2024 Policies and Procedures for Closed-Track Races

Pit Placement/Starting Order
Teams draw for starting order and pit placement during Team Check-In. The number drawn at check-in will be used as the starting order for the first day, along with the team's placement along pit row throughout the entire event. Pit row space will be numbered consecutively, starting with the space closest to Turn 1. Efforts will be made to locate teams with multiple cars next to each other.

Running Time
All teams will be released at a regular interval (nominally one minute) starting at 9:00am on each race day. Teams participating in the Classic Division, Advanced Classic Division, and the Electric-Solar Powered Vehicle Division may run for 3 hours in the morning and 3 hours in the afternoon. Teams participating in the Advanced Division and Cruiser Division may run for 8 hours, but must take a 30 minute rest/lunch stop during the day. The time starts when the team is released from the Start Line. For example, the third team will be released at 9:02am. If in the Classic Division, the team may run from 9:02am – 12:02pm and 2:02pm – 5:02pm. If in the Advanced Division, the team may run from 9:02am – 5:02pm, with a required 30 minute rest/lunch stop.

Time officially starts when the car is released onto the track, per the flagger's countdown. If a team is not ready at their time slot, time will start according to the official clock.

Only complete laps are counted towards the team's total. Laps are counted as complete once the front of the vehicle crosses the plane of the pit wall or crosses the start/finish line.

Track Operations
Solar cars will normally drive as close to the inside wall as possible, unless passing. A solar car may not obstruct a faster moving vehicle by driving a line that does not allow a faster solar car to pass safely. If a race official observes a driver obstructing faster traffic, the offending solar car will be black flagged and required to enter the pits and will be held for 10 minutes. Repeated offenses by a driver will result in the driver being disqualified. If a team feels they are being obstructed, they should notify their race judge, who will notify race control.

Horns and Passing
Per Rule 5.12.2, each solar car must have a horn producing at least 92 decibels and mounted as far to the front of the solar car as possible. At scrutineering, all vehicles will be inspected with regard to this regulation.

While on the race track, solar cars wishing to pass must sound their horn to express their intent to the solar car being passed. This warns the solar car being passed to stay to the inside of the track. The pass is considered started upon indication of horn. Solar cars being passed may not pass another vehicle until the faster solar car has completed the pass. The overtaking car must complete the pass in a reasonable amount of time; driving at the same speed as the car being overtaken could be treated as obstruction and penalized accordingly. Likewise, the car being overtaken shall not speed up to prevent the overtaking car from completing the pass.

When a pass is in progress, another (faster) solar car may not pass the two vehicles ahead until they have completed their pass (no 3 wide passing), except in the front and rear straight. Only one faster solar car may initiate a 3 wide pass on the front or rear straight (no 4 wide passing). At no time shall a solar car enter the banking of a turn. Vehicles entering the banking will be subject to immediate disqualification. If there is doubt as to the room to pass, it is incumbent on the overtaking solar car not to execute the pass until space is available.

If there are complaints that the horn is not heard by solar cars being passed, the race judge will inform the team and the team will inform the driver of the issue. The driver must then signal a long blow of the horn at the front straight near the team's pit location to confirm that the horn is still operational. If the horn is shown to be malfunctioning, the solar car must exit the track to pit lane upon conclusion of the lap. The solar car may not be readmitted onto the track until an audible inspection is conducted by a race official. Solar cars with malfunctioning horns may not pass unless clearance is given by race officials (e.g. to clear solar cars broken down or moving extremely slowly).

Radio Check

Teams must be in continual radio contact with their driver. If a team loses radio communication with their driver, the team or their judge must inform the scoring tent that they have lost radio communication. A race official will cross to the Start/Finish line, point to the car and raise a sign labeled "Radio Check", one indicating the team's number and another noting that the driver should radio back to their team. If radio communication is not established, the driver must exit the track to pit lane upon conclusion of the lap. The solar car may not be readmitted onto the track until a radio test is successfully conducted.

