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The International Labour Organization estimates that there are 40.3 million victims of human trafficking globally, 81% of which are trapped in forced labor and 75% of which are women and girls.
23,078 cases of known human trafficking in the United States in 2018
ABSTRACT

The effects of living through and being freed from human trafficking are clearly those of great proportion that impact every aspect of a survivor’s life. While healing from such trauma, a human trafficking survivor’s thoughts and emotions are incredibly susceptible to her surroundings. There have been several studies both in the fields of architecture and psychology about the impact one’s environment has on their mind, body, and wellbeing. Results from these studies have formed hypotheses such as biophilia (the tendency of humans to gravitate to connections to nature) and prospect and refuge (the feeling of a space being enjoyable based on its provision of a scene to observe from a place of safety). This project utilizes these two concepts heavily as well as extrapolates their underlying principles in the investigation of how to create a space that feels empathetic and enjoyable for someone who has undergone severe trauma. This project also employs principles from psychological theories such as embodied cognition (a theory that one’s environment constantly plays a role in their thought process).

Through the integration of the natural environment, the use of warm and familiar materials, the implementation of passive security methods, and the telling of a symbolic narrative this project aims to create a space optimal to a human trafficking survivor’s healing before transitioning back into society.

Given the nature of this project and its shared interest in architecture both as design and experience, this book will discuss details of the intention put into both aspects. Therefore, all design decisions based on the form and appearance of the building will be found in this location on each page in grey.
## PROGRAM

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<th>Occ.</th>
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<tr>
<td>Grand Total</td>
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The program above is derived from current aftercare methods used in the therapy of human trafficking survivors. This program supplies the building with both small and large scale spaces to learn, heal, and socialize.

## USER NEEDS

Due to the severe trauma a survivor endures, healing from the psychological consequences of human trafficking requires long-term comprehensive therapy. Mental health therapy is typically based on one or more theories of psychological treatment; however, empirical evidence on the treatment of PTSD supports the use of "cognitive-behavioral therapy." Cognitive-behavioral therapy focuses on uprooting dysfunctional thoughts and irrational beliefs while implementing behavioral interventions such as exposure therapy, thought stopping, or breathing techniques. Simply put, this therapy aims to restructure thought and decrease negative emotions associated with traumatic memories. For one who has endured such trauma, memories hold a key to the fear and feelings of worthlessness a human trafficking victim holds after she has been freed. She must learn to reprogram how she thinks about herself by facing painful memories and looking at them no longer as a defining characteristic of her life but rather a circumstance that she has overcome from which she is now safe.

Facing such painful memories is an exhausting task and the road to healing is not a short or easy one. With such a heavy psychological task, where can something like architecture play a role? There are new studies which suggest that there are several links between psychology and the built environment that designers must begin to consider. The largest link between cognition and the built environment takes place in the part of the brain known as the hippocampus. This is the area of the brain which consolidates long term memories, but it also controls spatial navigation. This means that one cannot develop a long-term memory that has no information of the place in which the experience occurred. Therefore, the physical environment one inhabits during an experience one considers important centrally figures itself within the memory. In a world in which the environment is primarily built, the buildings and landscapes one inhabits are central to the constitution of autobiographical memories and therefore one's sense of identity.

Considering this finding, some have drawn the conclusion that the built environment can be viewed as the framework upon which our past, present, and future selves are constructed.
Therefore, when a survivor of human trafficking must process the trauma she has endured, the places in which said trauma took place are integral in her perspective of self. Likewise, environments that share similarities in which trauma took place can lead to panic attacks and feelings of discomfort.

So, this project aims to create spaces in which a survivor can reconstruct her sense of identity and humanization. In doing so, a large goal of the space was to avoid looking or feeling like the typical environments that serve as a backdrop for human trafficking. These settings are often busy and urban. Therefore, the location of this project was chosen to be in a place that abounds with natural beauty: the foothills of the Rocky Mountains.

A few miles northwest of the Colorado Springs, CO city limits and at the base of national park grounds is the site of the Waldo Canyon Fire which burned 18, 247 acres and evacuated 32,000 people in June of 2012. While there are still parts of the scorched land that requires more healing, much of the foliage has grown back to be more vivid and lush than it was prior. The story and symbolism of this could provide a great deal of hope for victims of trauma in that it is proof that even tragedy can bring forth growth and new life. Here, the residents will be able to nurture the land through the use of agriculture and aid in the restoration of it while in turn, the breath-taking views of the landscape will bring peace and rest to the residents.
“Malee was just 9 years old the night she was found and liberated from her abusers. This child had already been through so much in her short life. Tears from earlier that night left salty tracks on her cheeks. Her sun dress was torn, the once white flowers on the blue cotton were now brown and dirty. Her hair fell in tangles. No one had cared for Malee. Her small body was sold repeatedly for profit. And as she walked down the path to the after care shelter, led along by a social worker, she moved slowly, tentatively. Malee trusted no one. Adults in her life had only betrayed her, and she wore an expression of fear mixed with resignation.

