Alternative Approach to Support Mental Health Centres

Centre for Human-Animal Assisted Therapy:

A Symbiotic Healing Space for People and Rescue Dogs

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A practicum study investigation is to be submitted to the Faculty of Graduate Studies at the University of Manitoba in partial fulfillment of the requirements of the degree of

MASTER OF INTERIOR DESIGN

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Abstract

This Master of Interior Design practicum proposes a design for a Centre that serves to foster symbiotic healing between people and rescue dogs who suffer from mental illnesses. Situated in Winnipeg, Manitoba, this Centre is designed as a healing centre where people and rescue are brought together in therapy and promote a collective recovery. For both people and rescue dog groups, the treatment process in overcoming trauma and battling forms of mental illnesses share similar struggles. These difficulties include behaviour conditioning, social support, and severe fear of environmental trauma.

Aspects associated with mental wellness—particularly intellectual, emotional, and social dimensions of health—are used as a catalyst to explore the joint activities in the rehabilitation process of each patient group. The two therapy methods of Eye Motion Desensitization Reprocessing (EMDR) Therapy and Behaviour Conditioning are explored to direct the study to identify stimulants factors, understand the impact of routine and familiarization, and behavioural reactions. With this, the practicum proposes a design solution that provenances the built environment and acts as a vital aid in the rehabilitation process, giving patients support that serves to help them focus on their present recovery and anchoring a patient's stability to the process. Using the Theory of Sensory Design, focusing on acoustic control, visual hierarchy and texture integration, the Centre is designed to resonate with the methods of EMDR Therapy and behaviour rehabilitation, providing environmental support to desensitization and lowering impacts of trigger factors. This practicum presents how interior design strategies and solutions, focusing on user sensitivity and needs, can help strengthen the built environment's attributes in the healing process.

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1.0 INTRODUCTION

1.1 Project Scope

This practicum project is a therapy centre mainly designed to support Human-Animal Interventions (HAI) that support therapy for people and rescue dogs by providing a space where individually and collectively, each patient can access, and experience therapy services fit their trauma healing. This research will explore how people and rescue dogs suffer from similar effects and difficulties with trauma processing that can negatively impact their overall wellness. Hence, to effectively conduct a design that could facilitate and assist with trauma healing, this study will explore EMDR therapy and Behaviour Conditioning. With this exploration, findings will also inform the design proposal in formulating a design model where the facility can address not just each therapeutic intervention but also propose to combine the patient groups. By designing a Centre that can provide a health resource for patients suffering from mental illnesses, an opportunity for people who suffer from mental illnesses—such as but not limited to depression, post-traumatic stress disorder or anxiety—to gain access to Animal-Assisted Therapy (AAT), while also providing an opportunity for rescue animals, particularly rescue dogs that are in animal shelters, to have access to behaviour rehabilitation that can be strengthened with facilitated social interactions through Behaviour Conditioning training. With an HAI Centre designed to facilitate the process associated with trauma healing, the Centre serves as a bridging agent for the patient groups in their recovery journey. By acting as a conduit to the patients, the design proposal provides patients with a space where, individually, they can focus on rebuilding themselves; collectively, they can also foster and assist in the recovery of another—formulating symbiotic healing.

1.2 Rationale

Animal-Assisted Therapy (AAT) is a therapeutic intervention that incorporates animals, usually domestic, into the treatment plan, mainly enhancing and complementing traditional therapy (Kamioka H, Okada S, Tsutani K, et al., Effectiveness of Animal Assisted Therapy, 2014). Research has shown that animal interaction significantly reduces stress hormones (Chandler, C. Ed.D, 2016). Thus, inducing health and social hormones, like oxytocin, dopamine, and endorphins, resulting in an overall behavioural improvement and reducing depression for a range of patients (Uyemura, Brandi-Ann, The Truth About Animal-Assisted Therapy, 2018). The presence of animals in therapy or behavioural rehabilitation has been present across various typologies—correctional institutions, hospitals, or the occasional university campus visits—however, accessibility to AAT practices is often limited. With the nature of animals participating in AAT, participants mostly come from volunteer groups with their handlers; access to AAT is often limited and reliant on the volunteer program schedule.

Research shows that fostering a bond with animals helps people develop a better sense of self-worth, comfort, safety, and trust, helping stabilize emotions and anxiety levels (Kamioka et al., 2014). Animals provide a sense of calm, comfort, and security, which allow patients to divert their attention from stressful situations, improving their communication, self-regulation, and socialization skills (Kamioka H. et al., 2014). On the other hand, for many rescue dogs residing within shelters, it has also been found how human contact and familiarization also lessens their level of anxiety and the effects of changes in their environmental transition (Thorn, J., Templeton, J., Van Winkle, K.M.M., Castillo, R.R., Conditioning Shelter Dogs to Sit, June 2010, pg. 25). It also presents considerable evidence that human contact with rescue dogs, like petting, can alleviate their stress levels. Hence, it would be beneficial to provide both patient groups with a design

proposal that would address their therapeutic methods to be separately focused but also integrate into the design a gradual transition that fosters familiarization, allowing the therapeutic paths between the two patient groups to intertwine. By designing the Centre to address the patient groups separately and collectively, the project provides an opportunity for design to provide spatial programming and retrofit design finishes to benefit patient groups, individually and collectively. Ultimately, designing the built environment to integrally support the overall recovery process of the patients through sensory grounding and spatial familiarization.

1.3 Research Questions

1. What is the role of the built environment for patients dealing with trauma processing in a Human-Animal Assisted activity context?
2. How can spatial design, applied in individual and collective treatment spaces, support the role of the built environment in the therapy process?
3. How can spatial programming and design help facilitate therapy with conditioning and desensitization?

1.4 Design Goals and Objectives

1. Design a spatial program to help mitigate the effects of sensory stimulants that causes trauma triggers to all patients in therapy. The design proposal aims to help support patients' therapeutic progress, especially during their reprocessing phase, by optimizing spatial layout, seamless material textures and spatial hierarchy.

2. Execute a design concept addressing the individual and collective sensory needs of therapeutic space, driving focus to acoustics, visual stimuli, and material texture application for the area, integrating a flow-through design concept that draws a routine path that would allow an experiential development to routine and familiarity to patients of site.

3. Design a space that allows people and rescue animals to gradually integrate into one another's therapeutic process using introductory areas with particular attention to the various strategic sensory design elements, noting that various spatial stimulants can help reduce stress-inducing effects for patients and rescue animals alike.

1.5 Project Limitations

This project proposes an alternative solution to supplement human and animal patients' ongoing holistic and psychotherapeutic treatments. It does not offer solutions that would be a primary alternative treatment for human and animal patients with mental illness. The design proposal serves as a gateway that strives to foster familiarization between human and animal patients and, in turn, helps establish a routine that would promote synergy that can help them improve their progress to recovery.

With the many branches and various treatment methods available for trauma processing and rehabilitation, it was necessary to narrow down and focus on several directed approaches to effectively inform this practicum study's proposal. Hence, this study investigates the therapeutic methods within Eye Motion Desensitization Reprocessing (EMDR) therapy and Behaviour Conditioning methods only to inform the final design. The decision to narrowly focus on these two

therapy methods were based on the similar patterns and approach that both therapies deliver, despite being applied to different patient groups. Moreover, precedent studies and investigations have also shown how the treatments selected have a history of integrating the targeted patient groups to a certain extent. Hence, the practicum study utilizes these resources to effectively identify two therapeutic methods that are best addressed and explored to provide information that informs the final design.

Moreover, while the study mainly focuses on the effects of the built environment on the overall trauma healing process, it is with understanding and full recognition that the targeted patient groups also have other illnesses beyond what is explored and investigated in this study. The design solutions proposed for this study aim to respond to the attribution of the built environment to the overall experience of trauma processing through spatial layout, sensory material application and grounding techniques. Other underlying and extensive traumas that may exist within patient groups, apart from the ones discussed in this study, may not be explicitly explored.

1.6 Methodology

The process of developing this practicum will include a sequence of conducting research through a directed literature review that will explore two therapeutic interventions, specifically EMDR therapy and Behaviour Conditioning, which deals with the process involved with mental trauma healing and working with intellectual and behavioural therapeutic strategies. The research findings within the literature review are used to develop a design proposal that aims to embody the built environment's role in effectively contributing to the treatment process. A brief precedent

study of existing therapy clinics and animal centres is also conducted to explain how the programs and system arrangements are working and how they may be optimized better with the exploration of this study. Subsequent investigations on spatial programming spatial function adjacencies and points of intersection will be done. Critical considerations to site selection and site analysis will also be conducted through the design development process. With the overall finding from each methodologic phase, the final design presented through this practicum will provide synthesis and design solutions that aim to have the built environment serve as a strengthening aid that helps facilitate rehabilitation and support the progress of recovery for patients in the Centre as well as aid the therapy providers.

1.7 Key Terminologies

Acceptance

- The action or process of being received as adequate or suitable
- The action of consenting to receive or undertake something offered
- Psychology: "Psychological acceptance is the active embracing of subjective experience, particularly distressing experience. The idea is not merely to grudgingly tolerate negative experiences but to embrace them fully without defence" (Herbert J.D and Brandsma, L.L., Understanding and Enhancing Psychological Acceptance)

Desensitization

- To make (a sensitized or hypersensitive individual) insensitive or nonreactive to a sensitizing agent
- To make emotionally insensitive or callous
    - Specifically: to extinguish an emotional response (as fear, anxiety, or guilt) to stimuli that formerly induced it (Merriam-Webster Dictionary, Desensitize, 2022)

Grounding

- Psychology: Grounding is a technique that helps keep one in the present and helps reorient one to the here-and-now and to reality (the University of New Hampshire, What is Grounding, 2021)
- Grounding technique is an exercise that helps one to refocus on the present moment and pull away from flashbacks, unwanted memories and negative or challenging emotions (Saphaphak, C. What are grounding techniques, June 2022)

Symbiotic

- Biology: involving interaction between two different organisms living in close physical association, denoting a mutually beneficial relationship between other groups (Oxford Languages, Symbiotic, 2022)

Healing

- The process of making or becoming sound or healthy again. (Merriam-Webster Dictionary, Healing, 2022)

Rehabilitation

- The action of restoring someone to health or everyday life through training and therapy after imprisonment, addiction, or illness (Oxford Languages, Rehabilitation, 2022)

Recovery

- A return to a normal state of health, mind, or strength
- The action or process of regaining possession or control of something stolen or lost (Oxford Languages, Recovery, 2022)

Reinforcement

- The process of encouraging or establishing a belief or pattern of behaviour (Oxford Languages, Reinforcement, 2022)

Sense of Belonging

- Sense of belonging is the psychological feeling of belonging or connectedness to a social, spatial, cultural, professional, or another type of group or community (Raman, S. Sense of Belonging, 2014)

Sensory

- Relating to sensation or the physical senses; transmitted or perceived by the senses

Stimulus

- Psychology: any agent, event or situation—internal or external—that elicits a response from an organism (American Psychological Association [APA], Dictionary of Psychology)

Threshold

- Psychology: The minimum intensity of a stimulus that is necessary to evoke a response (APA, dictionary of psychology)

Trigger

- Psychology: Triggers are sensory reminders that cause painful memories or specific symptoms to resurface (Saripalli, V. What is trigger, Psychcentral, 2022)

2.0. KEY ASPECTS

2.1 Mental Health on Overall Wellness

Mental health refers to individuals' emotional and psychological well-being, primarily dealing with an individual's coping abilities to daily life adversaries (Holland, K. Mental Health Basics: Types of Mental Illness, Diagnosis, Treatment, and More, September 19, 2018). Although World Health Organization (WHO) globally recognized mental health as one of the integral parts of the overall wellness of an individual, approximately 70% of the world's population suffers from several types of mental illnesses (Henderson C. et al., Mental Illness Stigma, Help-Seeking and Public Health programs, May 2013).

Mental illnesses that are commonly diagnosed are depression (persistent or significant), anxiety disorder, post-traumatic stress disorder (PTSD) and social anxiety disorder (Holland, 2018). For people suffering from these mental illnesses, their ability to function and respond to their daily activities can be severely affected as symptoms usually worsen. Although symptoms may vary, some of the common symptoms associated with mental illnesses are:

- Having suicidal thoughts, thoughts of hurting oneself or other people
- Have a nervous or mental breakdown
- Feeling fatigued even with enough sleep
- Feeling numbness or lacking empathy
- Feeling hopeless, helpless, or lost
- Feeling confusion, forgetfulness, irritability, anger, anxiety, sadness or fright
- Having extreme mood swings that cause relationship problems
- Having constant flashbacks or thoughts you can't get out of your head
- Distancing oneself from other people and favourite activities

- Unable to conduct day-to-day activities and chores (Holland, 2018)

Mental illness can severely affect an individual quality of life as it can affect their behavioural response to their surroundings. It can cause individuals to be severely debilitated, making it difficult to adequately respond and perform their everyday tasks and responsibilities. These difficulties often allude to a ripple effect that extends to an individual's sociability—creating tension, growing excessive uncertainties and stress that can significantly affect one's quality of life (Department of Health, State Government of Victoria, Australia. Mental illness, 2021)

2.2 Psychotherapy

Psychotherapy is the term used for the practice of treating mental health problems by connecting with a licensed therapist, counsellor, or psychologist (Mayo Clinic, Psychotherapy, 2021). Psychotherapy is one of the most effective ways to help restore mental wellness. It allows individuals to learn how to manage, regain control of their life, and respond to and cope better with challenging situations (Mayo Clinic, 2021). Primarily, psychotherapy plays a crucial component in determining mental health issues by diagnosing issues or illnesses. This helps narrow down supporting treatment by identifying what other details can be addressed and utilized to help individuals find a resolution that allows them to learn and practice mental resiliency. In light of the COVID-19 pandemic, awareness of and accessibility to various types of psychotherapy has become more prevalent. In Canada, access to diverse psychotherapy or counselling interventions can be obtained through general physicians' prescriptions or referrals, health line crisis phone numbers, or community health centres (Government of Manitoba, Mental Health Services, 2022). For some methods, like trauma-focused therapy, the treatment and psychotherapy can become more sensitive and fragile as it draws focus on subjects to recollect undesirable situations like

traumatic episodes and experiences. This type of psychotherapy method is common, particularly when treating illnesses linked with a history of abuse and trauma like post-traumatic stress disorder (PTSD). Hence, the environment where the therapy is conducted must contribute to the therapy practice by supporting patients and therapy providers.

Regarding therapy, the surrounding environment can constantly influence a person's emotional and behavioural response to the therapy session. The design of the physical parameters can highly influence the tone and direction of the therapy session's progress, setting the course and right frame of mind (Davies, N. Ph.D., Designing the Therapeutic Space, October 2018). According to Dr. Davies, when it comes to dealing with designing therapeutic spaces, some key factors suggested for consideration are:

- Room or Space Layout
- Color
- Seating
- Nature
- Materiality
- Soft furnishings
- Windows
- Privacy
- Personalization

In the context of therapy, one's experience with the spatial environment can easily affect their psychological perception of safety, intimacy, and social comfortability—not only to patients but also to the therapist themselves. These can highly influence mood, cognition, and the

occupants' behaviour in the space (Davies, 2018). Moreover, these environmental parameters contribute to the therapeutic process as they evoke patient emotions. Hence, with the sensitivity of the nature of therapy, these ecological parameters of the space can also be strategically designed by integrating elements into the room, such as intelligent storage units to store therapeutic instruments in use or acoustical dampening on vertical surfaces. By incorporating design elements that enhance the sense of privacy and personalization of the therapy room to the patient in therapy, the environmental parameters can help mitigate the effects of sensory stimulants, overall attributing to the progress and affecting the outcomes and experiences of the treatment.

2.3 Mental Health of Domestic Dogs

Like people, mental illness is also present in the health concerns of domestic animals involved in society, more commonly known as behaviour issues in domestic animals. Similarly, mental illness in domestic animals can affect their overall health, quality of life and even longevity (Oakland Veterinary Referral Services [OVRS], Mental Illness in Pets, June 2020). This state of health has been much observed among the most common domestic animal integrated into society, whether in the role of a household pet, service support or therapy support dogs. A trained dog's overall health is typically assessed through physical health status, such as wellness examinations, diagnostic testing, vaccination updates and preventatives (OVRS, 2020). However, a domestic dog's overall wellness is not reflected only in their physical health alone but also in their behaviour, emotional and mental state—all of which can affect a domestic dog's quality of life detrimentally (OVRS, 2020).

With a lack of clear communication, signs of mental illnesses among dogs can be harder to distinguish compared to people. However, despite the difference in verbal communication and

thought processes between people and domestic dogs, both groups experience similar behavioural anomalies, particularly in dealing with mental illness matters (OVRS, 2020). Some of the domestic dogs' most diagnosed mental illnesses are depression, separation anxiety, noise anxiety, obsessive-compulsive disorder (OCD) and dementia. According to Shelly Volsche, a professional dog behaviour consultant, these illnesses are often diagnosed with anomalies related to their behaviour, social responses, and demeanour like (Volsche, S. Signs of Mental Illness in Dogs, March 2020):

- Change in appetite or appetite loss
- Lethargy
- Hiding or withdrawing from social interactions
- Refusal response to water or treats
- Excessive sleeping or restlessness
- Diarrhea or vomiting
- Trembling
- Attempt of escapes
- Destructive behaviour
- Aggression
- Self-injuring behaviour

2.3.1 Rescue Dogs

Dogs have been integrated into various groups and roles; several landed within animal shelters or under humane rescue organizations with higher chances of suffering from trauma; these dogs are commonly known as rescue dogs. Rescue dogs are those who have been rehomed after experiencing abuse, neglect or abandonment from previous owners and dwelling situations

(Collins English Dictionary, Rescue Dog, 2020). Often, rescue dogs already suffer from mental illness and trauma (Reed, S. Adopting Rescued Dogs, June 2020). These are usually observed in various spectrums through their behaviours, body language, and social reactions. Some would reveal these signs through the change in their behavioural responses, like excessive fear and trembling once they are situated in a different environment. Others would show signs of behavioural changes once they sense triggering elements, like the sight of an object, the presence of a person, or even the creaking sound from a door opening (Reed, 2020). With domestic dogs expanding into different roles and support into society, they provide a significant boost to people that they provide social support, companionship, and active service; however, rescue dogs may have difficulties adhering to these roles due to their overall health debilitated by their mental traumas.

2.4 Behaviour Rehabilitation

As with people, they are addressing mental illnesses with rescue dogs is crucial as it affects their overall health. Strategies and methods in dealing with mental traumas and behaviour issues with dogs have been a growing practice that goes together with a facility designed for behaviour rehab recovery. In March 2013, the American Society for the Prevention of Cruelty to Animals (ASPCA) piloted the Behavioural Rehabilitation Centre program. This program facilitated and addressed behavioural rehabilitation for severely fearful, unadoptable dogs (ASPCA, Behavioural Rehabilitation Centre, May 2018). In aiding mental health issues with rescue dogs, it is essential to note that the goal is to ease their anxiety, lessen the effects of stress based on trigger identification and introduce association of the environment to be linked with safety and positive reinforcements. Some practical holistic approaches in aiding mental illnesses in rescue dogs are

providing enhanced behaviour modification techniques, positive socialization, positive support in training and environmental enrichment (OVRS, 2020).

2.5 Conclusion: Centre for Mental Support - People and Rescue Dogs

With the brief exploration of mental health matters between people and rescue dogs, there are aspects that the two groups mutually share and struggle with despite their difference in specie. Mutually, both groups can be affected by mental illnesses as it can significantly impact their behavioural, emotional, and social responses. As explored, each group has developed programs to address these mental health concerns in focus. Notably, it is found that in the process of treatment and helping patients cope with mental illnesses, both people and rescue dogs alike suffer from mental traumas. Each group's healing process requires keen attention to addressing their behavioural, emotional, and social reactions. Thus, this practicum study proposes to conduct a design solution that can help provide a spatial environment that can cater and shift to address these sensitive conditions involved with trauma processing.

Combining the therapy program of people with the rehabilitation program of rescue dogs gives opportunities for behavioural, emotional, and social confidence boost for all patients involved. With the benefits that animal companionship provides to people, as stated in the rationale section, along with benefits and the social familiarization that people offer to domestic dogs, it is presented how the presence of both patient groups provides mutual benefits to one another (McCune, S., Kruger, K.A, Griffin, J.A, Esposito, L., Freund L.S, Hurley, K.J., Bures, R., Evolution of research into the mutual benefits of human-animal interaction, July 2014). By bringing the two patient groups together, apart from the mutual benefits they can provide and attribute to each other's therapeutic process, they are also allowed to practice growth, fostering

relationships that can outlast days in therapy—in turn, flourishing symbiotic healing with one another.

With the symbiotic healing that can occur by bringing people and rescue dogs together in therapy, it is essential to note that merging the patients from each therapy process needs to be in a gradual transitional phase. Hence, it is necessary for the design intervention of this study to encompass spaces where each patient group can focus on their therapy processes. In these spaces, the collective pair (human and rescue dog patients) participate in therapy together. And also have areas that can serve as introductory spaces where the individual patients can be gradually introduced to one another. By providing rooms that can help the patients' individualistic, collective or familiarization phase of recovery, the spatial programming of the proposed design aids a forward step in every patient's journey to recovery.

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3.0. LITERATURE REVIEW

3.1. Introduction

Mental Health, according to World Health Organization (WHO), is one of the integral parts that make up the overall well-being and effective functioning of people in global, social and local communities (World Health Organization [WHO], Promoting Mental Health, 2004, pg.12). The state of an individual's mental health can affect their response to the different aspects of daily life —be it physical, social, emotional, and spiritual. Mental Health, in many factors, influence and affect all the intrinsic values as it serves as the core foundation for responses in the activities that people engage in; whether it be emotional, intellectual, communication, learning, resiliency and self-esteem (Parekh, R.M.D, What is mental illness? August 2018). It has material and immaterial values that can influence an individual's quality of life.

This occurrence of a healthy mental state of mind influencing an individual's overall wellness is not only applicable to people but also to the other domestic members of society, like common domestic animals like dogs. The presence of dogs in workplace settings has been increasing in frequency –whether it be in a role as a guide dog, therapy dog, police dog, or emotional or service dog (Foreman, A.M., Glenn, M.K., Meade, B.J., Wirth, O., Dogs in the Workplace: A Review of the Benefits and Potential Challenges, 2017 May 08). Unlike humans, dogs in service cannot express their discomfort or challenges. Nevertheless, it does not mean that their overall wellness should be overlooked, especially when their health condition may be compromised—despite their working members of society.

To better implement how the design for the Centre can support the therapy process, a general understanding of mental health disorders and causes will be briefly explored. After that, certain types of mental health treatment and conditioning will be analyzed from the separate target

patient groups, people and rescue dogs. For people, the theory of Eye Motion Desensitization and Reprocessing (EMDR) Therapy will be explored; In contrast, Behaviour Conditioning training will be explored to understand the health parameters that can be supported for rescue dogs. By exploring these therapies, the study presents the mutual process that each medicine undergoes – particularly with the process of desensitization facilitated through repetitive exposure, the impact of sensory stimulants, understanding thresholds and the importance of routine in the overall cycle. Through this exploration, the mutual process of healing between people and rescue dogs is extrapolated, informing the design strategies for the Centre to address the design programming where individual and collective therapy spaces are received. This study also shows how the built environment facilitates part of the treatment using spatial programming. Optimizing the spatial planning to formulate a circulation pattern that translates to a regime can also reduce the routine practices and desensitization process necessary in trauma processing.

3.1.1 Mental Wellness

Wellness, by definition, is the state of being in good health (Oxford, 2021). For every individual, wellness is not distinguished as a reference to a static state of being. Instead, it is associated with the ability of individuals to be in a resilient form of mind where they can make choices that provide optimal holistic health, allowing individuals to be in a mindset of thriving instead of surviving in their daily lives (Pfizer, What is wellness, 2020). However, wellness is composed of several key areas. According to Global Wellness Institute Organization, there are six general dimensions of wellness: physical, mental, emotional, spiritual, social, and environmental (Global Wellness Institute Organization [GWI], What is wellness, 2020). Harmony between these different dimensions of wellness should be intertwined for individuals to attain holistic health and continue resiliency continuously. For the study of this practicum, only the dimensions of wellness associated with the conditioning and pursuit of mental health will be explored: intellectual, emotional, and social. Simultaneously, each segment will also study the impact and attribution of the built environment from each topic. These dimensions of health will be utilized as a catalyst to explore and synthesize the mutual aspects that people and rescue dogs share in their rehabilitation process. Moreover, this will also help the study

Figure 1. Wellness Infographic by Global Wellness Institute 2020.

to identify what elements should be integrated into the design of the built environment so that it can resonate with the process of healing with patients.

3.1.2 Mental Wellness and Mental Resiliency

Figure 2. GWI. Mental Wellness Infographic. 2020

Mental wellness is an internal resource for individuals, allowing them to think, feel, connect, and function in their community and, overall, in society (GWI, Mental Wellness, 2020). It pertains to an individual's ability to be resilient or have mental resiliency; to find a sense of balance within one's own life, despite any life adversaries (GWI, 2020). With this, it is linked that the state of an individual's mental health can highly

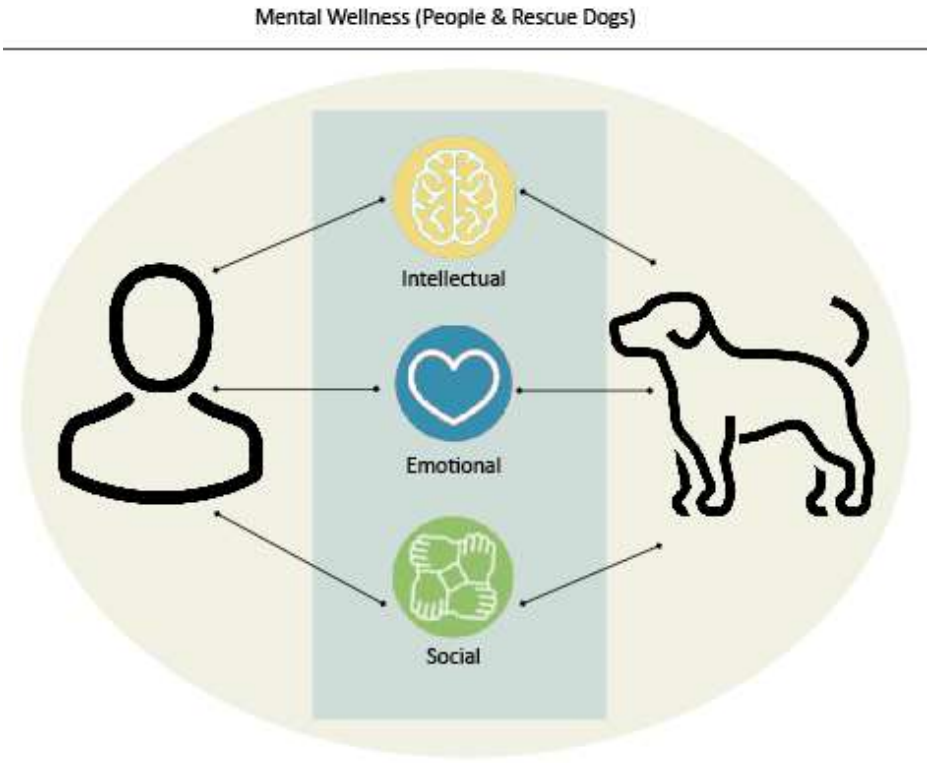


Figure 3. Mental Wellness - Parallel between People and Rescue Dogs. Diagram illustrated by Paula Combate (2022).

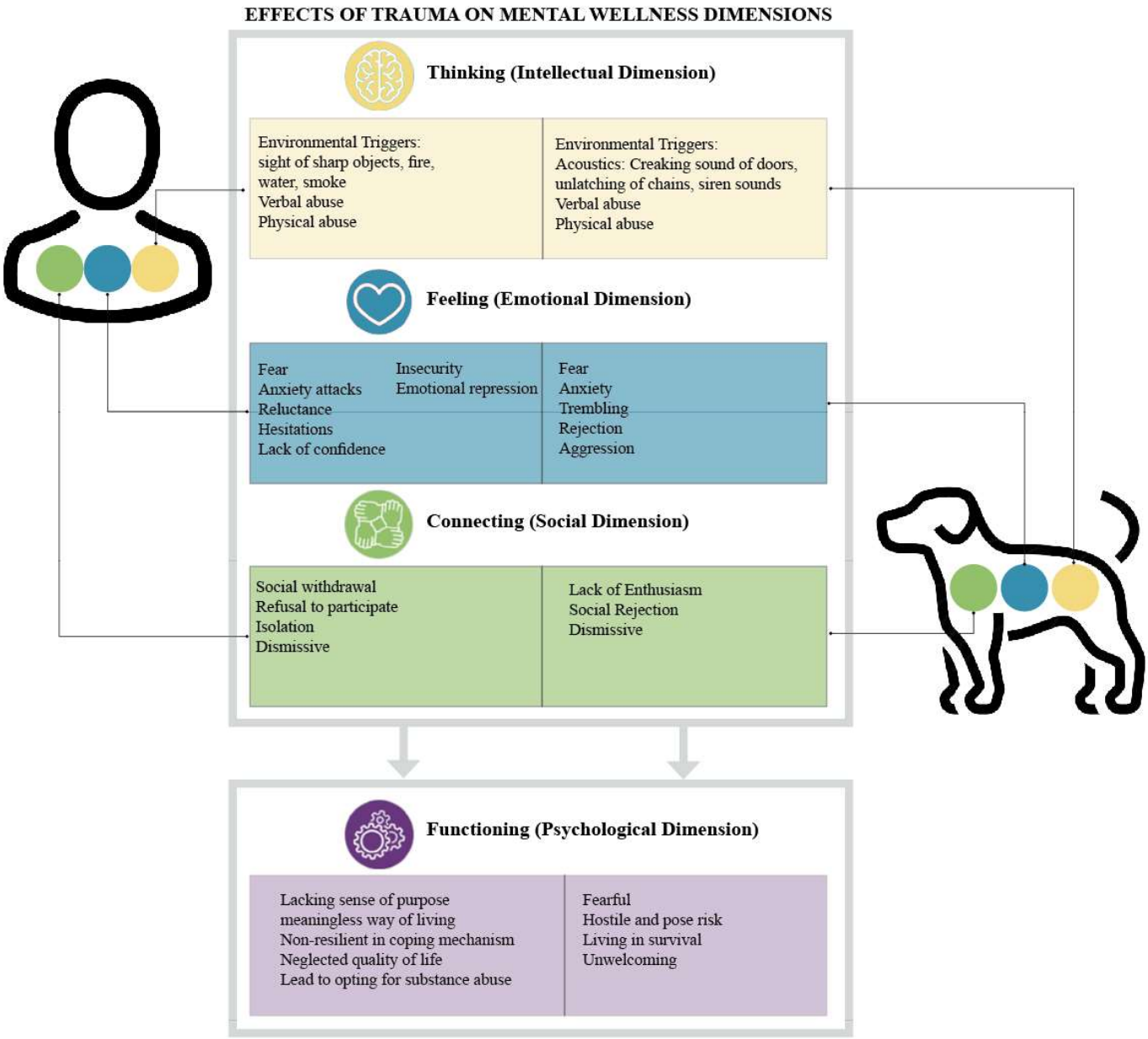


Figure 4. Effects of Trauma on Mental Wellness Dimensions. Diagram illustrated by Paula Combate based on GWI and OVRS data (2022).

influence and serve as a conduit in attaining mental wellness. However, for individuals that struggle with mental illnesses, achieving mental wellness can prove to be challenging as the opportunity to have mental resiliency is continually impaired by inflicted and existing traumas, all applicable to both people and rescue dogs.

As illustrated by GWI, it is identified that intellectual (mental), social and emotional dimensions of health are associated with mental wellness. With the lack of mental health balance, achieving mental resiliency and mental wellness is compromised. The state of one's mind can wholly affect not only one's physical body but also one's quality of life. Thus, interventions that would support individuals dealing with mental health are critical in these circumstances. GWI has also presented key strategies into main pathways to support and guide in practicing mental resiliency that can help lead to mental wellness.

The behavioural therapy process conducted within Eye Motion Desensitization Reprocessing (EMDR) Therapy and Behaviour Conditioning will be correlated using the dimensions of mental wellness. With this synthesis, the key strategies following the main pathway to mental resiliency by GWI will also be used as a basis to draw the parallel; presenting how the

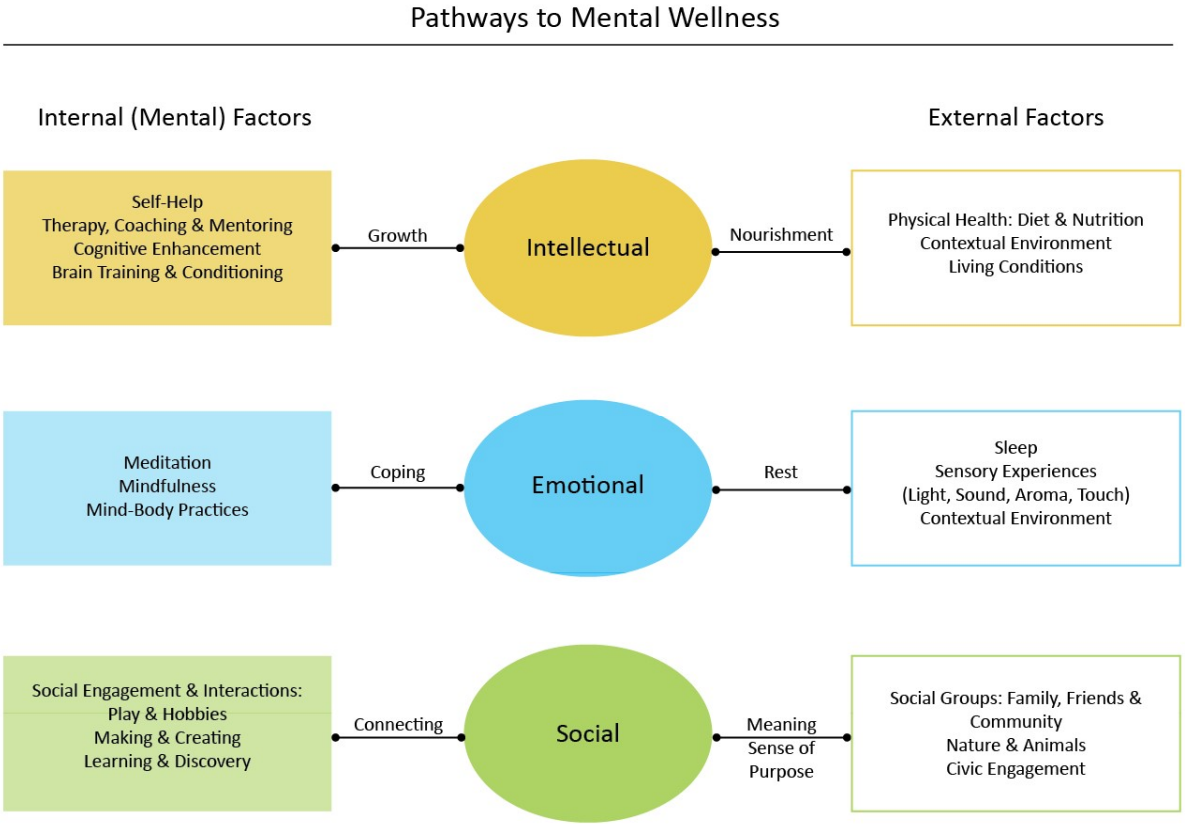


Figure 5. Pathways to Mental Wellness. Diagram illustrated by Paula Combate based on GWI data (2022).

recovery process binds together with the built environment and, in turn, making the process of therapy to be engraved with a spatial and experiential quality path to recovery. Hence, providing patients support in their therapeutic process by keeping their presence of mind within the active environment, resonating with their recovery.

3.1.3 Intellectual Dimension

The intellectual dimension of wellness embodies an individual's way of thinking, their thought process, and situating one's narrative in the context of their surroundings. This wellness dimension displays one's method of thought processing, even in fundamental aspects of engaging the world through learning, problem-solving and creativity (GWI, 2020). It is essential as it drives the nature of how individuals would handle stress, their ability to relate to others and comprehend consequences linked with their active choices. Many factors can severely impact an individual's intellectual stability. Traumatic experiences and psychological problems can primarily influence their thought process and even the environment they grew up in. Any of these elements that can affect a change in an individual's way of thinking can lead to the development of mental illnesses. Some mental illnesses' effects are partly based on faulty or unhelpful thought patterns and patterns of learned unhelpful behaviours (Cassady T., What is Cognitive Behaviour Therapy, July 27, 2020). Understanding how thinking patterns can influence the other underlying connections to mental wellness is essential as this intellectual process is strongly linked with one's emotional and social responses to others and their environment.

