



GeoWall

SPONSORSHIP PROPOSAL 2019-2020



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Letter From the ASCE at UCLA President

Hello Prospective Sponsor,

I am very pleased to present the 2019-2020 Sponsorship Package for the UCLA GeoWall Project. The combined efforts of our 370 members brought many accomplishments and successes to the American Society of Civil Engineers at the University of California, Los Angeles (ASCE at UCLA) this past year in all aspects of our chapter, from professional development events and project competitions to strong mentorship programs and community service events. The dedication and perseverance of our members did not go unnoticed as ASCE at UCLA garnered a variety of Project and Chapter awards. Most notably, our chapter earned the ASCE Region 9 Distinguished Student Chapter Award, which is given to the most outstanding ASCE Student Chapter in California.

Hosting close to 120 events in addition to our myriad project workdays, our chapter fosters a strong sense of community within UCLA Engineering that not only provides students with academic and technical support, but also creates lasting memories and friendships that remain with students long after their academic careers. The heart of this community is our 11 different projects, nine of which are competitive and two are service-oriented. These projects cover all different concentrations of civil engineering and construction management. Moreover, these projects offer our student engineers: countless hands-on opportunities to supplement their academic knowledge and improve important technical skills, invaluable opportunities to develop managerial skills in project leadership roles, and lasting friendships that begin with simply a common interest.

Eight of our projects continually compete at the Pacific Southwest Regional Competition (PSWC) and this year we had five top three finishes! Environmental Design and Sustainable Dam placed first, Transportation placed second, and both Concrete Canoe and Timber Design-Build finished in third place. Apart from PSWC, our Construction Management Sustainability team placed first at the annual Associated Schools of Construction (ASC) Regions 6&7 Student Competition, our Seismic Design team received second place at the annual Earthquake Engineering Research Institution (EERI) competition, and our GeoWall team finished third at the annual Geo-Congress student competition.

However, our success is not possible without the generous support from our industry sponsors like yourself. Your continued contributions allow our projects to purchase all the necessary supplies to compete at the highest levels of their respective competitions, as well as enhance project camaraderie for the benefit of student engineers for years to come. As a sponsor, your tax-deductible donation provides you opportunities to network at our industry events and receive publicity on all our media platforms, along with the other benefits listed within this sponsorship package. Specifically, our industry events include our highly successful career fairs, networking nights, and info sessions that provide valuable opportunities for you and your company to recruit UCLA engineers.

On behalf of our ASCE at UCLA Student Chapter and the 2019-2020 UCLA GeoWall Project, thank you for your consideration in reading this proposal and for your continued support. Personally speaking, the countless hours and work I put into these projects truly impacted my college career for the better since I joined this chapter as a freshman, and the words I used in this letter hardly do these experiences justice.

We are all extremely excited for the upcoming year, and I have the utmost faith in the creativity, dedication, and ability of our project managers to lead our 11 projects to even greater success this year. If you have any questions regarding this proposal or any aspect of ASCE, please don't hesitate to contact myself or the project managers!

Best wishes,



Claire Killian
President, ASCE at UCLA Student Chapter
ckillian113@gmail.com

Letter From the Geowall Project Managers



Dear Prospective Sponsor,

Since 2010, GeoWall has been a thriving link between UCLA undergraduates and the field of geotechnical engineering. As the only undergraduate geotechnical project combining these two, GeoWall has played a vital role in introducing undergraduates to the geotechnical field and fueling their interests in it. Through designing and building a miniature mechanically stabilized wall, GeoWall members gain valuable hands-on experience working with geotechnical concepts while improving their problem-solving skills.

For the past decade, we have consistently placed within the top 5 schools at our regional competition and qualified to compete at the national conference. Last year was no exception; we earned third place in nationals and fourth place in regionals. In particular, we received first place for our technical report at nationals. However, our journey wouldn't have been so successful without the generous help and support from our sponsors. If it was not for companies such as yours, we would not be able to buy the materials we need or afford to travel to our national competition that proves so enriching for our members.

It would be our privilege to have you as our sponsor as we continue this year's geotechnical project and further motivate our members to explore and challenge themselves. Any support would mean a lot to us! As a sponsor, your company's logo will be displayed on our t-shirt, the GeoWall sandbox, and the ASCE at UCLA website. Additionally, your company will receive networking benefits in the form of free admission to our ASCE student chapter Networking Night and End-of-the-Year Banquet, both of which are great opportunities to interact with UCLA students.

