

## Project Purpose

IDEAS Academy is dedicated to preparing students for our rapidly changing world, one that increasingly values conceptualization, innovation, and empathy. In the engineering department, we challenge ourselves to develop projects that not only are inventive, but serve a significant purpose. The Étude Engineering Portable Shelter Initiative is a project established by the students of the Foundations of Architectural Design seminar at IDEAS Academy with the vision of addressing veteran homelessness through innovative, space-efficient design. By creating a Portable Shelter through Habitat for Humanity, we hope to provide an alternative housing option for a person while building the skills and experience of the students in the course. When developing a project to bring the class into the next term, we identified the problem of homelessness in our own student body. The extent of the problem in our school alone prompted us to look into the homeless of Eastern Wisconsin. However, further investigation brought us to the conclusion that veterans are at a much higher risk than the average American so we shifted our design with the objective of serving homeless veterans in the greater Wisconsin area.

Veterans have consistently been overrepresented in the homeless population. A Point-in-Time count conducted by the U.S. Department of Housing and Development found that on a single day in January in 2009, veterans constituted 16% of the homeless population. In general, having a low socioeconomic status or a mental health disorder increases a person and face a host of mental disorders, with 11-20 out of every 100 veterans who served in Operations Iraqi Freedom and Enduring Freedom having PTSD in a given year (according to the National Center for PTSD). Fortunately, the situation has improved over the last six years. A similar Point-in-Time count conducted in January of 2015 found that the percentage of veterans in the homeless population had dropped to 8.6%. Secretary of Veterans Affairs Robert A. McDonald asserted that “we will solve this challenge community by community,” a sentiment that aligns with the mission of this project.



## **Veterans Outreach of Wisconsin**

### **Mission Statement:**

Our mission is to help veterans strive for normalcy in life by helping them furnish their new found homes while providing additional assistance as needed.

### **Outreach Overview:**

Our main outreach items needed are home furnishings and accessories, bedding materials, bathroom necessities, and kitchen utensils. We collect donated housing items and distribute them to veterans in need at their new homes. We have both pick up and drop-off services available making your donation process as easy as can be.

### **Our Philosophy:**

The measure of a person's character is how he treats those that he cannot benefit from. We have known many great men and women in my lifetime, both rich and poor. Many of these greats, who have served our great nation with pride and honor, end up falling on hard times but still ask for nothing in return for their service. Despite their best efforts sometimes other's help is still needed. The need for assistance is greater than you may wish to see, but it is there, which is why we decided to start this group so we could step in to make a difference.



## Current Partners with Habitat for Humanity and IDEAS Academy Engineering

- Alliant Energy
  - Financial, Safety Equipment, Materials, and Volunteering on build site
  - Contact:
    - Jenn Zillmer, Edgewater Safety Specialist II
    - [JennifferZillmer@alliantenergy.com](mailto:JennifferZillmer@alliantenergy.com)
- Abacus Architects
  - Feedback on designs and Volunteering on build site
  - Contact:
    - Chad Wleczyk, Architectural Technician
    - [Cwleczyk@abacusarchitects.net](mailto:Cwleczyk@abacusarchitects.net)
- Habitat for Humanity Lakeside
  - Professional Guidance and Materials
  - Contact:
    - Jon Hoffman, Director of Habitat for Humanity Lakeside
    - [jhoffman@habitatlakeside.com](mailto:jhoffman@habitatlakeside.com)
- Occupy Madison, Inc.
  - Professional Guidance
  - Contact:
    - Bruce Wallbaum
    - [occupymadisoninc@gmail.com](mailto:occupymadisoninc@gmail.com)
- Oostburg Lumber
  - Materials for building
  - Contact(s)
    - Steve VanderPloeg
    - [stevevanderploeg@oostburglumber.com](mailto:stevevanderploeg@oostburglumber.com)
- Plymouth Foam, Inc.
  - Materials for Insulation
  - Contact:
    - Paul Schwaller, Director of Customer Integration
    - [paul.schwaller@plymouthfoam.com](mailto:paul.schwaller@plymouthfoam.com)
- Quasius Construction
  - Professional Guidance and Materials
  - Contact:
    - Matt Quasius
    - [mquasius@quasius.com](mailto:mquasius@quasius.com)
- Schroeder Brothers Home Improvement
  - Material Donations
  - Contact:
    - Brooke Schroeder
    - [brookeschrobrosbcglobal.net](mailto:brookeschrobrosbcglobal.net)



