

architecture must die:
placing cemeteries within the flow of lived time

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Abstract

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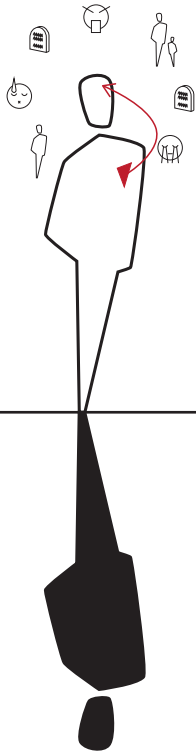
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Burial spaces are among the earliest works of architecture. Varying by time period and culture, they represent a society's sense of place and their values as a community. Historically, cemeteries in the United States have been an active part in defining social spaces. The development of rural cemeteries, in the early 1800s, created large, open spaces that became havens for people living in industrial cities. Built at a time when there were no public parks or museums, people flocked to them as places for picnics, biking, and festivals. However, the independent establishment of museums, libraries, and other public institutions led to the decline of the cemetery type as a social, public space, becoming solely for the use of the dead. Once on the outskirts of towns, the growth of cities now places cemeteries in highly populated areas, where they have become both cut off from the greater urban fabric but also absorbed by modern urban sprawl. Today, our continued impulse to memorialize ourselves is reflected by green burials and the spreading of ashes. Modern burial trends and an increase in families moving further from their ancestral homes have resulted in the permanence of death left unevicted. Though cemeteries still retain a spiritual importance, their social value requires our interaction with them. This thesis argues that a cemetery's true audience is the living individual and proposes the creation of spaces within local cemeteries that allow an individual to mourn unobscured to burial, removing the limitations on location and letting anyone mourn anytime and anywhere. Finding comfort in a collective history, local cemeteries are used as a forgotten infrastructure, reconnecting people to places within their neighborhoods and promoting the continued spiritual importance of cemeteries.

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Master of Architecture Thesis

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CHAPTER ONE

Introduction

Life and death are overlapping moments, each using the other as an opportunity for creation or destruction. The natural cycle is a fluid movement of growing organisms and ever-evolving forms of resources; the death of one becomes the life of another. But humanity tends to reject this reality, preferring to ignore these instances of death and design our environment to prevent such incursions. Nature, however, is not beholden to the whims of man and eventually all living things will experience the effects of time.

Though architecture typically avoids the life cycle to which it is subject, human cultures have always revolved around death. Burial spaces are among the earliest works of architecture. Varying by time period and culture, they represent a society's sense of place and their values as a community. In the United States, there are more than 150,000 separate burial grounds. (Eggener, 37) Originally, many of them were located outside of towns, but, today, they exist within greater urban areas. Like the changes that have taken place around them, cemeteries have moved





from social, cultural institutions to sites solely for the dead. Today, they are becoming a form of forgotten infrastructure as they run out of room for new burials and modern burial trends embrace more natural locations; cemeteries are in place but out of time.

Traditional cemeteries, relegated to an outdated form, should be allowed to return to a natural cycle and, like other architecture, experience the natural effects of time. It could be said that the advent of modern burial trends means we should let old cemeteries fall away to ruin, taking the land and building more useful architecture. Or, what this thesis is proposing, is that cemeteries hold a collective history shared by all people and through our social interaction with them we bolster their spiritual importance.

The primary purpose of burial architecture is to give people a physical place to remain in social contact with their departed. This thesis argues that a cemetery's true audience is therefore the living individual - the mourner. Given that modern burial trends and human mobility are

resulting in the permanence of death left unevidenced, how can we remain in social contact with those who have died? This thesis proposes that cemeteries become more inclusive of the living individual, fully embracing the many nuances of grief, and creating spaces within their walls that allow someone to mourn un beholden to burial, removing the limitations on location and letting anyone mourn anytime and anywhere.

The architecture of cemeteries can embrace both an individual's ever-changing journey through grief and the collective history of generations. Through a series of interventions, this thesis demonstrates that a site based on mourning can broaden our understanding of what grief means. It proposes that all cemeteries change how they address their neighborhoods, furthering their own development as sites of collective history and spiritual growth, and letting them return to being in place and in time.



Figure 2. 1984 Winter Olympics Village,
Sarajevo, Bosnia & Herzegovina

CHAPTER TWO

Architecture Ages

Nothing can avoid the effects of time. Living or inanimate, all things are subject to change. When measured in relation to the aging of our bodies, architecture is mistakenly assumed to be permanent, forgetting that our scale of perception is limited. The slower aging process of the built environment instills a false sense of durability and the assumption that a building's function and utility will always remain.

Buildings are thought to have “life”, functioning as though they are living organisms. Stephen Cairns and Jane M Jacobs observe that we use organic metaphors to describe buildings: structures are bones, exterior walls are skins that can breathe, windows and doors are apertures for sight, corridors and stairs act as circulation, and ornamental additions are cosmetic layers (11). In their book, *Buildings Must Die*, they observe how designers describe spaces as flowing, open or cellular, and bending. The act of design demands that architects imagine their built works sitting in pristine conditions, forever meeting their intended goals. This idea neglects the inevitable cycle of nature and changing human perceptions of

what is good and needed. Architecture, whether for better or worse, must eventually experience the processes of wasting and ultimately death.

Cairns and Jacobs observe that the terms decay, obsolescence, and ruin are typically regarded as negative conditions that we prefer to disassociate with our surroundings. These stages of aging are to be avoided, cleaned up, and hidden from sight. The aim of architecture is to design structures to avoid these processes and last forever. As Cairns and Jacobs argue, these are natural states that are needed in order to understand the full life cycle of building. This thesis argues that architecture must die, if it is to live; that is, it must engage with and respond to a building's eventual end.



Figure 3. Side of Building, Bryan, Texas

Aging with Decay

The architectural ruin has often been regarded with a romantic fascination. Old, decaying structures show the passage of time, inspiring people to imagine what once was and to envision the future. The process of decay, or deterioration of the material state, raises questions about our own sense of fragility and helps to inform our understanding of the human condition and enhance its experience. This natural cycle of rotting and decay is a constant renewal of life reminding us of our own brief existence.

Architects work hard to prevent the effects of nature from affecting their buildings. The careful selection of materials and of assembly methods seek to ensure that none of the forces of nature can breach the exterior. However, there is an innate life span to all things, including building materials, that tends to be ignored. Historic preservation can extend the time frame by attempting to restore a building as close to its original condition. A structure can be valued for its age but then not allowed to die naturally, by interacting with the atmosphere and experiencing the slow degradation of time.

In *Wasting Away* (1990), Kevin Lynch writes of the various scales of waste that buildings are subject to. Rather than lamenting this decay, he suggests living alongside this “tragic and marvelous” process. Lynch was fascinated by the scientific research of Britain’s Building Research Station where they studied weather-induced decay of buildings. In viewing decay as a defect and a failure of architecture, the research of this building science was in line with architectural practice. However, their reports also noted intriguing aesthetic effects, particularly in regard to natural growths like molds that they argued had “mellow and pleasing” effects. The acknowledgment that decay can be as life-giving as it is life-taking opens up a broader range of aesthetic choices for architecture.



Figure 4. Coal fired Power Plant

Aging from Obsolescence

Architecture is a product, like all designed objects. Its value is beholden to technology, taste, and fashion but most of all to a commercial market. Where the profession of architecture views itself as a creative field, those in politics and economics see architecture as real estate. A spatialized capital that flows through cycles of investment and disinvestment based mainly on how well a building operates with respect to its location and use. In *Obsolescence: Notes towards a History*, Daniel Abramson notes how the term obsolescence did not become associated with the built environment until the early twentieth century. “Buildings were subject to evaluative criteria that determined they had reached, if not the end of their material life, then certainly the end of their ‘commercial life.’” (Cairns and Jacobs, 114)

While built forms for industry and infrastructure are more typically accepted as obsolete, all buildings are subject to the unpredictability of fashion. Utilitarian buildings can quickly become obsolete when their intended use is forgotten or they are replaced by new and more modern

standards of technology. Unlike smaller designed objects, architecture is large and imposing and is not easily disposed of. Buildings are expensive to modify or to tear down, and while they may enter back into the cycle of value, they may also be suspended in a state of worthlessness. When obsolete buildings stay in the urban landscape, those who live in their presence are obliged to tolerate them. Though obsolescence presents an opportunity for those in the architectural profession, some architects have attempted to curb “capitalism’s power of creative destruction” by designing open floor plans that allow future users to modify spaces to meet their needs. (Cairn and Jacobs, 113) This goal of flexibility engages regeneration as a design principle in an attempt to cope with being in place but out of time.



Figure 5. House, Quimperle, France

Aging into Ruin

The deterioration of the physical and the loss of the functional can produce the ruin in architecture. These abandoned spaces are devoid of orderly functions prescribed by society. But as a result, they can be reclaimed by nature, released from the control of human purpose. While used in science fiction as places of terror and degeneracy; ruins can also serve as places of play and fantasy. Children and adults are attracted to them as an escape from the formality of urban development. Offering an alluring mix of freedom and danger, the ruin expresses the degradation of time but can also make possible the reconstruction of time through imagination and a detachment to the world outside.

Architecture that has been left to waste away is never “empty” space but is in fact filled with an abundance of materials that, being spared demolition, have been allowed to undergo the “injuries of time.” (Ruskin) Broken and stained, they stand against time and in time as “finely calibrated artifacts of the struggle between architectural agency and nature’s agency.” (Cairn and Jacobs, 174) Either from abandonment or a slow decline,

ruination is one stage in the normal process of material things to nature. Kevin Lynch observes that small or large, patterns of architectural waste can be seen across all spectrums: from buildings and town sites to lot lines and old right of ways. (Lynch, 152)

Embodying the life-giving forces of decay, ruins can act as sources of inspiration. Where some use ruins as an opportunity for recreational trespassing, others study them for their social value. Tim Edensor examines industrial ruins in the hope that they can “be used to critique ways in which urban space is produced and reproduced.” (qtd. in Cairn and Jacobs, 184) Seen in juxtaposition to the highly regulated, programmed spaces of commercial development, dilapidated buildings offer unscripted spaces for the adventurous and innovative; becoming homes for squatters or displaced animals, and sites for alternative uses and subcultures, and a continual blurring of informal uses.

Chapter Summary

Built works, like all natural things, undergo an aging process that includes both deterioration due to the natural forces of the environment and the loss of value through human interaction. Yet architects continue to design and construct buildings as though their initial condition will continue forever. As a creative field, architecture must take a broader view and see the design potential in acknowledging that life and death are overlapping moments rather than separate instances.



CHAPTER THREE

Cemeteries

Figure 6. Burial Mounds, Korea, 7th Century

Burial places are among the earliest works of human architecture; varying by time period and culture they represent a society's sense of their place in time and values as a community. While the earliest known human burial was over 100,000 years ago, the act of burying human remains in the ground was not common until 10,000 years ago with the rise of the earliest cities. Wanting to keep bodies close by either for religious beliefs or away from wild animals, most burials took place in pits beneath the floor of one's own home. (Eggener, 11)

As religious beliefs in the afterlife grew, burial customs became as much an act to serve the dead as the living. No longer were caves and pits appropriate places to house a future soul; more elaborate places were needed that mirrored the value of an individual in this life and the next. Keith Eggener observes that the rise of earthen burial and entombment gave death an architectural structure, giving cultures a physical place to remain in social contact with their departed; physical death no longer meant social death. Advances in science and technology led to a diminished belief in the

afterlife creating a stronger fear of death and the development of structures that were increasingly more elaborate. Society's impulse to memorialize themselves and their loved ones continues to be reflected through changing cultural beliefs and architectural styles.

Cemeteries in the United States

According to Keith Eggener, in 2010 there were more than 150,000 separate burial grounds in the United States, comprising over two million acres (37). Early cemeteries embodied the importance of community in early colonial life and, as such, were located in town commons, churchyards, or municipal burying yards. As towns and cemeteries grew, communities were forced to respond to the growing issue of diseases and contaminated water from burial grounds. A direct outgrowth of these conditions was America's development of rural cemeteries; in 1831, Mount Auburn



Figure 7. Cemeteries as Social Spaces
Mount Auburn Cemetery,
Cambridge, Massachusetts

Cemetery in Cambridge, Massachusetts was created as the first rural cemetery.

Idyllic and pastoral, rural cemeteries offered an open landscaped space for city dwellers to escape from their increasingly dense and chaotic commercial centers. They became significant cultural institutions, symbols of a city's prosperity and progress. In *The Last Great Necessity: Cemeteries in American History*, David Charles Sloane describes these sites as, "the last great necessity of a modern, civilized society." At a time when American cities did not have public parks or museums, cemeteries acted as recreation grounds and tourist attractions. They were places for picnics, biking, fairs and markets, for strolling and socializing. Cemeteries inspired painters and poets, and taught people about history, horticulture, and nature. Well known burial grounds like Mount Auburn in Cambridge even published sightseeing guidebooks.



Figure 8. Cities of the Dead
Calvary Cemetery,
Queens, New York

The social success of rural cemeteries influenced future urban projects of public parks, museums, libraries, and other cultural institutions, while their physical layout inspired the planning of residential suburbs. Eventually, cemeteries became places of the dead almost exclusively, as cities replaced their traditional functions with public institutions and funerals became private family events, rather than large communal activities.

Deteriorating Landscapes

Americans have historically always buried their dead. Whether in urban or rural contexts, the practice of burial has given people a sense of possession of the land and a feeling of legitimacy of their right to live there. (Eggener, 17) Our history of cemeteries as ownership continues to this day with the United States being one of the few countries that practices burial in perpetuity. While it is a romantic thought that one can purchase a final resting place as a permanent home, the idea fails to take into account the finite amount of land a cemetery occupies and the required care needed in the future. Limited in available graves to sell, American cemeteries will soon fill up, leading to neglect and deterioration as they cease to generate income.

Once important community spaces, cemeteries without a revenue for maintenance and repair quickly become overgrown landscapes of toppled and broken headstones. A financial burden, they are abandoned by people in the community and the corporations that manage them becoming an endless drain on city budgets. Without proper maintenance, it is relatively



Figure 9. Overgrown Cemetery,
Bela Crkva, Serbia

easy for a cemetery to die. “Monuments fracture, footstones sink into the earth, and statues and fencing disappear, stolen by thieves who recognize their worth as antique collectibles.” (Plante, web) Often the oldest intact properties in towns, cemeteries are also filled with enormous trees that can predate the cemetery itself. Neglect, even of basic pruning, coupled with storms can lead to tree damage that can obliterate hundreds of headstones. Forgotten cemeteries are not limited to remote areas. Tacoma’s potters’ cemetery in Washington State sits right behind the property line of the historic Tacoma Cemetery and next door to a funeral home, yet the graves of over 2000 people have gone unattended. Though currently being restored, newspaper articles from 1901 recount the history of the site’s continual neglect.



Figure 10. Goodbye Max, Southern California

Descendants Living Far Away

In the 21st century, the world has become globally connected, allowing people to be more mobile than ever before. The Seattle metropolitan area is the ninth fastest growing metropolitan area in the nation, with more than 1,000 people moving to the areas of Seattle, Tacoma, and Bellevue per week. The city of Seattle alone sees an influx of sixty-seven new residents per day, amounting to a yearly increase of over 24,000 people. (Trumm, web) Other cities around the world are experiencing similar patterns of growth as more people move to large cities; the U.N. Population Division estimates that by 2050 nearly seventy percent of the world's population will live in urban areas. (Mitchell, 13)

With greater access to travel, fewer families remain near the towns their ancestors called home. Lured to new cities with new opportunities, people have lost their connection to their grandparents' and great-grandparents' burial places, if they ever visited them at all. As people build lives focused on the present and future in new cities, there is little reason for them to visit places of the past like cemeteries. Even long-

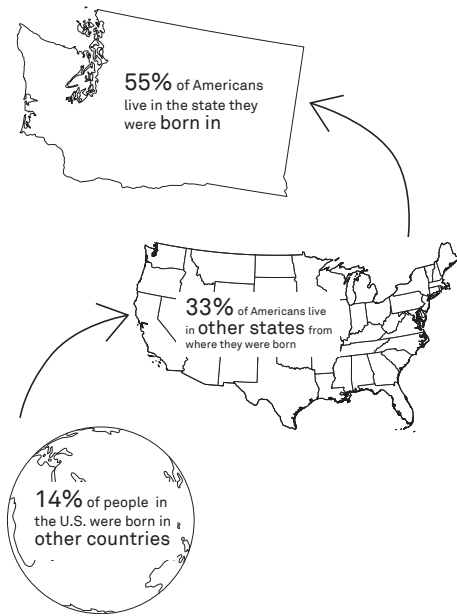


Figure 11. Average Migration Rates Across U.S., 2012 I.R.S. Data
+2% for Undocumented Immigrants

term residents can have little personal connection to the cemetery in their very own neighborhood. Whether active or historical, a cemetery faces the possibility that family trees have died out altogether leaving no descendants to visit their ancestors.

The location of a final resting place is a very personal choice and it makes sense for people to be buried in the towns they call home but those who live on must continue with their lives. In a time of increased mobility, it is not guaranteed that people will live near the burial sites of their loved ones. This leads to both a loss of visitation at the cemetery and to an individual's loss of having a place to pay respects.

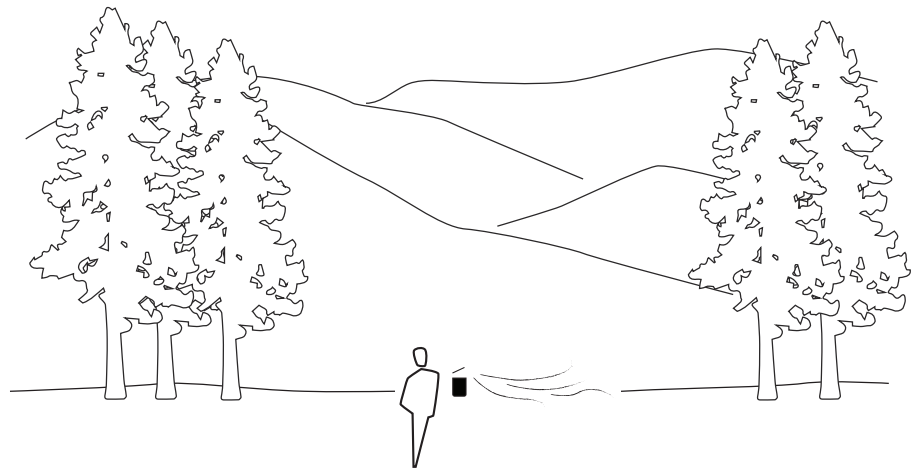


Figure 12. Permanence of Death
Left Unevidenced

Popularity of Other Forms of Burial

While burial in perpetuity is the norm in the United States, this concept that the burial right lasts for eternity is almost exclusive to this country. Most European countries that practice in-ground burial must lease burial spaces due to their history of limited space. Instead of buying a burial plot for eternity, families pay for limited terms ranging from five to ten years with any renewals costing an extra fee.

However, European countries prefer the funerary practice of cremation, making up sixty to eighty percent of their overall funeral market. (Worpole, web) Many other countries around the world prefer cremation, either for religious purposes, space conservation, or more affordable prices. The United States has been slow to adopt this trend. According to the Cremation Association of North America, in 1998, only a quarter of Americans were cremated but that number had almost doubled by 2013. By 2018 it is expected to be over half of the American population. (Schuler, 56-57)

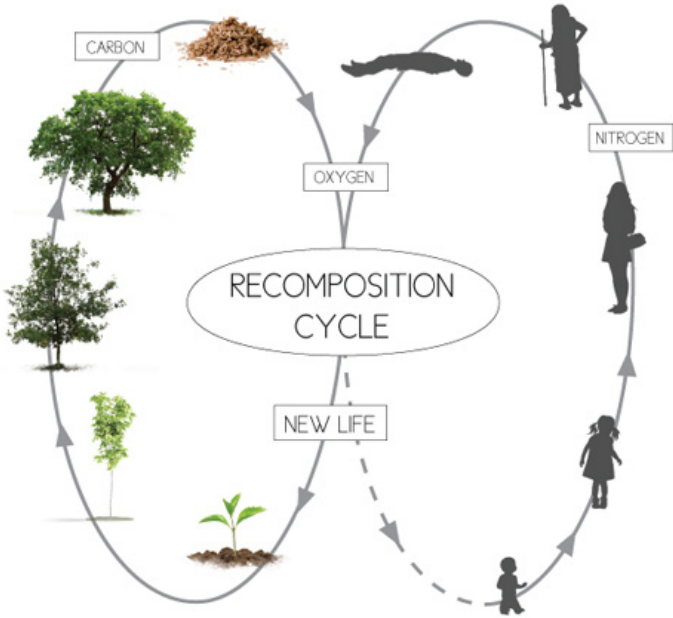


Figure 13. Recomposition Cycle, Urban Death Project

Both traditional in-ground burials in sealed caskets and cremation have high environmental impacts that people are less willing to accept as more environmentally conscious funerary alternatives become readily available. Natural or green burials are the most promising of these and the most reminiscent of the traditional form. Using unembalmed bodies and biodegradable materials, decomposition is able to occur, supporting and restoring the natural habitat in which it is buried. Usually taking place in more rural areas, this funeral type typically does not take into account urban areas. Searching for new solutions to urban funerary practices, research and design groups like GSAPP's DeathLab have studied how we live with death in metropolitan areas. In their aim to integrate civic infrastructure with places of remembrance, DeathLab looks to respond to the constraints of time, ecology, and the experience of the public. Similarly, the Urban Death Project has focused on human composting through recomposition as a natural fertilizer for trees and gardens.

