BRIDGING SAFETY, SECURITY AND THE COMMUNITY

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## Table of Contents

- Thesis Abstract ........................................... 5
- Thesis Paper ............................................... 7
- Sketch Problem ............................................ 27
- Research Development ................................. 31
- Precedent Studies .......................................... 41
- Sense of Safety Survey ................................. 51
- Site Selection ............................................. 57
- Engaging Community ..................................... 71
- Program Identification ................................. 79
- Schematic Design ......................................... 91
- Final Design ............................................... 105
- Conclusion .................................................. 129
- Bibliography ............................................... 131
Thesis Abstract

Security and the gradually growing need for a feeling of safety is nothing that cannot be traced throughout history, however it seems that traditional and modern systems have been achieved through the implementation of security systems. It is inevitable that upon entering a public space, public building, or even private sectors that one is drawn to notice the clutter that these modern forms of surveillance and safety measures have created. If we look at the way security has been addressed into the built environment, it seems that there may be a disconnect between what has been achieved and what an appropriate solution could be. Surveillance cameras, alarm systems, and so forth have been used to give the occupant whether permanent or temporary a somewhat “false” sense of security.

Especially following the events of 9-11, more and more emphasis has been placed on security methods and protecting our nation and people, however it seems that a more proactive approach to solving some of the rising security issues and flaws can be implemented into the design process in the early stages. How can architecture and aesthetic design bridge the gap that has been created through modern forms of security systems?

Crime prevention through environmental design (CPTED) is a modern day concept that has taken the approach of doing just that in a particular manner. In theory the idea of preventing and deterring crime through the design process is a good approach to solving some problems created with modern day security systems, but it seems that there needs to still be some revisions to the method. For example, one popular way CPTED has been practiced is through creating gated communities for residents. Although this is a step in the right direction, as we may be eliminating or reducing the number of alarm systems and surveillance cameras, this somewhat cautious approach is not an end all solution to the issue.
IS THE SOLUTION FOR THE ISSUE RAISED MERELY A TACTIC THAT ATTEMPTS TO SEGREGATE A PORTION OR PORTIONS OF A COMMUNITY SO THAT THE FEELING OF SECURITY IS PRESENT? THROUGH THE INVESTIGATIONS AND RESEARCH THIS THESIS WILL ATTEMPT TO BUILD OFF OF THE IDEAS CREATED THROUGH CPTED METHODS AND IMPROVE THE WAY WE AS USERS OF THE BUILT ENVIRONMENT ACHIEVE OUR SENSE OF SECURITY. SO AGAIN THE QUESTION IS RAISED. HOW CAN ARCHITECTURE AND AESTHETIC DESIGN BRIDGE THE GAP THAT HAS BEEN CREATED THROUGH MODERN FORMS OF SECURITY SYSTEMS?

HOW CAN MODERN PRINCIPLES OF SECURITY BE RE-DEFINED AND ENHANCED TO DEFINE THE BUILT ENVIRONMENT FOR A SPECIFIC USER GROUP WITHIN A COMMUNITY IN A WAY THAT BRIDGES SECURITY AND SAFETY, AND THE SURROUNDING ENVIRONMENT?
“At the end of the day, the goals are simple: safety and security.”

-JODI RELL
**INTRODUCTION**

Safety is represented by a feeling of being safe or being protected against any threatening event or occurrence. This feeling is very important when considering how an individual perceives a space; where a positive feeling translates into a positive perception, the same is true when a feeling of unease or discomfort is present; there is a negative perception of that space. Safety is afforded to an individual by the implementation of security including systems both readily apparent and those less obvious such as the particular spatial manipulations and adjacencies of a given space.

Physical boundaries usually include fences, gates, or bars that coupled with other security measures such as cameras give the perception that that space and its users are protected against the threat of danger. The objective of these traditional measures is to give a positive perception, however being surrounded by these measures begs the user to question whether or not the possibility for a potential risk is present. Safety, as it relates to an individual deals with the idea that the space is free from danger and any potential threat. Security represents the devices that are in place that give the potential for an individual to perceive a certain space a certain way. Based on the traditional methods of security that we rely on, it is important as a designer to question the approach that is currently being taken by employing such tangible elements to accomplish this. How can security become an element that is more integral into the design process, using environmental elements in the arrangement of a space, and not relying solely on traditional measures to accomplish this objective?

The goal of this thesis is to challenge current methods and measures of security that are employed. Modern day security seems to be more of an add-on
TO BUILDINGS, RATHER THAN QUALITIES THAT ARE MANIFESTED THROUGHOUT THE DESIGN PROCESS. “BRIDGING SAFETY AND SECURITY” REFERS TO THE PROCESS OF BRIDGING BUILDING SECURITY WITH A SENSE OF SAFETY AMONGST USERS OF THE BUILT ENVIRONMENT. THIS BRIDGING WILL BE ACHIEVED THROUGH EXPANDING ON TRADITIONAL MEANS OF SECURITY AND DRAWING FROM ENVIRONMENTAL DESIGN GUIDELINES PROVIDED BY OSCAR NEWMAN, JANE JACOBS, AND CPTED (CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN). RATHER THAN PROVIDING A “FALSE” SENSE OF PROTECTION FOR USERS, SECURITY WILL BE ACHIEVED BY USING ENVIRONMENTAL DESIGN TECHNIQUES TO PROVIDE THE SENSE AND FEELING THAT ONE IS FREE FROM THREATS AND DANGERS IN A GIVEN SPACE. THROUGH A PROCESS OF OBSERVING, ENGAGING, AND IDENTIFYING, A PROGRAM WITH A STRONG NEED FOR INTERNAL AND EXTERNAL SECURITY WILL DEVELOP IN WHICH THE MAIN FOCUS WILL BE ON CREATING A SPACE IN WHICH ENVIRONMENTAL DESIGN CRITERIA IS EMPLOYED SO THAT THE SPACE IS EXPERIENCED AS BEING FREE FROM VULNERABILITIES.

“BRIDGING SAFETY AND SECURITY” WILL TAKE ON THE ROLE OF FILLING A GAP THAT HAS BEEN CREATED WHEN DESIGNING SECURITY IN THE BUILT ENVIRONMENT, MOVING AWAY FROM THE TRADITIONAL SECURITY MEASURES THAT WE RELY SO HEAVILY UPON, AND SHIFTING TOWARDS DESIGNING THE SURROUNDING ENVIRONMENT AS A STRONG ELEMENT IN THE SECURITY APPROACH.

INSIDE OR OUTSIDE

WHAT DOES IT MEAN TO PROTECT THE INSIDE FROM THE OUTSIDE, OR TO PROTECT THE OUTSIDE FROM THE INSIDE? THIS IS THE VERY QUESTION THAT IS RAISED AND CONSIDERED WHEN TALKING ABOUT THE IMPORTANCE OF KEEPING PEOPLE INSIDE OF SOMETHING SAFE BY PROTECTING THEM FROM THE OUTSIDE. THIS CAN BE SEEN AS ONE OF THE OVERARCHING GOALS OF SECURITY SYSTEMS FROM THE BEGINNING, SECURITY SYSTEMS ARE IN PLACE TO KEEP INDIVIDUALS OR USERS OF A SPACE FREE FROM HARM OR THREATS.
Again this discussion of inside or outside can be traced back historically to the same roots as early security methods. The goal in most cases of security is to ensure that people within a place, location, or structure are free from harm and feel that they are safe in an area. But when does this discussion begin to cross the line, or in other words, is there a point to which there is a shift from protection to segregation. In order to examine what it means to protect inside and outside, two specific examples will be examined. The first is border patrol and the second are gated communities, which will also be studied as an anti-precedent for the purpose of this thesis. For the examination of these two instances, I will refer to them as edge conditions, meaning the manner in which the defined edge protects inside from outside will become the focus as to determine the strengths and weaknesses.

The first edge condition that we will examine as stated above will be border patrol. Border patrol was first established in 1924 as a response to the increasing number of illegal immigration entries the United States was experiencing (cbp.gov, 2010). Through time, although immigration has continued to be a large concern, many other concerns have risen, and the responsibility of protecting the citizens of the United States from external threats has been a continuing challenge. It is evident to see, that is the main purpose and goal of border security, it protects inside from outside by monitoring and filtering who comes and leaves the country. The U.S. Department of Homeland Security states, “Since the terrorist attacks of September 11, 2001, the focus of the Border Patrol has changed to detection, apprehension and/or deterrence of terrorists and terrorist weapons.” The terrorist attacks of 9/11 changed the way that security was addressed on a national level, however that is particularly important when considering a system that is responsible for protecting an entire nation. The example of Border Patrol demonstrates a method in which the inside is being protected.
from any outside threats. Border patrol is a system that has been integrated into our way of life, especially living here in Detroit, we understand its significance, rather than being seen as trying to segregate the United States from outside countries, border patrol acts to integrate them all while ensuring the safety of the citizens within.

We can look to gated communities as a way to examine a method in which protecting the inside from the outside has shifted from integration to segregation. Gated communities are becoming increasingly popular especially as the need for safety and security continues to grow. These communities operate in a manner in which residential housing is surrounded by gates, and in most instances people who enter and exit are strictly monitored. The purpose of these communities serve to give people a feeling of safety, by monitoring people who come and go, they are going to be less subjected to the threat of crime, there is a greater sense of perceived safety inside of the gates. Again looking at the inside versus the outside, the goal similarly to border patrol is to keep people inside safe from outside threats, only on a much smaller scale. However the main difference comes in the manner in which this objective is reached between these two instances. Integration is the main factor for border patrol, this element is lacking with gated communities. Gated communities attempt to reduce crime and offer a feeling of safety by segregating individuals from outside of the gates. Rather than integrating security features and measures into the context of the residential community as a means to combat crime individuals are removed from activities outside of the gates. Many of these communities offer a large number of amenities directly within the gates; so if we examine the concept of Live, Work, Play, two out of three of those elements are spent segregated within the confines of the gates. For this reason gated communities are examined for this thesis as an anti-precedent. The goal will be aimed at integrating a program into an urban
neighborhood all while ensuring that critical safety and security goals are met without segregation.

Methods of Security

It is evident that safety and security have played a significant role historically as well. Early forms of security measures can be seen through the implementation of walls in many cases. As early as the 8th century, the city of Jericho was surrounded by a wall as a way to protect citizens within from any outside attacks or invaders (Blakley, 2009). Walls were built as a way to protect a place, usually a city in early times against the threat of war or of an attack, the purpose of the wall as a barrier was to defend and keep safe what was inside that barrier. The walls that were present in early times served as a safety barrier, the general purpose was to protect the inner communities from various external threats. Other methods of security that were employed historically included the use of moats and drawbridges, in most cases isolating a castle by surrounding it by water and controlling the access to and from. This can be seen as somewhat of a shift to surrounding an entire city with a wall, this approach, although usually man-made, begins to challenge the notion that the environment can be used as a method to be employed as a security measure.

