ABSTRACT

Title of Document: AN URBAN MAUSOLEUM

**Ian James Black, Master of
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Directed By: David Cronrath, RA, Dean and Professor,
                                      School of Architecture Planning and
                                      Preservation

        This thesis explores the placement of a mausoleum into an urban

environment. Ideally, one is encouraged to reflect on their temporal nature.

A benefit of this contemplation is to be able to live a good life to the fullest

extent possible. Not only does contemporary US culture not do this, but it

continually distances itself further from supporting any type of reflection on

death. An absence of critical reflection is detrimental to the human

experience. It is the goal of this thesis to demonstrate that the built

environment can rectify this situation and sponsor a solution.

AN URBAN MAUSOLEUM

By

Ian James Black

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Advisory Committee:
David Cronrath, RA, Dean and Professor, Chair
Brian P. Kelly, AIA, Associate Professor
Michael A. Ambrose, Assistant Professor

Dedication

This thesis is dedicated to my very loving and supportive family.

Acknowledgements

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Background

As cities continue a trend of densification, urbanity is not well equipped to deal with the deceased. Taking the dead out past the city limits is not the only answer. Architecture for housing the deceased can take an active role in sponsoring a deeper relationship with an individual and their corporal body. It can enhance an individual's relationship with death and sponsor a more full life and a sense of the sacred within the secular. This thesis investigates how this might be accomplished within the fabric of urbanity.

The contemporary person's relationship with death is certainly different than it has been in the past. Many people tend to see their bodies as things as opposed to being an integral part of themselves, which is perpetuated culturally in two significant ways. The first of which is the omnipresent commercialization and objectification of the human form. The second is that through technological advances people have been removing themselves further from undesired natural circumstances, including death. With medicine, surgery, prostheses, genetic manipulation and cybernetics people are constantly taking a new level of control over our biology.

For these reasons, contemporary death has another level of transcending human experience. People will always have significant

moments that force them to confront their personal mortality, but now more than ever they are further removed from it as a society. Through reflection on one's corporal existence, a person can have a more robust and accurate worldview. A mausoleum within the urban fabric can be an environment built to foster this.

People have an inherent desire to overcome their own mortality. This can be manifested in a variety of ways including specific actions prescribed by religion, works left to posterity, or our ubiquitous participation in culture.[1] By living in continued societies people create culture that is passed on to future generations. Psychologically, participation in this process allows for the ostensible denial of death by the continuation of culture due to the active role of the individual. Elements present in these cultural constructs include an origin story, whether mythological or mythologized history, and a system of symbols that permeate the culture.[2]

A potential conflict for a person arises when the culture they belong to deals with death by denying or ignoring it.[3] United States culture is a narcissistic one, obsessed with youth and vanity. One need not look further

[1]   Becker, *Denial of Death* (Simon & Schuster Ltd, 1997).

[2]   *Flight From Death,* dir. By Patrick Shen (2003, Trancendental Media).

[3]   Becker, *Denial of Death* (Simon & Schuster Ltd, 1997).

than reality television, advertisements, or Facebook and Twitter to notice the culture's priorities. This stands in opposition to cultures that revere the community and the elderly. A culture that worships the individual and the young has profoundly different implications on how people cope with death.

The notion that a fuller life can be realized through connection with one's own mortality is certainly not a new one. A pervasive view on this matter is that when one is reminded of the time constraints on their own life, they will be more likely to make the most of the time they have. A skull or hourglass in a still life exemplifies how this idea can manifest physically. Architecture has also been used as a reminder of mortality. The Sedlec Ossuary, a chapel in the Czech Republic, is decorated almost exclusively with human bones for this reason (Figure 1).

Figure 1-Sedlec Ossuary (Source: author)

Reconnection with mortality is a much different and ever changing task for

contemporary people. As long ago as the conception of medicine or the

search for a fountain of youth, humans have been looking to separate

themselves further if not entirely from death. This struggle against death is

evident in how people utilize their technology. For instance, one of the

earliest and largest markets for the first professional photographers was to

make portraits of the dead, often posing with the living, as if they were alive in order that they are remembered and better serve the survivor's own death denial.

Technological advances often serve to widen the rift between a person's worldview and their own mortality. There are successful scientific projects that insert living animal brains as computers to direct the behavior of robots.[4] Genetic material has been combined to make completely artificial life.[5] There are currently projects underway that aim at storing an individual's memories on digital media.[6] Even if deemed not inherently problematic, these things blur the line between biology and technology, perpetuating the notion that "me" and "my body" are conceptually exclusive. Although the idea that people would eventually alter themselves to something other than human by technological means has existed since the 1960's[7], very real world legal and ethical concerns are being broached currently and more are on the horizon.[8]

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[4]   Gugliotta, Scientists Install Living Eel Brain in Small Robot to Call the Shots

[5]   CNN Reports, Scientist: 'We didn't create life from scratch'

[6]   Koene, Whole Brain Emulation, Issues of scope and resolution and the need for new methods of in-vivo recording

[7]   Fukuyama, *Our Posthuman Future* (Picador, 2003)

[8]   Ibid

The complication of the chasm created by technology is expounded by Martin Heidegger's illustration of calculative and meditative thinking. Calculative thinking is what an individual does in order to accomplish tasks.[9] This can vary widely, and can refer to things such as unconsciously placing a bag down, opening the bag, removing a cell phone, unlocking the phone, looking up a number on the phone, and then placing a call. It can also refer to having the conversation with person on the other end of the phone call, exchanging pleasantries, finding out what that person has been up to, recalling things that are new with you, and making plans for that evening. Calculative thinking follows the path of least resistance from A to B. Meditative thinking is what people do when they reflect back on the past and contemplate actions, reactions and stimuli.[10] Meditative thinking is how creativity and personal growth come about; it is how a person becomes more whole. Heidegger contends that as technology advances and modern lifestyles become more cluttered and convenient, people not only stop relying on meditative thinking to get through the day, but are also less likely to make time for it. This is in sharp contrast to how humans formerly needing meditative thinking for survival. The associations and abstract thoughts

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[9]   Heidegger, *Discourse on Thinking* (Harper Perennial, 1969)

[10]   Ibid

formulated in this meditative process largely allowed humans to be evolutionarily successful[11].

The notion that this trend is unhealthy and should be intervened with has been picked up by past creative movements. The perceived gap between contemporary lifestyle and the loss of meditative thinking as a part of human nature was actively resisted by the Situationist International (SI). With a penchant for rejecting dominant paradigms the work of the SI, led largely by Guy Debord, was essentially to design "situations" in opposition to counter the existing "spectacle".[12] Overtly Marxist in nature the SI believed that capitalism used technology and the media to propagate a false reality. They also used these tools to make this false reality enticing enough for people to pursue it. This was done in an effort to disguise that capitalism was causing the life of humankind to decay. This decay was caused by the coercion to complacently participate in consumerism and societal status quos. This commoditized false perception of reality is the "spectacle". The "situations" are instances where individuals force themselves to break from the spectacle so that they may reflect, realize and pursue their own passions without being hindered by the oppression of the omnipresent spectacle. Understanding

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[11]   Habermas, *The Future of Human Nature* (Polity, 2003)

[12]   Sadler, *The Situaionist City* (MIT Press, 2009).

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similar struggles against culturally perpetuated paradigms is especially useful when investigating how to intervene from within the culture that is perpetuating them.

A capitalistic and secularized culture deifies wealth and consequently can lose a sense of the sacred. While an individual's desires or beliefs will certainly preclude some from internment in the mausoleum, it will be open to all and favor none. Being overtly aware of itself as a place of spiritual importance, the project is free of religious bias, instead creating a sense of secular numinousness. When Friedrich Nietzsche famously gave the proclamation that "God is dead" he did not mean that religion was over or irrelevant, but was rather referring to how one of the most prominent Christian thinkers, Immanuel Kant, developed a system of ethics that did first assume religion. In an attempt to universalize ethical imperatives Kant's focus on moral goodness being based on intent and motivations rather than outcomes effectively removed the existence of a deity from being necessary for a moral society. While a negative light can be shed on this there is also an inherent freedom to be found, a freedom from preconceived notions of morality allowing for the numinous to spawn from shared ethics.

This notion of freedom is furthered by contemporary philosopher and statesman Gianni Vattimo in his outlining of nihilism as emancipation. Vattimo points out that a freedom from inherent interpretations of what a

good life is leaves people free to pursue their individual paths through life based on their own circumstances.[13] By ridding ourselves of artificially imposed constructs through careful and critical reflection people are not only free to live for their own reasons and passions, but are also more inclined to think meditatively. It is this inclination that the secular built environment can encourage in order to sponsor reflection.

Creating a sense of the sacred in secular architecture is certainly not a new idea. Louis Kahn often spoke of how this should be the goal of all architecture. He said that when architecture was done well the program of the building and its form would harmoniously take over the design and take on qualities of what he referred to as the "immeasurable"[14]. During the course of this process the building would become what it inherently wanted to be on its site, the architect was merely a conduit to allow this to happen. Buildings that captured the immeasurable were able to be more than just the sum of their parts and the functions of their programs, but were able to transcend something much deeper. Le Corbusier wrote about architectural

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13   Vattimo, *Nihilism and Emancipation* (Columbia University Press, 2007).

14   Twombly, *Louis Kahn, Essential Texts* (W.W. Norton and Company, 2003).

being able to take on such sacred qualities for similar reasons and referred to it as the "ineffable"[15].

An exploration of this lends itself well to the notion of the protean as described by Umberto Eco. The protean architectural form is largely indefinable. It resists categorization as it exists of its own volition, a means to its own end.[16] This is not unrelated to SI's design of situations, or even Kant's situational ethics. The intent being of primary importance over outcomes is not the same as form following function. Aesthetics were important to both Kahn and Corbu, who were both able to seamlessly blend formalistic drivers. If one sets out in order to engage in meditative thinking, does this intent not make it calculative thinking? A parallel can be made for the protean, as setting a course to design something that is specifically uncatagorizable is inherently flawed due to the fact that the designed artifact will be categorized by what it is not. Rather, it is more important to be free of other constraints in order to be allowed to pursue it. Heidegger's hermeneutic cycle between text and context becomes the most appropriate way to conceptualize the protean, just as a hermeneutic interpretation of

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15   Gargiani, Le Corbusier: Beton Brut and Ineffable Space (Routledge, 2011).

16   Eco, Semiotics of Architecture (Mariner, 2007).

form rends an inexhaustible depth of meaning by bringing to the forefront perceptions and relationships that may not be readily apparent.

The realization of the protean form is to create the ambiguous, an ambiguous form that is nether this nor that but rather between characterization. The form of this project is a threshold. It is a threshold in the same sense that the Cumaean Grotto, Vietnam Memorial and Brion Cemetery are thresholds. All these projects make you explicitly aware of a place they do not take you. Moreover they make you aware of yourself not being in the place they allude to. This causes an inevitable condition of reflecting on your own self and present situation.

Once a life has ended a corpse remains. The personality that was known ceases to be, yet the body is left to care for. The amalgam of body and spirit has ceased, with the extinguishing of life. People's knowledge of a state where life is no longer a possibility is described by Heidegger as how they are "beings toward death".[17] This knowledge unconsciously drives us in life, death always being a part of it as a possibility. The corpse, being left over must be tended to in some way. The possibility of doing so in such a way that makes people more explicitly aware of living as a condition as of a

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[17]   Heidegger, *Being and Time* (Harper Perennial, 2008).

being towards death can also lessen the dread associated with this state. It

propagates a more full life.

The "uncanny" in the etymological sense of the word refers to when

one returns home from being away only to find one's own home strange to

them. Nothing has changed about the condition of home, but rather it is

one's own worldview that has changed. Allowing oneself enough perspective

inevitably causes the familiar to become somewhat unfamiliar. The slight

discomfort in this perception is the uncanny. Encountering the thresholds

which are the Cumaean Grotto, Brion Cemetery, and Vietnam Memorial gives

rise to this feeling. That experience is emulated in this project.

Precedent Analysis

As architecture for the deceased has a long and storied past there is a wealth of precedents to draw from, however several have stood out with specific characteristics for this project to emulate in the way they deal with sensory stimuli, perceived dynamism, threshold conditions and frontal versus oblique relationships to those thresholds taking into account an exclusivity of participation.

The Grotto of the Sybil at Cumae, referenced in Virgil's Aeneid, is terminated with a main chamber where the Cumaean Sybil prophesied. To access the chamber one passes through a corridor, approximately 430 feet in length, carved immediately next to a cliff side (Figure 2). The hall's characteristic cross section runs the entire length to the main chamber. The way the wall next to the cliff is fenestrated repeatedly highlights the figure of the cross section. It also continually provides connection to the exterior blurring the division with the interior. The light also plays a role in the ambiguous nature of the hall. The way it regularly pierces the long dark stone tunnel causes one's eyes to repeatedly adjust to the rhythmic interruptions. As one nears the main chamber it is still difficult to focus on it. Having been in the hall for some time the outside is still tangible and having

repeatedly passed through the figural cross section a new place has not been reached.

This length of occupiable threshold is placeless. In it one is neither here nor there, outside the grotto nor in the chamber, on the interior or exterior. One occupies the space in between realms, between the one from which the occupant came and the one where a priestess speaks wisdom which is not hers. The experience of the threshold leading to the main chamber brings you to another placeless threshold; the main chamber itself housing the mantic used to pull forth knowledge from another realm. The threshold condition that runs that length of the hall acts as conduit to a conduit to a conduit.
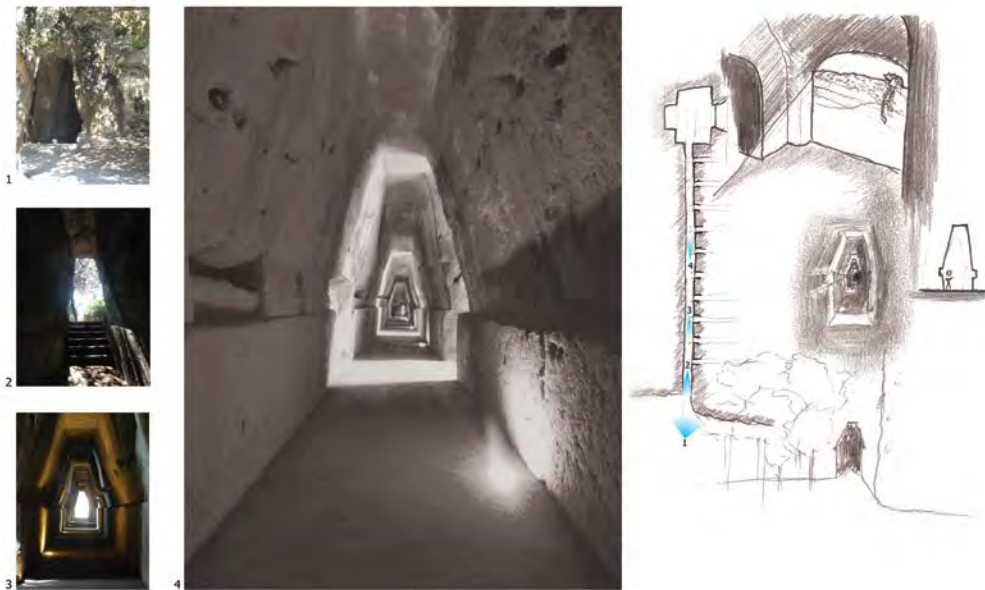
Figure 2-Grotto of the Sybil, Cumae, Italy (Source: author)

The Grotto of the Sybil also uses one's senses to make one more aware of the space they are occupying. The use of light to affect one's eyes and perpetuate the perceived threshold is immediately noticed when entering the space. While the regularly spaced full height fenestrations primarily effect one's visual perceptions they also offer a similarly varied experience audibly and tactilely. In the same way that the Brion Cemetery's entry sequence utilizes a sharp acoustic contrast between occupying the threshold and emerging from it, the Grotto alternates back and forth. The difference not only being the multiple oscillations but also the fact they occur within the occupiable threshold, serving to highlight the space's elongation. The alternating stimuli are felt tactilely as well as one regularly switches from feeling the warmth and breeze of the outside to the condition of being in a tunnel, (Figure 3).
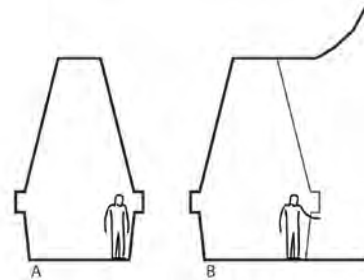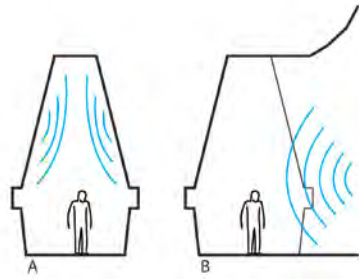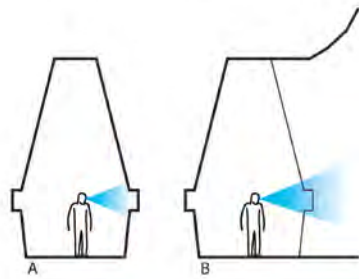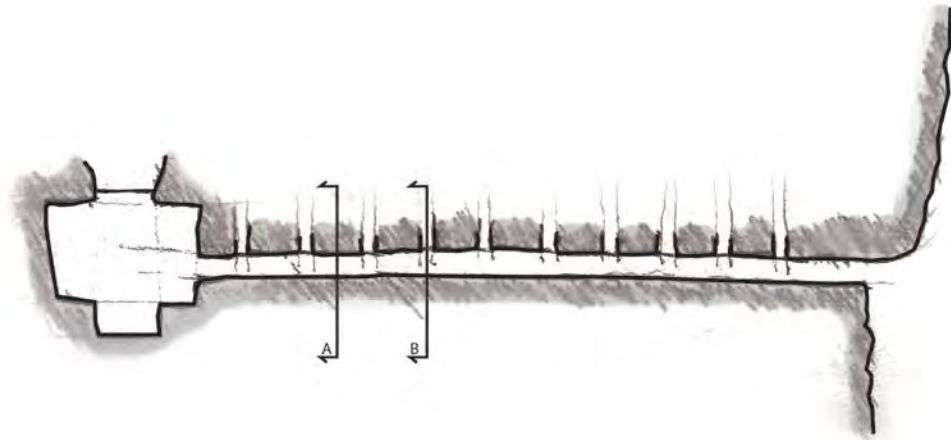
Figure 3-Grotto of the Sybil, sensory stimuli (Source: author)

The characteristic cross section of the hall also serves as a source of dynamism. While it is uncertain what the ledge at head height was used for, it along with the walls sloping away towards the center all mix with the volume of the hallway. The interior space of the hall intermingles with the walls in a way that would not happen if they were perpendicular to the ground plane. This intermingling along with a subtle reading of instability caused by the canted walls creates a dynamism within the space (Figure 4).
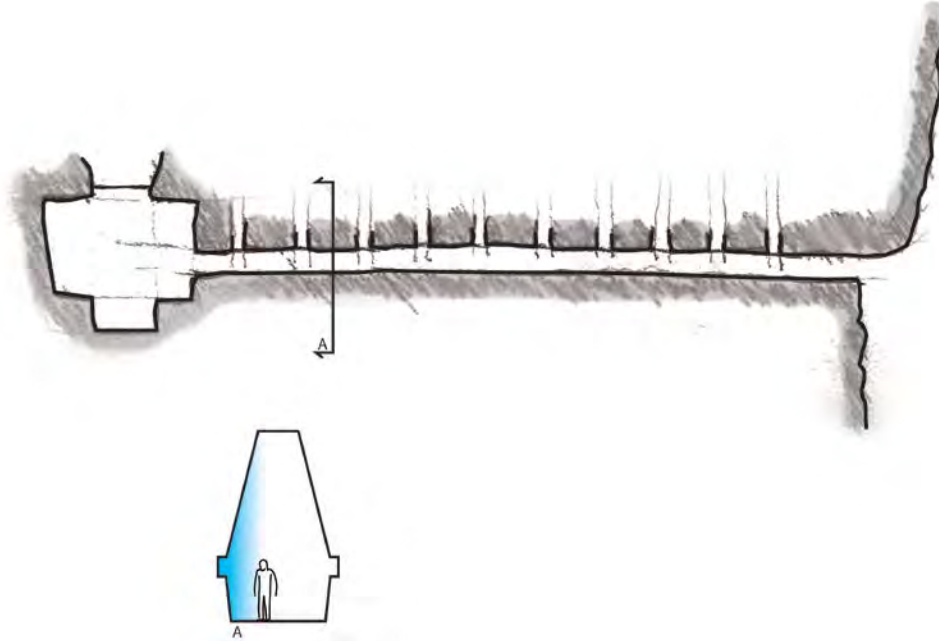
Figure 4-Grotto of the Sybil, dynamism of space (Source: author)

Instead of breaking up the space, the periodic fenestrations serve to hold it together throughout its length. The openings mark what become perceived as minor breaks within a continual threshold until one reaches the main chamber, (Figure 5).
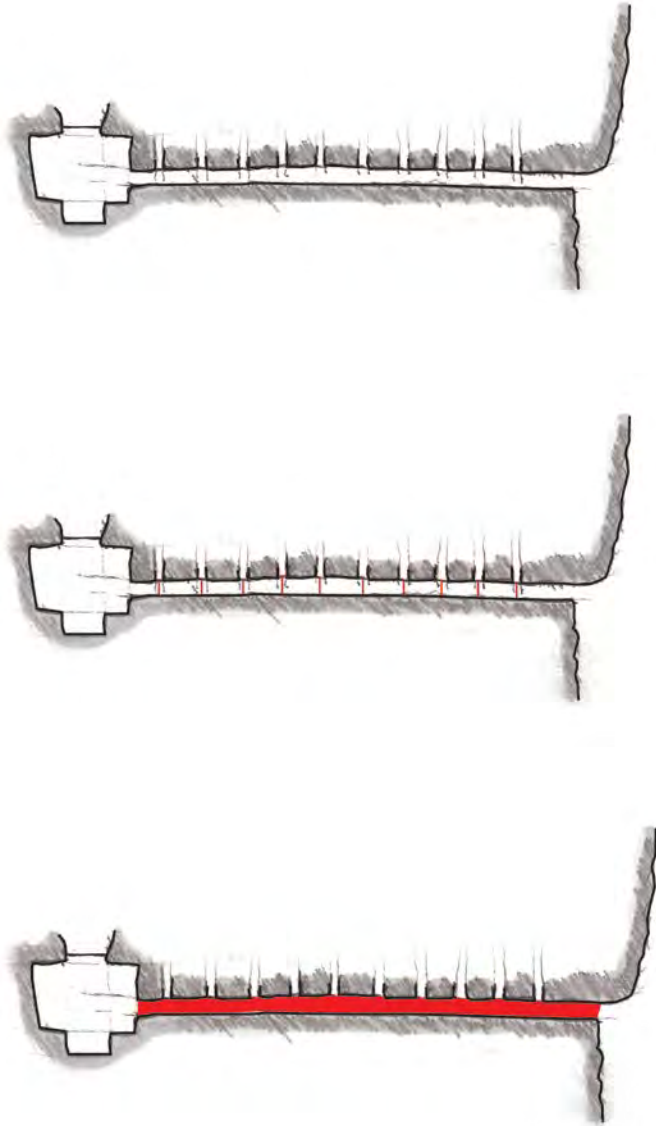
Figure 5-Grotto of the Sybil, threshold condition (Source: author)

The threshold condition is a procession flowing to the main chamber. The arrival is highlighted below in blue (Figure 6). The approach to this terminus is entirely frontal, being on axis with the chamber itself. As there is only one way into and out of the chamber there is no exclusivity of circulation. Those seeking the oracles advice as well as the priestesses and mantic all process the same way.
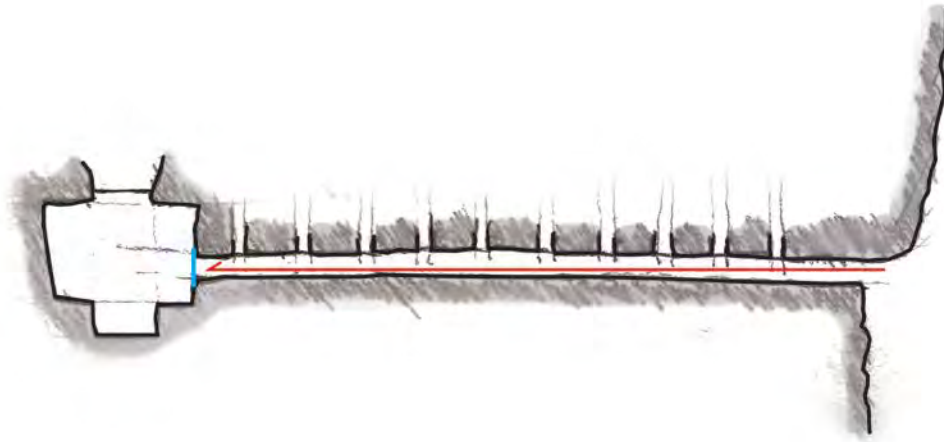
Figure 6-Grotto of the Sybil, frontal approach with no exclusivity (Source: author)

At the Brion Cemetery in San Vito d'Altivole, Italy, Carlo Scarpa makes masterful uses of threshold conditions. Designing an addition to an existing cemetery, Scarpa takes advantage of the existing context as the area was already set apart from the surrounding community for internment (Figure 7). The series of tombs along the eastern side of the original cemetery is continued with the main entrance to the addition. The dark tomb-like corridor opens as a break in the wall that separates Scarpa's work. This elongated threshold is occupiable as opposed to the linear separation that would have been made using a gate, which would have been more typical. Visitors are invited into the corridor-tomb, where the back walls fold outward onto a path with green grass beyond, offering a view to the other side. The path can be followed to the south where it goes out over a pond to an island pavilion (Figure 8). This pavilion is off center in the pool, further denying place to the island, but on axis with an arch situated to the north. Under the wide, low arch one can see two sarcophagi inside a lowered circle surrounded by grass. The sarcophagi are layers away, making them seem further removed then they physically are, emphasizing one's own circumstances.

To heighten this awareness of self, Scarpa made very deliberate decisions to affect the senses. The artificial pond that surrounds the pavilion is perfectly still. Moving water can be heard because at its center is a fountain that does not disturb the perfectly reflected image on the surface

due to it being below grade. The hole where the sound is coming can be seen as well as the surrounding platform that barely peeks out of the water, but one cannot see the fountain itself (Figure 9). While the platform surrounding the enclosure of the fountain cannot be occupied, one is explicitly aware of its presence.

After meditating and reflecting, one can return back along the path of arrival that extends alongside a linear waterway passing the tomb-like entrance and continues until one's footsteps fall silent. The paved path stops, but the waterway continues, the staggered change in conditions subtly bringing one to a series of steps that descend down under the archway to the sarcophagi of the Brion couple (Figure 10). Currently the linear waterway terminates in a small circular font where there is a concrete trench to another circular font and then finally a circular terminus (Figure 11). The original design intent had been that upon the passing of Mrs. Brion, the concrete waterway would be chiseled out allowing the water to pass to the next font and then to a bubbling fountain at the terminus, altering the architecture to create a physical sign of their having reunited. At the pavilion, the moving water is audible but hidden from view, having an inaccessible plane underneath the still reflective surface. Only at the sarcophagi where a visitor descends down to the level where the couple is interned, the bubbling water was to be visibly accessible.

After ascending back up from the level of the sarcophagi one proceeds

to the west, where a hollow set of steps leads to a path on axis to the chapel

(Figure 12). These steps serve to make the visitor's footsteps audible. The

hollowness of the steps is designed in such a way that footsteps create a

series of tones, ascending in pitch as one steps up and the reverse on the

way down. The chapel, like the pavilion, is surrounded by water. The

ziggurat-like stepping motif, which is present throughout the design, here

steps down visibly into the water, the architecture clearly continuing down

where visitors cannot occupy, again alluding to a realm other than this one.

The utilization of a stepping motif also serves to display a static

dynamism. Even though the design is comprised of regular geometries,

those geometries are arranged to defy stagnancy. Seen here in the arch over

the sarcophagi (Figure 13), and the interior of the chapel (Figure 14), the

angles and their interplay with light and shadows create dynamism even as

one stands still.

