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Evaluation and Amendments of a Healing Garden at the Western Massachusetts Hospital

Owen Morgan White
seascapesmv@gmail.com

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EVALUATION AND AMENDMENTS
OF A HEALING GARDEN
AT THE WESTERN MASSACHUSETTS HOSPITAL

A Masters Project Presented
By
Owen Morgan White
EVALUATION AND AMENDMENTS

OF A HEALING GARDEN

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By

Owen Morgan White

Approved as to style and content by:

____________________________________
Annaliese Bischoff, Chair

____________________________________
Michael Davidsohn, Member

____________________________________
Elizabeth A. Brabec, Department Head
Department of Landscape Architecture and
Regional Planning
“I only went out for a walk and finally concluded to stay out until sundown, for going out, I found, was really going in.”

-John Muir
DEDICATION

This project is dedicated to my great-grandmother, Else M. Toomey, who fought Alzheimer’s disease for almost five years before loosing the battle at the age of 92 (1900-1992). I will never forget you or the times we spent together in the garden.
ACKNOWLEDGEMENTS

I would like first to acknowledge The University of Massachusetts, Amherst for providing me with the necessary tools to be the person that I am today. To Annaliese Bischoff, for her constant care and inspiration. I remain in great admiration of her persistence and attitude. Thanks to Mike Davidsohn for always being the voice of reason, knowing him during the past ten years has done more to shape my life than he could possibly know.

To my amazing family for always being there, even when I was not.

Lastly I would like to thank my classmates, colleagues, professors, and great girlfriend for helping, assisting, and never faltering under the immense pressure that I have felt throughout the past few years.

Thank you all so much!
ABSTRACT:
EVALUATION AND AMENDMENTS
OF A HEALING GARDEN
AT THE WESTERN MASSACHUSETTS HOSPITAL
A MASTERS PROJECT
OWEN MORGAN WHITE
UNIVERSITY OF MASSACHUSETTS AMHERST

This study evaluates the variety and quality of four healing gardens currently in existence, with an eye toward developing a healing garden at Western Massachusetts Hospital (WMH) with similar characteristics, but designed specifically to the confines of the WMH site. In the evaluation process, the researcher employed the Mara Eckerling three-layer evaluation method. Personal survey and site photography were performed at four healing gardens; the Howard Ulfelder Healing Garden at Massachusetts General Hospital in Boston, MA; the Cooley Dickinson Hospital in Northampton, Massachusetts; the Joel Schnaper Memorial Garden at Terrance Cardinal Cooke Health Center in Manhattan, New York; and the Ethel Lamay Healing Arts Garden at Baystate Franklin Medical Center in Greenfield, Massachusetts. A six-range grading instrument was devised with which the researcher assessed fifteen individual elements ranging from visual and olfactory appeal to practical issues such as accessibility and security. The researcher tallied the results and calculated an overall score for each healing garden, giving each a corresponding overall rating. While each of the surveyed gardens appraised
well above average, the most highly rated was the Terrance Cardinal Cooke Health Center’s Joel Schnaper Memorial Garden, located in New York City. The Schnaper garden was able to appeal to all five human senses in addition to making excellent use of space and creating an open, welcoming, and unique atmosphere with good accessibility for both ambulatory and non-ambulatory visitors. The researcher surveyed the designated area on the WMH campus in much the same manner as was done with the existing healing gardens. Using the Schnaper architecture as guideline and inspiration, the researcher designed a unique garden, accommodating the multiple patient types, the semi-enclosed space, and one that garnered overall creature appeal. With hospital administration approval the healing garden, with slight modifications, was constructed.
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1.1 Overview

What are healing gardens? Where have healing gardens come from and where are they going in the theoretical, practical, and academic sense of the concept? In short, the healing garden is a very specialized garden, situated within the confines of a hospital, independent hospice, nursing home, or care facility of any type, for the express purpose of serving the patients’ psychological and spiritual healing needs.

Clare Copper Marcus (1995) offers a practical definition:

“In past centuries, green nature, sun light, and fresh air were all seen as essential components of healing in settings ranging from medieval monastic infirmaries…to pavilion style hospitals, asylums, and sanitoria of the late 19th and early 20th centuries… From approximately 1950 to 1990, the therapeutic value of access to nature all but disappeared from hospitals in most western countries. High-rise hospitals built in the international style resembled corporate office buildings.”

Extensive and compelling research demonstrates that natural areas or gardens offer restorative power, which can provide a recuperative environment and invigorating form of therapy for patients. Roger Ulrich, a Behavioral Scientist at Texas A&M, is engaged in research on the effect of healthcare facilities on medical outcomes. Specifically, Ulrich’s study of post-operative patients in a Pennsylvania hospital between 1972 and 1981 supported the idea that patients with views of natural elements, such as
trees, experienced shorter recovery times than those who saw only brick walls from the windows in their rooms (Ulrich, 1984).

The element of Nature embodies one of the most common instruments that people use to achieve relaxation and reflection. It is widely viewed as a haven in which to separate one’s self from stress and anxiety.

A healing garden is a carefully designed environment that provides a place in which to partake of all of these amenities. As such, many hospitals across the country have had gardens installed in adjacent areas of the hospital itself. The purpose of these gardens is to provide places to walk, observe, and engage the outside world. Vegetation "employs the mind without fatigue and yet exercises it: tranquillizes it and yet enlivens it; and thus, through the influence of the mind over the body, gives the effect of refreshing rest and reinvigoration to the whole system" (Ulrich, Parsons, 1992: 95). The perception of what a healing garden is, and what it should be has changed, “so also are the design professionals beginning to rediscover the therapeutic possibilities of sensitive garden design” (Marcus, 1999: 17).

1.2 Definition

A healing garden as defined is: "any garden attached to a healing institution, such as a hospital, hospice, mental institution or long-term care facility" (Eckerling, 1996: 1). Another close but more descriptive definition is, “a space to look out at, and a space for passive or quasi-passive activities such as observing, listening, strolling, sitting, exploring, and so on” (Marcus, 1999: 4).
1.3 Purpose

The purpose of this project is to redesign a healing garden at the Western Massachusetts Hospital. Currently the Western Massachusetts Hospital is looking to have a healing garden designed and built for the patients, staff, and family. A series of designs have been presented to the staff of the hospital, but none has been selected thus far. Some of the reasons for this are: the designs are impractical and go beyond the allowable area, are too expensive to be built, are not A.D.A. accessible, and contain elements that are not allowed in a hospice setting or environment. The people who work at the hospital want to understand what makes one healing garden more valuable than another, in as much as they contribute to healing in the hospital setting.

To assist in this effort, redesign case studies were conducted, applying a model created by Mara Eckerling, to evaluate each garden in the study. This model, a three-level qualifying system, informs and helps determine whether or not a healing garden is successful, and to what degree. When conducting each study, research gathering included documented interviews, photographs, and text describing to what level the garden is successful or unsuccessful. Informed by these case studies, the varying value attached to each, and the quality of the observed gardens, an attempt will be made to redesign a healing garden at the Western Massachusetts Hospital.

Additionally, the findings from these case study observations will help hospital administrators realize what more is needed for the garden. Such a study will provide them with recommendations on how to improve the healing or therapeutic power of the garden based on Eckerling’s model. This study helps point out further amendments and elements that could be added to strengthen and therefore contribute to the value of the garden,
building on strengths of the original design in place. The study emphasizes feasible improvements to the garden. Phasing of certain design elements is a strategy that, if employed, could prove financially beneficial in it’s eliminating the need to implement all parts of the redesign at one time.

1.4 Theory

Healing gardens have been considered valuable resources for thousands of years. Some of the first healing gardens were multi-faceted dwellings in which individuals endeavored to heal the mind, body, and soul. Monastic courtyards in the Middle Ages were used to grow therapeutic herbs and spices; they were also used to grow fruit and flowers that could be used at ceremonies. Yet, these gardens were most often used for contemplation (Barrall, 1966). Documentation of these monasteries illustrates that within the boundaries were several types of gardens. Cases include monks who lived in silence and remained isolated within the monastery, inside cells or rooms that were connected to a central cloister garden. The central garden provided the monks with a place to enjoy sunlight because they spent most of their time inside the walls of the often-dark monastery itself. Representing the tree of life, a juniper tree was usually planted in the corner of the cloister. Cloisters were laid-out in a cross or crucifix form, which created four quadrants with a central water feature (Landsberg, 1995; Warner, 1994).

S. B. Warner notes that early hospitals, with religious origins, were a creation of the church. The view of spiritual healing and the garden diminished in the late Middle Ages, transitioning to a more physical view of medicine (Warner, 1994). Coming into the early Modern Era, cloister design began to change. Instead of four quadrants, the new
design incorporated an open area with grass for people to experience and take in sunlight and fresh air, and to provide a place for patients to walk and experience the outside world (Tyson, 1998).