There is a common misconception that security is really only an important design factor when designing for prison and jail systems because of the threat that exists to keep individuals safe on either side of a prison gate; however by taking a deeper analysis
One can understand that many of the same principles apply when designing correctional facilities that do when designing everyday site locations for individuals. Many surveillance and design layouts can be traced to early prison designs, as designing security within a facility is one of the most critical elements because it pertains to keeping users of both internal and external environments safe. Similar to the importance of complete visibility when designing the environment, the importance of visibility and surveillance were the key drivers in how early prison and jail designs emerged and developed through time. First generation models of correctional facilities were designed in a linear fashion, which limited the amount of visibility that officers had to observe individuals from their single fixed location. These models were laid out as such that the unit would be comprised of a long corridor. Individual cells would occupy either side of the corridor and at one end or the other would be the fixed location for the officers of the facility. This design was limiting in the sense that it didn’t allow the officers to have complete visibility of the cells, the arrangement of elements limited the success of this model. As systems developed so did the design of the correctional facilities from which the podular design emerged. The podular design allowed officers to have direct contact with individuals while also utilizing remote supervision. This design, contrary to the linear design arranged the cells under a pod like organization and placed the correctional officers directly in the middle of the cell arrangement, allowing the officers a 360 degree view both directly and under remote circumstances. Technological advances outside of the facilities allowed for this shift to occur, as remote supervision was able to couple direct supervision to allow complete and maximum visibility within the correctional institutions.

These advances in security in the correctional facility are parallel with the changes and shifts that have been made when designing security in individual’s
EVERYDAY ENVIRONMENTS. SECURITY CAN BE EXAMINED ON TWO DIFFERENT LEVELS, PUBLIC AND PRIVATE. IN BOTH CASES THERE HAVE BEEN INCREASING EFFORTS IN PROTECTING PEOPLE AND KEEPING THE POPULATION FREE FROM HARM AND DANGER. IN THE PRIVATE SETTING, USUALLY PERTAINING TO RESIDENTIAL STRUCTURES, SECURITY HAS BECOME INCREASINGLY PREVALENT ESPECIALLY WITH THE CURRENT ECONOMIC SITUATION. EVEN MORE SO IS TRUE OF THE NATURE OF SECURITY IN PUBLIC FACILITIES. ESPECIALLY FOLLOWING THE EVENTS OF 9-11, THERE HAS BEEN A LARGE SHIFT AND INVESTMENT IN THE AREA OF PROTECTING PEOPLE THROUGH THE USE OF SECURITY DEVICES, IT IS IMPOSSIBLE TO ENTER ANY PUBLIC FACILITY AND NOT BE GREETED BY SOME SORT OF SECURITY MEASURE, WHETHER IT IS INTERNAL SECURITY, EXTERNAL SECURITY OR BOTH. SINCE THOSE EVENTS THE IMMEDIATE RESPONSE WAS ABOUT RECOGNIZING VULNERABILITIES WHERE THEY ARE PRESENT AND EMPLOYING THE PROPER RESPONSE AND ALTHOUGH CURRENT MEASURES MAY NOW SEEM SOMEWHAT IN YOUR FACE, THE INTENTIONS OF THESE ARE A COMBINATION OF PROTECTING BOTH INTERNALLY AND EXTERNALLY OUR NATIONS PEOPLE AND RESOURCES.

TANGIBLE SECURITY

THE NEED FOR SECURITY AND SAFETY IN EVERY ASPECT OF BUILT ENVIRONMENT IS NOT A NEW PHENOMENON, HOWEVER AS HAS BEEN STATED THERE HAS BEEN A GROWING EMPHASIS ON THE MANNERS IN WHICH SAFETY IS ACHIEVED THROUGH THE USE OF SECURITY DEVICES. ALL OF THE CURRENT SECURITY MEASURES AND DEVICES ACT INDEPENDENTLY TO SERVE A SPECIFIC FUNCTION, HOWEVER TOGETHER THEY DEVELOP AN INSTANCE FOR A LOCATION IN WHICH THE GOAL IS TO PROTECT. FENCES, PUBLIC SAFETY, SECURITY CAMERAS, CLOSED CIRCUIT TELEVISION, ARE ALL
very common devices that we have become familiar with due to the increased need for security especially in the public realm. Fences usually serve a purpose of keeping unwanted persons out of areas by defining spaces that should and should not be occupied. The goal of these barriers is to keep people safe, to present the feeling that unwanted individuals and threats will not be able to access places because of the barrier that is in place, however this is not always the case. As was studied for the purpose of this thesis, and is later discussed in detail, some individuals view fences and physical barriers more as creating a feeling of disconnection or isolation between different spaces. The same is true of the other modern security measures and devices that we rely upon, the objective of all of these systems is that they work together to create a uniform sense of safety within a space, again that is not always the case. In some cases individuals perceive all of these measures as being indications that the potential for risk is there, which is why these systems are in place. So with the question of, do these measures rely protect us from danger and risk, yes they do, however other elements are necessary to be included to truly allow users to perceive that they are safe and free from danger.

**Intangible Security**

The work of Oscar Newman and his theory of Defensible Space in the early 1970’s is a contributing factor for those principles that were later developed by CPTED (Crime Prevention Through Environmental Design). The basis of his theory was rooted in the interaction between individuals and their surrounding environment, more specifically their environment becoming defensible space. Newman, who was an architect, developed this model based on social control and crime prevention through social environments. Defensible space is a theory in which residents can be involved to reduce
CRIMINAL ACTIVITY. PHYSICAL SPACE CONSTRUCTS, STREETS, AND GROUNDS ARE ALL AREAS IN WHICH RESIDENTS CAN WORK TOGETHER WITH THE COMMON GOAL OF ELIMINATING CRIMINAL ACTIVITY THROUGH CREATING AN INSTANCE OF DEFENSIBLE SPACE WITHIN THE NEIGHBORHOOD. SIMILAR TO SOME OF THE PRINCIPLES EARLIER DISCUSSED PERTAINING TO CPTED, NEWMAN’S THEORY DESCRIBES A PROCESS OF ENVIRONMENTAL DESIGN IN WHICH IMAGE, SURVEILLANCE, AND TERRITORIAL REINFORCEMENT PLAY A LARGE ROLE IN THE MANNER IN WHICH RESIDENTS CAN CREATE A DEFENSIBLE SPACE. NEWMAN’S WORK EVOLVED OUT OF A STUDY IN WHICH HE COMPARED CRIME RATES IN HIGH-RISE HOUSING DEVELOPMENTS TO LOW-RISE DEVELOPMENTS. THROUGH HIS RESEARCH, NEWMAN DISCOVERED THAT WITHIN THE CONFINES OF HIGH-RISE HOUSING, INDIVIDUALS WERE UNABLE TO GAIN A SENSE OF INDIVIDUALITY OR IDENTITY. THE SURVEILLANCE TECHNIQUES OF IDENTIFYING SUSPICIOUS INDIVIDUALS AS POTENTIAL THREATS WAS NOT ABLE TO EXIST BECAUSE THE ENVIRONMENT AND THE PEOPLE HAD LITTLE INTERACTION AND NO IDENTITY AMONG ONE ANOTHER, SOME CRIMINALS WERE ABLE TO BLEND IN WITH THE SURROUNDINGS AND MANY OF THESE COMPLEXES PROVED TO BE UNSAFE. NEWMAN COMPARED THE FINDINGS WITHIN HIGH-RISE DEVELOPMENTS TO THOSE OF LOW-RISE COMPLEXES AND FOUND THAT IN MOST CASES THE EXACT OPPOSITE OCCURRED. SOME GROUPS OF INDIVIDUALS WERE USUALLY ABLE TO CREATE AN IDENTITY WITHIN THEIR NEIGHBORHOOD, AND THESE ELEMENTS WORKED TO CONTROL AND MAINTAIN THE SOCIAL NORMS OF THE NEIGHBORHOOD. IN THE LOW-RISE SETTING FOR EXAMPLE INDIVIDUALS BLENDED WITH THE ENVIRONMENT AND CREATED AN IDENTITY IN WHICH ONE FED OFF OF THE OTHER, THE COMPLEXES WERE DESIGNED IN A MANNER THAT ALLOWED SURVEILLANCE TO OCCUR, AND BECAUSE AN IDENTITY HAD BEEN ESTABLISHED THIS LESSENED THE FACT THAT CRIMINAL ACTIVITY WOULD BE ABLE TO FOSTER WITHIN THAT GIVEN SPACE (NEWMAN, 1972).

IN “THE DEATH AND LIFE OF GREAT AMERICAN CITIES,” JANE JACOBS ADDRESSES AND CRITIQUES HOW THE QUALITIES OF SPECIFIC ELEMENTS FOR EXAMPLE, THE SIDEWALK, RELATES DIRECTLY TO SAFER ENVIRONMENT. HER WORK AND THEORIES ALSO HAD A
large influence on the principles later developed by CPTED (Crime Prevention Through Environmental Design). Jacobs addresses the fact that the sidewalk identifies a demarcation between public and private space, stressing the environmental design element of reinforcing territoriality, which follows the understanding of clearly distinguishing between the different functions of spaces. The purpose of the sidewalk is to serve as a transitional element, but also as an element that distinguishes between public, the street, and private, residential housing. Similar to investigations that Newman conducted on environmental design and public housing, Jacobs studied the differences between the purpose of a sidewalk in a residential setting and that same sidewalk present amongst a high-rise development. “Eyes on the Street,” a well-known theory in which Jacob’s describes the idea that in the residential setting there are always people watching the street, and essentially watching out for one another. This theory is better described using the example that in a residential setting a mother that is sitting on her porch watching her kids play in the street can be confident that if she has to run inside for a moment someone else in the neighborhood will continue to watch her kids, because there are always eyes watching the street. This is not the case with high rise housing, by taking residents and moving them up off of the street those eyes that used to watch the street, and the sense of community that came along with it, is no longer there. A similar situation occurs in which surveillance plays a large role, again similar to Newman, in the residential setting strangers are easily identified because of the “eyes on the street,” but that is lost in high rise complexes, because of the lack of identity and unity in the instance of many high-rise complexes strangers blend in with the rest of the residents. Surveillance, which plays a critical role in successful environmental design, was lost with the shift of moving housing upwards into high-rise complexes compared to the typical residential neighborhood (Jacobs, 1972).
Today’s process usually follows the understanding that architects and
designers create safe environments and buildings by following building
codes. The gap in ensuring that these buildings and environments are safe is
then filled by the addition of tangible systems including fences, gates and
cameras. However, there is a process of designing secure environments that
sees that the architects and designers are involved in the entire process. This
system known as CPTED, or Crime Prevention Through Environmental Design
is a system that was a response to the work of Oscar Newman and creating
Defensible Space. CPTED was designed by both security professionals
and architects working together to develop a standard that was based on
using environmental design factors to create safety and security. CPTED
is comprised of 5 design principles that work together to fill the voids left
from traditional security measures.