In the following sections, a particular method of psychotherapy for people and behaviour correction training for rescue dogs will be examined to understand how each intervention addresses the cognitive and intellectual aspects of the patients involved. Findings from the topic will also be

utilized to analyze what elements can be integrated into the built environment to enhance and support the activities within the intervention.

3.2. Eye Motion Desensitization Reprocessing (EMDR) Therapy

3.2.1 Intellectual: Eye Motion Desensitization Reprocessing (EMDR) Therapy

EMDR is an interactive psychotherapy technique often used as a treatment to relieve psychological stress; often a benefitting approach for individuals suffering from mental illnesses related to trauma, like depression, domestic abuse, anxiety attacks or PTSD (Gotter, A., EMDR Therapy, July 2019). Found by Dr. Francine Shapiro, the EMDR method utilizes one of the patient's senses, typically the sense of sight, probing it to perform rapid rhythmic movements and bilateral stimulations. In contrast, patients are asked to recall certain aspects or events related to the trauma. (DerSarkissian, C., EMDR: Eye Movement Desensitization and Reprocessing, November 2021). During this process, the recollection of the trauma will include the emotions and body sensations that pair with the trauma. Each time the traumatic event is recollected, the therapist utilizes identified elements from the traumatic and trauma triggers to be reprocessed. Through this reprocessing, therapists help patients associate trauma triggers and thoughts with more pleasant ones until the recollection of the traumatic memories no longer causes distress or severely debilitates one's responses (DerSarkissian, 2021). Patients are gradually and actively involved with reprocessing their cognition, keeping their presence of mind to be actively responding to the therapy. Over time, with continuous reprocessing, the treatment helps gradually dampen the negative emotions associated with the trauma triggers, allowing individuals to be less disabled by their thought processing.

However, with the nature of EMDR therapy and trauma reprocessing and recollection, it is easy for individuals to experience overwhelming sensitivity as they are subjected to recollecting unpleasant memories. With the risk of overwhelming individuals during the process of therapy, active participation and response can be compromised, and in turn, this can also regress the individual's recovery progress. Hence, therapy must resonate with the environment where it is conducted.

3.2.1.1 Process of Eye Motion Desensitization and Reprocessing Therapy

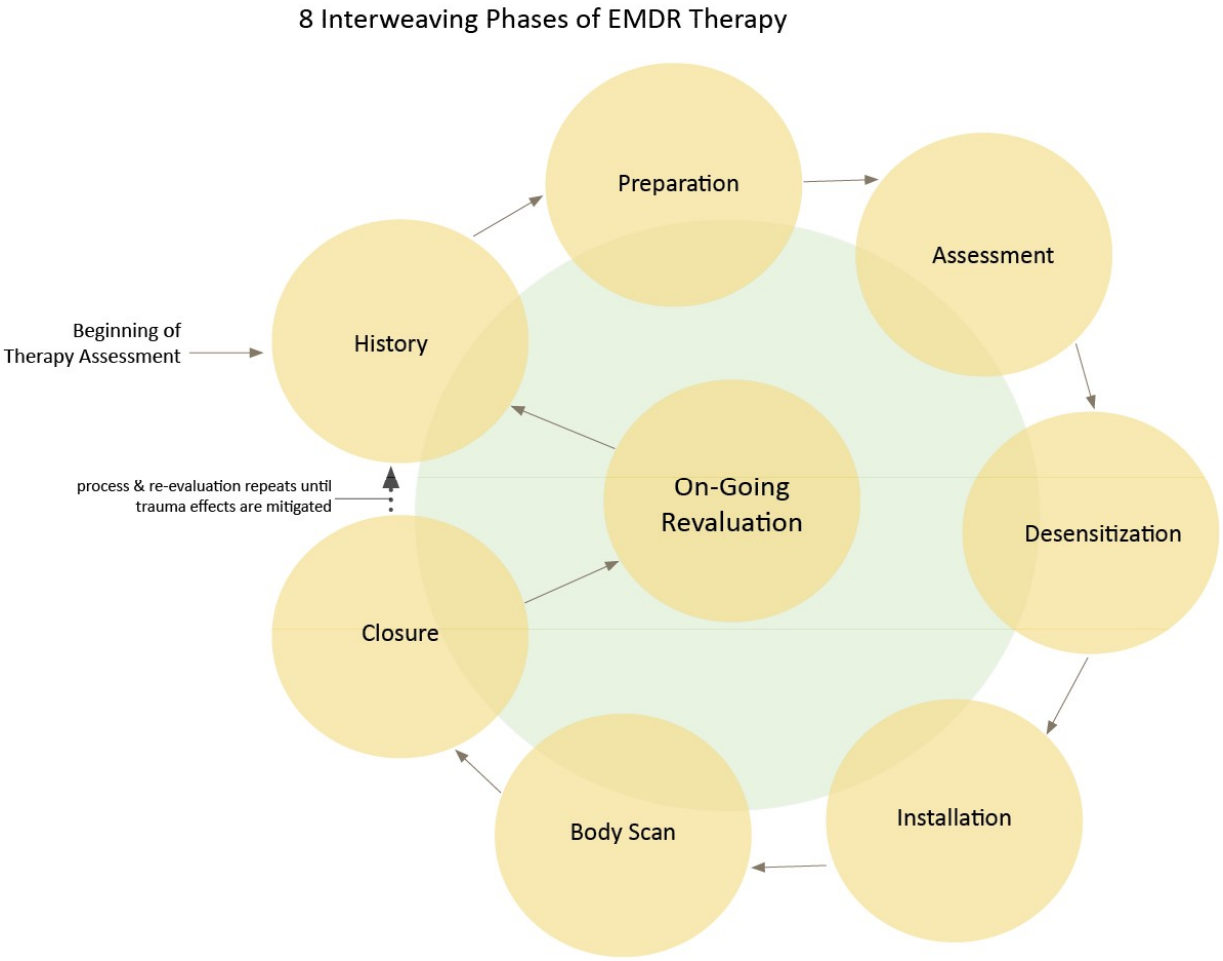


Figure 6. Crystal Blanton, LCSW. Eight Interweaving Phases of EMDR Diagram illustrated by Paula Combate following Blanton's article. https://blantonlcsw.com/about/

During EMDR therapy sessions, individuals are subjected to focus on recalling negative thoughts, memories, or images in brief fragments. While the subject reflects the details of the harmful elements of the experience, the therapist simultaneously diverts their eyes to follow specific movements. The therapist may stimulate these movements through different stimulants. The most common inspiration for therapists practicing EMDR is bilateral movement, typically asking their patients to follow their finger with their eyes as it moves back and forth. Some therapists may include tapping hands or toes, musical tones, or other body movements, depending on an individual's case (DerSarkissian, 2021). After each stimulation, the therapist will ask

individuals to draw their minds blank. After that, therapists aid patients by allowing them to reprocess what simultaneously comes up in their thoughts and emotions during the bilateral movement activity. Gradually, therapists will help guide patients' negative thoughts to be shifted to more pleasant and positive points (DerSarkissian, 2021). This process is also known as desensitization. Desensitization is the psychological process of mitigating one's emotional and behavioural response toward certain stimuli through repetitive exposure (Bushman, B., Cantor, J., Violence in films and television, 2003). This treatment method aims to gradually lower the level of distress that traumas inflict on an individual and allow them to reprocess the traumas to be less disabling. By desensitizing the harmful target sources of trauma to be paired with positive elements, the process will enable memories to be neutralized and negated. This process also lessens the disturbing effects these triggers pose on the subject, allowing them to regain control of their mental state and refocus themselves on the present.

During the bilateral movement stimulation on patients, therapists alter their method of stimulation per case. These bilateral stimulations conducted by the therapist to the patients involve activities that maneuver their visual, auditory, or tactile senses in rhythmic patterns (Grant, M., What is bilateral stimulation, January 2014). A therapist can conduct these bilateral stimulations differently (see table 1).

Table 1. Bilateral Stimulation Examples by Mark Grant, MA, Clinical Psychologist. January 2014.

Stimulation Type	**Stimulation Activity**
Visual	• Involve patients repeatedly watching the therapist's hand alternating from left to right for a short duration.

	• Involve patients to visually follow a moving light alternating from left to right. • Involve patients to bounce their focus of vision from decorative frames on opposite sides of the room to alternate back and forth.
Acoustic	• Involve patients in listening to tones from two alternative sides of the head. This activity could be facilitated using auditory equipment like headphones or speakers.
Tactile	• Involve patients to tap a specific body part in a rhythmic pattern alternatively. o Alternatively, tapping each knee. o Alternative tapping on each leg. o Alternatively, tapping on each shoulder o With a participating therapy animal, involve patients in alternating patterns of petting on the animal's body.

These stimulations often require the therapist to work with assistive equipment as the method of bilateral stimuli for each patient differentiates from each case. Hence, it would be beneficial for the therapy rooms that provide this bilateral stimulation to be designed with physical parameters that offer seamless integration of these assistive elements into the space. By creating a therapy room with integrated bilateral stimulants, the therapy space allows the therapy providers to alter the area as needed per patient. The chances of therapy traces from previous patients lingering are lessened with the ability to work in a therapy environment with fewer equipment traces. In addition, designing a space that seamlessly integrates bilateral stimulants and equipment

into the therapy space provides patients with some security if the therapy room they are integrated into exuberates an atmosphere that caters exclusively to their case.

3.2.1.2 Desensitization – Sand Play Therapy

With the EMDR therapeutic process requiring patients to focus on a client's recollection of disturbing emotions and circumstances, expressing these sensations can be difficult. For many patients, verbally expressing these emotions can be challenging and problematic. For these instances, one method of the process that can also be integrated into the EMDR therapy treatment is the sand play therapy activity. Contrary to the expressive verbal communication that follows upon bilateral stimulation during the desensitization phase of the EMDR therapeutic process, sand play therapy is a non-verbal graphic form of therapy. It involves encouraging patients to use miniature toys, figurines, various objects, and water in the sandbox of their choice (Good Therapy, Sand Tray Therapy, May 2020). Often, the end design of the patient's sand tray reflects a microcosm of their inner mind, allowing patients with non-verbal methods to express complex emotions subconsciously. Through this method, the patient's sand tray becomes an allegory—a symbolic representation of the patient's inner mind. Patients are provided with processing steps to recognize the connection between their sand tray and their inner mind with guidance and aid from the therapist. Through the sand play therapy technique integration, the challenges of patients struggling with verbal communication in the desensitization phase of EMDR are correlated. Hence, allowing the process of EMDR to continue.

Figure 7. AnnaMarya Scaccia, 'Sandtray Therapy', The Austin Chronicle (July 2016).

3.2.2 Emotional: The Metaphorical Arena

Apart from providing an alternative technique for desensitization, the symbolic representation and play technique can also be translated into the therapeutic space. The patients' sand tray can be translated metaphorically to the built environment by having a therapy arena that serves as a life-size sand tray. The therapy arena has been a known element integrated into Equine-Assisted Psychotherapy (EAP) practices. EAP is an animal-assisted therapy practice that incorporates horses into the therapy sessions. The integration of horses and therapy arenas into psychotherapeutic interventions has yielded benefits to patients suffering from mental illnesses as the horses, with their herd dynamics, provide a parallel socialization and behaviours of those in therapy (Kakacek, S., An Arena for Success: metaphor utilization in equine-assisted psychotherapy, October 2007). The therapeutic components within EAP often involve 1) participation of horses as part of the therapy-providing team, 2) a sequence of semi-structured

activities that provides a level of challenge to patients that engages them to procure creative strategies to achieve resolution, and 3) the use of a non-traditional setting space that is set with physical parameters that provide a sense of openness, not bounded by environmental elements that conjugate certain behaviours in standard rooms (Kakacek, 2007). The basis of the intervention provides an immersive, experiential, and solution-focused activity for patients to reprocess their trauma by allowing social interactions between the patients and the horses into the therapy arena. With the utilization of how therapy arenas provide support to patients and therapists in EAP, it can be presented how a therapy arena could provide strong support for EMDR therapy participants, especially for the patients who struggle with verbal expressions.

With the correlation of the process of EMDR between bilateral stimulation, sand play therapy and the opportunities for animal-assisted treatment to be integrated, it would be beneficial for EMDR therapy participants to have access to treatment. Differentiating from the typical therapy arenas utilized in EAP, it would provide the Centre benefits to integrated therapy arenas that work on a smaller scale that is workable with the integration of domestic dogs as the participating therapy animals instead of horses. By providing a scalable therapy arena, EMDR patients and therapy can translate the interpretations within the patient's sand tray to be correlated in an immersive experience. Additionally, the therapy arenas allow patients to reprocess their thought in an interactive approach, gradually fostering social connections and positive interactions with all participants in the space through the activity-based routine.

3.2.2.1 Emotional Dimension: Role of Environment in Trauma Processing

In trauma processing, the environment where the therapy is conducted must support recovery progress. In the setting of trauma processing associated with EMDR, individuals are

posed with situations of being retraumatized with the recollection of traumatic events in therapy. The therapy environment must function as a grounding element to help the therapy process keep the patient's presence of mind active in the therapy session. This method is also known as the 5-4-3-2-1 Grounding Technique. Grounding techniques help mitigate experiences of flashbacks, anxiety, uncomfortable symptoms, and negative emotion by turning one's attention away from the recollection process and refocusing on the present moment (Schuldt, W. Grounding techniques, 2018). Using the five senses, the 5-4-3-2-1 grounding technique works so that individuals are purposefully strived to notice the intricate details of the surrounding environment that are typically overlooked by the mind (Schuldt, 2018). By keeping this method in mind, elements of the physical environment act as an activating agent to help patients return focus to therapy and stop the

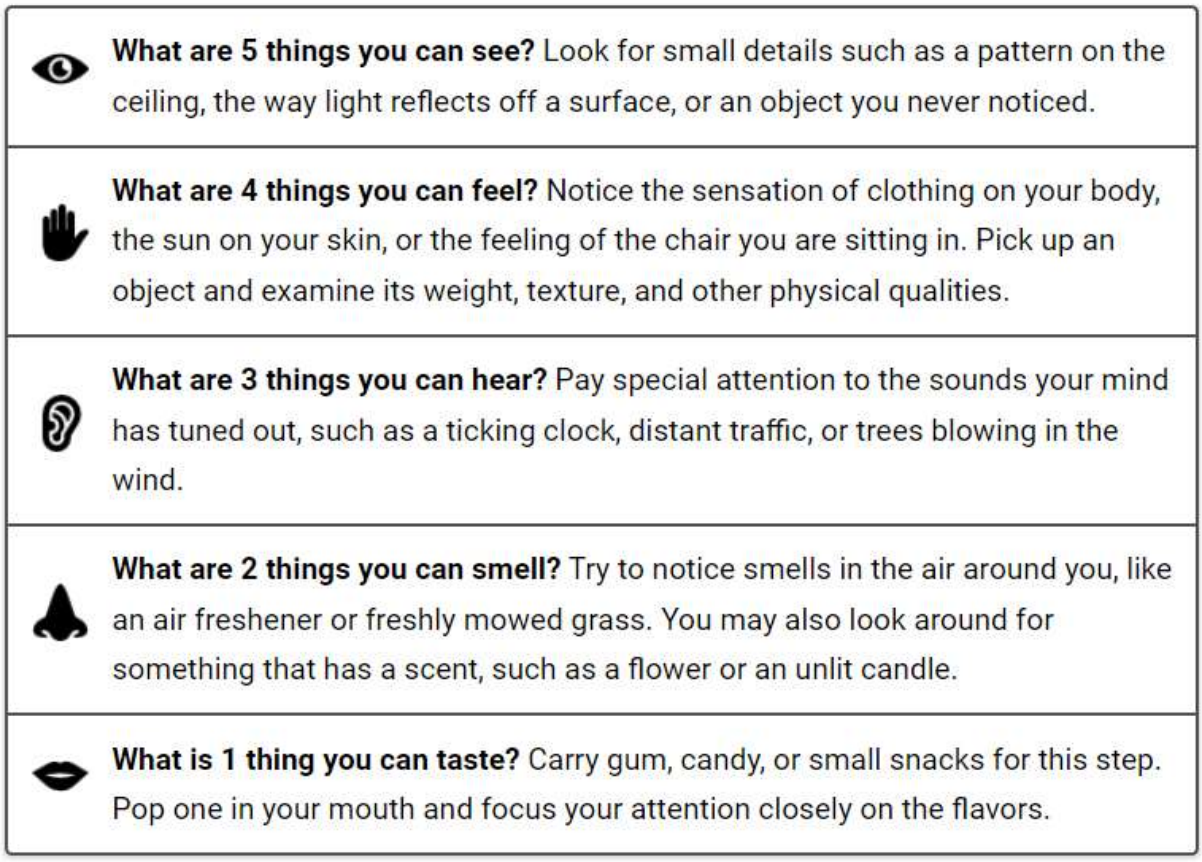


Figure 8. 5-4-3-2-1 Technique by Woody Schuldt, LMHC. Grounding Techniques (2018).

escalation of resurfacing negative emotions. This can be integrated into the therapeutic space's design through selective colour elements, material finishes and integration of natural ingredients like plants.

It is also important to note that apart from grounding, the therapeutic space can also highly influence how patients behave and respond to the therapy; for areas used for trauma processing like EMDR, most patients entering the site are emotionally vulnerable. Hence, the environment must emit a sense of calmness, comfort, and freedom to allow individuals to feel comfortable enough to disclose their vulnerabilities. This aspect of the built environment can be integrated into the therapeutic design through spatial layout (Reilly, G., Designing the right headspace, July 2017). By strategically considering the spatial structure of the therapeutic room, the therapy can frame the session to be non-confrontational (Reilly, 2017), diminishing any sense of social hierarchy during the process. Moreover, considered spatial layouts for therapy can also address how the importance of privacy for the patients is provided, which contributes mainly to their sense of safety within the space. These emotions emitted on patients in the therapeutic environment are essential as they can affect the patient's trust and confidence in disclosing sensitive information into the therapy—this hugely affects the progress of the treatment. By noting how the built environment can evoke many emotional effects on patients, it is presented how the design of a therapeutic setting can significantly impact the direction and progression of therapy. Through this exploration, it is also realized how the built environment can direct the therapeutic process and inform unintentional social hierarchy through design strategies like sensory grounding elements or spatial layout. Thus, providing synthesis that spaces serving as therapeutic environments are critical in assisting the therapy process.

3.2.3 Social: Secure Attachment

With EMDR therapy practice focused on trauma and negative emotion reprocessing, the risk of patients feeling overwhelmed and drowned in negative emotions is inevitable. With reprocessing emotions in EMDR, the risk for symptoms, anxiety, and signs of illnesses to surface and persevere is continuously posed. Support in trauma processing—whether in environmental or social factors, if not accounted for in the therapeutic process—can undoubtedly affect and delay a patient's progression in the therapeutic process. In the previous section, it has been identified how the built environment can help in therapy processing. By providing consideration and purposeful integration of design elements and strategies, the built environment can actively support therapists and patients by serving as a grounding element.

More than just the therapy treatment and the active grounding that the built environment provides in the healing process, secure attachments are among the most critical necessities individuals require in trauma processing. It is essential to facilitate secure attachments in trauma healing. According to Dr. Greenwald, "secure attachment is important in trauma healing as it enhances an individual's resilience in the face of adversity, fosters emotional and nervous system regulations, as well as increases the capacity for stable interpersonal relationships" (Greenwald, 2018). It is important for patients seeking trauma healing to have secure attachments as they can serve as a pillar of support that provides repertoires for patients to have better coping skills that can wholly link to healthier relationships and better social support for an individual's healing progress (Greenwald, 2018). Secure attachments are essential as they help patients, especially those undergoing trauma processing, sustain balance and harmony during the therapeutic process. This helps foster patients to continue in the facilitated therapy program, propelling patients to continuously foster self-regulation habits for recovery (Greenwald, 2018). In the process of trauma

healing, secure attachments serve as the emotional and social support in a patient's battle of continuously facing their negative point. Secure attachments can significantly improve a patient's response to therapy and gradually transgress themselves to associate traumas with a more positive sight. The therapeutic intervention is utilized and maximized by noting such attachments to provide patients with optimal care. With the importance of facilitating secure attachments within the therapy session, therapy offices must provide a sense of exclusivity and privacy dedicated to each patient. Thus, the therapy offices and the therapy arenas must be flexible (Hutton, K.P, Personal communication, December 2021). By creating the therapy offices and halls to have room for flexibility and accessible storage, the tools or instruments used to interact with every patient can be arranged to whatever fits them best.

3.2.4 EMDR Therapy: Conclusion

The exploration of EMDR therapy presents what fragile and vulnerable states undergo in trauma processing. From recognizing and combating traumatic thoughts and trauma-associated factors, battling sensory overload from experiencing surges of negative emotions and re-establishing a social foundation that could provide secure attachments. Patients under EMDR therapy and individuals struggling with mental illnesses encounter the same imbalance regarding their intellectual, emotional, and social patterns. One of the critical issues in mental illness is the feelings of isolation and loneliness. Isolation and loneliness can be linked to an individual's impaired ability to make or keep relationships, lacking opportunities to participate in social activities and stigmas associated with mental illnesses within their community (Perese & Wolf, Combating loneliness among persons with severe mental illness: social network intervention' characteristics, effectiveness and applicability, July 2005). Hence, for the program proposed by this practicum study, individuals like the patients under EMDR therapy are one of the

demographics and prime group that would benefit best from a Centre programmed and explicitly designed to work with trauma processing, not only for people but also for rescue dogs.

This section's exploration of EMDR therapy presents how sensory parameters can significantly impact patients within the therapy offices. During the healing phase, where negative trauma processing occurs, patients can experience excessive negative emotions that may disrupt their progress during a therapy session. During this time, the design of the built environment facilitates part of the treatment for patients by acting as a grounding element to revert the patients' presence of mind to the therapy session. This can also mitigate the adverse behavioural effects that may occur. In this aspect, the application of sensory design elements to the built environment serves as a critical element to consider, especially for EMDR patients, as the spatial aspects do to act not only as a grounding element for patients but also function as a mitigating agent to reduce possible trauma stimulants to patients in therapy. These sensory design spatial elements can be distinguished in the subtle details integrated into the therapy office, like the texture of the seat upholstery, the presence of a decorative plant or the blue colour of the carpet in the space. These spatial elements, although subtle in detail, can facilitate to support the progression of treatment within the therapy offices.

3.3. Rescue Dogs and Mental Trauma

In the context of addressing trauma healing with rescue dogs, which is more commonly recognized as behaviour issues, unlike with people, rescue dogs do not comprehend that the therapeutic intervention serves to improve their well-being. Rescue dogs respond instinctively. Due to their histories, which may or may not be known, rescue dogs' responses and progress with therapeutic intervention can vary (Hatch, A., The view from all fours: a look at an animal-assisted activity program from the animal's perspective, April 2015). Rescue dogs often land within animal shelter settings, rooted in various reasons, like abandonment, owner surrender, neglect, or abuse from dwelling situations (Hatch, 2015). For many dogs, especially in cases where they are owner surrendered or abandoned, the experience of being left behind can inflict an excessive amount of trauma projected through signs of fearfulness, aggression, timidness and overall emotional shutdown in the dogs' demeanour (Bissell, J. Adopting a dog who has experienced trauma, June 2019). With rescue dogs inhibiting behaviours that cause negative impacts on them emotionally, their chances of being rehomed to a new family where they can participate in a role and belong again in a pack weakens. With this outcome, the quality of life for rescue dogs is compromised. In other cases, if behavioural aggressions persist in dogs, they may be labelled as a liability as they may inflict harm to people or other animals in society and be subjected to behavioural euthanasia (Gibeault, S. When to consider behavioural euthanasia, November 2021). Considering these situational outcomes that may occur to rescue dogs, it is presented how behaviour conditioning for rescue dogs can significantly change their course of life. In animal shelter settings, by providing rescue dogs with some basic conditioning techniques and behaviour modification, opportunities to lessen the impact of their behaviour issues are mitigated, providing improvements to the rescue dogs' behavioural reactions within the shelter (Thorn, K. et al. pg. 26). These considerations offer

them with a better chance of performing a role in society. Whether as a household pet, companion, emotional support, a therapy dog or even a potential service dog, it gives the rescue dog a chance to have a better quality of life. Hence, it is essential that behaviour rehabilitation and conditioning be addressed.

Rescue dogs' behaviour issues and struggles can also be assessed similarly by looking at their intellectual, emotional, and social dimensions of health. Although rescue dogs may communicate their dialogue differently due to their lack of verbal speech, they still express dialogue through their body language and behaviour. However, their conveyance of emotional struggle is often limited to people's interpretation of these responses. Rescue dogs' response to behaviour conditioning is comparable to the therapeutic interventions with people, like EMDR, as they share mutual goals. This section of the practicum study will explore Behaviour Conditioning, mainly through the lens of BF Skinner's Operant Conditioning theory and how it has been utilized to support behaviour rehabilitation among rescue dogs, particularly in enhancing behaviour modification with rescue dogs affiliated with existing behaviour issues and triggers. This section will also explore existing programs that conduct behaviour rehabilitation for rescue dogs.

3.3.1 Intellectual: Operant Conditioning

B.F Skinner's Operant Conditioning is a method of learning where consequences are associated with positive or negative reinforcement. These reinforcements help determine the probability of repeated behaviours (McLeod, S. What is Operant Conditioning and H, ow Does It Work, 2018). Operant conditioning is one basis of animal training learning (McLeod, 2018). This conditioning method works with the principle that behaviour followed by pleasant consequences is likely to be repeated, while behaviour followed by unpleasant effects is less likely to (McLeod,

2018). In the context of rescue dogs, their trauma experiences, especially ones that reveal signs of excessive mental trauma, could exhibit various behavioural responses. There may be numerous established elements that the rescue dogs may have grown to associate with positive or negative consequences intellectually. Most dogs' display of reactive or aggressive behaviour channels their response to certain stimuli.

Table 2. Operant Conditioning - Theory Basics by Jennifer Cattet, Ph.D.

Reinforcement Type	**Reinforcement**	**Consequences**
Positive Reinforcement (Additive Consequence)	When the behaviour occurs, something is added that will strengthen it, making it more likely to happen again. • Giving food or treat • Giving attention • Giving them a toy • Giving praises	When the behaviour occurs, something is added to weaken the behaviour that would make it less likely to happen again. • Hitting • Restraint • Electric Shock
Negative Reinforcement (Subtractive Consequence)	When the behaviour occurs, something is removed that likely strengthens the behaviour to reoccur.	When the behaviour occurs, something is removed that

	• Removing the pressure on the leash hold when the dogs stop pulling	weakens the likelihood of the behaviour reoccurring. • Removing a toy or resource that they desire

These behaviours may often project in a rescue dog through the change in their body language, sudden excessive barking, or excessive shivering (Hatch, 2015), to name a few. These natural responses elicited due to prior, unknown stimuli are called respondent behaviours (Martin, G., Pear, J., Behaviour Modification, pg. 168). These responses can reveal a plan of approach as to what can be integrated as the reinforcement with operant conditioning, especially for all the individuals involved in the treatment process for a rescue dog's rehabilitation. This is where operant activity plays a big part, as it helps provide the first steps in delivering essential conditioning.

Prior behavioural assessment before initiating any behaviour modification is necessary for rescue dogs. This is important because it can direct where conditioning can take place in aiding mental trauma in rescue dogs, yielding important information as it identifies triggering factors and causes of certain behaviours. It can be utilized and integrated into behaviour modification training with the rescue dogs by identifying what acts as a trigger. By observing and identifying where they show negative behaviour responses, operant conditioning is used as a training method to help mitigate the behavioural response or associate the stimuli for the answer to be conditioned more positively. Gradually, with increased exposure, training and threshold, this conditioning method

can help neutralize or lessen the severe adverse behavioural reactions it causes to rescue dogs. In some cases, it may even eradicate the negative response overall.

Operant conditioning has been widely used as a basis in animal training. One of the best examples of operant conditioning's utilization is within animal shelter settings, in the context of rescue dogs, many lands within the walls of animal shelters. With many of them showing signs of behavioural issues coming from traumatic settings and histories, it was recommended by various researchers in the early 1990 that essential conditioning techniques be provided to shelter dogs as it has shown to decrease stress and improve their behaviour (Thorn, J. et al., pg. 26). One of the best evident examples of this is the primary conditioning of shelter dogs—to sit. By conditioning and training dogs to sit, there is a duration for the intervention to be processed and taught to the dogs.

3.3.1.1 Intellectual - Conditioning Rescue Dogs to Sit

In this essential conditioning, trainers, even at a novice level, involved in the intervention can allot minimal training (between 10-15 minutes) at a consistent pace to the dogs. Using operant conditioning, trainers can use an identified object as positive reinforcement or a reward. In this conditioning process, the rule of thumb is to provide positive support if the dog exhibits to accomplish the conditioned behaviour of sitting down or retaining the position. By providing positive reinforcement each time the dog repeats the act of sitting or controlling sitting on the trainer's cue, the dog affiliates the positive reinforcement to be linked with their behaviour. In effect, they increase the likelihood of repeating the behaviour as they are rewarded for it. The conditioning skill of sitting is critical as it allows not only the trainers but also the rescue dogs to retain a steady composure, regardless of succeeding tasks. Conditioning dogs to sit is a skill that

is applicable and can benefit all other following interactions that the dogs may encounter. Some of these encounters could be exiting a kennel, exiting the shelter (to the outdoors) and when a person approaches the dog for petting (Thorn et al., 2006, pg. 37).

Apart from the benefits of preparation for succeeding encounters that essential conditioning entails, the practice of activity alone allows rescue dogs to have ample exposure to social interactions. By allowing multiple trainers, whether it be novices or volunteers, in the settings of the animal shelter, the continuous practice and conditioning of the dogs exposes them to various social interactions (Thorn et al., 2006, pg. 37). Enough to be able to generalize and get habituated in acquainting with strangers. In this situation, the negative behaviours that rescue dogs elicit are mitigated, while their cheerful demeanour and behaviours are amplified with repetition and constantly receiving positive encounters and reinforcements.

With operant conditioning in part of providing basic conditioning skills to rescue dogs, simple conditioning methods show promises that serve as a foundation for the following days and health prognosis of rescue dogs. Using positive reinforcement and rewards in the intervention, encounters, and activities can gradually be introduced by non-enforcing. With constant mounts, conditioning patterns and training, activities allow rescue dogs to build confidence and regain some energetic spirit with the presence of positive reinforcements as a motivating factor in their routine. By using this method of essential conditioning in increments, the positive reinforcements are not only associated with the identified desired objects but also with the environment and social interaction within the activity. With the ability of rescue dogs to retain a positive behaviour, the situational context of the conditioned behaviour could gradually be increased to be linked with the rescue dog's response.

Operant conditioning, especially in aiding mental trauma by assessing the behaviour of rescue dogs, requires multiple trial and error processes from both subject dogs and the trainers. Hence, it would be beneficial for all participants involved in behavioural conditioning to have a flexible space to freely explore various methods to identify the possible existing stimulus and assess how to facilitate conditioning training. Moreover, trainers could adjust and expand the grounds for training and conditioning by having a flexible space. By adjusting these parameters to be linked with a rescue dog's response and prognosis to the behaviour modification, the positive behaviours are even more amplified with activities, allowing rescue dogs to regain energy, positive interactions, and motivations, making them more lively and socially able to interact.

3.3.2 Emotional: The Environment, Counterconditioning & Desensitization

Like people suffering from mental illnesses, a rescue dog's respondent behaviour unveils many versions of f discomfort and disturbances when presented or exposed to situations that act as a stimulating agent. These are often identified:

- Socially- through their body language,
- Emotionally - through their behaviour and
- Intellectually- through their general response.

These respondent behaviours are also linked with how rescue dogs associate themselves with their natural surroundings and environment. These situations are connected with classical conditioning. Classical Conditioning, attributed to Pavlov, follows the principle of learning through association (McLeod, S. Classical Conditioning, November 2021). According to Instinct Dog Behaviour and Training, behaviour responses are linked with how dogs feel and how their emotions are associated

with a stimulus (Instinct Dog Behaviour and Training, Counterconditioning & Desensitization, February 2019). Depending on what trigger is affiliated with a rescue dog's natural reaction, these reactions emit stress responses and cause an involuntary range of physiological changes such as increased heartbeat, increased breathing rate or excessive panting, heightened alertness and increased sensitivity to viewpoints and sounds (Instinct, 2019). In these situations, it is essential to note that the rescue dogs' behaviour is a natural response to a pre-associated stimulus. Hence, after providing operant conditioning to stabilize rescue dogs' composure, identified triggers must be used to conduct counterconditioning and desensitization. Counterconditioning and Desensitization use the principle of classical conditioning by using the identified triggers to be associated more positively or neutrally through gradual increments of exposure to the trigger factors (Instinct, 2019).

In addition to operant conditioning, counterconditioning and desensitization are central when it comes to aiding mental trauma among rescue dogs, as this allows them to reprocess the triggering factors of their trauma to be disassociated with negative consequences (Fitzsimmons, P., How to Heal an Emotionally Traumatized Pet, February 2018). Desensitization gradually reintroduces patients with a low level of associated stimulus within a safe, non-threatening environment with a low level of related inspiration (Fitzsimmons, 2018). In increments, gradually exposing rescue dogs to their trigger factors allows the dogs' adverse reactions towards them to dissipate instead of escalating (Instinct, 2019) slowly. Over time, with repetition, the rescue dogs'

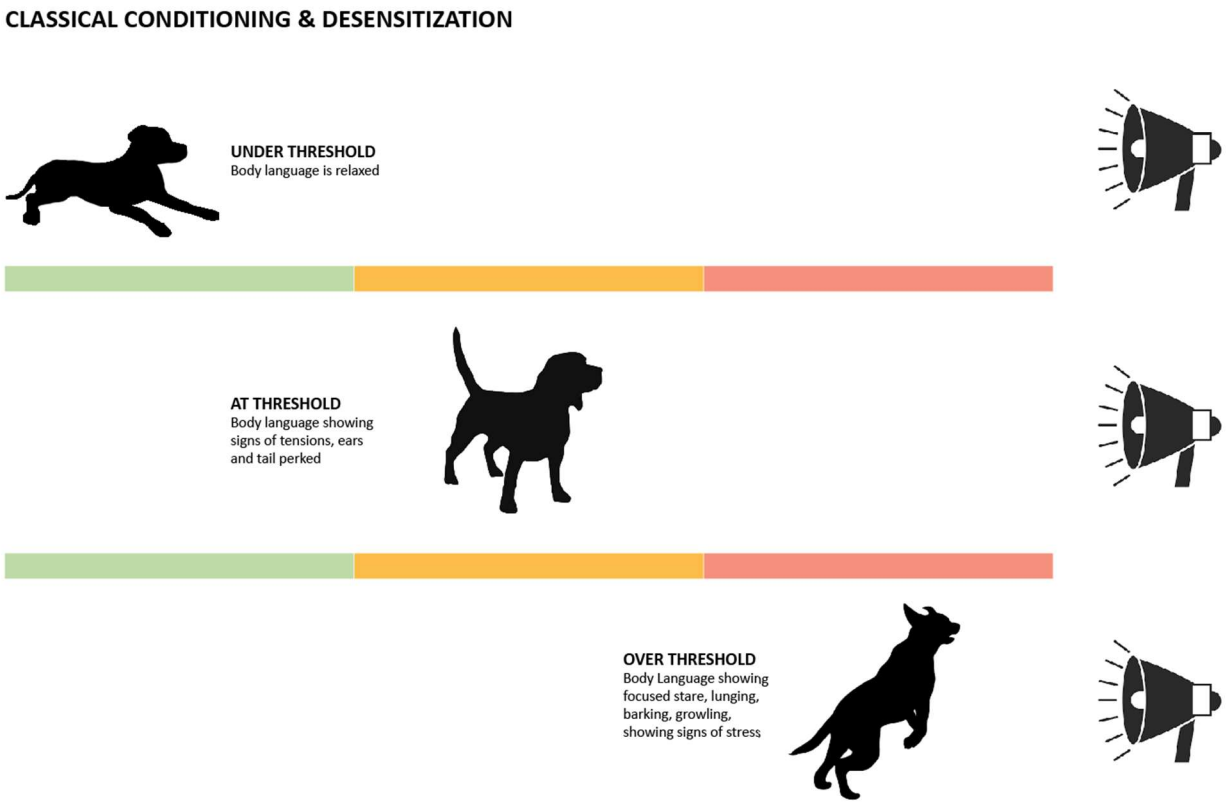


Figure 9. Effective Counterconditioning & Desensitization Diagram. Illustrated by Paula Combate following Instinct Dog Behaviour & Training Data (2019).

behaviour towards the stimuli would get desensitized, inflicting no escalation or presence of negative response. Moreover, this gradual exposure allows rescue dogs to be desensitized to a low-stress level, which helps keep the spike of negative behaviours at a minimum level (Instinct, 2019).