When designing and implementing restorative type gardens, it is important to remember that it is often the small aspects that can make the most impact. It is the idea that in everyday life there are things that happen or aspects that might not be so clear that we may take for granted, that help to shape our experience (Alexander et al., 1979). It can be the feeling of heat coming off a piece of exposed soil, the touch or sound of leaves, the smell or sight of flowers, and the taste of fresh produce that only the landscape can provide (Tyson, 1998).

One key point to understand is that when people are stressed, they find comfort in something they know and that is familiar to them. Understanding what garden design is like in a particular area helps inform the designer of what is most familiar to people in that area. Creating gardens that are representative and recognizable as gardens of their home (Marcus, 1999) can provide such comfort.

1.5 Practice

There are the three primary elements that will be discussed in this section. These elements are the importance of light sources, coherent path systems, and smaller spaces within the garden. Based on available research by practitioners in the field, it had been shown that all three of these elements have a major impact on the success rate of a garden. Lighting because of eye sensitivity in different patients, coherent pathways to
decrease the possibility of confusion or frustration, and smaller spaces to provide intimate settings for people to gather or rest.

Primary to design is consideration of light and light sources. Modification of light between indoor and outdoor spaces is an important thing to consider when designing a healing garden. Senior folks are especially challenged in recovering visually between sunny and dark areas and “should have arbors, overhangs, tree-shade, or other devices to help ameliorate the transition” (Marcus, 1999: 535). “Reducing contrast between the garden’s sunny and shady areas can compensate for the patient’s difficulties. Lawn, pavements of darker color value, pergolas, summer houses, and other shade structures all help to reduce the glare in the garden’s sunny areas. Pavements and ground covers of lighter color hue and value, trees and shrubs with translucent and/or variegated foliage will also aid in brightening shady areas” (Healy, 1986: 21).

Another key aspect to consider when designing a healing garden is a coherent path layout. When designing the path system, the designer should consider for whom they are designing the walkways and paths. When designing for travelers in wheelchairs, it is important to make paths legible and clear. The path system needs to be carefully laid out and choreographed in order to provide those patients who are being pushed in wheelchairs a sense of freedom. These pathways should be built using proper materials and should not be confusing. Whatever the paving material is should be non-reflective to eliminate the issue of glare and should be adequate to support people in wheelchairs. The material should be something that does not heave easily and resists damage from tree roots (Marcus, 1999).
The design system should also provide for many smaller areas where people can stop and engage one another. Creating different and varied viewpoints helps to reduce stress and is very important for people in hospice care units (Marcus, 1999). Clare Cooper Marcus talks of how important it is to give people in hospice environments places to sit, think, and rest. Providing semi-private places give the patients a place to pray, think, rest, reflect, and meditate. It is good to site these spaces next to the hospital, but in a way that seems farther away than it actually is. It is important to provide seating in all of these spaces so that people have the opportunity to sit down and “get away.”

1.6 Academic

The school of thought surrounding healing gardens and what they are, can be, and should be, has changed dramatically. Prior to the late twentieth century, there was little if any academic following pertaining to the modern day understanding of healing gardens, and “landscaping came to be seen as merely decoration used to offset the hospital building or perhaps to impress potential customers” (Marcus, 1999: 1). Medicine in general had all but shifted to holding patients inside and prescribing modern medicine and, “miraculous as it is, cannot cure everything” (Eckerling, 1996: 7). “It seems as though the hospital garden in the late twentieth century has become an invisible and ignored amenity, and awareness of its possible restorative benefits has been lost in the world of high-tech machines, high-cost drugs, and increased medical specialization” (Marcus, 1999: 14-15). Consequently, instead of the hospital being a place of well being, it shifted to being more important that the hospital was more efficient for the doctors and staff to do their jobs (Sebastian, 1999).
Roger Ulrich was one of the first to start studying the concept of people’s need to connect with nature, particularly the connection between patients’ recovery times and a view of nature through a window. His findings suggest that patients with a view of nature may experience more rapid recovery times. It also deduces that gardens can be a place of healing (Ulrich, 1984).

Much has changed since Ulrich’s study of a view through a window. Today there are many academic programs that offer students the opportunity to study these concepts. They range from full landscape architectural programs to individual classes that are offered across the country. The Therapeutic Landscape Network lists many of these relevant courses that students and professionals can enroll in. Landscape architectural degree programs that offer these courses are schools such as: Ball State, Clemson University-Architectural and Health Graduate Program, Colorado State University, Michigan State University, Texas A&M University-Center for Health Systems and Design, the University of Virginia-Center for Design and Health, and the University of Washington. There are also certificate programs, which include: Healthcare Garden Design Certificate Of Merit Program-Chicago Botanic Garden, and the University of Washington-Professional and Continuing Education Program. Horticultural therapy courses can be taken at the American Horticultural Therapy Association, the Horticultural Therapy Institute, and Kansas State University. In addition to these academic opportunities, there are other possibilities such as: The Landscape and Human Health Lab, and The Environmental Psychology Lab.
Academic avenues in multiple forms at multiple levels offer educational enrichment in the concept pertaining to, and surrounding healing gardens and healing garden design.

1.7 Conclusion

The healing garden, while not a new concept, is still an avenue of its own, possessing the proven benefit of accelerated healing. While this benefit is sufficient to justify its existence, the healing garden’s characteristics invite homage to the greater part of human nature. The elements of nature, whichever the architect should choose, bring about a tranquilizing effect, thus invigorating the human body and spirit, a feat which so far remains unrevealed within any of hospital’s laboratories.

Although a seemingly simple concept to convey such a garden within, the atmosphere into which the healing garden is placed is not so simply penetrated. Because of the vastly differing environments, the antiseptic versus the transcendent, the garden itself must be designed with careful attention to detail. Placement of elements of beauty and serenity must be carefully managed so as to maintain hospital’s original purpose, and not create tripping, slipping, exposure, or other hazards to the garden’s visitors. Such placement is well managed however by those who have re-pioneered the healing garden over the last two decades, as has research into past facility paired gardens from over a century ago. Additionally, courses of study as well as freestanding learning programs are now established within many institutions on the designing and planning of healing gardens.
CHAPTER 2
A METHODOLOGY FOR CASE STUDIES

2.1 Introduction

From a survey of healing gardens in the region, this researcher selected four to serve as the most useful case studies to inform this project. This designer selected to adapt the evaluation method first developed by Mara Eckerling for her master’s project at the University of Massachusetts in 1996. Eckerling’s model is not flawed, however, the reason for adaptation is that there is a lack of numerical value attached to each criteria. The designer wanted a qualitative numeric value in order to compare the gardens objectively. This researcher will apply the adapted method to each case study using the following categories or “layers” of consideration:

1) The Base
2) Making it Work
3) Fine Tuning

2.2 Procedure

The following case studies were conducted during the summer of 2011 with permission from each of the prospective gardens. The researcher sought to employ the practice of careful documentation of each garden, with special consideration given to visual aspects, through securing of both descriptive figures and written accountings. To that end, the researcher took photographs at each site and created a site plan of each garden. The resulting assembly offers insight into the meaning of a healing garden; what
it is; its potential value to society, and most importantly, what beauty and nature
combined with careful and attentive planning to create a healing garden should be.

Insights gained from the study of these gardens are instrumental in informing the
design for the healing garden for the Western Massachusetts Hospital. The studied
gardens are described in a way in which Mara Eckerling might describe them.

2.2.1 The Layers

An evaluation was made for each garden using a layering system to evaluate
healing gardens. In adherence to this procedure, if upon assessment, the first layer of the
garden was deemed acceptable, the researcher continued on to evaluate the second layer.
Should the second layer qualify, the third and final layer was contemplated.

The first layer of qualification was defined as “the base.” The base layer involves
conceptual foundation work, further defined as finding or creating the spirit of the place.
This layer also touches on the concept that a healing garden should be unique and should
not be clinical or sterile. The main purpose of this layer is to create a space that sustains
the spirit, which can be challenging to accomplish in an institutional setting.

The test of the second layer is defined as “making it work.” This layer includes
the determining of such things as who will be using the garden, the views into and exiting
the garden, location, special physical access, and the prospective garden’s layout.
Eckerling explains that among these aspects, the primary consideration should be the
population that will use the garden. It is for that population that the garden is designed.
Views into and out of the garden are important to consider for many reasons, including
safety, security, and the knowledge or understanding that the garden actually exists at the
hospital or facility. The garden should be located in a place where patients can see it from their rooms or lounge spaces. The location plays an important role in determining whether or not a patient can access the garden, or if they want to access it. Proximity to patient quarters increases the likelihood of the garden’s frequent use, and thereby its healing power. Physical access is an important consideration that addresses things such as path width, surface type or material, pull-off and sitting spaces, handrails, raised planters to aid in visual and sensory access, and doors that are automatic, open, or locked. Of course, all of these aspects are dictated by the garden’s anticipated visitors. A garden’s layout represents another important feature in the assessment. It covers such details as places that offer privacy for individuals and small groups, an essential element in the exercise of contemplation, prayer, private chat, and merely communing with the natural environment of the healing garden. Other important details include comfortable access to views, stability of tables and comfortable seating for mobile or wheelchair persons, variety of sun and shade, warm and cool places to accommodate varied wants, and emergency phones and electrical outlets to contribute to the overall feeling of security. This second layer addresses the needs of the individuals, both physical and emotional, and provides the scaffolding for a successful healing garden. If these needs are not met then the garden fails the patients who visit it.