Attached below is a detailed sponsorship proposal about what GeoWall does, and why we would appreciate your support next year. Moreover, we will follow-up via phone within two weeks to answer any questions you may have. We appreciate the time you spent to read our proposal. Feel free to contact us at any time if you have any questions or concerns. On behalf of everyone in the GeoWall team, we would like to invite you to join us on this year's geotechnical challenge!

Sincerely,

Maan Alhamdan
Project Manager
maan.alhamdan@gmail.com

Kaihong Kyle Hu
Assistant Project Manager
Kahu1@g.ucla.edu

About GeoWall

AT A GLANCE

GeoWall is a competitive project in which we design and build a small-scale, M.S.E. (mechanically stabilized earth) retaining wall out of kraft paper. Our design aims to use the least amount of paper to support the retained soil and design loads.

The competition rules - including the type of M.S.E. retaining wall, construction materials, and sand properties - change from year to year and are meant to challenge students' ability to come up with innovative solutions. Last year, we were tasked with designing a wrapped face wall that could withstand 500lb of backfill, 50lb surcharge on the backfill, 20lb static, and 5lb dynamic load on the load frame extending from the two piles inserted into the backfill.

TESTING

Over the first few weeks of Fall Quarter, our focus is to perform all necessary laboratory tests, allowing us to develop an informed design. During this time, we perform a sieve analysis test, triaxial test, force accelerometer test, paper tensile strength test, and pull out test. The results of the sieve analysis test will determine if sand in our practice build fits the grain size distribution given in the competition rules. From the triaxial tests, we plot the Mohr's circle and use it to find the friction angle, which will be applied in formulas to design the retaining wall. We also perform a paper tensile strength test and a pull-out test to measure the paper strength and its friction against our sand.

DESIGN

Following the collection and analysis of all relevant data, we begin the design process for the wall. Aided by the numerical computing software MATLAB, we use standard M.S.E. retaining wall equations to calculate the dimensions, placement, and geometry of the reinforcing strips. We also model pile-soil reaction using R.S. Pile, a pile analysis software, and numerically model plane-strain analysis in RS2. This initial wall prototype is typically overdesigned, but through collaboration with professors, graduate students and fellow undergraduate students, we refine our design to minimize the weight of the wall and its reflection under a load.



Figure 1: A GeoWall member gloats a successful design on top of a build.

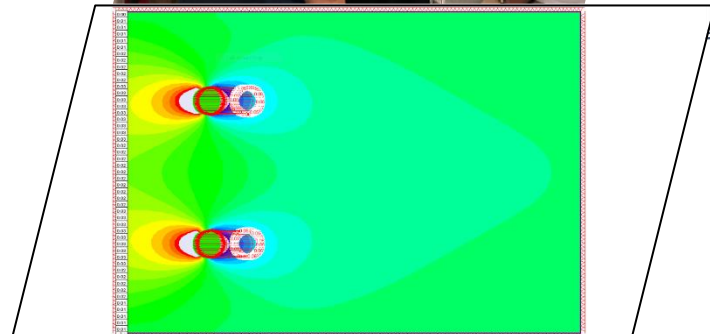
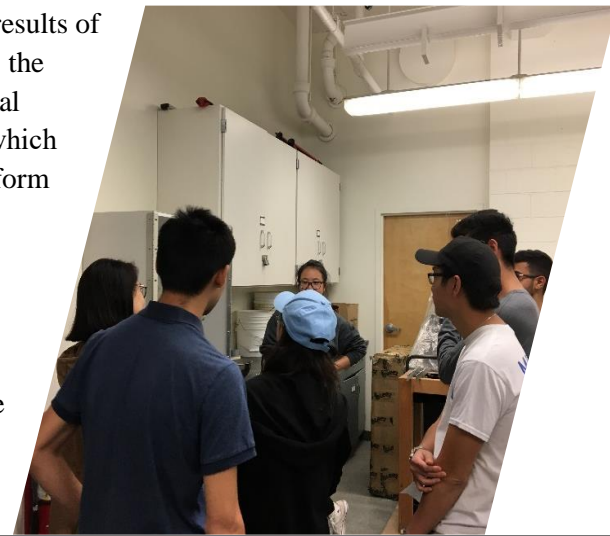


Figure 1: RS2 displays 2D plane strain analysis due to the 2 piles, proving data of stress on the front face of the wall.

