



ENGINEERS WITHOUT BORDERS

Texas A&M University Chapter 2024 Sponsorship Packet



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ENGINEERS WITHOUT BORDERS

Texas A&M University Chapter



Who We Are

Engineers Without Borders-USA (EWB-USA) is a non-profit organization that partners with developing communities worldwide in an effort to improve their quality of life through sustainable engineering projects. By placing an emphasis on sustainability, EWB-USA ensures that its projects can be facilitated and maintained by the community well after the project is implemented. For more information about EWB-USA, visit: <http://ewb-usa.org>.

The Engineers Without Borders-USA Texas A&M University Student Chapter (EWB-TAMU) is a community of 100+ active students, engineering faculty and professional mentors. Of 350 student chapters in the United States, EWB-TAMU is among the leaders in number of projects and membership. Our members rank among the top engineering students at Texas A&M University and have a passion for service. EWB-TAMU members maintain a rigorous class schedule while attending weekly officer and project meetings, monthly chapter meetings, and various training sessions throughout the year. Our mission is to deliver sustainable and innovative solutions to real-world problems in order to empower international communities by offering opportunities for the students of Texas A&M University to:

Manage international engineering projects

Develop relationships with members of other cultures

Create engineering designs

Lead the implementation of those designs

Initiate the supporting functions of the projects: fundraising, manage finances, and establish relationships with faculty and donors.



About Our Projects

We currently have two active international projects and have started a new team to equip new members. With past annual budgets of approximately \$32,000, we hope to increase to \$53,300 in upcoming years as our Rwanda and Dominican Republic projects grow. Corporate sponsorships are a large part of what makes our projects so successful.

Our international projects provide hands-on engineering experience for our members, and have a major impact on the developing communities in which we work. Not only are these projects the backbone of our organization, but they allow opportunities for students to participate in real-world engineering design. EWB students work alongside professional engineers, travel to foreign countries, interact with people from other cultures, and gain experience as part of a team. These projects allow us to build membership and give students opportunities that they will not find in any other student-led organization at Texas A&M, and experience that is found at few other universities in the country.

With two international projects, our financial needs have increased. Our projects are very cost-effective, but not inexpensive, and we rely heavily on corporate sponsors to support our mission. We hope that as you review these project descriptions, you find one that interests you and is worthy of your investment.

As a sponsor, there are various ways for you to get involved in our chapter for this academic year. Our success depends on our members partnering with valued sponsors who share and support our mission. Please choose the sponsorship that best meets your needs and join us in the world of international engineering service.

For more information about our chapter, visit: <http://ewb-tamu.org>.



How Aggies Create Impact Across the Globe

Innovation Through Latrines in Rwanda

Matyazo, Rwanda is located in the rural mountains about three hours outside of the Rwandan capital of Kigali. The Matyazo sector is divided into five cells, two of which have been identified as having the greatest need (the Binana and Gitega cells). In these two cells, less than half of the households have any sort of latrine and must resort to open defecation or using a neighbor's toilet. Furthermore, classification of having a latrine does not mean that the sanitation issues are solved. These "latrines" range from a mud brick structure to a covered hole in the ground. The latrines are easily flooded during the rainy season, causing diseases to spread along with the excrement.

The goal outlined by the community is to build 500 composting latrines to solve the sanitation issue and support subsistence farming. While 500 is a large number, Rwandans have a deep sense of community and are excited to help in the project. Additionally, IDA Rwanda, a local NGO, is heavily involved in the process.

In early September of 2023, Stephanie Nishimirwe filled out a latrine report on behalf of Philippe Ntarwerero, a 93 year old blind man, living with his 16 year old grandson, Gildas Niyitangurukundo. They report on the effectiveness and success of the latrine implementation work done in Rwanda. These product accomplishments include: the accompanying hand-washing station being used, the ease of using the latrine for children and women on their periods, and there being no difficulty or danger associated with using the latrines at night. They describe large improvements between these latrines and the previous methods such as the liquid drinking properly and a lack of smell. These latrines also serve as a potential source of income as Phillippe says that he would consider collecting and selling the excess fertilizer from the pit. Overall, this latrine report displays a clear picture of the impact of this project on the community as Phillippe notes that the latrines have resulted in the promotion of hygiene and sanitation as well as an improvement in agricultural production. Phillippe concludes his beneficiary report by saying that he is extremely thankful for the support that enables the implementation of clean latrines in both his own household and the surrounding community in need.