The first and seemingly most important principle is that of natural
surveillance which encompasses the idea of the “see and be seen” theory, in
which visibility is maximized within a space. The manner in which the building,
landscaping, pathways, lighting and other elements are laid out, provide the
user of that environment maximum visibility in the space. The objective is that
seeing everyone and being seen at all times helps to diminish the opportunity
for crime to occur in a given area. The second principle is territorial
reinforcement, which means clearly distinguishing between public and private
spaces. By properly distinguishing between these spaces the opportunity
for crime is reduced because offenders are less likely to travel into areas
that seem to be more private; ownership also plays a significant role in this
principle because individuals gain a familiarity and take ownership of the public
spaces that they occupy. Access control is a principle in that deals with the
transition of users through an environment, again by distinguishing between
public and private spaces. Defining pathways is a key element because by doing
so the opportunity for criminal activity is lessened because criminals can often be seen before they cause harm. Keeping pedestrian traffic flowing in a constant motion reduces the chance that an offender will be able to blend into the fabric of a public space. Activity support places activities within given areas that lessen the risk for a threat or for criminal activity; this principle uses all of the other principles to locate activities. The final and another very important principle is maintenance. This principle relates to the idea that a positive appearance will attract positive perception and influence other appearances within a space or neighborhood, and vice versa (Design Center for CPTED, 2010). Dr. James Wilson and George Kelling better describe this principle as the “broken window theory.” They explain that when a broken window is allowed to exist in a neighborhood, the neighborhood appears broken and to an extent attracts criminal behavior and activity. By allowing one occurrence in a neighborhood the image is that no one cares and this increases the chances that one will influence a chain of carelessness and unrepaired buildings (Vandelay, 2011).

The goal of this thesis again, is to build off of all of these principles that have been presented by Newman, Jacobs, and CPTED. It is important to understand that these three works, Newman, Jacobs, and the principles of CPTED all speak the same language about how residents and designers can use the environment to lessen the likelihood for criminal activity within a space or a neighborhood. Although these are three separate works and authors, the ideas are the same. CPTED, the newest principle to emerge in environmental design, uses the work of Newman specifically, and also of Jacobs as a foundation to the design criteria that it presents. It is my goal and belief that these principles will become a starting point for the environmental design that will bridge the gap that is created from architects and designers relying so heavily on modern day security devices. That gap will be filled by extending the role of the architect
TO CONSIDER HOW ENVIRONMENTAL CHANGES AND THEORIES CAN BE INCORPORATED INTO DESIGN AND THROUGH A PROCESS THAT WILL COMBINE WITH OTHER SECURITY MEASURES TO ENSURE THAT SAFETY IS REACHED WITHIN A SITE.

Process of Creating Safety

As a way to define a user group in which safety and security were an important aspect, Homeboy Industries was studied as a precedent for this thesis. Homeboy Industries is a gang rehabilitation facility located in Los Angeles, CA. The facility offers many services that educate and rehabilitate young gang members with the goal of integrating them back as contributing members of society. What is important to understand about this facility is the way it confronted the problem that Los Angeles faces with gangs by placing the intervention directly in the center of the area. The best way to revitalize a broken or suffering neighborhood is to take the problem head on, and that is what Homeboy has done. They have created an identity for themselves by placing themselves in the exact location where they have been subject to violence, break-ins, and other crimes. Homeboy continues to operate and be successful in rehabilitating formerly at risk gang members by ensuring that individuals seeking help are properly integrated back into society. The program offers a wide range of educational and job-training courses that allow individuals to develop necessary skills to make it on their own once the program has been completed.

Another precedent that was studied for the purpose of understanding fully the capacity to which residents can play a key factor in reducing crime by designing the environment was a Neighborhood Watch program. Neighborhood Watch programs are formed around the idea that the residents and citizens of a particular area take the lead role in the approach and become
the “eyes and ears” of the neighborhood. The residents work side by side with law enforcement in an effort to reduce criminal activity within their given community. In many cases communities that have enacted watch programs also modify elements of their existing environment to create space or spaces that along with the cooperation of law enforcement work to reduce and deter criminal activity. Examples of this include instances where crime-ridden streets have been closed and bollards have been put in place as a way to shut down a high traffic drug transit. By being the eyes and ears of the street, the residents know better than anyone what it is in a neighborhood that is wrong, and the watch programs allow residents to enable elements and functions that combat the criminal behavior. Specifically Lakewood, CO was chosen as an example of this concept. This area has had an enacted watch program among the residents for a few years, and as a way to study its effectiveness crime was studied and compared among areas in Colorado that didn’t have watch programs and those that did. Auto thefts, burglaries and vehicle break-ins were compared and on average there was a 12% reduction in crime among all of these areas in watch neighborhoods compared to neighborhoods without watch programs. A strong initiative for change and modifying environmental features can have a large impact on how areas are perceived and how they can be effective in reducing criminal activity.

Similar to the approach that Homeboy Industries took in creating an intervention for gang members, this thesis will identify a need within a neighborhood in Detroit and place an intervention in the area with the goal of revitalizing the neighborhood through a community initiative, while focusing on implementing the design principles that have been introduced based on the works of Newman, Jacobs, and CPTED.
Through the process depicted the two user groups that were chosen to focus on were adults and children, and the programs for each were a substance abuse facility and a youth center. The programs were chosen through observation and research through community engagement. Through these interactions it was discovered that there was a large drug problem in the area and a lack of amenities for the youth of the area. They face many of the drug problems that their elders in the neighborhood face because there are no effective means of prevention in place for them. As a way to continue to engage and support the programs that were chosen for the neighborhood, a meeting with a local school was arranged as a way to find out what elements would be important to incorporate into a youth center. The goal of the youth center will be to provide both recreational and educational activities that will provide kids the opportunity to get off of the street and give them a place to go. The main focus will also be on providing necessary steps and information about drug prevention for the youth as a way to ensure that they
don’t take the road of substance abuse. The substance abuse facility, similar to the approach that Homeboy has taken with combating gangs, will offer a program and facility that takes the approach of offering a all inclusive method of treatment of individuals. Meaning that the process will start with individually tailoring a program based on specific individuals and see them throughout the entirety of the program, with a strong emphasis on treating the family both during and after the process has been completed. Although these programs will be separate in nature, they will work together to rebuild families that have been torn apart from substance abuse. Since the neighborhood and the programs for the user groups have been established, the main focus of the thesis will be to create a safe and secure environment for both the users of the facilities as well as for residents of the neighborhood.

Defining Location

The City of Detroit was the area that was ultimately chosen to focus attention for the site for this thesis. Detroit offers many unique circumstances that make it the ideal location for a project in which safety and security will be the defining goal. As discussed earlier, Detroit can be seen as having an edge condition pertaining to the international border that we have with Canada. Along with this condition, Detroit has longed for a sense of safety and security in many areas. Detroit offers many unique instances in which the opportunity exists for an area to be chosen and for environmental design to lead the approach that is taken to repair a broken neighborhood.

The specific neighborhood that has been chosen for the intervention is located on Detroit’s Eastside near the intersection of Jefferson and Alter Rd. The neighborhood has experienced much loss in the current economic situation and as a result many lots have been wiped clear and many of the
Homes that once existed in the neighborhood have since become vacant. The site being so close to the intersection of Jefferson and Alter Rd. is unique in the manner that it feels like it is so distant because of the devastation that the area has experienced. In its current state the area is being used for nothing more than a dumping ground and a snapshot of what used to occupy the neighborhood. The site is also unique because of the many different elements that it offers to be incorporated into the youth center and substance abuse facility. The substance abuse facility will occupy the main site and across the street is a vacant park that will serve as the youth center through the revitalization of the park. Other elements surrounding the site include a vacant church, a school, and a number of vacant homes and multi-family complexes; all of which will be incorporated into the two facilities. As a way to revitalize the neighborhood as a whole the vacant homes will be used as transitional housing for those who wish to have that option once the program has been completed. By challenging the notion of security and how safety is experienced, the goal is to revitalize a neighborhood that has lacked that feeling by enacting elements that grant a space the opportunity to give the sense of safety and security that is needed.
Final Thought

In recent years, and especially following the events of 9/11, there has been an increased desire to be certain that facilities are safe and secure from outside threats and dangers. The design process as it currently stands usually affords security to only be addressed by architects following building codes, and from there other security measures are added. As a way to bridge that gap this thesis will draw from and seek to integrate environmental design principles combined with modern day security methods to create a safe, secure, and nurturing environment.
“If there’s a lesson in streetwatching it is that people do like basics - and as environments go, a street that is open to the sky and filled with people and life is a splendid place to be.”

-WILLIAM WHYTE
SKETCH PROBLEM
Sketch Problem

Properties of Styrofoam: Lightweight
Used for packaging / insulation
Static
Some flexibility

Problems of Styrofoam: Messy
Non-recyclable
Non-biodegradable

Thesis Problem: How security through environmental design can be an element that is incorporated more into the design process.

Styrofoam - insulation v. Security - barrier

Insulation as a barrier
“THERE MUST BE EYES UPON THE STREET, EYES BELONGING TO THOSE WE MIGHT CALL THE NATURAL PROPRIETORS OF THE STREET.”

