

SENSE OF MEMORY

by

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Jolene Marie Dale

2010

DEDICATION

Dedicated to my loving family for all of their help and support.

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ABSTRACT

Throughout this thesis three main categories will be addressed.

Memory: a: the power or process of reproducing or recalling what has been learned and retained especially through associative mechanisms b: the store of things learned and retained from an organism's activity or experience as evidence by modification of structure or behavior or by recall or recognition

Sense: a: the faculty of perceiving by means of sense organs b: a specialized function or mechanism (as sight, hearing, smell, ²taste or touch) by which an animal receives and responds to internal or external stimuli

Architecture: a: formation or construction resulting from or as if from a conscious act <the architecture of the garden> b: a unifying or coherent form or structure <the novel lacks architecture>³

There are many variables involved in the ability to acquire and store information, within the human memory. The senses, being one of these variables, enhance an individual's ability to retain information. Sensory influences should be addressed in architecture dedicated to memory; such as architectural memorials. Memories formed within or associated to a memorial have the potential to be carried with an individual for the rest of their life.

Senses connect people to their surroundings in natural and built environments by affording them a greater perception of space. This perception helps them further understand their existence in space, in relation to objects around them.

Memory and sensory are closely linked, and should be experienced together. Creating an architectural memorial which not only acknowledges who or what is being remembered, but also engages the human senses, has the ability to link experience, sense and memory to a built form of remembering. This bond of sense and memory forms an individual embodied experience, which holds the potential to coincide with experiences of individuals who experienced the memorial in the past, or of individuals who experience the memorial in the future. A memorial can become a link between generations of the past and future. It can become the present.

¹ <http://www.merriam-webster.com/dictionary/memory>

² ibid

³ ibid

Preface

Through personal experience I have discovered the things I remember most vividly are the things which enhance my senses. It is the sound of a person's voice, smell of a room, texture of a surface, and taste within an atmosphere in which I remember. I have realized memories, created through senses, not only facilitate vivid memories but also connect me to my surrounding environment.

Throughout history humans have adapted many ways to remember the past. Folktales, cave paintings, stories, history books, museums, music, art and architecture are just a few techniques we have used to record history. Each technique was a memory transformed into a memorial for future generations.

Architectural memorials have the potential to be one of the most effective ways to enhance human memory. Architecture permits physical interaction, and stimulation to the body, which has the potential to create relationships between sensory and memory.

Many memorials today focus

on the memorial's visual qualities. The visual statement of the memorial has become utterly important in relationship to the actual person, place, object or event being remembered. I do not believe visual aspects alone form a successful memorial. The way a memorial is experienced gives it the potential to affect us in ways other than what we see.

The way in which we address memorials and other architectural problems has changed over the years and has affected how we view architecture today. Competitions have become a popular way for us to explore a wide variety of architectural solutions, but in some instances has limited the way in which architects design. Designing a piece of architecture without ever visiting the site, such as through competition web-sites, will be discussed and explored throughout this thesis.

Section 1 Theory

Introduction

Detaching Memory

Fusing Memory

Maintaining Memory

Precedents

Conclusion

Introduction

Technology has accelerated within the twentieth and twenty-first centuries. Digital technology has been a helpful tool in the lives of many humans. It has allowed us to communicate quickly and efficiently, and has become a way for us to acquire information and materials from the comfort of our home. There are many advantages technology has brought to the twentieth and twenty-first centuries, however it has also brought some disadvantages.

With digital technology at our fingertips, we have been spending much more time with the digital interface. As digital technology continues to develop, we are evolving and becoming largely image oriented, allowing vision to become our dominant sense.

Visual dominance has begun to manipulate human life. People forming virtual relationships through internet web-sites, video games evolving to engage people in activities such as snowboarding, skateboarding, and biking from the comfort of their home, and the ability to buy daily necessities

without ever stepping outside are just a few examples of visual manipulation in today's society.

Architectural memorials have begun to be visually oriented along with the rest of society. The way a building appears, such as Frank Gehry's Guggenheim Museum, seems to be more important than the physical experience of the architecture. Pallasmaa believes architecture is becoming an art of a printed image fixated by the hurried eye of the camera, and moving away from the instantaneous bodily encounter.¹

Every piece of architecture should allow physical stimulation of the senses other than solely vision. Senses being linked to memory should be maximized in architectural memorials. The brain is stimulated by human interaction with the environment. Memorials should be created to allow engagement of all human senses, in order to form memories within the memorial.

¹ Pallasmaa, Juhani. *The Eyes of the Skin*. Great Britain: Wiley-Academy, 2005. Print. p. 30

The dominance of the eye and the suppression of the other senses tends to push us into detachment, isolation and exteriority. The art of the eye has certainly produced imposing and thought-provoking structures, but it has not facilitated human rootedness in the world. The fact that the modernist idiom has not generally been able to penetrate the surface of popular taste and values seems to be due to its one-sided intellectual and visual emphasis; modernist design at large has housed the intellect and the eye, but it has left the body and the other senses, as well as our memories, imagination and dreams, homeless. - Pallasmaa p. 19-20

Detaching Memory

Digital technology has evolved rapidly since the 1980's. The internet has grown and developed into a library source of an intangible amount. The material contained on the network is growing at a phenomenal rate every day and the number of people using the internet today is 1,668 billion, a drastic change from 16 million in 1995.¹

Technology has proven to be beneficial to society. Communication and obtaining information has become easier and more efficient. In some instances technology has actually enhanced human sensory perception. The invention of the telephone and the radio enhanced our sense of hearing, while the light bulb enhanced our sense of sight. Computer graphics in the twenty-first century have become a tool to enhance the human sense of sight, and in some cases is becoming a substitute for physical space.

Interaction with the computer has caused humans to rely on sight more than their other senses. While the sense of sight is extremely important it is not

1 "Internet World Stats." Web. 21 Oct. 2009. <<http://www.internetworldstats.com/>>.

understood without the other senses.

I must at least concede that the 'pure tactile data' are displaced and overlaid by an experience having its source in sight, and that they become integrated into a total experience in which they are ultimately indiscernible.²

Being a valuable tool in the lives of humans, digital technology has also become a dependant for many individuals. People are spending more time interacting with individuals through the computer and less time physically interacting with each other, slowly starting to depend on technology as a substitute for verbal and physical communication.

Navigating through friends on Facebook, shopping at various web sites, downloading programs music and movies, and entering into virtual communities and competitions, are a few examples of digital communication. Internet competitions are a great way to

2 Merleau-Ponty, Maurice. Phenomenology of Perception. London and New York: Routledge Classics, 2002. Print. p. 253

gain a wide range of ideas, however they turn into something different when used in architecture.

The idea of internet architectural competitions, is an interesting concept and will be further explored throughout Section 2 of this book. Architecture is about site, place and space. The beauty of architecture is that if the building is conceived accurately for its place and function, it will develop a strength of its own which cannot be reproduced elsewhere.³ An architect who physically experiences the architectural site with their body and senses, will make architectural decisions which would not be made if they did not physically experience the site. Performing specific site analysis through an internet web-site is a challenge and will be analyzed later.

Architecture has a special physical relationship with life. That relationship should always be expressed in architectural design, whether designing through a computer or in the

³ Zumthor, Peter. Thinking Architecture. Basel, Boston, Berlin: Birkhauser-Publishers for Architecture, 2006. Print. p. 29-30

Detaching Memory

physical world. Architecture should become an envelope and background for life, developing into a container for the rhythm of footsteps, concentration of work, meditation of the soul, and memory of the past.⁴ One should not allow technology to hinder the ability to create these effects, and if so proves the downfall, and faults of a visually dominant society.

Image dominated architecture has been influenced by advancements in technology. If we fail to distinguish between the advantages and disadvantages of technological advancements, we risk detaching ourselves from our sensory perception in everyday life.⁵ This detachment could lead to future generations experiencing and describing the world from one visually dominant perspective, while dismissing their other senses.

Walter Benjamin considered the twentieth-century “the age of

alienation” not only because of technological advancements but also because architectural spaces started to lose resemblance of the human spirit. “Something had been lost”.⁶

*What we remember cannot be compared to the end of a line. Various possibilities lead to and meet in the act of remembering. Images, moods, forms, words, signs or comparisons open up possibilities of approach. We must construct a radial system of approach that enables us to see the work of architecture as a focal point from different angles simultaneously: historically, aesthetically, functionally, personally, passionately.*⁷

4 ibid p.12

5 “Total Isolation.” BBC News. Web. 1 Nov. 2009. <programmes/horizon/broadband/tx/isolation/highlights/index_textonly.shtml>

6 Leach, Neil. Camouflage. Massachusetts: Massachusetts Institute of Technology, 2006. Print. p.19

7 Zumthor, Thinking Architecture p.18

Our own body is in the world as the heart is in the organism: it keeps the visible spectacle constantly alive, it breathes life into it and sustains it inwardly, and with it forms a system. - Merleau-Ponty p. 235

Fusing Memory

body and sense

Every sensation is spatial: we have adopted this thesis, not because the quality as an object cannot be thought otherwise than in space, but because, as the primordial contact with being, as the assumption by the sentient subject of a form of existence to which the sensible points, and as the coexistence of sentient and sensible, it is itself constitutive of a setting for coexistence, in other words, of a space.¹

Senses connect humans to their surrounding environments. In the scientific world there are five specific senses but research has proven the possibility of more.² Individually, each sense has its own relationship to the body and to the environment. However, without the senses working simultaneously, an individual would never be able to fully understand their surroundings.

My perception is therefore not a sum of visual, tactile and audible givens: I

¹ Merleau-Ponty, *Phenomenology of Perception* p. 256-257

² *ibid* p. 239

perceive in a total way with my whole being: I grasp a unique structure of the thing a unique way of being, which speaks to all my senses at once.³

A majority of philosopher Maurice Merleau-Ponty's philosophical work focuses on perception in general, and vision in particular. He believes his sense of sight is an embodied vision that is an incarnate part of the "flesh of the world." "Our body is both an object among objects, and that which sees and touches them."⁴ Merleau-Ponty saw a connection between the self and the world. He emphasized the simultaneity and interactions of the senses and how self and world interpenetrate and mutually define one another, together they turn into a single continuous existential experience. They are ultimately connected, there is no body separate from its residence in space, and there is no space unrelated to the unconscious image of one perceiving self.⁵

³ Pallasmaa. *Eyes of the Skin* p. 20-21

⁴ *ibid* p. 20

⁵ *ibid*



Psychologists have done experiments studying human relationships with their senses and their environments. Sensory deprivation, human isolation from their environment, is one of these experiments. These tests suggest a direct relationship between sense and memory.

BBC News performed one specific experiment containing individuals who were placed in a completely dark room for two days. Prior to the experiment the individuals memories were tested. They were each analyzed in two memory tests. One was reproducing a drawing which was shown to them earlier, and the other was a color coding test, where they had to read a list of words written in different colors. All individuals passed the tests successfully.

Within the first hour of the experiment the individuals went to sleep. None slept for long and once they awoke they were completely oblivious to the actual time. After thirty hours within the dark room, the individuals started pacing back and forth within the

Fusing Memory

body and sense

room. The brain, getting no stimulation, was losing the ability to think. One individual stated they began to pace because they felt it was the only way to keep their brain activated. "The most exciting instance was when you were about to touch the wall, wondering if you counted your steps correctly."⁶ Within the last eight hours of the experiment the people within the dark rooms began to hallucinate. Hallucinations occur when the brain receives no stimulation from the surrounding environment. Hallucinations are a way for the brain to continue associating with the world, the brain conjures dreams or memories because of lack of stimulation.

After forty eight hours in isolation the individuals were released, and follow-up tests were performed. None of the patients were able to recreate the drawing, as accurately as before the isolation. When given the color coding test the individuals struggled to complete it. One individual's tests concluded that after forty-eight hours of sensory

deprivation thirty-six percent of his short term memory was lost.

Psychologists have concluded that sensory deprivation affects a crucial part of the brain known as the central executive. This part of the brain controls mental processes which coordinate functions, language, memory, and vision, allowing people to understand and interact with the world around them.⁷

This experiment suggests how senses stimulate the brain. With no stimulation the brain is unable to continue to grow and develop, it actually retracts in its ability to think, analyze and make connections to the world. Without senses the human ability to interact with the world would be nonexistent and would effect the way in which humans think.

