

Healing Home: Exploring the Potential of
Trauma-Informed Design in Foster Care Group Homes

by

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H E A L I N G
H O M E

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Abstract

This thesis explores trauma-informed design's capacity to improve the health and overall livelihood of youth living in the foster care system. Statistics indicate that many youth in foster care are living with accumulated trauma. This trauma presents itself through physical and mental illness, and fosters poor adult life outcomes. Progress in the field of trauma-informed design and homelessness, has validated the success of this practice in the healing and mitigating of trauma. The collaboration between trauma-informed design and foster care architecture however, has not been studied. In the attempt to improve the life outcomes for this vulnerable population, this thesis proposes a trauma-informed foster care group home. A home designed in purposeful response to the unique traumas experienced by youth in foster care, provides a safe residence, and curates a healing environment. This is needed to allow youth in the system a clearer path forward in becoming happy and healthy adults despite their trauma.

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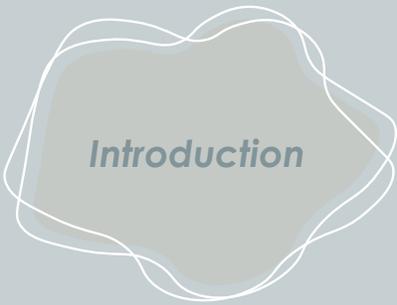
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Introduction

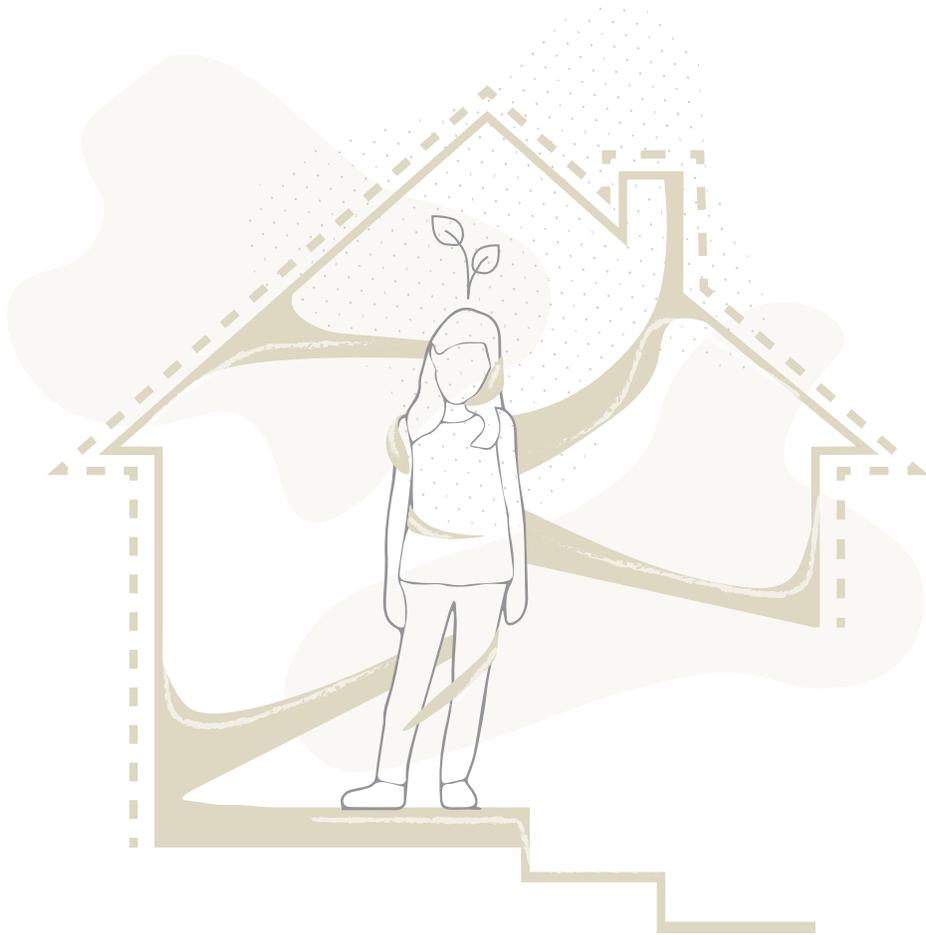
Introduction

Trauma follows children who have been placed in the foster care system, not only from the experiences that led to them entering the system, but continuously as they are displaced from their families, communities and all familiarities.¹ In Ontario, the most prevalent reasons for displacement are physical abuse, sexual abuse, neglect, emotional maltreatment, exposure to intimate partner violence, or a combination of these.² Understandably, these children are being diagnosed with post traumatic stress disorder at higher rates than their peers who have not been in the foster care system.³ A study conducted by the Vermont Center for Children, Youth and Families, Department of Psychiatry also found that adults who had accumulated trauma in their childhood were met with more psychiatric disorders and less functional outcomes.⁴ To achieve the best possible life and health outcomes for a child in the foster care system, it is imperative that their cumulative traumatic experiences are limited and addressed.

In order for foster caregivers to react and care for these children in the most sensitive and healing manner, they have been trained in the practices of trauma-informed care. Elizabeth Hopper defines this standard of care as “a strengths-based framework that is grounded in an understanding of and responsiveness to the impact of trauma, that emphasizes physical, psychological, and emotional safety for both providers and survivors, and that creates opportunities for survivors to rebuild a sense of control and empowerment”.⁵ While foster caregivers have been trained, mentored and set up for success in terms of social interactions with a child, the home itself is given much less attention and must simply meet a list of physical safety standards.⁶ However, since we recognize that our physical environments have an effect on our attitudes, moods and behaviours, and that our physiological state, emotional state, and physical environment are all directly correlated,⁷ we can start to look towards the home itself and the possible healing implications of its design.

Trauma-informed design is a relatively new and understudied field in architecture in which the concepts of trauma-informed care, such as empathy and understanding are applied to

figure 1. [right]
The Healing Home



the built environment.⁸ As Anne Marie Garcia explains, “Trauma-informed design incorporates the principles of trauma-informed care: empathy and understanding. It is an effective approach to designing spaces where trauma-experienced individuals may spend time”.⁹ This supports the idea that trauma-informed design in the home, where the user spends the majority of their time, could offer extensive and extended healing. Trauma-informed design is meant to curate environments in which the users feel safe, calm, dignified, and empowered. This is accomplished by controlling spatial layout, scale, furniture choice, visual interest, light, colour, art and biophilia.¹⁰ The practice of trauma-informed design has been explored most extensively in its relationship to transitional or supportive housing for individuals who have experienced homelessness. Considering children in the system have endured many of the same traumas as the homeless population, they too should be supported through design.¹¹ Using trauma-informed design in the realm of child welfare projects has not yet been explored, and thus presents an opportunity to advance research in this field and better the lives of youth in the system.

This thesis has evolved through a theory-led research model. It requires full comprehension of the discipline of trauma-informed care, which was the prerequisite for the understanding of trauma-informed design.¹² This knowledge was gained through the completion of trauma-informed care training,¹³ the reading of journals, and lectures. Case studies were conducted on existing trauma-informed buildings, research papers read, and lectures watched on trauma-informed design. These exercises allow one to not only recognize a design intervention as trauma-informed, but also understand the reasoning behind each intervention. This thesis also requires complete education on the foster care system itself, the target users, and the existing foster care infrastructure and architectures. It is important that the issues embedded in the foster care system are studied, understood and analysed so that proposed solutions can address root causes. In the attempt to better understand the foster care system, research papers were read, and data analysis on trauma and abuse prevalence was completed. Articles and personal testimonies on social media were observed and documented to better understand the unique traumas youth in the system are facing, which in turn provides one with the knowledge needed to begin designing user specific interventions.¹⁴

While this thesis has implications globally, the entire Canadian foster care system is in constant and desperate need of more licenced foster families.¹⁵ This leads to children being placed in privatised group homes or treatment centres in farther communities. The Niagara Region of Ontario for instance, has alerted the public to the fact that as of May 2020, there were 454 children needing foster care accommodations, and only 150 foster homes available, clearly indicating the need for intervention in this region.¹⁶ Thinking infrastructurally, while designing a trauma-informed home for each foster family is not feasible, redesigning and rethinking the negatively stigmatized group home model could result in less accumulated trauma for its users. Group homes designed with trauma-informed principles, would not only provide children in the foster care system a safe and healthy refuge, but also offer more bedroom capacity in the Niagara Region, reducing the number of children being placed outside of their communities and cultures. The rethinking of the group home model could also pose opportunities for the integration of new program, in addition to dwelling, that could engage community members and allow for imperative positive relationships to be formed.

Consequently, this thesis asks, can foster care group homes themselves provide personal and communal therapeutic healing for their occupants through trauma-informed design? Currently the foster care group home is failing to reach its potential in supporting its residents, however trauma-informed design has the capacity to mitigate and potentially heal the accumulated traumas that follow these innocent children into their adult lives.

Theoretical Framework

This thesis looks at trauma-informed design through the theoretical lens of care ethics. In Virginia Held's, *The Ethics of Care*, she states, "the central focus of the ethics of care is on the compelling moral salience of attending to and meeting the needs of the particular others for whom we take responsibility".¹⁷ This theoretical framework suits this thesis, as it is concerned with the moral obligation to care for individuals who cannot care for themselves, and children in the foster care system are represented in this group. This way of thinking also highlights the importance of providing equity over equality in the performance of care, recognizing that individuals are unique and present variable needs.¹⁸ This philosophy understands that some individuals have more needs than others, and these needs should be met regardless. The children in the foster care system typically present higher need, as they have experienced more trauma than their peers.¹⁹ Additionally, the value that the ethics of care philosophy places on emotional reaction coincides with the value trauma-informed design places on understanding and addressing emotion. In comparing philosophies, Held states that the ethics of care, "typically appreciates the emotions and relational capabilities that enable morally concerned persons in actual interpersonal contexts to understand what would be best".²⁰ The thought that an individual's instinctual emotions are imperative to care reiterates the importance of grounding this thesis in lived experience. The trauma-informed design process appreciates and works off of the possible emotional reactions incurred by the built environment. This thesis requires the designer to design through a care-oriented lens, while also requiring emotional information from the user to develop design interventions that may aid in healing.

It is commonly expressed that youth in the foster care system are in need of nurturing relationships that instill worth, and promote security. Studies clearly show the benefit to traditional foster family placements, highlighting the presence of parental love and acceptance as reason for this success.²¹ Therefore, in designing a home for these children, it is important to reference the feminist led ethics of care philosophy, as it recognizes the importance of maternal instinct and care which should be translated through the architectural design of the home. The user group proposed to inhabit this group home are female youth, therefore reiterating the value of approaching this project through a feminist directed theoretical framework.

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PART ONE
*Trauma-Informed
Design*



Introduction to Trauma

CAMH, Canada’s centre for addiction and mental health, defines trauma as the resultant emotional response that stems from an individual’s experience of something distressing.¹ A traumatizing event could be an isolated event, such as a natural disaster or an assault, it could be systemic trauma such as racism, or even crisis’ that are endured such as homelessness.² When an individual is triggered or reminded of a traumatizing moment, time and place become irrelevant as their bodies and minds are brought back to re-live the experience.³ A trigger will instruct the body and mind that one is in danger and initiate the body’s physiological stress response, which is to either fight, flee, freeze, or fawn.⁴ Changes in brain activity not only inhibits critical decision making, fear perception and impulse control, but heart rates increase, breathing becomes difficult, senses are heightened, muscles constrict and sleeping becomes a struggle.⁵ CAMH states that, “Experiencing a traumatic event can harm a person’s sense of safety, sense of self, and ability to regulate emotions and navigate relationships. Long after the traumatic event occurs, people with trauma can often feel shame, helplessness, powerlessness and intense fear”.⁶ Dr. Nadine Burke Harris presents the most troubling facts on living with trauma through her studies as she states, “folks who are exposed [to trauma] in high doses have triple the lifetime risk of heart disease and lung cancer, and a 20-year difference in life expectancy”.⁷ Given the serious physical and mental health implications that accompany untreated trauma, it is clear that trauma experienced individuals need to be addressed and treated. Looking beyond the healthcare system for treatment strategies could be beneficial given the system’s overload and reliance on specialised health care workers.

figure 2. [above]
The Trauma Response



Trauma-Informed Care

Trauma-experienced individuals should be cared for with trauma-informed care. This standard of care encourages caregivers to be empathetic and recognize and account for the trauma their patient or resident has been affected by.⁸ The framework emphasizes “physical, psychological, and emotional safety for both providers and survivors, and creates opportunities for survivors to rebuild a sense of control and empowerment”.⁹ Trauma-informed care is utilized in a number of diverse fields. From healthcare to homeless shelter, staff members interact with their patients or residents in an understanding and sympathetic manner. They are trained to internally ask “what has happened to you?” as opposed to “what is wrong with you?”.¹⁰

While therapy has long been thought to be the only treatment technique for those living with the impacts of trauma, research and clinical literature in the field, “suggest that much of the healing from trauma can take place in non-clinical settings”.¹¹ Howard Bath, in “The Three Pillars of Trauma-Informed Care”, also begins to question the place parameters for healing. He notes, “There is some evidence to suggest that trauma-informed living environments in which healing and growth can take place are a necessary precursor to any formal therapy that might be offered to a traumatized child”.¹² This deviation from traditional healing methods is what led to the conception of trauma-informed design. Trauma-informed design stems from the framework of trauma-informed care as it is quite literally the result of applying the concepts of trauma-informed care to the built environment.¹³

figure 3. [above]
TID Stems from TIC

Introduction to Trauma-Informed Design

In 2015, a research team, comprised of architects, social service professionals and housing developers, were beginning the design of a new project that would serve as a homeless shelter and affordable living complex in Denver Colorado.¹⁴ At this time, the team was introduced to the concepts of trauma-informed care, which would be the care standard for the residents of this project.¹⁵ After learning more about the social techniques in mitigating trauma, the team began to think about the environmental factors and how they might affect the residents and potentially mitigate trauma.

While the term “Trauma-Informed Design” was conceived prior to this revelation, it had not yet been rigorously studied, tested or funded. That is until the research team from Denver decided to take on the responsibility of developing a framework for trauma-informed design. The team has since developed a number of trauma-informed design projects through Shopworks Architecture, and continues to create documents and hold seminars to educate others in the field.¹⁶

This thesis will be referencing the framework and definitions provided by the Denver team and Shopworks Architecture, as they have spearheaded the majority of trauma-informed design’s development, and have worked on the largest number of trauma-informed buildings. According to the Denver research team, “At the broadest level, trauma-informed design aims to promote healing and improved physical health, mental health, and overall well-being of individuals and their communities”.¹⁷ This can be accomplished through, “adapting spatial layout, thoughtful furniture choices, visual interest, light and color, art, and biophilic design”.¹⁸

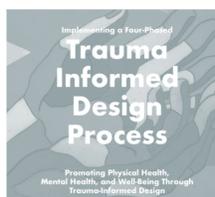
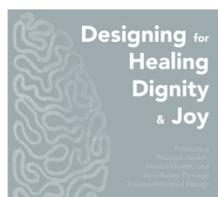
The Denver team’s framework consists of six core values, three C’s of designing for health and healing, and three organizing principles. The six core values include: 1. hope, dignity and self esteem, 2. connection and community, 3. joy, beauty and meaning, 4. peace of mind, 5. empowerment and personal control, and 6. safety, security, and privacy.¹⁹ These values will be explored further through case studies later in the thesis, however from the six core values, the Denver team extracted three key concepts which emphasize the importance of healing. These concepts were named the three C’s of designing for health and healing, and are, choice, community and comfort.²⁰ These three C’s are the three main conditions trauma-informed design attempts to replicate or curate in their buildings. Choice allows users personal agency and empowerment which instills a sense of worth. Community may be fostered through common or gathering spaces, allowing users the opportunity to form imperative social relationships and trust. Comfort may manifest itself in materiality or spatial security, and is important as being comfortable in an environment is the pre-requisite for any healing or productivity.

figure 4.
Designing for Healing
Dignity & Joy

figure 5.
Architectural Principles
in the Service of Trauma-
Informed Design

figure 6.
Trauma-Informed
Design Process

figure 7.
[right] Six Core Values &
3 Key Concepts of
Trauma-Informed design



DENVER RESEARCH TEAM

- CHAD HOLTZINGER
- LAURA ROSSBERT
- JENNIFER WILSON
- DANIEL BRISSON
- SAM GRABOWSKA
- RACHELLE MACUR

6 core values



Hope, Dignity &
Self-Esteem



Connection
& Community



Joy, Beauty
& Meaning



Peace of
Mind

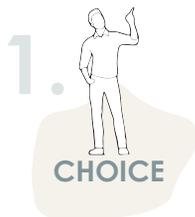


Empowerment &
Personal Control



Safety, Security &
Privacy

3 key concepts



The organizing principles essentially work to categorize design interventions in the field of trauma-informed design. There are interventions that are all sensory related, some that are concerned with spatial parameters and scale, and others that are more concerned with identity and self worth. The Denver team has highlighted three organizing principles which are, Sensory Boundaries, Nested Layers, and Identity Anchors.²¹

The first organizing principle, sensory boundaries, is referring to the filtration of sensorial input (see figure 8). Many individuals who have experienced trauma have sensory related triggers. This means a smell, a sound, a sensation or a texture could trigger a trauma response.²² The goal behind sensory boundaries is to encourage designers to use materials, and furniture that might change the way stimuli presents itself in a space.²³ This could mean using fabrics that will soften the acoustic properties in a lounge, or providing adjustable lighting to allow for a different ambiance.

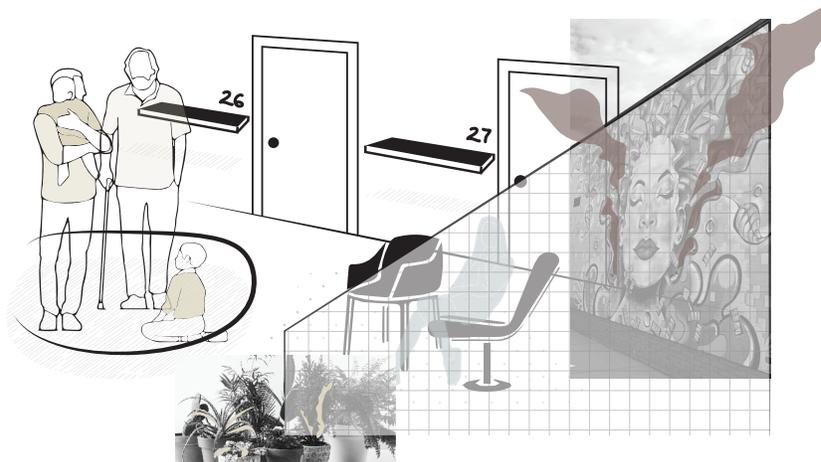
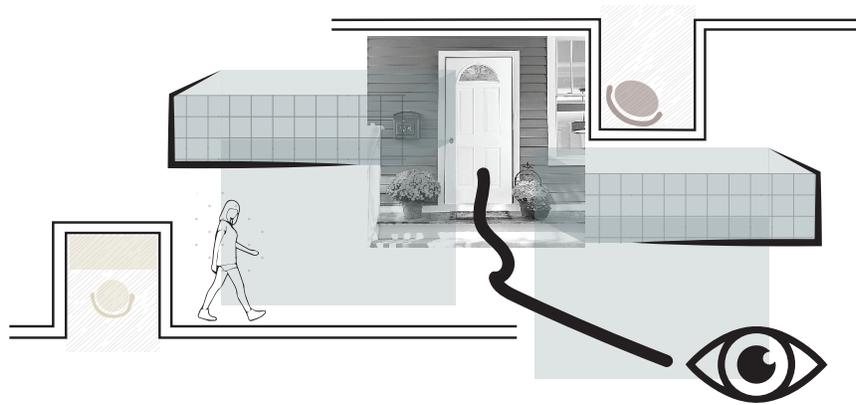
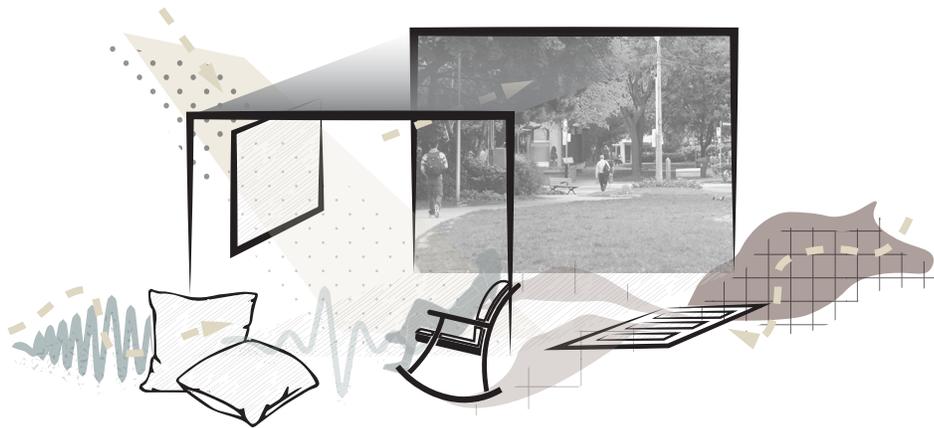
The second organizing principle, nested layers, is concerned with the variability of spaces (see figure 9). Considering no two individuals experience trauma and triggers in the same way, each individual will require unique design interventions to aid in their healing.²⁴ Carefully designing flexible spaces that can offer diverse program, provides opportunity for refuge, the security of visual surveillance, and allows individuals agency without over-stimulation.

