safety is the first priority at the ASCE Mid-American Student Symposium. CSCC requires a Safety Officer to ensure safety at this event. The responsibilities of the Safety Officer include, but are not limited to:

- Become familiar with all safety procedures in event spaces and for each competition
- Contact relevant parties before the event to ensure appropriate personnel are on site for quick access in case of injury or other related circumstances
- Communicate with the Planning Committee to ensure safe practices are in place at each event
- Presence at the entire ASCE Mid-American Student Symposium
- Communicate with head judges of each event about emergency procedures
- Communicate with Risk Management about safety policies and ensure all applicable forms are filled out prior to the Symposium
- Knowledge of first aid, as well as ensuring first aid kits are easily accessible at each event. Designate competent folks at each event to know how to use first aid kits

Safety Officer

Paul Kremer pkremer@iastate.edu (515) 294-8213

Student Safety Assistants

Jacob MacVey jmacvey@iastate.edu (515) 291-9134

Isaac Hunter iphunter@iastate.edu (563) 316-2123

In the event of an emergency, stop all activity and dial 911 or inform an EMT on site.

Safety for Concrete Canoe Competition

Responsibilities for Safety Officer regarding Concrete Canoe:

- Presence at the Concrete Canoe competition, in a location in which observation of each activity is allowable, typically the starting/docking area
- Make the decision to stop any and all activities that violate safety procedures
- Communicate with paddlers of any and all known hazards before the paddling/racing begins
- Communicate with paddlers and head judges of any conditions that arise during the event that are hazardous to any individual
- Alert paddlers and other participants of any pollutants, hazardous wildlife, and/or chemicals both in and out of the water that may be harmful, such as allergies or skin irritations or more serious lacerations
- Ensure all paddlers are competent swimmers
- Taking the temperature of the water and the air
- Awareness of weather conditions, such as precipitation or lightning in close proximity

Safety Equipment on Site

- **Powered rescue boats (2).** The powered rescue boats will be in the water during the entirety of the races. No races will occur without two powered rescue boats in the water.
- **Warming vehicle.** There will always be a vehicle on site near the water. This vehicle will be running any time individuals are near the water. The vehicle temperature will never be below 75°F. In case of risk to hypothermia or any other instances in which an individual would need to be in a warm space, this warming vehicle will be easily accessible.
- **Ambulance.** There will be an ambulance on site during the Concrete Canoe competition. The ambulance will be staffed with at least 2 EMTs.
- **Utility Terrain Vehicle (UTV).** The UTV will always be close to the water. If there is an emergency in which an individual will need to be transported to the ambulance, the UTV will transport the individual to the ambulance or warming vehicle in a prompt manner.

Cancellation Guidelines

Cold Temperature. The races shall not take place if any of the following scenarios occur:

- The temperature of the water is less than or equal to 35°F
 - If the water temperature is less than 60°F, the American Canoe Association recommends wetsuits.
- The air temperature plus the water temperature is less than or equal to 85°F
 - Per the discretion of the Safety Officer, the race may occur if the temperature of the air plus the temperature of the water is between 85°F and 120°F.
 - If the air temperature plus the water temperature is less than 120°F, the American Canoe Association recommends wetsuits.

Wind. The races shall not take place if any of the following scenarios occur:

- Waves heights greater than 1 foot occur in the water
- Sustained winds are greater than 25 miles per hour at the event location

Lightning. The races shall not take place if any of the following scenarios occur:

- Lightning occurring within 15 miles of the event location
 - If 30 minutes of time has elapsed since the last recorded strike within 15 miles of the event location, the races may occur per the discretion of the Safety Officer

Participant Safety

Team Safety

- Each team will be receiving 4 bright orange flags to carry in their canoe at all times. If an individual or team needs assistance from the Rescue Team, that individual or team will raise and waive their orange flag to indicate assistance is needed.

Connection to Canoe

- The team will be disqualified from the competition if there is a device that attaches a paddler to the canoe or a device that interferes with safely exiting the canoe if capsizing occurs

Canoe Entry

- The team will be disqualified from the competition if a judge or the Safety Officer deems the entry of the canoe into the water or entry of the individual into the canoe unsafe. If corrective measures are taken, the team may continue to compete.

Canoe Repairs

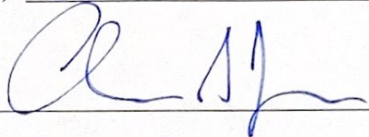
- If, prior to any race, repairs must be made to a canoe, the judge may allow the canoe to race in a heat later in the program, but prior to the next event.

Floatation Devices

- Each paddler will wear a US Coast Guard-approved inherently buoyant (no inflatables) Type I, II or III Personal Flotation Device (PFD) during all races, including practice. Each institution is required to provide PFD's for each paddler.
- A wet suit or buoyancy pads is not an acceptable substitute for the Coast Guard approved Personal Flotation Device.
- Before the competition begins, a safety representative will be conducting a PFD compliance check on all PFD's.