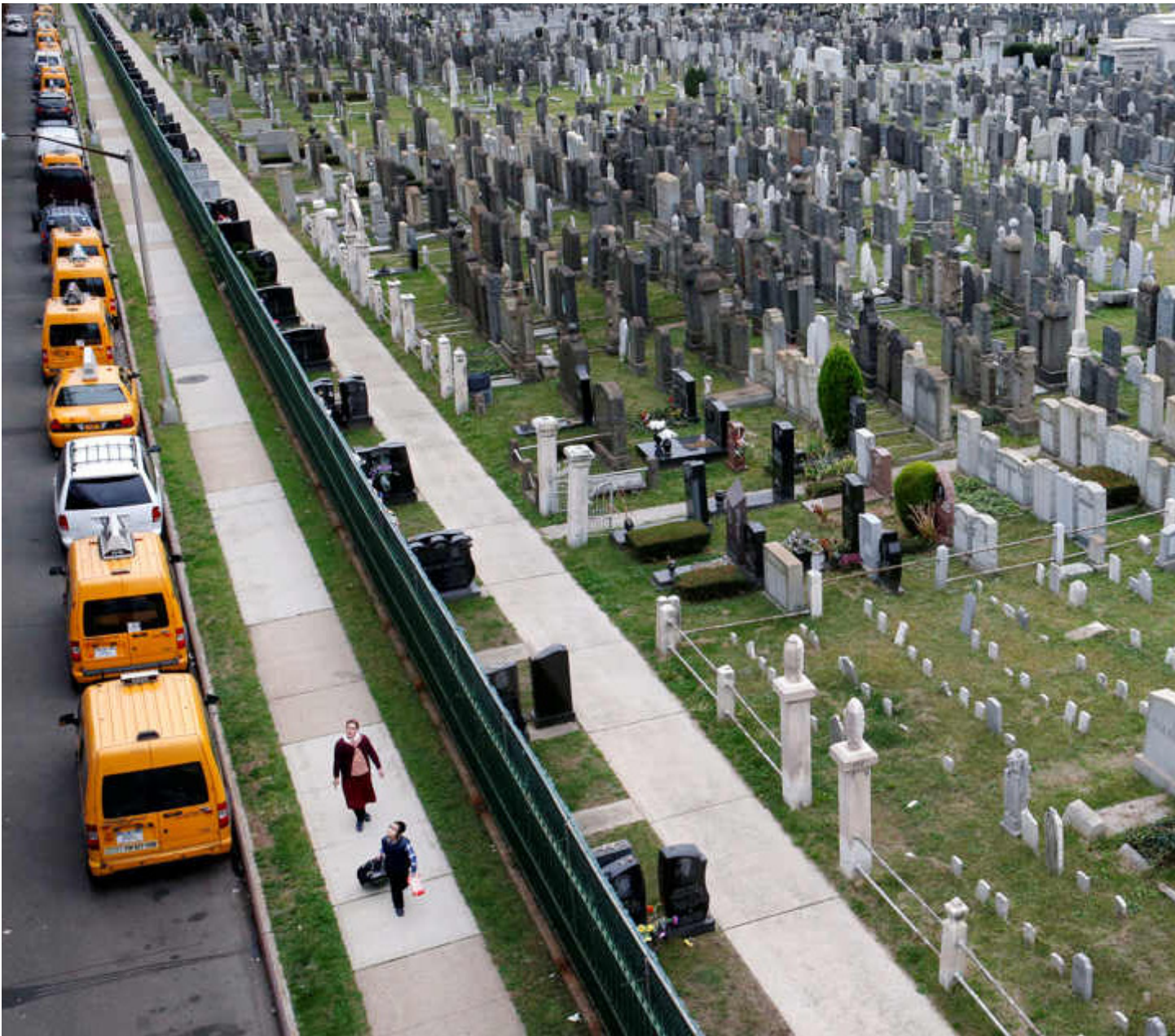


Figure 14. Washington Cemetery, Brooklyn, New York

Chapter Summary

The study of cemeteries, one of the earliest human creations, reveals evolving cultural attitudes and ways of memorializing across time and place. However, their current condition in the United States has been relegated to a physical form that is over two hundred years old, while the social activities that once enlivened them now exist as independent cultural institutions throughout the city. Still actively used, traditional cemeteries are running out of burial space and are being replaced by more environmentally friendly forms of burial. Cemeteries are being further hindered as society is ever more mobile and generations continue to move further away from their homes.

As cultural attitudes around burial change, so too must the customs around mourning be updated to fit within the current time period. Looking at the primary purpose of cemeteries - as places of mourning and contemplation, it is easy to see that their true audience is the living individual. In order to reconnect cemeteries back to being places of physical and social contact with the dead, this thesis will focus on mourning practices beyond the object of the headstone.

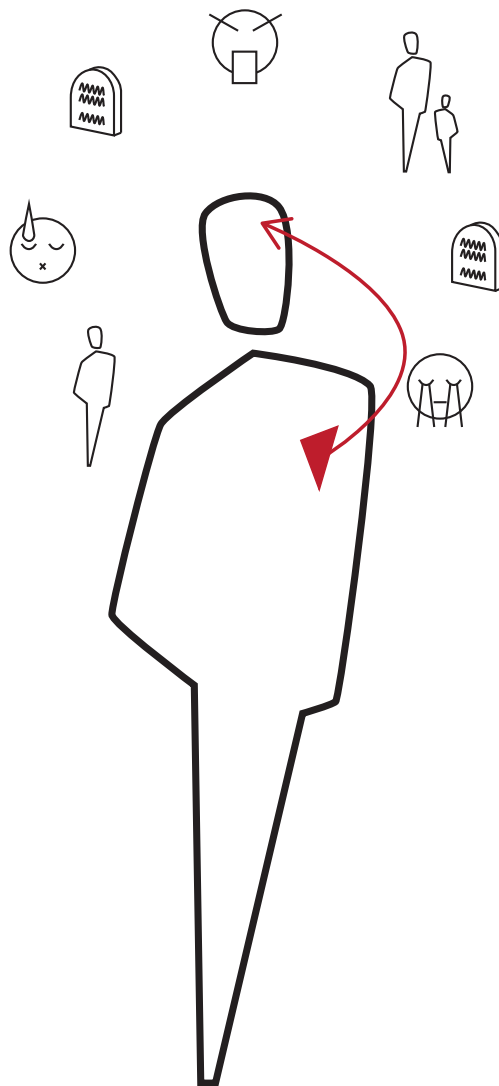
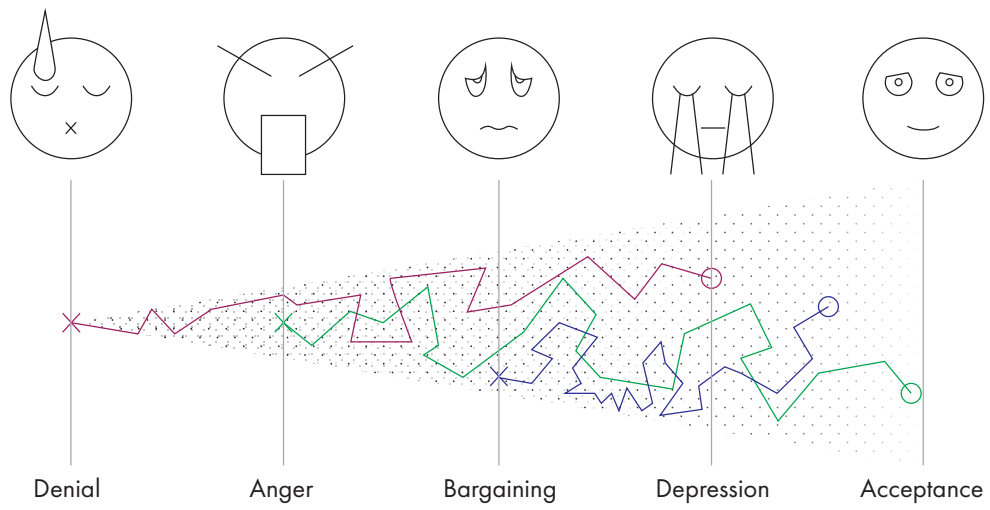
CHAPTER FOUR

The Individual as Mourner

Grief is not a linear process but a variety of complex reactions, behaviors, and tasks. The feelings experienced are unique to every individual and sometimes there are no words to describe these internal struggles. Many cultures have customs embedded within them that provide guidance and even rules that imply how a mourner should behave but showing the correct actions and feelings does not provide healing; grieving does.

Figure 16. The Individual Mourner

In *On Death and Dying* (1969), Elisabeth Kubler-Ross identified five stages of grief as a way to classify the common responses to the loss of a loved one. Meant as a framework to help people understand what they are coping with, these stages do not act as a time line or guide. In reality, grief has no time table or correct path. Emotions blend into and replace one another with mourners moving forwards, backwards, and sideways but never necessarily in a straight line. In *The Mourner's Dance* (2002), Katherine Ashenburg chronicles her and her family's journey through mourning, describing the process as a personal choreography, ever-changing but always persisting.





Outward observances of mourning customs can be seen in all cultures as festivals and holidays. As annual celebrations they create a respect for one's ancestors and act as collective commemoration. These are times for people to gather in cemeteries, to decorate and clean graves, leave offerings, and have conversations with those who have passed. But visitations to gravesides are not the beginning or end of grieving.

Figure 17. Cultural Celebrations



Figure 18. Personal Remembrance

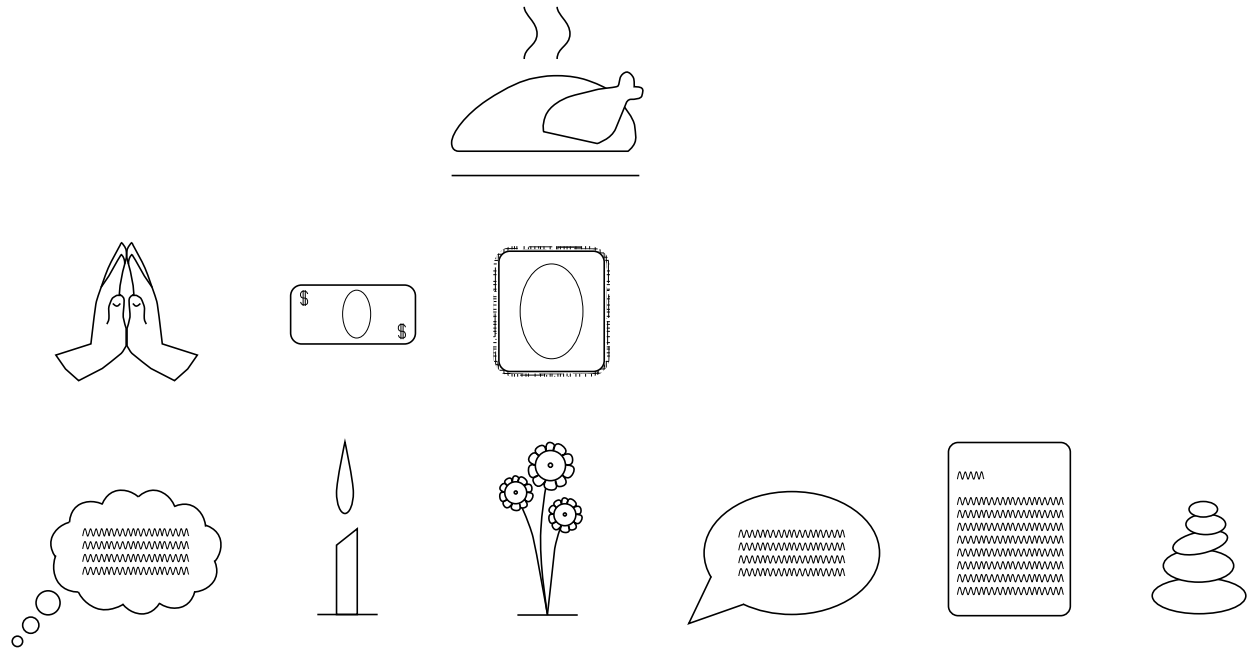
Individually, people pay respects in smaller ways to further ease the distress they are feeling. Personal altars or shrines in the home create places of visitation and keep the deceased part of daily life. Marking the anniversary of death on calendars reminds one that this is a day to be reckoned with, prodding some minutes of remembrance, while the simple act of naming a newborn in honor of a loved one can feel as though a legacy is being carried onward.

Whether an outward celebration or a private moment, memorials can take many forms. Often associated with votives, these small objects and acts represent symbols of respect. Lasting minutes, like a thought or prayer, or continuing on through generations, like stories and folk lore, the object itself is never what is most important but it is the person and memory it evokes. While these votives range from temporary to permanent, they all help to form a collective memory. As headstones in a cemetery, the accumulation of many people's grief is a reminder that they are not alone.

Figure 19. Votives

While this thesis is interested in the individual mourner and is proposing spaces in a cemetery unrelated to burial, it is not proposing that mourning be removed from traditional practices or that burial be stopped. Instead, it is stating that all types of mourners are equally important when considering the collective history of mourning. It is by opening up cemeteries to a larger audience that they can develop a greater spiritual depth.

Figure 20. Collective History
Between Individuals



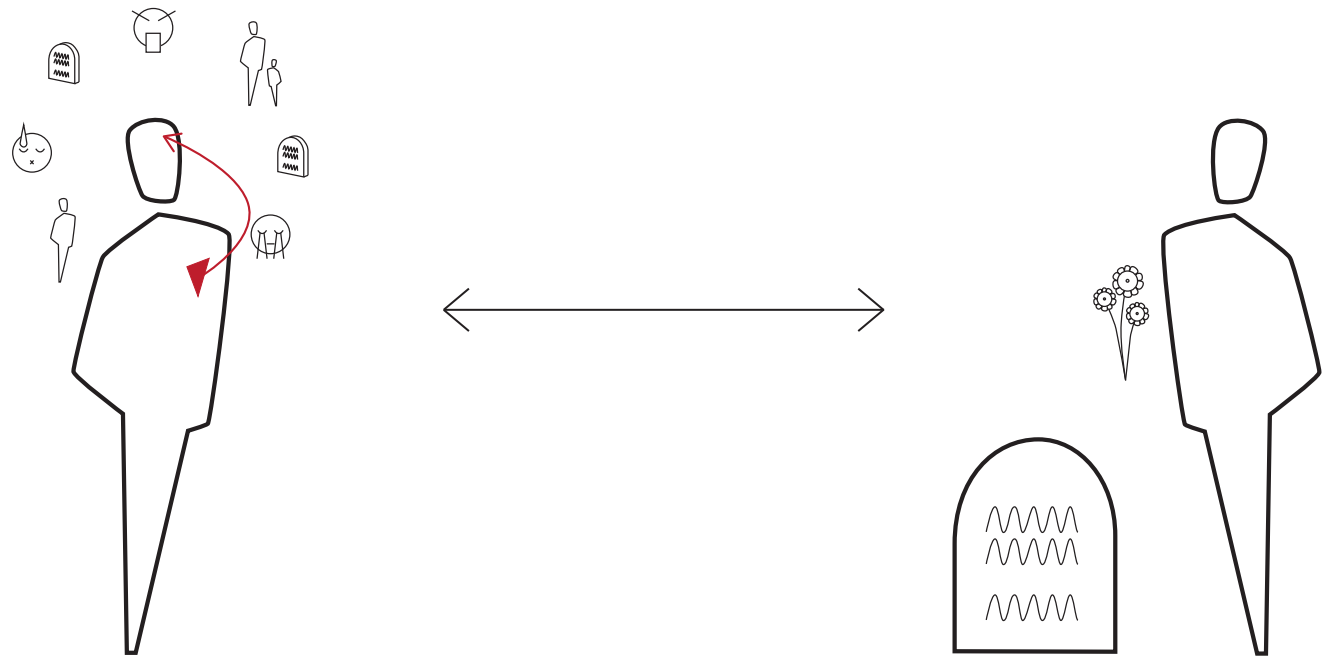
MINUTES

HOURS

DAYS

MONTHS TO GENERATIONS

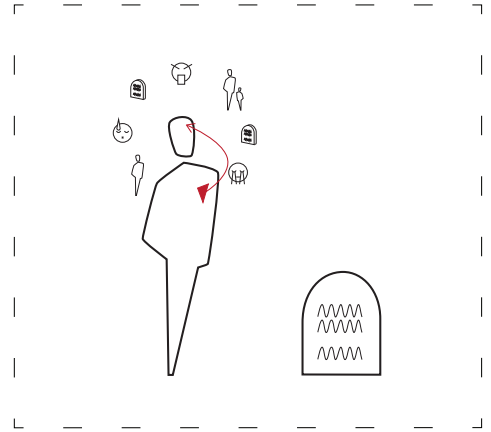
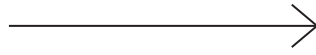
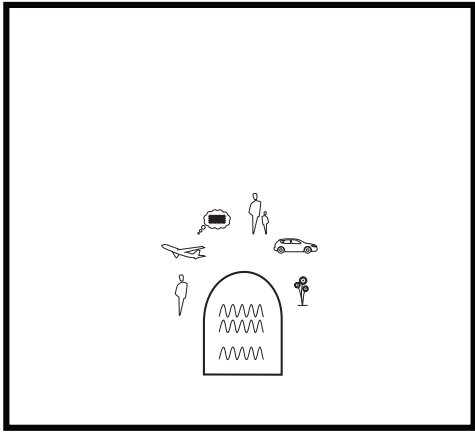
PERMANENT



Thesis Proposal

Currently cemeteries are focused on burials and headstones, requiring people to travel and direct their attention to one specific object. However, this form of mourning fails to take into account the many responses to grief. By becoming more inclusive of the living individual, cemeteries can offer more to those who have loved ones buried there and adapt to the current time period. Cemeteries may not be the same cultural centers they once were but their meaning still remains; however, their social value relies on our interaction with them. Hidden throughout the urban fabric, each cemetery exists as a collective history whose growth is being stunted. A broader understanding of mourning not beholden to burial removes the limitations on location and allows someone to mourn anytime and anywhere, not only where their loved ones are located. Finding comfort in the collective history of local cemeteries reconnects people to places within their neighborhoods and promotes these sites as places of spiritual importance.

Figure 21. Thesis Proposal



CHAPTER FIVE

Buildings in Transformation

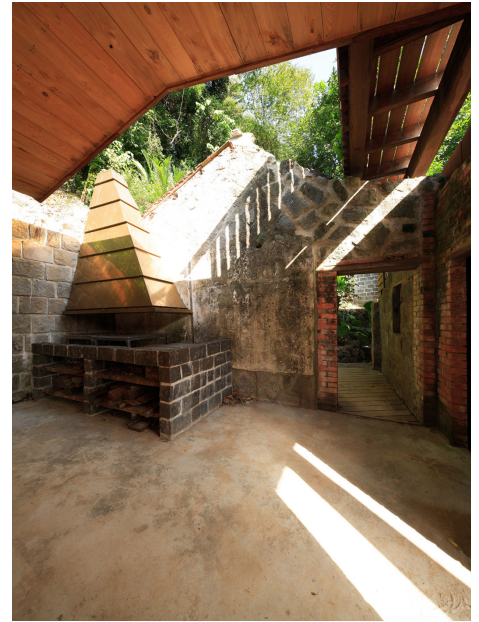
A primary objective of this thesis is to explore how architecture can show the effects of time and aging. It investigates how buildings can be designed to embrace material transformations in the form of degradation, as a spatial evolution, and as a representation of social value.

As cemeteries are park-like community spaces ranging in scale, these case studies focus on buildings that engage elements of nature and apply their overall design concepts to multiple scales within the project. The following precedents were chosen for their architectural responses to site context, material use, and inclusion of their future representations.

1. Ultra Ruin
2. Cattedrale Vegetale
3. Death is not the End

Figure 22. Ultra Ruin
Figure 23. Cattedrale Vegetale
Figure 24. Death is not the End





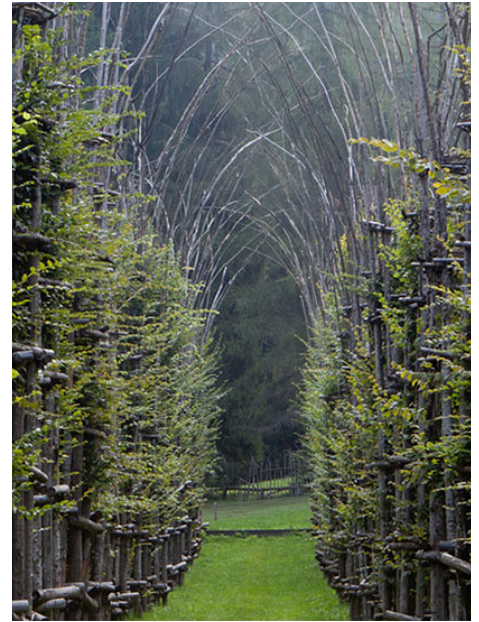
Ultra Ruin - Casagrande Laboratory

Ultra Ruin is a house built in and around an abandoned brick farmhouse in the jungles of Taipei, Taiwan. Designed as a series of fragments, the new house responds to the existing ruin and natural setting of the jungle. Modern wooden construction was chosen for its faster decaying process in relation to brick, allowing these new additions to quickly age and create an ultra ruin with the brick structure.

Embracing its location within a jungle, the site has been included in the design. Working around existing trees and following the contours of the site, nature has been allowed to dictate the plan. Free flowing indoor-outdoor living spaces blur the lines of enclosure and utilize the regions climate to create habitable areas. Casagrande Laboratory calls Ultra Ruin “an architectural instrument played by nature including human.” (Casagrande Laboratory, web)

Figure 25. Bathroom
Figure 26. Fireplace
Figure 27. View into Courtyard





Cattedrale Vegetale - Giuliano Mauri

Cattedrale Vegetale (Tree Cathedral) exists in three locations throughout northern Italy: Val Sella, Lodi, and Valsugana. These structures utilize the art of weaving to create formwork columns with local saplings planted in their centers. As the trees grow, the formwork naturally deteriorates, creating a seamless transition from manmade to the natural. The grown tree columns form a basilica of five aisles and their natural arching canopies allude to the vaulted ceilings of Gothic cathedrals.

