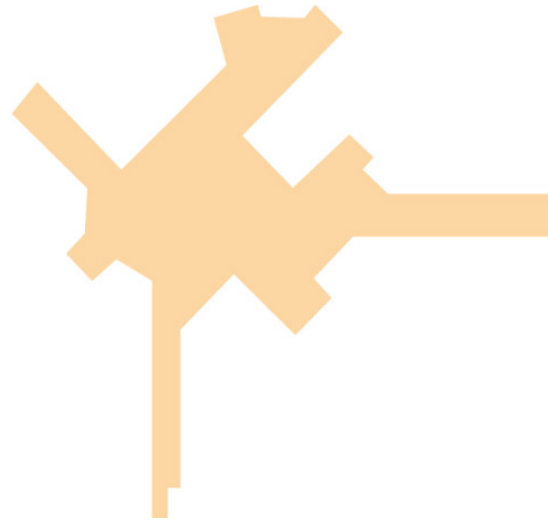


THE GARDEN UNIT:

A Case Study Exploring Therapeutic Garden Design for Elderly with Dementia
at the Jewish Home of San Francisco

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ABSTRACT

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This design thesis examines the significance of therapeutic gardens in long-term geriatric care facilities and advocates for thoughtfully designed “out-of-doors” spaces that support the highest quality of life for elderly individuals with dementia and their caregivers, both professional and personal. With a rapidly growing elderly demographic in the United States and elsewhere in the world, geriatric care is now, more than ever, a critical field demanding our attention. The aim of therapeutic gardens in the spectrum of care for elderly with dementia should be to provide emotional, psychosocial, and physical relief and foster their well-being. Therapeutic gardens should also be designed with the caregivers--staff, volunteers, and family members--in mind. As a means of highlighting the significance of design for those with dementia, this design thesis engages a case study approach, addressing the potential of one facility to be re-designed to improve the lives of its residents with dementia and their caregivers.

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INTRODUCTION

Problem Statement and Critical Stance

This design thesis examines the significance of therapeutic gardens in long-term geriatric care facilities and advocates for thoughtfully designed “out-of-doors” spaces that support the well-being and highest quality of life for elderly individuals with dementia and their caregivers, both professional and personal. With a rapidly growing elderly demographic in the United States and elsewhere in the world, geriatric care is now, more than ever, a critical field demanding our attention. The number of Americans living well into their 80s and 90s is expected to increase with a rapidly aging baby boomer generation and advances in medicine, technology, social, and environmental conditions. By 2030, the population age 65 and older is expected to double, accounting for roughly 20 percent of the total population (Alzheimer’s Association, 18).

In 2005, approximately 10 percent of the population over age 65 were affected by Alzheimer’s disease, with the percentage nearly five times that among those over 85. Without a cure or any significant preventive practices, the Alzheimer’s Association estimates that by 2025, the number of older Americans with Alzheimer’s will reach 6.7 million, a 30 percent increase from the current 5.2 million. By 2050, this number is expected to triple to a projected 11 million to 16 million (19).

The aging of the American population and the growing number of older Americans afflicted with dementia underlie the importance of exploring viable, effective, and compassionate healthcare alternatives for elderly with dementia and their families. Caring for elderly with dementia is extremely challenging—physically, emotionally, and financially. The National Institute on Aging estimates Medicare and Medicaid payments for people with dementia to be roughly three times higher than for cognitively normal older people. Caring for individuals with dementia is especially stressful and perhaps even detrimental to the health and well-being of the parties involved when it stems from a sense of obligation from a family member who may not be adequately trained or equipped to provide proper care for a loved one with dementia.

More and more of our elderly and their families will rely on full-time professional social and medical care and services outside of their homes, increasing the strain on long-term geriatric care facilities and their staff. It is imperative that we re-examine how we care for our elderly and how healthcare and therapy are defined in long-term care facilities, especially with respect to dementia. Restorative and therapeutic settings in skilled nursing and assisted living facilities, particularly those utilizing outdoor environments, are going to be more and more in demand as a holistic supplement and alternative to more traditional standards of institutionalized care typically restricted to the indoors.

Given the physical and sensory limitations of the elderly population, the impact of the physical environment on the health, functioning, and well-being of nursing home residents and for those suffering from dementia in particular is of utmost importance (Cohen-Mansfield and Werner, 199). The physical environment, primarily that which is outdoors, is critical to the well-being of dementia residents in long-term care facilities; and it is of equal importance to their caregivers, both family and staff. A well-designed outdoor garden has the potential to meet the therapeutic needs of staff, volunteers, and visiting family members. In fact, several researchers who have discussed the relationship between the built environment and elderly with dementia in long-term care facilities have referred to the former as the “silent partner in caregiving” (199). While the primary concern of the environment should remain focused on the needs of the residents, a garden that supports staff functions and programming can lessen their workload while increasing job satisfaction, improving morale, and reducing turnover caused by stress and burn-out (Calkins, 8). An outdoor garden can also serve as a respite for visiting family members and alleviate some of the stress and emotional strain they are experiencing while caring for their loved one with Alzheimer’s.

Landscape architects need to become familiar with and design for the particular needs of dementia patients and their caregivers so that appropriate, supportive environments become an important component in the whole spectrum of care (Cooper Marcus, *No Ordinary Garden*, 36). An outdoor space can be more than just a pretty garden. For example, many individuals with dementia have a tendency to wander and pace, behaviors that are adaptive and not uncommon for the cognitively impaired, especially for those living in long-term facilities who are typically restricted to the indoors. Designed with walkways and handrails, an

outdoor garden can be therapeutic, supporting the behaviors of residents with dementia in a safe and engaging way. A therapeutic garden can serve multiple functions, thus serving as an integral component of the recreational, occupational, and physical therapy programming of long-term care facilities.

This thesis explores relationships between the built environment and human health, specifically outdoor therapeutic gardens and elderly with dementia in long-term care facilities. The aim of therapeutic gardens in the spectrum of care for elderly with dementia should be to provide emotional, psychosocial, and physical relief and foster the well-being and highest quality of life for individuals with this ultimately terminal illness. Therapeutic gardens should also be designed with the caregivers—staff, volunteers, and family members—in mind. As a means of highlighting the significance of design for those with dementia, this design thesis engages a case study approach, addressing the potential of one facility to be re-designed to improve the lives of its residents with dementia and their caregivers.

Methods and Organization

By means of this thesis, I propose a therapeutic garden design for elderly with dementia residing at the G2 Garden Unit at the Jewish Home of San Francisco (JHSF), a skilled nursing facility (SNIF) located in the Excelsior neighborhood in South San Francisco. Of the approximately 400 residents receiving long-term care at JHSF, the 43 residents receiving long-term care in the Garden Unit have the most advanced stages of dementia and will spend the remainder of their lives there. The Garden Unit is named after an existing exterior garden directly adjacent to the residents' floor, which was originally designed and constructed in the late 1960s. This outdoor space has the potential to be an invaluable therapeutic setting benefitting the residents and their caregivers. Currently, for multiple reasons, it is underutilized and offers no benefits to residents, caregivers, or staff. The proposed design will benefit current and future residents living on the G2 Garden Unit floor, in addition to their caregivers.

The proposed design presented in this thesis was informed by existing precedents, literature, and research relating to the fields of geriatrics, dementia, therapeutic gardens, and horticultural therapy; interviews with JHSF staff and

experts in the aforementioned fields; on-site observations; and an iterative design and review process. In developing the design, I worked with geriatrics and dementia specialists, educators, historians, and design practitioners, and studied the original landscape architect's design for the original garden.

This paper is organized as follows: a background to the symptoms, types, prevalence, risk factors, and treatments of dementia and Alzheimer's; a review of existing literature and precedents relating to therapeutic gardens and dementia; an introduction to JHSF, with an overview of its mission, demographics, history, and vision for the future; an introduction to the Garden Unit, with an analysis of the design site, including existing opportunities, problems, and constraints as identified through on-site observations and interviews with staff and experts in the field of geriatrics; and finally a design proposal for the site.

LITERATURE REVIEW and PRECEDENTS STUDY

This is the bitterest pain among men, to have much knowledge but no power.

—Herodotus

Dementia and Alzheimer's Disease

Dementia is an umbrella term describing a variety of conditions that develop when nerve cells, or neurons, in the brain, no longer function normally or die (Alzheimer's Association, 4). The irreversible death or malfunction of these neurons causes changes in one's memory, cognition, communication skills, motor skills, and behavior, among other symptoms. In Alzheimer's disease, the most common form of dementia accounting for 60 to 80 percent of all cases, the affected brain areas show two microscopic changes: plaques, or abnormal deposits of a protein fragment called *beta-amyloid* outside neurons, and neurofibrillary tangles, or twisted strands of a protein called *tau* inside neurons. Brains of individuals with advanced Alzheimer's show drastic shrinkage and widespread debris from dead and dying neurons (10).

Most of those who are vaguely familiar with dementia, primarily Alzheimer's, commonly associate it solely with short-term memory loss. However, the disease affects more than one's ability to remember things. Alzheimer's may drastically impair an individual's ability to carry out basic functions such as walking and swallowing (4). In the most advanced stages, individuals need help with the most basic of daily activities, such as eating, bathing, dressing, and using the bathroom. In the final stages of the dementia, many individuals are non-ambulatory and even bed-bound, unable to communicate, and reliant on around-the-clock care (7). As the disease progresses, it may eventually lead to such a severe decline in general health that affected individuals often die of other causes such as serious infections, for example, pneumonia. On average, individuals with Alzheimer's live 8 to 10 years after their symptoms become apparent to others, but survival can range from 3 to 20 years (The University of Washington Alzheimer's Disease Research Center).

In advanced stages of Alzheimer's disease, in addition to cognitive and functional impairment, individuals may also show dramatic changes in their personality and mood. Their behavior may seem unlike their "normal self," times during which

COMPARISON OF THE BRAIN UNAFFECTED (TOP) AND AFFECTED (BOTTOM) WITH ALZHEIMER'S DISEASE



Source: UWADRC

they become withdrawn, depressed, anxious, apathetic, or aggressive (D'Andrea, Batavia and Sasson, 9). These changes may ultimately interfere with their daily life, ability to care for themselves, and affect their interpersonal relationships.

Dementia is an age-related disorder. One in eight older Americans 65 years old and above has Alzheimer's and nearly half of the elderly population 85 years old and above is inflicted. However, Alzheimer's does affect persons younger than age 65. Of the 5.4 million Americans with Alzheimer's, an estimated 4 percent are under age 65, inflicted with what is called *early-onset* or *younger-onset* Alzheimer's. With the proportion of the elderly population rapidly increasing in the United States, the number of Americans with Alzheimer's is projected to increase 30 percent by 2025 and triple by 2050 (AA,14).

Of the 5.2 million older Americans with Alzheimer's, almost two-thirds are women. 36 of the 43 residents with advanced dementia living in the G2 Garden Unit, or 84 percent, are women, a disparate proportion above the national average. However, current research holds that dementia is not a gender-related set of symptoms and women are not necessarily more likely than men to develop it. The disproportionate prevalence of dementia and Alzheimer's among women reflects that on average, women live longer than men (15).

Alzheimer's is the sixth-leading cause of death among Americans of all ages and the fifth-leading cause of death among Americans age 65 and older. It is the only cause of the death among the top 10 in the United States that cannot be prevented, cured, or slowed (22). Some common conditions associated with what many refer to as *normal aging*, such as forgetfulness, diminished physical capacity, and hearing loss, may mimic and be confused with dementia symptoms. However, dementia is caused by severe damage to brain cells and while the greatest risk factor is advancing age, it is not a normal part of aging. Its causes are unknown, however, experts agree that Alzheimer's develops as a result of multiple factors and not a single cause. Some of these variables include family history (e.g. heredity and/or shared environmental and lifestyle factors), mild cognitive impairment, cardiovascular disease, social engagement and diet, and head trauma and traumatic brain injury (10).

More than one type of dementia can be present at the same time in one individual. When two or more types are diagnosed, the individual is considered

Every **68 seconds** someone in the U.S. develops **Alzheimer's**.



It is the **sixth-leading cause of death** and the only cause of death among the top 10 in the U.S. that **CANNOT be prevented, cured, or slowed**.



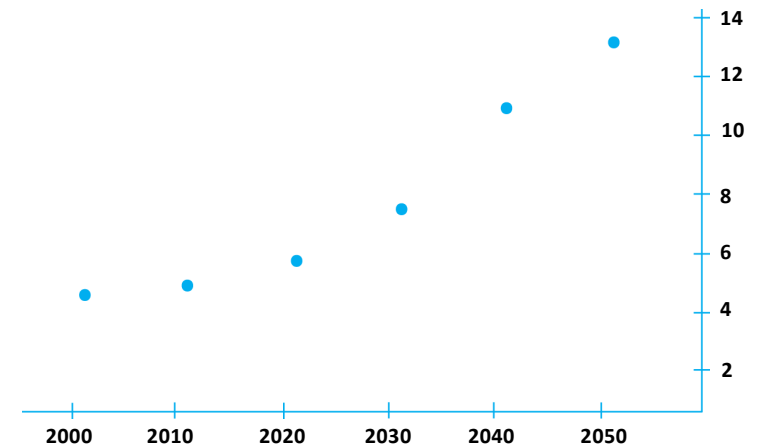
to have *mixed dementia*. Recent studies suggest that mixed dementia is more prevalent in individuals than previously thought (6). In addition to Alzheimer's, other common types of dementia are:

1. Vascular dementia: is often associated with and called post-stroke or multi-infarct dementia. It typically results from injuries such as microscopic bleeding and blood vessel blockage in areas of the brain affecting cognition and physical functioning. Initial symptoms include impaired judgment and ability to make plans versus memory loss associated with Alzheimer's.
2. Dementia with Lewy Bodies (DLB): shares common symptoms with Alzheimer's; in addition to memory loss, it is marked by sleep disturbances well-formed visual hallucinations, muscle rigidity, and Parkinson's disease-like movement.
3. Frontotemporal lobar degeneration (FTLD): is an umbrella term for other forms of dementia including behavioral variant FTLD and Pick's disease. Individuals with behavioral variant FTLD tend to develop symptoms at an earlier age, usually around age 60, and have a shorter life expectancy than those with Alzheimer's. Common symptoms include difficulty with language and changes in personality and behavior.

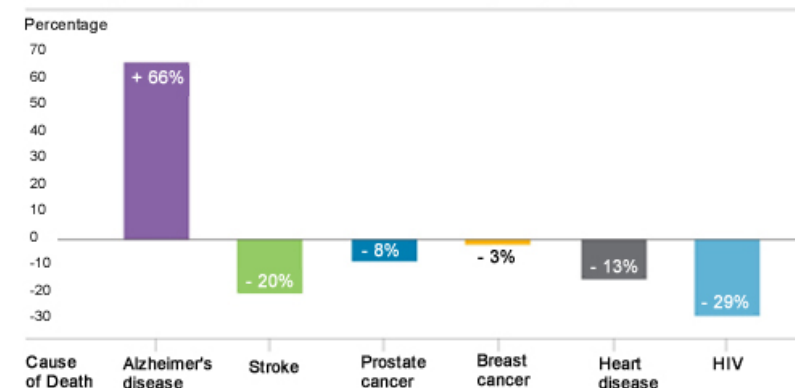
Alzheimer's disease has no cure, but treatments are available for the temporary alleviation of its symptoms. While these treatments cannot stop Alzheimer's from progressing, they can temporarily slow the worsening of symptoms and improve the quality of life of individuals suffering from the disease (UW ADRC). In addition to the four medications currently approved by the U.S. Food and Drug Administration to treat Alzheimer's, other active management strategies beyond pharmaceutical treatments include (AA, 12):

1. Appropriate use of available treatment options;
2. Effective management of coexisting conditions;
3. Coordination of care among physicians, other health care professionals, and lay caregivers;
4. Participation in activities and adult day care programs; and
5. Taking part in support groups and supportive services such as counseling.