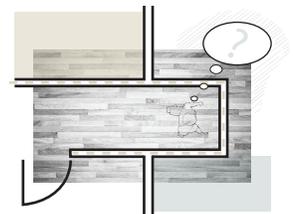
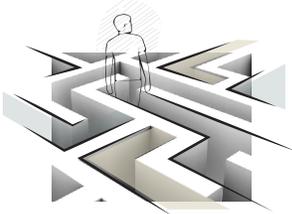
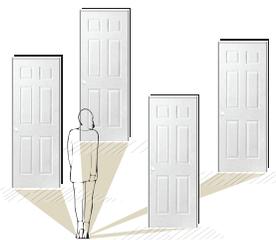
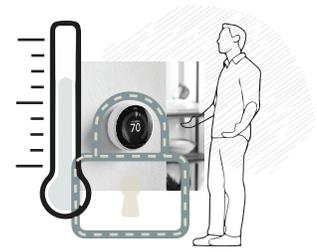
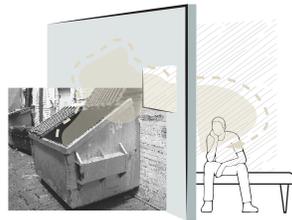
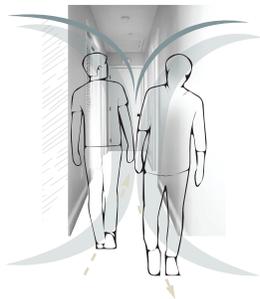
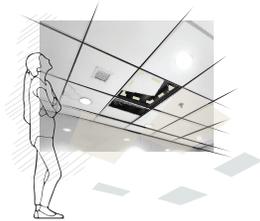
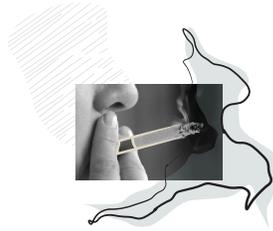
The third organizing principle, identity anchors, has to do with cultural belonging, self expression and empowerment (see figure 10).²⁵ Recognizing that many individuals who have experienced trauma struggle with feelings of worthlessness, it is important that spaces are designed to encourage confidence and a strong sense of identity. Design Interventions may be as small as a shelf outside an apartment door, or as big as a mural tying one's apartment building to the greater city's culture.²⁶ Any aspect that allows an individual to recognize a space as their own, or feel as though they belong in a space, helps to rid unhealthy notions of insignificance.

figure 8. [top right]
Sensory Boundaries
Organizing Principle

figure 9. [mid right]
Nested Layers
Organizing Principle

figure 10. [bottom-right]
Identity Anchors
Organizing Principle





Environmental Triggers

Overall, the organizing principles really work to encompass the three C's, which in turn work to encompass the six core values of trauma informed design. The values and principles presented in this framework will typically always bring benefit to users, regardless of their unique trauma-experience. However, removing, reducing, or mitigating environmental triggers is a component of trauma-informed design that is user specific.²⁷ Meaning, someone who has experienced the endured trauma of homelessness, may not be triggered or bothered by the same environmental conditions as someone who has experienced the trauma of sexual assault. With that said, it is important that designers are able to determine the users' unique triggers and struggles, so to develop design interventions. Figure 11 shows the diagramming of common environmental triggers that those who have experienced homelessness typically struggle with. Some of these triggers include, the smell of smoke, narrow hallways, unclear wayfinding, the sound of footsteps, institutional architecture, or lack of surveillance.²⁸ These are all triggers that the Denver team has seen patterns in while designing their trauma-informed buildings. Given this thesis is concerned with foster youth however, the list of environmental triggers will be different as the traumas experienced are unique to the user group.

Trauma-Informed Design Case Studies

Shopworks Architecture's trauma-informed buildings--supportive housing, transitional housing, affordable housing, and shelter typologies--serve mainly the homeless population.²⁹ Although this thesis does not address the homeless population, conducting case studies on these buildings allows designers to recognize how the key concepts and core values can be applied to any architecture. For example, precedence shows the implementation of gardens to promote community, an intervention that could easily find its place in a foster care group home. Precedence also shows the implementation of open reception desks and lobbies. A reception desk may allow a homeless individual security, but could also remind a foster youth of institutionalization. The concept of reception however, should be included in a group home, highlighting the importance of understanding the variable implications of core values.

figure 11. [left]
Diagramming of
Common Environmental
Triggers

figure 12.
LAUREL HOUSE
supportive housing
for youth exiting
homelessness



figure 13.
PATH
supportive housing for
the ex-incarcerated



figure 14.
ARROYO VILLAGE
homeless shelter and
supportive housing



figure 15.
LAUREL HOUSE
supportive housing
for youth exiting
homelessness



figure 16.
PATH
supportive housing for
the ex-incarcerated



Hope, Dignity & Self-Esteem



The core value, Hope, Dignity, and Self-Esteem is concerned with, “celebrat[ing] each individual’s inherent worth, communicating positivity, emphasizing strengths, and maximizing potential”.³⁰ Within figures 12-15, high quality furniture is highlighted as it is used to ensure residents feel dignified and worthy of nice things. Mirrors are used to improve confidence and self-image. Unique or dramatic architectural expression, allows residents to take pride in their residency at that location. High ceilings in the Laurel House represent hope and aspiration as residents are encouraged to set goals and harness their potential. The notion of instilling worth through design will be imperative to a foster care group home as so many youth have succumbed to feelings of worthlessness based off of the way they have been treated in their lives.³¹



Connection & Community

The core value, Connection and Community, attempts to, “create spaces that encourage camaraderie and collaboration among residents as well as between residents and staff – and offer the opportunity to belong, helping residents to rebuild relationships built on trust”.³² Figures 17-21, show highlighted seating arrangements that cultivate conversation, community gardens, and locational strategies such as placing the elevator adjacent to an area where people might be gathered. Any teamwork type initiatives or shared common spaces that help residents come together, can foster trustworthy relationship building. Youth in foster care will often miss their biological families and can benefit from opportunities to form bonds with other youth in the group home and staff members.



figure 17.
PATH
supportive housing for
the ex-incarcerated



figure 18.
ARROYO VILLAGE
homeless shelter and
supportive housing



figure 19.
PATH
supportive housing for
the ex-incarcerated



figure 20.
LAUREL HOUSE
supportive housing
for youth exiting
homelessness



figure 21.
ARROYO VILLAGE
homeless shelter and
supportive housing

figure 22.
LAUREL HOUSE
supportive housing
for youth exiting
homelessness



figure 23.
ELISABETTA
income restricted
affordable housing



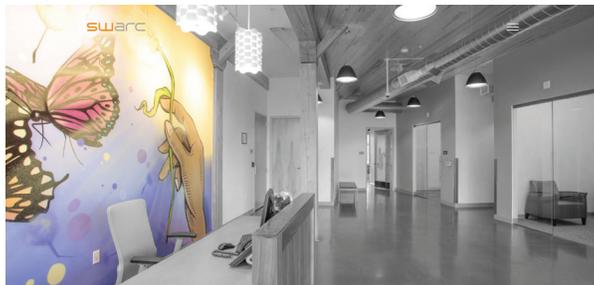
figure 24.
ARROYO VILLAGE
homeless shelter and
supportive housing



figure 25.
LAUREL HOUSE
supportive housing
for youth exiting
homelessness



figure 26.
ELISABETTA
income restricted
affordable housing



Joy, Beauty & Meaning



The core value, Joy, Beauty, and Meaning, tries to, “honour culture and identity while creating spaces that spark and nurture imagination, hope, and aspiration”.³³ Figures 22-26 show highlighted murals sparking joy and connecting a residence to the greater city’s culture. Beautiful, bright, positive paintings and architectural expression engages the imagination and fosters inspiration. Shelving, chalk boards and cork boards allow residents the medium to express themselves and have control over the public’s perception of them. This concept could be very beneficial in a foster care group home because birth homes and families often hold a lot of cultural significance and personal identity. When a youth is removed, they may feel as though they have lost a piece of themselves, hence the importance of giving them opportunities to express their culture and identity through furniture or furnishings.



Peace of Mind

The core value, Peace of Mind, is meant to, “cultivate a comfortable, calm ambiance that supports relaxation, self-soothing, stress management, and coping through design details such as lighting, sound mitigation, natural elements, and access to nature”.³⁴ This core value has a lot to do with sensorial experiences, therefore, figures 27-31 highlight natural materials, biophilia, acoustic properties, and lighting conditions. The laundry room in the Elisabetta also promotes peace of mind as residents are able to lounge in the same room their laundry is washing, eliminating the trauma-induced fear that their belongings could be stolen.³⁵ A foster care group home similarly, might ensure peace of mind through biophilia, seating orientation, lighting properties, or even the geographical location of the home. Providing peace of mind to foster youth will look different than providing peace of mind to members of the homeless community because they have experienced different traumas, however the overarching key value of ‘comfort’ remains the objective.



figure 27.
PATH
supportive housing for the ex-incarcerated



figure 28.
LAUREL HOUSE
supportive housing for youth exiting homelessness

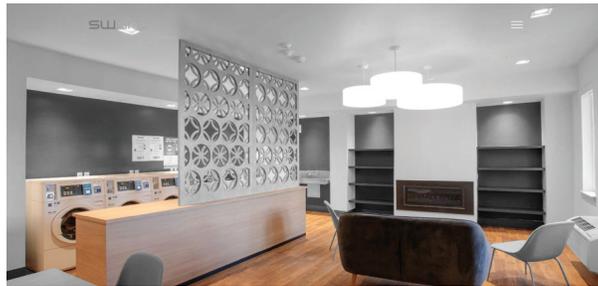


figure 29.
ELISABETTA
income restricted affordable housing



figure 30.
PATH
supportive housing for the ex-incarcerated

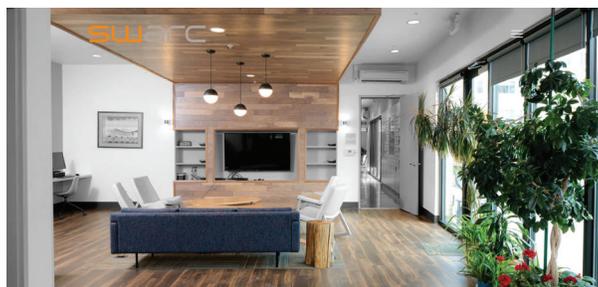


figure 31.
ARROYO VILLAGE
homeless shelter and supportive housing

figure 32.
PATH
supportive housing for
the ex-incarcerated



figure 33.
ELISABETTA
income restricted
affordable housing



figure 34.
PATH
supportive housing for
the ex-incarcerated

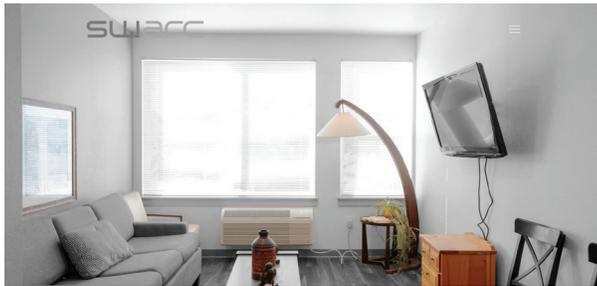


figure 35.
LAUREL HOUSE
supportive housing
for youth exiting
homelessness



figure 36.
ARROYO VILLAGE
homeless shelter and
supportive housing



Empowerment & Control



The core value, Empowerment and Personal Control, is focused on “encourage[ing] individual agency, welcom[ing] self-expression and offer[ing] choices for residents”.³⁶ Subsequently, figures 32-36 highlight all the elements that encourage agency. This includes providing residents control over temperature and lighting, providing options for where one can cook or where one sits to eat. Arroyo Village for example, provides residents with common computers, which allows more freedom and control in participating in or moving forward in society. Youth in foster care often feel out of control as social workers, judges, biological parents, and foster parents make all the decisions pertaining to the youths’ lives while they are left to adapt. Agency empowers individuals and is therefore imperative to the design of a trauma-informed group home.



Safety, Security & Privacy

The core value, Safety, Security, and Privacy, tries to, “understand that residents’ perceived safety is just as important as actual safety... prioritize clear wayfinding, sight lines, and boundaries; minimize negative triggers; offer vantages of both prospect and refuge and paths of retreat; and recognize the role of program staff in creating a sense of safety and security”.³⁷ Highlighted through figures 37-41 is design for refuge, the orientation of furniture, visual connection between spaces, and clear wayfinding. The Laurel house, pictured twice, shows the variability in design intervention based off the different physiological trauma responses, fight, flight, freeze or fawn. An individual that enters fight or flight mode may benefit from the winding paths outside of the Laurel house. An individual in freeze or flight mode comparatively, may benefit from small scale architectural nooks or rooms where they can hide or seek refuge.

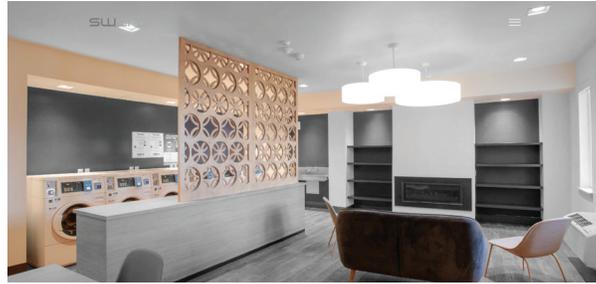


figure 37.
ELISABETTA
income restricted
affordable housing



figure 38.
LAUREL HOUSE
supportive housing
for youth exiting
homelessness



figure 39.
ARROYO VILLAGE
homeless shelter and
supportive housing



figure 40.
ELISABETTA
income restricted
affordable housing



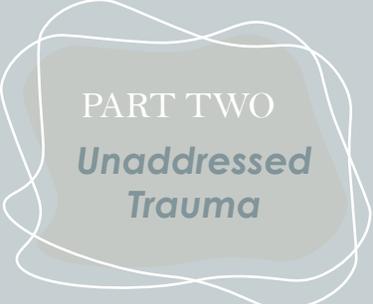
figure 41.
LAUREL HOUSE
supportive housing
for youth exiting
homelessness

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PART TWO
*Unaddressed
Trauma*



Trauma in Foster Care

The user groups that have been researched and addressed thus far in terms of trauma-informed design, either by Shopworks Architecture or other architectural firms, include veterans, people exiting incarceration, transgender individuals, chronically homeless and disabled individuals, and some others as shown in figure 42. One group of individuals riddled with trauma who have not yet been addressed by design, are the children in the foster care system. Children in foster care are a highly traumatized population as many children experience trauma before entering the system, then accumulate more trauma as they continue their journeys in the system.¹ In Ontario, if a child has been removed from their home for maltreatment, they could have experienced either; sexual abuse, neglect, emotional maltreatment, exposure to intimate partner violence, or a combination of these (see figure 44).² The initial removal process of the child from their home can be extremely traumatizing. These transitions are often accompanied by conflict, confusion and anger towards the party removing the child. Although adults understand a removal as protecting the child, the child will likely still have an attachment to their biological family or caregivers, and will often feel loss, confusion, fear, apprehension, sadness, anxiety, and stress.³ In the cases where a child is unrightfully removed, by reason of human error or systemic racism, the removal experience becomes even more traumatic.⁴ Speaking on the emotional burden children in foster care carry, Delilah Bruskas states, “Such feelings and experiences must be addressed and treated early to prevent or decrease poor developmental and mental health outcomes that ultimately affect a child’s educational experience and the quality of adulthood”.⁵ Data collection by The Ontario Incidence Study of Reported Child Abuse and Neglect, supports this quote highlighting major child functioning concerns. The study states that 16% of youth in care struggle with depression, anxiety or are withdrawn. 15% have learning difficulties, 10% are diagnosed with ADHD, 10% show aggression and conduct issues, 9% have intellectual disabilities and 8% develop attachment issues.⁶ Unfortunately, it is also common for children in the foster care system to be moved from placement to placement, which does not allow for any stability in social relationships or education. One study on the subject found, “Multiple placements while in care and less education correlated with more difficult post-discharge functioning”.⁷

figure 42. The addressed populations of trauma-informed design

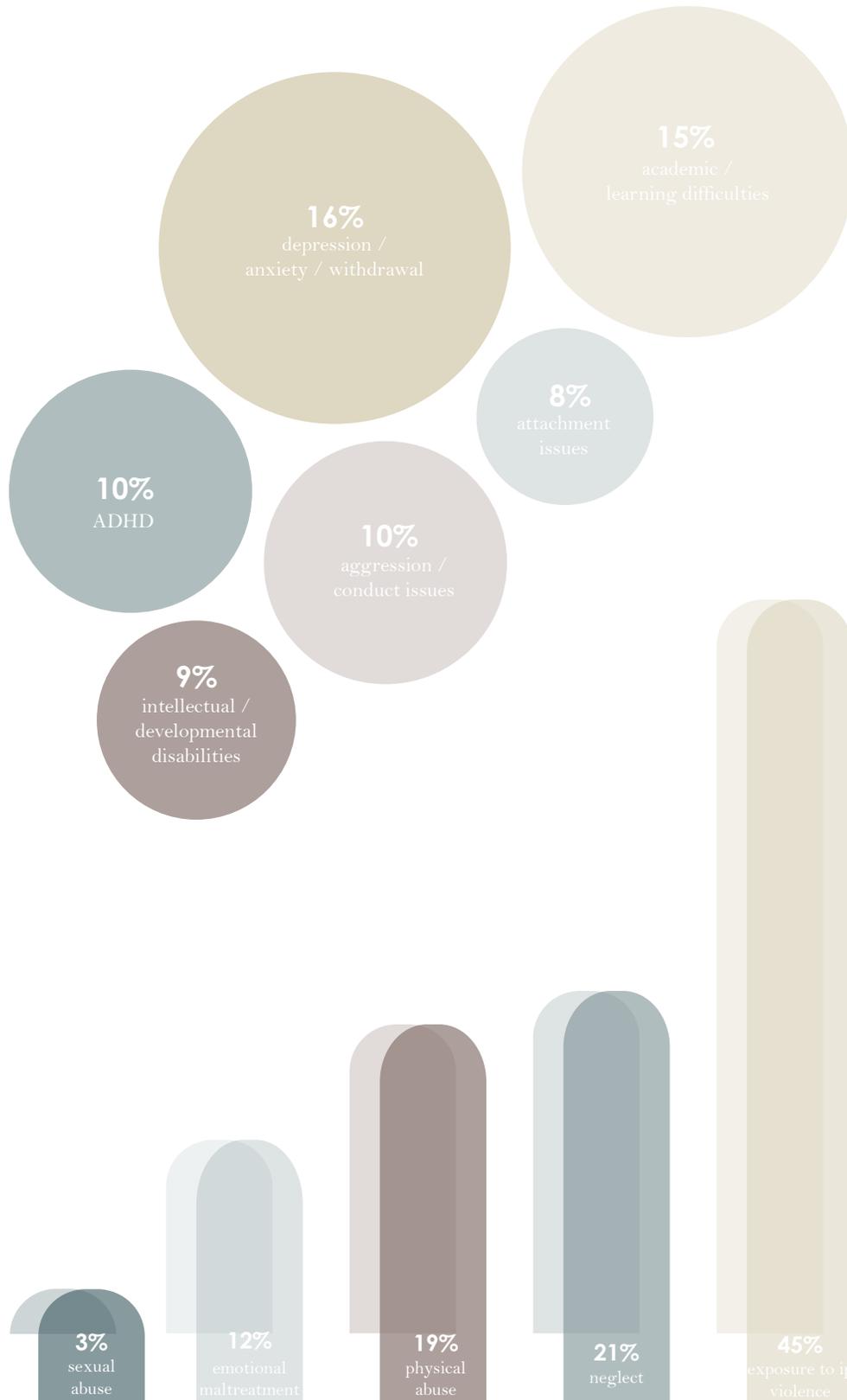


figure 43. Major child functioning concerns in child maltreatment investigations

figure 44. Categories of substantiated child maltreatment in Ontario in 2018



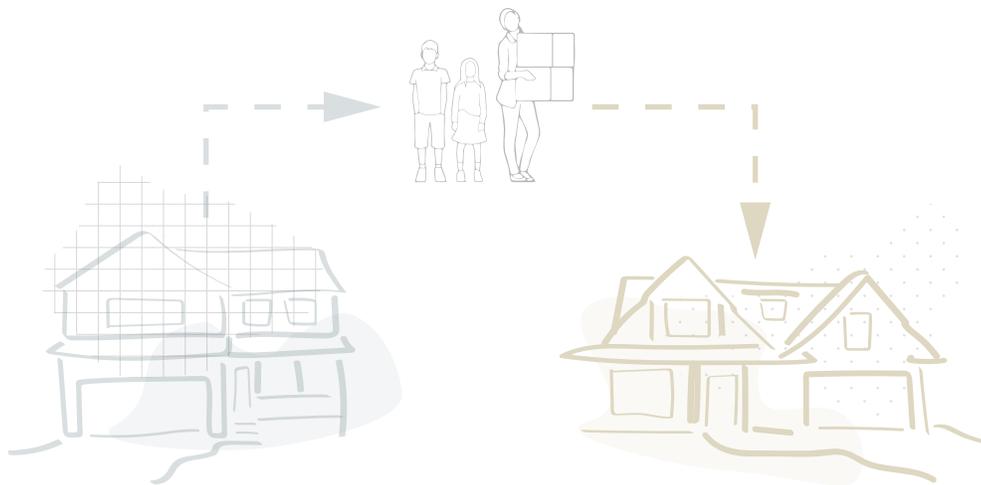
Resultant Adult Life Outcomes

The resultant adult life outcomes that stem from foster care, make up the driving force and purpose behind this thesis. Figure 45 shows the journey experienced by too many innocent children in society. The journey may begin with abuse at home, where trauma is incurred. The journey may continue in foster care and group homes where caregivers might treat foster youth different than their biological children, or physical fights might break out in the group homes. More trauma is incurred. The journey often ends in crisis, a failed transition to adulthood because the adults present in this child's life allowed trauma to accumulate and remain untreated. As the child accepts their adult life outcome, they may begin a life of substance dependence and homelessness, incurring more trauma, and the vicious cycle continues.