Driver Change Area

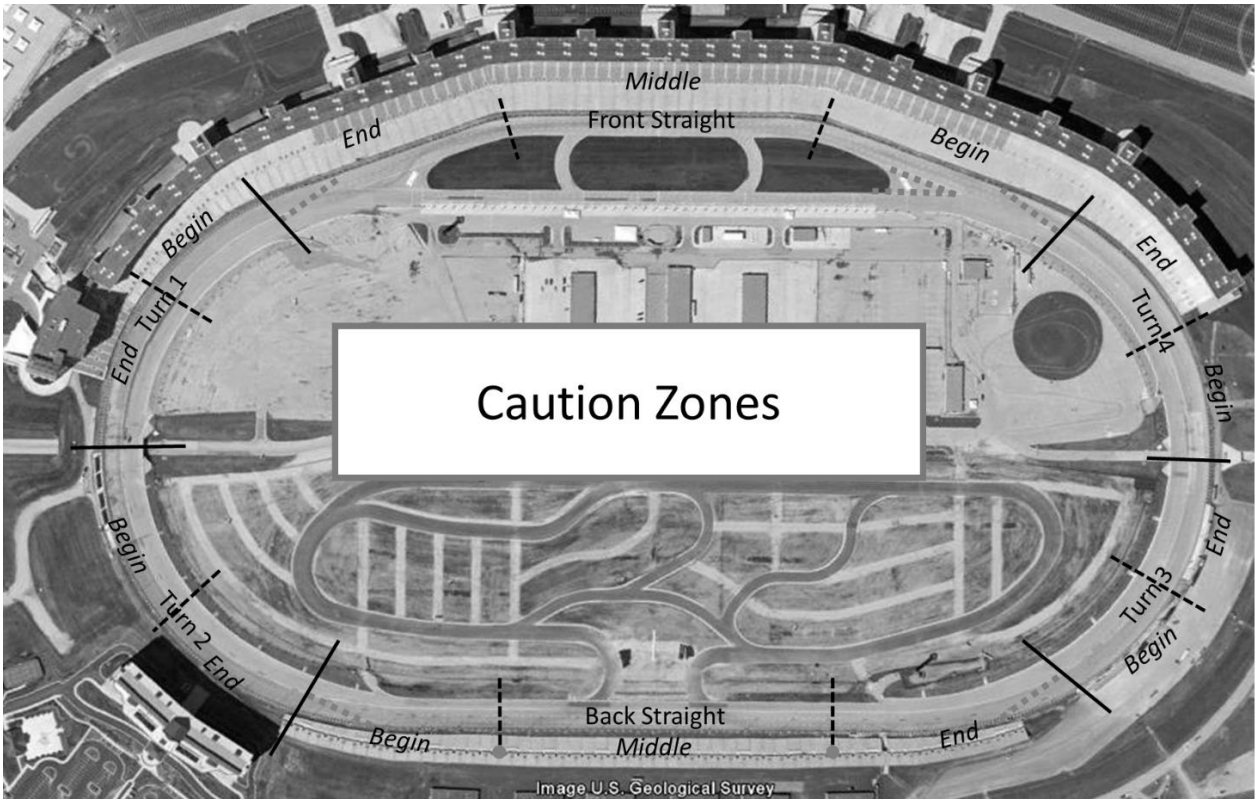
An area of the track side of the pit wall will be designated as the driver change area. This area is designed for teams to change their drivers without having to exit and re-enter the track. The area may also be used for other housekeeping tasks, such as providing additional water to the driver, changing radios and/or batteries, etc. Repairs may be done in the driver change area only if it takes 2 minutes or less and is cleared by the team's judge. If a repair is started in the driver change area and it takes more than 2 minutes, the team will be asked to push their solar car past the pit wall for further repairs.

