



ASCE 2024 Virginias Student Symposium Transportation Competition “Analysis of Accessibility and Safety of Vulnerable Road Users on College Campuses”

1. Objective: The objective of this year’s transportation competition is to introduce student teams to the applications of transportation planning, transportation operational analysis, transportation safety analysis, and context sensitive solutions. Student teams will prepare a 20-minute (maximum) presentation that highlights the current conditions related to vulnerable road users on and adjacent to their respective college campuses as well as make recommendations on recommendations that benefit the safety and accessibility for vulnerable road users.
2. Background: According to the Federal Highway Administration (FHWA), a vulnerable road user is a nonmotorist (typically pedestrian, bicyclist, other cyclist, and person on personal conveyance or an injured person that is, or is equivalent to, a pedestrian or pedalcyclist). Vulnerable road users include people walking, biking, or rolling.¹

Many jurisdictions, including those near college campuses, have not provided effective access for vulnerable road users. In addition, recent safety data have indicated increases in bicycle and pedestrian crashes. It is important for public agencies to address the needs of vulnerable road users. FHWA recommends a multifaceted, collaborative, and comprehensive approach that allows people full and safe access to our transportation system.¹

3. Presentation Requirements: The presentation shall be comprised of the following sections:
 - Introduction: This section should include a brief description and purpose of your presentation as well as an overview of the key topics that will be addressed
 - Background: This section should provide a background on the types of vulnerable users that exist on and adjacent to your college campus as well as the locations where vulnerable road users are typically found. The section should also describe general safety and access considerations based on a short literature search of relevant articles related to the topic.
 - Analysis of Existing Conditions: Through a combination of field reviews, data analysis (as data are available), and a review of other resources, provide a thorough overview of the existing conditions on your college campus related to the accessibility and safety for vulnerable road users.
 - Determination of Equity Considerations: Use the USDOT Equitable Transportation Community (ETC) Explorer tool² to assess transportation insecurity for your community in the areas of access, cost burden, and traffic safety.
 - Recommendations: Based on your knowledge of existing conditions, equity

¹ “Vulnerable Road User Safety Assessment Guidance”
https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-10/VRU%20Safety%20Assessment%20Guidance%20FINAL_508.pdf

² “USDOT Equitable Transportation Community Explorer”
<https://experience.arcgis.com/experience/0920984aa80a4362b8778d779b090723/page/Homepage/>



considerations, and other factors, develop a series of recommendations to improve safety and accessibility for vulnerable road users.

- **Conclusion:** This section should provide a short conclusion that highlights the main points of the presentation.
- **References:** This section should list references that were used to develop the components of the presentation.

4. Rules: The following rules apply to the competition:

- Each college or university may only enter one team for the competition
- Each team must consist of a minimum of one member and a maximum of five members
- Each team must be comprised only of undergraduate students
- Each team will have a maximum of 20 minutes to present, with scoring penalties for exceeding 20 minutes. After the 20-minute presentation, there will be an additional period where judges may ask questions of the presenters.
- All team members must participate in the presentation.
- Presentation order and times will be randomly selected before the competition begins.
- No handouts or other materials are to be given to the judges as part of the oral presentation.
- The use of video as part of the presentation is acceptable; however, the team is responsible for ensuring that the technology works properly. For this reason, teams will be allowed an opportunity to test their computer and audio/video prior to competition start time.
- Final presentation files need to be provided in PowerPoint by email to bkatz@vt.edu at 11:59PM the night before the competition. Videos may be used in the presentation; however, videos do not need to be submitted in advance.

5. Scoring: The presentations will be judged and ranked by a panel of judges. Points will be allocated as follows:

Category	Sub-Category	Maximum Points
Technical Requirements	Introduction	5
	Background	15
	Analysis of Existing Conditions	50
	Determination of Equity Considerations	20
	Recommendations	50
	Conclusion	10
	Subtotal	150
Presentation Quality	Quality of Oral Delivery	15
	Quality of Aesthetics	15
	Quality of Judge Question Answers	20
	Subtotal	50
TOTAL POINTS		200

NOTE: Scoring will also include a factor for Effective Use of Time. Presentations less than 20 minutes will receive full points. Deductions will be made for presentations longer than 20 minutes.

The winning team will be announced at the Symposium.

6. Questions should be addressed to: Bryan Katz (bkatz@vt.edu).