A study conducted by Thorn Reilly on The Status and Outcomes of Youth Who Age Out of Foster Care, revealed troubling results. Participants with more foster care placements had more trouble with the law and had spent more time incarcerated.⁸ They had more violence in their relationships, were more likely to have experienced homelessness after aging out of care and, were more likely to become pregnant early.⁹

The most appalling statistics and findings on this issue however, come from pediatrician Dr. Nadine Burke Harris. She found a direct correlation between adverse childhood experiences and adult health outcomes. Adverse childhood experiences, or ACE refers to any experience a child may have had that was potentially traumatizing.¹⁰ An ACE score is essentially the measure of how much trauma an individual has endured in their childhood, and Harris has found that adverse childhood experiences, "In high doses, affects brain development, the immune system, hormonal systems, and even the way DNA is read and transcribed".¹¹ She explains the affect these childhood traumas have on the brain, noting differences in brain function. The nucleus accumbens, the prefrontal cortex and the amygdala are all affected, compromising an individual's ability to manage impulse control, and fear, while also confusing the pleasure and reward centre which is implicated in substance dependence.¹² To reiterate, as mentioned earlier in this thesis, "folks who are exposed to adverse childhood experiences in high doses have triple the lifetime risk of heart disease and lung cancer, and a 20-year difference in life expectancy".¹³ Physical, emotional and sexual abuse are all considered adverse experiences, along with neglect, having a parent struggle with mental illness or substance dependence.¹⁴ Seeing as these adverse experiences are extremely common in foster children, it is clear this population, and their trauma needs to be addressed.¹⁵

figure 45. [above]
Journey through
the system



Architecture's Relevance

Now that the issues surrounding trauma in foster care have been identified, it is important to consider architecture's relevance in this issue. One may ask how this is an architectural problem. The answer is clear, in the event of a child welfare intervention, a child is being taken from one house, one apartment, or one car potentially, and they are being placed in another space, or house. This action is considered to be the solution. As much as the solution involves sending children to therapy, biological parents to rehabilitation, visitations, and allowing biological parents time to find employment or obtain new living arrangements, the most explicit intervention that takes place, is the moving of a child from one house to a different house (see figure 46). Considering this, should the house not do more than simply act as shelter in a different location from the biological parents or caregivers? Studies have made it very clear the impact that the built environment has on an individual's health, moods and behaviours, and the implications of trauma-informed design prove that architecture is capable of providing much more than shelter. With that said, a trauma-informed group home could be designed and enlisted as an ever-present inanimate therapist, actualizing the perceived notion that bringing a foster child to a different house could be of benefit to the child.

figure 46. [above]
The explicitly
architectural solution

Notes

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PART THREE

*Foster Care
Architectures*

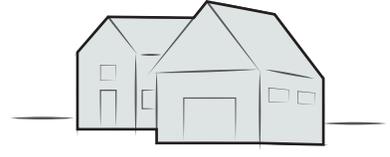
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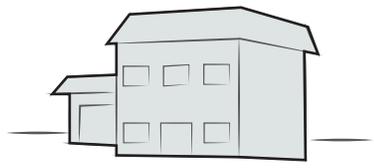
townhome



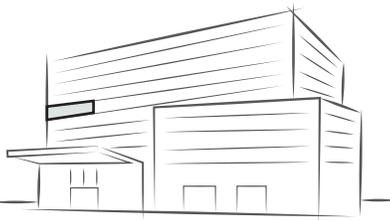
apartment



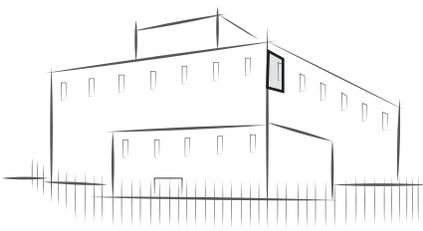
detatched home



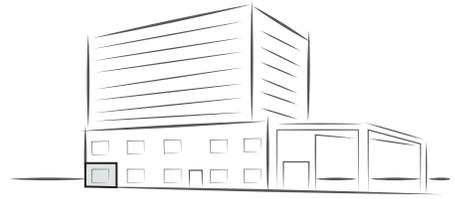
group home



institution



detention center



hotel



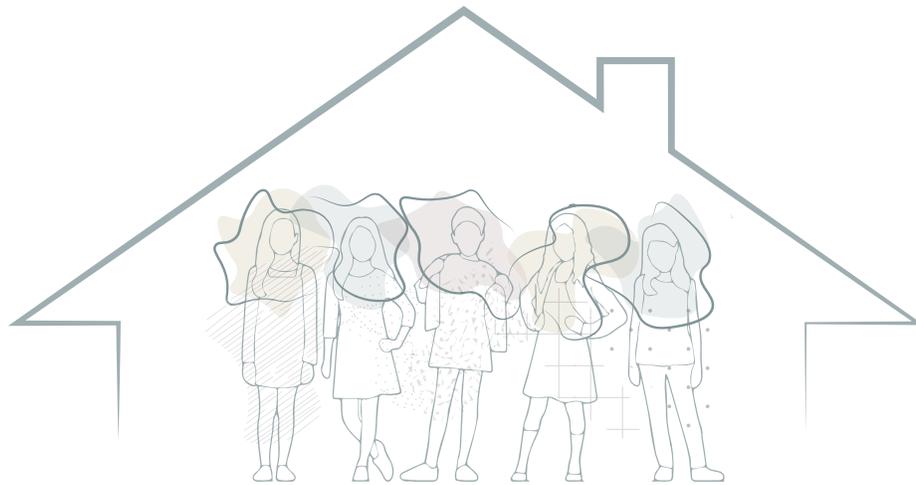
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Current Foster Care Architectures

Thus far this thesis has determined that trauma-informed design, “is an effective approach to designing spaces where trauma-experienced individuals may spend time”,¹ and “youth in the foster care system are a highly traumatized population”.² In discovering that children in foster care have not yet been addressed by trauma-informed design, an opportunity emerges to mitigate accumulative childhood trauma through design, and advance the research in implications of trauma-informed design.

An exploration of current foster care architectures is necessary in order to determine which building typology and care model would benefit the most from the implementation of trauma-informed design. When a child enters the foster care system, caseworkers first attempt to find a kinship placement possibility, or a traditional foster family placement, as those placements statistically yield the best results for the children.³ It certainly would not be feasible to propose the re-design or conversion of a traditional foster home to be trauma-informed however, and given that children in these placements seem to have the best outcomes, this may not be the most important intervention. Unfortunately, due to the lack of traditional licensed foster families, older children and teens are less likely to be accepted in these placements, and are sent to group homes or residential institutions.⁴ A group home in foster care is usually a typical detached single-family home where several foster children or teenagers live together, and staff members act as caregivers. This typology maintains the success that comes from living in a typical family style house, but fails in providing the traditional social family dynamic. Residential institutions include mental health facilities and youth correctional facilities. These can be considered the worst-case scenario placements as youth sent to these facilities are struggling with the most extreme traumas, and are missing both the benefit of a traditional family dynamic and traditional family architecture.⁵ While the issues surrounding youth institutional facilities run far deeper than a single year architectural thesis can reach, the issues surrounding the foster care group home model can certainly be addressed through architecture.

figure 47. [left]
Current Foster Care
Architecture Typologies



The Problematic Group Home

There is a negative stigmatization surrounding foster care group homes. This stigma stems from aggressive behaviours amongst teenagers and staff members, theft, substance use, and runaways.⁶ Overall, the stigma represents what could be perceived as troubled teen behaviour, in reality this is not troubled teen behaviour, but rather traumatized teen behaviour. Through analyzing personal testimonies on YouTube, in which individuals who have lived in foster care group homes share their experiences (see figure 49-50), it becomes clear that the issues present could be mitigated if action is taken. To summarize the findings from these testimonies, it seems as though the main issue contributing to the negative stigmatization of group homes, is the fact that there are several traumatized children, who have all experienced different hardships and are suffering from their own unique triggers and mental illnesses, all suffering in the same house.⁷ This leaves little room for healing as people in distress struggle to heal when surrounded by more people in distress. Individuals' will often make comments in their testimonies saying for example, "Its really hard when you wake up in the morning happy and ready for a good day, and then you have to step over your housemate who is screaming while being restrained, on your way to the breakfast table".⁸ **Certainly this solidifies the need for the group home itself to act as a secondary therapist for extended and constant subconscious healing, in addition to the already present social support provided by staff members and psychologists.**

figure 48.

[top] Diagram of the Group Home Effect

figure 49.

[bottom left] YouTube Testimony on Group Homes

figure 50.

[bottom right] YouTube Testimony on Group Homes



Foster Care Group Home Regulations

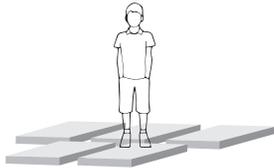
Upon determining that trauma-informed design should be introduced to the group home building typology, it is important to understand the architectural regulations for such facilities. This thesis will require the full design of a group home given the intent to address and provide trauma-informed interventions in every room of a home. Therefore the technical laws and policy in place for the construction or the licensing of the home must be analysed and taken into consideration. In doing this it became apparent that Ontario's child welfare system expects a great deal from the people involved in each individual case. They require foster caregivers and staff to complete extensive training.⁹ They expect biological parents to regroup their lives and heal their mental illnesses. They enlist therapists, doctors and teachers to guide and treat the children. Yet what Ontario's child welfare system requires from the house, the group home itself, is simply surface level. Figure 50 identifies the spatial regulations for a foster care group home as directed by the Government of Ontario. This includes minimum square footage requirements, the disapproval of basement bedrooms, and window requirements for example.¹⁰ Figure 51 shows the furniture or appliance related regulations for a group home. These regulations cover items such as the minimum room temperature, the number of toilets and showers required, and the securement of medication.¹¹ Essentially, in the eyes of the government, the house itself is expected to keep the children safe. They rely on the adults to keep the children happy, comfortable, and mentally healthy, but the architecture's only responsibility is safety. This is a missed opportunity as humans are only capable of so much, especially in this field of social work with case workers constantly overloaded and foster children over scheduled with therapies and appointments. The house however, cannot be overworked and is always available and present. It is there when one awakens, there when one returns from school, there as one eats dinner, and there as one goes to bed. With this said, if the house has the ability to provide therapeutic healing through the use of trauma-informed design, it seems obvious to explore this avenue.

figure 51.
 [next page - left]
 Foster Care Group
 Home Regulations
 - Spatial

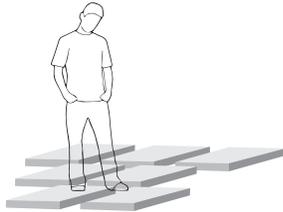
figure 52.
 [next page - right]
 Foster Care Group
 Home Regulations
 - Furniture / Appliance



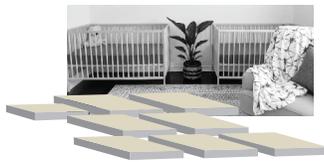
“The residence shall have a minimum area of **3.25 square meters** of floor space for each child younger than 18 months”



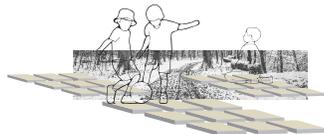
“Each bedroom shall have a minimum floor space of **5 square meters** for each resident who is [between 18 months and 16]”



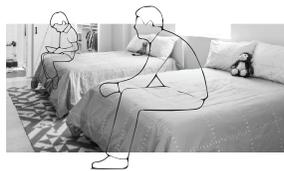
“Each bedroom should have a minimum floor space of **7 square meters** for each resident who is older than 16”



“Any bedroom occupied by a child under 18 months shall have a minimum floor space of at least **7.5 square meters**”



“shall have an outdoor play space that has a minimum area of at least **9 square meters** [per resident]”



“A resident who is 7 or older shall not share a bedroom with another resident of the opposite sex”

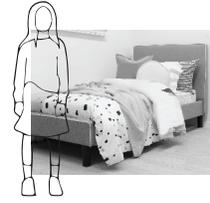


“No part of a basement shall be used for sleeping accommodation”



“No room without a window shall be used as a bedroom”

“Each resident shall be provided with their own bed and clean mattress and bedding”



“If there is more than one toilet in any room, each toilet shall be located in a separate stall”



“There shall be a supply of drinking water in the children’s residence that is sanitary and adequate [and] available”



“The maximum temperature of water in a children’s residence shall not exceed 49 degrees Celsius”



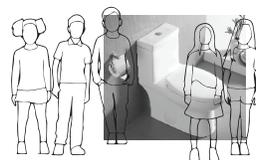
“The children’s residence shall be maintained at a temperature of at least 17 degrees Celsius”



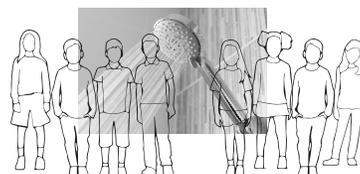
“Any harmful substance or object that is poisonous or hazardous shall be kept in a locked container”



“The children’s residence shall have a minimum of one flush toilet for every five residents or fewer”



“The children’s residence shall have a minimum of one bath or shower with hot and cold water for every eight residents”



Notes

1. “Empathy in Architecture: Using Trauma-Informed Design to Promote Healing.” E4H, September 8, 2020, <https://e4harchitecture.com/empathy-in-architecture-using-trauma-informed-design-to-promote-healing/#:~:text=The%20goal%20of%20trauma%2Dinformed,%2C%20art%2C%20and%20biophilic%20design.>
2. Amy M. Salazar, Thomas E. Keller, L. Kris Gowen, and Mark E. Courtney, “Trauma exposure and PTSD among older adolescents in foster care,” *Social psychiatry and psychiatric epidemiology* 48, no. 4 (2013): 545.
3. “Child Protection – Family and Children’s Services Niagara.” Family and Children’s Services Niagara. Accessed December 3, 2021. <https://www.facsniagara.on.ca/child-protection/>.
4. The Annie E. Casey Foundation, *Keeping Kids in Families: Trends in U.S. Foster Care Placement*, Baltimore: The Annie E. Casey Foundation, 2011, Accessed November 20, 2021, <https://assets.aecf.org/m/resourcedoc/aecf-keepingkidsinfamilies-2019.pdf>.
5. Government of Ontario, Ministry of Children and Youth Services, Communications and Marketing Branch, “Ministry of Children and Youth Services,” Residential Services, Government of Ontario, Ministry of Children and Youth Services, Communications and Marketing Branch. Accessed December 1, 2021. <http://www.children.gov.on.ca/htdocs/English/professionals/childwelfare/residential/index.aspx>.
6. Mélanie Doucet, Élodie Marion, and Nico Trocmé, “Group Home and Residential Treatment Placements in Child Welfare: Analyzing the 2008 Canadian Incidence Study of Reported Child Abuse and Neglect,” *Canadian Child Welfare Research Portal. Available online: ccwrp.ca (accessed on 31 March 2018)* (2018):4.
7. Christina Randall, “Growing Up in Group Homes,” YouTube Video, 20:15, December 18, 2019, https://www.youtube.com/watch?v=I8h0_jFDyOY.
8. Christina Randall, “Growing Up in Group Homes,” YouTube Video, 20:15, December 18, 2019, https://www.youtube.com/watch?v=I8h0_jFDyOY.
9. “Fostering.” Ontario Association of Children’s Aid Societies. Accessed October 17, 2021. <http://www.oacas.org/childrens-aid-child-protection/fostering/>.
10. *Child, Youth and Family Services Act*, O Reg. 156/18, s.97.
11. *Child, Youth and Family Services Act*, O Reg. 156/18, s.97.



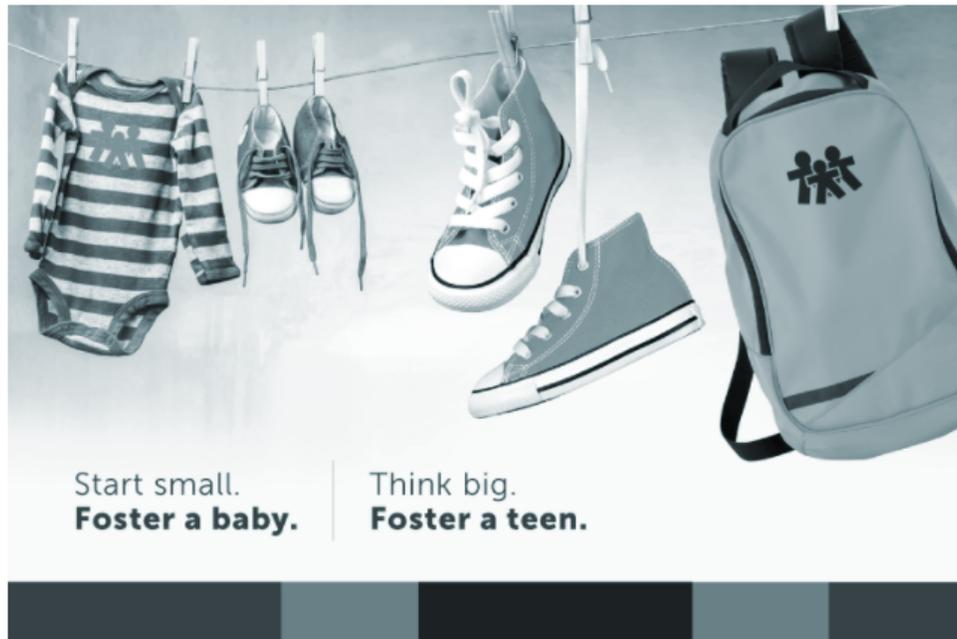
PART FOUR
The Proposal

Mapping By Need

In selecting a site for a new trauma-informed group home, it is first necessary to identify where the greatest need is located. Figure 54 shows the map of Ontario organized by children's aid societies. The country of Canada and province of Ontario was chosen based off of data availability, author familiarity, and site visit feasibility. The map identifies the specific municipality each children's aid society serves, while also indicating whether a society is municipally, religiously or culturally run. The opacity of each municipality represents the level of urgency surrounding the need for more foster parents indicated by each society. When case workers are unable to find a placement for children entering care, the children sleep in children's aid offices, police stations, are sent to institutions, or some have even been sent to hotels.¹ Given that the group home typology creates the most openings for youth in foster care, it is important to site this new project in the region most desperate for placement availability. In choosing between the seven most desperate municipalities, the Niagara Region presented the most urgent need, citing 454 children in need of a placement and only 150 openings available (see figure 53).² Therefore, the new group home shall be located within the Niagara Region as this location has the potential to make a difference not only in the crisis of untreated trauma in foster youth, but also in the crisis that is not having enough openings.