Up to four cars may occupy the driver change area at one time. Teams requesting use of the driver change area must clear the request with the race control to ensure that the space is available for use. If a driver change area is not available, the solar car can choose to exit the track and enter the pits, or wait for an available spot by pulling over to the left by the pit wall and stopping. A race control official will signal the next driver to proceed when a spot becomes available.

Once the solar car enters the driver change area, the safety officer must cross the pit opening, move two paces behind the solar car, and flag. Once the safety officer is in place, up to 2 other team members may cross the pit opening and complete the errand and/or repair. The driver being replaced may also exit the car at this time. Once the driver change and other tasks are complete, the non-driving team members must cross back over the pit opening. After all members are safely on the garage side of the pit wall, the safety officer may stop flagging and cross the pit opening. When all members have safely returned, and no vehicles are approaching in pit lane (or when clearance is given by the supervising judge), the driver is free to continue down the pit lane onto the main track area.

Caution

Cautions are issued over the PA and radios by the scoring tent or PA announcer. Cautions are applied to specific areas of the track (see diagram below for zones). When cautions are issued, no passing (including completion of a pass) may occur in the applicable area from 100 yards before the obstruction to the location of the obstruction until the caution is cleared by race control. Cautions are typically issued when a solar car has broken down on the track.



Breakdowns
A solar car may break down on the track during the race session. When a breakdown occurs, the team will notify the judge that their vehicle has broken down, and that they will retrieve their solar car. Teams are required to have a vehicle-trailer to retrieve their car from the track.

The judge accompanies the team to the support vehicle and sits in the front passenger seat. The judge should then notify race control that the support vehicle is ready to retrieve the broken down solar car. When ready, race control will ask the team to move their support vehicle to the support vehicle entrance and stop at the pit wall. Once the pit lane is clear and the announcement made over the PA, a race official will clear the support vehicle to enter the track. When on the track, flashing yellow lights shall be used.

The support vehicle must yield to solar car traffic when entering the track. Support vehicles should pass solar cars when safe, using the prescribed method used by solar cars, to avoid obstructing other solar cars. Solar cars may not pass support vehicles, except when they are stopped in position on the track. Once the support vehicle is in place in front of the broken down solar car, the safety officer must set up cones behind their solar car to warn vehicles of the obstruction. The safety officer must stand at the end of the line of cones waving a safety flag. Once the safety officer is in place, other team members (upon clearance from the judge) may exit the support vehicle and assist in loading the solar car onto the trailer. The driver may also help at this time. Once the solar car is secured onto the trailer, all team members (other than the safety officer), must return back to the support vehicle. When all team members are in the support vehicle, the team shall signal to the safety officer to return to the vehicle. The support vehicle may use the same entrance to exit the track.

Pit Lane / Garage Area Speed Limit
Pit lane is defined as the part of the track on the track side of the pit wall. Solar cars must drive slowly (~15 mph) in pit lane at all times. A penalty may be issued if the solar car speeds down pit lane.

Passing is allowed in pit lane if there is a significantly slower car and the pass can be conducted within the maximum speed limit. This should be a rare situation where the slower car is moving very slowly towards the pit exit, and a faster solar car is completing the lap before exiting the track. In this scenario, the slower solar car shall drive next to the pit wall, and the faster solar car shall drive in the outer lane. A horn indication shall be used, similar to passing procedures on the track.

The garage area is defined as the area on the garage side of pit wall and the garage itself. Solar cars in this area must be traveling at walking speed or less. When solar cars are moving in the garage area, they must be accompanied by two safety flaggers: one in front of the solar car and one at the rear of the solar car.

Pushing the Solar Car
Teams may push their solar car any time their car is in the garage area. Teams are not required to push their solar car, but teams choosing to drive must drive their car at walking speed or less. Teams may push their solar car up to the race start/finish line when they are ready to enter the track; however, team members must not push the solar car onto the track. Team members must take their hands off the car at the start/finish line and the solar car must enter the track from a dead stop.