The third and final layer is defined as “fine tuning.” This layer specifically takes into account the five senses: touch, smell, sound, taste, and sight. Eckerling points out that if a garden has been successful in meeting the basic needs, as addressed within the first two layers, one fits the assessment to a finer lens by explicitly considering the senses in this third and final layer. By delving into each sense, one develops important
enrichment to the design. For example, relating to the auditory sense, one can note details on how a design can provide, incorporate, and highlight desirable sounds, while masking or deterring undesirable sounds. From the visual and touch sensory perspectives, variety of color and texture can offer advantages when designing a healing garden, particularly when the garden is to be visited by a certain group of patients or individuals because of thoughts and feelings that might be induced by these influences. For example, visually impaired patients may benefit greatly by varied textures of ground cover; patients with depression, on the other hand, may have their suffering lightened in the presence of brilliantly colored poppies, lilies, or tall grasses waving in the wind. The importance of desirable sounds, sights, smells, tastes, and things to touch should not be understated. Rather, they should be celebrated and highlighted when designing a healing garden.

To summarize, the first layer addresses the need for a garden to be unique and special. The goal of the second layer is to provide the scaffolding or foundation for the physical needs of the users’ of the garden. The third layer enriches the design foundation through the five senses.

2.2.2 Evaluation Matrices

Facilitating this evaluation process, the researcher felt that it was necessary to develop a method to compare and contrast each healing garden in an objective and visually evaluative manner. To that end, the researcher created a series of matrices. These instruments provided optimal assistance in conducting the study, and are available to future students of landscape architecture. It should be stated that this matrix is a
combination of the researcher’s and Eckerling’s work, which ultimately was combined by the researcher to enrich this project. An example matrix follows this section.

After the matrices were filled out, and garden elements individually rated, the ratings were tallied in order to develop a final or overall rating for each garden. The scoring mechanism works as follows: The researcher assigned three levels to the positive aspects; H for high, M for medium, and L for low. The numbers or scores assigned to the three levels are 6, 5, and 4 respectively. The researcher then set up a corresponding set of three levels for negative aspects; L for low, M for medium, and H for a highly negative. The numbers or scores that corresponded to the negative ratings are 3, 2, and 1 respectively. Taking into account the 13 criteria being scored, with a maximum of 6 points per criteria, the maximum score any single healing garden could receive was 78. The lowest score a healing garden could be awarded was 13.

Once the overall rating for each garden was determined, the researcher developed another matrix to compare these case studies to one and other. The goal of this procedure was to see in one page which case studies were valued at the highest level, and those case studies which were valued at the lowest levels, and to further determine what criteria (if any) were missing. The basis for this evaluation was to develop a range into which each score fell and assign to it a verbal value. The researcher designated five categories in which each case study would fall; High, Medium-High, Medium, Medium-Low, and Low. For each category, a numeric range was determined, which would correspond to the verbal value, these ranges were: 65-78 points for High, 52-64 points for Medium-High, 39-51 points for Medium, 26-38 points for Medium-Low, and 13-25 points for Low.
### Case Study Name:

**Location:**

**Designer:**

<table>
<thead>
<tr>
<th>Layer 1:</th>
<th>Description</th>
<th>Positive Aspects</th>
<th>Negative Aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Conceptual Framework</td>
<td>H</td>
<td>M</td>
</tr>
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</table>

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<tr>
<th>Layer 2:</th>
<th>Description</th>
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<tbody>
<tr>
<td></td>
<td>Physical Factors</td>
</tr>
<tr>
<td></td>
<td>• Variation of Sun Exposure</td>
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<td></td>
<td>• Areas For Varying Sized Groups</td>
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<td></td>
<td>• Physical Access</td>
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<td>• Materials-Slippery When Wet?</td>
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<td></td>
<td>• Seating and Tables</td>
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<td>• Self Advertisement</td>
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<td>• Visual Access</td>
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<tr>
<th>Layer 3:</th>
<th>Description</th>
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<tbody>
<tr>
<td></td>
<td>Enrichment Through Five Senses</td>
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<td></td>
<td>• Touch</td>
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<td></td>
<td>• Smell</td>
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<td>• Sound</td>
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<td></td>
<td>• Taste</td>
</tr>
<tr>
<td></td>
<td>• Sight</td>
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</tbody>
</table>

**Rating Summary:**

---

*Figure 2.1: Evaluation Matrix-Blank*
2.3 Case Studies

Four of the case studies performed by the researcher are included here. They are categorized by layers, as explained in section 2.2 of this chapter, and headed by the actual healing garden’s name.

2.3.1 Case Study 1: The Howard Ulfelder Healing Garden, Massachusetts General Hospital, Boston, Massachusetts

This evaluation is based on the Eckerling model, as described in section 2.2 preceding this section. The following paragraphs will describe the case study sites, in detail, using the three tiered layering system developed by Mara Eckerling.

Layer 1: This garden is certainly unique and offers a very spirited atmosphere. Located on the 8th floor of the hospital, this garden provides an opportunity to take in amazing views of the Charles River, as well as the city on either side of its banks. The glass walls that enclose the north and west sides of the garden aid in visual access and ameliorate the views of the city and the Charles River. Many aspects within the garden are custom and seem to be uniquely brought to the project. Playful cartoon character statues perch on top of a rock on the South side of the garden adjacent to one of the many seating areas. The use of stone that protrudes into the lawn area and the irregular style of installation used present some challenges when navigating the garden, but are visually appealing. There are also little details that make this garden special. As visitors approach the entrance, they are met with a bowl filled with small stones. A sign explains that these stones are “wishing”, or “hope” stones that people are encouraged to take for themselves. This garden easily passed the first layer of evaluation.
Layer 2: Because this garden is located on the 8th floor of the cancer center, it stands to reason that the primary users of the space are cancer patients. The generous use of glass in the design provides views into and out of the garden that are outstanding. Another aspect that helps visibility is the fact that the garden is located within the hospital. Situating the garden on the 8th floor, with two sides revealing the expanse that is Boston and surrounded on the other two sides by the hospital building offers great visual access in all directions. Because of its high-rise location, the Howard Ulfelder Healing Garden welcomes the feeling of prospect when on the West and North sides of the garden, but there is also plenty of interior space that provides refuge and a fitting counterpoint to the expansive, and even overwhelming view.

The location of the garden in terms of self-advertisement is somewhat minimal. The garden is not visible from the street or any location in the hospital below the 8th floor. If patients don’t have knowledge that the garden exists, they might miss it completely, although prevalent signage does aid in patients’ discovery of the space. A positive aspect of the garden’s location is that it is connected to the hospital itself, which helps patients access it before or after treatments. In terms of the garden’s physical access, it is successful.

Because the garden is primarily for cancer patients, it does not share the same needs as a garden that is designed for patients primarily in wheelchairs. The material used for the pathways is granite, which provides a stable surface for patients and does not get slippery when wet. One drawback is that it would be difficult for patients in wheelchairs to access the entire place. There are also a few areas that have irregular paving, where it would be tricky if at all possible to access.
The layout of the garden provides visitors with ample opportunity to gather with varying sized groups of people. Gathering nodes are scattered about that are small and intimate, which encourage people to stay in the garden for extended periods of time. There is fixed and movable seating that gives people options and allows them to decide where and what they want to sit on. However, the garden does lack tables. One final positive aspect is that there is such a variety of places to go that visitors have opportunities to be in full, partial, and minimal sun exposure areas. This garden is a nice place for patients to get away from the hospital setting, and overall, the Howard Ulfelder Healing Garden does pass the second layer of qualification.

Layer 3: For the senses, this garden is moderately strong. There are great views, a good variety of things to touch, and interesting sounds, considering that it is located in Boston. The planting palette of colors, textures, and varieties seem to be well thought out and offer intriguing groups of plants that are nice to look at. The combination of the gray granite, reddish exfoliating bark on the paper bark maples, and the spectacular texture of the fountain grass come together in a subtle but elegant way. On the negative side, there seems to be a lack of pleasant smells in the garden. Occasionally there will be an undesirable waft of diesel smoke, but overall the space is devoid of scents. One other thing that seems to be lacking is the presence of anything to taste. Taste is a difficult sense to incorporate into any garden design, much less a healing garden design.