PROJECTED NUMBER OF PEOPLE AGE 65+ IN THE U.S. WITH ALZHEIMER'S (IN MILLIONS)



PERCENTAGE CHANGES IN SELECTED CAUSES OF DEATH (ALL AGES) BETWEEN 2000 AND 2008



Source: Alzheimer's Association

Additionally, a viable approach not explicitly mentioned in the above list, but which can play a critical role in alleviating stress and improving the quality of life for elderly with dementia is therapeutic gardens. The following section of this written report offers a brief but comprehensive overview of existing literature, research, and precedents that explore therapeutic gardens as a supplemental and/or alternative component in the spectrum of holistic care for elderly with dementia.

One thing is certain, and I have always known it—the joys of my life have nothing to do with age.

—May Sarton

Therapeutic Gardens for Dementia

What do *therapeutic* and *well-being* mean with respect to elderly with dementia, and how can a garden be therapeutic for this population? Moreover, what are the goals and benefits of therapeutic gardens and how do they differ from that of the built environment indoors? The following literature and precedents review presents an overview of seminal discourse surrounding these questions. The findings gleaned from this review informed the design guidelines and proposal for the therapeutic garden at JHSF.

In the United States, the Federal Nursing Home Reform Act or Omnibus Budget Reconciliation Act of 1987 (OBRA '87) sets the national minimum standards of care and rights for people living in certified nursing facilities. Under this legislation, long-term care facilities receiving Medicare or Medicaid funding from the federal government are expected to provide services that enable their residents to “attain and maintain their highest practicable physical, mental, and psychosocial well-being.” With respect to care for elderly with dementia, OBRA '87 states that formal care programs must promote a “holistic quality of life” for dementia-care clients, thus setting a baseline not only for the quality of care provided by nursing facilities, but also for the quality of life of the residents.

The U.S. Department of Health and Human Services is the federal government’s principal agency for protecting the health of all Americans and providing essential human services, especially for those who are least able to help themselves. Their guiding principle is, “improving the health, safety, and well-being of America.” The Centers for Medicare and Medicaid Services is a federal agency within the U.S. Department of Health and Human Services that administers Medicare and Medicaid programs nationwide. Its regulations specify

that care providers participating in federal Medicare or Medicaid programs must offer “an ongoing program of activities designed to meet, in accordance with the comprehensive assessment, the interests and the physical, mental, and psychosocial well-being of each resident” (Centers for Medicare and Medicaid Services). These regulations reiterate the guidelines set by OBRA '87 and are intended to ensure that long-term care facilities in the United States, including dementia-care providers, identify each of its resident’s unique set of interests and needs, and support them with appropriate services and activities that promote their highest level of well-being.

The term *well-being* varies depending on the individual. For elderly with dementia living in care facilities, standards of well-being are even more complex and difficult to assess than they are for normal functioning elderly persons. In their study, Debra A. Jansen and Victoria von Sadvoszky interviewed 30 community-dwelling elderly residents between the ages of 65 and 92 years old, to produce a catalog of activities in which the participants identified they engage and find restorative. In their research, *restored*, *restorative*, and *restoration* all referred to improved well-being, or what Jansen and von Sadvoszky equate to as improvements in mental and day-to-day functioning abilities (Jansen and von Sadvoszky, 381). A key component of a person’s well-being, according to Jansen and von Sadvoszky, is their capacity to direct attention (CDA), e.g. the ability to concentrate or focus on what is important in managing daily tasks (381). As people age, it is common for most to experience mild declines in select cognitive processes, including CDA. Therefore, promoting well-being for people, especially as they grow older, means maintaining their optimal functioning abilities.

The activities that the elderly participants in Jansen and von Sadvoszky’s study identified as restorative were categorized as follows: (1) creative outlets, (2) altruism, (3) nature, (4) social connections, (5) cognitive challenges, (6) physical activities, (7) reading, (8) family connections, (9) spirituality and reflection, (10) cultural activities, (11) travel, and (12) other activities, i.e. activities described by only a few participants that did not appear to fit with the previous categories. All of the restorative activities identified by the participants were experiences they described as engaging and having qualities of extent, fascination, and compatibility (384). Participants also highlighted the importance of variety, that is, experiencing something new or something different, as an essential quality of

a restorative activity. Jansen and von Sadvoszky note that variety is significant to restoration because it triggers experiences of fascination, extent, and of being away.

It is critical to note that the degree to which elderly with dementia experience a decline in their cognitive functioning is undoubtedly more severe than it is for a *normal* aging person or even for elderly without dementia. Thus, for elderly with dementia, the extent of restoration and well-being potentially gained from the activities identified by the participants (who were not diagnosed with dementia) in Jansen and von Sadvoszky' study, are unclear. However, the benefits of select activities highlighted in their study, in particular, creative outlets (1), nature (3), social connections (4), physical activities (6), and family connections (8), are noteworthy and relevant to the well-being and day-to-day functioning of elderly with dementia in long-term care facilities.

In Jansen and von Sadvoszky's study, creative outlets (1) refer to activities that disengaged effortful directed attention away from daily tasks and concerns and allowed involuntary attention to be drawn to pastimes involving originality and imagination. The nature category (3) includes passive as well as active activities that exposed participants to the natural environment. These frequently involved activities such as looking outside, particularly during sunrises and sunsets, walking outside and being near trees and flowers, watching birds, and gardening. Social connections (4) describe interactions with friends and acquaintances, whereas family connections (8) include activities of getting together and interacting with family, typically with grandchildren and children. Finally, physical activities (6) are non-nature-oriented activities involving the exertion of physical energy, such as walking indoors or outside and participating in exercise groups. While this category can be considered to overlap with the nature category, as a rule, activities were assigned to the physical activities category if no references to nature were explicitly made.

The select activities highlighted above are all outlets in which elderly with dementia can engage and which can potentially incite, to varying degrees, experiences of extent, fascination, compatibility, and a sense of being away. In particular, the nature category (3) and how it can offer restorative experiences for elderly with dementia in long-term care facilities is of most significance to this thesis. The nature category is especially promising because it overlaps with and can be integrated with many, if not all, of the other restorative activities identified in Jansen and von Sadvoszky's study.

The belief that contact with nature is good or beneficial for people is not a new idea. Empirical evidence of the beneficial effects of nature are extensive and support the concept of *biophilia*, a term coined by E.O. Wilson for the tendency of humans to affiliate with other life forms (D'Andrea, Batavia and Sasson, 10). The biophilia hypothesis suggests the existence of a biologically based, inherited human need to affiliate with life and life-like processes. Underlying this belief is the assertion that human identity and personal fulfillment somehow depend on our relationship with nature (10).

Much of Jansen and von Sadvoszky's study supports and resonates ideas that were introduced in the early 1970s by renowned environmental psychologists, Stephen and Rachel Kaplan. In *With People in Mind: Design and Management of Everyday Nature*, Kaplan and Kaplan explore the relationship between people and nature and people's preference of natural environments to other settings. Supported by over two decades of research, they contend that there are other benefits of natural environments beyond mere enjoyment and that role of everyday nature plays a dramatic role in the well-being of everyday people.

For Kaplan and Kaplan, the importance of nature in restoration and fostering well-being in people cannot be overemphasized. Views of nature have been demonstrated to be related to greater physical and mental health, while activities that are nature-related have been shown to help people go about their lives more effectively (Kaplan and Kaplan, 2). The Kaplans advocate that natural settings are especially effective for rest and recuperation, particularly for people suffering from mental fatigue, decreased attention span, and irritability, all of which are symptoms common in elderly with dementia. Contrary to what many believe, for natural settings to have a restorative effect, they do not have to be dramatic and even very short exposure to nature can be helpful to promoting restoration. In fact, benefits can be achieved even if that was not one's intention or if the gain is not immediately realized (67).

In addition to Kaplan and Kaplan's work, one of the most influential studies that was among the first to report measurable health benefits of contact with nature was Roger Ulrich's theory of stress recovery and the aesthetic and affective responses to natural environments, dating back to the 1970s. In *View Through a Window May Influence Recovery from Surgery* (1972-1981), Ulrich investigated the restorative and stress-reducing effects of natural views (i.e. trees) versus

views of a brick wall through a hospital window on recovering patients after surgery. In summary, his findings showed that patients with views of trees, in comparison with the wall-view group, had shorter postoperative hospital stays, fewer negative evaluative comments from nurses, took fewer moderate and strong analgesic doses, and had slightly lower scores for minor postsurgical complications (Ulrich, 421).

Ulrich concluded that views of nature, especially water, appear to sustain interest and attention in persons more effectively than urban views. Furthermore, because most natural views apparently elicit positive feelings, reduce fear in stressed subjects, and may block or reduce stressful thoughts, he was led to believe that such views might also foster restoration from anxiety and stress (420). Although Ulrich noted limitations of his study, stating that his conclusions cannot necessarily be extended to all built views or to other patient groups such as long-term patients, his findings are of great appeal to elderly with dementia living in long-term care facilities.

Elderly with dementia are understood to experience anxiety stemming from multiple variables. Stress and anxiety are especially acute in individuals with dementia living in long-term care facilities, whose confinement and diminished physical and psychosocial capacities limit their access to outdoor environments. It is not uncommon for this population to have their only connection to the outdoors be through a window view. Ulrich's research suggests that views of nature, but moreover, contact with and physical access to the outside may be especially important to dementia residents, who have unvarying schedules and spend an extensive amount of time indoors (420).

Beyond having views of nature, being in and interacting with nature are widely regarded as activities that provide benefits to a person's health and well-being. Research indicates that even passive involvement and minimal physical contact with gardens can have a calming and soothing effect on people with dementia and other related illnesses (D'Andrea, Batavia and Sasson, 16). Beyond the nostalgic benefits inherent in outdoor gardens, plants and flowers, among other things, engage all of the senses—sight, sound, touch, smell, and taste (16). While we may not fully understand how elderly with dementia experience these sensory elements, we do know that as sentient beings, they can readily perceive and benefit from them.

Horticulture therapy is a growing field attracting more and more attention for the holistic and restorative benefits it provides on a variety of functioning levels in elderly with dementia, from the emotional and psychosocial to the physical and cognitive. In their research, D'Andrea, Batavia, and Sasson looked at the impact of HT on the delay of cognitive deterioration in individuals with Alzheimer's disease living in a long-term care facility. Their findings showed that participation in HT did in fact contribute to the maintenance of memory abilities and attention span for individuals with Alzheimer's, as evidenced by documented observations, medical records, and minimum data set assessments (16). HT also ameliorated other negative effects of Alzheimer's disease including helplessness, lack of decision-making, lack of interest in socialization, and preference for isolation.

In addition to reducing the negative effects of Alzheimer's, D'Andrea, Batavia, and Sasson's study showed that HT can also provide positive opportunities for creativity, self-expression, social interaction, sensory stimulation, increased self-esteem, and practicing fine and gross motor skills and eye-hand coordination among elderly with dementia (9). In-line with the qualities of extent, fascination, and compatibility that were identified as restorative by the participants in Jansen and von Sadowszky's study, D'Andrea, Batavia, and Sasson suggest that HT offers an absorbing, restful, and rejuvenating state of mental alertness not derived from other settings, primarily those that are indoors. In the secure environment of an enclosed outdoor garden, HT can provide positive feelings, both real and perceived, of privacy and safety. As such, it can address many of the psychosocial, emotional, and physical needs of individuals with Alzheimer's and may become increasingly important as a valuable, inexpensive, and readily available alternative therapy for individuals suffering from the disease (10).

In a similar but separate study, Gigliotti and Jarrott analyzed individuals with dementia's responses to HT and the use of plants to facilitate holistic outcomes. Their conclusions were largely in accord with D'Andrea, Batavia, and Sasson's findings, asserting that HT is a desirable and viable choice for dementia-care programs because it elicits engagement and positive responses in individuals with dementia (Gigliotti and Jarrott, *Effects of Horticulture Therapy on Engagement and Affect*, 376). However, what is particularly noteworthy in Gigliotti and Jarrott's research is their support of and references to Kitwood's *theory of personhood* and Lawton and Nahemow's *environmental press theory*. Both models give credence not only to the benefits of HT for elderly with

dementia in long-term care facilities, but also to the critical and mutually supportive roles the caregiver, the designer, and landscape play in the well-being of the residents.

Kitwood's notion of personhood stresses the need to support the well-being of persons with dementia through meaningful activities that reinforce individual dignity, autonomy, and personal history (369). A hallmark of the theory of personhood or person-centered care is the importance of instilling a sense of competence in an individual with dementia by maximizing their intact abilities while minimizing disabilities. This approach to care places emphasis on the role of the caregiver, insisting that it is his or her responsibility to maintain and support the person with dementia's sense of self-identity and esteem. Guided by this theory, Gigliotti and Jarrott contend that holistic approaches to treatment must become the norm rather than the exception in dementia-care programs and that this can only be accomplished with the support of the caregiver (369).

Lawton and Nahemow's (1973) theory of environmental press looks at the impact physical and social environments have on the care of elderly with dementia. Underlying their theory is the idea that a balance between individual competence and environmental demand (i.e. press) represents a good person-environment fit. The success of programming and the well-being of a person reflects the degree to which the environment fits the individual (Gigliotti and Jarrott, *Layers of Influence: Important Contextual Factors in Directing Dementia Care Programs*, 114).

For persons with dementia, the impact of environmental stress is immense. Limited in their capacity to adjust to their environment independently, they often display maladaptive behavior and negative affect, characterized by self-stimulating behaviors, non-engagement, anger, frustration, and depression (Gigliotti and Jarrott, *Effects of Horticulture Therapy on Engagement and Affect*, 369). Guided by the theories of personhood and environmental press, caregivers should be required to help adapt the surrounding environment to better suit the needs of individuals with dementia, who are unable to do so for themselves. Based on Lawton and Nahemow's environmental press theory and Kitwood's person-centered approach to care, it is critical to recognize that in a holistic continuum of care for elderly with dementia, the term *caregiving* starts with designers.

Nursing *homes*, assisted living *homes*, and care *homes*, all allude to being a home, or providing as close to a home environment as possible to their residents. However, in reality, they are often perceived as the exact opposite—institutional, cold, sterile, and uncaring. Many times, these facilities have nothing *homey* about them, resembling an environment that is closer to a hospital setting than a home. In *Life Worth Living*, William H. Thomas points out the flawed definition of caring that often underlies contemporary nursing home care and management. He notes that residents and their families understand the difference between simply receiving treatment and being well cared for and yet most nursing homes confuse the two. To lay the foundation for the provision of care, Thomas contends that care facilities must be transformed into human habitats, that is, homes (Thomas, 7).

With the aging of the American population, Thomas points out that the United States currently stands at a threshold of a long period of nursing home expansion. As previously stated in this report, more and more money will be spent on institutional long-term care, as more individuals and families will depend on it and expect more from it. Thus, Thomas contends that the design, construction, and maintenance of human habitats should be a major focus of nursing home activity in the years to come (14). What should these habitats look like? Not so surprisingly, they should reflect the overarching principles arrived at in the aforementioned studies.

Thomas advocates for the *Eden Alternative* and the *edenizing* of nursing homes. Fundamental to the Eden Alternative are the following principles that resonate with many of the values previously discussed: (1) care should promote all residents' capacity for growth, as all humans beings retain a capacity for growth, no matter how small; (2) work should be defined by residents' needs and capacities; and (3) while treatment can be intermittent and brief, care must be continuous and long lasting. *Long-term care* is redundant, as all real care should be long term (17).

