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# Movement Architecture: an Investigation into the Manipulation of Movement through Form and Space

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# movement architecture

An Investigation Into the Manipulation of Movement through Form and Space.

Independent Project Submitted to Roger Williams University SAAHP
In fufillment of the requirements of the B.Arch degree
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William McQueen
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Professor Luis Carranza, Ph.D

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Professor William McQueen

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Dean Stephen White

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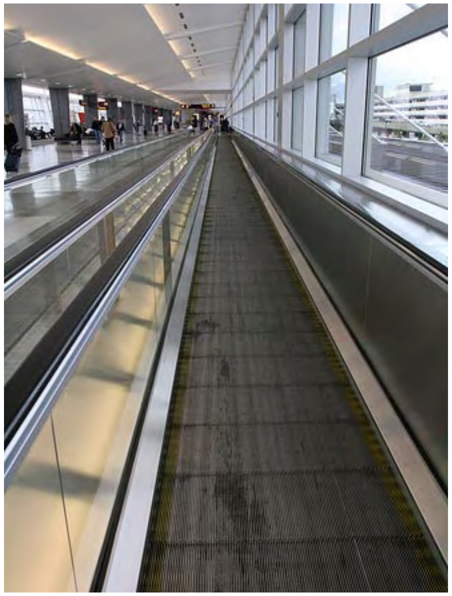

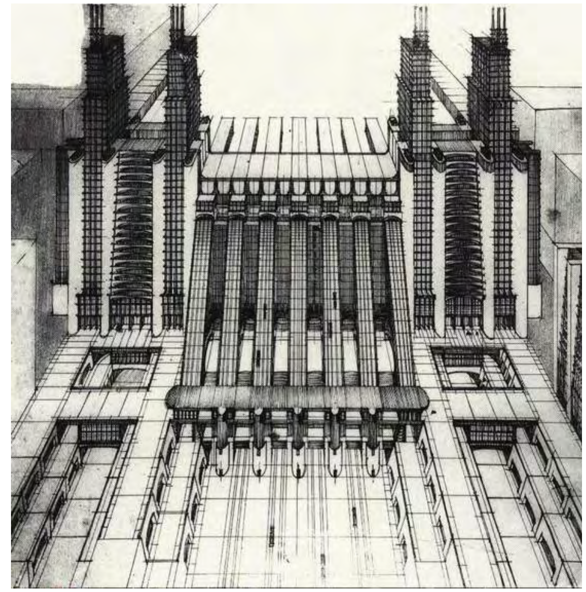

# LIGHTS... CAMERA... MOVEMENT!

# Abstract

Modern technologies, media and lifestyles have hampered our ability to comprehend and interact with our surroundings. We have become over stimulated in the mind, and thus we have shut down in a practice of self-preservation. Our bodies are not longer put to use; they lie immobile as machines and technologies have come to pervade our professional and private realms. We must try and eradicate these pervasive filters that block our minds and the immobilities that hamper our bodies. The solution to this problem lies in our ability to reintroduce movement back into our lives and environments.

This project will investigate the effect of movement on one's perception of space and their surroundings. Means by which movement can be altered, manipulated and designed in order to alter perceptions will be explored. These means will focus on architectural organizational strategies such as nesting, layering and revealing certain types and speeds of movements. These organizations will occur at various scales, but the main exploration will occur at the program and site level, and their associated movements. The differing motions of the project and urban site will be forced into architectural interactions and relationships with one another. This investigation will potentially lead to new ways to alter the bond between the individual and their environments.

# Table of Contents



End of the Line.  Have a Nice Day.

# Introduction I

Modern man no longer probes his surroundings and is no longer intrigued and perplexed by what transpires around him.  There is an overall lack of engagement with his environment.  This lack of engagement has occurred simultaneously in both the mind and in the body.

The Mind:

Mentally, modern society is over stimulated, predominately through media and communications. Television commercials, movie trailers and billboard ads have become increasingly loud and flashy in order to get our attention.  We, in turn, adapt to these ploys and become acclimated to whatever sensory explosion the media can devise. This creates a cycle of overstimulation, adaptation, and numbness that is detrimental. In the process of becoming accustomed to these sensory demands time and time again, we are placing restrictive filters on our senses that hamper our perception and thus our involvement with our world.

We ourselves, not just the media, are also responsible for the disconnect between our minds and our surroundings. While it may not appear voluntary, we willingly fill our lives with professional as well as personal obligations.  We work longer days and have commitments to our communities, friends and families.  We must focus on whichever commitment we are currently fulfilling and in doing so our minds have become distracted from reality.  For example, one could be walking while talking with a business associate on their cell-phone and be unaware that they are walking through a puddle and are about to be hit by a bus.  These distractions cut us off from the environment and destroy any spatial relationships or interactions.

The Body:

Technologies have deepened the rift between our physical bodies and our environment as well.  In many professions, machines replace much of what was once manual.  For example, tractors sew fields instead of a farmer, who once walked along tilled rows dropping seeds into manually-dug pockets of earth.  Automated pistons assemble automobiles instead of human arms and fingers. This same trend continues in our lives outside of work, most notably in how we find pleasure.  For example, people often turn to their computers and the Internet for recreation instead of physical activities.  Evening walks and community dances, both of which

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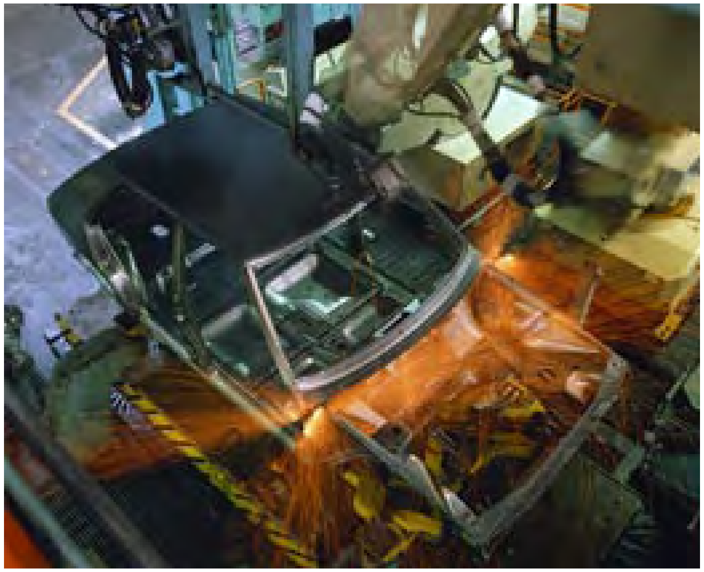
Increasingly loud ads vie for our attention.

Busy personal and work lives.



Human physical labor has been replaced by machines.

Seeking pleasure in immobility.

are physical ways to enjoy one's time, are no longer seen as fun pleasurable activities. Technologies have altered how we work and play by removing a physical component from our lives. This physicality ties us to the environment in which the action is taking place. If our bodies are not being physical within their surroundings, then this connection between body and environment cannot exist.

The same problems that have affected how the body and mind have become isolated from their surroundings, such as sensory filters, distractions and immobility, have also separated mind from body and vice versa. These problems that plague both body and mind cannot be selective in what they are isolating. An exploding bomb will not destroy some lives while leaving others unscathed – all will be consumed in conflagration. If the mind and body are to become separated from their context, then they will become separated from everything, including each other. For example, take the man who is on the phone, walking through a puddle and is about to be hit by a bus. The mental distractions are separating him from his surroundings. But in being distracted from his environment, he has also forgotten his physical body, (that is lips, legs, and feet are in motion) as he is physically part of this ignored environment. Channels must be opened and engagements must be fostered between the mind, body and environment by doing away with mental filters and distractions,

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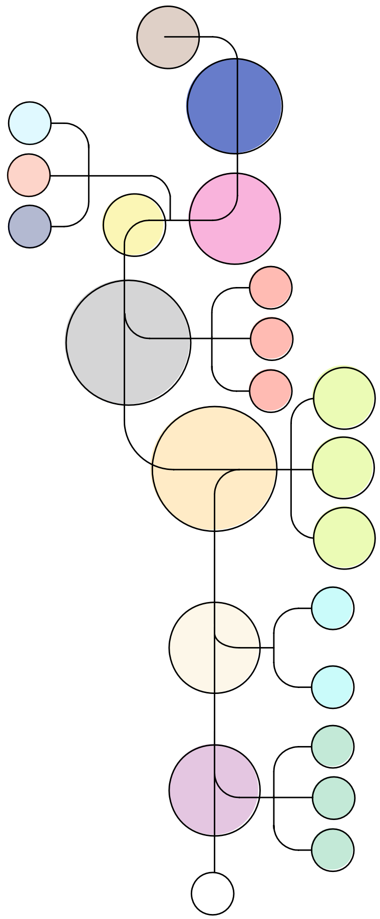
# Architectural Intentions A



as well as physical immobilites.  We must learn to probe our surroundings and connect our minds to our bodies.

How this is done is the reigning question for this project.

Architecture should create engagements and interactions, and by doing so remove any filters, distractions or immobility that handicap our minds' and bodies' perceptions of our surroundings.  In order define these interactions we must first look at the problems that plague the modern lifestyle.

If we examine each symptom of the  modern lifestyle, we can see that they all lack a feeling of motion, movement, or action.  When we erect walls or filters, we are stopping a flow of information – we have in essence limited the amount of potential brain activity.  We are craving a sort of stability, which itself is defined by a lack of movement. When we are distracted, our attention is pulled every which way and we lack focus and direction.  Movement can be characterized by this focus and direction – think of a bullet zooming towards its target, or an athlete sprinting for the finish line.  Movement can be directionless, but it is this type of action is not productive, just haphazard and chaotic.  Not only are we stagnant in our mind, but we are also sedentary in our bodies.  We are motionless in our work, and couch potatoes in our personal lives.  This problem presents the most obvious lack of movement:  by replacing normal manual, human actives with automated, technological ones, physical action and movement have been removed.

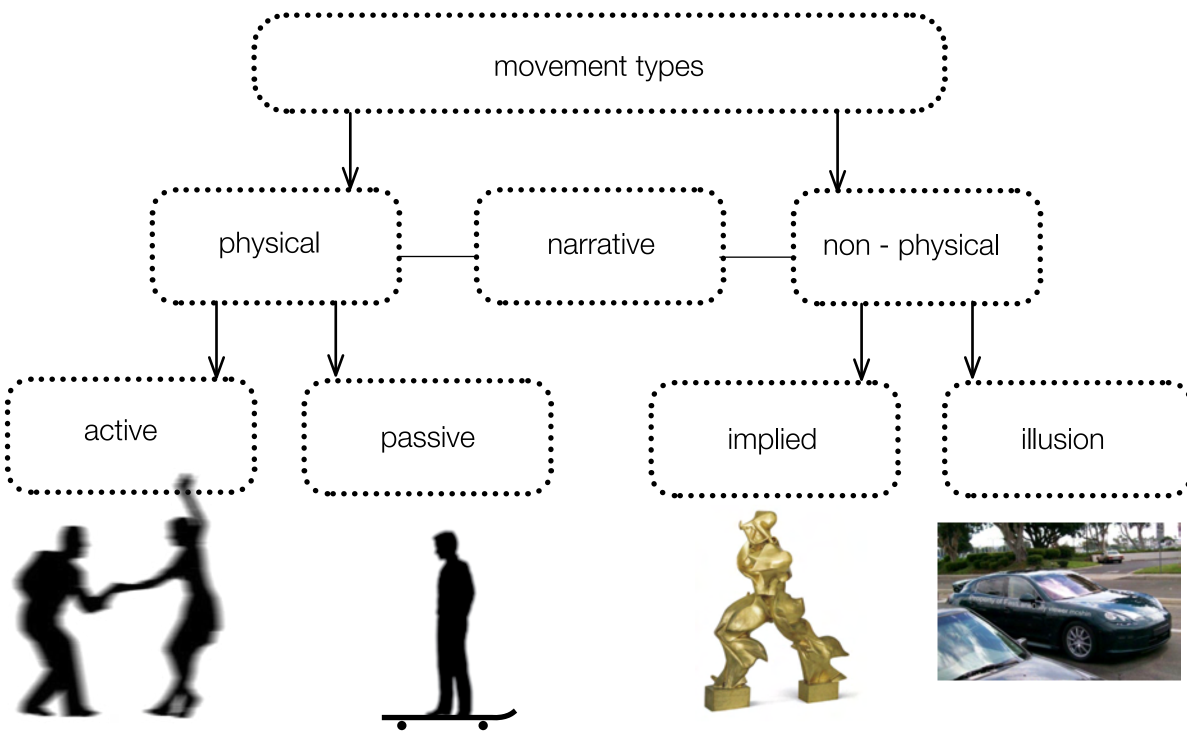
If all of these problems are defined by their lack of motion, then motion must be integral to their solution.  Motion must define the engagements and interactions through which architecture will solve these dilemmas. But how is motion itself defined?  What are the different types and speeds of motion, and which ones would be constructive to interactions within built form and space?

**Movement Types:**

The first differentiation between various types of movement is whether the action is non-physical or physical.  Whether or not they are physical depends if the motion is more geared towards the mind or towards the body.

Non-physical motion can occur in two ways:  in the first of the two one can feel as if they or an object is moving, even when there is no physical motion.  This can often feel unnerving, or as if it were a trick or illusion.  For example, if someone is sitting in a parked car, and they see the car next to them begin to move through the window, they in turn feel for a moment as if they too are moving, even when they know they are not. The way in which they are situated in a specific surrounding dictates whether this false feeling of motion is felt.

The second form of non-physical motion is associated with a mental awareness of movement. With this type of movement, one can look at a sculpture or a building, which is perfectly stationary, and understand that there is an implication or allusion of movement in the object. For example, this ‘homage’ to movement occurs throughout the futurist movement:  Boccioni’s *Unique Forms of Continuity of Space*

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appears as if is in motion, when we know that it is not. Many of Zaha Hadid's buildings look like they are slithering across the landscape, when we know full well they are made of rigid concrete and steel. While not as unnerving a feeling as if you are moving when you are not, the allusion to movement can still be trigger emotional responses due to the unusual nature of the 'moving' forms.

Physical movement is the most literal type of motion. In this type of motion, one can either be active, where someone could be physically moving something, or passive, where something can be physically moving someone. An example of being physically moved through architecture would be when you travel on a moving sidewalk in an airport. While this machine is perhaps replacing your manual locomotion, you are still physically in motion, and it has altered how you perceive this space because you are being moved in a non-normative way.

In active physical movement one becomes the mover instead of the moved. In this scenario, one controls what is in motion and how it is moved. Fredrick Kiesler's Art of This Century Gallery contains examples of this type of movement. The gallery visitor has an active role in the viewing of art: knobs are pulled and levers lifted to reveal paintings. This activity lets the person become an active participant in their surroundings, and thus alters how their mind and body communicate, as well as how they perceive their environment.

There is also a type of movement that combines characteristics of the physical and non-physical previously discussed motions. Movement that is used to articulate a narrative depends on a person moving physically, as well as the non-physical understanding of feelings and the recognition of the allusions to movement. With each physical step one takes through a building, a memory is made of this moving experience. A narrative is born when the person whom took these steps can string together the steps and spaces of this passage, and in doing so, understand the allusion to one entire, stitched-together movement, or narrative. Maya Lin's Vietnam Veterans' Memorial utilizes narrative movement. There is the physical action of descending, pausing and ascending a ramp. This physical procession alludes to the process of grief that is left to the visitor to understand and decipher. The linking of physical motion and the mental understanding of movement is critical in this memorial.

**Motion Speed:**

Motion can also be defined by the speed at which it occurs. This rate at which something is moving is not necessarily a characteristic of any specific form or type of moment. Any of the described types of movements can happen at any speed. For example, someone could engage in active physical motion at different rates: a door can be pushed open slowly or quickly. One could see a sculpture, and feel the 'movement' in the piece that is alluding to a quick staccato or a slow sinuous movement. Different speeds can be assigned to different types of movements, and in doing so, change the nature of the motion. Rate or speed can also offer numerous variations and interpretations of movement.

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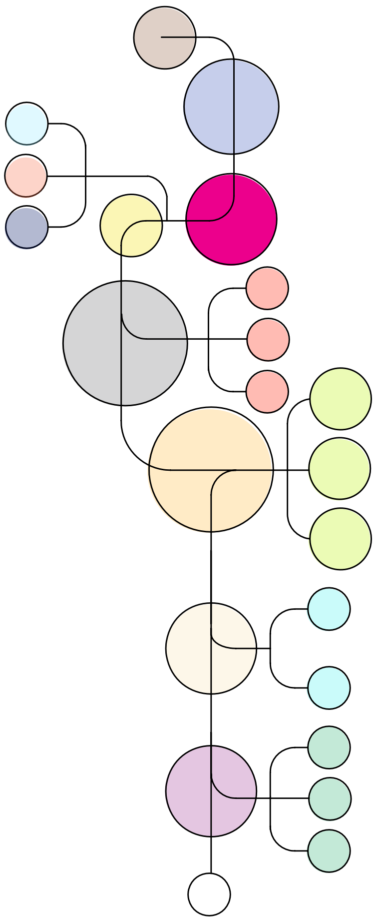
# Project Statement P



Movement is everywhere and in most cases, it is neither celebrated nor special. People engage in physical as well as non-physical movement on a daily basis, and most movements do not stand out or affect our perceptions in any way. For example, a person who walks into a typical office building, rides the elevator, reaches their floor and and pushes open their office door is not made more aware of their surroundings. In this case, the movements are responsible for this comatose state we have entered. The question becomes how to express, investigate, and manipulate this movement so as to break from these repetitive and expected characteristics.

Some places do not contain slow and daily movements, but they still follow an expected pattern. In these places, movement is welcomed and necessary to the name of the place. A football stadium holds a great deal of movement – of sprinting athletes and zooming balls and air-punching spectators. A train or subway station must hold movement – the most obvious physical and speedy kind – if it is to fulfill its functional role. The movements inherent within these are quite obvious, expected and desired. However, because they are expected, like in the office building, they lack the ability to transform how the user engages and understands their environment. In both these building types, movement becomes as normal and expected as a storage closet or restroom. Also, there is no contrast to highlight the very motions that are occuring within. Everything is occuring quite fast, so there is slow enough, with the needed recognition, that will display how very fast everything else is moving in comparison.

We must investigate ways that will bring new meaning to the movement inherent within a certain building, program or place. From the previous examples, we can see that the movement is expected and thus normative. The motions follow expected rules of engagement and organization: for example, the office worker must stand relatively still while zooming upwards in an elevator cab and the spectators must find the way to their seats by circling the fast, exciting movements on the field.

But what if these typical relationships or organizations of movement were manipulated or altered? What if the office worker stood outside of the elevator as it moved: would the relationship of their movements to the elevator's movements be altered? What if the spectator was forced to cut

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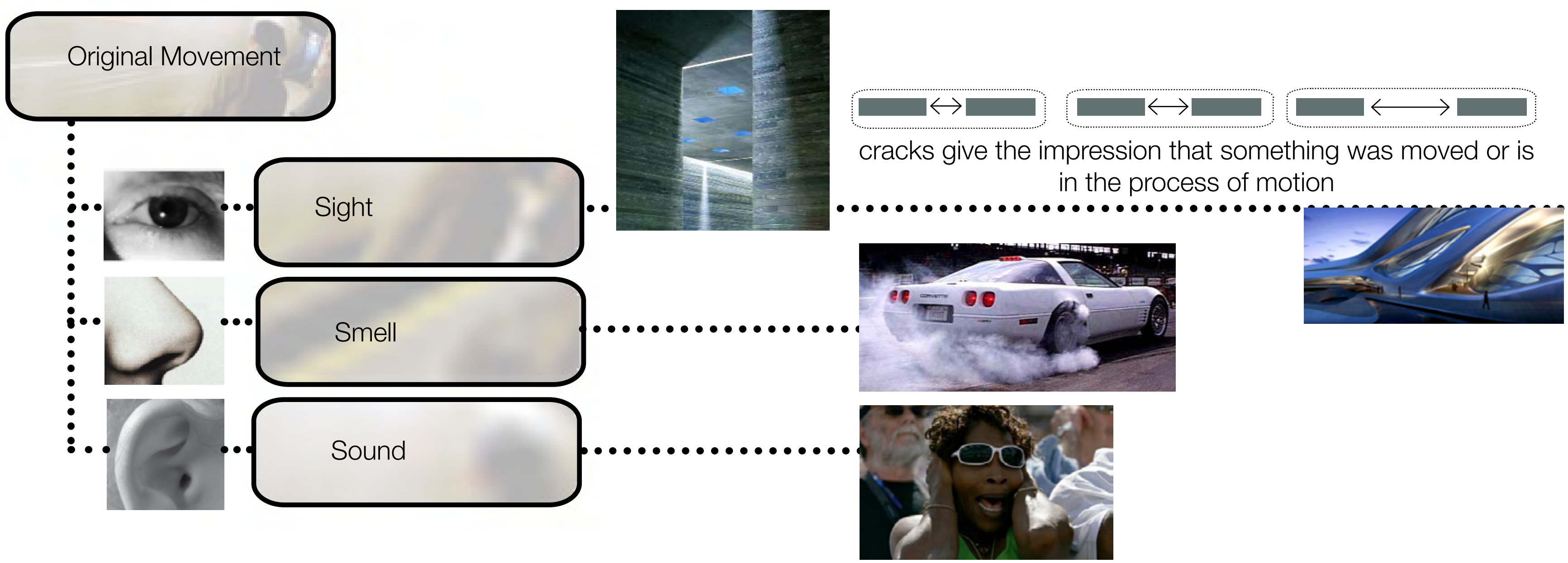
through the field, or to go over the field, to find their seats? While those are exaggerated and bizarre situations, they demonstrate that preconceived patterns and relationships of movement can be tampered with to create new conditions for the user.

Thus, a means of manipulating movement in order to alter a person's perceptions would be to change or play with the existing organizational strategies and relationships.

The idea of something fast and physical becoming nested, layered or revealed in something slow and non-physical is engaging. One begins to think of absurd scenarios, as found in Rem Koolhaas' *Delirious New York*, where men are eating oysters while naked and in boxing gloves. One can imagine race cars speeding through libraries, greenhouses wrapping techno night clubs, or a Zen meditation room nested in a Boccioni-esque, fluid-formed room. And while these movement mix-ups present interesting situations, and would certainly alter one's perceptions, they are not always feasible and plausible. When direct contact with true movements is impossible, creative means of implying or conveying movement become necessary.

Previous associations can be used to imply movement. Whenever we have seen movement, we have also received other sensory inputs simultaneously. We see a car racing down the street while we hear the screech of tires, smell the burning rubber and feel the vibration through the pavement. On their own, each of these sensory experiences has become just as authentic as being adjacent to motion itself. By utilizing associations of movement, movement can be simulated where its true existence would not be possible.

Associations of Movement



This project will exploit the various types of movement through architectural methods that manipulate both architecture and movement simultaneously. Each method should act as an organizational tool, and it should highlight or emphasize the different types of movements and speeds through specific architectural relationships. These relationships can be created through organizing the different types and speeds of movements with the various components of the project (the site and program). These organizations can involve the nesting, layering and revealing of the different motion types and speeds present in the site and program. The juxtaposition and contrast present in these organizational strategies will highlight a surrounding's and environment's condition, redefining how the occupant should perceive and engage with the space.

A description of these organizational methods are as follows:

1. Nesting: By designating the 'placement' of certain motions within other motions, unique opportunities arise. Nesting can highlight a more expected relationship, where certain movements happen and behave in an expected hierarchy. For example, a program is typically nested within a site; think of a fast, busy city enclosing a still, quiet office space. On the other hand, nesting can emphasize some sort of abnormality by acting against or interfering with this hierarchy. In this scenario, the programmatic pieces and their movements could wrap around the site. These organization can have distinct patterns. The site and its motion could wrap portions of program, which could also enclose another chunk of site. There are numerous possibilities.