About GeoWall

After the design is finalized, we begin writing the design report. This employs both our MATLAB calculations and AutoCAD visualizations of the wall to present the combined results of our testing and design processes. The report is reviewed by our graduate and faculty advisors who provide valuable feedback to our members and help refine our technical writing skills. At the end of the fall quarter, we submit our design report to a national committee of geotechnical engineers from academia as well as industry, who select the top 20 schools to compete at the national conference.

COMPETITION

GeoWall attends and competes at two conferences annually: a national conference hosted by the ASCE Geo-Institute during winter quarter and a regional conference hosted by a local ASCE student chapter in the Pacific Southwest region during the spring quarter. This year, the national conference will take place in Minneapolis, Minnesota and the regional conference will take place at California State University Fullerton.

During competition, four team members must fabricate, construct, and load the wall over the course of three timed stages. In the first stage, the facing and the reinforcing strips are fabricated and assembled to create the wall. In the second stage, the wall is placed against the inside of the removable front face of the wooden box, followed by pouring the sand and compacting it. Once this stage is completed, the front face of the box is removed so the wall's performance can be judged. In the third stage, an empty bucket is placed on top of the backfill and filled with 50lbs. After that, a bucket of 20 lbs. of sand is loaded on the two piles placed. If the wall holds, another 5 lbs. will be dropped 10 inch above the two piles. In total, the wall must withstand 500 pounds of backfill, 50 lbs. of vertical surcharge, 20 lbs. of horizontal surcharge and 5 lbs. of dynamic load with minimal deflection.

GOALS AND IMPACT

Through GeoWall, members participate in hands-on experiences such as running lab tests to determine grain size distribution, working in MATLAB to analyze data they helped collect, and meeting and connecting with industry professionals at the national conference. For many members, GeoWall is a bridge into the geotechnical world, where they can learn to engineer a M.S.E. wall even before their first soil mechanics class.

This year, it is our goal to once again attend the national conference in Minneapolis, Minnesota - this enriching opportunity is a great asset to our general members, many of whom otherwise could not afford to attend a national geotechnical conference and motivates them to further explore the field.



Figure 2: Build team competing at the national competition in Philadelphia, Pennsylvania.

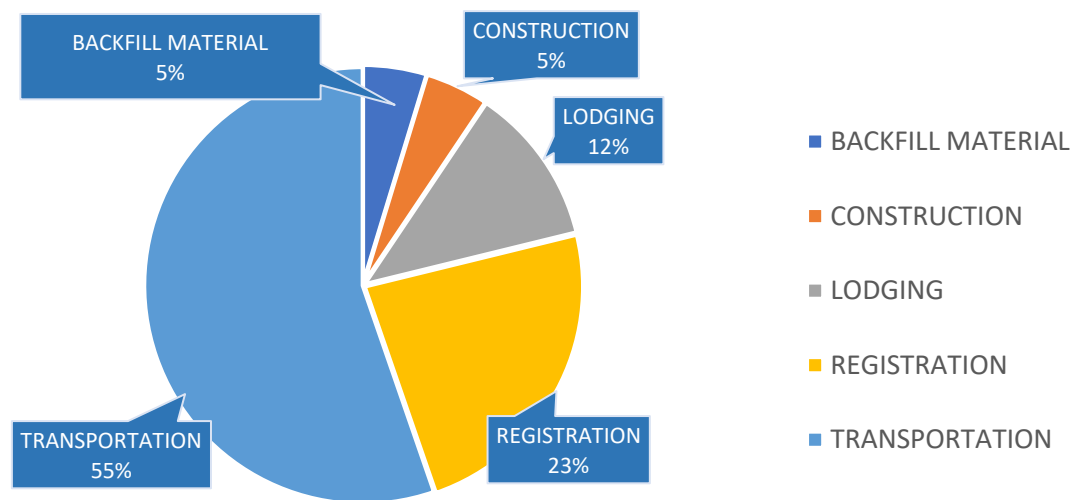


Figure 3: Build team after a successful build at the regional competition in San Luis Obispo, California.

