The Edge As In-Between The Ruin and Rebirth of San Francisco's Sutro Baths

Cover Page, Sutro Baths Beach | 01 |

Signature Page

A Design Thesis Submitted to the Department of Architecture and Landscape Architecture of North Dakota State University.

Вy

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In partial fulfillment of the requirement for the degree of Masters of Architecture.

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The Proposal



The ruins of Sutro Baths in San Francisco exist at the edge of coast and sea, at the edge of past and present, and at the edge of construction and deconstruction. Edges have historically been associated with the physical extremities of the known world and the origin of the universe. Ancient man feared and was intrigued by the idea of being at the borders of the earth, at the limit of the human world. As we encounter the half-written stories of ruins frozen in time, we are called to symbolically participate in a cyclical restoration - a ritual that was performed by our ancestors at the beginning

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of each New Year. Through participation in the symbolic annihilation and re-creation of the world, man could be purified, for he too began a new life. At the edge or origin of the universe, man came as close to the perfection of the creator as possible. He could also be purified through bathing, which itself is an edge between an unclean state and a state of purity. This thesis continues this cycle by introducing a Bath House in coexistence with the Sutro ruins that will connect the individual to the ocean and the larger world through a series of pools and spaces that offer a commentary on the cyclical nature of time and the process of restoration. There, guests will be able to become in touch with themselves and their collective history as a species that longs for renewal.

THE EDGE AS IN-BETWEEN The Ruin and Rebirth of San Francisco's Sutro Baths

Adolph Sutro built in 1869 a pleasure palace for the citizens of San Francisco, an enormous indoor bathing area - the largest in the world. There were six salt water pools and one freshwater pool, each with different water temperatures. Ocean water was captured in tidal basins, heated to different temperatures, and pumped into the pools. The baths served as a learning center, with museum collections to view as well as circus acts, bands, games and contests. Great ingenuity was exercised in emptying

the baths with the most advanced ideas on sanitary engineering and in protecting the baths with massive break water (450,000 cubic feet of rocks). The tanks had an ocean frontage and the buildings being of iron and glass, the bathers could see and hear the breaking waves.

Over time, the Baths became less popular, due to the Great Depression, reduction in available public transportation and new public health codes. In 1964, developers with plans to replace the Baths with highrise apartments bought the site and began demolition of what was a great structure. In 1966, a fire destroyed what was left of the Baths; the city did not pursue the high-rise apartment plans. Today the site lies in ruin at the edge of the ocean.

"Can we imagine what it was like to set out on sea voyages in the ancient world – voyages that would take sailors into the heart of darkness and unknown? Given a lack of reliable maps and adequate navigational devices, the prospect of sailing on a trackless waste of water must have been terrifying. The ancient Greeks even coined a special word for the open sea, pontos, and they were terrified of going astray on it, instead preferring to cling to the coastline and to travel from port to port in the cautious manner that came to be called *costagierre*, in which the fearful sailor never lost sight of land." This anxiety of the edge was present simultaneously with a fascination. Man feared and was intrigued by the edge of the earth. There was an ancient fascination - indeed, an obsession with the idea of being "at the borders of the earth." "Such borders were considered "the physical extremities of the earth...the limit of the human world", and were believed to be the origin of the universe. It was important to respect this phenomenon of nature because "edges act both to protect us from what threatens on the other side, as well as block us in our forward movement".

To stay on the other side of the edge meant to stay within the confines of man's fearful mind. For ancient man the construct of myth was a coherent framework for understanding the world. The gods that were present in these myths and the changing personalities of nature needed to be appeased for his protection. "The world appears to primitive man neither inanimate nor empty but abundant with life [...] Any phenomena at a time may face him, not as 'It' but as 'Thou'", an emotional presence that may manifest itself as a thunderclap, sudden shadow, or an eerie and unknown clearing. For this reason, primitive man was perpetually participating in rituals to mediate reality. One important ritual involved the ushering in of the New Year. Ancient man viewed time as cyclical, starting anew with the restoration of primordial time at the end of each year. "Since the New Year

is a reactualization of the cosmogony, it implies starting time over again at its beginning, that is, restoration of the primordial time, the "pure" time, that existed at the moment of Ancient man could also become close to the moment of creation at the edge of the earth, where he believed the universe originated. Unlike modern man's conception of linear time, ancient man's cyclical view of time implied a certain interval coming to an end in order to make way for the new beginning. "It is also a matter of abolishing the past year and past time. Indeed, this is the meaning of ritual purifications; there is more than a mere "purification"; the sins and faults of the individual and of the community as a whole are annulled, consumed as by fire."

Wouldn't it be fair then to claim that the Sutro Baths were purified as they burned to the ground, leaving only ruin in their wake? The ruins provide groundwork for rebirth. The site lies frozen in time, reaching back to the beginning while remaining accessible to the present. Ruins make us participate in rituals that were laid down before our individual lifespans, especially the ritual of rebirth in which man symbolically participated in the reactualization of time. "By symbolically participating in the annihilation and re-creation of the world, man too was created anew; he was reborn, for he began a new life." Historically man has desired to come as close as he can to the perfection of beginnings. "Man desires to recover the active presence of the gods; he also desires to live in the world as it came from the Creator's hands, fresh, pure, and strong." He could gain this by symbolically participating in the re-birth of time. "Life cannot be repaired; it can only be recreated through symbolic repetition of the cosmogony, for, as we have said, the cosmogony is the paradigmatic model for all creation." In this way man was purified.

Ruins are stories that are half written com-

pleted by our own memories and imagination. In particular, a complex interplay of presence and absence is constructed, determinacy and indeterminacy takes place. It brings about the material conditions for a veritable scenography of the empty and the full, the discontinuous and the continuous. "As residues of the past that have been rejected or by-products of economic progress, ruins can become the site of a critique of the ideology of progress, of the evermore-stringent forward movement of history." Because they are frozen in time ruins force us to slow down and reflect upon the transience of man, to think back to a time when things were slower, more pure, as in the primordial time of creation. Historically, areas of ruin spoke not only of the horrors of war, but also the possibility of renewal and rebirth. Here, we find conditions conducive with purification.

The ruins of Sutro Baths exist at an edge, at the edge of coast and sea, at the edge of past and present, and at the edge of creation and destruction. What was once destroyed by fire is now washed over with water as the borders of this edge condition are blurred. The low stone and the concrete walls are merging with the background and the structure is extending into the ocean, blending with the waves and creating its own soothing sound. The horizon far away seems to extend its arms to meet the waters and the land. The continuity of time can be experienced here at this place. We are invited to participate in the ritual of restoration. The life cycle of the site has been returned to a new beginning. However, the past has not been abolished but left manifest as the scars of ruin. The site has been purified through fire and rebirth and thus is suited for the process of bathing, which in itself is an edge, a state of transition and transformation from an unclean state to a state of purity. The act of baptism as a purifying act of immersion in water is evident

throughout history. The ancient Greek word baptizo was meant to express the immersion or washing of one's body as a religious rite or ritual. Homer mentions the washing of hands before prayer, and the purification of an entire army with water in the Iliad. And in ancient Babylon, water was an important spiritual cleansing agent. The Nile's cold water was believed to have regenerative powers and was used to baptize the dead in a ritual based on the myth of Osiris' death in the Nile. This ritual symbolically represented one's death to the life of this world. Today, Christians participate in the sacrament of baptism as repentance for the forgiveness of sins and the opportunity to live a new life.

Thus I have decided to continue the cycle of ruin by proposing a Bath House that will provide experiential healing baths for the public. Here, man will be able to become in touch with himself and his collective history as a species that longs for renewal. Through his participation in the ritual of bathing, a parallel can be drawn between his change of state from unclean to pure and the ancients' transition from sin to renewed purification. Man and the world being a part of the creator himself, strives to be as close to the perfection as possible - through new beginnings and purifications.

Thermal Baths

Sutro Baths are a part of the cycle of ruin; from the innate desire of man to build upward to the downward destruction of nature (in this case embodied by fire). This has placed the site as a frozen piece of history in the continuum of time. I have decided to activate the cycle of ruin through architecture that will continue the story. The ruins will preserve the essence of the site's historicity while the new archi tecture of experiential thermal baths will awaken in the visitors a connection between conditions of the present and the conditions of the past.

The cycle of time and nature has spurred me to bring back to life the historical ruins of Sutro Baths. The Baths were embedded in the natural settings to rejuvenate the visitors. Preserving the essence of its historicity. I will raise that respectfully to the level of their original attraction – to then being the experiential healing baths – to elevate, to exhilarate while maintaining the integrity of the site.



By taking pieces from each case study and applying them to the over arching thesis questions a building typology and program has been conceived.

Characteristics

The facade of grey brick integrates the remnants of the church's facade into a new face for the contemporary museum. Articulated with perforations, the brick work allows diffused light to fill specific spaces of the museum. As the city that was almost completely destroyed in World War II, the museum houses the Roman Catholic Archdiocese's collection of art which spans more than a thousand years. Zumthor's design delicately rises from the ruins of a late-Gothic church, respecting the site's history and preserving its essence.

Zumthor, consistently mindful of the use of the materials, and specifically their construction details, has used grey brick to unite the destroyed fragments of the site. tion details, has used grey brick to unite the destroyed fragments of the site.

Location: Cologne, Germany Architect: Peter Zumthor Year Completed: 2008 Size: 1,750 m² (17 rooms) Type: Art Museum & Exhibit Cost: 43.4 million euros

lowing case studies has inspired the premise

Summary

of this Thesis Proposal.

Situated in Cologne, Germany, a city that was almost completely destroyed in World War II, the museum houses the Roman Catholic Archdiocese's collection of art which spans more than a thousand years. Zumthor's design delicately rises from the ruins of a late-Gothic church, respecting the site's history and preserving its essence. "They believe in the inner values of art, its ability to make us think and feel, its spiritual values. This project emerged from the inside out, and from the place," explained Zumthor at the museum's opening.

Kolumba Museam | 06 |



These fragments include the remaining pieces of the Gothic church, stone ruins from the Roman and medieval periods, and German architect Gottfried seasons change, the" mottled light shifts and plays across the ruins," creating a peaceful ever-changing environment. The museum includes 16 different exhibition rooms and, at the heart of the building, a secret garden courtyard – a quiet and secluded place for reflection.

The materiality plays such an important role in the overall design that Zumthor, known for taking his time to develop projects, searched guite a while for the perfect material. Handcrafted by Petersen Tegl of Denmark, the bricks were specifically developed for this project, as they were fired with charcoal to imbue a warm hue.

