

ENGINEERS WITHOUT BORDERS

AWWA FALL 2024 CONFERENCE

About Us



TONY SAUDER

Faculty Advisor
Professional Engineer
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CLARICE PRANYOTO

President
Mechanical Engineering



IRIS WONG

Vice President, External
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RITHIKA RAMKUMAR

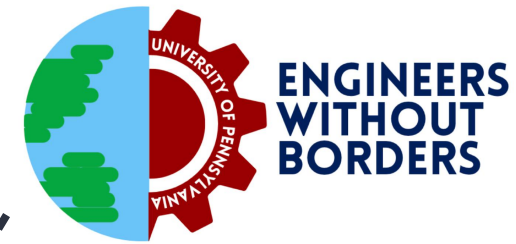
Project Lead
Chemical & Biomolecular
Engineering

Who are we?



EWB-USA Mission

- EWB builds a better world through engineering projects
- Empowers communities to meet their basic human needs
- Equips leaders to solve the world's most pressing challenges.



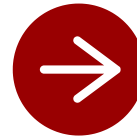
UPenn Engineers Without Borders (UPenn EWB)

- University of Pennsylvania's student-run chapter of EWB-USA
- Nonprofit humanitarian organization partnering with developing communities globally
- Enhances connections between Penn students and the greater Philadelphia area



Over the past 2 years...

5 members



41 members (3 committees)