In January of 2020, a team from Texas A&M traveled to Rwanda to perform an assessment. While there, they spoke with community members and leaders about the sanitation project. They also visited previously built latrines to see the current situation and learn what the community is accustomed to. The greatest takeaways from the trip were:

- Community Involvement**
- Teaching Methods**
- Design Solutions**
- Achievable Goals**

After gathering this and much more information from the assessment trip, the team and our engineering mentors started work on developing a design to meet all of our criteria and address the problems put forward by the community. After a year of further development on the solution, the final engineering documents were created and submitted for implementation. Construction of the first latrine began at the beginning of 2021. This latrine was implemented remotely by our partners in Rwanda using the documentation we provided.

Shortly after the first latrine was constructed, an implementation trip was planned for the summer of 2022 to build the second latrine in-country with a student team. The assessment trip was completed in May 2022 with a team of students and two of our adult mentors, and this trip was a great success; They were able to take part in the latrines construction and bring back easier and more cost effective building techniques that were added into the construction plan when they returned. They were also able to continue to talk to the community and gather input from them about the first latrine.

After our implementation trip, we started to shift more towards a fundraising standpoint. We started raising funds to meet our goal of 50 latrines. We also started the cost optimization process and decreased the price of latrines so that our money could build more latrines. During this phase, we continued the remote implementation of latrines. We constructed a total of 15 latrines during this time.

Towards the end of 2023, we started planning our monitoring trip to check up on the conditions of the previously constructed latrines. On this trip, which was done during January 2024, we got a chance to visit every latrine we had constructed to this point and structurally inspect them. Every latrine was still in great condition, even the ones built 3 years ago. We also interviewed the recipients of the latrines and gathered feedback from them to bring back to the chapter. Finally, we were able to speak to the local Rwandan government and secure the future of the project by negotiating an agreement with them where they will supply the local materials for the latrines. This cut down the price per latrine by a third.

Our plan for the future is to continue to raise money in order to reach our goal of 50 latrines. We also plan to continue talking to the government and see if we can secure more funding or materials from them.



How Aggies Create Impact Across the Globe

Building Bridges in the Dominican Republic

Located near the capital of the Dominican Republic, Villa Verde is a diverse, Spanish-speaking community. The community is comprised of approximately 6,000 members who travel along dirt roads in personal vehicles (motorcycles and small cars). However, when the community experiences rain for more than an hour, the poorly developed streets quickly flood, making them impassable for daily commutes. Additionally, as the water pools, it becomes a breeding ground for mosquitoes carrying malaria. Our goal is to work alongside the community to develop and implement a drainage system that diverts the water and makes the roads passable.

Our team does not plan to do this alone. Without the input and buy-in from the community, the project would be ineffective in the long-term. We have partnered with Community Empowerment, a local NGO in the Dominican Republic. Community Empowerment has worked in Villa Verde for many years and has built a strong rapport with the members of the community. They will be an integral part of the planning, implementation, and monitoring of the project.

In the summer of 2022 an assessment trip was conducted to the community where survey data, elevation points, and pictures of proposed improvements were taken. Additionally first contact was made with the community to go over the future of the project, goals, and discuss initial design ideas. This information was taken back to Texas A&M where students used this data to develop drainage design including ditches, underground piping, road grading, and more.