3.3.2.1 Emotional: Traumatic Environments

One of the key examples where counterconditioning and desensitization are most critical and applicable for rescue dogs is the setting within animal shelters. As mentioned earlier, many rescue dogs land in animal shelters (Bissell, June 2019). With many rescue dogs inhibiting signs of mental trauma, it is likely that the origins of their traumatic behaviour also stem from traumatic environments. For many rescue dogs with pre-existing traumas, entering the animal shelter can aggravate their conditions. For many dogs, the traditional animal shelter provides the kennel life experience in confined spaces and exposure to frequent barking and minimal human interactions (Thorn, Templeton, et al., 2006). For many dogs within shelters, their interactions with humans are often limited to only the staff and services within the shelter. Hence, their social exposure is during high-level activities, such as kennel cleaning, feeding, daily walks and interaction with the public (Thorn, Templeton et al., 2006). These settings are not optimal, especially as the first point of rehabilitation for many dogs, as these traditional animal shelter settings design subject dogs to minimal social interaction with humans while consistently exposing them to high levels of noise due to all the barking of all other dogs in the shelter (Coppola, C., Mark Enns, R., Grandin, T., Noise in the Animal Shelter Environment: Building Design and the Effects of Daily Noise Exposure, 2010, pg.2).

Noise is one of the primary factors that serves to be a physical stressor for dogs and any animals (Coppola, Enns, Grandin, 2010). The excessive noise level, especially within animal shelter settings, can lead to behavioural, physiological, and anatomical responses to dogs, making it an animal welfare concern (Coppola, Enns, Grandin, 2010). To provide behaviour conditioning to treat or mitigate mental trauma among rescue dogs, it is presented how behaviour conditioning, especially with a focus on desensitization and counterconditioning, would highly benefit from a

space specifically designed to serve as a training or conditioning space. This would help the behaviour conditioning to be the main focus activity of the area, allowing the participating rescue dogs to be the central focus that would benefit, as the subject, the most. By providing a space that separates it from more functional areas, such as main corridors or hallways, or adjacent to a window that sees into a high-traffic street or hallway, the number of stimuli that can distract and heighten the anxiety is mitigated. It would be highly beneficial if these facilities were provided with spaces that can focus on helping rescue dogs receive some essential conditioning in a trigger-free environment and minimize the negative impacts of mental trauma on their overall health. To provide better behaviour conditioning that would assist rescue dogs in mental trauma treatment, it can be assessed that strategic acoustic, spatial design and programming are necessary – particularly in the kennel and dwelling design and layout for the shelter dogs in residence.

3.3.2.2 Emotional: Designed Environment - Mat Training

Much like conditioning dogs to sit in an environmental setting where behavioural rehabilitation occurs for rescue dogs, it is also helpful if there are integrated elements in the space that trainers or handlers could utilize as a cue or an additional reinforcement for the behaviour training. One of the basic conditioning training examples that benefits from this is the mat training method in dogs. Like the benefit of conditioning dogs to sit discussed in the Operant Conditioning section, mat training is another essential conditioning skill that could benefit dogs undergoing behaviour rehabilitation. This behaviour conditioning skill can implement necessary desensitization by allowing the dogs to associate the mat with serving as a cue that is associated with rewards or positive reinforcements (Miller, Mat Training Tips, 2019). Participating dogs in the training ponds to tips that mitigated their fears and trauma. This behaviour conditioning is also

beneficial, as it allows trainers or handlers in the activity to expand the area of training and transition the training space to be less constricted to be on par with the recovery progress response of the dogs. Eventually, with consistent training and routine, this essential conditioning of dogs associated with the mat becomes a self-reinforcing element to the dog. Regardless of the size of the training grounds, with mat training, the dogs associate the rug with being correlated with rewards, safety, or a restful place at times of stress (Miller, 2019).

With mat training, a behaviour training room with colour-coded spaces on the flooring can be considered for the design. By integrating visible colours for dogs in a behaviour training room, the built environment's configuration can support the trainers and handlers in conducting the conditioning activity. Moreover, integrating the colour cues into the built environment with essential conditioning could also hugely foster how the dogs associate some aspects like the mats as a cue for positive reinforcement and rewards and the environment.

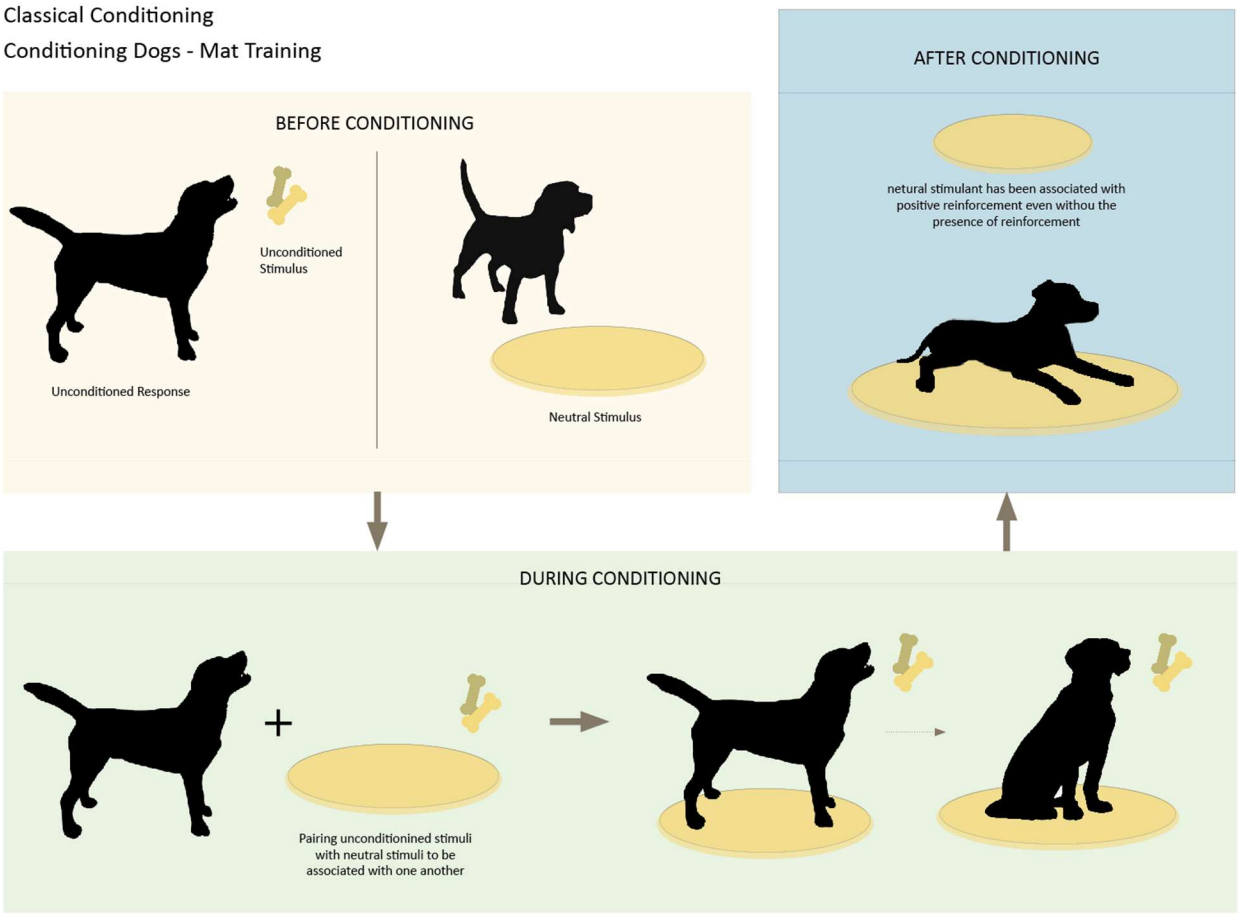


Figure 10. Mat Training. Diagram Illustrated by Paula Combate (2022).

3.3.3 Social: Human-Animal Interaction

Much like people, rescue dogs are innately social beings. Dogs naturally desire social contact with others. Over time, this innate gravitation toward social interaction has been drawn to be more aimed at humans with domestication (Ng, Z., Albright, J., Fine, A.H., Peralta, J., Our ethical and moral responsibility, 2015, p. 361). Hence, one of the critical components in addressing mental trauma among rescue dogs with behaviour modification is the opportunity for socialization. Socialization, for many rescue dogs and within shelter settings, is regarded as a necessary component that contributes to the good welfare of an animal (Ng et al., 2015). Be it social exposure to people or social exposure to conspecifics (same species), dogs need to have social connections.

However, among social interactions, especially in rescue dogs, human contact has yielded more impact as it showed reflective results that emitted a sense of calmness and relaxation for dogs. These findings have been observed through the various forms of sensory stimulation, including but not limited to the behavioural responses they show at the sense of touch, light pressure, warmth, stroking, olfactory, auditory, and visual cues that they have received from their interactions with people (Ng et al., 2015). For many rescue dogs, the benefits of social interactions with humans have also been widely noted in animal shelter environments. It has been reported that human contact with the dogs residing within shelter dwellings has lessened the severity of trauma's impact on rescue dogs, especially during their adjustment period of coping with the change in their environment (Thorn et al., 2006). This has been widely evident in numerous studies, particularly in shelter settings, that dogs with a minimum of 25 minutes of human interaction – with gentle exercise and play time- have shown more positive changes in their behaviour (Ng et al., 2015). It has also been noted that through the gradual integration of human contact within the dogs, a significant improvement in the rescue dogs' confidence, social response, and temperament over time (Ng et al., 2015). In this manner, it has upheld a smoother transition for many rescue dogs to be habituated to human social interactions and cope with environmental changes. Hence, rescue dogs can manage a more manageable transition from residing within the shelter to home (Thorn et al., 2006). This allows rescue dogs to get refamiliarized with social interactions, which in turn, will enable them to regain self-confidence and not be debilitated by their mental traumas – ultimately allowing them to be able to open to socializing with a new family and increase their chances of being adopted and find a new home.

Despite most of the positive effects that human socialization brings upon rescue dogs, it is also essential to recognize that for some dogs, human contact can also serve as the stimulant that

triggers changes in their behaviours. These negative behaviours are commonly observed through signs of uneasiness from the rescue dog, such as excessive panting or yawning during even the simplest petting received from people (Ng e al., 2015). The presence of humans and the sensory elements that generate, whether it be their noise, scent, or warmth, can alter behaviour in dogs (Ng et al., 2015); noting that many rescue dogs have pre-existing traumas that may have been elicited through their previous social interactions with people, gradual familiarization to a must occur with a set of individuals, especially in the beginning for most trauma cases. Allotting patience and enough time duration to allow the rescue to get familiarized with people, the chances of inducing stress upon the rescue dog are mitigated. Social familiarization, particularly with rescue dogs, has been presented to be vital as it was observed that dogs who have been familiarized with individuals and have been petted shed more appeased gestures and redirected their behavioural response to be more responsive and enthusiastic towards people (Kuhne, Hobler, Struwe, Applied animal behaviour science, 2012). On the other hand, the rescue dogs' interactions with unfamiliarized individuals often yielded uneased gestures, such as lip licking, paw lifting or lying down, especially if petted or touched on specific parts – indicating a source spot that may influence or induce trauma-associated behaviours (Kune, e al., 2012). With society's familiarization of people with rescue dogs, it is essential to essential these can be affected by many factors to a rescue dog's pre-existing traumas associated with their past. Some of these factors may be influenced by a rescue dog's response to people based on their gender, size, mannerisms, or even just by the tone or pitch of an individual's voice (Ng et al., 2015) with social familiarization, especially in the context of allowing rescue dogs to receive behavioural conditioning from trainers or handlers. The opportunity to have them interact with people would be highly beneficial if introductory spheres are integrated into the design of the Centre. An introduction space would serve as a place where

people involved in the practice, whether trainers, handlers, guests, or potential adoptees, are introduced to the rescue dog. In animal shelter settings, introductory meetings are highly suggested, if not mandated (McConnell, P., Mandatory introductions at shelters, January 2014). These meetings are encouraged as this determines how shelter dogs candidates fair with potential adoptees. With the intended program for the Centre, introductory spaces can highly serve as a conduit space, allowing rescue dogs to be introduced to patients from the EMDR therapy. This way, patients from EMDR and behaviour therapy are provided with an opportunity to connect before preceding treatment as a pair unit.

3.3.4 Behaviour Rehabilitation: Conclusion

The exploration of Operant conditioning presents how trauma reprocessing for rescue dogs, like with people, entails a lot of reprocessing that involves stimuli for negative behaviours and reactions to the surface. For many rescue dogs, the behaviour conditioning process requires patience, understanding, persistence and consistency. With some factors of the uncertainty of their history, which may be the root of their existing traumas, the interactions and the built environment must provide a sense of familiarity to rescue dogs. Providing this sense of consistency and routine allows rescue dogs to regain some constant familiarity with their surroundings that can mitigate feelings of fear with abrupt and unpredictable changes and enable the behaviour modification practice to embed itself with the rescue dogs. By providing this constant routine to rescue dogs, through the essence of behaviour training and the built environment, the ensemble can emit a sense of home and safety for them. Ultimately, this allows the rescue dog to associate the whole Centre as a positive reinforcement that provides them with positive interactions and atmosphere.

Like people, rescue dogs undergoing behavioural issues can benefit from positive social interactions. As explored in this section, the built environment can act as a support for behaviour conditioning practice. Integrating architectural elements and finishes within a space where behaviour conditioning is provided, aspects in the built environment can assist trainers or handlers in providing cues associated with reinforcements. The strategic application and material differentiation on the floor surface in a behaviour training room could help support trainers involved in mat training. Moreover, providing a layer of visual blocking, like applying frost finishes on glazing surfaces, can help control the number of stimulants that may cause challenges during behaviour conditioning practice.

By exploring the process of behaviour conditioning for rescue animals, it is also presented how parallel the trauma treatment process for rescue dogs is with the therapeutic process of EMDR. Integrating the behaviour conditioning with patients in EMDR therapy, with both patients under the different therapies experiencing different versions yet similar sensations, presents an opportunity for symbiotic healing and congruency. The proposed program for the practicum study provides an opportunity for the design of the built environment to serve as an instrument that can help foster support for the recovery process of the patients involved with the unison of the two therapies. Overall, the unison of treatments into one design Centre ultimately allows different treatments of two other species, yearning for positive social interactions and support to be connected. Allowing opportunities to help rebuild their resiliency, foster better growth and coping mechanisms with each other's trauma reprocessing, and, ultimately, achieve a sense of healing from their internal traumas.

3.4. LITERATURE REVIEW: CONCLUSION

Through the exploration of EMDR therapy and Behaviour Conditioning, the literature review study has shown how trauma patients, whether people or rescue dogs, undergo similar healing processes. For many patients, due to their inhibited traumas, when triggered by stimulating elements, these traumas inflict negative experiences and memories to resurface, causing negative emotional impact and behavioural responses to occur. As a result, these trauma effects often hinder patients, debilitating their ability to perform and function in their daily tasks effectively. Despite the differences in the patient groups, the study exploration has drawn how they experience similar needs and difficulties undergoing the intervention process—particularly in dealing with their intellectual, emotional, and social challenges.

For both people and rescue dogs, the literature exploration identified that both patient groups require expert intervention to provide effective therapy and better their chances of healing. For people, under EMDR therapy, the psychotherapy process is conducted in repetition through the induction of bi-lateral senses to be activated among patients as they are probed to recollect a targeted negative memory or experience. Through this process, depending on every individual's case, the recollection and reprocessing of the memory may inflict some negative behavioural response that can cause the therapy session to be halted. For rescue animals, on the other hand, in the behaviour conditioning process, many rescue dog patients are subjected to being gradually familiarized with their environment through counterconditioning/desensitization. During this process, the levels of the threshold limits and increments as to what rescue dogs can tolerate vary. Thus, it can resurface negative behavioural responses and regress the rescue dog's progress in their trauma healing. Although different in species, the withdrawal responses of both people and rescue dogs to the therapeutic intervention present similar characteristics.

Hence, with the exploration of this directed literature review, this practicum study proposes a spatial program and design that facilitates addressing the individual therapeutic intervention and provides an opportunity for collective healing for the two patient groups.

Intellectual: Routine and Repetition

art of the design solution proposed is to utilize spatial planning in the programming to facilitate a pathway that conducts a sense of routine and repetition. As discussed in the literature review, this typical pattern can also be integrated into the spatial design with the importance of practice and repetition in desensitization. By incorporating a sense of routine into the design planning and treatment process in a similar context of desensitization, the spatial structure of the built environment acts as the natural guide to the beginning of the treatment. .

Emotional: Sensory Design

Through the exploration of both therapies, it was also presented how one of the critical elements that can contribute hugely to the patient's therapy progress is the built environment where treatment is received. In both therapy explorations, it is noted how the surrounding environment can act as an activating agent that can evoke emotions in the patients (Kreitzer, M.J, What impact does the environment have on us, 2016). This point is critical for people and rescue dogs, as it can influence a patient's behavioural response and affinity to cooperate with the therapeutic process. Furthermore, with understanding the context of pre-existing traumas that are needed to be navigated with by therapy providers, it can be noted how important it is for the design of a therapeutic space to be highly coordinated so that it can provide a sensitive environment—a design

approach using Sensory Design methods and strategy. By noting how trauma triggers can cause negative behavioural responses to patients in the space, it is presented how critical the therapeutic area is designed with high sensory design considerations. It would be most supportive to all the occupants for a space to be strategically designed with sensory design applications that supports to facilitate therapy in progress. As mentioned in the EMDR section, some of these sensory design elements and spatial applications can occur in subtle gestures, like the texture of a floor rug, selective coloured instruments in therapy like kinetic sand or the coloured hues of a therapy office's carpet flooring. By embedding these design elements into the natural ambience of the space, the space functions as a grounding element to a therapy session (for people) or as a preluding reinforcement in behaviour conditioning sessions (for rescue dogs). Moreover, strategically applying sensory design elements into the space mitigates adverse sensory effects and stimulants to patients in therapy.

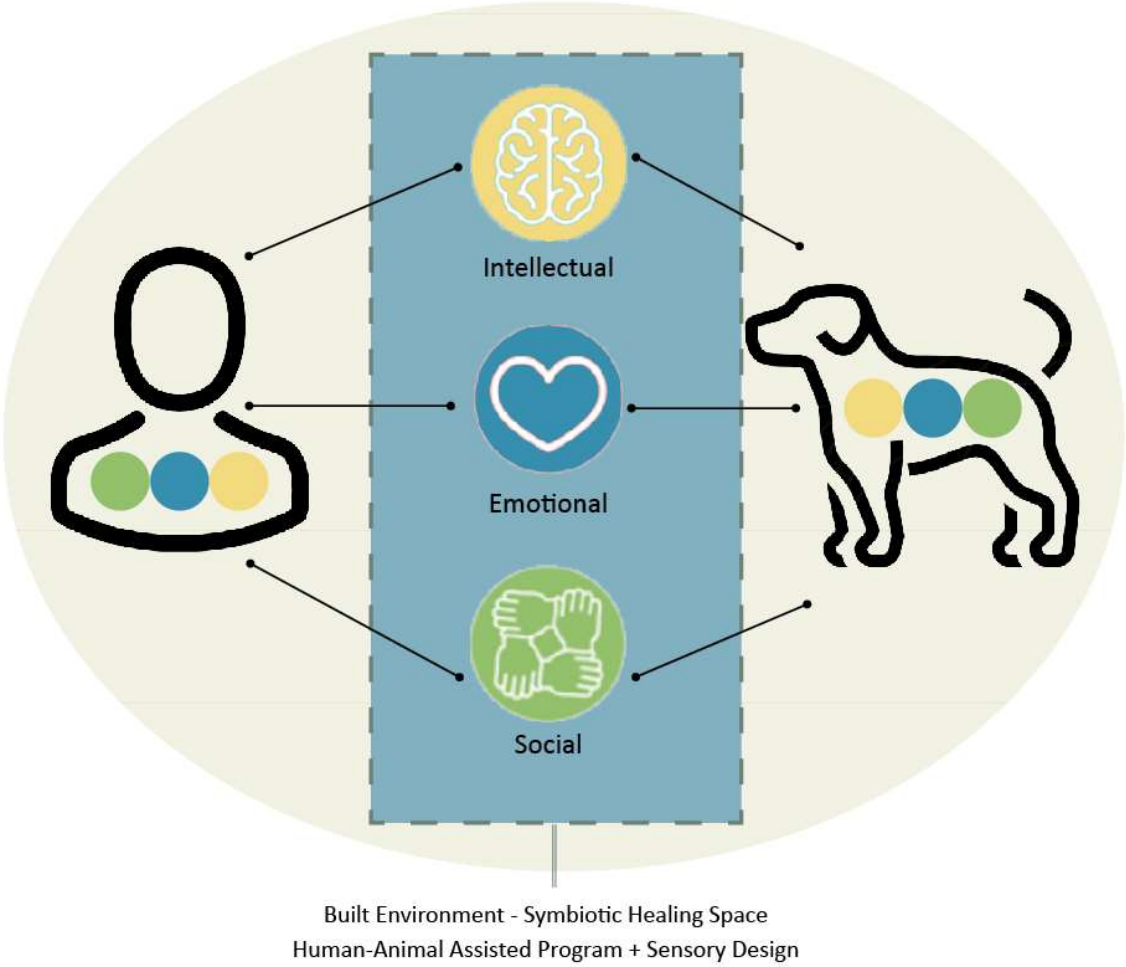


Figure 11. Symbiotic Healing Space for Human-Animal Assisted Therapy (2022).

Social: Bringing Therapy Patients Together

With the exploration of these two therapeutic interventions, it is presented that even with professional expertise in the therapy practice, there are windows of opportunity to help support and sustain grounding for patients undergoing therapy. Having explored these two therapeutic methods particularly, the practicum study identifies that while the two treatments are subject to negative experience reprocessing, there is an opportunity for each specie to serve as social support to one another in the process by providing an opportunity for the therapy services to be

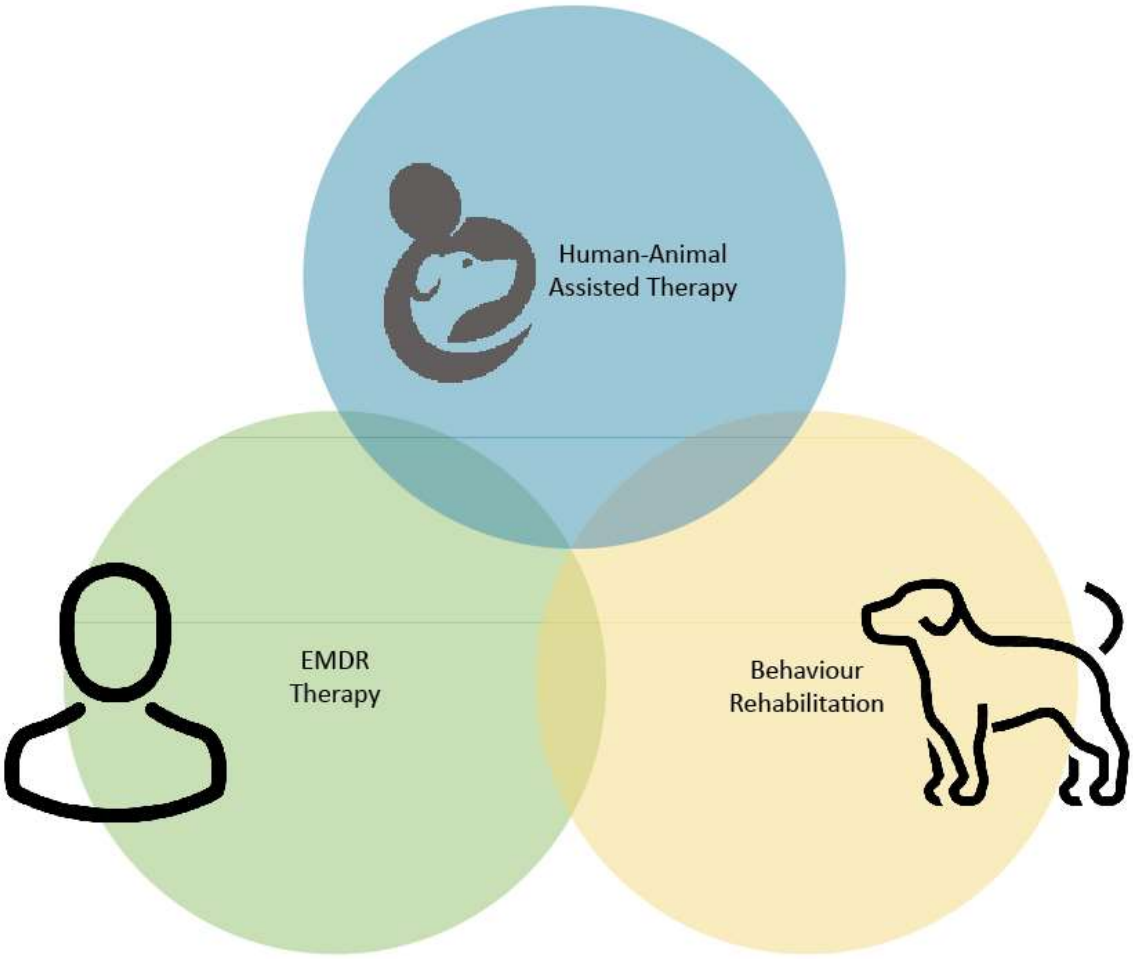


Figure 12. Concept-Image of Human-Animal Assisted Therapy in Symbiosis.
Diagram Illustrated by Paula Combate (2022).

programmed to be conjoined with one another. Patients from each therapy are also given opportunities to provide support and comfort and assist in the healing process of the other—a symbiotic healing process. This point of merge within the therapy process is also known Human-Animal Assisted therapy. By adding this point of intertwining between the two treatment opportunities for patients in the treatment foster connections, find social comfort through another individual undergoing similar circumstances, and provide a sense of companionship the two therapies to transition into a human-animal assisted treatment, both patients are given ample support and opportunities to practice and tether their trauma healing and mental resiliency and perhaps foster and practice resiliency beyond the bounds of the therapy process.

Further, to cater to the gradual integration of the therapy patients into one another, introductory spaces and activity spaces where the patients can freely roam will be included in the spatial planning and design. Elemental areas will allow for each patient, people and rescue dog to be gradually introduced and gain familiarization with one another.

4.0 PRECEDENT ANALYSIS

4.1 Program & Design Precedent: Peace of Mind Therapy Centre

Peace of Mind Therapy and Consultation is a therapeutic centre in Winnipeg, Manitoba. This Therapeutic Centre provides a range of psychotherapy and consultation services, including, but not limited to, EMDR therapy, cognitive behaviour therapy, psycho-educational assessment, and equine-assisted therapy. Under the leadership of Dr. Kelly Hutton, the program and services available within the therapy centre strive to provide psychotherapy service, uniquely and adeptly,

Figure 13. Peace of Mind Therapy and Consultation. Photo retrieved from Peace of Mind Therapy & Consultation website (2021).

for all ages – children, adolescents, and adults (Hutton, K.P, Personal communication, December 2021). The shape of the program under the Peace of Mind therapy centre also provides opportunities for internships among master's and Ph.D. students. Every therapist works collaboratively and integrative with each of their patients. Some key therapeutic strategies this

therapy centre provides are EMDR Therapy, cognitive-behavioural therapy (CBT), dialectical behaviour therapy and Acceptance and Commitment Therapy (ACT).

4.1.1 Therapy and Facility Dog

Apart from these psychotherapy strategies, this therapy centre is unique in how it integrates animals into the therapy. The therapy centre, in-house, has a golden retriever therapy dog named Abby. Abby serves as a therapy and facility dog at the therapy centre – helping during the therapy sessions. According to Dr. Hutton, as a trained therapy and facility dog, Abby provides a big help during therapy sessions as she detects when the window of tolerance, the threshold, for a patient's processing trauma has been reached. Abby would often present this indication by approaching patients and providing them with a sense of touch – whether by nudging their nose to the patient's hand, lifting their paw to touch the patient, or placing her body to lean against the patient's weight. These responses rooted in Abby provide aid to both patient and therapy provider. Abby helps the patients by giving them a sense of touch for grounding techniques. At the same time, Abby also provides an indicator to the therapy provider when the window of tolerance to processing the trauma is breached; thus – a pause or a recalibration within the therapy process is in need.

4.1.2 Equine-Assisted Therapy

One of the unique programs that Peace of Mind also provides is Equine-Assisted Therapy. Peace of Mind therapy centre offers patients access to Equine-Assisted therapy where they can work with horses. Equine Assisted-Therapy is supplied in the Symatree Farm, located near Oakbank, Manitoba and is separated from the leading therapy centre. Symatree Farm is a known farm specializing in horse therapy, with about 19 horses under their care. Horses from Symatree

Figure 14. Peace of Mind Therapy and Consultation. Therapy Arena in Symatree Farm, Oakbank, Manitoba. Photo Retrieved from Peace of Mind website (2022).

Farms are mainly from rescue, auctions and abandonment, unideal situations, and dwellings. Hence, patients from the Peace of Mind therapy centre also bring an induction of therapy to the rescue horses in Symatree Farms. The activities involved in Equine-Assisted Therapy occur within an arena, where the patient, the therapists and the rescue horse are together.

In Equine-Assisted-Therapy sessions, the horses in the therapy are an integral part of the therapy process. With horses belonging under the category of herd and prey animal type, a horses' natural way of responding to their surroundings is essentially and immediately reflected in their

feedback. Often, during equine-assisted therapy, especially with the involvement of a rescue horse in the process, the response of the horses during activities and interactions provides therapy patients with an insight into their therapy process. By integrating horses with the patients, the horses' response often provides a symbolic reflection of a patient's experience, feelings, and behaviour. Thus, allowing the therapy to enhance self-awareness will allow patients to expand their tolerance and threshold gradually.

This precedent study provides insight into the practicum's programming and spatial design. Its continuous function as a therapy centre provides in-depth information on what activities occur within the Centre. With a therapy arena removed from the main leading centre, this precedent studies also document how the unison between rescue animals and people suffering from mental illnesses can unfold by registering what specific activities and how animals participate in therapy response; this precedent study informs the practicum design of what environmental elements can be integrated and associated. For therapy arenas, having a larger space where people and animals can cointegrate in activity with moveable and customizable features allows people to experience

Figure 15. Peace of Mind Therapy & Consultation. Rescue Horses in Symatree Farm (2022). Photo Retrieved from Peace of Mind Therapy and Consultation.

the area metaphorically (as discussed in the sand play section).

Apart from moveable and customizable elements, this precedent study has also provided insight into how participating animals within more secular therapy rooms respond. This also includes information on how important it is to allocate a dwelling space for animals in therapy to settle to accommodate their comfort during these therapeutic sessions.

4.2 Program Precedent: Working on Our Future (WOOF) Program

The Working on Our Future (WOOF) Program is a joint initiative between the SPCA and the Department of Justice in Nova Scotia. Launched in 2012, the WOOF program is designed to have a puppy from SPCA be paired with an inmate from whom the puppy will receive training. The WOOF program is arranged so puppies under the SPCA will live on-site at the facility, where they are allocated their own space for sleeping. During the day, they work with their designated inmate handler for basic training (Layne, J., Nova Scotia SPCA - WOOF testimony, March 2019). Inmates undergo careful screening and must not have a history of domestic abuse or violence to be eligible to participate. These background checks are essential to maintain the safety and welfare of the SPCA puppies in the program. Puppies in the program are constantly under surveillance by correctional officers to ensure their safety. With the WOOF program providing the fundamental training needed for the puppies, by the time puppies are at eight (8) weeks old, they would have learned the necessary basic training, deeming them more ready and house-trained in their future home. Puppies are set to be spayed or neutered before being available for adoption.

The WOOF program provides ample evidence that collaborations between organizations can provide creative opportunities that mutually benefit the community. For inmates in the program, the chance to interact and work with a puppy reinforces them to relearn life skills that could better their way of living and the quality of their life. By interacting with puppies and teaching them essential conditioning and training skills, they also foster relearn responsibility, respect, patience, care, and love for an animal (Layne, 2018). The success of the WOOF program is not only entailed by inmates but also reflected in the atmosphere within the correctional institution. Correctional officers have reported that the presence of puppies in the WOOF program fosters a mitigating agent in the facility – reducing tension in the space and allowing connections

between staff and inmates (Layne, 2018). These testimonies present that the WOOF program yields successful rates, with approximately six hundred eighty (680) puppies recorded in 2019 to have participated and successfully adopted. Additionally, the success of the WOOF program is further extended as it socially breaks down barriers by alleviating how even inmates in correctional institutions can still contribute to the betterment of the community and society.

This precedent study provides insight into the programming of the practicum study. The documentation and success rate of inmates paired with puppies within the correctional institution presents how the integration and collaboration between people and dogs provide symbiotic benefits of purpose, social interaction, and social fulfillment with one another. This precedent's documentation of dwelling arrangements for the puppy participating in the program also provides essential information on how dwellings, or dog dormitory units for the animals participating in the practicum, must be integrated into the spatial programming and design.

Figure 16. Palm Spring Animal Care and Facility: Site and Floor Plan. Swatt Mies Architecture (2012).

4.3 Design Precedent: Palm Springs Animal and Facility

Located in Palm Springs, California, the Palm Spring Animal and Facility was built in 2012. Designed by the Miers Architect group, the facility presents an architectural building design that reflects the surrounding context of its geographical location. Designed with the collaborative intent of serving the public of the City of Palm Springs and the local shelter group, The Friends of the Palm Springs Animal Shelter, the facility serves as an essential Animal Community centre with a central indoor and outdoor kennel design, with access to public adoption near a garden courtyard equipped with misters and fabric shades structures to adhere to the location's weather conditions (ArchDaily, Palm Spring Animal Care Facility, 2012).

One of the critical components achieved by this precedent study is the execution of architect Carry Perkin's flow-through design concept. The flow-through design concept provides practical components, particularly to shelter design, as it presents that with the ongoing flow of people and animals coming through the space, the chances of animals outgoing correlates proportionally equivalently to outcoming of people (Perkins, Good Shelter design is suitable for animals, 2018).