Taking decades to mature, the cathedral will be an ever-changing, constantly evolving space. Highlighting the unique qualities of the plant species that grow in the area, Giuliano Mauri sought a dialogue between design, place, and the sacredness of the earth “moved by the idea of putting [himself] in relation with the natural cyclus, not offending it, not interfering with it.” (Cattedrale Vegetale, web)

Figure 28. Winter
Figure 29. Summer
Figure 30. Progress Diagram

1. Formwork
Built from degradable branches and twigs.

0 YEARS

2. Room to expand
A sapling is planted in each scaffold.

1 YEAR

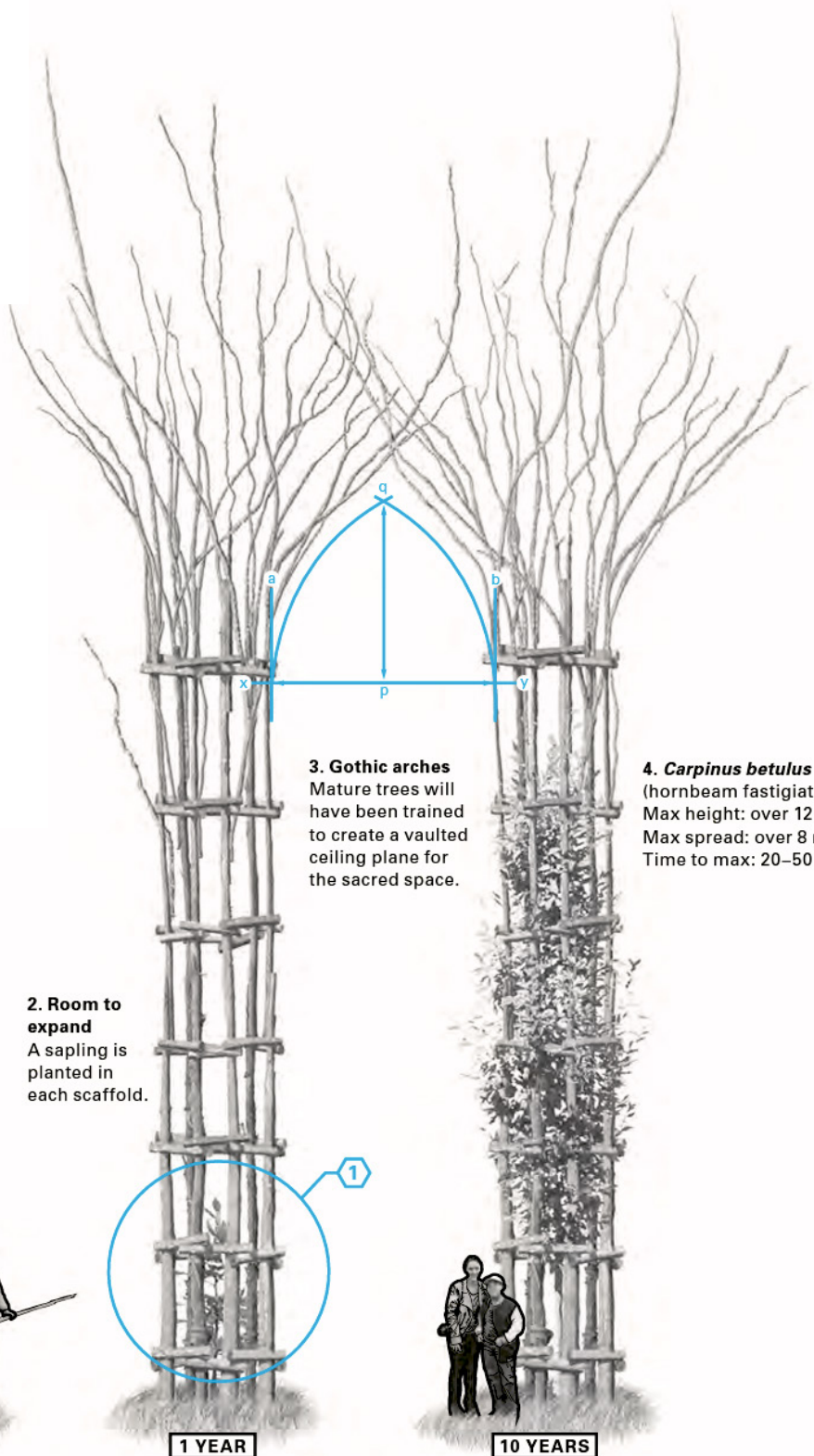
3. Gothic arches
Mature trees will have been trained to create a vaulted ceiling plane for the sacred space.

4. *Carpinus betulus*
(hornbeam fastigiata)
Max height: over 12 m
Max spread: over 8 m
Time to max: 20–50 yrs.

A | | A

1

10 YEARS



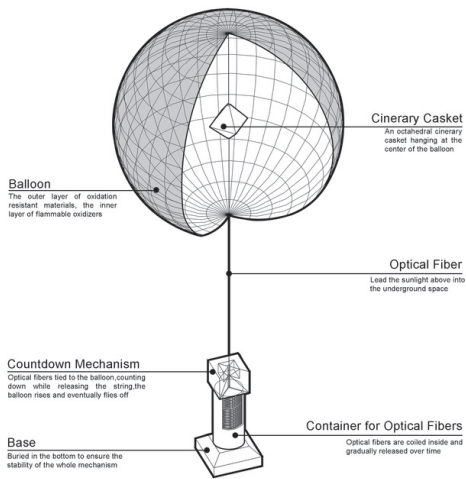


Death is not the End - Priestman Architects

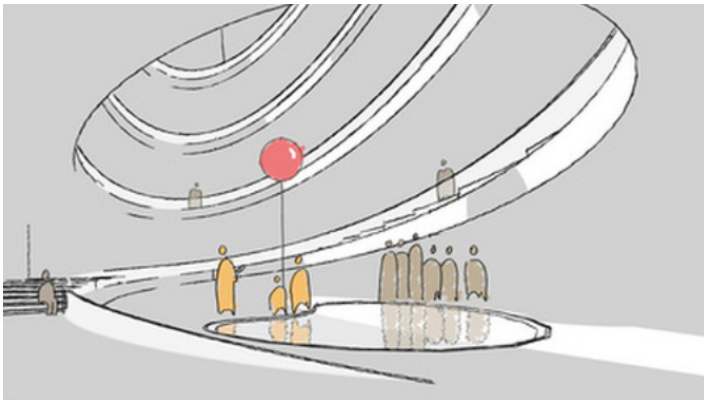
Death is not the End was the winning entry in Arch Out Loud's Tokyo Vertical Cemetery competition which sought solutions to Tokyo's issue of limited burial spaces. Located in Shinjuku district, the project explored issues of spatial constraint by using a temporary medium as coffin storage. The Journey of a Balloon also resonates with the temporality of life. Ashes stored in a balloon slowly rise up into the sky until the balloon reaches the end of its tether, floating off into the atmosphere, igniting, and disappearing into oblivion.

Placed throughout the city, these balloon towers are on view to everybody, uniting the entire city in the act of commemoration. The eventual departure of each balloon creates space for new burials, solving Tokyo's challenge of cemetery space.

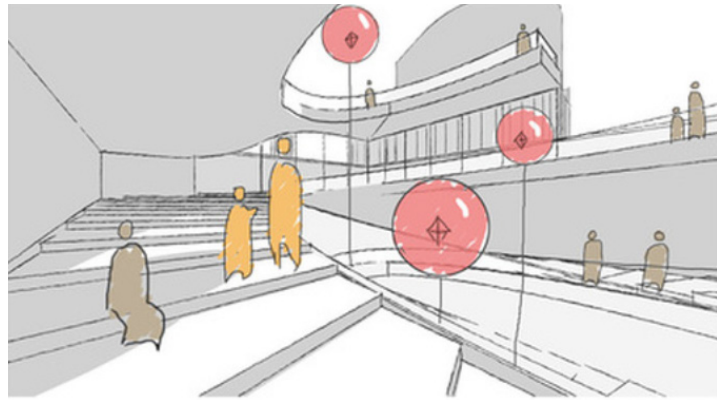
Figure 31. View across Sky
Figure 32. Balloon Mechanics
Figure 33. The Journey of a Balloon



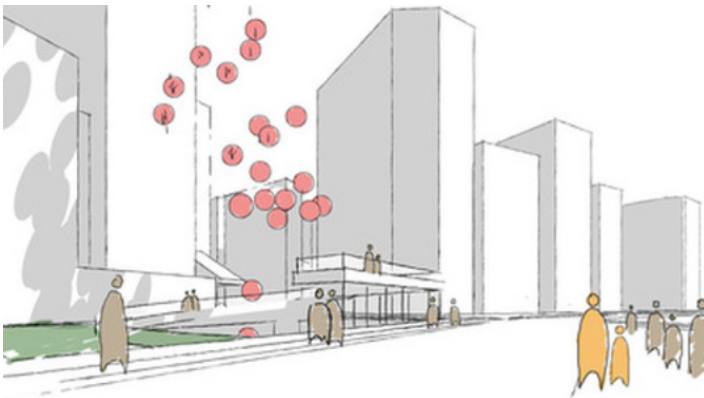
The Journey of a Balloon



1. Burial



2. Memorial



3. Observation

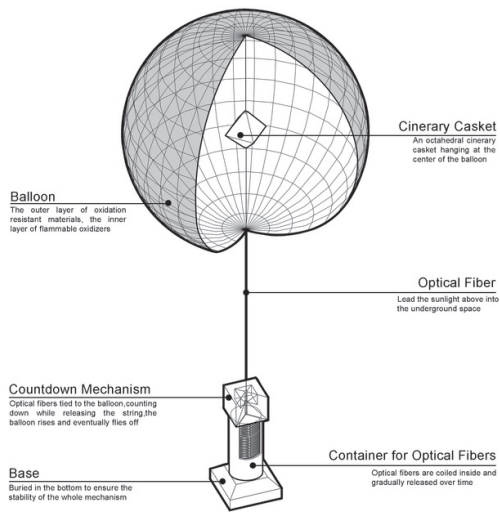
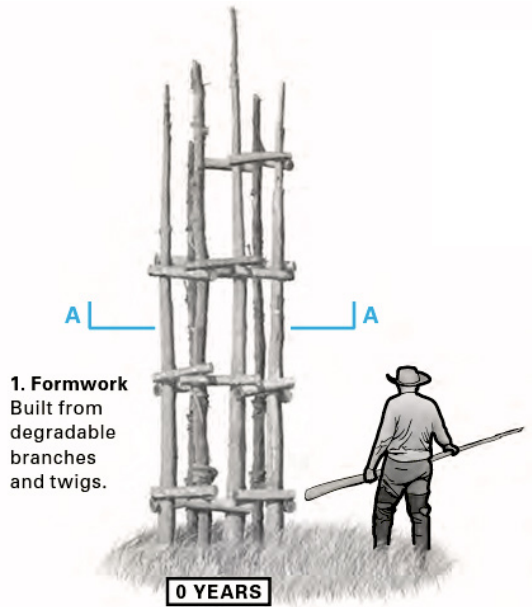
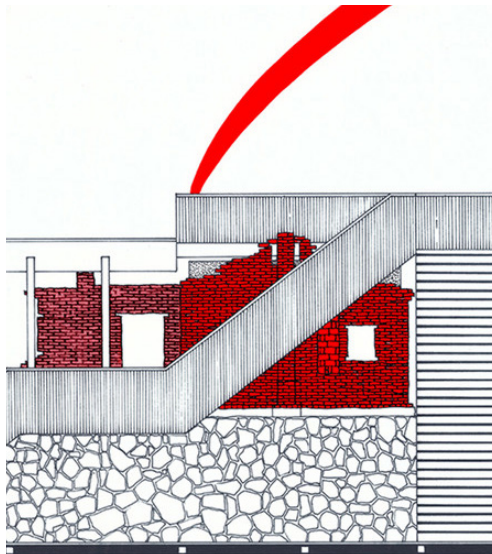


4. Oblivion

Case Study Summary

The case studies reveal that architectural aging can develop in multiple ways but the result they have in common is a greater awareness of the connection between humans and nature. By embracing their own temporality, these buildings create a dialogue with their sites, the people using the space, and history. The designers of each project viewed their materials as evolving elements, ever-changing the experience and views upon each visit. At Ultra Ruin, wooden construction was chosen because its decaying process would eventually meet that of the existing brick material and together they would form a single ruin within the jungle. At Cattedrale Vegetale, formwork built from degradable branches and twigs is the only designed element, rotting slowly for twenty years and guiding trees that will create the eventual building. In Death is not the End, temporary balloon coffins cast shadows across buildings and sidewalks, affecting the entire city even by their small size. Each project employed materials in creative methods that showed and respected the natural cycle of birth, growth, and death.

Figure 34. Ultra Ruin
Figure 35. Cattedrale Vegetale
Figure 36. Death is not the End



CHAPTER SIX

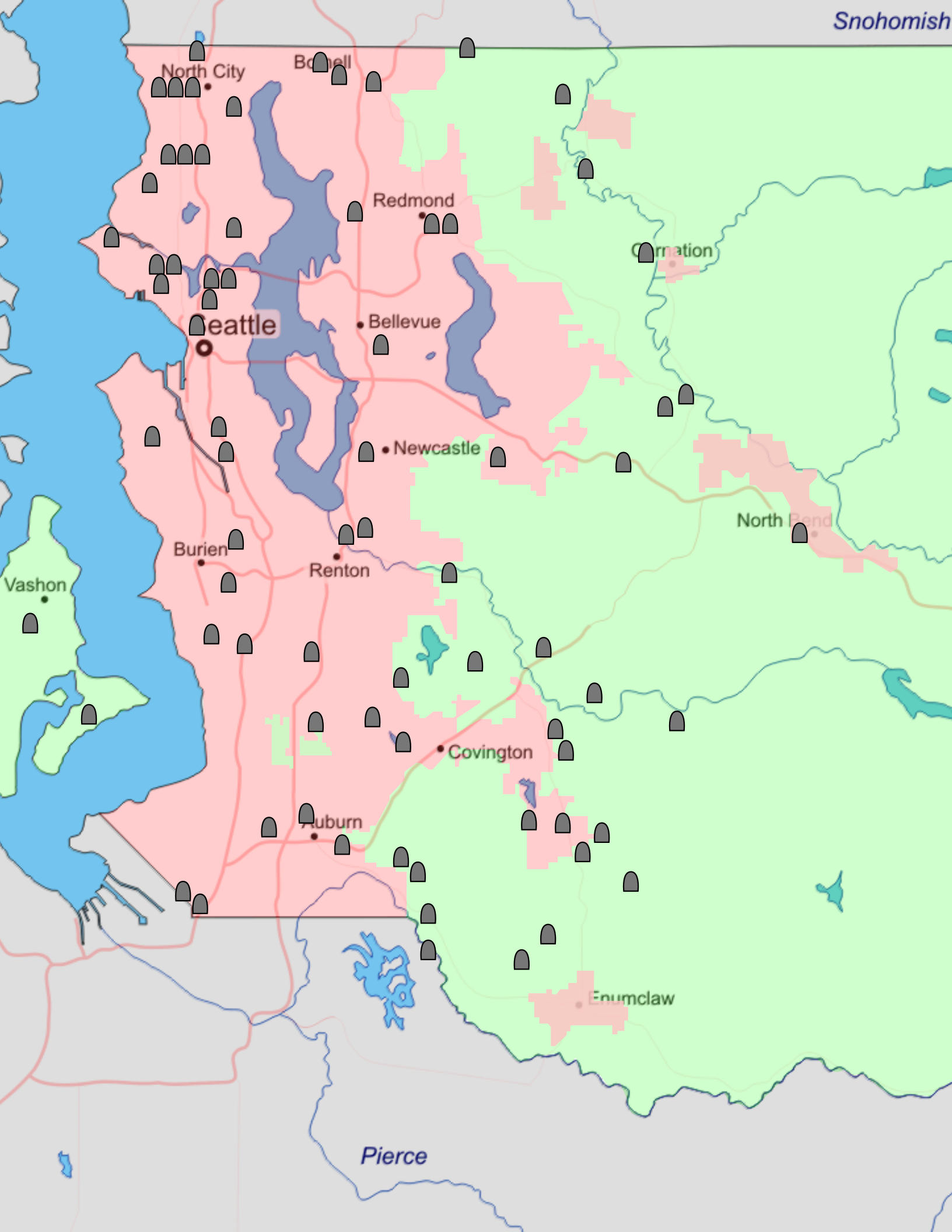
King County Burial Places

To better understand the current state of burial places, this thesis will focus on those that are within King County, Washington. In 2011 Washington State's Department of Archaeology and Historic Preservation (DAHP) conducted a survey of historic cemeteries and burial places in King County. Taking place from 2009 to 2011, the purpose of "The Survey of Cemeteries and Burial Places" was to evaluate the conditions of these resources located throughout the state. The report provides updates to earlier surveys conducted since 1978 and adds new locations that were determined to have met the criteria of inclusion. In total, 74 properties were recorded and entered into the DAHP's Access Database. (Figure #)

These properties were categorized into a series of types that are common to the country as a whole:

- Frontier graves (17th-20th centuries)
- Domestic homestead graveyards (17th-20th centuries)
- Churchyard burial grounds (17th-20th centuries)
- Potter's fields (17th-20th centuries)

Figure 37. Existing Burial Places, King County
Urban Growth Area Defined in Red



Snohomish

North City

Bonell

Redmond

Coronation

Seattle

Bellevue

Newcastle

North Bend

Burien

Renton

Vashon

Covington

Auburn

Enumclaw

Pierce

- Town/city cemeteries or community cemeteries (17th-20th centuries)
- Rural cemeteries (1831-1870s)
- Military cemeteries (1840s-present)
- Lawn-park cemeteries (1855-1920s)
- Memorial parks (1917-present)
- Hybrid memorial parks (1990s-present)
- Church interiors (17th century-present)
- Places of non-earth burials (19th century-present)

Figure 38, 39, 40, 41.
King County Survey Categories

No “rural” cemeteries exist in King County as this type originated on the East coast in response to urban growth. However, community cemeteries predominate among those remaining in the county; of the 74 surveyed, 40 were identified as community cemeteries. Overall, the entire survey can be summarized in terms of four categories of information: cemetery type, year established, management agency, and existing physical integrity. (Figures ####)

Cemetery Type

Frontier graves	1
Domestic homestead/Family plots	8
Churchyards	2
Community cemeteries	40
Lawn-park (or retaining influences)	4
Memorial park	9
Accident/disaster sites	2
Church interiors	2
Non-earth burial places (mausoleums, columbariums)	2
Military cemeteries	2
Other	2
Total	74

Year Established

1851-1860	1
1861-1870	2
1871-1880	8
1881-1890	15
1891-1900	17
Total pre-1900 (still existing)	43
Pre-1900 abandoned	~9
1901-1910	16
1911-1920	1
1921-1930	3
1931-1940	2
Total pre-WWII (1901-1940) (still existing)	22
1941-1950	3
1951-1960	3
1961-1970	1
1971-1975	2
Total post-WWII (1945-1975) (still existing)	9
Total	74

Management Agency

Public/County/State/Federal	16
Religious - Catholic/Episcopalian	7
Religious - Jewish	5
Religious - other	1
Ethnic benevolent association	1
Tribal	4
Family	7
Other private	2
Historic society	2
Non-profit association	14
Cemetery district	2
For-profit corporation	13
Total	74

Existing Physical Integrity

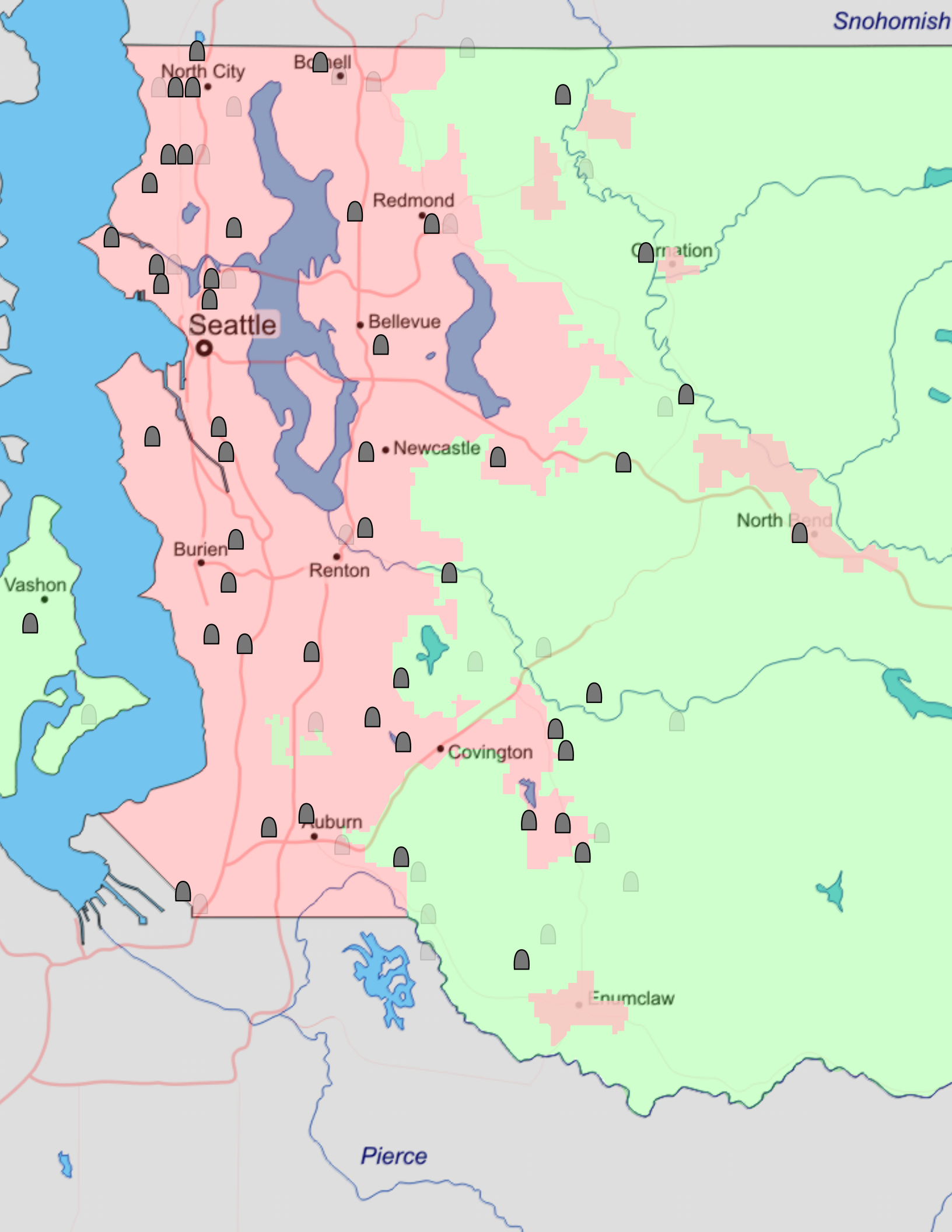
Relocated (not inventoried)	~9
Essentially abandoned or not maintained	9
Minimally maintained/very Damaged/partially relocated	5
Moderately well maintained	9
Well maintained	52
Total	74

Refining Possible Sites

As discussed earlier, the three defining features of traditional cemetery obsolescence are loss of income for maintenance, descendants living far away, and an increase in other burial types. Using these criteria and the four survey categories (above), the total list of 74 sites can eliminate sites solely dedicated to non-earth burials (crematoriums, mausoleums, church interiors), and accident or disaster sites as they are distinct from a traditional, in-ground cemetery. However, as this thesis is discussing the future of cemeteries, it will continue to include cemeteries established after World War II (1945-1975), cemeteries designed as Memorial Parks taking up larger land parcels ranging from seventy to over a hundred acres, and cemeteries that have a large percentage of open land still available for burials.

Using the DAHP's Access Database, the remaining properties were further analyzed by looking at their individual field reports, some having multiple reports that predate the 2011 survey. Each report documents the physical integrity of the property based on specific physical characteristics:

overall organization, plan and circulation, marker presence and condition, and vegetation presence and condition. Currently, 52 cemeteries are marked as “Well Maintained” but this has not always been the case. By looking at cemeteries with field reports that cover multiple decades, the fluctuation in levels of maintenance over the last 50 years can be seen. Beyond just those at full capacity, even cemeteries with available space can fall to neglect. The recent interest by community groups to clean up forgotten cemeteries is the only reason some of these sites are categorized as “Well Maintained”. Considering that future community groups might not continue these endeavors and as other cemeteries reach full capacity, many of the listed properties remain as potential sites for this thesis. (Figure #)



Snohomish

North City

Bonnell

Redmond

Corvallis

Seattle

Bellevue

Newcastle

North Bend

Burien

Renton

Vashon

Covington

Auburn

Enumclaw

Pierce

Existing Urban Conditions

Figure 42. Burial Places Identified as “Parks”
King County

Site visits provided more information than the data found in “The Survey of Cemeteries and Burial Places”, in particular, the cemetery’s context with its surrounding neighborhood. While the visited sites vary in age, type, size, and upkeep, their relationship to their own communities can be categorized in three ways.