History of St. Kolumba

Throughout the history of Cologne, since the earliest Roman settlements, churches have stood on the site where the Kolumba Museum stands today. In medieval times, when the Saint Kolumba parish was Cologne's largest and most dominant the splendid Kolumba Church was built to properly demonstrate the power of the parish. It stood until 1943, where the site was tragically demolished along with the rest of the city - by the allied air strike. Since then, the ruins were largely left untouched, with the exception of a small octogonal chapel built in 1949 by local architect Gottfried Böhm in rememberance of the devastating bombing. It might appear to be hopeless to reconcile these many layers of history, but it seems Zumthor chose to to see it as a challenge and he has intelligently managed to add to the architectural continuum, while keeping and embracing the preexisting fragments.

Kolumba Museam | 07 |



Kolumba Museam | 08 |

The building does not reveal a lot from the outside. Apart from a series of holes puncturing the facades halfway up and some large, square windows, it appears to be a closed box of slender and neatly aligned light grey bricks. But entering from the foyer into the main room of the museum's lower level, everything falls into place.

The walls are windowless apart from the perforations lining the top, casting filtered light into the double height room. A zigzagging pathway guides you through the archaeological excavations between slim concrete columns pinning up the ceiling. As you stand amidst the room with all layers of history exposed, protected by the outer walls that gently wraps everything together, there is a serene calmness and odd timelessness. Kolumba Museam | 09 |



Floor Plans

First Floor

Kolumba Museam | 10 |



Kolumba Museam | 11 |



Analysis

There is a proportional relationship between rectangular elements of plan and section at an approximate 1:3 ratio. This relationship can be sensed when one stands within the thin confines of the linear space leading up to the entry staircase. Tall, monolithic walls suggest that the visitor imagine the building in section as they proceed to the museum. This thin massing element is an important juxtaposition to the large exhibit space that spreads out in both width and length. The circulation of this space is determined by winding paths that divide the vast openness into manageable sections. Geometrically, this makes sense for the layout of a museum in which visitors are encouraged to roam. By contrast, the thin, rectilinear geometry of the entrance produces a directness. It leads the eye up and forward toward the museum. The eye is also drawn upward in the contemplative space of ruin, where punctuations in the walls let natural daylight and noise from the street into the quiet, contemplative house of ruin. In this sense, a hierarchy is established which is continued throughout the building. The visitor is encouraged to look up and forward where lighter elements of the building rest atop the dense materiality of the base. In the museum, gaps between masses reveal slivers of light and, in rare instances, natural daylight is allowed to flood into the building through floor-to-ceiling glazing. The structure of the building adds to the gravity of the contrast between light and heavy elements. Zumthor built upon stone ruins with brick and incorporated large, monolithic loadbearing walls of smooth stone.





Section Cuts

Section A

Kolumba Museam | 13

Therme Vals

Location: Graubünden, Switzerland Architect: Peter Zumthor Year Completed: 1996 Size: 5,800 m² Type: Hotel & Spa Cost: 16.5 million euros

Summary

Built over the only thermal springs in the Graubünden Canton in Switzerland, The Therme Vals is a hotel and spa in one which combines a complete sensory experience designed by Peter Zumthor. The idea was to create a form of cave or quarry like structure. Working with the natural surroundings the bath rooms lay below a grass roof structure half buried into the hillside. The Therme Vals is built from layer upon layer of locally quarried Valser Quarzite slabs.



Therme Vals | 15 |

Therme Vals | 16 |



Characteristics

This stone became the driving inspiration for the design, and is used with great dignity and respect. This space was designed for visitors to luxuriate and rediscover the ancient benefits of bathing. The combinations of light and shade, open and enclosed spaces and linear elements make for a highly sensuous and restorative experience. The underlying informal layout of the internal space is a carefully modelled path of circulation which leads bathers to certain predetermined points but lets them explore other areas for themselves. The perspective is always controlled. It either ensures or denies a view.

Floor Plans



Analysis

The thin, rectangular shapes of the individual pools are proportional to individual floors in section. When added together in various combinations, the rectangular base shapes can configure square sauna spaces, lockers, and toilets that reflect the changing floor heights in section as they grow taller when embedded into the mountain. This relationship can be felt as one feels the stone walls of the spa, built of the same material as the mountain itself. The structure of the load-bearing walls emanates a gravity similar to that of the mountain. Geothermal energy courses through the stone to heat the baths. The heavy rectilinear geometry of the walls creates spaces with many right angles. Bathers can be found relaxing in these intimate alcoves. The tectonics of the massive structural elements coming together at right angles produces a heaviness. However, the light, airy atmosphere of the outdoor pool is a breath of fresh air. The contrast between the heavy language of interior spaces and the light quality of the exterior pool gives this space hierarchy. Bathers can be observed floating between the two in a state of equilibrium. Natural light floods into the bath house through giant floor to ceiling glazing at one edge. Lounging next to these windows also provides a reprieve from the pressing weight of the pools carved into the mountain.mal layout of the internal space is a carefully modelled path of circulation which leads bathers to certain predetermined points but lets them explore other areas for themselves. The perspective is always controlled. It either ensures or denies a view.

Therme Vals | 17 |

Section A Therme Vals | 18 |



Section B Therme Vals | 19 |



Therme Vals | 20



Section Cuts

Location: Budapest, Hungary Architect: Budapesti Műhely Year Completed: 2010 Size: 4,960 m² Type: Thermal Baths

Summary

Originally built in the 1500s, the thermal baths were expanded to their current size in the 1800s, and have been con-

tinually used by locals since opening. The ornate romantic halls and tiled rooms were created in 1865 by architect Miklós Ybl, including the recently updated all and shower corridor. Parts of the corridor walls were destroyed during World War II, exposing some of the bubble shaped backs of interior rooms.



Rácz | 21 |

Characteristics

For the renovation, the architects further accentuated these bubble shapes, removing walls and replacing them with clear glass to maximize views within the building. Smooth white plaster was put over the bubble backs, creating an almost lunar landscape within the bathhouse. Artificial light, heating or ventilation aren't used in Turkish baths, so the renovation reflected this. Rounded skylights were added throughout to continue the orb shape theme, as well as infuse natural lighting into the bathhouse while preserving privacy. The skylights were also installed on different floors, connecting each space with light and maximizing its effect. Rácz | 22 |



Floor Plans









Analysis

The historical elements of the Racz bath house compose an interesting relationship between plan and section. The circle found in plan at the central bath is present also in section within the vaulted dome that rises above it. The modern additive elements have a proportional relationship to one other through plan and section at an approximate ratio of 1:3. The transition between these two geometrical qualities of spaces defines the strength of this project. The ancient geometry of the dome and the modern cubistic

geometry surrounding it juxtapose one another to establish a condition of centralized hierarchy at the point of focus: the restored ancient Turkish bath. The linear circulation of spaces around it leads the visitor inward toward it where natural light pierces through an opening at the top of the dome with a god-like presence. By contrast, the modern additive elements are bathed in a homogenous blanket of natural light let in through large panels of glazing. The structure of the bath house is a mix of original masonry and concrete columns. Where original baths have been preserved, the masonry has been cast over with concrete to produce a whitewashed perspective of the bulbous walls from the outside.



History

Situated at the foot of Gellért Hill, the Bath was founded probably during the ruling time of Sokollu Mustafa Pasha around 1560. The Turkish bath, the oldest part of the building, stayed fortunately unharmed when the long Turkish siege was over after the Battle of Buda (1686). As a result, the building's ownership went for a while to the Austrian Kaiserlich Chamber and then in the 1860s to the Heinrich family. The wealthy family commissioned Miklós Ybl, a renowned architect of his time, to renovate (1864-65) and to extend the building with several new bathing parts (1869-70) in his romantic style. But before any extension could be made, the Heinrich family had to purchase the necessary ground floor areas in small plots one by one, since this part of Buda was a densely populated area at that time. This caused certain suddenness in the extension method and a highly complex spatial structure. Thus, the recent renovation had to solve not only the reconstruction of different styles, but also to harmonically unify the overlapping historical building parts with the new facilities.

Major Project Elements

These are spaces that will be accesible to all the visitors of the building.

Hall with Saltwater/Circulation Sweat Chambers (Humidity 75 - 100%) Indoor Baths Outdoor Baths Cold Water Baths (14°-16°) Hot Water Baths (42°) Terraces/Public Viewing Area Museum/Display Area displaying information about the history of the site.

Point of Access/Exit Indoor Rest Spaces Outdoor Rest Spaces Massage Rooms Hotel Rooms Bike Storage

Spa/Sauna Restrooms Changing Rooms Bar and Beverage Spaces/Cafe These are spaces that will be accesible to only the staff at the building.

Circulation Water Purification Room to keep the water clean. Temperature Room for controlling the temperatures of water. Meeting Spaces Conference Rooms Mechanical Pump Room to circulate sea water in and out of the building.

Point of Access/Exit Bath Attendants Custodian Room Offices Staff Locker Rooms Staff Bike Storage

First Aid Room Staff Restrooms Breakout Spaces Staff Cafe

MEDIUM

SMALL

PUBLIC







PRIVATE



User/Client Descripction

The project will be designed for tourists and locals of San Francisco and will be purchased by the city as an investment in the well being of its people.

Guests Peak Time 7 a.m. - 7 p.m. Parking 50 - 100

Office Staff Peak Time 9 a.m. - 5 p.m. Parking 20 +

Hotel Staff Peak Time 24 hr. Parking 20 +

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The Site

Located at the westernmost point of Lands End, the historic Sutro Baths was once a lavish swimming facility and museum built in the 19th century by former San Francisco mayor Adolph Sutro. The facility was enclosed by 100,000 square feet of glass.

Though the grand structure was destroyed by fire in 1966, the foundations are still visible on the rocks, north of the site.

The remains of the Sutro baths have encouraged me to bring them back to life. The Baths were embedded in the natural settings to rejuvenate and enhance the lives of the visitors. The ruins preserve the essence of its historicity. Thus, I want to raise that respectfully to the level of multi sensory architecture by designing experiential healing baths – to elevate, to exhilarate while maintaining the integrity of the site.

San Francisco



Map of Califonia





Area of the Site: 432,015 sq. ft.

The ruins of Sutro Baths are essentially an extension of nature into the man-made realm, providing the ground for perception and the horizon of experiencing and understanding the world. The low stone and the concrete walls are merging with the background and the structure is extending into the ocean, blending with the waves and creating its own soothing sound. The horizon far away seemed to extend its arms to meet the waters and the land. The continuity of time can be experienced here at this place. Architecture domesticates limitless space and enables us to inhabit it. Major Roadways San Francisco



Map | 34 |



Major Roadways Richmond District



- SEA CLIFF
- 02 PRESIDIO MIDDLE SCHOOL
- 03 GEORGE WASHINTON HIGH SCHOOL
- 04 LANDS END PARK
 - PALACE OF THE LEGION OF HONOR

- 06 SAN FRANCISCO VA MEDICAL CENTER
- 07 SUTRO HEIGHTS PARK
- 08 SUTRO BATHS
- 09 SEAL ROCK BEACH

The Site

The ruins of Sutro Baths exist at an edge, at the edge of coast and sea, at the edge of past and present, and at the edge of creation and destruction.