figure 53.
[right] Post by Family
and Children's Services
Niagara

figure 54.
[next page] Mapping of
Children's Aid Societies

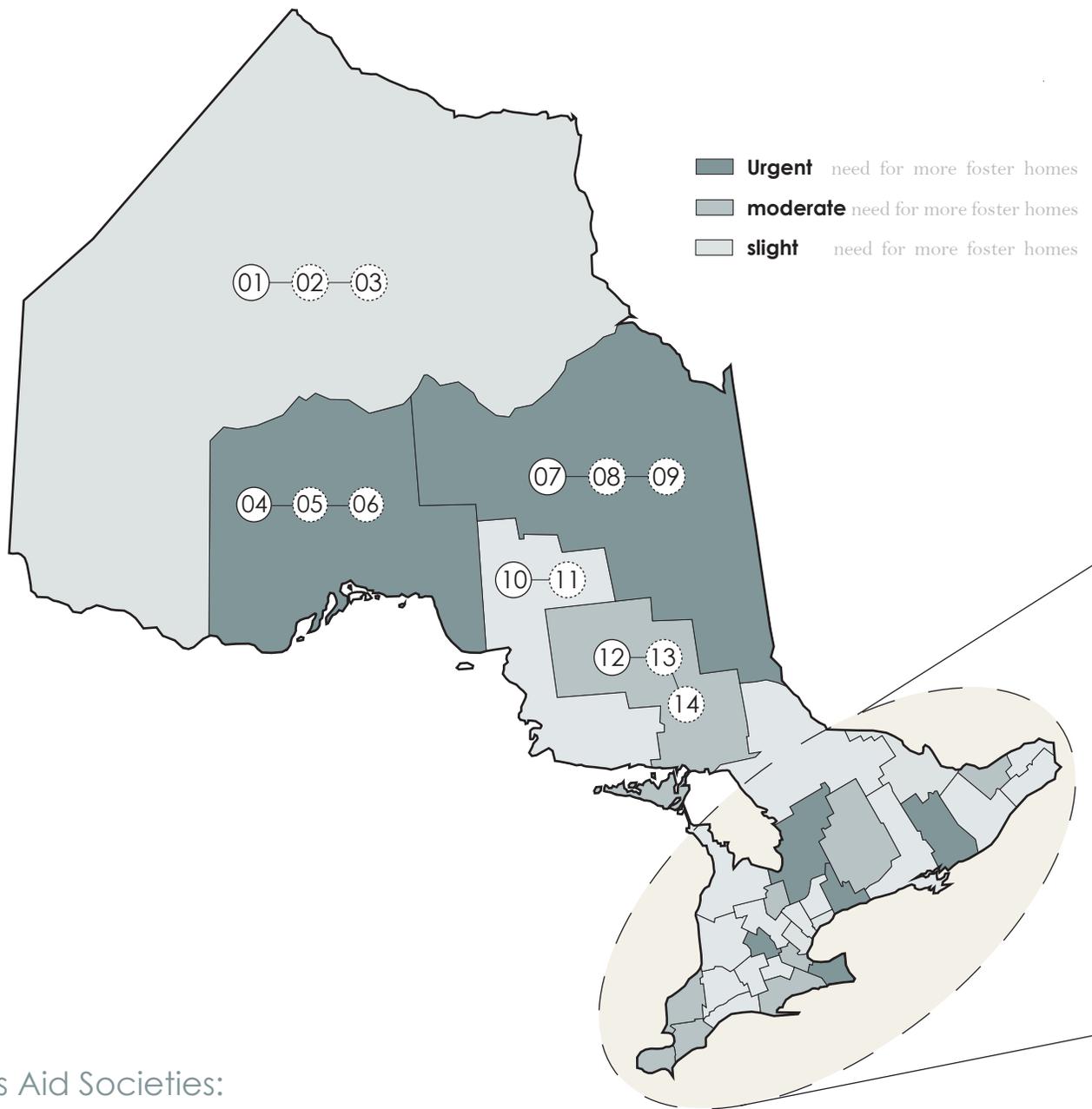


Foster Care

2018-2019 Monthly Average Number of Children in Foster Care: 462

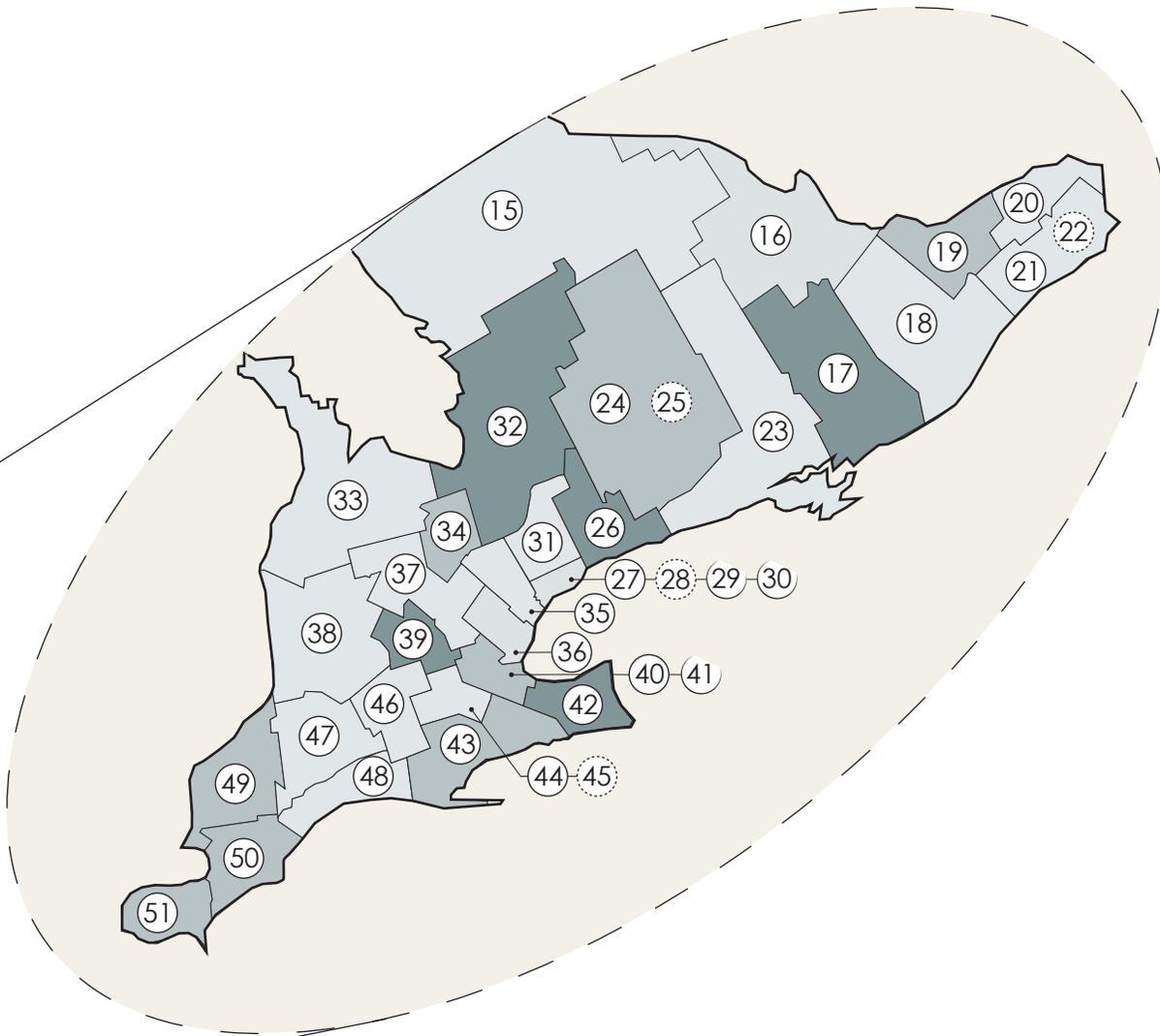
As of May 6, 2020 there were 454 Children in Care and 150 Approved Foster Homes in the Niagara Region available to care for them.

There is an **URGENT** need for more foster homes in Niagara!



Children's Aid Societies: Ontario N↑

- | | | |
|---|---|---|
| ① Kenora-Rainy River Districts Child and Family Services | ⑨ Payukotayno James and Hudson Bay Family Services | ⑰ Family and Children's Services of Frontenac, Lennox and Addington |
| ② Anishinaabe Abinoojii Family Services | ⑩ Children's Aid Society of Algoma | ⑱ Family and Children's Services of Lanark, Leeds and Grenville |
| ③ Weechi-it-te-win | ⑪ Nogdawindamin Family and Community Services | ⑲ The Children's Aid Society of Ottawa |
| ④ The Children's Aid Society of the District of Thunder Bay | ⑫ The Children's Aid Society of the Districts of Sudbury and Manitoulin | ⑳ Valoris for Children and Adults of Prescott-Russell |
| ⑤ Dilico Anishinabek Family Care | ⑬ Niijaanainaanik Child and Family Services | ㉑ Children's Aid Society of the United Counties of Stormont, Dundas and Glengarry |
| ⑥ Tikinagan Child and Family Services | ⑭ Kina Gbezhgomi Child and Family Services | ㉒ Akwesasne Child and Family Services |
| ⑦ North Eastern Ontario Family and Children's Services | ⑮ Children's Aid Society of the District of Nipissing and Parry Sound | ㉓ Highland Shores Children's Aid |
| ⑧ Kunuwanimano Child and Family Services | ⑯ Family and Children's Services of Renfrew County | ㉔ Kawartha-Haliburton Children's Aid Society |



25 Dnaagdawenmag Binnoojiiyag Child & Family Services

26 Durham Children's Aid Society

27 Children's Aid Society of Toronto

28 Native Child and Family Services of Toronto

29 Catholic Children's Aid Society of Toronto

30 Jewish Family and Child Service

31 York Region Children's Aid Society

32 Simcoe Muskoka Family Connections

33 Bruce Grey Child and Family Services

34 Dufferin Child and Family Services

35 Peel Children's Aid Society

36 Halton Children's Aid Society

37 Family and Children's Services of Guelph and Wellington County

38 Huron-Perth Children's Aid Society

39 Family and Children's Services of the Waterloo Region

40 Children's Aid Society of Hamilton

41 Catholic Children's Aid Society of Hamilton

42 Family and Children's Services Niagara

43 The Children's Aid Society of Haldimand and Norfolk

44 Brant Family and Children's Services

45 Ogwadeni:deo

46 Children's Aid Society of Oxford County

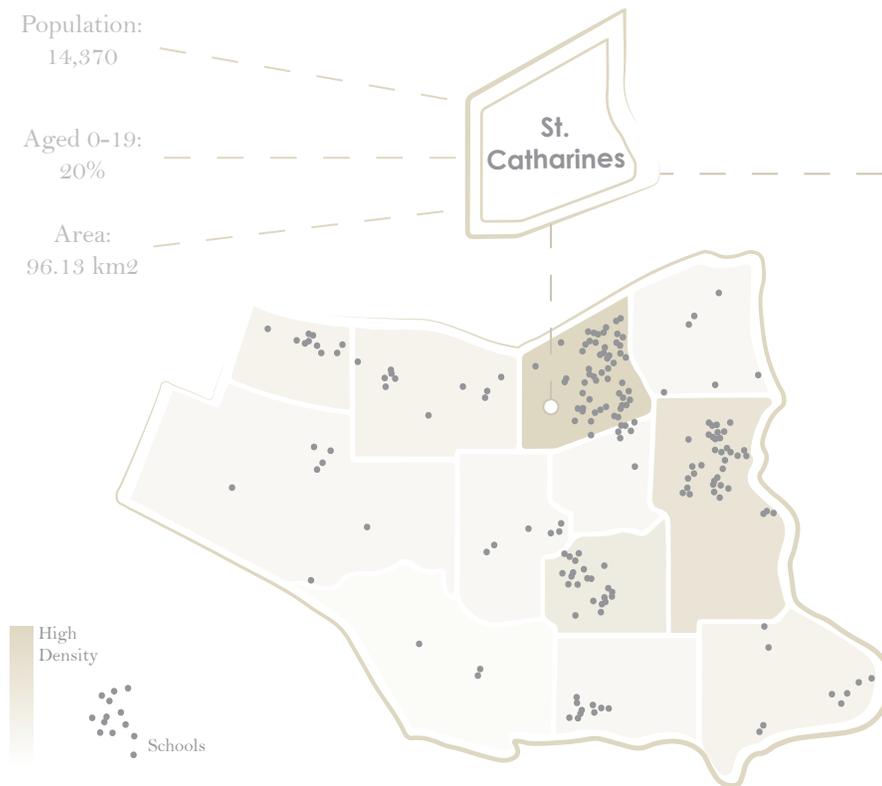
47 Children's Aid Society of London and Middlesex

48 Family and Children's Services of St. Thomas and Elgin County

49 Sarnia-Lambton Children's Aid Society

50 Chatham-Kent Children's Services

51 Windsor-Essex Children's Aid Society



Honing in beyond regional boundaries, it is necessary to select a city within the Niagara region, along with a neighbourhood, to locate this new group home. Figure 55 shows the Niagara region, organized by city, population density, and school density. The darkest opacities represent the densest cities and the dots represent schools. St. Catharines is Niagara's most dense city, by measure of population and schools. Therefore, if a new foster care architecture was to be implemented here, the likelihood of foster children needing to move cities, schools, or sporting teams after being displaced, drops significantly. In conversation with doctor of social work Jennifer Wilson, she reiterates the importance of school retention in foster care, calling it absolutely essential. She also highlights the importance of employment opportunities for older youth in care, indicating that this group home should be located close to businesses that typically hire youth.

With the importance of school retention in mind, the city of St. Catharines is settled on. Then in picking a neighbourhood within St. Catharines to site this new group home, it is necessary to map the most used resources by foster children and their caregivers within the city. Figure 56 shows the area or neighbourhoods within St. Catharines where the majority of necessary resources are located. Family and Children's Services Niagara, is where meetings with case workers and visitations with family can happen. The family courthouse is where hearings regarding foster care cases take place. Therapy and doctors' offices are highlighted as children who enter care are required to update all medical records.³ The abundance of schools and parks in the Grapeview area of St. Catharines along with amenities mentioned above, give solid reason to select this neighbourhood for the proposal of a new group home.

figure 55. [above]
Mapping of Schools and
Population Density in
the Niagara Region

figure 56. [right]
Mapping of Foster
Youth Amenities
in St. Catharines



School Children's Aid Park Courthouse Therapy Hospital Dentist Sports Eye Clinic

PHASE 1



Understand Trauma-Informed Care

Understand Trauma-Informed Design



Site analysis - environment

Site analysis - culture

PHASE 2



User Interviews (social media)

Identify “key findings and design response”

PHASE 3



Design

Collaborate

Refine

PHASE 4



Post occupancy research

Trauma-Informed Design Process

With a neighbourhood and building typology determined, the methodology behind the design process should be discussed. The Denver research team, who was introduced earlier, developed a document that outlines the trauma-informed design process for architects to follow. This process has been interpreted and adapted slightly to suit this thesis better (see figure 57). Phase one requires the full understanding of trauma-informed design and trauma informed care, which were studied rigorously at the beginning of this thesis.⁴ It also requires site analysis to take place, studying both the environmental components and cultural context, which will be presented in the following section.⁵ Phase two is concerned with the collaboration between designers and the intended user group. The designers are meant to converse and gather information about the specific user group's lived experience.⁶ The Denver research team makes it very clear, the importance of listening to the people who are being designed for, as opposed to assuming or projecting what one thinks the user group needs or wants to feel safe, happy and comfortable.⁷ With that said, this is a single year thesis project, and it is not possible to ethically interview former or current foster youth. Especially considering the conversation would be surrounding trauma. In the attempt to follow the trauma-informed design process as closely as possible, but without access to interviews of the intended user group, this thesis was forced to develop an alternate solution. This solution is sensitive to the sometimes potentially exploitative nature of collaborative design, as it will rely on social media and reference all content in which former foster youth have provided voluntary testimonies on their experience in foster care. These testimonies exist, are public, and accessible through YouTube. In them, individuals speak of their experiences with foster care, what led to them entering the system, what they experienced within the system, and what triggers them, whether it be environmental or social. The testimonies reveal what individuals struggled with the most, and what they continue to struggle with. Some testimonies referenced come from foster parents themselves, where they will speak of the common traumas and triggers that they have seen a pattern in through their many years of fostering many different children.

As a way of humbling itself, this thesis is sure not to project or assume what the teenagers in foster care, who are this project's intended user group, want or need to heal. Instead, this thesis will only document and work off of the exact traumas or triggers that are explicitly presented through a testimony (see figures 58-73). This will ground any key findings and design interventions in lived-experience.

Although testimonies are publicly available and cited in notes, this thesis does not use the real names or images of testifiers in the body text.

figure 57. [left]
The Trauma-Informed
Design Process



figure 58



figure 59



figure 60



figure 61



figure 62



figure 63



figure 64



figure 65



figure 66



figure 67



figure 68



figure 69



figure 70



figure 71



figure 72



figure 73

The methodology behind the collection and analysing of video testimonies should also be discussed. Video testimonies were found on YouTube, by searching titles similar to “My Foster Care Story”, or “Growing up in Foster Care”. In order to determine which video testimonies should be considered eligible to inform the design of the group home, a list of criteria was developed. First, the testifier must have lived experience in a North American foster care system. Whether that be as a foster child or as a foster parent. Secondly, the traumas or triggers being presented must be common among foster youth, and applicable to the teen age group. Finally, the triggers being presented must have architectural implications. For example, a testimony revealing that a foster youth is triggered by their biological mother’s voice, does not have the same architectural implications as someone who reveals they are triggered by cramped spaces. From the eligible testimonies, it was found that the majority were given by female presenting individuals. For that reason, although male presenting individuals’ testimonies will still be referenced in this project, this group home will be designed to serve teenage females.

In the videos, testifiers will typically speak about their life stories and how certain experiences impacted them. It is then the designer’s responsibility to translate their stories into physical space without projecting. For example, it would be wrong to assume that a former foster youth is triggered by the outdoors simply because they mentioned a traumatic experience that happened outside. Opposingly, after listening to former foster youth speak about their struggle in academics as a result of electricity shut offs, or the parentified child, it is fair to assume they may benefit from a dedicated study space.

From the eligible testimonies, the designer can extract key findings and develop design interventions. The thought process can be exemplified by the sequence chart in figure 74. The chart begins with a quote from lived experience. In this case, speaking on the initial move to a new home, a former foster youth says, “If I need to run away, I don’t know where to go”.²⁴ A seasoned foster mother says, some of her children are triggered when they feel like they are not in control,²⁵ and a former foster child who is now incarcerated says, “Everything about the experience is alien to you, and all you want is to be able to contact the people you have a bond with”.²⁶ From these quotes, and the greater context provided from the entirety of the testimonies, a key finding can be extracted. In this case, it is found that youth in foster care quite often feel as though they have no control over the decisions being made in their lives and they fear losing contact with trusted adults. At this point, the designer can look to trauma-informed design precedents to see what adaptations and interventions they have enlisted in their projects, especially if a trigger is shared by both the homeless community and the foster care community. In addition to precedence, the 3 key concepts of trauma informed design, being choice, community, and comfort are constantly being considered as they are the 3 C’s of designing for health and healing.²⁷ It is also necessary to be designing responses and thinking critically through the lens of feminist and care ethics. This combination of information and specific schools of thought is what informs the design response. In this case, the design response is to locate the group home within walking distance from Family and Child Services Niagara. This would allow the teenagers living in this group home greater perceived security and control as they know at any point, whether in crisis or not, they can walk 11 minutes and speak to their caseworker directly, and independently, expressing their concerns, or simply because that case worker is a trusted adult to the individual. The list at the bottom of the sequence chart helps to organize the order of operation so that one can determine what design responses to address first in the design process. This thesis project is supported by a number of sequence charts (see figure 75) which will be distilled into the writing of part 5.

figure 74. [right]
Sequence Chart for Site
Location

figure 75.
[next page] Collection
of All Sequence Charts

LIVED EXPERIENCE

“If I need to run away, I don’t know where to go” - former foster youth

“Some of the kids have triggers [where] they don’t like to be **controlled**, so if there is a situation where they feel like they’re not in control, it does trigger certain feelings” - foster parent

“Everything about the experience is alien to you and **all you want is to be able to contact the people that you have a bond with**”
- former foster youth

KEY FINDINGS

Youth in foster care feel as though they do not have control over the decisions made for them, and fear losing contact with trusted adults.

informs



DESIGN RESPONSE

Locating the group home within walking distance from FACS, gives power back to the youth in care, as they can independently access their case workers and express their own needs and concerns.

informs

accomplished through

SITE

PROGRAM
ADJACENCIES
FORM
MATERIALS
FURNISHINGS





LIVED EXPERIENCE

"One of [my triggers] is the smell of cigarettes, like being stuck in a room with the smell of cigarettes. I grew up around smoking all of my life so it's just a trigger for me" - former foster youth

"My parents used to smoke, and every time I see someone smoke it triggers me and brings back memories of what happened back then" - former foster youth

"In fact, [our daughter] has that same trigger [smell of cigarette smoke] - foster parent"

KEY FINDINGS

Several former foster youth seem to have the same trigger and that is the smell of cigarette smoke. Specific smells are common triggers for individuals living with trauma.