Island:

Completely cut off from any community, usually by roadways, highways, and airports. The speed at which one passes by these sites makes them almost invisible let alone accessible.

Park:

Set within residential areas, these sites are calm and quiet. While appearing accessible, they are still surrounded by fences and trees and only have a single entrance.

Wilderness:

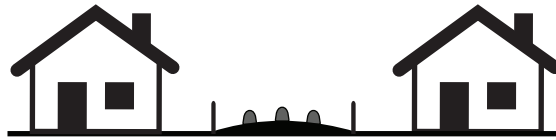
Overgrown by nature with disappearing tombstones. These sites exist within city boundaries but are lost between residential and commercial zoning changes.

Figure 43. Existing Urban Conditions

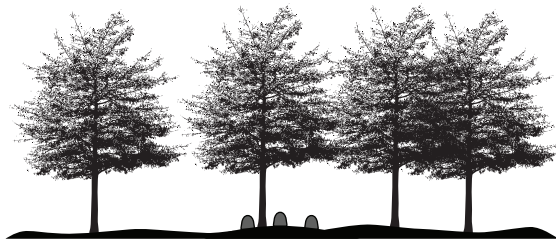
In the aim of seeking to reconnect the traditional cemetery to its urban fabric, the classifications of island and wilderness are too far removed from public contact. Focusing on sites that fit the classification of park and exist within residential neighborhoods enhances the programmatic possibilities of this thesis. Three sites of various scales were further studied, starting with their neighborhoods and historical context.



Island



Park



Wilderness

Crown Hill Cemetery

Originally heavily forested, Crown Hill was cleared by early settlers in the mid to late nineteenth century. Predominantly settled by people who had been living on and leveling the steep slopes of Queen Anne and Capitol Hill, legend has it that they were so in awe of the level ground that when asked what they would name the new district, they replied with, “I have seen them all; it takes the crown and we’re going to call it Crown Hill.” (Erickson, 1987, 8) The newly cleared, gently rolling topography lent itself to dairy farms and orchards, with many of the orchard trees scattered throughout the present-day neighborhood. The rural feel of the area gradually changed after World War II as the large farm lots were platted out into smaller lots, and returning veterans and aerospace workers moved into the area. Annexed to Seattle in 1954, all lands north of 85th Street and south of 145th Street joined the greater metropolitan area. By the 1960s, most of the neighborhood was filled in with few open lots left available, forming Crown Hill as it is today.

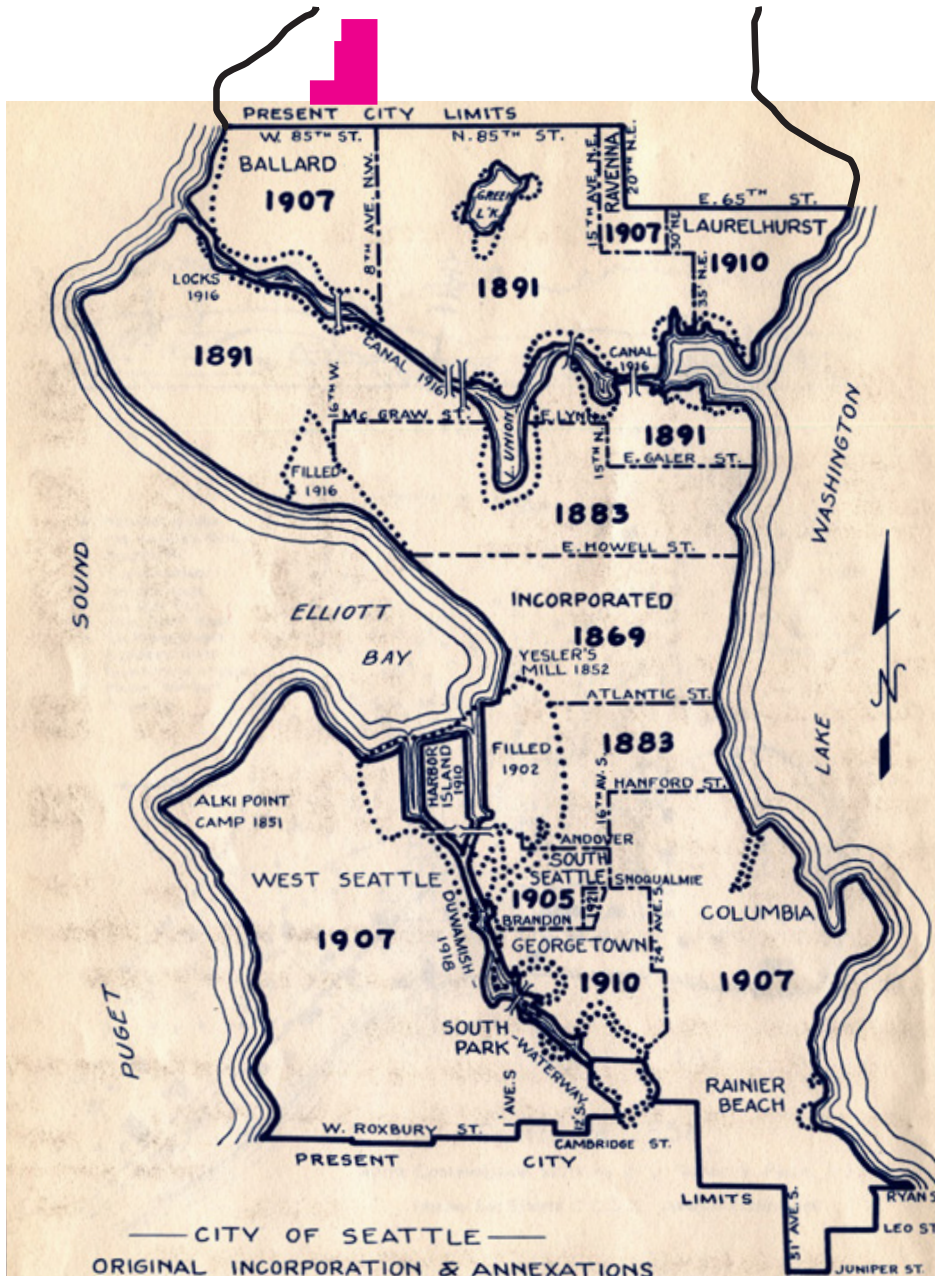


Figure 44. Seattle City Limits and Annexation Dates
 Crown Hill is Highlighted in Pink

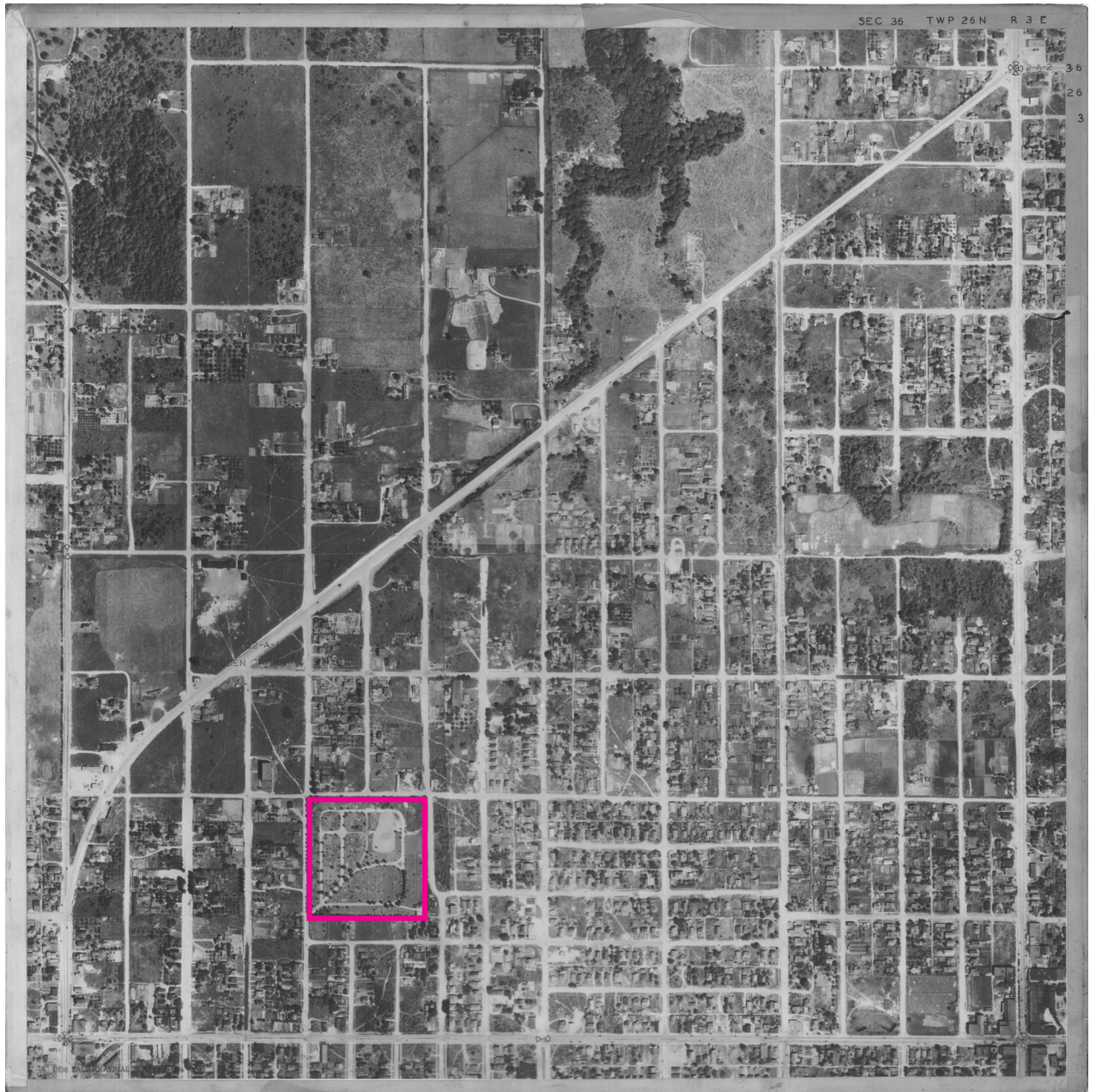


Figure 45. Aerial Survey, 1937
Crown Hill Cemetery is Highlighted in Pink

Located north of Ballard at 12th Avenue and 87th Street, Crown Hill Cemetery was founded in 1903 as a community cemetery for the developing towns of Crown Hill, Ballard, and Greenlake. Crown Hill Cemetery is situated on 10 acres, at the time of its founding the city of Ballard had not built an extension road connecting the two towns and little of Crown Hill had been built-on even though most of it had been platted for residential development. Within its first year, half the land of Crown Hill Cemetery had been cleared and a number of Ballard residents had been interred there. Many of the older headstones bear old-fashioned names like Hedwig, Torbjorg, Inga, and Lars, representing Seattle's early roots as a haven for immigrant Swedes, Norwegians, and Finns.

Evergreen Washelli Cemetery

Named after lakes in their vicinities, the neighborhoods of Bitter Lake, Haller Lake, and formerly Oak Lake all began as large estates and land holdings by the original settlers of Seattle. Mostly developed for summer cabins and farmhouses, portions of these neighborhoods remained unplatted even by the 1930s. However, the area benefited from the Seattle-Everett Interurban Railway, connecting these two larger city limits and offering stops within these remote, undeveloped areas. Never intended as a suburb, large plats remained well into the 1950s and it was not until the construction of Northgate Mall that new development moved to these communities. Included in the annexation to Seattle in 1954, these regions have been slower to develop than neighborhoods to the south. Large land areas and the distance to downtown Seattle contributed to the area's development as connector routes and warehouses; Interstate-5 and Aurora Avenue North act as physical boundaries to neighboring communities. Nevertheless, the lakes remain and are reminders of the areas farmland past.

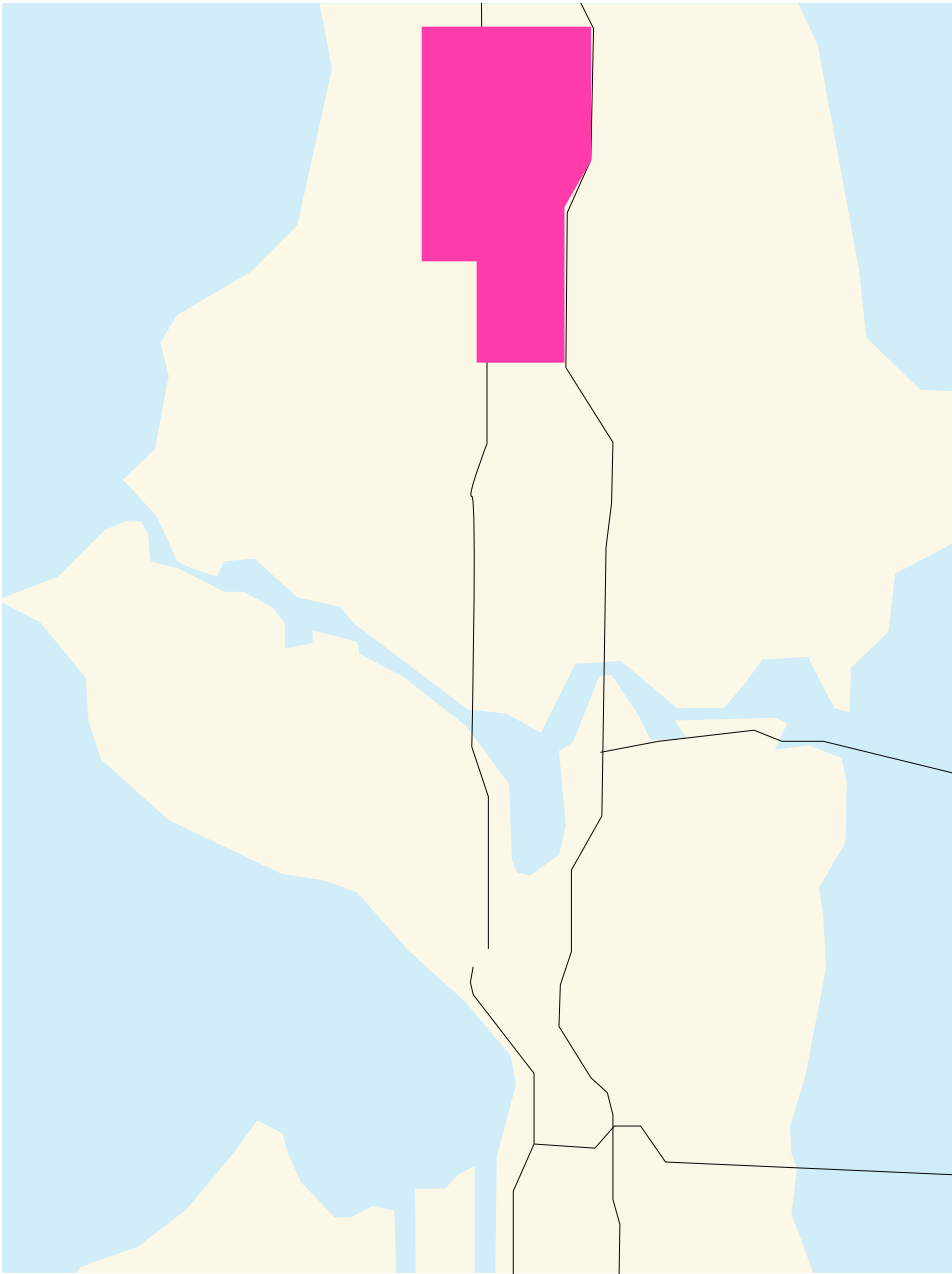


Figure 46. Seattle City Limits
Bitter Lake, Haller Lake, and Oak Lake are Highlighted in Pink

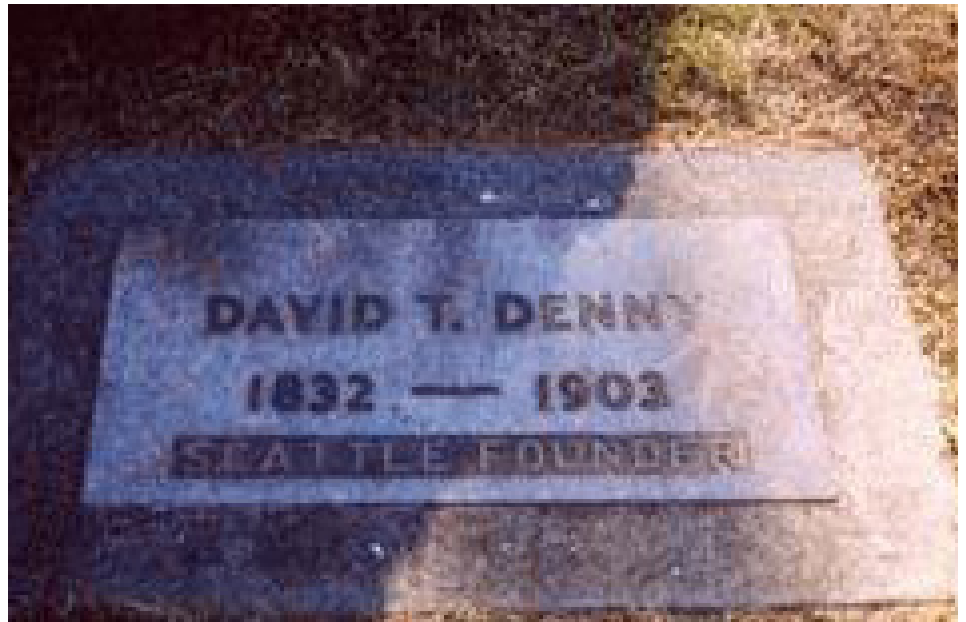


Figure 47. Unique Monuments on Site

Located in Northwest Seattle at Aurora Avenue North and 115th Street, Evergreen Washelli Cemetery originated in 1884 as Oaklake Cemetery, a private family plot for the Denny family. The fourth result of Seattle's municipal cemetery being moved, Evergreen Washelli has headstones dating from 1864. Operated by the Denny family until 1914, it was sold to the American Necropolis Association (ANA), a St. Louis based company. The company changed the cemetery's name to Washelli, meaning "west wind", and also the name of Seattle's second municipal cemetery, formerly located on Capitol Hill. In 1919, the Evergreen Cemetery company started a competing cemetery on the western side of Aurora and in 1922 purchased Washelli from the ANA. Merging cemeteries and land, by 1962 Evergreen Washelli Cemetery stands as we see it today, existing as cemeteries within cemeteries. Situated on 144 acres the site interrs over 200,000 people, including many members of the founding Denny family, a section devoted to veterans, and sections for various religious sects and fraternal organizations.

Meridian Cemetery

The city of Shoreline is one of Seattle's closest suburbs. Originally founded by homesteaders and vacationers, the first settlers arrived in the 1880s. Railroads greatly opened up the area to development and the town offered an escape from Seattle's urban center. Like the neighborhoods to its south, it soon became filled with lumber mills, shipyards, farms, and vacation homes. In the early twentieth century, large developments were attracted to the area for its rural yet accessible location and commercial centers sprang up around Seattle-Everett Interurban Railway stops. The surrounding small neighborhoods became identified and named after their local streetcar stop. In the 1940s, the term Shoreline was first used to describe the entire area, no longer a series of scattered settlements. The closing of the railway lines and the increased popularity in cars have allowed Interstate-5 and Aurora Avenue North to define the borders of this neighborhood, acting as commuter routes for those working in Seattle. The city of Shoreline incorporated its fourteen neighborhoods as an independent city in the 1990s.

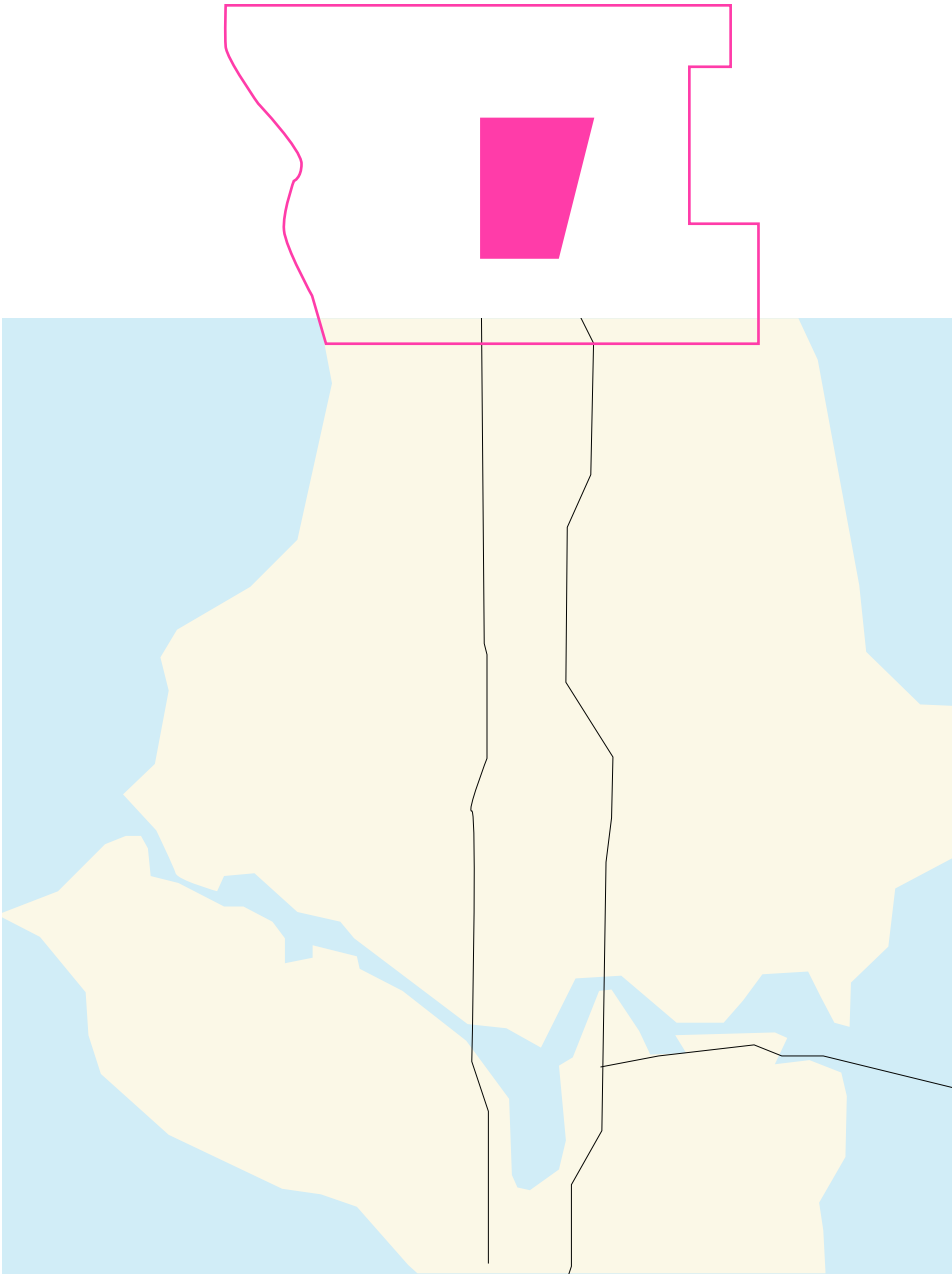


Figure 48. Seattle City Limits
Shoreline is Outlined in Pink
Meridian Park is Highlighted in Pink



Figure 49. Seattle-Everett Interurban Streetcar
North 155th Ave. and Aurora Ave.
ca. 1915

Located in the Meridian Park neighborhood of Shoreline at Aurora Avenue North and 167th Street, Meridian Cemetery was founded in 1927 and comprises three and a half acres. Accessible by the Seattle-Everett Interurban Railway, the line had a special funeral car to accommodate families traveling from Seattle for burial services. This route continues to offer neighborhood access, however, now in the form of the Interurban Bike Trail.