As the representative for Environmental Health and Safety (EH&S) at Iowa State University, I approve of this safety document in its current state, recognizing that safety protocol may change as knowledge of the event increases. In its current state, this safety document is deemed appropriate. In the case of any changes that need to be made, addendum(s) will be written and signed appropriately.

Name (print): Charles S. Jannow ISU EH&S

Signature:  _____

Date: 1/14/22

Name (print): _____

Signature: _____

Date: _____

Safety for Steel Bridge Competition

Responsibilities for Safety Officer regarding Steel Bridge:

- Presence at the Steel Bridge competition
- Make the decision to stop any and all activities that violate safety procedures
- Ensure all participants are wearing the proper PPE
 - Construction Crew members: hard hat, long pants, boots (preferably steel or composite toe), safety glasses. Any pouches or articles of clothing shall not be removed or held in the builder's hands during the construction time.
 - Loaders: gloves, long pants, steel or composite toe boots
- Ensure that steel angles used for loading are not stacked too high, preventing falling of steel
- Ensure only builders, judges, and safety officers are the only people entering and exiting the construction zone
- Awareness of weather conditions, such as severe weather, shall be observed. If any hazardous weather is near the event location, take necessary emergency precautions to ensure safety of all individuals at the event

Safety Equipment on Site

- **First aid kits (3).**
- **Bloodborne Pathogen spill kit.**

Construction Safety

- During construction, builders shall not hold any nuts, bolts, or tools in their mouths
- Nothing shall be thrown during construction
- The bridge shall not be used to support the full body weight of a builder
- Builders cannot depend on other builders for balance

General Load Test Safety

- Steel angles will be placed perpendicular to the span of the bridge
- Place steel angles at a steady pace, without hesitation
- Loaders shall stand outside of the bridge while placing the load
- If decking or any part of the bridge bears on a safety support or floor (unless intended), halt loading immediately and remove load from the decking carefully
- If decking unit or load falls off of the bridge, halt loading immediately and remove load from the decking carefully
- If loading has been halted for any reason, remove the load carefully and do not continue the load test

Lateral Load Test Safety

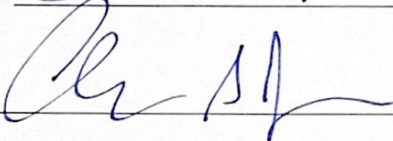
- No more than four students can participate in the lateral loading test
- If a bridge exceeds $\frac{3}{4}$ inch of sway during the lateral loading test, it cannot participate in the vertical loading test

Vertical Load Test Safety

- Collapses and failing of the bridge may occur without warning. Immediately halt loading and ensure safety of all participants if collapsing or failing occurs or is suspect of occurring
- Limit the number of students loading the bridge to 4, but substitutions are allowed
- A sufficient number of safety supports (such as 5-gallon buckets or jack stands) shall be used during the vertical loading process to prevent drastic collapsing of the bridge.
 - The safety supports shall be placed under the decking of the bridge, before loading starts
 - The safety supports shall be placed under the sides, ends, and middle of the decking units whenever possible
 - Safety supports shall be adjusted so that any load at any location will not drop more than 4 inches
 - If supports must be adjusted while loading is in progress, remove the load as soon as possible, make adjustments, then continue the loading process
- While vertical loading is taking place, no individual shall reach, crawl, step under, or stand inside the bridge
- During vertical loading, if sway exceeds $\frac{3}{4}$ inch, halt loading and remove vertical loading carefully
- If any deflection (upwards or downwards) exceeds 2.5 inches, halt loading and remove vertical loading carefully

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Name (print): Charles S. Jamson ISU EH&S

Signature: 

Date: 1/14/22

Name (print): _____

Signature: _____

Date: _____

Safety Requirements Checklist

The items below will not be provided by Iowa State University. All items in this list shall be provided by the institution competing, or provided by individuals. Iowa State University is not responsible for non-Iowa State University personnel's personal protective equipment.

Steel Bridge Competition

- All participants and spectators
 - Long pants
 - Closed toed shoes
- All competitors and close-proximity participants
 - Long pants
 - Closed toed shoes (preferably steel/composite toed boots)
 - Safety glasses
- Vertical Loading Crew
 - Long pants
 - Steel/composite toed boots
 - Safety glasses
 - Gloves
- All construction crew members
 - Long pants
 - Closed toed boots (preferably steel/composite toed boots)
 - Safety glasses
 - Hard hat

Concrete Canoe Competition

- All participants and spectators
 - Weather appropriate clothing (likely warm-wear)
- All paddlers
 - Personal Flotation Device (see Concrete Canoe guidelines for specifications)