In conclusion, The Howard Ulfelder Healing Garden rates high when evaluated with the model developed by Eckerling. There is a strong base, a comprehensive second layer, and a good amount of fine-tuning that has been executed in this design.
<table>
<thead>
<tr>
<th>Layer 1: Conceptual Framework</th>
<th>Description</th>
<th>Positive Aspects</th>
<th>Negative Aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td>This garden is located on the 8th floor of the cancer center, offering patients and others access to stunning views of Boston.</td>
<td>H</td>
<td>M</td>
<td>L</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Layer 2: Physical Factors</th>
<th>Description</th>
<th>Positive Aspects</th>
<th>Negative Aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many positive aspects make this garden successful as a second layer of qualification.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Physical needs of the patients have been well provided for and reflect a garden that is primarily used by patients that are ambulatory and able to navigate the somewhat uneven and inconsistent terrain. This garden does fall short however in the &quot;self-advertisement&quot; category because it is located on the 8th floor in the middle of Boston.</td>
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</table>

<table>
<thead>
<tr>
<th>Layer 3: Enrichment Through Five Senses</th>
<th>Description</th>
<th>Positive Aspects</th>
<th>Negative Aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td>It can be said that even though there are amazing views and plenty of interesting things to touch this garden is mediocre in terms of its sensory load. Besides the occasional bird visit the only sounds are traffic noise, few scents, and nothing to taste.</td>
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</tbody>
</table>

Rating Summary: Falling a bit short this garden provides a place to get out of the hospital and enjoy amazing views. Physically this garden is fairly strong but when it comes to the five senses it falls short with hardly any smells and nothing to taste. Overall rating: 59 Points, Medium-High.

Figure 2.2: Evaluation Matrix, Howard Ulfelder Healing Garden, Massachusetts General Hospital, Boston, MA
Figure 2.3: Plan View Sketch of Howard Ulfelder Healing Garden, Boston, MA
Figure 2.4: Entry and Main Walkway, Howard Ulfelder Healing Garden, Boston, MA

Figure 2.5: Intimate Seating Area, Howard Ulfelder Healing Garden, Boston, MA
2.3.2: Case Study 2: Healing Garden, Cooley Dickinson Hospital, Northampton, Massachusetts

As in Case Study 1, Howard Ulfelder Healing Garden, this evaluation was conducted using Eckerling’s Model. The following paragraphs will describe the case study sites, in detail, using the three tiered layering system developed by Mara Eckerling.

Layer 1: When visiting this garden, the researcher felt that on its surface, the space was perhaps somewhat lacking in personality, yet not clinical. The materials used are standard brick pavers with volcanic stone used for mulch. The size of the garden, however, which is quite generous, aids in reducing the potential for feeling boxed in, which could be a concern due to the fact that it is located between two of the hospital’s buildings. However, on closer inspection, the researcher discovered desirable, yet
obscured qualities. The positive aspect of substantial size affords the opportunity for many sub-gardens or spaces within the whole. A strolling path gives witness to a rock garden, and many and varied seating areas, offering patients and visitors the opportunity to engage individually or in groups, in varying activities all within the boundaries of the healing garden. Plaques displaying the names of charitable donors and mementos of ones lost lend a personalized feeling to the garden. The personalization is further distinguished in the garden’s memorial space, in which bricks are engraved with names of lost ones and sometimes the name of the donor as well. Several challenges had to be overcome to render the garden to its current condition, such as difficult grades, light shafts, and tall buildings on three sides of the space. This garden is certainly unique and therefore passes the first layer of evaluation. Overall, the designer did a respectable job of making the best of a tricky area.

Layer 2: A wide variety of users frequent this garden, so it is hard to determine its primary user. There are patients in wheelchairs, patients who can walk, and people who just want a nice place to walk outside of the hospital walls. The fact that this garden is designed for such a widely varying group presents perhaps one of the most difficult design challenges of the healing gardens examined in this project. The design must take into account the diversity of visitors’ needs, while simultaneously endeavoring to provide unique and tranquil features within the space.

The views into the garden from the hospital provide surprising clarity, considering that the hospital surrounds the garden on three sides, which makes views out of the garden minimal at best. There are, however, good interior views. Visual access, in terms of self-advertisement, is less optimal, due to the fact that only one side is exposed. That
one side opens only to the adjacent vacant lot, which does little to self-promote the existence of the garden to anyone outside of the hospital itself; if one were not a patient or visitor to the hospital, they probably would not know that it exists.

Physical access, both vehicular and pedestrian, is ample. Removable bollards help enclose and define the space, but also allow emergency vehicles access and pedestrians a more fluid entrée to the garden. Because of the material choices that were made, pathways provide solid footing and prevent the area from becoming slippery when wet, while simultaneously rendering access to people in wheelchairs, and assurance that they will be able to navigate the terrain smoothly. The layout of the garden welcomes, with its overall ease of access. Many seating areas offer groups of one to six the opportunity to stay for extended periods of time, although seating options are limited. There is a lack of large seating areas to comfortably accommodate groups of more than six. The researcher also noticed that there are not any tables to gather around and/or upon which to put things. One major negative aspect is the lack of any overhead structures that would provide patients and visitors a place to get out of the sun. The only retreat from the sun’s rays is reached when the angle of the sun is such that the building shields it, which depending on the time of year, can be less than half of the day. All things considered, however, the value of this garden passed the second layer.

Layer 3: In this garden, a lot of features serve to stimulate the senses. From a tactile standpoint, there are many different textures and surface preparations that are executed in an appealing fashion and in a well-balanced way. From the roughness of the bricks and granite benches, to the smooth but rustic feel of the mahogany seating and fine textured grasses, there is a whole host of interesting and intriguing things to touch.
Visually, this garden and its surroundings would be described as monochromatic and visually weak if it weren’t for the rich and well thought out planting palette. An abundance of brick and reddish hues can make the garden seem a little dry, but then rescuing this feeling are the plants themselves, exhibiting many shades of green, with even more textures, combining subtly yet powerfully, to paint a rich visual embroidery.

Auditory stimulation comes from the three water features that adorn the garden, the nicest and most captivating being one that was constructed using a large stone as the centerpiece, down which water trickles and cascades onto a bed of small cobble stones. Other than the water features the garden is quiet, which is conducive to peaceful contemplation and prayer.

There were very few smells or things to taste, which is somewhat common, although more attention could have been paid to the floral palette. There are so many flowers that contribute pleasant aromas, that to just ignore them seemed an oversight to the researcher. It is often very difficult to incorporate things that satisfy three of the senses, let alone all five of them.

This garden has many successes, such as providing patients and visitors a nice place to walk, listen to the many water features, and gather alone or in small groups to talk or contemplate. On the other hand there are details that are lacking and could have been executed better. Overall this garden rates high in the way it presents itself. It is unique and somewhat non-clinical, has a strong second layer other than the lack of tables or areas for large groups of people, and an acceptable presentation to the five senses. With the demands of a facility with such a wide range of patients, it can be difficult to
accommodate all of the criteria Eckerling has laid out, but overall this garden has done well in providing a pleasant place for patients and visitors alike.

<table>
<thead>
<tr>
<th>Case Study Name: Healing Garden</th>
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</thead>
<tbody>
<tr>
<td>Location: Cooley Dickinson Hospital, Northampton, MA</td>
</tr>
<tr>
<td>Designer: Unknown</td>
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<table>
<thead>
<tr>
<th>Description</th>
<th>Positive Aspects</th>
<th>Negative Aspects</th>
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</thead>
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<td>H</td>
<td>M</td>
<td>L</td>
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</tbody>
</table>

**Layer 1: Conceptual Framework**
Because of its location and use of materials (Brick building and brick paving) this garden has a somewhat generic clinical feeling, but is still unique and special.

**Layer 2: Physical Factors**
This garden struggles a little bit in terms of its physical factors. There are no overhead structures to provide shade and without shadows cast by the building the space would be like a desert on a sunny day. One other drawback is that there is little self-advertisement because the garden is surrounded on three sides by the hospital. Positively, physical access is great and the materials used provide plenty of traction even when wet.

- **Variation of Sun Exposure**
- **Areas For Varying Sized Groups**
- **Physical Access**
- **Materials-Slippery When Wet?**
- **Seating and Tables**
- **Self Advertisement**
- **Visual Access**

**Layer 3: Enrichment Through Five Senses**
Open views with plenty to look at as well as many things to touch help this garden.

