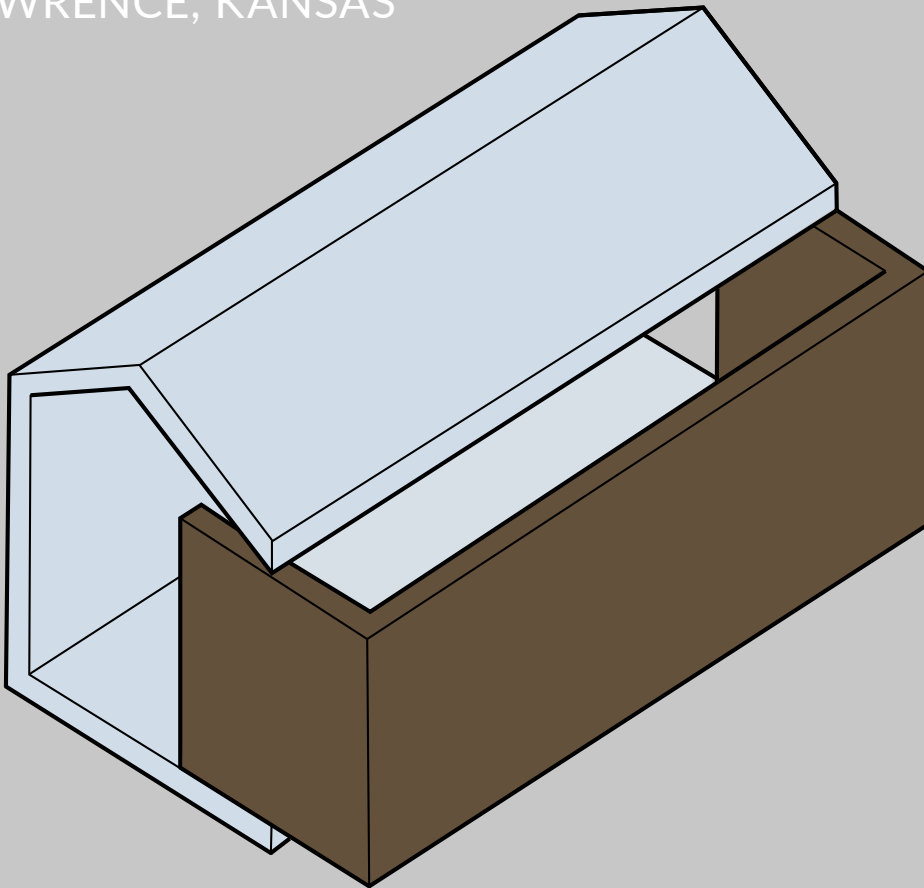


Dirt Works Studio

H  HAVEN
STUDIO

LAWRENCE, KANSAS



PRESENTATION



Haven Studio, rendering of the southeast corner showing the main entrance

Communication and Marketing Strategy

The Haven Studio project is an initiative by the University of Kansas School of Architecture and Design to develop sustainable housing solutions for the community. Over the past four semesters, four cohorts of students have worked on this project, encompassing over fifty students. During the design phase, Dirt Works Studio partnered with BNIM (architectural consulting), Apex Engineers (structural engineering), Henderson Engineers (MEP engineering), SunSmart Technologies (solar system design), and Mercer

Zimmerman (lighting consultant). These professional partners provided valuable expertise and feedback to the team. This project's impacts extended beyond the students with communications and marketing strategies reaching the general public including social media, the team's website, and utilizing LaunchKU, a crowdfunding platform through the University's Endowment office. In total, the team raised over \$139,000 in solicited, crowd-sourced, and in-kind donations.

These strategies are instrumental in informing the public of the project and sustainable solutions and promoting Haven Studio. The project has a presence on various social media platforms, including Instagram, Facebook, and LinkedIn.

The project website provides a comprehensive overview of the project and helps to promote the school's strength in designbuild education. The University of Kansas marketing and communications team has also promoted this project contributing to its widespread visibility and impact.