Projected Budget

Below is a breakdown of the projected UCLA GeoWall budget for the 2019-2020 school year. These values were generated based on the previous year's budget and adjusted with this year's new competition locations and potential need in material. We anticipate again attending both the regional and national conference. This year's national competition will take place in Minneapolis, Minnesota. Thus, travel expenses are a significant part of our budget.

For the past two years, we have sent a build and design team to our national conference, which has been enriching for both the competing and non-competing members. Many GeoWall members who attended conference last year found themselves motivated to explore the geotechnical field further and increase their involvement in GeoWall. Thus, we hope to again send two teams. The design team provide our non-competing members the opportunity to see the cumulation of their efforts, while also furthering their exposure to the geotechnical field.



Description	Qty	Unit Cost	Total Cost
REGISTRATION	8	\$ 250.00	\$ 2,000.00
TRANSPORTATION	-	-	\$ 4,700.00
Airfare	8	\$ 425.00	\$ 3,400.00
Uber/Rental Car	1	\$ 500.00	\$ 500.00
Shipment of Geowall Box	2	\$ 400.00	\$ 800.00
LODGING	1	\$ 1,000.00	\$ 1,000.00
CONSTRUCTION	1	\$ 400.00	\$ 400.00
BACKFILL MATERIAL	1	\$ 300.00	\$ 300.00
TOTAL			\$ 8,400.00

How to Get Involved

Our successes in competitions are highly assisted by the generous donations from industry and professional organizations such as yours. Funds are imperative to purchase essential materials and attend crucial competitions, and each contribution brings us one step closer to achieving our goals and allowing members to participate in this unique project.

Donations of any kind, including material resources such as sand, are greatly appreciated and will heavily impact the success of our project. We also welcome industry involvement for workshops and undergraduate mentorship opportunities. If there are any resources you would wish to donate, please reach out and let us know. Full sponsorship packages and benefits are detailed in the final pages of this proposal and contact information can be found on the Sponsorship Contact Information page.

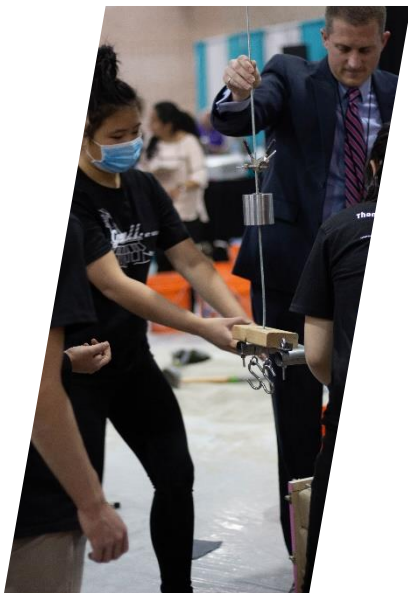


Figure 6: Build team set up the loading frame for the 5lbs dynamic load during the national competition.



Figure 7: Build and design team celebrate after placing 3rd at the national competition.

Sponsorship Packages

SPONSORSHIP LEVEL	BRONZE	SILVER	GOLD	PLATINUM
	<\$500	\$500-\$749	\$750-\$999	\$1000+
Company Logo on T-Shirt and Poster	Small Logo	Small Logo	Medium Logo	Large Logo
Advertisement on the ASCE at UCLA Website	X	X	X	X
Advertisement in the ASCE at UCLA Quarterly Newsletter		X	X	X
1 Free Admission Ticket to End-of-the-Year Banquet			X	X
1 Free Admission Ticket to Networking Night				X

Note: Packages consider and account for both monetary and material donations. Material donations will be awarded the package corresponding to their monetary value.

Company Logo on T-Shirt and Poster

Your company logo will be included on the project team's annual 2019-2020 T-Shirt as well as our project posters, if applicable.

Advertisement on the ASCE at UCLA Website

Your company will be publicized on our ASCE at UCLA website.

Advertisement in the ASCE at UCLA Quarterly Newsletter

Your company and your respective sponsorship level will be publicized on the back cover of our widely distributed quarterly ASCE at UCLA newsletter.

1 Free Admission Ticket to End-of-the-Year Banquet

A representative from your company will receive free admission to our annual ASCE at UCLA End-of-the-Year Banquet. Admission includes event registration, a lovely three-course meal, and an evening of celebrating ASCE at UCLA's yearlong achievements while networking with students and professionals.