This design precedent provides insight and a design example of how a flow-through design concept, wayfinding and navigating design strategy can be executed in the space. By designing spaces with a path that supports the integrative routine, especially in therapy, the flow-design

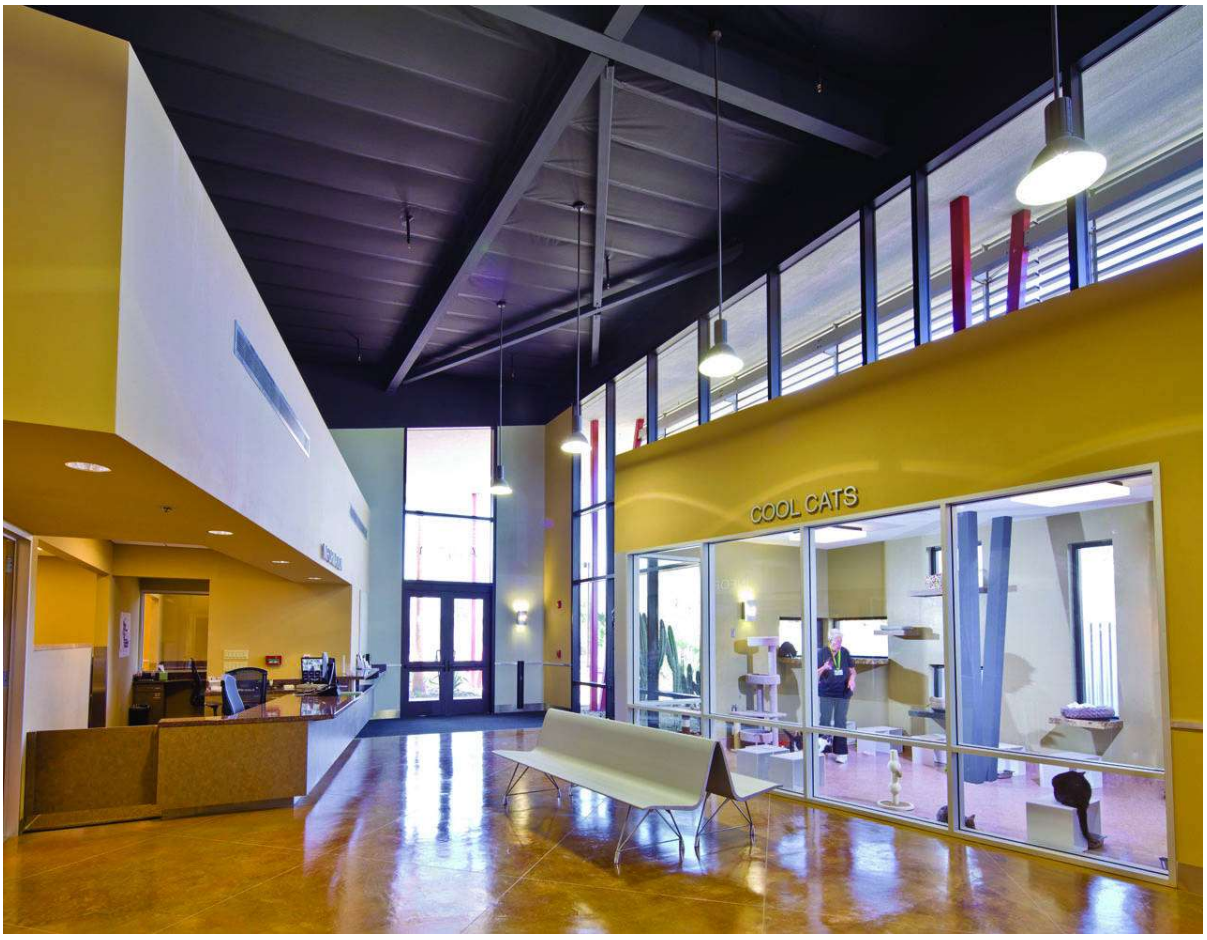


Figure 17. Palm Springs Animal Care and Facility. Entrance View. Swatt Mies Architecture (2012).

concept presents additional information on how design can contribute to treatment. Designing spaces that navigate users and patients in the area, the repetition of experiencing the same pathways, routes and wayfinding choice that occurs in the room becomes part of the therapeutic intervention itself—allowing healing through familiarization and routine to flourish and contribute to a patient's progression.

4.4 Design Precedent: Santa Clara County Animal Services Centre

The Santa Clara County, Animal Services Centre, provided a restructure and reimagined the conventional meaning of animal shelter. Built in 2021 and designed by Dreyfuss + Blackford Architecture, the reimagined home of the Animal Services Centre functions not only as a shelter

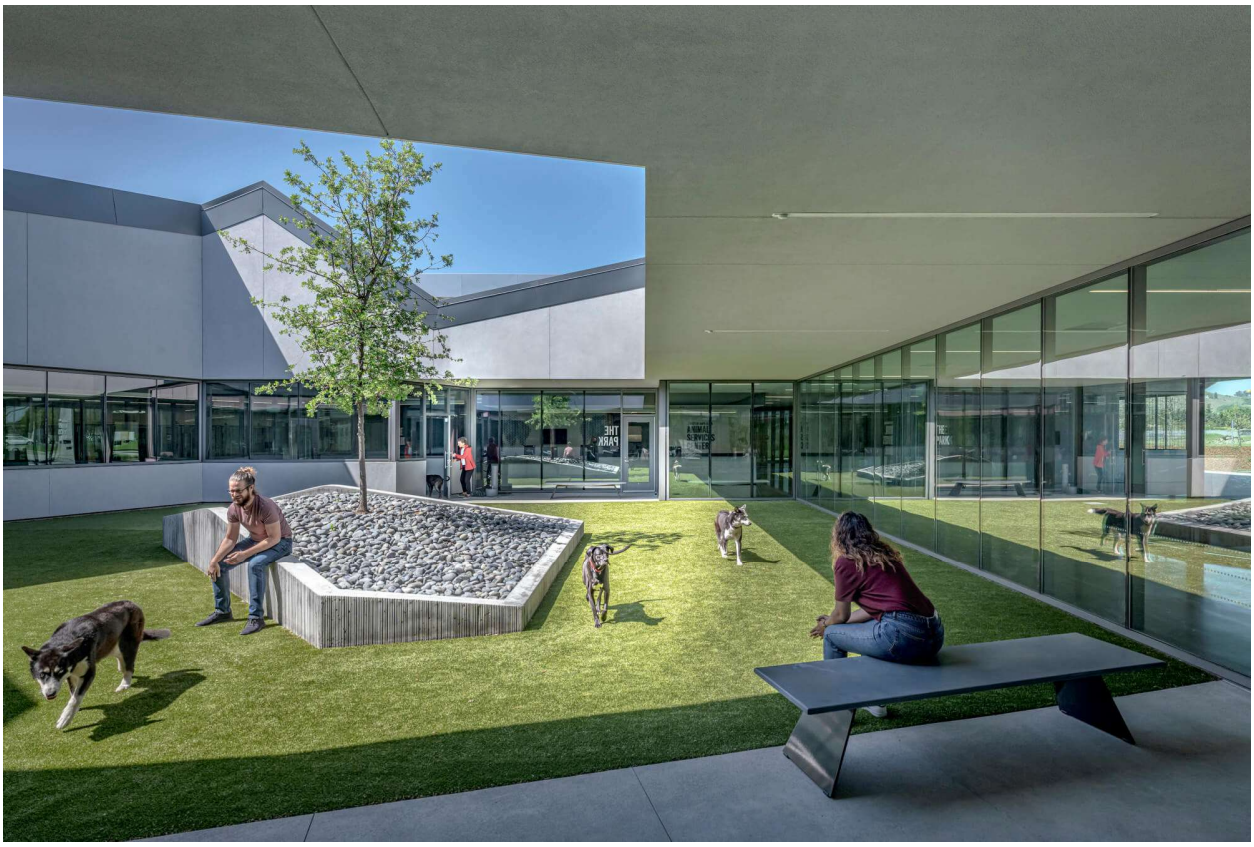


Figure 18. Tim Griffith. 'A shade providing native oak in the middle of The Park'. The County of Clara Animal Services Center (2021).

that provides refuge dwelling to animals but also inhibits an in-house veterinary clinic with surgery room units for spaying or neutering and other surgical procedures. The design of the facility also allows for the space to be used as a community centre that can host communal gatherings, such as animal-centric community events and other local meetings held by various county agencies and groups (Hickman, M., The country of Santa Clara animal services center reimagines the conventional shelter, July 2021).

One of the critical points in this precedent study is the facility's design execution of an internal courtyard that serves as a crucial spatial component to their design execution of core kennel arrangement and visitations. With an inner courtyard, finished and blanketed with artificial turf (Hickman, 2021), the space provides an access window to an outdoor space. Additionally, the

Figure 19. Tim Griffith. 'The Park, an outdoor interior social space, as seen from inside the facility'. The County of Clara Animal Services Center (2021).

core kennel units are designed following a circular maneuvering fashion that bounds the interior courtyard. This looping organization of the kennel design negates the conventional linear front-of-house and back-of-house hierarchy among dogs residing in the shelter. Thus, all dog residents on the cover have equal chances to be seen (Hickman, 2021).

Through this precedent study, a design implication on how an interior courtyard can be integrated into the spatial design provides opportunities to develop spatial experiences that can significantly benefit the sensations affiliated with being close to the outdoors. Like the facility in this precedent study, the HAAT Centre can use internal courtyard spaces to serve as grandeur space bridges and provide interconnections within the area.

5.0 SITE ANALYSIS

Figure 20. Ian Griffin Photography (2021). Former Christie's Biscuits factory. Photo Retrieved 2021.

5.1 Site History

The chosen site for this project is the former home of the Christie's Biscuits factory located at 1147 Notre Dame Avenue. Built in 1931, the building site was distinctly contemporary during its completion. The original building was designed by Winnipeg architect George G. Teeter (Winnipeg Architecture Foundation, 1147 Notre Dame Avenue, 2013). In 2013, the building was repurposed and retrofitted by Stantec Architecture and Prairie Architects to be the new home of the Specialized Service of Children and Youth (SSCY). Since the opening of SSCY in 2016, the building has served as an extension of the Winnipeg Regional Health Authority (WRHA) branch in providing community health services and resources for rehabilitation to the Winnipeg society.

Figure 21. Ian Griffin Photography. (2022). Former Christie's Biscuits factory [Photograph]. Photo Retrieved from April 2021

The overall building is composed of two floor levels, with approximately 22,427 square footage per floor level, amounting to a net square footage of approximately 44,854 square feet. For this practicum study, approximately 17% of the overall building square footage will be utilized and repurposed for the project. Particularly the Northwest corner of the building facing Notre Dame Avenue.

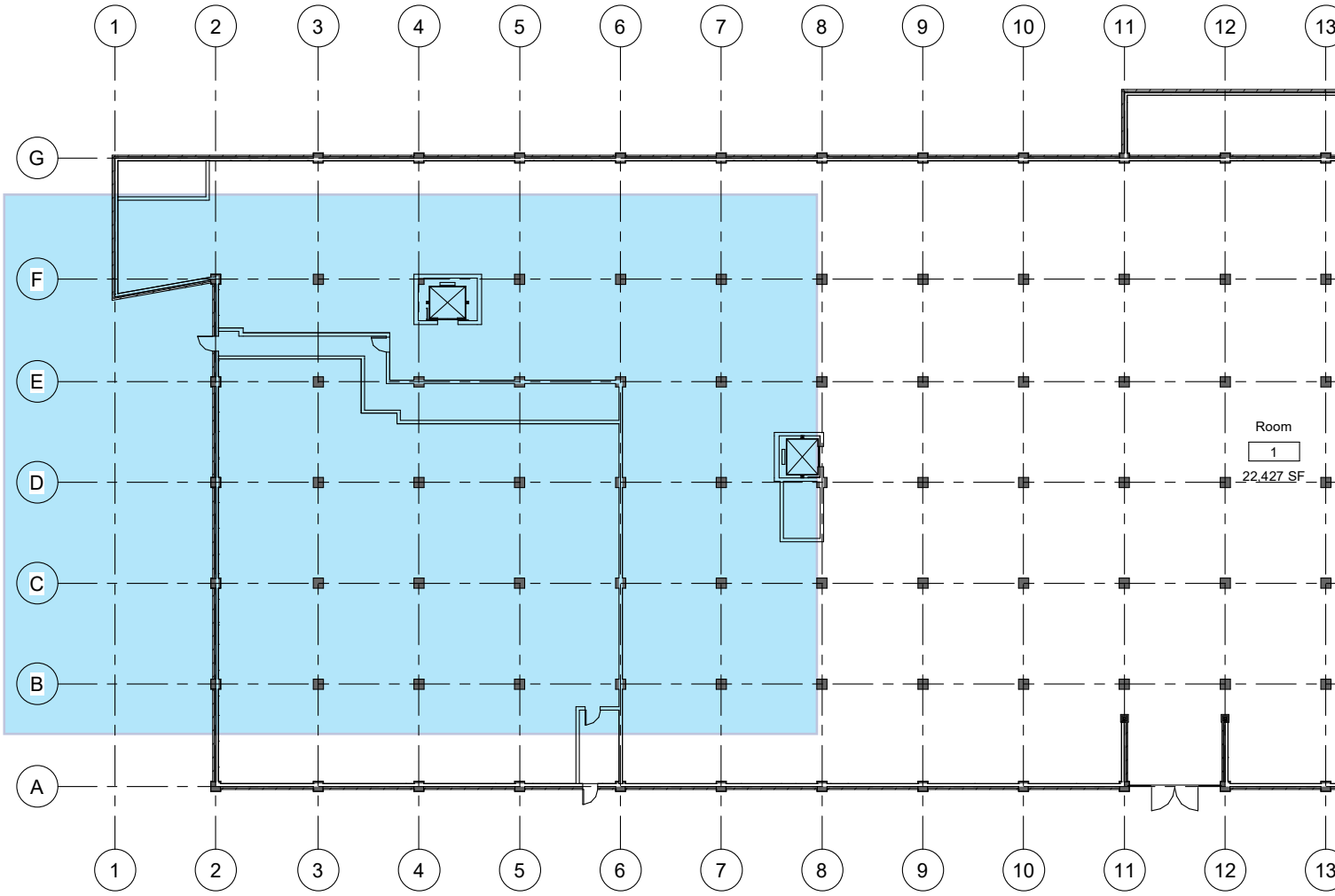
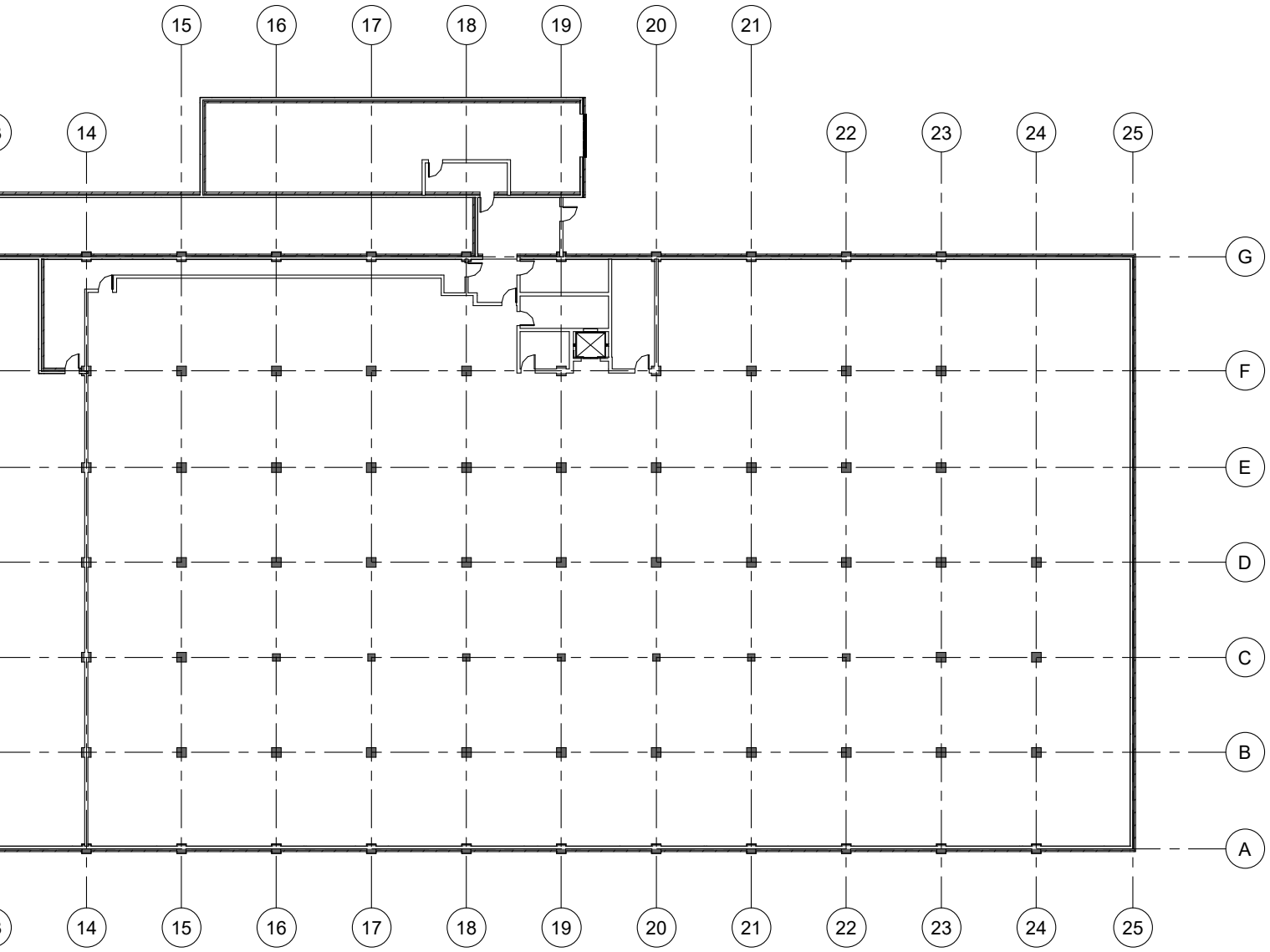


Figure 22. Stantec Architecture Ltd. (2013). Level 1 - Floor Plan [AutoCAD Drawing]. Floor plan was retrieved from Stantec Architecture in



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5.2 Site Opportunities

Situated along the main road of Notre Dame Avenue, the site provides an optimal location as it presents critical adjacencies to facilities that would support the proposed program in the Centre. By having a place already serving as a rehabilitation resource with WRHA, the program allows proximity to Health Sciences Centre and the University of Manitoba's Bannatyne campus. This location also shows proximity to Winnipeg Animal Services Agency situated on Logan Avenue, where shelter dogs reside. With the volunteer program presenting as a critical component engraved like the proposed program, this location also provides suitable adjacency by being close to the Technical Vocational High School – providing key adjacency for the volunteer ran aspect integrated into the program. Apart from critical facilities, the site also provides access to nearby greenspaces.

Figure 23. Site Map. Diagram Illustrated by Paula Combate (2022).

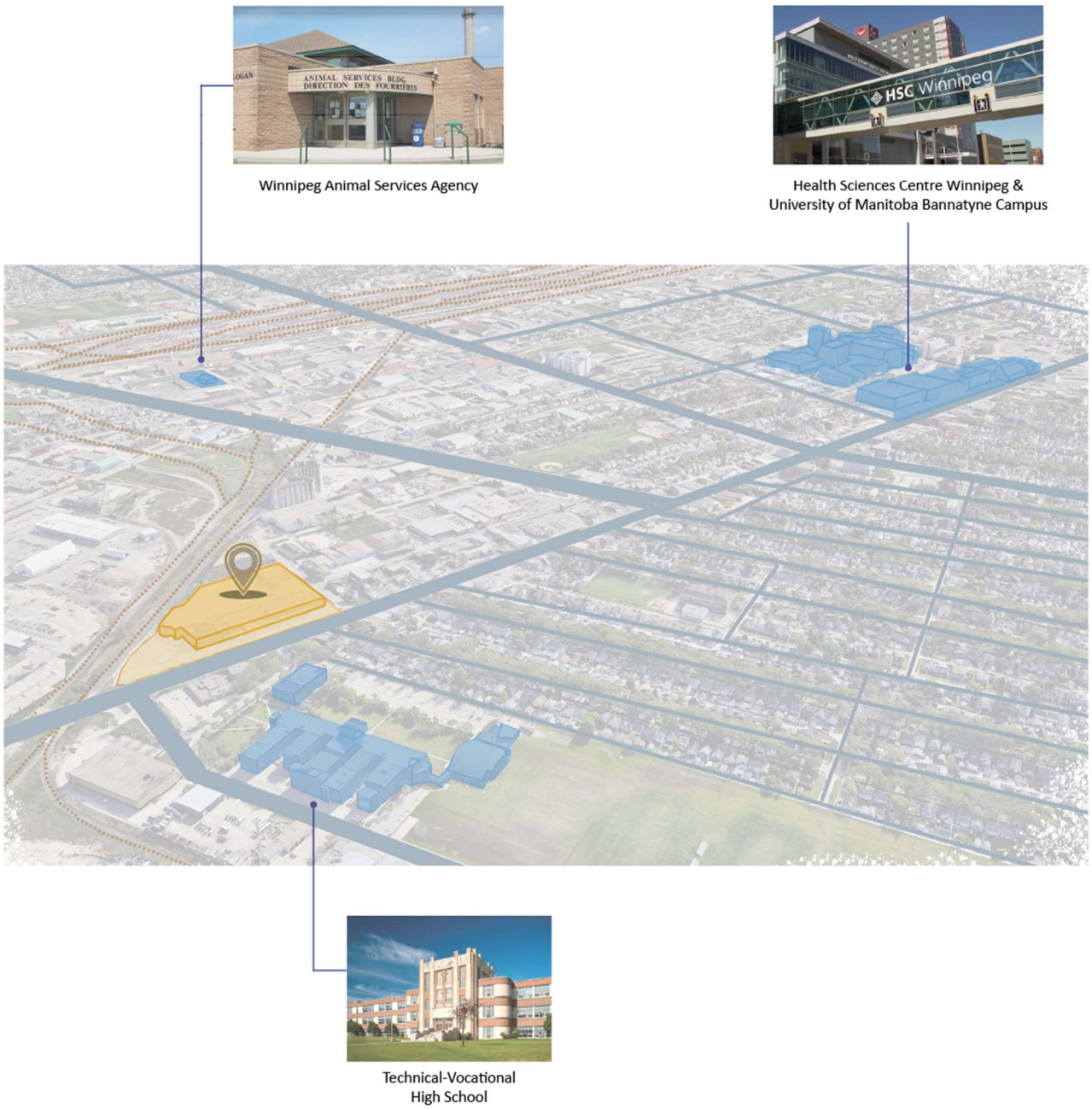


Figure 22. 3D Site Map Adjacency Diagram. Illustrated by Paula Combate (2022).

6.0 PROGRAMMING

6.1 National Building Code Major Occupancy Type

Primary Occupancy: Group B3 – Care, Treatment or Detention Occupancies (National Building Code [NBC], 3.3.3, 2020)

According to the National Building Code 2015, the Centre falls under the occupancy type under Business Group B (classified as Group B-3 in National Building Code 2020).

"304.1 Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and account" (NBC, Section 304 Business Group B, 2015).

The occupancy type and building function of the Centre falls under:

- Animal hospitals, kennels, and pounds
- Clinic, outpatient

Programs Facilitated Within the Centre

Table 3. Program Occupancy Analogy with NBC 2015.

Program Occupancy Type **(Following NBC 2015 Grouping conventions)**	**Human-Animal Assisted Therapy (HAAT)** **Centre's Program**
Clinic, outpatient	EMDR Therapy
Clinic, outpatient	Human-Animal Assisted Therapy
Animal hospitals, kennels, and pounds	Behaviour Conditioning Training
Animal hospitals, kennels, and pounds	Centre's Dog Dormitory Units

6.2 Client Profile

To provide an effective design proposal catering to the functioning vision of the space in the Centre, the practicum study uses the platform of Peace of Mind Therapy in collaboration with Winnipeg Humane Society's (WHS) Animal Companionship program as the hypothetical client and schedule for the Centre.

Table 4. Client Profile – Hypothetical Collaboration

Organization	**Description**
Peace of Mind Therapy and Consultation	Directed by Dr. Kelly Hutton Penner, Peace of Mind Therapy and Consultation is a private therapeutic centre in Winnipeg, Manitoba. The therapeutic centre offers traditional clinical psychology therapies in individual or group settings. The private clinic offers innovative treatments, such as EMDR and animal-assisted therapy (Peace of Mind Therapy and Consultation, 'About,' 2021).
Winnipeg Humane Society – **Animal Companionship (Pet Therapy)**	WHS Animal Companionship program is an animal-assisted program where behaviour-assessed animals from WHS will be introduced to a group of people who are in need or may benefit from the presence of an animal companion. Often, the requestee group struggles with physical, mental, and behavioural needs, making it difficult to foster and make social connections. Hence, by introducing behaviour-assessed

	animals to the group, the presence of the animals provide support, attention, affection, and comfort. Allowing participants to gain practice and social exposure enables them to make close connections (WHS, Animal Companionship, 2021). By having the animals as a bridging agent with the internal struggles of a relationship.

By referencing the collaboration between the two programs, expertise in addressing the therapeutic intervention from the separate patient groups is accounted for. Moreover, by having professional personnel from each patient group, the process of gradually conjoining the patients together is also given proper guidance and paced accordingly to benefit the gradual integration of the patients to help each of their respective treatment progress.

Figure 24. Peace of Mind Therapy and Consultation (2022)

Figure 25. Winnipeg Humane Society Logo (2022)

6.3 User Profile

Primary Users

Table 5. Primary User(s) Profile

Users	Role
Therapist or Counsellors	With the function of the Centre catering to patients of mental health, the presence of therapists or counsellors is one of the fundamental and primary users of the space to provide on-site therapy services to patients. Therapists and counsellors provide individual and collective therapy services to patients. Most practicing therapist and counsellors has their certification, completion, and experience in the background of clinical psychology or social work. They can also work collaboratively with the animal behaviour specialist on site to formulate a regime that would gradually integrate their patients with a rescue dog from the Centre that could mutually fit their recovery progress together.
Animal Behaviour Specialist	The presence of animal behaviour specialists is also one of the fundamental users of the space to provide on-site therapy and services to the rescue dogs residing in the Centre, as well as incoming rescue dogs from the shelters or animal rescue centres that come with their foster handlers. The presence of animal behaviour specialists on site will provide guidance and training services to the rescue dogs residing on site that will help build routine and familiarization to help mitigate negative behavioural responses. Most animal behaviour specialists on-site would have a certification under the Animal Behaviour Society that comes

	from either a background of Master's in biological or behavioural science with at least two years of professional experience have a Doctor of Veterinary Medicine (DVM) background with a minimum of 5 years experience with animal (Gibeault, S, What is an animal behaviourist, April 2018).
Administration Staff: Receptionist Facility Manager	The administration staff are primary users who fulfill the administrative duties for running the system procedures. They are in charge of tracking the program schedule and booking system involved with the service-situated on-site, processing and processing any record-keeping work affiliated with the Centre's function.
Veterinary Technologists (Vet Techs)	Veterinary technologists are one of the primary users on site to ensure that there is always staff personnel that can provide emergency responses r quick health examinations to the rescue dogs in residence.

Secondary Users

Table 6. Secondary User(s) Profile

User	**Role**
Veterinarian	An in-house veterinarian is scheduled to come to the Centre part-time to provide wellness maintenance and vital examination to the residents' rescue dogs. A veterinarian is allotted to work on a part-time basis in the Centre to allow for in-house consultation and collaboration with animal ban ehaviospecialistsist and therapists, as well as to share the veterinarian profession expertise with the main office of WHS.
Volunteer	With the formulated program involved with the WHS, the non-profit nature of the organization encourages and utilizes the

	help from volunteers – particularly with executing regular maintenance with the facility, such as taking rescue dogs on site for their daily walks, reviewing applications for foster or adoptee applicants, as well as maintaining the cleanliness standard within the kennel dormitories and courtyard.
Foster Families	Foster families are considered secondary users as they also respond collaboratively with the WHS animal companionship program. In some situations, rescue dogs may have candidates interested in fostering them. Hence, the rescue dog's residential status in the Centre is partial. Therefore, if the rescue dogs are scheduled to have a behaviour conditioning training schedule, foster families may come into the Centre to bring the rescue dogs to their set training schedule.
Visitors	Visitors are considered secondary users as it can be anticipated that there would be first-time comers to the Centre seeking to learn more about the program and on-site services. Moreover, for the interest and context of the rescue dogs residing on site, potential candidates as adoptees for any of the rescue dogs in residence may also schedule a private slot to be introduced to the dogs. Moreover, to observe and respect Manitoba's Personal Health Information Act (PHIA) law associated with the health resource function of the Centre, the introduction meetings for potential adoptees for rescue dogs will be scheduled outside clinic hours.

Tertiary Users

Table 7. Tertiary User(s) Profile

User	Role
Building Maintenance Staff Personnel	These users occasionally arrive to perform inspections and provide maintenance checks on the condition of the utilities servicing the Centre. This maintenance check and examinations are often conducted to assess the various mechanical, electrical, water and air flow systems in the Centre to ensure that it performs to the standards of health care facilities.
Supply Deliveries	These users are anticipated to arrive every week to ensure that the Centre's maintenance supplies to provide services effectively are available to access. These users also include postal or mail services that ensure necessary documentation sent between other facilities affiliated with the Centre is delivered accordingly.
Rescue or Shelter Organization	These user groups are considered tertiary as they primarily come to the Centre to transport rescue dogs from their care to be transferred into the Centre's dormitory unit and residence.

6.4 Spatial Programming

Table 8. Spatial Requirements - Desired Atmosphere & Sensory Design Considerations

Space	Spatial Function	QTY	Desired Atmosphere	Sensory Consideration
Reception	• Space is the primary checkpoint where people can inquire about their purpose information, destination, and location.	1	• Welcoming • Accessible	• Acoustic
Lobby	• Space used as a primary entry point to the Centre	1	• Welcoming • Unrestricted	• Acoustic
Waiting Area	• Space used primarily for EMDR therapy patients where they can spend idle time waiting for their therapy handlers to let them enter the therapy room. • Space can also be used as a lounge space outside therapy office hours for staff personnel and visitors.	1	• Calm • Relaxing	• Acoustic • Visual • Tactile
Display/ Info Area	• Space primarily functions as a place where bulletin information, resource pamphlets, upcoming events and current event posters are available for viewing.	1	• Informative • Visible	• Visual

Internalized Courtyard (Activity Space)	• Space primarily functions as a communal space where paired patients (people and rescue dogs) can experience an indoor active play area. • When enough comfort with social familiarization and trauma triggers are mitigated, the space can also function to help paired patients interact with another pair – allowing for more social growth and connection to foster.	1	• Playful • Welcoming (with conditions)	• Acoustics • Visual • Scent

Flexible Space	• Space primarily functions as a flexible space where parameters of the rooms are adjustable as needed.
	• Space can be utilized as a multipurpose room for assembly-like or extensive group activities.
	• Space parameters depending on user group needs.
	  ○ Space can be divided into 4 separate units that can be used for individual therapy or introductory space if needed.
	  ○ Space can be divided into 2 larger spaces for
		2 (4)	• Calming
			• Adjustable
			• Non-restrictive
				• Acoustics
				• Visual

	group therapy and training use. o Space can be used as 1 ample space for multipurpose usage for educational sessions, assemblies, conferences, and events.			
Introductory Space	• These spaces primarily function as an introduction space where therapy patients from EMDR and the rescue dog patient are introduced to one another. These spaces are essential to the function of the Centre as they serve as buffer zones that provide social familiarization between people and rescue dogs before heading into their therapy sessions within the arenas.	4	• Homelike	• Visual • Acoustics
Therapy Office	• These spaces primarily serve as a therapy space for EMDR therapy patients and providers. These spaces are meant to serve one-on-one individual therapy or counselling sessions. Each therapy office is set to have a home-like environment to allow patients to feel welcome and have a sense of safety.	8	• Homelike • Non-hierarchal • Calming	• Visual • Acoustic • Tactile

	• Each therapy office is also arranged to have pet beds and mats to provide comfort to participating rescue dogs or therapy dogs			
EMDR Therapy Arena	• These spaces function as a therapy area that provides an immersive therapy experience for EMDR patients. • These spaces are designed to be open, with adjacent storage spaces with various elements and props that can help therapy providers and patients arrange the room like sandbox therapy. • These spaces serve as an alternative canvas to EMDR therapy patients, utilizing the customizable arrangement of the area as an instrument to enhance trauma processing through experiential therapy.	2	• Calming • Adjustable • Non-restrictive	• Visual • Acoustic • Tactile
Dog Dormitory Area (Space with units)	• These spaces primarily function as the individual dwelling units that serve as the home of rescue dogs patients transferred into the Centre. • These spaces have two compartments in each unit to allow versatility and enough	7 units	• Open • Breathable • Non-restrictive	• Acoustic • Scent

	room for residents' rescue dogs to walk around.			
Isolation Room (Space with units)	• These spaces function primarily to assist severely debilitated rescue dogs impacted by trauma to be allocated in a much less stress-inducing environment to help desensitize and stabilize their heightened health conditions.	5 units	• Protected • Safe	• Acoustic
Exam Room	• These spaces primarily assist in-house veterinarians, veterinary technicians, veterinary assistants, and behaviour therapy providers in conducting health checks on the rescue dogs in residence. • These spaces also function to help the Centre conduct health assessments for newly arrived rescue dogs to the Centre.	3	• Clean	• Scent
Behaviour Training Room	• These spaces are mainly used for behaviour conditioning and rehabilitation for ue dogs residing in the Centre. • These spaces are designed to help and assist behaviour therapy providers with the process of conditioning,	2	• Calming • Adjustable • Non-restrictive	• Visual • Acoustic • Tactile

	desensitizing, and providing training to rescue dogs.			
Wash/Bathing Area	• Space mainly used to provide bathing, medicated bath (if needed), washing and grooming for rescue dogs in dormitories.	1	• Clean	• Scent • Acoustic • Temperature (Humidity)
Laundry	• Space mainly used to have access to a laundry washer and dryer equipment used to clean soiled or dirty blankets, mats, pillows and other miscellaneous used to assist in activities.	1	• Clean	• Scent • Acoustic • Temperature (Humidity)
Kitchen (Supply Storage)	• These space primarily functions as a room where all food stocks for rescue dogs in residence are stored.	1	• Organized	• Scent
Mock Living Room	• This space functions as a space where potential adopters are introduced to meet rescue dogs in residence. The area provides a spatial experience that would be like the settings of a natural home environment to help rescue dogs and adoptee candidates assess comfort and fit with one another's synergy. • When not used, this space can also function as an introductory	1	• Homelike	• Visual • Acoustic • Scent

	space before therapy arena interventions.			
Outdoor Space	• This space functions as a bounded outdoor space where people and rescue dogs can access outdoor activity types, weather permitting, with their therapy sessions.	1	• Freeing • Playful • Welcoming	• Visual • Acoustic • Tactile • Scent
Shared Office	• These spaces function as a space where assigned workspaces for therapy providers, interns, and staff personnel working with all patients are available.	2	• Organized	• Acoustic
Meeting Room	• This space functions to help conduct group meetings, conferences, interviews, and other team-building activities.	1	• Welcoming • Flexible	• Acoustic • Visual
Staff Room	• Space primarily functions as staff support – where staff can take their work break and have a space to lounge and relax.	1	• Comforting • Welcoming	• Acoustic
Volunteer Room	• This space primarily houses the locker units and coat rack to store volunteer personnel's belongings safely.	1	• Secure • Safe	• Acoustic
Copy/Print Room	• Space functions as a staff support space where copiers, printers and fax machines are available when needed.	1	• Organized • Accessible	• Acoustic • Visual

Storage	• Storage spaces are integrated into every space when necessary to help accommodate users with activities anticipated for each space.	-	• Organized	
Mech/Elec	• Space primarily serves as a safe location space for all mechanical and electrical supporting the spatial quality and building performance – ventilation, electricity, and data connection – to continuously be balanced and provide comfort to the user of the space.	1	• Organized	
Janitor's Closet	• Space used primarily to house custodian equipment and tools required for foremost housekeeping and cleanliness in the Centre's maintenance.	1		

6.5 Functional Programming

Table 9. Functional Programming - Square Footage, FF&E, Material Colour and Lighting Considerations.