- **Touch**
Taking away from its success are the sounds coming from
- **Smell**
The air conditioning units, nothing very fragrant to smell, and nothing to taste.
- **Sound**
The many water features do provide some nice sounds though.
- **Taste**
- **Sight**

**Rating Summary:** This garden does some things well and does have some positive things going for it but overall is unimpressive because of its failure to provide any overhead structures, positive things to listen to, things to smell, or anything to taste. Overall rating: 54 Points, Medium-High

Figure 2.7: Evaluation Matrix of Healing Garden, Cooley Dickinson Hospital, Northampton, Massachusetts
Figure 2.8: Plan View Sketch of Healing Garden at Cooley Dickinson Hospital
Figure 2.9: Accessibility of surface and width of path, Healing Garden, Cooley Dickinson Hospital, Northampton, Massachusetts

Figure 2.10: Contemplative area with contrasting shades of green, Healing Garden, Cooley Dickinson Hospital, Northampton, Massachusetts
2.3.3 Case Study 3: Joel Schnaper Memorial Garden, Terrance Cardinal Cooke Health Center, Manhattan, New York

The evaluation of this garden, as in Case Studies 1 and 2, was completed following the Eckerling model. The following paragraphs will describe the case study sites, in detail, using the three tiered layering system developed by Mara Eckerling.

Layer 1: Located on the 6th floor of the Terrance Cardinal Cooke Health Center, the Joel Schnaper Memorial Garden provides patients and staff a place to “get away” from the hospital. This garden is certainly unique but because of the location on the 6th floor, with many floors above it, does have a somewhat clinical feel. Some of the aspects that reduce the clinical feeling are the many arbors and overhead structures adorned with
vines that help soften the rigidity of the concrete walls and plate glass windows above.

One unique aspect of the space is that all of the plantings, which are numerous, are raised and contained. Mobility is a positive feature in this garden, because due to its relatively small dimension, each and every plant or planter can be repositioned in new and different locations, giving the opportunity to refresh the garden routinely to provide a new look and/or feel. Another unique or positive aspect is that there are very few telltale signs that you are on the 6th floor of a building, which makes the feel of the garden self-contained and independent. This garden surely passes the first layer of evaluation.

Layer 2: The Terrance Cardinal Cooke Health Center serves patients suffering from various illnesses, but the primary users of the Joel Schnaper Memorial Garden are AIDS patients. Views into and out of the garden are relatively limited due to its location. Only from exterior rooms of the hospital above the 6th floor on the Southwest side can one view the garden from above and, similarly, when in the garden visitors can only see those rooms from below. Because of the storage containers and fences that surround the South and East sides of the space, its presence can be discerned from only one or two high-rise buildings to the Southwest that rise above these containers and fences. The best view into the garden is from the cafeteria area directly adjacent and connected to the space, which provides patients a framed view. This framed view is the only real self-advertisement the garden has, without which it might be unknown. However, this view gives a snapshot of what a patient can expect to see and experience once he or she decides to visit the garden. Because of the confinement and fences that surround the garden it is not visible from the street level, nor can it be seen from any of the floors.
below the 6th, so if people did not have prior knowledge of its existence they would not likely go to visit.

Physical access to the garden is somewhat limited with only one entrance/exit. Patients are required to set up appointments or wait for hours of operation in order to get through the locked, wheelchair friendly, automatic door. Once through the door, physical access is very good, partially due to the open floor plan and easy to navigate terrain, although there are a few places where the planters are too close together. The materials used on the ground plane are large, approximately 2’ by 2’ concrete pavers, which are stable and do not get slippery when wet. Another positive trait of the paving is that it is all one level, which assists in seamless transition from one space to the next.

The layout of the garden is an open plan with annexes or rooms off to the sides. There are areas that can accommodate small groups and larger gatherings, making it a very flexible garden. Due to the fact that there are so many different things going on in the garden space, patients are encouraged to stay for extended periods of time, even though the actual size of the garden is not as large as those of other case studies within this paper. One of the most positive aspects the researcher observed was the presence of many tables and different chair styles that have been provided. Some of the chairs have armrests, some of them rock, and all of them are mobile and stable as are the tables. As with other groups, AIDS patients have special needs. One requirement is that there be a place to get out of the sun because they are especially sensitive to sunlight exposure. The designer provided many different overhead structures achieving that objective, that create a variety of solar escapes during all times of the day and times of year. This garden passes the second layer of evaluation easily.
Layer 3: Touching on all of the five senses, patients are encouraged to get their hands dirty, eat the produce, and smell the herbs that are grown in the garden. Further stimulation comes from the colorful, textured, and vibrant plant palette. When in the garden, one hears birds chirping, the tinkle of wind chimes, and leaves rustling. It is surprising that the sound of street noises coming from below are masked almost completely by the more positive noises within the garden.

Visually strong, the colors and textures that have been incorporated into the space give a feeling of solitude, even though there may be many other people in the garden at the same time. One of the most unique aspects when compared to other gardens is the idea that patients be given the opportunity to plant and are encouraged to care for the plants themselves. In some of the other gardens the plants are there to be seen and not touched, but not this garden.

Patients plant several different types of herbs and vegetables that they can eat, as well as flowers and other herbs that they can smell. There are herbs and spices that when picked or touched give off smells reminiscent of an English herb garden. The patients also grow fruits and vegetables such as tomatoes, peppers, and pears.

The Joel Schnaper Memorial Garden rates very high when evaluated using Eckerling’s model. It is unique but somewhat clinical, has a strong second layer, and shines as an example of application to the five senses. There are many things that have been done well in this garden, such as the way in which it provides for and serves the patients, which are a testament to the designer’s well thought out work.
| Case Study Name: Joel Schnaper Memorial Garden  
| Location: Terrance Cardinal Cooke Health Center, Manhattan, NY  
| Designer: David Kamp |

<table>
<thead>
<tr>
<th>Description</th>
<th>Positive Aspects</th>
<th>Negative Aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Layer 1: Conceptual Framework</strong></td>
<td>Being Located on the 6th floor of the hospital this garden is certainly unique and offers patients a place to get away from the indoor space.</td>
<td></td>
</tr>
<tr>
<td><strong>Layer 2: Physical Factors</strong></td>
<td>Physically this garden does many things well but does fall a bit short in the way it advertises itself. The same aspect that makes it unique detracts from its strength because no one can see it from the street level, or even when in the hospital, unless in one of the exterior rooms. It also gets a low rating for physical access because there is only one door into the space but, once in the garden physical access is great.</td>
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<tr>
<td>• Variation of Sun Exposure</td>
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<tr>
<td>• Areas For Varying Sized Groups</td>
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<td>• Physical Access</td>
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<tr>
<td>• Materials-Slippery When Wet?</td>
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<tr>
<td>• Seating and Tables</td>
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<tr>
<td>• Self Advertisement</td>
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<tr>
<td>• Visual Access</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Layer 3: Enrichment Through Five Senses</strong></td>
<td>Rating high sensory-wise the garden offers patients opportunities to grow and eat vegetables, see great plant communities, touch different textures, listen to wind chimes, and smell the herbs and flowers.</td>
<td></td>
</tr>
<tr>
<td>• Touch</td>
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<tr>
<td>• Smell</td>
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<tr>
<td>• Sight</td>
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</table>

**Rating Summary:** Overall this garden shows potential in the way it presents itself to patients, providing many positive amenities. This garden does fall a little short when compared to others because there is only one door into the garden and in terms of self advertisement because it is located on the 6th floor where no one can see it from street level. Overall rating: 68 Points, High.

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Figure 2.12: Evaluation Matrix, Joel Schnaper Memorial Garden, Terrance Cardinal Cooke Health Center, Manhattan, New York
Figure 2.13: Plan View Sketch of the Joel Schnaper Memorial Garden
Figure 2.14: Open floor plan, Joel Schnaper Memorial Garden, Terrance Cardinal Cooke Health Center, Manhattan, New York

Figure 2.15: Large protected gathering spaces, Joel Schnaper Memorial Garden, Terrance Cardinal Cooke Health Center, Manhattan, New York
2.3.4 Case Study 4: The Ethel Lamay Healing Arts Garden, Baystate Franklin Medical Center, Greenfield, Massachusetts

As with Case Studies 1, 2, and 3, this Case Study was evaluated against the Eckerling Model. The following paragraphs will describe the case study sites, in detail, using the three tiered layering system developed by Mara Eckerling.

Layer 1: The Ethel Lamay Healing Arts Garden is certainly spirited and unique. From the inception, the visitor is introduced to the garden through glass walls that separate it from the hospital’s interior. This transparent aspect is fairly unique when compared to other healing gardens and serves as an intriguing presentation to anyone walking down the hallway passing by the garden. This introduction is just one of the special things this garden space has going for it. Once in the garden, one can admire...
many unique objects, such as the garden’s interesting water feature, raised central planter, and even wooden tops covering the trashcans. The little things come together to create a place, which is calming and captivating. This garden passes the first layer of evaluation.