It is neither contradictory nor impossible that each sense should constitute a small world within the larger one, and it is even in virtue of its peculiarity that it is necessary to the whole and opens upon the whole.⁸

⁷ ibid

⁸ Merleau-Ponty. Phenomenology of Perception. p. 257

⁶ Total Isolation. BBC

As I grip the old brass door handle I feel the cool metal absorb heat from my warm hand. Each scratch has a location on the handle which is identified on my hand as I slowly turn the knob feeling the latch click within the door. As I push the door open I feel the weight of the solid wood, and the resistance as the door moves over the rug, where shoes are removed on the other side. As I remove my shoes, and move from the rug to the tile floor I can describe the variety of tile sizes being imprinted under the sole of my foot without having to look. The heat is being pulled from my feet into the floor, grounding me in a strange way which makes me feel as if the heat of my body is needed within the small kitchen of my grandparents home. - Personal Narrative



Fusing Memory

sense of touch

Because I know that the light strikes my eyes, that contact is made by the skin, that my shoe hurts my foot, I distribute through my body perceptions which really belong to my soul and put perception into the thing perceived.¹

The skin, which senses interactions with the objects around an individual, helps that individual understand and remember their physical environments. The body is informed from haptic and orienting experiences very early in life. Visual images however, are developed later in life, and their meaning depends on primal experiences that were acquired haptically.² Without the haptic memory relating to the sense of touch one would never be able to understand apprehension of materiality, distance or spatial depth, which is associated to all other senses but usually linked closest to vision, humans dominant sense of today.³

George Berkeley and Georg

1 Merleau-Ponty. Phenomenology of Perception p. 247

2 Pallasmaa. Eyes of the Skin p. 40

3 ibid p. 42

Wilhelm Friedrich Hegel claimed that the only sense which can give meaning to spatial depth is touch, because touch senses the weight, resistance, and three dimensional shapes of material bodies. Touch lets humans understand that things extend away from them. Vision reveals what the sense of touch already knows.⁴

The skin reads the texture, weight, density and temperature of matter. The door handle is the handshake of the building. The tactile sense connects us with time and tradition: through impressions of touch we shake the hands of countless generations.⁵

4 ibid

5 ibid p. 56

Precedent

The Night of the White Gloves is an exhibit for the blind. The exhibit will be held on November 21st 2010 at the BMW Museum in Munich. While BMW is allowing visitors to touch their array of classic cars and anything from the interiors to the depths within the engine, they require visitors to wear white gloves. Textures and temperatures of materials are trapped behind the fabric, and questions arise if this exhibit is really truly for the blind?¹

¹ "BMW Museum: Night of the White Gloves Lets Visitors Touch Exhibits." WorldCarFans.com. Web. 20 Oct. 2009. <<http://www.worldcarfans.com/108111414833/bmw-museum-night-of-the-white-gloves-lets-visitors-touch-exhibits>>.



The aroma of freshly cut grass greets me as I walk slowly up the concrete path, pausing to inhale the scent of summer. I climb the familiar concrete steps and open the old wooden door, which I have opened so many times before. As I cross the threshold from exterior to interior space I am hit with the smell of freshly baked cookies. The aroma fills my nostrils and I can taste the ingredients of almonds, chocolate, butterscotch, melted butter, sugar, eggs, and flour. My mouth waters, and the urge to savor the taste and feel the warm texture draws me towards the counter where a fresh batch is cooling on a metal rack next to the oven. - Personal Narrative



Fusing Memory sense of smell

While the sense of touch unfolds physical environments, the sense of smell is the most persistent way to remember a specific space.¹

*I cannot remember the appearance of the door to my grandfather's farmhouse in my early childhood, but I do remember the resistance of its weight and the patina of its wood surface scarred by decades of use, and I recall especially vividly the scent of home that hit my face as an invisible wall behind the door. Every dwelling has its individual smell of home.*²

A particular smell unknowingly allows one to re-enter a space which has been forgotten by the retinal memory. The nostrils are able to unlock a forgotten image, and one is enticed to enter a vivid daydream. The nose makes the eyes remember. 'Memory and imagination remain associated.'³

I alone in my memories of another century, can open the deep cupboard that still

*retains for me alone that unique odor, the odor of raisins, drying on a wicker tray. The odor of raisins! It is an odor that is beyond description, one that it takes a lot of imagination to smell. - Bachelard*⁴

Helen Keller, who was blind and deaf, utilized her other senses to their fullest potential. She was able to recognize an old fashioned country house because it had several levels of odor. She was able to distinguish odors left by a succession of families, genres of plants, mist of perfumes, and decorative draperies.⁵ Helen Keller did not need her sense of vision to identify, and/or remember. The sense of smell is the sense which is the most closely linked to human memory. Smell links human memory to place, time, people, and objects.

¹ Pallasmaa. Eyes of the Skin. p. 54

² ibid

³ ibid

⁴ ibid

⁵ ibid p. 55

Precedent

This exhibit known as Out-SIGHT-In took place inside the Palais de Tokyo. It was an experiment in smell reversal. Smell can be experienced as seeing and seeing as smelling. A series of back-lit photographs, taken by a blind woman, were displayed. The blind woman directed her camera towards non-visual stimulations, focusing on the sense of smell. These images become moments of visualization in a non-visual perception of space. These photographs of non-visual impressions were placed in context with a series objects stimulating the sense of smell. Smells are associated with light and colors. As an abstract, extracted artistic research of the environment, Out-Sight-in is complementary to the directly perceived environment of the excursions outside.¹

¹"Out-SIGHT-In." Out-SIGHT-In. Web. 23 Oct. 2009. <http://www.helgagriffiths.de/projects/out-sight-in_2.html>.



As the grandfather clock chimes, I realize the sound has become so familiar that it is hardly acknowledged when it rings the time every hour. When it is acknowledged I can feel the vibrations of the rhythm and tone throughout my entire body. The sound of this grandfather clock is engraved in my body and has become a part of who I am. The clock, which was constructed by my grandfather, started chiming on the day I was born. The sound of this clock is not only a sound which I can recite and hear in my mind but also a sound which evokes memories of home, place, and family. - Personal Narrative



Fusing Memory

sense of sound

The sense of sound is a resource for identifying and remembering a specific person, space, or object as well as understanding spatial environments.

By hearing my mother's voice over the phone my memory immediately flashes to images of her appearance. Through her voice I see her face. This same form of identification happens with any familiar voice, I am easily able to identify tones and pitches in a particular voice and associate the voice with a familiar face.
-personal narrative

Other sensory memories can be triggered by sound as well. The smell of a particular perfume, or the potent smell of smoke heard through the vocals of a persistent smoker can be evoked through sound. Sound also helps individuals identify their spatial surroundings. For example, the reverberation time of an echo in a particular space, allows one to judge the size of the space. The longer the reverberation time the larger the space. This technique can be used in

both indoor and outdoor spaces. Some materials have different sound absorption values, but through the use of other senses one would further understand material changes in relation to sound, helping them further understand their surroundings.

Listen! Interiors are like large instruments, collecting sound, amplifying it, transmitting it elsewhere. That has to do with the shape peculiar to each room and with the surfaces of the materials they contain, and the way those materials have been applied.¹

¹ Zumthor, Peter. Atmospheres. Basel, Boston, and Berlin: Birkhauser-Publishers for Architecture, 2006. Print. p. 29

Precedent

Athens by Sound created by Anastasia Karandinou, Christina Achtypi, and Stylianos Giamarelo presents a non-visual way to experience the atmosphere of the city. The pavilion challenges atmospheric interactive spaces, presenting fragments of sound and visual fragments of Athens. The visitor re-creates the space around them, and visual instances are only available when an individual walks or invites another person to sit next to them. This allows the visitors to interact with each other within the space itself, creating a dynamic environment which becomes specific to each individual visiting. The pavilion brings forth the non-visual exclusive experiences of space. This exhibit challenges the limits of architecture.¹

¹ "Athens by Sound." Web. 23 Oct. 2009. <<http://www.karandinou.com/>>.



As I bite into the freshly baked cookie, I feel the warmth and variety of textures baked carefully within. The gooey baked cookie dough mixed with the melted chocolate and butterscotch chips in conjunction with the warm almonds make an amazing combination of textures within my mouth. The sweetness of chocolate lingers in my mouth after the cookie is gone and I lick remains of the sweetness off my lips. I reach for another. - Personal Narrative

The sense of taste may not be viewed as applicable to architecture as the other senses. However, the sense of taste and sense of smell are closely linked to each other. One can taste through their sense of smell, and smell through their sense of taste. In this case taste is very much a part of architectural experience as the sense of smell. Both senses are part of the human relationship to the world.

There is a subtle transference between tactile and taste experiences. Vision becomes transferred to taste as well; certain colours and delicate details evoke oral sensations. A delicately coloured polished stone surface is subliminally sensed by the tongue. Our sensory experience of the world originates in the interior sensation of the mouth, and the world tends to return to its oral origins. The most archaic origin of architectural space is in the cavity of the mouth.¹

Pallasmaa is in a way referring to the sense of taste as an extension of touch. He claims that subtle details are so intricate that

¹ Pallasmaa. Eyes of the Skin p. 59

Fusing Memory

sense of taste

they can be felt through imagination in an individual's mouth. Taste, in general, is a form of identification and can evoke memories. A memory of a perfectly baked chocolate chip cookie can be evoked when tasting a cooking, which does not compare, at a local bakery. It is interesting how people remember the best cheese-burger they ever ate. It is also interesting how people will most likely remember the environment where they experienced that burger. Good bakers and chefs are able to use their sense of taste to their advantage. For example; a chef may create a dish which has no written recipe because the dish is made purely by their memory of taste, which not only makes for a unique food item but also prohibits replication by anyone else. Taste is used to trigger memory and identify substances, and in many instances is used in architecture more than an individual might assume.



Precedent

Regardless about what an individual understands about art, this exhibit by Hannes Broecker definitely stimulated ones sense of taste. The exhibit in Dresden, Germany came up with the concept of combining his exhibition with grabbing a glass. His idea was to experience the exhibit by stimulating ones sense of taste. Broecker hung a variety of cocktails in glass containers, with only colors as a guide. The success of the exhibit ended in the exhibit running dry.¹

¹ "Refreshing Interactive Art by Hannes Broecker." Visual Streak. Web. 20 Oct. 2009. <<http://visualstreak.com/2007/12/11/refreshing-interactive-art-by-hannes-broecker/>>



As I sit at the small round kitchen table, I am able to view the garden and back yard through two large windows. It is early morning and the sun has just started to rise above the peak of the garage fifty feet away. The sun trickles through the window facing the garden and hits a collection of colored glass sitting on the window sill lining the center of two large pieces of glazing. The sunlight transforms into tiny rainbows throughout the kitchen as it filters through the colored glass. The bird feeders situated outside the window allow for a variety of summer birds to gather and feed. I can see a collage of vibrant colored flowers emerging in the sunlight from the garden. The morning light paints a moment in time where I am completely content and immersed in my surroundings. As the sun rises the light changes and that content moment will not occur until the next cloudless summer morning. - Personal Narrative



The person who sees and the one who touches is not exactly myself, because the visible and the tangible worlds are not the world in its entirety. When I see an object, I always feel that there is a portion of being beyond what I see at this moment, not only as regards visible being, but also as regards what is tangible or audible.¹

The eyes can be tricked, as some have witnessed from perspective experiments. The Ames room, is one such experiment, which is a perspective room designed to create an optical illusion. The room is designed in a way which looks like a simple rectangular room from a set perspective. However, the room is actually warped and completely not rectilinear. Vision from a specific viewpoint can easily be misled in believing something that does not exist. By using the other senses, equally with the sense of sight, one will begin to further understand spatial relationships of their surroundings

¹ Merleau-Ponty, Phenomenology of Perception p. 251

Fusing Memory sense of sight

I admit that space belongs primarily to sight and that from sight it is transmitted to touch and the other senses, then since there is in the adult, to all appearances, a tactile perception of space, I must at least concede that the 'pure tactile data' are displaced and overlaid by an experience having its source of sight, and that they become integrated into a total experience in which they are ultimately indiscernible.²

Sight is the dominant sense in separation and investigation. It understands and interprets color and movement, but never understand the spatial physical environment without the other senses. Vision reveals what the sense of touch already knows.³ The eyes detection of color is a useful contribution from the eye to ones physical environment, due to the facts based on psychology about how color effects an individual's mood or movement. To truly understand physical environment all senses need to be working as a whole,

² ibid p. 253

³ Pallasmaa. Eyes of the Skin. p. 42

the entire body needs to be engaged within the space, thus the body becomes an object within objects.

Rene Descartes, for instance, regarded vision as the most universal and noble of the senses and his objectifying philosophy is consequently grounded in the privileging of vision. However, he also equated vision with touch, a sense which he considered to be 'more certain and less vulnerable to error than vision.'⁴

⁴ ibid p. 19

Precedent

The room to the right is named after the American ophthalmologist Adelbert Ames, Jr, who first constructed the room in 1946. His design was based off of a concept designed by Hermann Helmholtz in the 19th century.