Figure 7-Brion Cemetery, San d'Ativole, Italy, Carlo Scarpa, Plan (Source:
Friedman, *Carlo Scarpa, Architect, Intervening with History*)
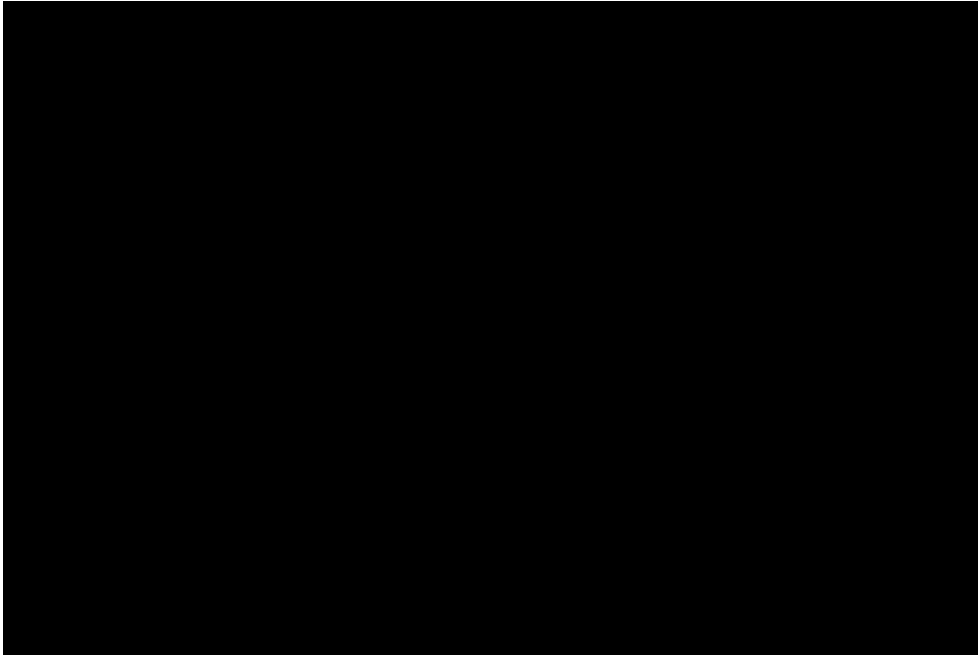
Figure 8-Brion Cemetery, Water Pavilion (Source: Friedman, *Carlo Scarpa,*

*Architect, Intervening with History***)**

Figure 9-Brion Cemetery, below grade fountain (Source: Brian P. Kelly, AIA)

Figure 10-Brion Cemetery, sarcophagi (Source: Brian P. Kelly, AIA)

Figure 11-Brion Cemetery, font (Source: Jeremy Kamal Hartley)

Figure 12-Brion Cemetery, acoustic steps (Source: Jeremy Kamal Hartley)

Figure 13-Brion Cemetery, arch over sarcophagi (Source: Jeremy Kamal Hartley)

Figure 14-Brion Cemetery, chapel interior (Source: Brian P. Kelly, AIA)

The segmented walkways to the water pavilion and the chapel are designed to shift slightly when walked over, causing one to be overtly aware of balance and touch, (Figure 15). The tomb-like entry causes an acoustically vibrant enclosed tunnel condition before opening up to the expanse beyond, (Figure 16). While the exterior wall cuts off one's view of the surrounding town, the water pavilion limits views upward. One can walk through a cut-out to avoid ducking into the space, but the lower lip is well below an average vantage point. A slit on axis with the sarcophagi offers another view out with a double circle feature to more explicitly frame the vista. Here the cut out along the path as well as the double circle framing device are highlighted in red (Figure 17).

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Figure 15-Brion Cemetery, path to chapel (Source: Brian P. Kelly, AIA)

Figure 16-Brion Cemetery, entry sequence (Source: Brian P. Kelly, AIA)

Figure 17-Brion Cemetery, water pavilion apertures (Source: Brian P. Kelly, AIA)

Despite the serene and reflective nature of the Brion cemetery, a visitor has a lingering sense of uneasiness. The inherent dynamism of the design produces a slight anxiousness to keep moving. Dynamic space is also created through perceived instability. The roof above the water pavilion is supported by four columns, which read as spindly when compared to the mass they support (Figure 18). The heavy exterior walls are canted in such a way that even though they clearly define the inside and outside of the cemetery they leave an ambiguous space on the interior, not meeting the ground as a wall is expected to, (Figure 19). The massive sarcophagi themselves are not only built up at an angle as though to reach to each other, but are rounded at the bottom as they rest on grade, making it seem as though there is a possibility of them doing so, (Figure 20). These three spaces highlighted in blue become part of the composition with the architecture. The pressures placed on them by their respective contexts leaves them inexorably intertwined.
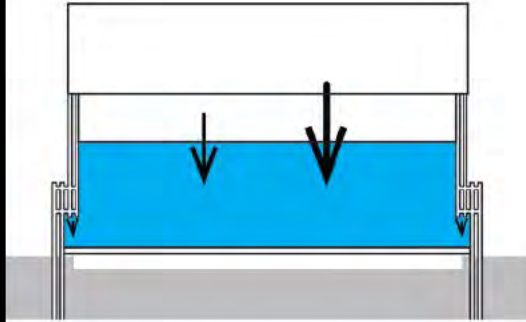
Figure 18-Brion Cemetery, Water Pavilion (Photo Source: Friedman, *Carlo Scarpa, Architect, Intervening with History***, Illustration Source: author)**

Figure 19-Brion Cemetery, surrounding wall (Photo Source: Jeremy Kamal Hartley, Illustration Source: author)
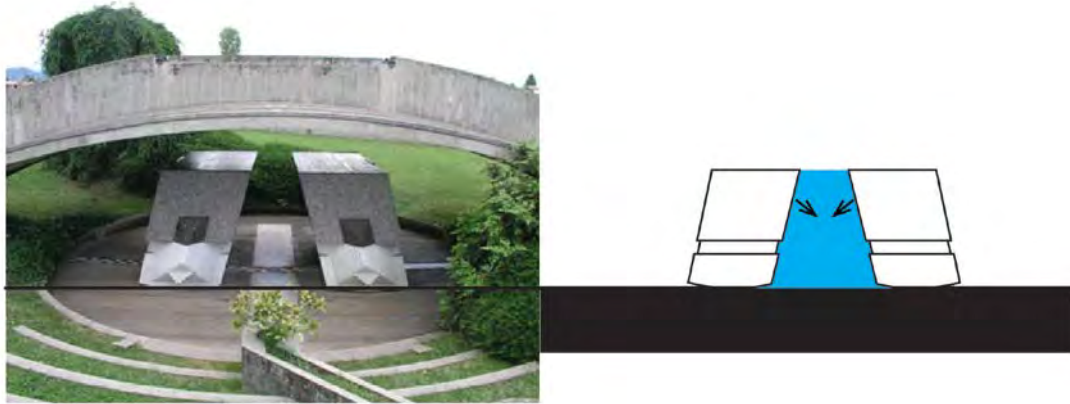
Figure 20-Brion Cemetery, sarcophagi (Photo Source: Jeremy Kamal Hartley, Illustration Source: author)

Though the entire cemetery is decidedly separated from the realm of the living by a heavy wall, the staggered way that Scarpa articulates interior thresholds is of particular note. As the tomb-like entry to his addition becomes an elongated and occupiable threshold the path within it is staggers unevenly back as opposed to starting on a clean line, causing the barrier to be blurred, (Figure 21).
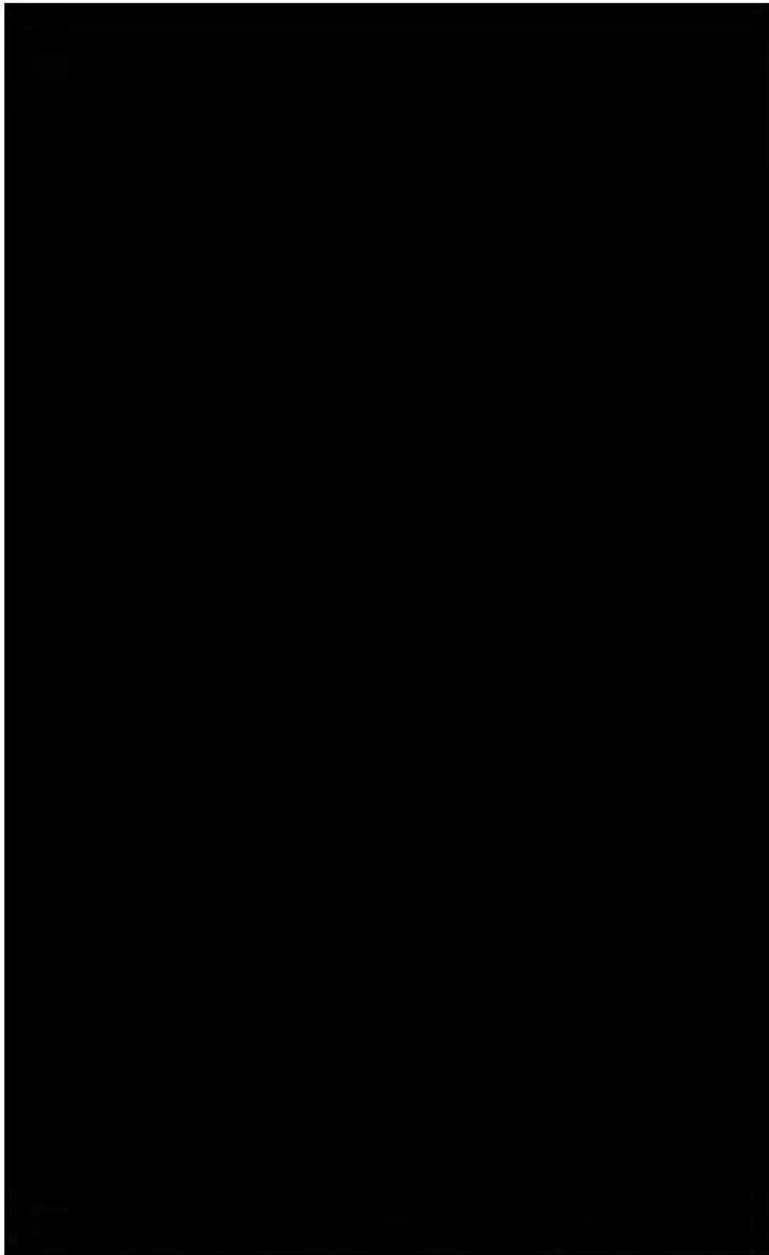
Figure 21-Brion Cemetery, entry (Source: Friedman, *Carlo Scarpa, Architect,*
Intervening with History, **Highlights by author)**

The entrance continues the rhythm of tombs to its south. The third in line extends east further than the others. Rather than linearly rationalizing this bounding condition, Scarpa bumps the exterior wall in and then back out in uneven amounts. Neither of these corresponds linearly to the wall separating the path from the water on the other side. This effectively causes a dynamic staggering of the expansion of the space, the size of the path and the immediacy of the water at what could have otherwise been a singular and fleeting threshold condition, (Figure 22).

Figure 22-Brion Cemetery, approach to water pavilion (Source: Friedman, *Carlo Scarpa, Architect, Intervening with History*, Highlights by author)

Moving north to the sarcophagi, the walls do not meet evenly either. The waterway not only changes in width, but does so at a dissimilar point

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than either place the wall to the west changes scale. Then the steps down

toward the level with the entombed couple radiate out from the circular inset

staggering both the material as well as grade change, (Figure 23).

Figure 23-Brion Cemetery, approach to sarcophagi (Source: Friedman, *Carlo*

Scarpa, Architect, Intervening with History, **Highlights by author)**

From the sarcophagi moving up the acoustic steps the surrounding walls change in uneven ways with one of them flaring out to embrace the square chapel. From the chapel to the grove area what would otherwise be a more regular path is flanked in a randomized way by extensions out into the water making it seem as though the path is materializing upward, (Figure 24), in another instance of the architecture visibly extending down past the still pools, alluding to an inaccessible yet readily apparent realm.

Figure 24-Brion Cemetery, paths surrounding chapel (Source: Friedman, *Carlo Scarpa, Architect, Intervening with History*, Highlights by author)

All processions to the three major components of the cemetery are primarily on the oblique before briefly placing one on axis before arrival.

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Approaching the water pavilion one is parallel to but off axis giving one an

oblique perspective before turning at a right angle aligning oneself with the

fenestration in the lower section of the pavilion which provides access,

(Figure 25).

Figure 25-Brion Cemetery, axis to water pavilion (Source: Friedman, *Carlo Scarpa,*

***Architect, Intervening with History*, Highlights by author)**

When moving toward the sarcophagi from either direction one is on the oblique until moving towards the curved steps down. There one is on the axis of arrival before being on grade with the tombs, (Figure 26).
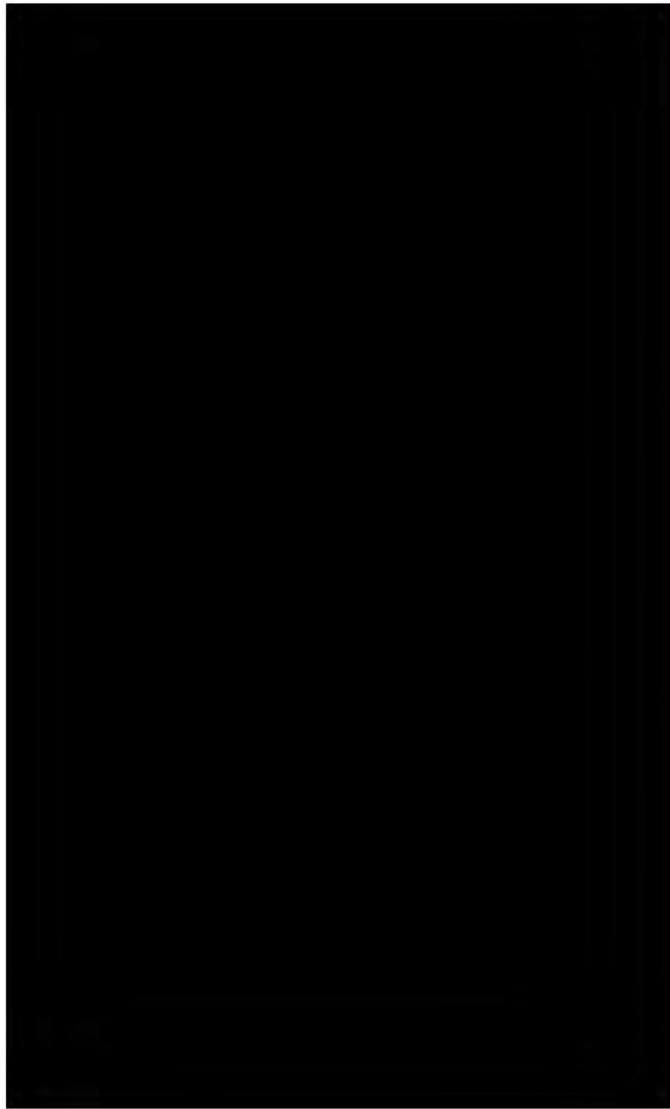

Figure 26-Brion Cemetery, axes to sarcophagi (Source: Friedman, *Carlo Scarpa, Architect, Intervening with History*, Highlights by author)

The two processions to the chapel both take place on the oblique before orienting oneself on axis southeast of the entrance. The highlighted path to the west marks an entrance through a gate. This secondary entry is typically closed to the public and by design acts as a private entrance leading directly to the chapel. To open the gate one must push the activating mechanism down into the water, wetting the hand. After acting on this exclusive knowledge and physically touching the water that denotes the otherworldly realm, one may pass through the privatized entry, (Figure 27).

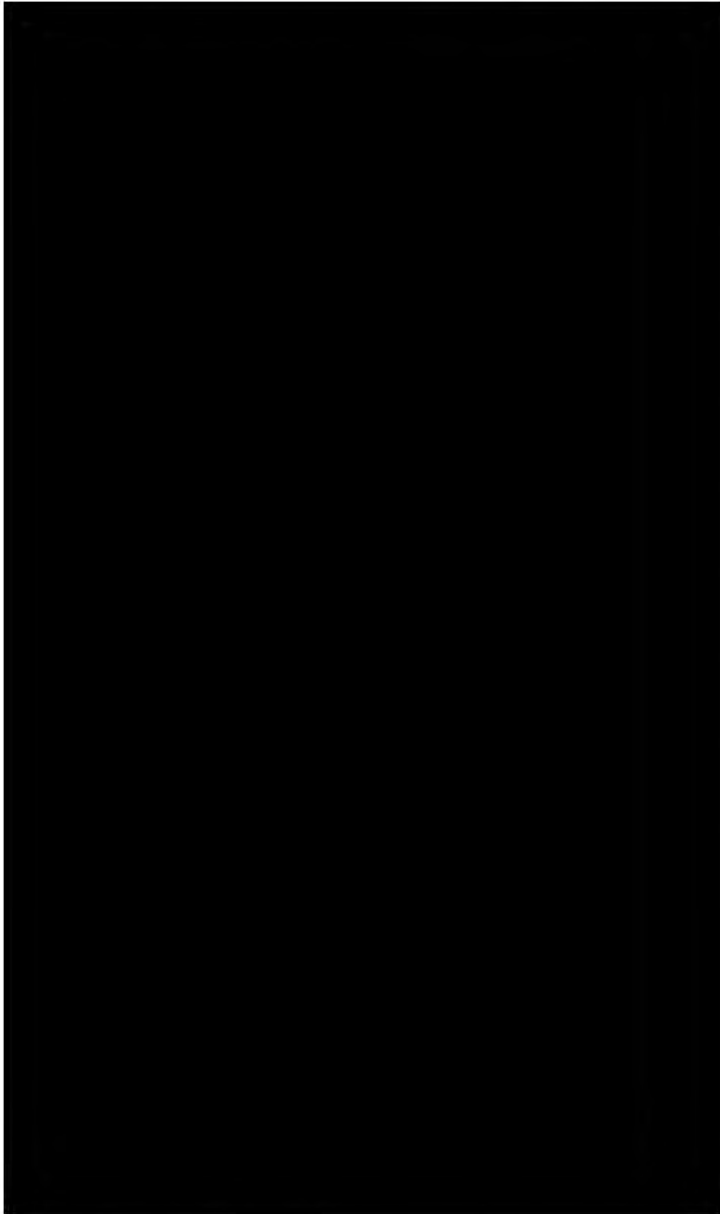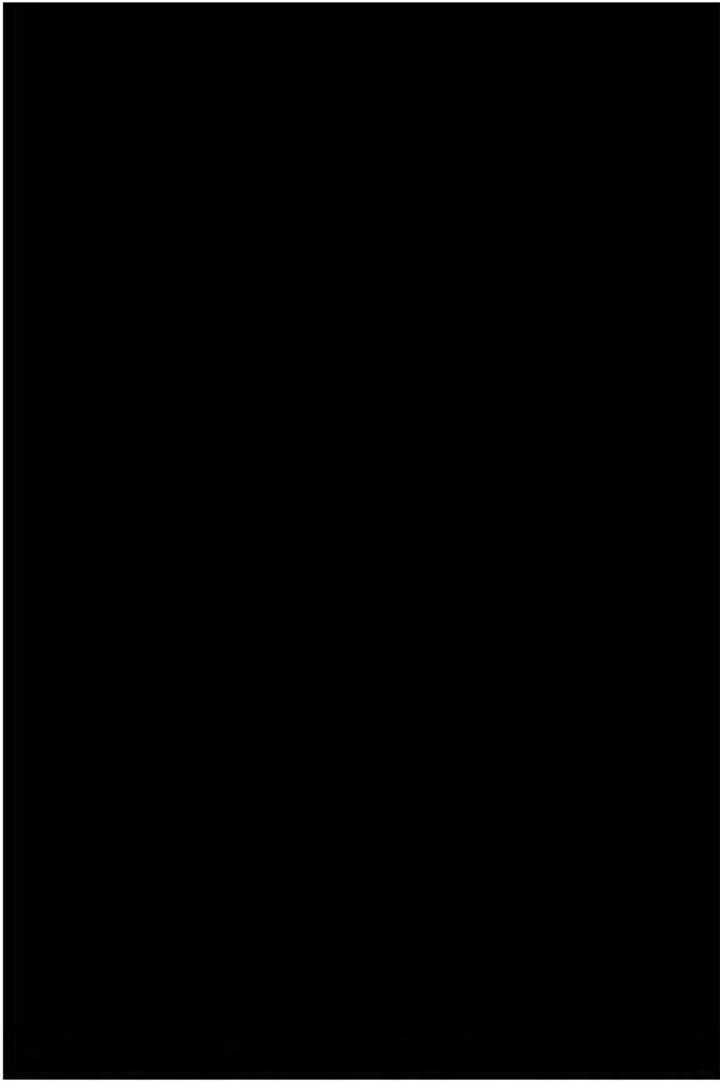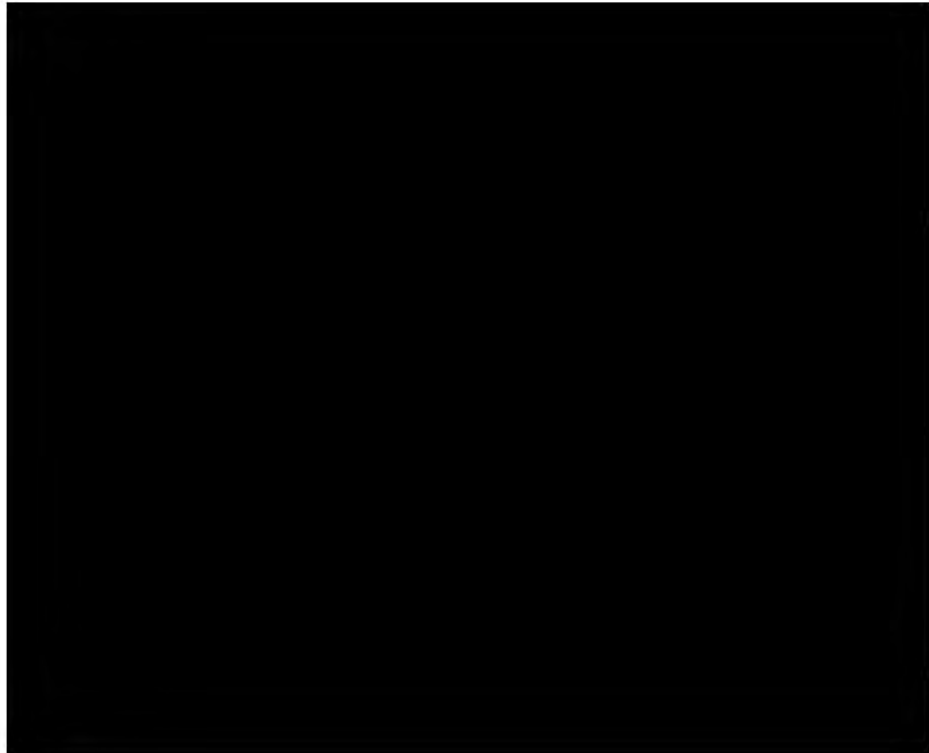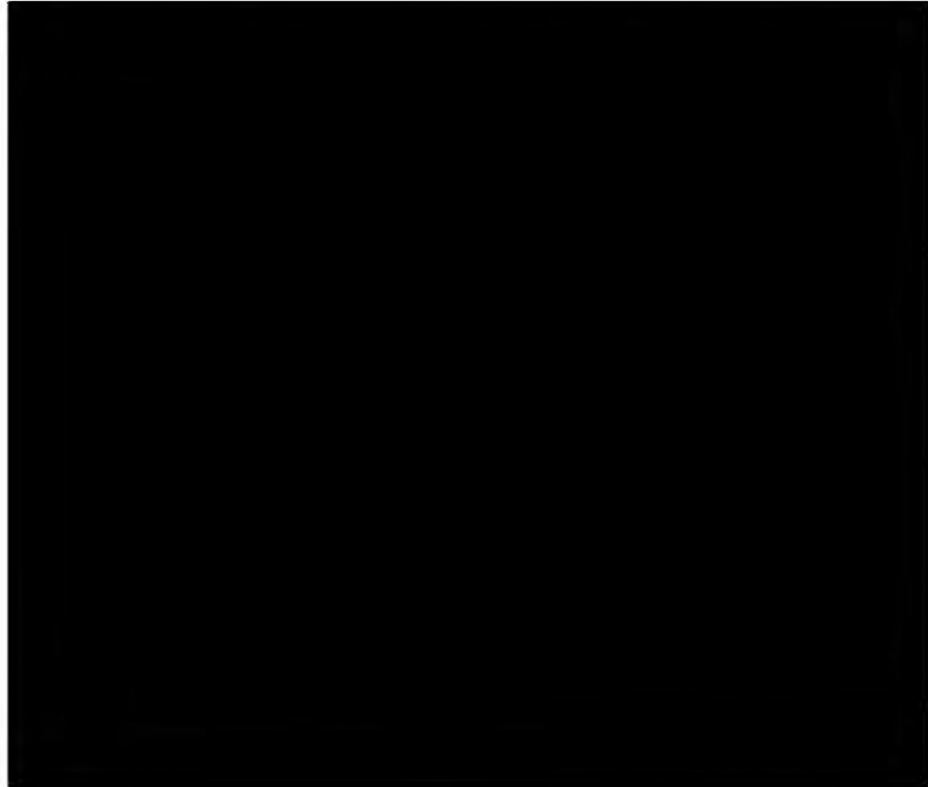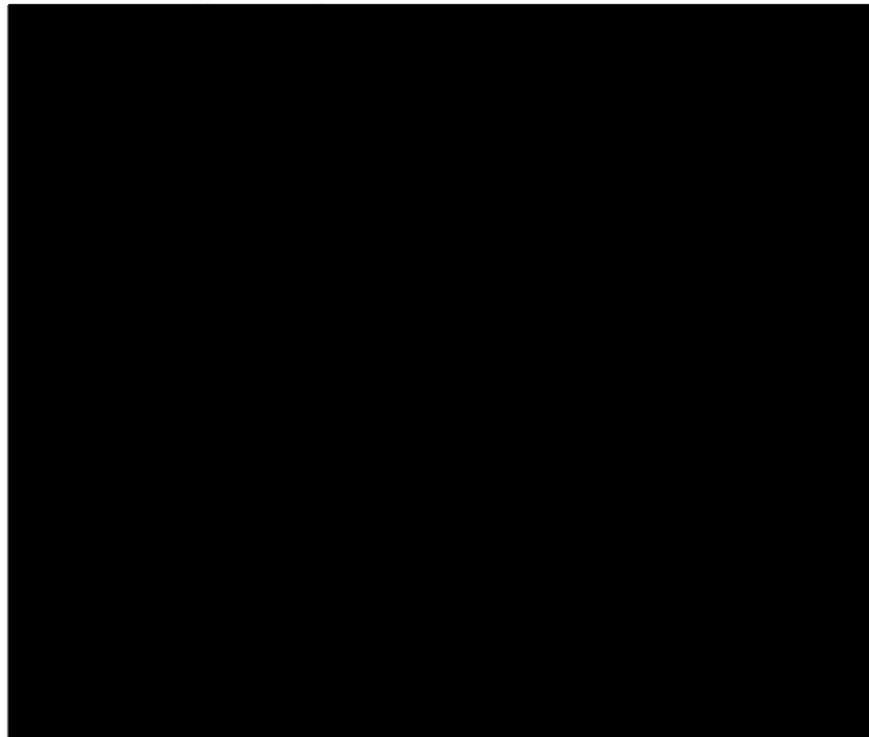**Figure 27-Brion Cemetery, axes to chapel (Source: Friedman, *Carlo Scarpa, Architect, Intervening with History*, Highlights by author)**

Scarpa's strategy of approaching on the oblique and putting one on axis just before arrival creates an interesting series of perceptions. At first one is having a tangential relationship with the architecture, contemplating it as an object. Then one finds themselves on axis with it, suddenly sharing the same organizing grid. Here, only a small space separates one from arrival. With this new axial vantage point one is too close to perceive it as an object in space. This fleeting moment of recognition is highlighted before arrival at the destination. These processions physically reflect the contemplation of death.

Having entered through a tomb to a space where one cannot stay, a visitor is given the surreal opportunity to glimpse and reflect upon the threshold to the realm of the deceased. This not only causes an awareness of this realm, but also recognition that you are not there, forcing reflection on where it is you are and therefor yourself.

Maya Lin's Vietnam Memorial in Washington DC is also a threshold to the unoccupiable. Incredibly simplistic in its power, two black granite walls form an obtuse angle along a path that sinks below grade to the vertex, and then rising back up (Figure 28). One only notices the noise from the traffic and tourists on the mall as it fades away as one progresses down. The names of the casualties etched in the stone grow in number as the granite

rises beside the path. These names become too many to count, too many to comprehend except in the most abstract of ways; yet every name remains highly specific, referencing an individual's entire life. By the time the polished granite has risen above eye level one notices the reflections in it. The viewer and the surrounding world appear between the names making it clear that those listed are somewhere else (Figure 29).

Even as the memorial is refined in its simplicity it still encourages physical interaction. Often, people use the relief of the etched names in order to make rubbings on paper (Figure 30), allowing the experience of the wall to be taken with them. At the foot of the wall there is a ledge to leave remembrances like one might do on a grave (Figure 31). Through these processes one can physically interact with the deceased. Due to the nature of the architecture, one can have a corporeal relationship with someone who has died, someone who is not physically there, someone that may not have been previously known.