DESIGN RESPONSE

Materials and strategies that are known to purify air should be used throughout the house. This could be seen in the use of natural woods, natural ventilators, and biophilic design.



- SITE
- PROGRAM
- ADJACENCIES
- FORM
- MATERIALS
- FURNISHINGS



LIVED EXPERIENCE

"I'd have stuff taken away like my mattress, my sheets, to stand up sleeping on the floor" - former foster youth

"He felt like he was never good enough, like he did good things in life" - foster parent

"[We were] living in our van cause we were homeless but super horrible" - former foster youth

KEY FINDINGS

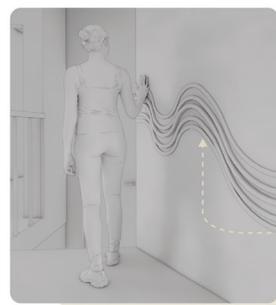
Many children in foster care do not believe they are deserving of good things, and experience feelings of worthlessness due to past neglect, abuse, and poverty.

DESIGN RESPONSE

Bedrooms should be aesthetically pleasing and furnished with quality bedding and furniture. Ample pillows and blankets should be provided to maximize comfort items.



- SITE
- PROGRAM
- ADJACENCIES
- FORM
- MATERIALS
- FURNISHINGS



LIVED EXPERIENCE

"The boys were playing in the hallway, they weren't even in the same room as me, and somebody yelled 'Get Down' really really loud, and that really scared me, and I started bowling. That trigger actually came from when my biological dad got arrested and the cops had barged into our house" - former foster youth

KEY FINDINGS

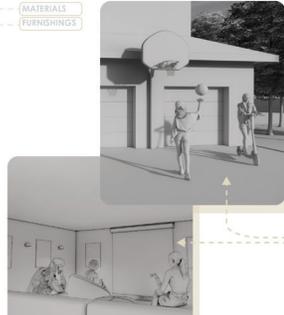
Many youths in foster care struggle with PTSD and will require safe spaces within the home to recover from triggers and ground themselves during flashbacks.

DESIGN RESPONSE

Textured architectural elements throughout the home can act as grounding tools as residents can engage with them in the attempt to pull themselves out of a flashback.



- SITE
- PROGRAM
- ADJACENCIES
- FORM
- MATERIALS
- FURNISHINGS



LIVED EXPERIENCE

"I dropped out of school to raise my siblings, and I ended up just begging for food and doing errands for neighbors in exchange for tips that I'd put towards toothpaste and toilet paper" - former foster youth

"Sometimes I would have to stay home from school because they were no where to be found and I couldn't just leave my younger brother's home alone" - former foster youth

KEY FINDINGS

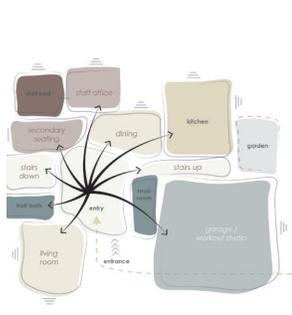
Because these former foster youth had to take on adult and parental responsibilities as children, they never got the chance to enjoy the freedoms of childhood.

DESIGN RESPONSE

Proposing a movie room or a gaming room that only align with today's youth culture, but also helps in deconstructing the parentified child. Any program that can re-introduce an aspect usually associated with childhood is welcome.



- SITE
- PROGRAM
- ADJACENCIES
- FORM
- MATERIALS
- FURNISHINGS



LIVED EXPERIENCE

"Every single move is a traumatic experience" - former foster youth

"I cried every single time [we were moved]. The last foster home I went into I was 17 and I cried, because of that feeling that you get... I don't know how far away from my mom I'm going. I don't know this lady, I don't know what goes on in their home. If I need to run away, I don't know where to go" - former foster youth

KEY FINDINGS

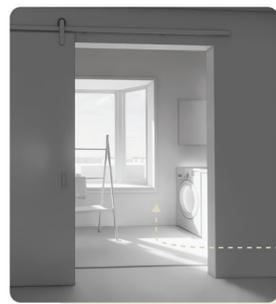
Former foster youth identify the trauma and fear that accompanies the move from one home to another, because of the unfamiliarity.

DESIGN INTERVENTION

Upon initial entry to the group home, the individual should be able to stand in one spot and visually see the location of each room. This can be accomplished through open concept design.



- SITE
- PROGRAM
- ADJACENCIES
- FORM
- MATERIALS
- FURNISHINGS



LIVED EXPERIENCE

"We would come to school in the most smelly clothes. Our grandpa did not believe we deserved clean clothes... And they smoked on the house so our clothes reeked" - former foster youth

"They would get made fun of at school, so they would actually wash their clothes in a bathtub without her knowing it, and then they would go out into the trees and hang them up" - foster parent

"I was always dirty, my brother was always dirty and we would go to school and have not the nicest clothing" - former foster youth

KEY FINDINGS

Former foster youth are identifying the trauma that is associated with clothes and the cleanliness of clothes, specifically expressing the embarrassment that accompanied wearing dirty clothes.

DESIGN RESPONSE

The laundry room should be celebrated, bright, welcoming, accessible, and situated in plain sight. It should be designed to assuage positivity in the attempt to re-shape residents' feelings around the concept of laundry.



- SITE
- PROGRAM
- ADJACENCIES
- FORM
- MATERIALS
- FURNISHINGS



LIVED EXPERIENCE

"Every single move is a traumatic experience" - former foster youth

"I cried every single time [we were moved]. The last foster home I went into I was 17 and I cried, because of that feeling that you get... I don't know how far away from my mom I'm going. I don't know this lady, I don't know what goes on in their home. If I need to run away, I don't know where to go" - former foster youth

KEY FINDINGS

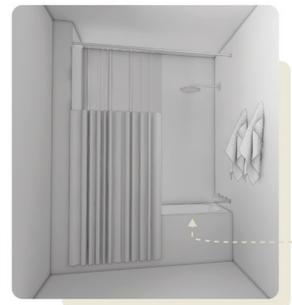
Former foster youth identify the trauma and fear that accompanies the move from one home to another, because of the unfamiliarity.

DESIGN INTERVENTION

Place halfway door at a landing hallway down the stairs. This way halfbacks can tell that a door leads to the basement because they can already see the beginning of the stairs.



- SITE
- PROGRAM
- ADJACENCIES
- FORM
- MATERIALS
- FURNISHINGS



LIVED EXPERIENCE

"When I was 9 years old I was raped by two neighbors, [her father] was so neglectful that it happened, all under his nose" - former foster youth

"Doing a simple thing like taking a shower in a stranger's home is a very disconcerting experience" - former foster youth

KEY FINDINGS

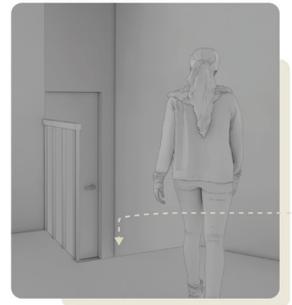
The act of undressing in a new environment can be extremely triggering for young women, especially for survivors of sexual assault.

DESIGN RESPONSE

Bathrooms should offer both a bath tub and a shower so that residents can use whichever they prefer. Shower curtains or doors should be opaque below the neck level to ensure added privacy and perceived security.

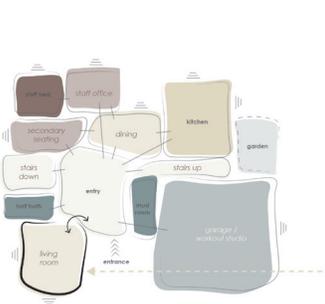


- SITE
- PROGRAM
- ADJACENCIES
- FORM
- MATERIALS
- FURNISHINGS



- SITE
- PROGRAM
- ADJACENCIES
- FORM
- MATERIALS
- FURNISHINGS

my pillows.
I deserve
and it was
Foster Care (Blue)
RAM CENCIES
RIALS
SHINGS



LIVED EXPERIENCE
"I can remember coming home from school and nobody would be home... Looking back I know that they were doing meth and cocaine" - former foster youth
"Sometimes I would have to play home from school because they were not where to be found and I couldn't just leave my younger brother's home alone" - former foster youth



KEY FINDINGS
Former foster youth desired living in and returning home to empty houses with no sign of their parents.

DESIGN RESPONSE
Design spaces that foster community and encourage social interaction. At least one of these spaces should be located at the entry of the home.



LIVED EXPERIENCE
"Jim and my mom would have physical fights they'd get drunk, I would hear them fighting and it would terrify me" - former foster youth
"There were many nights when he would get abusive towards my mom. Seeing him hit her was natural" - former foster youth
"My mom was upset that the cops were in her house so she was screaming, telling them that nothing's wrong, because of that the cops were arresting her, they arrested her and my dad. And I'm just crying and crying" - former foster youth



KEY FINDINGS
Testimonies prove that overhearing or witnessing someone else's distress can be very triggering, especially for those who have witnessed domestic violence in their childhood.

DESIGN RESPONSE
The staff office should be soundproof as there needs to be a space where discourse, arguments or altercations can take place safely and privately, for the privacy of the person in distress and the comfortability of the other residents.

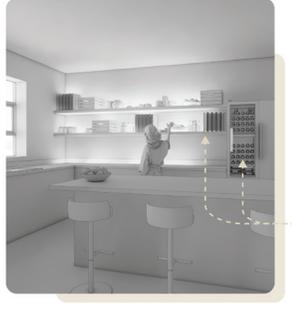


LIVED EXPERIENCE
"I entered the system rattled with PTSD, with anxiety, with depression, desensitized to touch... my trauma was always present, a jingle of keys, a slammed door, an unexpected pat on the back, an unfamiliar voice, they would tell me off" - former foster youth
"They arrested her and my dad... and I'm yelling you can't take my mom and one of the cops, grabbed me and he put my face onto the concrete floor and he told me you need to calm down or you're going to go with them... and that's the worst thing that's ever happened to me" - former foster youth



KEY FINDINGS
Many youths in foster care struggle with PTSD and will require safe spaces to recover from triggers that may cause one to fight, flee, freeze or fawn.

DESIGN RESPONSE
Alcoves, or escapes that offer different levels of sensory stimulation, should be designed to fit within the architecture of the home.



LIVED EXPERIENCE
"The hoarding food, is something that is really difficult and really common in foster care" - foster parent
"If a child has gone hungry, you may see things like food hoarding, food hiding, shoving the food into their mouth so fast that they're choking on it, and just really bad habits around food" - foster parent
"They would always come down, and this was with almost every placement and they'd say do you think there's enough dinner for me tonight?" - foster parent



KEY FINDINGS
The majority of youth in foster care struggle with food insecurity from their past. Even after being brought to a new home, they struggle to recognize the abundance of food available to them.

DESIGN RESPONSE
Kitchens should be designed to maximize the visual connection between residents and food. This could include using glass door cabinetry or shelving instead of cupboards and using transparent refrigerator doors.

LIVED EXPERIENCE
"The hoarding food, is something that is really difficult and really common in foster care" - foster parent
"If a child has gone hungry, you may see things like food hoarding, food hiding, shoving the food into their mouth so fast that they're choking on it, and just really bad habits around food" - foster parent
"They would always come down, and this was with almost every placement, and they'd say do you think there's enough dinner for me tonight?" - foster parent



KEY FINDINGS
The majority of youth in foster care struggle with food insecurity from their past. Even after being brought to a new home, they struggle to recognize the abundance of food available to them.

DESIGN RESPONSE
A built and vegetable garden should be included, if children are able to take part in and see, food growing and replanting itself. It fosters their peace of mind and also fosters community and ownership.



LIVED EXPERIENCE
"You can tell, she treats you and your brother different and you or dress different from the other kids, so I can tell that she's not your mom" - former foster youth
"We moved into this nasty house on these back roads that was not built properly, it didn't have insulation" - former foster youth



KEY FINDINGS
Testimonies draw attention to the embarrassment or shame foster children felt when their peers at school or within the community, could tell, based off of anything, that they were foster children.

DESIGN RESPONSE
The group home should fit in with the surrounding residential vernacular, and appear as a typical Ontario family home.

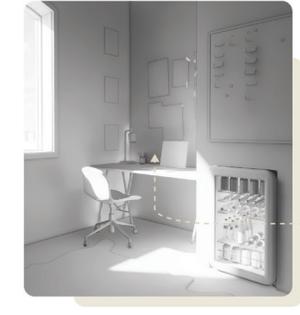


LIVED EXPERIENCE
"Our windows were all screwed shut and we lived in this tiny trailer and it was disgusting, we had a room full of rats, snakes and dogs. It was just gross we lived with roaches... And I was always dirty, my brother was always dirty... I remember going to school and I'd always have lice which was really embarrassing" - former foster youth
"I can't wear the same clothes twice in a row, because my grandparents used to make us wear (dirty clothes) days in a row" - former foster youth



KEY FINDINGS
This testimony reveals the trauma associated with living in deplorable conditions, and how the dirt and smells that would translate onto the children's clothes.

DESIGN RESPONSE
Materials that are easily cleaned and hygienic maintain their cleanliness should be used throughout the home, especially in areas that are more likely to become dirty, such as bathrooms, and kitchen.

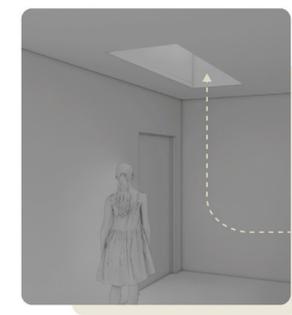


LIVED EXPERIENCE
"That was like a theme throughout my childhood, like I wanted to be of school, I didn't matter what was going on in my life school was a place of normalcy and consistency and security, so I made it a point to always get myself to school" - former foster youth
"I was bounced from so many foster homes I could not stay in school... I can hardly read or write. Yet I have a high school diploma" - former foster youth



KEY FINDINGS
Former foster youth speak to both their level of school for the consistency it provided, but also their academic struggle from the multiple moves.

DESIGN RESPONSE
A well-lit desk or homework area should be provided to promote academics. The teenagers who are invested in their academics must be given the tools and spaces to succeed.



LIVED EXPERIENCE
"I remember the windows were kind of boarded shut, we would sit in these dark rooms alone without any kind of interaction with other people" - former foster youth
"I lived most of my life without electricity" - former foster youth
"We had the electricity go out a few days ago and wow did that spark a trigger in one of our kids" - foster parent
"I was always scared about money, we had our electricity turned off, our water turned off" - former foster youth



KEY FINDINGS
These 3 individuals have expressed their anxieties surrounding darkness. They recall feelings of powerlessness accompanying the darkness.

DESIGN RESPONSE
Slighty can be enticed as they provide natural daylighting and are able to harness moonlight. Providing a natural light source at night time could combat trauma responses in individuals with electricity related triggers.

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PART FIVE
The Design

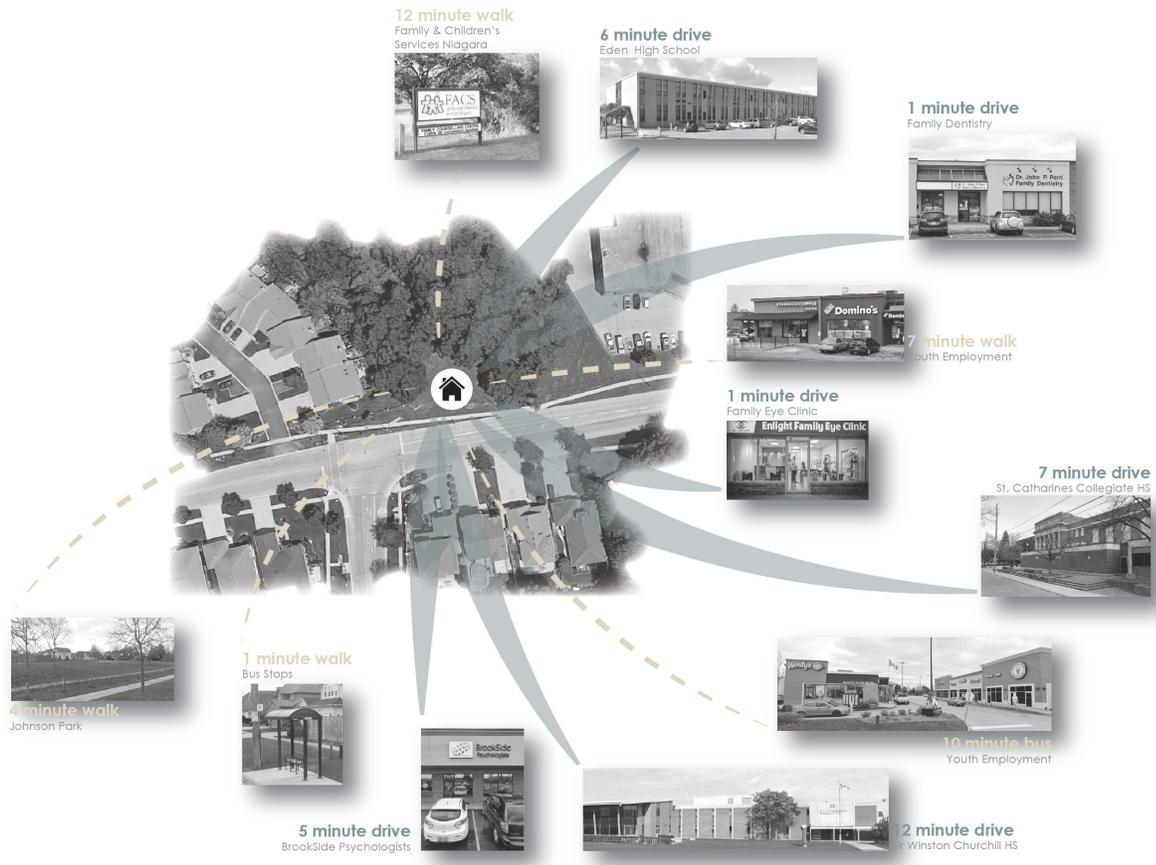
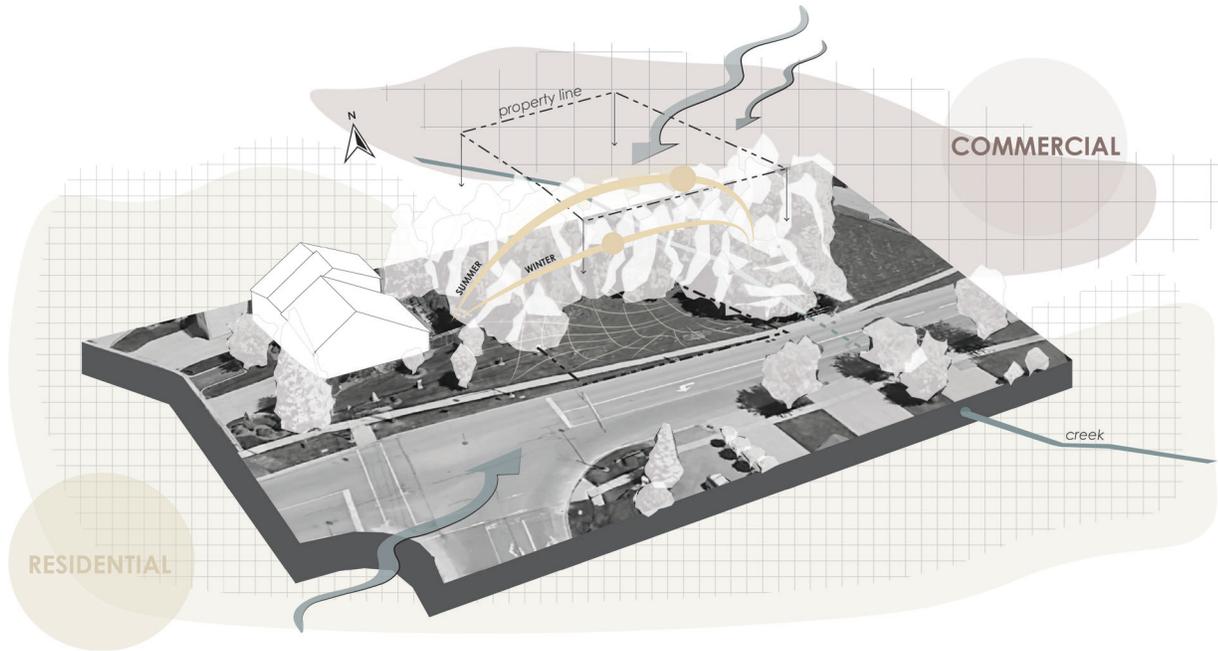
Site Analysis