At the time when the Sutro Baths still existed the power of the Pacific Ocean during high tide could fill the 1.7 million gallons of water required for all the pools in just one hour. The Baths could accommodate 10,000 people at one time and offered 20,000 bathing suits and 40,000 towels for rent.







View

01

This view of the Sutro Baths looks at the center most part of the site.

Standing upon the ruins one can see the neibhorhood close to the Sutro Baths. Being so close to the beach there are not many houses around but since the site is famous for its historicity there are some new upcoming cafes and resaurants around the site.







Sutro Baths| 39 |

View

02

This view of the Sutro Baths looks at the center and the southern side of the site.

This picture is taken standing in the area where the saltwater pools existed before the Sutro Baths burned to the ground. One can see only the stone structure which was capable of withstanding the destruction for all these years is the only thing that lies on the site now.





Sutro Baths| 40 |

View

This view focuses more on looking at the tunnel system which was used to bring in the salt water and heated to different temperatures for people to swim in.

The Pacific Ocean during high tide could fill the 1.7 million gallons of water required for all the pools in just one hour.



View

04

This photograph captures the place where the changing rooms stood when the Sutro Baths still existed. The Baths could accommodate 10,000 people at one time and offered 20,000 bathing suits and 40,000 towels for rent.

Now it has become a common place for the homeless to spend the night in due to the sites location.





The Project Emphasis

This project examines the architectural significance of

Why is that ruins fascinate our era? Why do architects feel the need to preserve and build upon them?

The primary objective of this project is to investigate if Ruins are stories that are half written completed by our own memories and imagination. In particular, a complex interplay of presence and absence is constructed, determinacy and indeterminacy takes place. It brings about the material conditions for a veritable scenography of the empty and the full, the discontinuous and the continuous.

Ancient and sacred experiences of bathing and their continual relevance today

Hot baths, saunas, steam rooms, hot springs – spa culture takes on various forms throughout the world, and learning to relax like a local is a top attraction in many destinations. But as twisted as bathhouse culture has become with many modern day societies, the seemingly omnipresent practice of using heat to release toxins is actually tens of thousands of years old, dating back to the Neolithic Age when nomadic tribes would find relief from the bitter cold by soaking in the various natural hot springs they stumbled upon around the world.

Therapy through water

Hydrotherapy, or therapy through water is a part of medicine and alternative medicine, in particular of naturopathy, occupational therapy and physiotherapy, that involves the use of water for pain relief and treatment. The term encompasses a broad range of ap proaches and therapeutic methods that take advantage of the physical properties of water, such as temperature and pressure, for therapeutic purposes, to stimulate blood circulation and treat the symptoms of certain diseases.

Various therapies used in the present-day hydrotherapy employ water jets, underwater massage and mineral baths, whirlpool bath, hot Roman bath, hot tub, Jacuzzi and cold plunge.

Goals

The Academic

Through this project I will research on how the sense objects can unravel our inner self, how the sensory modalities can manipulate the human perception and make architecture more meaningful. "We don't just experience buildings and the cities and their history superficially – we live them", as Juhani Pallasmaa puts it.

I want to reinforce the sense of self and ground it in architecture through well researched knowledge. I want to read and study thoroughly how materiality can change the perception of people. This study of the theories will help giving more meaning to my designs.

Besides I will also gain proficiency in programs such as Revit, Rhino and also rendering softwares so that designs are not only rooted but are also smart.

The Professional

Professionally I will transcend the old into the new by showing how history can be tied with new technologies. How the journey of the old into the new takes place.

Besides the current issues and the questions which are relevant to today's world and cultures will be explored by me. I will make my designs more buildable as well as sustainable, thereby merging the theoretical and the practical aspects of deign.

The Personal

This project will be instructional in helping me evolve and grow as I research on how materials manipulate our inner self. It will surely impact my work ethics; it will help me explore my relationship with the world, the people, the materials and most importantly with myself.

The project will also help me in managing my time more meaningfully. I will go into dedicated study of theoretical aspects of architecture and history of architecture. This will further widen my horizons and also my reading abilities will be thorough.



A Plan for Proceeding

Research and design inputs will build and document the project by developing a single source document. The relevant sources will be mentioned in the final book form presentation, those that significantly contributed to the project. Research will be base3d on the unifying idea, the program of the project, historical context and site analysis. The project will be compiled and then presented

in a book format followed by an oral presentation. The project will be submitted as a digital copy to the North Dakota State University Repository so that it is available and accessible through the internet to the public and becomes a resource for architecture students all over the world thereby helping in advancement of architecture.

There will be employment of various mediums to effectively and clearly communicate the methodology of the design solution.

Intent

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The project deliverables will be:

Book: Project proposal, program, design solution and appendix of information such as floor plans, section cuts and elevations will be detailed in the comprehensive report.

Boards: To meet the thesis program reguirements the comprehensive project synopsis will be displayed and plotted on the boards.

October 15 Thesis Proposal Due November 26 - 29 Thanksgiving December 14 Program Due December 18 Christmas Break January 12 First Day of Classes January 18 No Class - MLK Day March 7 - 11 Mid-Term Reviews April 15 Book to Print (Blurb) April 21 Project Complete May 02 - May 05 Thesis Reviews Mon May 14 Commencement Sat



Schedule | 43 |

Model/Artefact: To clearly articulate the metaphor and final design solution multiple physical models and an artefact will be constructed. A relationship to the sites surroundings will be displayed by creating a highly detailed context model.

Presentation: In order to describe the extent of the project an oral and a multimedia presentation will be made. Adobe Creative Cloud will be used as a platform to create these presentations in the hope that it will make the presentation more dynamic and effective.

Once the program phase of the project is accomplished the next step will the conceptual design phase. A site context model will be constructed on the computer using Sketch up. A physical model of the site will also be constructed using the wood shop, laser cutter and the 3D printer depending upon the complexity of the site. To maximize the design iteration time a context model that is ready for rendering in final production will also be created. The spatial requirements established in the design phase will be considered while exploring conceptual massive environments and multiple design options by using softwares such as but not limited to Sketch up, Revit and Vasari. Overall forms and shapes will be decided after simultaneous research on the design moves and by constructing mass

models which will be presented in class and reviewed as a whole group. Adobe Creative Cloud as well as hand sketching will be used throughout the iteration process so that the forms can be analyzed that are established as a means of markup and critique. The entire process will be documented as and when it was created so that a clear design process can be maintained for the final design solution. The essence of the site and of the design problem will uncovered by using a variety of mediums and incorporating key design components. In order to clearly convey the metaphor used to solve the design problem an artefact will be constructed and presented. There will be critiques of the design solution, the artifact and the thesis narrative every week until the development stage to give room for better ideas and growth of the project and as well as me as a designer.

ntation Production and representation of this project will be done in a very detailed and proficient manner as this project is a capstone to the final year of architecture. Dedicated efforts and proficiency will be put in to create photo realistic renderings and a highly detailed physical model so the project is highlight-Q ed in its final setting. The renderings Φ will be done using Maxwell Render or 3DS Max and fine-tuned using Adobe **M** Creative Cloud. The final design vision will conveyed by furnishing the floor plans which will highlight the structure 0 and the interior programmatic func-Ę tion. The elevations and sections will Ū be detailed and developed for a clear J understanding of all the facades and σ interior spaces of the building. Key dis-5 covery and transitions points from the in class critiques and reviews will be

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Key discovery and transitions points from the in class critiques and reviews will be incorporated in the final presentation and thesis book. A whole process timeline to show the development of the design will be developed. The importance of an artefact can never be underrated. An artefact will be developed and performed at the presentation in hopes of conveying the philosophical aspect of the project. The book will be printed using Blur. com and will include the Proposal, Program, Design Solution and Appendix. Finally a digital copy of the project will be published to the North Dakota State University Repository as a means of inspiration for the future students of architecture.



Theoretical Premise

Sutro Baths was once a pleasure palace for the citizens of San Francisco, an enormous indoor bathing area – the largest in the world. Today it lies in ruin at the edge of the ocean, the result of a mid century fire. This thesis proposes to build upon the ruins of Sutro Baths that are slowly being eroded by the passing tide.The intention of this Bath House is to provide experiential healing baths for the public. **WATER** as an agent in ritual purification is a feature of many religions. The act of baptism as a purifying act of immersion in water is evident throughout history.

water was believed to have regenerative powers and was used to baptize the dead in a ritual based on the myth of Osiris' death in the Nile. And today, Christians participate in the sacrament of baptism as repentance for the forgiveness of sins and the opportunity to live a new life.

Another example that suggests that water is inclined towards good (purification) is indicated by Gaston Bachelard in Water and Dreams: An Essay On the Imagination of Matter, "Wash me and I shall be whiter than snow." It is because water has an inner power that it can purify the inner being, that it can give back to the sinful soul the whiteness of snow. He who has been sprinkled physically is cleansed morally. Here water is no longer thought of as substance but as a force. For example, pure matter radiates in the physical sense of the term, it radiates purity.

The role of water as a purifying agent

Water can refer more narrowly to a particular chemical compound that is found in different forms, and more broadly to a liquid of impure chemical composition, of which seas, lakes and rivers are composed, and which falls as rain and issues as springs. Ivan Illich, in H2O & the Waters of Forgetfulness: Reflections on the Historicity of Stuff notes that, "water was stripped of its aura in the modern age of plumbing." "By 19th Century water had lost its power of ritual purification and become a mere cleansing agent." It is this dominant metaphor: *Water as a purifying agent,* is of primary concern in this thesis.

The use of water in ritual purifications has been mentioned throughout history. Homer mentions the washing of hands before prayer, and the purification of an entire army with water in the Iliad. And in ancient Babylon, water was an important spiritual cleansing agent. In Ancient Egypt The Nile's cold



Another of Gaston Bachelard's views that is worth highlighting here is that the psychology of purification is dependent upon material imagination and not on an external experience. This is can be explained using the example of running or gushing water which is primitively *living water*. It is this life that remains attached to its substance which accomplishes the purification. All purification must be thought of as a substance.

This thesis intends to provide that space for material imagination where one can become in touch with himself and his collective history as a species that longs for renewal. Through participation in the ritual of bathing, a parallel can be drawn between a change of state from unclean to pure and the transition from sin to renewed purification.