As one approaches and then moves away from the vertex of the angle, the gradation of experience is gradual yet overwhelming. Progressing along the path one never leaves the National Mall to enter into a monument as one does at the Lincoln or World War II memorials. Instead, one doesn't arrive anywhere new; moving rather into and then back out of a threshold condition. The sensory experience of the memorial provides for meditation

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and reverence for the place held by those listed in the granite. This is a place

that the memorial creates an explicit awareness of without offering passage

to, one can only return back to where the journey began.
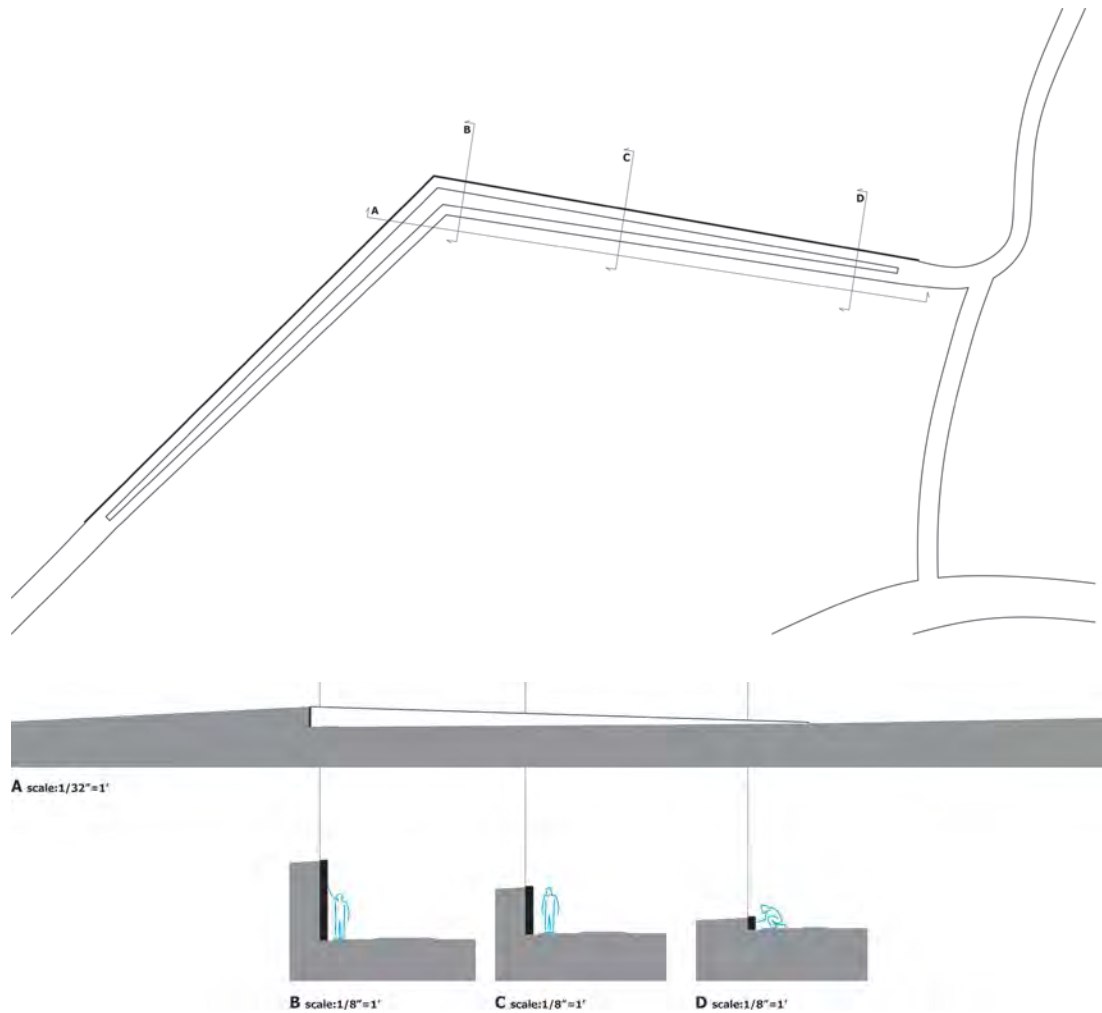
Figure 28-Vietnam Memorial, Maya Lin, Washington DC, Plan and Sections

(Source: author)

Figure 29-Vietnam Memorial reflection (Source:

http://www.dipity.com/tickr/Flickr-vietnam-memorial)

Figure 30-Vietnam Memorial rubbing (Source:

http://www.dipity.com/tickr/Flickr-vietnam-memorial)
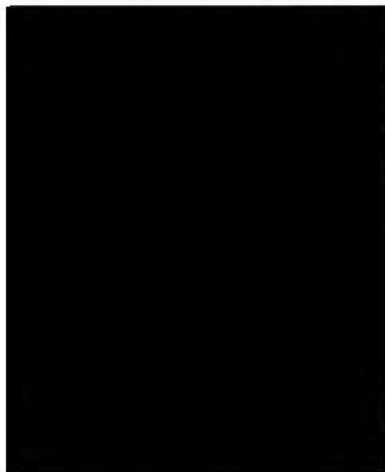
Figure 31-Vietnam Memorial ledge (Source: http://www.dipity.com/tickr/Flickr-

vietnam-memorial)

The sensory experience as one progresses through the Vietnam memorial is also varied, but with a continued gradation. While one can touch the wall for the duration, its changing height alters this experience as you approach the vertex. At first one must bend over in order to touch the wall or make a rubbing of a name. As one continues the wall is reachable while standing and all names are accessible. Closer to the vertex this is no longer the case. One cannot physically reach the names toward the top of the wall as its height goes over one's head. This physical barrier sets you further apart from the surrounding area as well as offering more visual and acoustic isolation. At the vertex the threshold to the space occupied by those on the memorial is the deepest. Auditory and visual stimuli have been dropping steadily due to the lowering path and the berms on either side. Conversely, tactile stimulus builds most of the way, but drops off dramatically towards the vertex as more of the wall passes out of reach. It is here that one is most prompted to reflect on their current situation, being not quite set apart from the National Mall and most aware of the space alluded to by Lin, (Figure 32).
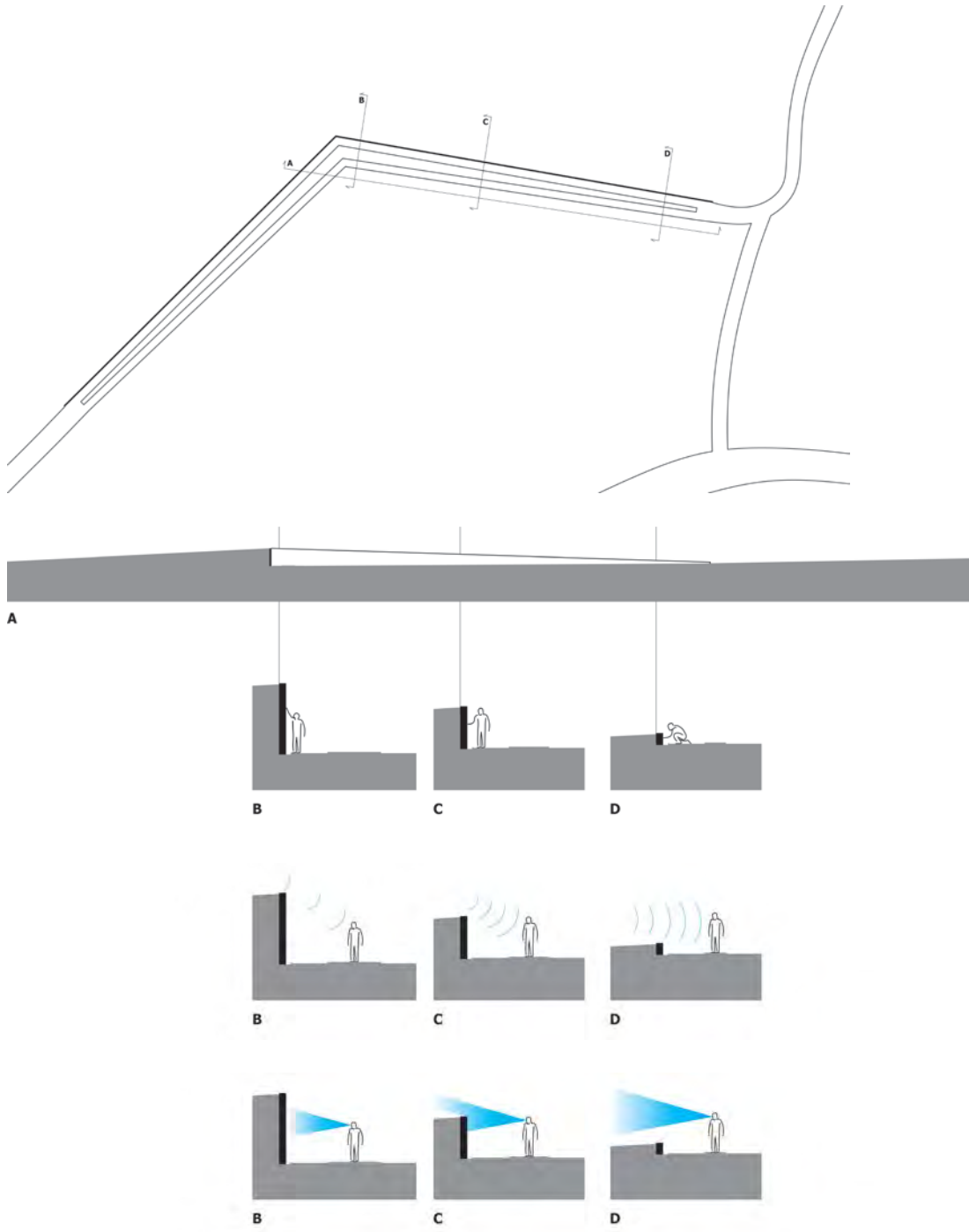
Figure 32-Vietman Memorial, sensory stimuli (Source: author)

The major threshold condition is the created by the wall as it marks

the barrier where those memorialized exist beyond, (Figure 33). There is also

an experienced threshold as one moves on or off the inlayed path due to a

different materiality and a small change in grade, (Figure 34). After the wall

it is the material change moving from the path toward the wall that is the

most prominent threshold, (Figure 35).
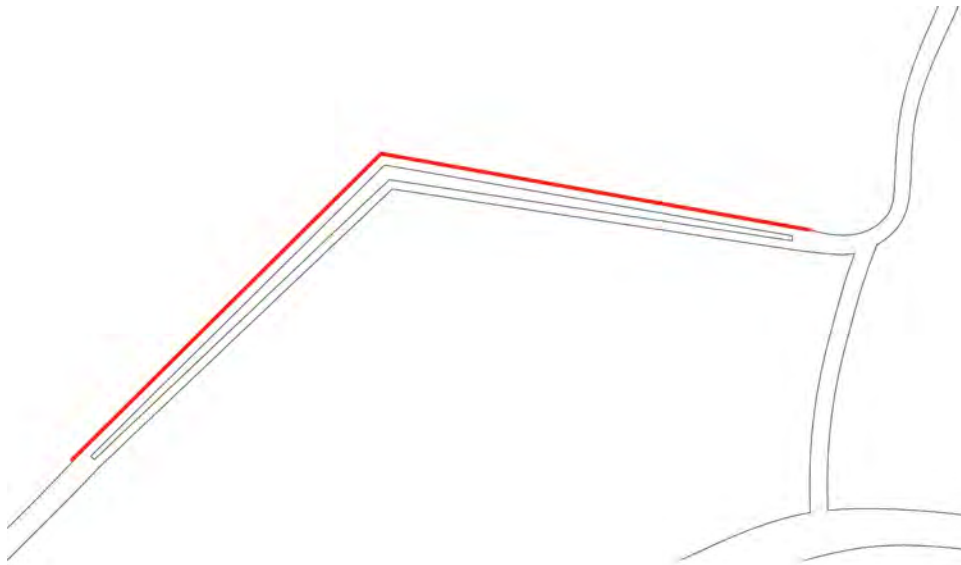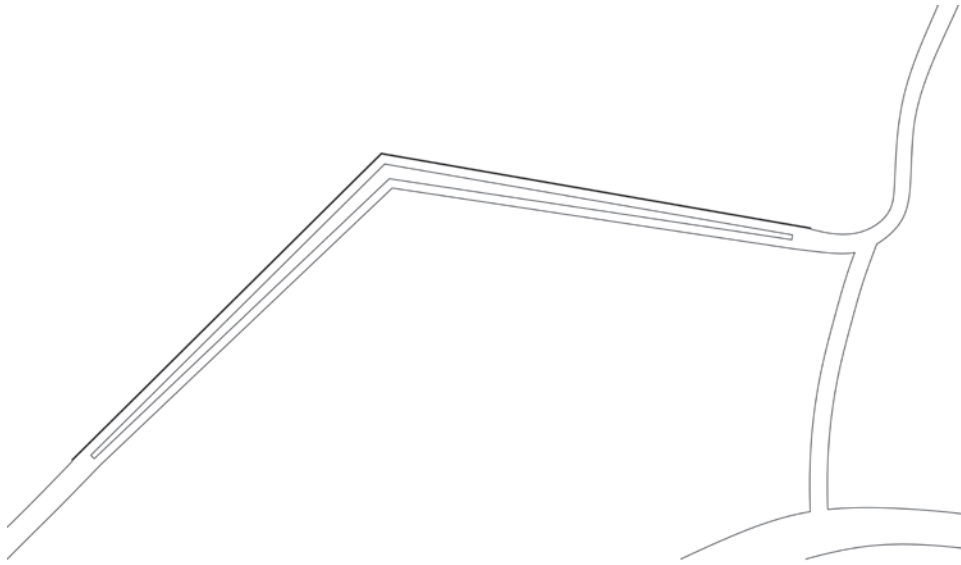
Figure 33-Vietman Memorial, threshold conditions (Source: author)
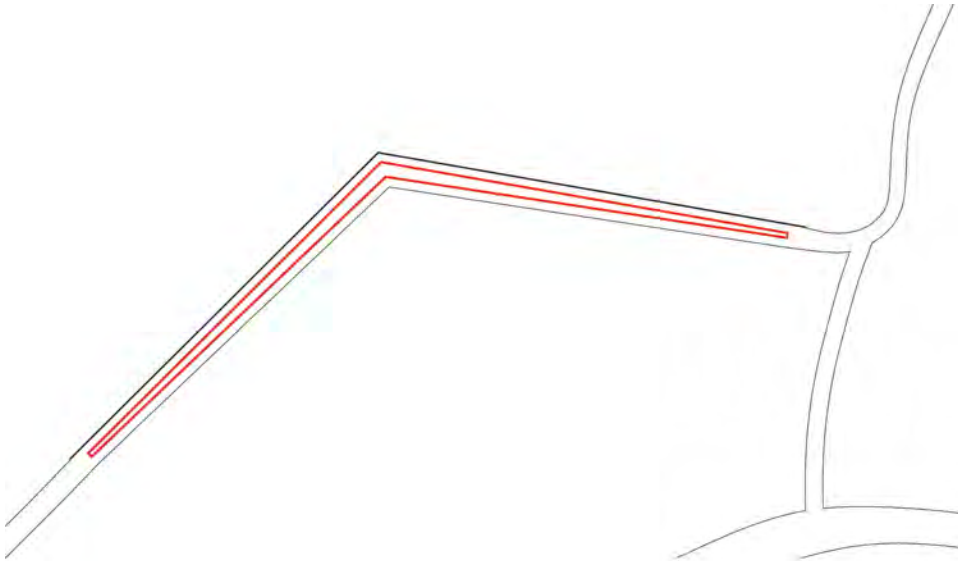
Figure 34-Vietman Memorial, threshold conditions (Source: author)
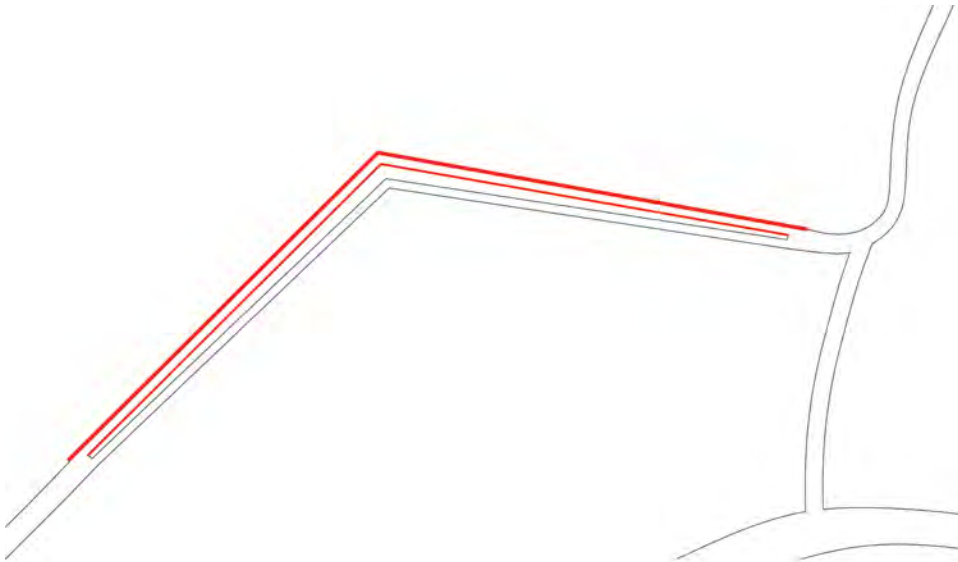
Figure 35-Vietman Memorial, threshold conditions (Source: author)

These two thresholds are parallel to each other and the path is always

parallel or oblique to both. It is by crossing the threshold of the path and

approaching the wall that an exclusion of participation takes place. Those

who remain on the inlayed path moving with traffic remain in a constant

tangential relationship with the wall, (Figure 36). In order to interact with it

one must turn ninety degrees and move towards it. This crosses the

threshold from the smooth inlaid path to the rough cut stone in front on the

wall. This conscious transition in orientation and to an uneven surface

heightens an awareness of self while allowing for direct interaction with the

wall or an individual engraving, (Figure 37).
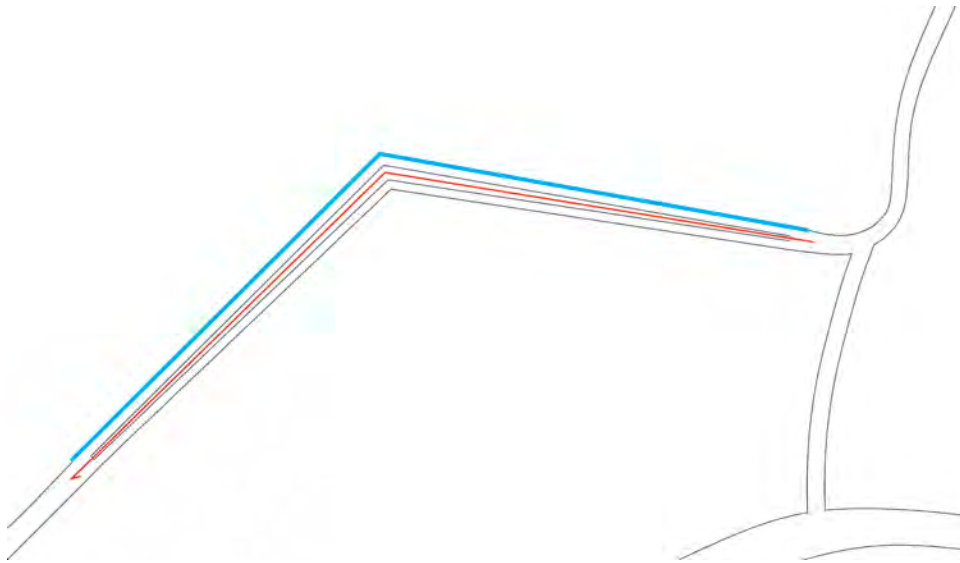
Figure 36-Vietman Memorial, oblique axes (Source: author)
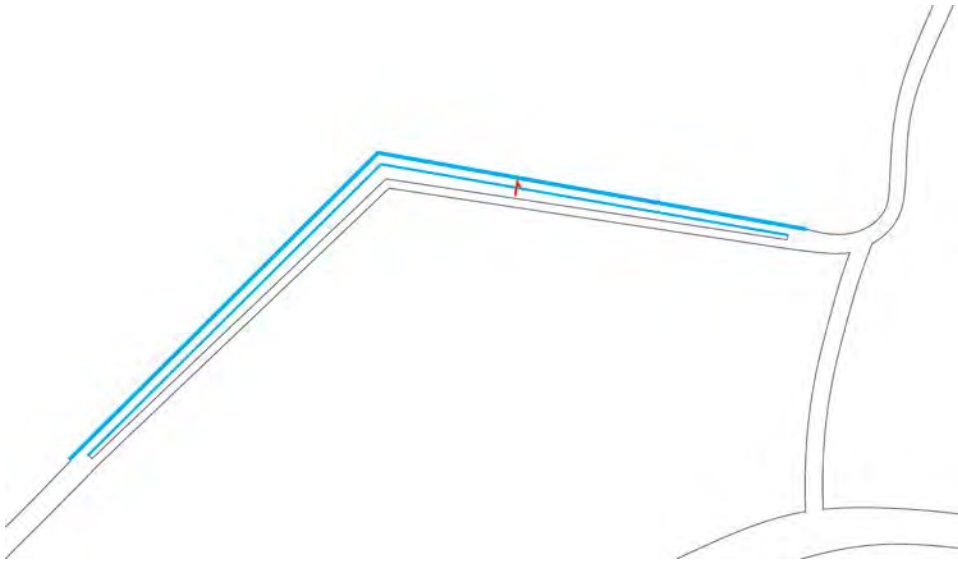
Figure 37-Vietman Memorial, frontal axis (Source: author)

It is in this space between the two principle thresholds that a dynamic tension exists as the experience becomes further gradated. The wall exists as threshold to those who have passed. The inlayed path acts as the place of the living. The small narrow space between these is an occupiable and interactive threshold before the impenetrable threshold to the dead, (Figure 38).
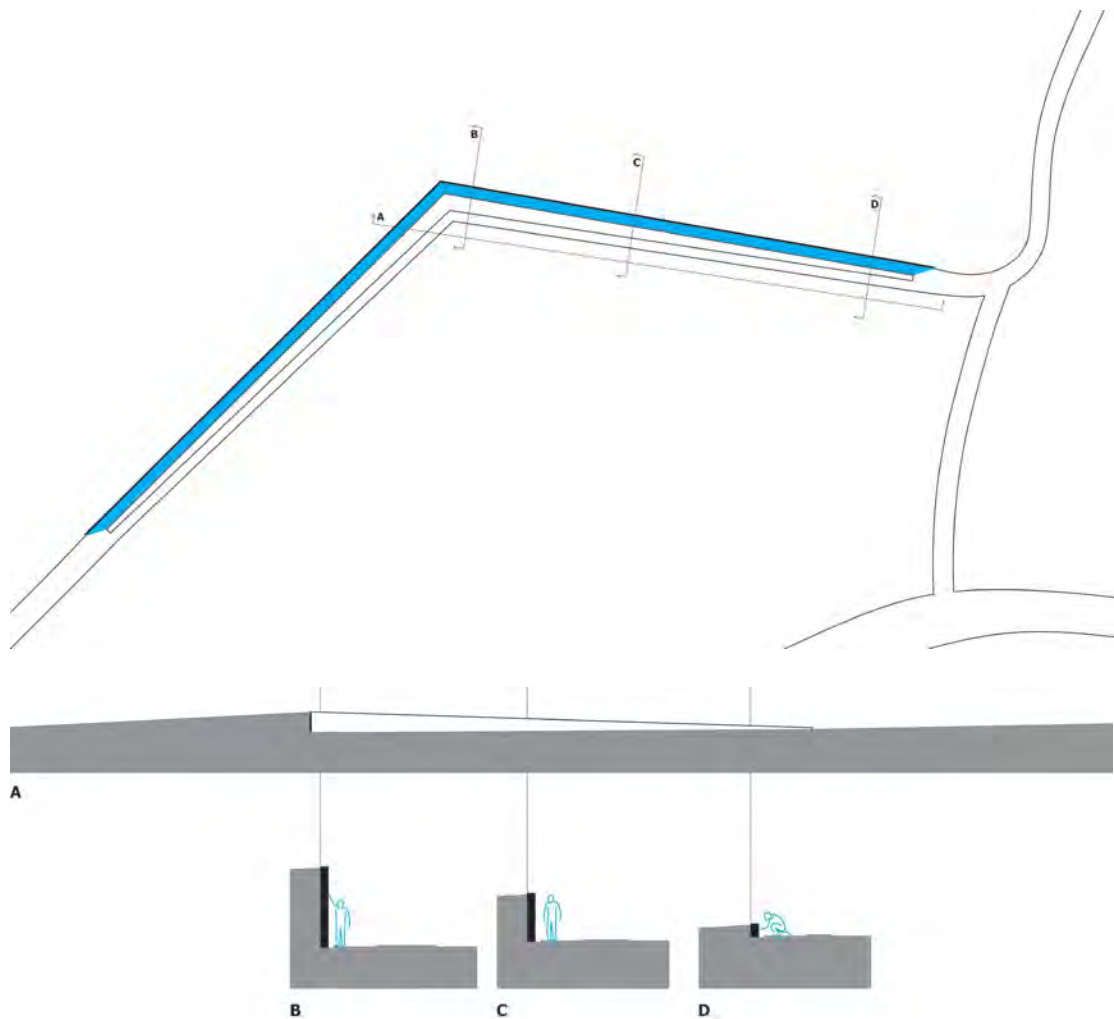
Figure 38-Vietman Memorial, dynamism (Source: author)

Site

Initial drivers for this project did not presuppose any site characteristics other than being part of an urban context and not being an existing location of interment. This being the case, it made sense to locate the project in the nearest major urban area, Washington DC, for the sake of familiarity and convenience.

Several criteria were chosen in order to facilitate site selection. While the objectives of the project did not require a certain size building or number of internment spaces, it was desirable to have a site larger than a typical urban slot site. The mausoleum was designed to be of a community and belong to a neighborhood. As the number of people in a mausoleum trends lower, it is more likely that it will be seen as being exclusive. This problem would be exacerbated by the fact that the cost of being interned in an urban location is more expensive than a more traditional suburban alternative. A smaller mausoleum has a tremendous opportunity to set the tone of its locale, but is more likely to do so as a set piece in a similar fashion to a single or family mausoleum in a suburban cemetery. A larger scale can better sponsor a sense of interaction and inclusion while responding to its context.

The project was designed as an active threshold, and it followed to put it on a site that was accustomed to and experiencing change socially,

programmatically and typologically, a site that was a threshold itself. The history of Logan Circle has made the surrounding area fall into just that category. The site that was chosen was the west end of the block on 14th bounded by P to the north and Rhode Island to the south. The design of the project called for the demolition of 1415 14th, the Ethiopian restaurant Lalibela, 1413 14th, Yum's Chicken, Salad, Seafood & Chinese food, 1409 14th, formerly The Playbill Cafe, that closed September 24th 2011[18], 1401 14th, Reincarnations Furnishing, that closed April 2012 and 1322 Rhode Island, a townhouse that has been converted into rental units.

Figure 39a view from site from the northwest (Source: author)

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[18] O'Bryan. "After Party." MetroWeekly.com, September 22, 2011.

(http://www.metroweekly.com/news/?ak=6600 accessed December 15, 2011).

Figure 39b- Lalibela, Yum's and the Playbill (Source: author)

Figure 39c-The Playbill and Reincarnations Furnishing (Source: author)

Figure 39d- Reincarnations Furnishing and rental units (Source: author)

Across P Street to the north of the site is the recently renovated Studio

Theater, which mostly puts on contemporary plays. Across the Intersection

to the northwest is a branch of PNC Bank. To the west across 14th Street is

the Mid City Deli, holding the corner of a series of small retailers.

The site is currently zoned C-3-A, that the Washington DC zoning code

gives the following description:

> Permits matter-of-right medium density development, with a density
>
> incentive for residential development within a general pattern of mixed-use
>
> development to a maximum lot occupancy of 75% for residential use and
>
> 100% for all other uses, a maximum FAR of 4.0 for residential and 2.5 FAR
>
> for other permitted uses and a maximum height of sixty-five (65) feet. Rear

yard requirements are twelve (12) feet; one family detached dwellings and one family semi-detached dwellings side yard requirements are eight (8) feet.

The site is also within the ARTS overlay zone which has the following characteristics:

The Uptown Arts-Mixed Use (ARTS) Overlay District was established to encourage retail, entertainment and residential uses that require pedestrian activity; an increased presence and integration of the arts and related cultural and arts-related support uses; a design character and identity of the area by establishing physical design standards and adaptive reuse of older buildings in combination with new buildings; and increased public safety. The ARTS Overlay provides for flexibility in use, height, bulk, bonus density, and combined lot development; and is subject to the Inclusionary Zoning Requirements of Chapter 26 of the Zoning Regulations. No portion of an eating/drinking establishment located on the ground floor of squares fronting 14th Street or U Street, N.W. is permitted to occupy more than fifty percent (50%) of the linear frontage of that square. Where there are conflicts between the ARTS Overlay and the underlying zoning, the more restrictive provisions of the Zoning Regulations govern. For more information, including preferred uses, combined lot development, bonus density provisions, and street frontage design requirements, see Chapter 19 of the Zoning Regulations.