-JANE JACOBS
RESEARCH DEVELOPMENT
Defensible Space

The work of Oscar Newman and his theory of defensible space in the early 1970’s is a contributing factor for those principles that were later developed by CPTED. The basis of his theory was rooted in the interaction between individuals and their surrounding environment, more specifically their environment becoming defensible space. Newman, who was an architect, developed this model based on social control and crime prevention through social environments. Defensible space is theory in which residents can be involved to reduce criminal activity; physical space constructs, streets, and grounds are all areas in which residents can work together with the common goal of eliminating criminal activity through creating an instance of defensible space within the neighborhood. Similar to some of the principles earlier discussed pertaining to CPTED, Newman’s theory describes a process of environmental design in which image, surveillance, and territory reinforcement play a large role in the manner in which residents can create a defensible space. Newman’s theory evolved out of a study in which he compared crime rates in high rise housing developments to low rise developments. Through his research, Newman discovered that within the confines of high-rise housing, individuals were unable to gain a sense of individuality or identity. The surveillance techniques of identifying suspicious individuals as potential threats was not able to exist because the place and the people there had little interaction and no identity, some criminals were able to blend in with the surroundings and many of these complexes proved to be unsafe. Newman compared the findings within high-rise developments to those of low rise complexes and found that in most cases the exact opposite occurred, some groups of individuals were usually able to create an identity within their neighborhood, and these elements worked to control and maintain the social norms of the neighborhood (Newman, 1972).
“DEFENSIBLE SPACE IS REAL AND SYMBOLIC BARRIERS, STRONGLY DEFINED AREAS OF INFLUENCE, AND IMPROVED OPPORTUNITIES FOR SURVEILLANCE - THAT COMBINE TO BRING AN ENVIRONMENT UNDER THE CONTROL OF ITS RESIDENTS.”
In her book, “The Death and Life of Great American Cities” Jane Jacobs, addresses how a sidewalk and a feeling of safety relate to one another. The sidewalk serves the purpose of designating an area of travel for individuals whether familiar or strangers to the area. Jacobs addresses the fact that the sidewalk identifies a demarcation between public and private space, it stresses the environmental design element of reinforcing territoriality, clearly distinguishing between the different spaces.

Jacobs in particular identifies that there are differences between the purpose of a sidewalk in a residential setting and that same sidewalk present amongst a high rise development. In theory, the understanding is that in the residential setting there are always “eyes on the street.” She talks about this using the example of children playing on the sidewalk, a person would feel comfortable leaving their children to play outside while they ran inside for a moment because there are always many other people who are watching the street, people around the area watch out for one another, and as a result individuals have the confidence to rely on each other. This element is usually lacking with the development of the high rise housing, the “eyes on the street” are no longer on the street because of the shift in the housing setting. By moving people up into complexes that same surety that is present in the residential housing setting is lacking among high rise complexes. Because of the confidence that exists among the residential setting, Jacobs addresses the fact that strangers on the street are welcome, because everyone looks out for one another, that street is “well equipped to handle strangers.”

“Once a street is well equipped to handle strangers, once it has both a good, effective demarcation between private and public spaces and has a basic supply of activity and eyes, the more strangers the merrier.”

-Jane Jacobs
“EYES ON THE STREET”
CPTED IS A CONCEPT THAT GREW OUT OF THE WORK OF OSCAR NEWMAN’S DEFENSIBLE SPACE AND WAS DEVELOPED BY SECURITY PROFESSIONALS AND ARCHITECTS ALIKE. THE APPROACH COMBINES ELEMENTS OF HISTORICAL AND MODERN DAY SECURITY MEASURES AND ESTABLISHES GUIDELINES TO DESIGNING SECURITY ELEMENTS USING ENVIRONMENTAL FACTORS.
Natural surveillance encompasses the idea of the “see and be seen” theory, in which visibility is maximized within a space. The way that the building, landscaping, pathways, lighting, and other critical elements are laid out provide the user maximum visibility when using the space. The objective is that seeing everyone and being seen at all times helps diminish the opportunity for crime in a given area.

Territorial reinforcement means that public and private spaces are clearly distinguished in a space. By properly distinguishing between these spaces it reduces the opportunity for crime because offenders are less likely to travel into areas that seem to be more private to the everyday user. Ownership also begins to play a factor in reducing crime because individuals gain this sense when they are familiar with the public spaces that they occupy.

Access control deals with the element of properly moving people through a space, again by distinguishing what is private and public space. Pathways play a key role in access control as they move people through a space, by doing so the opportunity for a criminal attack is lessened because they are often seen as an intruder because of the demarcations between public and private.

Creating offensive and defensive space pertains to the overall concept of CPTED. It’s about creating an environment in which the overall risk and threat of crime is lessened because of how the building and environmental elements are laid out.

Maintenance refers to the idea that a positive appearance will attract a positive perception and vice versa. This theory ties in with the “broken window theory” meaning that if one broken window is allowed to exist in an area, it is a matter of time before others foster in the area.

Activity support places activities in a given area in places that lessen the risk for a threat or criminal activity. It places these activities in areas that are well seen by others on the site.
Environmental Design Principles

Natural Surveillance

Territorial REinforcement

Access
Control

Maintenance

Activity Support
“I WOULD GIVE ALL MY FAME FOR A POT OF ALE AND SAFETY.”
- WILLIAM SHAKESPEARE
PRECEDENT STUDIES
THE COVENANT HOUSE IS A NON-PROFIT ORGANIZATION THAT FOCUSES ON HELPING THE HOMELESS YOUTH BETWEEN THE AGES OF 13-22. THIS ORGANIZATION EMPHASIZES THE IMPORTANCE OF PROTECTING HOMELESS YOUTH IN DETROIT AND PROVIDING THEM WITH THE OPPORTUNITIES THAT ARE LACKING IN ORDER TO GET THEM BACK ON THEIR FEET. THE MICHIGAN LOCATION DEVELOPED FROM A SMALL STOREFRONT LOCATION AS IT WAS DETERMINED THAT A LOCATION REALLY WAS NEEDED IN DETROIT BECAUSE OF THE NUMBER OF YOUTH THAT WERE HOMELESS. THE FACILITY OFFERS SHORT AND LONG TERM STAY FOR INDIVIDUALS THAT ARE HOMELESS AND WHILE THEY ARE STAYING AT THE FACILITY THEY ARE WORKING TOWARDS RECEIVING AN EDUCATION THAT THEY MAY HAVE LACKED OR DEVELOPING IMPORTANT CAREER TRAINING SKILLS. THIS ORGANIZATION ALSO WORKS WITH OTHER ORGANIZATIONS TO HELP THOSE INDIVIDUALS WHO SUFFER FROM OTHER ILLNESSES, ADDICTIONS, OR AFFILIATIONS. THEY OPERATE 2 SCHOOLS IN THE DETROIT AREA THAT ALLOW INDIVIDUALS TO WORK TOWARD RECEIVING A HIGH SCHOOL EDUCATION AND THROUGH THE JOB TRAINING, MANY OF THE PEOPLE WHO COMPLETE THE PROGRAM ARE HIRED BACK OR VOLUNTEER TIME TO CONTINUE WORKING AT THE ORGANIZATION.

THROUGH MEETING WITH ONE OF THE DIRECTORS OF THE FACILITY, SHE WAS ABLE TO IDENTIFY SOME IMPORTANT SECURITY MEASURES THAT ARE CRITICAL WHEN PROVIDING SERVICES IN WHICH COMMUNITY OR NEIGHBORHOOD WELL BEING ARE AT STAKE. SOME OF THE INTERNAL SECURITY ISSUES THAT HAVE ARISEN AMONG THE PEOPLE STAYING IN THE SHELTER INCLUDE CONFLICTS BETWEEN DIFFERENT MEMBERS INCLUDING, THEFT, FIGHTING AND SEXUAL MISCONDUCT WHICH ARE ALL ACTIVITIES NOT PERMITTED. TO COMBAT THESE PROBLEMS THE COVENANT HOUSE HAS IMPLEMENTED SECURITY CAMERAS IN ALL OF THE HALLWAYS OF THE RESIDENCE HALLS AS WELL AS REQUIRE INDIVIDUALS TO LOCK THEIR ROOMS. EXTERNALLY THE ENTIRE CAMPUS WHICH OCCUPIES APPROXIMATELY A BLOCK, IS SURROUNDED BY A FENCE THAT HAS 2 GUARDED ENTERANCES AT EITHER END OF THE FACILITY. PEOPLE WHO COME AND LEAVE THE ORGANIZATION ARE STRICTLY MONITORED, THE DIRECTOR STATED THAT THE SECURITY IS A VERY VITAL PART BECAUSE OF THE INVOLVEMENT OF ACTIVITIES THAT INDIVIDUALS COULD HAVE BEEN ENGAGED IN BEFORE ENTERING THE FACILITY. FOR EXAMPLE, THEY HAVE HAD PROBLEMS WITH YOUTH MEMBERS WHO ARE WORKING ON TURNING THEIR LIVES AROUND, WHO PREVIOUSLY WERE ENGAGED IN GANG ACTIVITY, HAVING OTHERS MEMBERS OUTSIDE COME LOOKING FOR THEM. THIS STUDY AND INTERACTION HAS ALLOWED ME TO IDENTIFY SOME OF THE SECURITY ISSUES THAT CAN ARISE WHEN PROVIDING FOR A COMMUNITY ORGANIZATION.
LOCATIONS:
CALIFORNIA
ALASKA
FLORIDA
GEORGIA
HONDURAS
MEXICO
MICHIGAN
MISSOURI
NEW JERSEY
NEW YORK
NEW ORLEANS
TEXAS
PENNSYLVANIA
TORONTO
VANCOUVER
WASHINGTON DC
NICARAGUA
GUATEMALA
Homeboy Industries - Los Angeles, Ca

Homeboy Industries is a shelter that assists formerly at-risk gang members and rehabilitates them back into the community. The center was started by Fr. Greg Boyle in the late 1980’s, and has since transformed itself into the leading rehabilitation center for youth gang members. Homeboy offers many services that educate and rehabilitate these members to help them turn their lives around and get away from any gang activity that they previously engaged in.

The important aspect of how Homeboy Industries has operated in the past is how successful it has been in correcting the lives of many gang members. This program precedent is a model in the manner in which Fr. Greg understood the problem with gangs in Los Angeles, and placed an intervention directly in the heart of the problem. The first facility that Homeboy occupied was an old warehouse in which was surrounded by boarded up buildings and was subject to violence because of its location. As a way to combat the violence of the area all of the security bars were replaced with large panels of bullet proof glass and this became the starting place of the facility. When it came time to re-design the facility many of the former gang members were involved in the process as a way to ensure that their voices were heard and their ideas considered into the design.

The program is successful not only in the manner in which its location places itself directly in the problem, but also because of the many services that it offers to rehabilitate those at risk individuals. The program offers education, classes, legal services, meetings, and tattoo removal to ensure that those people are successfully integrated back into society with all of the skills that they will need to succeed. Homeboy Industries takes the approach that this thesis will take in the aspect of placing an intervention where there is a problem and also by offering all of the programs necessary to ensure the individuals succeed with their training and throughout the process.
Neighborhood Watch Programs

Neighborhood watch programs are community initiated programs in which members of communities join together to reduce crime in their neighborhoods. This is done by these citizens being the “eyes and ears” of the streets, they work together to look out for one another and work closely with law enforcement to reduce crime that exists in their neighborhoods.