The Ames Room is associated with two illusions. When viewing the room from a specific view point the room, which is actually trapezoidal, appears to be cubic. This is because the room is cleverly distorted. The floor, walls, ceiling and far windows are trapezoidal surfaces, which are angled in relationship to the angled room. When people are moving within the room they appear to grow and shrink. This illusion is created by the sloping floor, which appears to be level due to the pattern, which like the windows along the wall, are actually trapezoidal.¹

¹ Ames Room. Web. 10 Oct. 2009. <http://www.psychologie.tu-dresden.de/i1/kaw/diverses%20Material/www.illusionworks.com/html/ames_room.html>.



The timeless task of architecture is to create embodied and lived existential metaphors that concretize and structure our being in the world. Architecture reflects, materializes and eternalizes ideas and images of ideal life. Buildings and towns enable us to structure and understand and remember the shapeless flow of reality and ultimately to recognize and remember who we are. Architecture enables us to perceive and understand the dialectics of permanence and change, to settle ourselves in the world and to place ourselves in the continuum of culture and time. - Pallasmaa p. 71

Maintaining Memory

memory and memorial

The person who, in sensory exploration, gives a past to the present and directs it towards a future, is not myself as an autonomous subject, but myself in so far as I have a body and am able to 'look'.¹

The body uses all senses as a whole when experiencing the world. The senses can scientifically be broken down into five different categories, which contain their own experiential values. However, an individual's surrounding environment cannot be fully experienced unless all senses are engaged at a single moment.

An individual can use their senses as a whole to create memories in the world. These memories can be carried with them throughout their life, filling the void of the future with a fresh present.²

As discussed earlier, humans have increasingly become more visual beings due to advancements in technology, and architectural memorials have been affected by this advancement. Engaging senses, other than vision is gradually

¹ Merleau-Ponty. Phenomenology in Perception. p. 279

² ibid

becoming minimal in memorials. Without full sensory perception the human ability to remember will be altered, weakening their potential relationship with world history.

History becomes important in remembering events from the past which have affected a large population in either a negative or positive way. When remembering negative events throughout history, it is important to understand why and how the events occurred in order to prevent reoccurrences in future generations. Architecture, in the form of memorial or monument, has become one way to preserve history of the past and allow that history to be carried into the future.

Before the invention of printing the primary way to gain knowledge was by word of mouth. The only way to record events experienced in the past was by storing this information in an individual's memory. There were very few manuscripts to record information, and therefore the Greeks invented a memory system known as the art of

memory. This system was a memory technique based on creating a series of places and images in the mind.³

Simonides was a poet who used and invented the technique.

He inferred that persons desiring to train this faculty (of memory) must select places and form mental images of the things they wish to remember and store those images in the places so that the order of the places will preserve the order of the things, and the images of the things will denote the things themselves, and we shall employ the places and images respectively as a wax writing-tablet and the letters written on it.⁴

The art of memory was used in rhetorical speakers and politicians, prior to and throughout the Renaissance period, so they could deliver long speeches with great accuracy. This tradition used by Greek and Roman orators was carried

3 Mann, A. T. Sacred Architecture. Shaftesbury, Dorset [England]: Element, 1993. Print. p. 155

4 Yates, Frances A. The Art of Memory. Chicago: University of Chicago, 1966. Print

Maintaining Memory

memory and memorial

through to present times. However, since the Renaissance period and invention of printing the technique has not been used as adequately.⁵

Walter J. Ong analyses the transition from oral to written culture and its impact on human consciousness and the sense of collectiveness in his book "Orality and Literacy". He points out that 'the shift from oral to written speech was essentially a shift from sound to visual space' and that 'print replaced the lingering hearing-dominance in the world of thought and expression with sight-dominance which had its beginning in writing'.⁶

The Greeks and Romans used sculpture and contemporary architecture as the foundation for the art of memory. An individual would pick a familiar spatially varied building, to be memorized. Everything down to the decorations, details and furniture would be memorized, and associated with a part of the speech. The speech to be remembered was

⁵Mann, A. T. Sacred Architecture. p. 155

⁶ Pallasmaa. Eyes of the Skin. p. 24

stored in specific memories which were associated to specific spaces within the building. When it was time for the orator to recite his speech he would travel through the building in his imagination retrieving the information from within the places he had placed them. The order of the speech was fixed by the order of the building, in this way one could recite the speech verbatim.⁷

The art of memory was designed using the environment around an individual, specifically the built environment. Using their sense of being, meaning all their senses, an individual was able to imagine themselves traveling through a building in order to remember their speech. The art of memory is an example of how architecture can have a major influence on human memory. When in an influential space an individual is able to recall that space, and recite their experience in that space based on the way that space altered their senses. Architecture, sensory and memory are closely linked, and when designing a

⁷ Mann, A. T. Sacred Architecture. p. 156

space for memory, such as a memorial, all should be acknowledged.

A monument in its oldest and most original sense is a human creation erected for the specific purpose of keeping single human deeds or events (or a combination there of) alive in the minds of future generations.⁸

Whether intentional or accidental, memorials and monuments are powerful objects, spaces, areas, or events either preserved in their natural state or man made which serve to hold remembrance. They tell a story about place and time, and teach people about events which have happened in the past.

Memorials and monuments are very similar. The OED describes a memorial as, "Preserving the memory of a person or thing; often applied to an object set up, or festival (or the like) instituted, to commemorate an event or a

⁸ Riegl, Alois. "The Modern Cult of Monuments: Its Character and Its Origin." *Oppositions Reader*. New York: Princeton Architectural, 1998. 621-649. Print. p. 21

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memory and memorial

person. Formerly with of.”⁹ Monuments then are described as, “Something that by it’s survival commemorates and distinguishes a person, action, period, event etc.; something that serves as a memorial.”¹⁰

Memorials can be architectural, artistic, historical, literal, symbolic, eventful, or a combination. There are many variations of memorial, however the two most obvious are whether a memorial is a physical object, space, or area or whether a memorial is an eventful or traditional experience.

When thinking about memorials that are physically tangible objects, spaces, or areas they can be broken down into three categories; age-value, historical value and intentional value.¹¹ Alois Riegl, a famous art historian from the nineteenth and early twentieth century, focused his work on historiography and perception. Because of the broad scope and relevance of his work art historians

9 Oxford English Dictionary. Web. 30 Nov. 2009. <<http://dictionary.oed.com.proxybz.lib.montana.edu/>>.

10 ibid

11 Riegl, Alois. “The Modern Cult of Monuments: It’s Character and It’s Origin.” *Oppositions Reader*. p. 21

and non-historians of recent decades have rediscovered and acknowledged his work. Riegl’s work provides the models for linking the analysis of specific artworks with a history of perception, exploring the relationships between monument and memory, and analyzing the nature of visual modernity.

Age-value memorials are essentially a life cycle, which triggers an emotional effect in the beholder. They emerge from a particular period in time, and then are left untouched; they are left to erode and dissolve back into the environment. The emotional effect, evoked by sensory perception, dealing with age surprisingly does not depend on knowledge or education for its affect on human perception. Age-value memorials include every artifact, without regard to its original significance and purpose, as long as it reveals the passage of a considerable period of time.¹²

Age-value memorials are left to age over time, their parts which are worn and broken are never replaced by new

12 ibid p. 624

parts. Pottery and other artifacts found in museums, are kept in places to preserve their deterioration, but they are never replaced.

Historical memorials, like age-value memorials include those which refer to a particular moment in time, but the choice of that moment is left to one's subjective preference. Historical value, unlike age-value which allows a memorial to eventually deteriorate back into the environment, preserves a memorial over time. This difference keeps a memorial in usable and visible conditions in order to preserve a specific point or moment in time.

Historical memorials, are preserved in a different way than age-value memorials. While age value memorials will never be replicated or replaced, historical-memorials will be replaced in order to preserve the essence of a particular time period. Many Japanese temples have burned down in the past, and every time they burn down, they are rebuilt exactly as they were the first time. Some temples have burnt and

Maintaining Memory

memory and memorial

been rebuilt as many as eight times. These temples are a perfect example of historical-value memorials.

Finally, intentional memorials are a form of historical memorials. They belong to works which recall specific and complex events and moments from the past. They, like historical memorials, can be consistently preserved over time. They can also re-create events and moments from the past for future generations to experience.

Many memorials, which are being built today, are examples of intentional memorials. Every Holocaust memorial, Holocaust museum, 911 memorial, or war memorial is an example of an intentional memorial. They are designed and built in order to stage a story, of an event, which has occurred recently or many years ago. The story will then fill future generations of history from the past.

These three classes of physically experienced memorial form three consecutive phases of the generalization of what a memorial means. A cursory glance at the history of preservation

up to this time reveals how these three classes have risen in identical sequence over historical time, and what exactly memorials will become in the future.¹³

Memorials which are not physically tangible are a whole other genre of memorial. This type of memorial, similar to physical memorials, can be broken down into many categories, but for the sake of simplicity it will be addressed in two categories of holiday based memorial and technological environment based memorial.

Holiday-based memorials originate from a specific event in time. Usually this event is a type of tradition which has evolved and been passed down through many generations. Since holiday-based memorials are choreographed around a specific date they can be experienced almost anywhere at anytime. Holidays may not be celebrated in the same way, and may not even affect a group of people at the same time, but they will usually be experienced somehow at sometime

¹³ ibid

get warped.

For example, today Halloween in the United States is celebrated as 'trick or treating' and masking true identities through costumes. Halloween actually originated in parts of Ireland and the United Kingdom, by the Celts. Halloween represented the end of summer, and transition into the long cold winter. This time of year was usually associated with death. The Celts believed October 31st was the day the worlds of life and death blurred and ghosts returned to the earth. Bon fires burning crops and animals, was one way the Celts celebrated this holiday.¹⁴ Throughout the years many holidays, like Halloween, have transformed into something completely different.

Films are created to entertain, and therefore will manipulate true stories in order to make them more exciting, and create a greater climax. Therefore, a film based on a true story, simply means it is based on a true story, it is not the true

¹⁴ "Halloween Ancient Origins." History.com. Web. 30 Oct. 2009. <<http://www.history.com/content/halloween/real-story-of-halloween/ancient-origins>>

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throughout the year. This type of memorial usually targets a specific group of people, meaning it is up to the person's background and beliefs whether or not they chose to partake in the event. Even if an individual chooses not to experience the event, they will most likely be exposed to something that reminds them about the event, such as internet home pages or store display systems.

Technological memorials are memorials such as songs, film, and images based around the idea of an event. These types of memorials, similar to holiday based memorials, are widely spread and not necessarily a tangible object. They are based on events and can reach a large group of people at a similar time due to the fact that they are broadcasted, and whoever is watching and/or listening will be exposed at that time.

Both holiday oriented memorials and technological based memorials are highly effective at spreading the idea of memorial. However, as memorial spreads quickly the facts and traditions

story.

Given the earlier discussion on the relationship between sense and memory, the best way to experience a space or memory is arguable through physical involvement with the space. This way one truly engages all senses, and is able to fully engage their body within the environment. Architecture is the only form of memorial that allows one to fully experience their relationship to their environment .

It is as the centralization and protectress of this sacred influence, that Architecture is to be regarded by us with the most serious thought. We may live without her, and worship without her, but we cannot remember without her.¹⁵

¹⁵ Ruskin, John. The Seven Lamps of Architecture. New York: Dover Publications, Inc., 1989. p.178



Precedent

The United States Holocaust Memorial Museum by James Ingo Freed, is located off Washington's central symbolic-historic axis. The memorial links the experience of European Jewry to the key events in the foundation of the United States. The 258,000 square foot building imposes on the historic district as a new building, but at the same time appears as if it belongs. The museum presents a fractured connection to the city line; what at first appears harmonious and contextual, but soon begins to display its incongruity. This tension produced by an emphasis on congruity, exaggerated conservatism which borders the uncanny. The horror of the Holocaust was not a bizarre sudden act of violence, it was something people lived with in everyday life.

It would have been easy for Freed to simply produce a shocking building, which contrasted with its surroundings, but that would turn the 'banality of evil' into a radical spectacular act. Instead Freed took the repressive tension of

the site, the straitlaced formality of the surrounding buildings, and heightened them to create a sense of unbearable compression. This gives the effect that the energy of the museum is held down tightly in place.

Ingo Freed's design of the United States Holocaust Memorial Museum, could be read element by element as a history of the Holocaust. However, this would reduce the building to a single system. Freed was able to give the building depth in relation to the Holocaust itself. Separate elements are positioned in relation to one another, to afford sequential development, instead of simply a static and isolated juxtaposition.¹

1 Freed, James. United States Holocaust Memorial Museum. London: Phaidon Limited, 1995. Print.



Precedent

The Berlin Holocaust Memorial by Peter Eisenman provides plenty that goes against the grain of what might normally be expected of a memorial. There is no sense of occasion, no discernible aim, no entrance, and no exit. It does not lend itself to stage a ceremony. There is literally no room for such gestures neither in the museum, Information Centre, deep beneath the memorial, nor among the stelae. The stelae are too densely grouped, for such ceremony to occur. The beauty of this memorial is that individuals experience is left to their own interpretation.