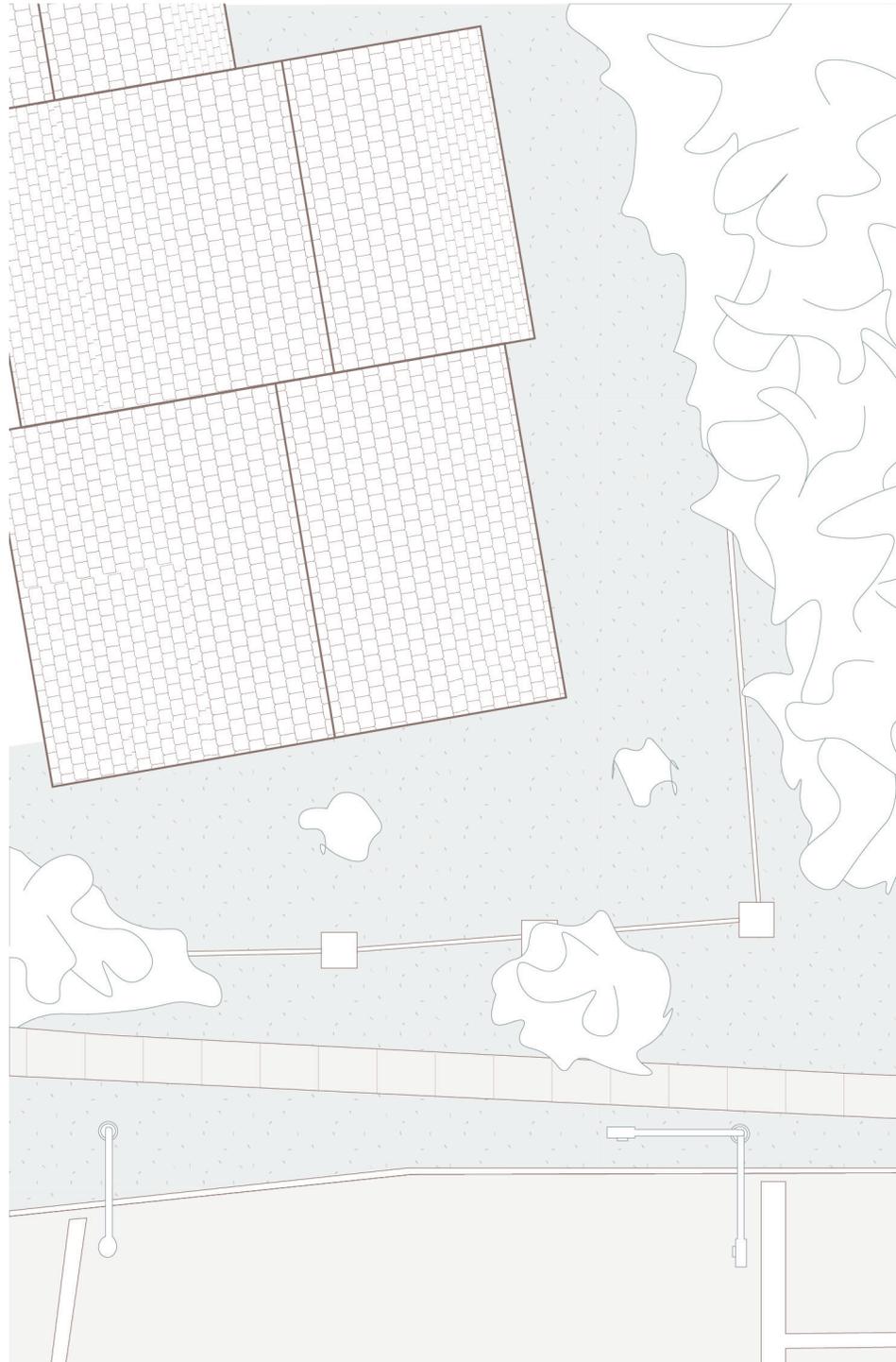
While earlier mapping exercises indicated that St. Catharines would benefit from added foster placement availabilities, the specific site was chosen because of the local amenities and the lived experience presented in the first sequence chart (see figure 74). The site is located on Erion Road and borders both residential and commercial neighbourhoods. There is an existing clearing, surrounded by heavy deciduous and coniferous vegetation on the north, east, and west sides of the site. Prevailing winds approach the site from the north east and south west. The topography of the site drops off in the north east corner which then continues toward a creek running below infrastructure, requiring an appropriate setback.

It is worth noting that the specific environmental components of the site are not critical to this thesis, however they will provide different opportunities to introduce trauma-informed design. For example, topography that allows for a walk-out basement is not mandatory in a trauma-informed group home, but it does bring added benefit and thus should be capitalized on. What is critical to site selection for a trauma-informed group home, are the surrounding amenities. The lot on Erion Road has superior proximity to schools, youth activities, youth employment opportunities, doctors, therapists, and bus stops (see figure 77). These amenities would allow foster youth living at this home more independence and opportunity to partake in the typical teenage lifestyle.

figure 76. [\[top\]](#)
Site Analysis

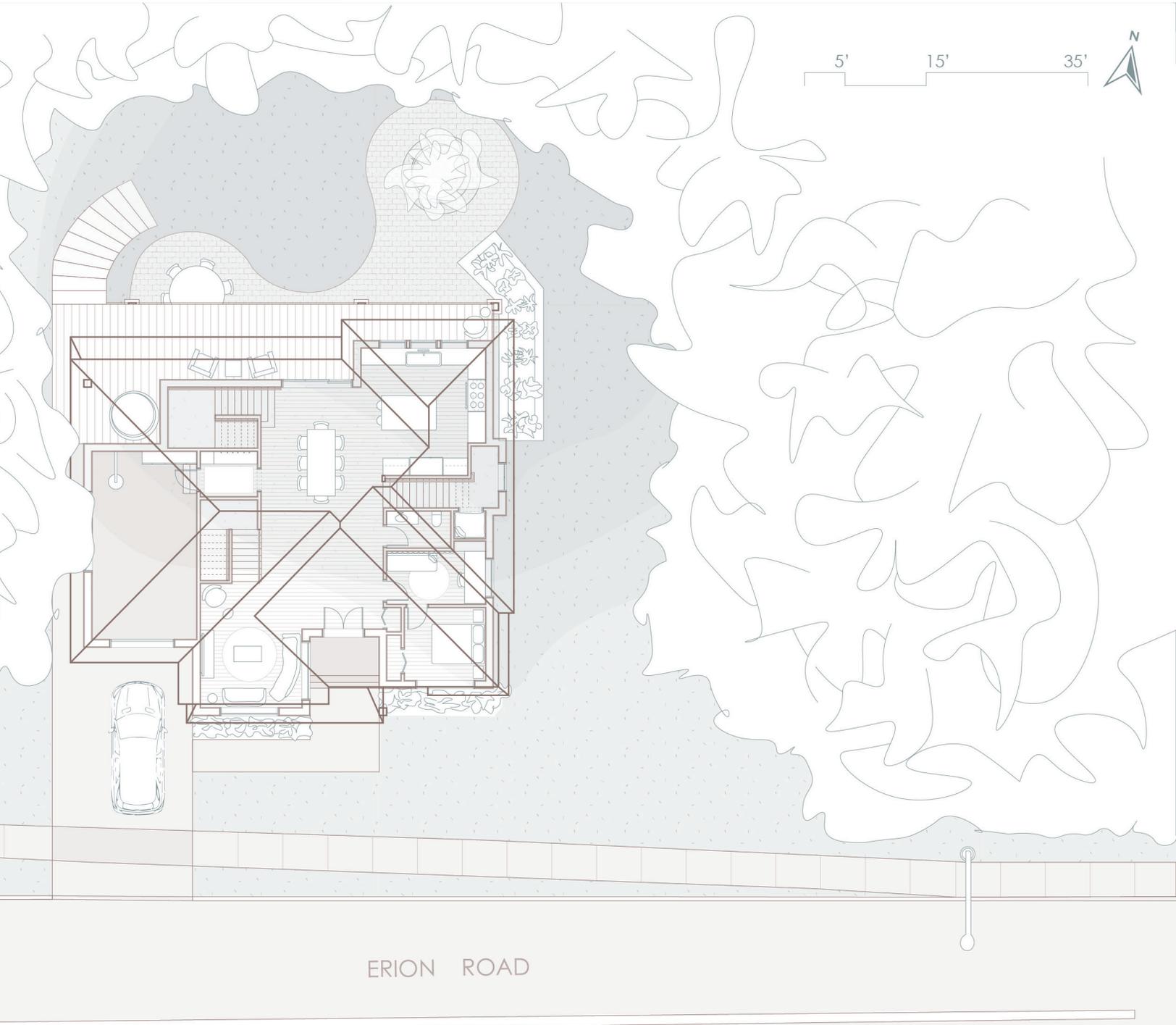
figure 77. [\[bottom\]](#)
Nearby Amenities

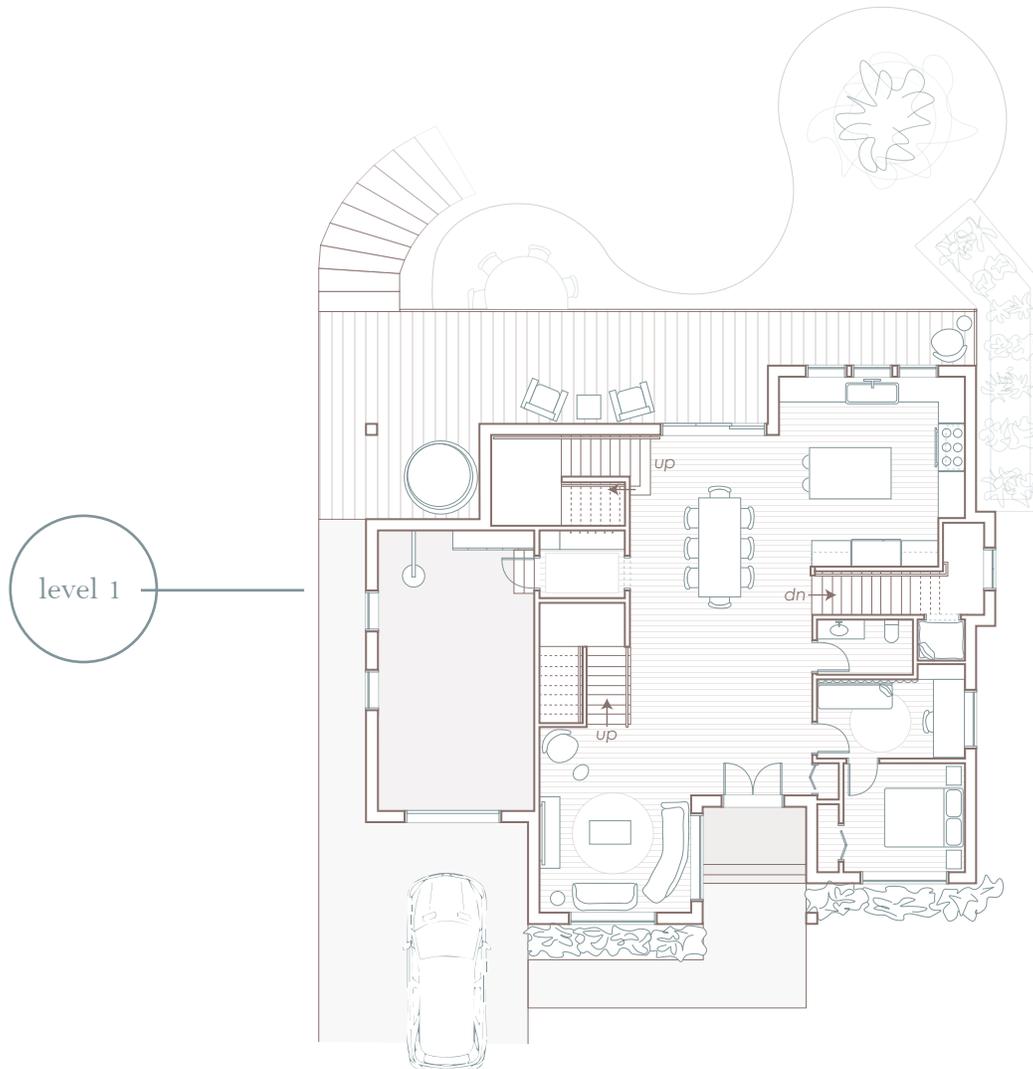




The home is situated on the west side of the site, where the topography is elevated and aligns with the street level. On the east side of the site, the topography gently lowers, eventually creating a walk-out basement and backyard condition in the north-east direction.

figure 78. Site Plan for Group Home





The Group Home

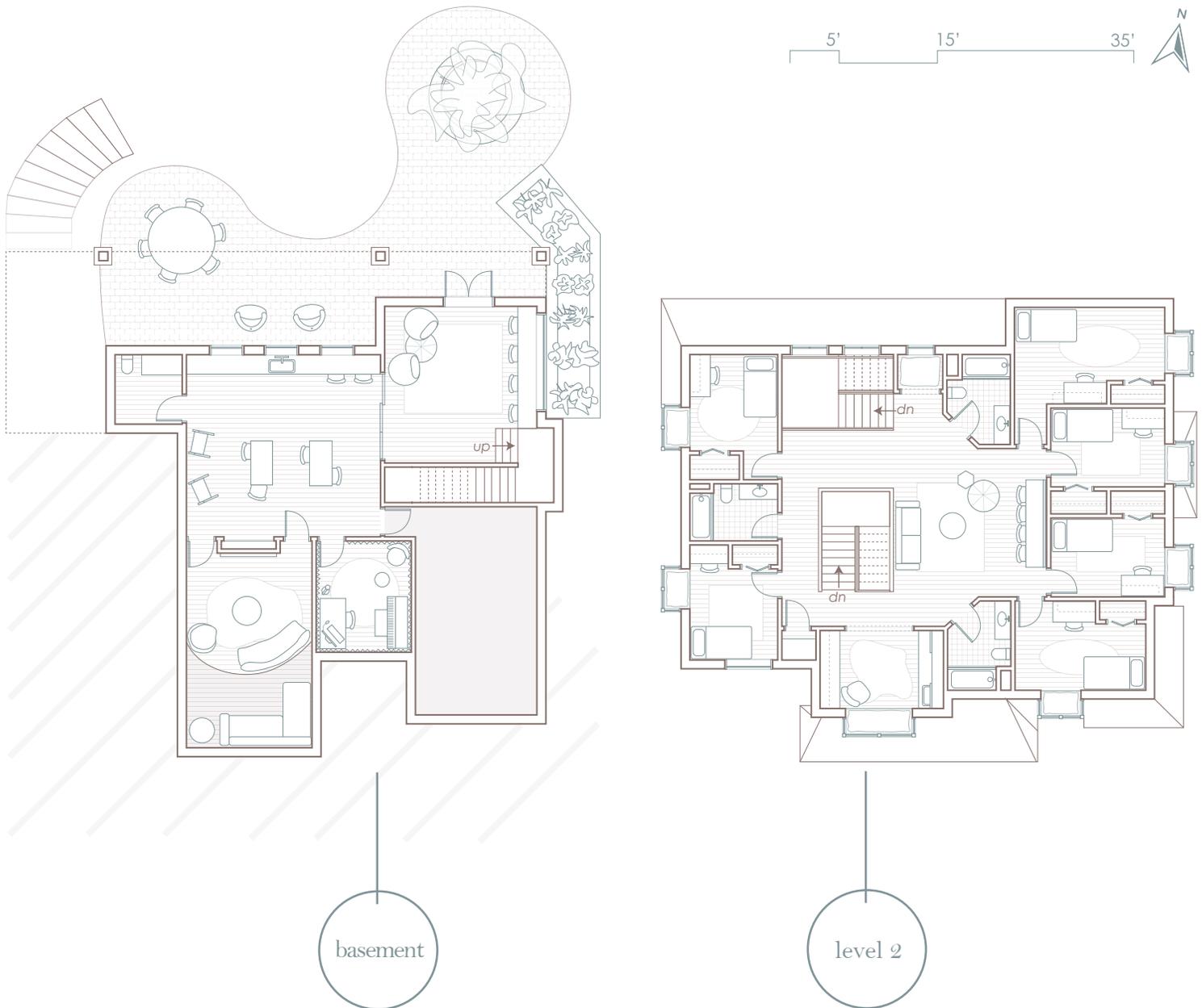
As the design of the group home begins to unfold, it is important to note that the home design being presented is one possible iteration of thousands. The purpose of this design is to provide examples of how foster care specific trauma-informed design could be implemented in residential architecture. Referencing the title of this thesis, it is about exploring the potential, not stating one correct solution.

figure 79. [left]
Level 1 Floor Plan

figure 80. [middle]
Basement Floor Plan

figure 81. [right]
Level 2 Floor Plan

One of the main concepts behind this design is obvious wayfinding. In testimonies, two former foster youth spoke about the trauma that accompanies being moved to an unfamiliar home. Aggravating the situation, this unfamiliarity is often paired with grief from sibling and family separations.¹



“the last foster home I went into I was 17 and I cried because of that feeling that you get... I don't know how far away from my mom I'm going, I don't know this lady, I don't know what goes on in their home”² - former foster youth

Therefore, in referencing the clear wayfinding and sightlines suggestions from trauma-informed design precedence,³ this group home is organized so that an individual can stand at the entry of the home, and be able to visually see where each room is located, and in some cases what each room contains. This is in hopes that the initial move would cause less stress in terms of unfamiliarity and provide some independence and confidence.



The design of the home will be presented as a walk-through. This is intentional as the reader is encouraged to try to imagine the experience of coming to an unfamiliar home. Rendered perspectives, quotes, and text will highlight and explain the trauma-informed design interventions throughout the chapter, and a video walkthrough is accessible at:

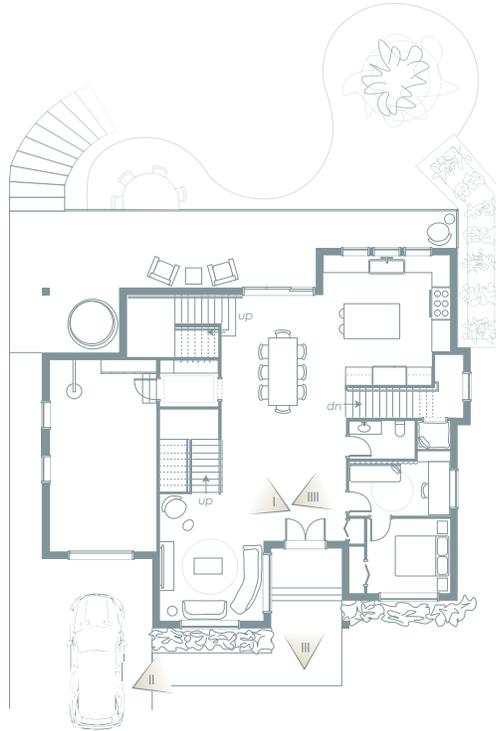
figure 82. Exterior
Render of Group Home

<https://youtu.be/Vt14zgwEGUE>



The Arrival

As a youth in foster care approaches the trauma-informed group home from the street or driveway, they will begin receiving visual information immediately. The large front window frames views into the living room and entry, allowing the individual to become more comfortable knowing the environment they are about to enter (see figure 85). As they stand at the glazed front doors, they can visualise the home within, and will see as someone approaches to answer the door (see figure 86). Once the teenager is welcomed in, they can look to the left, seeing the location of the living room, the first staircase, the mud room, the second staircase, the dining room and the backyard (see figure 84). If they turn to their right, they will see the location of the kitchen, the stairs leading down, the powder room, and the staff office (see figure 87). This clear wayfinding is accomplished through open concept design, glazing, décor, and openings or archways between rooms. The living room and staff office were chosen to sit directly adjacent to the front door because in testimonies, former foster youth touch upon the trauma associated with living in empty houses and returning from school to empty houses.⁴ They found that they would quite often have no idea where their parents were, gone for days or weeks at a time.



“he neglected us completely... he was always high or gone”⁵

– former foster youth

Therefore, in trying to avoid that trigger, the living room, a communal space, and the staff office were placed at the entrance, increasing the likelihood of someone being around when residents return home.