Headstones

These cemeteries reference many of the important events of the early twentieth century. Headstones in the shape of tree stumps hint at north Seattle's original lumber industry and the frequent sawmill accidents; sections devoted to children and the large number of deaths in 1918 are reminders of diseases and epidemics that affected the city; and large Pine, Cedar, and Fir trees scattered throughout the site allude to the former forests on these lands. Headstones from before the cemeteries' establishment can be found, relocated from other sites. These burial sites are evidence of the wide spread re-interments taking place across the city as urban growth spread and more land was needed for commercial and residential developments. Today, newer headstones with Russian, Japanese, and Chinese names show the changing diversity of the neighborhoods. These headstones represent the transition these neighborhoods have gone through in the past century, maintaining a local community feeling. Even a tabby cat, named Lilly, who used to live on the Crown Hill cemetery grounds is buried with her favorite toy.



Figure 50. Variety of Headstones Throughout Cemeteries

Common Characteristics

The history of each site and its surrounding neighborhood show common themes across the three cemeteries and speaks to the histories of the cemeteries in the Pacific Northwest, a region that developed more recently than many parts of the United States. Specific to Seattle, much of the land was originally heavily forested contributing to each site still having old growth trees on their premises and headstones that reference the region's logging past. Other remnants of the city's former life are still present; the footprint of the Seattle-Everett Interurban Railway and other rail tracks still cut across many parts of the city, existing today as bike trails. Though each site is a century or more old, their presence does not hinder development around them; however, seeing their development within their unique historical context shows common characteristics as to how the city has responded to their physical presence over the years.

Meridian Cemetery (1927)
3.5 Acres



Crown Hill Cemetery (1903)
10 Acres



Evergreen Washelli Cemetery (1884)
144 Acres



Figure 51. Three Sites, Overview

Meridian Cemetery



Crown Hill Cemetery



Evergreen Washelli Cemetery

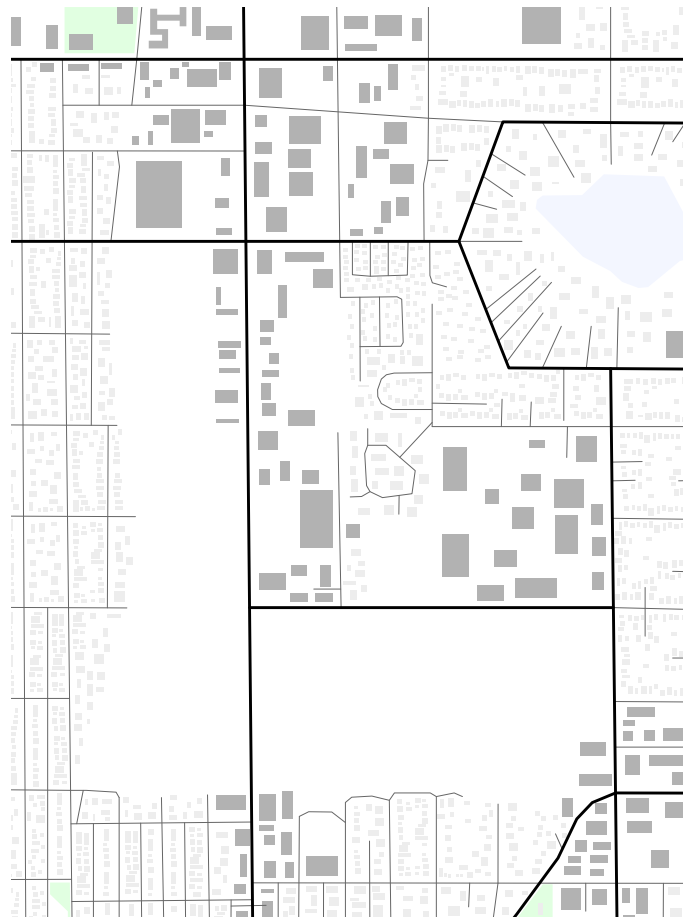


Figure 52. Three Sites - Zoning

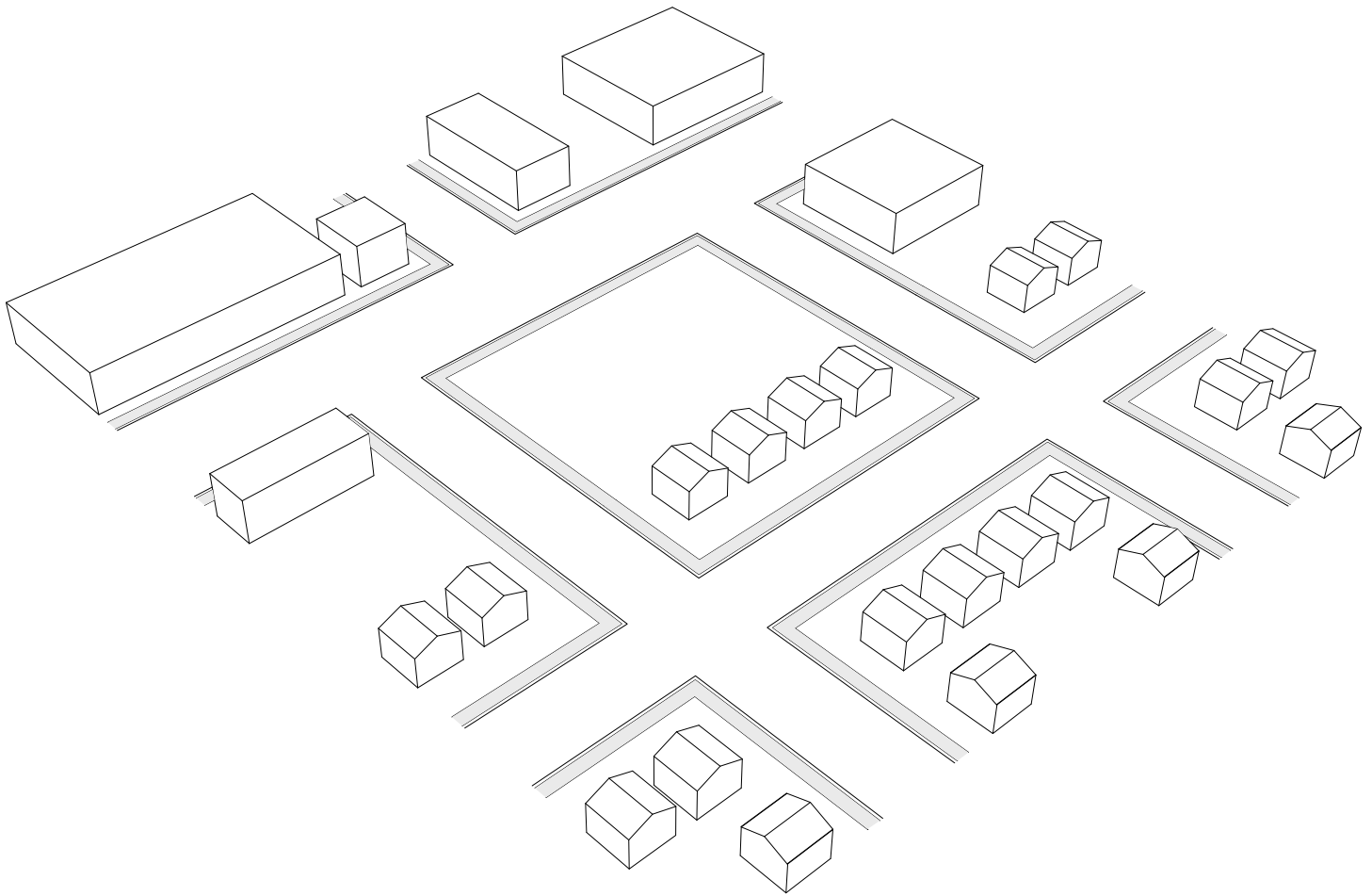
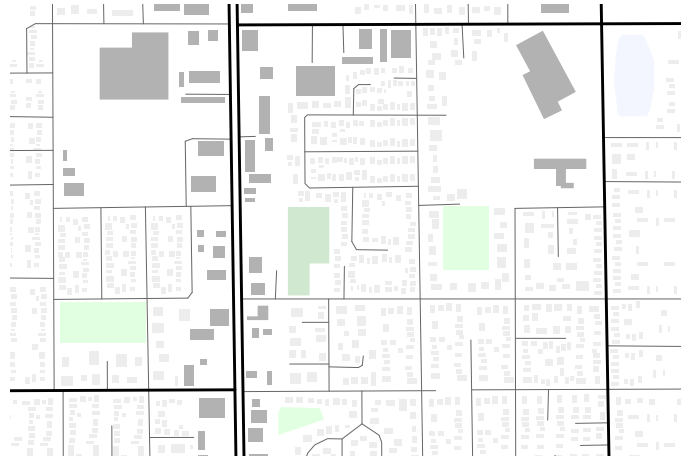


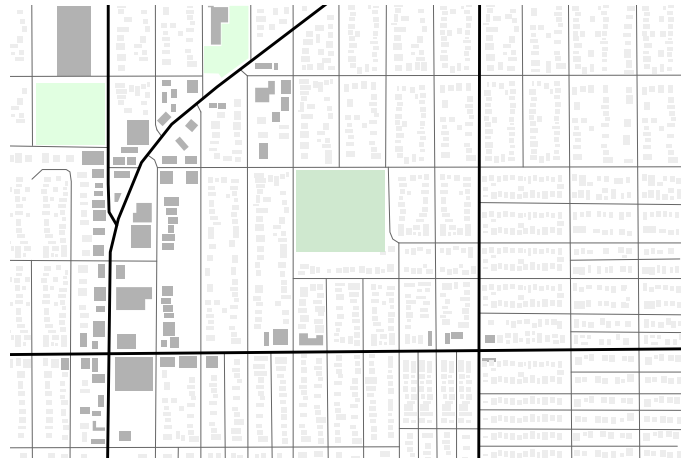
Figure 53. Neighboring Commercial and Residential

Each of the three cemeteries are bordered by a mix of zoning uses. Founded at times when much of the land was still unplatted, the surrounding parcels have undergone dramatic changes in development. What was once farmland has become a mix of small scale residential neighborhoods and commercial developments ranging from small businesses to larger industry. Each of their individual neighborhoods are experiencing the growth of Seattle and, in turn, have been identified as pieces of Seattle's Residential Urban Village; the city has drafted proposals to increase their density.

Meridian Cemetery



Crown Hill Cemetery



Evergreen Washelli Cemetery

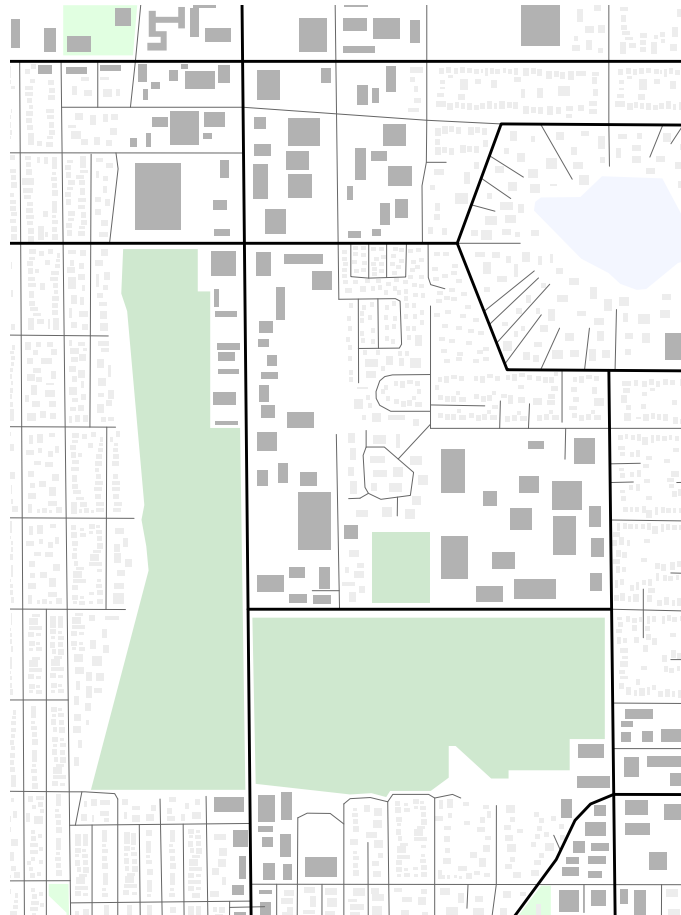


Figure 54. Three Sites - Green Spaces

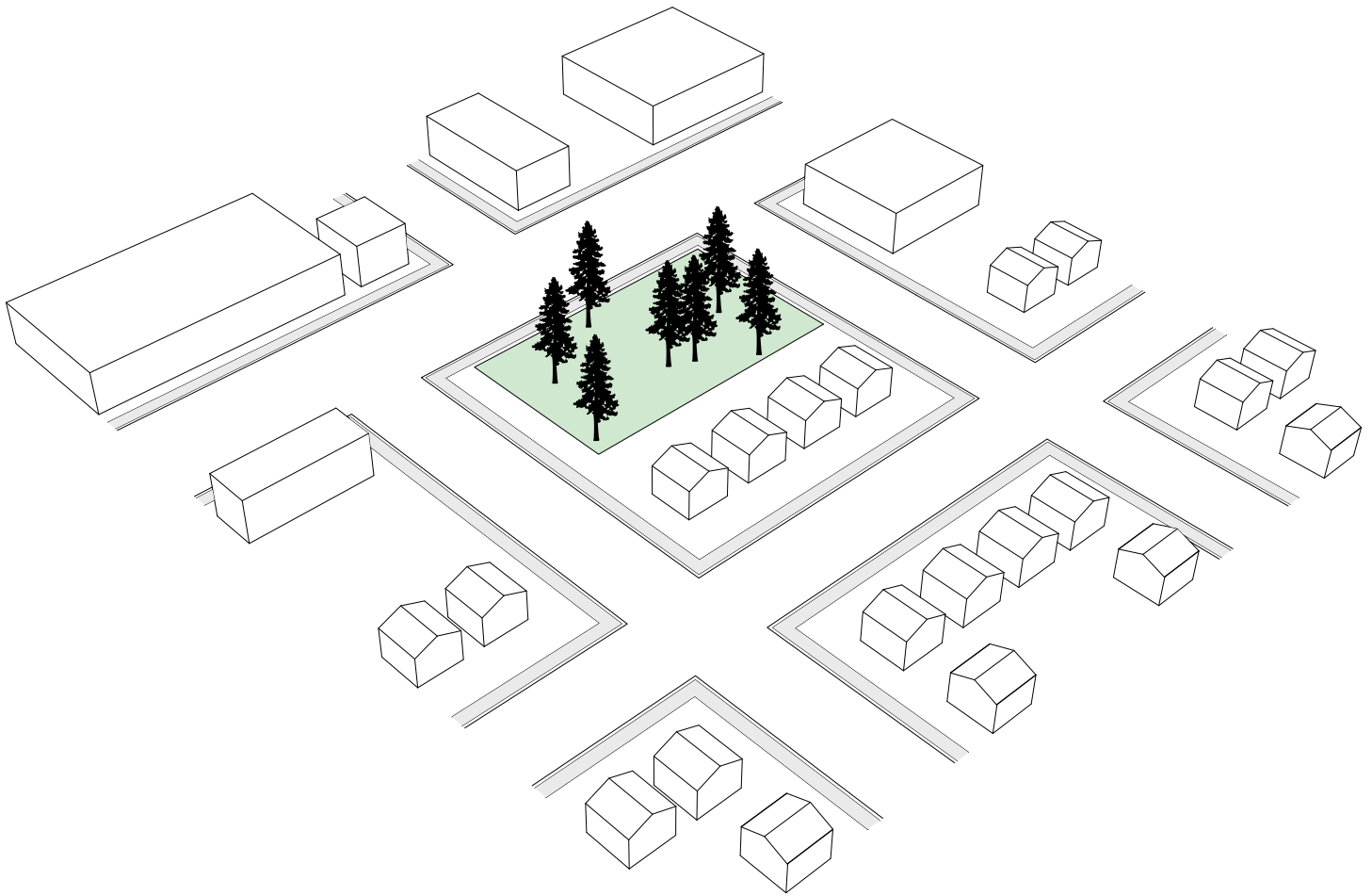


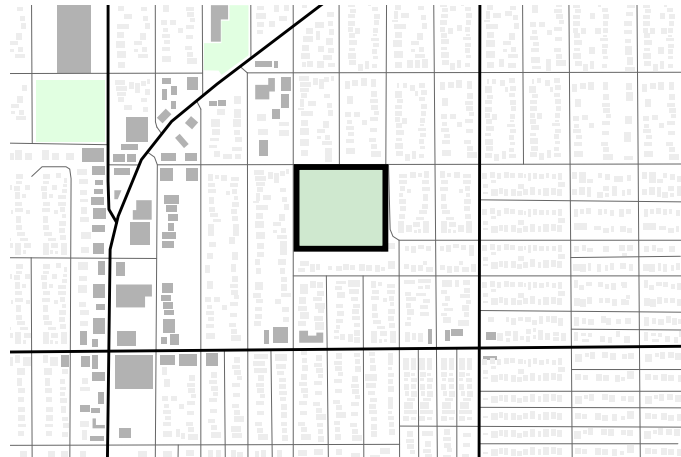
Figure 55. Green Spaces

All cemeteries exist as green spaces within their neighborhoods. Predating most development and mostly untouched since their founding, these sites have some of the oldest trees remaining in the city. Old Maple trees, White Poplars, and Oregon Ashes are a few of the varieties that can be found, with some trees so old they are listed on walking routes in tree guidebooks. The grounds themselves are large, open grassy areas meeting the natural topography as closely as possible. While most of the vegetation is heavily landscaped, the openness of the entire site is an unexpected discovery within a densifying city.

Meridian Cemetery



Crown Hill Cemetery



Evergreen Washelli Cemetery

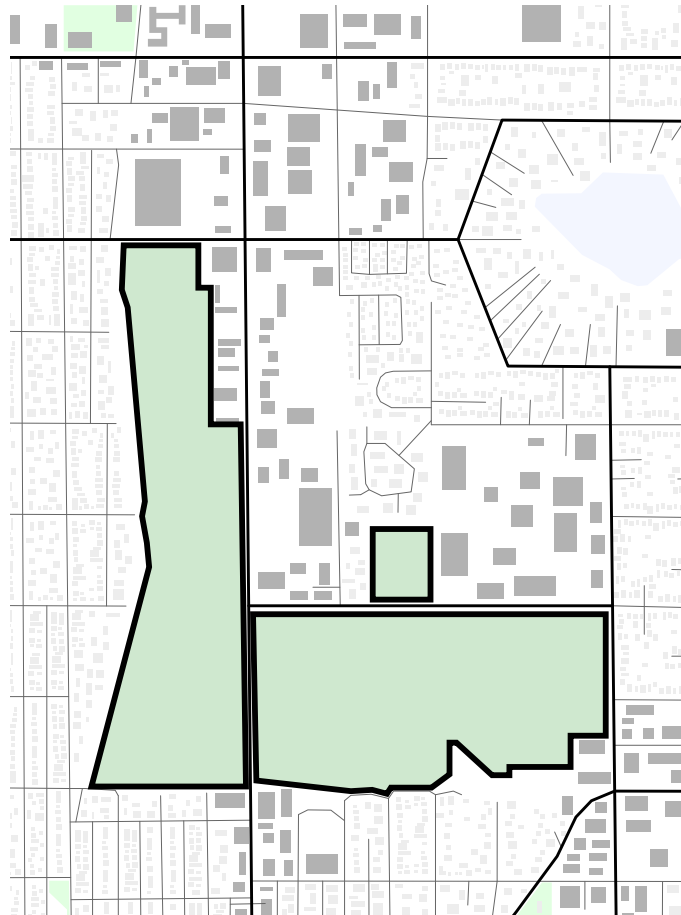


Figure 56. Three Sites - Fenced Off

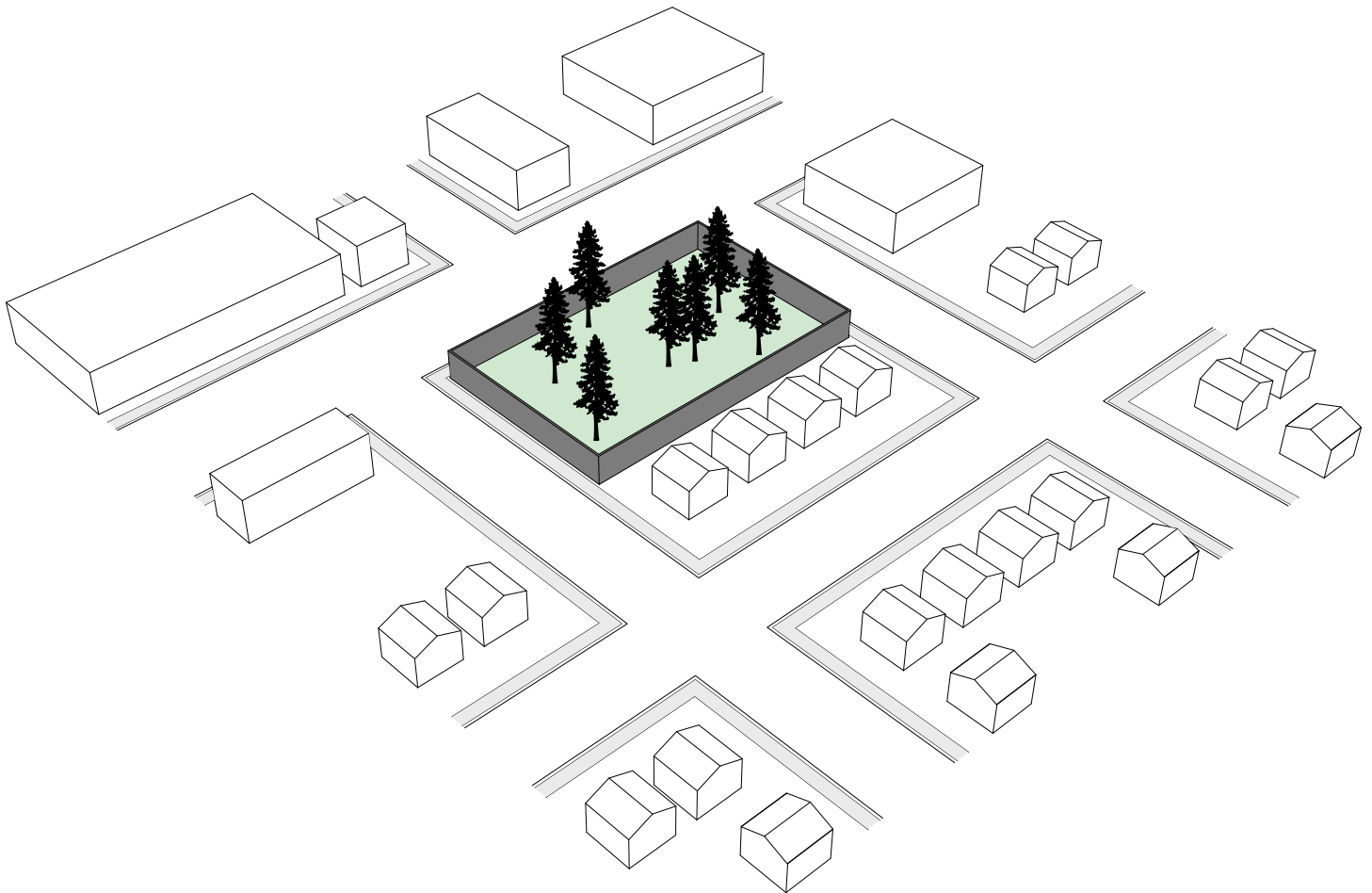
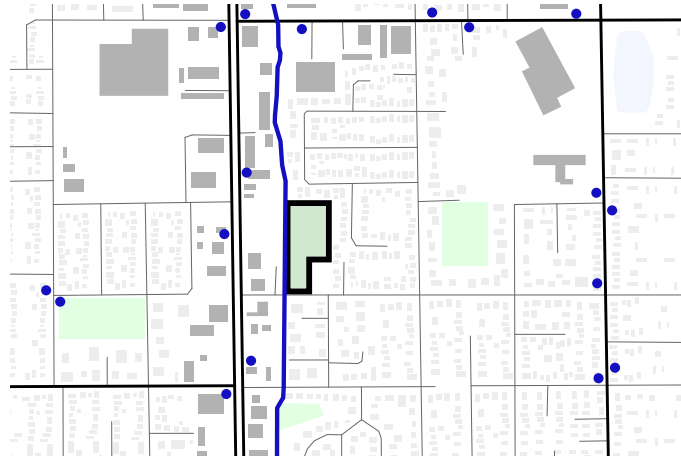