2. Layering: This method works similar to the organization of nesting, but it does so in a striated rather than concentric manner. A traditional example can be found in many urban buildings: the private area is layered on top of the public area. Can this same method be applied to movement? Different motions and speeds associated with the project can be layered like a cake. Perhaps the busy site and its movements are sandwiched between the slow, moving water and other slow program components. Maybe a non-physical movement (for example, a form that alludes to movement but is not moving) is sandwiched between two physically moving components. This type of structure allows certain comparisons and relationships to be made between the various movements. Like mixing two different chemicals, the end result may differ entirely from the individual components.

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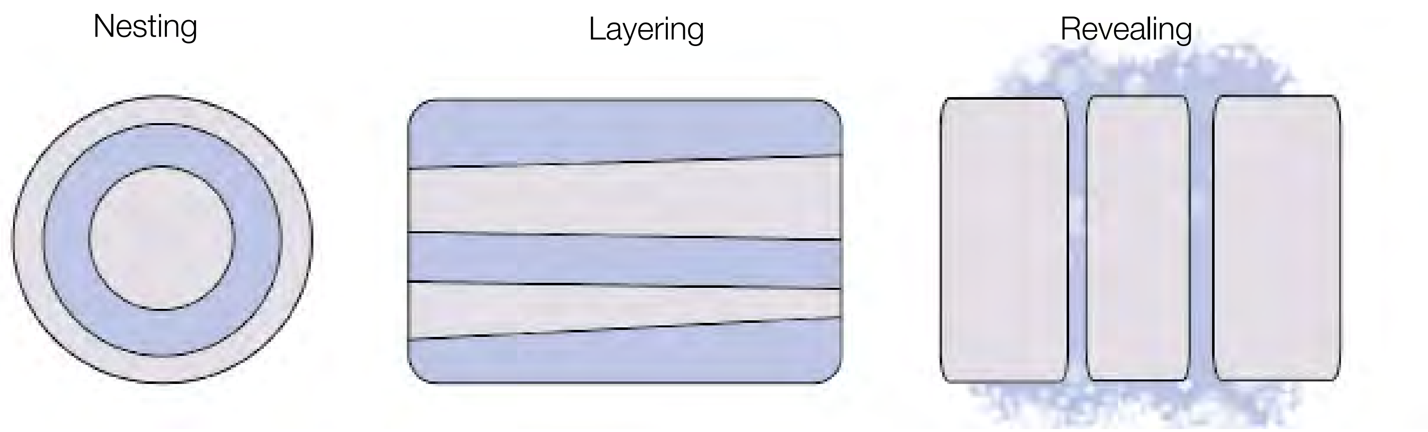
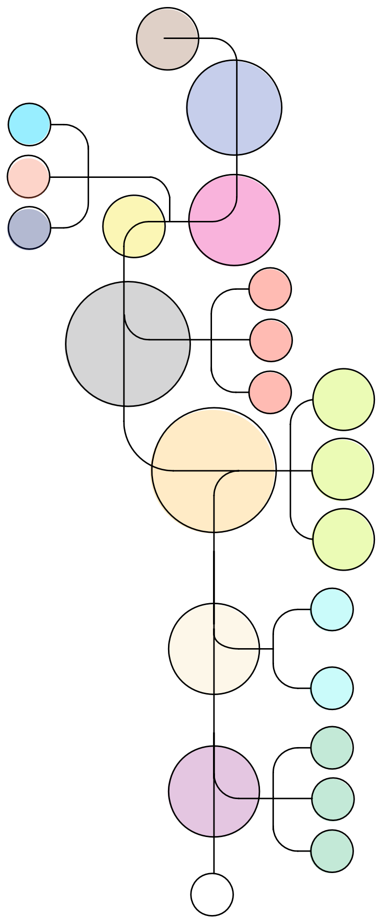
## Organizational Methods




A Movements Type and / or Speed

B Movements Type and / or Speed

3. Revealing: As opposed to nesting or layering, the act of revealing is a negative process as opposed to a positive one. Movements can be stripped away, simplified and isolated. Revealing depends on the removal of something to expose or highlight something else. An obvious example of revealing can be found in a window. Material is taken away so that a view can be exposed. The same can be said for movement: various movements can also be removed or relocated in order to expose new motions. A common example of this occurs when a portion of a site, and its associated movements, are removed so that a building, filled with its own movements, can be constructed. A way to redefine this typical organizational strategy would be to remove a portion of the program to reveal a chunk of the site and its movements. Also, When a movement or speed is not in comparison or association to it's expected movement or speed, its definition changes.



## THE MANHATTAN BATHS

Modern technologies, media and lifestyles have hampered the individual's ability to comprehend and interact with their surroundings. They have become over stimulated in the mind, and thus have shut down in a practice of self-preservation. Their bodies are not longer put to use; they lie immobile as machines and technologies have come to pervade one's professional and private realms. One must try and eradicate these pervasive filters that block our minds and the immobilities that hamper their bodies. The solution to this problem lies in the individual's ability to reintroduce movement back into one's lives and environments.

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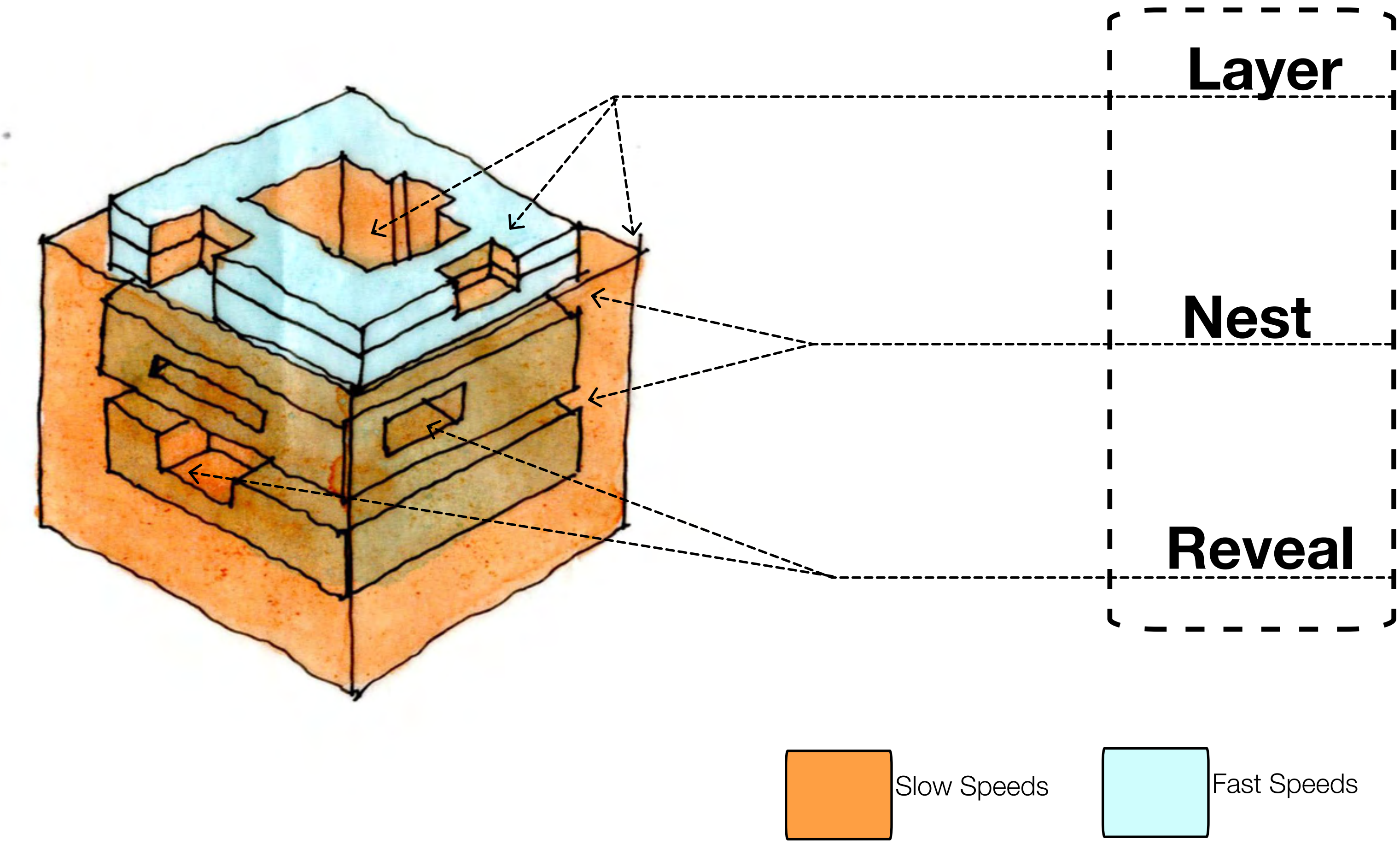
Original Parti Diagram

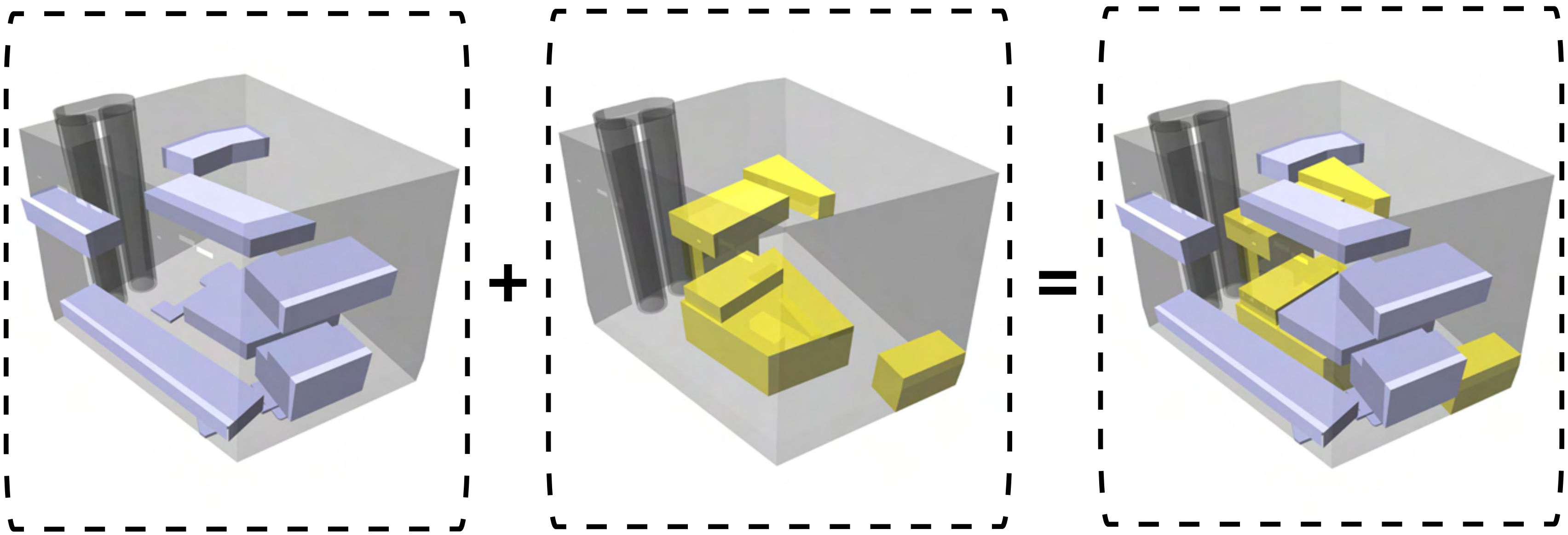


# Nest

Program speeds determine how program is contained within the building skin.  The result are interactions that occur when fast programs are nested within slower zones, and slower zones are nested within faster zones.  Faster program is either filled with faster activities, or has a relation to the surrounding urban life (public program such as a cafe, laundromat, etc.)

Slow bumps out into busy site

Fast bumps inwards towards quiet interior



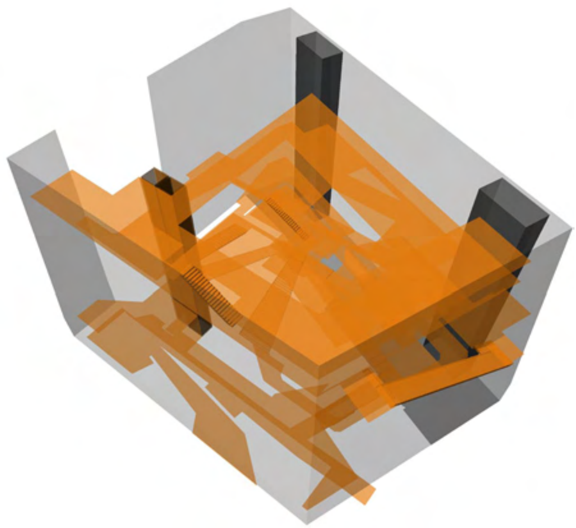
Slow Program

Fast Program

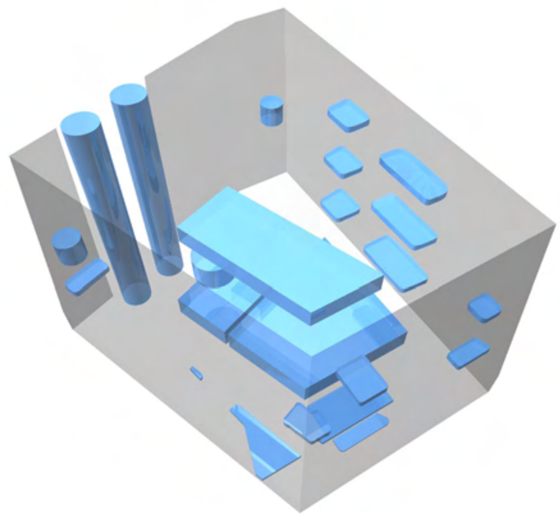
Fast and Slow Program

# Reveal

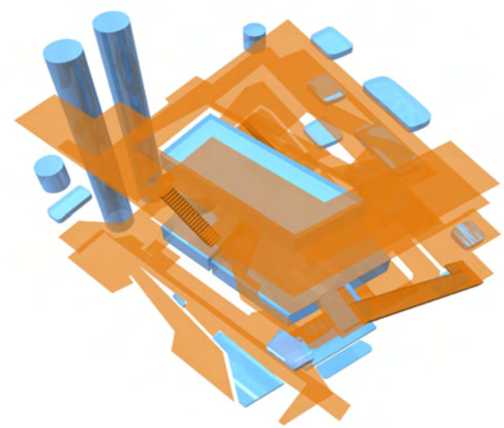
The processional circulation constructs moments where views are granted to various programmatic elements and to the site. These moments reveal either a fast situation to a slow situation or vice versa. The circulation creates constructed experiences that grant awareness through the juxapostion of various speeds present within the project and the site.



Processional Circulation



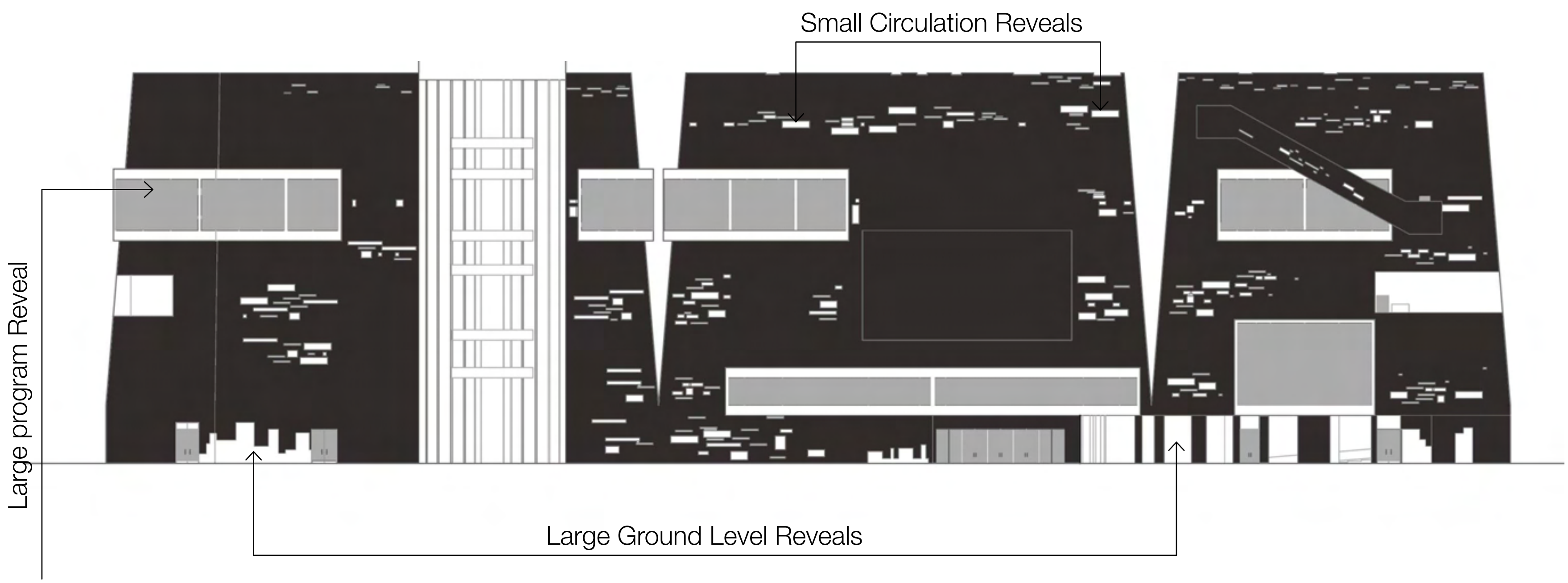
Bodies of Water



Circulation and Water

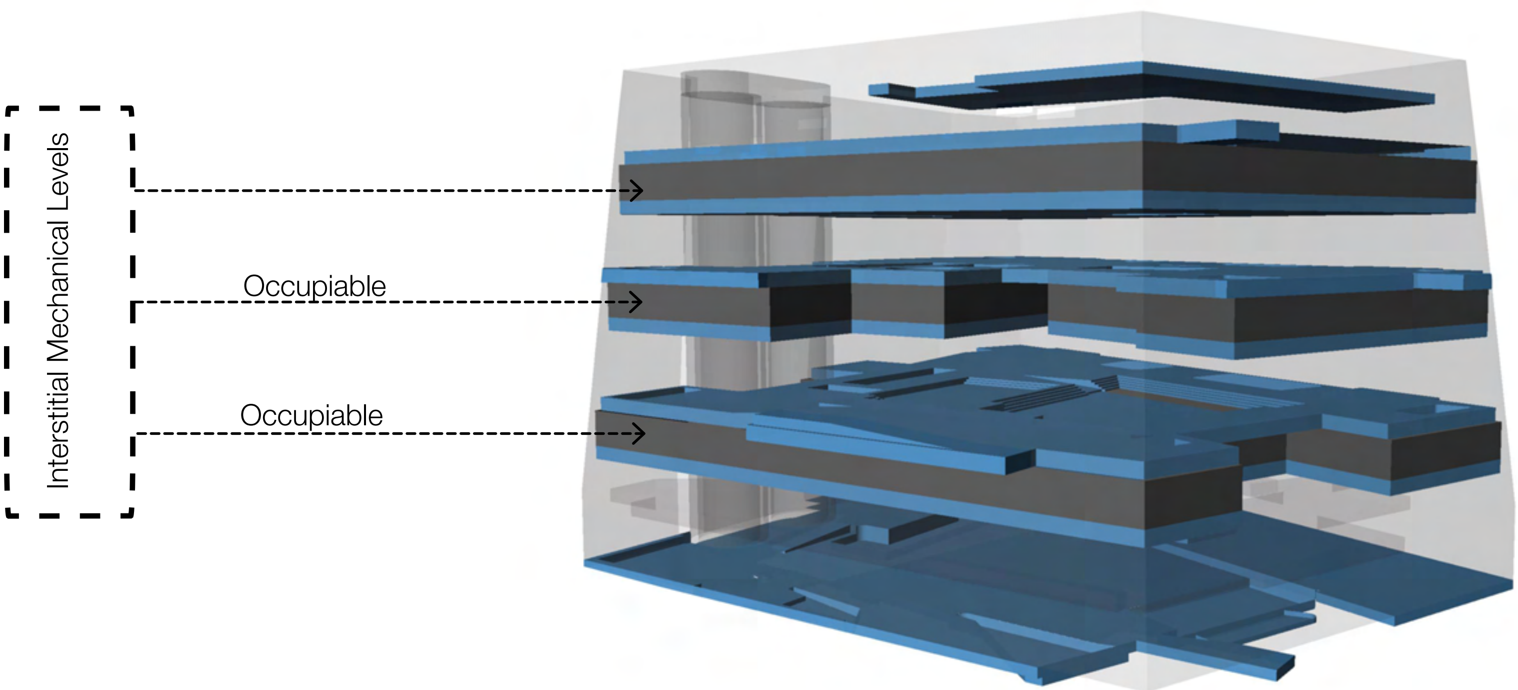
# Reveal

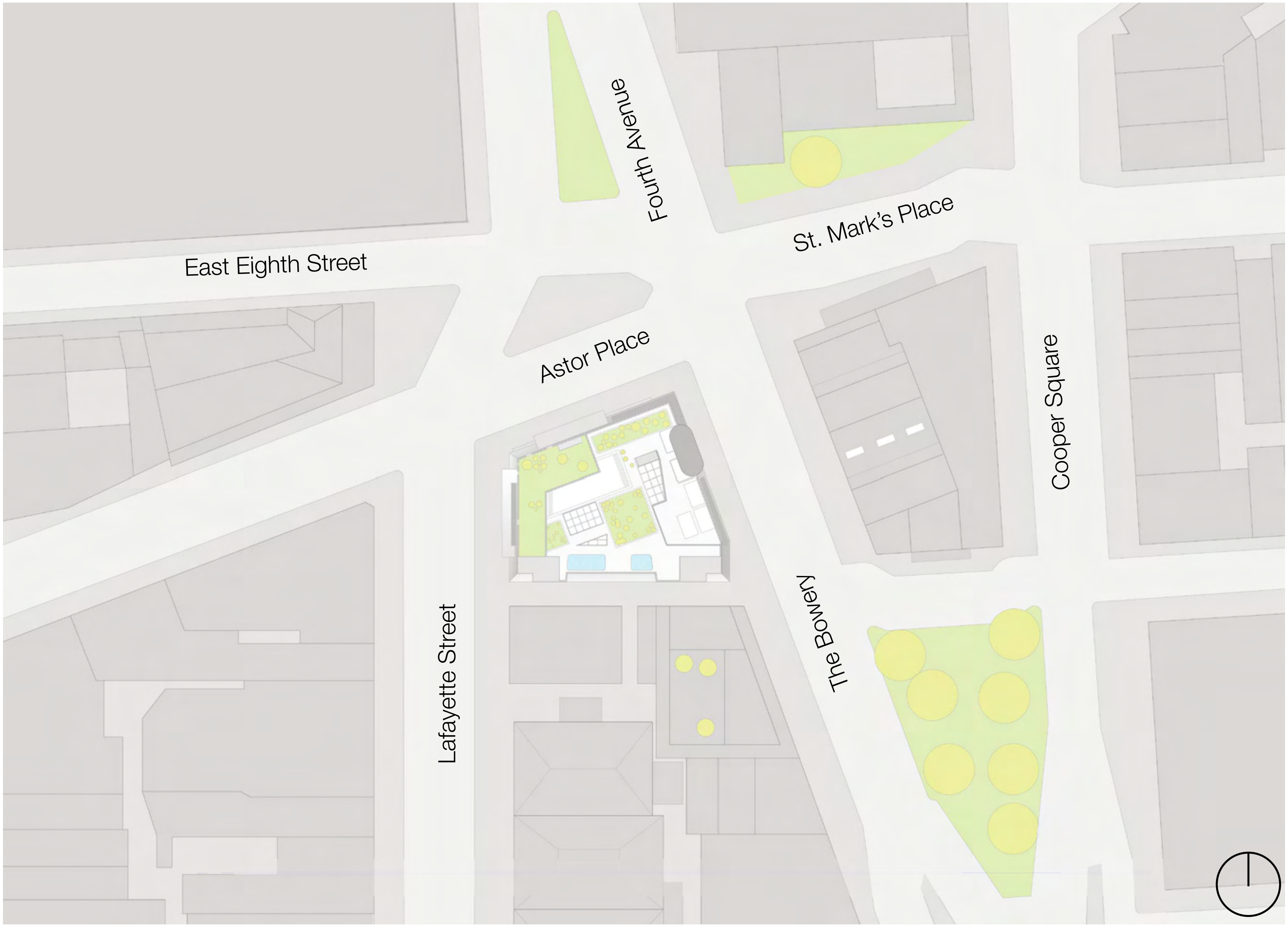
As the processional circulation brings the visitor through the project, various views are constructed through the use of reveals constructed within the building envelope.  When there must be a moment of 'fastness' that is not provided by faster program, but rather by the site, reveals are created.  These reveals manifest themselves through punctured openings in the granite facade.  Many are very small, so that the large fast city beyond is made more comprehendable and realized at a smaller human scale.The small reveals occur along the ciruculation path only.  Larger reveals occur when the slow program leaves the boundaries of the facade and enters the fast domain of the city. These reveals may be a small outdoor terraces that are extensions of the circulation, or more commonly, a projecton of a piece of slow program, such as the nude baths or caldarium.  These reveals are opaque or textured glass to offer a certain amount of privacy to the visitor inside while revealing the desired realtionship between fast site and slow program.  Other large reveals occur at the ground level, to allow urban inhabitants to experience the slow baths within the project while simultaneously allowing the bath visitors a reminder of the fast urban life they have left behind.