Baptism | 46 |

Symbolic Recreation & the Significance of Ritual

The ancient mans way of seeing the world was very differet than what the world in seen as today. The differences between modern and ancient man is that the phenomenal world for modern man, is primarily an 'It'; and for the ancient and primitive man, the world is perceived as a 'Thou'. Henry Frankfort in Before Philosophy: The Intellectual Adventure of Ancient Man compares how the ancients saw the world and themselves to how we see the world and ourselves today. "The world appears to primitive man neither inanimate nor empty but abundant with life [...]

Any phenomena at a time may face him, not as 'It' but as 'Thou'", an emotional presence that may manifest itself as a thunderclap, sudden shadow, or an eerie and unknown clearing.

Ancient man has always understood the world through a structure of myths and fantasies. It was believed that the Gods that were present in these myths and fantasies and nature that had changing personalities had to be appeased for the protection of man. For this reason ancient man was perpetually participating in rituals to mediate reality. These rituals were performed through particular actions in distinctive cultres. For exapmle the Mesopotamian view of the world was that we were created to serve the gods. This view of the world as a state was based on many levels of power and made man a slave to cosmic forces. Eveything that happened, good or bad was based on mans actions. The only means of influencing the Gods was through prayer and sacrifice.

Another important riual involved the ushering in of the New Year. Time for primitive man was cyclical, starting anew with the restoration of primordial time at the end of each year. Mircea Eliade writes, "Since the New Year is a reactualization of the cosmogony, it implies starting time over again at its beginning, that is, restoration of the primordial time, the "pure" time, that existed at the moment of Creation." "This is why the New Year is the occasion for "purifications," for the expulsion of sins, of demons, or merely of a scapegoat".



Animal Sacrifice | 48 |



Ancient man could also become close to the moment of creation at the edge of the earth, where he believed the universe originated. Unlike modern man's conception of linear time, ancient man's cyclical view of time implied a certain interval coming to an end in order to make way for the new beginning. "It is also a matter of abolishing the past year and past time. Indeed, this is the meaning of ritual purifications; there is more than a mere "purification"; the sins and faults of the individual and of the community as a whole are annulled, consumed as by fire."

bolic recreation through participation in rituals in the reactualization of time. "By symbolically participating in the annihilation and re-creation of the world, man too was created anew; he was reborn, for he began a new life." Historically man has desired to come as close as he can to the perfection of beginnings. "Man desires to recover the active presence of the gods; he also desires to live in the world as it came from the Creator's hands, fresh, pure, and strong." He could gain this by symbolically participating in the rebirth of time. "Life cannot be repaired; it can only be recreated through symbolic repetition of the cosmogony, for, as we have said, the cosmogony is the paradigmatic model for all creation." In this way man was purified.

Seduction of the Edge

Edward S Casey writes, "Edges act both to protect us from what threatens on the other side, as well as block us in our forward movement". For the most part, edges are obstructive, something that we have to get around to get somewhere else. They hold us back, or at the least make us consider what to do next. They stand in our way, or else they lead us to change our direction if we are already on our way.

The ruins of Sutro Baths exist at an edge, at the edge of coast and sea, at the edge of past and present, and at the edge of creation and destruction. What was once destroyed by fire is now washed over with water as the borders of this edge condition are blurred.



Essence of Ruin

As stated by Tim Edensor "As residues of the past that have been rejected or by-products of economic progress, ruins can become the site of a critique of the ideology of progress, of the ever-more-stringent forward movement of history." ." Because they are frozen in time ruins force us to slow down and reflect upon the transience of man, to think back to a time when things were slower, more pure, as in the primordial time of creation. Historically, areas of ruin spoke not only of the horrors of war, but also the possibility of renewal and rebirth.

"Ruin" means "collapse"-but as described by Svetlana Boym, ruins are more about remainders and reminders. They are stories that are half written completed by our own memories and imagination. Ruins make us participate in rituals that were laid down before our individual lifespans. Ruins make us think of the past that could have been and the future that never took place, persuading us with dreams of escaping the irreversibility of time. In particular, a complex interplay of presence and absence is constructed, determinacy and indeterminacy takes place. It brings about the material conditions for a veritable scenography of the empty and the full, the discontinuous and the continuous.

For Simon Schama ruins remind us of the narrative of humanity, of the "instability of built grandeur, of the chronicles of heady



calamitous risings and tumblings" that constitute it. There is a constant cycle of the building up of the human environment and the crumbling down by natural or man-ensued means.

The ruin of a building, means that where the work of art is dying, other forces and forms, those of nature, have grown; and that out of what of art still lives in the ruin and what of



nature already lives in it, there has emerged a new whole, a characteristic unity. It is the fascination of the ruin that here the work of man appears to us entirely as a product of nature. The same forces which give a mountain its shape through weathering, erosion, faulting, growths of vegetation, here do their work on old walls. Even the charm of alpine forms-which for the most part, after all, are clumsy, accidental, artistically insipid-rests on the felt counter play of two cosmic tendencies: volcanic eruptions or gradual stratification have built the mountain upward; rain and snow, weathering and landslides, chemical dissolution and the effect of gradually intruding vegetation have sawed apart and hollowed out the upper ledge, have cast downward parts of what had been raised up, thus giving the contour its form. In this form, we feel the vitality of these opposing

Leptis Magna Ruins | 52 |

tendencies-and, instinctively sense this dichotomy within ourselves. We notice that the composition of this configuration lies within the serene unity of these upward and downward forces.

Relevance of the Site

As it has been suggested by Mircea Eliade "This is the meaning of ritual purifications; there is more than a mere "purification"; the sins and faults of the individual and of the community as a whole are annulled, consumed as by fire." Wouldn't it be fair then to claim that the Sutro Baths were purified as they burned to the ground, leaving only ruin in their wake? The ruins provide groundwork for rebirth.

The ruins of Sutro Baths are an extension of nature into the man-made realm, providing the ground for perception and the horizon of experiencing and understanding the world. The ruins exist at an edge, at the edge of coast and sea, at the edge of past and present, and at the edge of creation and destruc-

tion. What was once destroyed by fire is now washed over with water as the borders of this edge condition are blurred. The low stone and the concrete walls are merging with the background and the structure is extending into the ocean, blending with the waves and creating its own soothing sound. The horizon far away seems to extend its arms to meet the waters and the land. The continuity of time can be experienced here at this place. We are invited to participate in the ritual of restoration. The life cycle of the site has been returned to a new beginning. However, the past has not been abolished but left manifest as the scars of ruin. The site has been purified through fire and rebirth and thus is suited for the process of bathing,

which in itself is an edge, a state of transition and transformation from an unclean state to a state of purity.

Sutro Baths are a part of the cycle of ruin; from the innate desire of man to build upward to the downward destruction of nature (in this case embodied by fire). This has placed the site as a frozen piece of history in time. This thesis intends to activate the cycle of ruin through architecture that will continue the story. The ruins will preserve the essence of the site's historicity while the new architecture of experiential thermal baths will awaken in the visitors a connection between conditions of the present and the conditions of the past.

A quiet, intimate setting will provide guests

with an opportunity to be transported from their everyday reality to a more self-conscious experience, connecting micro to macrocosm, present reality to cultural history.



Summary of the Theoretical Premise

On the north-western edge of San Francisco are the historically protected ruins of the once grand Sutro Baths built by Adolph Sutro. On March 14, 1896 the Sutro Baths opened to a dazzled public at a cost of more than \$500,000. Spread over three acres, the artistic detail and engineering ingenuity were impressive.

The Baths massive glass enclosure containing one fresh water tank and six salt-water tanks, all at various temperatures. Together the pools held 1,685,000 gallons of seawater and could be filled or emptied in one hour by the high or low tides.

Historicism & Phenomenology

Ruins are stories that are half written completed by our own memories and imagination. In particular, a complex interplay of presence and absence is constructed, determinacy and indeterminacy takes place. It brings about the material conditions for a veritable scenography of the empty and the full, the discontinuous and the continuous. "As residues of the past that have been rejected or by-products of economic progress, ruins can become the site of a critique of the ideology of progress, of the evermore-stringent forward movement of history." Because they are frozen in time ruins force us to slow down and reflect upon the transience of man, to think back to a time when things were slower, more pure, as in the primordial time of creation. Historically, areas of ruin spoke not only of the horrors of There were 20,000 bathing suits and 40,000 towels for rent as well as slides, trapezes, springboards, and a high dive for up to 1,600 bathers.

Over time, the Baths became less popular, due to the Great Depression, reduction in available public transportation and new public health codes. In 1964, developers with plans to replace the Baths with highrise apartments bought the site and began demolition of what was a great structure. In 1966, a fire destroyed what was left of the Baths; the city did not pursue the high-rise apartment plans.

war, but also the possibility of renewal and rebirth. Here, we find conditions conducive with purification.

The ruins of Sutro Baths exist at an edge, at the edge of coast and sea, at the edge of past and present, and at the edge of creation and destruction. What was once destroyed by fire is now washed over with water as the borders of this edge condition are blurred. The low stone and the concrete walls are merging with the background and the structure is extending into the ocean, blending with the waves and creating its own soothing sound. The horizon far away seems to extend its arms to meet the waters and the land. The continuity of time can be experienced here at this place. We are invited to participate in the ritual of restoration. The life cycle of the site has been returned to a new beginning.

However, the past has not been abolished but left manifest as the scars of ruin. The site has been purified through fire and rebirth and thus is suited for the process of bathing, which in itself is an edge, a state of transition and transformation from an unclean state to a state of purity. The act of baptism as a purifying act of immersion in water is evident throughout history. The ancient Greek word baptizo was meant to express the immersion or washing of one's body as a religious rite or ritual. Homer mentions the washing of hands



Conclusion

This theis will continue the cycle of ruin by proposing a Bath House that will provide experiential healing baths for the public. Here, man will be able to become in touch with himself and his collective history as a species that longs for renewal. A guiet, intimate setting will provide guests with an opportunity to be transported from their everyday reality to a more self-conscious experience, connecting micro to macrocosm, present reality to cultural history. The ruins will preserve the essence of the site's historicity while the new architecture of experiential thermal baths will awaken in the visitors a connection between conditions of the present and the conditions of the past. Through man's participation in

before prayer, and the purification of an entire army with water in the Iliad. And in ancient Babylon, water was an important spiritual cleansing agent. The Nile's cold water was believed to have regenerative powers and was used to baptize the dead in a ritual based on the myth of Osiris' death in the Nile. This ritual symbolically represented one's death to the life of this world. Today, Christians participate in the sacrament of baptism as repentance for the forgiveness of sins and the opportunity to live a new life.

Sutro Baths | 54 |

the ritual of bathing, a parallel can be drawn between his change of state from unclean to pure and the ancients' transition from sin to renewed purification. Man and world being a part of the creator himself, strives to be as close to perfection as possible – through new beginnings and purifica tions.