Malee was now physically free from her traffickers, but her rescue that night was only the first step in her long journey to experiencing true freedom. This journey for survivors like Malee is individually complex and varied, but quality aftercare is a critical component of counter-trafficking work.”

- Stephanie Koziela
“What Is Awareness to Human Trafficking?”

STORY OF RESCUE

RESCUE
A woman is rescued from human trafficking and given back her freedom.

PARTNER
Non-Profit partner with her to provide aid and lodging on her road to regaining independence.

CARE
Her immediate physical emotional needs are met by a team of staff members.

COMMUNE
She is welcomed into the community of fellow survivors to walk alongside each other to freedom.

HEAL
She attends both personal and group counselling with a mental health care professional on staff.

LEARN
She attends classes to gain education and marketable skills to use when re-entering society.

NUTURE
She engages with nature and by learning to care for the environment in turn learns to care for herself.

RESTORE
In giving back to the environment, she restores the landscape that was restorative to her.
The site for this project is located only a few miles northwest of the Colorado Springs, CO city limits and a few miles east of national park grounds.

While the master plan of this project will include clinics, farmlands, and a marketplace, this project will take a more extensive look at the community’s center and houses. This center serves as the chief social space of the community by housing spaces for learning, counseling, dining, commuting with one another, and meeting with legal representation. The residential units radiate from the community center following the contour lines established by the topography of the site.
The project’s site sits at the base of the Rocky Mountains and South of the US Air Force Academy. Most of the wind the site receives is from the Southwest. Because the site faces the south, it will also receive plenty of sunlight throughout the year.

The project is nested in the foothills of the Rockies which provide protection and a barrier between the “outside world” and this safe community. The hills serve to screen out the outside world and create a safe place within. While these hills serve as a barrier they also are low enough to surround the residents with breath-taking Colorado mountain views.
Architecturally, the goals of this project were to create a space which is integrated with nature yet set apart from it. The community center utilizes natural materials and draws design inspiration from the environment to emulate the feeling one gets from being in nature while still maintaining the cleanliness of modern design.

This project’s goals are to create an experience for the residents in which they would feel like they are in the natural environment throughout their day of education and counselling. By creating a range of intimate to open spaces within this building a resident has options to experience nature and community to the degree at which she feels comfortable.
Design began by trying to describe how the project should feel through the following sketches. Taking biophilia into account, this image describes the way one feels when sitting under the shade of trees on a sunny day. The varying opacity of the leaves filters sunlight in a way that allows one to be surrounded by light while remaining safely away from the sun's UV rays. In doing so, it is also constantly creating a dynamic composition of shadows and light on the forest floor.

Another goal in the creation of this project was to foster an environment which was integrated with nature while still safely removed from the uncertainties of it. A concept known as prospect and refuge describes a space in which one can enjoy an incredible view; prospect, from a place of safety and security; refuge. Achieving this concept within the project is vital in order to make the space feel safe and secure yet open and hidden with the natural environment.

Another inspiration for this project was pulled from canyons which make one feel as though they are wrapped within the protection of the twisting earthworm walls. While these walls surround its visitor, they do not create a feeling of being too closed in due to the ample amounts of daylight that floods the space. Each bend in the canyon diffuses the light in a different direction and creates an overall glow and almost magical effect.

One other articulation of prospect and refuge, this sketch depicts the vision of the chapel. A design goal with this space of the project was to create a space that in no way competes with the beauty of the natural environment. This space should rely on the simplicity of form to direct one's focus away from themselves and towards something bigger.
A large design inspiration was taken from "Kintsugi," the Japanese art of mending broken pottery with molten gold. Kintsugi is beautiful because it takes something which is broken and mends it with something incredibly valuable; thereby, letting the pottery fulfill its function while also adding value where it once was broken.

In following with the narrative of restoration, this project takes a picture of healing to a group of people whose purpose and identity has been stripped away from them. However, the hope is that as they heal, the damage that has been done by others becomes a valuable part of their story. That they overcome the obstacles placed in their lives and grow to be strong women who in turn can help others and fulfill their original purpose.