# Layer

Throughout design, a pertpetual issue kept arising regarding how to encorporate layering into the project's overall goal of the manipulation of movement.  After examining the movement sequence, it was discovered that once one passed the entry system of compression, the overall experience of the baths (meaning, generally light and with double-height spaces) never altered.  In order to have the visitor's realm of experience regarding movement speed reset, interstital mechanical floors were incorporated into the project.  These floors seemed a natural solution:  the bathing floors were becoming so thick to hold the bath basins, that they could form a seperate sub floor entirely.  The visitor would travel through the main bathing levels, then progress upwards into a dark interstitial mechanical level, where they would see all the plumbing, equipment and bath basin walls.  These floors would set up a sort of tableau rossa for the visitor, and allow them to experience a special slowness and stillness that was at odds with the varieties of speeds and densities within the rest of the project.






Roof Plan in Site
Astor Place, Manhattan, New York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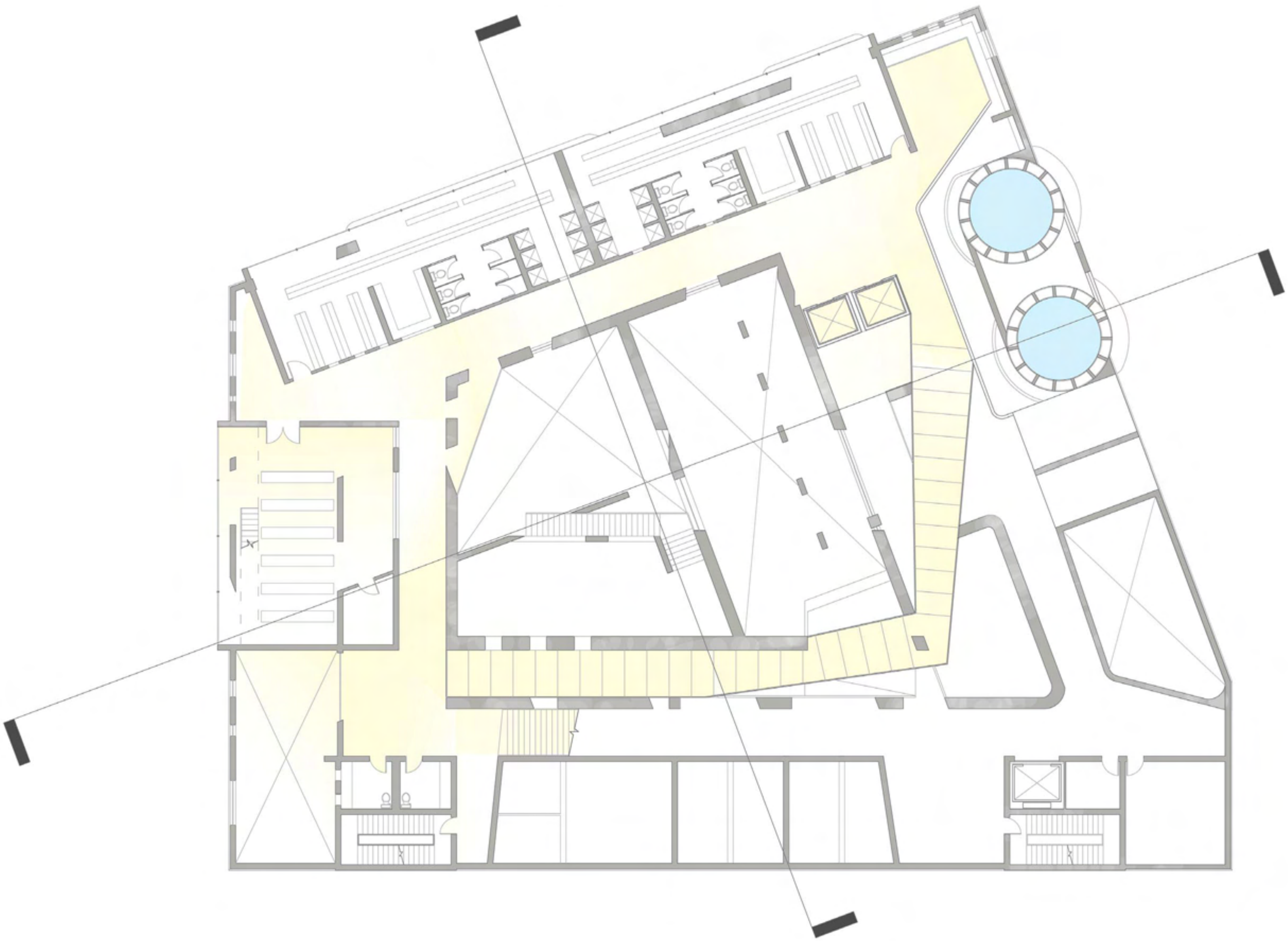
Ground Floor Plan

Processional Circulation



First Floor Plan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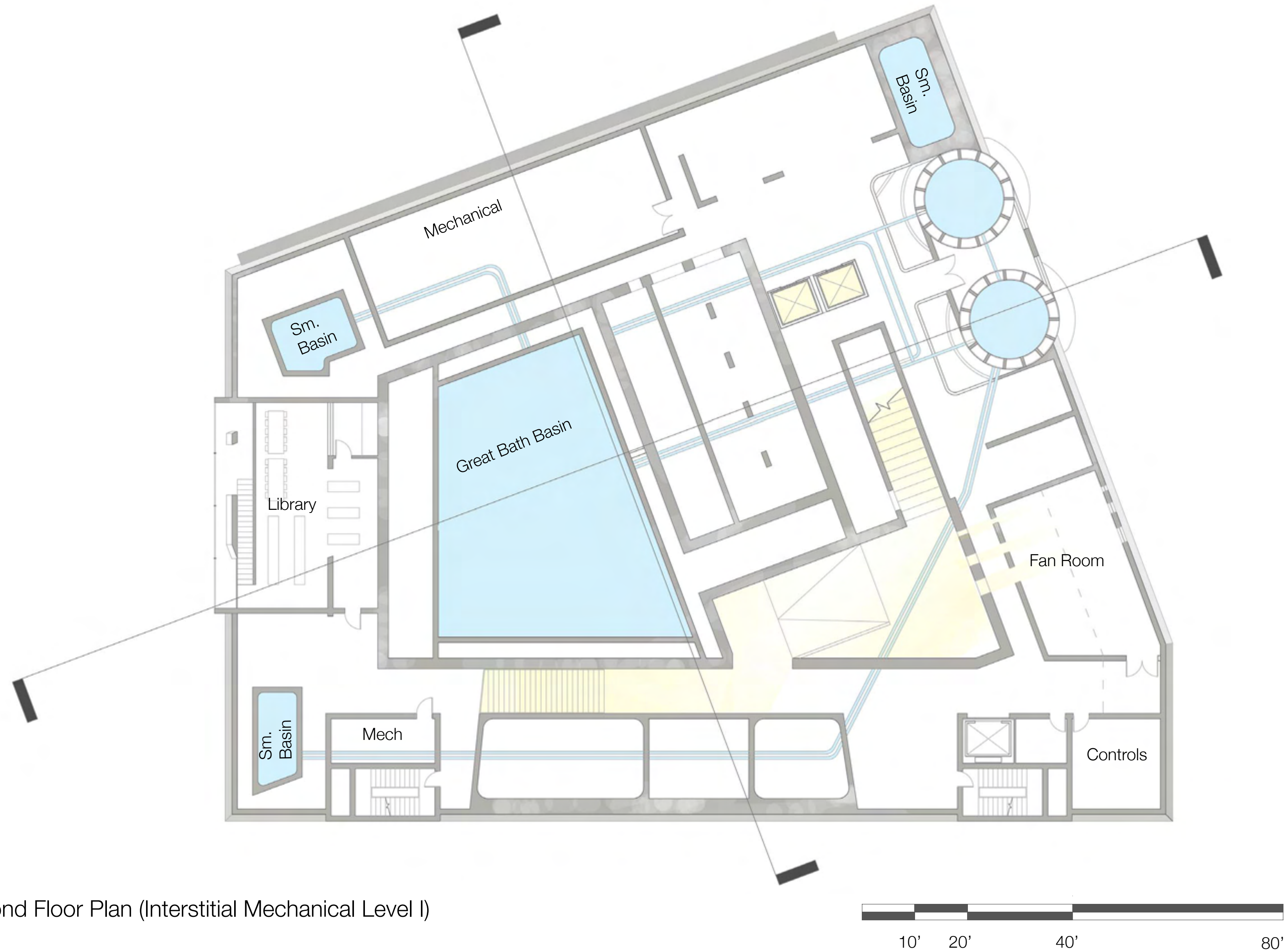


Second Floor Plan (Interstitial Mechanical Level I)


Third Floor Plan

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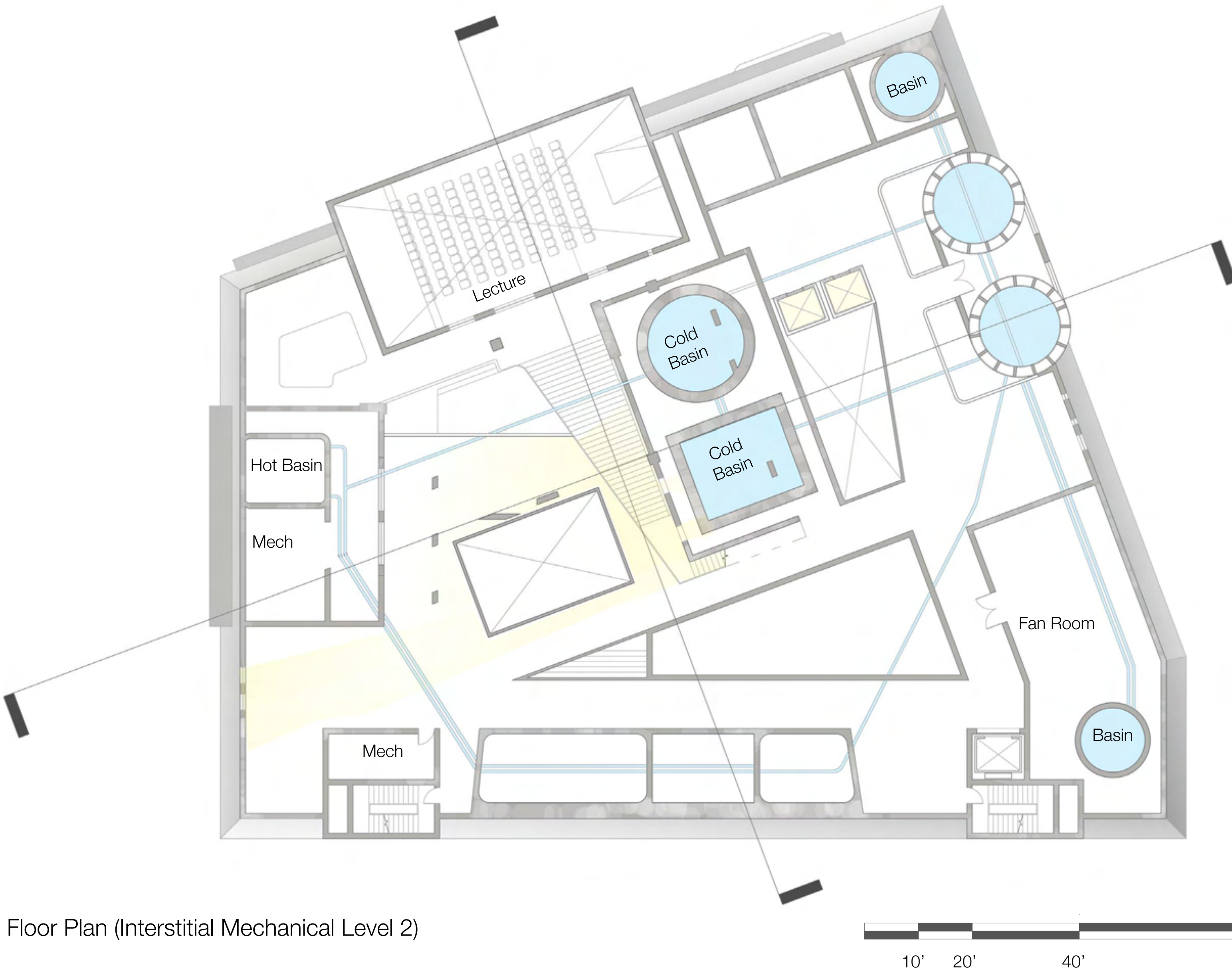
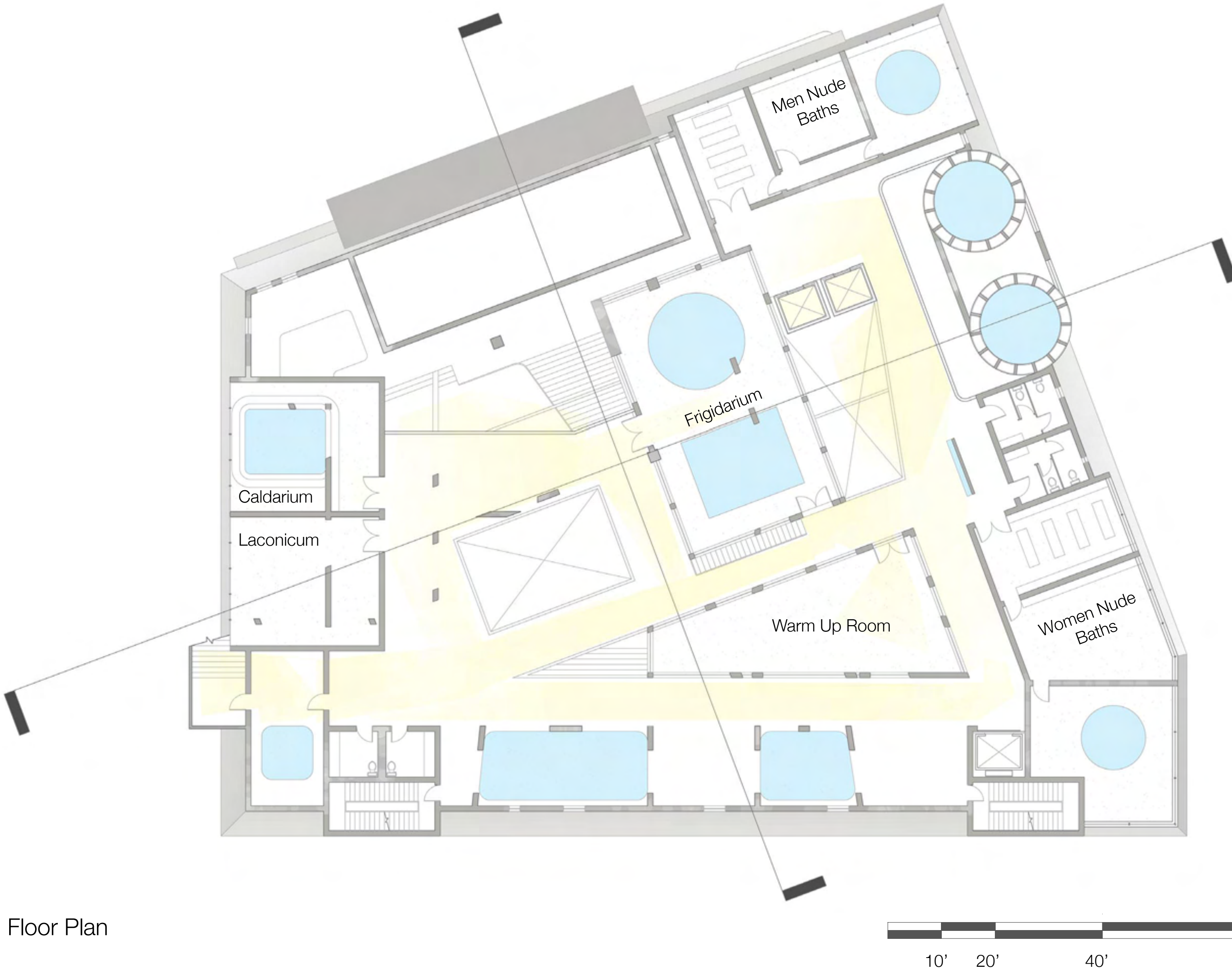



Fourth Floor Plan (Interstitial Mechanical Level 2)




Fifth Floor Plan

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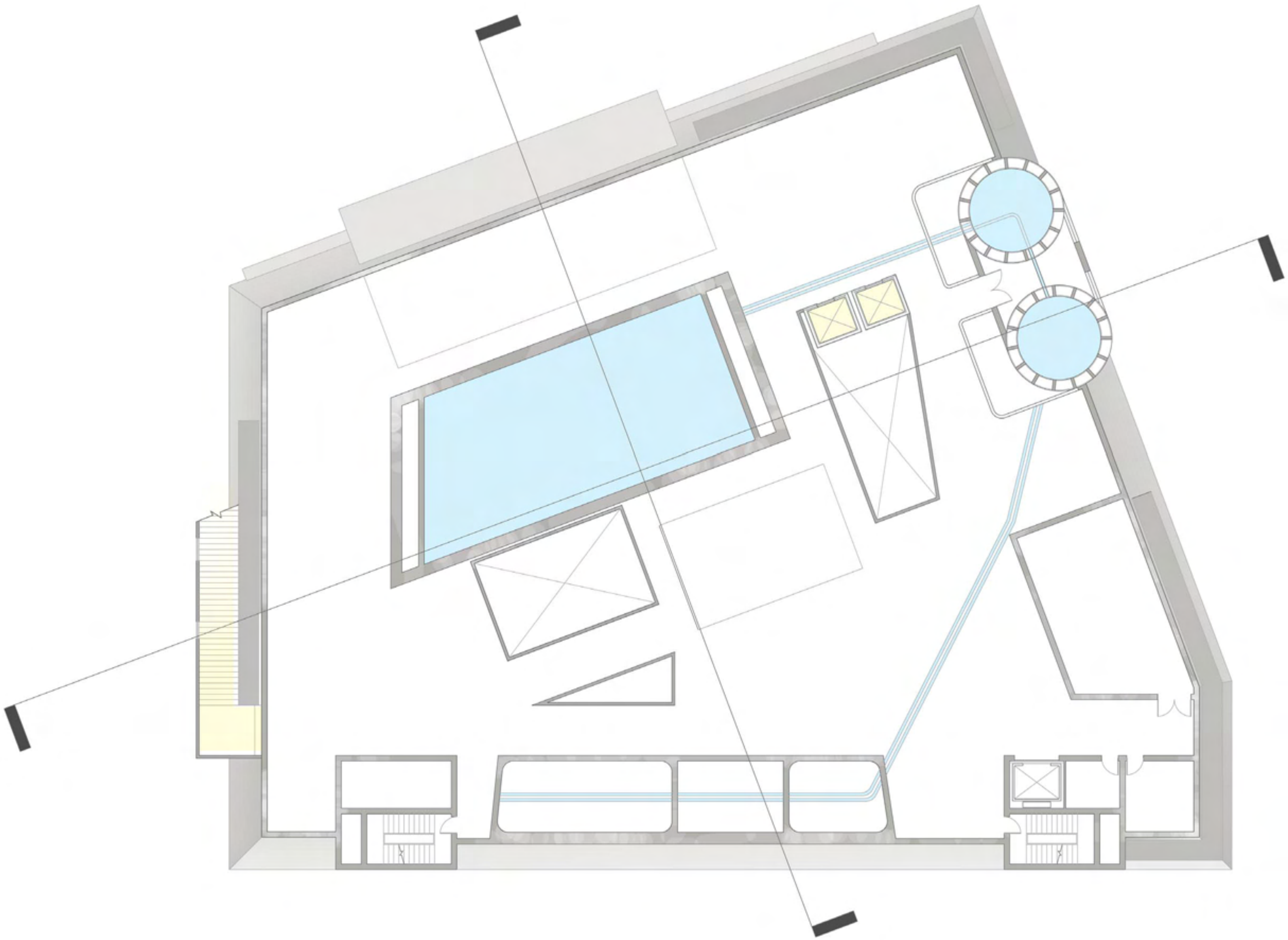
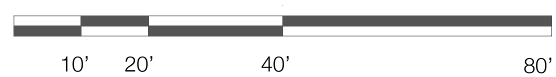
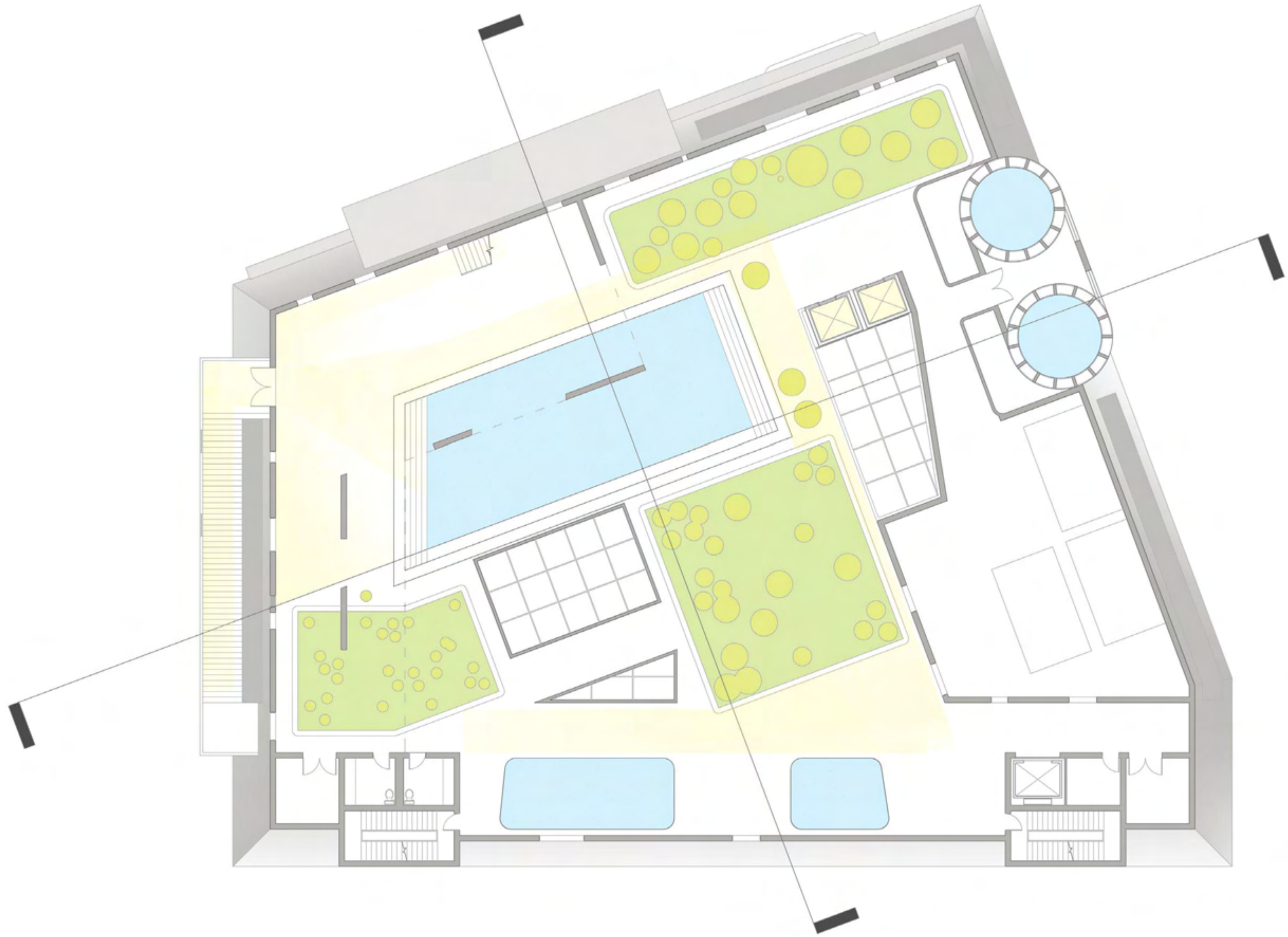
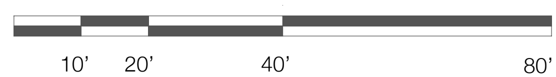