A cornerstone of the Eden Alternative is that long-term care facilities should be inspired by natural habitats. They should employ biological and social diversity, and be driven by the same devotion to harmony that enlivens music and nature (35). Residents should have close and continuing contact with as much of their surrounding habitat as they choose to embrace. The Eden Alternative adopts a

model that makes nature, plants, even pets and children the pivots for daily life in the nursing home. What better way to employ these qualities and provide residents with a connection to natural habitats than through a therapeutic garden?

It is important to note that just as *care* is not synonymous with *treatment*, *healing* and *therapeutic* are not synonymous with *cure*. While a therapeutic garden cannot cure residents with Alzheimer's, extensive research clearly suggests that supportive and sensitive garden design can positively contribute to their mental and physical health and well-being (Cooper Marcus, *Help with Healing*, 26). While the previous section highlighted seminal research and literature discussing the significance and therapeutic benefits of nature and gardens for elderly with dementia, the following section introduces specific case studies and therapeutic garden precedents.

Practitioner and Professor Emeritus of Landscape Architecture, Clare Cooper Marcus is recognized for her pioneering research on the relationship between landscape design and the human experience, in particular, the psychological and sociological aspects of the built environment. For decades, she has traveled the country and world researching hospital and care facility gardens, advocating for the therapeutic possibilities of garden design. One case study that Cooper Marcus highlights as an exemplary model of therapeutic garden design is the Sophia Louise Dubridge-Wege Living Garden at the Family Life Center in Grand Rapids, Michigan. The Family Life Center is a dementia-care facility, where nearly half of its residents have Alzheimer's (Cooper Marcus, *No Ordinary Garden*, 26).

In her assessment of the Family Life Center garden, Cooper Marcus notes that a critical design element is the division of the garden into two distinct spaces. This division provides hierarchy and a variety of experiences. The first space is a main strolling and viewing garden consisting of lawns, paths, perennial bed, gazebos, a waterfall and pond, and various places to sit. The second is a working garden with raised beds and trellises for horticultural therapy.

As with any health-care facility garden, but especially in dementia-care facilities, Cooper Marcus stresses how critical it is for a garden to be both visible and accessible so that users can conveniently access it and feel safe within it. The Family Life Center has spacious views of the garden that even the

staff can enjoy from their indoor workstation. There are multiple entries into the garden and doors remain unlocked during the day, making it easily accessible to residents. Upon entry, users can also see the layout of the entire garden at a glance, and an arbor marks the transition from one space to the next. A simple circular circulation system is easy to navigate, with alternative pathways for moving around the garden that empower the users with a sense of choice and variety (30).

The Family Life Center garden offers a variety of social spaces for gathering and interaction, as well as intimate and quiet areas, where users can be alone. A therapeutic garden should have multiple spaces offering privacy so that users also do not feel, perceived or real, as though they are in a fishbowl, always being observed by others. The garden also performs well for programmed activities and physical therapy. It is designed with a variety of supportive elements that meet the residents' diverse interests and needs, including wide pathways for wheelchair users, raised beds and tables for horticultural therapy, and sitting and resting areas. However, the garden intentionally avoids providing too many choices or clutter that can often lead to confusion, agitation, and even aggression for many of the residents with dementia (30).

Lastly, Cooper Marcus applauds the sensitive planting design of the garden, noting the thoughtful variety in flora, colors, texture, and smell. All of these qualities, she comments, can stimulate memories from childhood, conversations about seasons, and even parts of the brain not reached by *intellectual* activities in elderly with cognitive impairment. Cooper Marcus notes that in most therapeutic gardens there is often a noticeable lack of attention given to plants. She believes gardens should be generous with their plantings and recommends a 70 to 30 plants to hardscape ratio. It is important to design with plants that are non-toxic, change color (e.g. indicating seasonal change and the passing of time), and are subtle in texture and movement (e.g. grasses and leaves). They should also be symbolic (e.g. trees representing solidity and perennials symbolizing renewal and persistence).

An ideal therapeutic garden should calm and nurture. It should provide familiarity and psychological comfort and look and feel like a “garden in that person’s mind.” It should also have an “aesthetic rooted in the culture of the majority of users and plants and furnishings that are familiar...this is especially important in hospices for the terminally ill and facilities for people with Alzheimer’s disease” (Cooper

**CASE STUDY:
THE SOPHIA LOUISE DUBRIDGE-WEGE LIVING
GARDEN AT THE FAMILY LIFE CENTER
GRAND RAPIDS, MI**



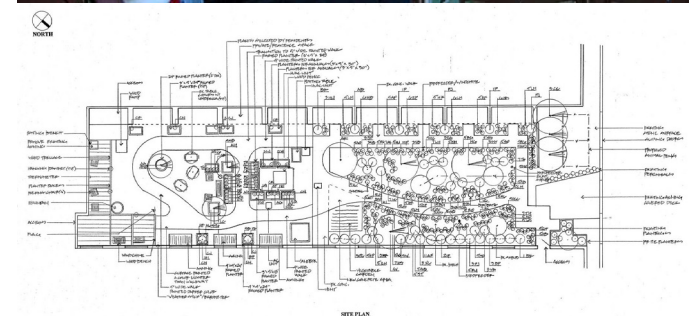
Source: Cooper Marcus, Clare

and residents in wheelchairs or other assistive devices had difficulty accessing the garden without assistance from others. In addition, both residents and staff complained about the amount of glare from the garden's roof surface, furniture, and windows. Not only did residents rarely go outside, but they seldom opened the window blinds in their rooms to avoid the glare reflecting off the exterior.

Some of the goals of the re-design were to improve the overall conditions of the garden by hiding or camouflaging existing utilities, creating areas for programming, and incorporating plantings that were more attractive to residents. However, the primary goal was to entice residents to use the garden. According to Geri Stride, the Director of Community Activities at Medford Leas, these goals have been achieved. Since the re-design, there has been a significant increase in resident use on their own and as a part of programs initiated by staff.

According to Stride, the conditions of the garden have vastly improved— it is completely handicap accessible; has both shady and sun lit areas; the harshness of the adjacent brick building wall was softened by awnings, also reducing the glare; cushions, umbrellas, and various seating options including rockers, picnic tables, benches, and lounge chairs have been provided; a porch and two water features are focal elements; flowers that the residents love have been added; and the originally brown roof was painted green with trails to resemble a garden path. Not only have the elements enticed residents to use the garden, but the new design has also motivated staff to offer more programs and activities outside. Originally, access to the garden was the least positive feature for the dementia residents. Now, one of the most compelling signs of the garden's success is the removal of imaginary barriers, physical and psychological, as more dementia residents are willing to go outside. The Back Porch Garden has been a catalyst that has created an area for resident interaction and involvement. It also offers a pleasant setting that is more welcoming and comfortable than the indoors, in which spouses and other family members can spend time with their loved ones.

CASE STUDY: MEDFORD LEAS BACK PORCH GARDEN MEDFORD, NJ



Source: www.medfordleas.org

SITE ANALYSIS and DESIGN STUDIES

The Jewish Home of San Francisco

JHSF, or the Jewish Home of San Francisco, offers a wide range of care, services and programs to the Bay Area of Northern California's elderly—it is “a place they can call *home*.” Located on a nine-acre campus in the Excelsior district in South San Francisco, JHSF has been caring for older adults, age 65 years and above, since 1871. Operated by a 501(c)(3) nonprofit corporation and rated a five-star SNIF by the U.S. Department of Health and Human Services' Centers for Medicare and Medicaid Services, it is the largest private nonprofit distinct part nursing facility (DPNF) in the state of California. JHSF serves approximately 1,200 patients each year and currently has over 400 long-term residents and more than 700 clinical and allied health personnel. JHSF is also affiliated with the University of California, San Francisco for teaching and research relating to geriatric care.

In recent years, JHSF has expanded its long-term care to offer short-term and rehabilitation services (STARS) and acute geriatric psychiatry care. The STARS unit offers a limited number of rooms for elderly requiring temporary rehabilitation care of 120 days or less, and JHSF's licensed acute geropsychiatric hospital has approximately twelve beds accommodating individuals age 55 years and older who voluntarily seek assistance for their acute psychiatric diagnosis. JHSF's geropsychiatric hospital is also licensed to admit individuals age 75 and older on an involuntary basis.

JHSF was founded within a Jewish tradition and while the majority of its residents and a large number of its administration and staff are Jewish, its admission policies are not limited by religious or cultural affiliation. JHSF's primary mission is to “enrich the quality of life of older adults.” The current resident population includes octogenarians, centenarians, Holocaust survivors, refugees from the former Soviet Union, and other Californians, as well as residents originally from the East Coast, who have all contributed to the innovation and prosperity of both the state and country in the 20th century.

MAP OF SAN FRANCISCO, CA
AND JHSF



Source: Google Maps

JHSF recognizes the support of the community—past, present, and future—as the cornerstone of its achievement. It also considers its staff and volunteers to be its most important resources. Its operating principles state:

We understand that our mission can only be achieved through the combined efforts of staff, volunteers, clients, and their caregivers. We provide an environment that encourages people to learn and flourish. We continuously strive to improve in the delivery of health and social services to the elderly and their caregivers. We provide care that emphasizes and capitalizes on the individual strengths of each client and family member, and embraces the notion of autonomy. We are accountable for the effective, efficient, and ethical utilization of human, financial, and material resources in fulfilling our mission. We protect the interests of the elderly and advocate on their behalf by assuming a leadership role, working cooperatively with others to improve health and social service policy.

In early 2004, JHSF launched a collaborative and community-wide strategic visioning initiative for the future. The initiative was undertaken in response to emerging trends in aging and healthcare, as well as policy and legislative reform. At the same time that JHSF launched its strategic visioning initiative, the Jewish Community Federation of San Francisco, the Peninsula, Marin, and Sonoma Counties completed a demographic study that revealed a 50 percent increase in the 45 to 54 age group in the Bay Area, whose parents are in the 70 to 90 age category. The study identified that these 70 to 90 year olds may become future Bay Area residents, requiring age-appropriate housing and services closer to their adult children.

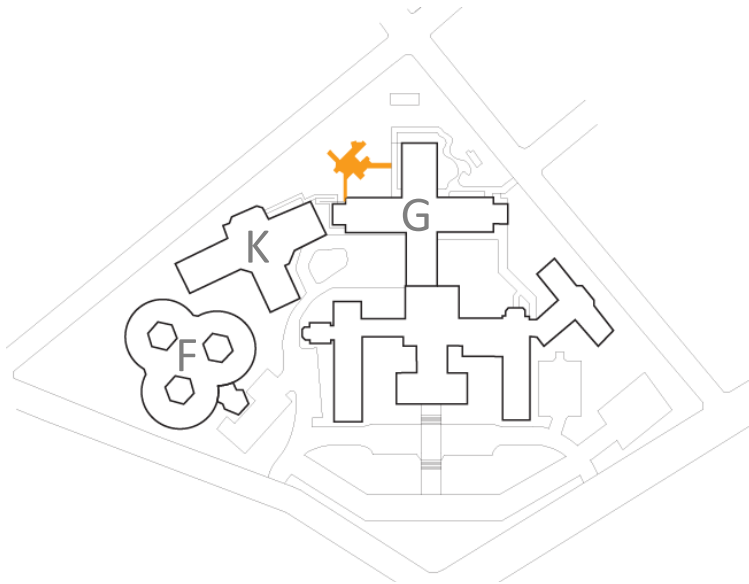
In response to these findings, JHSF created a “Vision Statement” that reexamined how and where it delivers programs and services, so as to serve a broader constituency of older adults. Included in this vision was a master site redevelopment plan to the Excelsior campus that integrates a continuing care retirement community (CCRC) and a licensed Residential Care Facilities for the Elderly program. Although the design of the proposed CCRC is currently in progress, JHSF has made available a rendering of the future campus on its website. The new buildings will more efficiently comply with city building requirements and allow JHSF to bring its facilities up to 21st century standards of care, something it believes it cannot do with its current facilities. The updates will




JHSF 1938, 2012 AND FUTURE



Source: www.jhsf.org

JHSF CAMPUS MAP



SKILLED NURSING FACILITY	= 400	
ACUTE PSYCHIATRIC CARE [K]	12	
SHORT-TERM + REHABILITATION CARE <120 DAYS [F]		
LONG-TERM CARE		
DEMENTIA [G]	132	

also reflect contemporary innovations in geriatric care and allow JHSF to diversify its continuum of age-in-place services.

To explore design guidelines as I will do in this thesis for therapeutic dementia gardens is extremely timely. As the largest private nonprofit DPNF in the state, JHSF is an ideal case study that can serve as a model of care incorporating therapeutic gardens as an integral component in its continuum of age-in-place services. Developing such a vision can be used to set policy and management of geriatric care facilities in a more strategic, but also compassionate direction, while addressing future needs.

The G2 Garden Unit

The G2 Garden Unit, located on the second floor of the five-story Goodman building at JHSF, provides 24/7 care for approximately 43 residents with the most advanced stages of dementia, including Alzheimer's, Vascular, Lewy Bodies, mixed dementia, and Parkinson's disease. Currently, there are 36 women and 7 men living on G2, all age 65 years and above. Some have been living there for as little as a few months, while others have been at JHSF for over ten years. The majority of the G2 residents are from the Bay Area, but some originally hail from the East Coast or even parts of Europe and Asia. Many, but not all, have family living close by in the Bay Area. A large proportion of residents understand Hebrew and Yiddish, and some are Russian speaking. Currently, there are one or two residents who are native Chinese speakers. A remaining few residents are Holocaust survivors. While the residents come from such diverse backgrounds, what they share in common is dementia and the fact that the majority, if not all, will spend the remainder of their lives at JHSF.

The G2 residents exhibit a wide range of dementia symptoms, the most common being memory loss (e.g. names, events, time, and place), cognitive impairment (e.g. diminished visual perception and communication skills), and changes in behavior (e.g. mood and personality, withdrawal). In addition, the majority of residents have diminished motor skills, muscle rigidity and involuntary movements, and acute sensitivity to light and temperature. Approximately 20 percent are ambulatory and 80 percent non-ambulatory, dependent on wheelchairs or other assistive devices.

The G2 staff consists of a dedicated group of clinical and health personnel specializing in geriatric care and dementia, who provide round-the-clock care to the 43 individuals residing at the Garden Unit. The G2 staff philosophy, which is framed and posted above the nursing station on the floor, reads:

Residents of the Garden Unit may find it difficult to express their needs verbally. We recognize that everyone should be treated with respect and dignity. An empathic approach may help lower anxiety and deal more effectively with behavioral manifestations of the disease. We encourage involvement of family and friends in the Garden Unit and recognize the need for continued social support.

Staff work in three 8-hour shifts. There are more staff working the day and evening shifts (7am to 3pm and 3pm to 11pm, respectively) than the overnight shift (11pm to 7am). Staff is primarily comprised of licensed nurses and certified nursing assistants (CNA), and a rotating cast during the day that includes occupational therapists, recreational activities coordinators, social workers, and nutritionists. During the day, there are also a varying number of volunteers and family members who are on the floor at any given time.

In April 2013, JHSF went through a major restructuring in response to budgetary reform, and alarming number of employee positions were eliminated. In particular, the recreational activities department at JHSF has significantly reduced many of its positions, including recreational therapists and activities coordinators who had been employed at JHSF and assigned to G2 for many years, were eliminated. Needless to say, the restructuring will have, if not has already had, a significant impact on the care and services provided to the residents of G2, as well as on the workload and level of morale of remaining staff.

