

HSEP AutoCad Project

Goals: Eco-friendly, minimalistic, appealing, supportive, effective, affordable.

I based my project on tiny homes for homeless communities. Homelessness is a big issue in my city, and this method of combating homelessness has been effective. The bigger picture would involve multiple houses in a village setting. The tiny homes are for sleep and leisure while there would be a main building with food, a kitchen, an eating area, restrooms, laundry, dish washing, and shower services. I designed a rectangular house fitting around 4 people after a similar model. Houses would be eco-friendly, using recycled materials (recycled wood) and mainly natural lighting along with solar panels & insulation to minimize electricity use. There would be a greywater & rainwater collecting system.



More on the bigger picture:

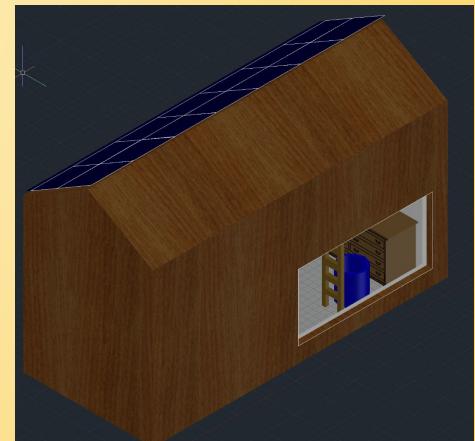
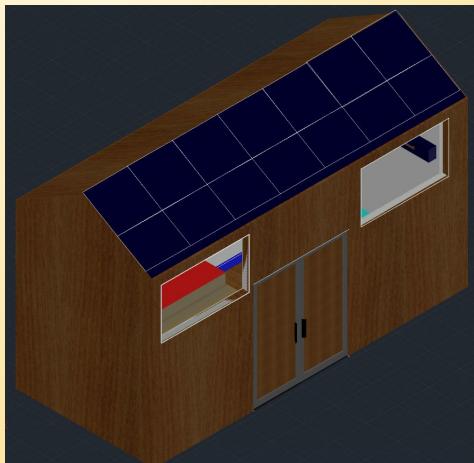
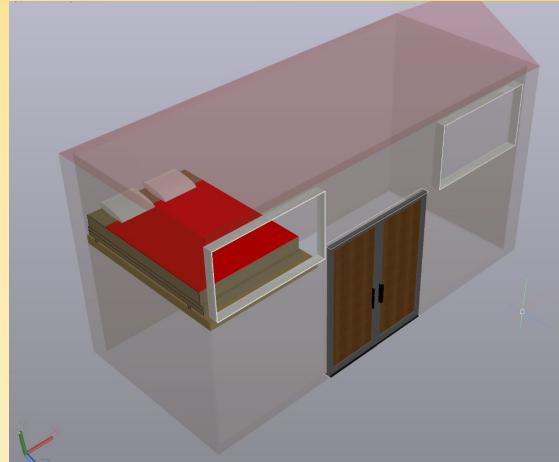
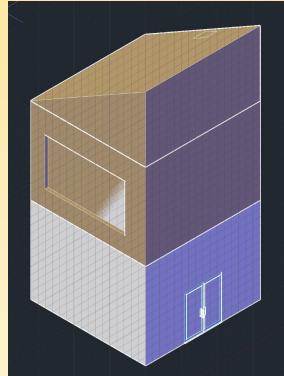
Beds would be bought and furniture such as tables and chairs would be recycled and upcycled or donated. It would be a community effort with the donation of time to build houses and furniture, plant trees, and create visual art. Cost could be covered through donations of materials, money, labor, food, water, and possibly funding from the city.

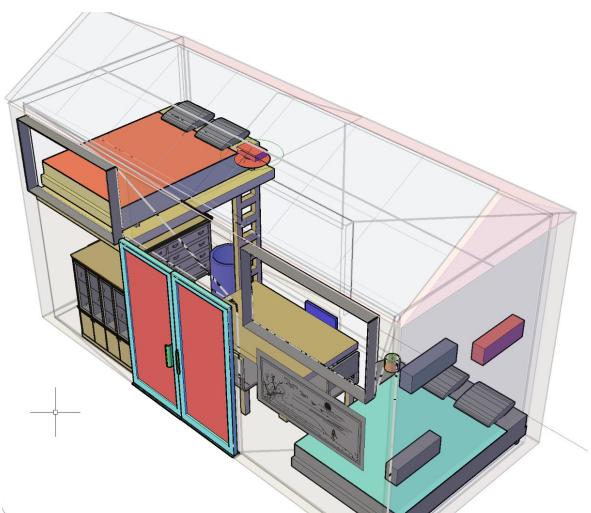
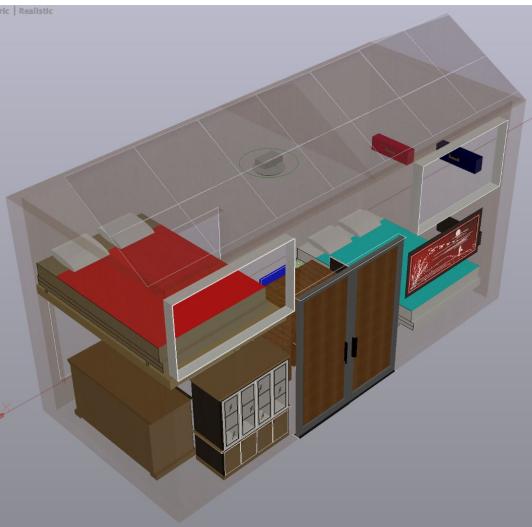
The village would be self governed with community agreements, meetings, etc. Services would be put in place to help people find permanent housing and jobs in which giving back to the community to help cover up the cost would be encouraged. Mental & physical health, rehabilitation and legal services would be made available.