While a special exception would have to be obtained in order to build a mausoleum, it would not be out of line with the spirit of the site planning. It is reasonable to assume the program of the project was not considered at the time of zoning and therefore be eligible for consideration.

A site of relative notoriety within the urban fabric was also a determining criteria. Washington DC, being a city of monumental importance has several areas that are arguably world famous. It was not the intent of this thesis to make the singular statement that placement on the National Mall or K Street would entail, it instead dictated more of a neighborhood situation. Logan Circle, which is a history-steeped local landmark, gave the mixture of neighborhood character and prominence that was best for the project.[19]

The 1791 L'Enfant plan for Washington DC had the area that is now Logan Circle drawn as a triangular section of land named Iowa Circle. By the 1930's, residents of the area referred to it as "Blodget's Wilderness" and it remained open farmland until the Civil War. During the Civil War the area became something of a shanty town, housing miscreants and freedmen while also serving as the site of military executions for deserters and the like. In the Civil War, John A. Logan distinguished himself in battle. After resigning

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[19] Logan Circle Community Association. logancircle.org. (Accessed December 15th, 2011).

his Illinois senatorial seat to enlist in the army as a colonel, he played a key role in several battles against the Confederate Army. One year before his death in 1885, Logan lived on the circle that would later bear his name.[20]

In 1864, a horse car line was established to aid the commute of Washington DC's growing population. In the 1870's the circle had established itself as one of the city's most desirable areas to live. 14th Street became a main street as it was home to a variety of retailers including grocers, cobblers, and druggists. The character of the area evolved alongside the advent of the automobile. In 1898 the first automobile showroom was opened on 14th selling Kensington Electric Cars. Shortly after, many of the Victorian style buildings in the area were demolished so that larger car showrooms could be built. The transformation being a good reflection of the times, the small retailers took a back seat to car vendors and 14th street became dominated by the dealerships.[21]

By the middle of the 1890's newer and more luxurious residences were being built further west closer to DuPont Circle, six blocks from Logan Circle, as well as Massachusetts Ave. Then and through the beginning of the next century, Logan Circle became part of the artistic and intellectual locus of the

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[20] Ibid

[21] Ibid

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Black population of Washington DC. Noteworthy American's such as Alma

Thomas, the expressionist painter, Mary Jane Patterson, the first African

American woman in the world to receive a college degree, and Duke

Ellington, the landmark jazz musician all lived within blocks of Logan Circle

around the turn of the century.[22]

In the early 20th century the Logan Circle area remained a prominent

commercial corridor. 14th street was still lined with car dealerships and the

other retail components that remained. In 1930 Congress passed a law that

officially changed the name from Iowa Circle to Logan Circle in honor of the

war hero. The westward move of the city's more affluent families continued,

and the neighborhoods east of 16th Street became almost entirely inhabited

by Black residents. This area began to experience further financial hardships,

and consequently did not develop as the properties to the west did. Many of

the remaining Victorian style houses became partitioned to become small

apartments and boarding rooms.[23]

Logan Circle fell into further disrepair through the middle of the

century and was significantly affected by the 1968 Washington DC riots. The

riots were especially detrimental to the commercial corridor on 14th Street.

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[22] Ibid

[23] Ibid

By the 1990's, the area was particularly disreputable, becoming infamous for problems with drugs and prostitution.[24] Toward the end of the century, Logan Circle began to see economic development occur beginning with the renovation of many of the area's original Victorian style houses. Although some were razed, many of these structures remained in relatively good and original condition having surviving the riots and previously being passed over for redevelopment.[25]

In late 2000 Logan Circle began to see a mass influx of revenue ushered in largely by the opening of the grocer, Whole Foods. Logan Circle itself remains entirely residential, Washington DC's only circle to do so, however many national chains have moved into the area amongst older local retailers. Logan Circle still ostensibly identifies with the depth of Black American culture in the area, as does the nearby Shaw and U Street neighborhoods, but rising property values have forced gentrification into the area. White young adults now comprise the majority of the residents, displacing the former majority of Black adults that previously lived there. Demographically, Logan Circle has a prominent LGBT community with

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[24] Moeller, *AIA Guide to the Architecture of Washington D.C.* (Johns Hopkins University Press, 2006).

[25] Ibid

Number 9, a prominent gay bar in the city located nearby.[26] New

development continues to push towards the circle from the south on K Street,

from the north as part of the U Street revitalization efforts, and more closely

from the west where the Whole Foods is located two blocks away. Both P

and 14th are now significant commercial corridors with retail, theaters,

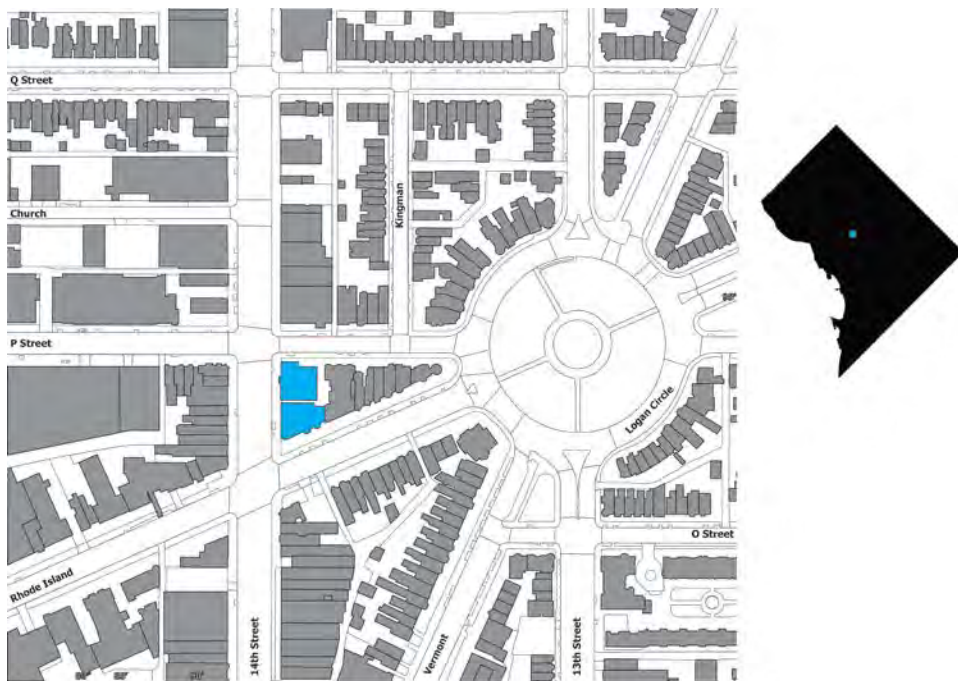restaurants, bars and banks.

Figure 40-site located in Washington DC (Source: author)

The site and the surrounding area are relatively flat. The 12,000

square foot site slopes just over two feet to the northwest, (Figure 41).

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[26] Breen, *Intown Living: A Different American Dream* (Greenwood Publishing Group, 2004).
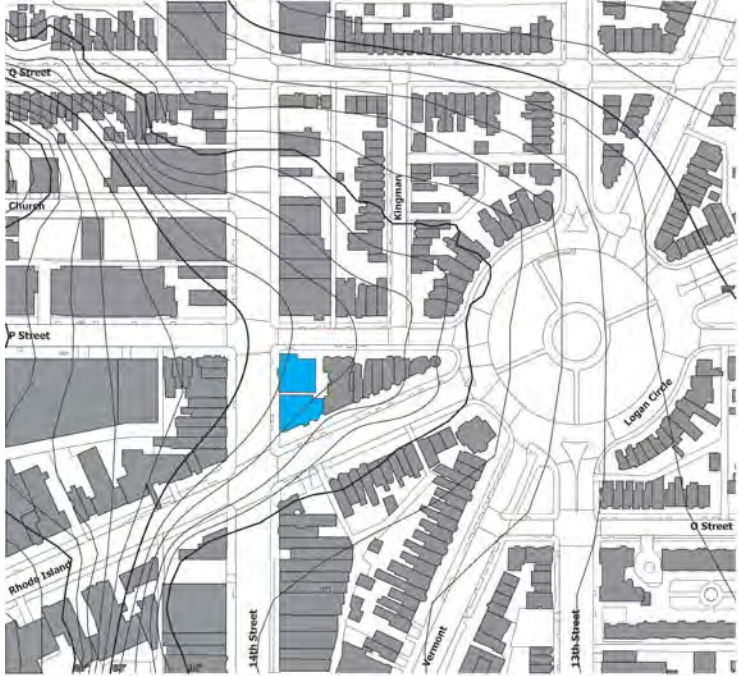
Figure 41-topography map with 1' contours (Source: author)

Looking at the surrounding space use one can see the site sits on a seam in this regard as well. Sitting on a prominent commercial intersection of P and 14th, there is a strong commercial presence in the area, however the site has residential to the east around Logan Circle and the street that bounds it to the south, Rhode Island is residential except for the corners on 14th (Figure 42).

Figure 42-space use map (Source: author)

The traffic volumes from the Washington DC Department of Transit for the streets bounding the site clearly show that P Street is the least busy and indicates that the façade along 14th will be seen as the de facto public face. The site has an existing alley to the northeast off 14th. Due to both the existing condition and the fact that this street has the lowest traffic volume, it follows that the vehicular entrance would be located here, (Figure 43).
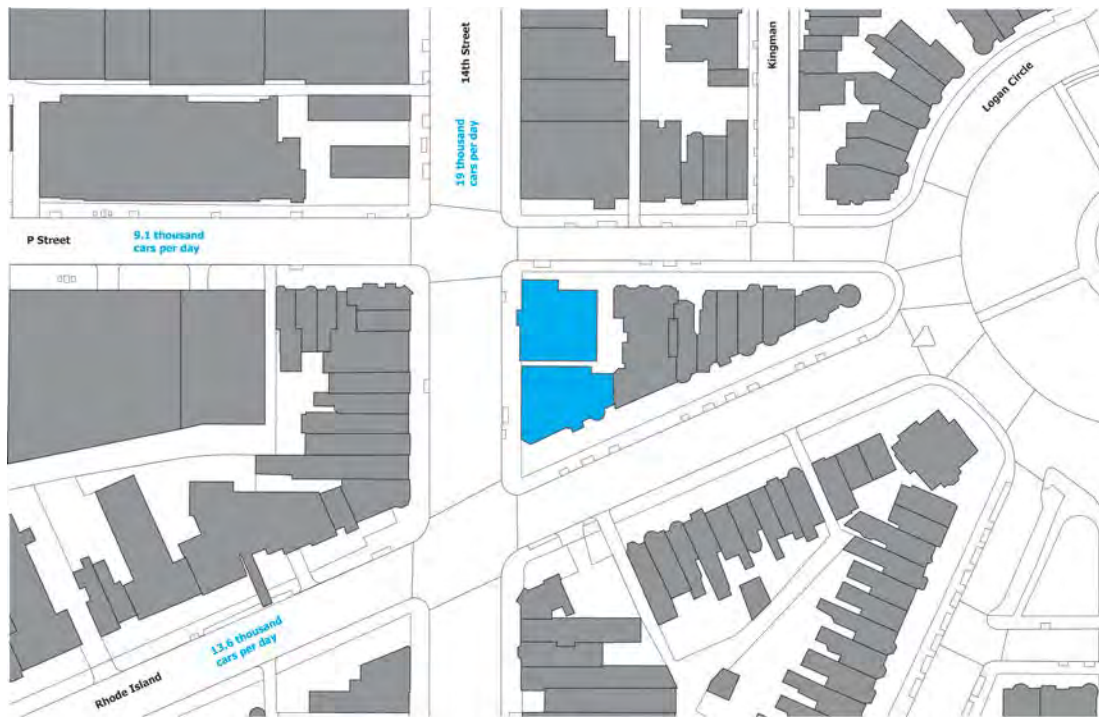

Figure 43-traffic volume (Source: author)

Public transit in the area indicates that the site is accessible by both metro rail and bus. It is a fifteen minute walk or less at four miles per hour to the orange and blue lines to the south and the yellow and green lines to the east. Three major bus routes pass right by the site, two running north/south along 14th and one running east/west along P Street, (Figure 44).
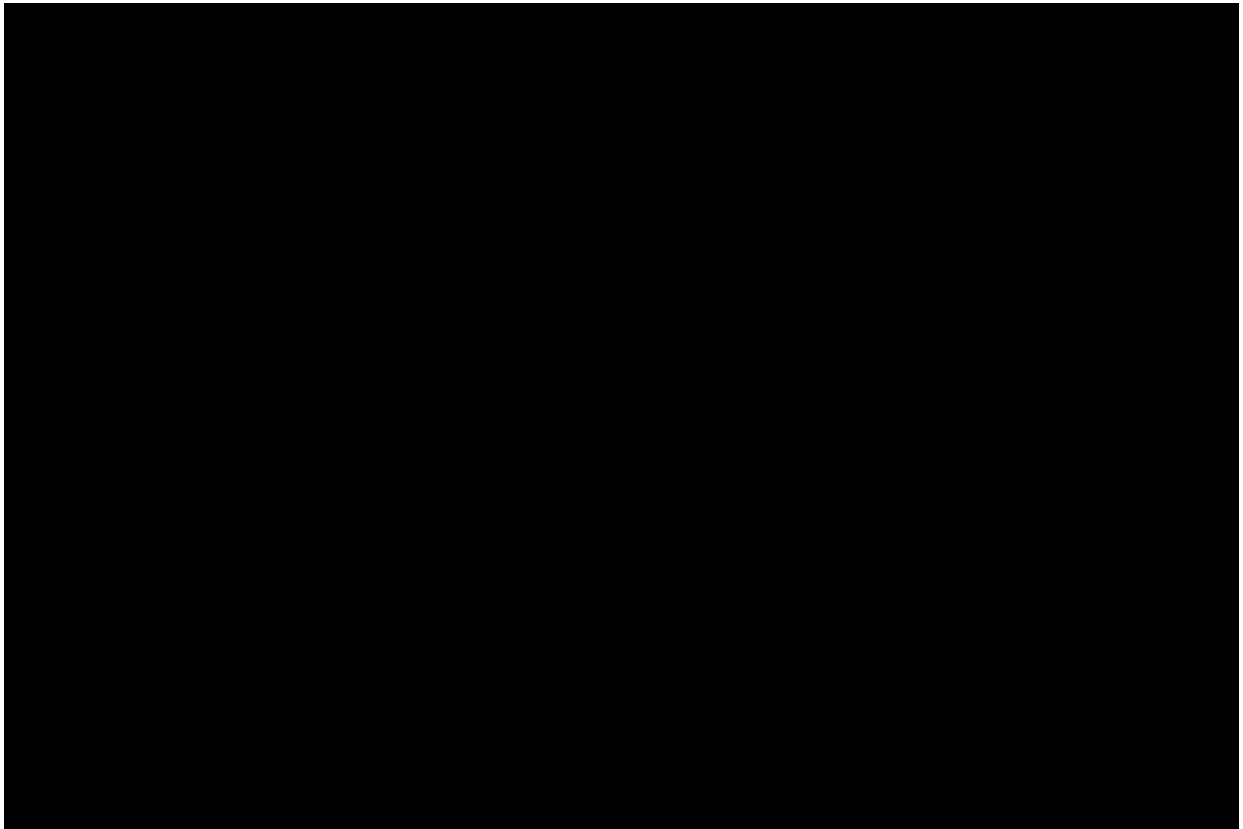
Figure 43-public transit (Source: Washington DC Department of Transportation)

Site sections indicate more of the surrounding context as well as the gentleness of the slope on the site. The number of lanes on each street reasserts the findings of the traffic volumes. 14th Street is the widest with two lanes of traffic each way, a dedicated bike lane in each direction and a lane of parking on either side. Rhode Island has a lane of traffic each way in between two lanes of parking. P Street is the smallest with a lane of traffic each way and one row of parking to the north, (Figure 45).
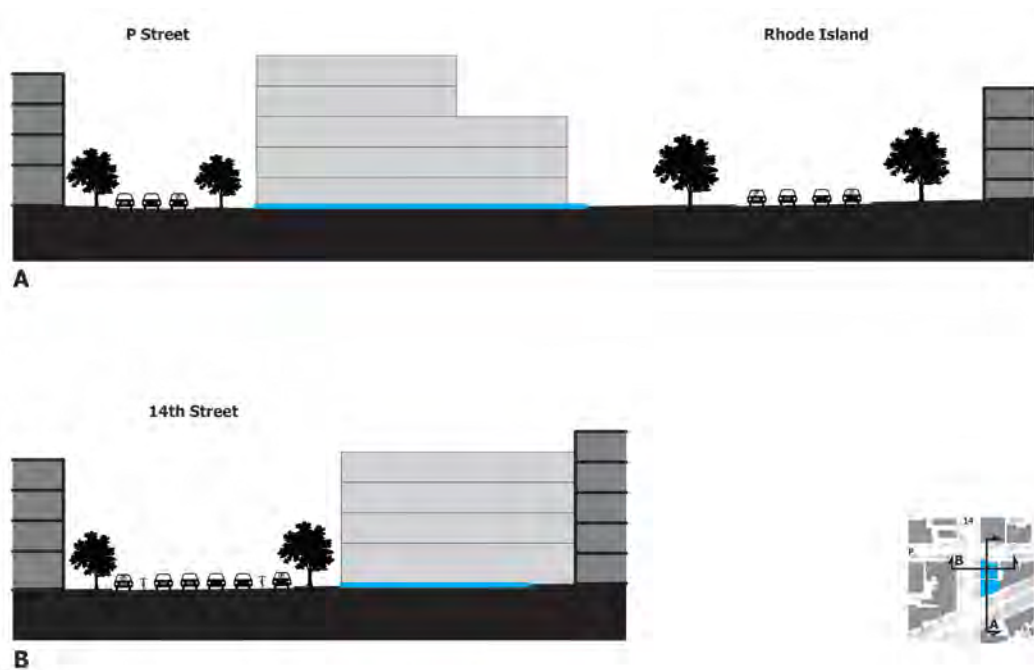

Figure 45-site sections (Source: author)

A massing study shows further information about the volumetric qualities of the site context. The site is indicated in blue, (Figure 46), and then shown to be built out to the allowed 65' height, (Figure 47). Different

views of this next to the existing massing show that if the project is designed

to the full allowable height that it will not be overwhelming to the

surrounding neighborhood, (Figure 48 and 49).

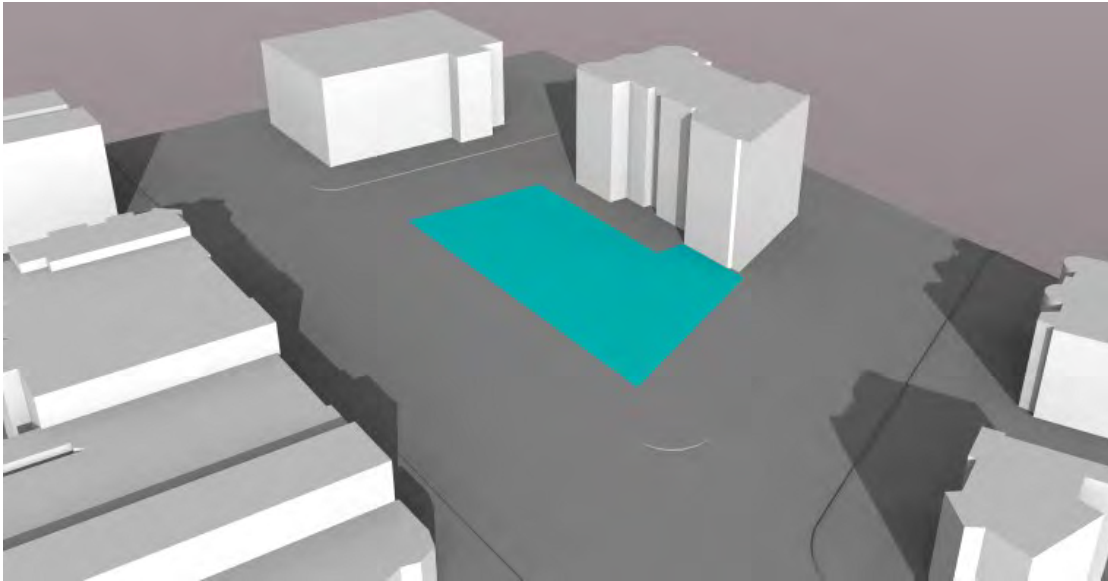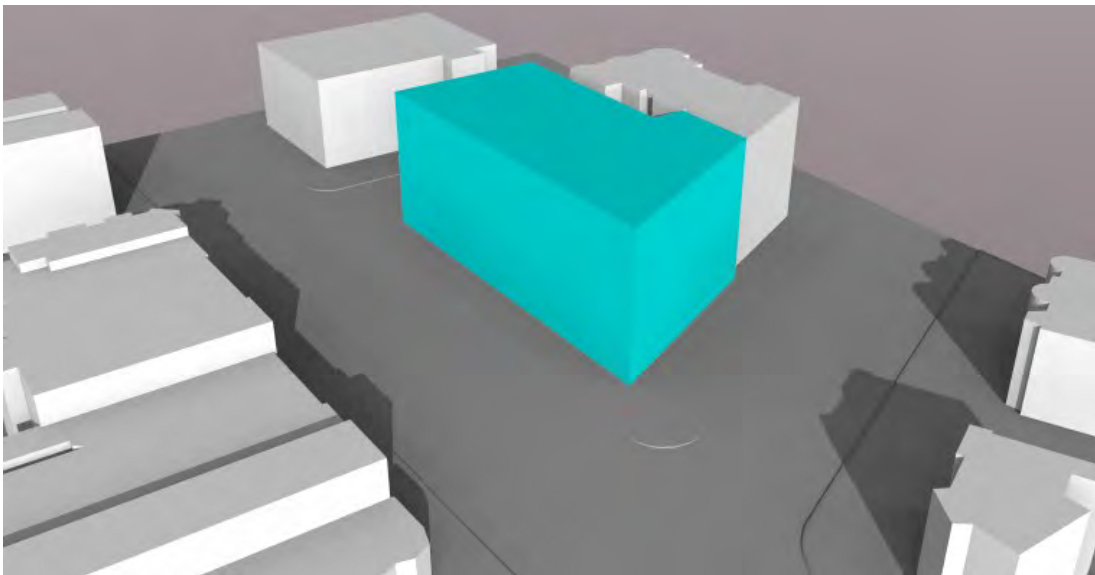**Figure 46-massing study, site (Source: author)**

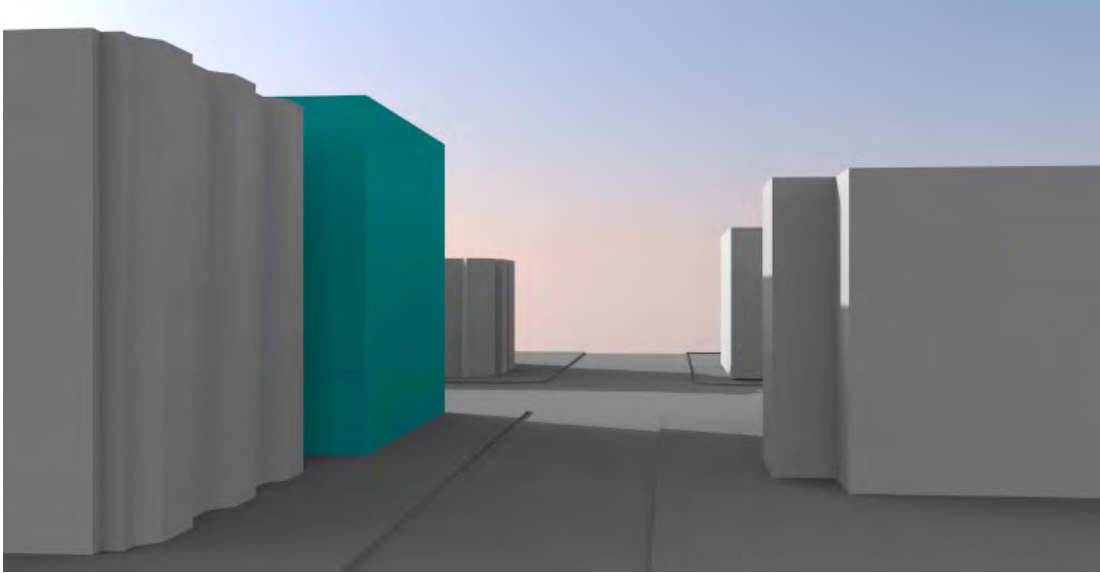**Figure 47-massing study, site built to 65' (Source: author)**

Figure 48-massing study, site built to 65' (Source: author)
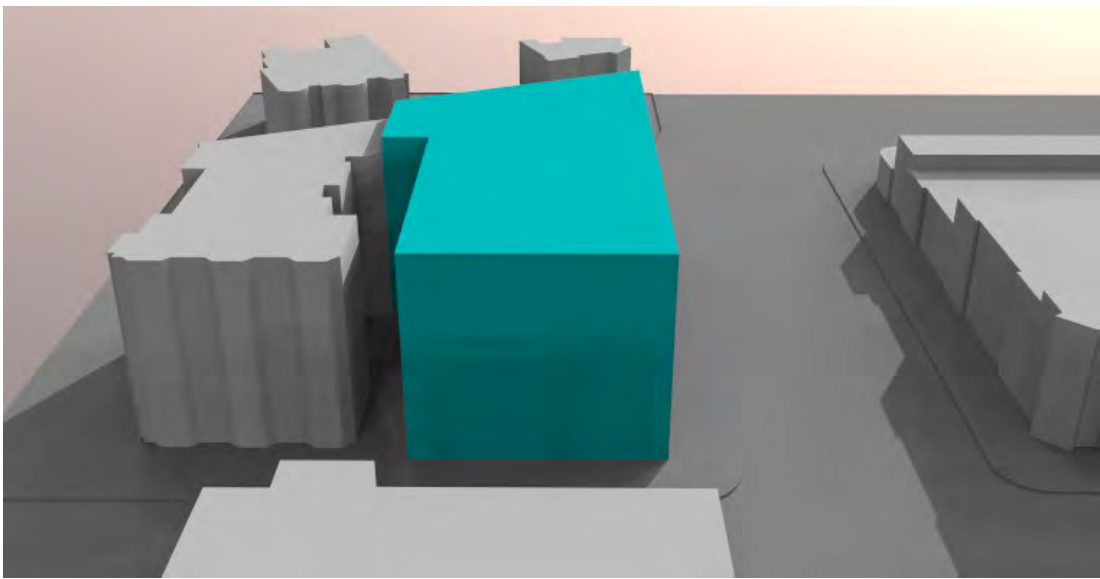

Figure 49-massing study, site built to 65' (Source: author)

For being located in an urban context there is a fair amount of vegetation around the site although the entire buildable site is impermeable. There are several trees located in planters abutting the site along the streets and the only occupiable green space in the vicinity is Logan Circle. This scenario gives rise to a few different opportunities such as significantly bettering the environmental footprint of the area. If the site were designed to retain all of its rainwater and absorb runoff from uphill, it would have a tremendous impact on the predominately hardscape neighborhood. There is also an opportunity to set up a planted area in juxtaposition to Logan Circle. It is an occupiable green space, but is surrounded be a busy traffic circle and therefore extremely outward looking. A heavilt planted area on site would be close enough to relate to Logan Circle, but could be set apart from the street and take on a more serene, reflective nature, (Figure 50).

Figure 50-surrounding vegetation (Source: author)

It is also useful to view the site and its surroundings through a spatial rather than societal perspective. When people observe the world around them, it is viewed through an innumerable series of lenses and filters. These are used as tools in order to locate and distil information that is useful to the observer in what would otherwise present itself as a jumble of information. These lenses are cultural but some affect one's reality on an even more base

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level. One's initial sensory perceptions are translated into information that we interpret to be recognizable objects. Bill Nichols refers to this sort of translation as the difference between bracketed and normal perception.[27]

For Nichols, normal perception is how an observer sees through the regular course of a typical day. Bracketed perception is to consciously perceive sensory inputs that are received before having the brain assign them meaning. Bracketed perception perceives the world as a series of colors, gradients and surfaces conditions with no relative or contextual meaning. To observe the site for an architecture project in this way is useful to gain an understanding of the spatial characteristics that are being altered and interacted with through the course of the design. Nichols' notion of bracketed perception played a major role in how the design proposal began to take shape.

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[27] Nichols, *Ideology and the Image*, (John Wiley & Sons, 1981).