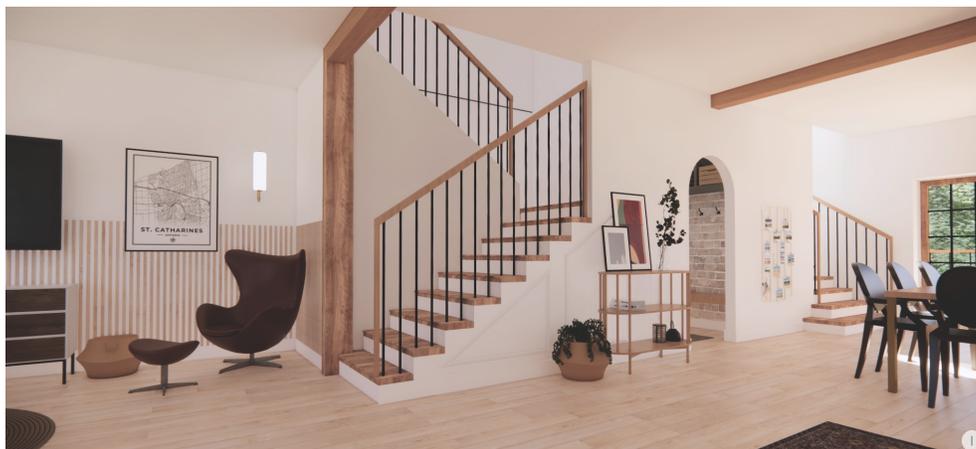


figure 83. [top]
1st Level Key Plan

figure 84. [bottom]
Render of Left
Perspective at Entry

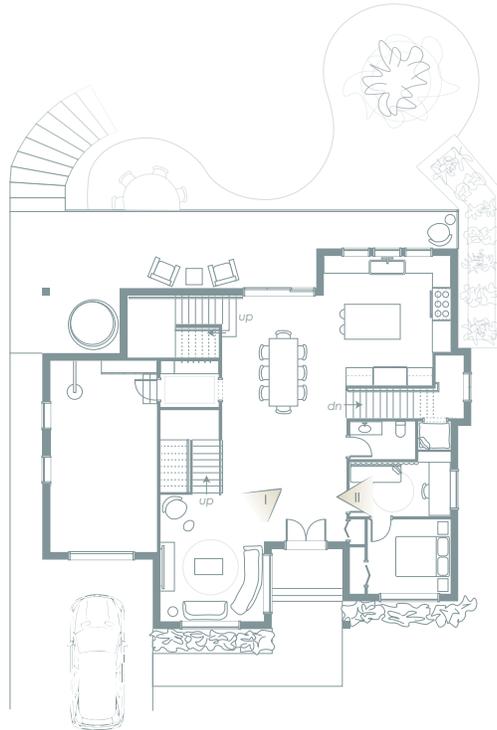


figure 85. [top]
Exterior Render of the
Front Window

figure 86. [middle]
Exterior Render of the
Front Door Entry

figure 87. [bottom]
Render of Right Per-
spective at Entry

In addition to the living room's location at the front of the home, it is also strategically placed at the bottom of a staircase to encourage unplanned social interaction. Making friends and bonding with housemates can be intimidating and uncomfortable, therefore any opportunity to have residents cross paths or naturally occupy spaces could help with this. The seating in this room is arranged so that nobody's backs are turned away from the rest of the house and the variety of seating allows user choice. Throughout the entirety of the home are several plants and biophilic design. This is because testimonies reveal that many youth in foster care have the same trigger, which is the smell of cigarette smoke.



“I grew up around smoking all of my life so it's just a trigger for me”⁶
 - former foster youth

Recognizing that smells are quite common triggers for individuals living with trauma,⁷ natural materials that are known to purify air are incorporated throughout the home. This results in the increased use of wood, natural fabrics, and houseplants.

The staff office is at the front of the home for security reasons. This way the staff member would be the first to know if someone came to the door and should be the person to greet visitors or new foster youth. Inside the office, there is a comfortable seating area for one-on-one conversations or mediating between residents. The most important intervention in the staff office however, is the sound proofing. This is because there needs to be a space where arguments or altercations can take place safely and privately, for the sake of the person in distress, and the comfortability of the other residents. Testimonies prove that overhearing or witnessing someone else's distress can be very triggering, especially for those who have experienced domestic violence or violent altercations in general in their childhood.

“somebody yelled ‘get down’ really loud, and that REALLY scared me. That trigger actually came from when my biological dad got arrested and the cops had barged into our house”⁸
 - former foster youth

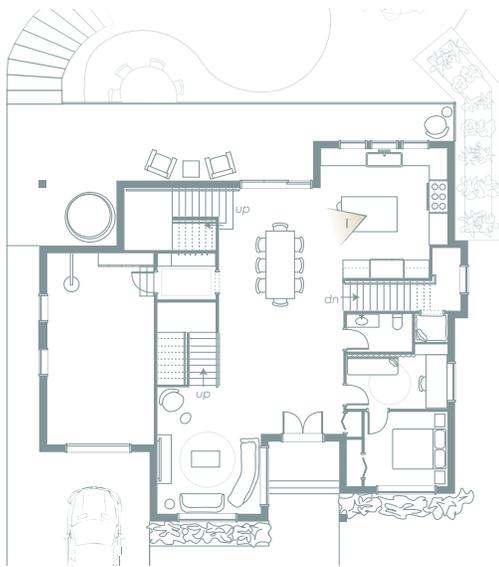
Therefore, fabric padding on the walls and ceiling, rugs, curtains, and fabric furniture are all incorporated to aid in acoustic absorption (see figure 90). The staff bedroom also sits directly off the office, aiding in soundproofing and reducing the number of doors youth will need to navigate in the main living space.

figure 88.
 1st Level Key Plan



figure 89. [top]
Render of Living Room

figure 90. [bottom]
Render of Staff Office



Similar to the staff office soundproofing, this house contains multiple stair paths as a way to provide youth the ability to avoid altercations, or to avoid un-pleasant stimuli.

“it was typical for you to step over someone getting restrained or going through something to get to the breakfast table”⁹

– former foster youth

In testimonies former foster youth speak about the hardships that accompany living in group homes, highlighting how isolated situations would affect the moods of everyone in the house whether they were involved or not.¹⁰

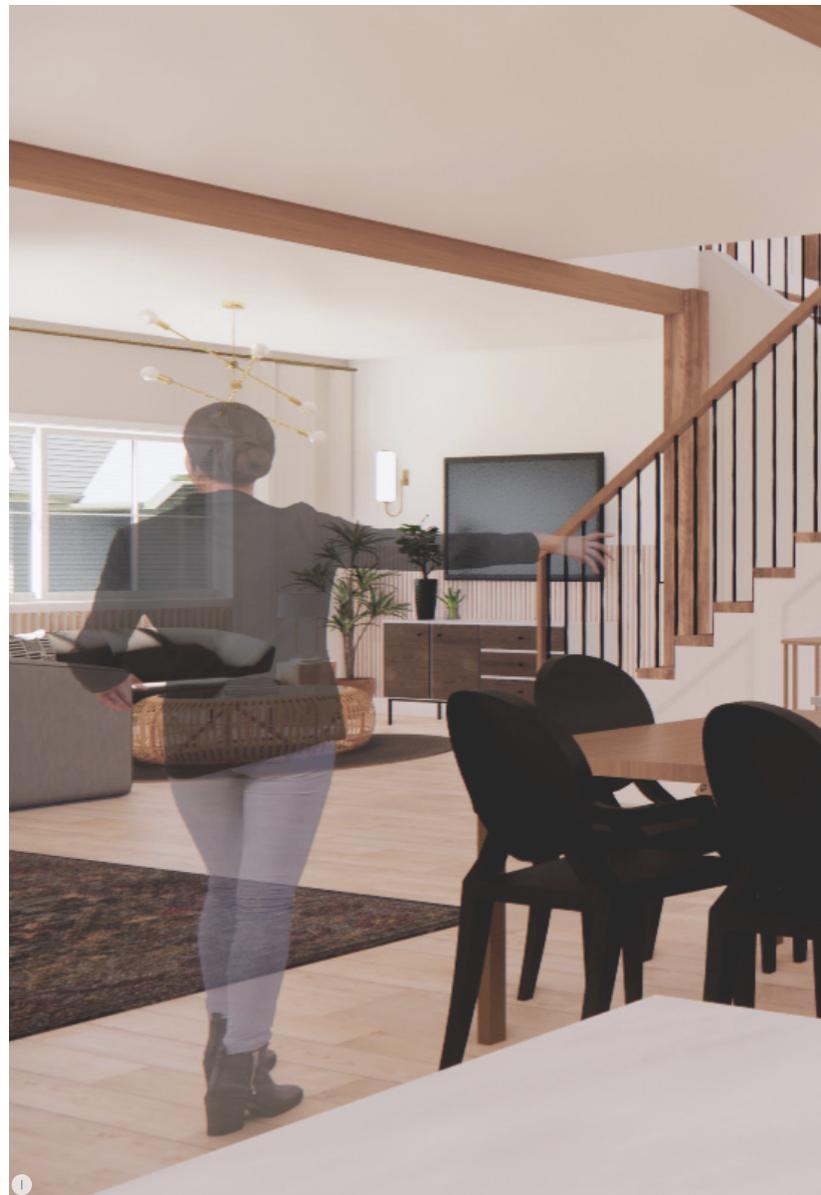
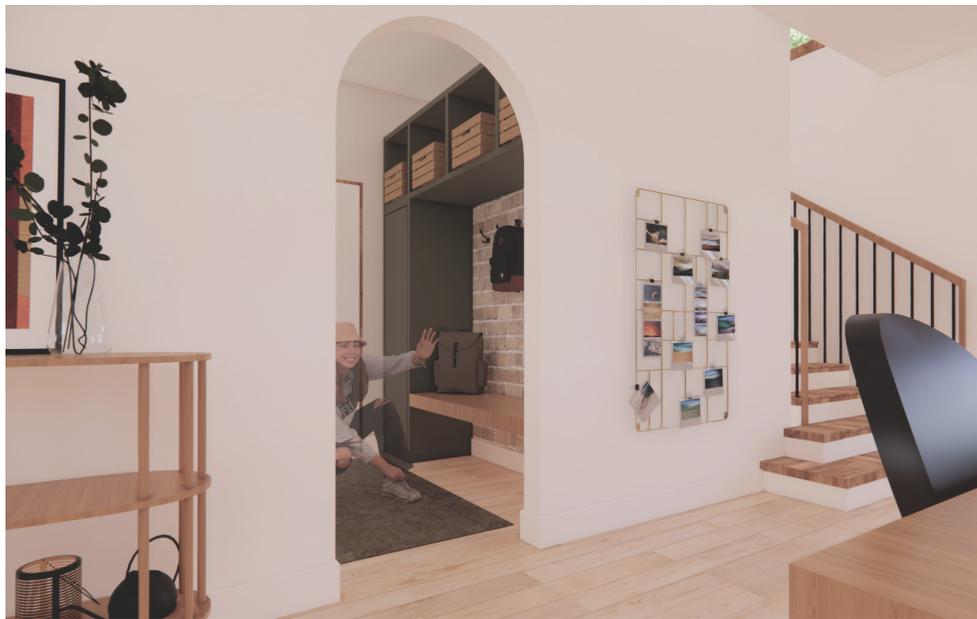


figure 91.
1st Level Key Plan

figure 92.
Render Showing
Multiple Staircases



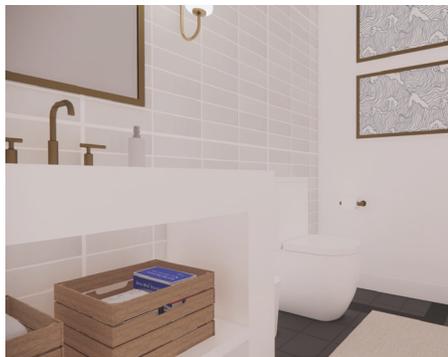


Throughout the main level there are several wayfinding indicators and purposeful circulation paths. The mudroom for example, is open to the dining because it creates another unplanned social interaction between the person entering from the garage and whoever is in the kitchen or dining room (see figure 93). The mud room also indicates the location of the garage and of an exit to someone who is unfamiliar with the layout. The extension of the stairs at the back of the house also acts to indicate the presence of an upward leading staircase as opposed to being hidden.

figure 93. [top]
Render of Mudroom

figure 94. [bottom]
Renders of the Bathroom Doors





Continuing on the main floor, across from the mudroom, the powder room, and all other bathroom doors in the house are indicated by residential-like signage or décor (see figure 94). This is meant to indicate to new foster youth where the bathrooms are located without the house looking institutional. This is because institutional design can be another trigger for groups who may have experienced trauma in treatment facilities, juvenile detention centers, hospitals, or any negative institutional setting.¹¹ The door décor will hopefully provide some independence in the same ways that the door-less cabinetry below all the bathroom sinks do. Having shelving below sinks rather than closed cupboards, allows teenagers to automatically know the location of, and help themselves to; pads, tampons, toilet paper, and towels (see figure 96-97). This eliminates some of the dependence teenagers are forced to adopt in unfamiliar settings, as they do not need to ask housemates or staff for assistance. Additionally, throughout all the bathrooms in the home, the toilets were placed behind the sink cabinetry or the door swing, as a way to block the view from doorway to toilet, allowing greater perceived privacy and peace of mind (see figure 95-96). The fixtures and materials used in all the bathrooms are non-porous and sleek, which is in response to many testimonies revealing the trauma associated with living in deplorable conditions. One former foster youth, spoke on the hardships she endured while living locked in a pest infested trailer.¹²

“it was disgusting, we had a room full of rats, and a room full of snakes, we had dogs. It was just gross, we lived with roaches”¹³

– former foster youth

In the attempt to combat this trauma and those similar, materials that are easily cleaned and typically maintain their cleanliness are used, especially in areas that are more likely to become dirty, such as bathrooms, and kitchens.

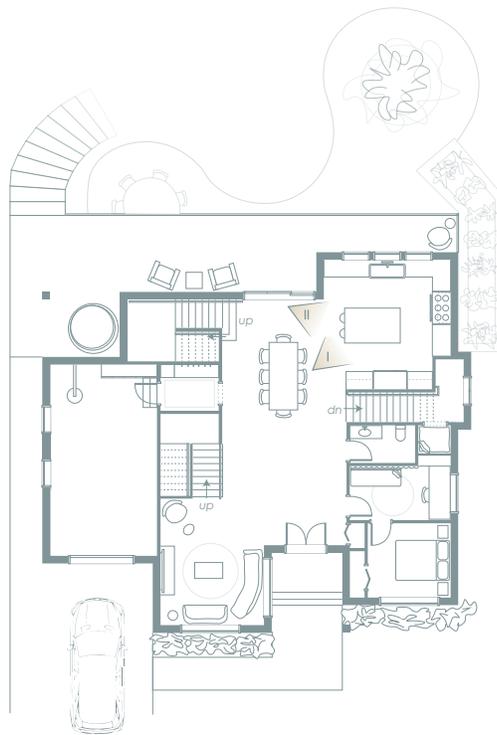
figure 95. [top]
Render Showing Toilet
Location

figure 96. [left]
Render of Powder Room

figure 97. [right]
Render Showing Condi-
tions Under Sinks

The kitchen is responsible for combatting one of the most common traumas experienced by youth entering foster care. Unfortunately, many youth in care grow up without proper access to food, either because of poverty, neglect, or discipline.¹⁴ These experiences have lasting impacts on the youths' relationships with food, as they may question the sustainability of their food source or their ability to access to the food. Testimonies provided by many foster parents revealed that children would often hoard, hide, or sneak food, and some would desperately shovel the food into their mouths causing them to choke.¹⁵

"The hoarding food, this is something that is really difficult and really common in foster care"¹⁶ - foster parent



"They would always come downstairs [and say] 'do you think there's enough dinner for me tonight?'"¹⁷ - foster parent

Foster parents have tried to combat this trauma by leaving fruit baskets out on counters and removing pantry doors. This trauma-informed group home builds off of the same visual connection concept by replacing solid door wall cabinets with shelving and glass cabinet doors. A glass door fridge is also included, once again reinforcing the visual connection between the teenagers living in the home, and the food available to them (see figure 100).

This kitchen also provides ample space for instructional learning around the sink, stove and island, as the staff members are meant to work with the teenagers on life skills in preparation for adulthood (see figure 99). Finally, the seating at the kitchen island is meant to not only promote community, but also to provide user choice in dining or group participation.

figure 98.
1st Level Key Plan



figure 99. [top]
Render Showing North
Side of the Kitchen

figure 100. [bottom]
Render Showing South
Side of the Kitchen

Upstairs

The second floor of the group home contains six individual bedrooms, three full bathrooms, a laundry room, a communal vanity, an alcove, and a lounge area. The centering of the main staircase forces an open concept design and creates a circular path that youth can pace as a coping mechanism. When a new foster youth arrives at the top of either staircase, similar to the main level, they can once again see the entrance to each space as a result of the commitment to eliminating dead ends and blind corners (see figure 102).



Each bedroom door displays a different color, allowing youth to quickly learn and remember which room is theirs, while also encouraging unique identity. The skylights are present as a common trigger or trauma amongst youth in care, are power outages and darkness in general.¹⁸ This is the result of several children having grown up in homes where their parents could not keep up with bills. In some extreme cases foster youth have been in very abusive situations where they were locked in dark rooms or had windows boarded shut.¹⁹

“We would sit in these dark rooms alone without any kind of interaction with other people, and we were only allowed to come out when it was meal time”²⁰ - former foster youth

“I was always scared about money, we had our electricity turned off, our water turned off”²¹ - former foster youth

“We had the electricity go out a few days ago and wow did that spark a trigger in one of our kids”²² - former foster youth

In response to these traumas and those similar, it is important that an abundance of natural light reaches the entire home, hence the heavy presence of glazing throughout (see figure 103). In direct response to power outages, skylights could be helpful in harnessing natural light during nighttime from the moon and stars.

figure 101.
2nd Level Key Plan



figure 102. [top]
Render of 2nd Level
Circulation Space

figure 103. [bottom]
Render Showing Natural
Light Access on the 2nd
Level

The communal vanity is meant to celebrate femininity and grooming, while also fostering community and growth. In testimonies, several former foster youths touch upon the bullying or judgment they received as children because they would attend school with matted unclean hair, unwashed faces, and dirty clothes.

“I was always dirty, my brother was always dirty... I remember going to school and I'd always have lice which was really embarrassing”²³
- former foster youth

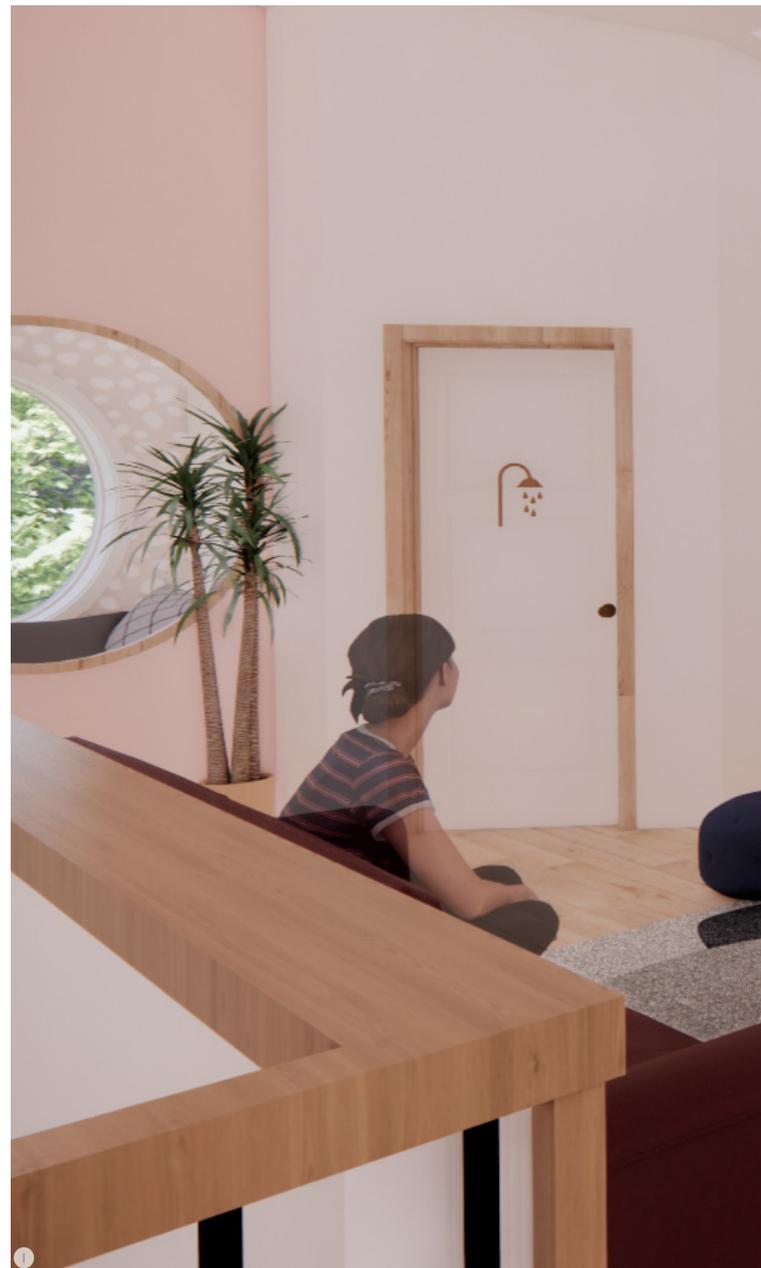
“I can't wear the same clothes twice in a row [now], my grandparents used to make us wear [dirty clothes] days in a row”²⁴
- former foster youth

These experiences have caused some of these individuals to be hypervigilant about grooming and cleanliness, while others may develop negative feelings or avoidant behaviours towards the subject.²⁵ The act of grooming however, becomes much more enjoyable and encouraging when done in a group setting. In a group home that will not only be housing females, but females of various races, it is important to recognize the role grooming will play in their lives. A communal vanity allows teenagers to come together, learn from each other, grow, and accept themselves.