Peter Eisenman, who drew up the design (initially in collaboration with sculptor Richard Serra), did not want to build a guilt ridden conscience in stone, a nagging insistence on the duty of remembering. Instead, he gives visitors free rein; they enter with open eyes and open minds. What they first see is an architectural jumble of concrete blocks disappearing into a deep hallow.

Remembrance easily dissolves

into an empty ritual as the last of the eyewitnesses die and the history of the Third Reich fades into the ever more distant past. Eisenman has countered this with the attempt to create a new intimacy. Remembrance, for him, is walking towards an unknown destination; it is a physical experience in which we come closer to ourselves and, he hopes, to history. It involves a vague notion of art's ability to bridge time and change attitudes. But even for those who do not subscribe to this idea, unexpected impressions emerge while walking, touching, and seeing. For some, at least, these impressions turn out to be vital and memorable metaphors an abstract awareness of history slips into the here and now. People disappear into the inextricable maze before their very eyes. Individuals discover how easily their notions of order are undetermined. Each individual is on their own, they experience the memorial individually.¹

¹ Eisenman, Peter. Holocaust Memorial Berlin. Italy: Lars Muller, 2005. Print.



Precedent

The Jewish Museum by Daniel Libeskind is a museum which explicitly integrates the history of Jews in Germany with the repercussions of the Holocaust. The museum exhibits the social, political and cultural history of Jews in Berlin from the 4th century to the present. The new extension is connected to the Baroque building by underground axial roads. The longest road leads to the “Stair of Continuity” and to the museum itself, while the second leads to the “Garden of Exile and Emigration” and the third to the dead end of the “Holocaust Void.” The displacement of the spirit is made visible through the straight line of the void which cuts the museum, connecting the exhibition spaces to each other by bridges. The Void is the impenetrable emptiness across which the absence of Berlin’s Jewish citizens is made apparent to the visitor.

“There are three basic ideas that formed the foundation for the Jewish Museum design. First, the impossibility of understanding the history of Berlin without

understanding the enormous intellectual, economic and cultural contribution made by the Jewish citizens of Berlin. Second, the necessity to integrate physically and spiritually the meaning of the Holocaust into the consciousness and memory of the city of Berlin. Third, that only through the acknowledgement and incorporation of this erasure and void of Jewish life in Berlin, can the history of Berlin and Europe have a human future.

“I believe that this project joins architecture to questions that are now relevant to all humanity. To this end, I have sought to create a new Architecture for a time which would reflect an understanding of history, a new understanding of Museums and a new realization of the relationship between program and architectural space. Therefore this Museum is not only a response to a particular program, but an emblem of Hope.”¹ -Daniel Libeskind

¹ “The Jewish Museum Berlin.” SLD. Web. 01 Nov. 2009. <<http://www.daniel-libeskind.com/projects/show-all/jewish-museum-berlin/>>.

Conclusion

With the evolution of digital technology humans have increasingly become more visually oriented. This relationship has been occurring throughout architecture within the twentieth and twenty-first century. Visually dominant architecture is beginning to forget about the other human senses, which allow humans to fully experience the world in which they live.

An individual who experiences the world with their whole body (engaging all senses) will ultimately be able to create more vivid and intimate memories within the world than an individual who experiences the world solely by imagery.

...the 'data of the different senses' belong to so many separate worlds, each one in its particular essence being a manner of modulating the thing, they all communicate through their significant core.¹

Each sense has its individual relationship with the body and world.

¹ Merleau-Ponty. Phenomenology in Perception. p. 267

However, while working simultaneously as a continuous system, they allow the body to become fully engaged within the world. By stimulating the senses in everyday life, the human brain continues to grow and develop. The more stimulation received by the brain the more memory the brain will be able to retain from a given environment.

Architectural environments addressing memory of a given event from the past should become more thoughtful of the senses. Something capturing the past solely by visual stimulation, will not be as effective when merging with future generations, as something touched, heard, smelt, or tasted by people of the past.

My body takes possession of time; it brings into existence a past and a future for a present; it is not a thing, but creates time instead of submitting to it.²

² ibid

Section 2 Project

Competition

Site Analysis

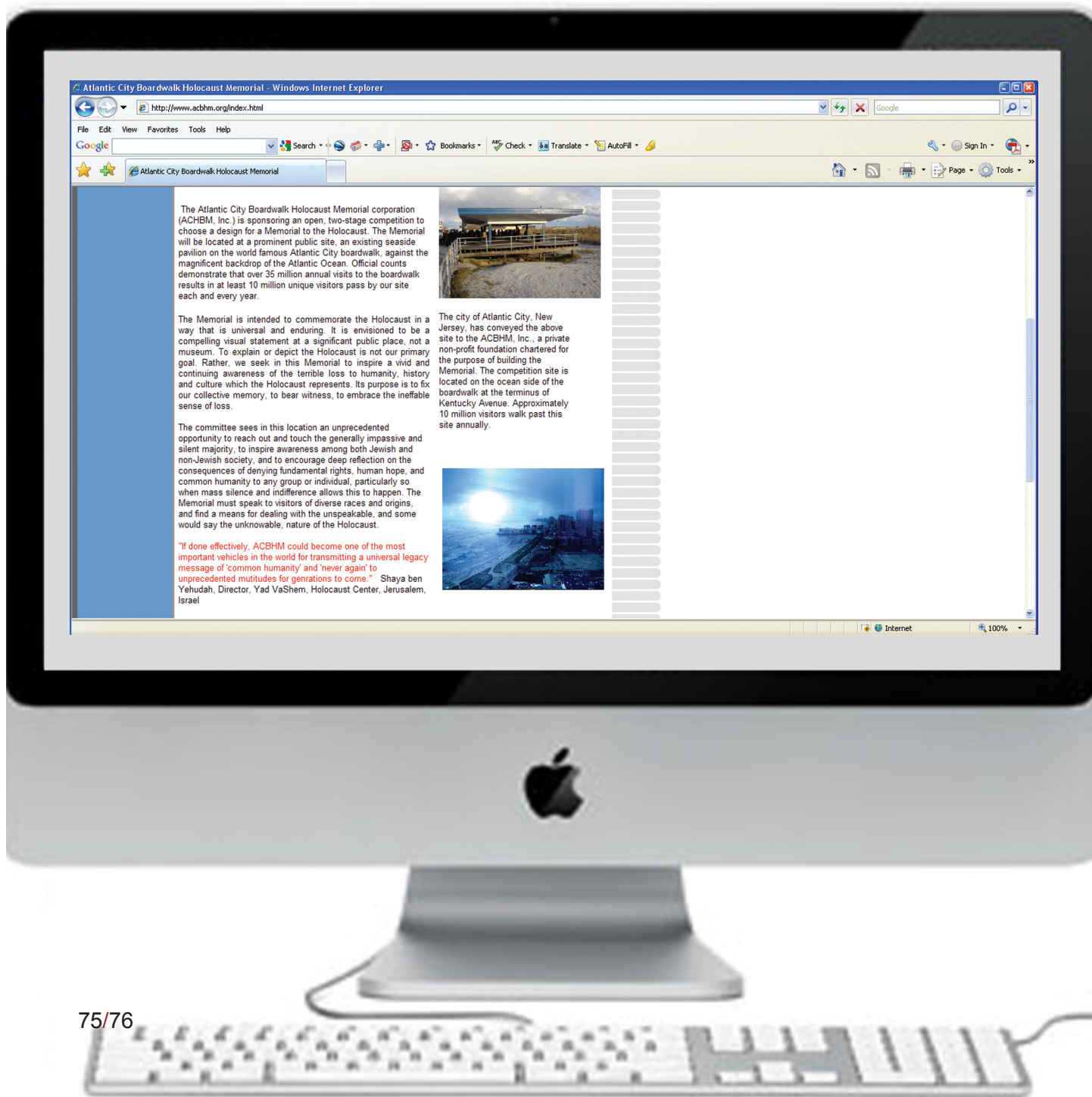
Program

Code Analyses

Design

Mission Statement

TO REMEMBER the suffering is to recognize the Danger and Evil that are present whenever one group wantonly and unjustifiably persecutes another. The Holocaust was the ultimate act of malignant and lethal Bigotry. The Memory of the Holocaust is the Legacy and Responsibility of all Humanity. Our overall objectives in building this Memorial are to witness History and reaffirm the basic Human Rights of our common Humanity. Those who survived the Shoah require no aids for their indelible Memories. It is those of us who were not there that Demand such a Memorial, and our Descendants will depend on it even more than We. - <<http://www.acbhm.org/>>



Competition

Architecture is supposed to engage and support the human experience in the world, and it is interesting how technology has affected that experience.

As described earlier, architectural competitions are one example of the affects of technology. They have over 2500 years of history. The Acropolis in Athens was a result of one of the first architectural competitions.¹ Over the years competitions have become more and more popular. The development of the internet has allowed competitions to open to individuals world wide.

Competitions, before the internet, were held at conventions. This way everyone who entered the competition, had a personal connection to the place where the building was to be constructed due to the fact the convention was located near the site. Once the internet was introduced and open conventions were accessible through internet web-sites, there was no longer a need to

¹ Haan, Hilde De, and Ids Haagsma. *Architects in Competition*. New York: Thames and Hudson, 1988. Print.p. 9.

have a physical connection to the place of architectural construction. The image to the left is an example of one of these online competitions, and will be the source of the following analysis, which is based on a paragraph taken from the web-site.

*The Atlantic City Boardwalk Holocaust Memorial corporation (ACHBM, Inc.) is sponsoring an open, two-stage competition to choose a design for a Memorial to the Holocaust.*²

There are already over fifty well known Holocaust memorials and museums throughout the world, so why is there a need for another? The fact is that the Holocaust was a major tragedy for a large sum of people throughout the world and memorials and museums commemorating the event will inevitably continue to appear. When designing and constructing these memorials and museums it is important to understand what these memorials are actually

² "Atlantic City Boardwalk Holocaust Memorial." Web. 09 Oct. 2009. <<http://www.acbhm.org/>>.

achieving within a given community. Does the museum or memorial become a tourist attraction? Does it become a place where people take a moment of silence and remember those who were lost, or does it become something else?

The Memorial will be located at a prominent public site, an existing seaside pavilion on the world famous Atlantic City boardwalk, against the magnificent backdrop of the Atlantic Ocean. Official counts demonstrate that over 35 million annual visits to the boardwalk results in at least 10 million unique visitors passing by our site each and every year.³

Atlantic City is the home of a large Jewish community. Many Jews settled in the inlet section of the city and eventually moved to Margate, an island community in Atlantic City, where they established hundreds of shops along the world famous boardwalk, and nearby avenues. They owned hotels, motels, kosher foods and deli counters, and even

³ ibid

Competition

raised chickens on farms just outside of town. The evolution of the Jewish settlers into a strong Jewish community in Atlantic City, gives reason for creating a memorial in the area. However, this place which was once filled with Jewish shops has developed into a tourist attraction for addicted gamblers. The focus of the city is no longer influenced by the Jewish community, it is now influenced and driven by the thousands of tourists who visit every year, which is why the question of how this memorial will influence the community becomes extremely important.

The Memorial is intended to commemorate the Holocaust in a way that is universal and enduring. It is envisioned to be a compelling visual statement at a significant public place, not a museum.⁴

Why visual? So many memorials of today are visual statements. They are sculptural, and do not relate to the body in any other way. As a species

humans are forgetting they have senses other than the optical. All the senses help humans understand spatial environments, not only one. Senses are one thing all humans have in common. There are certain disabilities, where single or multiple senses are lost, but the other senses adapt and make up for that handicap. Humans do not need to be taught how to use their senses, they are innate. By engaging all senses within a piece of architecture, that engagement can facilitate the architectural experience to be interpreted in a universal way.