Water is the transitory element, the embodiment of flux, compromise, fluidity, pliability, mixing; it demonstrates the endlessly changing substance of our own essential being, teaching us that our destiny is that of flowing water. Water instills a taste for infinity; we feel transported because we are carried by water's current.

Project Justification

It is evident throughout history that water was considered more than mere cleansing agent, it was seen as a purifying agent. An element that had qualities to tranform one from a state of unclean/impure to pure. And Gaston Bachelard talks about the elemental substances of water as it plays throughout our lives, our reveries and our poetry. "One dives into water in order to be reborn and changed. The material imagination of water allows us to de-objectify objects and deform forms enabling us to dream, imagination and perceive the flow of soul in world.

Using these qualities of water I intend to provide the residents of San Francisco and the visitors of the Bath House a place to slow down perceive their lives in a disparate way. To understand their place in the present world by basing it in a broader historical context. grams such as Revit, Rhino and also rendering softwares so that designs are not only rooted but are also smart.

This project also requires the understanding of the integration of water in architecture and how it can be used with architecture to change perception of people.

Importance to Society

Our construct of the reality we believe past industrial revolution is highly specialized and prodctive mode of living. Jacques Ellul writes in reality technique has become more than the machine "...technique has taken over all of man's activities, not just his productive activity." Humans are treated as a pieces of a whole, a cog in this machine of progress. This production line did not just speed up work, it sped up the worker, and disintegrated the human into its components.

The goal of this thesis is to slow down the fast paced mechanic lives of people and bring back quality of life. Through my architecture I want to give people the opportunity to step back and realize what it is to be human, with individualized passion and goals. The intention is to provide a setting to escape hyperreality, meditate, contemplate and relax.

As said before water is a purifying agent through material imagination. But it is this ideology of progress that has changed our mental construction towards water to a mere cleansing agent and stopped us from seeing the qualities of water.

Water is of the earth and humans of the water (97%) immersion in water begins a sensual body drive experience rather than a mental, mechanical experience and my architecture will continue this experience.

Demonstration of Knowledge & Skills

From an academic standpoint, the project encompasses a wide range of skills and knowledge base that ties the present to the cultural and historical. This project by tying the past with the present and the micro with the macrocosom intends to come up with a design that will change how an individual perceive their life.

Because this is primarily an academic project, this study of the theories will help giving more meaning to my designs. Besides I will also gain proficiency in pro-

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Finally, this project is something that San Francisco needs. After the destruction of Sutro Baths there is no other Bath House that the city has. And bringing these Baths back to life can help people who were alive at the time of the Sutro Baths by reconciling the past with the present.
Historical Context

History of San Francisco

San Francisco, is a city located on the tip of a peninsula surrounded by the Pacific Ocean and San Francisco Bay in northern California.

The development of San Francisco as a center of maritime trade, were shaped by its location at the entrance to one of the world's best natural harbors. San Francisco is the name of both the city and the county, which share the same boundaries. Starting over night as the base for the gold rush of 1849, the city immediately became the largest and most important population, commercial, naval, and financial center in the West.



It was devastated by a great earthquake and fire in 1906 but was quickly rebuilt. It remains the leading financial center,[dubious – discuss] and has grown wealthy in recent years by its proximity to Silicon Valley. Covering three acres, six tide-fed seawater pools of varying sizes and temperatures were housed under enormous glass arches. The construction required 10,000 barrels of cement, 1.7 million gallons of sea water, and \$1 million 1896 dollars. A promenade overlooking the pools featured a museum of curiosities collected by Sutro on his travels, including exotic plants, taxidermy, geologic specimens, and Egyptian mummies. Guests could avail themselves of 500 tiny dressing

Early Sutro Baths



Just 20 years old when he arrived in 1850, German born Sutro was an ambitious young engineer.

Starting in the 1880s Sutro began to acquire land on the outskirts of the city, and at one point it was said that he owned as much as 1/12th of the entire city. On the 22 acres of land he acquired along the Pacific coast, he built lavish public gardens, rebuilt the beloved Cliff House into a gingerbread Victorian icon of the city, and began works on what he first called his 'aquarium'.

The first stages of building was a relatively modest artificial tide pool in the natural cove next to the Cliff House. He then began developing plans for an extraordinary public bath house.



rooms and observation bleachers with seating for 3700 spectators.

A wonder of their times, the baths were at first enormously popular. But over time the costs of maintaining the huge building became a burden. In the 1930s an ice rink was added, and the pools remained open until the 1950s. By 1966 it was destined for demolition, but it caught fire under suspicious circumstances before the process could begin, and was completely destroyed.

The original Statistics of Sutro Baths

The seven pools, the stage, the seating for thousands to observe were all topped by a glazed roof of 100,000 panes of glass to allow the sunlight. Unheated seawater filled the largest of the tanks. The rest were heated to varying temperatures

Length of baths, 499.5 feet.

Width of baths, 254.1 feet.

Amount of glass used, 100,000 superficial ft.

Iron in roof columns, 600 tons.

Lumber, 3,500,000 feet.

Concrete, 270,000 cubic feet.

Seating capacity amphitheater, 3,700.

Seating capacity promenade, 3,700.

Holding capacity, 25,000.

Salt water tanks, 6.

Capacity of tanks, 1,804,962 gallons.

Fresh water, plunge tank, 1.

Toboggan slides in baths, 7.

Swinging rings, 30.

Spring boards, 1.

Private dressing rooms, 517.

Club rooms capacity, 1,110.

Time required to fill tank by waves. 1 hour.

Time required to fill tank by pump, 5 hours.



Sutro Baths Today

Today the site lies in ruin at the edge of the ocean frozen in time.

The ruins are publicly accessible, but the terrain is rough and can be dangerous, especially in bad weather. The main paths however are easy to traverse, and let you get a better look at the parts too dangerous to now enter.



It is still possible to make out the contours of the building, and walk along the sea wall. The only pool that is easy to identify today is the remains of the deep diving pool, which still shows supports for ladders. A cave tunnel through the mountain is also accessible, with views of underwater channels. Another major piece disintegrated is the



wooden platform near the entrance of the cave. One can sit on it while the waves crash up underneath them. The stone and metal structures are nearly indestructible, but a lot of them are currently marred with extensive graffiti.

Historical Precedent

Bathing is the washing of the body with a fluid, usually water or an aqueous solution, or the immersion of the body in water. It may be practised for personal hygiene, religious ritual or therapeutic purposes.

Bathing can take place in any situation where there is water, ranging from warm to cold. It can take place in a bathtub or shower, or it can be in a river, lake, water hole, pool or the sea, or any other water receptacle. The term for the act can vary. For example, a ritual reli-

History of Bathing

As we have said earlier, bathing was a ritual to appease and come close to the Gods and the desire to live in a world as it came from the Creator's hands, fresh, pure and strong. And the God that man desired to connect with was Artemis, also known as Diana, the goddess of huntingand archery, protectress of animals, children, and the weak and feeble, guardian of the woods and springs. She is also often called the moon goddess or associate with the moon, and the moon is the sourceof all water. Artemis and her nymphs would bathe in the natural springs of the forest. (Hauser, 2011, p.17)



gious bath is sometimes referred to as immersion, the use of water for therapeutic purposes can be called a water treatment or hydrotherapy, and two recreational water activities are known as swimming and paddling.

Since the beginning of time, the art of bathing in water has been essential to one's good health and peace of mind. As early as the third century, bathing emporiums quickly became the fashion.

History of Bath House

The medieval bathhouse was where the barber-surgeon piled his trade, trimming beards and also performing minor operations.



Thus Roman thermal baths integrated physicians' offices and operating rooms. In ancient Greece the therapeutic bath was both a place of healing and a cultic site, the physician as balneologist and balneotherapist, thus doctor and at the same time priest. Greek philosophers and doctors recognized and propagated the therapeutic benefits of springwater from the fifth century on, especially Hippocrates, the Father of Medicine, who was born around 460 BC on the island of Cos.

After his death, an asclepieion was erected outside the city of Cos in his memory.

This sacred temple built to honor ASCLE-PIUS was located in a sacred grove at a sacred spring and was gradually enlarged into a rambling sanatorium with terraces, indoor athletic tracks, dormitories for the sick, and treatment rooms. This was the beginning of a cult that also spread in Rome due to an epidemic of the Plague in 293 BC.

In Rome, the Greek god Aesculapius was worshiped and by the Late Roman Empire allegedly over 300 sacred temples with therapeutic springs had been dedicated to him, the Romans called them aquae. Aesculapius was the god of healing and the son of Apollo and Coronis. The legends about his birth diverge, but what seems clear is that he received his medical training from the Centaur Chiron.



At an asclepieion, healing was achieved through ritual washing at the spring, consumption of the water, and sleep, which was called incubatio and took place in a closed room, the abaton: visions during incubatio were interpreted by the priests and converted into therapeutic measures.

Social Context

Adolph Sutro was a firm believer in the health benefits of swimming and social gatherings. His Bath House provided the public with a learning center with museum collections to view as well as circus acts, bands, games and contests. Sutro liked to instruct as well as entertain and that was one of the reasons promenade areas were used to display museum items and collections. Exhibits included Japanese and Mexican items, Egyptian coffins, and Mummies, Esquimaux and American Indian baskets, clothing and curios.

Social Developments

Primitive man like the rest of the animals and plants on earth moved through our natural cycles at nature's pace. Time was marked by the passing of the seasons, the life cycles of human, animal and plant life and the yet grander cycles of the moon and the other celestial bodies. To celebrate this cycle of time, the beginning of a new year and the annihilation of the past man came together and participated in rituals and festivals.

Today our fast paced lives have left us completely frazzled and out of synch with our deepest selves.

The results of this disconnection from nature and nature's pace show up in therapists' and doctors' offices every day. Living under unnatural time pressures causes a myriad of psychological, social and physical ailments. Delinked from the natural rhythms of our bodies and the rest of the planet, we struggle with diminishing success to adapt to the strange mechanical and disembodied world we have created.

Sutro Baths which once served the purpose of social gatherings, entertainment and health was burned down in a fire in 1966 and with that the social aspect that Sutro dreamed of also died. This thesis intends to fill this gap of social gatherings in the public realm and to provide an intemate place where one can come and relax and meditate, contemplate and heal. The new Bath House will provide a quite intimate setting with an opportunity to be transported from their everyday reality to a more self-conscious experience, connecting micro to macrocosm, present reality to cultural history.

"Water is the transitory element, the embodiment of flux, compromise, fluidity, pliability, mixing; it demonstrates the endlessly changing substance of our own essential being, teaching us that our destiny is that of flowing water. Water instills a taste for infinity; we feel transported because we are carried by water's current." (Bachelard, Water and Dreams) These qualities of water combined with the architecture will help visitors to escape their fast paced hyper-realities and reconcile the past with the present.