These programs are not new ideas, however they have had growing interest and presence in neighborhoods. The program requires the citizens of the neighborhood to do nothing more than look out for the well being of the neighborhood and of the other residents and they do the same.

In order to understand the success that neighborhood watch programs have had I examined the city of Lakewood, Colorado.

Effectiveness of watch program: Year 2010

Crime in watch areas [Jan-Aug] 2010

- Burglaries: 638 city total - 11% in watch areas
- Auto Thefts: 360 city total - 11% in watch areas
- Vehicle Break-ins: 876 city total - 13% in watch areas

The city saw a reduction in the number of crimes that were committed in neighborhoods that had watch programs in place as compared to those neighborhoods that did not.
Anti Precedent - Gated Communities

GATED COMMUNITIES ARE NOT A NEW TREND, HOWEVER THEY ARE CONTINUALLY GAINING POPULARITY. IT CAN BE SAID THAT VERY EARLY ON, CASTLES AND ROYAL FAMILIES LIVED UNDER GATED CIRCUMSTANCES BECAUSE OF THE NEED FOR SECURITY THAT THEY POSSESSED, INCLUDING DRAWBRIDGES AND MOATS. HOWEVER, THE GATED COMMUNITIES THAT EXIST TODAY HAVE A COMMON GOAL AND THAT IS TO KEEP PEOPLE INSIDE THE GATES PROTECTED FROM CRIMES AS IT OCCURS OUTSIDE. THE THEORY IS THAT BY SEGREGATING PEOPLE INSIDE OF THE GATES AND MONITORING PERSONS WHO ENTER AND EXIT, THE POSSIBILITY OF CRIME IS DIMINISHED.

THE APPROACH THAT GATED COMMUNITIES TAKE TO KEEP PEOPLE SAFE IS THE EXACT OPPOSITE OF THE GOALS OF THIS THESIS. THE APPROACH TAKEN IS ONE THAT SEGREGATES A GROUP OF PEOPLE BY PROVIDING MANY OF THE DAY-TO-DAY ACTIVITIES WITHIN THE GATES AND WHAT IS REALLY CREATED IS AN INSTANCE IN WHICH THERE IS A LACK OF INTERACTION BETWEEN THE INSIDE AND THE OUTSIDE OF THE GATES. THESE COMMUNITIES ARE SURROUNDED BY A FENCE AND ALSO INCORPORATE OTHER SECURITY MEASURES INCLUDING GUARDED GATES, SECURITY CAMERAS, AND IN SOME CASES SAFETY PERSONAL. BY OFFERING SO MANY AMENITIES WITHIN THE GATES AN ATMOSPHERE IS CREATED THAT ALLOWS RESIDENTS TO LIVE AND PLAY WITHIN THE SAME COMPLEX, NOT HAVING TO LEAVE THE GATES.

“A PORTION OF THE CENTRAL AREA OF THE STREET HAS BEEN COMPLETELY CLOSED TO TRAFFIC...CRIME HAS ALMOST BEEN ELIMINATED...CONCERN FOR MAINTENANCE AND SAFETY OF THE STREET APPEARS TO BE UNIVERSALLY SHARED BY RESIDENTS.”

-OSCAR NEWMAN
S ense of Safety Survey

As a way to gain insight into how people perceived safety within an area, I conducted a survey on the campus of the University of Detroit Mercy, in which I surveyed approximately 80 students male and female with a dominant age range between 20-25. The questions asked pertained directly to the campus and feelings about the traditional security measures that are currently enacted on campus, including the fence, campus security, security cameras, and the existing lighting and pathways defined through the campus. I also directed questions pertaining to environmental design elements that could be incorporated and if the perceived safety would be changed by incorporating elements of environmental design including, surveillance, defining paths, lighting and landscaping.

1. Does complete visibility in a space, or the idea of seeing everything/everyone and being seen, make that space feel:
   - More welcoming
   - Less welcoming
   - Indifferent
   - Other

2. Do environmental design elements such as landscaping, lighting, pathways, make a space:
   - More welcoming
   - Less welcoming
   - Indifferent
   - Other

3. Does the presence of individuals walking around on campus make that area feel:
   - More welcoming
   - Less welcoming
   - Indifferent
   - Other

4. Does the fence that surrounds campus give you a sense of:
   - Security
   - Disconnection from the surrounding neighborhoods
   - Isolation
   - Indifferent
   - Other

5. Does the presence of landscaping including: trees, flowers, benches, or pathways give a greater sense of safety than when these elements are not present:
   - Yes
   - No
   - Indifferent

6. Do paths or walkways that are not well maintaind, overgrown, and broken make you feel:
   - Curious
   - Fearful
   - Indifferent
   - Other
RESULTS
Sense of Safety Survey

**MALE ANALYSIS:**

The results from the males surveyed indicated that all of the environmental design elements that were included in the survey made a particular space more welcoming or more appealing.

- 70% feel that complete visibility within a space makes it more welcoming
- 96% feel that environmental design elements would make a space more welcoming
- 80% feel that the presence of individuals occupying a space makes it more welcoming
- 70% feel that the fence around campus gives a sense of isolation and seclusion from the outside
- 55% feel that walkways fallen into disrepair invoke a curious reaction

**FEMALE ANALYSIS:**

Similar to the males, the females that participated in the survey indicated that environmental design elements included in the survey, would make a space feel safer and more welcoming.

- 80% feel that complete visibility within a space makes it more welcoming
- 90% feel that environmental design elements would make a space more welcoming
- 96% feel that the presence of individuals occupying a space makes it more welcoming
- 60% feel that the fence around campus creates a disconnection between inside and outside
- 60% feel that walkways fallen into disrepair invoke a curious reaction
To conclude the results of the survey, it was interesting to see how different elements of security changed how people perceived safety within a location. Modern day security measures, while aimed at keeping people safe and free from danger, in some cases do just the opposite. Having heightened security measures in some cases give people the sense that they are more prone to experience an event that would put them in harms way. It was also very interesting to see the similarities and differences between how male and females perceive safety in a space. One example in particular, was the number of people who felt that the fence that surrounds campus is more of a negative barrier, disconnecting them from outside the gates, then it is seen as a protective measure. To relate to the goals of this thesis it was informative to see how people felt about how environmental design can change how safety is perceived. Environmental design principles such as those this thesis will build off of, make a person feel safer than when these elements are not present. Defining pathways, distinguishing between public and private, landscaping, lighting, and visibility all play a factor in how one perceives a space in which they engage.
“PUBLIC AND PRIVATE SPACES CANNOT OOZE INTO EACH OTHER...THERE MUST BE A CLEAR DEMARCATION BETWEEN WHAT IS PUBLIC SPACE AND WHAT IS PRIVATE SPACE.”

-JANE JACOBS
SITE SELECTION
SITE SELECTION

DEFINING LOCATION

FOR THE CIRCUMSTANCE THAT WOULD BE IDEAL FOR THIS THESIS PROJECT, I DIRECTED MY ATTENTION TO FOCUSING ON DETROIT AS AN AREA FOR THE SITE. THE IDEA WAS TO FIND A SUITABLE LOCATION WITHIN DETROIT IN WHICH A USER GROUP COULD BE IDENTIFIED AND THE INTERVENTION COULD BE ENACTED WITHIN THAT SITE. THE SITE CONDITION NEEDED TO BE AN AREA THAT WAS IN NEED OF AN INTERVENTION, AND ONE THAT ALLOWED ENVIRONMENTAL DESIGN TECHNIQUES TO BE DESIGNED ON THE SITE. AS DISCUSSED EARLY, DETROIT CAN BE SEEN AS PROVIDING AN EDGE CONDITION ON THE BASIS THAT THE CITY BORDERS ANOTHER COUNTRY. DETROIT IS A CITY THAT HAS LONGED FOR A SENSE OF SAFETY AND SECURITY, AND IN MANY NEIGHBORHOODS IN THE CITY THOSE ELEMENTS ARE LACKING. WITH THESE CONDITIONS IN MIND IT WAS IMPORTANT TO FIND A LOCATION WITHIN THE CITY IN WHICH THAT NEED FOR REVITALIZED SAFETY AND SECURITY WAS NEEDED. THE THESIS WILL BRIDGE THE GAP OF THOSE TWO ELEMENTS WHILE FOCUSING ON THE REGROWTH OF A NEIGHBORHOOD BY IMPLEMENTING A COMMUNITY PROGRAM.

THROUGH A MEETING WITH THE COVENANT HOUSE MICHIGAN, I WAS DIRECTED TO A POSSIBLE SITE. THE AREA WAS ALTER RD. AND JEFFERSON ON DETROIT’S EAST SIDE. THIS AREA OF DETROIT IS UNIQUE IN HOW IT HAS A EDGE CONDITION BECAUSE OF THE BORDER IT HAS WITH GROSSE POINTE. THE AREA WAS DESCRIBED AS BEING ONE THAT WAS IN NEED, HOWEVER THAT NEED WAS NOT IMMEDIATELY IDENTIFIED. AS A WAY TO DETERMINE WHAT THAT NEED WAS WITHIN THE SITE, A PROCESS OF OBSERVING, ENGAGING, AND IDENTIFYING WAS ENACTED WITHIN THE LOCATION.
Defining Boundaries

After visiting the site at Alter Rd. and Jefferson, it was clear to see that the neighborhood was in need. However, that particular need still had not been identified. As a way to contain the large neighborhood boundaries were established in which would mark the neighborhood that I would focus my investigations. The boundaries were Jefferson, Alter Rd., Mack Ave., and Chalmers. By defining these boundaries I was able to focus on the portion of the neighborhood that was clearly in need of a community intervention.

This neighborhood is unique in the sense that Alter Rd. is a bordering condition with Grosse Pointe, and the two cities although closely linked to one another, are very separate. The neighborhood within the boundaries is very vacant, many of the residential homes have been abandoned and lie vacant and run down. However the interesting aspect is how dense the housing is just opposite Alter Rd. in Grosse Pointe. The housing in the boundaries are very sparse and some of them are nothing more than shells or remanents of an existing neighborhood.

