**Registration**

* Registration Information: Go to [https://www.eventbrite.com/e/2024-infrastructure-works-derby-tickets-1012894874837](https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.eventbrite.com%2Fe%2F2024-infrastructure-works-derby-tickets-1012894874837&data=05%7C02%7Ctheo.deligiannidis%40hdrinc.com%7Cc2a5d7099bb04a3107dd08dcd434f0b9%7C3667e201cbdc48b39b425d2d3f16e2a9%7C0%7C0%7C638618571097202969%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=pTaW6CzBRGLYKTTju3HaVwtMfCKWEpVjsIoPnJCXSNM%3D&reserved=0) Registration closes December 3, 2024, at 5:00 PM.
* Race Entry Fee is included with each sponsorship and exhibit purchase. Additional entries (team or individual) are $75.00 each and are tax-deductible.
* Proceeds go to ACEC-SC Infrastructure Works Institute, a 501(c)(3) non-profit that informs stakeholders of the state’s infrastructure status, invests in tomorrow’s engineers, and advances the business of engineering in SC.
* One car building kit will be provided with each registration (email Anne Heiler at anne@acecsc.org to receive your kit).
* Participants may purchase (at their own expense) alternative pinewood blocks, axles, wheels, and other accessories, provided they meet the *Car Specifications*.
* Limited “rentals” will be available the day of for racing in support of ACEC-SC Emerging Leaders Board (ELB).
* Participants do not have to be present to race. See Race Rules for more information.

**Awards**

Prizes will be given for the 1st, 2nd, and 3rd fastest cars as determined by the results of the Final Race. Additionally, there will be an award for the “slowest” car and an award for a “fan favorite” car based on voting by conference attendees.

The fastest car will have the option to represent ACEC-SC at the ACEC National Derby in October 2025.

**Car Specifications**

* **Car Body:**

1. The main body structure must be made from wood.
2. Measurements:
   1. Total Car Height: Not to exceed 3 inches.
   2. Total Car Length: Not to exceed 7 inches.
   3. Total Car Width: Not to exceed 2 ¾ inches.
   4. Total Car Weight: Not to exceed 5.0 ounces. The official race scale shall be considered final.
   5. Wheelbase: Any, as long as axle spacing does not exceed the 7” total length requirement.
   6. The car must have a minimum 1 ¾” clearance between the inside face of wheels.
   7. The car must have a minimum 3/8” clearance underneath the body.
   8. The front end must be at least ½” wide in the middle.
3. No part of the car shall extend beyond the starting peg.
4. The wheels shall not extend beyond the rear of the car.
5. The assigned car number should be incorporated into the design, if possible, for tracking purposes.

* **Axles:**
  1. 4 axles & wheels must be installed to the side of the car body directly across from one another / no more than a 45-degree angle measured from vertical. Rear wheels cannot be reversed.
  2. Minimum diameter is 0.084 in.
  3. Axles must have a nail head.
  4. Lubrication: only dry lubrication is allowed.
* **Wheels:**
  1. May be BSA, Maximum Velocity, Awana, or Pinecar.
  2. May be CnCed, lathed, polished, and/or sanded to the true edge of tread, surface, and circumference.
  3. The tread / contact surface must remain flat and parallel to the bore as humanly possible.
  4. No angling, reshaping, canting, round crowning, tapering, H-ing, V-ing, dishing the outside of the wheels and/or tread surface.
  5. Lettering must remain visible on the inside and outside of the wheel. In the case of a wheel that has no lettering on the outside, the original shape must remain. A wheel cannot be machined flat on the outside of its sidewall.
  6. Wheel covers may be used only if entire wheel is visible.
  7. Minimum tread width is 7.50 mm.
  8. Wheels have no weight restriction as long as they meet the above requirements.
* **The following items are PROHIBITED:**
  1. Springs
  2. Starting devices or propellants
  3. Liquids, wet paint, oil, sticky substances, or powders other than axle lubrication.
  4. Glass or excessively fragile parts
  5. Wheel bearings
  6. Loose material of any kind, such as lead shot.

**Race Rules**

* **Race Location:**

Columbia Metropolitan Convention Center

1101 Lincoln Street

Columbia, SC 29201

* **Date:** Tuesday, December 10, 2024
* **Time: Check-in and inspections begin at 7:30 AM and close at 10:30 AM.** Races will begin following check-in. Actual start times may vary depending on conference flow.
* **Attendance:** Participants do not have to be present to race.
  1. Cars can be mailed/dropped off with the following person/location prior to the event:

*Anne Heiler*

*826 Assembly St.*

*Columbia, SC 29201*

* 1. Cars must be mailed or dropped off no later than December 9, 2024, at 5:00 PM to be eligible.
  2. Mailed cars are the responsibility of the participant and include damage, passing check-in inspection, weight restrictions, and lubrication.
  3. The cost of delivery and return delivery is the responsibility of the participant.
* **Check-in**
  1. **All cars must pass inspection** before being allowed to race. Cars will be inspected by a race official for compliance with *Car Specifications* within these rules. After check-in the car may not be modified.
  2. Cars that do not pass initial inspection will be given 30 minutes to make modifications and have the car re-inspected.
  3. After cars are inspected, they will be moved to the “pit area” and may not be touched by participants when they are ready to race.
  4. During the race event, cars can only be handled by a race official/assigned ELB member.
  5. Lubrication of wheels and axles may take place prior to check-in and prior to the Final Race.
* **Racing:**
  1. Exciting NEW FORMAT for 2024! Get ready for some heated competition with the untimed, ladderless elimination race method. Unlike time-based races, winning your heat means everything.
  2. Each car will race against five other cars at a time in a heat. After each heat, the car will be assigned a point total, receiving 0 points for finishing first up to 5 points for finishing sixth.
  3. Each car will race a minimum of 3 races. A car is eliminated when the defined point level (to be determined on race day) is accumulated. The last car standing will be the winner of the ACEC-SC IWI Derby!
  4. In the event the race equipment fails, the race will be re-run.
  5. During the race:
     1. If a car interferes with another car, then the race will automatically be re-run.
     2. If the same car interferes with another car again, then that car is disqualified.
     3. If an item affixed to the car falls, and does not interfere with another car, and the offending car finishes the race, the race will not be re-run. The damaged item may be repaired by participant with no other modifications made to the car.
     4. If a car jumps the track or an item affixed to the car falls and does not interfere with another car, but does not cross the finish line, that car will receive 8 points.
  6. Let the suspense build as the racing continues and cars are eliminated, until the final race that leaves only **one car standing**.
  7. Decisions from the race officials are final.
  8. For more information on the ladderless elimination method, [click here](http://www.usscouts.org/pinewood/cspdpro2.asp#:~:text=Table%20of%20Contents-,Ladderless%20Elimination%20Methods,a%20given%20number%20of%20losses.).

**Additional Information**

For Additional Information Contact:

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