Layer 2: Many things combine in this garden to “make it work.” Because this hospital serves a wide range of patients with a variety of needs, the garden has no primary user. There are patients that are ambulatory and non-ambulatory, patients that are young and old, and patients that are in need of supervision and those who are not. Such being the case, the designer has to accommodate a wide range of patients in a cohesive yet powerful way.

Views into the garden are great, interior views are good, and views out of the garden are minimal due to the fact that it is sited within the hospital, enclosed on four sides. Visibility inside the space is great partially because of the open landscape plan without any walls, partitions, or tall obstructions to obscure views from one side to the other. To reiterate, visual access in terms of self-advertisement is productive once in the hospital, but without any exposure to the public, only residents and patients of the hospital will know it is there.

Physical access to the garden is good; having two entrance/exits, one on either side, that are wide and easily accessible by ambulatory and non-ambulatory people alike. The ground plane materials (brick, bluestone, and turf) allow people in wheelchairs to move freely to all parts of the garden, and provide definition and interest of things underfoot, none of which get slippery when wet. The space is laid out in such a way as to facilitate groups of varying sizes to sit and gather, gander and gossip while remaining open enough to alleviate the feeling of confinement. Because of the many “programs”
that are offered, patients, visitors, and staff feel encouraged to stay for long periods of
time without getting bored. Assisting in achieving this feeling are the many different
seating options. There are fixed benches, benches that swing, movable chairs with
armrests, tables with umbrellas, and tables without umbrellas. Along the same lines, there
are areas that are under full sun, partial sun, and full shade, giving people the option to be
completely exposed, shaded from the sun’s rays, or anywhere in between. Overall this
garden has what it takes to “make it work” and therefore passes the second layer of
evaluation.

Layer 3: This garden is very bright and tactiley strong, but does lack some things
that appeal to the five senses. In terms of its plant palette, it is very strong, with numerous
textures, colors, and scents rendered by trees, shrubs, and perennials. The materials that
have been incorporated provide the visitor with ample opportunity to feel things that are
rough, smooth, slippery and wet, soft, hard, warm and cold. Missing from the mix,
however, is the presence of anything to listen to or taste. If it weren’t for the delicate
rustling of the river birch leaves and the trickling of the water from the water feature,
there would not be anything to listen to. Taste is probably one of the most difficult things
to incorporate into a healing garden, especially in a hospice setting, and as in many
others, it is lacking in this garden. The fact that smell and taste are so closely related is
one of the rescuers here; the abundance of aromatic plants helps to ease the necessity to
actually taste things.

In conclusion, The Ethel Lamay Healing Arts Garden rates high when evaluated
with Eckerling’s model. There are many positive things that are going on in this garden.
It is a very unique and spirited place with many components that help it “work,” and most
of the sensory elements that are required to pass the third and final layer. With a little fine-tuning, this garden could be more successful, according to this model.

Figure 2.17: Evaluation Matrix, the Ethel Lamay Healing Arts Garden, Baystate Franklin Medical Center, Greenfield, Massachusetts
Figure 2.18: Plan View Sketch of The Ethel Lamay Healing Arts Garden, Baystate Franklin Medical Center, Greenfield, Massachusetts
Figure 2.19: Seating amidst arrays of flowers, the Ethel Lamay Healing Arts Garden, Baystate Franklin Medical Center, Greenfield, Massachusetts

Figure 2.20: Shaded and unshaded seating, the Ethel Lamay Healing Arts Garden, Baystate Franklin Medical Center, Greenfield, Massachusetts
Figure 2.21: Even, traversable surface, the Ethel Lamay Healing Arts Garden, Baystate Franklin Medical Center, Greenfield, Massachusetts

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Figure 2.22: Cooperative Overall Matrix.
CHAPTER 3

AMENDMENTS AND RECOMMENDATIONS FOR A HEALING GARDEN AT THE WESTERN MASSACHUSETTS HOSPITAL

3.1 Opening

From the case studies that were conducted and documented in Chapter 2, the researcher determined that it may be important to do a “case study intervention” in order to strengthen and bolster the matrix development. This intervention would be a hybrid between a case study and a design intervention. The garden selected for that purpose was one that is within the region and was nearing completion at the time of this work, which introduced a great opportunity to apply the concepts of this study. Specifically, the researcher selected Western Massachusetts Hospital, located in Westfield, Massachusetts.

The researcher was further motivated to choose this garden because the researcher had previous ties to the Western Massachusetts Hospital. During his time in graduate school, the second year design studio used the same site to design a healing garden for the patients, families, and staff at the hospital. The students had the choice of building a digital model or a physical model of the finalized design concept. The hospital hoped to build a garden based on the concepts and designs produced by the students. The class of 13 participated in multiple meetings with the patients and staff in order understand their needs and hopes. The students garnered information that would be useful in beginning their designs. Each student conducted a case study to inform their design decisions, which were then shared with the class. The professor provided multiple books, PDF articles, website links, and videos that were pertinent to the project. The students were also encouraged to visit healing gardens in the surrounding area.
There was a strong connection made between this type of design work, the group of people who would be served, and the researcher. It was a type of work that the researcher had not known about before the described project. Since his great-grandmother had passed away after suffering from Alzheimer’s disease, a project of this nature resonated resoundingly within the researcher.

The end-of-studio presentations were a success, with many positive comments from the director and staff of the hospital. The students were encouraged to “keep in touch” with the hospital in order to receive updates on the status of design and construction plans of the garden. After approximately one year, the researcher contacted the hospital’s administration to ascertain the status of the project. It was explained that another graduate student from outside of the studio had begun working with the hospital, but was unable to complete the project. Toward the end of their collaboration, all communication had stopped. The administration indicated that the hospital needed to get something built in the specified area and within a timely manner, which led to an interesting set of conditions. Here was a call to action; an obvious choice for a master’s project would be to develop a realistic finalized design based on the positive aspects of the 13 students’ designs.

The plan was set and the researcher decided that he would begin working on the project as a means to also satisfy the requirements of a master’s project. Unfortunately, the researcher began this work before he established a proposal and an advising committee, both of which are required for all master’s projects. Such proved problematic. However, the work continued on the basis that the researcher had agreed that he would complete the project along with the hope that it could later tie into his master’s project.
This chapter will discuss how the researcher’s work was conducted, first with the site, then the design process, moving into what the researcher specified and what was actually built, and finely running the matrix that was developed in Chapter 2 to provide insight and direction for further design work.

3.2 The Site

The Western Massachusetts Hospital is located at 91 East Mountain Rd. in Westfield, Massachusetts. The hospital is to the south of Rt. 90 and west of Rt. 91 and the Connecticut River. Figure 3.1 below shows the location of the Western Massachusetts Hospital site circled in red.

Figure 3.1: Location of selected site, Western Massachusetts Hospital, Westfield, MA
The site that was selected by the hospital’s staff for the healing garden is to the north of a pavilion that separates two similarly sized areas adjacent to the main hospital building. The area, covered in concrete and asphalt, had sheared evergreens, a small annual flowerbed, and a crab apple tree tucked in the corner of the building, all of which were improperly pruned and cared for. Figure 3.2, below, shows the hospital building and the red rectangle shows the location of the healing garden.

![Figure 3.2: Location of Healing Garden within Western Massachusetts Hospital](image)

The following images were taken from ground level in order to provide a better picture of what the site looked like before any intervention. The one larger crab apple tree was destroyed during an October snowstorm in 2011. It is important to understand that the hospital’s staff was not concerned with saving anything that existed on the site. The only serious restrictions (other than elemental types which will be discussed later in this
chapter) were to stay within the current footprint, connect to the previously existing doorway, and not to extend into the parking lot. Please note that the stairway seen in Figure 3.5, below, is temporary and would be removed before any construction began.

Figure 3.3: Back side of the Western Massachusetts Hospital

Figure 3.4: Right of the pavilion, left side of intended garden space, WMH
Figure 3.5: Showing most of the intended garden space, WMH
Figure 3.6: Looking out of the site to the East, WMH

Pre-existing slopes in the space were slight and below five percent (5%) maximum. The highest slope within the space was located on the planting berm that can be seen in the right side of Figure 3.4. Seen in Figure 3.6, above, there is an employee asphalt parking lot, which separates people from the forest and trails beyond.
Solar studies were conducted in order to demonstrate the locations of the sunniest and shadiest areas. All figures (3.8-3.11) were taken at 12:00 noon on the indicated date. These solar studies helped the researcher determine where certain amenities, structures, and plants should be located and sited. As the staff was interested in securing some type of overhead structure, the solar studies would prove valuable in the future phases of development.
Figure 3.8: Spring Equinox-March 20th, WMH

Figure 3.9: Summer Solstice-June 20th, WMH
3.3 Design Process

The design process began with the consideration of what was learned from the site analysis work, as there were specific criteria that had to be considered. The staff had many concerns including proximity to parking, the potential and opportunity for patients to wander off, unpleasant air conditioner noise, pleasant view from above, seasonal interest, and places for patients to get out of the sun. They also requested specific
elements be incorporated into the garden, such as a walking path, plenty of seating, placement for approximately 75 commemorative bricks, overhead structure(s), flowers, no sharp edges, a kind of barrier between the garden and the parking lot, and lights. Other than these criteria, the researcher had freedom to propose, based on his research; whatever he felt would be useful and necessary to the hospital for review.

