

ASCE

AMERICAN SOCIETY OF CIVIL ENGINEERS

Auburn University ASCE Chapter
April 11th, 2023



AUBURN
UNIVERSITY

SAMUEL GINN
COLLEGE OF ENGINEERING

Our Year by the Numbers!

2022-2023 School Year

102 Members

34 Student Participants @ Symposium

30 German Students hosted

23 Career Lunch Series

12 Exec Board Meetings

7 General Body Meetings

6 Benefit Nights

4 new Exec positions added

2 Community Service Projects

2 Career Fairs

1 National Competition competed in

1 National ASCE Convention Attended

1 Workshop for Student Chapter Leaders

1 Winning IM Softball Team

1 Golf Tournament Lost...

2022-2023 Exec Board



President
Emily Doody



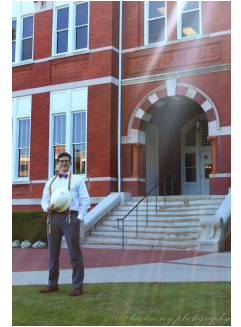
Vice-President
Morgan Burk



Treasurer
Stanton Freeman



Secretary
Juliana Wood



Member-at-Large
Josh McLeod



Social and Outreach Chair
Katie Harmon



Fundraising Chair
Kelli McMicken



Symposium Chair
Emma Tolbert

2023-2024 Exec Board



President
Kate Wilson



Vice-President
Celi Cotton



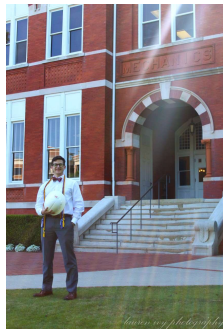
Treasurer
Garrett Wise



Secretary
Juliana Wood



Member-at-Large
Lauren Flannely



Safety Chair
Josh McLeod



Social and Outreach Chair
Emily Walker



Fundraising Chair
Camille Daugherty



Symposium Chair
Ethan Lowrey

2022 ASCE National Surveying Competition

3rd place in Field Surveying
Portion



2022 ASCE National Convention



ASCE Montgomery Branch Golf Tournament



WSCL



Brought 2 current
Execs and 3 potential
Exec Members



Auburn University &
Georgia Tech ASCE

Community Service & Outreach

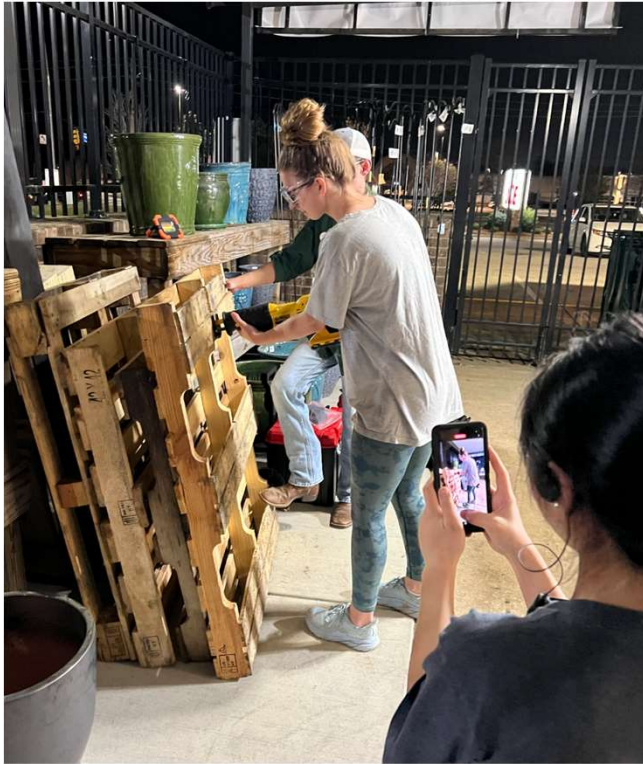
E-Day
February 2023



The Big Event
March 2023



ACE Hardware Collaboration



Tool Demonstration
workshop with local
Ace Hardware

Planning on having
more activities in the
future



Pain in the Asphalt: IM Softball



4-0!
Finals start THIS
week



THWS Student Visit

30+
Students
Visited



2023 Gulf Coast Student Symposium



National Competitions

Concrete Canoe

5th Place

Surveying

8th Place

Sustainable Solutions

3rd Place

Concrete Canoe



Concrete Canoe



Concrete Canoe



Concrete Canoe



UESI Surveying



Sustainable Solutions

ASCE SUSTAINABLE SOLUTIONS

Team: Kate Wilson, Celi Cotton, Joshua Sanborn, Lauren Flannelly, Emily Walker



The Site Design

The source of inspiration for our design is the University of Denver's Community Commons building. This building has a green roof, LEAD silver certification, multiple stories, and classrooms. This building serves as an area for campus residents to learn and grow as a community. Similar in design to this building, our design provides a site that is welcoming, sustainable, and transportable. Each element included in the site focuses on the promotion of healthy living and sustainability.