4 ibid

We have an innate capacity for remembering and imagining places. Perception, memory and imagination are in constant interaction; the domain of presence fuses into images of memory and fantasy. We keep constructing an immense city of evocation and remembrance, all the cities we have visited are precincts in this metropolis of the mind. Pallasmaa p. 67-68

my nostrils and into my mouth. I taste the ocean. The sand is cool under my feet, and I burry them into the ground beneath me. As I wiggle my toes the sand wedges between them, each grain becomes individual. The sound of each wave creates a soothing rhythm, as I watch the white foam creep up to my toes, and wash away the sand in which they were previously buried. The sun is setting, and the sky is an intimate array of purple, red and yellow. The colors reflect off the twinkling surface of the water. In moments like this, I become engulfed by my senses, all are activated simultaneously, embedding a distinct memory in my mind. - Personal Narrative

Site Analysis

location

Atlantic City, in southeast New Jersey, lies on narrow, sandy Abescon Island several miles off the mainland. The island, separated from the mainland by a series of low-lying meadows and a narrow strait, is 60 miles southeast of Philadelphia and 100 miles south of New York City.¹

The competition site is located on the ocean side of the Atlantic City boardwalk at an existing pavilion, at the terminus of Kentucky Avenue. It is 60 feet in length and 40 feet in depth. Approximately ten million visitors walk past this site each year. Visitors will approach the site from the boardwalk. Directly across from the pavilion are typical boardwalk shops and places to eat. There are no structures to either side of the pavilion. To the southeast (ocean side), there are sand dunes, beach and the Atlantic Ocean. The pavilion is

The summer breeze coming off the ocean to the east brings refreshing cool air to my skin. The smell of salt drifts through

¹ "Atlantic City: Geography and Climate." City-Data.com. Web. 13 Nov. 2009. <<http://www.city-data.com/us-cities/The-Northeast/Atlantic-City-Geography-and-Climate.html>>





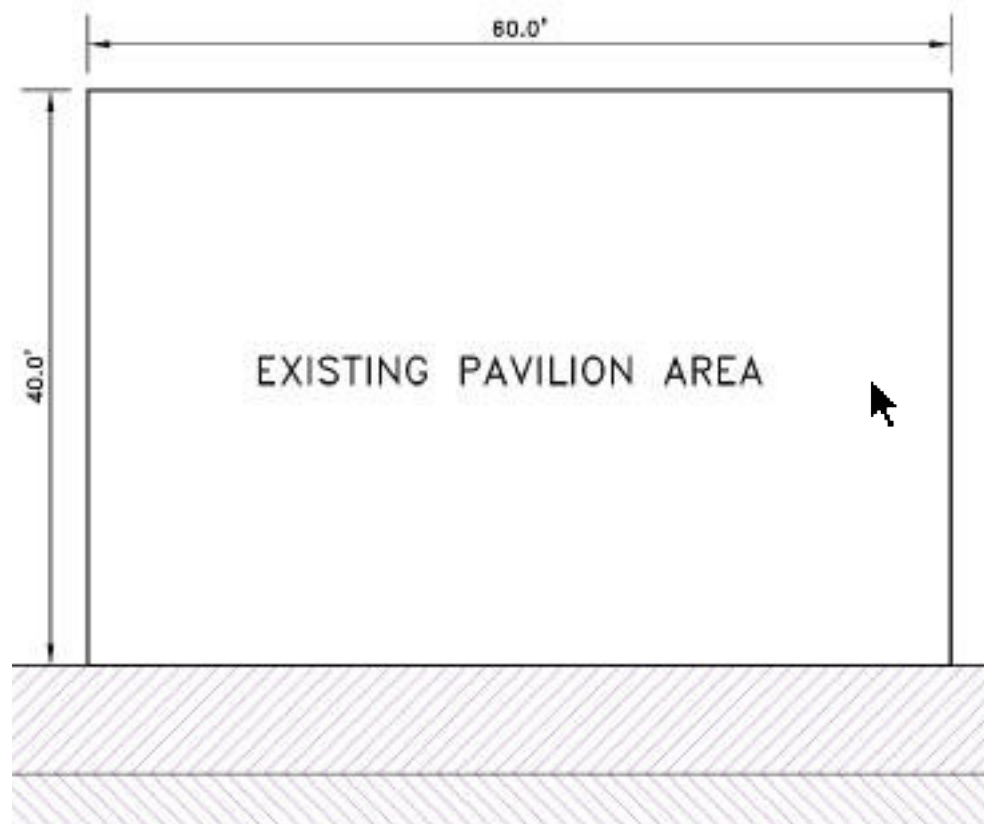
Site Analysis

advancements in technology

Places of Interest

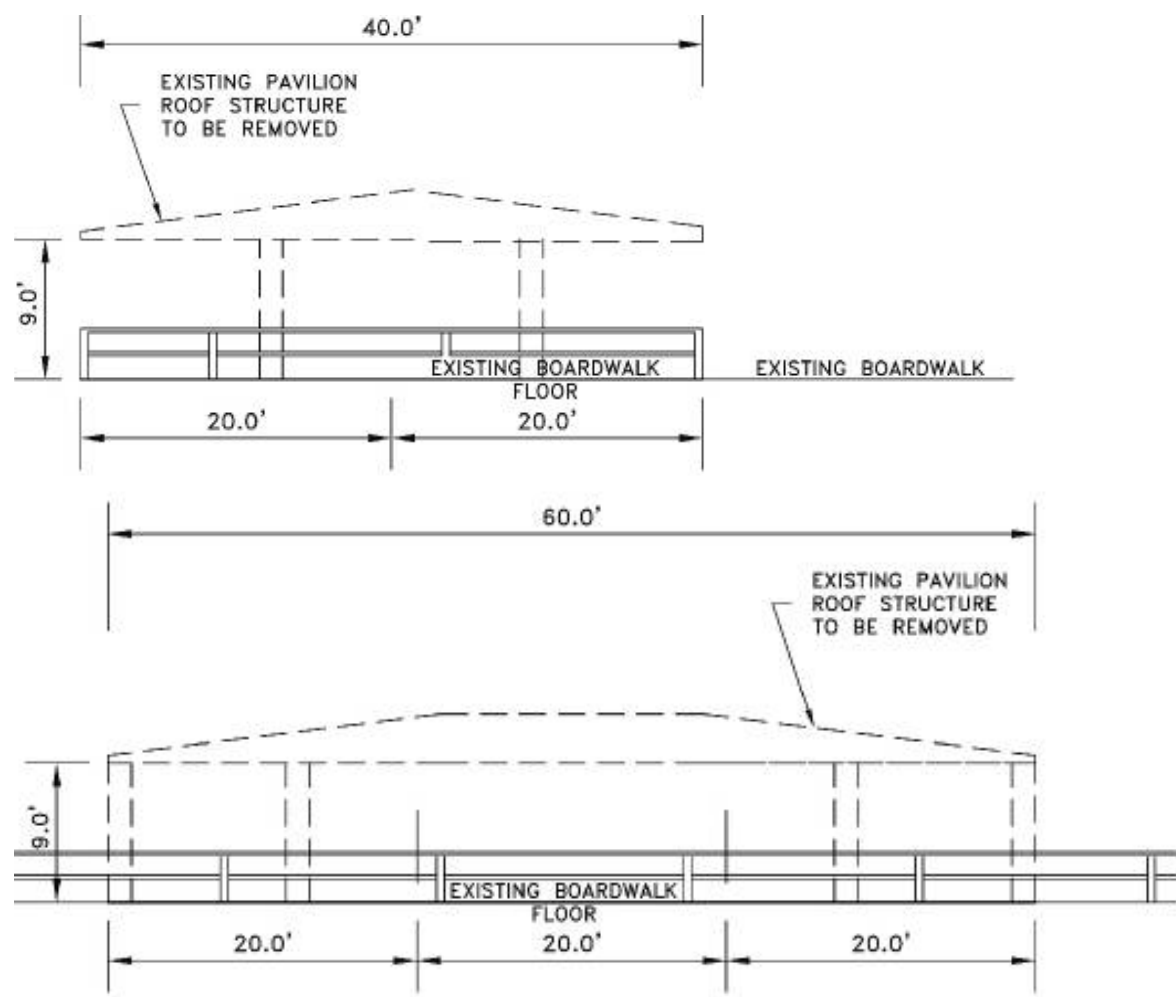
- ☒ Bars/Clubs
- ☒ Coffee Shops
- ☒ Dining
- ☒ Lodging
- ☒ Banks/ATMs
- ☒ Gas Stations
- ☒ Grocery Stores
- ☒ Major Retail
- ☒ Movie/DVD Rental
- ☒ Pharmacy
- ☒ Shopping Malls
- ☒ Geographic Features
- ☒ Golf
- ☒ Parks and Recreation Areas
- ☒ Skiing
- ☒ Transportation
- ☒ Fire
- ☒ Hospitals
- ☒ Schools
- ☒ Places of Worship





Site Analysis

location



North



East



Site Analysis

location

South



West



Atlantic City's climate, while generally continental, is influenced by the proximity of the Atlantic Ocean. Summers start later and last longer than on the mainland and winters are milder. Precipitation is moderate and distributed throughout the year. The exception is the heavy rainfall attendant on the occasional hurricane which blows in off the coast.

Area: 11.3 square miles (2000)

Elevation: 6 to 8 feet above sea level

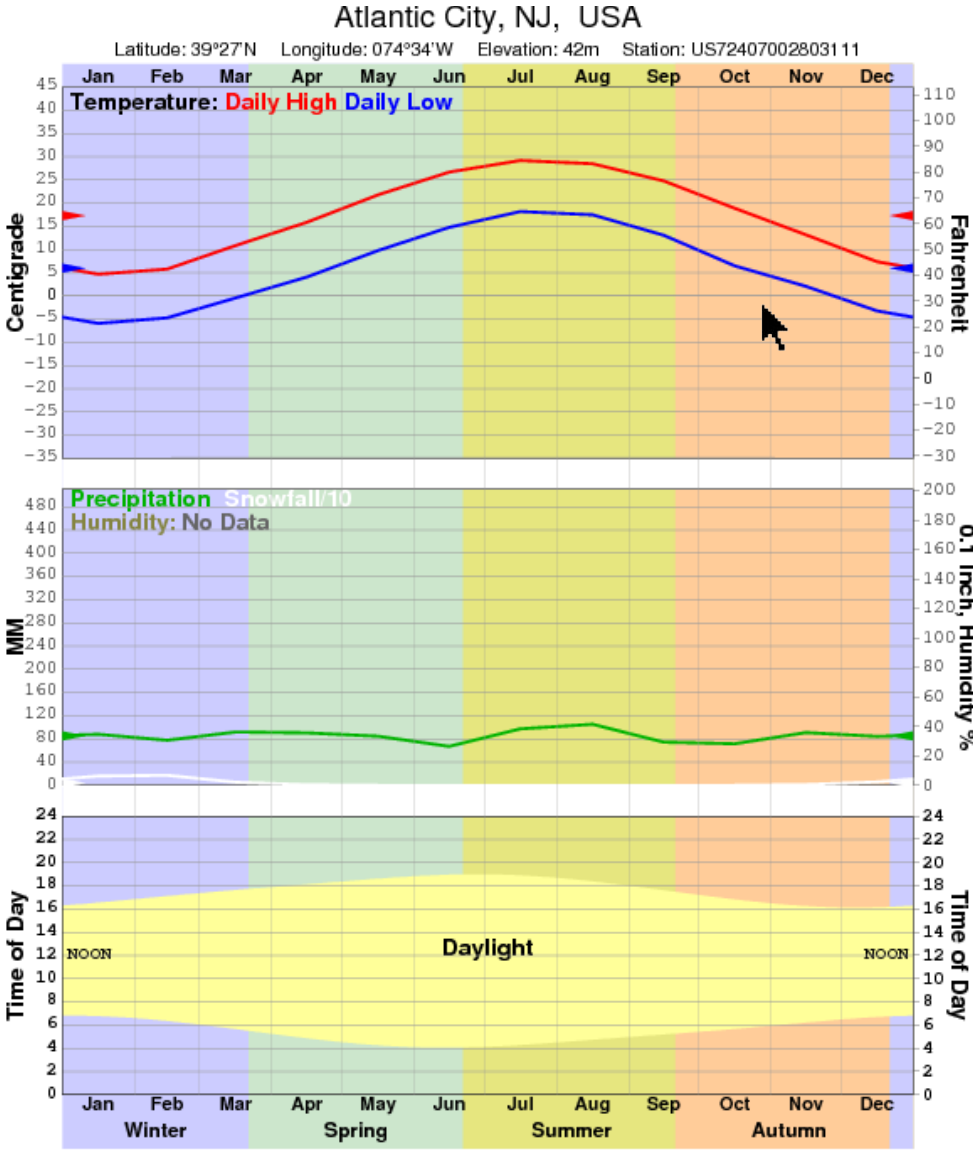
Average Temperatures: January, 30.9° F; July, 74.7° F; annual average, 53.0° F

Average Annual Precipitation: 40.3 inches of rain; 15.7 inches of snow¹

¹ "Atlantic City: Geography and Climate"

Site Analysis

climate



Site Analysis history

Atlantic City has a long varied history, which is an important component of what Atlantic City has become today and what it will become in the future. Much has been written about the days before the casino years, and the heyday years of the 30's and 40's where the Atlantic City Boardwalk was the place to be seen.