- Salvation Army Sheboygan
  - Recipient, First Groceries, and Home Goods
  - Contact:
    - Daryl Mangeri, Lieutenant, Corps Officer/Pastor
    - [daryl\\_mangeri@usc.salvationarmy.org](mailto:daryl_mangeri@usc.salvationarmy.org)
- The Etude Group
  - Home Depot Grant
  - Contact:
    - Tim Pasche, Engineering Teacher
    - [tpasche@etudegroup.org](mailto:tpasche@etudegroup.org)
- Veterans Outreach of Wisconsin
  - Location for Portable Shelter in Racine as a part of a Veteran community
  - Contact:
    - Jeff Gustin
    - [veteransoutreachofwisconsin@gmail.com](mailto:veteransoutreachofwisconsin@gmail.com)



## Liability Information

- **Site Liability**
  - Construction of the trailer was proposed to be on the site of a Habitat for Humanity Lakeside plot
  - Materials would be stored and secured on site. Tools of IDEAS Academy will be transported between the school and site during the building phase.
  - The contractors on site will be provided by Habitat for Humanity and Quasius Construction during the construction phases of the build.
- **Student Liability**
  - Tool Safety
    - All students are required to pass an OSHAcademy Safety Test based on the Power and Hand tools book from OSHA.
    - All students must show proficiency in power and hand tool use.
    - Students under the age of 16 will only be able to use non-electric hand tools and electric drivers
    - Power tools such as a table saw, compound miter saw, or circular saw can only be used by students 16 or older under the direct supervision of a professional or teacher.
    - Students and parent/guardians of students must sign a safety contract and waiver as a part of the Habitat for Humanity Lakeside protocol and will be required to apply safety practices as applied at IDEAS Academy and safety protocols as stated by Habitat for Humanity Lakeside.
  - Safety of Site
    - Safety Glasses will be required at all times along with Hard hats while the shelter is under construction.
    - Safety of the site will also supervised by professionals and teacher(s) that are on site.
- **Liability After Construction**
  - A clarification is that this is a *Portable Shelter*. Any movable living quarters, no more than 150 square feet in area, used as an individual's permanent place of habitation. For purposes of this definition, a permanent place of habitation is established when an individual lives in a portable shelter for four (4) consecutive months.
  - Gift in Kind - Waiver of Liability
    - The trailer is a donation to a Veteran in need and is intended to be a "Gift in Kind" Donation which will have a Waiver of Liability as part of an agreement with Veterans Outreach of Wisconsin. Veterans Outreach of Wisconsin accepts all possible liability of the home.
  - Power for the Portable Shelter after it leaves the location will be the same as a typical RV connection for electrical. Any other utilities will be similar to that of a mobile home (heating, water, cooking, etc). The design will be hooked to electrical, but will not have running water due to the site having

## Conditional Use Permit (City of Sheboygan)

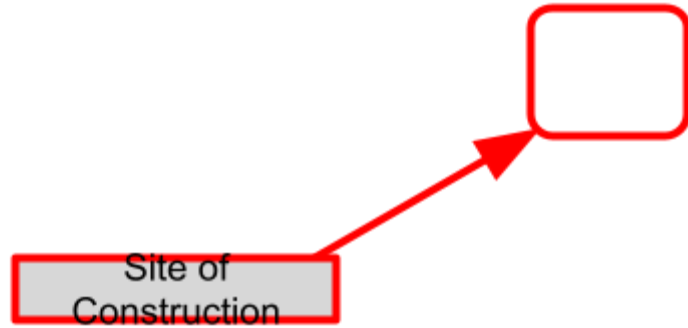
- **Existing use of Habitat for Humanity Restore**
  - The ReStore is a retail outlet store that stocks gently used home improvement products at a very low discounted price. ReStore volunteers work alongside staff to create a friendly environment for our customers. Our ReStore is open 5 days a week, giving the most flexible options for volunteers to donate their time. The ReStore location also houses the main office for Habitat for Humanity Lakeside.
- **Portable Shelter and all related activities to take place onsite**
  - Construction of the Portable Shelter will occur on site at the ReStore, outside in the parking lot, on the following dates and times:
    - May 31 (8am-3pm), June 1 (8am-2pm), June 7 & 8 (8am-12pm), June 10 (8am-4pm), June 13-16 (12-4pm), June 20-23 (12-4pm), and June 27-30 (12-4pm).
    - Tentative Build Days beyond July 4th: (12-4pm schedule)
      - July 5-7, 11-14, 18-21, 25-29.