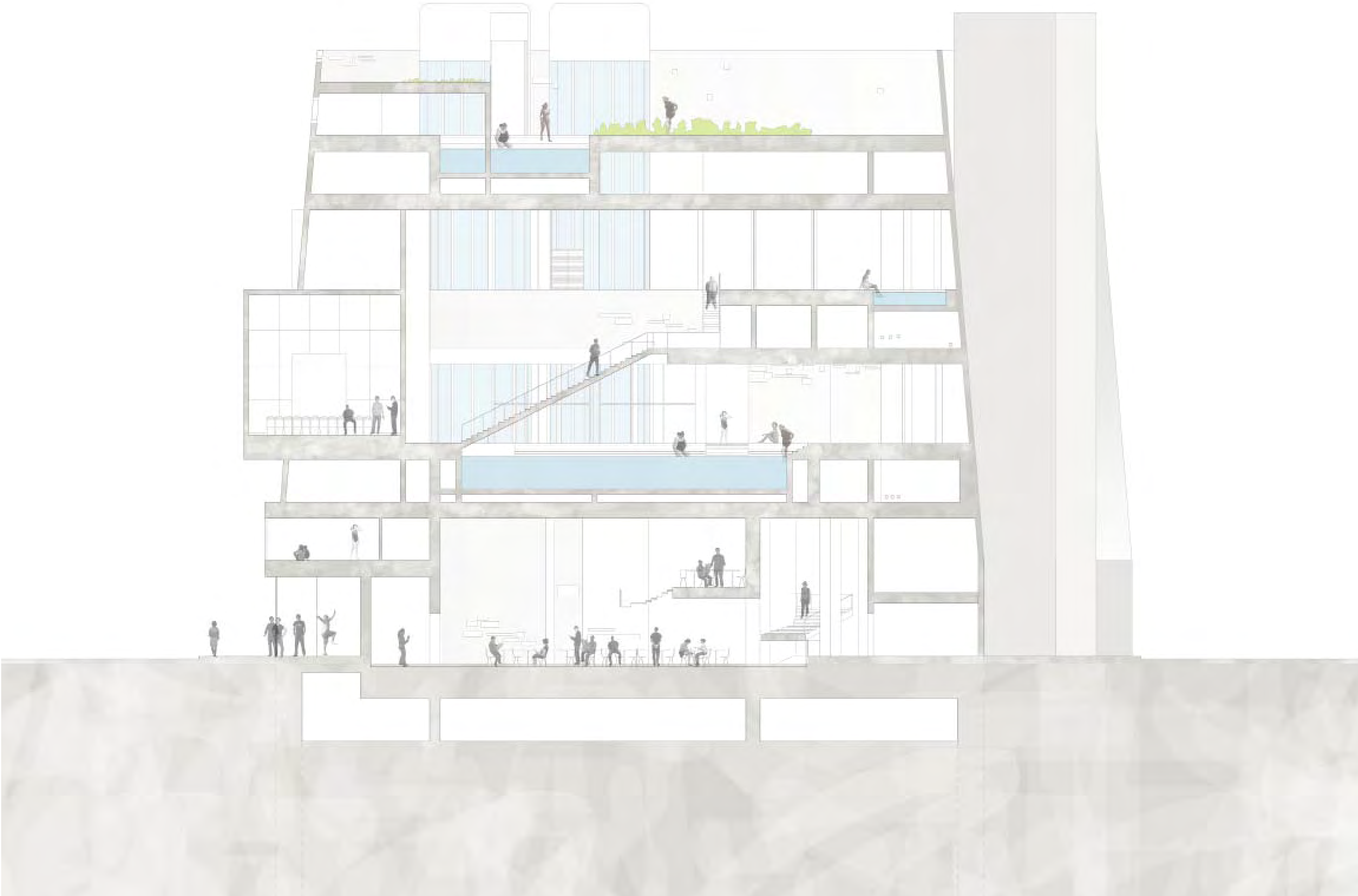
Sixth Floor Plan (Interstitial Mechanical Level 3)



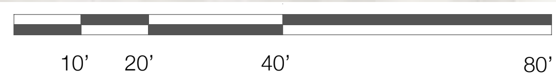


Seveth Floor Plan

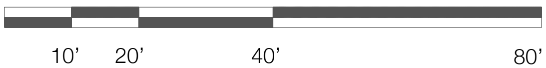




East West Section

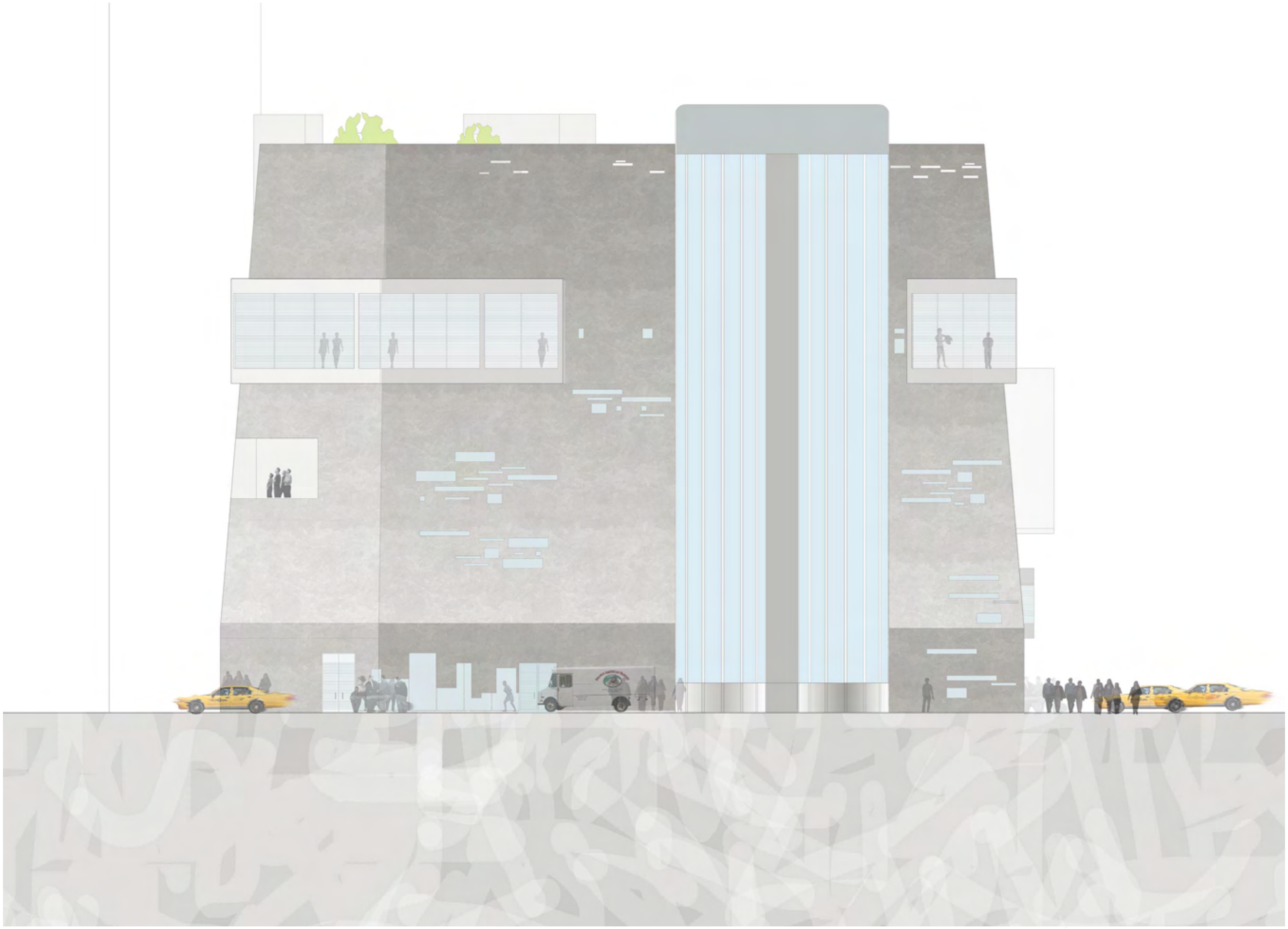


North South Section

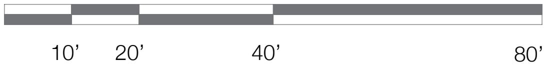



North Elevation

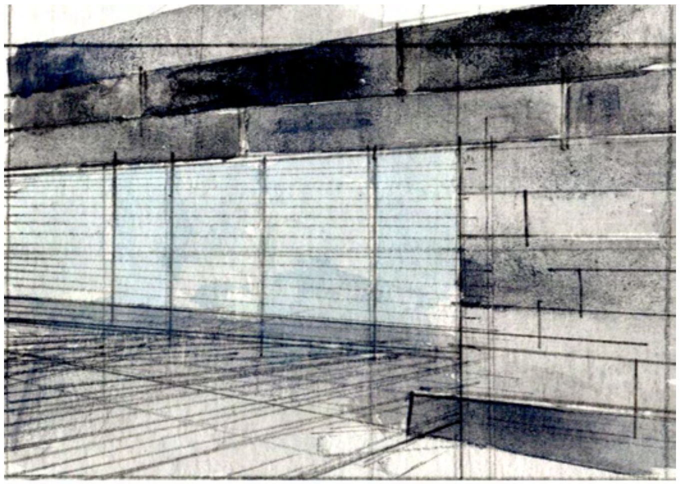
East Elevation



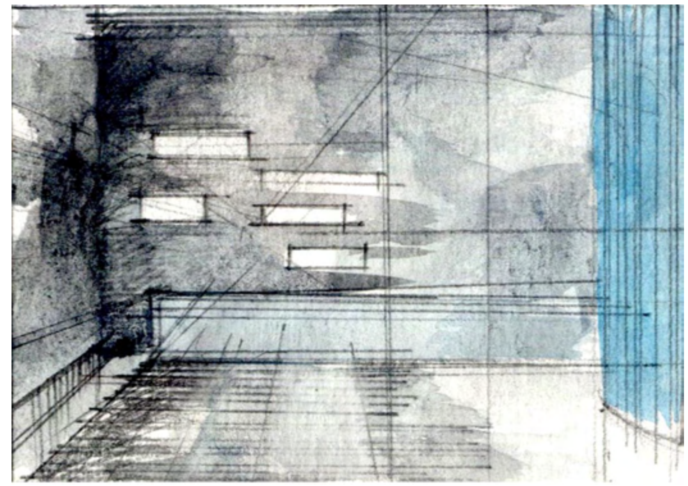
West Elevation



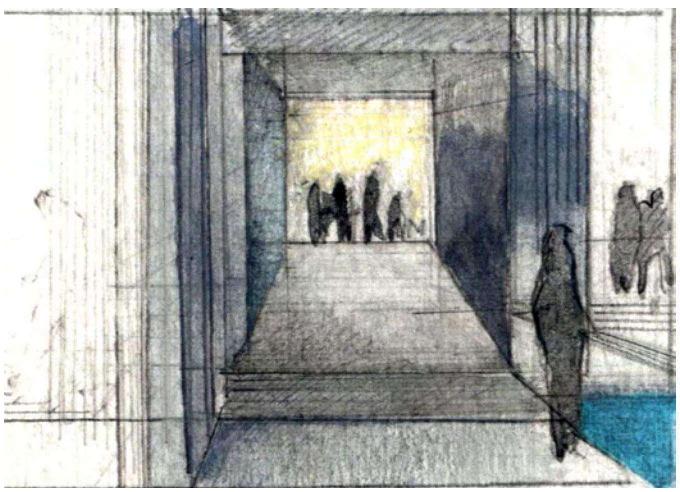
Circulation Vignettes:
Procession to Great Bath



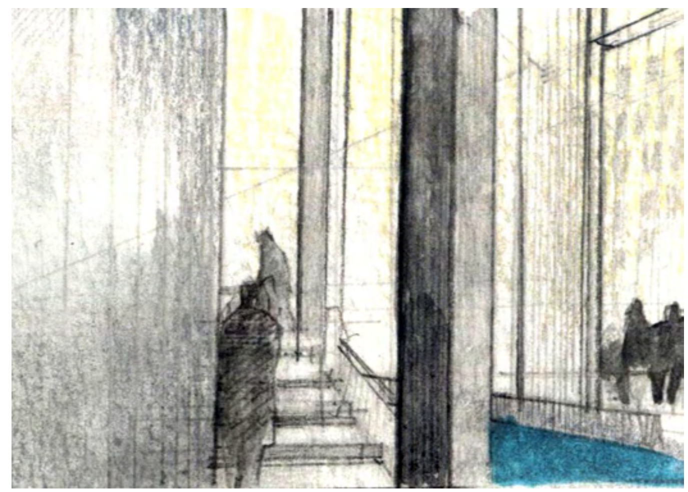
Entry on Astor Place.



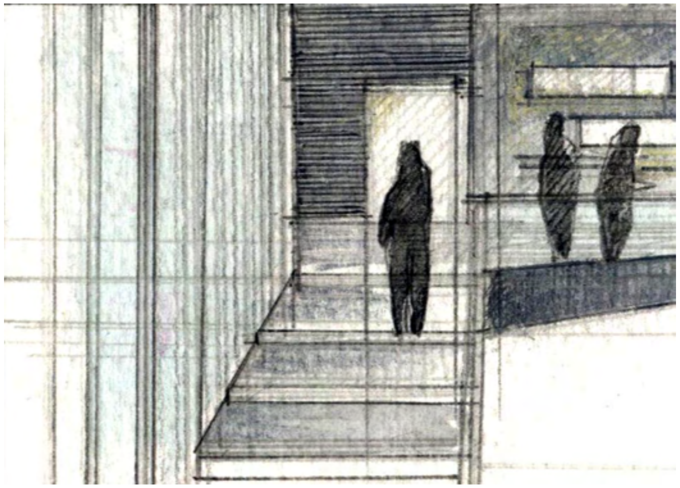
Reception.



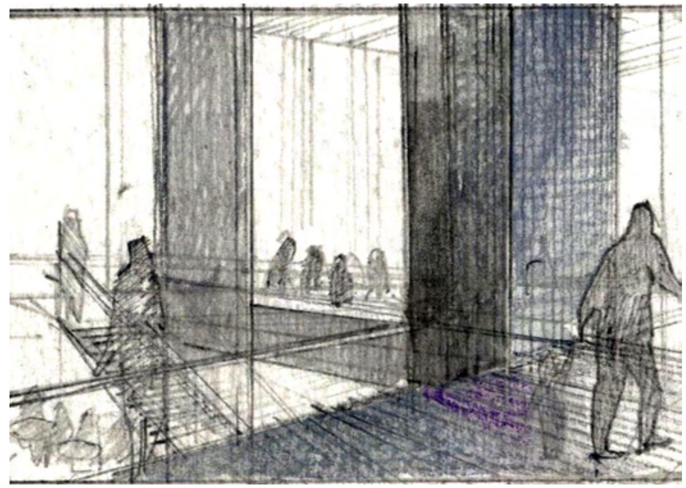
Looking towards outdoor cafe
on Lafayette Street.



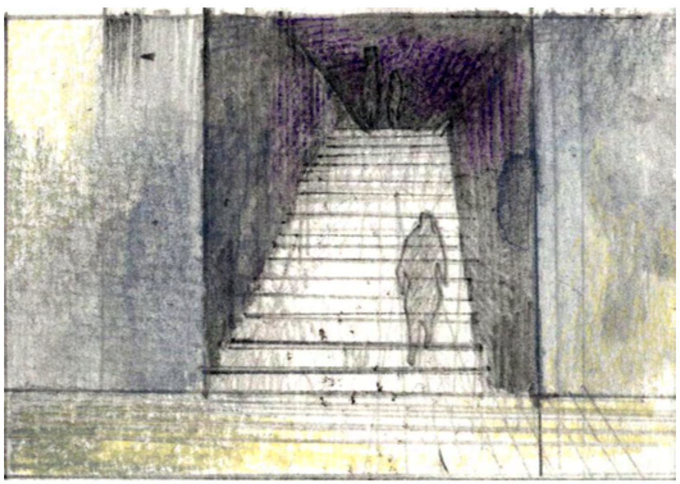
Beginning of slow stair that
wraps around gallery and cafe.



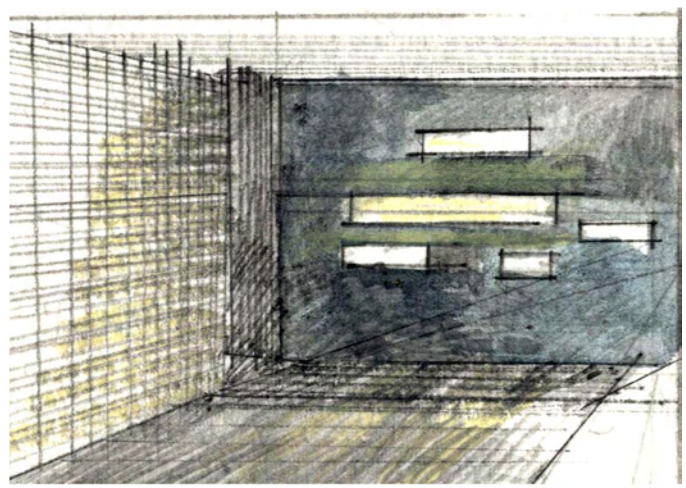
Top of slow stair that wraps around gallery and cafe facing apodyteria.



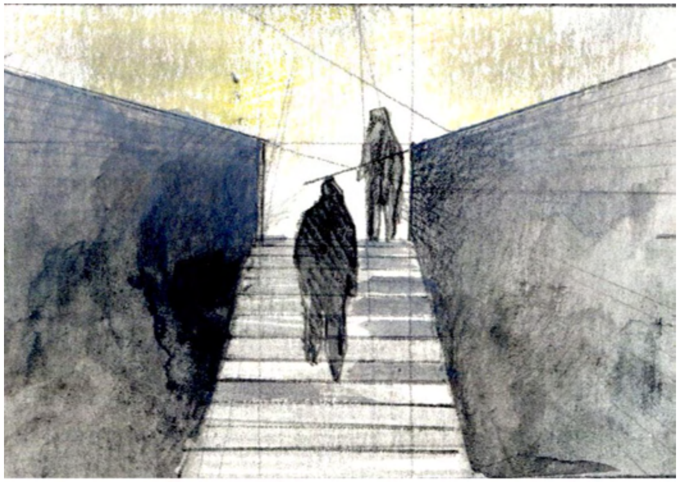
Overlook on first floor, outside of library, looking down into cafe space below.



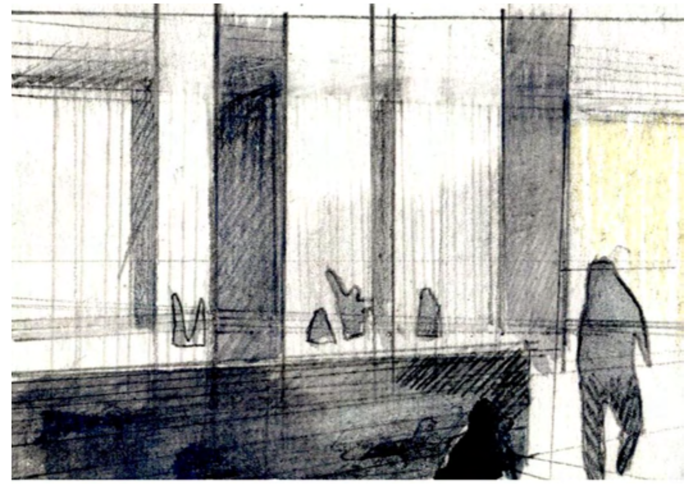
Leaving the first floor and entering the stair to the first intersitial mechanical level (Second Floor).



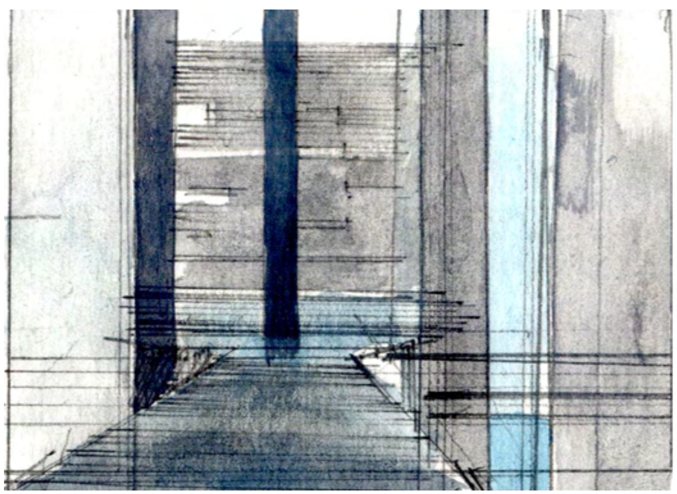
Reveals within first interstitial mechanical level into both fan room and The Bowery beyond.