3 long-term EWB projects



2 international, 1 domestic

Expanded demographic
beyond engineering students



International Studies, Masters
in Environmental Science

Increased engagement with
local Philadelphia community

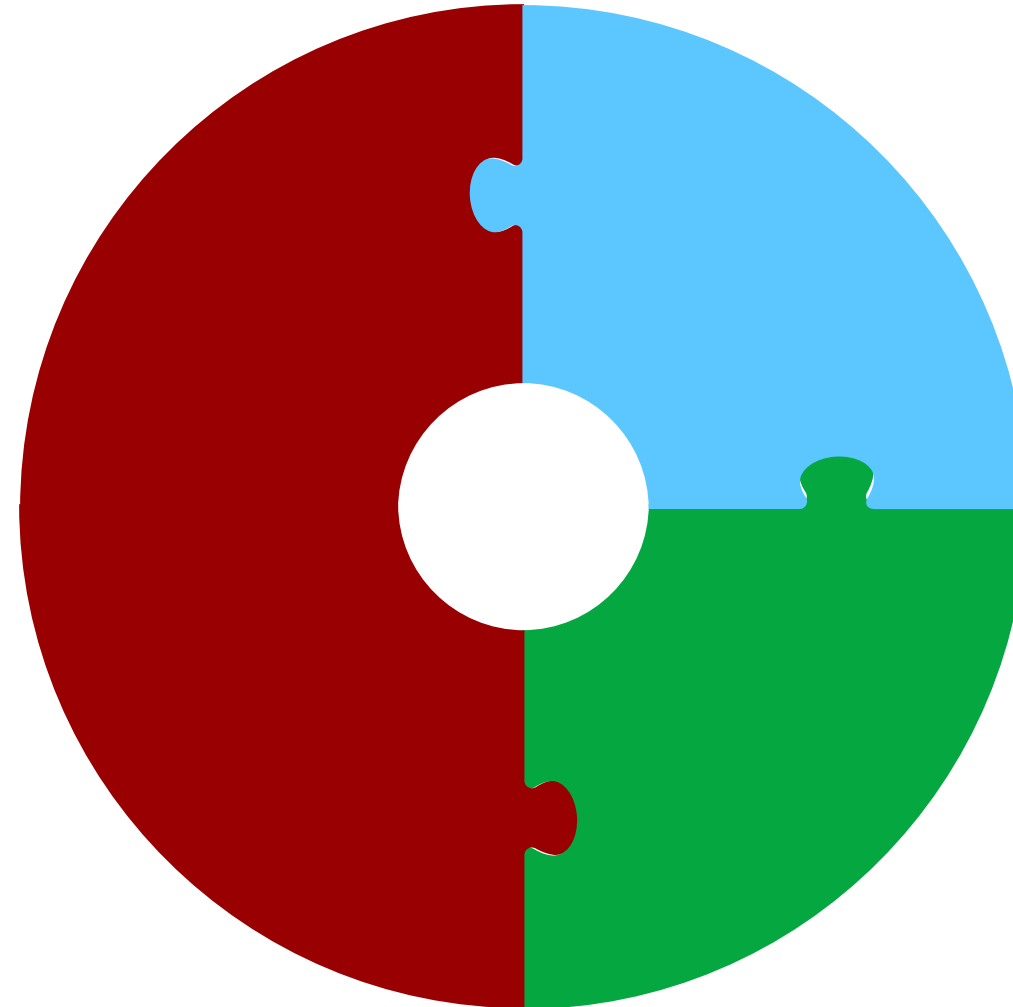


Penn Food and Wellness
Collective, Penn Farm

Team Structure

Project (Current)

- Plan and implement projects to support international communities
- Day to day work include technical reports, research, CAD, data and alternative analyses
- Aim to promote sustainable practices and provide engineering solutions to problems faced by our community