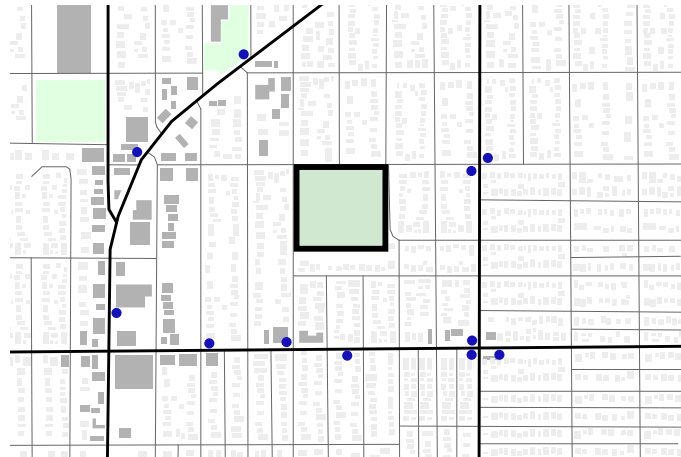
Figure 57. Fenced Off

No matter the cemetery's size, they are all fenced off from public view. Usually having a single gated entrance, physical access is limited to certain hours and visual access is almost completely obstructed. Surrounded by solid walls or overgrown hedges, it takes some effort to find many of these cemeteries as their grounds are barely visible from the street. Often entry signs are tucked back away from the street, further adding to their seclusion. Evergreen Washelli is unique in that it is divided by Aurora Avenue North. This is the only cemetery with multiple entrances but these also act to create the feeling of separate cemeteries not a more open whole.

Meridian Cemetery



Crown Hill Cemetery



Evergreen Washelli Cemetery

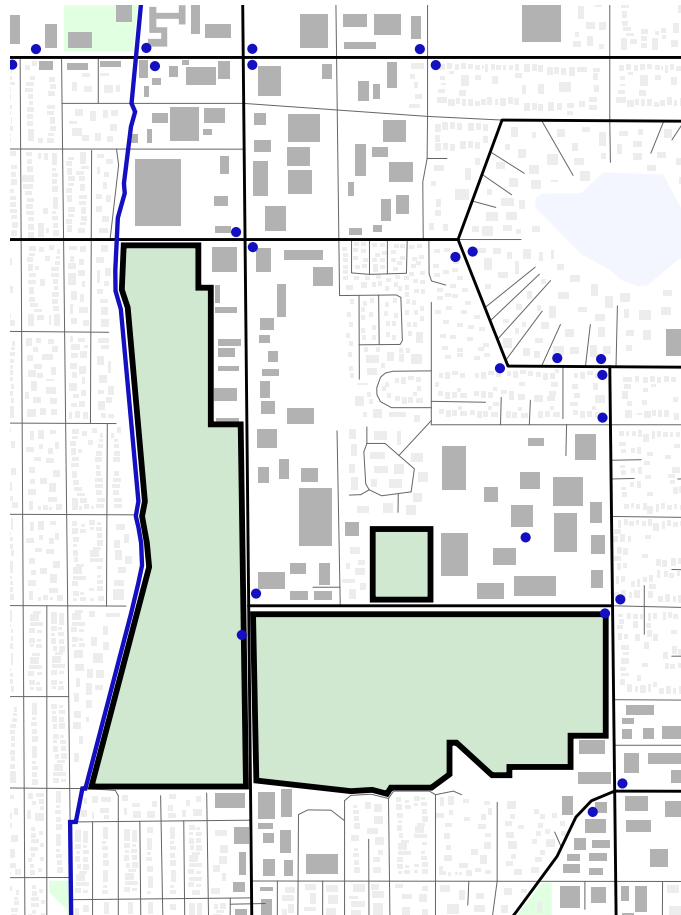


Figure 58. Three Sites - Transit

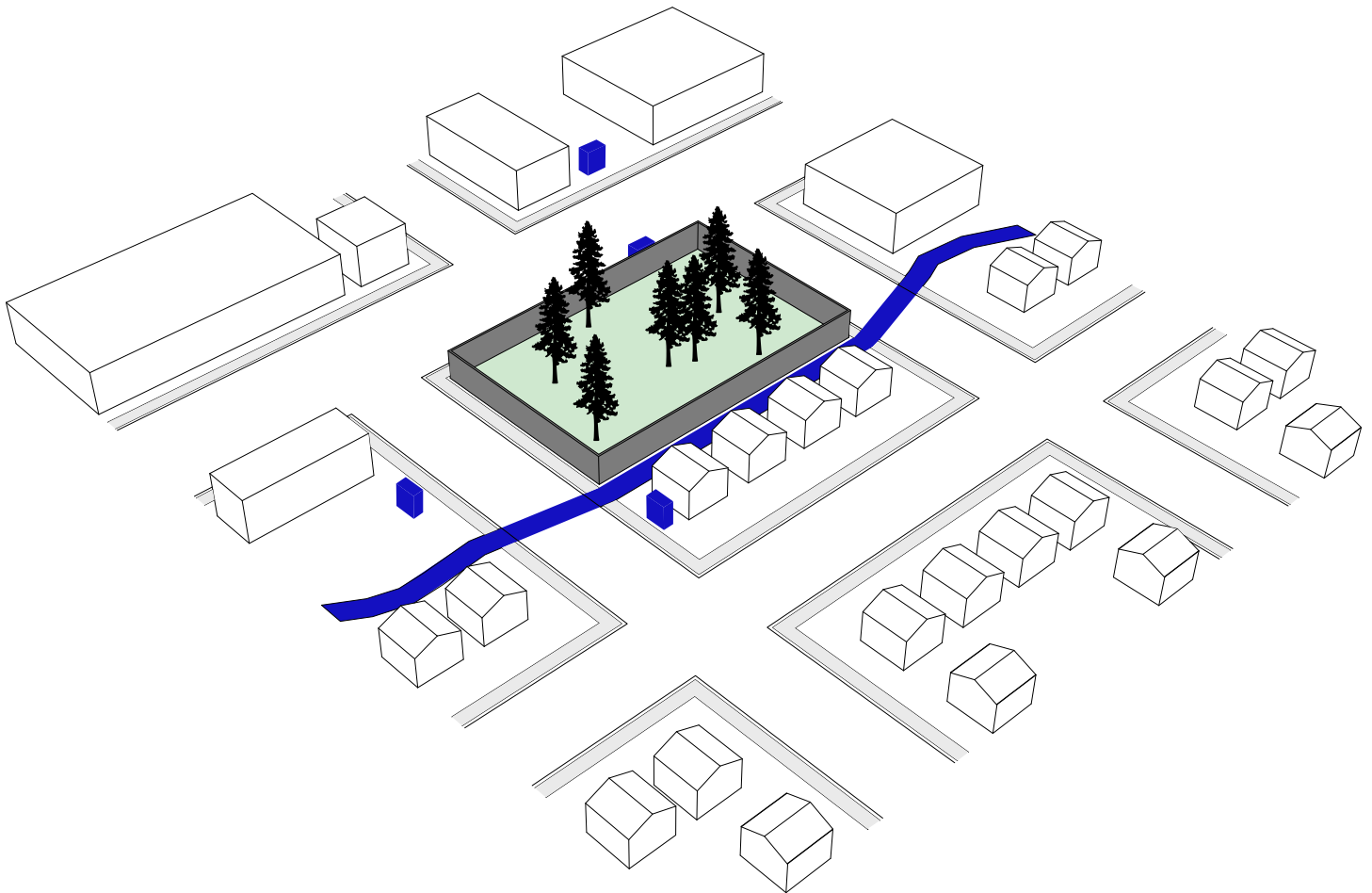


Figure 59. Surrounded by Transit

No matter how removed they feel from the urban fabric, they still exist within it. Situated in active neighborhoods, there is a constant movement of pedestrians around the perimeter of all these sites. Each cemetery is bordered by a fence and a sidewalk. At major intersections and within neighborhoods, there are bus stops with people being dropped off and picked up. And the route that used to be the Seattle- Everett Interurban Railway now functions as the Interurban Bike Trail. No longer do streetcars run but commuters still use the same route to cross the city, connecting to other bike trails and passing beside more cemeteries.

Cemetery Design Strategies

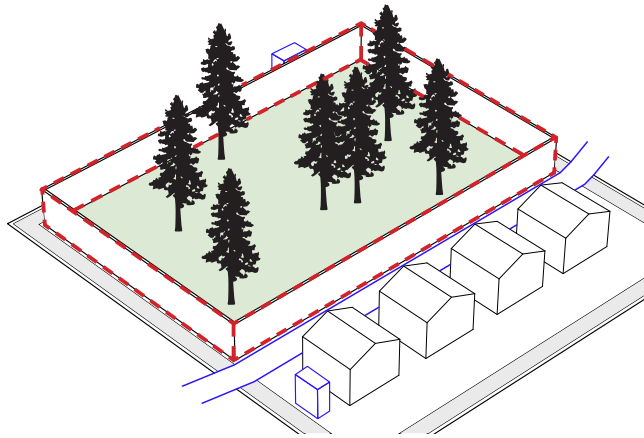
Breaking down these three cemeteries into a generic model highlights their unique limitations and possibilities within the greater urban context. All cemeteries can be addressed by three design strategies:

Engage: Activate the edge and create an awareness of the cemetery's existence beyond its front door. Utilize existing bike trails, sidewalks, and bus stop locations.

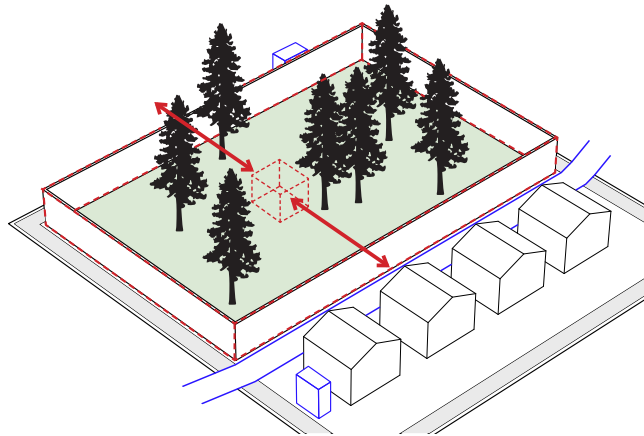
Meander: Connect the edge and center in ways that lead people through the cemetery. Change the role of the site as a single object focus (headstone) and broaden people's exploration of the entire site.

Reflect: Acknowledge the cemetery's role as a place of remembrance and offer places to focus on those no longer with us. Continue the site's use as a place of collective history.

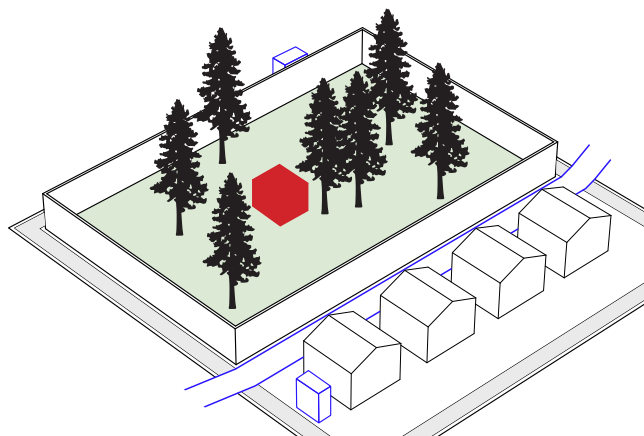
Figure 60. Design Strategies



Engage



Meander



Reflect

CHAPTER SEVEN

A Cemetery Typology for the Living

Making room in cemeteries for the individual mourner, this thesis aims to incorporate the three cemetery design strategies of engage, meander, and reflect with the physical manifestations of mourning in votives. A series of interventions, focused on votive representations, sets up a pathway across the site creating an experiential journey through mourning. Ranging from encounters of observation to physical interaction, each intervention changes over time either through seasonal shifts or the accumulation of use. These additions, unlike headstones, are made of more temporary materials - wood, earth, and intangible qualities of floral aroma and sunlight - representing an ever-changing journey and allowing new spaces to open up for future mourners.

As the process through mourning is a very personal experience, these varieties of spaces allow anyone to enter the cemetery and find the place that best represents their current moment. Providing for a number of responses both acknowledges the diversity of grief and sets up a larger network to create a greater collective history. Uniting the old and new, the

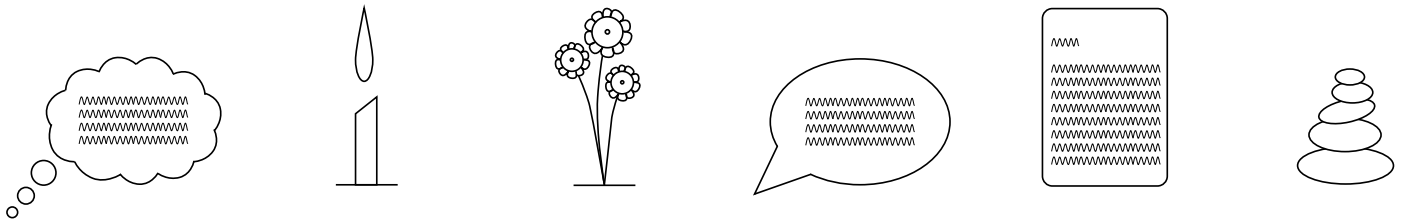
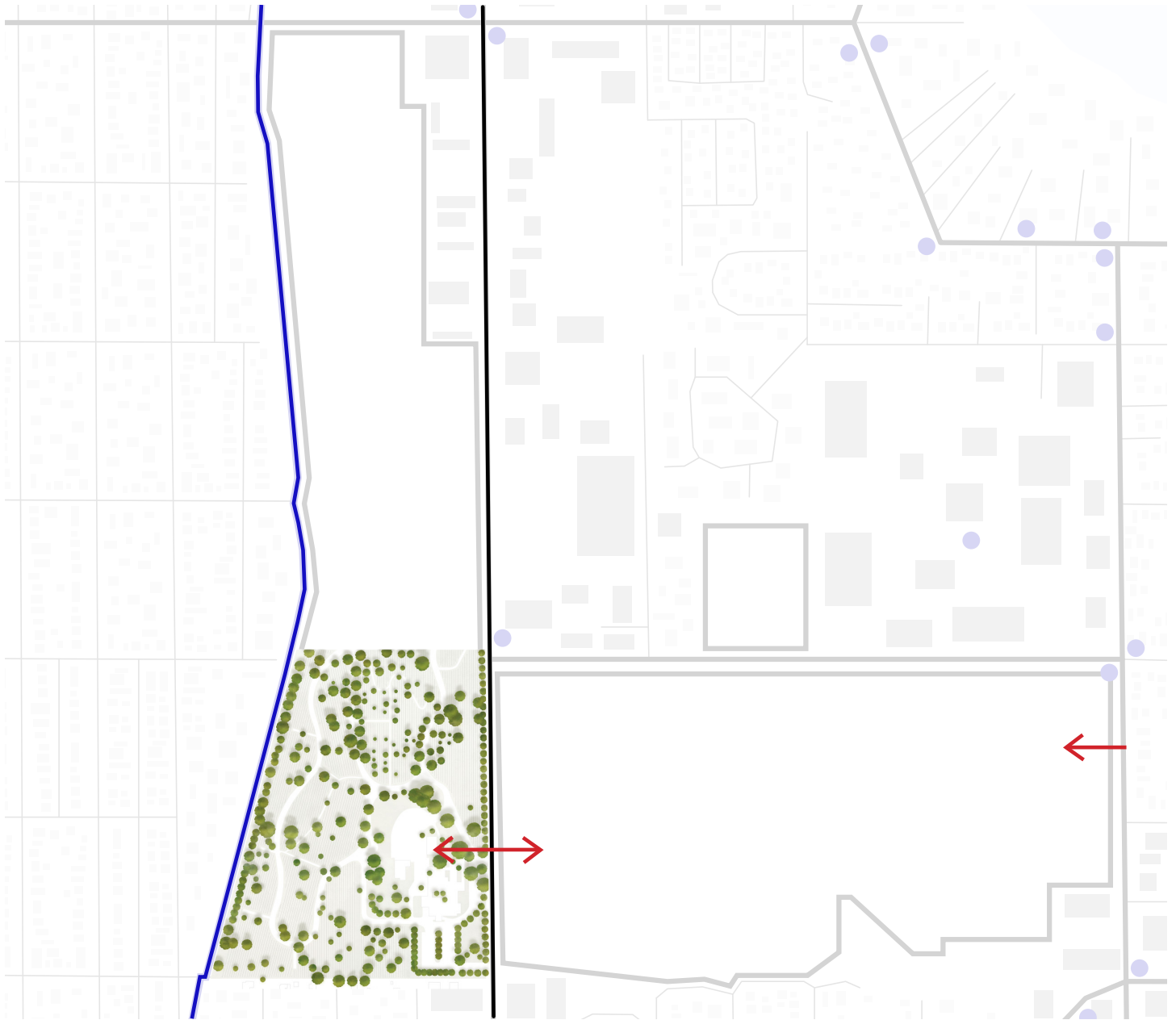


Figure 61. Votive References

new additions are woven among the traditional cemetery. This integration changes the experiential pathway to one that can be left and returned to, connecting the headstones to the interventions and implying that all elements within the cemetery are part of a collective history.

By thinking of these interventions, not as a full account of how to address the living individual as mourner, but as a series of elements within mourning, this thesis can apply this new typology to cemeteries of various scales. This thesis proposes that all the cemeteries within King County Washington and cemeteries beyond this study can better meet the needs of their neighborhoods by taking into account the many responses to grief. New elements can be applied in ways that maintain the unique features of each site, allowing the interventions to work within these limitations and still extend the cemetery as a space of contemplation and solace.