Website: <https://designbuild.ku.edu/haven-studio>

Instagram: @dirtworksstudioku

Facebook: <https://www.facebook.com/dirtworksstudio>

LaunchKU: <https://www.launchku.org/project/33189/wall>

LinkedIn: <https://www.linkedin.com/company/dirt-works-studio/>

The measured contest Home Occupancy sub-contest will function as a soft opening for the house. The team plans to invite community members to the dinner party on April 4 to highlight the sustainable strategies and continue the community engagement efforts of the project.

Fundraising

During the Fall 2022 semester, fundraising became the team's top priority to be able to continue in the competition. In partnership with the university's endowment office, a crowdfunding page was established to help the studio collect donations from friends, family, and the community. This

page was heavily promoted on the Dirt Works Studio social media pages as well as students' personal pages. On top of this effort to utilize the team's personal connections, team members reached out through hundreds of emails to different companies asking them to sponsor the project through monetary or in-kind donations. This campaign was wildly successful, raising over \$38,000 through the crowdfunding page and almost \$100,000 in in-kind donations. The email campaign was successful at raising awareness for the project even for businesses who were unable to financially contribute at that time. The team plans to thank these sponsors by laser engraving the sponsors' logos into the wooden rainscreen to be displayed at the entry to the house.

In addition to these virtual efforts, the team organized and hosted an on-campus fundraiser to raise both funds and awareness for the project. The event offered several raffles with prizes donated from local businesses and the University Athletics department, raising \$849 just from university students. The School of Architecture and Design contributed to this event by supplying the team with free pizza to hand out to attract students to the event. Beyond fundraising, the team set up a one-to-one scale plan of the house to offer walk through tours as well as show off material selections for the project.

During the construction of Haven Studio, Dirt Works Studio worked with a wide array of industry partners and suppliers who generously donated or discounted their time and materials. Early in the construction process, Mar Lan Construction assisted the team with foundation excavations and utility trenching. Grabill Plumbing provided essential plumbing services and guided students through the work as did Westerhouse HVAC for mechanical services. Lynn Electric provided a highly skilled electrician to work with students throughout each phase of the electrical installation and performed key portions of the work. Build Smart prefabricated wall assemblies and provided consultation on their installation. Kennedy Glass provided consultation on glazing the window wall system. In addition to these construction partners, there are many industry partners that provided discounted or donated materials or products, and several provided guidance or advice to the team. We would like to acknowledge their collective generosity.

The University of Kansas team, Dirt Works Studio, is competing with more than a dozen national and international collegiate teams to design and build the most sustainable, cutting-edge house powered by renewables.

Students from the University of Kansas aren't waiting to tackle climate change; they are starting while still in school by designing and building a zero energy house as part of the U.S. Department of Energy Solar Decathlon®.

"The mission of the Solar Decathlon Build Challenge competition aligns beautifully with the mission of the University of Kansas' Designbuild program in the School of Architecture and Design – balancing care for our local communities, concern for the health of the planet, and a dedication to educate future leaders in the design of a more sustainable, equitable, and inspired built environment," said Chad Kraus, Faculty Lead.

More than a dozen finalist teams, including the University of Kansas each earned \$50,000 in prize funding from the U.S. Department of Energy (DOE) to build and exhibit their ground-breaking, zero energy buildings in their home communities before competing for contest and grand prizes in April 2023.

The University of Kansas design, Haven Studio, stands out among the international competitors because of its innovative envelope design that addresses both embodied and operational carbon, and the high level of involvement from students in the construction process.

Year: 2023
Location: Lawrence, Kansas
Course: Arch 509 Designbuild Studio
Instructor: Chad Kraus (Dirt Works Studio)

Virtual Tour [Construction]