1 Free Admission Ticket to Each Networking Night

A representative from your company will receive free admission to our Fall and Winter Networking Nights. Admission includes event registration, hors d'oeuvres, and a night of networking and recruitment opportunities. Inquiries can be directed towards our Networking Night Coordinator Nick Borov at nickborov@yahoo.com.

Sponsorship Benefits

In addition to organization promotion and the aforementioned advantages of supporting our projects, a partnership with GeoWall implies a relationship with ASCE at UCLA, which provides the following opportunities and benefits:

TAX DEDUCTIONS

All donations and contributions to the UCLA Henry Samueli School of Engineering and Applied Sciences are fully tax-deductible for federal income tax purposes and are subject to any limitations placed on charitable gifts. Additional fund disclosures and information regarding donor privacy can be found here:

<https://www.uclafoundation.org/finances.aspx?content=disclosures>.

Information regarding UCLA tax I.D. numbers, tax exemption letters, and other frequently requested documents can be found here:

<https://www.uclafoundation.org/resources.aspx?content=tools>.

ASCE at UCLA CAREER FAIRS

Fall: Thursday, October 31st, 2019

Winter: Thursday, January 30th, 2020

Meet with bright engineers from one of the top engineering schools in the nation at our biannual ASCE at UCLA Career Fairs – events you will not want to miss in the Fall and Winter! Inquiries can be directed to our Career Fair Coordinator Youngbo Shim at shimyoungbo123@gmail.com.

STUDENT ACTIVITIES

The goal of our projects and competitions is to enhance the education our student members receive through practical applications of their technical knowledge. UCLA's Civil and Environmental engineers-in-training are multifaceted students, each with the unwavering desire to further their education with the extracurricular experiences provided by ASCE at UCLA.

To showcase the talents of our students, ASCE at UCLA compiles an annual resume book of its leaders and student members for reference and for consideration in internship and job openings by organizations like yours. It is available upon request for purchase. Inquiries can be directed to our Career Fair Coordinator Youngbo Shim at shimyoungbo123@gmail.com.

Donations

If you are interested in becoming a sponsor, please **fill out the ASCE at UCLA Sponsorship Form** below and **return your check along with a copy of the Sponsorship Form to the mailing address listed below.** In addition, please **send a copy of the Sponsorship Form to Maan Alhamdan at maan.alhamdan@gmail.com or Kyle Hu at kahu1@g.ucla.edu.**

We will gladly accept any form of donations and contributions, whether it may be a monetary donation, a material donation, or a service donation (i.e. professional workshops or advising). Please note that all donations and contributions are non-refundable. If you have any questions regarding the information included in this packet, please contact Maan Alhamdan at maan.alhamdan@gmail.com, Kyle Hu at kahu1@g.ucla.edu, and/or our Project Executive Alex Lee at alee6409@g.ucla.edu.

2019-2020 GeoWall Team



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Craig Sugiyama

Financial Director



Peter Lee

Conference Director



Tiffani Vuong

Technical Director



Sarah Ciudad

Laboratory Director



Alan Truong

Managerial Director

ASCE at UCLA Sponsorship Form

Company Name: _____

Address: _____

Phone: (____) _____

Email: _____

☐ Yes! I would like the _____ package by generously donating a total amount of \$_____. I would like this to be distributed as follows (please specify amounts in lines below):

<input type="checkbox"/> ASCE at UCLA General Fund	<input type="checkbox"/> Navajo Water
<input type="checkbox"/> Concrete Canoe	<input type="checkbox"/> Seismic Design
<input type="checkbox"/> Concrete Sports	<input type="checkbox"/> Seismic Outreach
<input type="checkbox"/> Construction Management (ASC 67)	<input type="checkbox"/> Steel Bridge
<input type="checkbox"/> Environmental Design	<input type="checkbox"/> Surveying
<input checked="" type="checkbox"/> GeoWall	<input type="checkbox"/> Transportation Design

☐ Yes! We would like to donate the following products/supplies with a value of \$_____

Total Amount Enclosed: \$_____

Please make checks payable to:

UC Regents

Please address memo to:

ASCE at UCLA – GeoWall

Please return checks and a copy of the Sponsorship Form:

UCLA Department of Civil & Environmental Engineering

ASCE at UCLA

5731 Boelter Hall, P.O. Box 951953

Los Angeles, CA 90095-1593

THANK YOU FOR SUPPORTING ASCE at UCLA!