- Materials will be stored inside of the building in the basement along with some materials stored in the outdoor Brat barn. Parking will not be hindered for the ReStore or Save-a-Lot because the build is being completed with the help of students who will not be using parking spaces.
- **What is the purpose of this project?**
  - As stated at the top of this document, the purpose of this project is to take action on homelessness in Wisconsin, specifically veteran homelessness. We have connected with Veterans Outreach of Wisconsin to do so by building a Portable Shelter to give homeless veterans a step-forward in their lives.
- **Why did you selected this location?**
  - The ReStore is the perfect location to build the portable shelter due to the collaboration of Habitat for Humanity Lakeside and IDEAS Academy. The ReStore is providing materials needed to build a majority of the portable shelter. It is a convenient build location with proper power support for tools and storage for materials.
- **How many people will be working on this project?**
  - There are approximately 26 students working on this project along with their teacher and professionals. At most, there will be 25 people on site at a time. Not all students will be at the location at all times due to this being a summer project and conflicts.
- **Who will be managing/overseeing the project?**
  - There will be a few key managers on site. Tim Pasche, the engineering teacher from IDEAS Academy, will be on site overseeing students and tool use by students. He is a certified teacher of physics, mathematics, and technology education with an OSHA certificate in construction safety. Jon Hoffman of Habitat for Humanity Lakeside will also oversee construction as a contractor, along with collaborators from Abacus Architects and Quasius Construction.
- **Where is proposed Tiny House Construction to take place on the property?**
  - The attached map of the Habitat ReStore is marked to indicate the location. This location is in 3 parking places near the Brat barn on site, directly west of the ReStore entrance.
- **An explanation as to when you will construct the Tiny House**
  - First Build Day will be May 31st. The build is expected to be completed by July 4th but may extend beyond into July. The Portable shelter is expected to be sent down to Racine, WI where Veterans Outreach of Wisconsin is located with their Tiny Home Community. The build hours are listed above. If the build
- **Parking**
  - Parking will be easily accessible and parking of volunteers, students, and supervisors of the build will not hinder the business of Save-A-Lot and Habitat ReStore.
- **Hours of Operation and Courtesy to Neighborhood**
  - The hours of operation will be during typical school and work hours. The summer hours are shifted to the afternoon as a courtesy to students in summer school classes morning business hours.
- **Proposed Signage**
  - A banner will be posted with the project name along with the partner logos to show sponsorship but will only be posted on the build site. There will be a temporary fence with a description of the project posted for onlookers to inform themselves of what is happening.



**Site of Construction at Habitat for Humanity Lakeside ReStore**



All other documents of the site are attached.



## PROJECT MANAGEMENT

[Project Gantt Chart](https://goo.gl/T1kw06) - <https://goo.gl/T1kw06>

[Bill of Materials](https://goo.gl/1bDjZ0) - <https://goo.gl/1bDjZ0>

The delegation of work within the IDEAS Portable Shelter Initiative is essential to the prosperity of the project. We have twelve students in the Foundations of Architectural Design class with six who have been working on the logistical concerns since the end of January. Within this group, we have five areas of focus: CAD Design, Exterior Design, Interior Design, Material Research, and Marketing and Public Outreach. As partnerships continue to grow, we anticipate focus areas will also evolve. During the building process, all students in the Foundations of Architectural Design class will participate. Though most students of the class have basic skills they have obtained through personal experience, the class will be working closely with Habitat for Humanity for guidance through the process and fine tuning the skills students already have.

Though the timeline we currently have is subject to change, our intent is to acquire the trailer and exterior materials between May 15th through the 19th. By May 30th, we will have started building with the objective of having baseboards down by June 1st. Further information regarding specific dates and the course of action is to be determined.

Additional information is available upon request. With any questions regarding the Étude Engineering Portable Shelter Initiative, feel free to contact us.

Best Regards,

Jon Hoffman  
*Habitat for Humanity Lakeside Director*

Tim Pasche  
*Teacher Supervisor of Engineering and Construction*

Kenzie Kastman  
*Marketing and Public Outreach Coordinator*

Hannah Staats  
*Marketing and Public Outreach Coordinator*

Jeremy Sharp  
*Partnership Coordinator and Spokesperson*

Jacob Bartz  
*Student Engineering and Construction Manager*

Michael Kraemer  
*Principle Designer*

Miranda Kelm  
*Materials and Eco-Efficiency Manager*



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