Abescon Island is the island on which Atlantic City rests, and is where the Lenni-Lenape Indians lived. The Lenni-Lenapes would travel over the Old Indian Trail, where Florida Avenue is located today, to spend the summer months on the island. They took advantage of the variety of flora and fauna, which lived on the island.¹

An Englishman by the name of Thomas Budd, was the first recorded owner of Abescon Island. Budd arrived in Atlantic County in the 1670's and was given the island as a settlement claim he had against the holders of the royal

grant.

For the next hundred years, the island would be visited by not only the Indians, but also hunters and some of the early mainland settlers. Among these brave soles, was Jeremiah Leeds. Leeds, born in Leeds Point in 1754, was the first white man to build a permanent structure on the island in 1785 at what is now Arctic and Arkansas Ave. Jeremiah and his family were the first official residents of Atlantic City. Their home and farm was called Leeds Plantation, they grew corn, rye and raised cattle. A year after Jeremiah Leeds death in 1838, his second wife Millicent Leeds got a license to operate a tavern called Aunt Millie's's Boarding House. Aunt Millie's was located at Baltic and Massachusetts Avenue. Thus, the first business in Atlantic City was born. Several of Jeremiah and Millicent's children grew to also become important residents on Abescon Island.²

In the 1850's there were seven permanent dwellings on the island, and

¹ History of Atlantic City." Atlantic City Free Public Library. Web. 18 Nov. 2009. <http://www.acfpl.org/index.php?option=com_content&view=article&id=22&Itemid=784>.

² "Atlantic City History." Atlantic City History. Web. 11 Nov. 2009. <<http://www.atlantic-city-online.com/history/history.shtml>>

all were owned by relatives of Jeremiah Leeds. A doctor by the name of Jonathan Pitney, who was a physician living in Abescon, felt the island had a lot to offer. He had ideas of turning the island into a health resort, however access to the island had to be improved. Pitney, along with a civil engineer by the name of Richard Osborne decided to bring a railroad to Atlantic City. Construction of the Camden-Atlantic City Railroad began in 1852, and the first train arrived in 1854. Tourism began.³

By 1878, one railroad couldn't handle all the passengers wanting to go to the Abescon, so the Narrow Gauge Line to Philadelphia was constructed. Massive hotels such as the United States and Surf house, along with smaller boarding houses, began to spring up all over town. Belloe House was the first commercial hotel located at Massachusetts and Atlantic Avenue. The United States Hotel took up a full city block between Atlantic, Pacific, Delaware and Maryland. These grand hotels were luxuriously designed in

³ ibid

Site Analysis

history

order to accommodate the many tourists who were invading the island.

Osborne has been given credit with naming the city, while his friend Dr. Pitney thought up the plan for the names and placements of the city streets which remains today. Streets running parallel to the ocean would be named after the worlds great bodies of water, Pacific, Atlantic, Baltic, Mediterranean, Adriatic, and Arctic, while the streets which ran east to west would be named after the States.

With the beautiful hotels, elegant restaurants, and convenient transportation the city had one big problem. Sand from the Atlantic shoreline was everywhere, from the hotel lobbies to train cars. A conductor by the name of Alexander Boardman was asked to think up a way to keep the sand away from the hotels and train cars. Boardman, along with Jacob Keim, a hotel owner, presented an idea to the City Council in 1870 to create an eight foot wide wooden boardwalk. This boardwalk extended from the beach into town. On September

9th in 1889, a devastating hurricane hit the island destroying the boardwalk. The city was buried in water. The boardwalk was rebuilt and today is 60 feet wide, and 6 miles long. The boardwalk's planks are placed in a herringbone pattern, and are laid on a substructure of concrete and steel. The boardwalk keeps shops, hotels, and restaurants to one side viewing piers for visitors to the other.

In 1880 a resort was born. By 1900, there were over 27,000 residents in Atlantic City, a drastic change from 250 only 45 years earlier.

The next twenty-five years saw many firsts in the city. The First National Bank of Atlantic City was opened in 1881, and a little over a year later in 1882 the first use of electricity from a streetlight brightened the street of South Carolina Avenue. The Atlantic City Beach Patrol opened in August 1881, posting strict 9am to 5pm bathing hours. By the next season, there were 20 guards on duty. The Atlantic City Hospital opened in 1898, while the public library opened 1900. Trolley service began in the city in

1893, extending out to Ventnor in 1900. The trolleys ran till 1955. Atlantic City's famous jitney service started up in 1915, with a ride around town costing just 5 cents.⁴

The late 1800's were a major growth period for the city. Nearly 2/3rds of the city's 6,500 dwellings in 1899 were cottages. These cottages were elaborate private homes. They were places in which wealthy doctors and businessmen, from Philadelphia, migrated for the summer months. At the same time amusement piers began popping up along the boardwalk. Everyone found some sort of entertainment to meet their needs.⁵

Atlantic City became "the" place to go. Entertainers from vaudeville to Hollywood graced the stages of the piers. Glamorous Hotels like Haddon Hall, The Traymore, The Shelburne and The Marlborough-Blenheim drew guests from all over the world. Atlantic City's future seemed bright, until World War II.

After the war, the public seemed to stop its love affair with The World's

⁴ ibid

⁵ ibid

Site Analysis

history

Favorite Playground. This could have been because of the public access to national air travel, the population shift west, the general deterioration of the city, or a shift in the public's taste for more sophisticated entertainment. Atlantic City lost its shine, and tourists.

The passage of the Casino gambling Referendum in 1976, Atlantic City once again began an upward battle, to once again become a renown tourist attraction.⁶

⁶ History of Atlantic City

This memorial seeks to stimulate fresh thinking about public memorials. The competition web-site suggests the site be located on the 40 foot by 60 foot pavilion shown in the previous Site Analysis section. However, this suggestion has the potential to become quite unconstrained.

My goal is to create a program of memorial, which enforces remembrance of the past and also encourages human social interaction in order to create memories within the present.

Atlantic City is a place of dining, shopping, gambling and site seeing. This program will interpenetrate the aims of visitors and also teach visitors about the Holocaust; one of the darkest and most horrific events recorded in human civilization.

Program

Loose Program

Restaurant/Cafe - stimulation focused on sense of taste and smell

Art Gallery/Exhibition - stimulation focused on sense of sight and sound

Exterior Approach - stimulation focused on sense of touch

Structured Program

Restaurant/ Cafe

Entry	200 sq. ft
Dining/Seating	1,500 sq. ft
Kitchen	600 sq. ft
Bathrooms	300 sq. ft
Storage	400 sq. ft

Art Gallery/Exhibition

Private Exhibition Spaces	800 sq. ft
Public Exhibition Spaces	800 sq. ft

Exterior Approach

Guidance Toward Gallery and Restaurant
unlimited

Total 4,600 + sq. ft

2009 International Building Code

Use and Occupancy Classification

- Use Group - Assembly Group A. (303.1)
- A-2 - Assembly area where food and drink are consumed.
- A-3 - Occupancies which are assembly areas and do not fit the criteria of the other four Group A categories.

General Building Heights and Areas

- Type II - A (UL)
- (UL) - Unlimited-Area (507.6)

Fire Resistance-Rated Construction

- Table 601 (hour rating)
- Primary Structural Frame - 1
- Bearing Walls Interior/Exterior - 1
- Non-Bearing Walls Interior/Exterior - 0
- Floor Construction - 1
- Roof Construction - 1

Means of Egress

- Section 1003 ceiling height - 7'-6" and up
- Table 1004.1.1 Standing assembly area - net floor area of 5 square feet per occupant

Code Analysis

-Section 1008.1.1 minimum width of each door opening shall be sufficient for the occupant load- clear width of at least 32" - the exit travel distance for type A occupancy requires 200 ft

-Paragraph 1015.2.1 exit doors or exit access doorways shall be placed a distance apart equal to not less than half the length of the maximum overall diagonal dimension of the building

Accessibility

-Section 1104.2 requires at least one accessible route to connect accessible buildings, facilities, elements and accessible spaces that are on the same site. All other accessibility elements such as water closets, ramps, turning, radii will comply with ANSI 11.7.

Interior Environment

-Section 1203.4 natural ventilation of an occupied space shall be through windows, doors, louvers or other openings to the outdoors

-Section 1205.1 every space intended for human occupancy shall be provided with natural light by means of exterior glazed openings

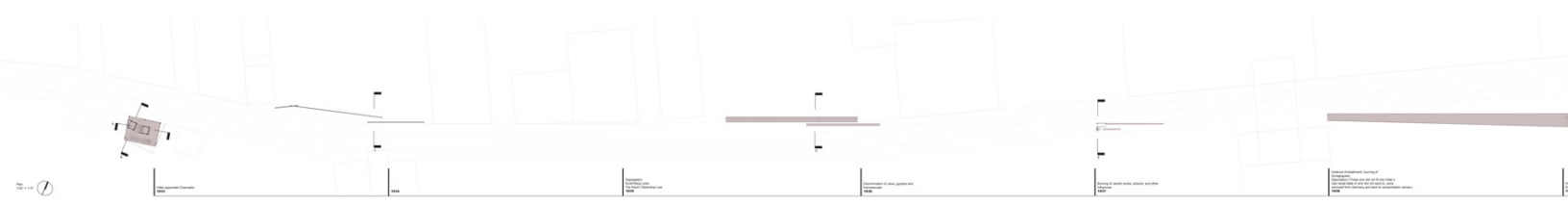
-Section 1205.2 minimum net glazed area shall not be less than 8 percent of the floor area of the room served -artificial light must provide an average illumination of 10 foot-candles over the area of the room at a height of 30 inches above the floor level - space requirements inform that no habitable room can be smaller than a width of 7 feet in any direction

Plumbing Systems

-Table 2902.1 Restaurants, banquet halls and food court

-Table 2902.1 requires an occupancy of A-2 (restaurant, banquet hall or food court) to contain 1 water closet for every 75 males and 1 water closet for every 75 females

-Table 2902.1 requires an occupancy of A-3 to contain 1 water closet for every 125 males and 1 water closet for every 65 females



Design master plan

This memorial encourages one to engage with the intangible number of lives lost during the Holocaust.

The **tower** provides circulation through vast void spaces, while focusing views towards a distant destination. Through views one understands the memorial's enduring length and scale, which reinforces a sequence of events building up to the unfathomable Holocaust.

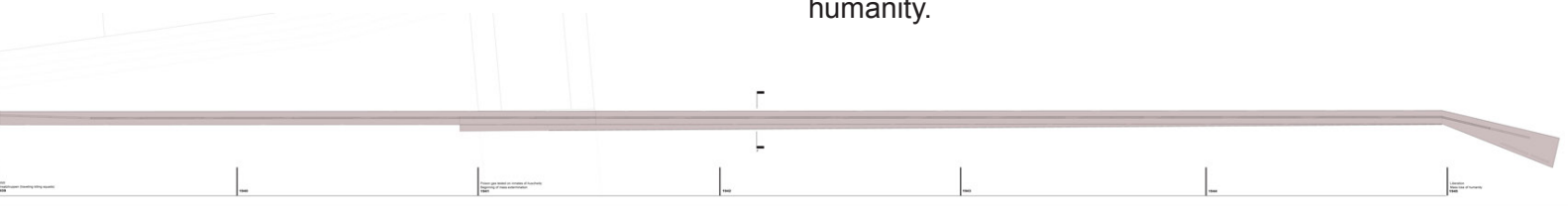
Installations along the boardwalk afford separate personal experiences by segregation of materials and spaces.

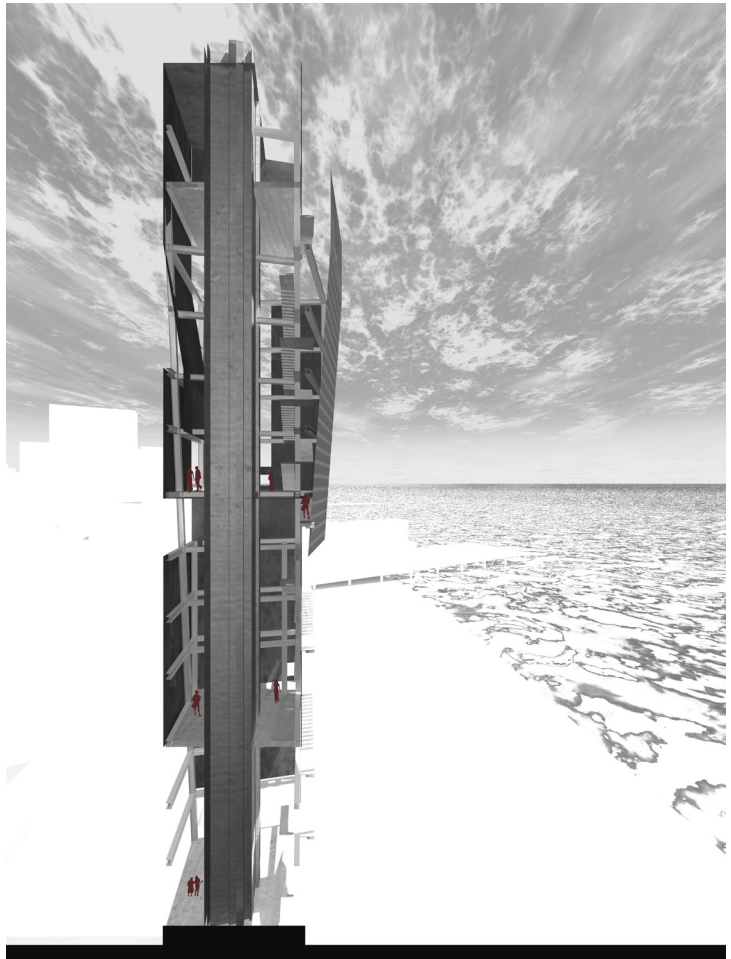
The path's **divergence from the boardwalk** instigates a movement in a forced direction, further isolating an individual from the density of the city.