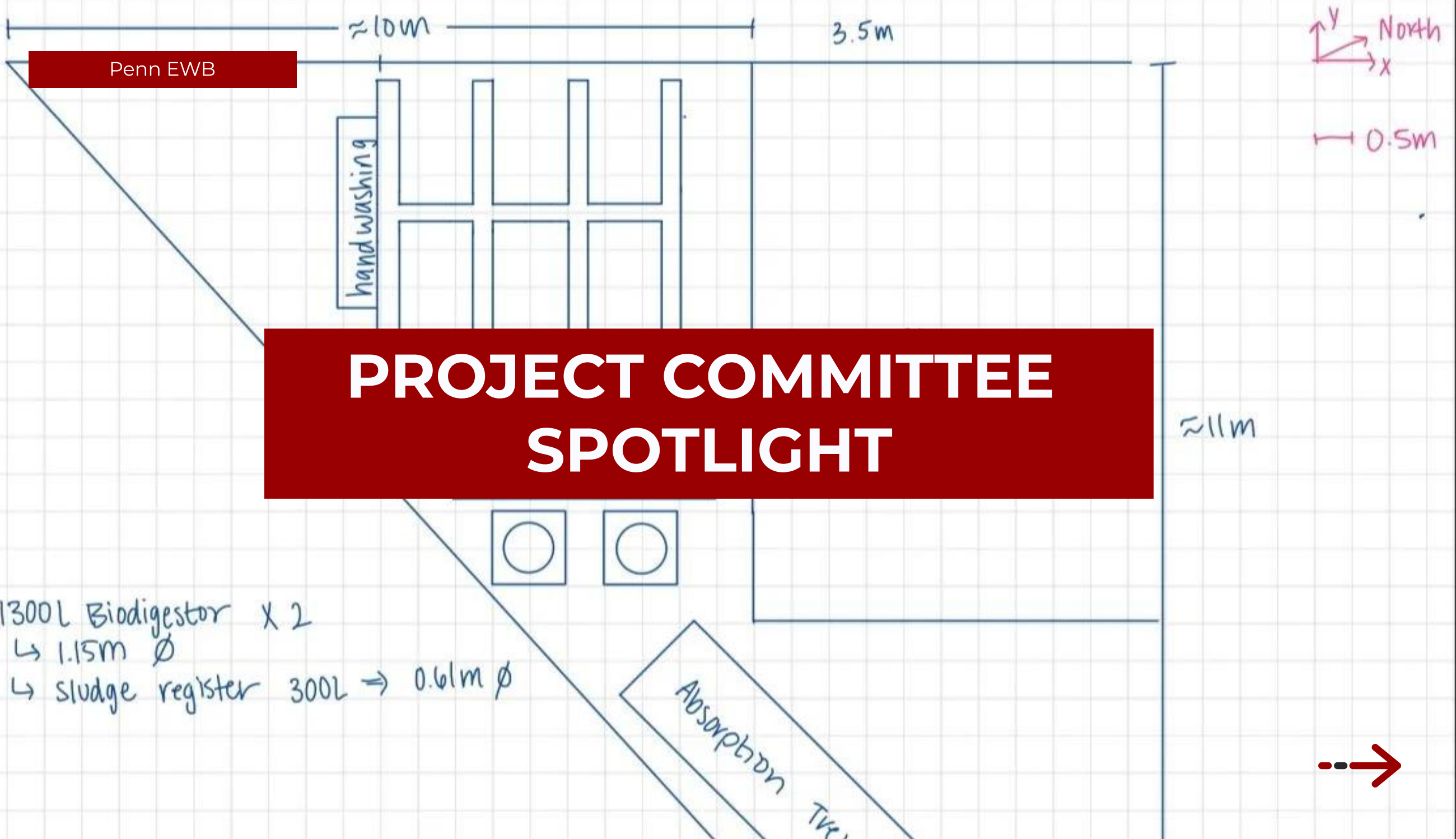


Outreach (Fundraising)

- Fundraising for material costs for ongoing projects
- Build and maintain corporate partnerships to continually support to communities impacted by our work

Outreach (Marketing)

- Manage club website and social media to provide up-to-date information
 - Create flyers and infographics to promote club activities and events



Penn EWB

hand washing

PROJECT COMMITTEE SPOTLIGHT

1300L Biodigester X 2
↳ 1.15m \varnothing
↳ sludge register 300L \Rightarrow 0.61m \varnothing

Absorption Tank



Guatemala "Los Angeles School" Project

About

Project Background: The Los Angeles School, located in Los Angeles, Guatemala, lacks proper bathroom facilities, with only two poorly maintained pit latrines that are unable to accommodate a growing student and faculty population.

Project Goal: The scope of this project is to design and implement a bathroom system for the Los Angeles school with a population of 88 students and 5 teachers.

Project Scope

The project work was intended to include building structure, toilets, piping, a septic tank, and seepage pit(s). The University of Pennsylvania Chapter was to take on raising 70% of the project funds, estimated at approximately \$11,700 according to the detailed project budget provided.