The G2 unit is a secured, closed unit, requiring an access code to enter and exit the floor from the elevator. It is the only floor in the building to take such security precautions, given that its residents are the most cognitively and physically impaired at JHSF. G2 has 44 beds in total, and the majority of its rooms are single occupancy, with the exception of a few doubles. The Goodman building, designed by architect Howard A. Friedman in 1969, is a brutalist-style tower with a layout that is in the form of a symmetrical cross. Located directly in the middle of the floor are the elevator bank and nursing station. Three of the

GARDEN UNIT [G2]

RESIDENTS

43/44



WOMEN 36 | MEN 7

AGE > 65 YEARS

20% AMBULATORY

80% NON-AMBULATORY



GARDEN UNIT [G2]

STAFF

DAY



EVE



- 2 LICENSED NURSES
- 7 CNAS
- 1 RECREATIONAL COORDINATOR
- 1 SOCIAL WORKER
- OTHER + VOLUNTEERS + FAMILY MEMBERS

NIGHT



- 1 LICENSED NURSE
- 3 CNAS
- OTHER

floor's four wings are residents' units, while the fourth wing contains the recreation room, where G2 residents spend the majority of their day. Located directly behind a wall adjacent to the recreation room is the dining hall. All meals are served at regularly observed times and taken in the dining room.

The recreation room is the primary social room for residents and is bustling with activity throughout the day. It is considerably spacious, containing an upright piano, a music stereo system, small television, movable chairs, residents' artwork on the walls, and an enclosed glass cage with small birds along the back wall. There is also a small outdoor patio off of the recreation room to the northwest that overlooks a courtyard below on the ground floor; the door to this patio, however, is locked and inaccessible to residents due to supervision and safety concerns. Windows on the opposite side of the room overlook a vehicle turnaround and passenger drop off/pick up area on the ground floor outside of one of the Goodman building's main entrances. The recreation room is naturally well lit and when the weather is pleasant, these windows are propped open.

During the day, residents, the majority of whom are in wheelchairs, typically sit around the periphery of the recreation room, facing the center of the room with their backs against the walls. There is often music being played and/or a recreational activities coordinator walking around or standing at the front of the room leading a programmed activity. There are always a number of CNAs in the room, usually in the back, tending to, checking on, or sitting and chatting with residents. Other staff, such as occupational therapists, social workers, and nutritionists, as well as volunteers and a few family members are frequently present throughout the day.

Each programmed activity typically begins on the hour starting at 9am until 7pm, and ranges from sing-alongs and drum circles to "in-room chats" and "outburst." For higher functioning residents, there are also scheduled activities designed to meet their specific needs and interests, such as writing workshops and study groups held in the dining hall. A few times a week a trained pianist who volunteers at JHSF, pays visits to G2 to perform short piano concerts, something the residents appear to thoroughly enjoy.

G2 residents can be escorted off the floor by staff, family members, or volunteers to visit other areas of the Goodman building for therapy, recreation, or leisure.

Many enjoy visiting the creative arts center to paint, attending weekly luncheons or concerts in the family lounge, or getting a haircut in the beauty shop, all located on the ground floor. The JHSF synagogue and rabbi are also located on the ground floor, and residents frequently attend Shabbat or other religious services there. Many residents are escorted off of G2 to the ground floor simply for a change of scenery.

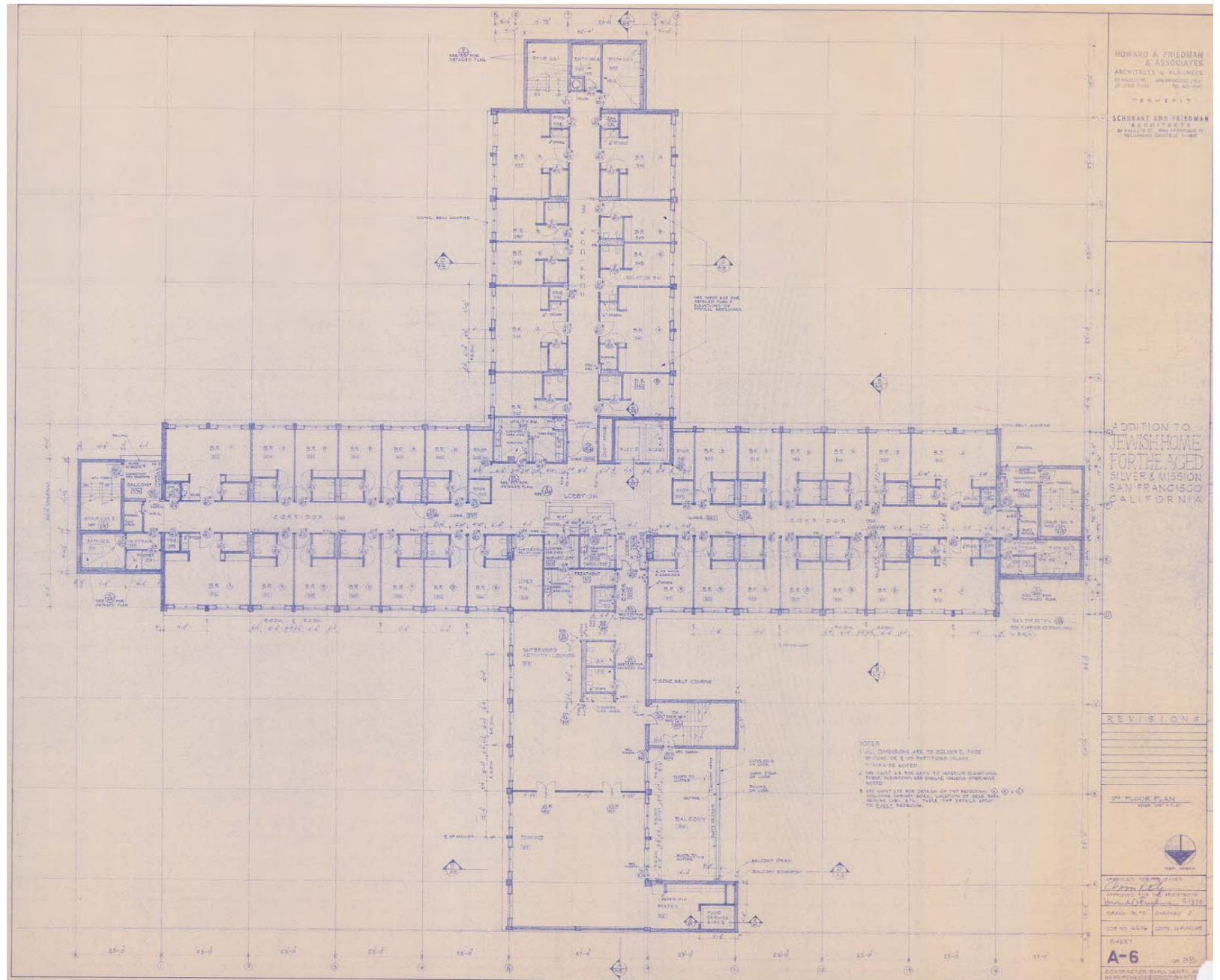
The lobby of the Goodman building is an extremely busy area that sees a variety of activity and movement throughout the day, as residents, staff, and visitors are constantly coming in and out of the building and lobby elevators. In addition to the art center, beauty shop, and family lounge, there are a variety of other services on the ground floor, including a pharmacy, fitness center, greenhouse with indoor plants, a café, and gift shop. Additionally, beyond human activity, the ground floor has an array of pet rabbits, turtles, and birds for residents and visitors to enjoy.

Also on the ground floor, adjacent to and easily accessible from the café is an outdoor courtyard. From the interior of the Goodman building, the courtyard is highly visible, as the corridors surrounding it are made of glass. Family members and volunteers frequently bring residents here and many staff members enjoy spending their breaks outside at one of the small, movable tables. The west-facing courtyard is popular because it is one of the few common areas at JHSF that is located outside, offering fresh air and sun exposure. There is also a calming water fountain that acts as a climactic focal element in the center of the courtyard.

**JHSF GOODMAN BUILDING
GROUND FLOOR COURTYARD AND FOUNTAIN**



GOODMAN BUILDING CONSTRUCTION DOCUMENT
 HOWARD A. FRIEDMAN & ASSOCIATES, 1968



Courtesy of JHSF

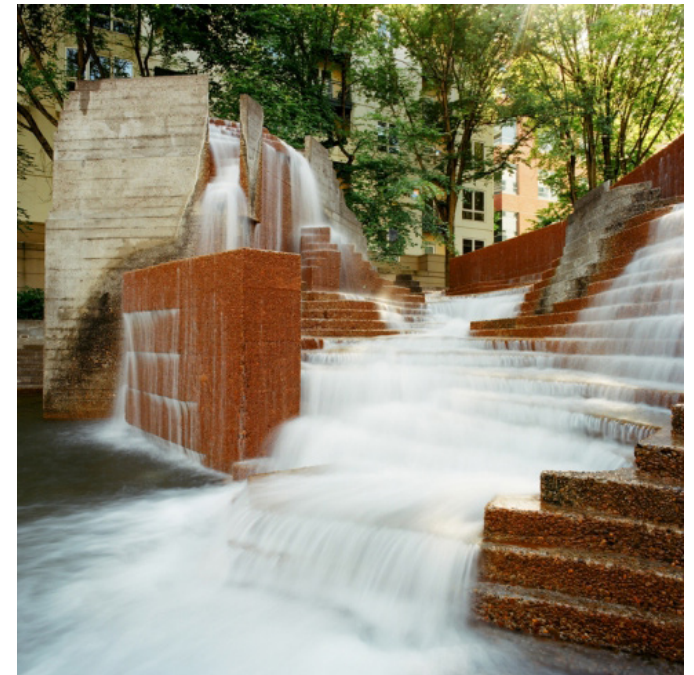
The Garden: An Introduction

While the ground floor courtyard is open to all JHSF residents, staff, and visitors, a second garden located on the second floor of the Goodman building is only accessible to the residents and caregivers of the G2 Garden Unit. Erected at the same time as the Goodman building in the late 1960s and part of the same master plan as the ground floor courtyard and fountain, the garden was designed by one of the most prominent landscape architects of the 20th century, Lawrence Halprin (1916-2009). Halprin is most famous for his urban scale, public projects, some of the most well-known including: Ghirardelli Square in San Francisco (1962); Sea Ranch in Northern California (1964); Nicollet Mall in Minneapolis (1967); the Portland Open Space Sequence comprised of Lovejoy Plaza, Auditorium Forecourt (later renamed Ira Keller) Fountain, Pettygrove Park, and Source Fountain (1963-1970); Freeway Park in Seattle (1976); and the FDR Memorial in Washington D.C. (1997).

The JHSF commission in 1969, which was designed during the same period as the Portland Open Space Sequence, is unique in that for a designer whose works are internationally known and celebrated, few know about the project. It can be defined neither as large scale and public, nor small scale and residential—it falls in the middle. However, the project hints at Halprin’s origins as a residential garden designer, while also showcasing his conceptual experimentation with certain materials and forms, primarily water and geometry, that characterize many of his larger urban park designs. “The scale at the beginning was small, but the ideas were large and very advance for their time, embodying a whole new approach to environmental design...Our gardens were to reflect our lifestyle: places meant not only for contemplation but activity, designed not for perfection and fixity, as in the Oriental tradition, but for changeability and responsiveness to people’s changing needs” (Jost, 94).

As Garrett Eckbo once claimed, “it is the garden that provides the classroom and test site for landscape architects. There, one learns a vocabulary with which one designs, the processes by which landscapes are realized, the people who realize them, and not negligibly, how to approach and interact with people” (Treib, 5). Prior to opening his own practice, Halprin worked with renowned landscape architect, Thomas Church. During this period, the majority of Halprin’s projects were not the urban, civic spaces that he is most known for today. Instead, they

LOVEJOY (TOP)
AND FORECOURT FOUNTAINS (BELOW)
PORTLAND, OR
LAWRENCE HALPRIN & ASSOCIATES



Source: *Seubert, Susan*



Source: *Cultural Landscape Foundation*

The G2 Garden Unit garden at JHSF contains elements that distinctly point to Halprin. Located in the southeast corner of G2, the garden is approximately 100 feet by 100 feet. On its north and western sides, it is hugged by the brick façade of the Goodman building. To the south, it is enclosed by a hill that rises approximately twenty feet above to meet Lisbon and Avalon Avenues. Upon exiting the G2 unit and entering the garden, an eight feet wide concrete path directs users away from the building to the center of the site. There at the center, the path opens up into a space that feels something like a small stage or plaza, approximately thirty feet by thirty feet at its widest point. From this central plaza, there are six smaller rooms, or nooks, approximately eight feet wide and of varying lengths extending from the center. The entire space is paved with concrete. Two feet high by one foot wide concrete retaining walls enclose the outer perimeter of the paved space, which including the nooks, has twenty-six sides in total. These walls can also function as seating walls.

At the end of each of the six nooks is a small seating bench, fixed to the concrete wall, that can accommodate two people each (not in wheelchairs). In contrast to the central area that is more open and social, each nook offers privacy away from the center. Counting the six benches, but not the concrete walls, the site provides seating for approximately twelve people. Two sets of movable round café tables with chairs in the center of the plaza offer additional seating.

FDR MEMORIAL
WASHINGTON D.C.
LAWRENCE HALPRIN & ASSOCIATES



Source: Cultural Landscape Foundation

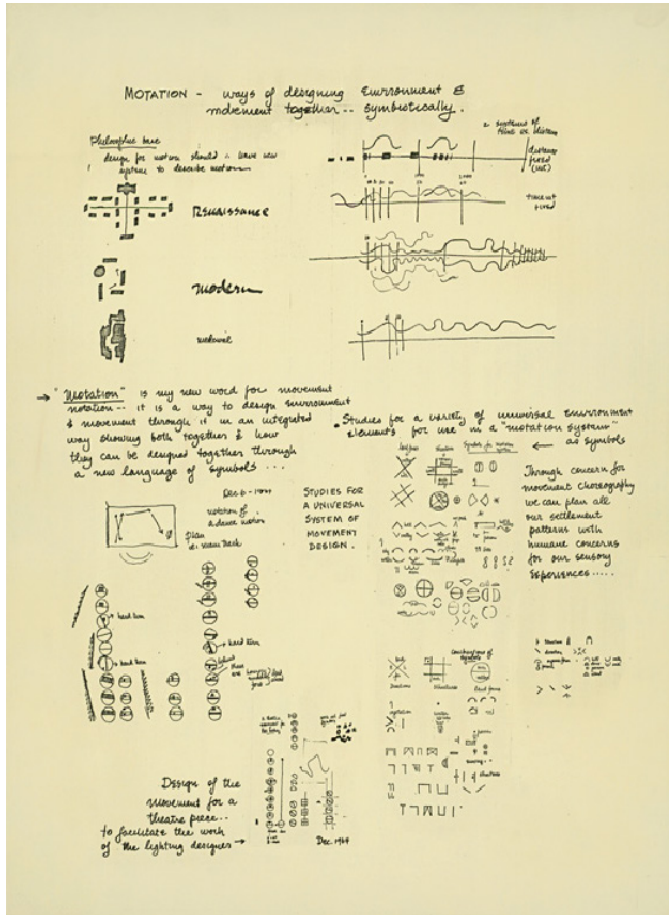
1963-1970

PORTLAND'S PUBLIC SPACES:
 LOVEJOY PLAZA, SOURCE FOUNTAIN,
 PETTYGROVE PARK, AUDITORIUM FORECOURT

1969

JEWISH HOME FOR THE AGED
SAN FRANCISCO

HALPRIN SKETCH - NOTES ON MOTATION



Source: Lawrence Halprin Notebooks, 1959-1971

The site's rectilinear geometry, sequencing of spaces into nooks, and generous use of hard paving all point to Halprin. These elements create a signature interface between form and activity, a hallmark of his designs. Similar to Lovejoy Plaza, in which the designer remarked, "there should be events... sculpture shows, concerts, dance events with dancers all over and arriving to the center space from above and down stairs, around the fountain" (Beardsley et al, 19), one cannot help but feel as though he had similar intentions for the G2 garden, and was attempting to sequence movement.