Keeping It Sustainable

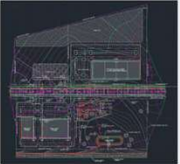
The team's construction planning and decisions were primarily driven by maintaining a sustainable environment. Decisions were made with a major focus on potential air pollution and gas emissions. Solar panels were utilized on streetlights and buildings as a sustainable energy source. Bike lanes and rental stations were constructed in order to encourage transportation that does not contribute to air pollution. The community center created provides resources to educate and encourage more sustainable living within the community. Further, an existing brownfield was converted into a grassy area with trees.

Community Center Design

Above all else, the team wanted the Community Center to bring together the community and neighboring districts. The design features two indoor floors and a rooftop garden. The first floor features a communal area with couches for studying and tablets and interactive displays explaining the green roof above it; the second floor is an IMAX theater with a built-in classroom for children and adults alike. The rooftop garden also features a community compost to encourage self-sustainability. Products grown on the rooftop garden will be sold within the community and exported to neighboring districts.



Plan View and Cross-Section View of Site

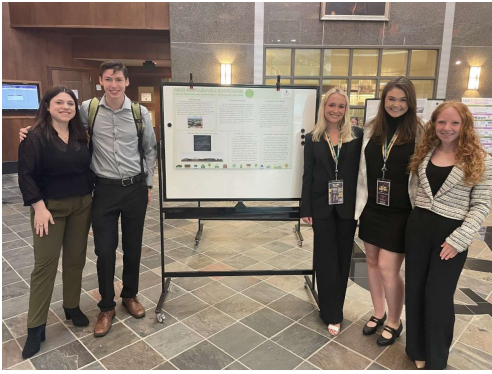


Benefits to the Community

When designing the community, the goal was to increase the quality of life of the community members while keeping the site sustainable. With this in mind, additions such as the bike rental, permeable pavement parking lot, and emergency call boxes were included in the design. Education and health were also emphasized throughout the project as the new community center teaches sustainability, supplies ways to get involved in the community, and grows fresh produce to sell. One way that the community center asked people to get involved is by leading volunteer events in the local forest, where community members would take part in activities such as the weeding of invasive species.

Multimodal Transportation Features

While designing the roadway, the team considered such factors as traffic load, multimodal transportation, and ADA accessibility. The roadway itself remained largely unchanged to accommodate vehicle traffic, but both a sidewalk and bike path were added parallel to the roadway. Together, the sidewalk and bike path are 10 ft wide, with the sidewalk itself being 6 ft wide in order to meet ADA compliance standards. Both provide alternate commuting pathways for local residents and visitors to the area. This aids in sustainability and environmental protection efforts while also offering an efficient multi-modal transit system for the city.