Like Kintsugi, this project takes a simple form of a rectangle and breaks it into pieces on different axes. These broken pieces are then clad with wooden slats and house the main social spaces; thereby letting the breaks of the building become its source of beauty.
Architecturally, this concept of Kinsugi affects the building by creating a wide corridor that houses several social spaces and lounge areas for the residents to connect with one another. On either side of the corridor are the programmatic spaces. In pink, are the educational spaces, yellow the social, green the support, blue the staff, and dark green the visitor spaces.
The first floor is divided down the middle by an angled passageway from the public side of the building to the residential side. This green space serves as a barrier and passive security measure between the public and private while also creating a common outdoor space for the residents to have lunch with the staff. The public portion of the building houses an exhibit space to tell the stories of hope the community has seen.
The angle of the "break" in the building is designed to let the southern sunlight come through the top of the building and fall down the angled wall in a way that is reminiscent of a canyon wall. The addition of wooden slats lining the interior angle are also inspired by canyons but spaces have been left in between them to allow light from this corner to pass into other spaces of the building.
Inside the main residential entrance is the dining room and gathering space. On the southeast side of the underground garage, Aspen trees have been planted to create a visual connection to the natural environment. These trees also allow sunlight which filters through the building creating a dynamic view to fall through to create interesting compositions of shadows along the walls and floors.
VISITOR AREAS

The exhibit space raises public awareness of the realities of human trafficking while also telling the stories of hope from women who have been not only rescued from it but have also healed from it. Adjacent to the exhibit space is a projection room in which the non-profits who theoretically run the facility could inform the public of ways to aid in their fight against human trafficking. These two spaces along with public restrooms are the only spaces visitors have access to in the facility.

Because creating an experience that feels safe yet open is vital to this project, it uses principles of passive security. This simply means that the security measures utilized are not noticeable such as large metal detectors at every entrance. The measures taken here were to use the staff spaces as a barrier between the public and the spaces used by the residents.
SECOND FLOOR

The second floor of the community center is where most of the social spaces are housed. Within the interior of the angled corridor are several spaces for residents to engage with others. The northern side of this floor houses a recreation room and workshops, each of which utilizes folding glass doors to open to an outdoor green space.
The community center is designed to foster different levels of sociability depending on how a resident is feeling that day. Should she want to engage with friends, she can choose to walk through the large wooden corridor. However, if she would prefer to be alone to reflect before a counseling session she may take a smaller walkway that wraps around to the front of the building, where she can sit within the thick walls and look out at the scenic views.

Overall this gives the resident the freedom to make decisions based on how she is feeling which aids in reinforcing the fact that she is safe and out of harm’s way.
THIRD FLOOR

The third floor is comprised of the more private and quiet spaces of the building. Because keeping the central corridor full of light was a priority, this floor leaves many spaces open to create the two and three-story spaces on the floors below. The circulation space which results allows a resident to go from space to space while still maintaining visual connections of the social interactions occurring on the floors below.
Depicted above is the computer lab which faces the residential plaza of the building. Here along with five classroom spaces the women can gain more marketable skills before transitioning back into society.

Above is the group counseling space. This space was designed to feel open and safe. This room maintains visual connections to both others in the community as well as nature through the trees planted inside the first floor passageway.
1. PARAPET COPING
2. ROOF MEMBRANE
3. 12" RIGID INSULATION
4. 6" COLD-FORMED METAL FRAMING
5. 1/2" GYPSUM BOARD
6. ALUMINUM STOREFRONT
7. COMPOSITE DECKING
8. SUSPENDED GYPSUM CEILING
9. BATT INSULATION
10. 1/2" GYPSUM BOARD
11. Z-EE CHANNELED
12. METAL MESH
13. SPACE FRAME
14. METAL GRATE
15. WOOD PANEL
16. STEEL ANGLE
17. COMPOSITE DECKING
18. HDG TUBE (DICO)
19. 6" COLD-FORMED METAL FRAMING
20. INSULATION
21. FIBERGLASS CHANNEL
22. METAL SOFFIT
23. MILUXION
24. ALUMINUM STOREFRONT
25. VICO FORM
26. YAPOR BARRIER
27. GRADE BEAM

MATERIALS

A space frame is used to wrap the building in a perforated mesh to emulate the leaves of a tree. By wrapping the building with different layers of transparency it creates filters for the sunlight while also maintaining the privacy of the residents by impeding the view of the public into the building.

The space frame itself creates interest shadow patterns on the walls and floors like that of the branches of a tree. This structure type was also chosen for symbolic purposes in that it is made up of small delicate members that prove to be incredibly strong when put together. This is intended to remind the residents that approaching healing from trauma is easier when done with others.

The rest of the building is supported by HSS. There is also an abundance of wood used through the project whether in wooden slats or panels. The determination of which surfaces would have wood, and which would not was based on how empathetic a space needed to feel. For example, the central social corridor and dining spaces are to feel open and welcoming while the more educational spaces possess simpler finishes in an effort to not distract from the task at hand.
Above are plans and elevations which aid in making the building ADA compliant.
The residential units are designed with optimal efficiency by stacking all the mechanical and plumbing functions in a central spine. Each apartment is extending from the spine with a simple space which has a large window in which a resident can sit and view the sun as it rises over the Rockies.