The lounge area also allows youth who may not want to partake in the grooming, to sit down and be a part of the conversation. The location of the vanity also promotes community as the youth will often circulate through those spaces naturally, curating unplanned socialization.



figure 104. [top]
2nd Level Key Plan



1

figure 105. [bottom]
Render of Communal
Vanity & Lounge



The laundry room's location upstairs is very intentional as some youth in foster care may have complicated relationships with clothes and laundry. This has been expressed in several testimonies, and it seems to be a common theme. Either by reason of poverty or neglect, many children in care have had minimal clothes provided to them, and in many cases their clothes were not washed, resulting in bullying at school.²⁶



"I had to wash my clothes sometimes in the bathtub because they wouldn't let me use the washer"²⁷ - former foster youth

"They were not allowed to wear clean clothes, so they would actually wash their clothes in a bathtub without her knowing, they would go into the trees and hang them up, then before they went to school they would stop and change into them, and then on their way [home] they would stop and change back into their dirty clothes"²⁸ - foster parent

In the attempt to re-shape some teenagers' feelings around the concept of laundry, this laundry room is celebrated. It is bright, welcoming, accessible, situated in plain sight, and doorless so that it can be seen and engaged with constantly. There are various seating options allowing youth to stay with their belongings during wash cycles if they wish, while also fostering user choice. Open shelving once again increases a new foster youth's ability to accomplish a task independently, in this case by revealing the location of the detergent and other necessary laundry products. Similar to the kitchen, there is ample space for instructional learning as some teenagers will come to the home and learn this skill for the first time.

figure 106.
2nd Level Key Plan



figure 107. [top left]
Render of East Side of
the Laundry Room

figure 108. [top right]
Render of West Side of
the Laundry Room

figure 109. [bottom]
Render Showing East
Elevation of the Laun-
dry Room



The bedrooms have several trauma-informed interventions. First, a well-lit desk or homework area is provided to promote academics. Cork boards, white boards, and chalkboards are used to allow for personal customization. Similarly, contact paper and shelving provides youth choice and gives them the opportunity to express their identity on their own terms. For the same reason, furniture is moveable, allowing residents to reorganize as they wish. The layout and design of each bedroom is purposefully unique, once again for identity and ownership, but also to avoid institutional-like repetition. Leaving room for customization also allows youth space to include or partake in relevant cultural or religious decoration, organization, practice or rituals. Youth come into foster care from various cultures and religions, therefore it is important they are provided a private space if that is what they require to maintain their religion or cultural identity.

The use of good quality furniture and finishings is also imperative as testimonies reveal the living and sleeping conditions some youth have endured.

“I’d have stuff taken away like my mattress, my sheets, my pillows, so I’d end up sleeping on the floor”²⁹ - former foster youth

“we were living in our van cause we were homeless and it was just super horrible”³⁰ - former foster youth

By providing teenagers with a beautiful home, bedroom and high-quality items, it is hoped that they will begin to realize they are worthy and deserving of good things, as so many have been told or shown otherwise in their pasts. For this reason, window seats are included in all bedrooms, offering variable scaled spaces within the room, providing choice, comfort, and connection to the outdoors.

Many existing foster care group homes use shared bedrooms as feasibility is their top concern, however in a trauma-informed group home, the benefits of single bedrooms such as: ownership, identity, privacy, escape and security are the top concern. Testimonies reveal that many youth in care lack spatial ownership and belonging.

“You can’t be at the shelter all day, those hours that me and my siblings couldn’t be in the shelter, we’d just be at the park and we’d just wait there”³¹ - former foster youth

If youth are not provided the benefits of the single bedroom, they will not have the same advantages in healing or mitigating their trauma.



figure 110. [top]
Render of One Youth
Bedroom

figure 111. [bottom]
Render of Another
Youth Bedroom



Bathrooms can be a sensitive space for foster youth to navigate because of the vulnerability associated with them. The act of undressing in a new environment can be extremely triggering, especially for survivors of sexual assault,³² and unfortunately this type of abuse is prevalent amongst foster youth.³³

“When I was 9 years old I was raped by two neighbours, [my father] was so neglectful that it happened all under his nose”³⁴

- former foster youth

“Doing a simple thing like taking a shower in a stranger’s home is a very disconcerting experience”³⁵

- former foster youth

In the attempt to provide peace of mind, this trauma-informed group home strays away from the communal bathroom model, and provides three separate intimate full bathrooms. This way bathrooms are used by one person at a time, for showering, brushing teeth, and using the toilet. The vanity is then where the communal ‘getting ready’ aspect comes in. One of the main design interventions in the bathrooms is the inclusion of a tub-shower (see figure 112). Tub-showers allow youth to stay within their comfort level or familiarity and decide whether to bathe or shower. In the attempt to provide added perceived privacy and security, the glass shower panel should be opaque below the neckline and as mentioned before, toilets should be hidden behind sinks or door swings.

Remaining on the topic of safety, there have been several different interventions applied to all three staircases in the attempt to provide youth greater perceived and actual safety. Enclosed staircases historically create unsafe environments as a result of blind corners, lack of light and surveillance, and could be triggering for individuals who have experienced trauma in similar spaces. For that reason, all staircases in this group home have access to natural light and are not enclosed. In instances where blind corners cannot be avoided, mirrors can be used in a decorative, not institutional tone (see figure 113).

figure 112.
Render of Full
Bathroom Upstairs

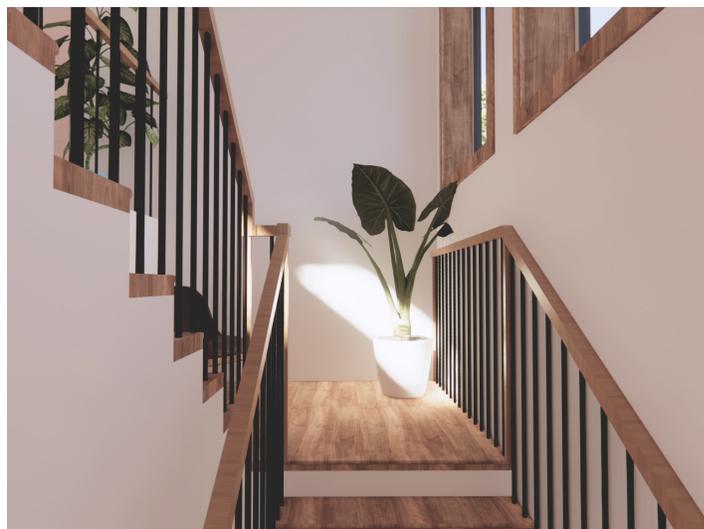


figure 113. [top left]
Render of Stairs Leading
to Basement

figure 114. [top right]
Render of Main Staircase
Leading Upstairs

figure 115. [bottom]
Render of Back Staircase
Leading Upstairs

Before moving to the basement, the use of alcoves should be discussed. The presence of alcoves or escapes are necessary in a trauma-informed group home (see figures 116-117). As the Denver research team has pointed out, creating safe spaces and environments to recover from triggers and flashbacks plays a large role in trauma informed design.³⁶ Often individuals with trauma, especially PTSD, may unconsciously resort to a trauma response which could be to fight, flee, freeze, or fawn.³⁷

“I entered the system riddled with PTSD... my trauma was always present, a jingle of keys, a slammed door, an unexpected pat on the back, an unfamiliar voice, they would set me off”³⁸

- former foster youth

Thus, this group home needs to be able to provide safe spaces for these responses. Alcoves are also an intervention that traditional foster families could implement through reorganization or renovation, capitalizing on extra nooks or space under stairs.

Textured architectural elements and walls are present throughout the home for similar reasons as the alcoves or escapes (see figures 118-120). More specifically in this case, the design needs to provide safe spaces to recover from flashbacks. Testimonies reveal that many youth in foster care have been involved in, or witnessed traumatic events and experiences which could cause flashbacks.

“As someone who doesn't want to lose their mom, I interfere, and I'm yelling 'you cant take my mom,' and one of the cops, he grabbed me and put my face onto the concrete floor ...

and I'm just crying and crying”³⁹

- former foster youth

One technique individuals use to cope with flashbacks is grounding themselves. This essentially means pulling oneself out of a flashback and recognizing actual time and actual safety. One can ground themselves by focusing on the immediate environment, the smells, the views, and feeling things tangibly.⁴⁰ Consequently, by adding various textured elements throughout the architecture of the home, more opportunities to ground oneself in a flashback emerge.

figure 116. [far left]
Render of Alcove
Downstairs

figure 117.
Render of Alcove
Upstairs

figure 118.
Render of Textured
Wall Upstairs

figure 119.
Render of Textured
Wall in Living Room

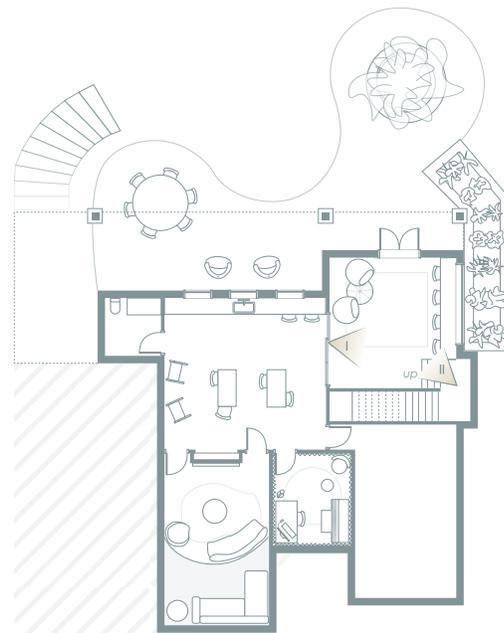
figure 120.
Render of Textured
Wall in Kitchen





Downstairs

In the basement, the space at the bottom of the stairs works to soundproof the downstairs programs from the rest of the house without enclosing the stairs. This space acts as a homework, visitation, or relaxation area with the work space and seating being flooded with natural light and connections to nature. This room sits at the lowest corner of the site allowing for walk-out access and making the concept of a basement in a group home itself, much safer. This space also offers more user choice. In testimonies, former foster youth would speak to their love for school, but also their academic struggle with school.



“it didn't matter what was going on in life, school was a place of normalcy, consistency and security”⁴¹ - former foster youth

“I was bounced from so many foster homes I could not stay in school... I can hardly read or write, yet I have a high school diploma”⁴² - former foster youth

It is therefore important that the teenagers who are invested in their academics are given the tools and spaces they need to succeed.

figure 121.
Basement Key Plan



Beyond the homework space lie a few different programs which aim to foster typical youth development and healing simultaneously. The presence of hobbies or extra curriculars in a teenager's life is imperative to identity formation and differentiation, which are two important developmental milestones for teenagers.⁴³ For that reason, programs with proven therapeutic benefits that also align with today's youth culture, and encourage extra curricular interest, are chosen to be included in the basement.

figure 122. [top]
Render of West Side of
the Homework Room

figure 123. [bottom]
Render of East Side of
the Homework Room

Studies on foster care and art therapy indicated that, “Art therapy is inherently suited to the needs of adolescents, and its organic nature gives the flexibility and versatility needed in trauma work”.⁴⁴ Therefore, the next space in the basement of this trauma-informed group home is an art studio (see figure 125). The space is designed to be an arts and crafts room, or wet area, that doubles as a space for youth to gather and socialize with friends. The bright colours and natural light create an inviting and motivating environment where youth can express themselves through art, and feel comfortable or proud inviting friends over.

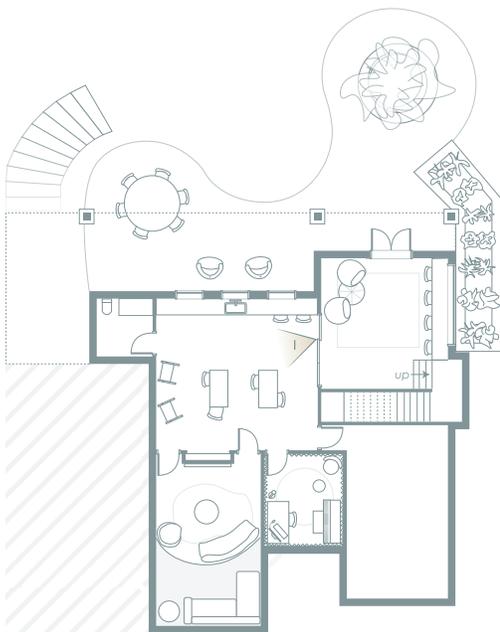


figure 124. [left]
Basement Key Plan

figure 125. [right]
Render of Art Room





Beyond the art room lies a small music studio (see figure 128) as research reveals that music therapy has proven to be a beneficial for individuals in the foster care system. One study looking at the efficacy of music therapy programs for adolescents in foster care found that, “Music listening, singing, song writing and playing improvised music proved effective in facilitating self-expression and non-violent communication, and in creating a safe and playful environment in which relationships could grow and community could flourish”.⁴⁵ This room is heavily soundproofed and therefore has a glazed door to ensure safety through surveillance (see figure 127).

In designing a trauma-informed group home for teenagers, youths’ interests should to be considered, regardless of whether or not the interest has therapeutic or academic benefits. Research into youth culture indicated that today’s youth spend the majority of their free time on screens.⁴⁶ In combining this finding with testimonies, one could suggest that providing a movie room, or a gaming room could help in deconstructing the parentified child.

Many former foster youth have indicated in testimonies that they were not able to enjoy the freedoms of their own childhoods, after having to take responsibility for younger siblings and even parents.

“Sometimes I would have to stay home from school because they were nowhere to be found, and I couldn’t just leave my younger brothers home alone”⁴⁷ – former foster youth

“I dropped out of school to raise my siblings, and I ended up just begging for food and doing errands for neighbours in exchange for tips that I’d put towards toothpaste and toilet paper”⁴⁸ – former foster youth

The movie room or theatre is a space where foster youth can partake in the typical teenage lifestyle, while also embracing the childhood magic of theatre (see figure 129). This concept is also applied through the level driveway and basketball net in the front yard. In keeping trauma-informed, two exits are provided in the movie room because the space is communal with no visual surveillance (see figure 127). This is out of consideration for foster youth who may have experienced assault.

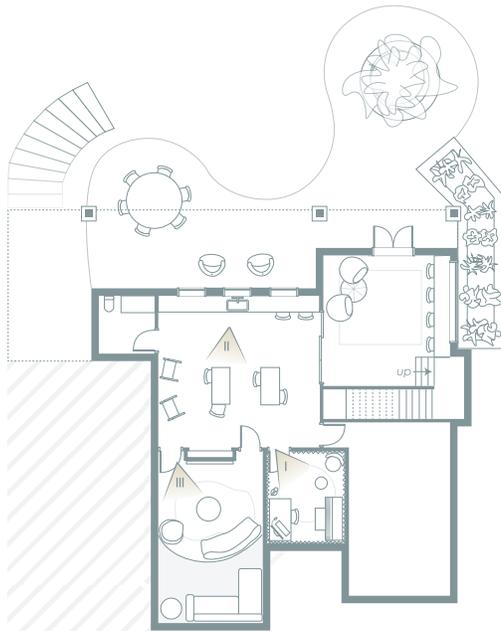


figure 126. [top left]
Basement Key Plan

figure 127. [top right]
Render Showing Movie &
Music Room Doors

figure 128. [middle]
Render of Music Studio

figure 129. [bottom]
Render of Movie Room

The backyard acts as an extension of the home, including more trauma-informed interventions. The garden (see figure 132) has a plethora of positive implications, beginning with food security, educational benefits, and the communal aspect of working together and seeing growth.⁴⁹ Gardens could also foster feelings of ownership in a population that typically owns very little, or does not have access to the things they do own. This backyard includes a winding pathway, similar to what is seen in trauma-informed precedent ‘The Laurel House’.⁵⁰ Winding pathways are used to provide safe outlets for the trauma response. Youth should have the option to pace in the backyard when they feel the instinct to flee, as opposed to running away, which is a common occurrence in foster care.⁵¹ Swings are included as they are calming and provide the sensorial input that some youth may seek in certain situations. The balcony, extending from the dining room provides more seating and eating options to foster user choice and connection to the outdoors.



Rounding the west corner of the balcony one can continue towards the front of the house or the garage. The garage is proposed as a multi-use space acting as a home gym or dance studio (see figure 133), both of which being programs that align with today’s youth culture and pose therapeutic benefits.⁵²

Finally, the exterior of the house is designed to appear unmistakably as a residential home. In testimonies former foster youth spoke to the hardships of being known as the ‘foster kid’ and strangers being able to tell.

“I was ashamed of being in foster care, I didn’t want anyone to know I was in foster care”⁵³ – former foster youth

Therefore, this home is designed to respect the residential vernacular and avoid any architectural expression that could read as institutional.

figure 130. [left]
Basement Key Plan

figure 131. [right]
Render of Backyard

figure 132.
[bottom left]
Render of Garden

figure 133.
[bottom right]
Render of Garage





figure 134.
Exterior Render
of the Home Front



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Conclusion

Conclusion

It is widely expressed and understood that the North American foster care system requires reform. There are issues concerning the over representation of Black and Indigenous youth in foster care, and the unsubstantiated removal of many youth.¹ There are issues concerning the sometimes-minimal level of support provided to biological families and family preservation.² There are issues concerning the abuse of the foster care system by foster parents whose motivation is monetary. The issues within the system run deep and are thankfully being constantly contested by activists of various disciplines. In regards to this thesis, while the reform of a social service system should not be the responsibility of those educated in design, there is an intersectional opportunity to address at least the trauma aspect intertwined within all of these issues.

Research indicates, “an extremely high prevalence of emotional disturbances among young people in foster care (estimates range from 35% to 85% of adolescents in care), particularly those in group home or institutional placement”.³ Subsequently, these youth are subjected to higher risks of becoming pregnant, homeless, dependant on a substance, incarcerated, or experience educational underachievement.⁴ Knowing that the ‘emotional disturbances’ or the mental illnesses that put these teens at risk of adverse outcomes stem from trauma, it becomes clear that the solution lies in addressing and treating that trauma.⁵ Trauma-informed design’s success in mitigating and helping to heal those who have experienced trauma through homelessness is assuring and exciting. It gives reason to be hopeful for the possible positive implications of applying trauma-informed design to foster care group homes.

The end-all solution to the issue of childhood-trauma in foster care causing poor adult life outcome involves the eradication of abuse and poverty. This is not something architecture can control; however, architecture can contribute to the healing of trauma in foster youth through trauma-informed design, and thus should be explored further.

The goal of this thesis was to start the conversation about trauma-informed design and its possible implications in foster care architecture. The intent also being to draw attention to the dire need to find better ways of treating and mitigating childhood trauma, especially for youth in foster care. This resulted in the proposal of a trauma-informed group home design, and the exploration of user specific interventions driven by lived experience. At the PhD level, the prior methodological limitations are no longer in place. Voluntary user interviews could potentially be conducted, and the building and testing of interventions in the home could take place to verify the most prevalent traumas and triggers unique to youth in care. Post occupancy research could take place to determine which interventions are beneficial and which are not. This would all hopefully lead to a solid framework for designing trauma-informed foster care group homes. From this framework, hope for the overarching goal of the whole thesis emerges. That is to provide youth in foster care the support they deserve to become happy, healthy, and successful adults in society, despite their trauma. They are an extremely vulnerable and innocent population, facing unfathomable hardships, and they deserve more from their caregivers, the government, law enforcement, citizens, and in this case, from designers.

figure 135. [right]
Goal of the Thesis

Fall .21 - Winter .22

Short-Term Goal:

Thesis Level Research

Start the discussion about trauma-informed design and its possible implications in foster care architecture

This could work!

Long-Term Goal:

PhD Level Research + Testing

Develop and test a framework for trauma-informed design as it pertains specifically to foster youth and their unique traumas

This could certainly work!

Overarching Goal:

Real World Outcomes

Provide youth in foster care the support they deserve to become happy, healthy, and successful adults in our society

This works!

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