Cultural Context

Situated on a peninsula separating San Francisco Bay from the Pacific Ocean, San Francisco is a uniquely picturesque city, whose scenic attractions include the largest cultivated urban park in the country, Golden Gate Park. Its steep streets, traversed by the famous cable cars, are home to a remarkably diverse ethnic population, and the city's

Demographics



Cultural Developments

People living in San Francisco seek a healthy life style. With numerous bike paths, restaurants with health food, yoga centers and running paths by the water the city has a hearty and lively feel to it.

During my site visit to San Francisco I visited the Golden Gate Park which is a very big part of the city. It provides a transition from the downtown area to the financial district. A sizeable population of the city endorses health and the benefits of it, which is one the

reasons people can be seen participating in

reputation for tolerance and diversity is also evident in its history.

San Francisco has always been a haven for those seeking to escape the conservative traditions of the East Coast and Midwest. Because it's a major port, it also has attracted large numbers of people from all over Asia and the Pacific.

different activities throughout the day.

Because people and the city itself suatain an innovative and experimental cultural, building upon the ruins and providing a place to contemplate and relax would be supported by the people.

Also by building upon ruin, Adolph Sutros dream of a health and social gatherings would be reborn, which in turn would give the people who were alive at the time when Sutro Baths originally existed a place to reunite their past with the present.

Site Analysis

San Francisco, California

San Francisco, – a small city of around 825,000 poised on the tip of a peninsular on America's western edge is the cultural, commercial, and financial center of Northern California and the only consolidated city-county in California. San Francisco encompasses a land area of about 46.9 square miles on the northern end of the San Francisco Peninsula, which makes it the smallest county in the state.

Site Narrative

On a small beach on the western side of the San Francisco peninsula lies a large, rectangular pond. Wide strips of rusted metal bolted to the concrete foundation rise up a few inches before curving back towards the water and disappearing into the thick algae. Beside it stands a tall square, also concrete, covered in graffiti. In the hills surrounding the beach century-old bones of iron jut out of the dirt at odd angles only to dive back in again. These strange ruins of times long past sit, waiting, for anyone curious enough to explore. Even though the ruins lie frozen in time I felt as if I had stumbled upon something new, something no one had seen for years.

Half a mile to the north stands the Cliff House, an impressive building once owned by Adolph Sutro, now owned by the National Parks Service, which has been transformed

The Site

At the northwestern edge of San Francisco, right on the Pacific Ocean, is a curious jumble of concrete ruins. You wouldn't know just looking at it, but this ruin is quite young. It's what's left of Sutro Baths, a magnificent indoor swimming pool and amusement park built in 1898.

The baths served as a learning center as well, with museum collections to view as well as circus acts, bands, games and contests. Great ingenuity was exercised in emptying the baths with the most advanced ideas on sanitary engineering and in protecting the baths with massive break water (450,000 cubic feet of rocks).Significant architecture makes us experience ourselves as complete embodied and spiritual beings. In fact, this is the great function of all meaningful art.The Sutro baths literally opened a world of senses for the experiencers.





into a restaurant for people who visit the site. Sutro, had made his wealth from mining operations in Nevada and real estate investments in the San Francisco area. He had become mayor of San Francisco and a philanthropist, giving back to city residents and even opening his home as a sort of museum to display the treasures he had acquired during his travels. He bought the original Cliff House in 1881, and revived it by both repairing it and building a short railroad to help draw in the wider public. A concrete wall, about four-feet high, blocks ones view north as they approach the Cliff House. Glancing over the wall one can find a small beach with crumbling structures: a semi-circular wall, surrounded on the outside with hard-packed dirt yet empty in the center, intersected with the western edge of a concrete pond. Just east sits a small concrete bunker, half buried in the side of the hill that leads down to the ruins, covered in a mixture of brush and graffiti. A cave bored into the rocky cliff to the north and above it, built into the cliff side, is a cleared area.

After I reached the bunker and climbed inside, I paused for a moment and wondered what else was buried beneath me. A rush of excitement passed through me as I envisioned more than just a singular concrete bunker, but a vast network of lost buildings and tunnels. Looking out, I noticed that the rectangular pond's eastern side ended irregularly. Dirt from the hill spilled into it at differing angles, not unlike the sand that spilled into the sea on the beach just beyond. Parts of the pond, too, had been covered by earth. I stood wondering who had built this and how old it might be.

I continued on to the cave carved into the side of the hill, its floor made of coarse sand, unlike the hard, packed dirt outside. About





halfway through the cave a rusted handrail blocked a small, jagged hole, just large enough for a man to fall through. It led to a beach about eight feet below, hidden by the rocky coast. The end of the cave opened out onto a rock-strewn beach. I had expected to find more ruins, but the absence of anything man-made just added to the mystery.

I exited the cave and walked back out towards the pond. Along the western side of the pond, dull metal spikes jutted up at varying heights. To the south end, a small dais with half a set of concrete steps led down to the rocky beach. While I explored, I couldn't help wondering how many knew what once had stood here.

I discovered that the concrete bunker had once been the foundation for a huge seating section where thousands could sit and watch swimmers. The concrete pond, once seven separate and independently heated pools, had its water supply recycled by the ocean during high tide and by pump during low tide. A honey-combed building is all that remains of the pump house. And the tunnel to nowhere was once a part of the recycling system that fed water during high tide, its coarse-sand floor the result of blasting a hole into the rocky cliff face.





Site Reconnaissance & Character

The circle on the map depicts the site that the solution for this thesis will be built upon. Right now the site lies in ruin and is constantly being eroded by water. Because the site is next to the ocean the ruins get pooled up with ocean water during a high tide which results in muddy water. The muddy water in turn leads to the growth of algae that is covering the remains of the Baths.

The site being on the edge of the ocean also gives it lot of character. The horizon far away seems to extend its arms to meet the waters and the land.

The site also attracts a lot of tourists because of its ruinous nature.









Site Characteristics | 71 |







Material Textures



Construction of Sutro Baths was mostly steel and glass built upon a stone base so the bathers could see and hear the waves crashing against the magnificent structure. This image shows the stone that was used as the base of the building. Sticking out of the stone is a metal rebar that was used to reinforce the stone.



This image shows the material of the tunnel system that was carved out in the ground to pump water into the baths.



This image shows how the water has effected the stone on site. Being eroded by water constantly the stone on the site has developed beautiful natural colors.



Seen here is the sand that covers the stone on the site. One can only imagine how difficult it might have been to tackle the problems of building upon sand and the hard rock that forms this site.



This image is of a wall that survived the fire that destroyed the Baths in 1966. The wall is now covered in algae and grafiti.

ite Materiality | 72 |

Shade and Shadow Characteristics in Plan



Winter Morning



Summer Morning

An indepth sun and shadow study of the site is shown here. To get accurate results the site was drawn in sketch up and location added using google earth. Building context was added too.

The model was then transfered to Revit and using the energy analysis plug-in a render was done to see how the sun and shadows effect the site which in turn will effect the design of the building solution.



Winter Night



Summer Night

Shadow Studies Plan | 73 |

Results of the study show that there is sun hitting the site site throughout the day which could possibly be used to power solar panels in the design. Because the site stays fairly warm in the morning and also later in the day it would give the visitors of the Bath House to be comfortable in a bath that would be placed outside the building.

Shade and Shadow Characteristics in Section

The same method of was used to get shadows on the site, where the site was drwan in Sketch up and transfered to Revit for the energy analysis plug in.

Here one can see the hilly contours of the

site organically covered in shadows that play accross the landscape. As the sun moves accross the site there is a rise and fall of shadows, as if the shadows were dancing on the hilly topography of the site.

The site lies at the lowest point of the hill and will recieve large shadows from the south sun over the span of each day which is like a cyclical drama of a shadow show. The design will try and incorporate a lot

Winter Morning

Shadow Studies Elevation | 74 |

Summer Morning



Winter Noon



Winter Evening





Summer Evening



of skylights and windiws to showcase this shadown movement throughout the day. This shadow dance could be a part of the design solution to guide people across the building.

Topography

San Francisco is in an area of exceedingly diversified topography that is favorable to numerous microclimates. The development of the extremely varied California landscape is a consequence of the interaction between of the North American and Pacific tectonic plates.

San Francisco's steep topography is the boundary between the Pacific Ocean on the west, San Francisco Bay to the east and the Golden Gate to the north. The highest terrain is toward the south, where the elevations rise to over 900 feet, with Mount Davidson's peak of 938 feet the tallest, followed closely by Mount Sutro at 920 feet and both North and South Twin at 919 feet. In addition to the primary north- northwest to south-southeast ridgeline, a number of significant hills dominate the San Francisco horizon, as spurs off of the main axis. The city's steepness is shown by the fact that the 60 meter elevation contour is generally within one mile of sea level.

Built Features



Remains of Sutro Baths

The Cliff House features two restaurants, the casual dining Bistro Restaurant and the more formal Sutro's. Additionally, the Terrace Room serves a Sunday Brunch buffet. There is a gift shop in the building, and the historic camera obscura is on a deck overlooking the ocean.

Louis' Restaurant is a cozy family owned restaurant overlooking the Pacific, offering classic American breakfast & lunch menus.

This image shows the outer wall of the Bath House that was destroyed in a fire in 1966. One can see the rusted metal rebar that was used as reinforcement in the construction of the Bath House.







Built Features | 75 |

Light Quality

Sutro Baths | 77 |

The site has a Mediterranean climate, but even on a what should be mild 75°F days in San Francisco, the sun feels unbearably hot but, as one steps into the shade, it's far too cold for comfort, because the site is on the edge of water which constantly gets a cool breeze from the water.

On days that are hotter the intensity of the light is much higher and the reflection from the water makes one squint. But days that are humid the day seems gloomy because of the fog around the site.

When one stands at the edge of the ocean and looks at the horizon one can get beautiful views of the sun setting into the ocean and that creates great lshades and shadows on the ruins of Sutro Baths which is why this site attracts a lot of photographers.

Water

The project site sites on the coastal edge of the north western part of San Francisco. Being at the edge of water Adolph Sutro took advantage of this opportunity and built a salt water Bath House.

The water by the site is ocean water and during high tide covers up half of the site which is why Adolph Sutro decided to use the sea water. The water used to fill up the baths during high tides and it was pumped out of the baths when needed. This phenomena served as a natural filtering system for the baths.

Wind

Because the site lies on the northwestern coast of San Francisco it does get very windy. This is one reason the site attracts a lot of sailors and surfers. The California Current brings cold arctic seawater down along the coast.