Enclosed within the **tunnel containing 6,000,000** perforations through the metal casing, enforces the identity of the loss often associated with the ultimate act of malignant discrimination.

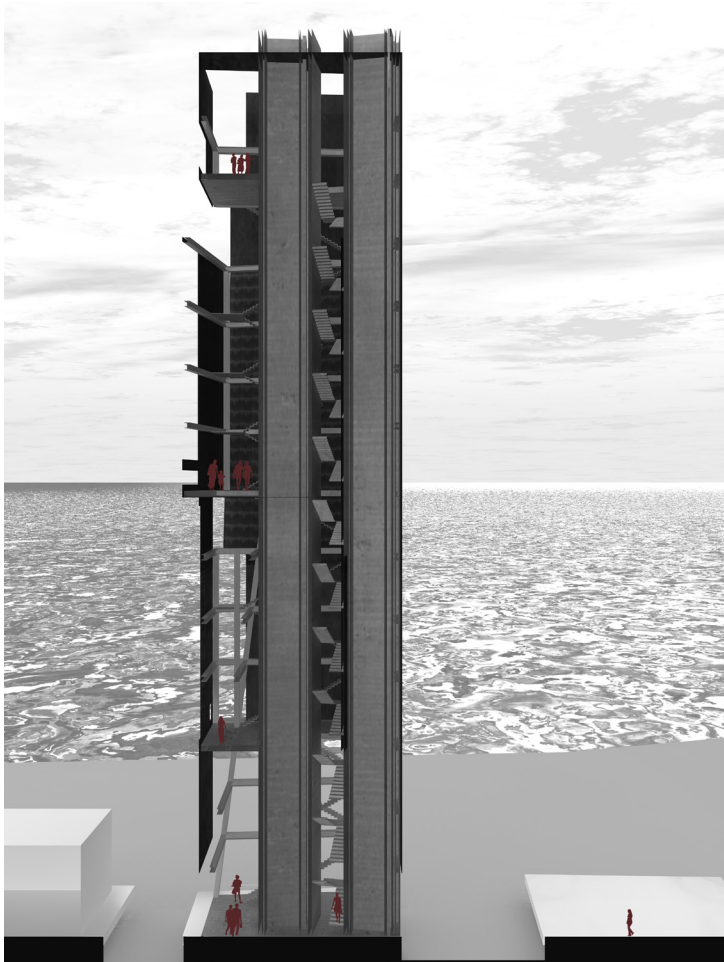
The end of the tunnel **opens on to an unlimited view of the Atlantic Ocean, directed towards the place of devastation**. The open sea represents liberation and freedom from entrapment, while the sea's unpredictable moods and limitless views express the uncomfortable unknowns of the Holocaust.

The series of spaces along the walk manipulate human senses through scale, materiality, and spatial organization providing different perceptions of the event, which universally expresses the progression to tragedy, and the waste of humanity.





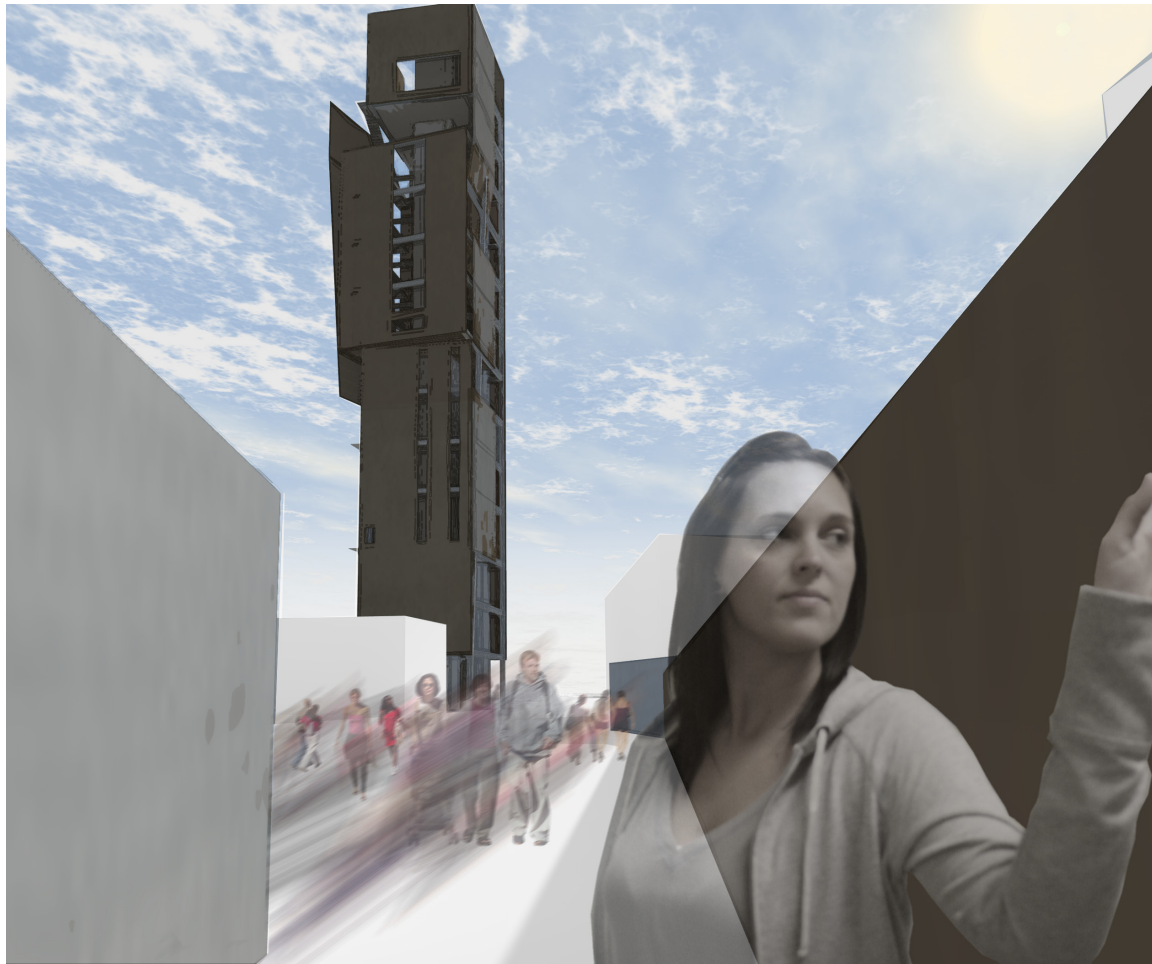
Design
sections

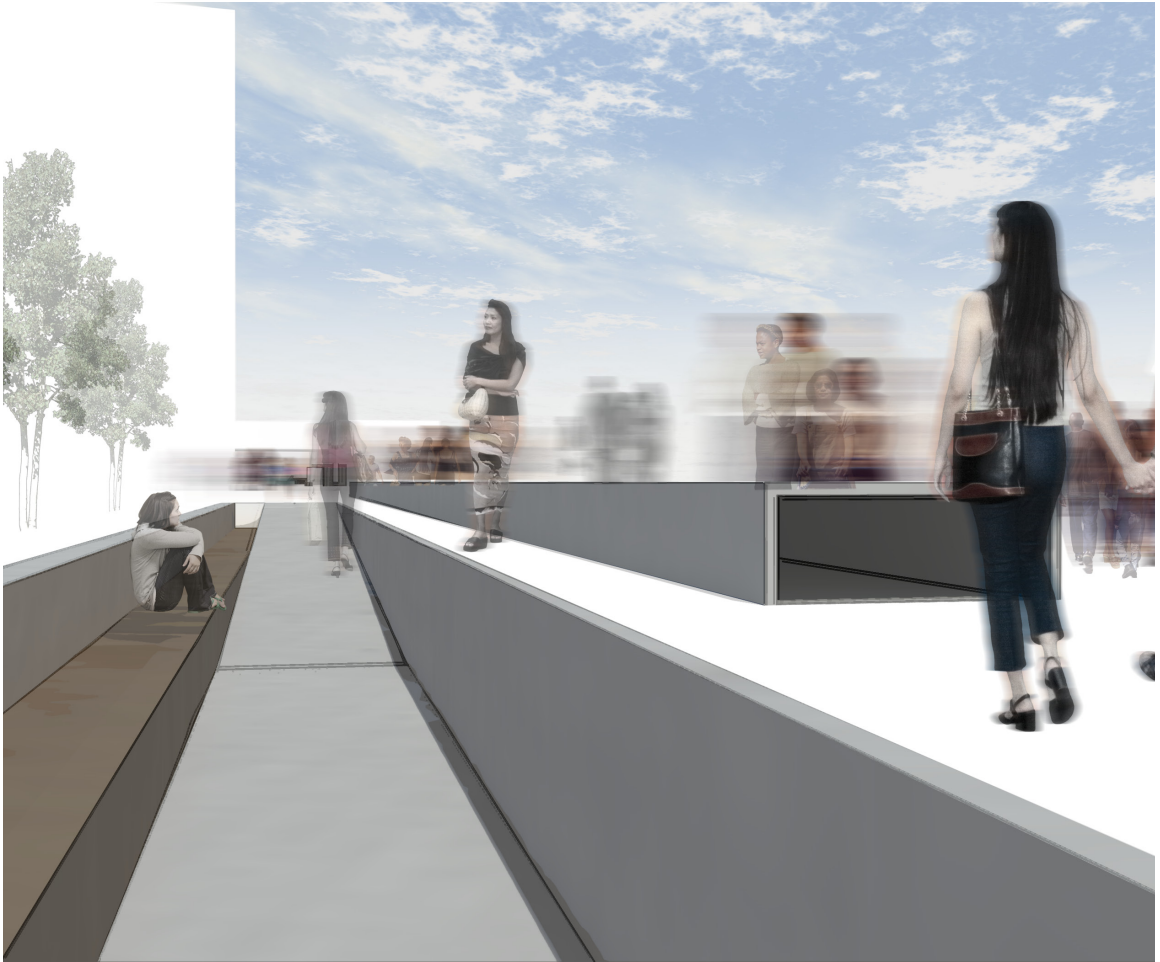


Directed views from the tower provide the opportunity for one to experience the walk from a different perception, allowing them understand they are part of something much greater. They are then led onto the mile long path, where they are able to physically interact with environments, isolating them in different ways.