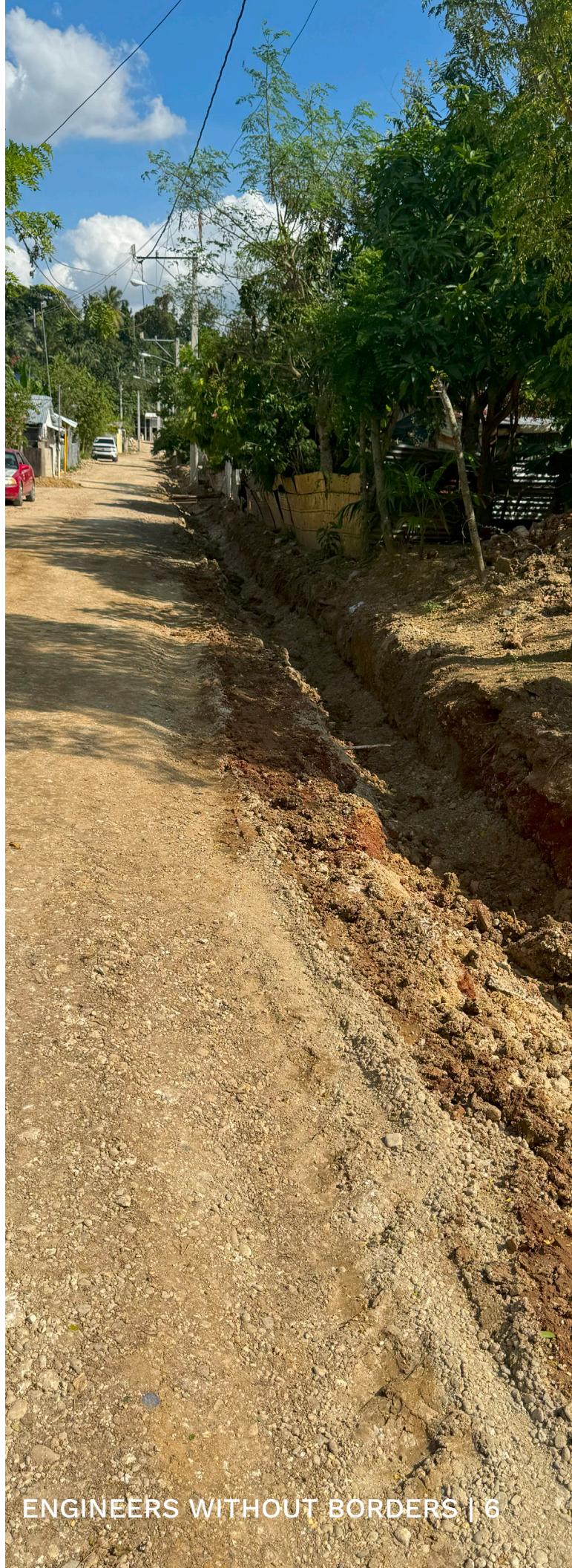


It was so amazing to see all of the work, research, and planning we were doing throughout the semester unfold before us on this trip. The community was so welcoming towards us, and it was very fulfilling to see their excitement towards the end when they saw the improvements we'd made on their road. I also learned so much about project management and implementation, and I'm looking forward to learning even more as we continue to work with this wonderful community.

- Renee Schoellman
Sophomore Nuclear Engineer,
EWB Member

The implementation trip was made in January of 2024 which marked the first time breaking ground in the community. On this trip the team was able to work alongside the community members to implement the drainage solutions. This included graded and re-constructing a gravel road, digging a drainage ditch alongside the roadway, identifying and developing a retention pond to hold rainwater, and installing a pipe with a flap gate to control water flow. This was the work to be done in the community and allowed the team to not only maintain communications and relationships with the community members but also to work on field design to identify areas of improvement throughout the community.

Now the team is primarily focused on adding finishing details to the work done during the implementation trip including walkway bridges for the ditch and an operation and maintenance manual for the project. Additionally, the team looks to continue to design and develop drainage solutions throughout the community looking for other places to implement pipework and ditch design. The team remains in contact with both the Community Empowerment team and Unidos por Villa Verde to continue to plan, design, and coordinate future trips and projects, including remote implementation.





Serving the Bryan, College Station Community Through Engineering

Implementation of FIELD

After developing multiple international projects, we recognized a need in our organization for teaching students the basics of engineering design. While our projects have a Civil Engineering emphasis, our members major in all branches of engineering and non-engineering and have a variety of experience levels. As such, in August of 2021 we established FIELD, a "Fundamental Introduction to Engineering and Local Design," which partners with REACH, a local service organization.

Through our partnership with REACH, we will choose one project each semester for our members to work on. This project could be anything from raised beds to aquaponics for the "invisible aggies" on campus, those who tirelessly serve Texas A&M as custodians, cooks, etc. In the span of one semester, members will go through the 3-5 year engineering design process that we employ for our international projects. Through weekend workshops and weekly meetings, they'll learn how to manage a project, draft a 3D model, write a technical report, and use tools to build the final design for one of the REACH projects. In doing so, our members will gain the skills to succeed on a larger scale, international project and give back to our local community.