After defining boundaries within the neighborhood, two potential sites were investigated and analyzed further. Both of the sites offered the possibility that a program could be implemented into the areas. The potential sites were chosen because of the proximity they shared to the busier defining lines, all while both of them felt very distant in nature. Both of the sites chosen had been largely impacted by vacant land and vacant homes, and offered great possibility in utilizing these elements as a way to revitalize the neighborhood as a whole.
THE FIRST POTENTIAL SITE WITHIN THE DEFINED BOUNDARIES WAS LOCATED BETWEEN PHILIP AND MARLBOROUGH ST. 2 BLOCKS FROM MACK AVE. THE SITE ENCOMPASSES A VACANT OVERGROWN AREA FROM ONE STREET TO THE OTHER. THE SITE IS CURRENTLY BEING USED FOR NOTHING MORE THAN A DUMPING GROUND OF TRASH, BUILDING MATERIALS, AND REMINISCENT OBJECTS THAT REMIND ONE OF WHAT USED TO OCCUPY THE SITE. ONLY ONE HOME STILL EXISTS WITHIN THE BOUNDARIES OF THE SITE, AND IT IS REALLY JUST PART OF A SHELL FROM WHAT THE HOME USED TO BE. SURROUNDING THE SITE IS A MIX OF VACANT AND OCCUPIED HOMES, AND A MIX OF BUSINESS ALONG THE MACK AVE. CORRIDOR.

THE BENEFITS OF THIS SITE INCLUDE ITS POTENTIAL TO OCCUPY NOT ONLY THE AREA BETWEEN THE TWO STREETS, BUT ALSO TO EXTEND BEYOND THE IMMEDIATE BOUNDARIES BECAUSE OF THE NUMBER OF VACANT HOMES AND LOTS THAT SURROUND IT. OCCUPYING THIS SITE WOULD ALLOW A PROGRAM TO BE INTEGRATED INTO THE SURROUNDING COMMUNITY AND TO CONNECT TO THE EXISTING CONDITIONS OF RESIDENTIAL HOMES AND BUSINESSES ALONG MACK. THE GOAL OF THE THESIS TO PLACE AN INTERVENTION INTO AN AREA OF NEED WOULD BE SUITABLE IN THIS LOCATION BECAUSE OF THE BENEFITS THAT IT OFFERS THAT WOULD WORK AS A MEANS TO IMPROVING THE NEIGHBORHOOD.
VIEW OF SITE FROM MARLBOROUGH TOWARDS PHILIP

VIEW OF THE SITE BETWEEN THE STREETS
Final Site

The second site within the defined boundaries and that which was chosen for the final site, is located between Philip and Manistique a half of a block off of Jefferson. Although this site has a close proximity to the busy Jefferson and Alter Rd. intersection, it really feels very distant in nature. The site does not feel very busy and loud as does Jefferson, it is just the opposite it is very quite, and in some respects feels disconnected because of the condition that the neighborhood has fallen into.

The site currently offers similar possibilities as the previous site, however this site has many more connections that can be made to incorporate the surrounding community and integrate it into the proposed intervention. Again, similar to the first site, this site is really nothing more than a dumping ground for trash, concrete, and other miscellaneous building materials. The site also reveals hidden elements that speak to a school that used to be on the site. This site allows the possibility to spread across both sides of the street and to incorporate many different elements into the design. The disconnect from the neighborhood and the many features that present themselves on the site make it suitable location for the community intervention that this thesis will propose.
As was previously stated, this site has many elements within close proximity that will be incorporated into the program design. Along with the abandoned park directly across the street, next to the vacant site is a vacant church and many vacant homes, one of which is located directly on the site. Although there are some occupied homes surrounding the site, many of the residents have left the area and homes have fallen into disrepair. By incorporating all of these elements into the design, the intervention will aim to repair the neighborhood that as a whole has suffered from disrepair and abandonment.
Final Site

FIGURE GROUND MAP
“A WELL-USED CITY STREET IS APT TO BE A SAFE STREET... A DESERTED CITY STREET IS APT TO BE UNSAFE.”

-JANE JACOBS
ENGAGING COMMUNITY
..."The two biggest things that this neighborhood needs is a place for the youth to hang out and play, and also a program to deal with the drugs in the area."

..."This area has a problem with drugs, as well as a lack of amenities for the children of the area."

..."I want somewhere to hang out and play after school."
Once the neighborhood had been chosen for the program, I began a process of observing and engaging with the community in order to establish and identify who the user groups of the area would be. Like was previously stated, by analyzing the neighborhood it was clear that the neighborhood had been devastated by vacant properties and was in need of an intervention. Once I began engaging with community members and residents, two immediate problems were presented within the neighborhood. Several residents of the community identified that there was a large drug problem in the area as well as a lack of youth friendly amenities.

One resident of the area identified that there were known houses, many of which were vacant homes that were being used as drug houses. He also revealed that the lack of amenities has had an effect on the youth of the area. He worked at a strip mall located on the corner of Alter and Mack and has experienced many occasions in which children have been playing in the parking lot because they have no where else to go after school or on the weekends.

Based on the initial observations and engagements of the site, I determined that a substance abuse facility and a youth center would be an intervention that would help revitalize this neighborhood. As a way to further solidify how these programs would work together with one another, I located a school near the site and used a process of interviewing teachers and students to find what types of programs would benefit the area the most.
Engaging Community

Detroit Merit Charter Academy is located on Alter Rd. Approximately a block away from the site. I interviewed a group of teachers from the school as a way to find out not only what programs would be beneficial to have in a youth center, but also to find out if the drug problem of the area had affected any students within the school. They were able to identify to me that drugs in fact are involved in some of the students families, and that it would be beneficial to offer services that helped those families re-build. It was also discovered that the school had no preventative drug programs in place and just had been identified the size of the school prevents it from offering recreational activities that reach beyond the students education. Through meeting with teachers I was able to identify how these programs would work together with one another to provide appropriate drug prevention programs and also educational and recreational activities for the kids in the area.
- Within the boundaries that I have defined to focus on there are no amenities for the kids, whether it be educational programs, areas to play, or sport activities.

“THERE IS NOTHING WITHIN THOSE BOUNDARIES.”

- Identified that security is an issue on the campus of the school, the theft of school and personal property is a regular issue.

“If a path were provided, it would be safe for students to walk to the center immediately after school, but only because of the increased number of people around the school at the time.”

- Currently offer some after school programs and clubs, however due to the size of the school, there is no gym so there are no sports programs offered at the school.

- Estimate that a large number of students would use and would benefit from services and activities provided at the youth center.

- Are aware that “there are many students in the school who live with relatives other than parents because of substance abuse in the families.”

- Currently there are no drug prevention programs within the school, but feel that it would be a beneficial program to have, to better educate the students about the effects of drug use.
WITH THE ESTABLISHMENT OF A YOUTH CENTER BEING ONE OF THE PROGRAMS PROVIDED, I SURVEYED SOME STUDENTS FROM DETROIT MERIT ACADEMY AS A WAY TO UNDERSTAND NOT ONLY HOW MANY WOULD USE THE YOUTH CENTER, BUT ALSO WHAT TYPES OF RECREATIONAL AND EDUCATIONAL ACTIVITIES WOULD BE THE MOST BENEFICIAL FOR THE CENTER. ALTHOUGH THERE WAS A WIDE RANGE OF RESPONSES BASED ON THE RECREATIONAL ACTIVITIES, I WAS REALLY SURPRISED BY THE NUMBER OF STUDENTS WHO WANTED EDUCATIONAL ACTIVITIES INCORPORATED AS WELL. THE MOST SURPRISING STILL, WAS THE NUMBER OF STUDENTS WHO WOULD LIKE TO HAVE DRUG PREVENTION COURSES AND COUNSELING AVAILABLE TO THEM. THESE RESULTS SOLITIFIED THAT THE TWO PROGRAMS I HAD CHOSEN REALLY WILL BE ABLE TO WORK WITH ONE ANOTHER TO REBUILD FAMILIES THAT HAD BEEN TORN APART DUE TO SUBSTANCE ABUSE.

What types of recreational activities would you like to have at a youth center?

____ Indoor Basketball,  
____ Indoor volleyball  
____ Indoor swimming pool  
____ Skate park  
____ Tennis Courts  
____ Running Track  
____ Gardening  
____ Other

Are there any educational activities that you would like to be able to engage in outside of school?

____ Drug prevention  
____ Counseling  
____ Religious education  
____ Reading room  
____ Computer lab  
____ Art center  
____ Other

If there was at least one activity that you were interested in, how often do you feel you would use the facility?

Before school  
After school  
Weekends
RESULTS FROM THE STUDENTS THAT WERE SURVEYED INDICATED:
APPROXIMATELY 78% OF STUDENTS WOULD USE THE CENTER AFTER SCHOOL
APPROXIMATELY 65% OF STUDENTS WOULD USE THE CENTER ON THE WEEKENDS
APPROXIMATELY 30% OF STUDENTS WOULD USE THE CENTER BEFORE SCHOOL
“Don’t fight forces, use them.”
- R. Buckminster Fuller
Program Identification

Site

Observe

Engage Community

User Group

Identify Security

Substance Abuse Facility + Youth Center
The diagram on the next page depicts this process step by step in further detail, explaining what each of the four steps in the process will encompass.
Substance Abuse Center

- Medical Evaluation and Intake Interview
- Inpatient or Outpatient Status
- Detox
- Long or Short Term Resident
- Day or Evening Classes
- Weekly Support Groups
- Individually Tailored Treatment Process
- Target Approach for Repeat Abusers
- Counseling and Therapy
- Treat as a Family Disease
- Building Family Structure
- Prevention Programs and Services
- Rehabilitate users away from drug use
- Education Programs
- Process Completion Services
- Housing Arrangements
- Continued Education
- Continued Family Services
- Transitional Housing
- Continued Therapy / Support
I medical evaluation and intake interview
inpatient or outpatient status
dentify
long or short term resident
detox
day or evening classes
weekly support groups
individually tailored treatment process
target approach for repeat abusers
reat
treat as a family disease
counseling and therapy
building family structure
T
prevention programs and services
prevent chance for relapse
revent
EDUCATION PROGRAMS
rehabilitate users away from drug use
P
PREVENT
PREVENT PROGRAMS AND SERVICES
PROCESS COMPLETION SERVICES
HOUSING ARRANGEMENTS
TRANSITIONAL HOUSING
CONTINUED THERAPY / SUPPORT
CONTINUED FAMILY SERVICES
CONTINUED EDUCATION
The second part of the program is to provide a youth center for the kids in the area because of the lack of amenities that are currently offered in the neighborhood. It is also important to understand that the neighborhood already has a problem with drugs, and with a lack of amenities and drug prevention programs, there is a very high risk that the youth of the area can become involved in drug activity.

The youth center has two main components to the objective that it will serve. The first component again is to identify the problems that the youth of the area face because they lack proper drug education and safe havens for play outside of school. It is also going to be a very important goal that this center work with the substance abuse facility in which kids with drug addiction in their families will be treated to assure family structure is rebuilt. The second component is providing the youth center. The center will consist of both educational and recreational activities for not only the students of Detroit Merit Academy but also for the youth of the area. Drug prevention will be incorporated into the center as a way to educate kids about the effects of drugs and to prevent that road. The overall goal of the youth center is to educate kids about the effects of drug use, treat kids with addiction in their families and to provide them clean, safe, fun areas to gather.