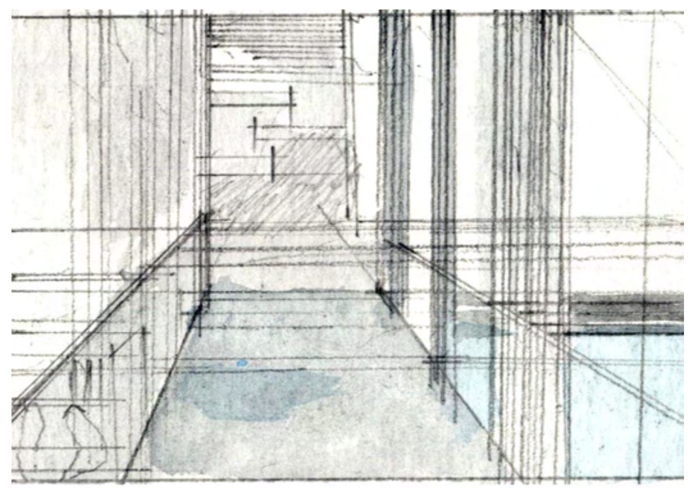
Leaving the mechanical level below and entering the main bathing level (third floor).



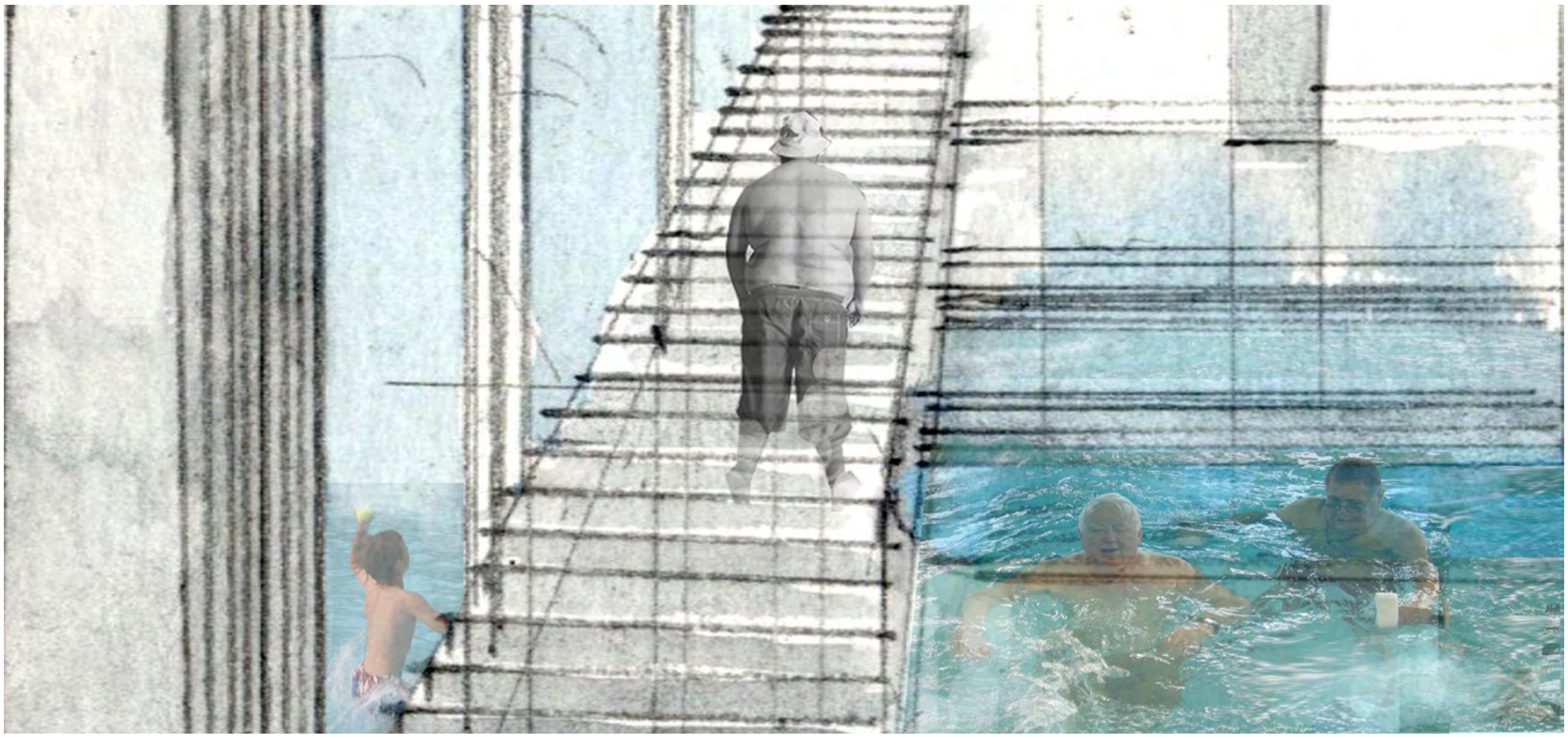
At the top of the stair that leaves the mechanical level below, facing the children's bath.



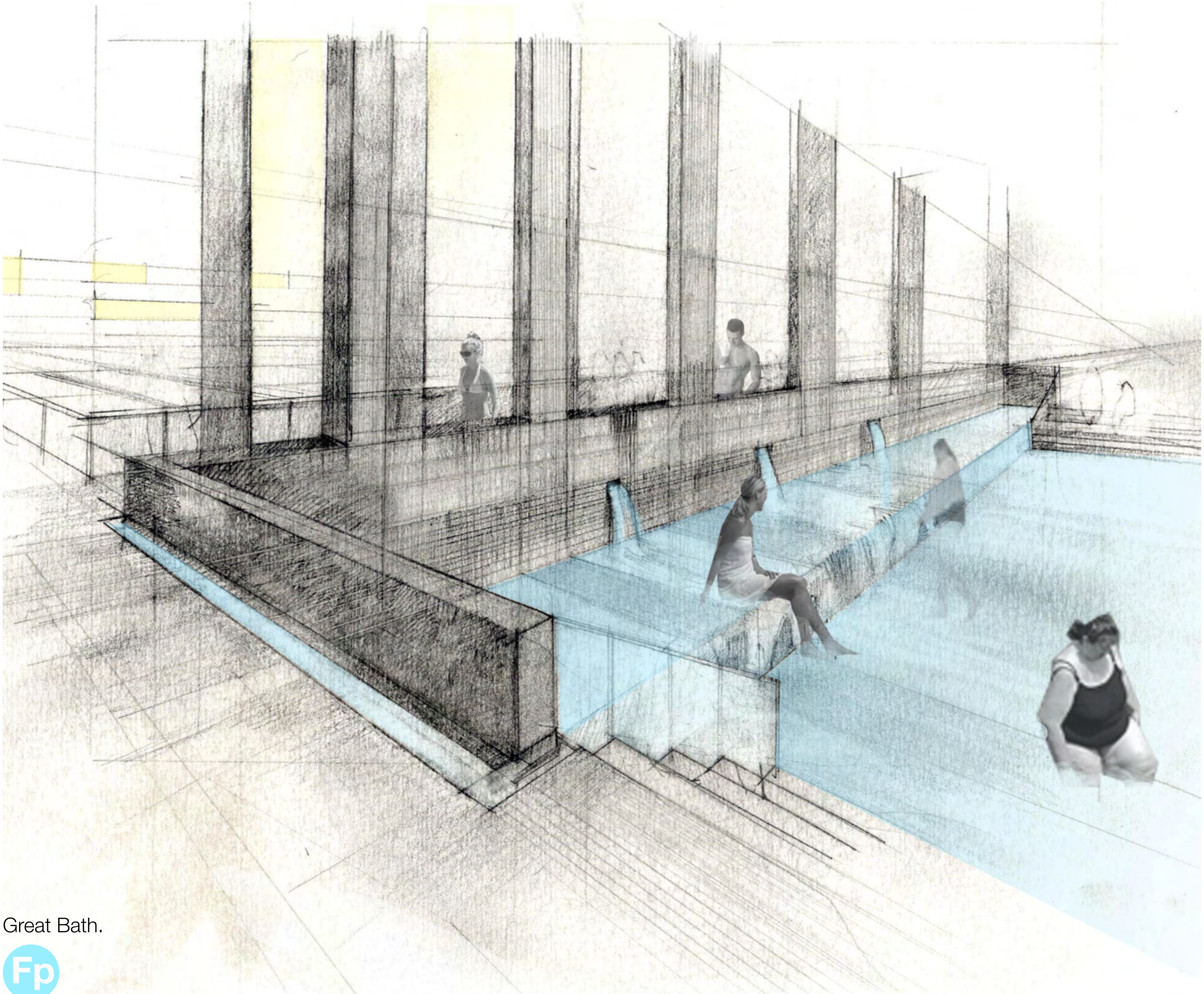
Descending the ramp between the tepidaria and children's bath.



Crossing the bridge that looks over the great bath and down into the library below.

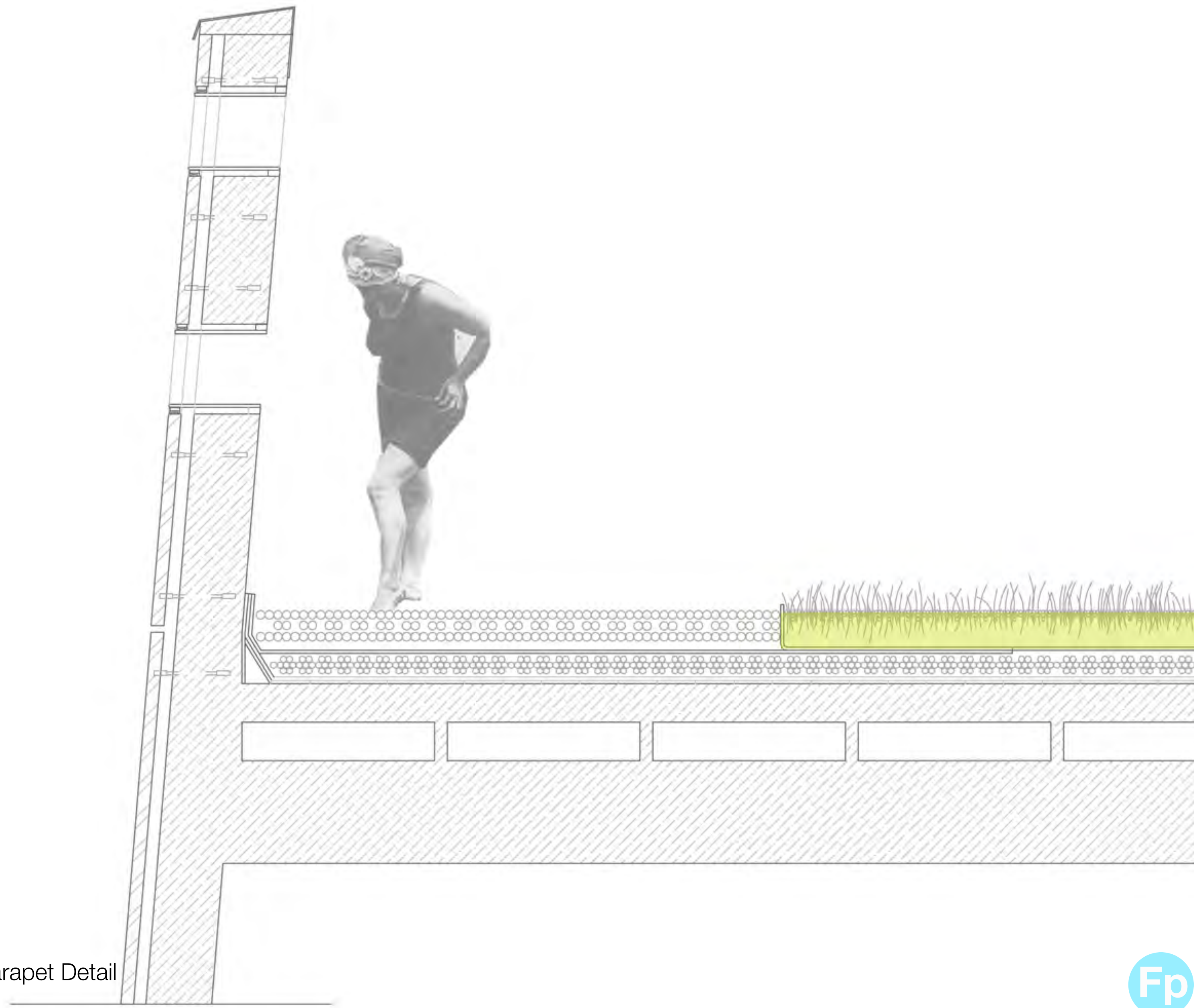


Beginning the stair that leads to the Turkish bathing level, which is flanked by the children's bath to the left, and the great bath to the right.

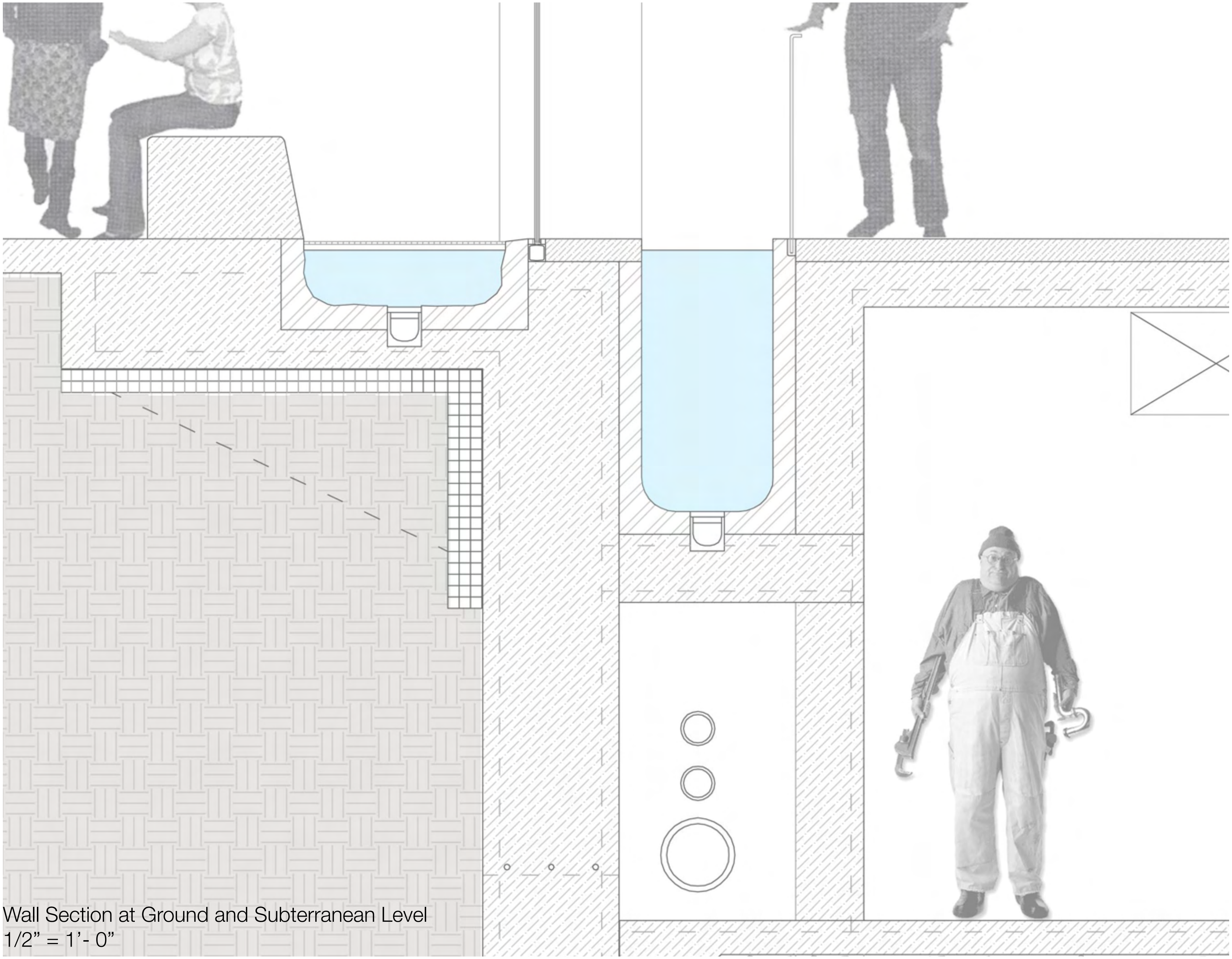


Great Bath.

Fp

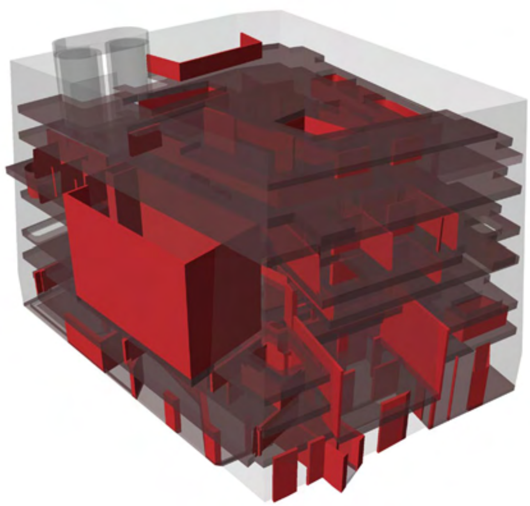


Green Roof and Parapet Detail
1/2” = 1’- 0”

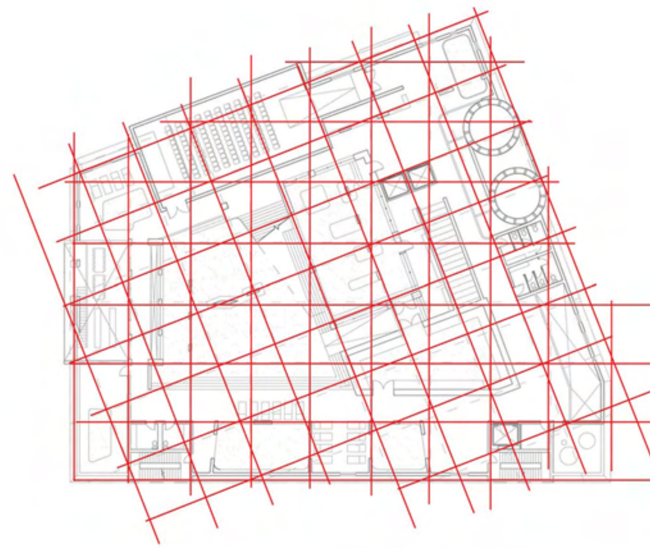


Wall Section at Ground and Subterranean Level
1/2" = 1'- 0"

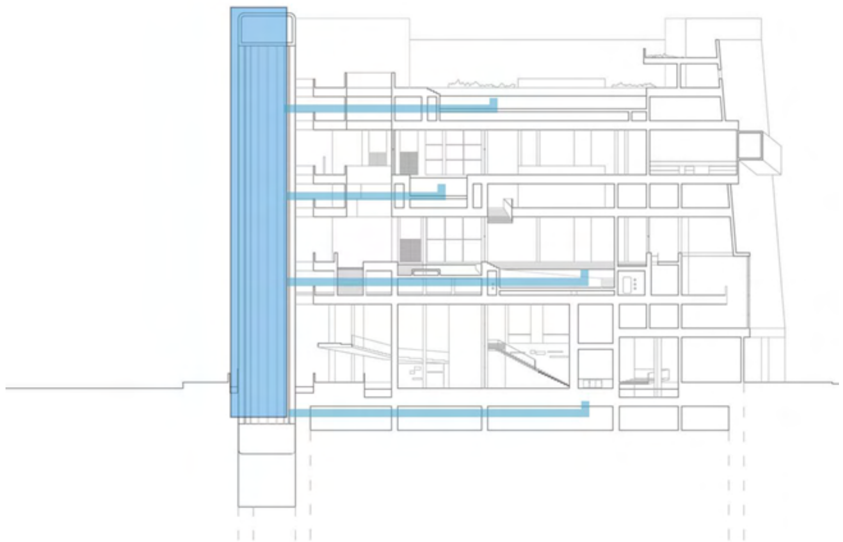
Fp



Structural Load Bearing Walls.

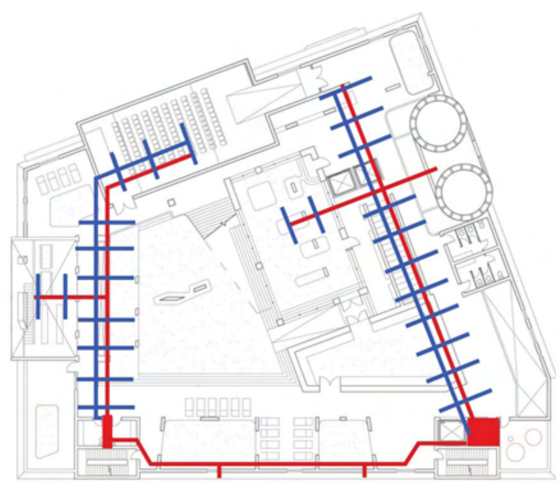


Overlapping Structural Grids.

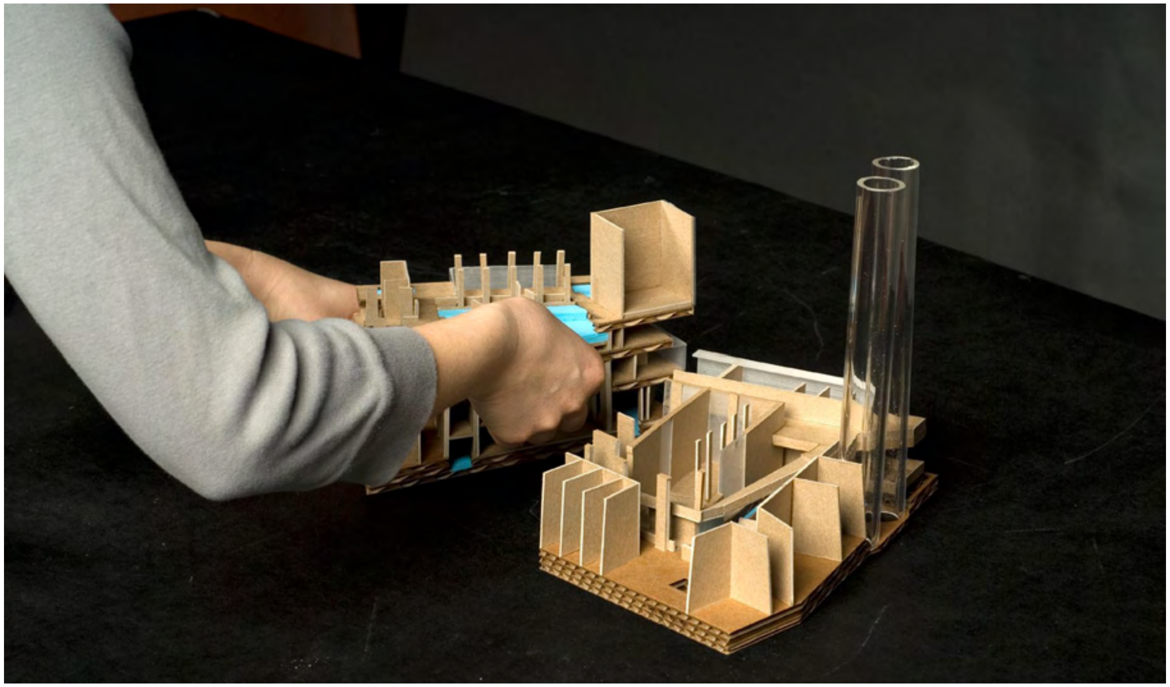


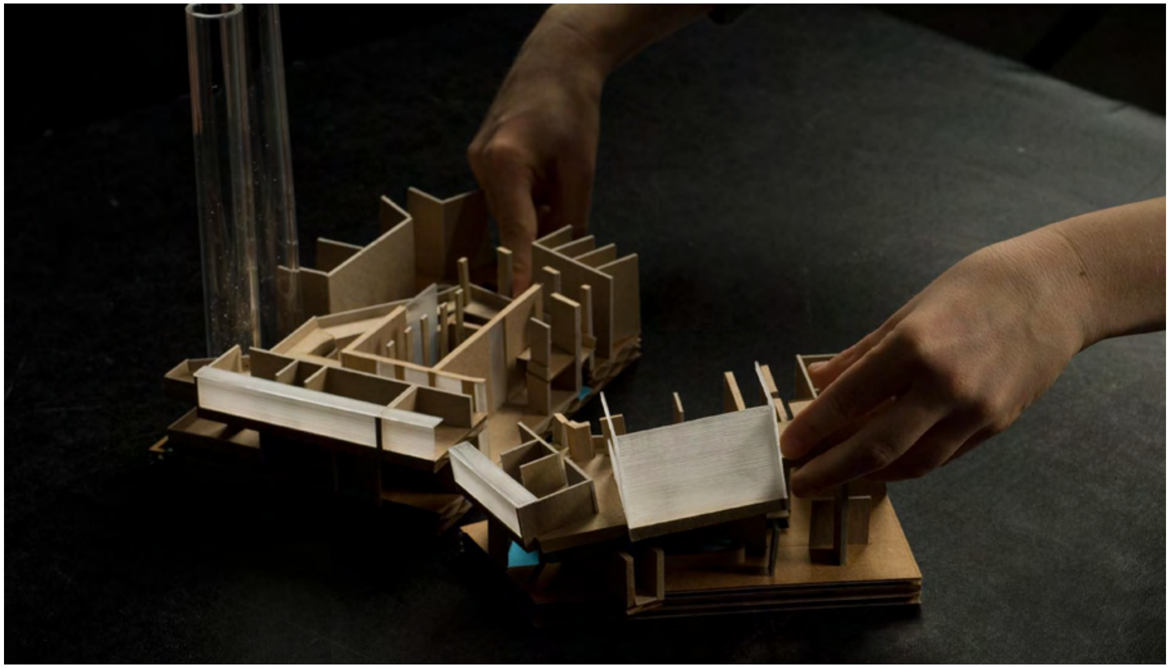
Water Supply off Main Water Towers.