The residential space is designed to feel close to nature and one’s roommate while still having a place to retreat. The fireplace and warm finishes aim to make a temporary living space feel as comfortable as possible and allow a resident to take ownership of her own space.
The residential units are designed around the idea of creating numerous opportunities for each resident to experience nature. The layout of the houses was determined by the contour lines of the site’s topography. They were then staggered and placed on three different levels to prevent any one unit from blocking the scenic views on another. In between each unit is a personal garden space for the use of each survivor to cultivate her own garden. Due to the staggered layout of the units, each garden extends onto a roof garden of the unit on the level below. Sliding wooden louvers were then attached to the sides of each unit to create a porch which can be semi-enclosed while still allowing air circulation.
CONCEPT

Healing from trauma such as human trafficking includes not only physical and emotional aspects but also spiritual. Therefore, this facility houses a place for a resident to meet with and worship God with her fellow human trafficking survivors. This chapel is designed to direct one’s attention off oneself and onto the glory and beauty God reveals about Himself in His own creation. The use of a large glass facade held with glass mullions creates an unobstructed view of the Rocky Mountains while the rhythmic pattern of the wooden louvers creates dynamic shadows. The roof of the chapel has three skylights which allow light to pass into the building and project different shadow patterns as well.

Here, a trafficked survivor can be reminded that a God who is powerful enough to speak a world into existence, is also caring enough to make it beautiful for us. Here, she can understand that she has been redeemed and made new because of Christ’s sacrifice for her. Here, she can be reminded that she is loved and valuable despite how others have treated her because she is loved by the almighty Creator who made her in His image.
“THEREFORE, IF ANYONE IS IN CHRIST, HE IS A NEW CREATION. THE OLD HAS PASSED AWAY; BEHOLD, THE NEW HAS COME.”

2 CORINTHIANS 5:17
CONCLUSION

In conclusion, the survivors of human trafficking may be free from the immediate danger they were once in, but they still face devastating mental health consequences which rob them from the basic assumptions of humanization: that one is safe from harm, one is a good and decent person, and the world is meaningful and just. By creating a built environment that both serves the therapeutic needs of survivors and amalgamates itself with the natural environment, this project is designed to constantly remind a survivor back to the fact that she is valuable. Every garden in which she can engage with nature is meant to instill in her that she plays a vital role on this earth. Every scenic view she takes in from safety can remind her that she is out of harm's way and that the future is hopeful. Every conversation she has with a new resident by the comfort of a fireplace reinforces the truth that her story and knowledge are valuable to others. Through drawing attention to nature's beauty as well as reinforcing symbolism of healing through form, materials, and function, each space of this project holds intentions and design decisions made to paint a human trafficking survivor to the fact that she is not broken but whole.
DEDICATION

There are so many people I would like to thank for helping me throughout this final study process.

To my parents: Thank you for your constant support, encouragement, and belief in me. Thank you for consistently reminding me of truth when I need it the most. Your strength, love, and unwavering support will always mean the world to me. I am beyond blessed to call you my parents!

To my friends and coworkers: Thank you all for your support as well! Thank you for every late-night coffee run, printing session, and chick-fil-a delivery you made. Thank you for always generously taking time to hear about this project and give helpful and encouraging input.

To my committee: what an all-star committee you have been. I thank each of you so much for joining me in this process. You have each given such helpful and needed input in this project that helped it become what it needed to be. I thank each of you for your belief in me as a designer, your constant encouragement, and your generosity in always making time for me.

To my classmates: Thank you for making this process worthwhile. Your friendship has been something which had I not had during this process I do not know how I would have made it through. Thank you for always being so generous in giving your time and opinions when I ask constant questions of which rendering looks better at 2.00AM. Thank you for your encouragement and belief in me as well! We did it!

COMMITTEE MEMBERS

Marcel Emmery | Committee Chair

Michael O’Brien | Committee Member

Andrea Etiskol | Committee Member

Ray Holliday | Studio Professor
RESOURCES

While this project is theoretical, it revolves around a very real and serious issue that takes place in our nation every day. If you would like to know more about the fight against human trafficking or donate to the organizations who fight it daily, please follow the QR codes below. Thank you!

A-21
A-21 is a Christian-based non-profit that actively fights to free enslaved workers worldwide.

EXODUS ROAD
Exodus Road fights human trafficking not only through freeing entrapped workers but also by providing after care to ease them into their transition back into society.

IJM
International Justice Mission fights to free people trapped in all forms of forced labor around the world by partnering with local governments.

END IT MOVEMENT
End It movement is a coalition of numerous organizations that fight human trafficking which focuses on making the public aware of the severity of human trafficking.

REFERENCES