The diagram on the next page describes the two components of the youth center and the elements that each will incorporate.
I identify the youth in the area face drug problems in families. There is a lack of youth amenities in the area. Prevention and education programs about drugs are needed. Education programs to coincide with school are beneficial. Before and after school programs are important. Clean, safe, fun areas to play outside of school are essential. A youth center can provide these services.
The existing vacant park that lies across the street from the site in which the substance abuse facility will occupy will be revived and incorporated into the design for the youth center. The park will house outdoor recreational activities for the youth in the area. The park currently is nothing more than two overgrown and broken basketball courts in which alternative activities will occupy with the growth of the youth center.
Security as the site currently stands is an issue, so as the teachers from Detroit Merit Academy identified it will be necessary for a path to be provided so that students have a safe route to travel to and from the youth center. Keeping in mind that the objective of these two programs is to design a safe and secure intervention using environmental design elements, this diagram is a study of how traditional walls and paths can be created by incorporating alternate activities into the function they serve. Instead of simply walling off the path, the walls become instances in which kids can experience art, out of the traditional manner, by using graffiti. This is a study of how recreational activities that will be incorporated in the youth center can also influence the path provided for the students.
AS A WAY TO FIND OUT MORE ABOUT ELEMENTS CRUCIAL TO SUBSTANCE ABUSE FACILITIES I CONSULTED A SUBSTANCE ABUSE FACILITY. THE FACILITY WAS ABLE TO IDENTIFY SECURITY NEEDS THAT MUST BE PRESENT IN THESE FACILITIES, INTERNAL AND EXTERNAL SECURITY. THEY ALSO IDENTIFIED HOW IMPORTANT IT IS TO TREAT ADDICTION AS A FAMILY DISEASE, IT’S NOT ABOUT TREATING JUST THOSE INDIVIDUALS WITH THE ADDICTION. TO ACCOMPLISH THIS ASPECT WITHIN THIS THESIS, TRANSITIONAL HOUSING WILL BE MADE AVAILABLE ALONG WITH THE FAMILY CONSULTING AND SERVICES. TRANSITIONAL HOUSING WILL FOCUS ON ALLOWING FAMILIES TO RE-BUILD THEIR FAMILY STRUCTURE, ONE THAT WAS LOST DUE TO THE ADDICTION. THIS FACILITY WILL NOT ONLY TREAT THE DRUG USERS BUT ALSO THOSE IN THE FAMILY WHO THE ADDICTION HAS AFFECTED.

“WE STRONGLY BELIEVE THAT ADDICTION IS A FAMILY DISEASE.”

“I’VE HAD STUDENTS COME UP AND TELL ME,

“I WANT MY FAMILY BACK.”
“Those independent transitional housing options are no longer available and we find that this has had a severe adverse impact on the recovery of many of our outpatient folks.”
“THE THING TO UNDERSTAND IS THAT THE PROBLEM OF INSECURITY CANNOT BE SOLVED BY SPREADING PEOPLE OUT MORE THINLY.”

-JANE JACOBS
Schematic Design
Based on the steps that I had identified for the treatment of the Substance Abuse Center and the steps for the Youth Center, as a way to study the relationships with one another I broke the steps down into the individual specified functions within each component. By doing so I was able to understand the relationship that different functions within the programs had with one another and to get an understanding of how to lay out the interior spaces before committing to site restrictions. This study allowed me to understand which components of the separate programs needed to have interaction and which elements needed to be separated between the two. It was important to identify the relationships because the ultimate goal is that these two programs although serving separate needs will work together for the common good of the neighborhood.
registration
substance abuse
facility
detox
repeat
offenders
long term
treatment
short term
treatment
groups
meetings
day/
evening
weekly
partial
day
Weekend
continued
education
trans.
housing
housing
support
families
services
prevention
abusers
youth
center
youth
recreational
activities
educational
activities
registration
substance abuse
facility
short term
treatment
long term
treatment
repeat
offenders
detox
youth
center
Security Analysis

This diagram depicts the way in which modern day security measures are implemented on a site. Although this is an extreme example, it depicts how elements we rely on to achieve safety can clutter the building environments. Fences, cameras, and guards are commonly used as methods that allow users to perceive an environment as safe.
This diagram depicts the method in which this thesis will take in creating a safe and secure environment. Instead of relying solely on add-on security devices, this thesis will use the surrounding environment as a means of achieving safety. Defined paths, maintained landscaping and visibility within a site reduce the risk that crime can occur by reducing the opportunities that offenders have within a space, thus creating a safe and secure environment.
Security Analysis

After analyzing the differences in the security approach, add-on security versus environmental security, I created an initial massing model as a method to begin to implement and study different approaches to the established principles. Using the model the first principle that was studied was access control. This was done by laying out beginning building forms and placing pathways throughout the site as a method to effectively transport persons through the space. Territoriality was studied at the same time as access control because of the relationship that they have with one another. Using the paths were placed onto the site the shift was then to study how elements such as landscaping can be used to create buffer zones, or areas that distinguish between the public pathways and the private areas of the site.

The initial form that was analyzed for this study was generated around the principle of natural surveillance. As was stated this is one of the most important principles when designing an environment, visibility plays a crucial role in successful environmental design. The idea is that designing different push and pull elements of building design will allow for natural surveillance to occur because of the increased number of views and directions that are generated. Along the lines of surveillance is activity support, which relies on visibility to be successfully integrated. Using the same principles of vision pertaining to surveillance, activity spaces were placed on the site to begin to see which locations on the site would be most appropriate to place activities so that they would be utilizing the other integral principles.
THE FINAL SCHEMATIC DESIGN FOR THE DESIGNATED PROGRAMS WERE AN EXPLORATION IN WHICH MATERIALS, SITE PLANNING AND FUNCTION, ENVIRONMENTAL SECURITY, AND BUILDING FORM WERE ALL EXPLORED. BECAUSE OF THE RESIDENTIAL FEELING OF THE NEIGHBORHOOD, THE MATERIAL PALETTE THAT WAS CHOSEN FOR THE SUBSTANCE ABUSE CENTER WAS A STONE EXTERIOR AND USING BOLT-ON ALUMINUM PERFORATED PANELS TO ATTACH TO THE FAÇADE IN THE MORE PUBLIC FUNCTIONS OF THE BUILDING. THE YOUTH CENTER WAS A TWO STORY MULTI-PURPOSE GYMNASIUM WITH A MIX OF EDUCATIONAL RESOURCES LOCATED WITHIN. THE STRUCTURE OF THE GYMNASIUM WAS COLUMN AND TRUSS TO ALLOW FOR RIBBON WINDOW ALONG THE TOP FOR NATURAL DAY LIGHTING.

WITH THIS DESIGN ALL OF THE SECURITY ANALYSIS THAT HAD BEEN DONE WAS IMPLEMENTED INTO THE SURROUNDING ENVIRONMENTS OF BOTH FACILITIES. ACCESS CONTROL WAS IMPLEMENTED BY PROVIDING PATHWAYS TO AND FROM BOTH FACILITIES AS WELL FROM THE SCHOOL TO THE YOUTH CENTER, AND TO THE VACANT CHURCH WHOSE FUNCTION SERVES AS THE COUNSELING AND DRUG PREVENTION AREA FOR THE YOUTH. PUBLIC AND PRIVATE SITE FUNCTIONS WERE DESIGNATED USING LIGHTING AND LANDSCAPING. THE PLANNING AND SITUATION OF THE BUILDING FORMS ALLOWED FOR SURVEILLANCE ON THE SITE AND UTILIZING THIS PRINCIPLE, ACTIVITIES WERE PLACED WITHIN AREAS OF SURVEILLANCE.
ENVIRONMENTAL SECURITY IMPLEMENTATION
Schematic Design Final Model

Substance Abuse Treatment

Natural Surveillance
“The safety of the people shall be the highest law.”

-Marcus Tullius Cicero
FINAL DESIGN

THE FOLLOWING PAGES SHOW THE FINAL SITE DESIGN AND HOW THE ELEMENTS OF ACCESS CONTROL, ACTIVITY SUPPORT, NATURAL SURVEILLANCE, AND TERRITORIALITY WERE CARRIED OUT THROUGHOUT THE SITE. THE EXISTING SITE MAP HIGHLIGHTS THE EXISTING ELEMENTS OF THE SITE THAT WERE INCORPORATED INTO THE FINAL DESIGN, AND THE PROPOSED SITE DIAGRAM SHOWS THAT CONNECTIONS THAT THE SEPERATE BUILDINGS HAVE WITH ONE ANOTHER.
Existing Site Condition
Proposed Site Condition

A.1 Substance Abuse Treatment Center
A.2 Substance Abuse Outpatient Treatment
B.1 Youth Center Recreational Activities
B.2 Youth Center Educational Activities
B.3 Youth Drug Prevention and Counseling
C.1 Transitional Housing for Adults and Kids
D.1 Performing Arts

SITE PLAN - 1" = 70'
A.1 SECOND FLOOR

A.2 FIRST FLOOR
AS A WAY TO BRING THE BUILDING DOWN TO THE RESIDENTIAL SCALE, THE CONTINUED EDUCATION BUILDING WAS DESIGNED TO FIT INTO THE CONTEXT OF THE NEIGHBORHOOD. SIMILAR MATERIAL PALETTES OF BRICK AS WELL AS GABLE ROOFS WERE USED AS A TRANSITION FROM RESIDENTIAL TO THE MAIN CENTERS.
Similarly the rear portion of the youth center recreational building was dropped down to residential scale and a similar brick palette was added so that the proposed buildings didn’t feel disconnected from the homes that still did exist in the neighborhood.
The main courtyard space created on the site utilized all of the environmental design principles that were established for the site. Pathways throughout provide transition through the site, marked by separation between public and private, and the outdoor activities were placed within direct views of the buildings.
The portion of the second floor that occupies the inpatient rooms was designated with IPE wood as a way to soften the material palette. A private entrance opposite of the courtyard space was also added to give the residents of the treatment center a private setting.
Section through Resident Rooms
Substance Abuse Treatment