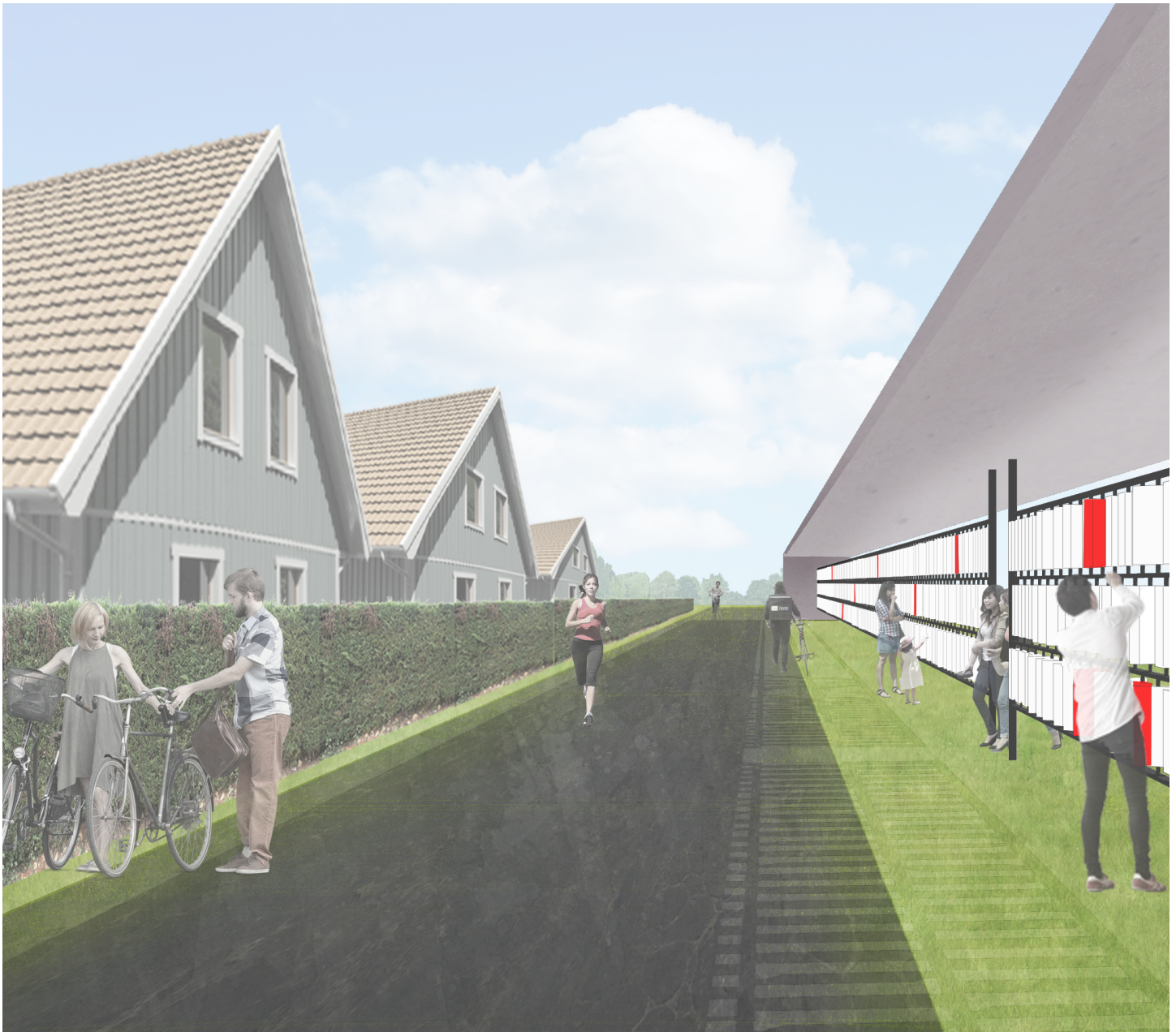
Focusing on one of the previously analyzed cemeteries, Evergreen Washelli was chosen for its large size - 144 acres - as the site with the most diversity, providing the largest opportunity for a variety of interventions. The southern end of the cemetery became the focal point as it has the closest connection between the parking lot for visitors and the bike trail on the western edge. These two groups can be characterized as those already actively visiting the cemetery to see specific headstones and those who pass by the cemetery, either unaware of its existence or feeling unwelcome because they do not have a relative buried there.

Figure 62. Evergreen Washelli Cemetery Existing Entrances



Figure 63. New Entry Points

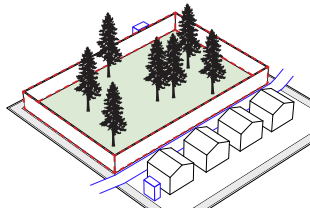
How can these new interventions touch the ground when so much of the cemetery is covered in headstones and burials? The headstones are both a form of art representing their time and tell stories of those buried; their presence is the most defining feature of cemeteries. Keeping the headstones untouched, the footprints of the existing roads and pathways became the new massing. Four new access points were created based on the presence of walkways, one near the parking lot and three near the bike trail. The interventions were spaced across the site regarding their relation to the three design strategies of engage, meander, and reflect.



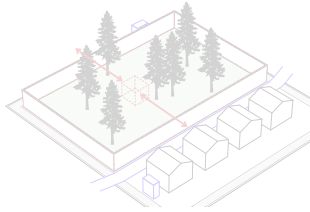
Edge

Engaging the bike trail, the Edge intervention removes what was once a solid wall and creates an occupiable space protected by a concrete roof. A new wall of steel rods supports a series of wooden blocks that are able to spin. Moving by human interaction or wind, these blocks create sight lines into the cemetery, offering an ever-changing view of the headstones and allowing views down the bike trail to fluctuate with each passing. Placed at points along the bike trail, three new entries into the cemetery are created.

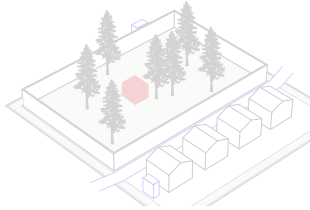
Figure 64. Edge Perspective
Figure 65. Edge Design Strategy
Figure 66. Edge Map



Engage

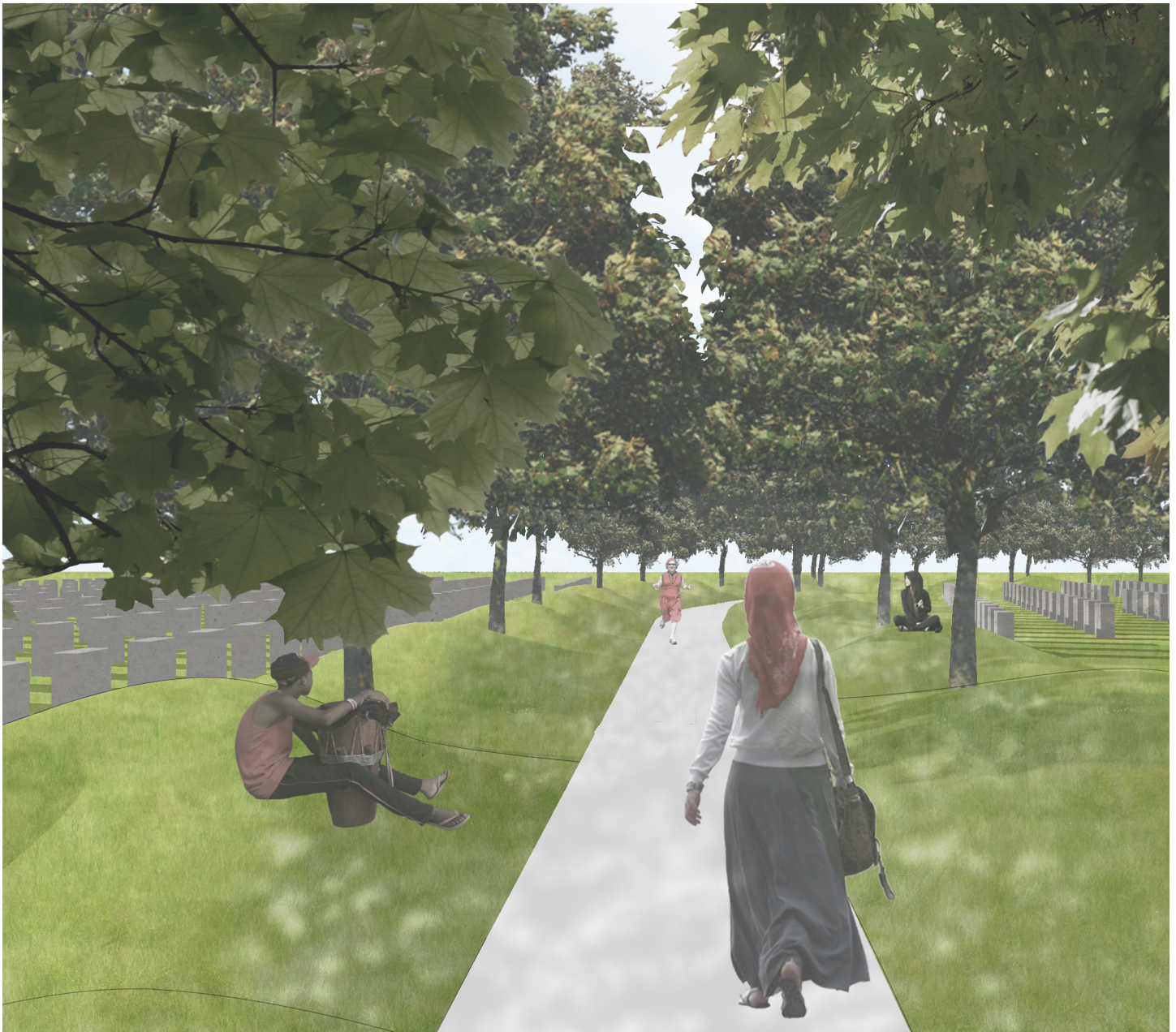


Meander



Reflect

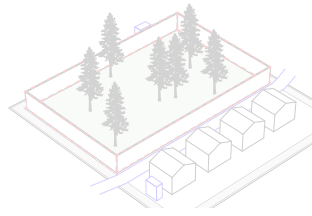




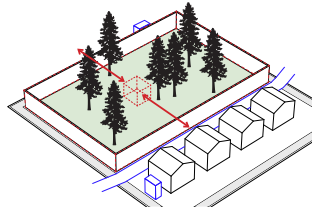
Tree

Meandering along the southern portion of the site, the Tree intervention creates an arcade of trees interspersed with small mounds. Cemeteries are usually quite open with large old trees but this arcade creates a space of changing light conditions throughout the day and seasons. The canopy encloses a pathway, where small mounds provide places to sit which are lacking in most cemeteries. The small, grassy knolls are a soft contrast to the surrounding stone headstones.

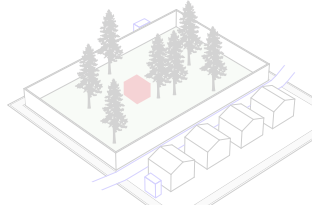
Figure 67. Tree Perspective
Figure 68. Tree Design Strategy
Figure 69. Tree Map



Engage



Meander



Reflect

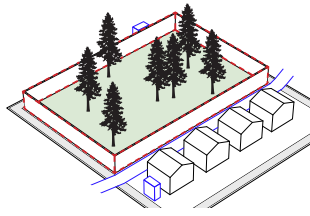




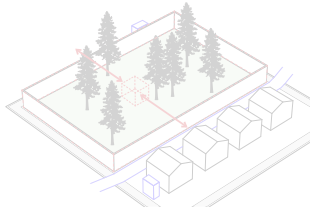
Block

The wood blocks at the bike trail originate from within the cemetery as totems for people to carve in. The Block intervention creates a place of engagement and reflection as people are able to leave new marks in a similar way to how headstones function. As wood, the blocks can both age and decay, showing the passing of time and making room for new people to join the collective history of the site. Their placement within the site and on the bike trail represents the accumulation of users overtime.

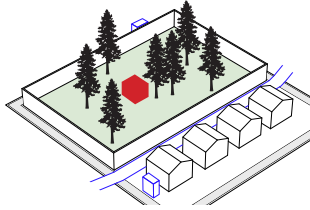
Figure 70. Block Perspective
Figure 71. Block Design Strategy
Figure 72. Block Map



Engage



Meander



Reflect

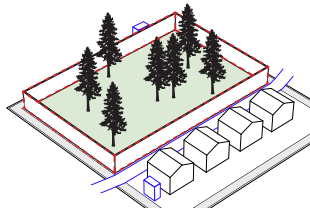




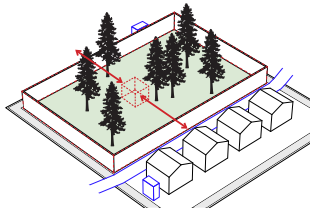
Earth

The site of Evergreen Washelli is on a slope and by taking advantage of the contours, the Earth intervention cuts across a portion of the site letting people walk along a flat route while the ground rises and falls next to them. Removing dirt for the pathway, the earth becomes the retaining walls and pockets within the walls offer nests for birds, amplifying the abundance of birds already living at cemeteries. In considering the many votives created, grooves along the walls provide places for people to leave notes and stories of loved ones.

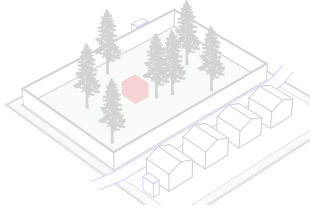
Figure 73. Earth Perspective
Figure 74. Earth Design Strategy
Figure 75. Earth Map



Engage



Meander



Reflect

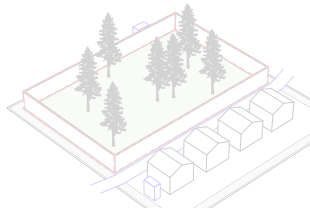




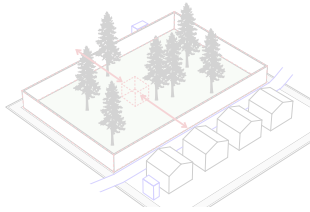
Box

Unlike the previous interventions that used the footprints of the existing roads, the Box intervention is placed further within the site, hidden among the headstones and trees. Acting as something to discover, this intervention responds to those who seek seclusion as they mourn. Following the grid of the headstones, the foundations are dark stones. While within the structure, stone blocks provide seats and wooden slats limit your views back out to the cemetery, creating a private place within the expanse of the site.

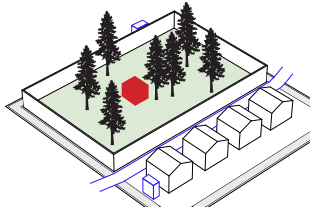
Figure 76. Box Perspective
Figure 77. Box Design Strategy
Figure 78. Box Map



Engage

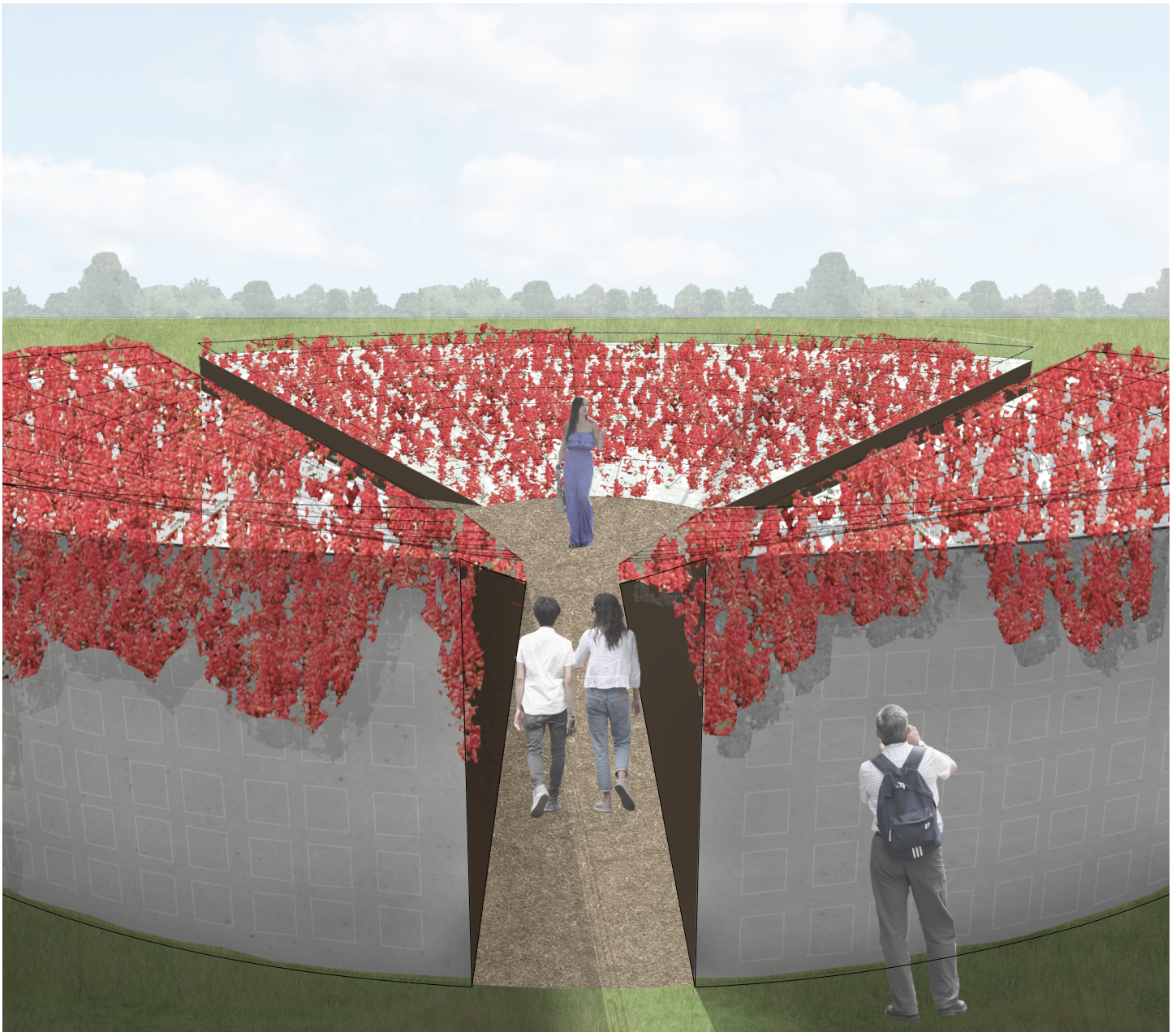


Meander



Reflect

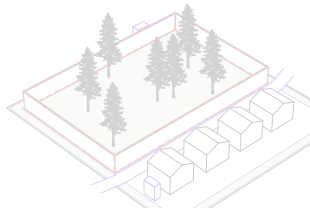




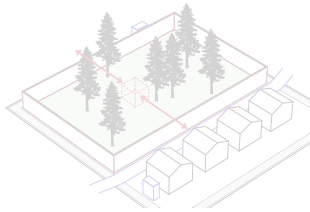
Flower

Placed near the parking lot for visitors, the Flower intervention responds to the traditional votive decoration of bouquets on headstones. While cemeteries are planted with trees and hedges, they are devoid of this most common votive. Inside this sloped mound, flowers rise above your head limiting your views solely to them and amplifying their floral aroma, reinforcing the delicate sense of smell. The outside of some of the interventions - Flower, Earth, and Block - are filled with columbarium niches expanding the space for burials.

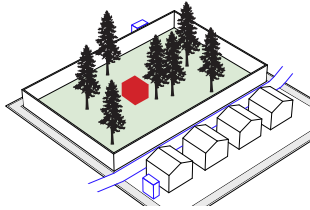
Figure 79. Flower Perspective
 Figure 80. Flower Design Strategy
 Figure 81. Flower Map



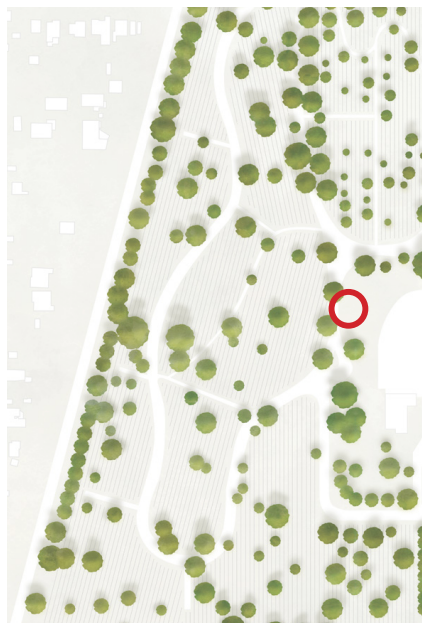
Engage

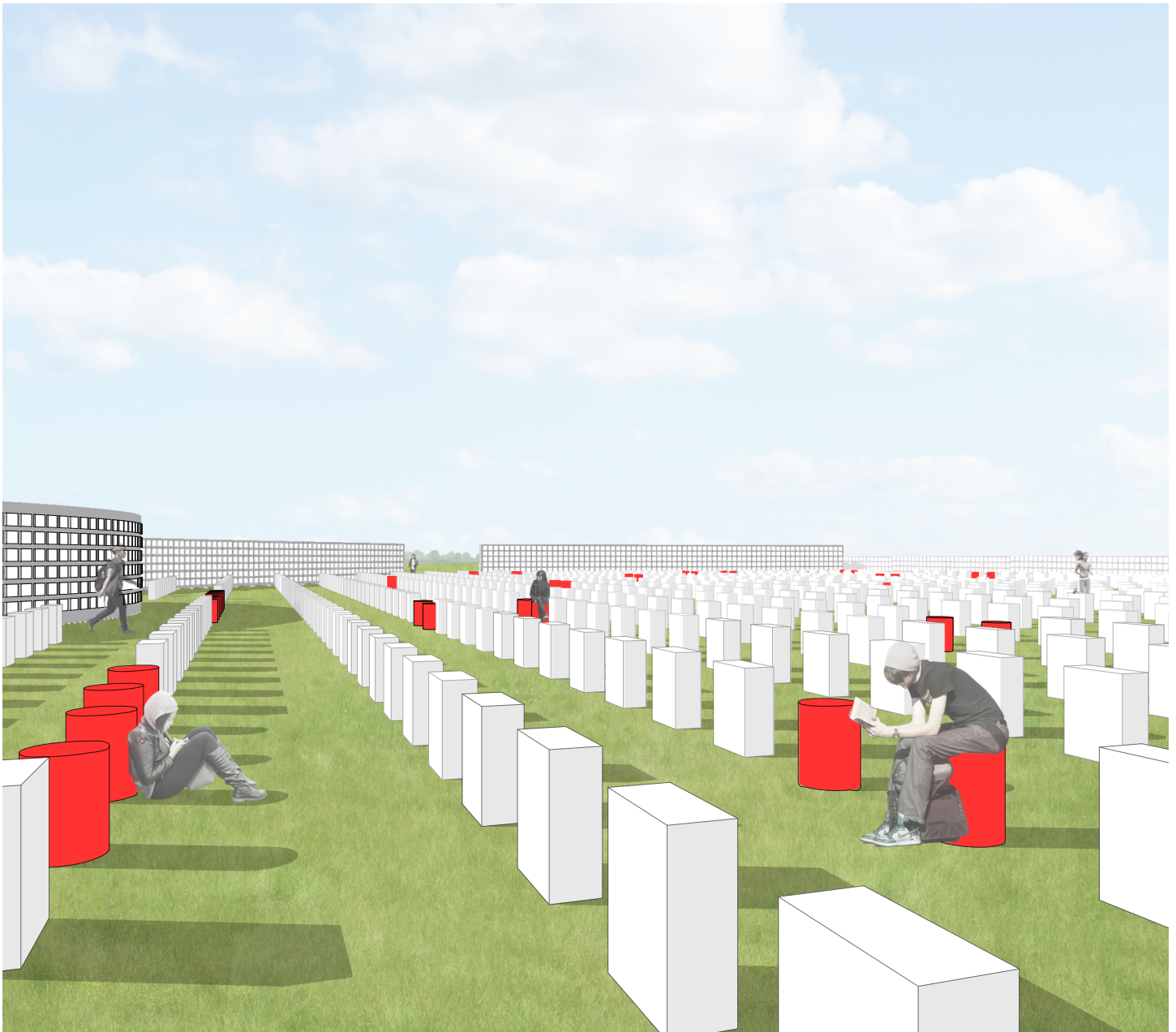


Meander



Reflect

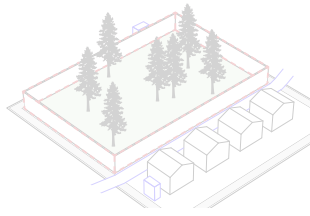




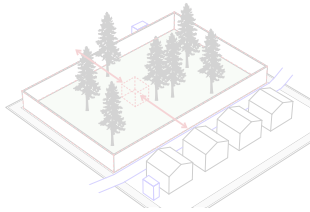
Center

The inclusion of columbarium niches considers the traditional use of cemeteries as places for burials and creates room for future growth. While the path of interventions are on one side experiences for the individual unrelated to burial, the opposite side of niches forms a large enclosed area reflecting the traditional side. As you walk among the headstones, the edges of all your sight lines are walls of burials. Stone seats scattered among the headstones offer places to rest and reflect among the existing headstones.