Design Constraints

Part of the challenge of this thesis was deciding what components would be incorporated programmatically due to there not being precedent for this kind of institution. The mausoleum would need minimal staffing and could run with two people operating the premises at any given time. There would need to be part of the building that would function as the office in order to facilitate business matters. This area should include office and workspace for the staff as well as a reception area and private meeting room for those coming in to conduct business with the mausoleum. There would also need to be a gathering area for roughly 100 people that would be able to host a variety of functions in memory of the deceased, such as a memorial service, wake or reception.

Much thought was given to the amount of parking that should be on site. The initial motivations for the project of integrating a mausoleum into an existing urban condition call for a use of public transportation and street parking when vehicles would have to be used. While these methods of arrival are preferred they are impractical for the transportation of remains. For this purpose accommodations must be made for a hearse or similarly oversized vehicle. It was also decided that close members of the funeral party should

have available on site parking and therefor there are seven parking spaces in the final design.

To be consistent with trending burial preferences and the urban site, there would significantly more spaces for cremated remains then there would be caskets as well as roughly one tenth of the spaces for caskets being able to accommodate two standard size caskets next to each other or one oversized caskets. The spaces themselves are sized to accommodate standardized casket dimensions with typical caskets being 23"high x 84"long x 28"wide and oversized caskets being 23"high x 84"long x 52"wide. When remains are cremated they are typically placed in a standard oversized temporary urn and then moved to a smaller permanent urn. Spaces in the mausoleum are sized to accommodate these oversized urns which are 5"high x 6"long x 6"wide.

In reality this project would present itself as an exceptionally challenging real estate investment. The main obstacle being that the land value is so high relative to the income streams associated with running it. This could be offset with relatively high price-points in the long run, however the absorption rate of the individual tombs would be detrimental enough to the short term return that it would not pay for itself. If this building were to be built the start-up costs would have to include a sum of money for funding

an endowment to produce dividends to provide for an operations budget that

would be supplemented by the sale of individual spaces.

Program

Office Area   **1920 square feet**

The office area of the building is the only area that has a thermal envelope. It exists on the ground floor and is comprised of the following spaces:

Private Office	*160 square feet*
Work Space	*350 square feet*
Reception	*225 square feet*
Waiting Area	*160 square feet*
Conference Room	*200 square feet*
Restrooms	*425 square feet*

Additional Restrooms and Sinks   **1200 square feet**

In addition to the restrooms located on the ground floor there are also restroom facilities on the bottom level as well as the top. On floors where there are not restroom facilities there are a drinking fountain and sink.

Utility/Service   **5600 square feet**

Floors other than the top floor with each have service space including mechanical and storage rooms.

Area for Interment   **28000 square feet**

On all levels except for the top floor there are places of interment totaling in room for 592 caskets and 4160 urns.

Circulation   **5200 square feet**

Much of the design is devoted to circulation around the areas of interment. These spaces are not be compressing, however remain paths as opposed to creating a sense of place.

Seating Areas   **4000 square feet**

Every floor where there are spaces for interment has a day-lit area that is set apart for rest and reflection. These areas as separated spatially in plan as well as section by a slight slope downward on the floor-plane.

Gathering Area   **6000 square feet**

The top floor has a gathering area able to host a variety of functions in memory of the deceased, such as a memorial service, wake or reception.

Total   *51920 square feet*

Design Development

Design development of the project began with physical models. From the beginning of this process two systems were seen as interacting with each other, a system for the living visitor and one for the deceased. In order to design a built form that sponsors reflection, a dynamic system is desirable to create a continuous state of change over experience, which is why this was an area of focus when consulting precedents.

In order to create sense of dynamism with a static form out of two distinctly different structural systems several models where created out of MDF blocks and glass shards. The MDF was cut into blocks of varying dimensions on a relatively similar scale and the glass was randomly broken into pieces of roughly the same size. As all pieces adhered to each other with glue, rules were created at the onset to ensure a consistency of structure. Blocks had to remain orthogonal to each other and be contiguous. Shards also had to be contiguous and only meet each other on edge. Glass could meet blocks at any point and would be adhered to one another when adjacent. Finished models had to be roughly orthogonal when finished, which was checked by being able to rest on all sides.

The materials were chosen so that a variety of spaces would be captured and alluded to. The experiential depth of the models changes with

light and the movement of the observer. They were made so that different

spatial characteristics would become manifest and would be able to sponsor a

list of desirable criteria to be emulated when moving forward. Figures 51, 52

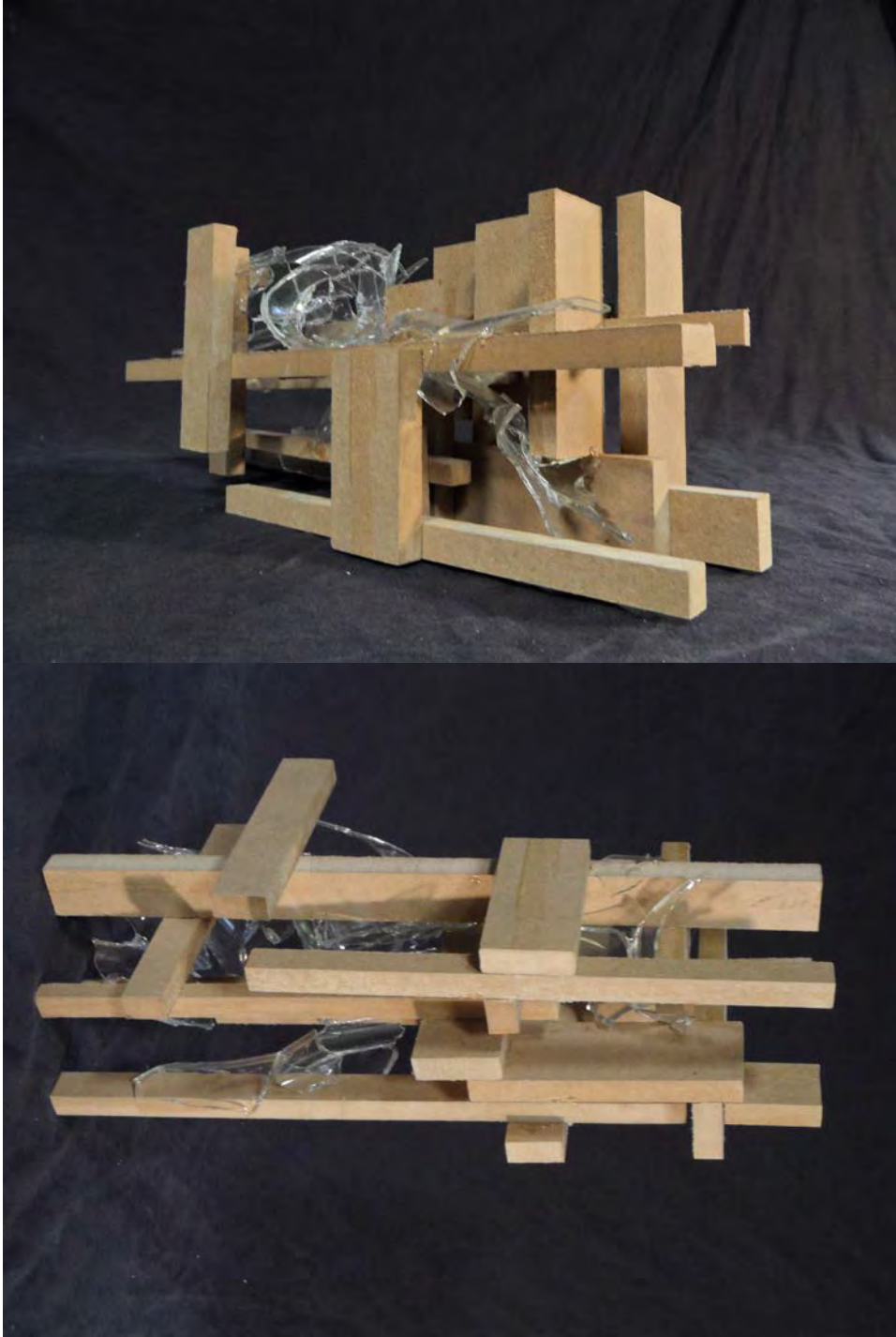and 53 illustrate three different ways to articulate this system.

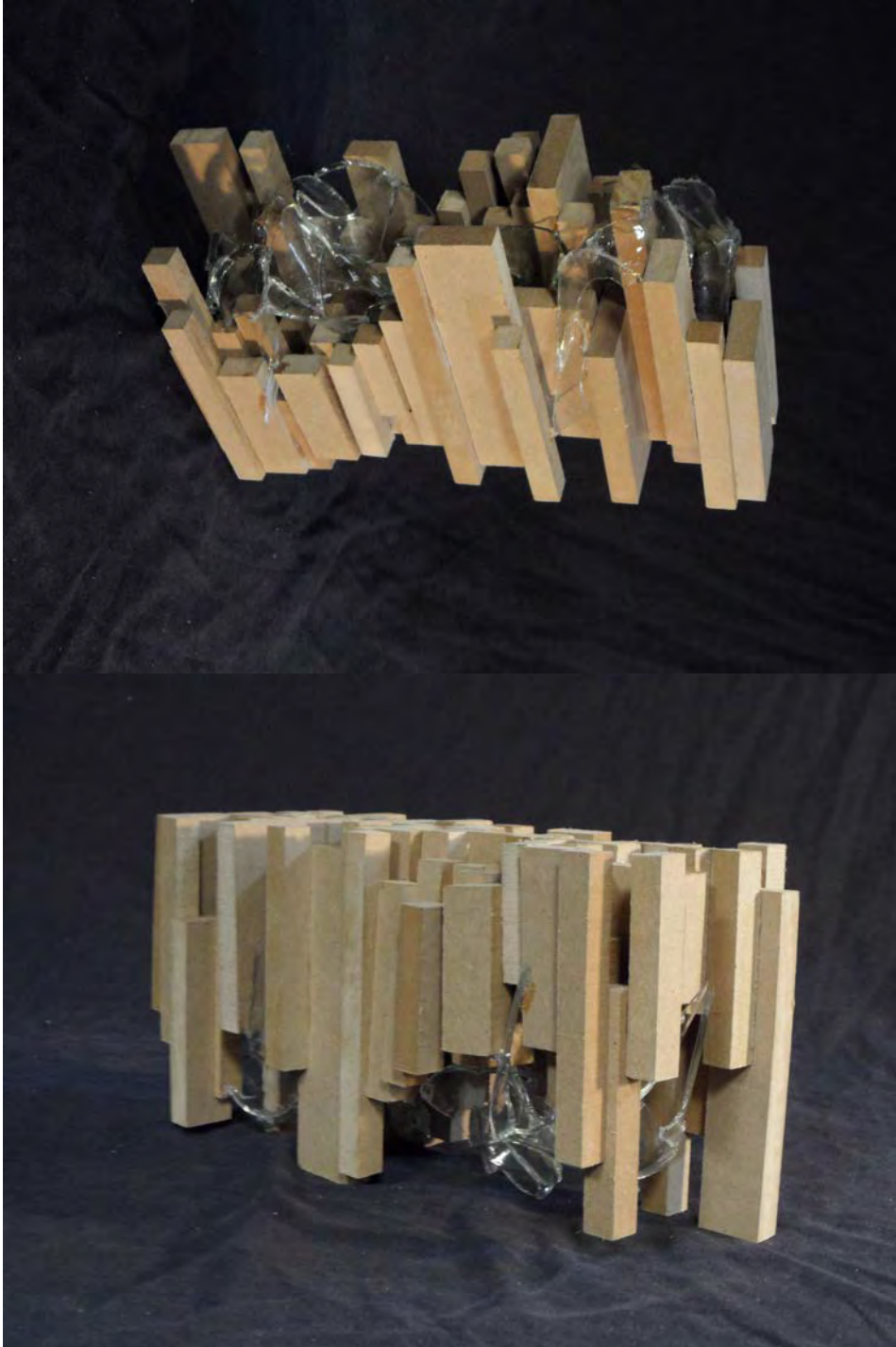**Figure 51-Shard and Block model 1 (Source: author)**

Figure 52-Shard and Block model 2 (Source: author)

Figure 52-Shard and Block model 3 (Source: author)

Consultation with the committee after these studies and iterative investigations of the ground floor it was decided that the design should focus first on the overall form of the building and how a perceived sense of dynamism might be accomplished on the macro scale. In the next iteration of the design the physical models focused on layering and differing degrees of openness. Three different strategies were used to manifest these notions and are depicted in Figures 53, 54, and 55.
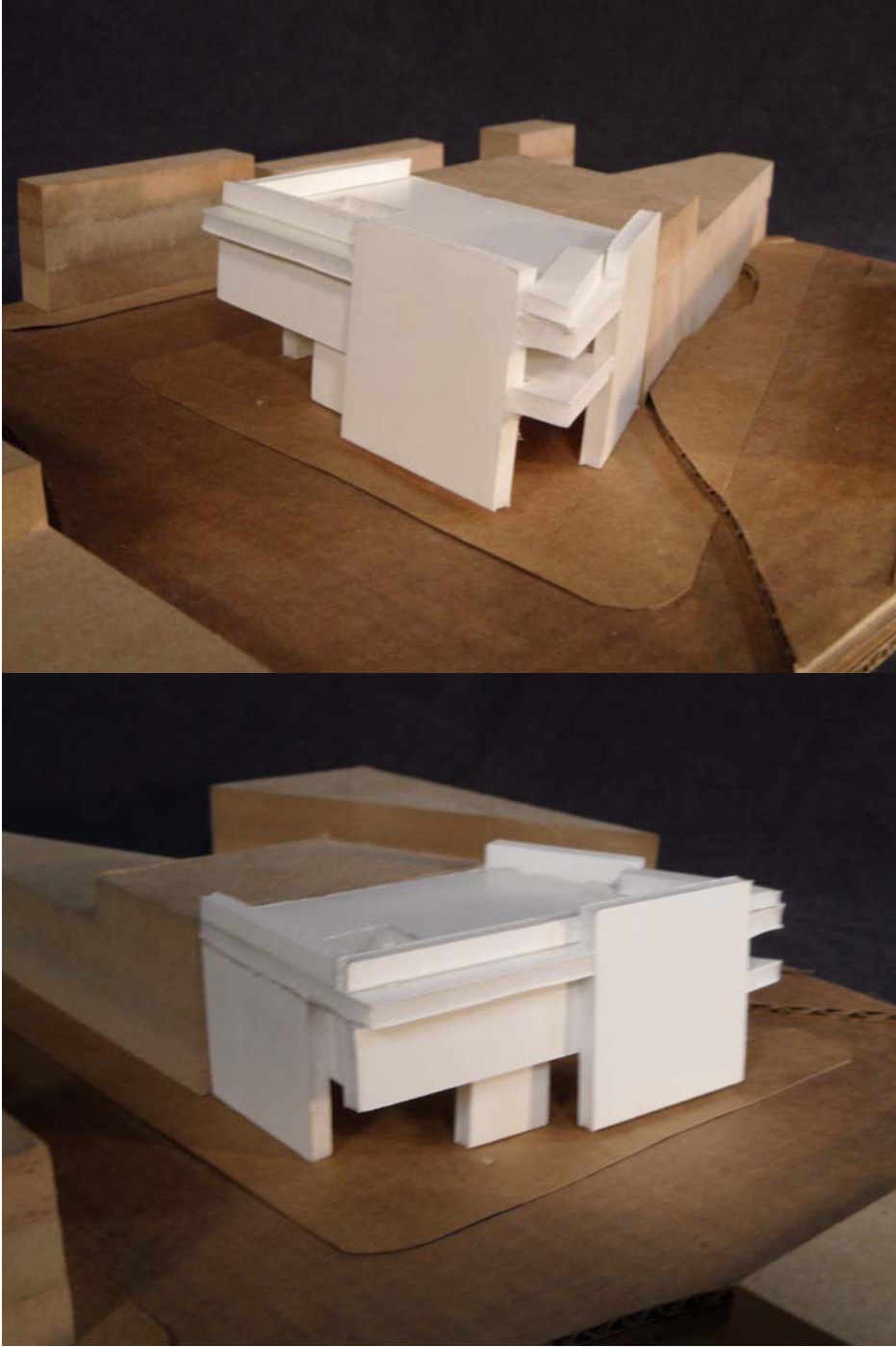
Figure 53 form study 1-(Source: author)

Figure 54 form study 2-(Source: author)
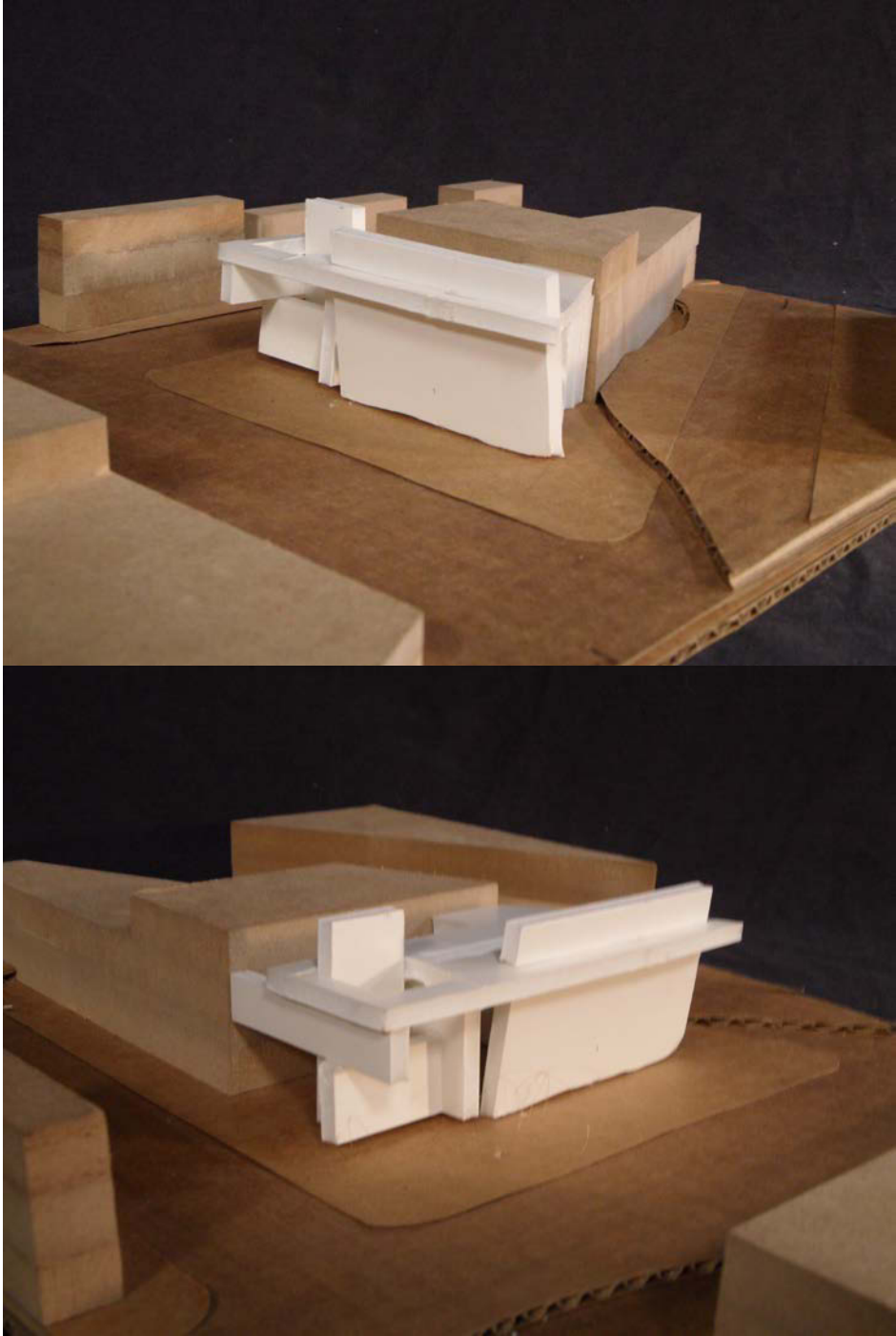
Figure 55- form study 3 (Source: author)

These three models all featured a prominent atrium space running the vertical height of the building, a feature that would remain constant through future iterations. Being primarily concerned with the perceived reading of the overall form, none of these models break the ground-plane. All iterations moving forward would instigate carving into the ground in one way or another. The formal characteristics of the model depicted in Figure 55 had the best balance of several important criteria. It achieved a sense of openness to the surrounding space as well as setting up a system of spaces on the interior. It also began to set up a system of movement versus stability. It became evident that this would be a very important relationship to create due to the desired effect of dynamism. Dynamism being a relative term needs to be juxtaposed with stability in over to be perceived. In order to distill this relationship a large series of models were made to explore the implied motion of related forms created by a number of planes on the site. From these several were elaborated upon while taking into consideration of a prominent void on the site. The inclusion of this void gave rise to much more opportunity to play with gravity, pressure and perceived instability while creating form. Some of these models are illustrated in Figures 56, 57, 58 and 59.
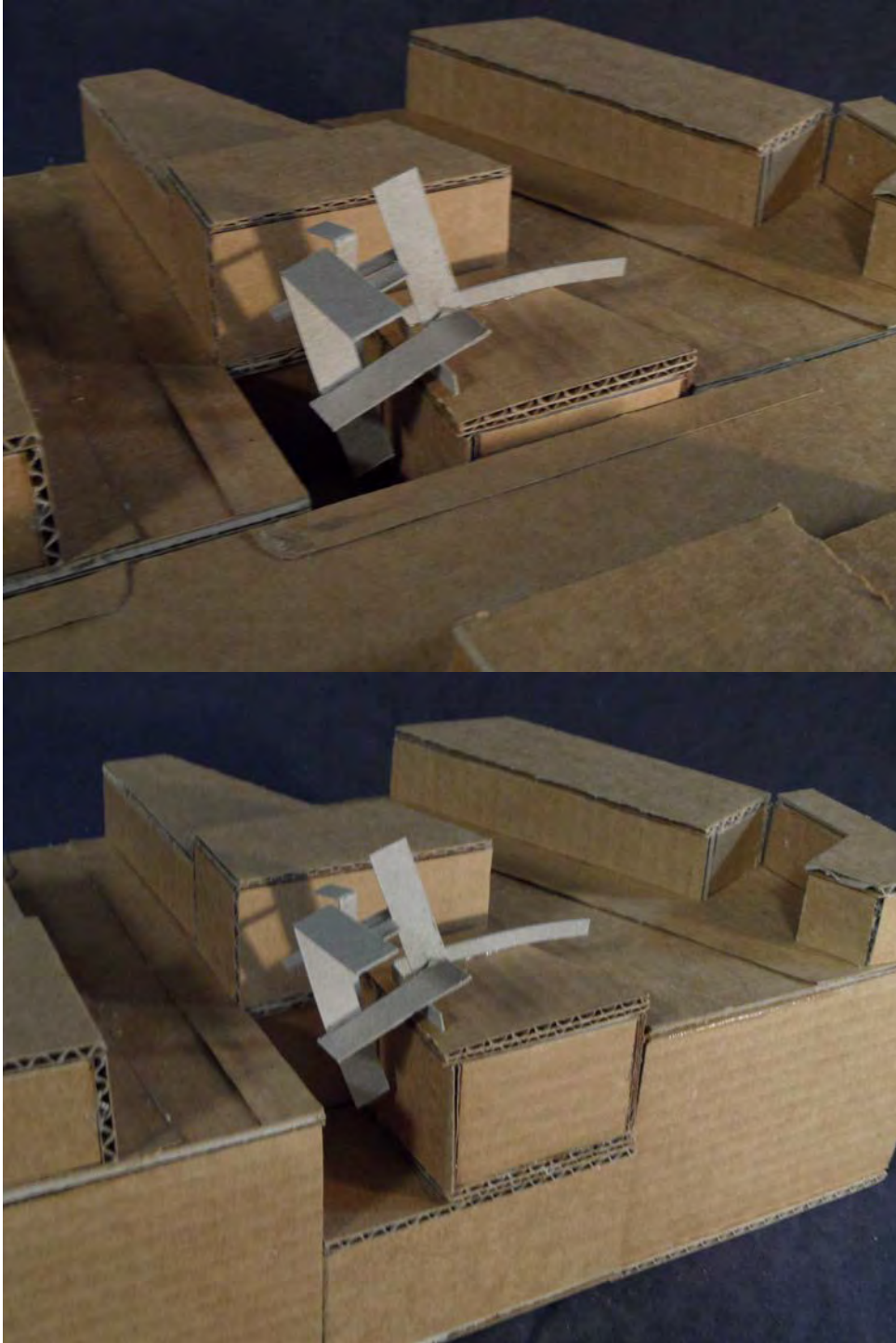
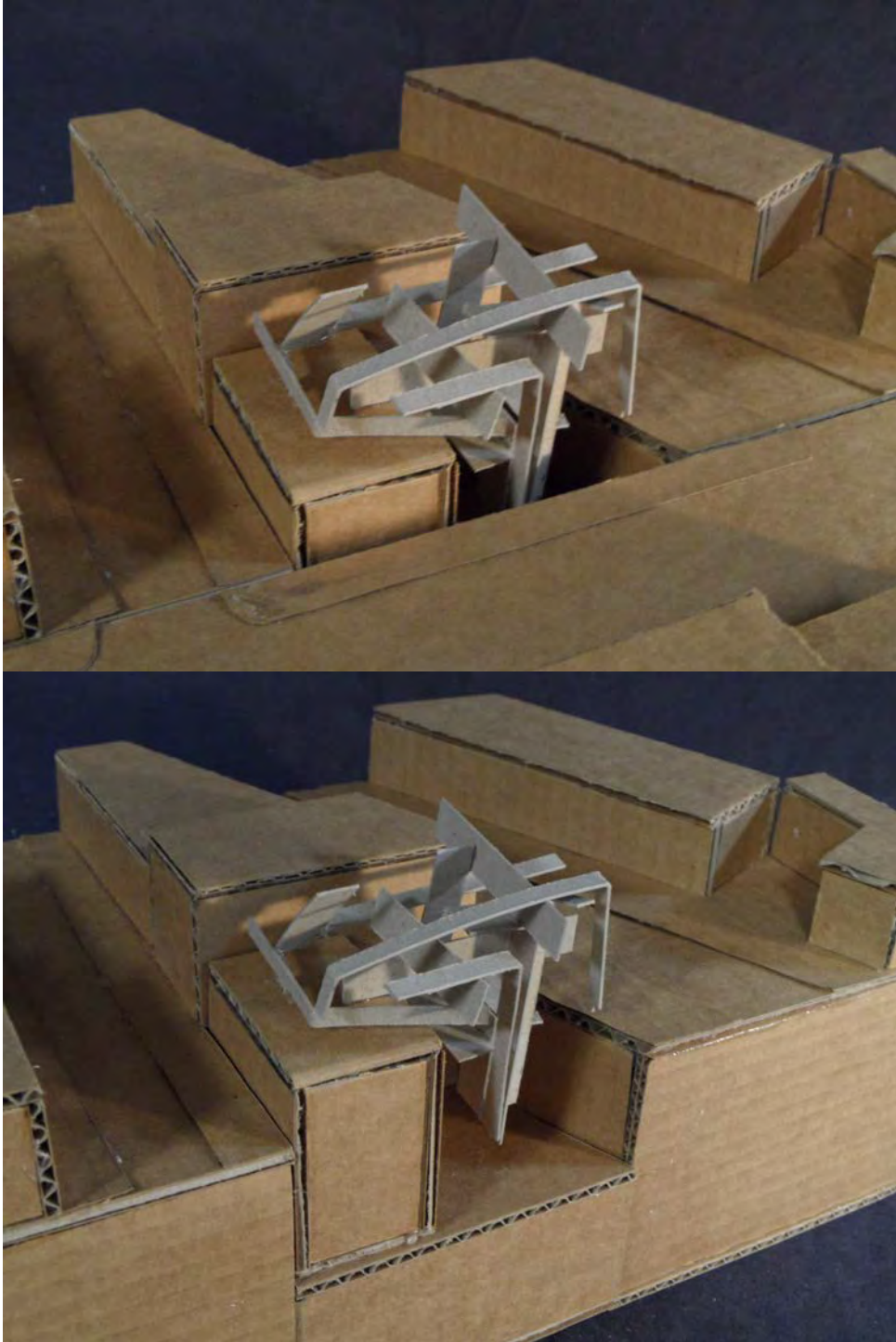**Figure 56-movement study 1 (Source: author)**