Students: Ty Adams, Michael Akanni, Anas Alghamdi, Emily Almloff, Lily Altenhofen, Yuridia Alviter-Rivera, Madison Beck, Brennen Berends, Cora Blackford, Jackson Bontty, Sarah Boyle, Jenna Bracaglia, Harleigh Brandon, Jay Clements, Ehren Coleman, Gwendolyn Comas, Luke Delehaunty, Kaitlyn Dunn, Fernando Echaury, Nicholas Einig, Brad Elpers, Claudia Frahm, Liz Fraka, Bridget Gerstner, Kodi Hayes, Alec Hendrix, Emma Herr, Eryn Herrera, Anan Hoque, Jake Hornbuckle, Andrew Jundt, Matteo Kalusha-Aguirre, Kyle Kissel, Aria Lynch, Areli Madrigal, Lauren Maloney, Crayton Maurer, Arianna Mccue, Erin McMahon, Reece Mehrens, Garrett Miller, Grant Miller, Sarah Moore, James Noteman, KayLee Nottestad, Maddie Parr, Clayton Cooper Plaster, Tylor Poitier, Abi Price Nakagawa, Micah Ramsay, Brenna Richart, Madison Schaefer, Tom Schotte, Graylon Sestak, Carson Severt, Jack Shannon, Kiara Smallwood, Madison Smith, Andrew Stender, Liz Stone, Haleigh



HOST:
Dirt Works Studio & KU ARCH/D

HAVEN STUDIO RIBBON CUTTING AND OPEN HOUSE

**SATURDAY, APRIL 15 FROM 10:00 AM
TO 4:00 PM CT**

**KU Designbuild Center
3813 Greenway Drive
Lawrence, KS 66046**

HAVEN STUDIO RIBBON CUTTING AND OPEN HOUSE

WHEN

**Saturday, April 15, 2023
10:00 AM CT - 4:00 PM CT**

WHERE

**KU Designbuild Center
3813 Greenway Drive
Lawrence, KS 66046**

Evite for the Public Exhibit to collect RSVPs from potential guests.

Industry Sponsors

Alpen HPP [window wall]
AZZ Galvanizing [galvanizing]
Bauco [access panel]
Beko [appliances]
Brownlee Lighting [lighting]
CMS [cellulose insulation]
Cooper Lighting [lighting]
Daltile [tile]
Deer Valley [plumbing fixtures]
Emerson [plumbing fixtures]
Green Tech Renewables [EV charger]
Hunter Douglas [roller shades]
KC Millwork / TruStile [interior doors]
Kelvix Lighting [lighting]
Kohler [plumbing fixtures]
Lumber One [lumber]
MBCI [metal roofing]
Midwest Concrete Materials [concrete]
Mitsubishi Electric [HVAC system]
Prosoco [liquid-applied flashing]
REW Materials [drywall]
Richlite [countertops]
Rothoblaas [specialty hardware]
Royal Metal Industries [steel]
Schluter Systems [tile system]
Shaw Floors [tile]
Simple Human [accessories]
Simpson Strong-Tie [timber connectors]

Spectrum Paint [paint]
Sonoco [sonotubes]
Tech Lighting [lighting]
Teron Lighting [lighting]
TimberHP / Steico [timber insulation]
Wood Haven [wood rainscreen]

Project Sponsors

BRR
Clark Huesemann
Grabill Plumbing
HOK
Hoke Ley
Hollis + Miller
Hufft
JE Dunn
KTCY
M&W Enterprises
Odimo
Sabatini Architects
Slaggie Architects
Treanor HL
KU School of Architecture and Design
KU Student Senate
Weiland Family / Steel Erectors and
Machinery Movers Association

Public Exhibition Plans

Haven Studio is both a demonstration house and a living laboratory. As a demonstration house, the project will demonstrate beneficial features and characteristics of a net-zero energy house in the American Midwest. During the Solar Decathlon public exhibition, the team will place signage to better explain these systems and features. However, Haven Studio will not go on to become a conventional house. Instead, after the public exhibition and once the competition draws to a close, Haven Studio will continue to be used as a demonstration home in perpetuity. This means that the approach to signage and the public exhibition will tend toward a more permanent communication strategy.

For this reason, the team has elected to place the heat pump mini split condenser adjacent to the main sidewalk and parking area, with accompanying signage. The team has also placed the solar system disconnect and meter right where they can be seen by all. The solar panels themselves will be clipped onto the standing seams and easily seen from the ground on the south side. In addition to overall building signage, the team intends to install on the exterior wall permanent diagrams explaining these systems and how they work.