Space	Square Footage	Furniture, Fixtures & Equipment (FF&E)	Material/ Colour	Lighting Consideration
Reception	250 ft^2	• Reception desk • Office chair • Garbage receptacle • key hooks (for leash and harnesses)	• Durable finishes	• Ambient lighting • Task lighting • Signage lighting
Lobby	150 ft^2	• Entrance mat	• Durable • Easy to clean • Acoustically dampening	• Natural lighting • Ambient lighting
Waiting Area	150 ft^2	• Soft Seating • Coffee table • End table	• Durable, comfortable	• Natural lighting ambient lighting • Cove lighting
Display/ Info Area	50 ft^2	• Display Storage • Display shelving • Pamphlet holders	• Durable	• General and task lighting
Internal Courtyard (Activity Space)	500 ft^2	• Patented flushing system • Bench seating • Mats • Leash • Poop bag dispenser • Garbage receptacle • Sink • Hose • Faucet access • Toys (chew toys, balls, rope, plushies)	• Artificial grass tuff – (synthetic grass) • Removable to access basin • Flooring to have stay lock perforated tile • Acoustic dampening • Easy to clean • Retain sterility	• Natural and daylight quality

		• key hooks (for leash and harnesses)		
Flexible Space (Multipurpose Room)	350 ft^2	• Mats • Training cones or disc • Training poles • Training leash • Agility equipment • treat pouches • key hooks (for leash and harnesses) • toys (chew toy, ball, rope) • Pet waste stations	• Durable • Abrasive resistant • 1/4” rubber flooring	• Natural daylight • Task lighting • LED pot lighting
Storage Spaces	20-80 ft^2	• Shelving unit • Drawers • Cube storage • Totes with covers	• Durable • Easy to clean • Lockable	• Pot lighting
Introductory Space	200 ft^2	• Seating • Pet bed • Mat • Dog pouches	• Acoustically dampening • Sensory grounding	• Natural daylight • Task lighting • Dimmable lighting
Therapy Office	100-120 ft^2	• Soft Seating • Built-in millwork for integrated storage • Ottomans (with storage capacity)	• Acoustically dampening • Soft finishings (for furniture, flooring, wall finishes) • Carpet flooring	• Ambient lighting • Natural light (or harvested) • Dimmable lighting
EMDR Therapy Arena	150-200 ft^2	• Storage • Telescopic poles • Training cones or discs • Mats • Step stools • Art supplies (illustration boards, coloured sheets, crepe paper, etc.) • Toys or figurines	• Durable • Abrasive resistant • 1/4” rubber flooring	• Task lighting • LED pot lighting • Dimmable lighting

		• Pet waste stations		
Dog Dormitory Area (Space with units)	60-120 ft^2 per unit	• Elevated dog bed • Pet dishes • Chew toys • Mats • Blankets • key hooks (for leash and harnesses) • Pet waste stations	• Flooring – 3/4" interlocking mats • Slip-resistresistanting • Easy to clean	• Natural light • Dimmable lighting
Isolation Room (Space with units)	20-40 ft^2	• Elevated dog bed • Mat • blanket	• Flooring – 3/4" interlocking mats	• Dimmable lighting • Ambient lighting
Exam Room	80-100 sq ft^2	• Sink • small fridge or cooler • exam table • seating	• Anti-bacterial surface finishes • Easy to clean	• LED general lighting
Behaviour Training Room	100-150 ft^2	• Mats • Training cones/discs • Harness • Leash • Hook rack • key hooks (for leash and harnesses) • Riser steps • Elevated bed	• Durable • Abrasive resistant • 1/4" rubber flooring	• General lighting • Dimmable lighting
Wash/Bathing Area	150 ft^2	• Pet grooming bathtub – with telephone faucet • Pet grooming table • Storage shelving	• Slip-resistant • Easy to clean • Durable	• LED general lighting
Laundry	120 ft^2	• Washing machine • Dryer machine • Double sink • Dryer rack • Storage shelving	• Slip-resistant • Easy to clean • Durable	• LED general lighting
Kitchen (Supply Storage)	150 ft^2	• Storage shelving • Storage cabinets	• Easy to clean • Durable	• Daylighting

		• Refrigerator (for wet food) • Transparent totes with cover lids		
Mock Living Room	200 ft^2	• Soft seating (couch, sectional, or armchair) • Coffee table • Mini fridge or cooler • pet food dish • blankets • pillows • dining table • dining chairs • coffee table • ottomans • key hooks (for leash and harnesses)	• wood finishes (mimicking home-like atmospheres)	• Daylighting • Ambient lighting
Outdoor Space	500+ ft^2 (dependent on-site capacity)	• Fenced • Lockable gates or doors • Dog course kits or playground equipment (agility course equipment) • Pet waste stations	• Flexible and durable for all-weather and all-season conditions	• Natural lighting • Motion-sensor lighting
Shared Office	120 ft^2	• Office desk • Computer workstation (with docking station, monitors, keyboard & mouse) • Laptops	• Carpet flooring • Easy to clean • Durable	• LED general lighting • Task lighting
Meeting Room	150 ft^2	• Meeting table • Office chairs • Overhead projector screen • Digital media projector ports (HDMI, VGA)	• Carpet flooring • Easy to clean • Durable	• Motion-sensor lighting • Dimmable lighting

Staff Room	250 ft^2	• Soft seating • Dining table • Refrigerator • Locker	• Easy to clean • Slip-resistant • durable	• General lighting
Washroom (With stall units, universal & gender inclusive)	500 ft^2	• Sinks • Hand dryers • Paper towel dispensers • Grab bars (for universal stalls) • Garbage receptacle • Toilet seats	• Slip-resistant • Easy to clean • Anti-bacterial surfaces	• LED General lighting • Wall washing lighting
Volunteer Room	100 ft^2	• Lockers • Bench seating		• General lighting
Copy/Print Room	120 ft^2	• Printer (with printer and scanner function) • Paper supply • Storage shelving		• General lighting
Mech/Elec	40 ft^2	• Hot water servicing tank • Mechanical ventilation (specific to the tenant) • Electrical panel switch		• Task lighting
Janitor's Closet	100 ft^2	• Mop sink • Storage shelving • Custodian cart with cleaning supply kit		• General lighting

6.6 Spatial Zoning Process

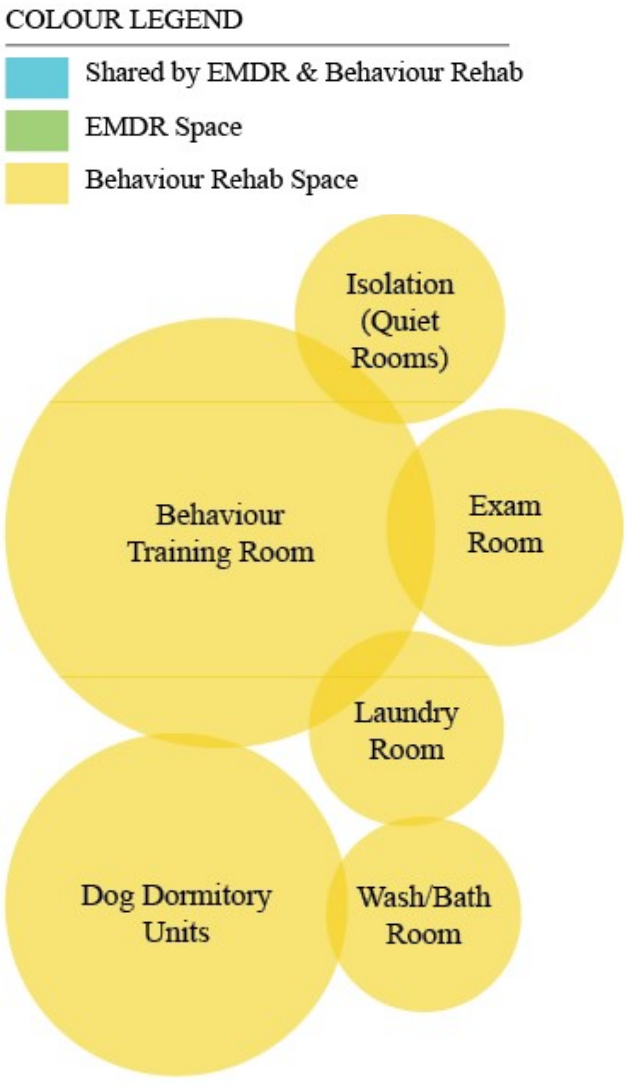


Figure 26. Behaviour Conditioning & Dog Dormitory - Bubble Diagram

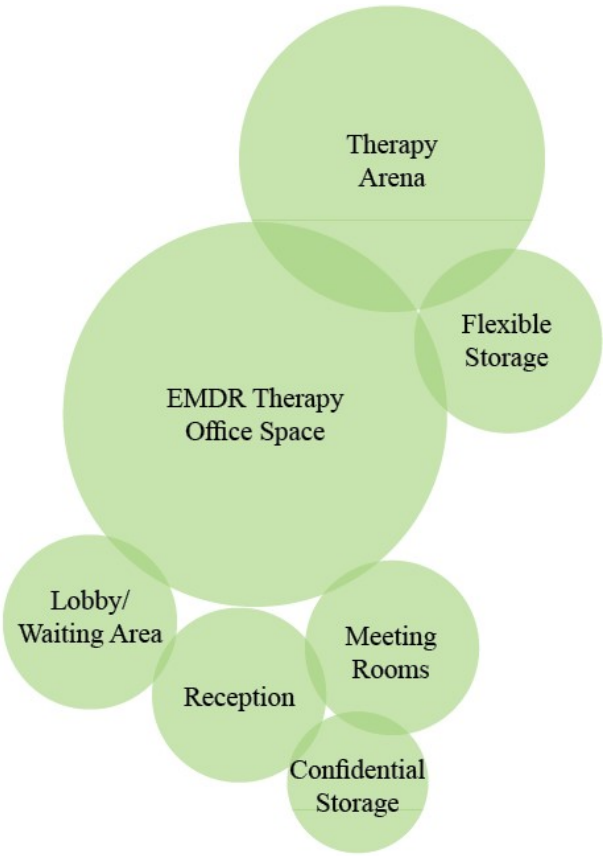


Figure 27. EMDR Therapy - Bubble Diagram

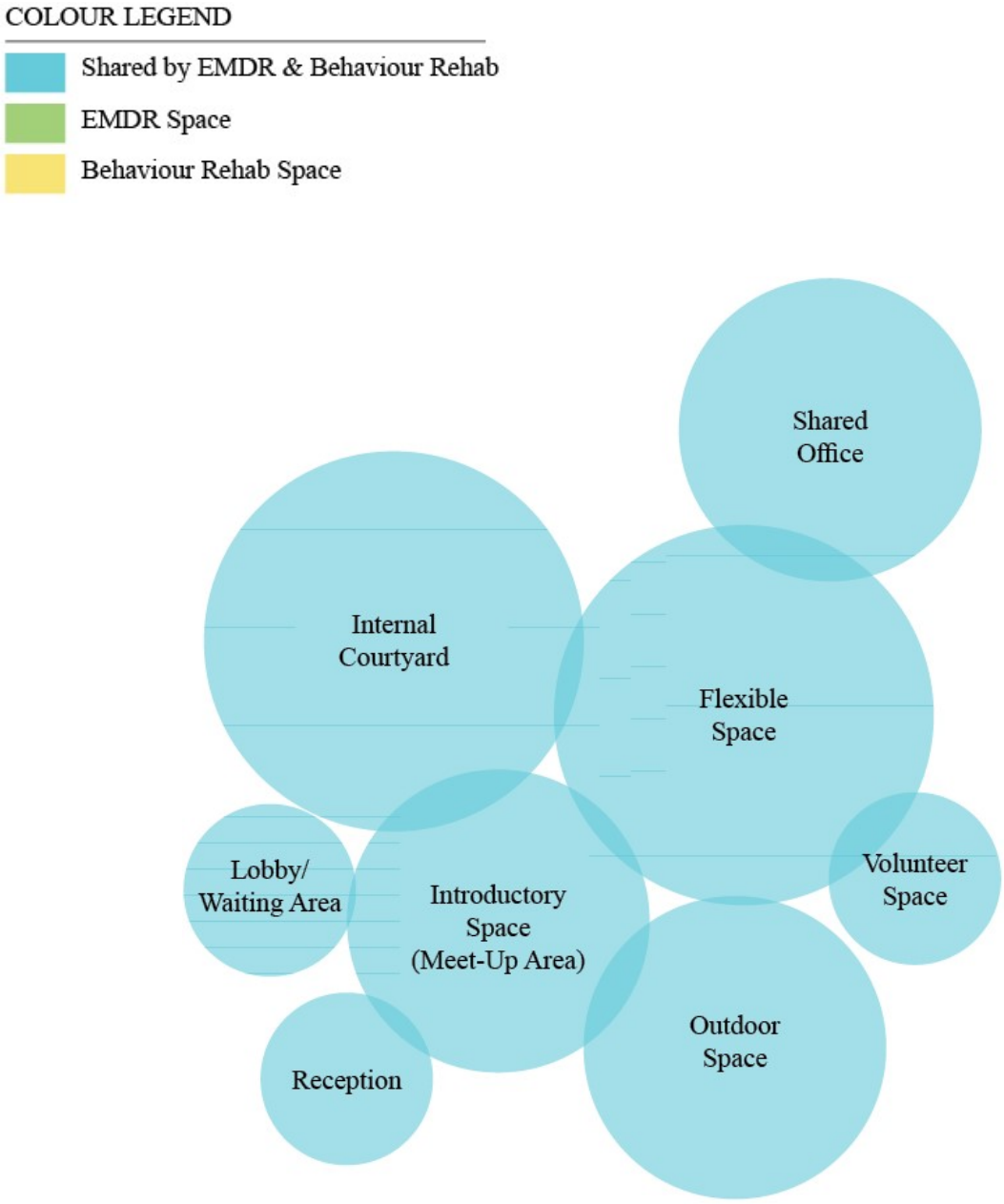


Figure 28. Shared by EMDR & Behaviour Conditioning Spaces - Bubble Diagram

6.7 Adjacency Matrix

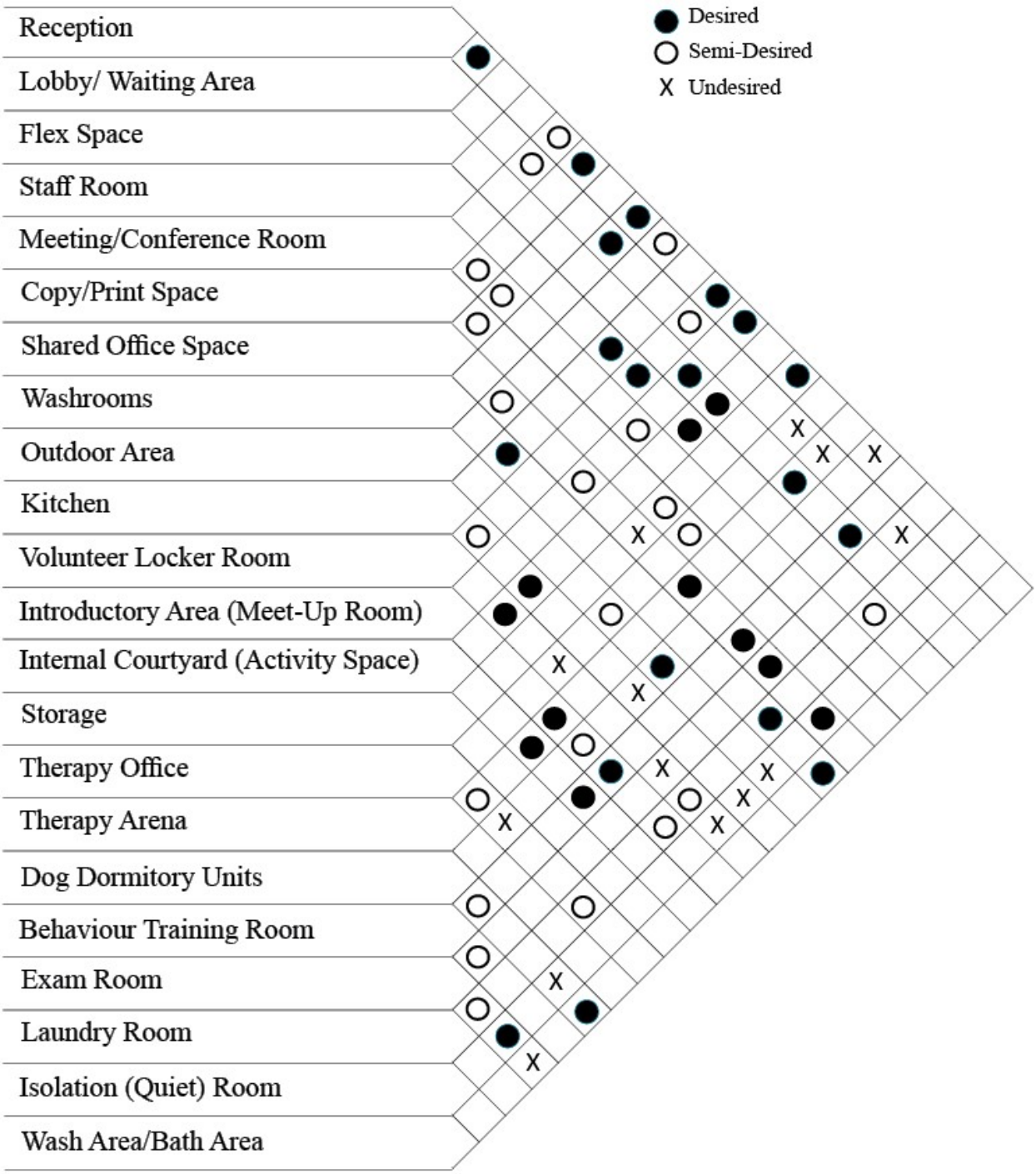


Figure 29. Spatial Adjacency - Matrix Diagram. Digitally illustrated by Paula Combate (2022).

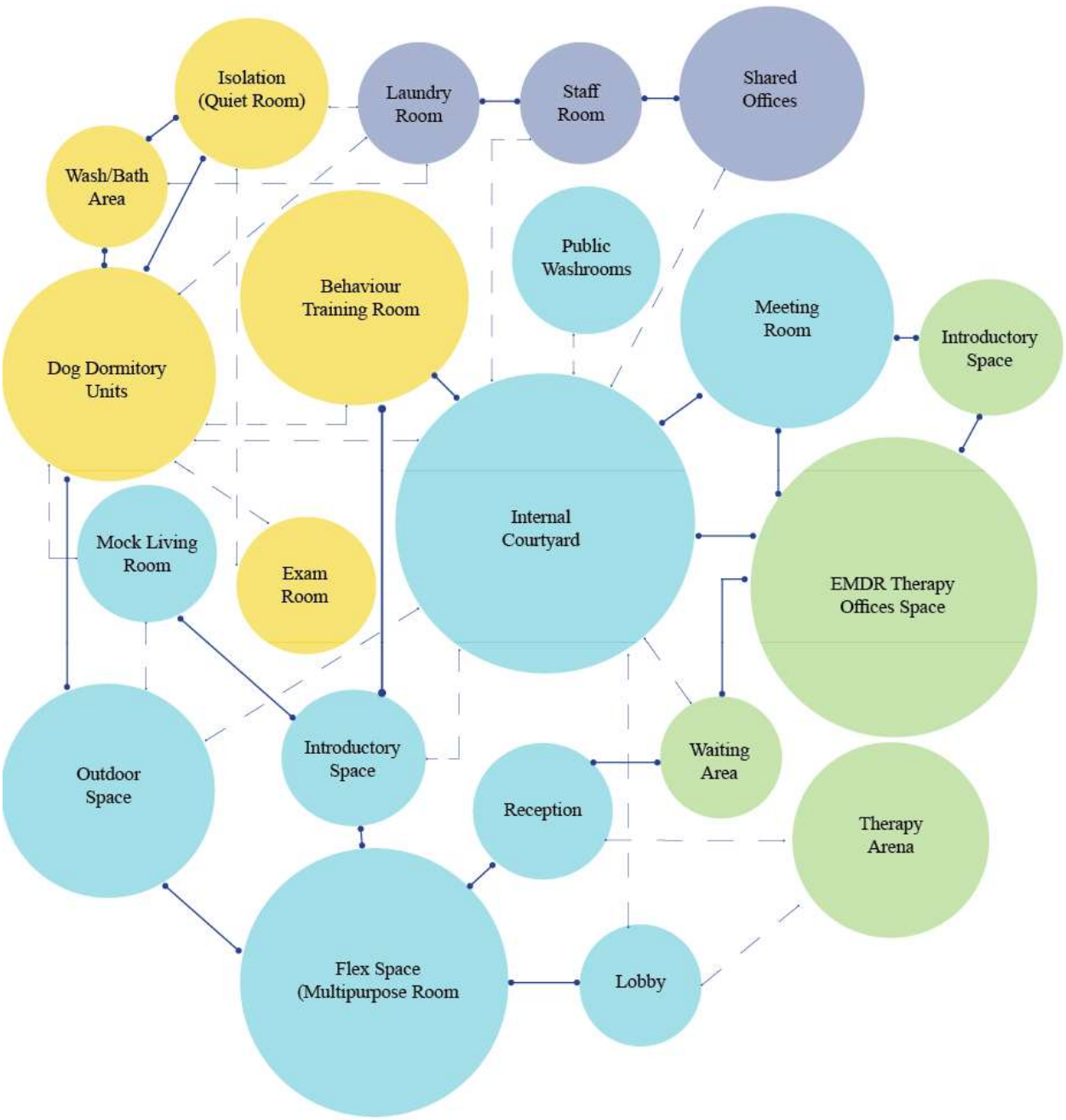


Figure 30. HAAT Centre - Adjacency Matrix Bubble Diagram

7.0 Design Proposal

This section presents the design proposal for a portion of 1147 Notre Dame Avenue to be spatially reprogrammed and designed as the Centre for Human-Animal Assisted Therapy (HAAT) for identified patient groups, people, and rescue dogs, that suffer similarly from mental illnesses and trauma. This section presents how the synthesis from the directed literature review and precedent analysis aims to serve the needs of the hypothetical client and its collaborative nature through the concept of healing through the routine. The design focuses on prioritizing the built environment's role in attributing and facilitating treatment by optimizing spatial planning to reflect the healing journey within the circulation pathways and architectural elements that perform sensory aspects to the spatial design. The spatial function that caters to the individual and collective needs of the patient groups was considered, particularly regarding establishing sensory hierarchy.

7.1 Concept Development

With the exploration of the literature review, it is presented how the primary target users of this share a similar process in their recovery journey. The discussion and synthesis of the literature review show how there is a repetitive process in their treatment for both patient groups, which allows them to reprocess, mainly memory triggers to be re-associated. These repetitive patterns of the therapy process—how people patients are probed to reprocess negative memories while implementing classical conditioning with rescue dogs—serve as a constant aspect in the recovery that indirectly provides patients with an intangible regime that facilitates treatment.

Routine, by definition, is a sequence of actions regularly followed in a fixed program (Oxford Language, Routine). By having a constant routine, individuals build a fixed foundation for themselves in the context of their physical, intellectual, social, emotional and environmental factors. This allows them to create a consistent roadmap that can foster growth, whether internally correlated with their academic or emotional welfare or social aspect.

With the significance of repetition and cycle within the literature study, the design proposed by this practicum will apply the concept of healing through the routine by reflecting it onto the spatial planning, circulation pathways, and the application of sensory elements into the design languages into the spatial design.

7.2 Form Development

The design phase began by exploring each therapy process's spatial and functional needs and identifying which spaces were vital for integration and which were critical to separate. As illustrated in section 6.6, the bubble diagram formulated following the adjacency matrix with the list of spaces shown was crucial to individual therapy. During the spatial programming phase, it was critical to identify these key spaces, particularly the therapy offices for EMDR and the behaviour training rooms for rescue dogs, as these were the therapeutic spaces that primarily addressed individual therapy sessions. After identifying where the individual-focused therapy

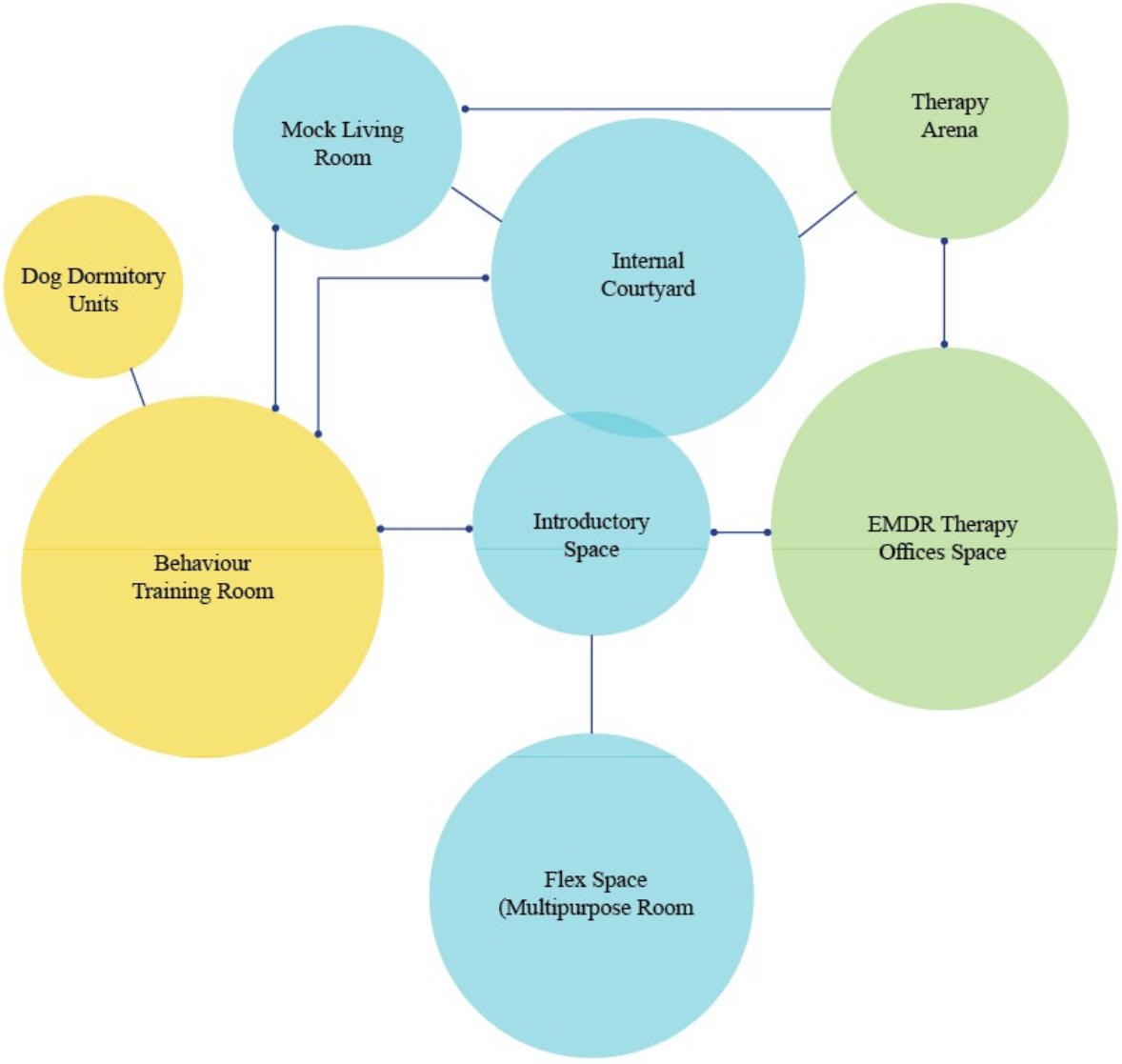


Figure 31. Key Spaces for Spatial Planning & Zoning

spaces were, the spatial programming is devised to allocate areas where the collective therapy is situated, particularly the internal courtyard, flex space and mock living room. In the process of spatial planning, it is found that the holes meant for joint therapy provided opportunities to be the central space that provided a pivotal intersection to the rooms. This is indicative primarily of the location of the internal courtyard. By centralizing the inner courtyard, it acted as a central space that connected the two therapies. At the same time, it also provided a spatial separation between the two therapy areas that are individually focused. By utilizing the shared spaces as a central linkage within the HAAT, the surrounding area also provided circulation spaces as an opportunity for the spatial design to execute the concept of healing through the routine by developing pathways.

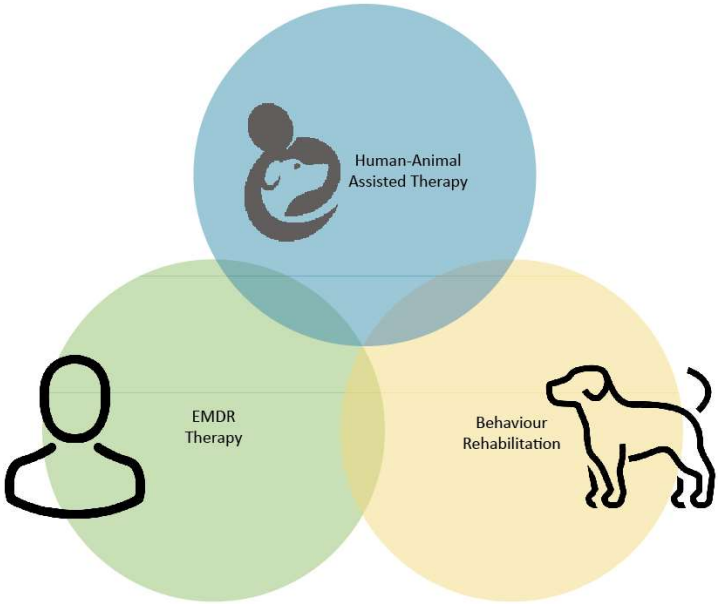


Figure 32. Concept Image of HAAT Centre

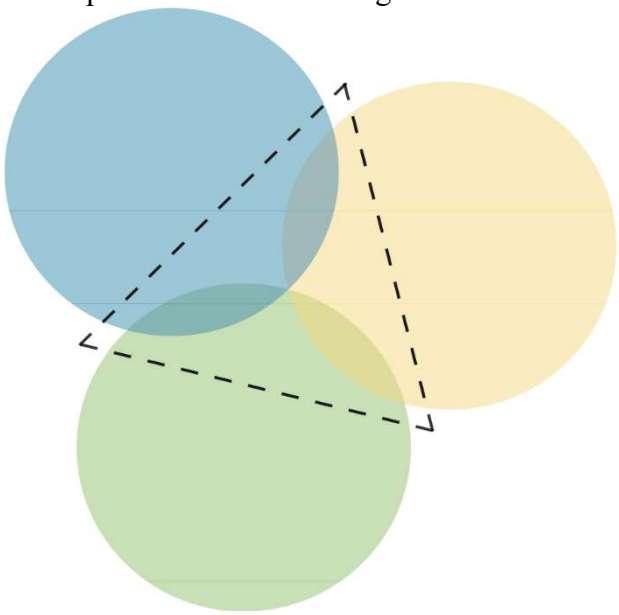


Figure 33. Concept Diagram - Abstraction

The design form is highly informed by the schematic diagrams illustrated in the literature review's exploration. Derived from the data comparison rooted in the investigation of EMDR therapy and Behavior conditioning, the form development of design is influenced

by the triad conceptual diagrams formulated. Through the diagrammatic exploration within the literature review and spatial programming, the points of intersection and overlaps provided opportunities for abstraction and design languages that were embedded within the study exploration.

Using the triad diagram formulated and abstracted from the literature review conclusion, the overlapping areas represent the central space where the joint activities occur. This form also presented a spatial pattern that provides a guide where a circulation pathway can be designed.

Following this extrapolation, the forms are overlayed onto the building grid and oriented to be parallel to the north direction line of the building. By overlaying the abstracted design form with the building grid, the abstract form acts as a guide to the design language that will be presented to the spatial design elements.

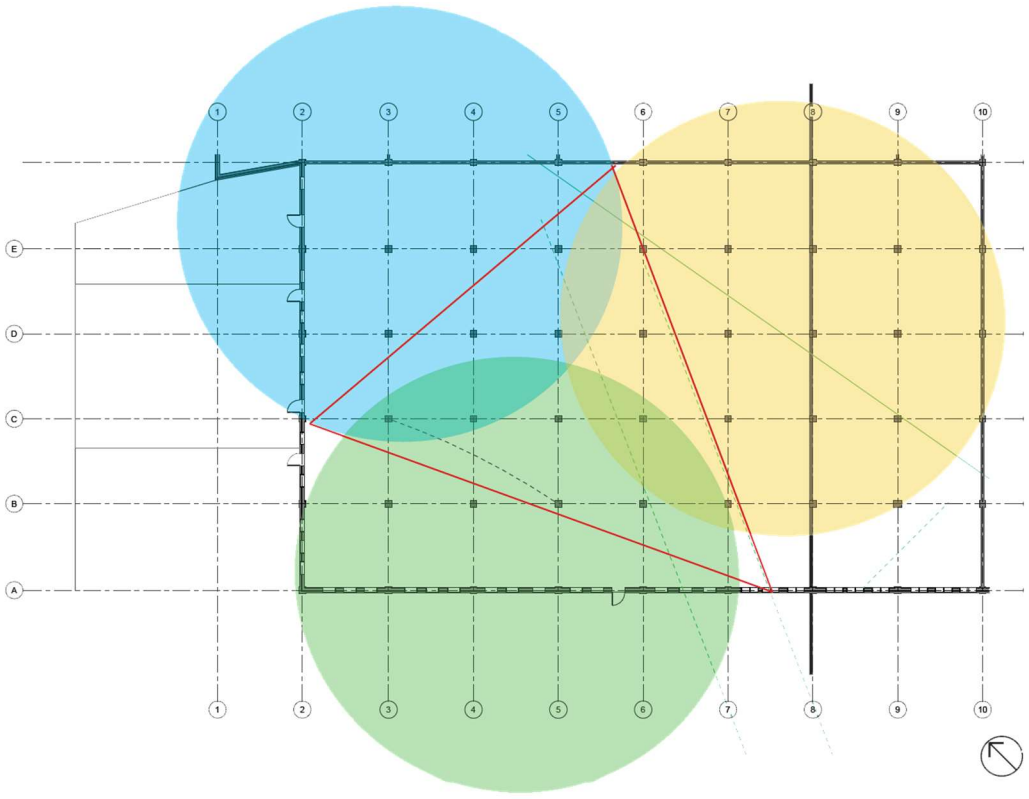


Figure 34. Form Development on Building Grid

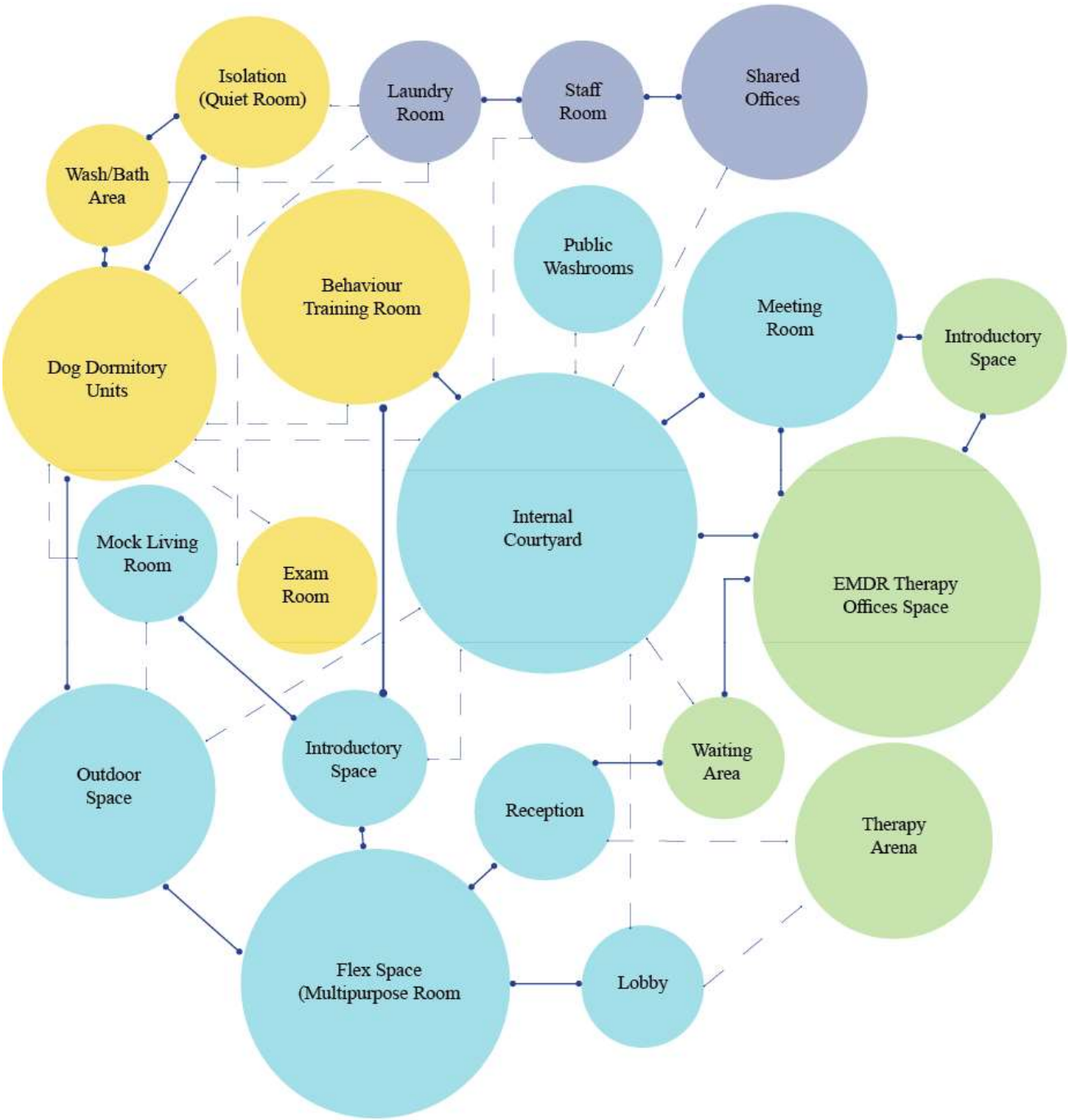


Figure 35. HAAT Centre - Adjacency Matrix Bubble Diagram

Figure 36. Preliminary Zoning & Spatial Design.