Because of the provided hospital administration’s criteria, research, and in consideration of the specific patient types who live at the hospital, the researcher deemed it important to begin programming the space. Alzheimer’s patients would be using the garden, so it was important to design the pathways without dead ends, since such features can lead to patient confusion and disorientation, raising anxiety levels rather than lowering them. The hospital required that there be an overhead structure to provide shade for the patients. The researcher considered many different overhead structures that would provide shade, such as a pergola, arbor, awning, or gazebo. Because of the linearity of most of the overhead structures, combined with the fact that they provide only partial coverage, it made sense to choose to incorporate a gazebo. This structure would double as a gathering node, and would provide complete shade if desired.

Next it was necessary to determine what would work well, for the raised planting bed walls, within a $75,000 budget. It was important to incorporate a wall that was more-or-less the same height as a patients’ hands when sitting in a wheelchair. It was also important to specify a wall that one could sit on, as well as provide support for patients with limited mobility, so it had to be structurally sound. The researcher decided that a wall built with pre-cast blocks would give the most versatility and flexibility. It could
also provide a great variety of colors, sizes, and textures for the hospital’s staff to choose from, so that is what was proposed and recommended by the researcher.

![Initial design (Plan view) to the Western Massachusetts Hospital](image)

**Figure 3.12: Initial design (Plan view) to the Western Massachusetts Hospital**

### 3.4 Designed vs As Built

**Designed:**

After approximately ten meetings over the phone, via email, and in person the group decided that the materials needed to be chosen carefully and previous plan needed to be slightly amended. The form and circulation, which can be seen in Figure 3.13, is the finalized design recommendation that was presented to the Western Massachusetts Hospital. This plan was primarily for the purpose of visual presentation and display in the
hospital’s lobby and was not intended to be a construction document (actual construction documents that were presented to the WMH will be discussed later in this chapter).
Figure 3.13: Final specified display board

The Memorial Walk. This is an area where people can view bricks of those who want to remember someone special.

Right: Looking from the outdoor gathering space, over the planting beds, to the gazebo seating area. Trees and shrubs help block views of the parking lot, while providing shade and cooling for people in the garden.

Looking from the gazebo, over the front lawn to the outdoor gathering space. Raised planters feature colorful perennials, shrubs, and bulbs.

WMH Healing Garden - A Place Where People Can Be...
The actual display board that was displayed in the WMH lobby can be seen in Figure 3.14. This display board was placed in the lobby for the purpose of showcasing what was to be built as well as gather comments and suggestions via a “comments and suggestions” box for patients and families to leave feedback to be read by the researcher. Much of the feedback was general and in the form of compliments, expressing happiness that the garden was going to be built. Other feedback was in the form of suggested amenities, building materials, and plants that people wanted to see incorporated into the garden. All of this information was taken into consideration by the researcher and incorporated into the finalized construction documents when feasible. All of the construction documents the researcher provided to the Western Massachusetts Hospital can be seen in the appendix section of this document, and include: a layout plan, grading plan, planting plan, as well as a building and planter detail, wall and path detail, lawn and drainage detail, and a plant list was also provided.
As Built:

Once the Western Massachusetts Hospital received all the information that was discussed earlier in this chapter, the information was arranged into a package and sent out to bid. A plan view sketch of the built garden can be seen in Figure 3.15, below. What was built resembles what was specified but with a few aspects that were different. These differences include: size and material of the gazebo, dimensions of the precast building blocks, and reinforcing material used in the turf area in the center of the garden.

Figure 3.15: Plan View Sketch of Western Massachusetts Hospital Healing Garden
The gazebo as specified was an 18’ diameter octagon made from redwood. As built was a vinyl posted 20’ diameter octagon selection. The outcome of this selection is both positive and negative. It is positive in the sense that it is able to accommodate larger groups of people at any given time. On the negative side, because of its larger size it made the original path system between the gazebo and turf area more narrow by two feet, which can prove a challenge when trying to navigate that part of the path system. The size and resultant narrow path can be seen in Figure 3.16, below.

Figure 3.16: Resultant Narrow Pathway
The segmental retaining wall blocks that were used are larger than the ones originally specified, which made for a positive result due to the perception of scale within the garden. The original specified block dimension was four by twelve inches. What was actually used was a block that was six by sixteen inches, smaller pieces with a size of six by eight inches were used intermittently, and a coping that was four by sixteen inches. Along with an abundance of red brick that the hospital is constructed of, the larger light colored blocks that were used helped to bring a variation of scale and color to the garden space. The contrast between red brick and large light colored building blocks that were used can be seen in Figure 3.17, below.

![Figure 3.17: Contrasting Light Block to Dark Brick](image-url)

Figure 3.17: Contrasting Light Block to Dark Brick
Lastly, the reinforcing material that was specified was not incorporated into the turf area located in the center of the garden. The original material that was specified was a “honeycomb” shaped, cellular interlocking plastic material that can be filled with planting medium, and direct-seeded with a cool season grass seed. The dimension of these honeycomb shaped cells is approximately two by two inches. The reason this material was originally specified is because it would render the turf area to be useable and accessible to both non-ambulatory and able-bodied people alike. It would provide more of a structural footing than traditional turf areas due to its small cells and interlocking quality, making it easier for the wheels of a wheelchair to move over and across. An image of what was instead constructed in the center of the garden can be seen in Figure 3.18, below. Note that there are no interlocking, cellular blocks, but rather concrete turf blocks around the perimeter of the space, which presents a potential hazard for people in wheelchairs because their wheels could get caught in the larger holes.

[Seeding is planned to take place during the spring of 2012.]
Figure 3.18: Unseeded Area in Center of Garden
3.5 Matrix and What is Missing:

Matrix:

Looking at the garden and the state it was in when this paper was written the researcher felt that it was important to assess a value for this healing garden with the matrix discussed and displayed in chapter two. It was also important to compare the value of this garden with the values of the healing gardens that were discussed in chapter two. This would help to discover and highlight what is missing or lacking and what was properly provided for based on the research that was conducted. This particular matrix with the attached values can be seen in Figure 3.19, below.

This matrix was vital to highlight what was missing in the garden based on the research. From this matrix it is clear that there are many aspects of the garden that are either missing or weak. Part of this inadequacy is due to the fact that the garden is new. When a garden has recently been installed it needs time to grow and mature. The trees that were planted are approximately six feet tall and do not provide very much shade, but will in the future. Also affecting the value of this garden is the fact that the center area of the garden has not been seeded and so far is not able to be used.

The biggest inadequacy comes from the lack of sensory provisions. Using the matrix, it is clear that this area is lacking. What could help? To begin with the “touch” category, with a score of four, there is the potential for two more points, which could be accomplished, with more objects in the garden to touch. These objects could include: smooth rocks, rough textured sculptures, wooden display cases, and hanging ornaments. “To someone who is blind or deaf, touch is important, because it provides access to the world” (Eckerling, 1996, 42). Next, smell is also lacking, with a score of three. It is hard
for any garden in the Northeast to have many smells in the winter, which is when the matrix on this garden was run. There are ways to improve the scents in a garden, these can include: fragrant flowers, smells from grilling, or fresh air. Sound in this garden is rated as one of the lowest categories in the matrix. There are sounds in the garden that come from rustling branches, shuffling feet, and birds chirping. The reason for this category falling short is because of the air conditioning units that adorn almost every window of the hospital. These drown out more positive sounds, although some people do like the “white noise” of air conditioning units. It would be an improvement if the window units could be removed, and a central air conditioning system installed to reduce the noise that comes from the units. There are also elements that produce pleasant sounds which could be installed throughout the garden, such as: wind chimes, soft music, moving water via different types of water features, and bird feeders that attract songbirds. Songbirds would serve double duty, as they are also pleasant to look at and observe.