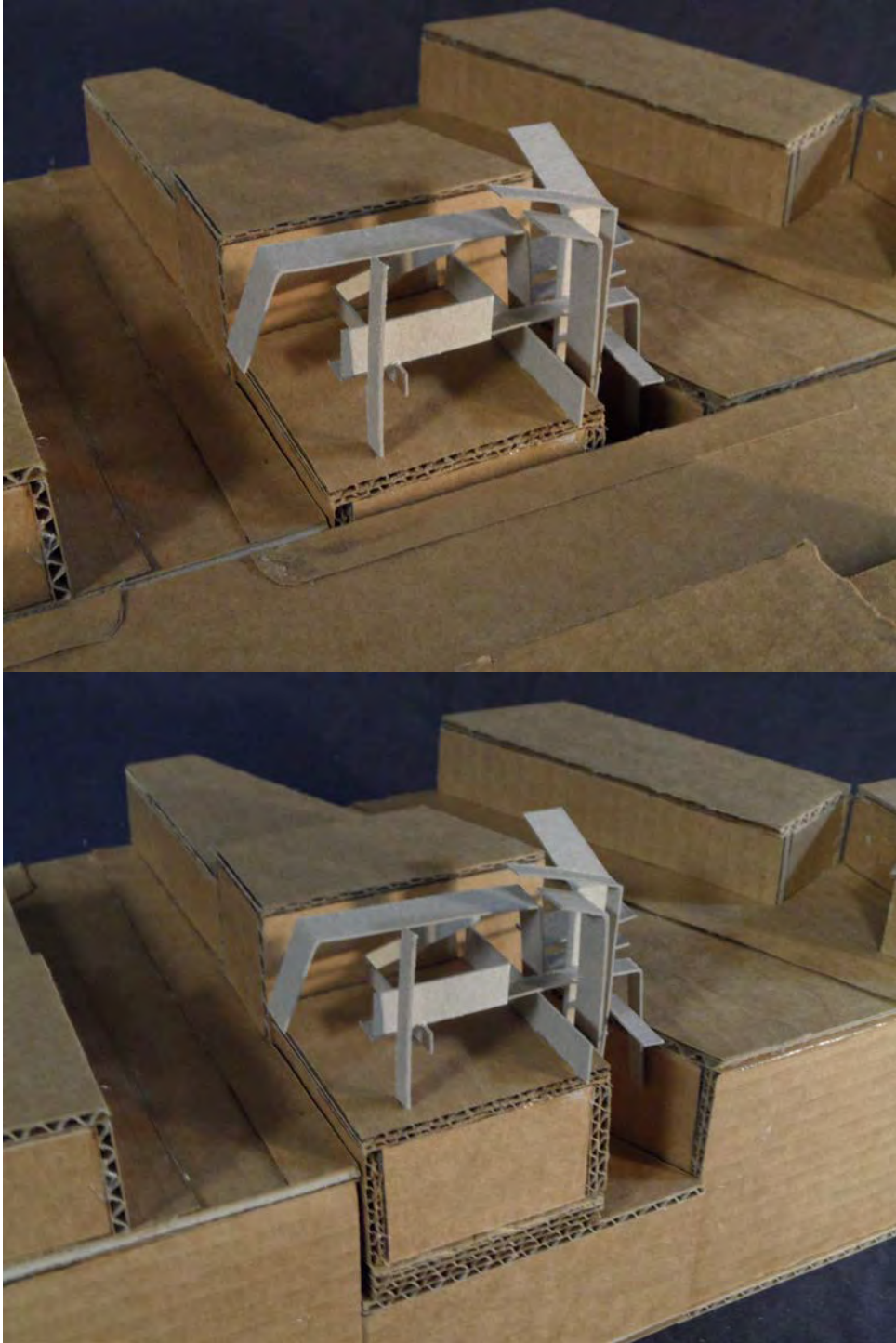**Figure 57- movement study 2 (Source: author)**
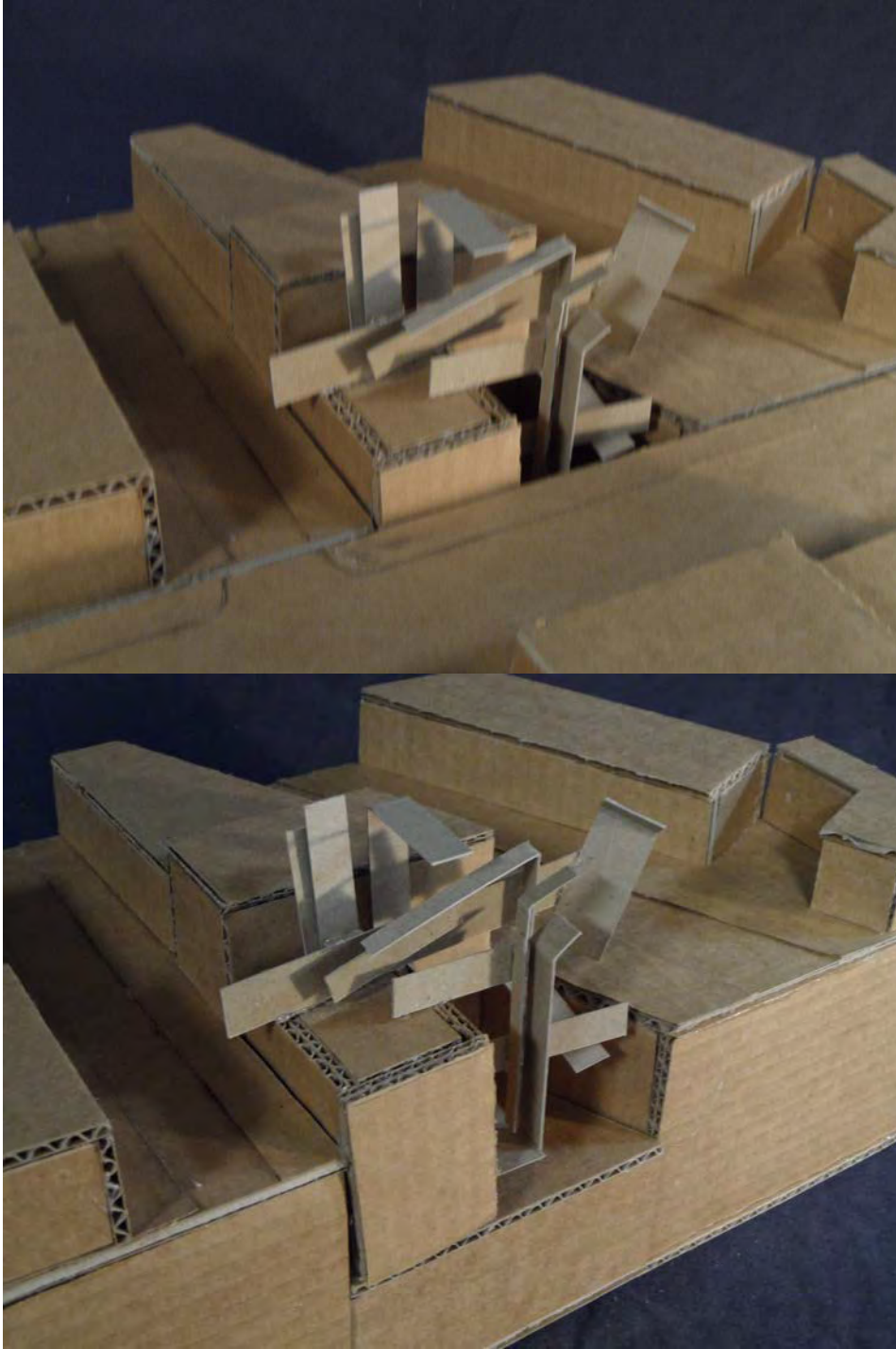
Figure 58-movement study 3 (Source: author)

Figure 59- movement study 4 (Source: author)

These models were then studied for desirable criteria and several important characteristics stood out. One was that the hierarchical relationship of built elements to the prominent void in the ground-plane developed problems when the void was read as being encompassing. This is because if the structure were to be seen as being in a hole, it would necessarily be read as being in a hole, which in turn gives it a very distinct sense of place. Having a very distinct sense of place runs counter to achieving an initial reading of dynamism and was subsequently avoided. Another important lesson was the creation of very legible datums. These were not only necessary due to the needed dichotomy of static and dynamic, but held even more importance when significantly intervening with the otherwise solid ground. Manipulating the ground level as well as the manipulation of the solidness of occupiable floor would become a very important experiential quality moving forward. Computer modeling was then used to express the desired qualities in a more solid form as opposed to the planer elements.
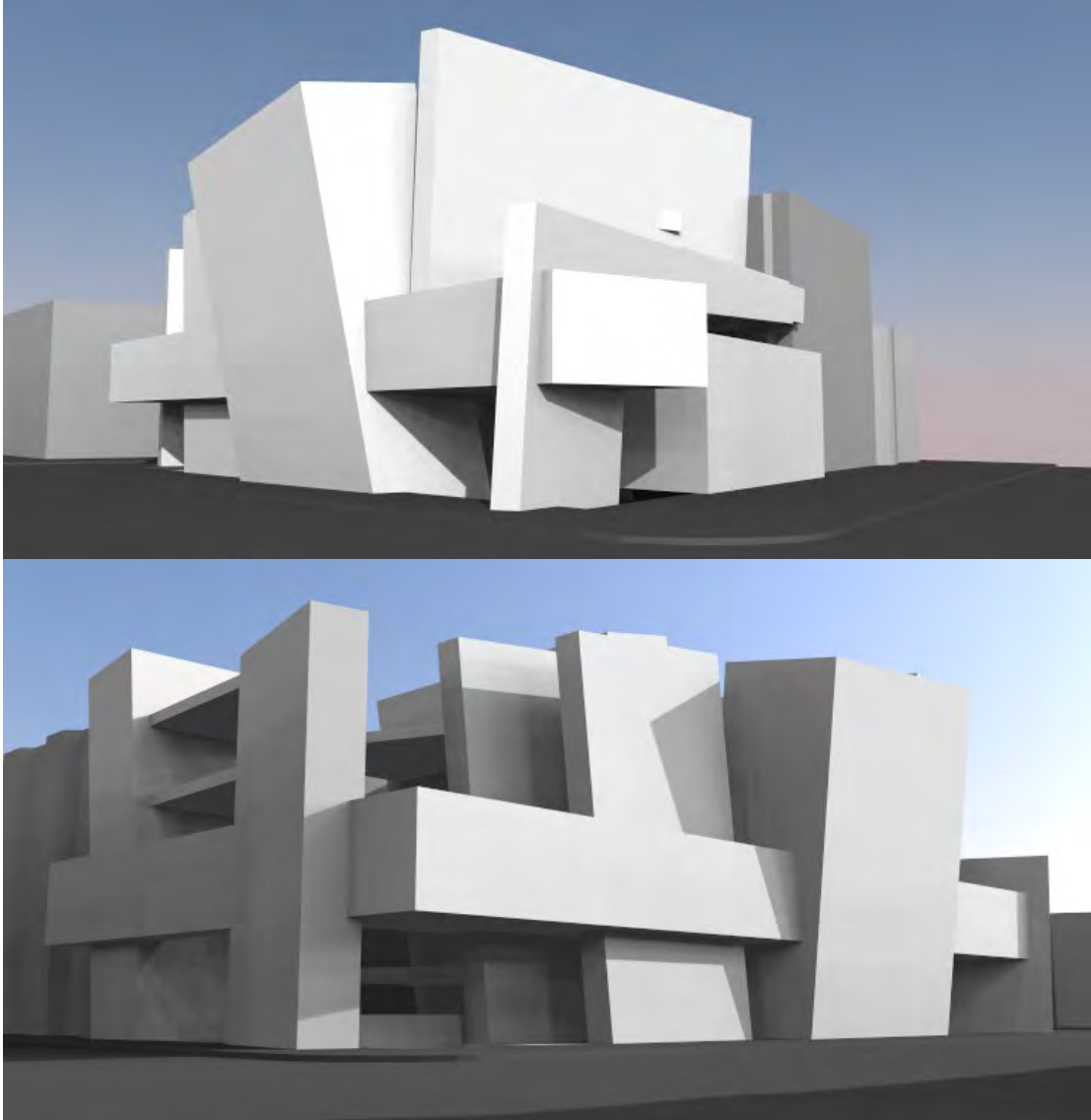
Figure 60-massing study 1 (Source: author)

Figure 60 demonstrates how the concepts of layering, differing depths of space, and datum versus askew had progressed. This form, derived from the planer compositions illustrates movement in a way that recalls a system of shards. While these shards can easily be read as dynamic against the

prominent datum line midway up the façade they also break up any potential

reading of the building as a whole. The void in the ground has now been

relegated to the interior of the building so as to not lend more of a sense of

place to the entire composition. The datum serves to replace the reference

of the ground plane as well as begin to tie together the disparate pieces of

the design, but those pieces coming together as one unified form was the
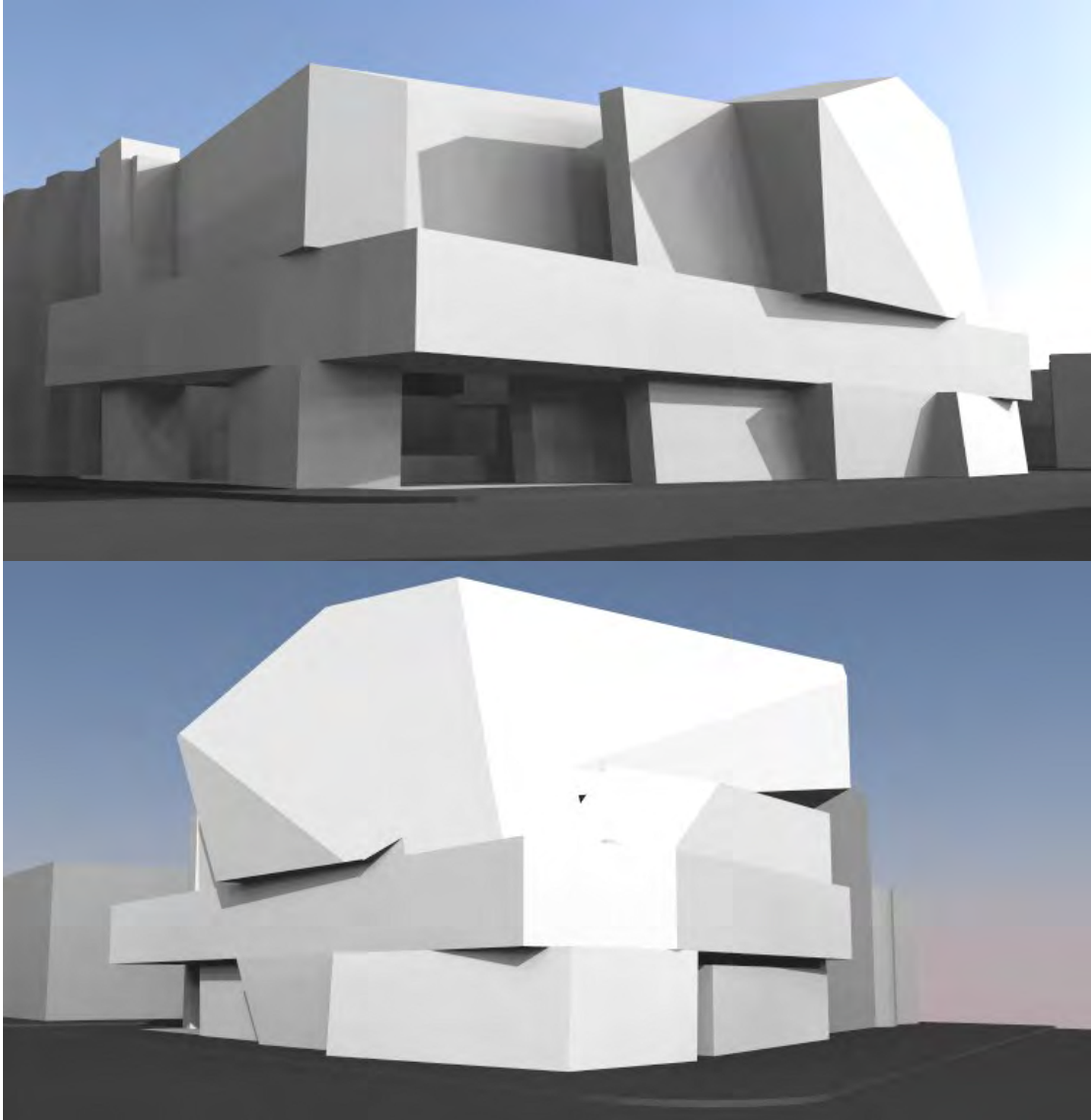
next major investigation of the interior.

Figure 61-massing study 2 (Source: author)

Figure 61 shows many of the same spatial characteristics as the previous iteration when its components become more unified and the datum is given even more prominence. While process more or less congealed

previously separate parts, it did so in a way that added a significant amount
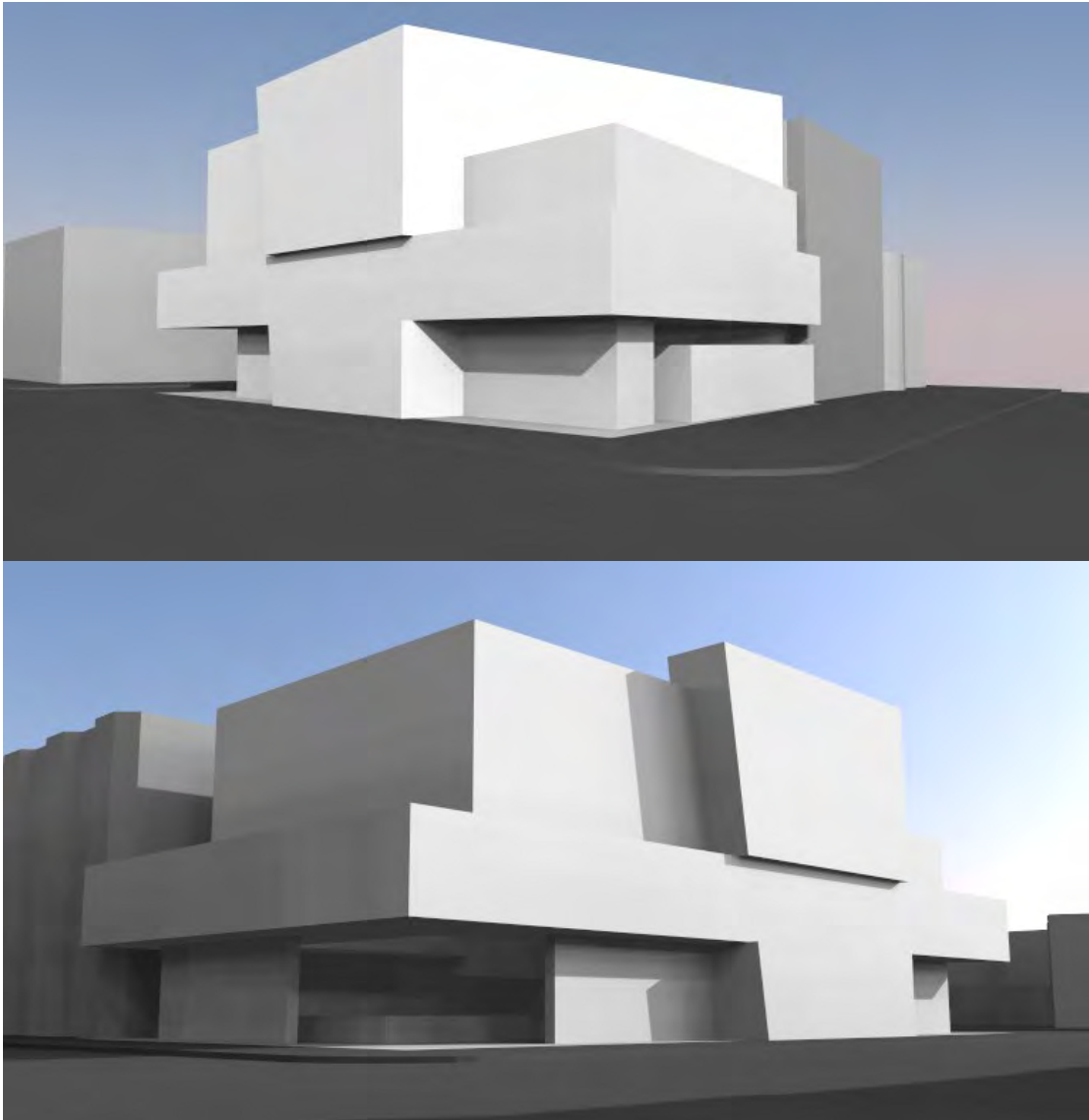
of unnecessary complexity.

Figure 62-massing study 3 (Source: author)

Figure 62 takes the primary spatial moves seen in figure 61, but

greatly simplifies the overall form by distilling it down to its primary moves.

From here thought was given to how the building would be fenestrated. Important considerations for the fenestrations were how the building's entrances would be closed after-hours and how the building would look at night. By this time the floor plans of the building had developed to the point where only the office area had a thermal envelope and the rest of the building, while having a distinct sense of enclosure, would be open to the elements.

Places for caskets lined much of the exterior of the building, making think walls with ample opportunity for deep windows into the spaces. The caskets were stacked in such a way that by irregularly removing a place of interment in favor of a void would maintain a figural representation of the whole by obscuring the floor heights. Theses voids would also serve to reconnect occupants to the urban context and serve as reminders of places not held by the deceased, alluding to ones that would be filled.

Another important consideration for after-hours was how the design would present itself at night. The irregular windows could be backlit serving to cast light from out of the deep recesses, an inversion of the daytime condition for when the building now focused on outward experience rather than on the interior. They would also offer the same contemplative instigation of absence to observers at a time of day that it could not welcome them inside. The oversized entrances, which serve to sponsor thought on

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one's own fragile condition in a way that a normative entrance would not, would also cast light out from behind gates. These gates would be open enough to see into the voids and planted areas behind them, still offering visual access even at night. An illustration of how this would look is seen in figure 63.
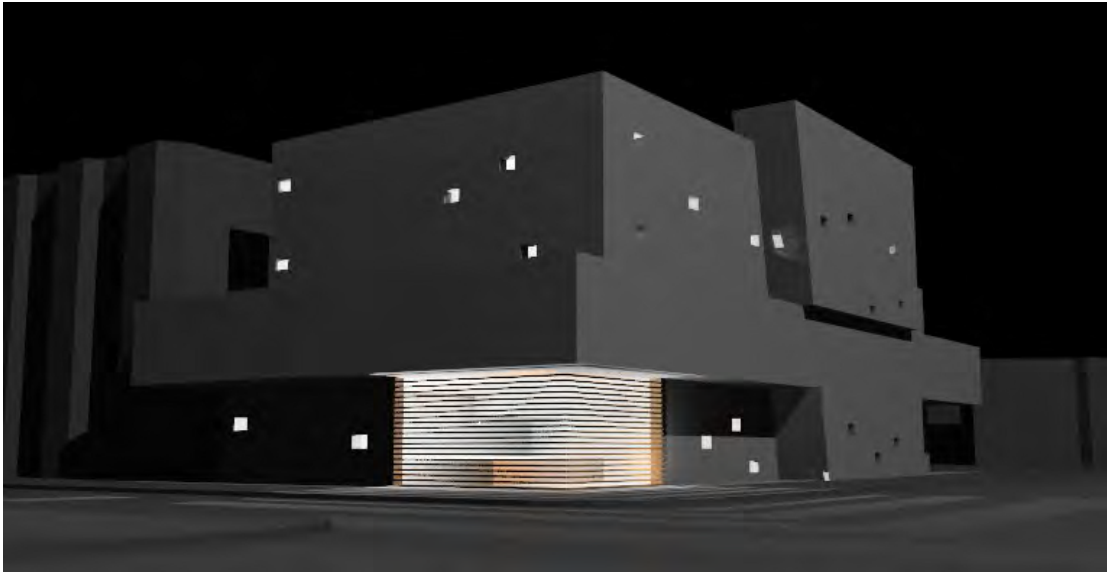

Figure 63-fenestration study (Source: author)

A physical massing model was then made for comparison and comprehension, (Figure 64). In this model a large pillar can be seen running from just above eye level on the ground floor all the way to the bottom of the lowest. This pillar is in the middle of the full height atrium and is planted with an evergreen to always stand in living juxtaposition to the deceased who circle its perimeter. As it is prominently planted, but just above eye level

serves to immediately alter one relationship with the ground. It also adds

emphasis to the large void of the atrium. The planted surface of the pillar

stands out as a distinct place in the middle of the circulation that surrounds

it, which can be read in plan on all levels.

Figure 64-massing study 4 (Source: author)

At this stage a pivotal change in design approach occurred when

articulating the places of interment. The spatial relationship of a visitor to the

deceased should be one where the fact that the remains lie in three

dimensional, unnocupiable space is read initially. This is as opposed to a

more normative contemporary mausoleum where the remains simply become

part of the wall. In keeping with the primary motivations of the thesis, the

remains should occupy space that is neither inside nor outside, that are

protected yet accessible and stable yet dynamic. An exploration of two

different ways this can be achieved by physical separation can be seen in

figures 65 and 66.
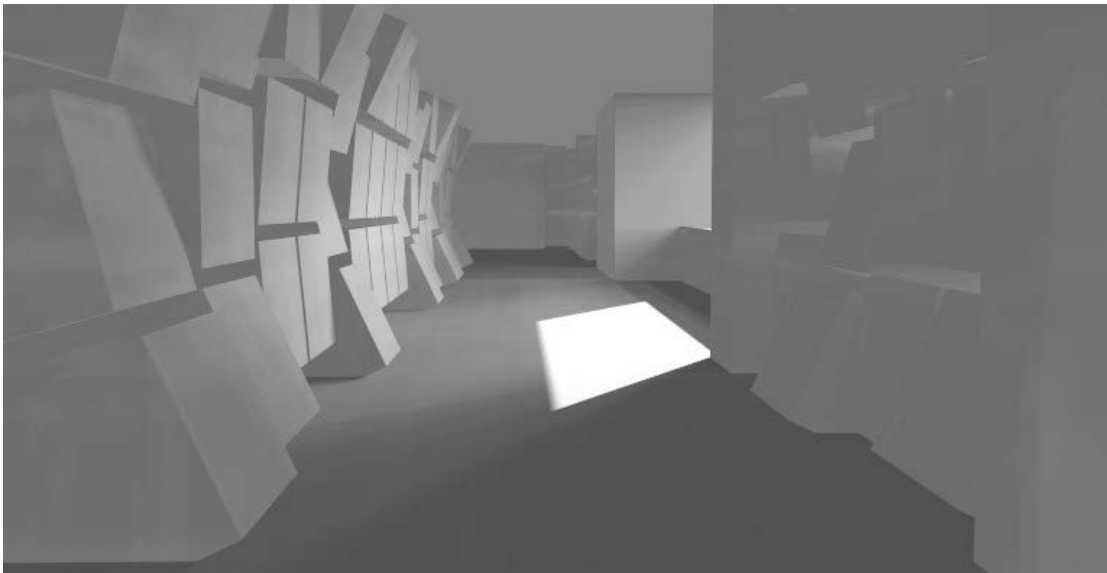
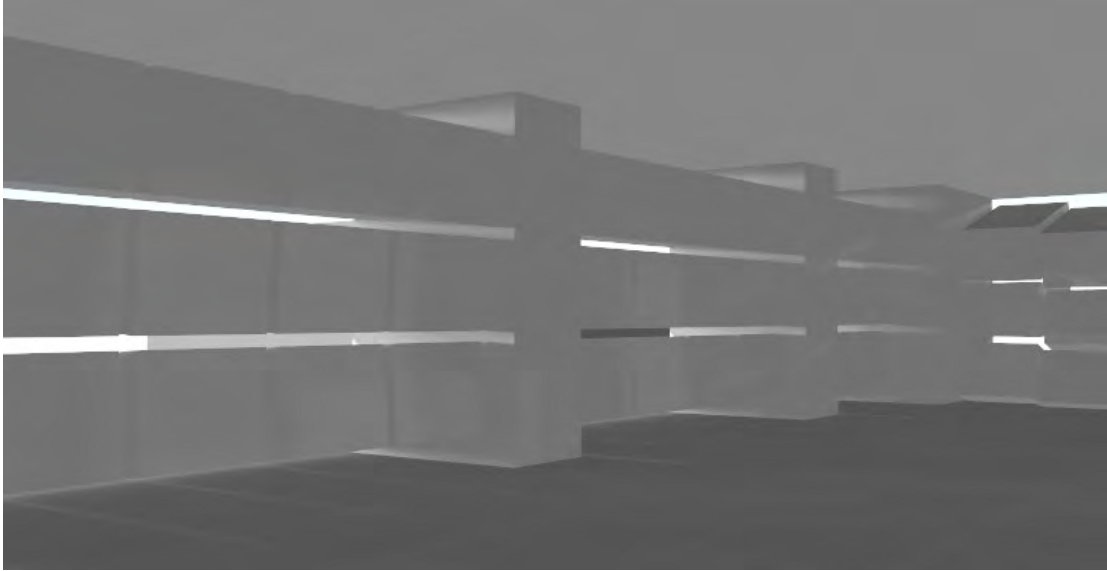**Figure 65-individual tombs study 1 (Source: author)**

Figure 66-individual tombs study 2 (Source: author)

These explorations began to get at these goals, but in doing so punched through and replaced the façade. While the floor plans still worked in much the same way as previous iterations, the overall form of the building would change significantly and much of the spatial resolution would come in section.