7.3 DESIGN PROPOSAL

7.3 Design Proposal and Renderings

Floor Plan

Design Strategy:

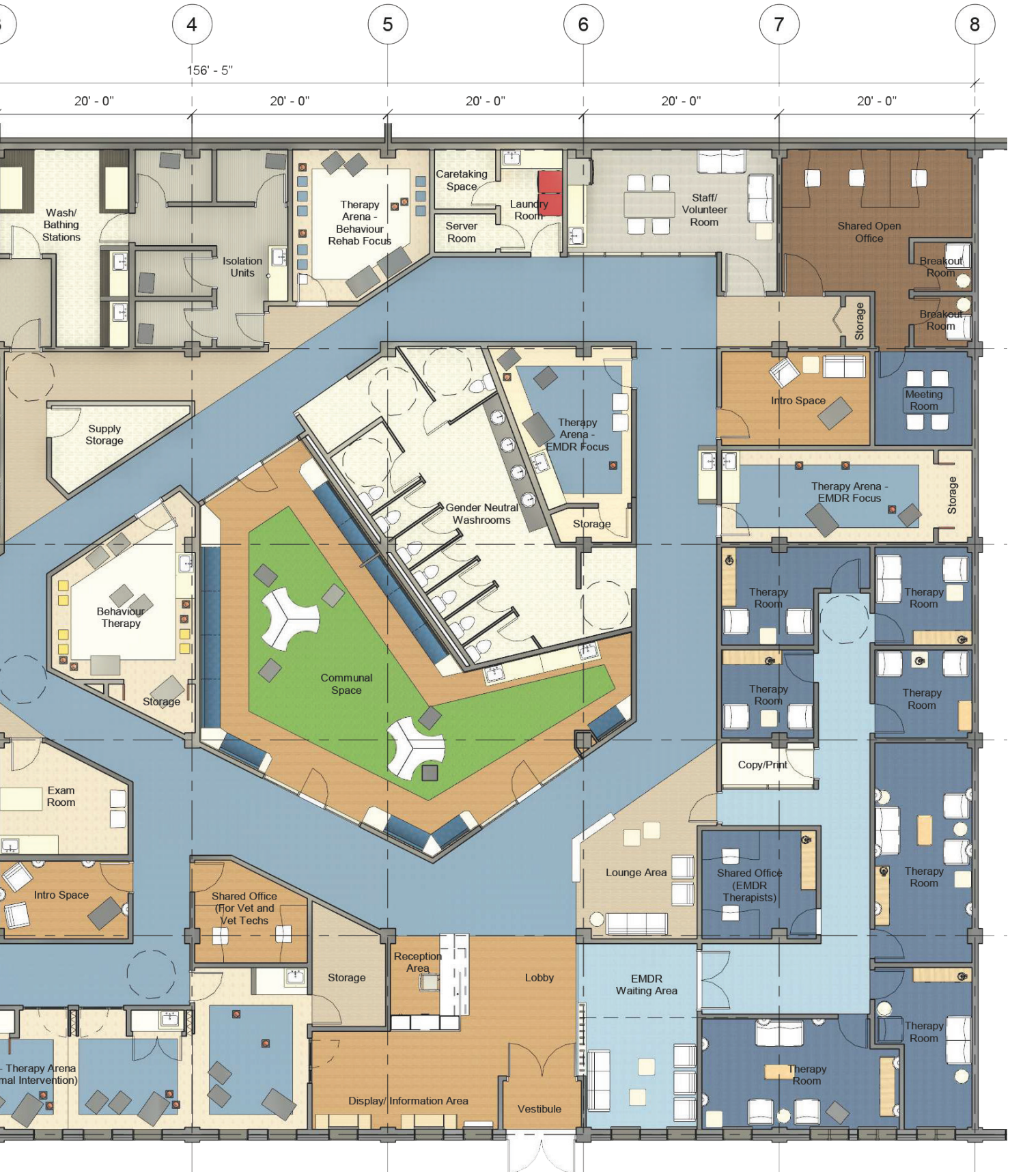
Concept: Healing Through Routine

The floor plan is designed to follow the interpreted forms from the literature review conclusion and is influenced by spatial planning. The concept of healing through the routine is further applied to the floor plan using the triage zoning and the triangular form that provided a circulation track.

Using the formed circulation track, the floor plan is then developed to allow the communal space to function similarly to an internal courtyard. The HAAT's spatial design is optimized to provide a hybrid space that offers a space where individual and collective therapeutic sessions can occur by using the joint space as the central space that serves as the vital connection.

Figure 36. Floor Plan View

Scale: NTS


4
5
6
7
8
156' - 5"
20' - 0"
20' - 0"
20' - 0"
20' - 0"
20' - 0"
Wash/ Bathing Stations
Isolation Units
Therapy Arena - Behaviour Rehab Focus
Caretaking Space
Laundry Room
Server Room
Staff/ Volunteer Room
Shared Open Office
Breakout Room
Breakout Room
Storage
Supply Storage
Therapy Arena - EMDR Focus
Gender Neutral Washrooms
Storage
Intro Space
Meeting Room
Therapy Arena - EMDR Focus
Storage
Behaviour Therapy
Storage
Communal Space
Therapy Room
Therapy Room
Therapy Room
Therapy Room
Copy/Print
Exam Room
Intro Space
Shared Office (For Vet and Vet Techs
Storage
Reception Area
Lobby
Lounge Area
Shared Office (EMDR Therapists)
EMDR Waiting Area
Therapy Room
Therapy Room
Therapy Room
Therapy Room
Therapy Arena mal Intervention)
Display/ Information Area
Vestibule

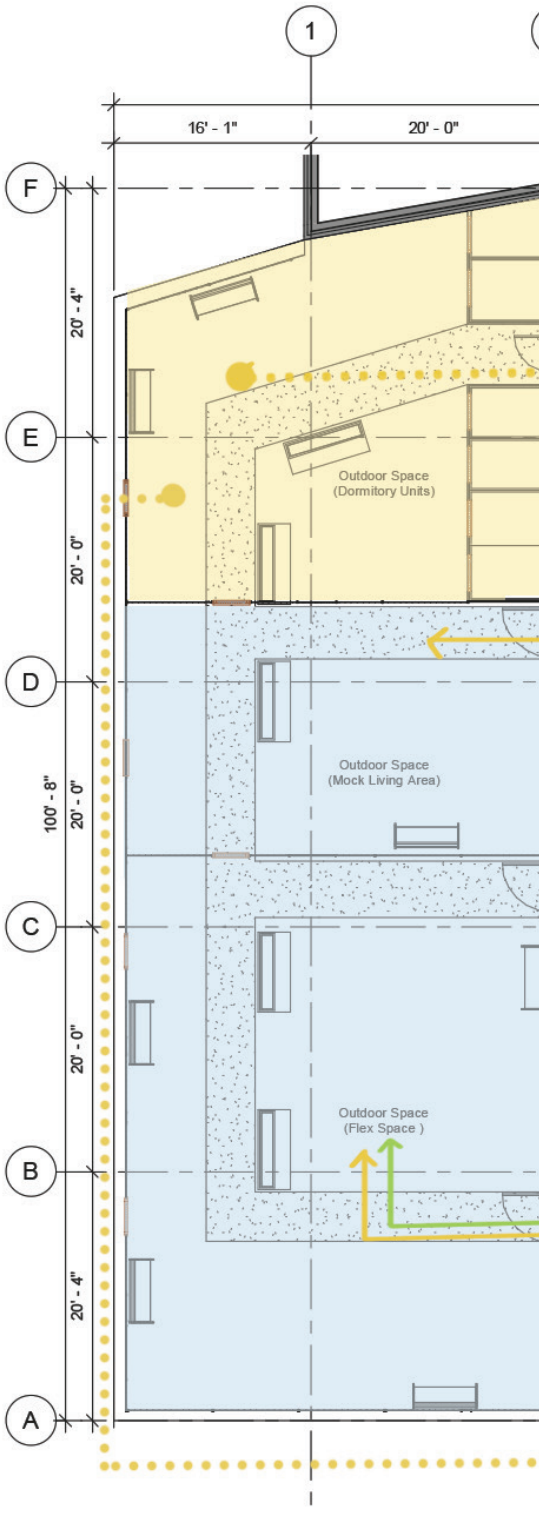
Floor Plan - Spatial Zoning

LEGEND

- Shared
- Behaviour Conditioning
- EMDR
- Main Circulation Path
- Support Spaces

Pathways

- People
- People (severe sensitivity)
- Rescue Dogs
- Rescue Dogs (severe sensitivity)



Design Strategy:

Concept: Healing Through Routine

Pathways

Use of Circulation Track

To correspond with the design concept, the communal space and circulation use are instrumentalized as a design element that facilitates wayfinding and directional routine for patients within the space. By establishing routine paths for patients in the space, the spatial design formulates a sequence for patients to build on as a foundation – to guide them while improving their desensitization and thresholds.

This spatial zoning and pathway diagram also shows how the circulation track allows the path of travel between highly sensitive patients and regular patients can differentiate - to help with the desensitization process, as well as to accomodate for their gradual introduction into the set program of the space.

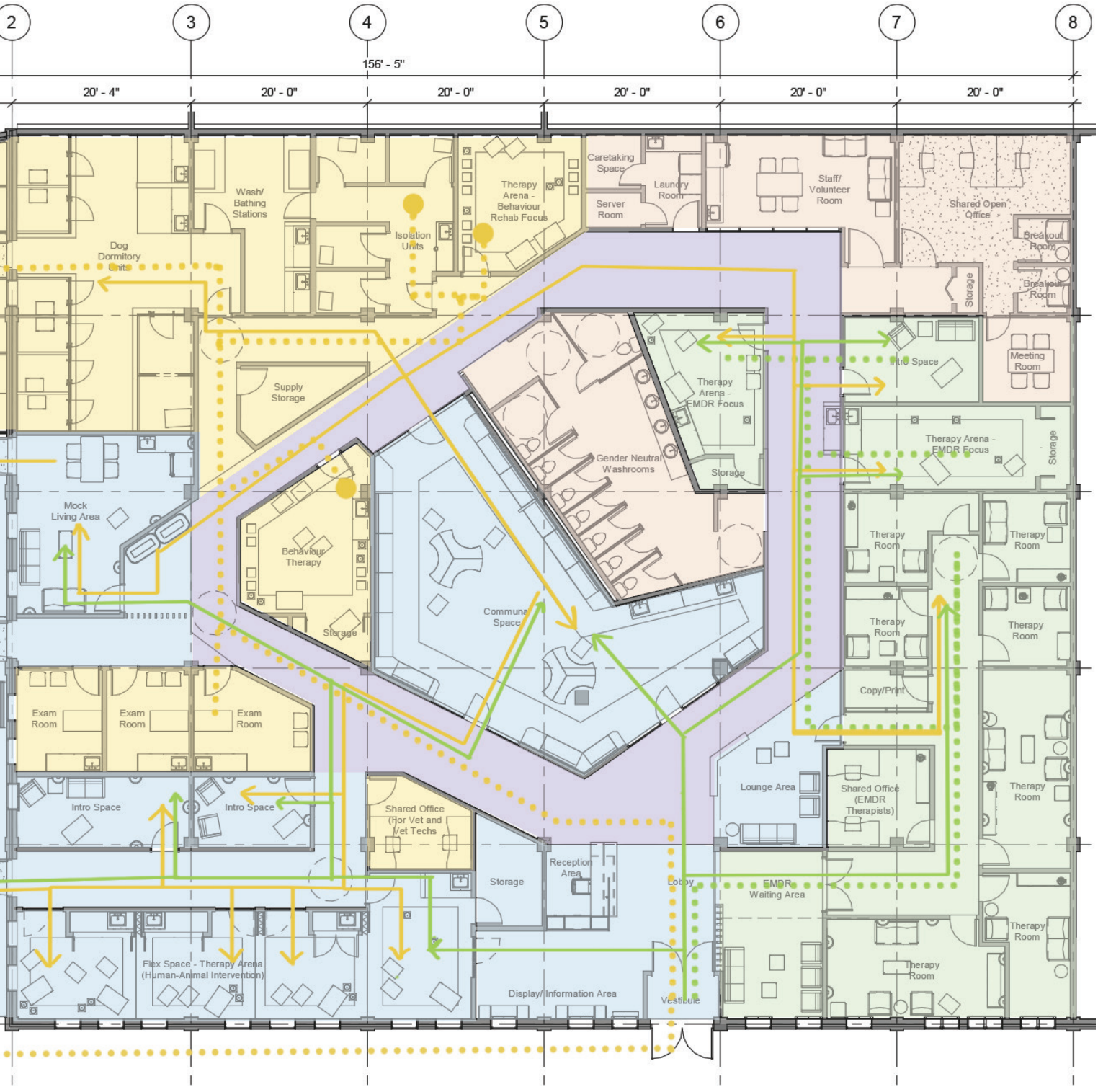


Figure 37. Floor Plan - Spatial Zoning

Scale: NTS

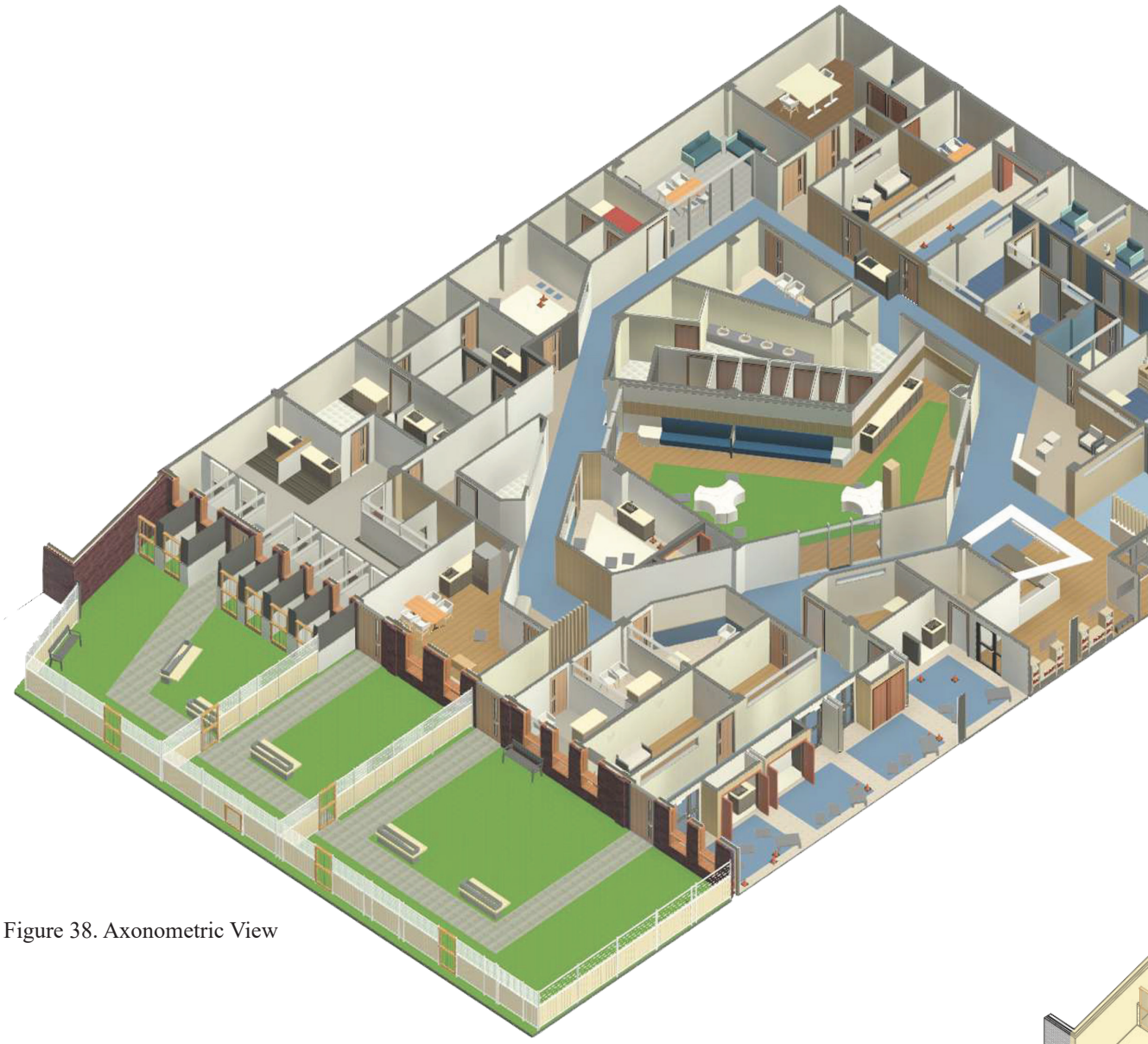
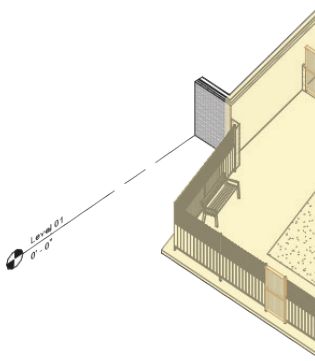


Figure 38. Axonometric View



The spatial design is highly influenced by the spatial planning that documents where the separate therapeutic zones are. The spatial structure is arranged to have shared or flexible spaces allocated towards the forefront of the area. At the same time, individual-focused spaces are designated to be closer to the polar opposite of the room.

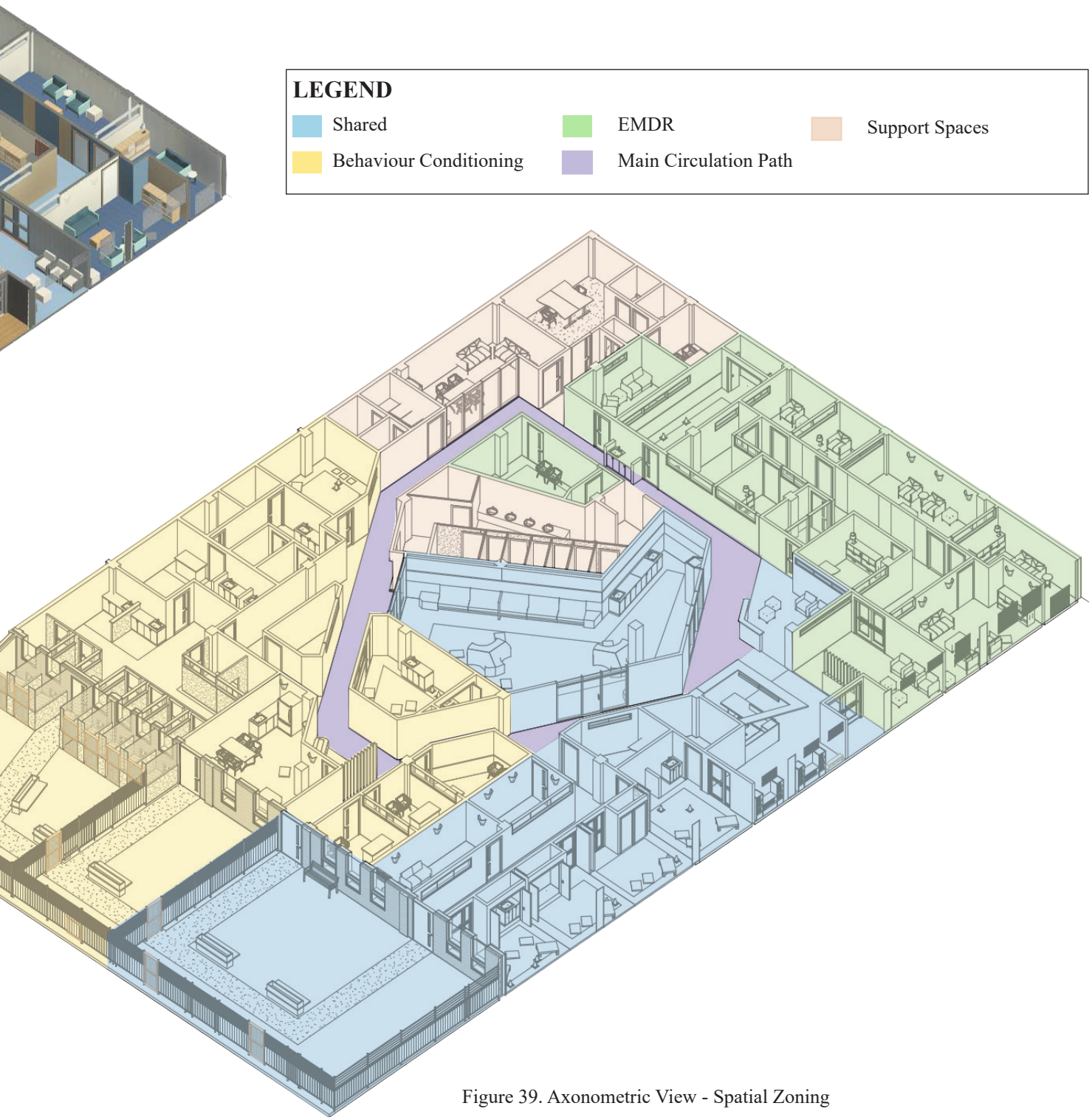
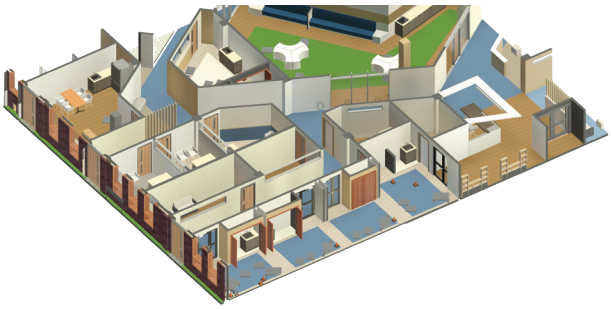


Figure 39. Axonometric View - Spatial Zoning

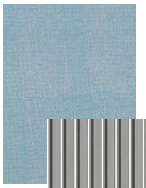
Figure 40. Shared Spaces Axo



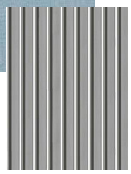
The entrance lobby is designed to have a bigger space to accommodate all therapy patients coming into the room. Upon passing the vestibule space, the reception desk is at the forefront to welcome and aid or answer inquiries. The reception has lowered ceiling planes coloured in blue to focus acoustic dampening better. These varying ceiling planes are also designed to give occupants a sense of wayfinding and spatial directions.

Figure 41. EMDR - Waiting Area

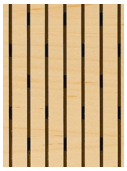
Ceiling & Wall Finishes



Armstrong
ACOUSTIBUILT
Seamless Acoustical
Ceiling System



Armstrong
Metal Acoustic
System Wall Panel



Armstrong
Acoustic Wood
Wall & Ceiling
Panels

Upholstery Finishes

STEELCASE
Siesta Healthcare
WHITE WOVEN

STEELCASE
Siesta Healthcare
ASHK614

Figure 42. Reception - View Upon Entry

Figure 45. Reception - Elevation [NTS]

Figure 43. Entry View - Lobby & Reception

There are two areas where individuals are welcome to lounge or find some seating comfort while waiting for their therapy session to commence. The lounge area across from the reception desk provides some visual partition from the main entry. With the understanding that people and rescue dog patients are continuously going in and out of the space, this area is situated to help individuals who may have some trauma associated with dogs to be tucked away from the main circulation path.

Figure 44. Vestibule & Display Area - Elevation [NTS]

Figure 46.Waiting Area - Elevation [NTS]

Communal Space

The communal space is designed as the central area where people and rescue can interact. This area is surrounded by the main circulation path with three entrances. The main idea for this space is to function as a space where the gradual introductions of the patients may occur. The area provides a communal atmosphere where patients can gather and not disrupt any individual therapy in session.

The communal is designed with a high ceiling, with acoustic baffles to dampen noise and provide some acoustic control within the space to accommodate for high-energy activities that are foreseen to occur within the area.

The communal space also has artificial turf flooring integrated underneath the finish flooring. It was designed with a patented flushing system to function like an internal courtyard without the maintenance required for natural grass.

Figure 47. Communal Space - Elevation View [NTS]

Patented Flooring - Design Feature

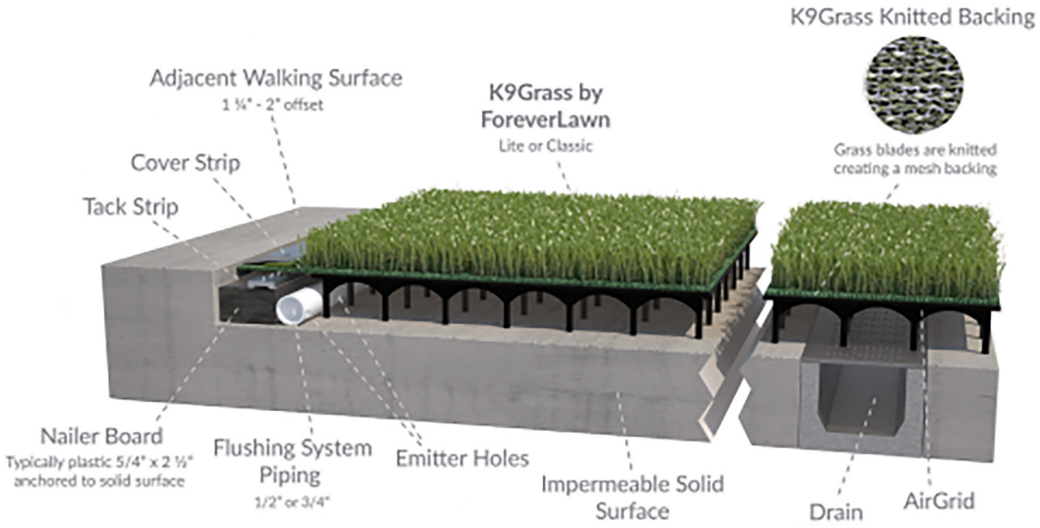


Figure 48. K9Grass, Patented K9 Grass Flushing System

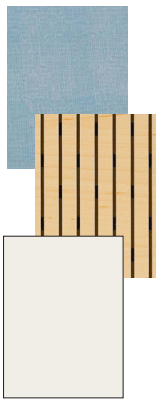
Flooring Finishes

Luxury Vinyl Tiles
Colonia Wood PUR

K9GrassArtificial Turf Grass

Figure 49. Communal Space - Southwest View

Ceiling & Walls Finishes



Armstrong
ACOUSTIBUILT
Seamless Acoustical
Ceiling System

Armstrong Acoustic
Wood Wall
& Ceiling Panels

Bejamin Moore
White Dove Paint

Figure 50. Communal Space - Southwest View

Figure 51. Communal Space - South East View

The intended design for the communal space provides opportunities for introductions between patients. The communal area has 3-lockable door that is accessible. It can also function as a therapy arena for EMDR patients and behaviour conditioning.

Apart from the communal space, the HAAT Centre also has Introduction spaces and Mock

Figure 52. Mock Living Area

Living Area. Introduction spaces are situated adjacent to joint therapy spaces. These rooms function similarly by allowing people and rescue patients to meet in smaller rooms to get familiarized with one another before going into therapy collectively. Alternatively, the Mock Living room also serves as an introductory space for potential adoptess to any rescue dogs in residence.

Figure 53. Introduction Space - Perspective

These space are design to mimic a home-like atmosphere for introductions, so that patients can experience desensitization and refamiliarization under a setting that is close to the natural setting of home environments.

As each patient progress in their therapy recovery within the individual therapy sessions and training rooms, the availability of these natural-like interior rooms, such as the communal space and the Mock Living area, the patients are given gradual introductions to a more natural setting. The availability of these settings within the HAAT Centre helps patients be reintroduced gradually into a more normal environment and keeps them grounded from their trauma processing.

Flooring Finishes

Upholstery Finishes

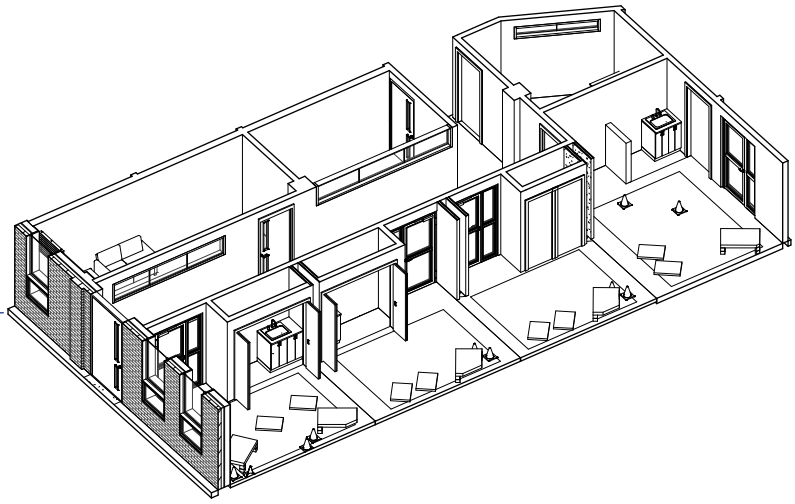
Flexible Space - Multipurpose Therapy Arena

The Flex Space is designed to be configurated in 3 different arrangements. There are ceiling tracks that allow the partition walls to be installed - allowing the room's square footage to function as one ample space, two semi-large spaces or 4 regular-sized rooms for therapy sessions. This versatility provides opportunity for the space to be expanded or limited as needed. Moreover, providing adjustment to the therapy session to accomodate according to the patiens' threshold capacity and responses.

Figure 54. Flex Space (MPR Whole Space)

Handwashing stations with built-in millwork is also designed to be integrated within each of the storage compartments of each room. This provides access to all participants that are interacting with dogs to have immediate access to handwash stations or access to water line - in case any accidents occur with the rescue dogs - such as various discharges (like pee, poo, diarrhea or vomiting).

Figure 55. Flex Space - Configuration 1

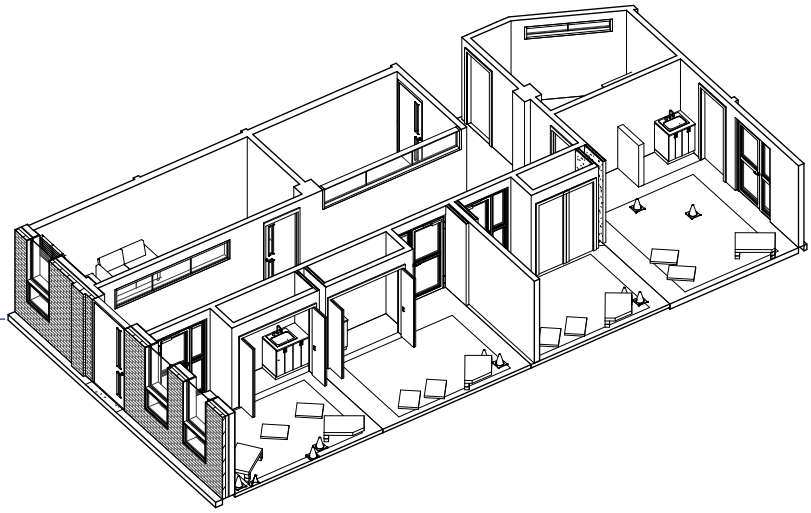


Flooring Finishes

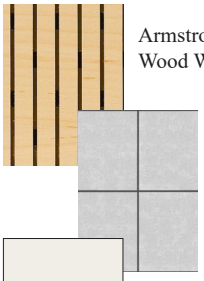
POLYFLOR Resilient
Vinyl Flooring Sheets

Luxury Vinyl Tiles
Colonia Wood PUR

Figure 56. Flex Space - Configuration 2



Ceiling & Wall Finishes

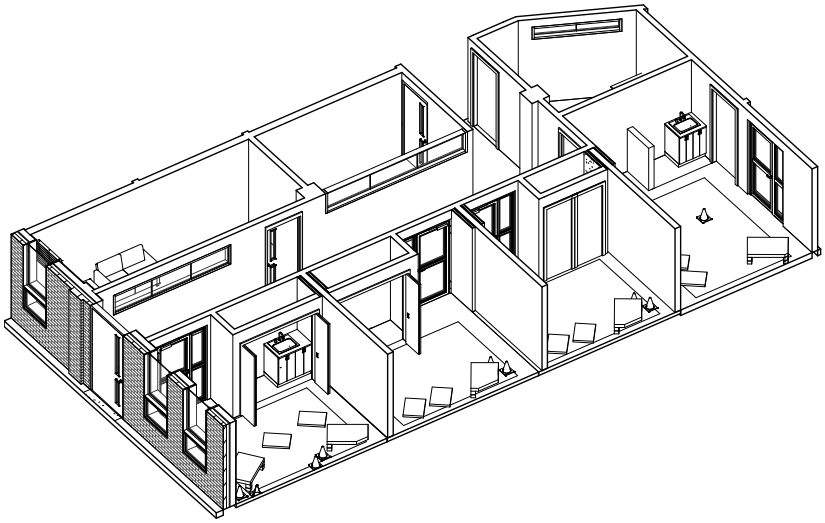


Armstrong Acoustic
Wood Wall Panel

Suspended Acoustic
Ceiling Tiles

Bejamin Moore
White Dove Paint

Figure 57. Flex Space - Configuration 3



EMDR Therapy Office

The EMDR therapy offices are designed to be privatized so that patients can feel safe disclosing their worries during the therapy session. Each therapy office has ottomans and shelving for storage use. Therapy instruments can be stored and accessible to flexibly configure or modify the space uniquely to each client.

Figure 58. EMDR Therapy Office - Internal Location View

The location of the EMDR zone allowed for varying daylight harvesting strategies, with some rooms have ample access to natural daylight and some siutated to be more internal in the spatial design.

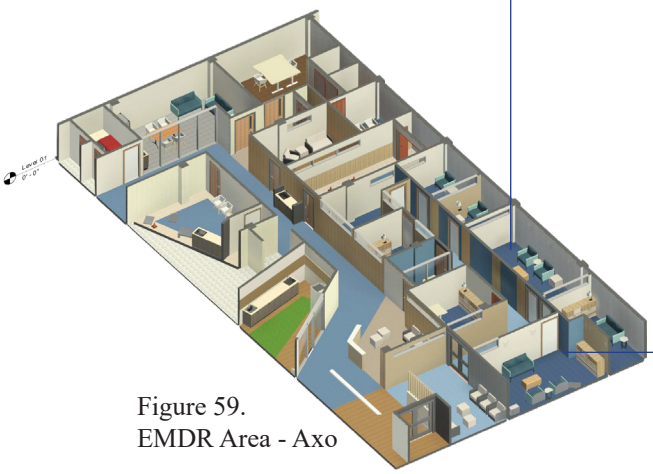
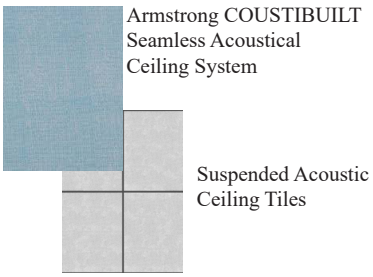


Figure 59.
EMDR Area - Axo

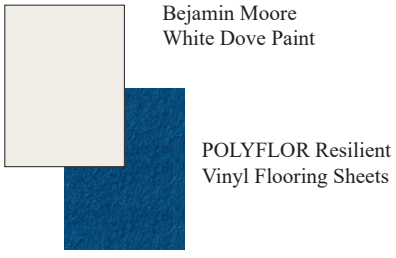
Ceiling Finishes



Armstrong COUSTIBUILT Seamless Acoustical Ceiling System

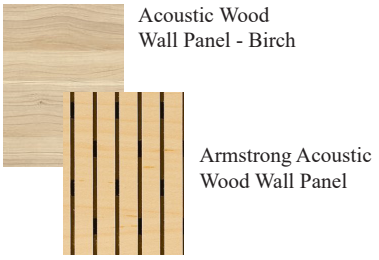
Suspended Acoustic Ceiling Tiles

Wall & Floor Finishes



Bejamin Moore White Dove Paint

POLYFLOR Resilient Vinyl Flooring Sheets



Acoustic Wood Wall Panel - Birch

Armstrong Acoustic Wood Wall Panel

Use of internal clerestory windows were utilize to allow for daylight from the southside of the building to be harvested and penetrate some natural light into the therapy offices. Light switches for all therapy offices are also set to be dimmable, so that lighting brightness can be controlled according to patients' needs.