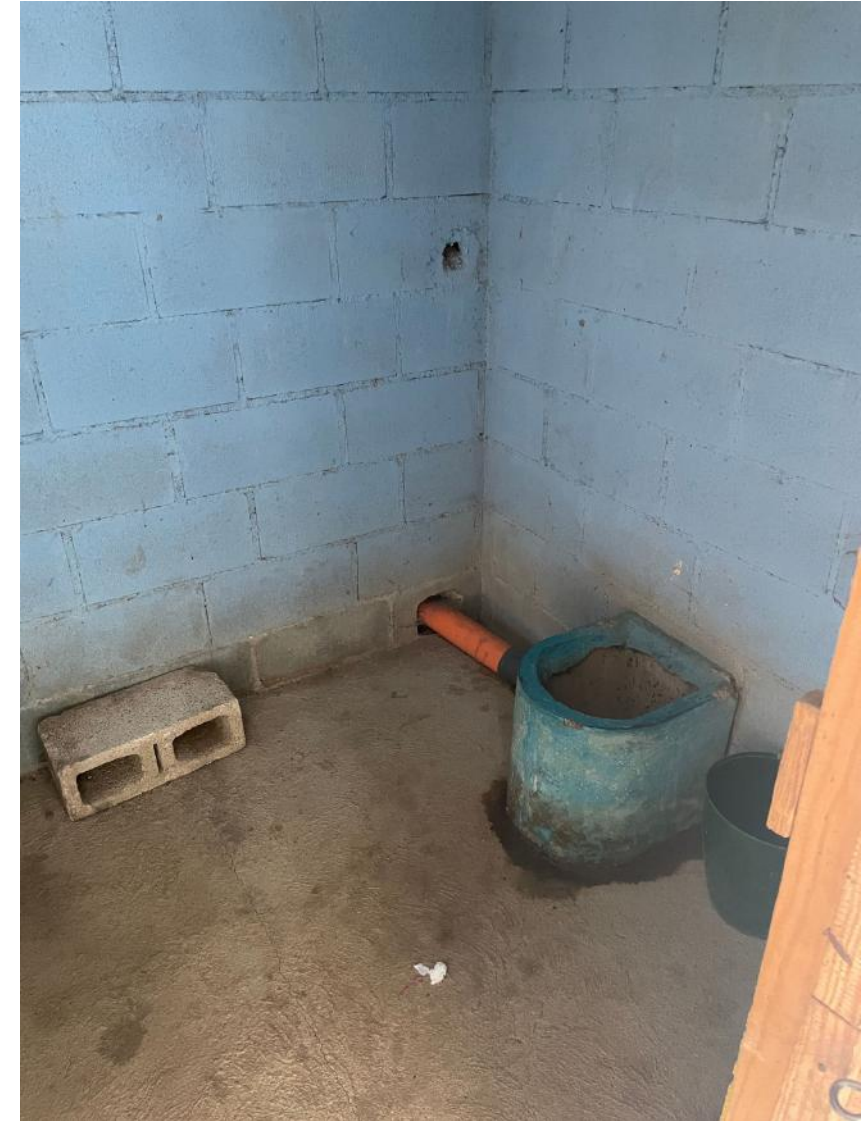




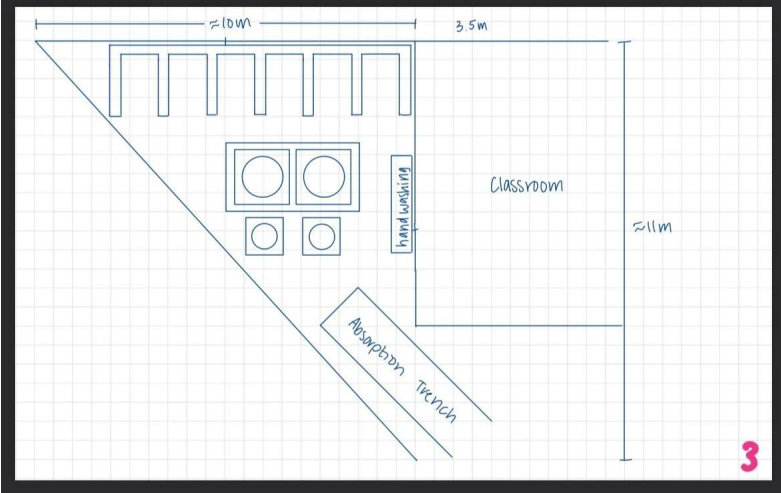
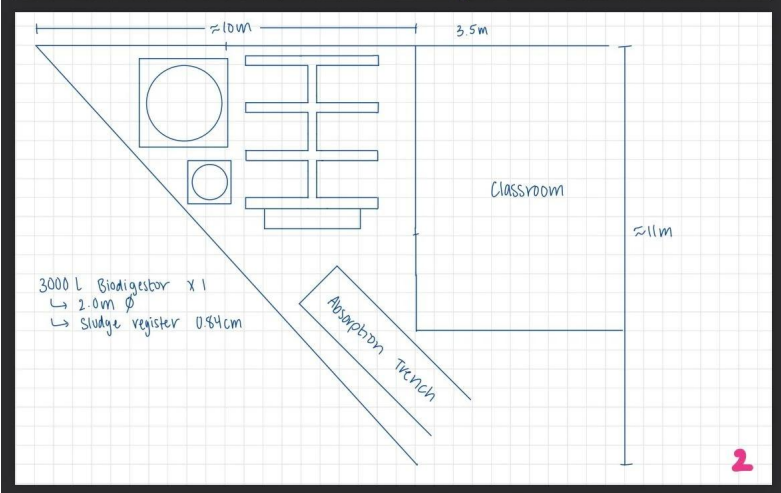
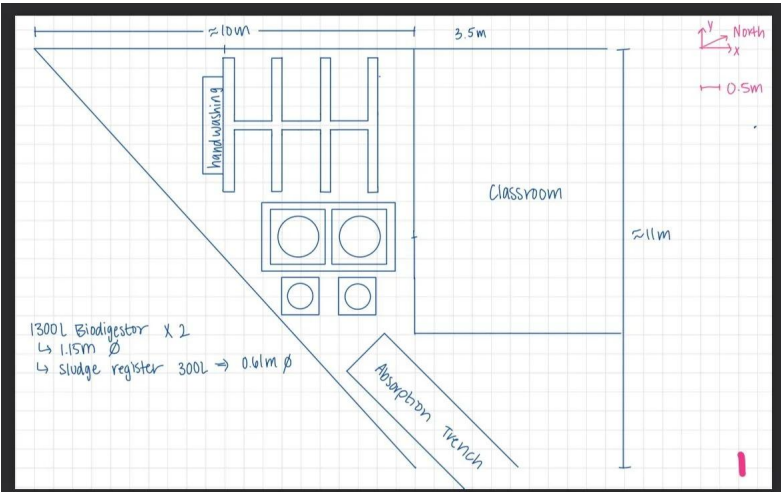
Meeting students of the Los Angeles School