Design Proposal

While creating a different environment than typical mausoleums was always intended, the way that the design proposal became articulated made specific differences especially relevant. For this reason it is useful to reference what these typical conditions are, (Figures 67 and 68).

Figure 67-typical mausoleum interior (Source: author)

Figure 68-typical mausoleum exterior (Source: author)

As can be seen in these typical conditions, places of interment in typical mausoleums become part of a solid wall. Whether a visitor has a frontal or oblique relationship does not particularly matter and the space the visitor occupies is the residual space created by the walls. This project on the other hand takes care to articulate the differences in these relationships as well as the conditions on the circulation around the remains.

Something else of note in the typical conditions is the height that the remains are stacked up to. The interior condition, which is shorter than the

referenced indoor condition, has the interred at over 10' high. This situation

is a far cry from one that fosters a personal connection that aids in a visitor's

reflection. This problem is exacerbated when noticing that in figure 68 to the

left of the wall are spaces for urns, having a height twice as small and

stacked to over 24' high. In this scenario one can easily imagine someone a

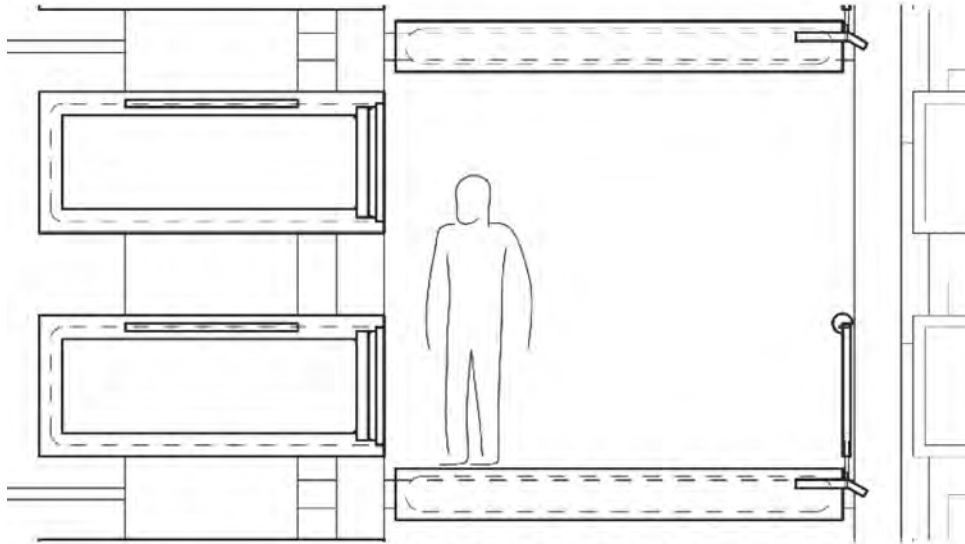difficult time discerning the plaque between the distance from the viewer and

the angle it is being viewed at.

Figure 69-standing near caskets (Source: author)

Figure 69 shows how in this project a visitor is always in close

proximity to the interred. The tomb which holds the caskets is fully realized

by the visitor in three dimensions causing an overt awareness of the entire space that the remains occupy. This allows a very ready comparison to the space that the visitor is occupying. This comparison is made more concrete by walkway the visitor is on being physically separated from the casket. All the tombs for placing both caskets and urns are held up and apart from each other by steel struts that extend outwards from the reinforcing steel within the concrete boxes. They are then braced laterally against the rest of the structure.

By placing just two caskets on top of each other per floor level, the design ensures a spatial proximity that allows the experience of the tomb in three dimensions to be realized. The tombs are immediately above and below where a visitor's normative attention would be. This causes the visitor to have to shift attention slightly upward or downward in order to approach an individual tomb, (Figures 70 and 71). The spatial arrangements of the urns also allows for an ease of spatial proximity, (Figure 72).
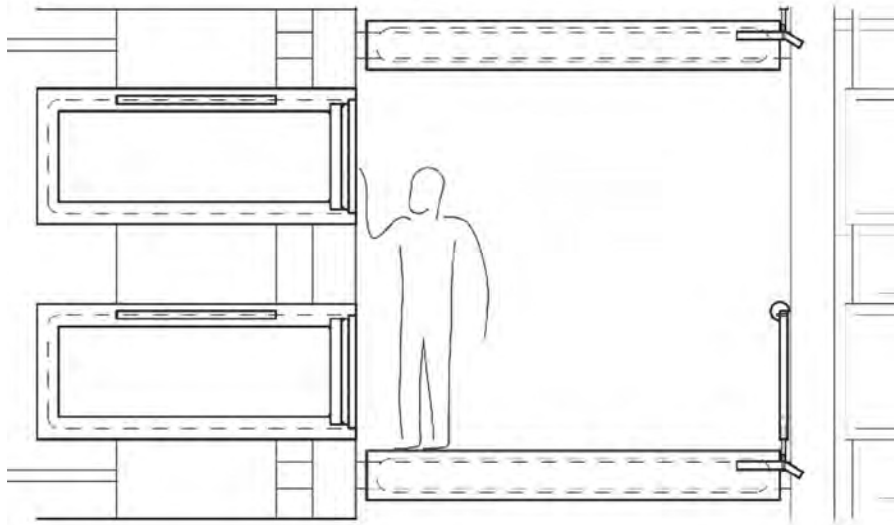
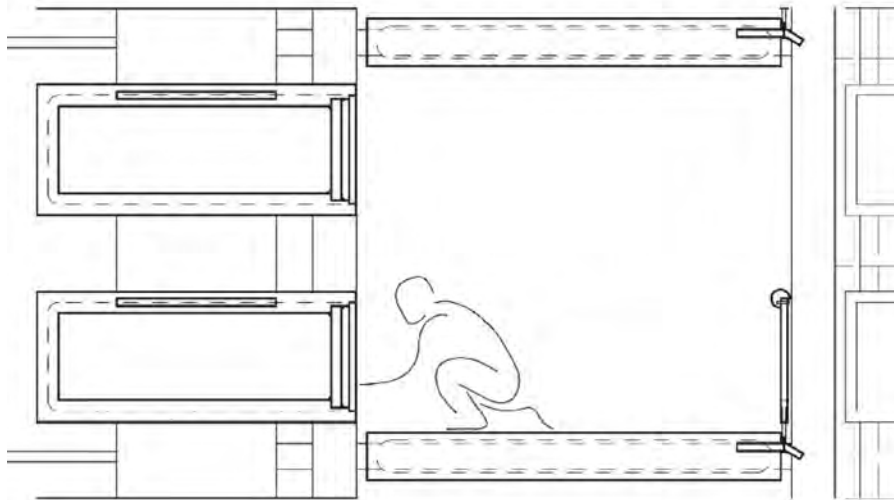**Figure 70-approaching casket on top row (Source: author)**

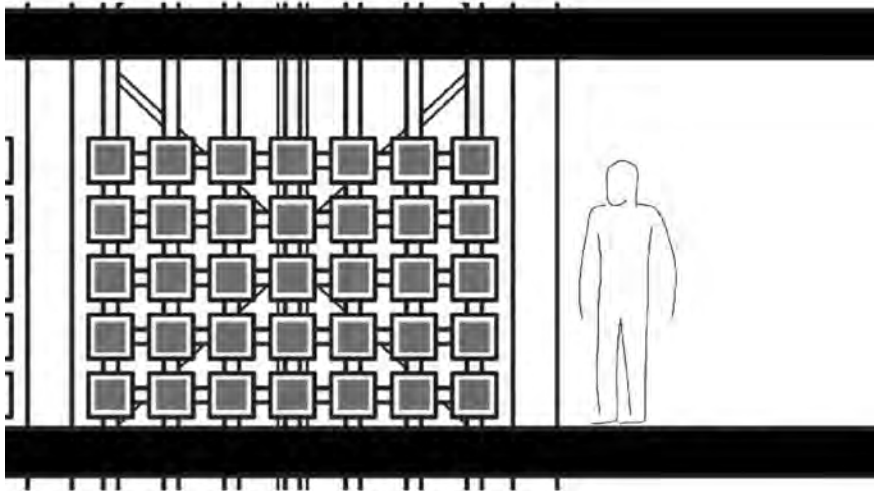**Figure 71-approaching casket on bottom row (Source: author)**

Figure 72-standing near urns (Source: author)

Even though there is only a three inch gap, this gap is seen as a slit of

space running the entire length of the caskets on the oblique. When one

turns to have a frontal relationship with the caskets, the visitor can perceive

the continuation of the void that the tombs stand in. In the design, all places

of interment stand apart from the walkways for the visitors. Every path

adjacent to the deceased is between voids in the floor-plane, these voids

being either space where tombs stand or the central atrium. This causes the

paths to become experienced as bridges. This bridge condition happens

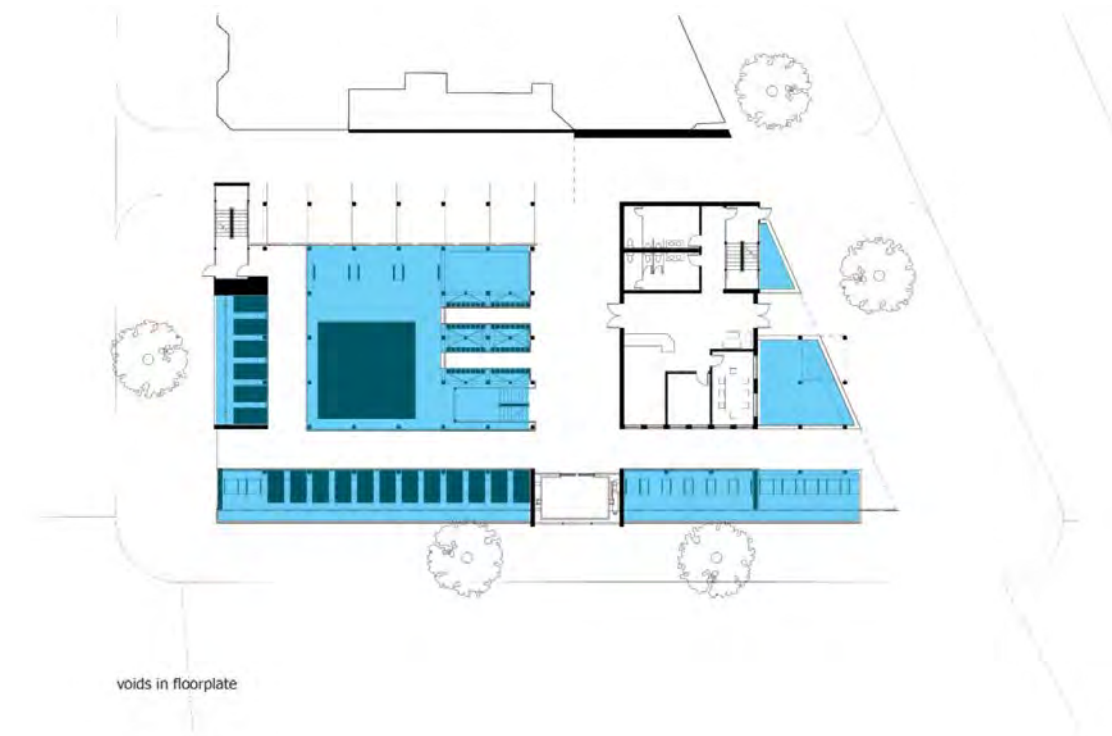immediately as one enters the mausoleum, which can be seen in figure 73.

voids in floorplate

Figure 72-voids in floorplate (Source: author)

These voids run the height of the structure until the top floor where there are no places of interment, but rather the gathering space is. Here where the vertical spaces reach the 6th floor, they are terminated with planted roofs. The way that this part of the design is articulated can more readily be seen in a wall section, (Figure 73).
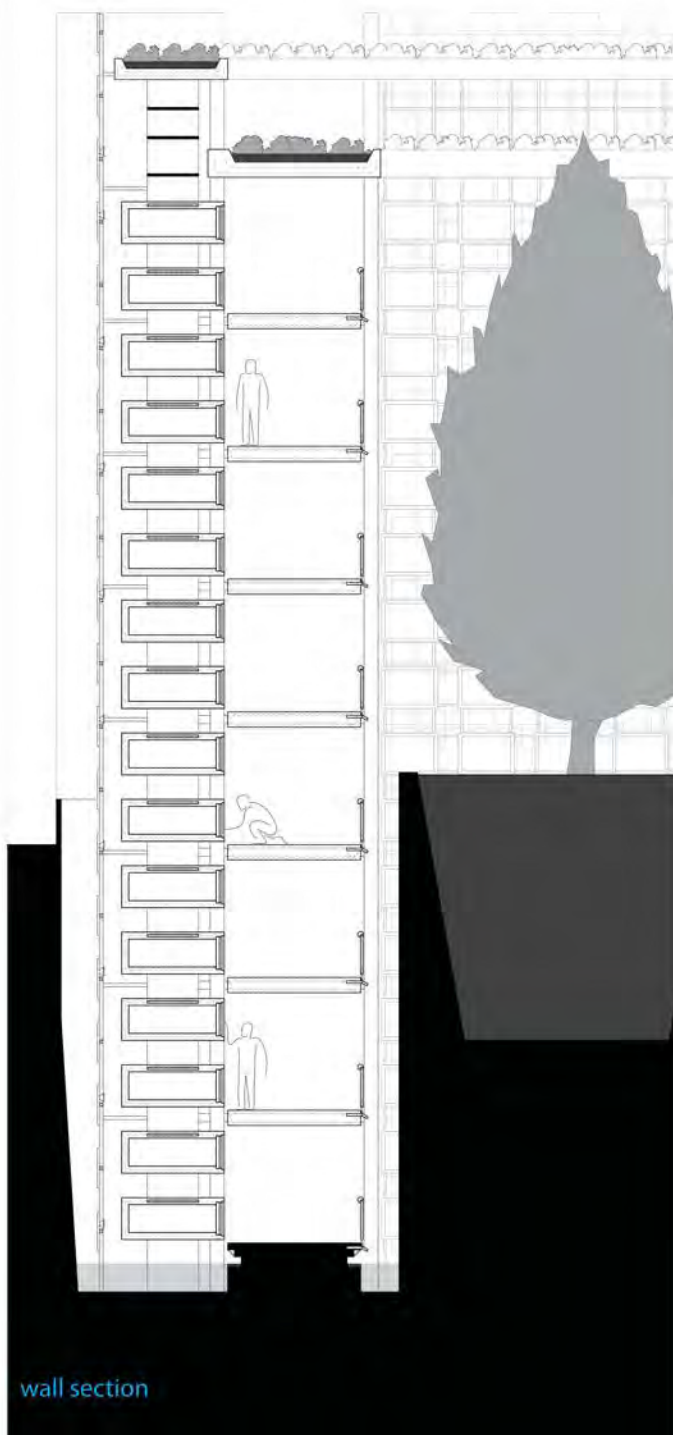
Figure 72-wall section (Source: author)

Figure 73 shows how the caskets are arranged vertically in the building and how the terminate with plantings pulling up and replacing the ground plane above. It also illustrates how all tombs terminate at the bottom in a pool of water. As every part of the building except for the office area is open to the exterior, the design keeps all water on site by draining inward towards drip edges which extend outward from the walkways. The water then falls into these pools of slowly circulating water which are kept full with overflow outlets against on their perimeter. Above these overflow drains is a light fixture which casts light at an oblique angle to the flat surface of the water. This causes a reflection of the tombs above and considerable ambiguity as to where they end below. One can easily imagine them continuing down into the reflecting surface ad infinitum.

The section also shows how the tree is situated on the pillar in the central atrium. While the atrium is open to the sky there is considerable shading due to the structure, which is why an Eastern Hemlock was chosen. Not only is it a native evergreen which will grow to the appropriate dimensions, but it has carved out a biological niche by doing exceptionally well in high shade environments.

The vertical stacking of the tombs is echoed in the organization of the other programmatic elements. The repeating stacking of these zones can be seen in figure 73.
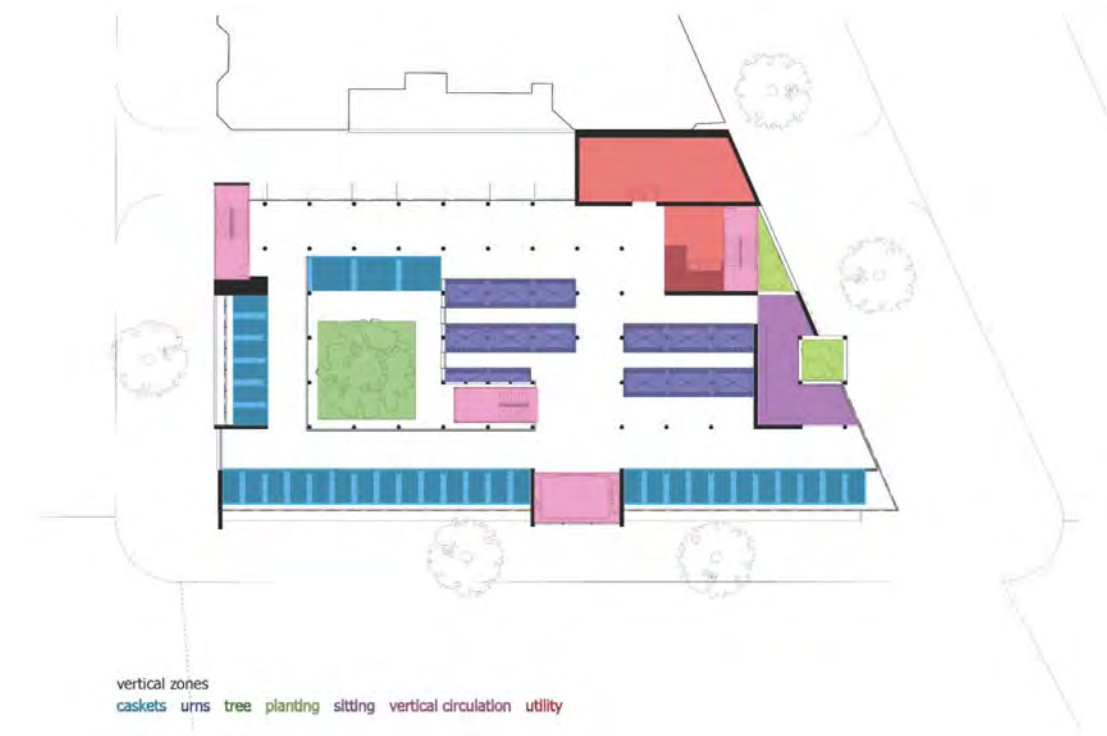
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vertical zones
caskets urns tree planting sitting vertical circulation utility

Figure 73-vertical zones (Source: author)

On the ground floor this organization allows for straightforward

circulation even though a variety of paths must be taken into account. Figure

74 shows how a visitor might approach the mausoleum and easily be able to

reach any part of the design. All paths easily lead to the large glass elevator

towards the center of the west façade. All vertical circulation is sided in

glass, causing an explicit reconnection to the urban context when passing

from floor to floor. As one of the primary drivers for the design is that this

program should be included in the urban fabric and that, even though

traumatic, death is just part of the life cycle this reconnection becomes central to the experience.

The glass elevator is the primary means of vertical circulation for all paths, including the remains. The vehicle transporting the remains can easily pull into the alley on the east side of the project and has direct access to the elevator. Sized so that a casket and pall bearers can make the trip to the gathering space, the elevator also reconnects the deceased to the visitors. Much consideration was given to the celebratory potential of the procession of the remains, however primary motivations for the project to bring the realization of death into the everyday life called for the use of the same exposed circulation path to be used. Circulation is also shown from the parking to the interior of the building for the funeral party or someone going to the office area. The rectangular office area stands apart from the rest of the design. Its entry shown here on the right is orthogonal to the column grid, cranked inward from the diagonal street edge of Rhode Island, giving the office area its own identity.
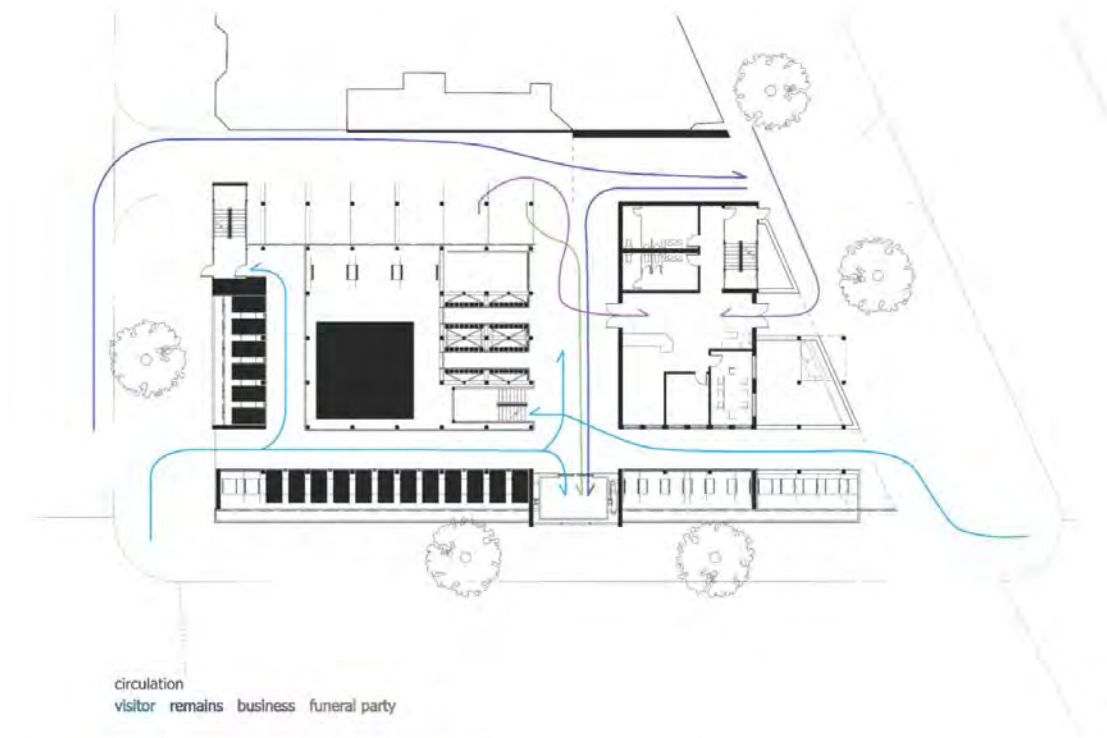
circulation
visitor remains business funeral party

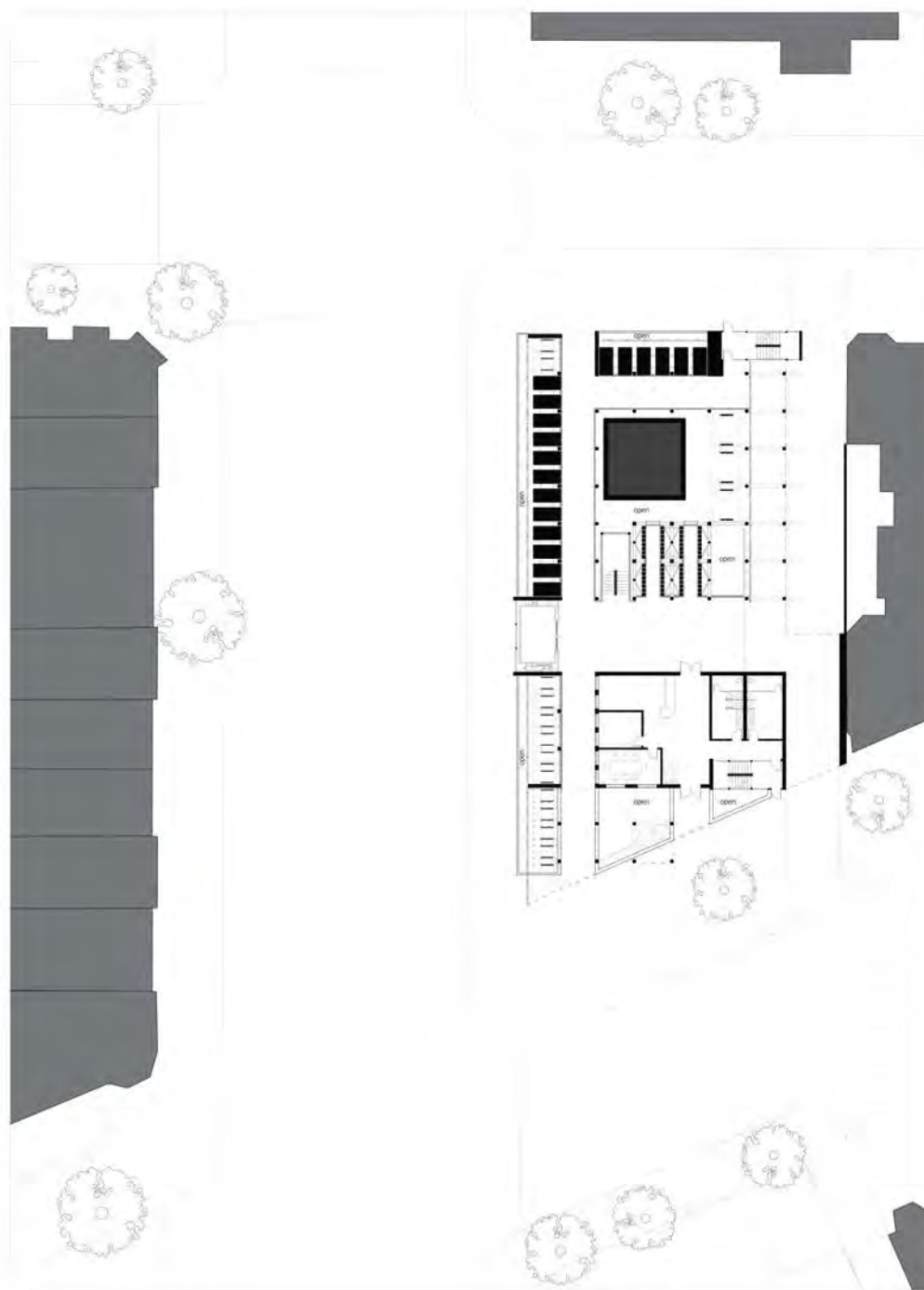**Figure 73-circulation (Source: author)**

Figure 74-ground floor plan (Source: author)