Figure 60. EMDR Therapy Office View

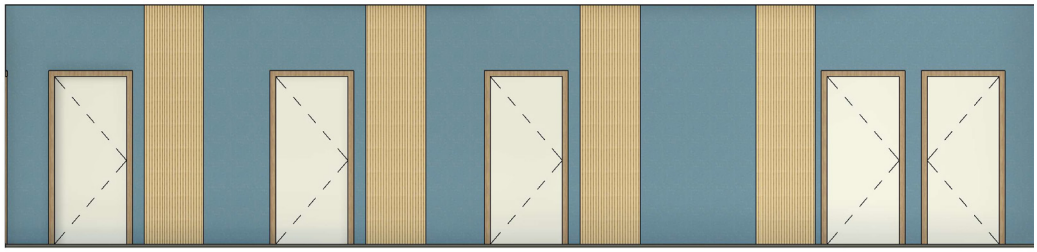


Figure 61. EMDR Therapy Office Hall - Elevation [NTS]

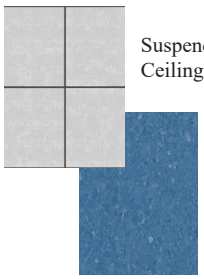
Figure 62. EMDR Therapy Arena

Wall Finishes

Wallguard Rigid Vinyl
Wall Protection Sheets
(Wood Grain Finish)

Armstrong
Acoustic Wood
Wall Panel

Ceiling & Floor Finishes



Suspended Acoustic
Ceiling Tiles

POLYFLOR Resilient
Vinyl Flooring Sheets

The EMDR therapy arena is designed to have a built-in storage closet to allow for equipments needed for therapy to be easily accessed for patient needs. The therapy arena are mostly designed with acoustic wood panel finishes to help dampen acoustic and activities from therapy sessions, increasing privacy and focus for the therapy session. Behaviour assessed and stable rescue dogs are introduced into this space to allow collectively therapy to occur. This also provide comfort and aid to patients in EMDR therapy by helping them stabilize and keep calm.

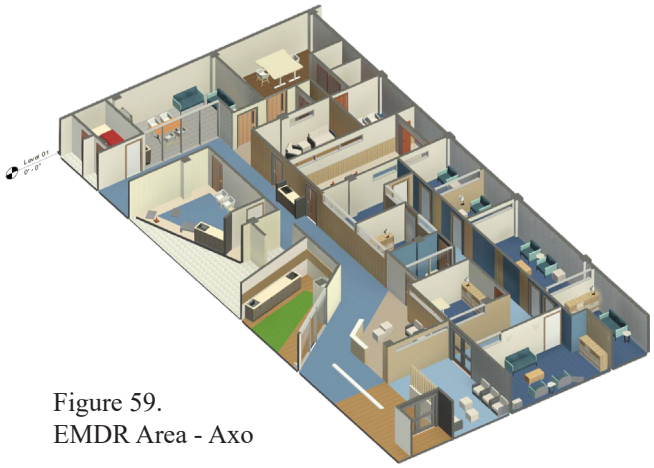


Figure 59.
EMDR Area - Axo

The clerestory windows in this space also allow opportunities for light harvesting to occur in the room. These windows also provide enhanced privacy for patients by having them elevated from the sight line.

Floor Finishes

POLYFLOR Resilient Vinyl Flooring Sheets

Luxury Vinyl Colonia Wood PUR

Ceiling & Wall Finishes

Armstrong Metal Acoustic Wall Panel

Wallguard Rigid Vinyl Wall Protection Sheets

Armstrong Acoustic Wood Wall Panel

Figure 63. Lounge Area

Behaviour Conditioning Training Room

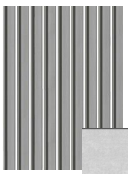
The behaviour conditioning rooms are designed to have coloured design patterns applied to the flooring (in colours yellow and blue). This flooring finish supports the mat training and classical conditioning implemented within the training rooms. Built-in closets and handwashing stations are also placed in the space for therapy providers.

Ceiling & Wall Finishes

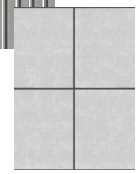
Figure 64. Behaviour Conditioning Room

Figure 65. Back Hallway Elevation [NTS]

Wall Finishes



Armstrong
Metal Acoustic
System Wall Panel



Suspended
Acoustic
Ceiling Tiles

Figure 66. Behaviour Conditioning - Exam Room

Wall Finishes

Wallguard Rigid
Vinyl Wall
Protection Sheets

POLYFLOR
Resilient Vinyl
Flooring Sheets

Acoustic Wood
Wall Panel Birch

Armstrong Acoustic
Wood Wall Panel

Figure 67. Hallway View from Behaviour Conditioning Area

The dog dormitory units are designed to accommodate the rescue dogs in residence and undergoing behaviour conditioning sessions. This dormitory is designed to have 7 dwelling units with two compartments each, with most of the dwelling counts providing outdoor access. The space is also designed to have high ceiling finished acoustic ceiling tiles to allow better airflow and acoustic control.

Wall & Floor Finishes

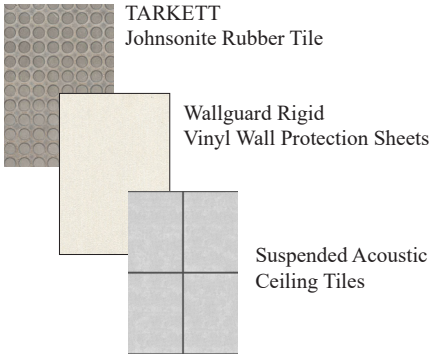


Figure 68. Dog Dormitory - Kennel Spaces

Figure 69. Dog Dormitory - Hall View

Figure 71. Dog Dormitory - Elevation [NTS]

Outdoor Finishes

Figure 70.
Behaviour Conditioning Area - Axo

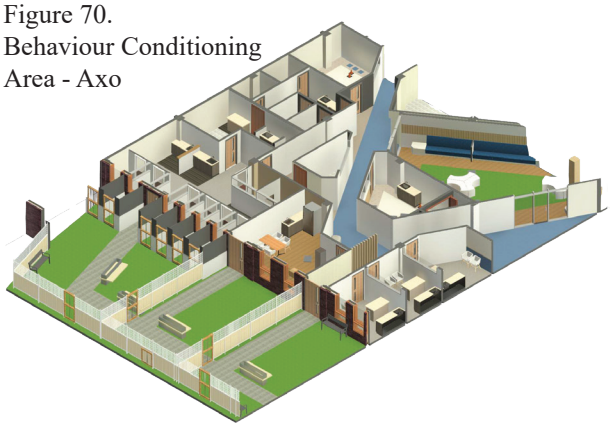


Figure 72. Dormitory - Outdoor Space

7.4 Material Finishes

Flooring Finishes

POLYFLOR Resilient Vinyl
Flooring Sheets
Homogenous XL PU
Sablee Beige

Blue Zircon

Citrine

Tanzanite Blue

POLYFLOR Resilient Vinyl
Flooring - Luxury Vinyl Tiles
Colonia Wood PUR
Cliff Top Oak

New England Elm

Golden Koa

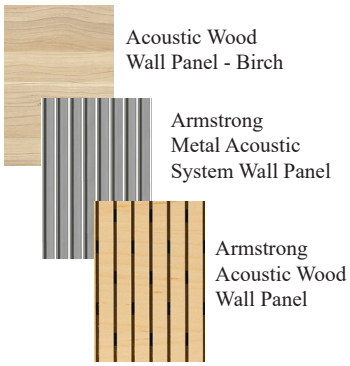
Wood Fencing

Concrete

K9ForeverLawn
Artificial Turf Grass

TARKETT
Johnsonite
Rubber Tile

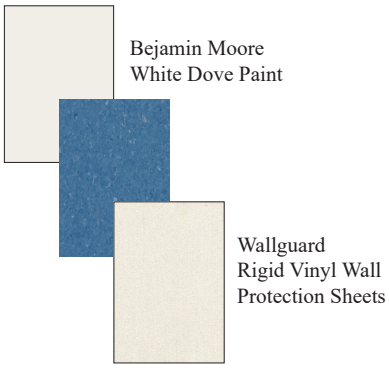
Wall Finishes



Acoustic Wood
Wall Panel - Birch

Armstrong
Metal Acoustic
System Wall Panel

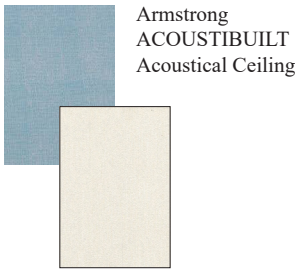
Armstrong
Acoustic Wood
Wall Panel



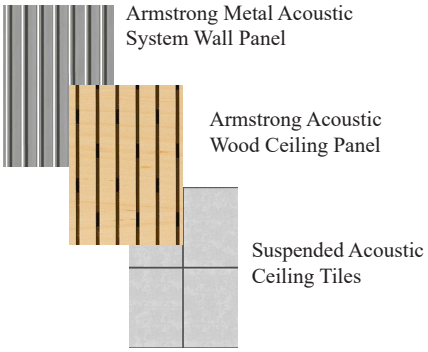
Bejamin Moore
White Dove Paint

Wallguard
Rigid Vinyl Wall
Protection Sheets

Ceiling Finishes



Armstrong
ACOUSTIBUILT
Acoustical Ceiling



Armstrong Metal Acoustic
System Wall Panel

Armstrong Acoustic
Wood Ceiling Panel

Suspended Acoustic
Ceiling Tiles

Upholstery Finishes

STEELCASE
Siesta Healthcare
White Woven

STEELCASE
Siesta Healthcare
ASHK614

STEELCASE
Era-Coalesse

8.0 CONCLUSION

8.1 Summary

This practicum study intended to provide a space where a successful human-animal assisted therapy intervention can occur. To effectively design a space that would facilitate this interaction, the practicum study explored and investigated two separate therapy processes from each target patient group to identify what commonalities they share and how the trauma process unfolds individually. In summary, the practicum study explored the fields of study related to trauma processing, which included:

- Eye Motion Desensitization Reprocessing (EMDR) therapy
  - Grounding Technique
  - Sandplay Therapy – Metaphorical Arena
- Behaviour Conditioning
  - Operant Conditioning Training
  - Classical Conditioning

Through the exploration of these therapeutic interventions, the design objectives for the study are provided with the catalyst elements to procure a spatial program that offers a solution in response to the shortage of accessibility to these types of treatments. By investigating individual therapeutic interventions, it is presented what the mandatory spatial needs for the design space were and what sensory considerations they require.

With this exploration, the practicum study also establishes the design goals of:

1) Develop a spatial design that helps facilitate therapy and mitigate the effect of trauma.
2) Implement a flow-through design concept focusing on sensory element applications.

3) Develop a spatial program that combines therapy patients to foster and promote symbiotic healing.

For many patients, the sense of privacy, exclusivity and environmental grounding are essential due to the sensitive nature of their trauma healing. This exploration provided insight into how there are different levels of effects and damage trauma can unfold, as well as how the spatial environment can contribute to this through proper spatial planning, furniture arrangement and having a flexible space. Likewise, in addressing the spatial needs of rescue dogs undergoing behaviour conditioning, it is found that positive reinforcements, the process of desensitization and familiarization were crucial aspects in their healing. These conditions are also subjective to the level of trauma that exist with the rescue dogs. An in-house examination room and isolation rooms were also included in the design planning to address these needs.

Moreover, with the practicum study proposing an integrated program between the two patient groups, it was critical to understand how each patient group was undergoing the therapy processes to facilitate where the transition from individual therapy to collective therapy can occur. It is important to note how these transitional spaces are integrated as the patient groups from sensitive backgrounds propose collaborating. Hence, the design language and design solutions offered in this study are heavily rooted in the strive to combine the two patient groups to instigate symbiotic healing.

8.2 Responses to Research Questions:

Research questions were presented at the beginning of the practicum to help direct the focus of the design proposal. This section adheres to answers these questions upon the study completion.

1. What is the role of the built environment in trauma healing?

The built environment plays a role in trauma healing as it can elicit strong emotions to patients in therapy. Hence, it can strongly influence treatment response. With addressing two different patient groups for this practice, this was important to note. As each patient group required their own sensitivity needs and required a sense of privacy. In the context of a collective human-animal assisted therapy, the built environment serves as a grounding element for people while it serves as a positive reinforcement for rescue dogs. In this practicum project, this is executed through spatial zoning of the space. By zoning the overall space to have designated areas to focus on a target patient group, it allows for individual treatment to be facilitated before commencing any adjoining activity.

2. How can spatial design, applied in individual and collective treatment space, support the role of the built environment in the therapy process?

Through this study, the built environment is supported by design primarily through spatial planning and sensory design applications to each respective zone focus. With the sensitive nature of the targeted patient groups for the HAAT centre, the design strategies for the built environment largely dictate where privatized, and semi-privatized areas can conjoin. This is executed in the design distinctively for the EMDR therapy offices, the dog

dormitory units and the isolation area. By allocating the spaces from opposites of the room, it allows the focus to be driven more individually.

Moreover, the design of the built environment also contributes to trauma healing by acting as a grounding element. In the context of people as patients, designing therapy offices to have distinct components that touch on any of the five senses allows therapy patients to be grounded back into therapy and have their presence of mind shifted back to the therapy session easier. This is also executed through the use clerestory windows and having a more privatized hallway into the therapy offices to allow for better privacy, providing a better sense of security to the patients.

In the context of rescue dogs, integrating design components, like coloured shapes on the wall or floor surface, or by applying material at the bottom half of wall surface to be in frosted finish, these design elements help support classical conditioning. With the utilization of the built environment to support training in classical conditioning, the design of the built environment is also associated with being processed as favourable reinforcement.

With the conscious application of these architectural elements to individual focus spaces, the collective and shared spaces entail to have the similar characteristic from each individual space, but with a more expandable and configurable square footage. By designing spaces fit to cater to the reinforcement, privacy and flexibility needs of each activity, the design elements of the HAAT Centre acts as an active support in the therapeutic process.

3. How can spatial programming and design help facilitate therapy with conditioning and desensitization?

Spatial program and design support patients conditioning by applying materials within the built environment that can be used as an element that can serve as conditioned stimulant that can be used to establish association of the therapy to a more sequential, experiential and a genesis to the healing and conditioning process.

Spatial programming can support desensitization intervention with integrated interior design strategies as it performs to mimic the same regime routine of healing within the space. This is primarily executed in the design by programming the introductory space to be adjacent to shared space where collective treatment occurs. By programming introduction space to be adjacent to shared spaces, the thresholds of patients can be strengthened. This adjacency also provides incremental exposure of patients to gradual introductions, allowing them to sustain composure and strengthen their resiliency and mitigate negative effects of trauma. This design adjacency also follows the sequence of routine involved within the therapy by providing a spatial program deemed to collaborate two patient groups.

8.3 Reflection

Animal Welfare in Animal-Assisted Activities

Prior to undertaking this study, the original and initial intention for the practicum proposal was to design a built environment where dogs within animal shelter or rescue organizations are given the opportunity to meet with the community. However, as the exploration of the study developed, sadly, I found that there were many factors in this context that posed more risk and liability to the people that would be exposed to the dogs, with the welfare of the participating animals perceived in a secondary manner. Hence, the direction of the undertaking of this study was geared towards addressing rescue dogs' behavioural issues to be treated with equal care as treating the mental illnesses with people. With much attention and care for their therapy and rehabilitative needs. With how household pets provide social comfort and companionship to many families, it only seemed fair to address and cater to their needs equally as that of people.

Animal Shelters in COVID-19 Pandemic

With this practicum study being conducted during the peak of the COVID-19 pandemic, it was disheartening to see how the demographics within animal shelters reflected the reality and logistics of the neglect to the long-term welfare of the animals. During the beginning of the pandemic, with everyone in a state of quarantine, many shelter and non-profit rescue organization had more demands for adoption than the number of pets available in the shelter (Kavin, K., Dog adoptions and sales soar during the pandemic, August 2020). For many people, at the peak of the pandemic, the void cause by isolation and loneliness was aided with the presence of an animal companion. However, with the improvement of the condition of the pandemic and people returning to work, many of the pets adopted during the peak of COVID-19 suffer from abandonment. With some shelters documenting that there is twice the percentage number of animals surrendered, returned, or abandoned to their centres (Morris, C. People are abandoning their pandemic pets nationwide as returns to work loom, July 2021), causing animal shelters and rescue organization to be in a case of havoc and having to do an intake freeze. With this evidence of neglect and

overlooking of the welfare of pets and animals in households, this practicum proposal also strives to shed some light to how facilities like the HAAT can provide opportunities to help these situations to be managed. More importantly, to provide care and behaviour rehabilitation to the pets' health and help find a proper home for them.

8.4 Future Opportunities

With the undertaking of this project, it presents how there are many avenues of animal-assisted therapy or activities that provides an opportunity to be studied larger. There is an aspect of community, particularly in the context of animal rescue organization and animal shelter, that can be further explore. With this study concentrated more on addressing canine as the species for animal-assisted activities, there are also opportunities to explore the study with different species, such as feline, equine, or other species. There is also opportunity for this study to be delved in collaboration and conjunction with studying the nature and atmosphere within animal day care centres – as it proves to be a rising typology within the 21st century context, and with the growth of animal companionship advocacy.

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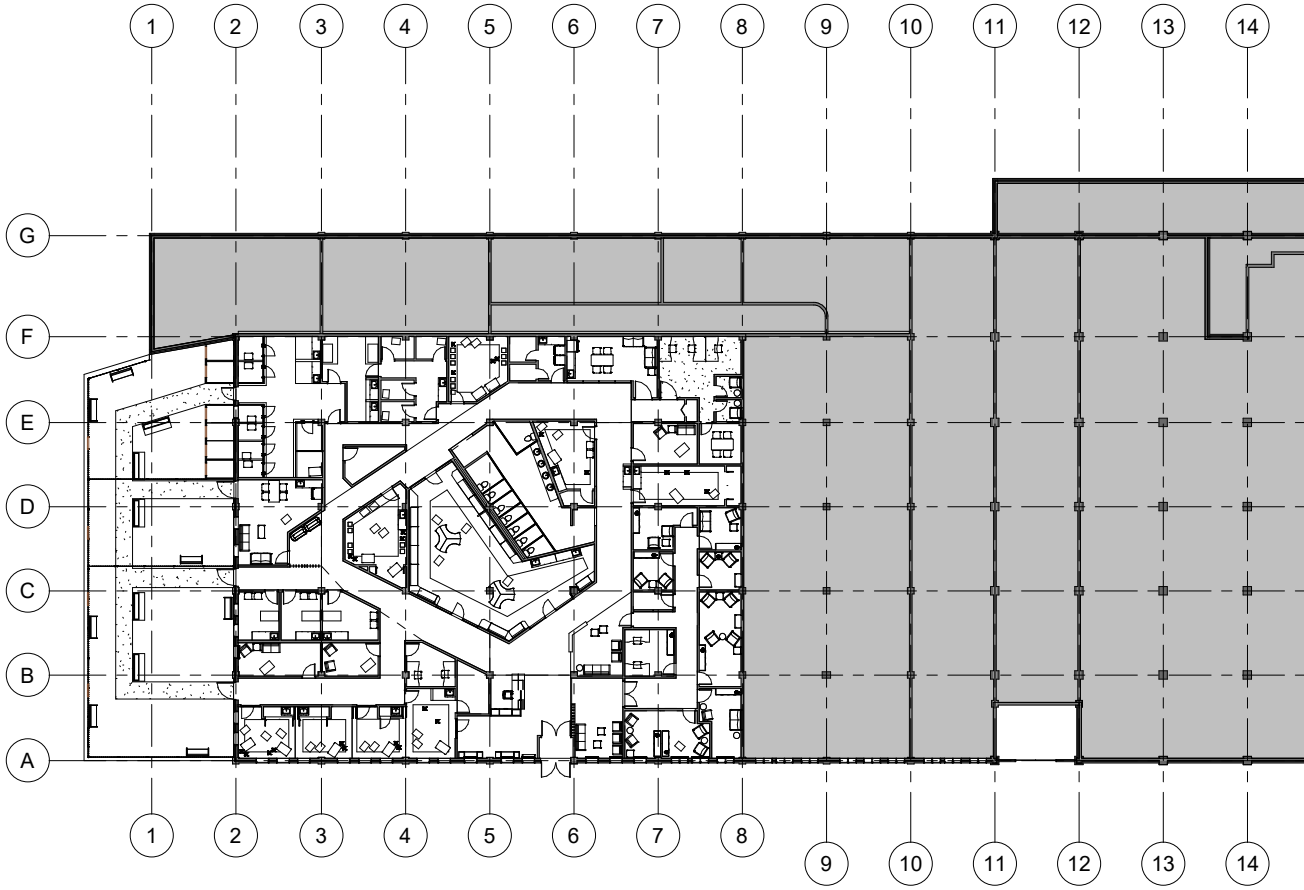
10.0 APPENDIX - TECHNICAL DRAWINGS

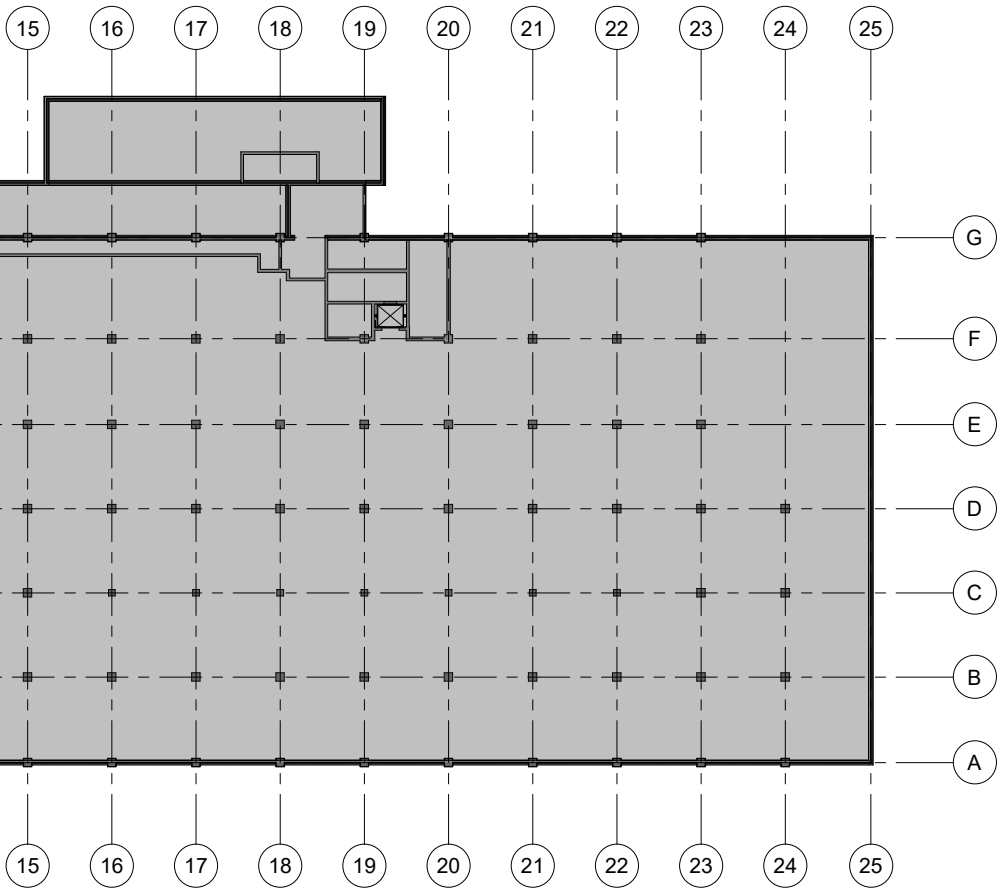


1 LEVEL 01 - OVERALL BUILDING PLAN

1" = 20'-0"

GENERAL PROJECT NOTES:

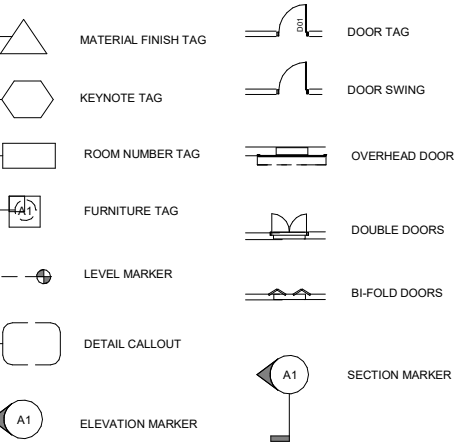
1. THIS PROJECT PROVIDES A DESIGN PROPOSAL TP REPURPOSE & REIMAGINE THE DESIGN FOR A PORTION OF 1147 NOTRE DAME AVENUE BUILDING.
2. SQUARE FOOTAGE BETWEEN GRID POINTS A1-F8 OF OVERALL BUILDING WILL BE UTILIZED FOR THE PROPOSAL OF THIS PROJECT.
3. THIS PROJECT IS BY NO MEANS AFFILIATED WITH ANY PROGRAMS EXISTING ON SITE AND IS ONLY TO SERVE A DESIGN PROPOSAL AS PART OF FULFILLMENT REQUIREMENT FOR THE FACULTY OF GRADUATE STUDIES UNDER THE MASTER OF INTERIOR DESIGN.
4. INTERIOR BUILDING PLANS WERE RETRIEVED FROM STANTEC ARCHITECTURE IN DECEMBER 2020.
5. EXTERIOR BUILDING FENESTRATION COULD NOT BE RETRIEVED FROM PRAIRIE ARCHITECTS DUE TO WINNIEPG HEALTH AUTHORITY CONFIDENTIALITY RIGHTS.



GENERAL CONSTRUCTION NOTES:

1. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH LATEST APPLICABLE BUILDING CODES, FIRE REGULATIONS AND ANY LOCAL BUILDING REQUIREMENTS.
2. THE CONTRACTOR IS TO REPORT ANY DISCREPNACIES TO THE ARCHITECT PRIOR TO WORK COMMENCEMENT.
3. DRAWINGS ARE TO BE READ IN CONJUNCTION WITH OTHER DRAWINGS, SCHEDULES SPECIFICATION AND DETAILS ENCLOSED IN SET. CONTRACTOR TO REVIEW ALL CONSTRUCTION, FINISHES, ELECTRICAL AND LIGHTING PLAN. CONSULT WITH DESIGNER FOR ANY DISCREPANCIES.
4. ALL NEW OPENINGS TO BE CONSTRUCTED ON EXISTING FENESTRATION ARE TO BE SALAVAGED AND INCLUDED INTO ADJACENT NEW WALLS.
5. ALL OPENINGS THROUGH FIRE-RATED ASSEMBLIES ARE TO BE FIRE STOPPED AND SEALED TO MAINTAIN INTEGRITY OF FIRE SEPARATION.
6. ALL WOOD MATERIAL USED AT OR BELOW GRADE IS TO BE PRESSURE TREATED.
7. LAP AND SEAL ALL PENETRATION IN VAPOUR BARRIER MEMBRANE.
8. ALL STAGING AND SOTRAGE AREAS TO BE KEPT CLEAN, ORGANIZED AND PROTECTED FROM INCIDENTAL DAMAGE. GENERAL CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING ORIGINAL CONDITION.
9. GENERAL CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL LOAD RESTRICTION INFORMATION THROUGHOUT SITE TO ALL TRADES. WORK AREA IS TO BESTAGED AND COORDINATED WITHIN ALLOWABLE LOADS.
10. PENETRATIONS OR OPENINGS IN FIRE SEPARATIONS ARE TO BE FIIRE STOPPED AND SEALED TO MAINTAIN FIRE SEPARATION INTEGRITY.
11. ALL WORK TO BE COORDINATED WITH CLIENT AND SHOULD LIMIT DISRUPTION THROUGHOUT CONSTRUCTION. PORTION OF BUILDING WILL BE TEMPORARILY UNOCCUPIED DURING CONSTRUCTION.
12. CONTRACT TO VERIFY SITE CONDITIONS AND CONFIRM ALL DIMENSION RELATIVE TO AS-BUILT CONDITION OF EXISTING SPACE.

OMMON DRAWING SYMBOLS



ABBREVIATIONS

ACT	ACOUSTIC CEILING TILE
CC	CONCRETE
CT	CARPET TILE
GWB	GYPSUM WALLBOARD
GLS	GLASS
LVT	LUXURY VINYL TILE
MTL	METAL
O.C	ON CENTRE
P.B	PHONE BOOTH
PT	PAINT
RB	RUBBER BASE
WD	WOOD
WP	WALL PANEL
SRF	SLIP RETARDANT FLOORING
U/S	UNDERSIDE
U/WC	UNIVERSAL WATER CLOSET

University of Manitoba

PROJECT:
HUMAN-ANIMAL ASSISTED THERAPY (HAAT) CENTRE

ADDRESS:
1147 NOTRE DAME AVENUE
WINNIPEG, MB

DRAWN BY:
PAULA COMBATE

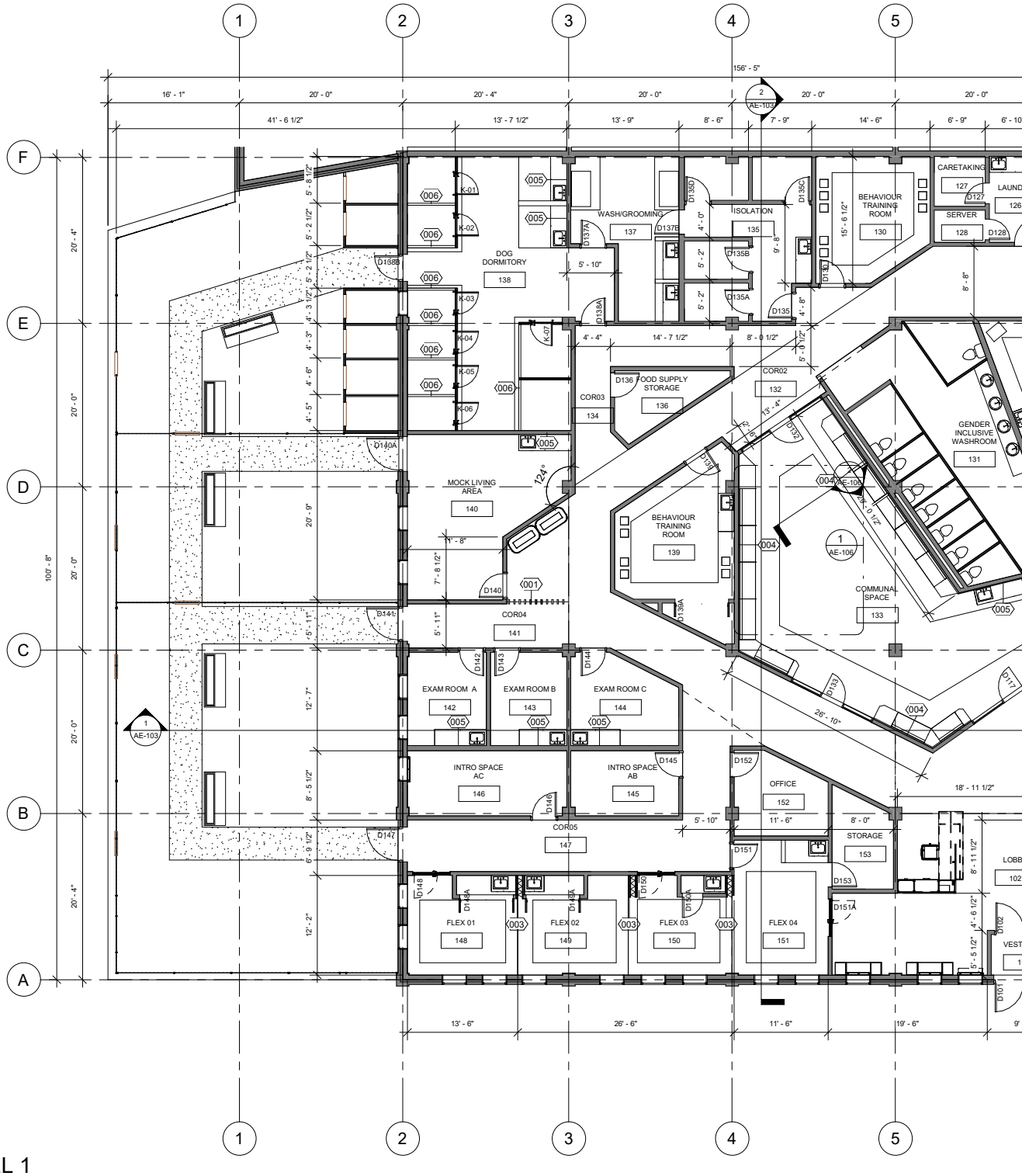
CHECKED BY:
KURT ESPERSEN-PETERS

SCALE: AS INDICATED

DATE: AUGUST 2022

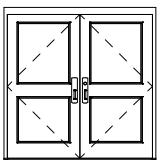
SHEET TITLE:
TITLE & INDEX

SHEET NO.
AE-100

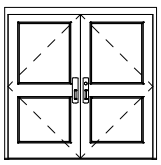


1 LEVEL 1

1/8" = 1'-0"



DOOR TYPE - 01
EXTERIOR
DOUBLE DOOR
TWO LITE
2100MM X 2100MM



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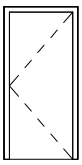
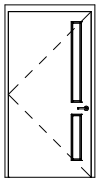
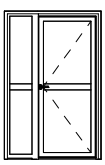
DOUBLE DOOR
TWO LITE
1800 MM X 2100MM



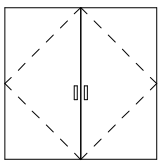
DOOR TYPE - 03
ROOM DOOR
915 MM X 2134MM



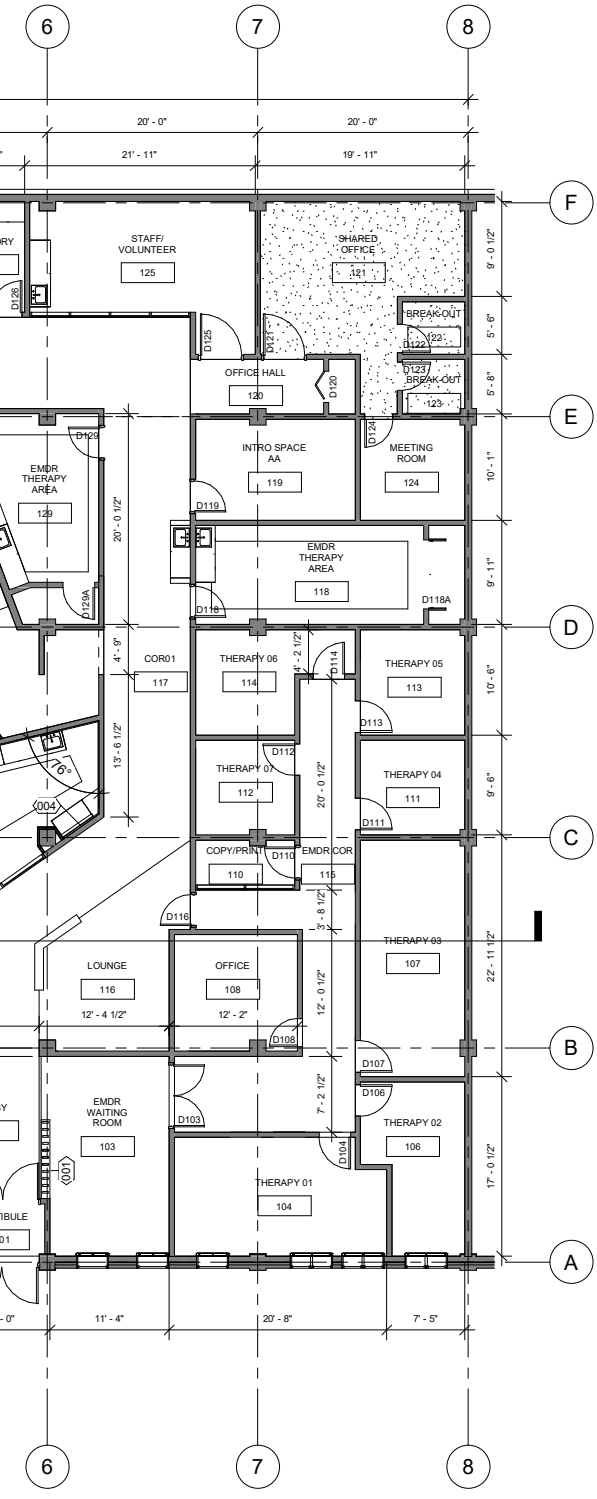
DOOR TYPE - 04
INTERNAL
NOBERNE
10B SINGLE - N90
SECURITY DOOR



DOOR TYPE - 05
ALUPROTEC BP1V LM
SINGLE AL FIRE DOOR
WITH SIDELIGHT E30

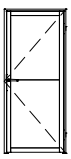


DOOR TYPE - 06
SINGLE DOOR
GLASS DOORS

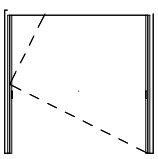


KEY NOTE LEGEND	
Key Value	Keynote Text
001	WOOD SLATS TO BE INSTALLED AS PART OF WALL PARTITION
003	RETRACTABLE PARTITION WALLS TO BE INSTALLED
004	WOOD ACOUSTIC WALL PANEL TO BE INSTALLED ALONG WALL ABOVE BENCH SEATING
005	BACKSPLASH TILES TO BE INSTALLED ABOVE MILLWORK
006	PARTITION WALLS ARE TO BE 5'-0" TALL TO SUPPORT KENNEL SPACE WITH CLERESTORY TOP

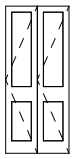
Door Schedule	
Mark	Type Mark
D101	TYPE 01
D102	TYPE 01
D103	TYPE 01
D104	TYPE 03
D106	TYPE 03
D107	TYPE 03
D108	TYPE 03
D110	TYPE 04
D111	TYPE 03
D112	TYPE 03
D113	TYPE 03
D114	TYPE 03
D116	TYPE 04
D117	TYPE 06
D118	TYPE 04
D118A	TYPE 08
D119	TYPE 04
D120	TYPE 08
D121	TYPE 03
D122	TYPE 03
D123	TYPE 03
D124	TYPE 03
D125	TYPE 03
D126	TYPE 03
D127	TYPE 05
D128	TYPE 05
D129	TYPE 04
D129A	TYPE 03
D130	TYPE 04
D132	TYPE 06
D133	TYPE 06
D135	TYPE 04
D135A	TYPE 04
D135B	TYPE 04
D135C	TYPE 04
D135D	TYPE 04
D136	TYPE 03
D137A	TYPE 04
D137B	TYPE 03
D138A	TYPE 04
D138B	TYPE 04
D139	TYPE 04
D139A	TYPE 08
D140	TYPE 04
D140A	TYPE 02
D141	TYPE 02
D142	TYPE 04
D143	TYPE 04
D144	TYPE 04
D145	TYPE 04
D146	TYPE 04
D147	TYPE 02
D148	TYPE 05
D148A	TYPE 08
D149A	TYPE 08
D150	TYPE 05
D150A	TYPE 05
D151	TYPE 04
D151A	TYPE 05
D152	TYPE 03
D153	TYPE 03
K-01	TYPE 07
K-02	TYPE 07
K-03	TYPE 07
K-04	TYPE 07
K-05	TYPE 07
K-06	TYPE 07
K-07	TYPE 07



DOOR TYPE - 07
BASFAMILJEN
FORM SLIM
M9 X 20
KENNEL DOOR



DOOR TYPE - 08
BI-FOLD DOORS
TODA ALBERTA
STYL



DOOR TYPE - 09
BI-FOLD DOORS
915MM X 2134MM

GENERAL CONSTRUCTION NOTES:

1. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH LATEST APPLICABLE BUILDING CODES, FIRE REGULATIONS AND ANY LOCAL BUILDING REQUIREMENTS.
2. THE CONTRACTOR IS TO REPORT ANY DISCREPNACIES TO THE ARCHITECT PRIOR TO WORK COMMENCEMENT.
3. DRAWINGS ARE TO BE READ IN CONJUNCTION WITH OTHER DRAWINGS, SCHEDULES SPECIFICATION AND DETAILS ENCLOSED IN SET. CONTRACTOR TO REVIEW ALL CONSTRUCTION, FINISHES, ELECTRICAL AND LIGHTING PLAN. CONSULT WITH DESIGNER FOR ANY DISCREPANCIES.
4. ALL NEW OPENINGS TO BE CONSTRUCTED ON EXISTING FENESTRATION ARE TO BE SALAVAGED AND INCLUDED INTO ADJACENT NEW WALLS.
5. ALL OPENINGS THROUGH FIRE-RATED ASSEMBLIES ARE TO BE FIRE STOPPED AND SEALED TO MAINTAIN INTEGRITY OF FIRE SEPARATION.
6. ALL WOOD MATERIAL USED AT OR BELOW GRADE IS TO BE PRESSURE TREATED.
7. LAP AND SEAL ALL PENETRATION IN VAPOUR BARRIER MEMBRANE.
8. ALL STAGING AND SOTRAGE AREAS TO BE KEPT CLEAN, ORGANIZED AND PROTECTED FROM INCIDENTAL DAMAGE. GENERAL CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING ORIGINAL CONDITION.
9. GENERAL CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL LOAD RESTRICTION INFORMATION THROUGHOUT SITE TO ALL TRADES. WORK AREA IS TO BESTAGED AND COORDINATED WITHIN ALLOWABLE LOADS.
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12. CONTRACT TO VERIFY SITE CONDITIONS AND CONFIRM ALL DIMENSION RELATIVE TO AS-BUILT CONDITION OF EXISTING SPACE.