Halprin was married to the dancer and choreographer, Anna Halprin, and the creative influence they had on each other is evident in their works. Throughout their careers, the two frequently collaborated together on many projects, including landscape designs, installations, performing arts and dance exhibitions, and community and artists' participatory workshops. Halprin was acutely aware of how choreographed movement can enhance perception. "His understanding of the experience of landscape went well beyond the visual, and included the pace and rhythm of movement, the effect of textures underfoot, and the way perception might be modulated by ambient light, sounds, and scents" (32).

Like many of his civic designs, the G2 garden, but on a much smaller scale, has a balance of intimacy and self-display, with the theater-like space in the middle connecting the rooms that extend outward in a conceptual sequence. There is a scoring of processional movement, rest, and pause in the G2 garden design that underpins many of his other projects. Here, "it can be perceived that Halprin was equally focused on stimulating social interaction and creative behavior to make the usual "mindless" walk through an urban corridor a feast for the senses (what became known as the California school visual aesthetic) and a celebration of urban vitality" (20).

1972

EMBARCADERO PLAZA
SAN FRANCISCO

1976

FREEWAY PARK
SEATTLE

1982

LEVI PLAZA
SAN FRANCISCO

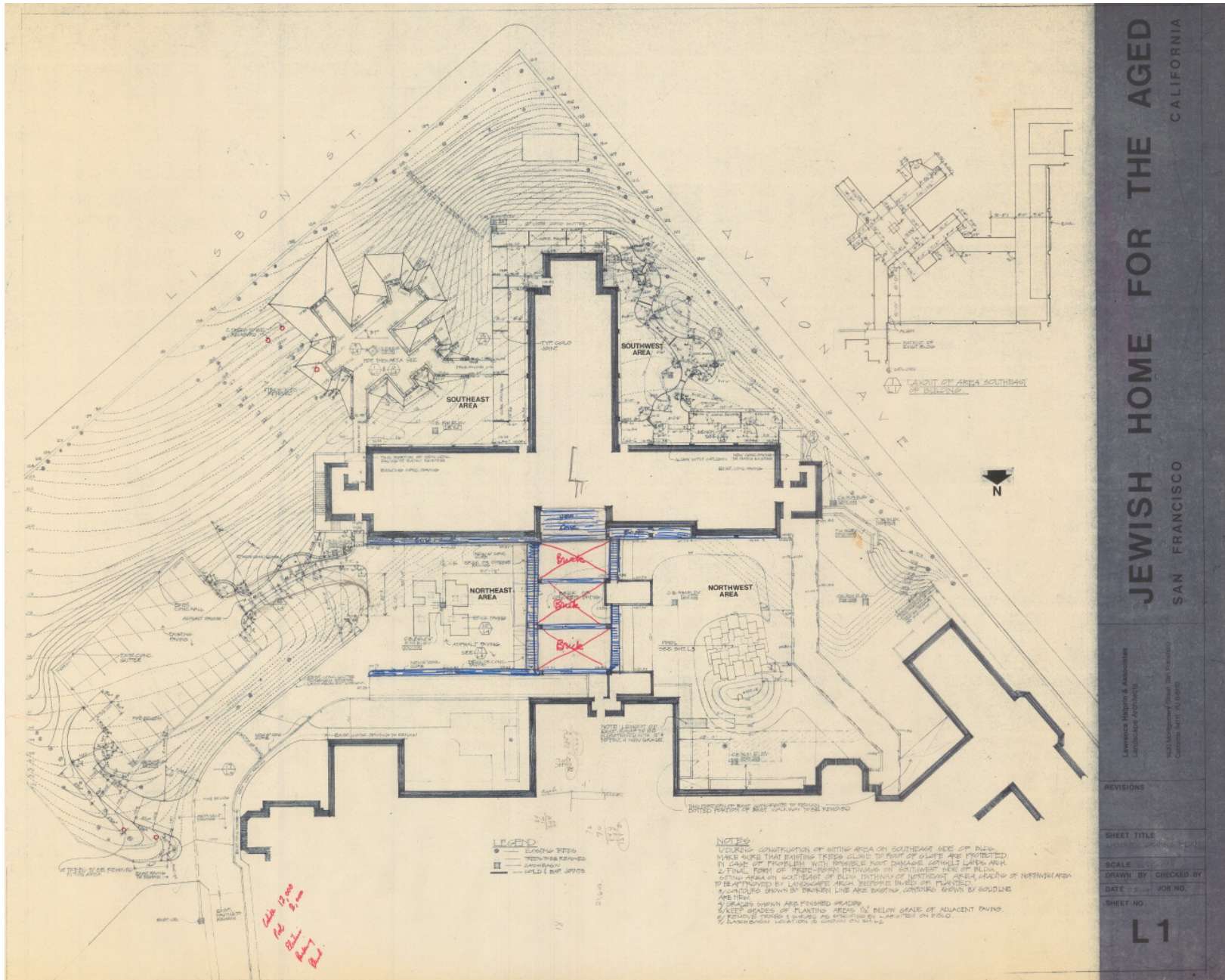
1997

FDR MEMORIAL
WASHINGTON DC

2005

STERN GROVE
SAN FRANCISCO

JHSF GARDEN CONSTRUCTION DOCUMENT
 LAWRENCE HALPRIN & ASSOCIATES, 1969



JEWISH HOME FOR THE AGED
 CALIFORNIA

SAN FRANCISCO

Lawrence Halprin & Associates
 Landscape Architects

100 Montgomery Street, San Francisco
 California 94104

REVISIONS

SHEET TITLE

SCALE

DRAWN BY CHECKED BY

DATE 12/10/69 JOB NO.

SHEET NO.

L1

Courtesy of JHSF

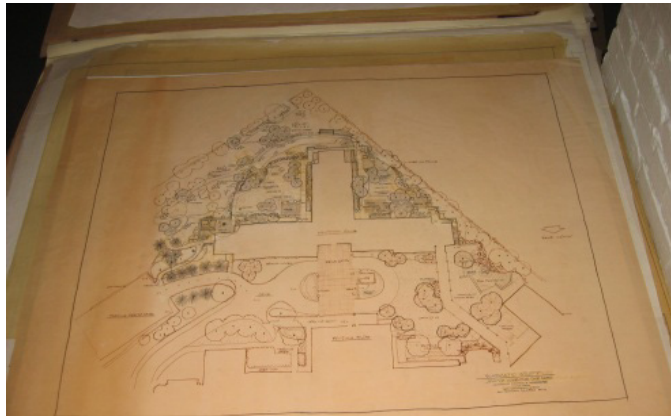
STUDY I (JAN 15, 1968)



SCHEMATIC STUDY (JAN 24, 1968)



SCHEMATIC STUDY (NO DATE)



DRAWINGS BY LAWRENCE HALPRIN & ASSOCIATES
Courtesy of the UPenn Architectural Archives

The Garden: A Critique

The G2 garden, in theory, illustrates Halprin's distinct conceptual vision and bold design artistry. In practice, however, the garden falls short in numerous ways. While the site's form and materials help to elicit some sort of emotional and perceptual experience through a heightened awareness of movement in space—a common goal of his projects (30)—it is not an experience appropriate for the contemporary users of G2. It fails miserably to meet their needs and interests, as evident by the lack of people occupying the space on the numerous days on-site observations were made.

At the time the garden was completed in the late 1960s, JHSF was named *Jewish Home for the Aged*. During this period, the population living there consisted of elderly residents receiving long-term care. However, the residents in the Goodman building and specifically in G2 were not the dementia-specific demographic that live in the unit today. Since its original construction over forty years ago, the garden has not undergone any significant changes, despite changes to its user group and their needs.

Digital copies documenting Halprin's schematic studies of JHSF and the G2 garden are housed at the Architectural Archives of the University of Pennsylvania. These drawings are equally, if not more compelling than, the final design documents. They unveil Halprin's design process and intent that are critical to better understanding the project. The drawings reveal that Halprin went through a series of conceptual and schematic iterations before arriving at the final design. This last design is a drastic departure from the earlier studies that reveal a more organic approach to the site with respect to forms, vegetation, and programming.

While the G2 garden's current design is characterized by its rectilinear geometry and central open space, Halprin's earlier iterations show curvilinear pathways that unify a series of smaller spaces within the garden. Zooming out, we see a system of paths that loop around the entire Goodman building, connecting the G2 garden with the courtyard on the ground floor. Each corner of the building was designed not as a separate entity, but as part of a larger and cohesive master plan, linked by movement and circulation.

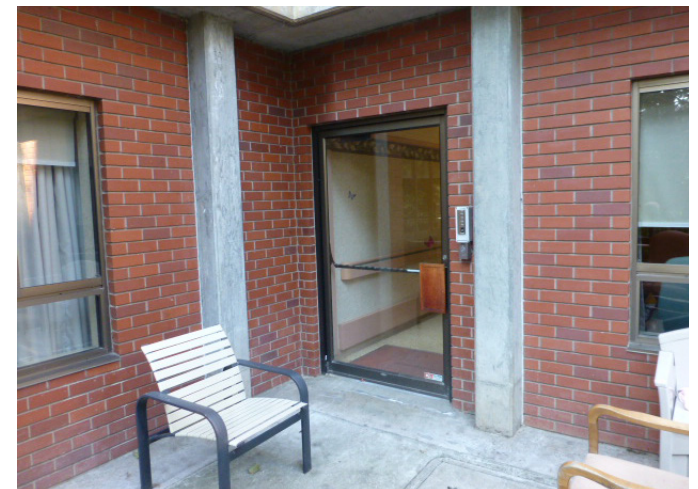
Previous drawings also contain more detail, complexity, and programmatic elements. Intimate gathering spaces, or nodes, are designed around distinct landmarks promoting activity and interaction. Examples of these features include a bird bath, sun dial, play sculpture and steps, and game tables. There is also more material and tactile variation, such as brick, concrete pavers, and wood details. Variations in paving patterns also demarcate rooms and pathways. Lastly, the earlier drawings pay much more attention to vegetation and the planting design. Flowering trees, fruit trees, meadow grasses, wild flowers, undisturbed areas, vines on fences, and potted plants and flowers are labeled throughout the site. The variety in these schematic studies suggest that Halprin was designing with people in mind. The sensibility of scale and attention to detail feel much more human than what stands today.

For reasons not understood, the final design is a complete departure from Halprin's previous iterations, in form and character. Whereas, the earlier studies show a sensibility of scale and sensitivity to details, the existing design does not. Beyond these shortcomings, there are additional problems in the existing design that inhibit residents with dementia from using the site. Some of these flaws may be attributable to the architecture of the building in relation to the garden, safety concerns, staffing issues, and higher up administrative decisions.

First, accessibility to the garden is restricted, with only one entryway in and out of the G2 unit. The door to the garden can be opened by a cumbersome push handlebar, but entry or exit requires a five-digit code to unlock and manually open it from either side. Once the door is opened, a piercing high-pitched alarm goes off, alerting staff on the floor that someone has left or returned to the unit. The door to the garden is approximately three feet wide, whereas the width of a wheelchair is 26 inches measured to the outside of the rear wheels (ADA). As 80 percent of the G2 residents are non-ambulatory, this doorway is barely wide enough to fit one wheelchair through at a time.

In addition, there is limited to no visibility of the garden from common areas inside the Garden Unit. The entryway to the garden is at the end of a narrow corridor hidden behind a corner from where the elevator bank and nursing station are located. The door, not to mention the garden itself, is completely out of view from staff working at their station. More importantly, the doorway and garden are least of all visible to the residents of G2, who spend the majority of their day in the recreation room on the opposite end of the floor.

G2 GARDEN UNIT LOBBY AND ENTRYWAY TO GARDEN



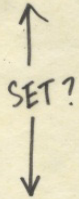
CATALOG: ORIGINAL DETAILS IN HALPRIN'S ITERATIONS

• SCHEMATIC STUDY
"STUDY I"
(NO DATE)
BEFORE/AFTER JAN 15?
1968



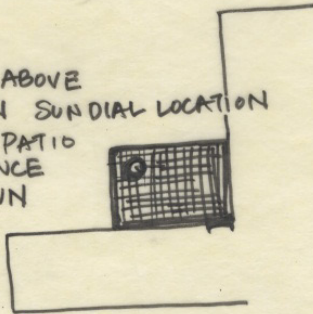
- BRICK #
- BENCH ↙
- SUNDIAL ⊙
- WOODEN PLAY SCULPTURE & STEPS
- LAWN
- VINES ON FENCE
- SITTING AREA
- (W/VEG? FOCAL CENTER PIECE)
- LOOPEO PATHS
- CONCRETE WALK
- FISH POND (1ST FL)
- UNDISTURBED AREA

• SCHEMATIC STUDY
"STUDY I"
JAN 15 1968

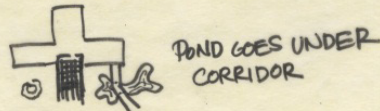


• SCHEMATIC STUDY
"STUDY II"
JAN 15 1968

SAME AS ABOVE
EXCEPTION SUNDIAL LOCATION
IN BRICK PATIO
BY ENTRANCE
VS IN LAWN



1ST FL POND AREA ONLY

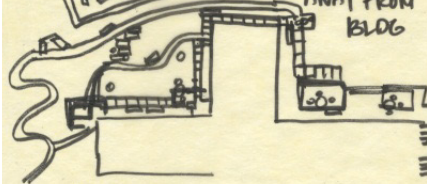


POND GOES UNDER
CORRIDOR

CATALOG CONT

• SCHEMATIC STUDY
(NO DATE)
BEFORE/AFTER JAN 24?

- FOCUS ON MULTIPLE, DISTINCT SPACES
- MORE COMPLEX
- MULTIPLE PATHS - INTERIOR PATHS AWAY FROM BLOG



- LOTS OF SEATING
- ON PATHWAYS (BENCHES)
- GAME TABLES
- MORE VEGETATION VARIETY

• SCHEMATIC STUDY
JAN 24 1968

- SIMILAR TO ABOVE EXCEPT MORE DISTINCT GATHERING SPACES AROUND "LANDMARKS" eg. BIRD BATH & SUNDIAL

- NO SEATING AREA BY LISBON ST.
- NO UTILITY BOX
- OUTER PATH TERMINATES
- MORE SCULPTURES
- COMPLEX PATHS/STEPS

POTS? ○ ROCKS?
GAME TABLES ○

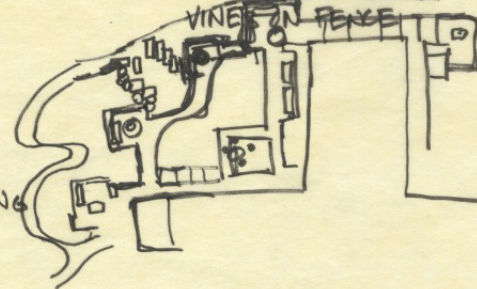
FLOWERS *
FLOWERING TREES
BIRD BATH IN LAWN
WATER FALL & FISH POND
FRUIT TREES
(IN UNDISTURBED AREA BY UTILITY BOX)