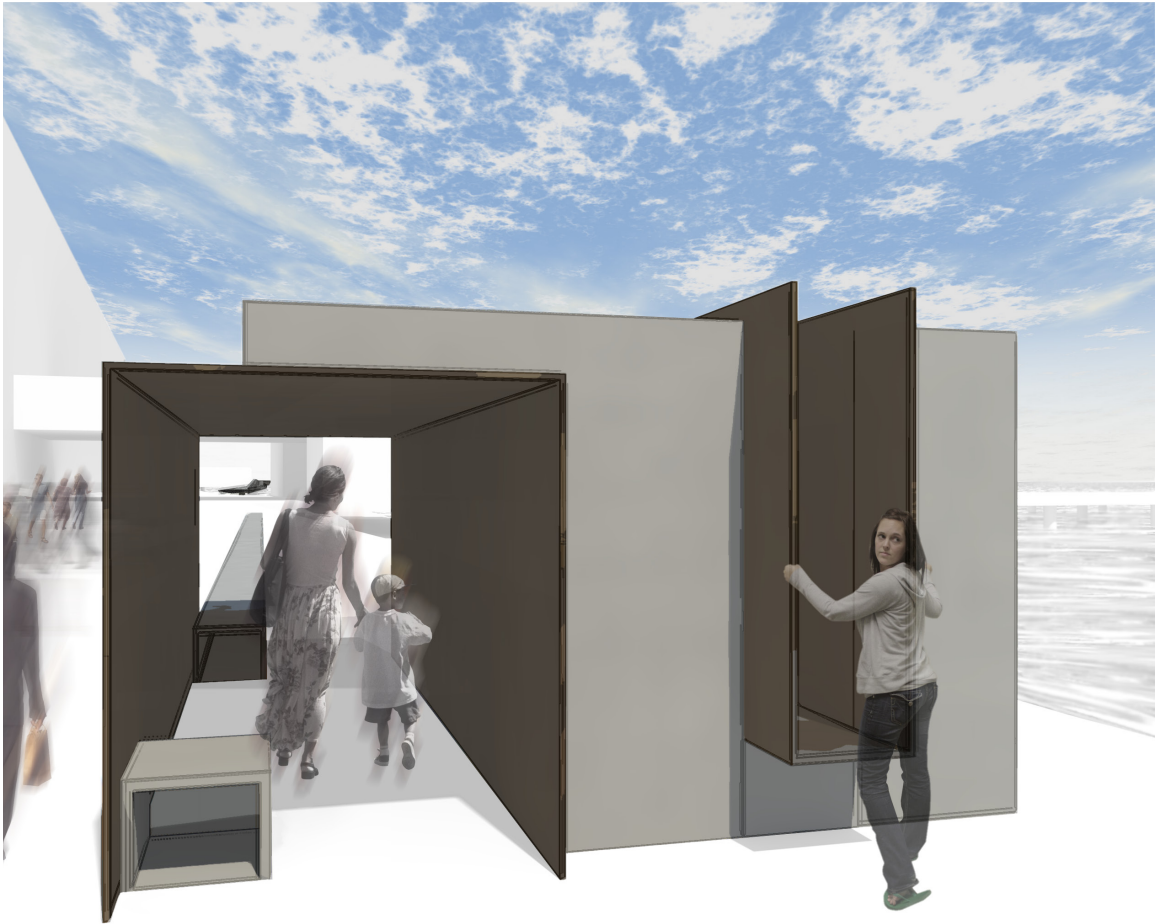


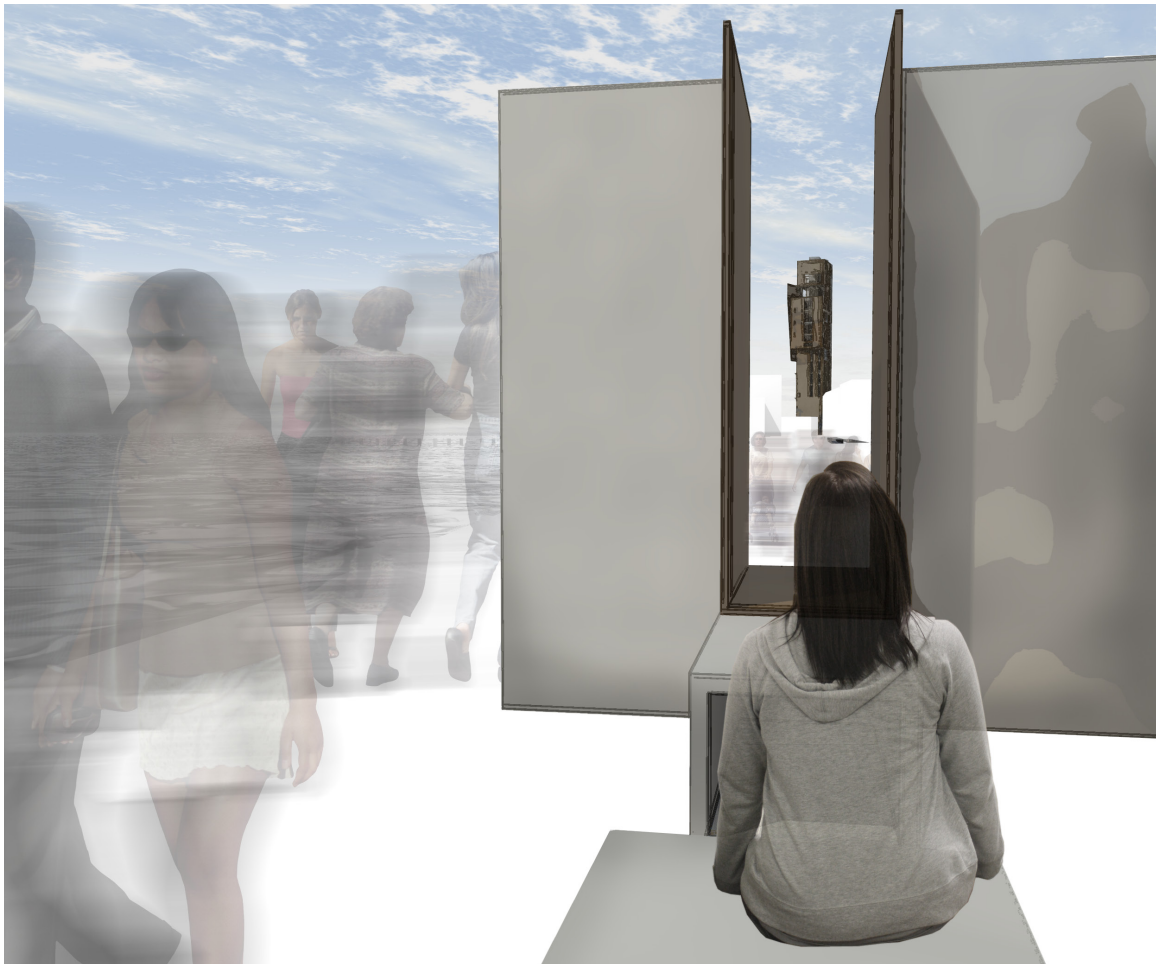


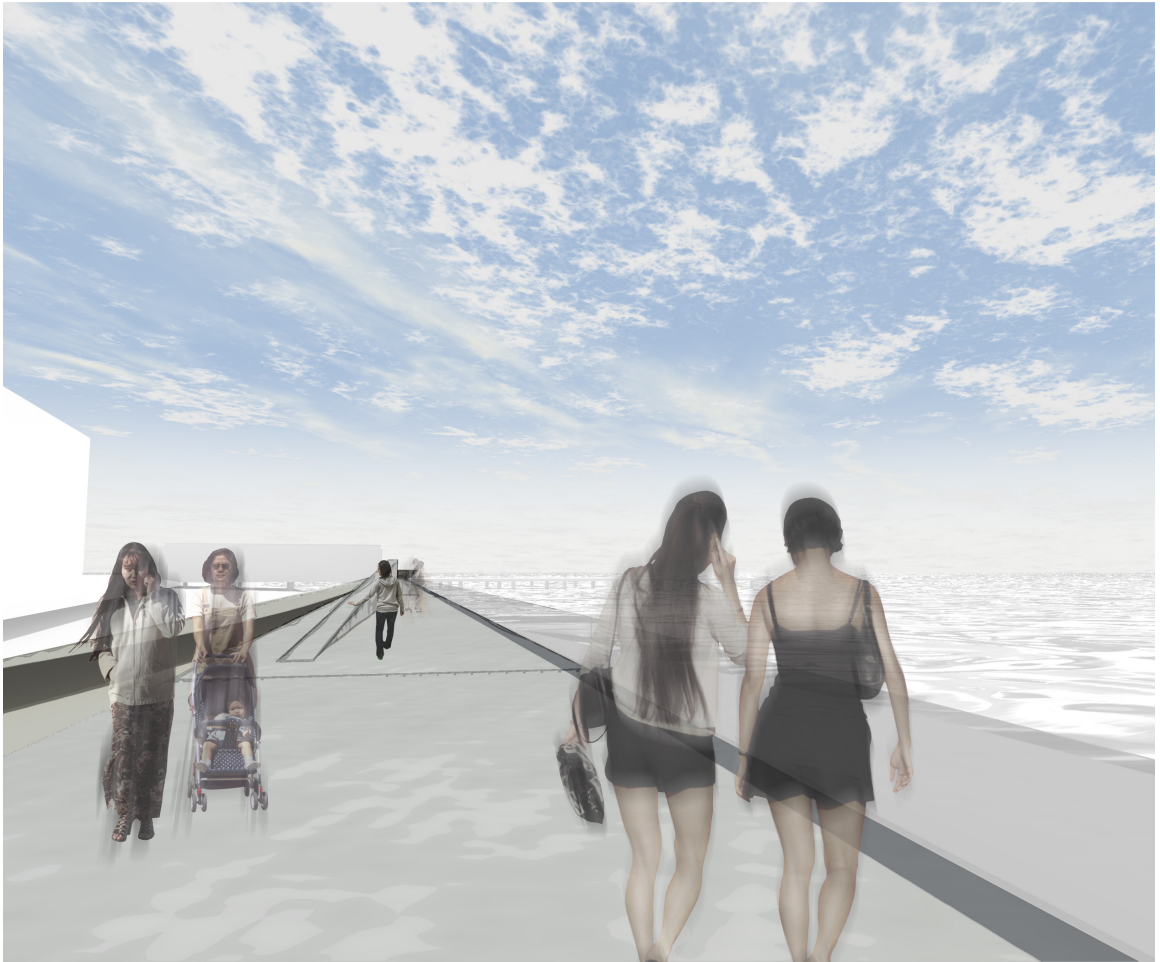




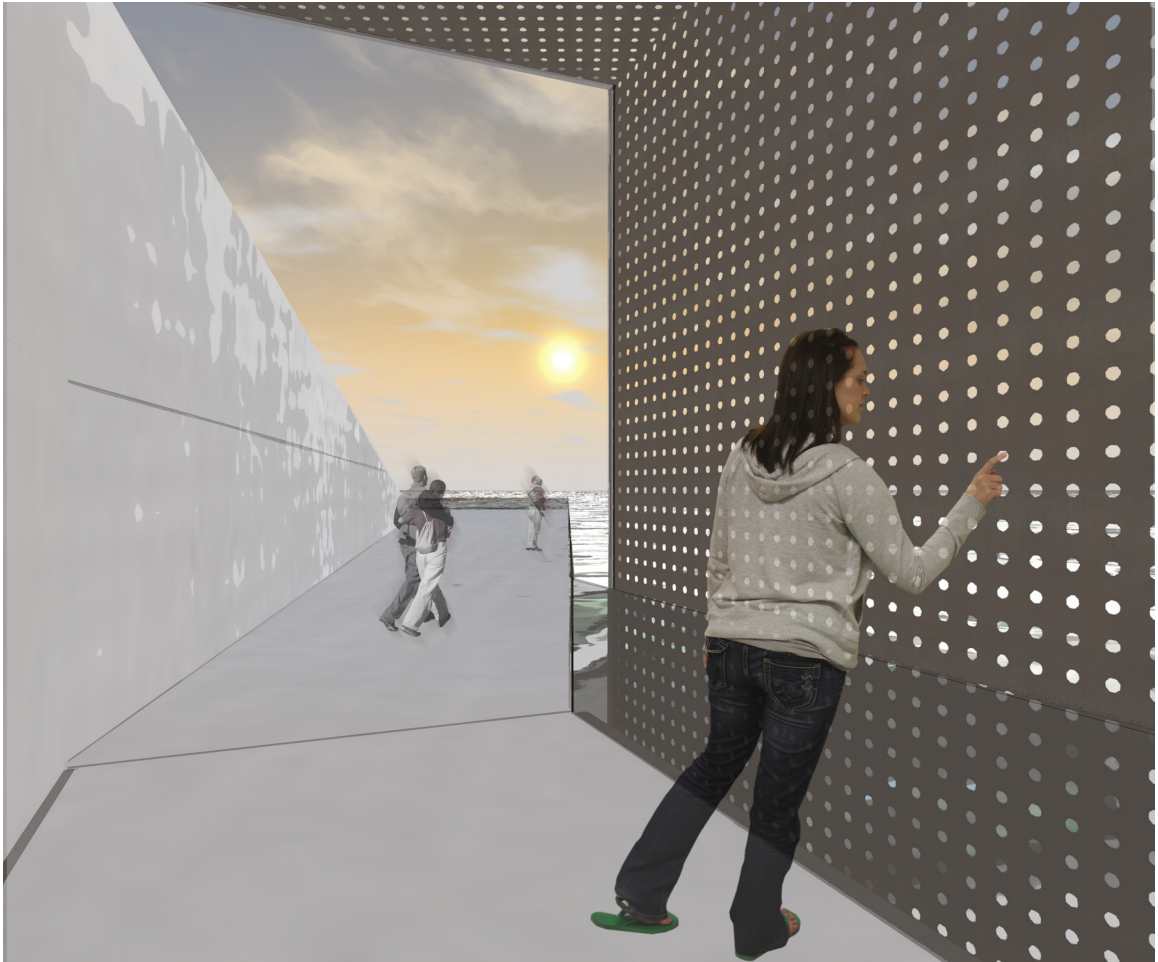














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