Taste in a hospice garden is a difficult aspect to incorporate and is lacking in this garden with a score of one. This score is based on the fact that there are only two species of edible plants that were incorporated into the design, although it is not recommended or encouraged by the hospital’s staff. The two edible species incorporated into the garden are catmint and lavender. Short of growing their own vegetables the researcher feels that it would be difficult to incorporate other edible plants into the garden, although adding ones that smell pleasant can help due to taste and smell being closely related. Lastly, with a score of five, sight was the strongest of the layer three categories. There are many objects to look at and the researcher strived to incorporate contrast between color, texture, shape, and size. As seen in the pictures of the as built garden there are plants with
bright colors, a gazebo with many materials, small bricks, large blocks, upright trees, and spreading shrubs.

| Case Study Name: Western Massachusetts Hospital Healing Garden |
| Location: Western Massachusetts Hospital, Westfield, MA |
| Designer: Owen White |

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<tr>
<th>Description</th>
<th>Positive Aspects</th>
<th>Negative Aspects</th>
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<tr>
<td>Layer 1: Conceptual Framework</td>
<td>This garden is unique and special but due to its surrounding, four story brick walls, it can seem clinical and overbearing.</td>
<td></td>
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<tr>
<td>Layer 2: Physical Factors</td>
<td>In terms of physical factors this garden provides a good amount of variation of sun exposure and does not have any materials that could get slippery when wet. It does lack, however, areas for different sized groups of people (larger) and any tables or chairs (currently). The hospital has said that there will be many chairs with backs and two tables.</td>
<td></td>
</tr>
<tr>
<td>Variation of Sun Exposure</td>
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<tr>
<td>Areas For Varying Sized Groups</td>
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<tr>
<td>Physical Access</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Materials-Slippery When Wet?</td>
<td>This garden does lack any kind of self advertisement, as it is on the opposite side of the hospital as the street.</td>
<td></td>
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<tr>
<td>Seating and Tables</td>
<td></td>
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<tr>
<td>Self Advertisement</td>
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<tr>
<td>Visual Access</td>
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<tr>
<td>Layer 3: Enrichment Through Five Senses</td>
<td>Many things to look at and touch helps this garden. What is detracting from it’s strength is the lack of smells and sounds. It is hard to determine what it will be like once all the plants leaf out and flower. The major inadequacy is that there is nothing to taste, which may not be possible here.</td>
<td></td>
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<tr>
<td>Touch</td>
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<tr>
<td>Smell</td>
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Rating Summary: Because this garden has not been finished it is difficult to accurately rate some of the criteria. Overall this garden does have an ok first layer, fairly strong second layer, and somewhat weak third layer due to its lack of sensory elements. Overall rating: 51

Figure 3.19: Evaluation Matrix, the Western Massachusetts Hospital Healing Garden
Once this matrix was run for the healing garden at the Western Massachusetts Hospital it became evident that in order to compare this garden to the others discussed in chapter two, it would be necessary to insert the score of this garden into the overall comparative matrix. This comparative matrix is important and helpful in order to get an instant idea of how the researcher’s design stands up to the values of the case studies gardens, which can be seen in Figure 3.20, below. This final comparison provides insight into which aspects were evaluated, how the garden that the researcher designed compares to gardens that others have designed, and highlights aspects that are missing or lacking.

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<td>Western Massachusetts Hospital</td>
<td></td>
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Figure 3.20: Cooperative Overall Matrix
CHAPTER 4
CONCLUSIONS

The effort to construct a suitable Healing Garden on the site located at the Western Massachusetts Hospital resulted in success. The designer reiterates the merits of a careful evaluation, and in particular, that set forth by Mara Eckerling for this specific purpose. The three-layer method created by Eckerling was an excellent fit for the instrument devised in this study, the evaluation matrix, by which assigning of numeric values assisted in the rating of healing garden properties, including the gardens at the Cooley Dickinson Hospital, Baystate Franklin Medical Center, Terrance Cardinal Cooke Health Center, and the Western Massachusetts Hospital. And while subjective in nature, the evaluation matrix represented a gathering of data that overall served to shape the design of the healing garden at the Western Massachusetts Hospital.

Additionally helpful was the use of photography to aid in the planning and designing of the project with realistic dimensions and adjacent elements. “Love the natural shapes in the design”-Anonymous patient. The views from within the building to the open parking lot provide perspective when attempting to serve non-ambulatory populations, as well as those on foot. Photos also show the color of existing structures and terrain, helping to established gentle contrast of color and texture within the overall scheme. The researcher’s conducting of a solar study to determine angle and intensity of sunlight and proclivity for warm weather heat at the site was also very supportive, determining sun and shade areas against the plan and aiding in the choice of plantings and subtle location of structures and pathways.
The suggestion box that was presented with the design display at the WMH was also helpful in determining what would make a successful garden in this particular environment. This has helped the designer to see and understand what to look for in different settings. Healing gardens are not all used by patients with the same illnesses or disabilities nor are all sites alike, therefore no two can be the same. Being able to use and understand the matrix, Eckerling’s model, and the needs of different hospitals is what will make this designer successful in his evaluation of future designs. “Everything structurally is in place, things went very well. Thank you.”-Hospital Administrator.

The pursuit, however, did yield one notable lesson. Although the researcher submitted an accepted plan, the final construction was modified due to individual requests for preferences of all kinds throughout the garden from patients and staff. While careful attention was paid to create an easily accessible and open space, with devotion to uniqueness and elements of design, certain sacrifices had to be made to the plan in order to facilitate unforeseen requirements of the hospital administration. These sacrifices are the result of two conditions, 1) project management or lack there of, and 2) failure of the client to understand the value of design decisions made by the designer. Because the designer did not have the ability to monitor the progression of the garden on a weekly basis, there was less direct contact with the contractor than may have been needed.

Some of the issues that resulted from this were the use of different materials and the size of certain features. The plastic, interlocking “honeycomb” shaped material that was to be used around the turf area was changed to concrete grass pavers with approximately four inch holes, which makes it more difficult for wheelchairs to access the area.
One of the major issues that derived from this disconnect is the gazebo. The original wooden 18’ by 18’ structure is instead a vinyl 20’ by 20’ structure, which narrows the pathways by one foot on either side, making it more difficult for patients in wheelchairs to navigate that area. Designers or design teams hired for their expertise, while respected and paid the tribute of adherence to nearly all detail presented in the project proposal, will almost always have to make room for a few minor and sometimes major adjustments in the final design. Such a lesson is best learned early in one’s design career. “I think it looks very professional as is, awesome job Owen!” -Anonymous patient.

As the aging population grows and more facilities open, the available space for building is reduced. Future healing garden designers should anticipate the increasing demand for such structures and the growing requirement for efficient use of space. Designs of these facilities should include healing gardens in order to effectively use the space provided. The long ago designers of healing gardens were not limited to the extent that today’s city and even suburban designers are and will be, but their work offers an abundance of inspiration and knowledge that can prove very useful. “I think it’s a good idea for fresh air.” -Anonymous patient. The reestablishment of the healing garden and its refreshing use of space, beauty, and nature will, if appropriately executed, resuscitate our recognition and appreciation of the healing powers of the garden.

“The design is lovely and should bring joy to all that have the opportunity to visit.” –Anonymous patient.
Western Massachusetts Hospital Healing Garden
91 East Mountain Rd. Westfield, Ma
Layout and Grading Plan 4/8/11

Figure A.1: Layout and Grading Plan
Western Massachusetts Hospital Healing Garden
91 East Mountain Rd. Westfield, Ma
Planting Plan 5/6/11
Scale: 1/4"=1'

Figure A.2: Planting Plan
<table>
<thead>
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<th>#</th>
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<td>7</td>
<td>Hm</td>
</tr>
<tr>
<td>Bearded Iris-purple and white</td>
<td>Iris germanica 'Batik'</td>
<td>#1</td>
<td>11</td>
<td>Ig</td>
</tr>
<tr>
<td>Lavender</td>
<td>Lavender x intermedia 'Grosso'</td>
<td>#1</td>
<td>15</td>
<td>Li</td>
</tr>
<tr>
<td>Oriental Lily-white</td>
<td>Lilium oriental 'Casa Blanca'</td>
<td>#1</td>
<td>11</td>
<td>Lo</td>
</tr>
<tr>
<td>Red Twig Dogwood</td>
<td>Cornus sericea</td>
<td>#3</td>
<td>7</td>
<td>Cs</td>
</tr>
<tr>
<td>River Birch</td>
<td>Betula nigra 'Cully'</td>
<td>8'/10'</td>
<td>5</td>
<td>Bn</td>
</tr>
<tr>
<td>Stonecrop-pink</td>
<td>Sedum spectabile 'Purple Emperor'</td>
<td>#1</td>
<td>7</td>
<td>Sp</td>
</tr>
<tr>
<td>Walking Stick</td>
<td>Corylus avellana 'Contorta'</td>
<td>24'/30&quot; b&amp;b</td>
<td>3</td>
<td>Cc</td>
</tr>
</tbody>
</table>

Figure A.3: Plant List
Figure A.4: Building and Planter Detail

PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

WMH Healing Garden

PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

Scale: 3/4"=1.0"
Wall and Path Detail

WMH Healing Garden  
Scale: 3/4"=1'0"

Figure A.5: Wall and Path Detail
Figure A.6: Lawn and Drainage Detail
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