SITTING AREAS
HARD & SOFT

↳ IN LAWN ON 1ST FL

BIGGER FINING WALLS

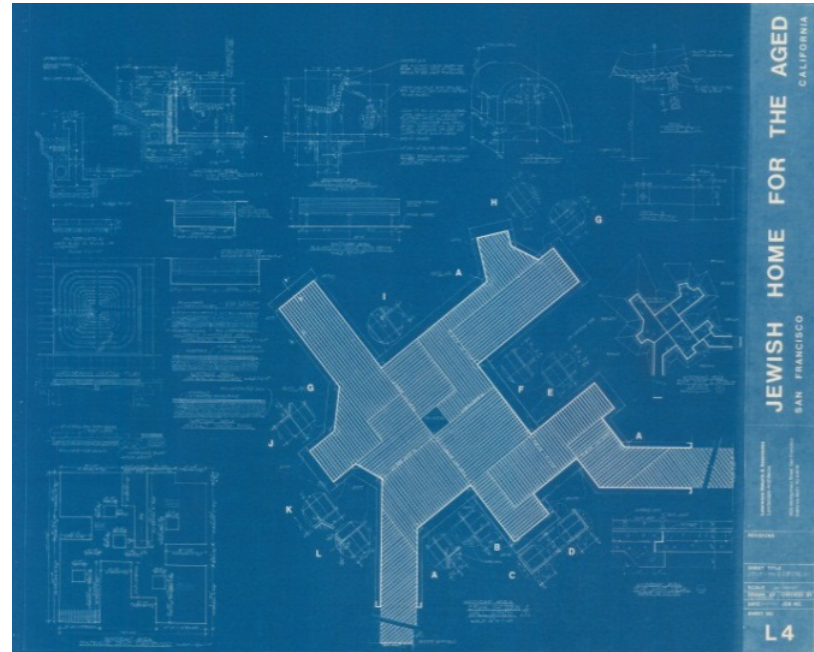
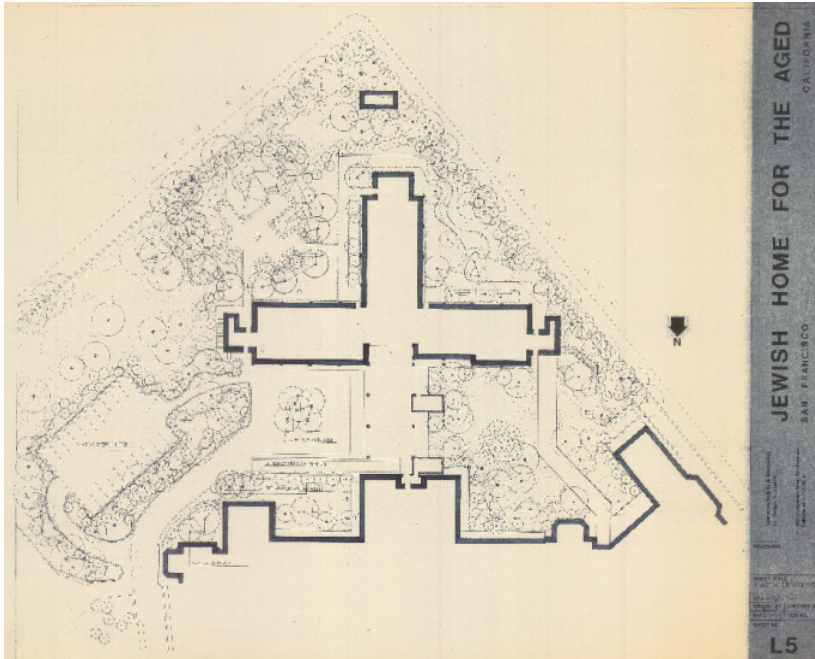
SUNDIAL IN LAWN
VINES IN FENCE



- "UNDISTURBED AREA" →
MEADOW GRASS & WILD FLOWERS AREA

- FLOWERS & SHRUBS

JHSF GARDEN CONSTRUCTION DOCUMENTS
LAWRENCE HALPRIN & ASSOCIATES, 1969



Courtesy of JHSF



G2 GARDEN



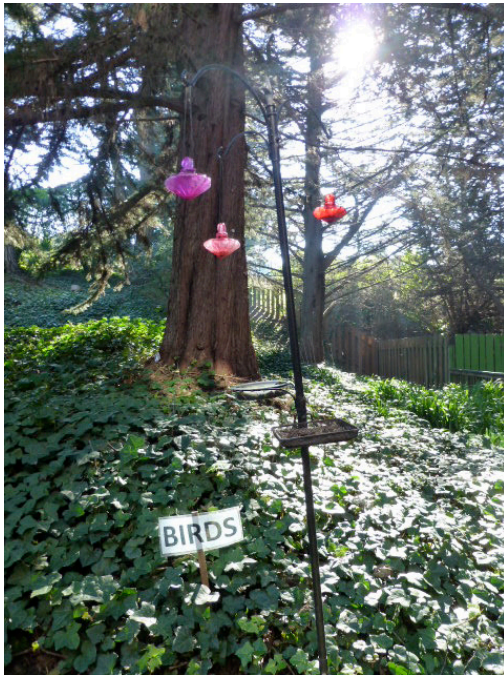
While the garden is out of view from common areas in the building, residents with bedrooms in the south and east wings have views of it from their windows. While views of nature are understood to have benefits to human health and well-being (Ulrich), for users in the garden, having 44 residents on four floors looking at you can be disruptive. The fishbowl effect can be extremely intimidating to residents with dementia seeking privacy in the garden.

Due to its scale, choice of materials, and lack of vegetation, the garden feels more like a small civic plaza than it does a garden. Its planting scheme is extremely simplified and monochromatic, which can be interpreted as uninspired and uninspiring. While the site has ideal southern exposure, there is very limited vegetation. Dense and low hanging conifer trees planted on the south slope block most of the natural light during the day. Many of these trees, some as tall as forty to fifty feet, existed on site prior to the garden's construction and were kept as a part of the planting design in the 1960s. Mostly belonging to the Cupressaceae and Pinaceae families, these trees, cast heavy shadows on the concrete pavement below year-round. This can be extremely hazardous for persons with dementia, who have diminished visual perception and trouble interpreting high contrast lighting, colors, and patterns. There are also a few smaller and sparsely planted trees/shrubs of the Myoporaceae family, primarily *Myoporum laetum*, on the south slope, in addition to three thinned out *Platanus acerifolia*, or London plane trees, planted near the windows outside the east wing. Lastly, *Hedera helix*, or English ivy, covers the ground where concrete paving does not.

The unpruned conifers, unkempt and sprawling English ivy, and gray concrete exaggerate the cold, dark, and damp conditions of the site. Moreover, the garden is monotonous not only in its planting palette, but also in its experiential qualities. It feels completely enclosed and lacks experiences of expanse or relief. While the tree canopy, sunken topography, and adjacent building block the streets and resident units above, they also add to feelings of isolation and confinement.

In more recent years, the garden has undergone modest adaptations spearheaded and funded by staff, in particular, the recreational activities department. Many of these interventions have been incremental, *guerilla* efforts aimed to draw residents into the garden. For example, approximately five years ago, a couple of staff members were responsible for installing colorful





G2 STAFF INTERVENTIONS

hand-painted mailboxes throughout the garden. A few mailboxes were strategically positioned directly outside the doorway to attract residents into the garden. Once outdoors, residents are encouraged to check the mail, an activity that staff hopes they find familiar and engaging. Some of the mailboxes store magazines and books that are meant for residents to browse through and thus stay outdoors longer; a few contain gardening tools, such as gloves and hand shovels. Staff have also installed colorful pinwheels and wind-activated devices in the ground and attached to tree branches above. In addition, bird feeders intended to attract wildlife and signs that are boldly labeled, “TREE,” “SMILE,” “COME HERE,” are posted throughout garden to capture the attention of residents.

In addition to an extensive review of precedents and literature, information gleaned from on-site observations and interviews were invaluable to this thesis. During the summers of 2009 and 2010, I volunteered at the Garden Unit at JHSF, working closely with the G2 residents with dementia. At that time I was completely unaware that my master’s thesis would be focused on the benefits of therapeutic garden design for elderly with dementia and that the Garden Unit would serve as my case study. However, in retrospect, my observations and interactions with residents and staff during that time influenced my thesis topic and content.

Beginning in January 2013, after selecting my thesis topic, I flew down to San Francisco on two separate occasions to conduct on-site observations and one-on-one interviews with staff at JHSF. In total, I interviewed thirteen persons: eight JHSF G2 staff members and five non-JHSF affiliated specialists in geriatrics and dementia. In the interviews with JHSF staff, questions were focused on perceptions and attitudes toward the existing garden and design improvements to benefit the residents with dementia.

Common themes that arose in the interviews were related to residents’ safety, supervision, and accessibility. Numerous staff confirmed that the majority of residents are prohibited from visiting the garden unsupervised. Even if the garden were visible from their workstation or if there were closed circuit cameras and monitors installed (which there are not), staff commented that they would still feel uncomfortable leaving residents in the garden alone due to physical limitations and safety issues. In a more ideal location, i.e. adjacent to, visible, and easily accessible from the recreation and work areas, staff believe they

would still not be able to respond quickly enough to a resident who was left alone outside and accidentally sustained a fall or injury.

The majority of the staff stated that they believe being outside is beneficial to the well-being and quality of life of residents. However, they added that residents rarely use the garden because the majority are non-ambulatory and reliant on someone else to accompany them. Staff feel they are too busy with their own daily responsibilities, none of which mandates that they take residents outside, to escort residents to the garden. Thus, the responsibility or initiative falls on visiting family members or volunteers. During three days of on-site observations between 9am and 3pm, a different resident was observed using the garden each day. Each day the resident was always accompanied by a family member.

Another concern that was frequently raised in the interviews addressed the perceived uninviting condition of the garden. One staff member commented, “there is nothing that attracts them [residents] outside.” Another staff member stated, “there is no reason for them to go outside, there is nowhere to go.” Numerous interviewees agreed that the site feels cold and dark, even to staff. As residents with dementia are typically hypersensitive to light, temperature, and quickly get cold, they often hesitate going outdoors and have to be persuaded by family members or volunteers. In preparation of going outside, escorts or staff frequently have to run to the resident’s bedroom to retrieve an extra jacket or sweater. By the time they return, the resident often changes their mind or loses interest in going outside.

The need for a covered and well-protected area from wind and occasional sun and glare, particularly by the entrance to the garden, was identified in several interviews. One or two staff also raised the importance of “blurring boundaries” to lessen the distinction between indoors and outdoors. Staff noted that a sheltered area by the entrance is especially important for residents with greater physical and psychosocial limitations, who prefer to stay closer to the building or want quicker and easier access back inside. In this protected, transitional space, residents can adjust to any changes, real or perceived, of being outdoors.

Residents’ comfort was a common concern that came up in interviews. Staff requested supportive infrastructure, such as ADA accessible entryways and



PRECEDENT STUDIES & LITERARY REVIEW

ON-SITE OBSERVATIONS

INTERVIEWS

13 total



JHSF [G2 GARDEN UNIT AFFILIATED]

- 1 RECREATIONAL PROGRAMS DIRECTOR
- 2 RECREATIONAL ACTIVITIES COORDINATORS
- 2 RECREATIONAL THERAPISTS
- 1 VOLUNTEER SERVICES COORDINATOR
- 1 CERTIFIED NURSING ASSISTANTS
- 1 VOLUNTEER

OTHER [NON-JHSF AFFILIATED]

- 3 OCCUPATIONAL THERAPISTS (GERIATRICS)
- 1 SOCIAL WORKER
- 1 NEUROLOGIST

EMERGING THEMES

- SAFETY
- ACCESSIBILITY
- SUPERVISION
- STAFFING
- STIMULI
- ENGAGEMENT
- SIMPLE PLEASURES
- NATURE
- TRANSITION INDOORS -> OUTDOORS
- BLUR BOUNDARIES
- SHELTER
- WARMTH
- COMFORT
- MEMORIES
- MUSIC
- SMELL
- PURPOSEFUL WANDERING
- QUALITY OF LIFE
- SENSE OF SELF
- FAMILY
- HOME

pathways, resting areas, and handrails, for both the safety and comfort of the residents. The importance of offering options and variety for residents with different functioning levels, interests, and needs was also raised. Choices, in the form of paths (e.g. varying levels of difficulty), spaces (e.g. social vs. private), and activities (e.g. passive vs. programmed), not only engages residents, but also provides a sense of empowerment and agency. As many of the G2 residents with dementia wander and pace due to agitation, boredom, or disturbed sleep patterns, staff noted the need for paths and loops that promote purposeful wandering and reduce negative behaviors. Many staff expressed a strong dislike for the geometric form in the garden, preferring more curvilinear, looping pathways on which residents can walk, or if in wheelchairs, be pushed around.

There were additional concerns raised about the conifers on the south slope and the shadows they cast. While a few staff noted the value and age of these trees and were hesitant to suggest cutting them down completely, they acknowledged that more natural light and warmth in the garden are critical to attract residents outdoors. Many staff revealed dislike for the ivy and current planting plan, and all of the staff unanimously expressed a strong desire for more plants and flowers in the garden. There was general agreement about the pleasurable benefits and appeal of plants, especially in engaging residents with dementia.

Lastly and most importantly, all of the staff interviewed addressed the importance of stimuli regulation for residents with dementia. They all urged the need for more visual sensory stimulation in the garden, but equally important, stimulation via sound, smell, and touch. In particular, many staff mentioned the perceived calming effects of water. A desire for a water feature in the garden and providing residents with opportunities to see, touch, and hear water came up in several interviews. However, multiple staff also raised concerns about confusing and agitating residents with overstimulation and too many choices, stressing the importance of simplicity and non-challenging elements and design forms. One staff pointed out the joy and power of “simple pleasures,” and how simple activities such looking at birds or clouds, smelling the aromatic fragrance of flowers, hearing trickling water or leaves flutter in the wind, and putting one’s fingers in soil, can have a powerfully positive impact on residents with dementia.

Conclusions

Design Proposal

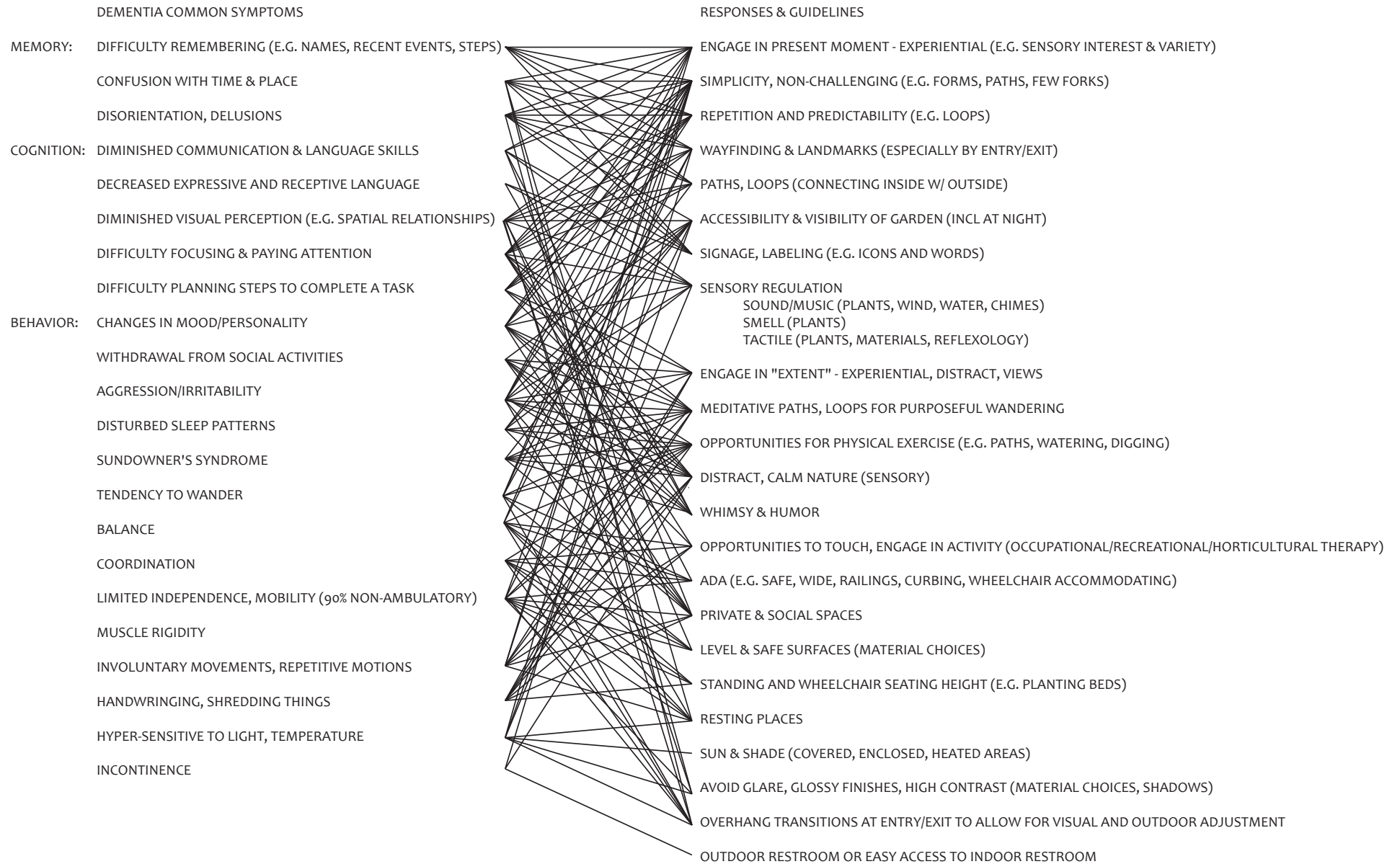
Dementia is multifaceted, complex, and difficult to understand; it is even more challenging to design for. At present, the G2 garden does not support its residents with dementia. In light of the impending changes and physical redevelopment occurring at JHSF, the garden is now, more than ever, an invaluable resource to the Garden Unit, its residents, their families, and staff. It is an asset to the JHSF community, laden with opportunities that can reflect the goals and strategic definition set forth in the administration's visioning initiative. It should be more than a garden, but a place of respite and relaxation—a therapeutic space that reduces stress and improves the well-being of its residents and their caregivers. The proposed design aims to nurture and reflect the humanity and identity of the Garden Unit and its residents.