A. Family Entrance
Private Entrance
Substance Abuse Treatment

A. Interior Courtyard
WITH THE EMPHASIS THAT THE TWO SEPARATE PROGRAMS WOULD WORK TOGETHER WITH THE OBJECTIVE OF REBUILDING FAMILIES THAT HAD SUFFERED FROM SUBSTANCE ABUSE, A SEPARATE FAMILY ENTRANCE WAS CREATED OFF OF THE MAIN EXTERIOR SPACE IN ORDER TO ENSURE THAT TREATMENT BECAME A FAMILY PROCESS. A PRIVATE ENTRANCE FOR THE RESIDENTS OF THE TREATMENT CENTER WAS ADDED ON THE OPPOSITE SIDE OF THE BUILDING AS A WAY TO GIVE A PRIVATE ENTRANCE FOR THOSE ENTERING AND EXITING THE CENTER. BOTH OF THE ENTRANCES ALSO INCORPORATE DOWN SLOPING ROOFS TO CREATE AN INTIMATE FEELING TO BOTH ENTRANCES OF THE CENTER. AFTER MUCH RESEARCH INTO SUBSTANCE ABUSE, ONE OF THE MOST IMPORTANT ELEMENTS THAT I DISCOVERED WAS THE IMPORTANCE OF CREATING AN ENVIRONMENT THAT FELT HOME LIKE IN NATURE FOR THE INDIVIDUALS THAT WOULD OCCUPY THE CENTER. TO ADDRESS THIS ISSUE THE MAIN MATERIAL CHOSEN FOR THE TREATMENT CENTER WAS A TAN LIMESTONE EXTERIOR AND AS A WAY TO GROUND THE BUILDING A SLATE STONE WAS ADDED TO THE FOUNDATION OF THE BUILDING. IPE WOOD WAS USED AS A MATERIAL TO SOFTEN BOTH OF THE ENTRANCES OF THE CENTER AND WAS ALSO USED TO WRAP THE INPATIENT ROOMS LOCATED ON THE SECOND FLOOR OF THE CENTER. THE 2-STORY CURTAIN WALL THAT OVERLOOKS THE MAIN EXTERIOR SPACE UTILIZES THE CONCEPT OF NATURAL SURVEILLANCE TO ENSURE THAT EYES ARE ALWAYS WATCHING OUT INTO THE SPACE. THE GLASS ALSO SERVES THE PURPOSE OF ALLOWING A CONNECTION TO THE OUTDOORS FOR THOSE RESIDENTS IN THE CENTER. THE OBJECTIVE OF THIS TREATMENT CENTER IS NOT TO SEGREGATE THOSE INDIVIDUALS WITHIN THE TREATMENT CENTER, BUT RATHER TO USE THE BUILDING FORM AND MATERIALS TO INTEGRATE THE USERS WITHIN TO THE EXTERIOR ENVIRONMENT. OVERALL, THE MATERIALS THAT WERE CHOSEN ARE INTENDED TO MAKE THE RESIDENTS OF THE CENTER FEEL LIKE THEY ARE IN AN ENVIRONMENT NOT COMPLETELY SEPARATE FROM THEIR HOME, IN ORDER TO ENSURE THEY CAN CONTINUE THEIR SOBER LIVING ONCE THE PROCESS HAS BEEN COMPLETED. THE INTERIOR COURTYARD SPACE WAS ADDED TO THE TREATMENT CENTER TO GIVE THE RESIDENTS AN EXTERIOR SPACE TO OCCUPY AT ALL TIMES. BECAUSE OF THE INTENSE ATMOSPHERE THAT CAN BE CREATED WHEN TREATING SUBSTANCE ABUSE IT IS IMPORTANT TO OFFER RESIDENTS A CONNECTION TO THE OUTSIDE, BUT THE SAFETY AND SECURITY STILL MUST BE MAINTAINED WITHIN THE CENTER.
Youth Center

REVITALIZED PARK
3. Interior Multi-purpose gymnasium
Youth Center

Besides providing a safe environment for the youth center, the main elements that were incorporated were the path that runs from the school to the center and also revitalizing the existing vacant park that was located on site. Through the survey that was conducted with the students at the school, the decision was made to revamp one of the exterior basketball courts and to convert the other into a skate park. The recreational building that houses a multi-purpose gymnasium and supporting functions, is a 2 story tall building with pre-cast concrete panels utilized for the exterior façade. As a way to make the building more playful because of its function, colored concrete panels were added to the façade as well; and to tie in with the substance treatment center, ipe wood was used along the street façade to cover 3 one-story pullouts that served as benches for the interior of the gym. The roof for the gym was also designed to be playful and incorporated a series of 3-sloped roofs with glass to allow for natural day lighting from the south. As a way to deal with the Michigan weather and also to keep with the playful nature of the building design, rain troughs were designed to contain rainwater and to dump the water off of the roof of the building into landscaped areas below between the 3 pullouts. The education building located opposite of the exterior functions was designed using similar material palettes. The second story of the building created an overhang for a covered patio below for people to gather and view the outdoor functions. A balcony was also implemented on the second level for exterior viewing. As a way to create separation along the pathway extending from the school to the youth center, instead of putting up a wall or fence, perforated metal panels were utilized to form a wall with openings that separated the path from the occupied homes. Art was one of the activities to take place in the youth center, so to engage the exterior of the site and to create an alternative art usage the wall is engaged by becoming an active wall for graffiti art by the students of the youth center. Bollards were also used to give demarcation between the street and the exterior functions of the youth center.

As a way to complete the transition through the site and to extend the environment into the community even further, a outdoor performing arts space was added across the opposite street of the youth center. The orientation of the performance space was derived to face away from two occupied homes that are behind it. It is a small performance space that incorporates all of the elements of environmental design surrounding it. The performance space is intended to serve function to the youth center and also to extend the connection that the environment makes into reviving the neighborhood through safety and security.
Performance Arts Space
Achieving Environmental Security
This aerial view of the site highlights all of the environmental security principles that were implemented onto the site. The principles access control, activity support, natural surveillance, and territorial reinforcement were all implemented into different areas within the site and work together with one another as a means to achieve safety and security for the users among the site. “Public Gathering” refers to a canopy structure that was designed to be placed in the center of the main exterior space and serves the purpose for a small gathering or hang out place, and also is placed so that views can be achieved to both the skate park and basketball courts as well as to the performance space on the opposite side.
CONCLUSION

THE MAIN GOAL OF THIS THESIS WAS TO CONSIDER HOW SECURITY CAN BE AN ELEMENT THAT IS MORE INTEGRAL IN THE DESIGN PROCESS. SAFETY AND SECURITY HAVE A STRONG RELATIONSHIP WITH THE EVERYDAY SPACES THAT PEOPLE OCCUPY, SO THE CHALLENGE WAS TO STUDY THE RELATIONSHIP AND IMPACT THAT SECURITY THROUGH ENVIRONMENTAL DESIGN CAN HAVE ON THE BUILT ENVIRONMENT, AND HOW THAT SECURITY CAN BE USED TO REVITALIZE A COMMUNITY IN NEED. AS HAS BEEN STATED THE DEVICES THAT USUALLY AFFORD ONE TO PERCEIVE A SPACE AS SAFE GENERALLY COME IN THE FORM OF FENCES, GATES, CAMERAS, AND OTHER PHYSICAL DEVICES. SO THE MAIN OBJECTIVE WAS TO DESIGN A SPACE WITH SAFETY AND SECURITY AS THE NUMBER ONE GOAL, HOWEVER CHALLENGING TRADITIONAL SECURITY MEASURES AND DESIGNING THE SURROUNDING ENVIRONMENT AS A WAY TO ACHIEVE SAFETY AND SECURITY.

THROUGH RESEARCH INTO THE METHODS OF ACHIEVING ENVIRONMENTAL SECURITY, IT BECAME EVIDENT THAT FOR THIS THESIS TO BE SUCCESSFUL IN STUDYING SAFETY THROUGH ENVIRONMENTAL DESIGN THAT A USER WOULD NEED TO BE ESTABLISHED AND DESIGNED FOR. THE PROGRAMS WERE ULTIMATELY CHOSEN BECAUSE OF THE NEED THAT HAD BEEN IDENTIFIED WITHIN THE COMMUNITY AND THEY PRESENTED CIRCUMSTANCES IN WHICH SECURITY AND SAFETY ARE IMPORTANT.

THE FINAL DESIGN FOR THE PROJECT WAS TO UNDERSTAND HOW WE AS DESIGNERS CAN BE INVOLVED IN THE DESIGN PROCESS OF SECURITY MEASURES BY INTEGRATING ENVIRONMENTAL FEATURES RATHER THAN RELYING SOLELY ON ADD-ON SECURITY. THE PROJECT AS A WHOLE WAS SUCCESSFUL IN THE MANNER IN WHICH A USER GROUP WAS IDENTIFIED AND THE SURROUNDING ENVIRONMENT WAS DESIGNED BY IMPLEMENTING THE DESIGN CRITERIA THAT WERE ESTABLISHED EARLY ON IN THE PROCESS. THROUGH THE IMPLEMENTATION OF THE CHOSEN PROGRAMS AND THE INTEGRATION OF ENVIRONMENTAL SECURITY, THE GOAL WAS TO USE THIS AREA AS A WAY TO REBUILD A COMMUNITY THAT SUFFERED. IN THEORY, THE PROJECT ACCOMPLISHES THE GOAL SET OUT FOR THE STUDY OF THIS THESIS, HOWEVER IT IS MY BELIEF THAT THE BRIDGING PROCESS BETWEEN SAFETY, SECURITY AND THE ENVIRONMENT CAN CONTINUE TO STRENGTHEN BY USING ENVIRONMENTAL DESIGN TO FILL THE VOIDS THAT ARE LEFT FROM TRADITIONAL ADD-ON SECURITY DEVICES.
FOR ALL MY FAMILY AND FRIENDS WHO HAVE SUPPORTED ME..

AND FOR MY DAUGHTER LYLAL, YOU ARE MY INSPIRATION.
BIBLIOGRAPHY


ATLAS, RANDALL. 21ST CENTURY SECURITY AND CPTED: DESIGNING FOR CRITICAL INFRASTRUCTURE PROTECTION AND CRIME PREVENTION. 1ST ED.,. BOCA RATON, FLA: AUERBACH PUBLICATIONS, 2008. 560. PRINT.


COLQUHOUN, IAN. DESIGN OUT CRIME: CREATING SAFE AND SUSTAINABLE COMMUNITIES. 1ST ED.. NEW YORK, N.Y.: ARCHITECTURAL PRESS, 2004. 334. PRINT.

COVENANT HOUSE MICHIGAN. PERSONAL INTERVIEW. OCTOBER 2010.


DETROIT MERIT CHARTER ACADEMY. PERSONAL INTERVIEW. NOVEMBER 2010.


GALLAGER, CONNIE. ALLEGIANCE RECOVERY CENTERS. PERSONAL INTERVIEW. NOVEMBER 2010.
Homeboy Industries. Phone Interview. October 2010.