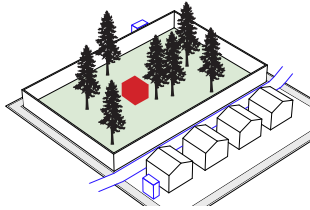
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Figure 83. Center Design Strategy
Figure 84. Center Map



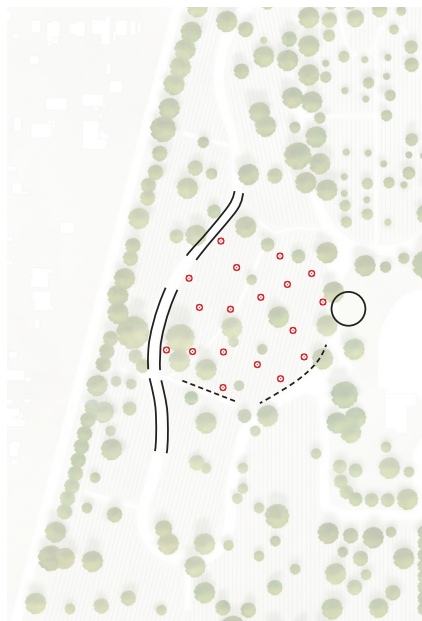
Engage



Meander



Reflect



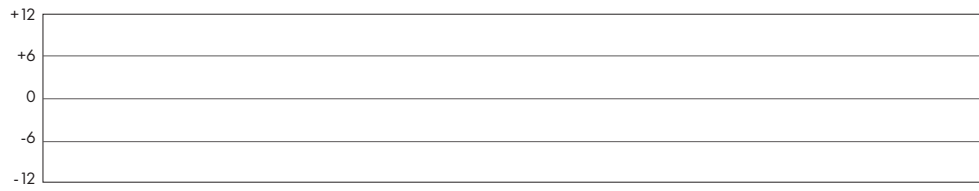
Visualizing Experiential Pathways

Using the design strategies of engage, meander, and reflect, this series of interventions established a pathway across Evergreen Washelli Cemetery that spatializes a journey through mourning. To better visualize an individual's path across the site, the experiences of a single route have been graphed. Elaborating on the categories of vertical movement (feet), horizontal movement (degrees), texture underfoot, sound, and sensorial focus advances this thesis from focusing on the interventions as singular objects to ones interconnected. The graphs show perceived and intangible fluctuations and would be different for each individual depending on the route chosen and time of day or season.

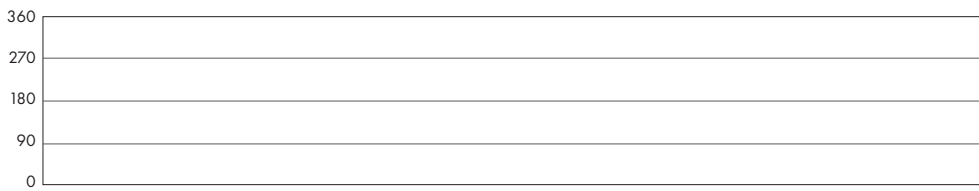
Adapting each intervention to the specifics of other cemeteries changes the experiences being graphed and creates a unique pathway. At the moment, these graphs only show movement between the interventions but could be expanded to follow an individual as they moved to and from the traditional cemetery's headstones.

Figure 85. Experiential Graphs
Blank Template

vertical movement:
height
(feet)



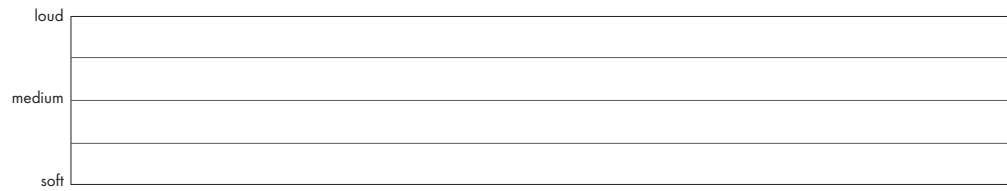
horizontal movement:
turns
(degrees)



texture underfoot:



sound:



sensorial focus:

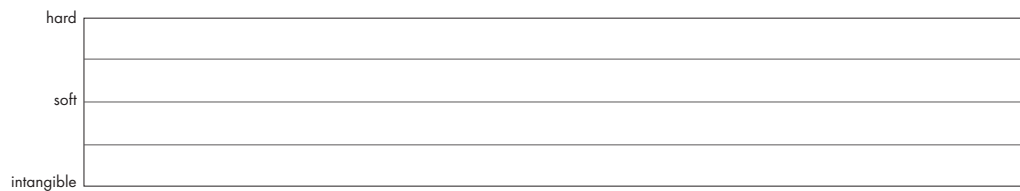
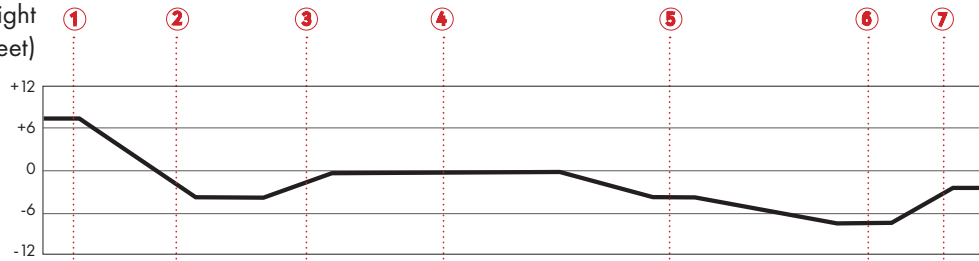




Figure 86. Evergreen Washelli Cemetery
Figure 87. Evergreen Washelli Cemetery,
Experiential Graph

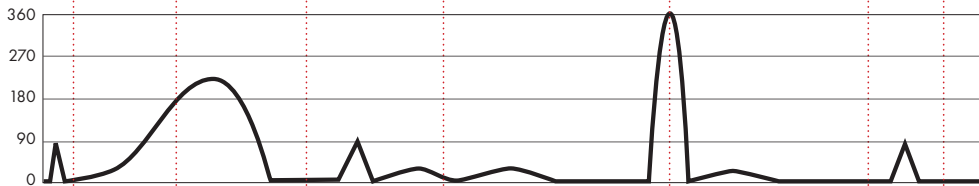
vertical movement:

height
(feet)

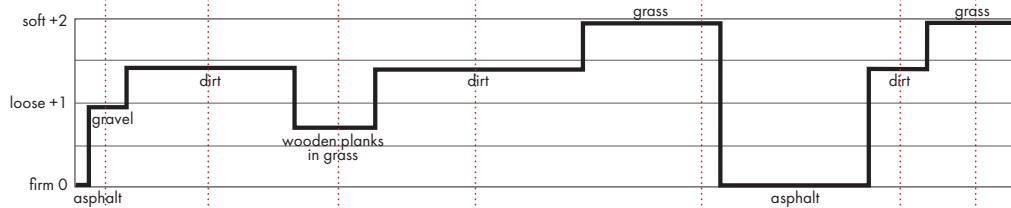


horizontal movement:

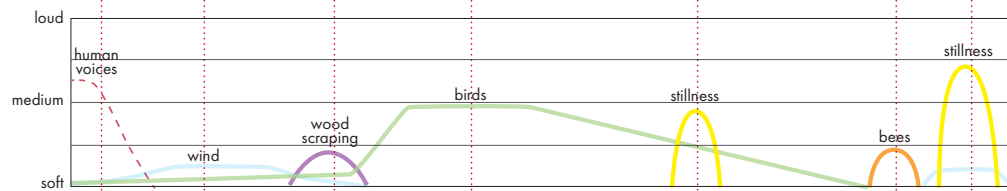
turns
(degrees)



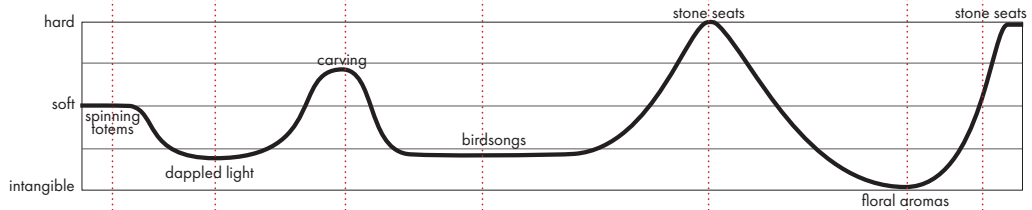
texture underfoot:



sound:



sensorial focus:



0 0.5 miles

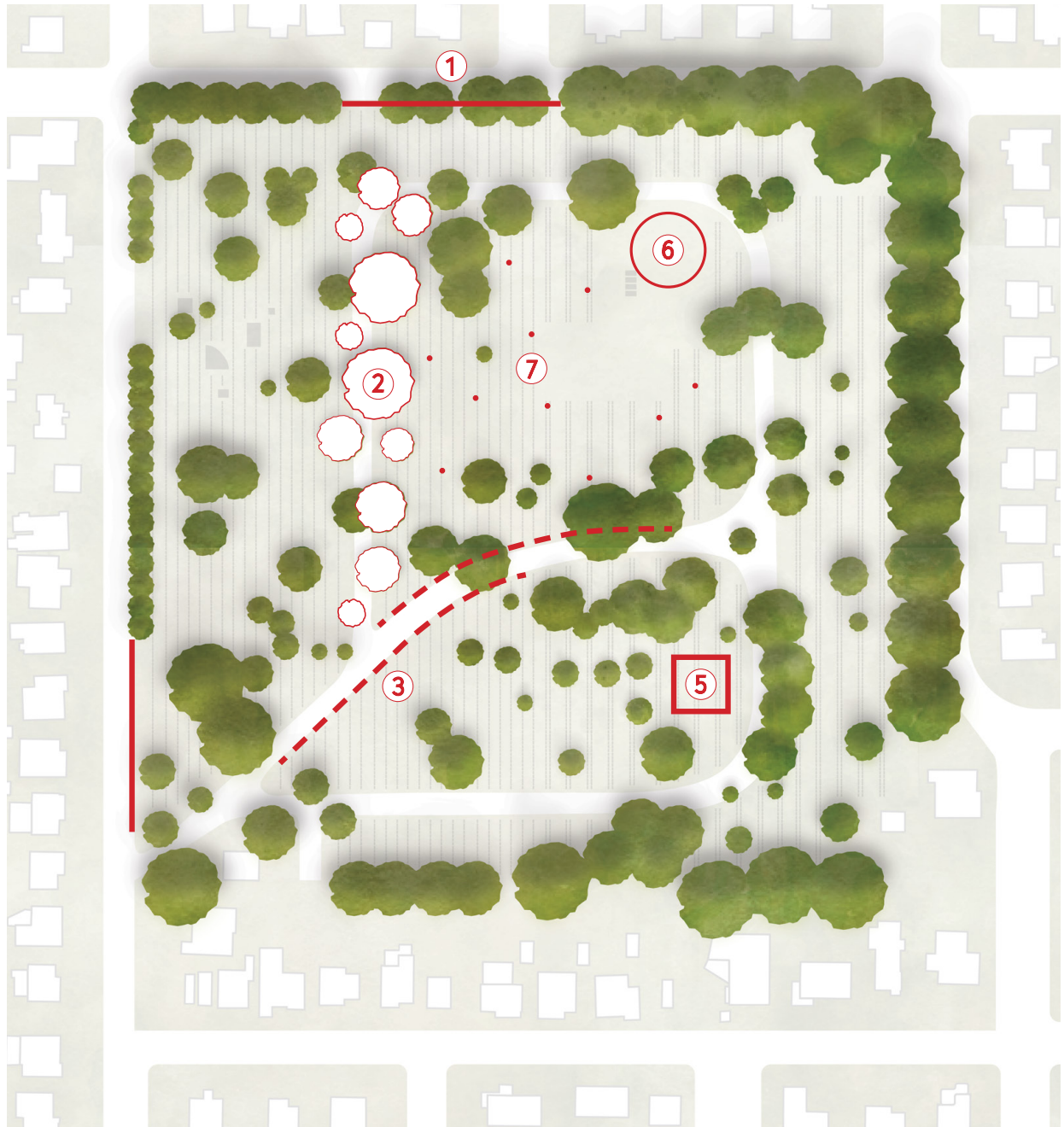
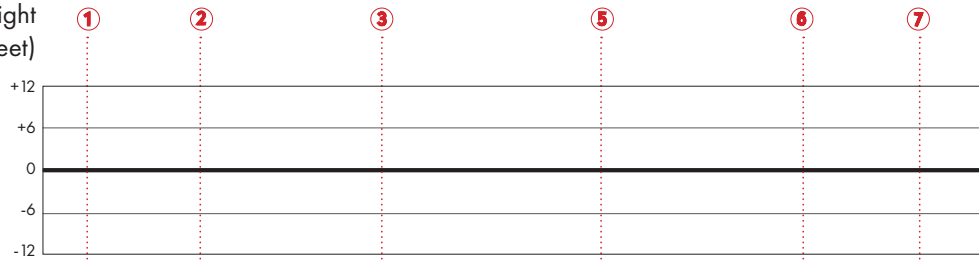
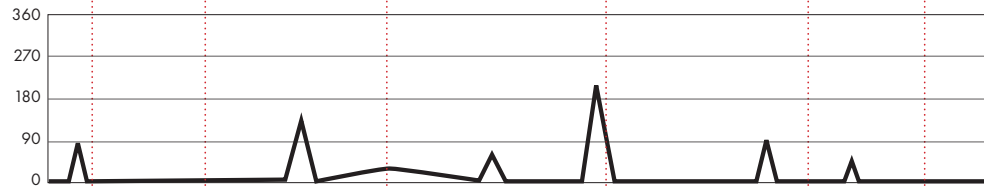


Figure 88. Crown Hill Cemetery
Figure 89. Crown Hill Cemetery,
Experiential Graph

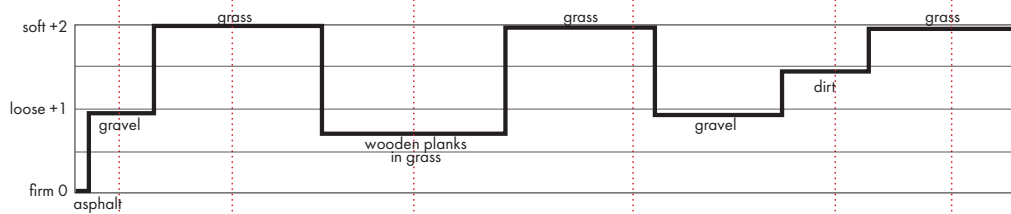
vertical movement:
height
(feet)



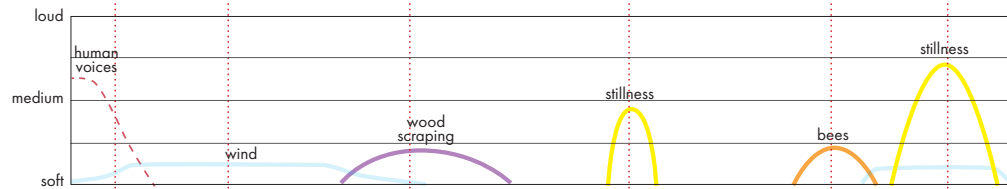
horizontal movement:
turns
(degrees)



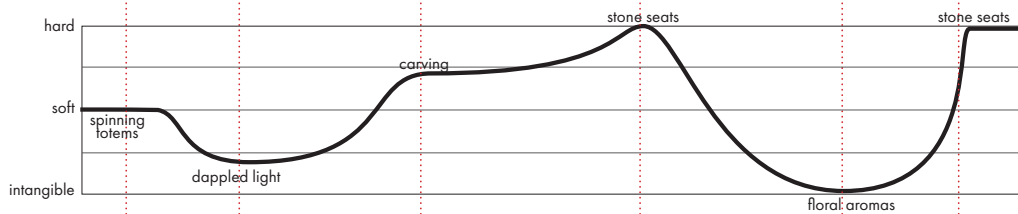
texture underfoot:



sound:



sensorial focus:

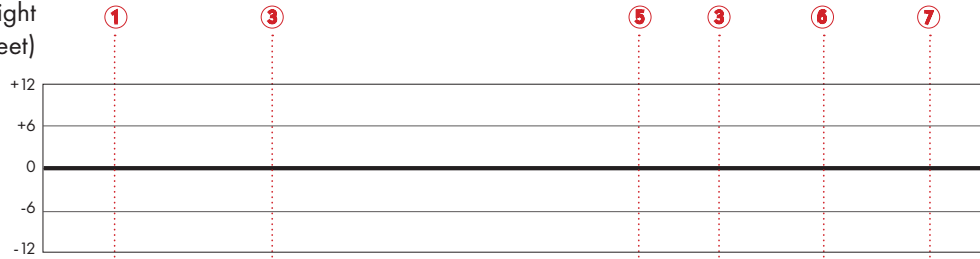


0 0.3 miles

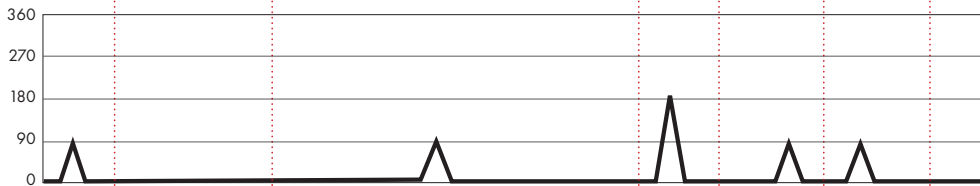


Figure 90. Meridian Cemetery
 Figure 91. Meridian Cemetery,
 Experiential Graph

vertical movement:
height
(feet)



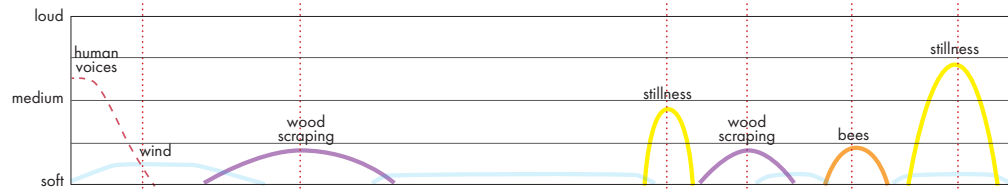
horizontal movement:
turns
(degrees)



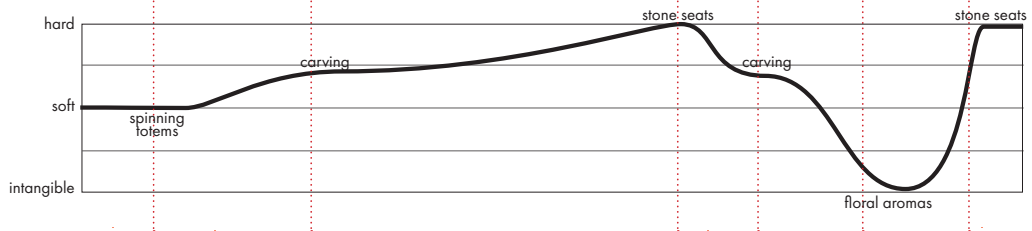
texture underfoot:



sound:



sensorial focus:



0 0.1 mile

CHAPTER EIGHT

Future Cycles

Placing cemeteries within the flow of lived time looks at the important roles cemeteries and burial grounds have had in society and questions their current role, as modern burial trends and human mobility seek to disguise the permanence of death. While burial customs are changing, the need to grieve remains a personal, internal struggle and, as such, should not be tied to a burial site. Utilizing the collective history and spiritual importance of cemeteries, this thesis proposes creating spaces within local cemeteries that allow an individual to mourn anytime and anywhere, reconnecting these sites to their neighborhoods and promoting their continued spiritual growth.

In looking at the physical manifestations of grief through votives, new interventions were located in local cemeteries that allowed for individual expression and personal meditation. These additions, unlike headstones, are made of more temporary materials - wood, earth, and intangible qualities of floral aroma and sunlight - representing the ever-changing journey through grief and allowing new spaces to open up for future mourners.

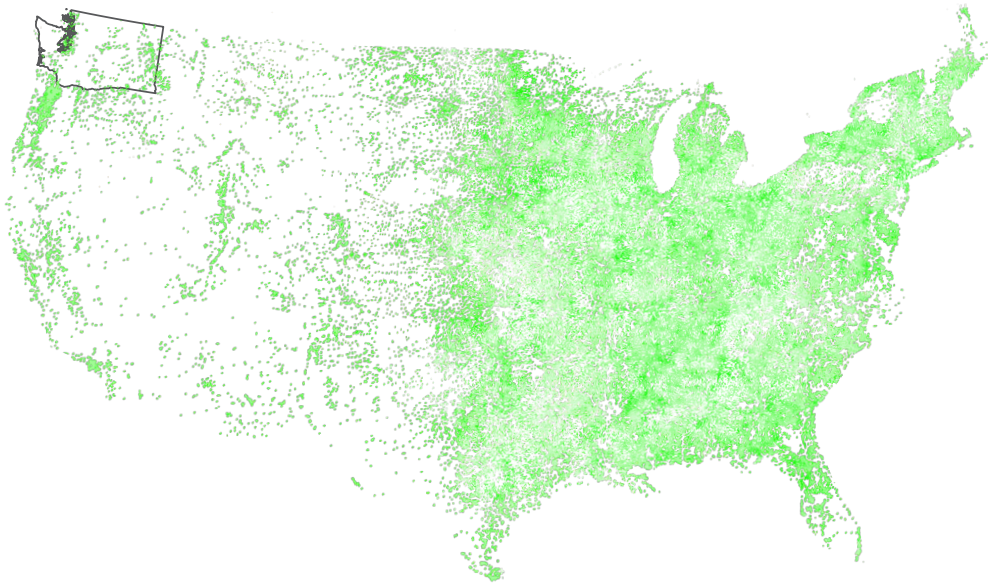


Figure 92. Burial Sites Identified in U.S.

These interventions are not a full account of how to address the living individual as mourner but offer possibilities to explore further. By viewing the interventions as part of an experiential pathway, cemeteries can become more than sites focused on single objects - headstones - and part of the broader process of mourning.

Researching the seventy-four burial sites of King County Washington and exploring three cemeteries of various scales in depth resulted in an understanding of how all cemeteries can alter the way they address their urban fabrics. This thesis continues to propose that ALL cemeteries can better support their neighborhoods by being more inclusive of what mourning means and, in turn, furthering their own development as sites of collective history and spiritual growth. For it is not until we walk through a cemetery that the weight of all those who have passed and all those who have lived through grief can be felt.

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