This section introduces five principal design recommendations for the G2 garden that provide pleasurable and therapeutic benefits to its users. While every therapeutic garden should be analyzed on a case-by-case scenario, as each site's user group and physical and social conditions vary, the overarching principles presented in the attached guidelines are intended to inform most dementia garden designs. The proposed design for the G2 garden provides choices that accommodate the different interests and functioning levels, physical and psychosocial, of its residents. Choice begins with circulation, the first design recommendation. The proposal for the new garden incorporates two primary pathways that weave through the site, fostering movement. The first path cuts through the center of the garden, where the existing concrete geometric form currently stands (to be removed in the re-design). The second path extends around the outer edge of the existing form's perimeter, at the base of the south slope. Both paths are curvilinear, ADA accessible, and designed with handrails. While 80 percent of the G2 residents are non-ambulatory, the handrails provide a sense of support and security, real and perceived. Each pathway offers a diverse set of experiences. Depending on their interests and abilities, residents can choose which path they take with their caregivers.

It isn't nature I'm after. It's humanity in nature, in culture, related all together.

—Lawrence Halprin

DEMENTIA PLAQUES AND TANGLES

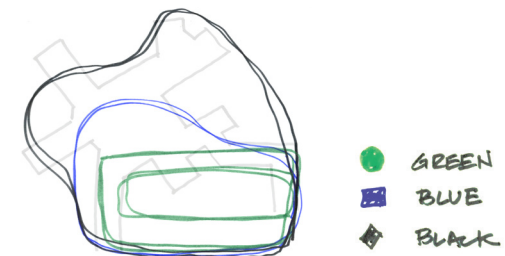
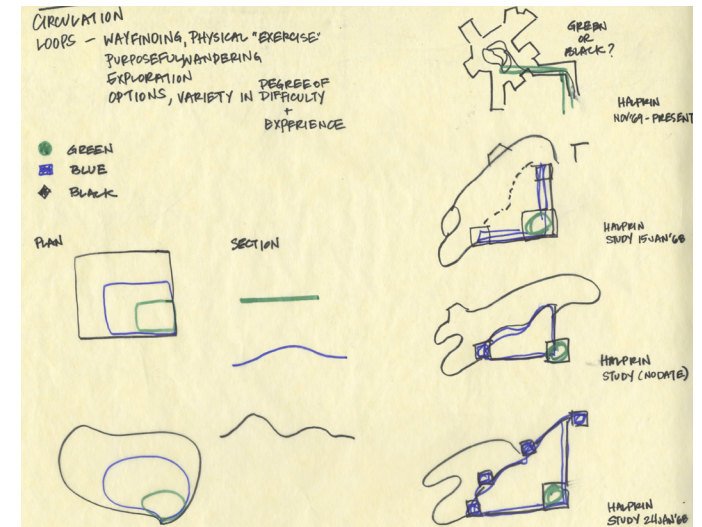


Conceptually, the circulation system is organized like a ski slope, offering a beginner's *green circle path*, an intermediate *blue square* path, and finally, an advanced *black diamond path* for higher functioning residents. The green circle is less a path and more of an open area that is immediately adjacent to the building and accessible to residents who may prefer not to venture too far from the building. The blue square and black diamond paths start from the G2 entryway of the building, extend out into the garden, and then circle back to the building. The black diamond route traverses the furthest distance. The set of paths are designed as concentric loops with few forks, to avoid confusion or residents having difficulty finding their way back to the building. The circuit is also therapeutic, accommodating residents' tendencies to pace, by providing controlled paths for safe and purposeful wandering.

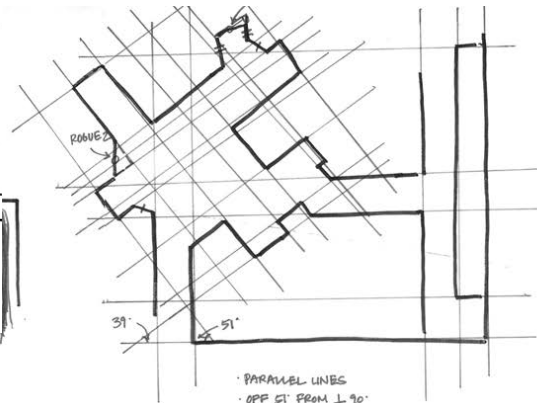
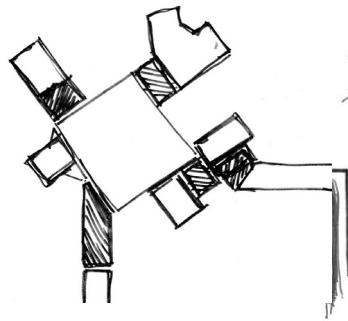
The new paths are designed to integrate the interior of the building and merge the indoors with the outdoors. The design proposes a path that continues into the building through an existing doorway on the west wing of the G2 unit that is currently a locked emergency exit. This door acts a dead end that can frustrate and confuse residents. By unlocking this door and making it accessible to residents, it serves as an alternative entryway, while creating a longer circuit for residents to wander in and out of the garden in one continuous loop. It also allows staff to better supervise pacing residents as they wander through the building in front of the nursing station. In my proposal, the circulation system does not extend around the exterior of the Goodman building as they did in Halprin's earlier iterations. Concerns over the safety and supervision of residents restrict the garden to its current boundaries. However, if proper security measures are taken in the future, the garden could be expanded as part of a phasing plan.

The proposed design aims to provide more variety in the garden's outdoor spaces that offer multiple experiential qualities beneficial to residents with dementia. The second principal feature is a paved rectilinear patio directly adjacent to the G2 unit that spans the entire east wing. The patio is set back approximately ten feet from the face of the building and buffered by planting beds, as to offer privacy and not disturb residents living in the adjacent units. The patio is partially covered with an overhead structure that provides protection from outdoor elements that currently inhibit residents from going outside. The patio is also intended to blur the divide between the indoors and outdoors,

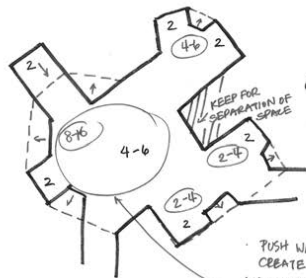
DIAGRAMMATIC STUDIES OF CIRCULATION



DIAGRAMMATIC STUDIES OF FORM AND MOVEMENT

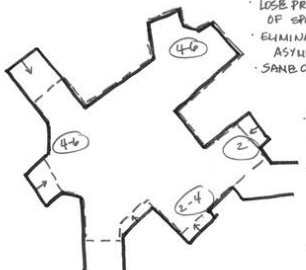


- PARALLEL LINES
- OFF 51' FROM L 90° BLDG AXIS
- FOR PRIVACY FROM BLDG?
- ADIT BEAK- AREA AXIAL GEOMETRY?
- MOVEMENT, SEQUENCING?
- REMOVE ROGUE LINES, EXTEND PARALLEL LINES



62:44 RESIDENTS
MAX ACCOMMODATIONS
18 PPL

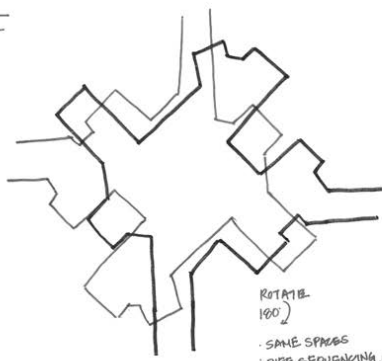
- PUSH WAVES OUT TO CREATE LARGER SPACES, ACCOMMODATING ~30 PPL



- LOSE PRIVACY, SEPARATION OF SPACES
- ELIMINATES COMPLEXITY; SIMPLIFY ASYMMETRICAL SYMMETRY
- SAME CIRCULATION

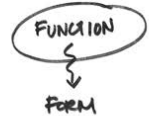
- PUSH IN ~18 PPL

- LOSE PRIVACY, SEPARATION OF SPACES
- TOO CRAMPED
- NO HIERARCHY
- SAME CIRCULATION

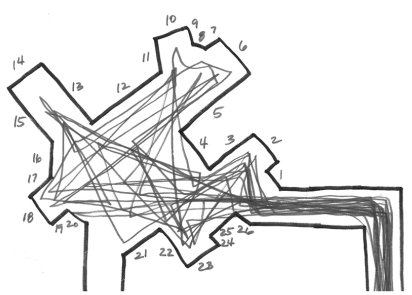


ROTATE 180°

- SAME SPACES
- DIFF SEQUENCING, ORIENTATION
- NO BIG CHANGE TO EXPERIENCE



- REDUCE LINES? (SIMPLE IS BETTER ESP FOR THIS POPULATION)
- MAXIMIZE SPACES (WIDEN FOR WHEELCHAIRS)
- BUT KEEP PRIVATE AREAS
- FORM TOO RIGID, INFLEXIBLE
- CIRCULATION, ACCESSIBILITY
- MOVEMENT
- DIVERSITY OF EXPERIENCE



acting as a transitional space where residents can adjust to being outside. Here, if needed, caregivers can assist residents feel more comfortable by putting a warmer jacket on them or covering them with a blanket.

The patio functions as the primary social space that can accommodate multiple activities, including special occasions such as birthday parties and picnics, and more day-to-day activities such as horticultural, occupational, and recreational therapy. The intention is for many, if not all of the activities currently held indoors in the recreation room, to also function in this outdoor area. However, this is more than a design challenge; it requires the support and efforts of staff and caregivers to escort residents and lead activities outdoors. Programming held on the patio enables residents to observe and engage with nature while, for example, painting outdoors, *en plein air*, or participating in a drum circle.

Given the extensive research showing the therapeutic benefits of horticultural therapy for elderly residents with dementia, the outdoor patio is equipped with planting boxes and a variety of plants that engage residents. These boxes are designed to support residents in wheelchairs (e.g. of an appropriate height and cantilevered) so that they can easily participate in HT, with the assistance of staff or caregivers, if necessary. The boxes are also mounted on wheels (that lock in place), so that they can be moved and the space can be configured as needed. The patio also has movable café tables and chairs, similar to the existing sets currently in the garden, where residents and caregivers can sit, rest, read, enjoy a meal, listen to music, talk, or simply take in the view of the garden. The patio is also spacious enough to accommodate users seeking to be alone and away from groups, but who may not want to leave the building. The patio extends away from the building to a small expanse of lawn buffering its edge. This green lawn provides a softer and welcome contrast to the gray concrete paving currently in the middle of the site.

In addition to the patio, there are smaller and more intimate spaces throughout the garden, providing privacy away from the building. These spaces are designed for two to three people each and can accommodate residents in wheelchairs. Located at various intervals along the paths, they also serve as rest areas for residents and caregivers wandering through the garden, wishing to pause and sit. A particularly unique feature of the proposed design is that the majority of these rest areas are the existing nooks designed by Halprin. In the

proposed design, the locations, seating benches, and concrete retaining walls of these nooks are preserved as seating areas, but relinked with the new curvilinear paths. The majority of these nooks are located along the outer edge of the black diamond path, facing the center of the garden towards the building.

In addition to the circulation system and covered patio, there are three additional interventions in the proposed design that dramatically impact the experience and scale of the garden. The third element is an additional covered area, or pagoda, on the south side of the garden, accessible from the black diamond path. The pagoda is located opposite of and away from the patio, but positioned so that the two covered structures face each other. This positioning creates an elegant juxtaposition of the two *rooms* and a hierarchy of space and scale. In comparison to the patio, the pagoda is much smaller, approximately ten feet by twenty feet. It is intended to offer privacy and respite for smaller groups who wish to be away from the building and patio, but perhaps still have them in their view.

The pagoda is enclosed with safety railings, because it is perched approximately a foot above the fourth principal design element of the garden—a therapeutic water feature. This water feature is a response to the wishes of the G2 staff and the extensive amount of research supporting the healing effects of water. It replaces the static geometry of the existing paved form and is intended to serve as the principal focal element in the new garden. What is unique about the water feature is that it sensibly re-uses some of the old concrete from the existing design and repurposes it for the new design. The feature is composed of a wide and shallow pool with a series of rectilinear concrete blocks on one side. These blocks are stacked on the pool's western edge, creating a series of overlapping planes with water streaming over them and collecting in the shallow, sunken pool below. Together, the rectilinear blocks and cascading water create a playful sculptural element that honors the hallmarks of Halprin's designs—water and geometry.

The water sculpture is especially compelling because it serves as an interactive and therapeutic element for the Garden Unit residents. The design of the water cascading over the blocks, stacked two and a half to three feet high, encourages residents to touch the fountain as they pass by in wheelchairs or on foot. Located directly adjacent to the black diamond path, the positioning of the

fountain enables residents in wheelchairs to reach out and easily put their fingers into the water gently streaming over the concrete. The water feature, including the pool and fountain, is the largest and most compelling element on site, intended to accommodate as many users as possible. Both the blue square and black diamond paths run along the sides of the pool, making the water accessible to residents with different functioning levels. Beyond its tactile properties, the water feature also has engaging and soothing visual and audible qualities, which residents can see and hear from as far as the patio and the green circle area. A section of the pool is also designed as a fishpond, providing added enjoyment for residents, their caregivers, and staff. As water is widely accepted as having multiple therapeutic benefits for people, particularly for elderly with impaired cognitive and psychosocial skills, the fountain aims to draw G2 residents into the garden. It gives them a reason to go outside.

The fifth and final recommendation for the garden is an improved planting palette. Decisions to retain or remove individual plantings and planting masses have been based on whether or not the current scheme attracts residents into the garden—it does not. This thesis can be thought of as a social restoration experiment more than an ecological one. Its paramount goal is to provide a restorative space for the G2 residents and their caregivers. To restore the site, the new design completely removes the English ivy from the garden. The majority of conifers on the south slope are retained to maintain enclosure and privacy from the streets, but pruned back. Responding to the requests of numerous G2 staff, a few trees planted lower on the slope, closer to the southwest side are also removed to let more light and warmth into the site.