Human Characteristics

The area located overlooking the Pacific Ocean in the westernmost portion of San Francisco has since the 1850s been developed and used by San Franciscans and visitors to the city to experience the scenery and recreational opportunities associated with the shoreline, beach, and ocean. Characteristics of this cultural landscape have combined activities related to the natural features of the area — scenic panoramic views, access to the beach and ocean for hiking and swimming, opportunities to see plant and animal communities - with tourist activities - restaurants, swimming, museums and buying souvenirs.

Sutro Baths Sea | 78 |



Now that I have the opportunity to build upon this ruin which was once an Architectural and Engineering Marvel, I would like to take advantage of the sea water and the natural filtering system.

This cools the air over the ocean, which is why the site is cooler than the areas around it. But because the site is on a lower slope than most of the areas around it the wind gets blocked by the hills and the trees on site.

These have provided the reasons that people wanted to come to site and have wanted to shape it to reflect recreational attitudes of the specific time. Through the years the landscape has evolved, specific structures built to provide recreationalrelated activities have come and gone or changed, but the Sutro Historic Landscape District continues to be a vital place for San Franciscans and regional, national, and international visitors to the city to come and do all the things people have always done in this landscape by the sea.

Distress

Because the site which lies in ruin now gets a lot of tourist attraction it faces a lot of distress that is caused by the visitors of the site. One can find trash on the site from the tourists and grafiti done on the remains of the Baths. And because the site is a hub for water sports like fishing, sailing and surfing there is equipment left behind by the people which is dangerous for the flaura and fauna on and around the site.

The site also attracts homeless people at night. On one of my site visits which was late in the evening I saw sleeping bags in a part of the ruin. Also because there is sea water constantly coming in onto the site it

Flora and Fauna

Even though the site lies in ruin and barren without any vegetation, there is lot of vegetation around the site.

As one walks down the hilly topography on which the site lies, one can notice different plants and flowers that are growing along the path that leads them to the ruins of Sutro Baths.

Sutro Baths Flora and Fauna | 80 |



Sutro Baths Algae in the Water | 79 |



pools up in different areas. This has caused algae to grow on the pooled up water. And also there are signs of erosion on the site because of the sea water.

The site is also home to sea animals and birds that can be found playing in the pooled up waters around and and on the site.

Below is the list of different plants and animals that can be found on the site.

This image shows how algae has covered up the remains of Sutri Baths. The pooled up water has helped algae to grow on the site.



Nearly all the plant in Sutro Heights and on Land's End is the result of deliberate or accidental introduction from elsewhere. Seen here is a Yellow Bush Lupine.











This image is of a Monterey Cypress in its early stages. Most of the Monterey Cypress were accidentally introduced.

This image is an example of a deliberate plantation. The Willows' flower can be found all over the site. Especially as one walks along the trail down to the ruins of Sutro Baths.

Sooty Shearwaters can be seen perched on sea rocks in huge flocks May through August as they come to this area for the Austral winter. These birds are of shy nature and prefer to stay away from humans.

Seen here is an image of an Otter. Sea Otters can be seen on and around the site during a hot day basking in the sun.

Sea Gulls are one the most common birds that can be found not only on the site all over San Francisco. Because they are scavengers, gulls follow food sources, sometimes choosing to build nests and breed near areas of waste like landfills and coastal towns to secure their next meal.

Climate Data

The sharp topography and maritime surroundings of San Francisco combine with the unique California climate to produce a number of extremely varied microclimates within its 46 square miles. California's location in the middle latitudes and on the west coast of the North American continent, places it in the relatively rare Mediterranean type climate. This type of climate type is generally characterized by moist mild winters and dry summers. San Francisco's climate is further modified by the location of the City on the northern end of a peninsula, surrounded on three sides by the relatively cool waters of the Pacific Ocean and San Francisco Bay. In addition to the normal cool temperatures of the mid-latitude Pacific Ocean, the water temperatures are modified by the upwelling of cold water along the California coast.



Summertime in San Francisco is characterized by cool marine air and persistent coastal stratus and fog, with average maximum temperatures between 60°F and 70°F, and minima between 50°F and 55°F. The mornings will typically find the entire city overcast followed by clearing on the warmer bay side, but only partial clearing on the cooler ocean side. The summertime temperature gradient across the city is generally from northwest to southeast, with the warmer readings farthest from the coast and in the wind sheltered valleys east of the Coast Range bisector. Winter temperatures in San Francisco are quite temperate, with highs between 55°F and 60°F and lows in the 45°F to 50°F range. The main source region of wintertime fog in San Francisco is the Great Valley. Radiation fog is formed in the moist regions of the Sacramento River Delta and is advected through Suisun and San Pablo Bays and into San Francisco Bay on cool easterly drainage winds. This type of fog is less common than that of summer, but is typically much denser and has a greater impact upon transportation systems due to greatly reduced visibilities.



Over the course of a year, the temperature typically varies from 44°F to 73°F and is rarely below 37°F or above 82°F. The warm season lasts from June 13 to October 19 with an average daily high temperature above 69°F. The hottest day of the year is September 2, with an average high of



73°F and low of 56°F.

The cold season lasts from December 4 to February 8 with an average daily high temperature below 58°F. The coldest day of the year is December 26, with an average low of 44°F and high of 55°F.

Temperature Bands | 83 |



The relative humidity typically ranges from 49% (comfortable) to 94% (very humid) over the course of the year, rarely dropping below 27% (dry) and reaching as high as 100% (very humid).

The air is driest around October 7, at which time the relative humidity drops below 61% (mildly humid) three days out of four; it is most humid around January 4, exceeding 91% (very humid) three days out of four.



Over the course of the year typical wind speeds vary from 0 mph to 24 mph (calm to fresh breeze), rarely exceeding 31 mph (high wind).

The highest average wind speed of 14 mph (moderate breeze) occurs around June 11,



The wind is most often out of the west (38% of the time) and north west (18% of the time). The wind is least often out of the east (4% of the time).



at which time the average daily maximum wind speed is 24 mph (fresh breeze).The lowest average wind speed of 7 mph (light breeze) occurs around January 11, at which time the average daily maximum wind speed is 13 mph (moderate breeze).

Values do not sum to 100% because the wind direction is undefined when the wind speed is zero.

Varous Wind Direction | 87 |



Annual Wind Rose (Speed Distribution)





The median cloud cover ranges from 33% (mostly clear) to 68% (partly cloudy). The sky is cloudiest on February 1 and clearest on September 21. The clearer part of the year begins around April 22. The cloudier part of the year begins around November 14. On September 21, the clearest day of the Median Cloud Cover | 89 |

year, the sky is clear, mostly clear, or partly cloudy 74% of the time, and overcast or mostly cloudy 26% of the time.

On February 1, the cloudiest day of the year, the sky is overcast, mostly cloudy, or partly cloudy 67% of the time, and clear or mostly clear 33% of the time.



Dew point is often a better measure of how comfortable a person will find the weather than relative humidity because it more directly relates to whether perspiration will evaporate from the skin, thereby cooling the body. Lower dew points feel drier and higher dew points feel more humid. Over the course of a year, the dew point typically varies from 38°F (dry) to 57°F (comfortable) and is rarely below 28°F (dry) or above 61°F (comfortable).

The time of the year between April 26 and November 21 is the most comfortable, with dew points that are neither too dry nor too muggy.

Sun Hours | 91 |

Dec 21

Nov

Oct

9:33 h

Dec

night



Dew Point | 90 |

The length of the day varies significantly over the course of the year. The shortest day is December 21 with 9:34 hours of daylight; the longest day is June 20 with 14:46 hours of daylight.

The earliest sunrise is at 5:47am on June 15 and the latest sunset is at 8:36pm on



- June 26. The latest sunrise is at 7:37am on November 3 and the earliest sunset is at 4:51pm on December 9.
- Daylight savings time (DST) is observed in this location during 2012, starting in the spring on March 11 and ending in the fall on November 4.



Precipitation is most likely around February 4, occurring in 43% of days. Precipitation is least likely around July 9, occurring in 10% of days.

Over the entire year, the most common forms of precipitation are light rain, moderate rain, and drizzle.

Light rain is the most severe precipitation observed during 40% of those days with precipitation. It is most likely around March 10, when it is observed during 17% of all days. Moderate rain is the most severe precipitation observed during 30% of those days with precipitation. It is most likely around February 4, when it is observed during 17% of all days.

Drizzle is the most severe precipitation observed during 18% of those days with precipitation. It is most likely around August 7, when it is observed during 9% of all days.





During the warm season, which lasts from June 13 to October 19, there is a 13% average chance that precipitation will be observed at some point during a given day. When precipitation does occur it is most often in the form of drizzle (53% of days with precipitation have at worst drizzle), light rain (28%), and moderate rain (13%).

Topographic Survey

Distance between the contour lines is in between 180 - 200 feet which makes it hard for vehicles to get to the site. Even though the slope on the West side of the site is flat enough for human acivity stairs must used to reach the site from North, East and South where the slope is greater than 20%.

The ruins of Sutro Baths lie at the lowest topography level of the surrounding area and will receive runoff from North, East and South side which drains off to the ocean.



During the cold season, which lasts from December 4 to February 8, there is a 39% average chance that precipitation will be observed at some point during a given day. When precipitation does occur it is most often in the form of light rain (41% of days with precipitation have at worst light rain), moderate rain (36%), heavy rain (13%), and drizzle (6%).



Traffic Density





Vehicular Traffic

Pedestrain Traffic

Sutro Baths exist beyond the edge of the regular vehicular traffic grid. The major road that leads to the site rises steeply uphill from the south, loops around the Cliff House, and continues east toward Downtown, the Financial District, and the rest of the city. The site is only accessible to pedestrians via a path from the Cliff House that leads down a series of steps carved into the rocky terrain below. This path is heavily populated with tourists as the site is a Historic District owned by the San Francisco Park District.



Entisols; Rock outcrop - orthents complex 3-75% slopes

Inceptisols; Urban Land - Sirdak Complex 2-50% slopes

Mollisols; Typic Agirs tolls, loany urban land association 5-15% slopes

Final Building Program

As the cycle of ruin has been continued because of the proposal of this thesis which is a Bath House. The Bath House will provide a quiet, intimate setting will provide guests with an opportunity to be transported from their everyday reality to a more selfconscious experience, connecting micro to macrocosm, present reality to cultural history.

Space Allocation & Square Footage -Public Use

Entry/Circulation (3500 sq. ft,)

Sweat Chambers (600 sq. ft,)

Indoor Baths (400 sq. ft,)

Outdoor Baths (450 sq. ft,)

Cold Water Baths (14°-16°) (120 sq. ft,)

Hot Water Baths (42°) (200 sq. ft,)

Terraces/Public Viewing Area (550 sq. ft,)

Museum/Display (4400 sq.ft)

The building program has been divided into two parts; The spaces that will be accessible to the public and the spaces that will be accessible just to the staff of the Hotel and the Bath House.