Regional Competitions

Professional Paper

4th Place

Mini-Prestressed Beam

1st Place

Balsa Bridge

3rd Place

GeoWall

5th Place

Transportation

2nd Place

Coastal

1st Place

Mini-Rain Garden

1st Place

Hank Aaron Smash

3rd Place

Professional Paper



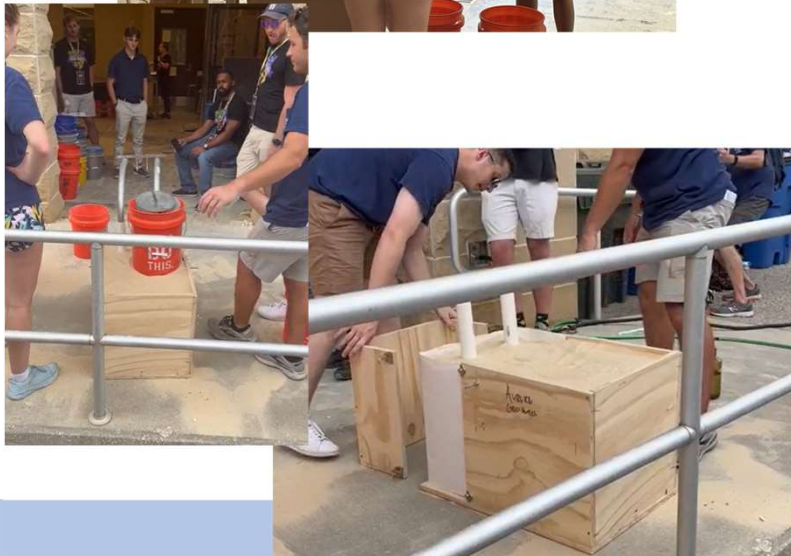
Mini Prestressed Beam



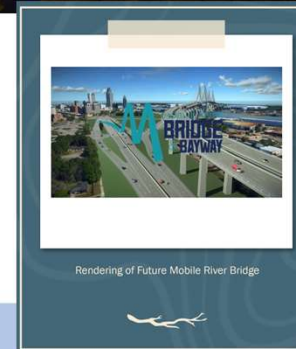
Balsa Bridge



Geotech Wall



Transportation



Economic Feasibility

Recommend 6 Lanes
\$2.7 Billion Cost

Funds

\$625 million Federal Funds
\$250 million State Funds
\$1.2 billion in bonds
\$1.1 billion Federal loans

Tolls

\$2.50 per passenger vehicle
Unlimited use option \$40 per month
\$18 for tractor trailers
Toll ends when total debt is paid

our PROBLEM

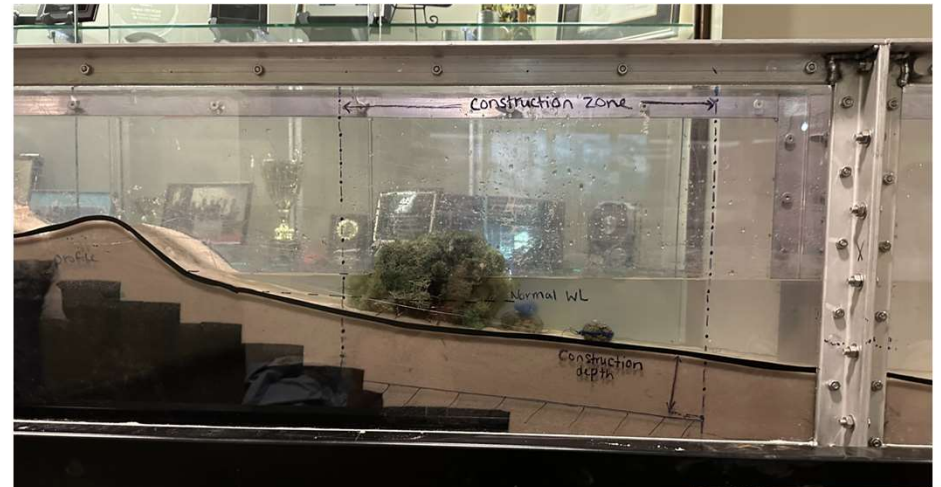


I-10 segment connecting
Mobile & Baldwin Counties

Between Exit 26 and Exit 35
Current Segment = 9 miles; including
George Wallace Tunnel & Jubilee
Parkway Bridge

Current Year = 2021
Current LOS = E or F

Coastal Protection



Mini-Rain Garden



Hank Aaron Smash



Spirit Competitions

Bead Toss

5th Place

Tug-O-War

9th Place

Community Service Video

5th Place

Concrete Cornhole

8th Place

2nd Line Umbrella

5th Place

Bead Toss



Tug-O-War



Tug-O-War



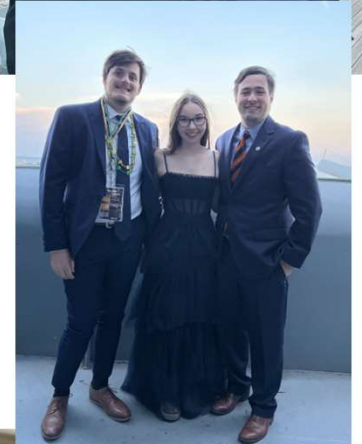
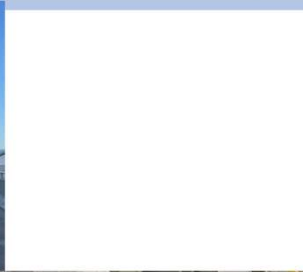
Community Service



Concrete Cornhole



Awards Banquet



Overall:
4th Place



War Eagle & Thankyou
Questions?