The proposed conceptual planting plan is not entirely *new*. It is inspired by Halprin's earlier schematic drawings that unveil his design process and intent for the garden. These studies reveal Halprin's attentiveness to the character of plants, but not specific plant species. Similarly, the recommendations that follow do not attempt to dictate specific plant species for the site. Instead, they offer suggestions for planting masses and variety that create distinct spatial forms and abstract various experiential and sensory qualities. While simply looking at and being around plants, flowers, and color has been shown to bring joy and pleasure to most people, careful thought was given to the stimuli and therapeutic benefits plants impart to elderly with dementia.

There are multiple areas throughout the garden that aim to engage residents with plants. Directly outside the windows of the residents' units on the south and east wings are planting beds. These beds contain a variety of shrubs and flowers that provide visual delight and privacy to the residents living in these units and on the three floors above. They also act as buffers for the residents in the garden, reducing the fishbowl effect.

In addition to these planting beds and the horticultural therapy planter boxes on the patio, there are various sensory gardens planted throughout the site intended to offer stimuli regulation for the G2 residents with dementia. Some of these masses are designed as separate and distinct spaces, while others are a blending of multiple sensory and spatial qualities, creating a more cohesive garden. Many of these sensory gardens are planted adjacent to and on both sides of pathways and seating areas, to integrate the infrastructure and unify the site. While these gardens are aesthetic and pleasurable to look at, move through, and be in, it is also anticipated that many residents may be unaware of the garden's effects on them. The gardens may provoke a positive or delayed response in residents that they don't necessarily sense or realize.

The first sensory garden is an aromatic garden containing fragrant flowers, shrubs, and herbs, such as rosemary and lavender—two plants that do well and are extremely popular in Northern California. Smell is understood to be a powerful sense that can trigger memories tracing back to a person's childhood or formative years. In addition to potentially stimulating memories and conversations, this garden can also provide aromatic therapy and have a calming effect on residents with dementia.

A second garden focuses on visual stimulation, consisting of a diverse and colorful palette of perennials, plants, and trees. Not only do plants in this garden share visual interest with respect to color, but they also have compelling shapes, patterns, and textural characteristics, collectively or planted alone. Some of these qualities may be subtler than others, but all are equally stimulating and engaging to the eye. Plants that are dynamic in nature as well as symbolic—e.g. deciduous trees whose leaves fall or turn color with the changing of seasons, flowering trees that indicate the passing of time, tall grasses that move and rustle in the wind, or fruiting trees that may represent renewal—can also capture the attention of residents and provide psychological comfort.

While all of the plants on site should be non-toxic, a third garden intentionally grows edible plants. Its productivity, however, is not of paramount importance. There are many reasons to include a vegetable garden at a long-term care facility, one of which is to create a familiar and nurturing homelike environment. Another goal, similar to the objectives that underpin horticultural therapy, is to offer recreational and occupational activities to residents with dementia in a supportive outdoor environment. Caring for a productive garden not only encourages interaction with plants and nature outdoors, but it also supports social interaction among residents, their caregivers, and staff, all of which have positive benefits to health and well-being. One goal is to sensibly integrate a variety of plants into the site, so that it feels more like an actual garden. Equally important is the implementation of an out-of-doors activities curriculum that promotes interaction with plants and nature, such as horticultural therapy, so that the garden becomes fully integrated into the daily life of the Garden Unit.

We are a family of people who move through this landscape, responding along with our materials to a life situation.

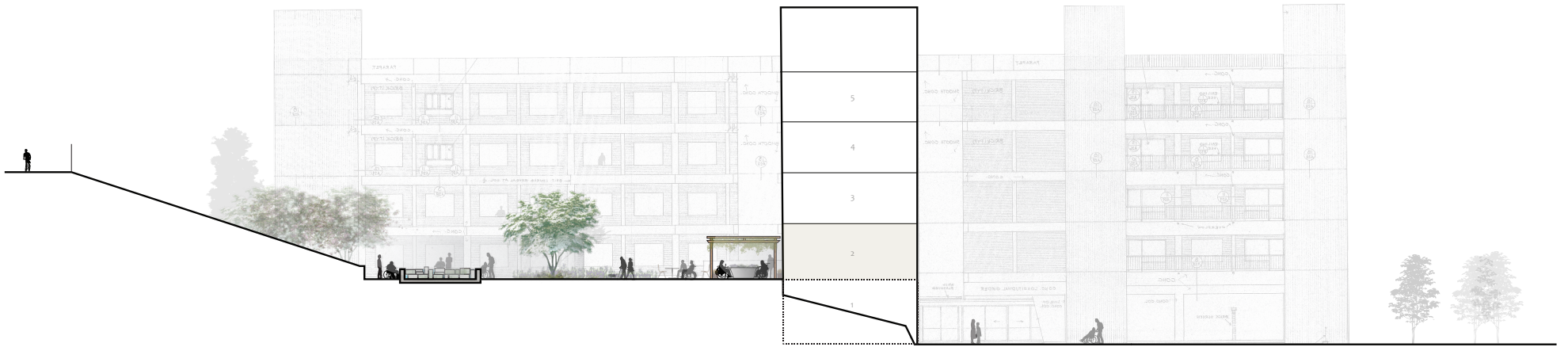
—Lawrence Halprin,
from *Parades and Changes*,
Notebook Drawing 1965



CATALOG OF MATERIALS



CONCEPTUAL PERSPECTIVES - BEFORE AND AFTER



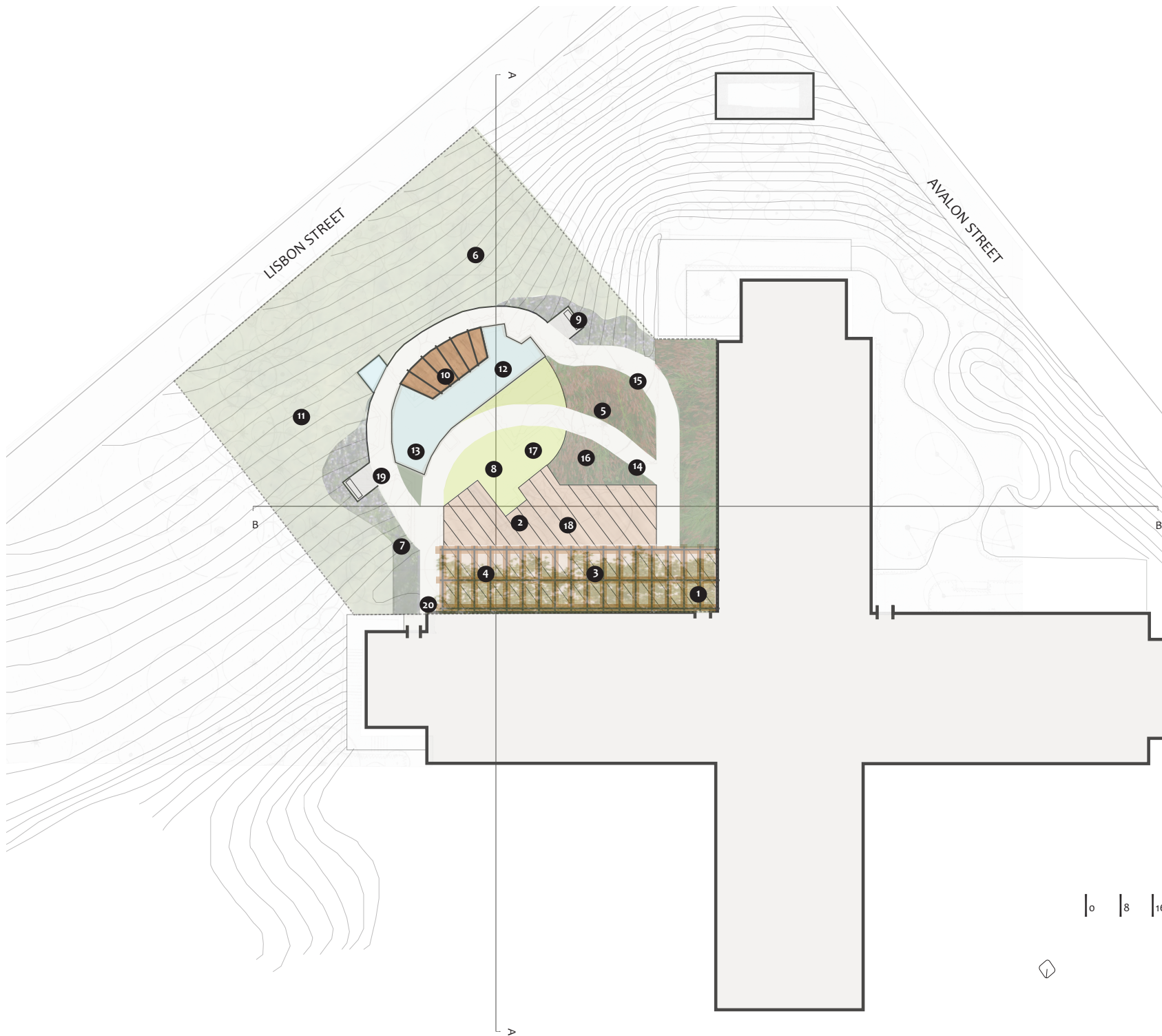
ELEVATION LOOKING WEST



ELEVATION LOOKING NORTH

PLAN

- | | | | |
|----|---|----|---------------------------|
| 1 | FRONT DOOR | 11 | MUIR WOODLAND |
| 2 | TWIN PEAKS PATIO | 12 | LARRY'S FOUNTAIN |
| 3 | ACTIVITIES AREA WITH COVERED TRELLIS | 13 | FISH POND |
| 4 | HORTICULTURAL & OCCUPATIONAL THERAPY AREA | 14 | BLUE SQUARE LOOP |
| 5 | AROMATIC HERB GARDEN | 15 | BLACK DIAMOND LOOP |
| 6 | NATIVE GRASSES & SHRUB GARDEN | 16 | BUTTERFLY HABITAT |
| 7 | SUNDIAL | 17 | BIRD BATH |
| 8 | PLAY LAWN | 18 | DRUM CIRCLE COURT |
| 9 | CHERRY ORCHARD | 19 | RESTING ROOM WITH BENCHES |
| 10 | GOLDEN GATE PAVILLION | 20 | BACK DOOR |



0 | 8 | 16 | 32'



Reflections

The proposed design for the Garden Unit garden refocuses attention on holistic care in long-term geriatrics facilities, and in particular, responds to the symptoms of elderly residents with dementia. Its primary goal is to provide a contemporary design that meets the needs of its contemporary users. However, it also attempts to balance the process, character, and intent behind the original design, to create a more rich and engaging environment that all users can benefit from. The proposed design seeks to respect the contribution of all elements, not just the original design, but also changes made by JHSF staff in subsequent years. Its resulting character and form have been informed by listening to and learning from the site and all of its users. Approaching this project through a lens of historic preservation has only added layers of complexity, interest, and intrigue to the design.

We are facing a period ahead when the very essence of our lives together will rest on how we deal with change in a positive and creative way...Change is going to be. How do we work with it?

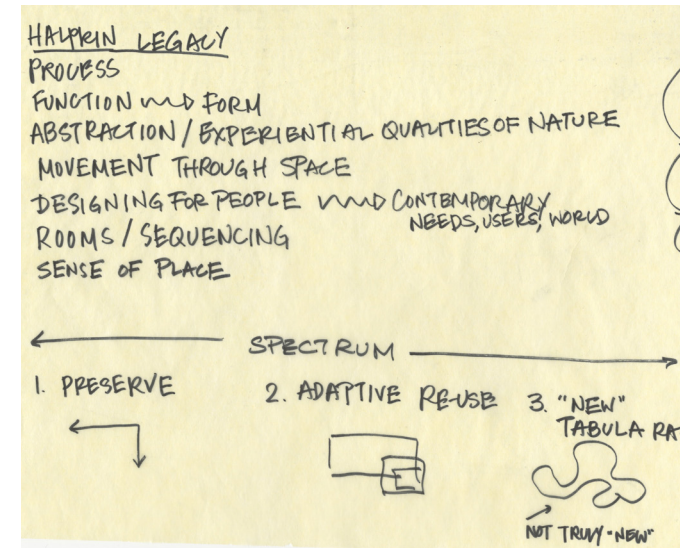
—Lawrence Halprin, *The RSVP Cycles*

This design proposal makes no claim or attempt to completely preserve what currently exists on the site. While some may argue for the classic case of historic preservation, given the reputation and legacy of the original designer, doing nothing or simply maintaining the site are not viable options. The existing site does not work. There are no users. The proposed design also does not attempt to wipe the site's slate clean, a la *tabula rasa*. Many of the "new" recommendations are based on "old" ideas originally put forward by Halprin in his earlier conceptual drawings that, for reasons unknown, did not make it on the current site. What the design does is span the spectrum of historic preservation to bridge values of preservation, adaptive re-use, and *tabula rasa*. The result is in an innovative, creative, and responsive dialogue that permeates throughout the site. Where appropriate, the proposed design is empathetic to the original design, taking some of its intentions, but integrating it with contemporary sensibility to create a new choreography of experiential and spatial qualities that respond to the needs of the users.

This project is not complete and there is much more work to be done. In the upcoming months during the summer and fall of 2013, more detailed conceptual and schematic graphic renderings of the proposed design will be completed and presented to the G2 staff and administration at JHSF. In particular, music therapy will be further explored as a specific programmatic element that can be harmoniously integrated into the design. As a design thesis that engages a case

study approach, what is unique to this project and essential to its success is that it remains flexible and open to change. The design welcomes dialogue that continuously reassesses the changing needs of its users and how we define care for elderly, particularly those with dementia. The intent is to generate conversation and new ideas among designers, staff, and administration at and outside of JHSF. It is imperative that we realign the goals of geriatric healthcare and reprioritize our values of holistic care.

As informed designers, we can facilitate this dialogue and advocate the role that the out-of-doors environment plays in the spectrum of care for elderly. We are in a unique position from where we can affect change. We serve not only as stewards of the landscape, but also stand on the front line as caregivers, demanding more than treatment, but the highest quality of care for our elderly. How we treat and care for our elderly and others who are most in need is a reflection of our humanity. We must not forget that.



OUR GARDEN

SPRING

THE BREEZE AND THE TREES.
SAY GOODBYE TO ALL THAT RAIN.
MAKES THE FLOWERS GROW.
GREEN LEAVES. RED, RED, RED!
HOW COULD YOU NOT COUNT ON THE FLOWERS?
YOU HAVE THEM. RIGHT THERE. DAISIES.
WHATEVER WE DO IS NICE.
MY HOME SWEET HOME.

SPEAK TO A GARDENER. HE'LL DO NICE STUFF.
SAVE IT FOR TOMORROW.
YOU HAVE TO HAVE ATTAINMENTS TO BRING IN THE COLORS.
GOD BLESS AMERICA. RED, WHITE AND BLUE.
GROW FLOWERS. IT ISN'T EASY TO GROW NICE ONES.
FERTILIZE THE SOIL.
SKUNKS! POWDER HIM UP AND RUN LIKE HELL.
WHAT COMES, WILL COME.

RACCOONS, A SNAKE, BUGS, DOGS, CATS.
A BEETLE IN THE FLOWER POT IS NICE.
WATER! YOU CAN HAVE IT ALL THE TIME.
USE IT ACCORDINGLY.
YOU DON'T WANT TO OVERDO IT CAUSE YOU'LL DROWN IT.

WE WANT TO LEAVE IT FOR YOU, SWEETHEART.
YOU CAN'T GROW TWICE THE SAME PEACH.
LET IT DRY A LITTLE. GIVE IT STRENGTH. CHAI!
STARS, SUN, CHILDREN.
WRITE IT DOWN. GET IT OUT! PLANT A TREE.
MY MOTHER WILL HELP ME.

WRITTEN ON MARCH 11, 2011
BY G2 RESIDENTS "GARDEN TASK FORCE"

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