

Spring 2022 | CEM Capstone

Capstone Overview

Students in the CEM Capstone apply theory studied throughout the construction engineering and management curriculum to a design-build project spanning two (2) semesters. Teams work collaboratively to develop a competitive proposal summarizing their design and construction solutions. Team finalists are then invited to present on Capstone Day, which is considered a simulated project interview. Industry participation in our Capstone is critical to the experience and helps prepare students for successful careers in construction. [We are grateful for our 21-22 CEM Mentors & Sponsor – Thank you for your time and commitment!](#)

21-22 CEM Mentors

- Cory Curtin, Allan Myers
- Angie Gwynn, formerly of MBP
- David Johnson, Archer Western
- Jason Mroz, Flatiron
- Mike Murray, Port Authority of NY-NJ
- Adrian Price, S&B Engineers & Constructors

21-22 CEM Sponsor: MBP

21-22 CEM Project Overview

The CEM Capstone project has two (2) components: The first project component involved preconstruction planning for the Blacksburg Transit – Multi-Modal Transit Facility (MMTF) currently under construction on the Virginia Tech campus. In the second project component, teams re-imagined the congested Prices Fork Rd. – Stanger Street intersection to improve safety and congestion for all modes of transportation. The intersection project is considered an alternate to the MMTF to be pursued if design-build proposals are within budget and funding is acquired. Teams were not asked to investigate potential funding mechanisms.

Capstone Simulation

The CEM capstone project simulates the competitive Design-Build (DB) process, where the Owner will select a DB partner based on evaluation of competitive project interviews (Capstone Day presentations). In this simulation, student teams represent the construction side of the DB entity (i.e. the primary contractor) and MLSoC Industry Partners represent the Owner (Town of Blacksburg). Industry Partners will evaluate the performance of each team using the provided scoring rubric.

MMTF | Components & Stats

- Budget: \$36M
- Purpose: To relocate the Blacksburg Transit bus “hub” from the VT Drillfield to a more centralized and efficient location
- Building: 12,933 SF, 2-Story operations building
- Site: 17 bus stops, Stanger St. roundabout, West Campus Dr. intersection improvements, stormwater management, utility improvements, and extensive hardscape improvements

Intersection Improvements | Design Criteria & Stats

- Budget: \$25M (plenty of budget to inspire creativity!)

- Project Limits: 500-ft radius (center of intersection)
- Focus on safety
- Prioritize pedestrians, cyclists, scooters, and other modes of alternative transportation
- Maintain a similar or improved level of traffic control
- Consider aesthetics and design prominence, making the project a unique, iconic, and appropriate addition to the Blacksburg community
- Incorporate elements from the Virginia Tech and Town of Blacksburg design palettes
- Consider accessibility, convenience, and ease of use

21-22 CEM Capstone Finalists

Team B | NRC Design Build

Diana Logue
Thaison Smith

Team A | A Team Construction

Brayden Bird
Cameron Brown
Jacob Hawley
Sutton Perozek
Conor Sweeney

Team E | E's Construction

Logan Cook
Joe Kelly
Logan Lantz
Tyler Rasinski
Patrick Seery
Bryanna Underwood

Team F | Fuego Builders

Bo Bowersox
Shalom Dukhande
Colton Heard
Emmy Melchert
Charlie Schaefer
Morgan Sparks

Team H | Senior Construction

Taigue Anna
Mark Carey
Mason Craven
Drew Golde
Michael Hinnenkamp
Jacob Muller