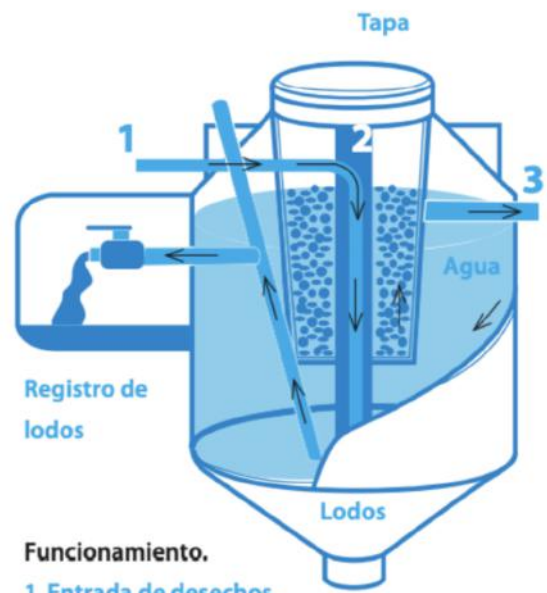
Site assessment: flow rates of the percolation of water in the soil



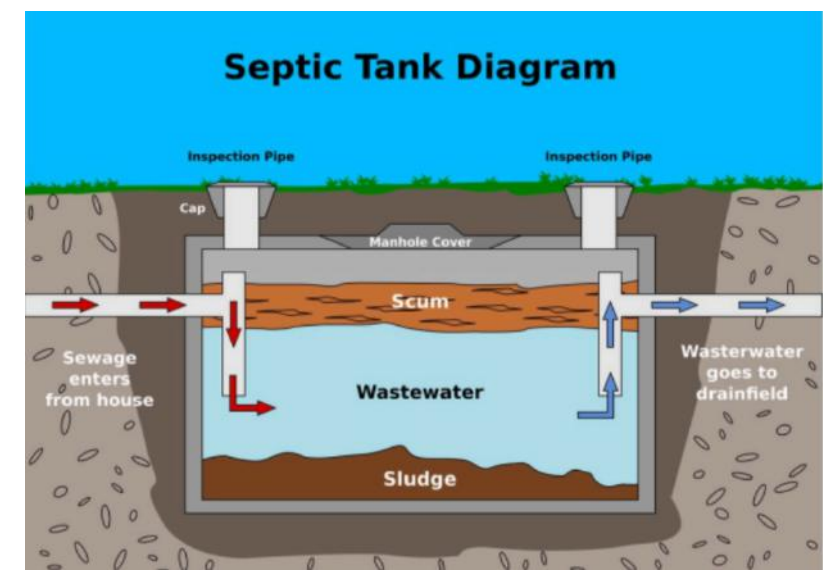
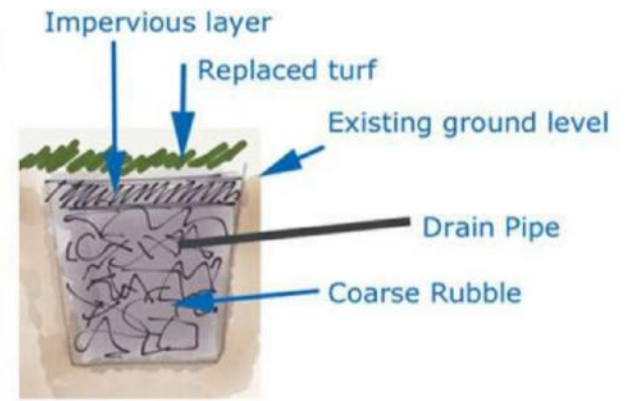
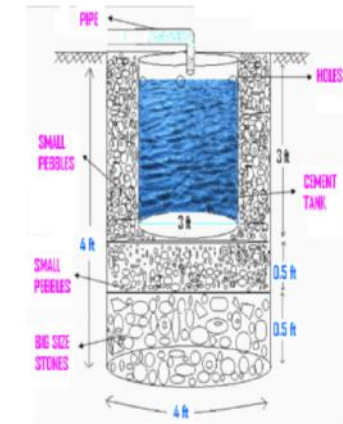
Current singular latrine for all students at the Los Angeles school