Creation:

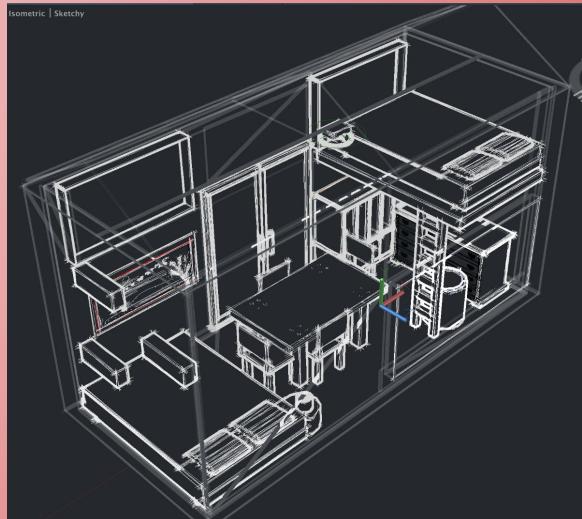
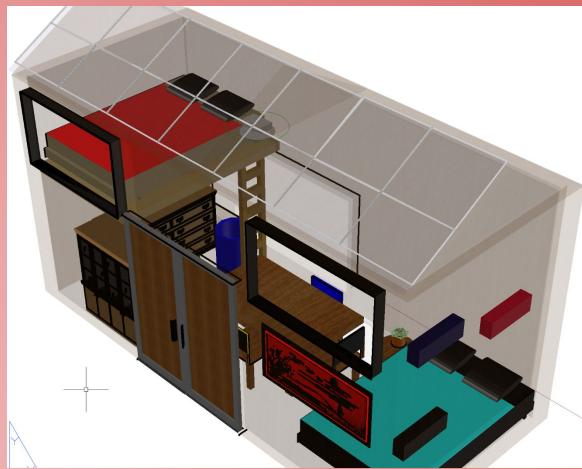
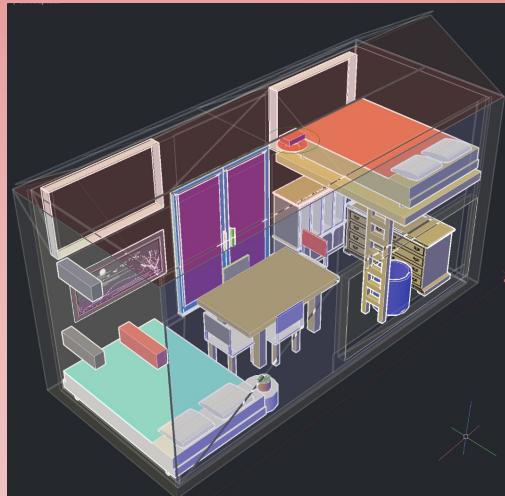
Originally I planned for a two story cubic structure but later changed to rectangular. I used a larger rectangle for the outside wood and a smaller rectangle for the inner walls, both with holes for the windows and doors. I positioned and sized it so the walls were visible. I added windows and doors along with, ceilings, floors, and a roof. Then I added the loft bed platform, furniture, lights, the ladder, art, suitcases, a bedside table & plant, and solar panels while doing colors & texture along the way.





Challenges:

Some challenges I had were navigating autocad as it was my first time using the program. This included difficulty moving 3D objects to the location I wanted, extruding certain objects/making them 3D, and making holes in the rectangles for windows & doors. Deciding on a design that tried to achieve my goals was also challenging as I hadn't gotten into architecture before and it was hard to figure out how to be minimalist and affordable yet also appealing and effective.





Some things I learned is to make use of what I have and how useful the internet can be. Thankfully we were given things to use by our mentor such as . I also did a lot of research including successful tiny home projects, eco friendly/sustainable homes, what has worked well for housing homeless communities in the past, blueprints, tutorials, insulation, furniture I could recreate in my project, what roof degrees were best for solar panels, what recycled materials and furniture you could get, and more! I also learned that CAD modeling can take a lot of time and to manage my time better throughout the project while taking breaks to come back if I was struggling with something. As I continued to work with the software, I got more used to it, played around with different tools/components such as making objects transparent, union, separate, etc. Overall it was really fun to learn and explore CAD modeling, which I always wanted to learn, and autocad specifically. I'm happy I got experience working with a project that I am now interested in getting more involved in!