For the remainder of the HVAC system, the team chose to place them in a mechanical loft in order to not consume limited and

valuable square footage, however, through a large access panel, visitors can see all of the other major components of the systems that heat and cool (heat pump air handler), ventilate (energy recovery ventilator), provide hot water (water heater) and provide the home with internet (switch). This access is also important for future maintenance.

Since Haven Studio is modestly sized, at 550 SF, the number of occupants in the home will be limited during the public exhibit to twenty at one time. With five members of the studio stationed throughout the home, this will create an intimate experience where each student can explain the design concepts, systems, components, and materials to a small group. However, since the project is adjacent to the University of Kansas' Designbuild Center, the team will also have the opportunity to create a second exhibit there with a collection of the materials that are not visible in the finished product yet are essential to its performance. We will also provide a slideshow of the construction process and allow visitors to virtually tour the building during its construction through the first Matterport tour.

Dirt Works Studio will host community exhibition events at Haven Studio and the KU Designbuild Center, 3813 Greenway Drive, Lawrence, Kansas 66046, on the following dates/times:

- Thursday, April 13, from 9:00 - 12:00
- Friday, April 14, from 9:00 - 3:00
- Saturday, April 15, from 10:00 - 4:00
- Sunday, April 16, from 1:00 - 4:00

The main event will be held on Saturday, April 15, and will include the ribbon-cutting ceremony, at 10:00 am, followed by home tours and activities. Parking will be readily available, including accessible parking. Haven Studio will be fully accessible, as is the neighboring KU Designbuild Center.

The open house will lead visitors on a path through the KU Designbuild Center to explain the Solar Decathlon competition, highlight a gallery wall of progress photos, showcase an interactive display of the building materials, and thank the project supporters before leading guests into the house for a tour. This strategy will enable the team to show off the existing KU Designbuild Center as well as keep visitors engaged while they are waiting for their turn to go through the house. Along this path will be optional interactive stops to engage visitors of all ages, from creating chalk art to imagining net-zero homes of the future and coloring sheets of Haven Studio.

The Haven Studio project has been a successful initiative by the University of Kansas School of Architecture and Design, bringing together students and professionals from various fields to develop a solution to sustainable housing for the community.

Post-Competition Plans

After the competition is over, the promotion of the project will not stop. Haven Studio will be an interactive, full-scale, teaching tool and learning environment to benefit current and future generations of architecture and design students at the University of Kansas as well as our broader community. As a living laboratory, Haven Studio will serve as a classroom space for students who will use its lessons to inform future designbuild projects, such as an upcoming collaboration with a local non-profit organization to deliver small, sustainable, affordable housing to our local community.

Future students will benefit from this project by interacting with the living lab. This project will be a case study example for learning about environmental systems in a residential application. All the systems will be expressed and diagrammed to make this knowledge accessible. The space itself will also function as a clean and quiet space for design collaboration and meeting with outside partners or clients separate from the main Designbuild Center, which is often dusty and loud from ongoing construction projects. The residential studio (open concept kitchen / dining / living room / bedroom) will convert to the academic studio (conference room / meeting space to discuss design ideas for future designbuild studios); the living room cabinetry will transform into a materials library; the living room television will be adapted as a presentation and video conference tool to facilitate design collaboration.

Finally, the exterior of the house facing the street will serve as a wayfinding element to help new students and community partners visiting the currently unmarked KU Designbuild Center know that they have arrived.

The broader community will continue to benefit from this project beyond the Solar Decathlon competition. Already, before its completion, Haven Studio is serving as a catalyst. The University of Kansas has created a partnership with a local non-profit organization to provide one affordable house design and one built version of this design each year for the next several years. These small homes will be designed, using Haven Studio as a model, to address: 1) the rising cost of homes in the area; 2) the scarcity of homes in the area; and 3) the imperative to design and build more sustainable homes.

The project has great promise in demonstrating the capacity for sustainable design at multiple scales, and in the lives of the students who will have contributed throughout the process, who will in turn be the future leaders of a more sustainable world.