University of Manitoba

PROJECT:
HUMAN-ANIMAL ASSISTED THERAPY (HAAT) CENTRE

ADDRESS:
1147 NOTRE DAME AVENUE
WINNIPEG, MB

DRAWN BY:
PAULA COMBATE

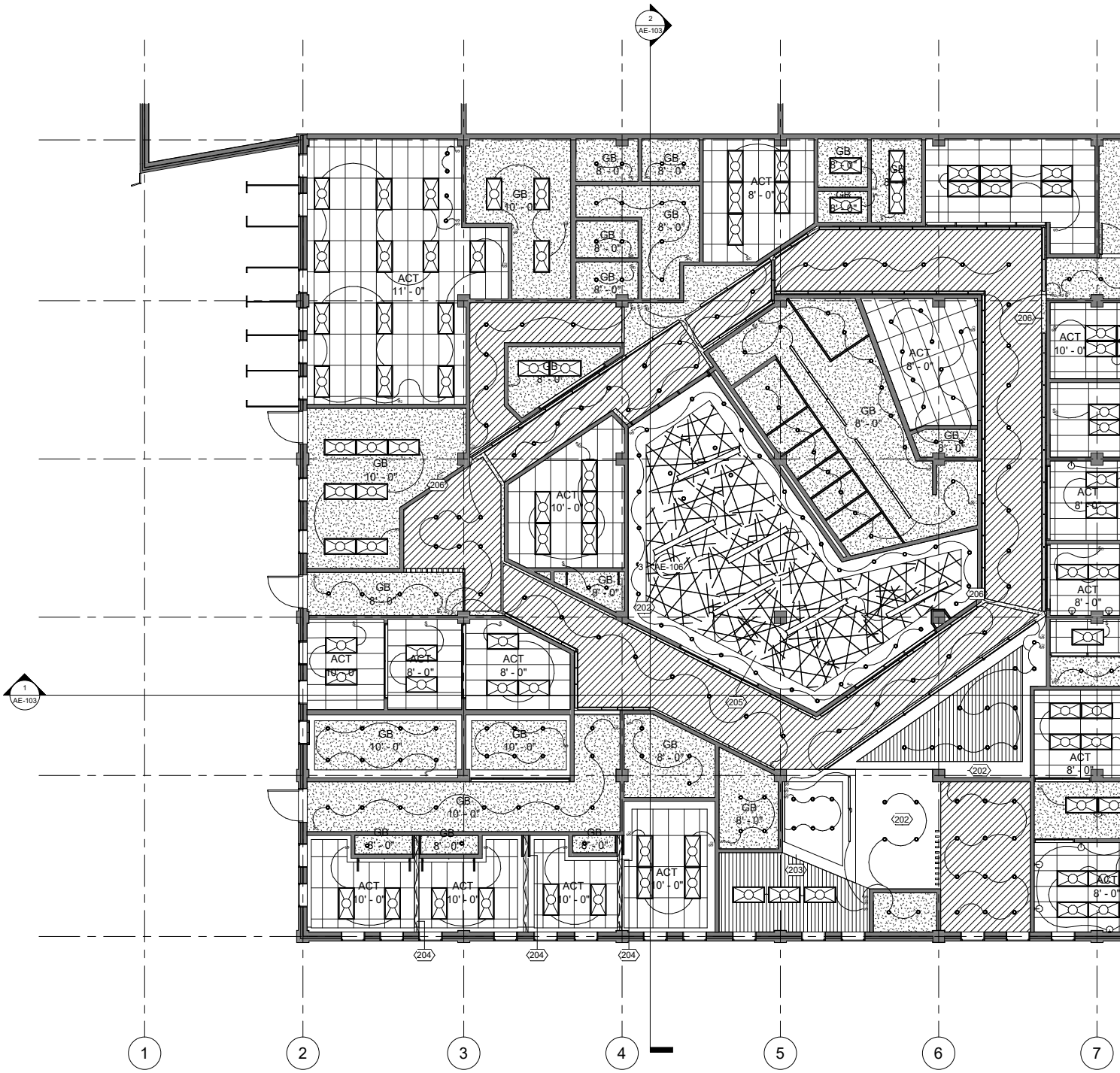
CHECKED BY:
KURT ESPERSEN-PETERS

SCALE: AS INDICATED

DATE: AUGUST 2022

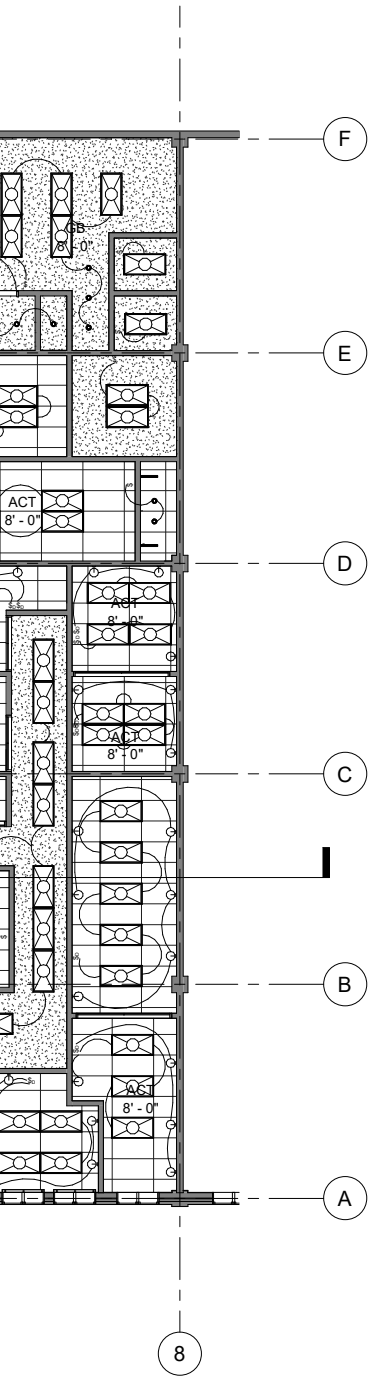
SHEET TITLE:
LEVEL 1 FLOOR PLAN

SHEET NO.
AE-101



1 LEVEL 1 REFLECTED CEILING PLAN

1/8" = 1'-0"



RCP KEYNOTE	
Key Value	Keynote Text
202	BULKHEAD AT 10'-0"
203	RECEPTION BULKHEAD DROPPED TO 8'-0"
204	CEILING TRACK FOR RETRACTABLE WALL PARTITIONS
205	ABOVE CEILING FINISHED WITH ACOUSTIC WOODL PANELS
206	ABOVE CEILING OPEN TO U/S OF CEILING STRUCTURE

LIGHTING LEGEND:	
	RECESSED POTLIGHTS
	AXIS CLICKED - RECESSED LED LINEAR LIGHTING
	LOWERED CEILING ELEMENT
	AXIS SURROUND LITE ARCLED HANGING/PENDANT LIGHTING
	AXIS SURROUNDLITE ARCLED - PENDANT LIGHTING S8-800
	2X4 TROFFER LIGHTS PARABOLIC 120 V 2 LAMP
	WALL SCONCE LIGHTING
	ARKTURA - SWITCH SOFTGRID ACOUSTIC CEILING BAFFLE DESIGNS 4x8 DESIGN PANELS
	CEILING TRACK FOR RETRACTABLE PARTITION WALLS

SWITCH LEGEND:	
$	1-WAY SWITCH
$2	2-WAY SWITCH
$D	DIMMABLE SWITCH
$A	AUTOMATED SWITCH (FOR MOTION SENSOR LIGHTS)

CEILING FINISH LEGEND	
	ACOUSTIC CEILING TILES
	GWB ON METAL STUD
	ACOUSTIC WOOD CEILING
	LINEAR PERFORATED ACOUSTIC METAL CEILING

CEILING PLAN GENERAL NOTES

1. REFER TO CEILING FINISH SCHEDULE FOR CEILING FINISH.
2. GWB AND ACOUSTIC CEILING TILES ARE TO BE INSTALLED AFTER ALL MECHANICAL AND ELECTRICAL WORK IS COMPLETED.
3. ALL CEILING HEIGHTS ARE GENERALLY NOTED PER ROOM. CONSULT/NOTIFY CONTRACTOR FOR ANY DISCREPANCIES.
4. ALL CEILING FINISHES ARE TO BE PT-1 UNLESS OTHERWISE NOTED.

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DRAWN BY:
PAULA COMBATE

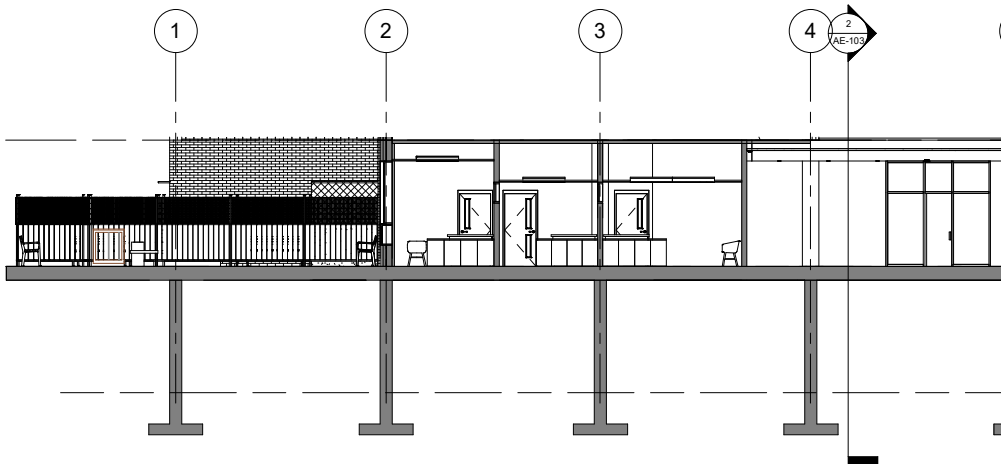
CHECKED BY:
KURT ESPERSEN-PETERS

SCALE: AS INDICATED

DATE: AUGUST 2022

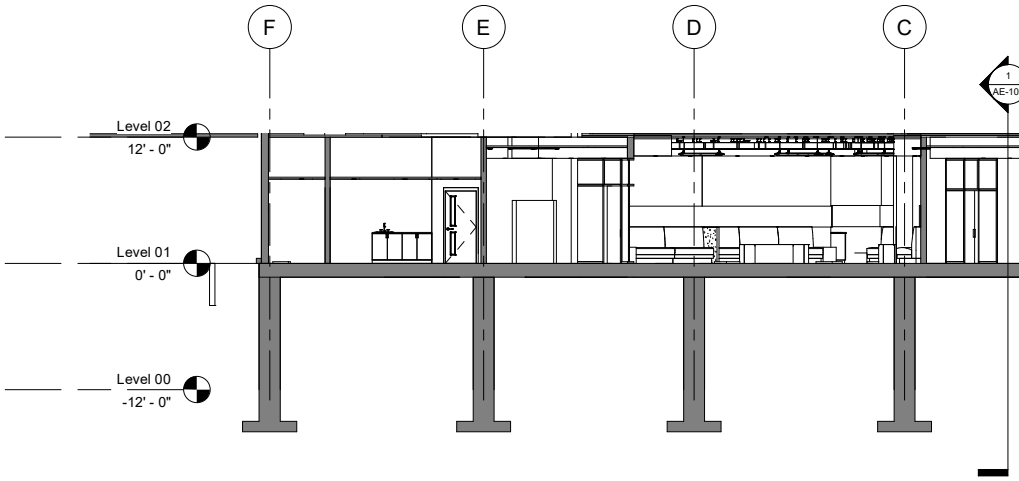
SHEET TITLE:
LEVEL 1 REFLECTED CEILING PLAN

SHEET NO.
AE-102



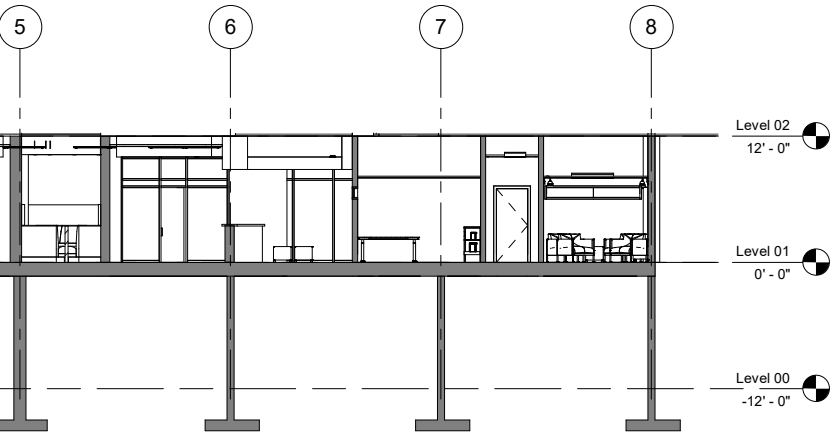
1 NORTH-SOUTH SECTION

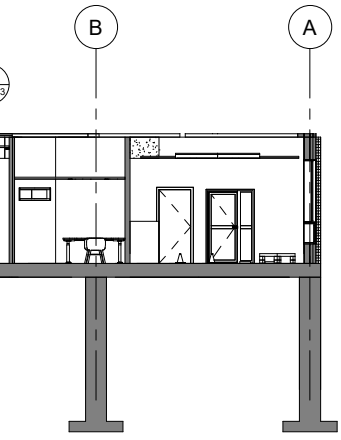
1/8" = 1'-0"



2 WEST- EAST SECTION

1/8" = 1'-0"





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DRAWN BY:
PAULA COMBATE

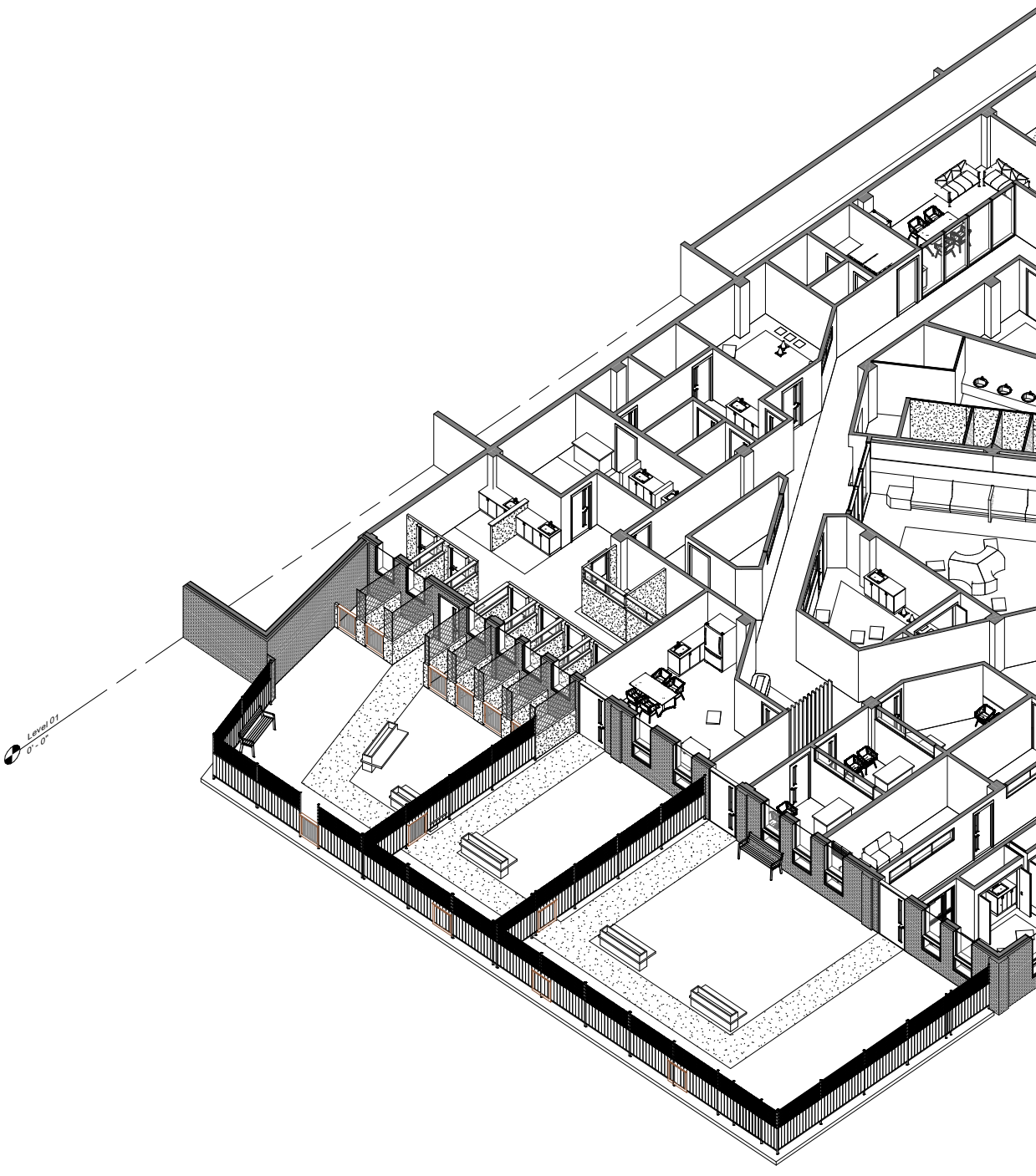
CHECKED BY:
KURT ESPERSEN-PETERS

SCALE: AS INDICATED

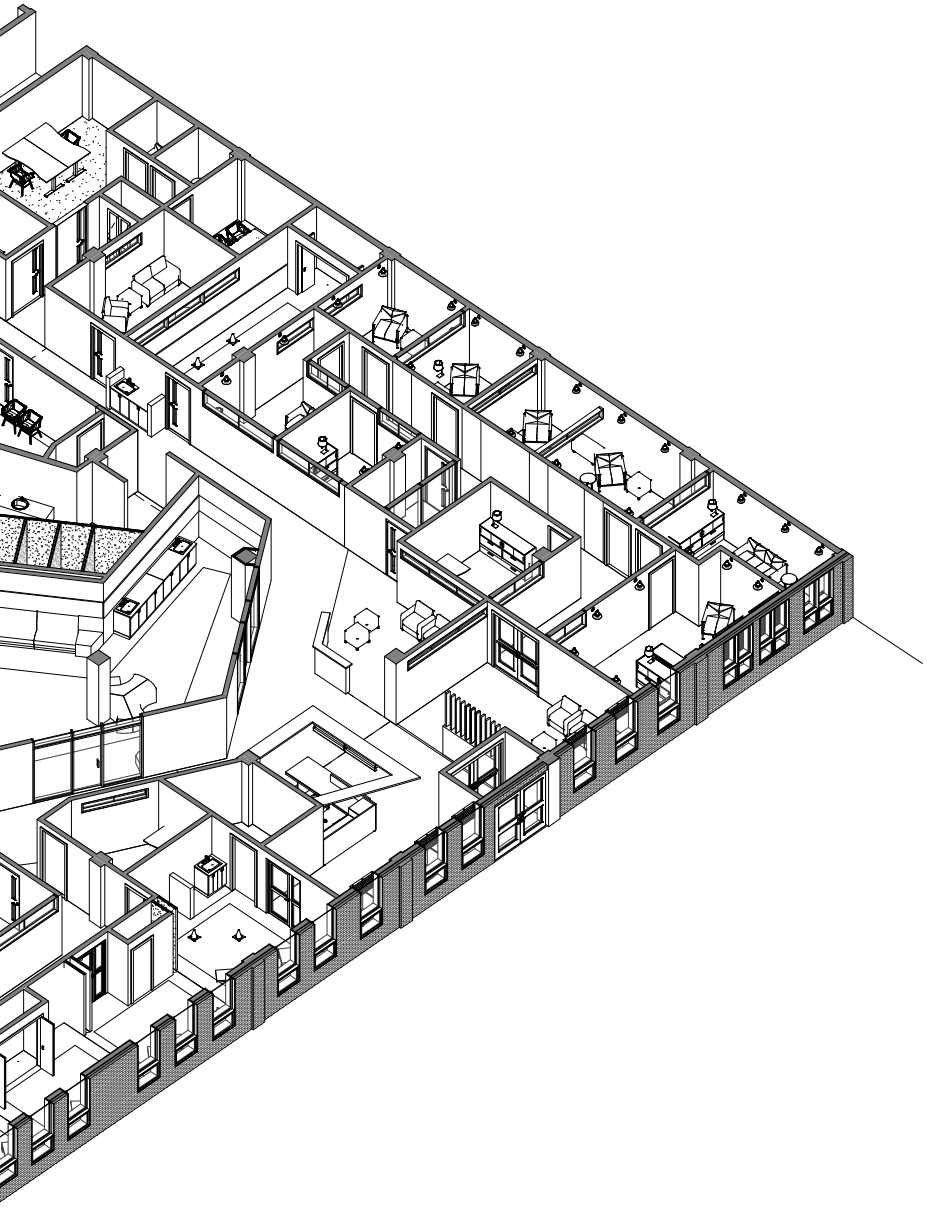
DATE: AUGUST 2022

SHEET TITLE:
SECTION VIEW

SHEET NO.
AE-103



1 AXONOMETRIC VIEW - SECTION PERSPECTIVE



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DRAWN BY:
PAULA COMBATE

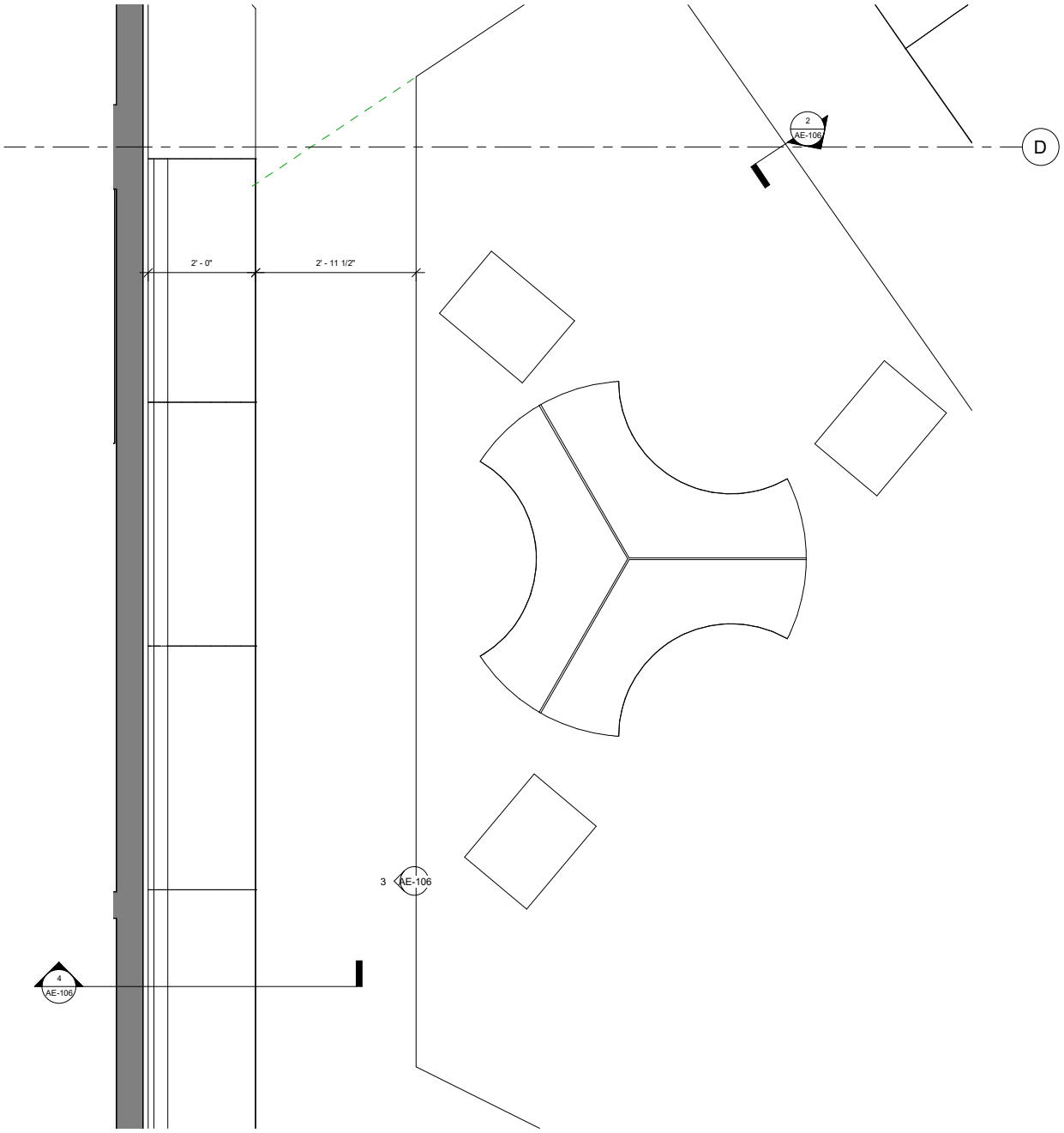
CHECKED BY:
KURT ESPERSEN-PETERS

SCALE: AS INDICATED

DATE: AUGUST 2022

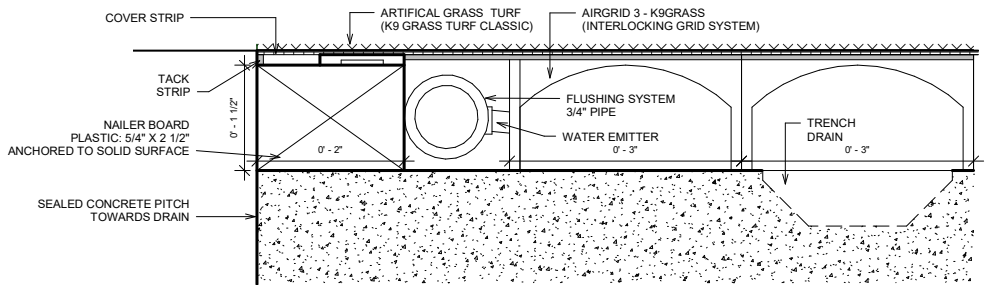
SHEET TITLE:
SECTION - AXONOMETRIC

SHEET NO.
AE-104



1 LEVEL 1 - DETAIL PLAN VIEW

3/4" = 1'-0"



2 PATENTED FLOORING - SECTION DETAIL

12" = 1'-0"

BENJAMINE
PAINT - WHI

ARMSTRONG AC
WOOD WALL

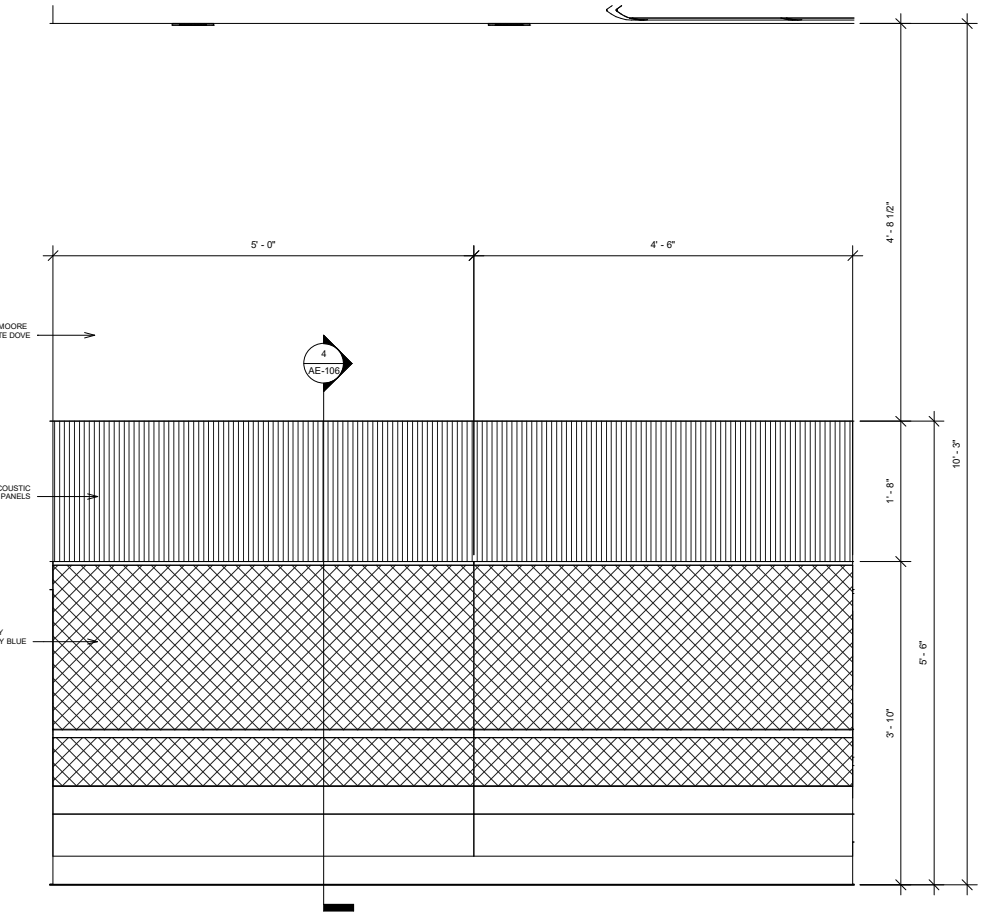
STEELCASE
UPHOLSTER
ASHK19 NAV

3 BEN

1" = 1

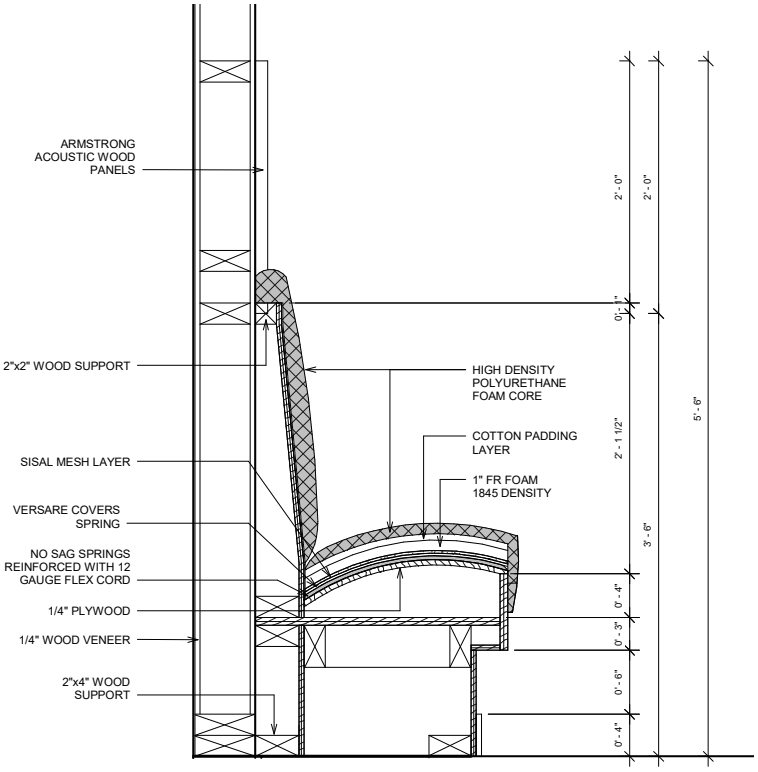
4 BENCH

1 1/2" = 1'



CH ELEVATION

"-0"



I DETAIL

-0"

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KURT ESPERSEN-PETERS

SCALE: AS INDICATED

DATE: AUGUST 2022

SHEET TITLE:
DESIGN DETAIL

SHEET NO.
AE-106