Electric-Solar Powered Battery Exchange
Electric-Solar Powered vehicles wishing to exchange their battery pack shall exit the track at the designated track exit location and drive to their charging station, if able. Once in the charging station area, teams should move down the established circuit until they reach their charging station. The team can then perform the battery exchange with supervision from their team judge. Once complete, the team shall continue on the established circuit until they leave the charging station area, then return to the track. This ensures that no team is advantaged from the position of their charging station.

Spotters
One team member from each team may be designated as a spotter and watch the race from the stands. This allows the spotter to help notify the driver of obstructions, upcoming vehicles, and imminent passes. Spotters should start assembling at the scoring tent no later than 15 minutes before each race session. Spotters will be escorted across the track 10 minutes before the first solar car is released in the session.

They must remain until the session is complete. Spotters should carry an adequate supply of liquids with them to hydrate them during the whole race session and spare radio batteries. Spotters must remain in their designated area apart from the general public.

Routine Penalties during Closed-Track Races
(1) The Texas Motor Speedway requires, by contract, that no one sit, stand, or place any items on the pit wall. Sitting, standing, or placing items on the pit row wall will result in a one lap penalty.
(2) All persons taking part in the Solar Car Challenge must wear a wide brim or bush style hat that provides 360 degree sun protection when they are outside the garage. “Baseball caps” are not adequate. Not wearing a hat outside the garage will result in a one lap penalty. A tent does not provide adequate protection from the sun.
(3) All persons taking part in the Solar Car Challenge must wear closed-toe shoes. Not wearing closed toe shoes will result in a one lap penalty.
(4) Persons working on a solar car in the “garage area” must wear protective eye wear. Appropriate penalties will be applied.
(5) Solar cars driving in the garage area, as defined above, must be traveling at walking speed or less. Traveling too fast will result in an appropriate penalty.

Sportsmanlike Conduct
Race officials expect each team to conduct themselves in a sportsmanlike manner. Teams should be courteous to one another and respect the privacy of each team's private communications. As such, any teams found intentionally eavesdropping on another team's radio communications shall be assessed an unsportsmanlike conduct penalty, per the judge's discretion. Other unsportsmanlike conduct may be similarly penalized, per Rule 24.8.

Communications with Race Officials
Teams are encouraged to talk with race officials on a regular basis. If a team desires to take a particular action, please inform the team judge of your intentions. The judge is your official liaison with the race organization and is empowered to provide decisions on behalf of the race. If there is an issue that a judge cannot resolve, teams can call for clarification to another race official, such as the Technical Director or Assistant Race Director.

Water Station Responsibility
The race provides water to teams through the seven days of the event (July 10-17). Each team will be asked to volunteer one team member to help with this responsibility during one of the racing periods. These volunteers, working with race staff, will ensure that everyone has water and other refreshments.

Identification of Participants
The Race will provide each race participant (students, registered teachers, judges) with an identifying badge at Team Check-in. This makes it easier for Race Staff to provide better security during the event. Participants must wear the badge for access to the garage, and for race-sponsored meals.

Drivers for each team will have a special wristband identifying them as "qualified" to drive in the race. This implies that the driver has a State Driver's License, and has passed Scrutineering checks.

Team Check-In
The Team Adviser and Team Captain(s) must be present at the Official Team Check-In scheduled for Wednesday, July 10, 2024. The Team Adviser will submit a photocopy of the driver's license for each solar car driver. All race participants must take part in the All Teams Meeting scheduled for 7:00 PM on Wednesday, July 10th.

The Spirit of the Solar Car Challenge
The philosophy of the Solar Car Challenge is to bring together teachers and students from around the country in a *spirit* of cooperation and camaraderie. For this reason, we are asking all race participants to wear hats, shirts, and other attire that reflect their team, school, or community. It is inappropriate to bring attire seeking to promote any political candidate.

Please be aware of the rules for attire spelled out in Rule 6.11.