Left: Three proposed layouts for latrines in the allocated land (biodigesters quantity, capacity, latrine quantity, discussed with Guatemala engineer and advisor)



Funcionamiento.
 1. Entrada de desechos.
 2. Filtro por donde pasa el agua.
 3. Salida de agua.



Right: Alternatives considered. Biodigester, Soakaway, Septic Tank

However...and into the takeaways

Ingenieros Sin Fronteras
Capítulo de University of Pennsylvania

Por este medio reciban un cordial saludo, la presente tiene como objetivo manifestarles nuestro agradecimiento por la buena intención manifestada durante la intervención en nuestra escuela, sobre la construcción de los baños. Como es de su conocimiento era un problema que ameritaba una pronta solución. El mes anterior se nos presentó una oportunidad en otra institución, en llevar a cabo dicho proyecto, donde nosotros como Escuela y Padres de Familia de la comunidad de LOS ANGELES no podíamos rechazarla, por lo que queremos dar a conocer que el proyecto de baños ya inició su construcción en nuestra escuela a través del apoyo de otra institución. Con todo respeto que merecen Ustedes como Ingenieros Sin Fronteras Guatemala y el Capítulo de University of Pennsylvania, queremos agradecer infinitamente su apoyo brindado hacia la Escuela de Los Angeles, y quedamos abiertos que vuelvan algún día quizás para otro tipo de apoyo si se pudiera dar.

Gracias por la atención


Juan Carlos Alvarez Saquic
Director



Funding is of highest priority along with quality of technical work.

Consolidate project resources to complete projects efficiently.

Reach out to other EWB collegiate chapters for their insights.

Our team is involved, efficient, and dedicated, making us able to bounce back and learn quickly.



Grace City Church (Current)

Project Location: 8950 Ashton Rd, Philadelphia, PA 19136

Project Background: Grace City Church of the Northeast cannot host community events, because it does not have an American with Disabilities Act (ADA) accessible ramp

Project Goal: Design a ramp that abides by ADA guidelines for the church. Given the topographic features of the church lot, a standard ramp would not fit, causing them to need outside help.

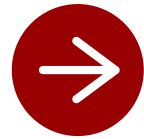
EWB Project Scope: Designing an ADA accessible ramp using Auto-CAD; this design will be used by contractors hired by the church to construct the ramp (note outsourcing construction work).

OUTREACH COMMITTEE SPOTLIGHT

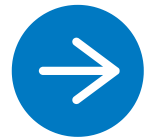




Recent Fundraising Efforts



Received \$1000 from Impact Fund EWB USA in 2024. Grant will be used to cover material costs for upcoming project.



Applied for Engineering Information Foundation Grant (Pending). Grant supports developmental projects and training programs in engineering education



Raised \$400+ through campus bake sale in Spring 2024. All earnings will go towards material costs for upcoming project.

THANK YOU!