Figure 74 shows the ground floor in greater detail, showing the surrounding context. Plans for the other floors can be seen as figures 75, 76, 77 and 78. On these plans one can see the sitting areas to the south. Figure 79 shows the design's longitudinal sections and Figure 80 shows transverse sections.
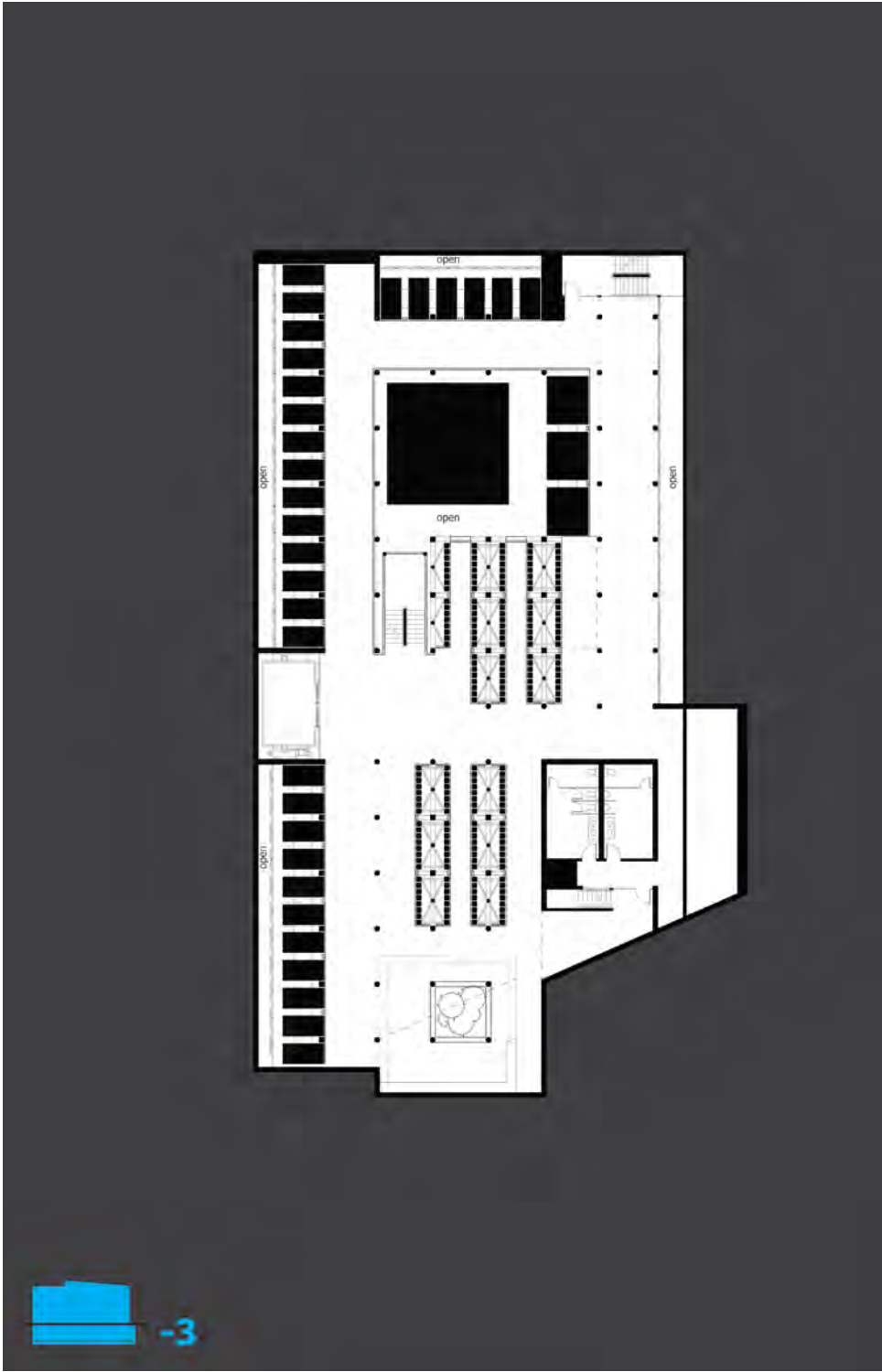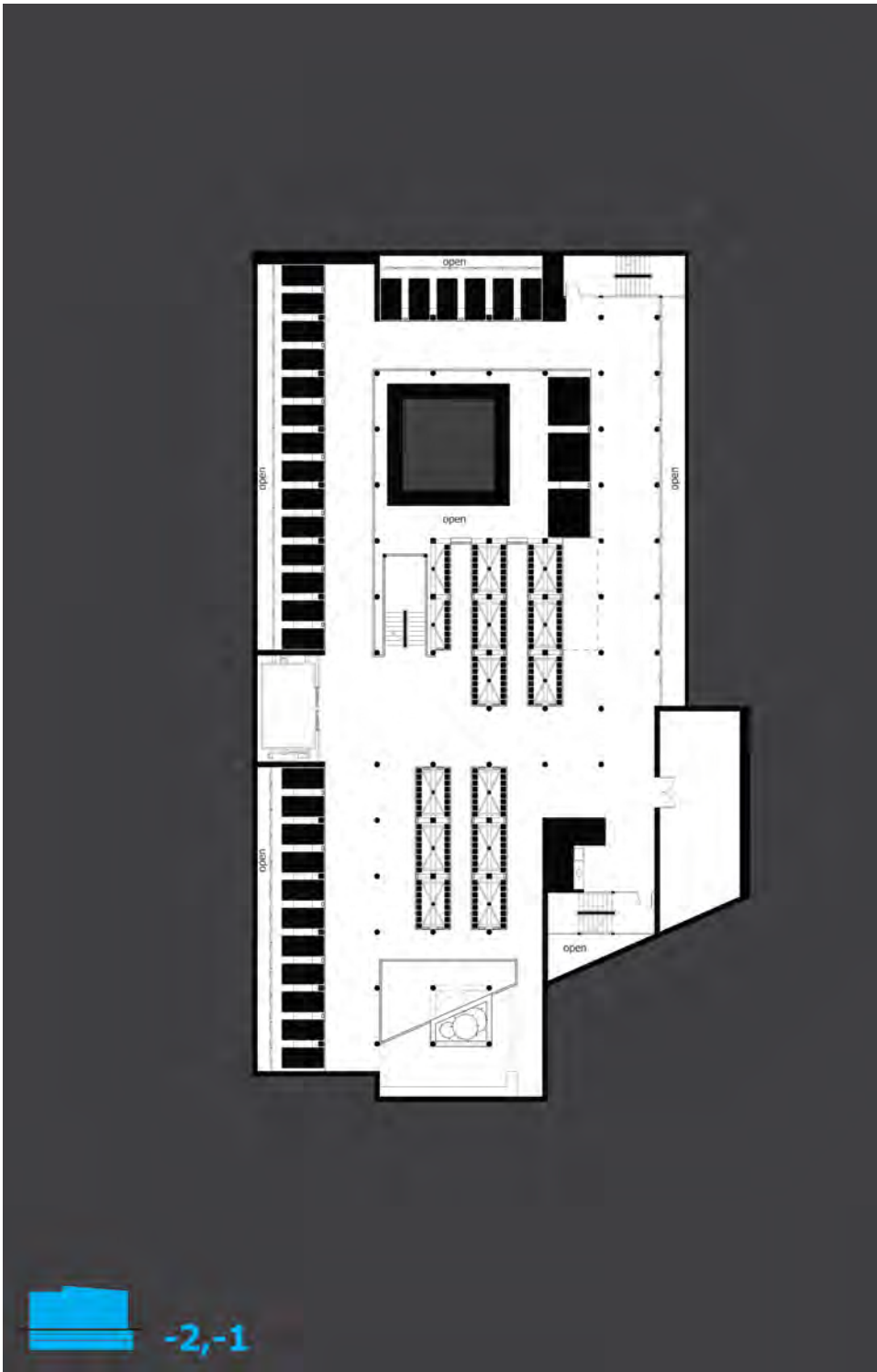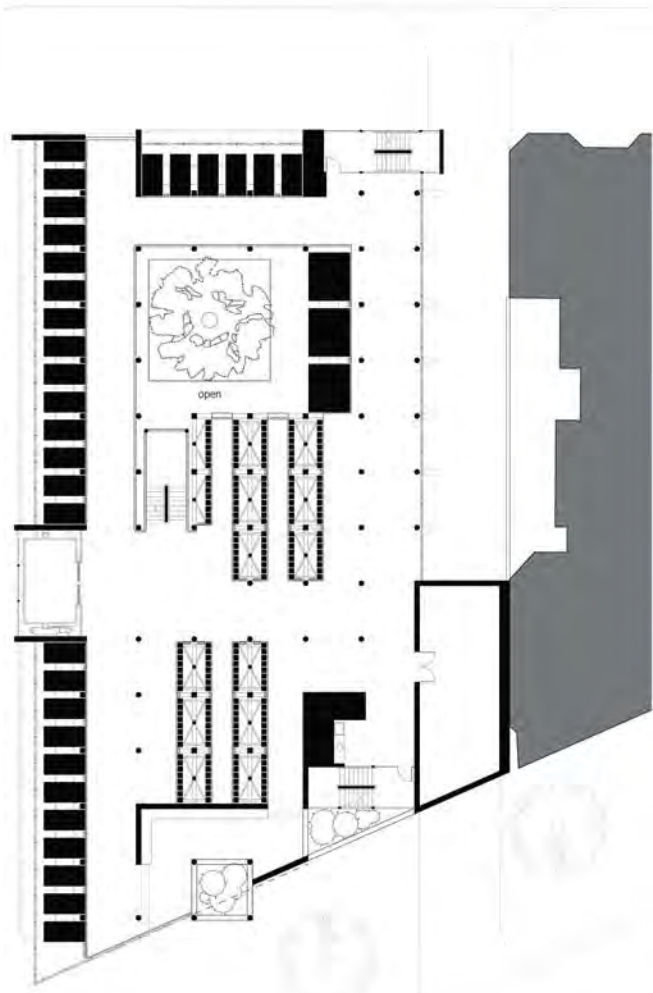
Figure 75-negative third floor plan (Source: author)

Figure 76-negative second and first floor plan (Source: author)

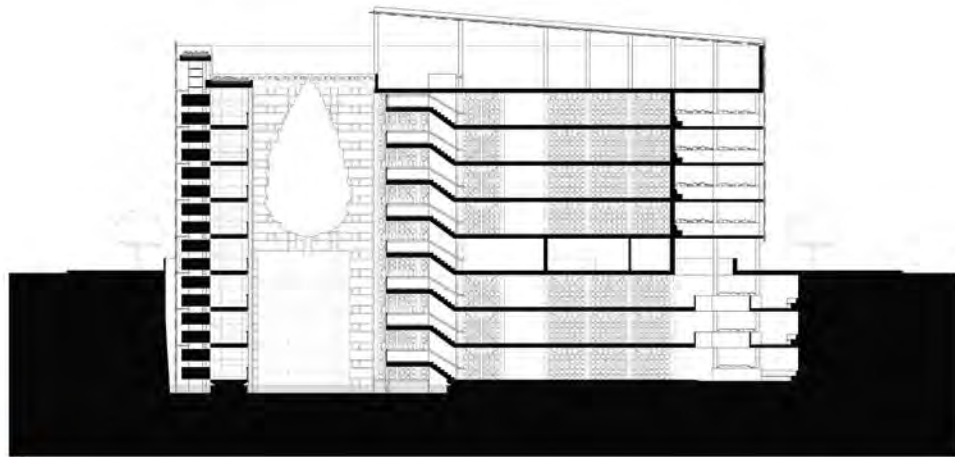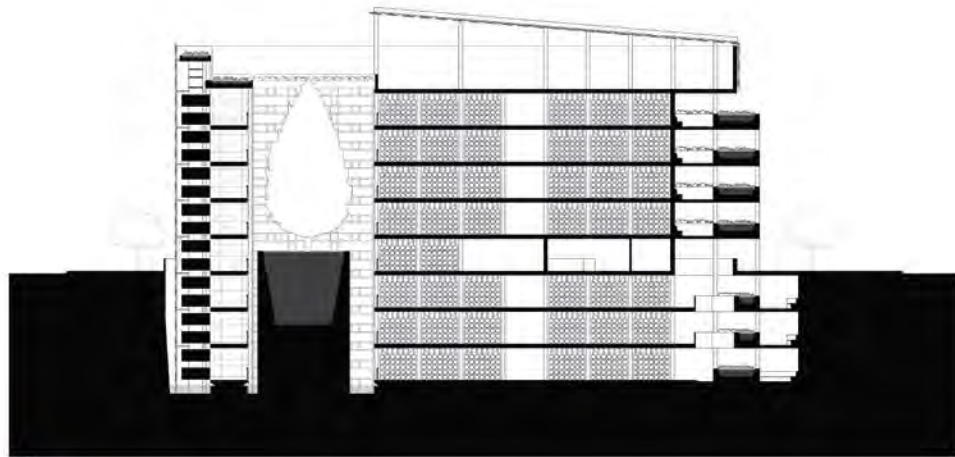**Figure 77-second, third, fourth and fifth floor plan (Source: author)**
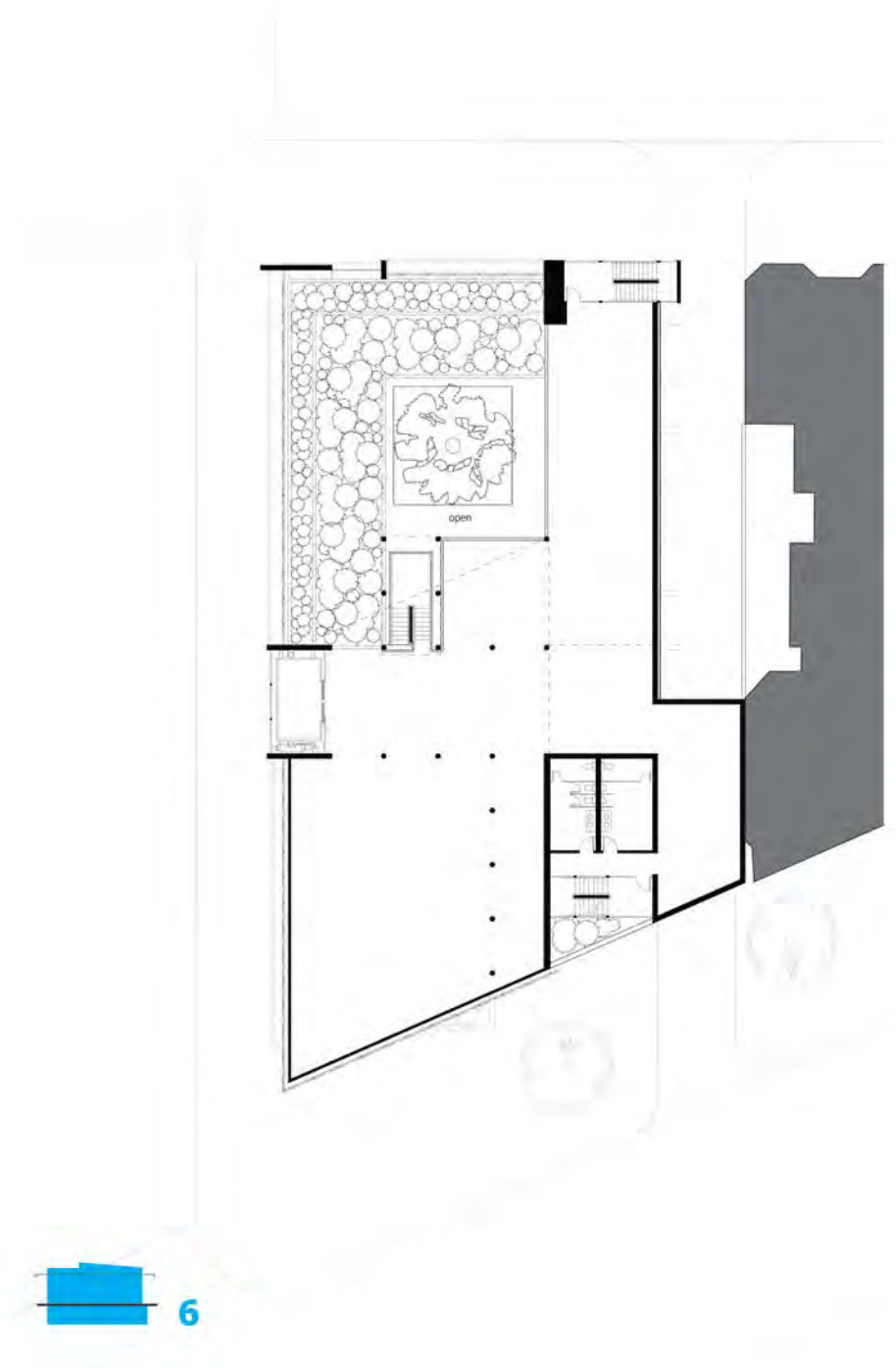
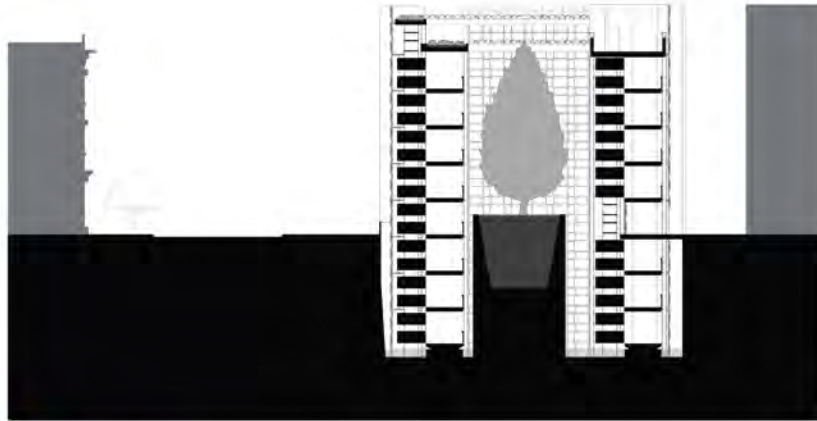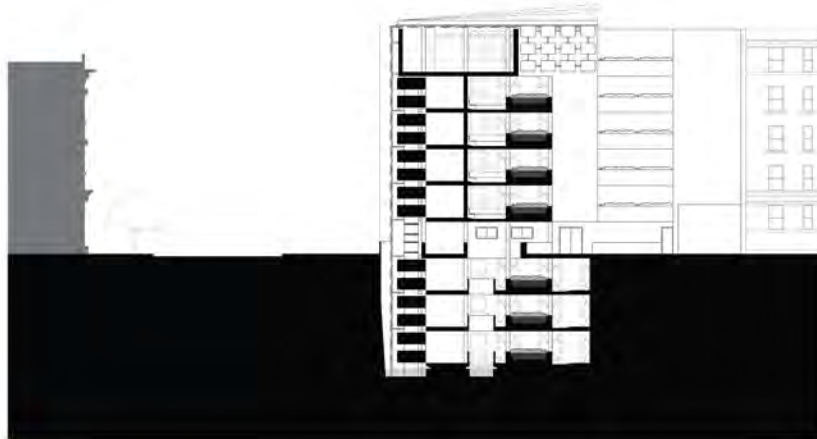**Figure 78-sixth floor plan (Source: author)**

section A

section B

Figure 79-longitudinal sections (Source: author)

section C

section D

Figure 79-transverse sections (Source: author)

The design places the tombs for caskets around the perimeter of the building with equal distances between them horizontally and equal distances between the vertically regardless of relation to the floor level. This sets up a very regular organization of boxes on the facades.

Figure 80 illustrates key differences in perception between to objects that take up roughly the same volume. One cannot help but to notice the object on the right is faceted and therefore made up of smaller components even though the object as a whole is easily discerned. This concept was applied to the facades in that although they can be read as a single array, one cannot help but to be aware of the individual parts.
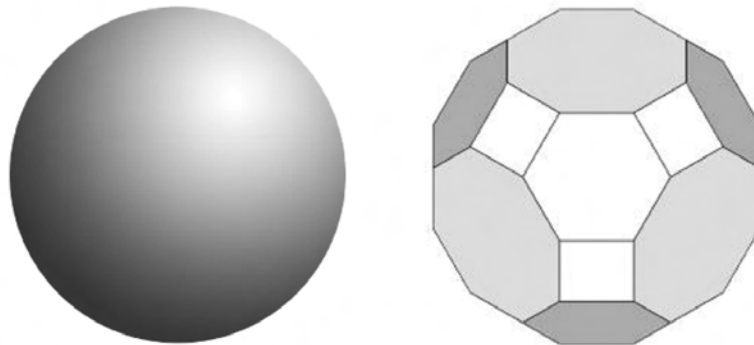

Figure 80-smooth versus facets (Source: author)

The regularized pattern was then disrupted in order to achieve a sense of dynamism. Rather than alter the actual tombs, a Moire effect was created using a system of exterior Corten steel panels. Moire effects are created by scaling a set of regularized objects and overlaying the result with the original. When the amount of scaling is to great or too little, the result of the overlay becomes a plaid pattern, yielding distinct groupings, (Figure 81). It was found that when the scale of the overlay was around 95%, the desired effect was created, (Figure 82). The resulting façade is illustrated here on the west elevation, (Figure 83).
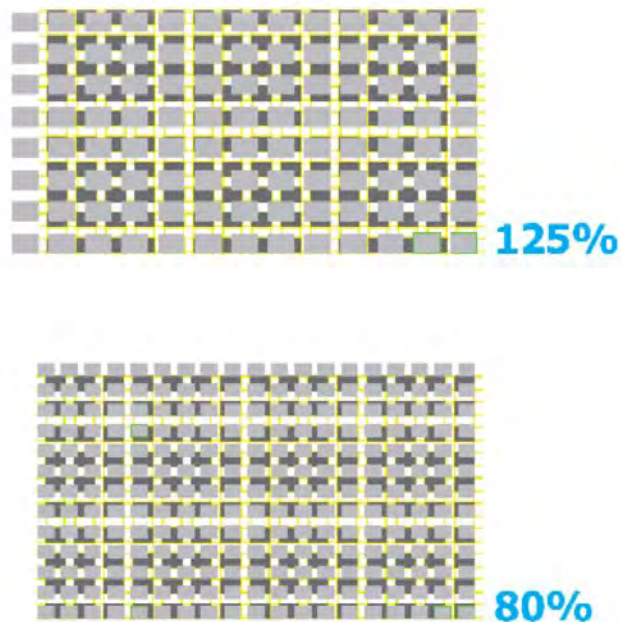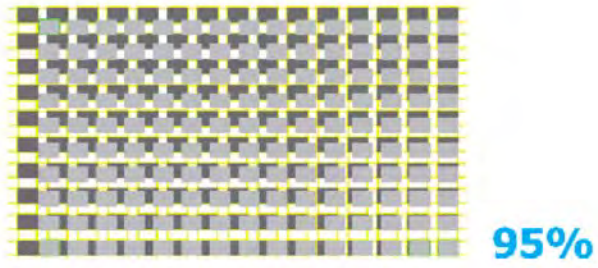

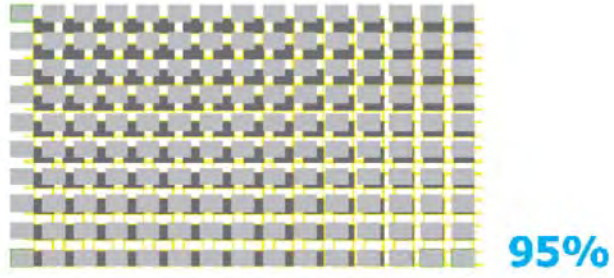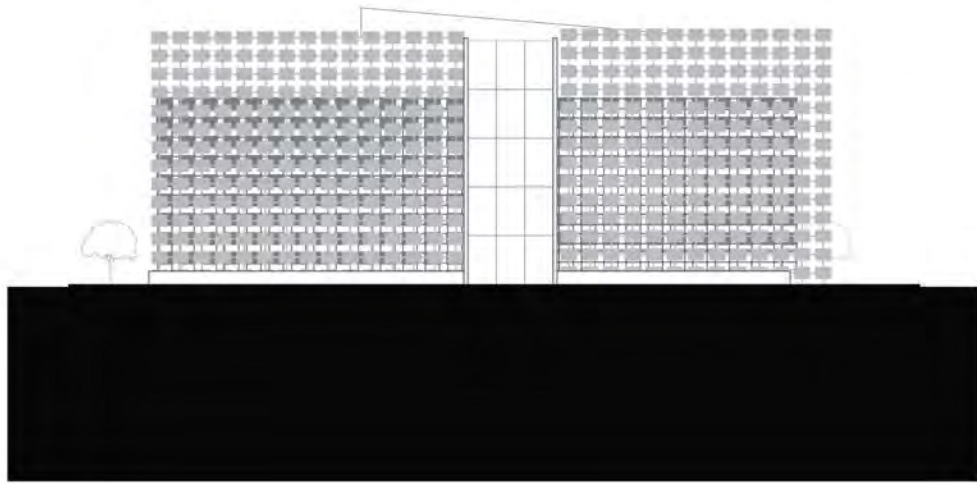**Figure 81-undesirable Moire effect (Source: author)**

Figure 82-desirable Moire effect (Source: author)

west elevation

Figure 83-west elevation (Source: author)

A very important part of the façade design is not only the change that is perceived while looking at the structure and while moving past it, but also how the façade changes over the course of the day. The wide variations caused by the depth from the panels to the tombs and the shadows cast as the sun moves across the sky creates a dramatic difference in perception as one sees the building at different times of day, (Figure 84). At midnight the panels are shown backlit from inside the space between them and the tombs. This allows for the mausoleum to still provide visual perception of each individual tomb to observers at night.

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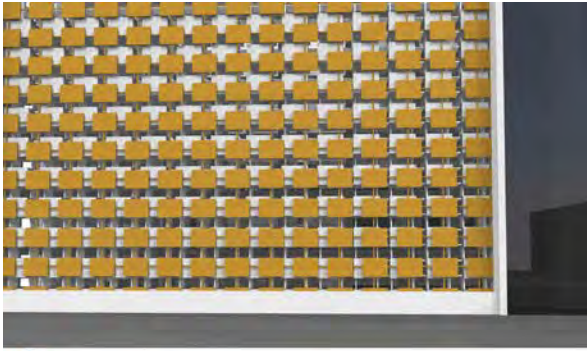
9am
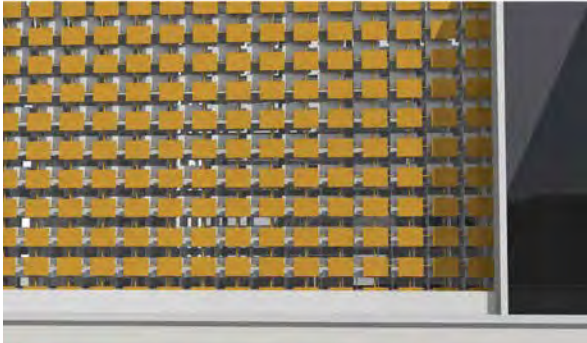
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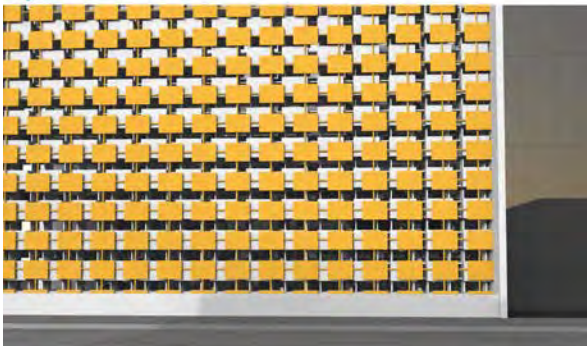
7pm
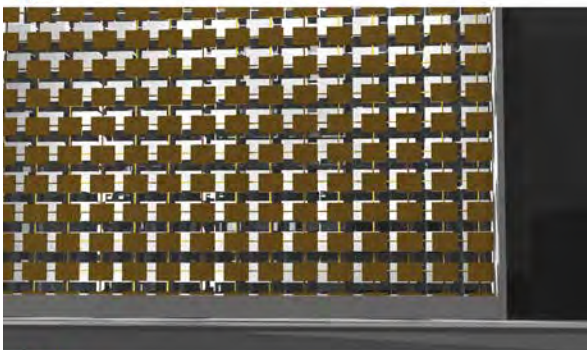
12am

Figure 84-elevation throughout the day (Source: author)

Figure 84-view from the southwest at night (Source: author)

Figure 84 shows the design at night with the vegetation from the planted seating areas protruding.

Figure 85-view from the northwest (Source: author)

Figure 85 shows how the panel and tomb façade meets the regulating verticals of the concrete entry and the glass vertical circulation components.

Figure 86-view entering from the northwest (Source: author)

Figure 86 shows how after crossing into the bridge-like paths from the exterior one encounters the podium in the central atrium. Along the void of the atrium is a wood rail. The warmest material when compared to the concrete and steel of the rest of the design, it encourages you to approach the atrium.

Figure 86-view on the third floor (Source: author)

Figure 86 indicates how one is constantly reconnected to the urban context when having a frontal relationship to the tombs. On the oblique one is exposed to the length of the gaps on either side of the path, while the tombs on the oblique read as a whole and the regularized penetration of light recalls the reification of threshold of the Grotto of the Sybil. One can also see the difference between the square columns that support tombs and the round ones that exclusively support the paths of the visitor.

Figure 87-view on the bottom floor (Source: author)

Figure 87 shows the seating area for rest and reflection on the bottom floor and offers a perspective of the entombment of urns.

Figure 88-view in the gathering area (Source: author)

In figure 88 one can see a wake on the top floor in the gathering area. While open to the elements it is covered by a canopy overhead. The panels of the façade come over the top and double to create a Moire pattern that distributes light to draws one's attention to the focal corner of the space. The canopy is supported by steel beams and covered with frosted glass to keep out precipitation.

Figure 89-view of the central atrium (Source: author)

Figure 89 illustrates a view across the central atrium.

Conclusion

While altering through iteration, the design ended up recalling conceptual motivations of the initial block and shard conceptual models. These models focused on a structural separation between elements for the deceased and those for the living as well as dynamic shifts in perception through movement and light. These relate to the key concepts for the separation of the vertical tombs standing in voids as opposed to the bridge-like paths for those visiting and the changes in perception of the tomb and panel facades. Though there were significant shifts away from those models, it was interesting to see the project slowly trend back towards initial project motivations.

After having time to reflect on the design since the public presentation, several points could have made the design proposal stronger. One was the materiality of the interiors. More attention could have been paid to these material choices in order to support the design objectives. One especially provocative idea would be to detail the floor in such a way as to highlight their bridge-like nature.

Another issue that could have been refined was the articulation of programmatic components on the ground floor. While issues concerning the

more mundane parts on the program were addressed, they could have been given better woven into the rest of the design.

All in all, this was a design exercise that addressed several issues that have been of interest for quite some time and a great deal was learned from the process. If I were to revisit the design my primary goal would be to recheck all design decisions, from formal moves to material detailing, against the primary project motivation of using the built environment as an avenue to foster individual reflection. This project has allowed for the germination of many ideas to be reflected on first over a career and then the remaining lifetime to follow.

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