Air Supply off Chase in Circulation Core.



Supply and Return





Sectional / Pull-Apart Model

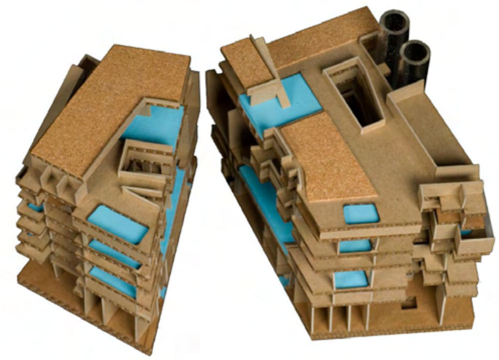
Third Floor

Portion of
Second Floor and
Interstitial
Mechanical I

First Floor

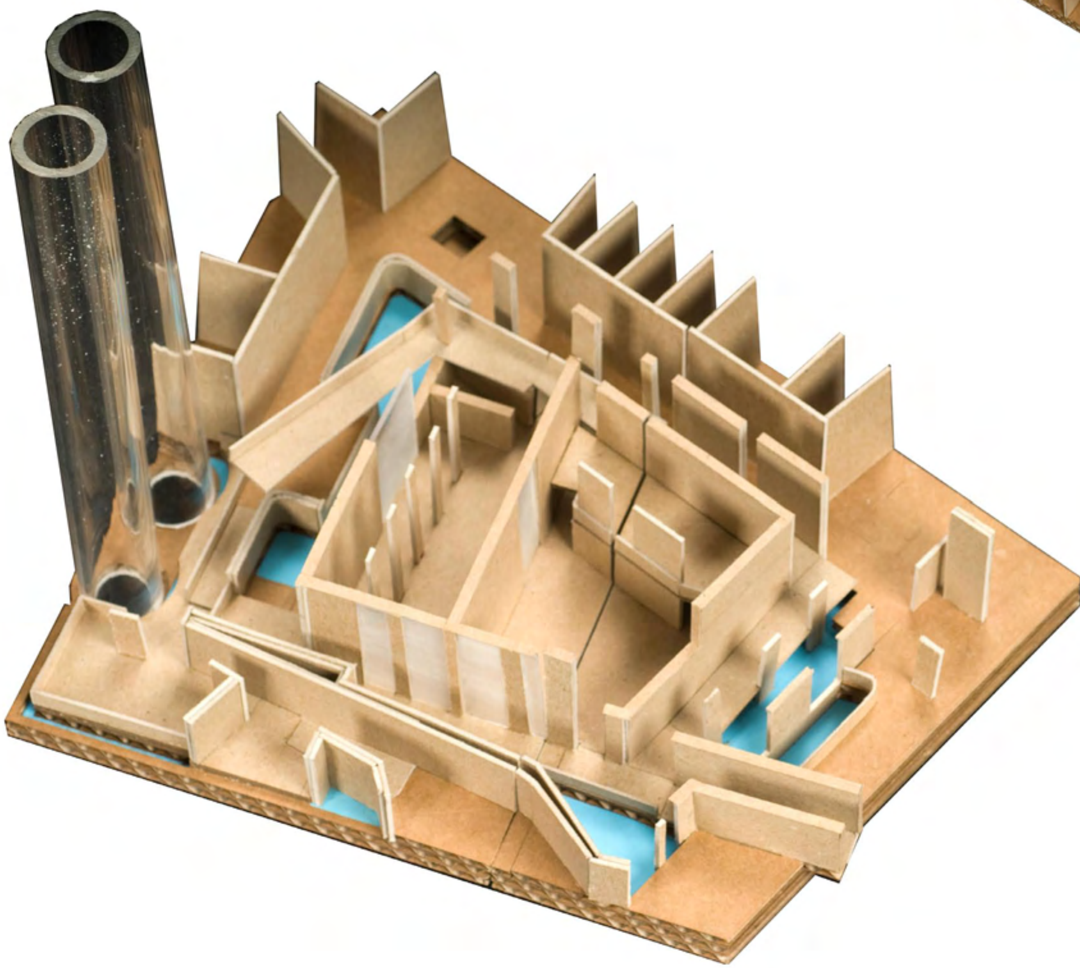
Ground Floor

Roof with Roof
Mezanine
(Seventh +
Eighth floors)



Fifth Floor

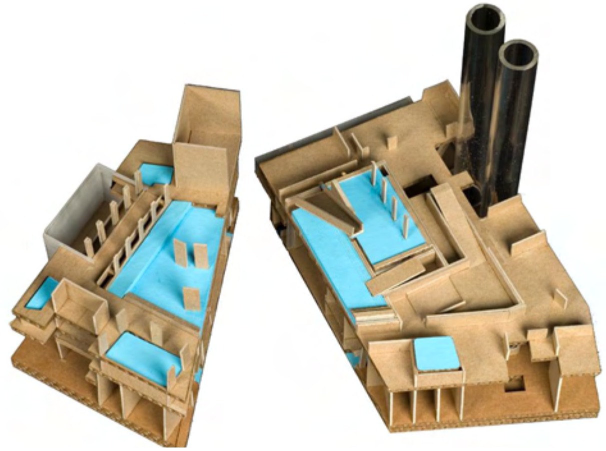
Cont.