Semester	Project	Cost
Fall 2021	Raised Beds	Completed
Spring 2022	Pergola	Completed
Fall 2022 - Spring 2023	Floating Dock	Completed
Fall 2023	Solar Pump for Pond	\$1,500 - 2,000
Spring 2024	Tractor/Pedestrian Bridge	Exp. \$1,800

Benefiting Areas in the United States of America A Trip to Arkansas



Heifer Ranch, Arkansas, requested a way to use solar energy to power equipment on a Prairie chicken schooner that would provide light, cool down the chickens in the summer, and reduce the manual labor to feed the chickens. Jon Fripp and Dan Lepinski are both mentors for the project. They came to college station and provided a solar workshop in Fall 2023 to teach EWB members how solar power works and what is necessary for a Photovoltaic system. Electrical knowledge was also disseminated regarding how to measure volts, amps, and input/output at a point in an electrical system.

The project members interviewed Heifer poultry expert Buzz (Bailey Egan) and electrician (Tim Nacke) about their prairie chicken schooners and the way they raise the chickens. The needs for the equipment were identified in order to confirm power generation requirements. Budget questions were asked as well as who the design would go to once the finalized design was selected. Measurements of the schooner joints and distance between them were recorded. Opinions of the operators and concerns of safety were written down to be taken into consideration.

Arkansas Timeline

Fall 2023
Kickoff and Solar Car Workshop

December 2023
Heifer Technical Information Call

February 2024
Heifer Assessment Trip & Workplan Due

March 2024
Design and Calculations

April 2024
Initial Design Report

September 2024
Redesign Period, Based on Concerns and Issues with Initial Designs

October 2024
Finalize Design & Submit

November 2024
Wrap Up and Final Documentation Reports



OUR BUDGET & SPONSORSHIPS

Varying levels of sponsorship of our chapter offers a great opportunity to advertise with top tier students across multiple engineering disciplines. This year we are providing better recognition and branding for our sponsors. Many of our members have said that they hope to continue working with EWB-USA post-graduation and would love to be in a company that supports the organization. We hope that you take advantage of this opportunity to support our members and the communities in which we work.

Cost	Platinum \$5,000+	Gold \$3,000+	Silver \$1,000+	Bronze \$500+
Link and logo on our website	✓	✓	✓	✓
One-time Social Media shout out	✓	✓	✓	✓
Sponsor acknowledgment and thanks at events	✓	✓	✓	✓
Logo on size t-shirts	Center, Large	Medium	Small	Small
Opportunity to speak at a meeting	✓	✓	✓	
Logo on flyers	✓	✓	✓	
Logo on weekly newsletters	✓	✓		
Excerpt of company on website	✓	✓		
Recurring Social Media shout out	✓	✓		
Member resume collection	✓			
Featured sponsor at events, such as the banquets	✓			

HOW TO CONTRIBUTE

All general and international project donations can be sent directly to EWB-USA at the link below or you can mail a check to our on-campus mailbox. You can also visit our website at <http://ewb-tamu.org> for more information.

Donation Link: <http://tinyurl.com/ewbtamu-donate>

Make checks payable to EWB-USA. Please specify Texas A&M University Chapter and Sponsorship Level on the memo line. If you are donating to a certain international project, please specify the project in the memo line as well.

We also would appreciate gift cards and materials to be used for our projects. This may include gift cards to Home Depot or Lowe's, or a discount in power tools or other materials. If you would like to choose this option, please contact us directly at the information below.

Lastly, two anonymous former students passionate about international travel and students have recently created an endowment to benefit our chapter. If you would like to contribute to this endowment fund, please contact **Patrick Wilson, director of Development**, at pwilson@txamfoundation.com.

Mailing Address

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THANK YOU!

Thank you so much for taking the time to learn about our student chapter of Engineers Without Borders at Texas A&M and for your consideration in financially supporting our work. If you have any questions or would like to know more, do not hesitate to contact us. Our contact information is found below.
Thank you again for your support!

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The 2023 - 2024 Sponsorship Packet was designed by our Director of Communications. For design information, contact:

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STAY CONNECTED

We appreciate your interest in the Texas A&M University Chapter of Engineers Without Borders USA. Please consider connecting with us in a variety of ways to stay updated with our organization.

 [ewbtamu](#)

 **Engineers Without Borders-USA:
Texas A&M Student Chapter**

www.ewb-tamu.org