Shown below is the division of the Bath House and square footages that have been estimated using case studies done in the previous section of this book.

Massage Rooms (750 sq.ft)

Hotel Rooms (5400 sq.ft)

Spa/Sauna (500 sq.ft)

Restrooms (200 sq.ft)

Changing Rooms (200 sq.ft)

Bike Storage (250 sq.ft)

Indoor Rest Spaces (1500 sq.ft)

Outdoor Rest Spaces (1000 sq.ft)

Space Allocation & Square Footage -Staff Use

Circulation (3000 sq. ft,)

Water Purifier (600 sq. ft,)

Temperature Control (300 sq. ft,)

Meeting Spaces (700 sq. ft,)

Conference Room (250 sq. ft,)

Mechanical Room (2000 sq. ft,)

Pump Room (750 sq. ft,)

Bath Attendants (440 sq.ft)

Point of Access/Exit (3000 sq. ft)

Offices (1500 sq.ft)

Staff Locker Rooms (450 sq.ft)

Staff Bike Storage (200 sq.ft)

First Aid Room (200 sq.ft)

Staff Restrooms (200 sq.ft)

Break Out Spaces (500 sq.ft)

Custodian Room (350 sq.ft)

Interaction Matrix



SPA & SAUNA

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0

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0

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TERRACES



HOTEL

OUTDOOR BATHS

BREAKOUT SPACES

MUSEUM/DISPLAY

BIKE STORAGE

Interaction Net | 99 |

Design Solution



Process Documentation

An artefact is a physical representation for the ideas developed through the linguistic narrative. It presents these ideas spatially and materialistically so that they may be tested in a tangible reality.

The Artefact

This room has been transformed from its intended purpose into the curated setting for this particular ritual. Bricks with a history of ruin now inhabit this room and contribute to its sacred quality. They embody the essential alchemical elements of earth, air, fire, and water which have acted upon each other in order to be transformed into what we recognize as these bricks. The earth was cultivated as clay and mixed with oxygen to be fired into the rough, porous nature of brick. They were assembled into a determined position for a period of time, eventually deconstructed and disposed of by the river at the end of their intended lifespans, and left to decompose as they began to return to the earth, constantly eroded by the currents of the river as the cycle brings each element back to its origin. These bricks remind us of the narrative of humanity, of the "instability of built grandeur, of the chronicles of heady calamitous risings and tumblings" that constitute it. There is a constant cycle of the building up of the human environment and the crumbling down by natural or man-ensued means.

This ritual is similar to that of bathing. The sound of deconstructed brick against the wood flooring envelopes the room and the guests within it, filling our senses with the essence of a grand movement: a landslide, an earthquake, or a rush of water. As the small, scattering pieces rush around you, they create an atmosphere of escalating sound and vibration, culminating with a serene silence as the pieces come to their final resting place in front of you. The entire action is reminiscent of the ritual of bathing. The enveloping sound and movement of the brick pieces is like plunging the body into water. As they

Artefact | 101 |



trickle up to their vertical configuration, the impact of the ritual is left in the body, but the physical presence of brick and sound falls off like dripping water and evaporating steam.



The pieces that form the vertebrae of this structure were once components of the bricks on which you stand. They have been further deconstructed in order to be reconstructed, continuing the cycle of the human narrative. They were taken from their previous situation as pieces of ruin to be re-or dered as the backbone of a new structure. They have been broken apart in order to be reassembled, just as Plato says the tekton artist cuts and joins, divides and connects in order to build. There is an edge between the solid brick platform and the constant, flowing trails of brick pieces. The active, constructive pieces create the built environment of the present while the dormant, ruinous bricks remind us of their past forms.

Process Documentation

Precedent Study

In Anselm Kiefer's, "The Fertile Crescent" a space of fiction is constructed within the relationship between the archeology of antiquity and the history of our own times.

The Fertile Crescent is composed of four paintings, each of which refers to the rural brick factories of India that he encountered fifteen years prior. "A vast fire is built inside these factories to bake the bricks that are subsequently dismantled and dispersed in an ongoing cycle of construction and deconstruction." This image continued to reverberate in Kiefer's mind, as his works frequently express his "fascination with the ambiguities of construction and deconstruction." His eventual completion of The Fertile Crescent suggests a vast array of cultural and historical references, spanning from the first great human civilization of Mesopotamia to the ruins of Germany in the aftermath of the Sec-





The Fertile Crescent | 104

ond World War, where he played as a small boy. The resulting paintings are rich, multilayered and open to numerous readings but their impact is universal. Fragmented pieces of fired ceramic spill from the "two-dimensional mooring of the wall into our own space." Kiefer's ceramic work reflects this self-destabilization of the built environment through the mode of making. He allows raw materials to be treated as the elements from which they were constituted. His "bricks are made in their clayey, puddly muddiness as he works. Differential drying rates echo the process by which loose clay or mud hardens and cakes, the density of the pigment forming tessellated deposits and stacks." There is a mineral energy to his brick work. "In this sense, the fertility of Mesopotamia, the slow motion kinesis of its estuaries, carries through to the edifices that were raised on its river banks. And as if in acknowledgment of this organic relationship with the landscape that produced the hanging gardens of Babylon or the Ziggurats of Ur, Kiefer's tesserae are alive with mineral animation." This teetering, erosive essence of fragmented parts of material embodies the narrative of humanity as a whole, with its "instability of built grandeur" and "heady calamitous risings and tumblings."

Solution Documentation

Presentation

The Sutro Ruins exist within a network of supporting paths, roadways, and amenities that suggest the location of a new intervention.

The new bath house will rest behind what was once present, nestling into the land and connecting to the surrounding environment with a slightly elevated vantage point.





Guests enter the bath house at the first edge of land and new construction. The building opens up at each end as a pair of staircases descends into its depths. As the body is submerged below the level of the land, the

quality of space densifies with the echoes and scents of the ocean, as if submerging the body in water.



Inside the building, the guest is met with reception and given a key to their room, where the edge of the horizon is laid out before them. Another layer of submersion brings them through the building's core where the staircase hovers above the level of the pools, guiding them once again to the back of the building on the lower level. Here, the changing rooms re-orient the body toward the horizon to set the pace for a sequence of edge experiences.



The tectonic language of the bath house references the rising and falling of the built environment through the push and pull of air and water along a system of canons and channels. Ocean water that washes over the beach with the tide enters these channels and is divided into four passages, carrying the rushing fluid energy of the sea into a series of still pools. These pools lie below four hovering canons lined with narrow channels through which the briny ocean air is pushed upward to echo through the building before falling back with the tide. At the intersection

Section Cut referring to the Tectonic Language | 109 |



of this horizontal and vertical movement, bathers can see, hear, feel, and smell the pulsing rhythm of the ocean. As the body is washed over with water from the edges of the ocean, impurities are loosened from the flesh and carried back to the sea, replaced with the purifying properties of mineral water. This process is repeated with each lapsing wave, creating a purifying rhythm. The ocean also leaves its deposits on the smooth inner concrete of the canon, accumulating a beautiful patina over time.







Above the channels, those walking along the beach can sense the rushing pulse of the ocean beneath their feet seconds after witnessing it break along the coastline as it travels toward the building. The ruinous edge of Sutro Baths lies between the body and the edge of the ocean as the turning of the tide marks days and the revolutions of the moon marks months. One is made aware of the cyclical rising and falling of the built and natural environment as the time-keeping tide persists below, lapsing in its point of impact as it travels further back in space and time toward the building.



Floor Plan Low Tide | 112 |



Floor Plan Mid Day Tide | 113 |



Floor Plan High Tide | 114 |

Beyond the four interior pools, a series of low steps leads up to the edge of a thin exterior pool that spans the length of the building. It sits in front of the canons and submerged pools to create a new edge marking the end of formal building and the beginning of untouched land. What is at first a serene and still environment slowly transforms as the feet recognize a subtle contrary directional

movement of water below. This rhythmic pulsing comes from within the channels that form the floor of the edge pool. This uneasy feeling of vertigo awakens the body to the instability of built grandeur, to the imminent transformation of the orienting relationship between the earth and our bodies that shapes our understanding of the world.



Edge Pool Perspective | 115 |



As the day ends, the guests ascend from the bath house through the canons and into their individual rooms.

Here they are reminded of the ocean water because of the patina on the walls of the canons. **Floor Plans**



From this vantage point, each edge is visible in a timeline of memory. As the tide rolls in, the mouths of the channels disappear, eroding beneath layers of ocean. The water slowly swallows up the edge of ruin, followed by the land on which visitors stood and gazed at the horizon. By nightfall, the expanse of land before the building submerges completely underwater, but the building continues to breath, inhaling and expiring the heartbeat of the earth. Tomorrow, the cycle will begin anew.





Top Floor Plan

KEY:

Entry
Restrooms
Reception Office
Reception
Lobby
Storage
Suite

8. Rooms



Top Floor Plan | 118 |







Lower Floor Plan | 119 |

KEY:

- 1. Mechanical
- 2. Elevator Rooms
- 3. Changing Rooms/Restrooms
- 4. Air Canons
- 5. Sauna Mechanical Room
- 6. Sauna
- 7. Edge Pool
- 8. Channels





HVAC | 120 |



Water Filtration System

Billions in Change Rain Maker is the filtration system that is used in the design to filter the ocean water. This system mimics nature, turning seawater or polluted water into fresh water suitable for drinking and agriculture. Rain Maker makes more than just a little water. One machine the size of small car can make a thousand gallons per hour. Unlike other desalination systems, Rain Maker recycles its heat energy making it incredibly clean and efficient



Billions in Change Rain Maker

Figure | 122 |










Plumbing | 123 |



Plumbing | 124 |

Thesis Display

Thesis Display | 125 |







Project Appendix

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Previous Studio Experience

Fall 2012

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Name: Darryl Booker Projects: Tea House Fargo, ND Boat House Minneapolis, MN

Spring 2013

Name: Stephen Wischer Projects: Twin House Fargo, ND Performance Theater Fargo, ND

Fall 2013

Name: Milton Yergens Projects: Boat Museum, Gloucester Literary Center, Glasgow

Spring 2014

Name: Frank Kratky Projects: Star Institute Fargo, ND Youth Center Chicago, IL

Fall 2014

Name: Bakr Aly Ahmed Projects: Highrise San Francisco, CA

Spring 2015

urth Ō Name: Don Faulkner Projects: Marvin Windows Fargo, ND Midtown Greenway Minneapolis, MN



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"The towering concreteness of the shadows here reflect the power, the pride and the essence." Anshul Brat