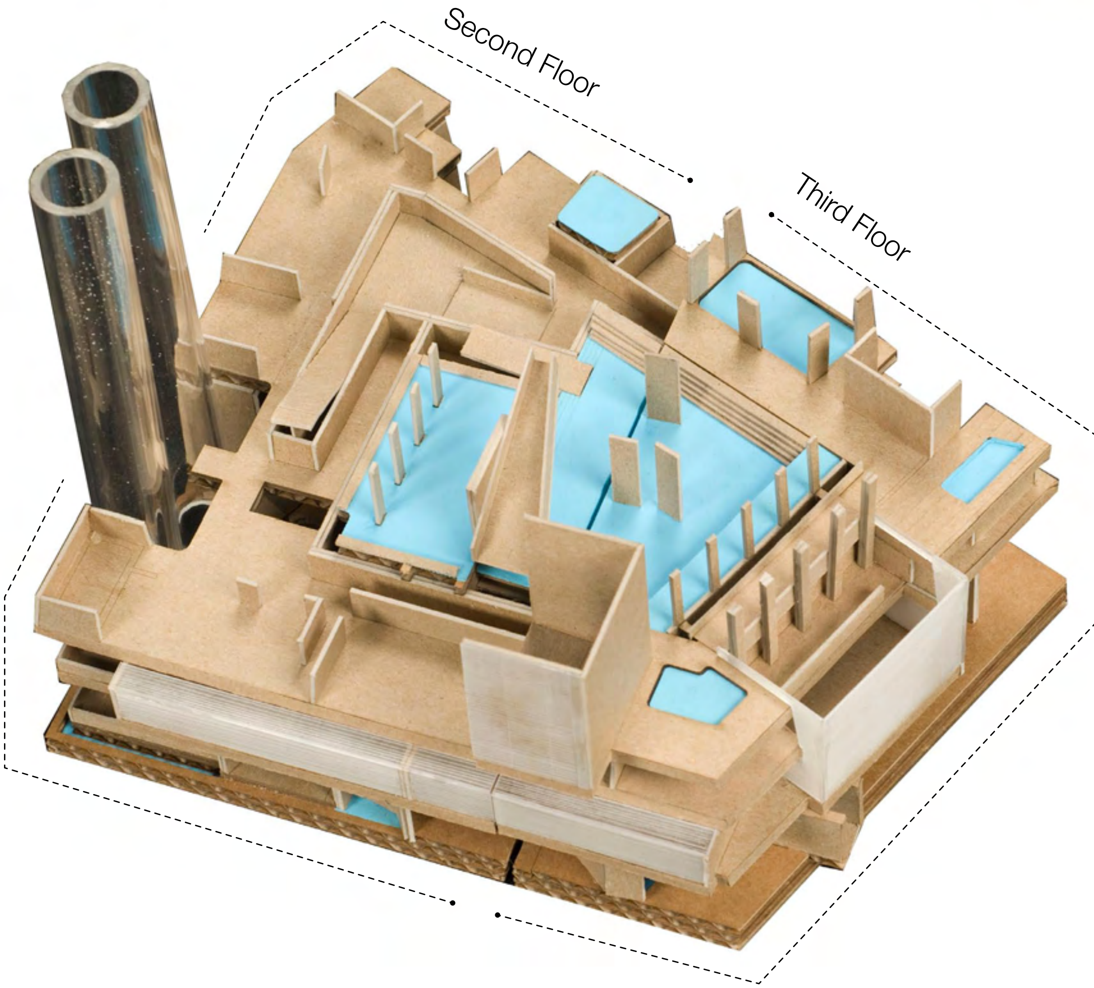


Ground Floor

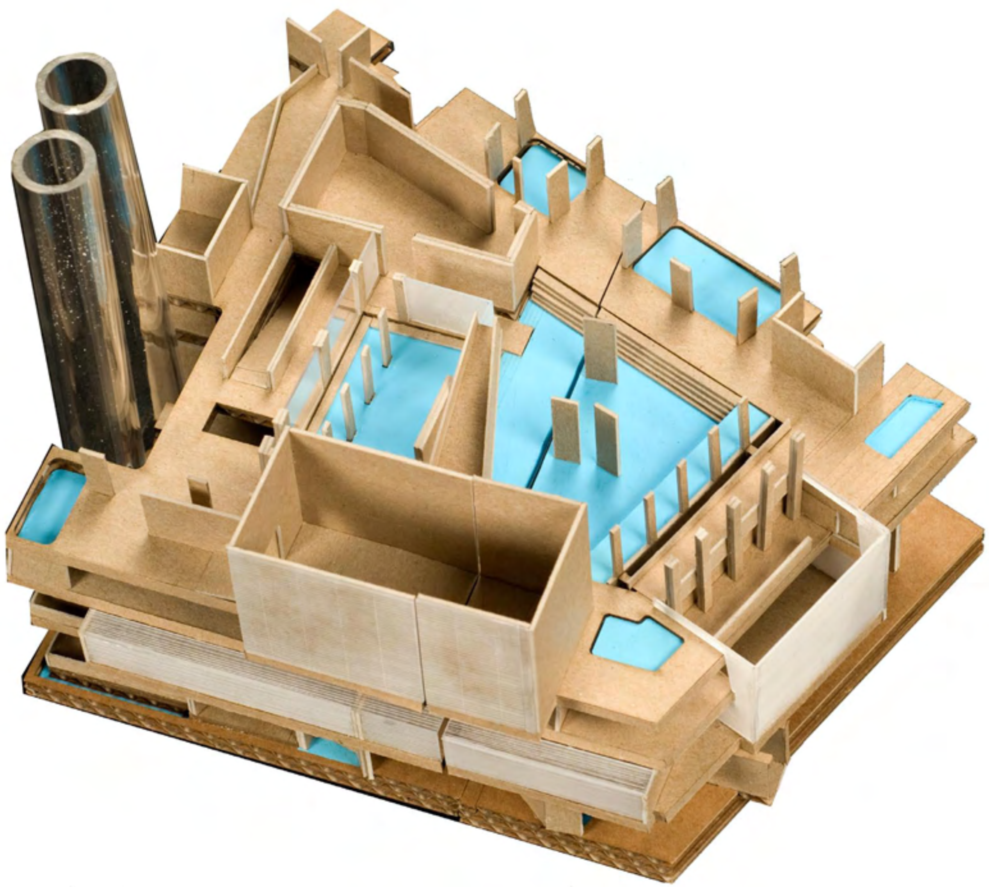
First Floor

Fp



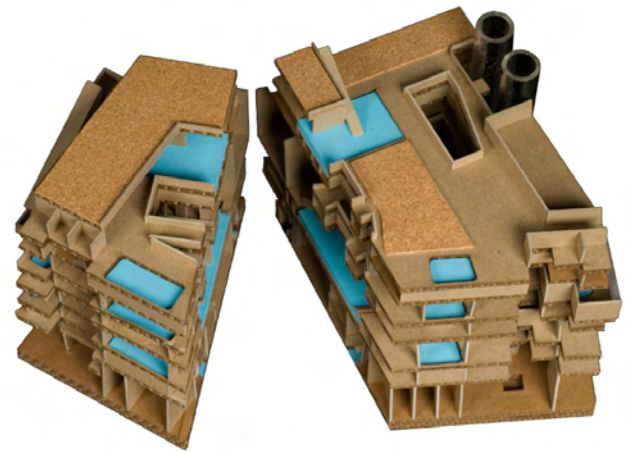


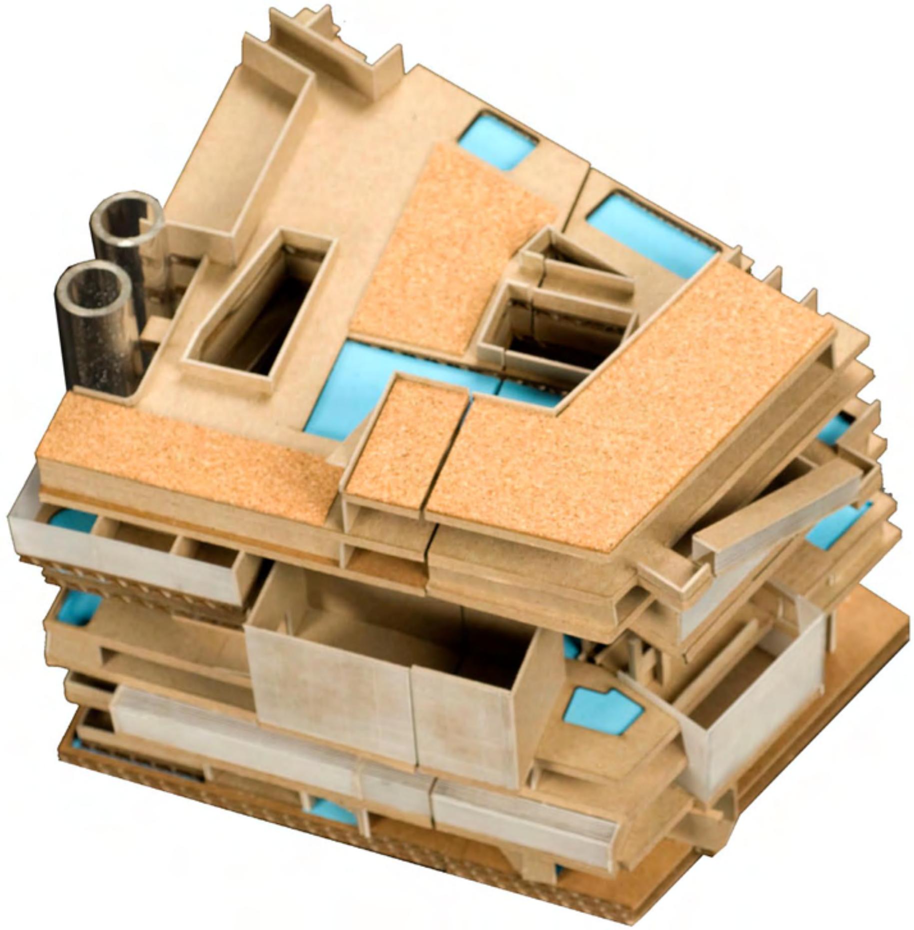

Half of Second Floor and Half of Third Floor



Third Floor

Fourth Floor

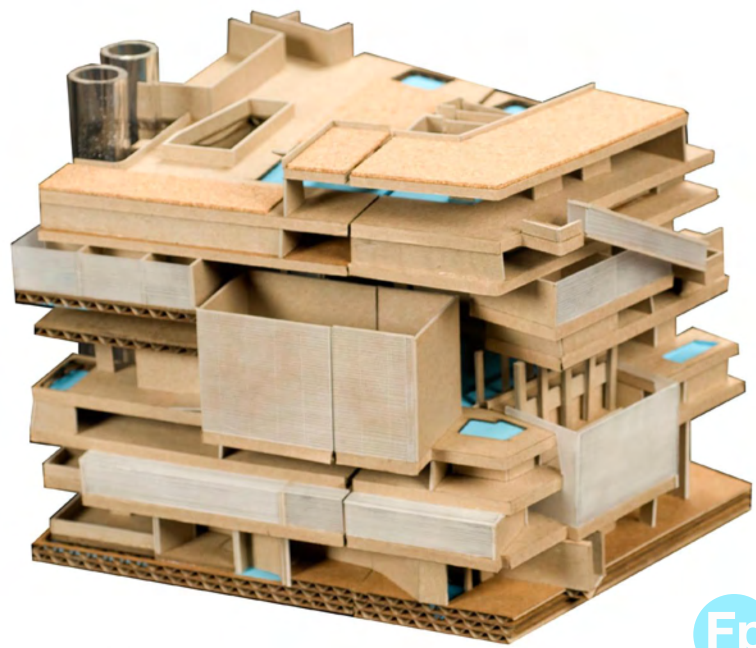




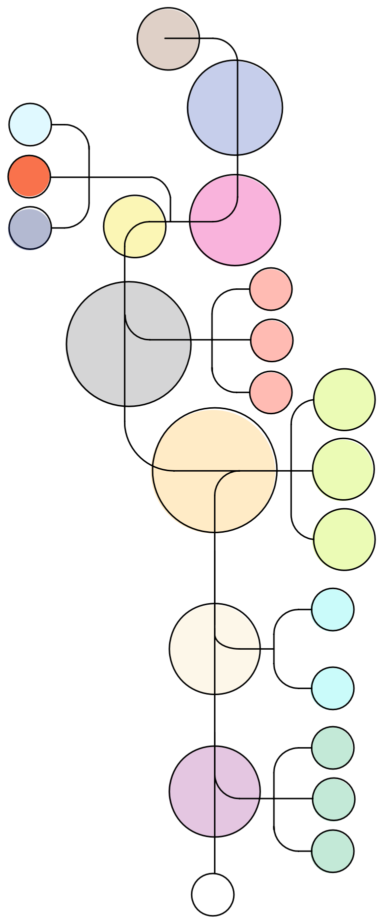
Fifth Floor

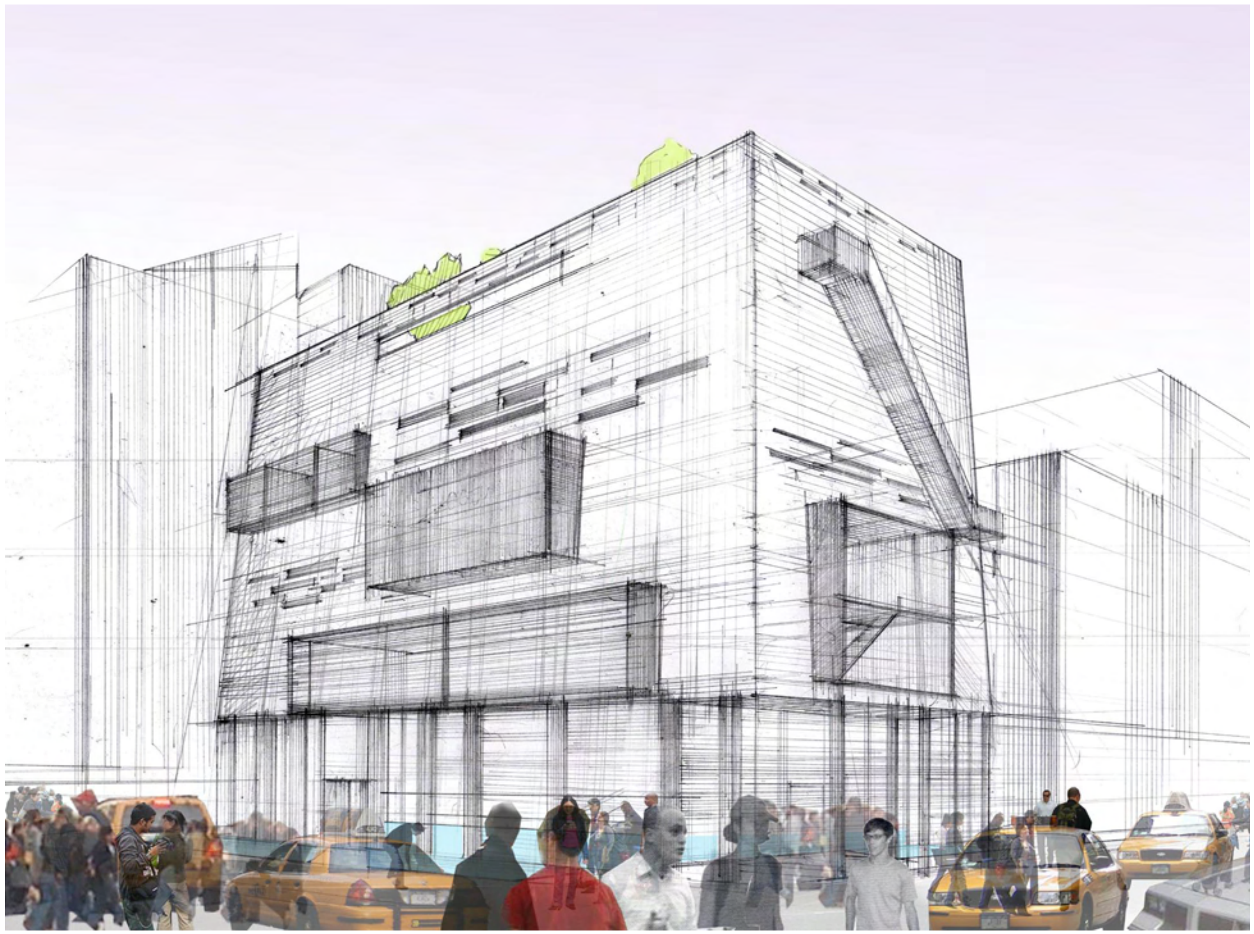
Fp

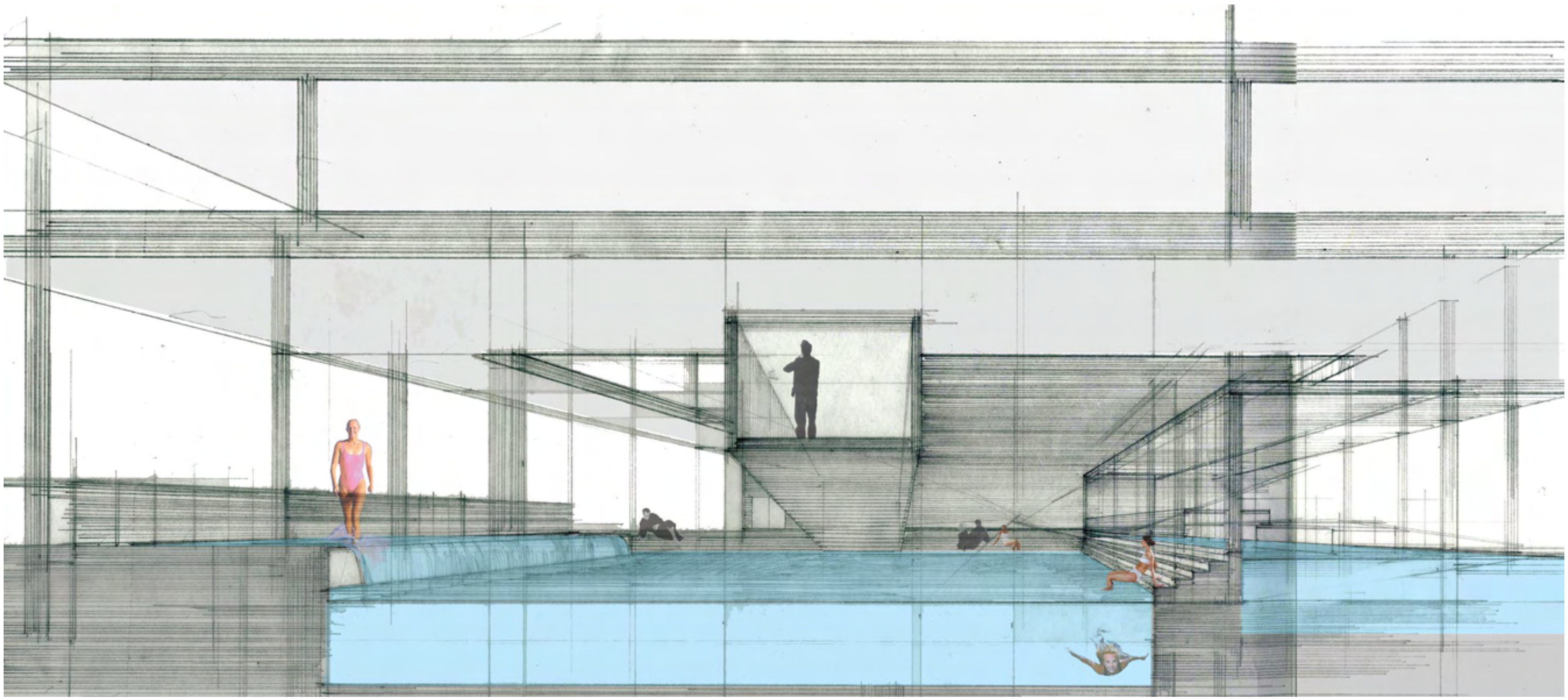


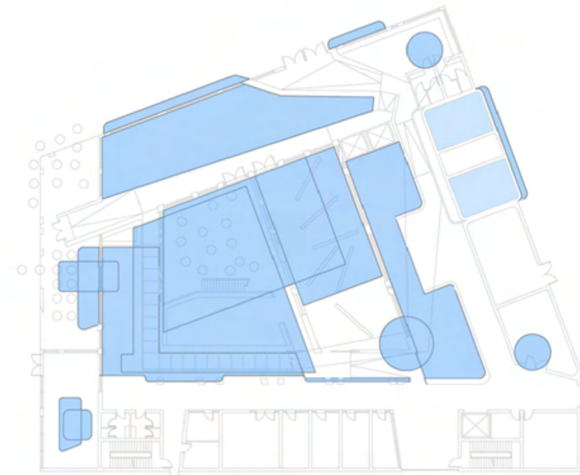
# Gate Presentation

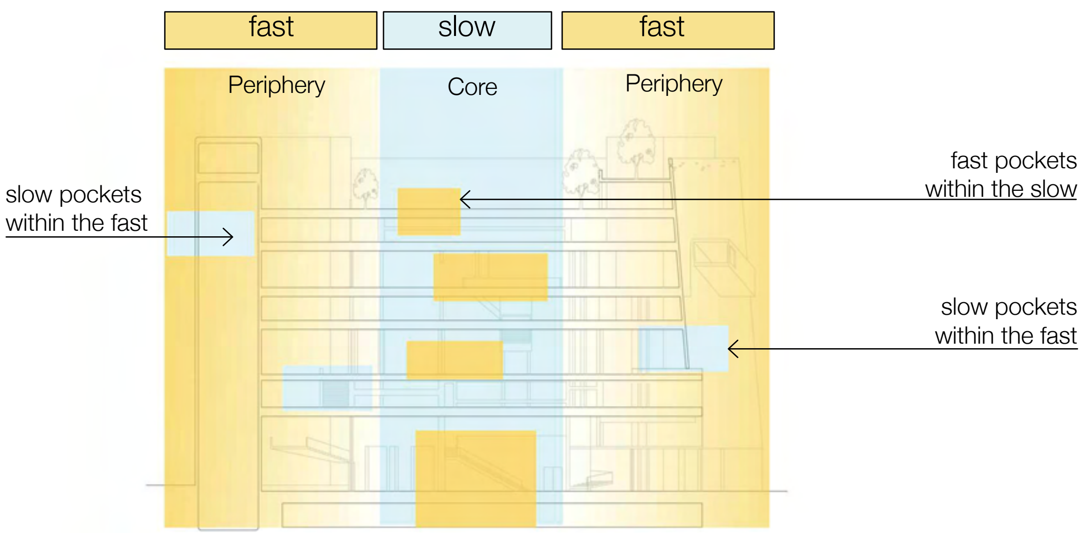


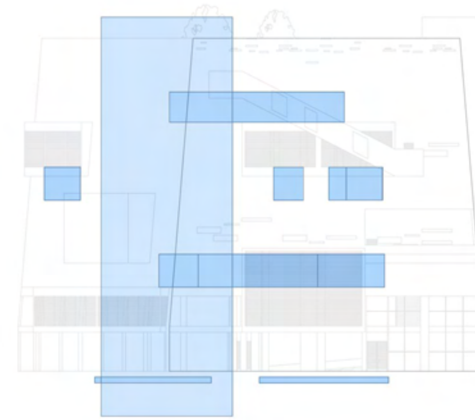




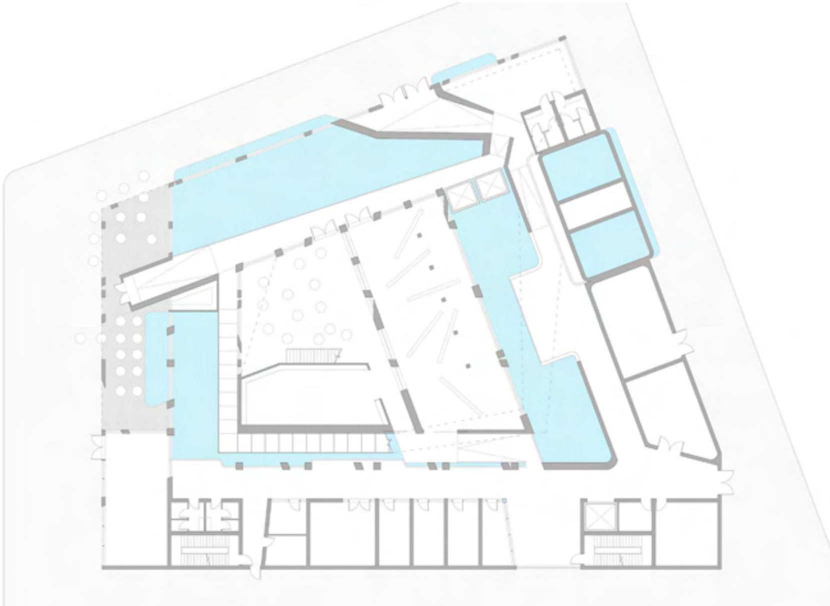
Sectional Perspective of Great Bath

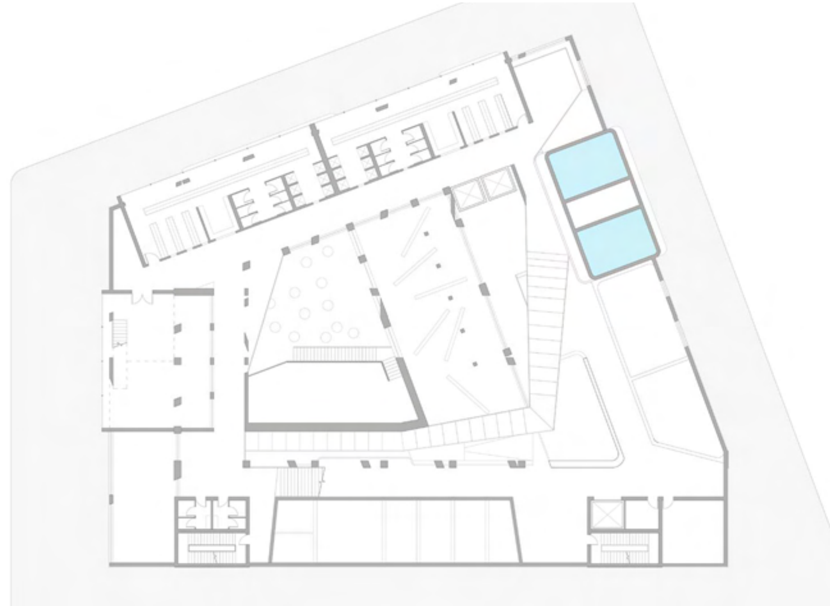


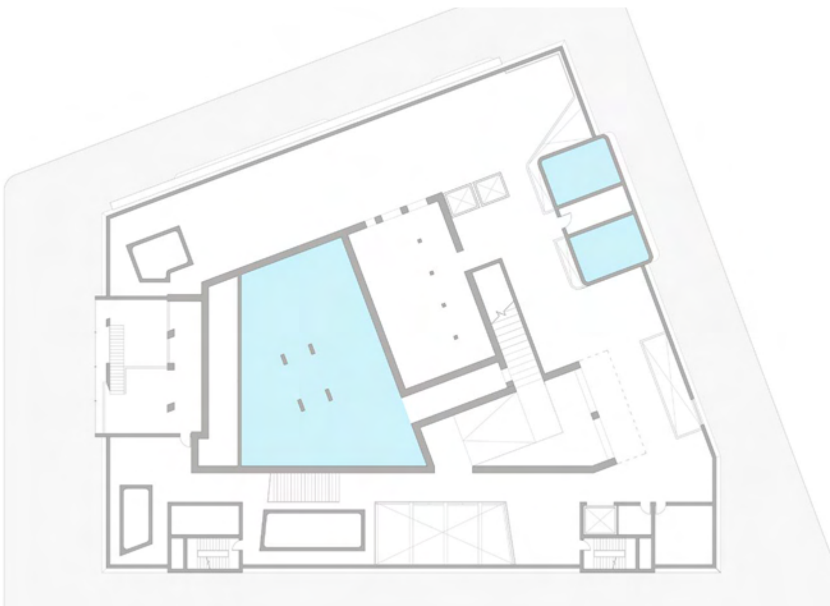

fast
slow
fast
Periphery
Core
Periphery
slow pockets
within the fast
fast pockets
within the slow
slow pockets
within the fast

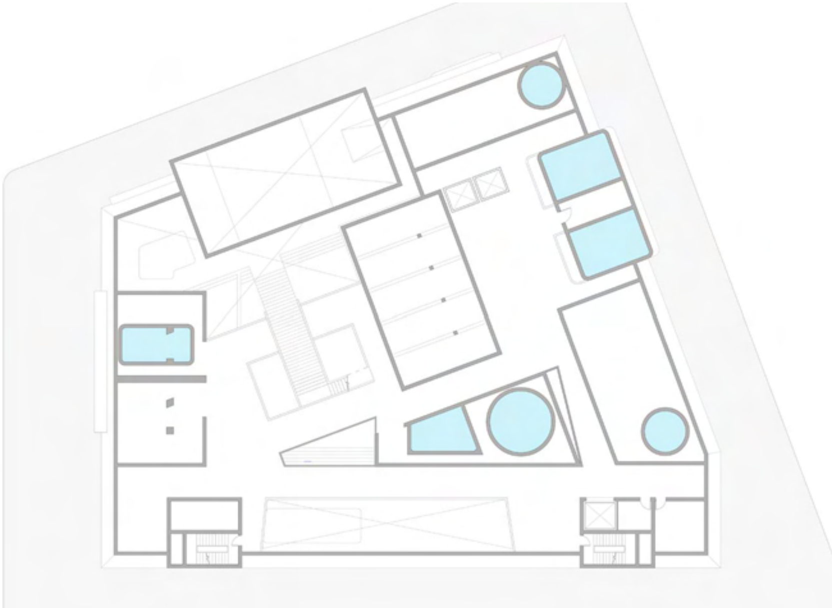


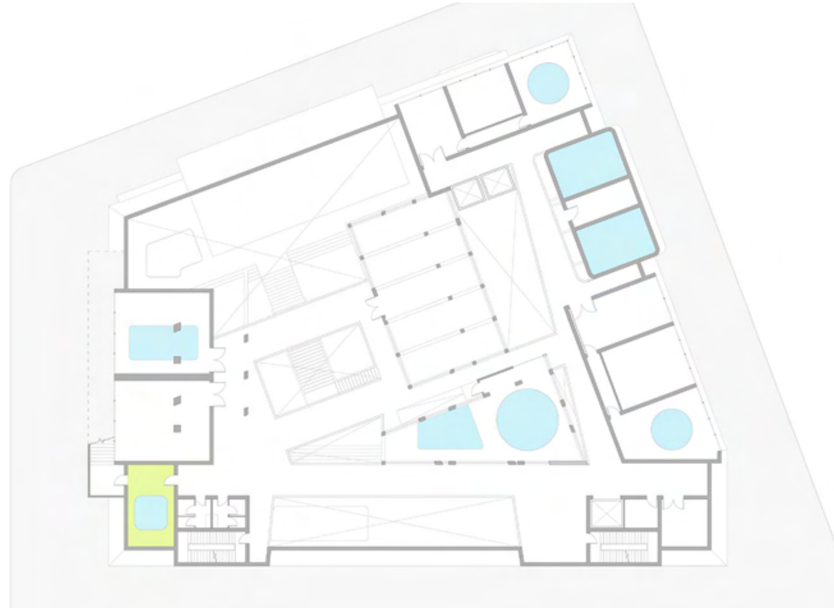

25'
50'
100'
200'

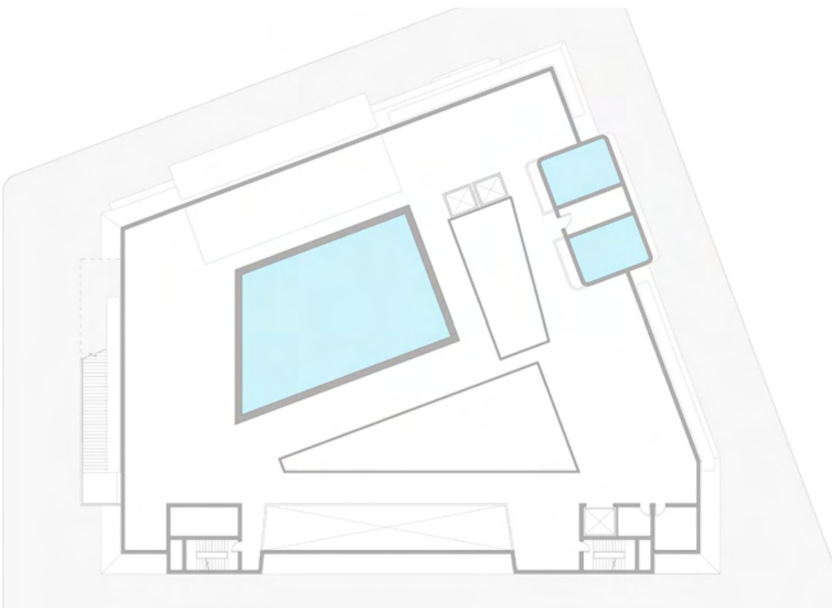


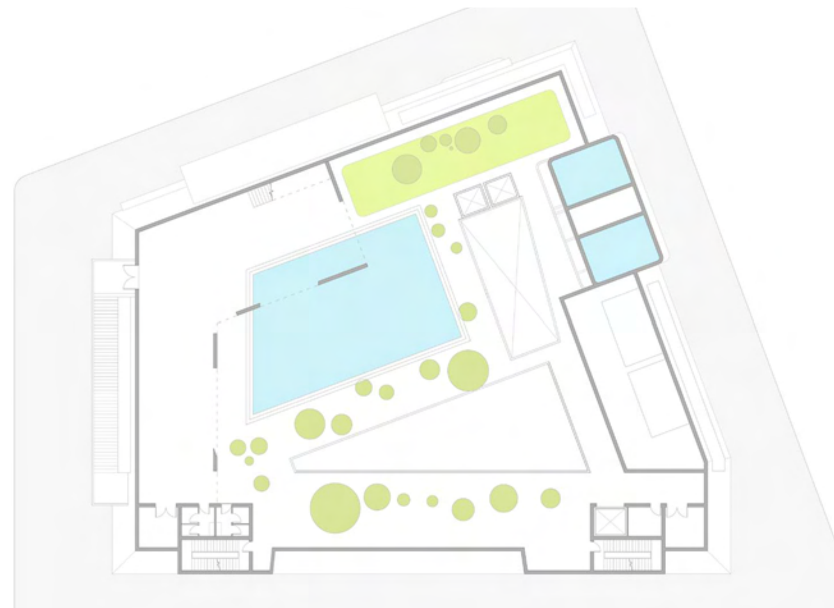




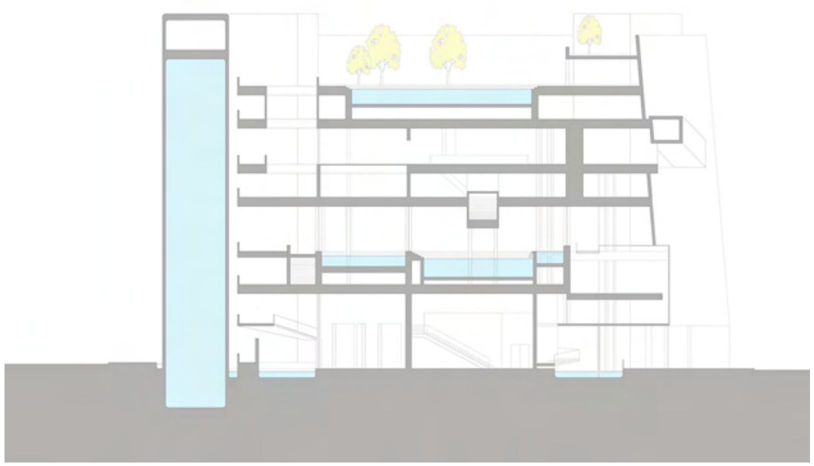






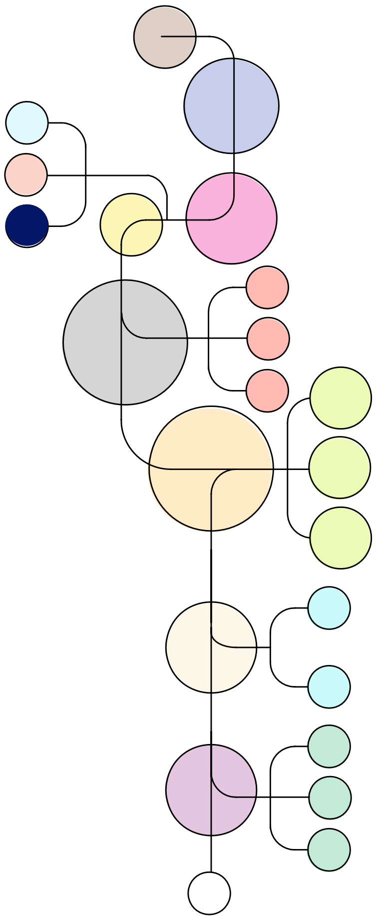


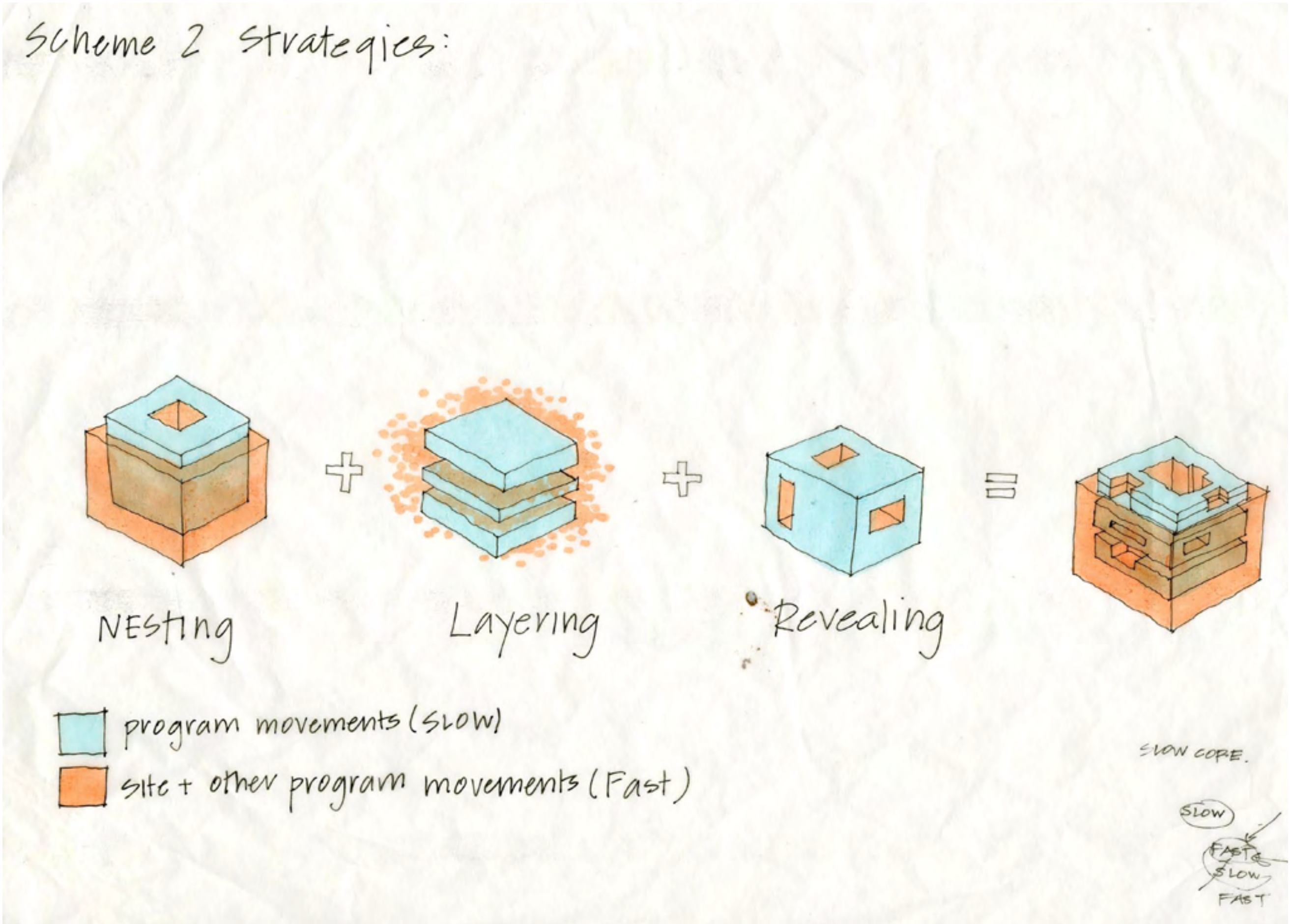

LECTURES at the BATHS:
Modernity and the Sacred Feminine
Anna Schultz
Tuesday July 7 2009
THE MANHATTAN BATHS

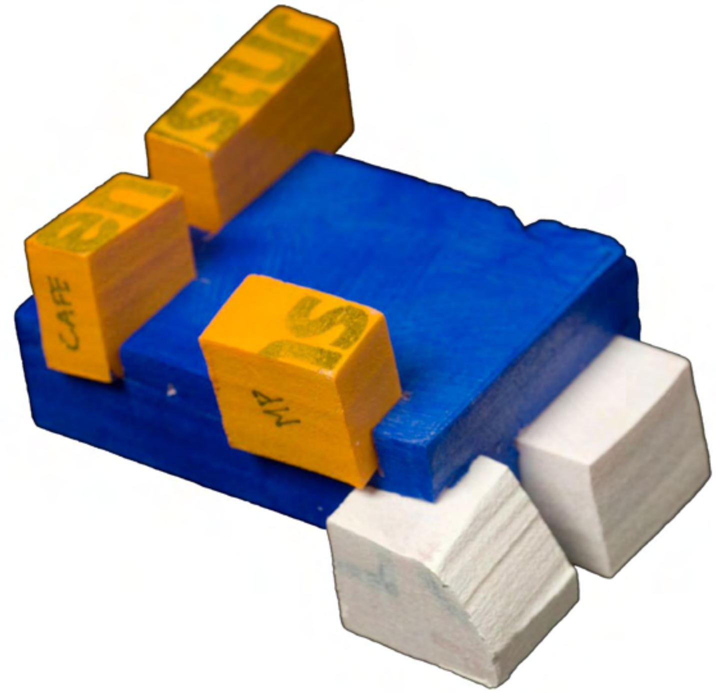


Gp

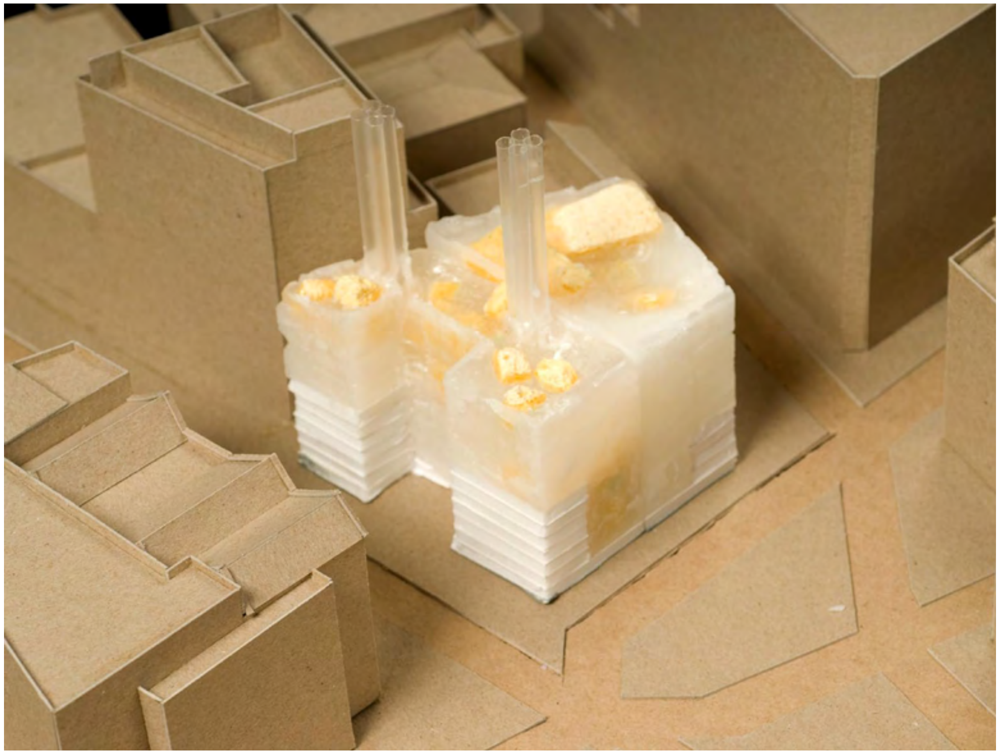
# Process and Schematic







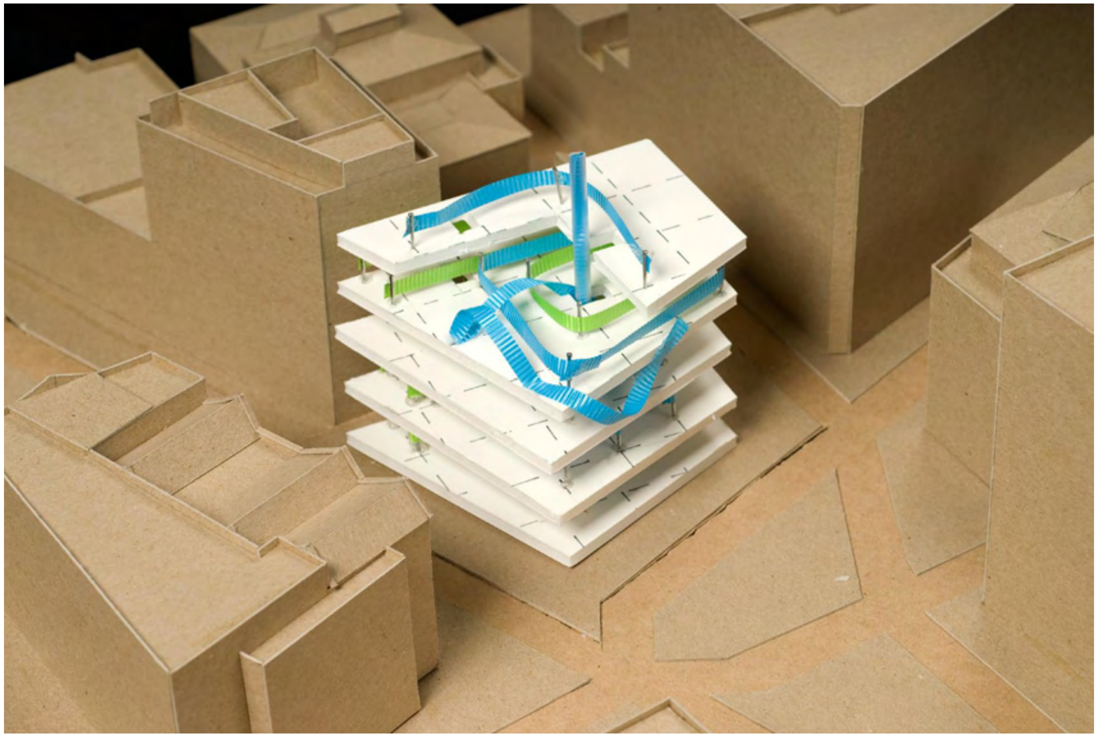

Process Models

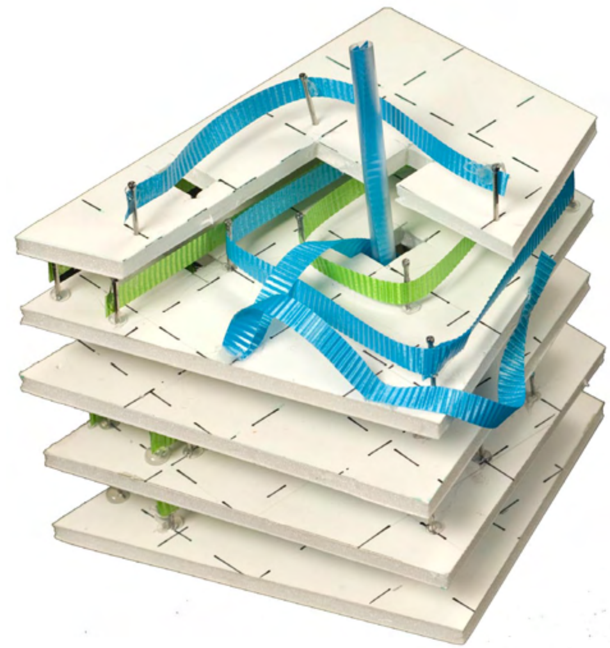


Wax Model

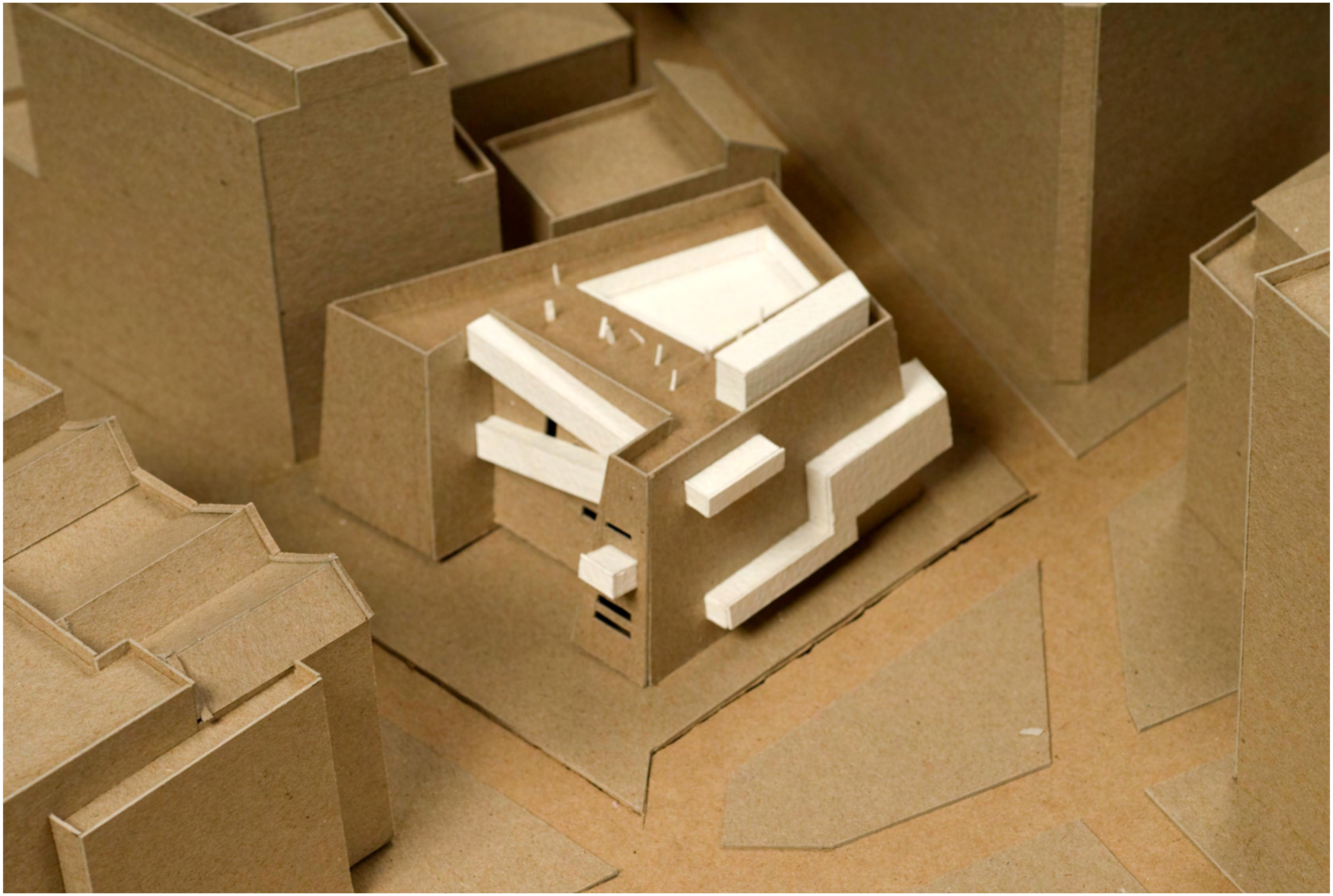
PS

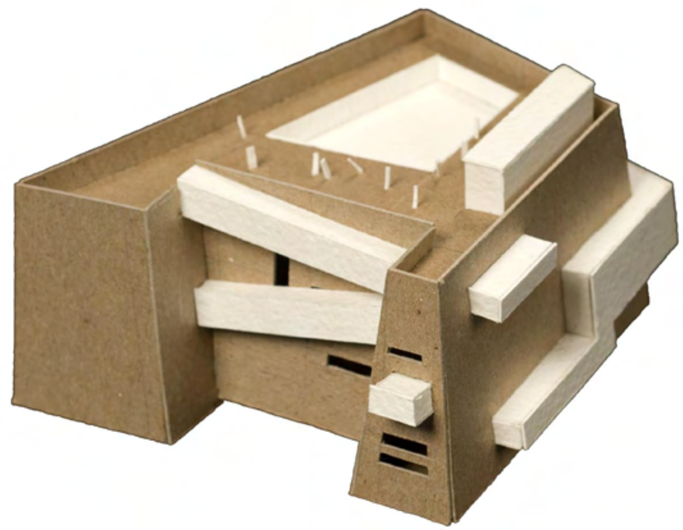
Green Spaces and Water Spaces Study

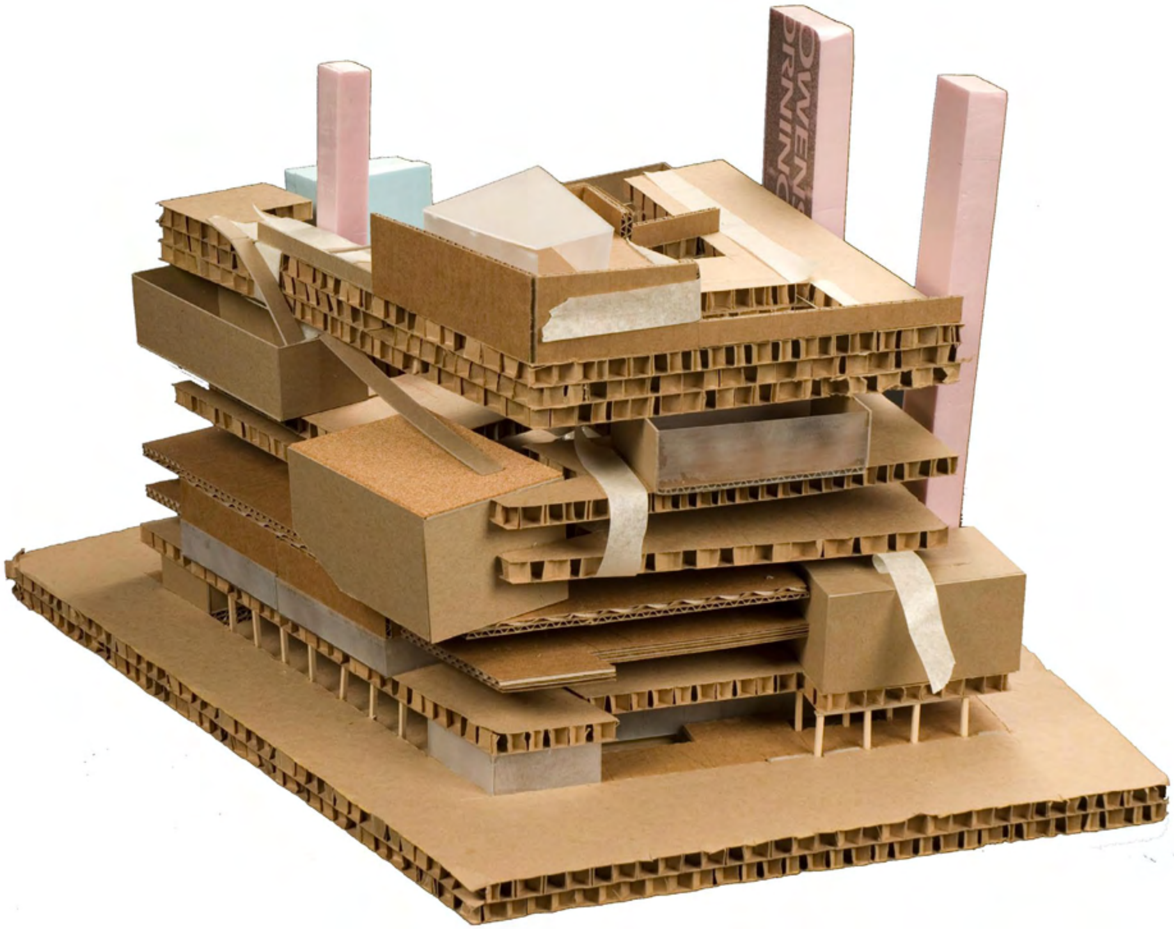


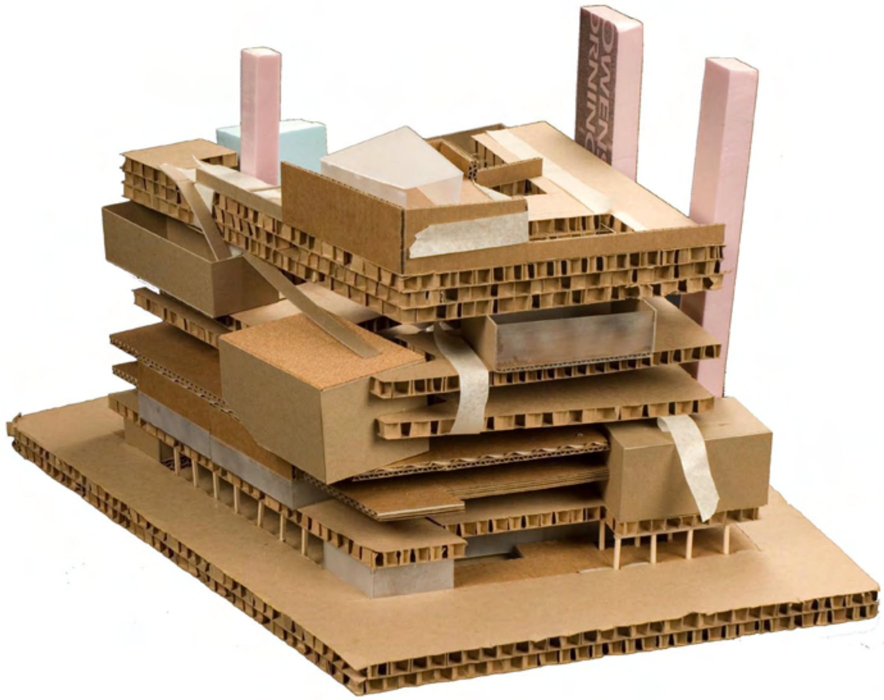


Circulation Study

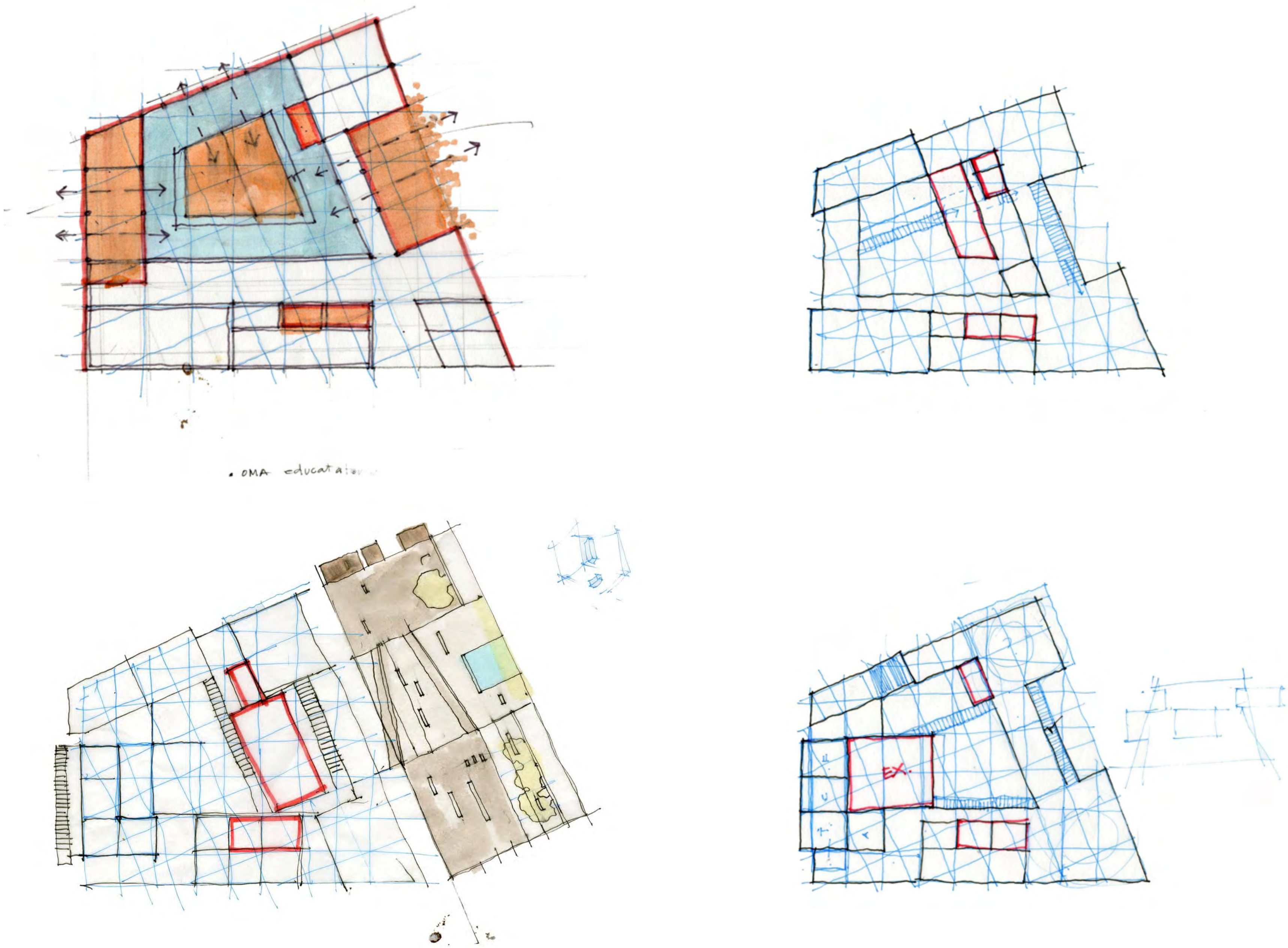

Fast Volumes versus Slow Mass Study



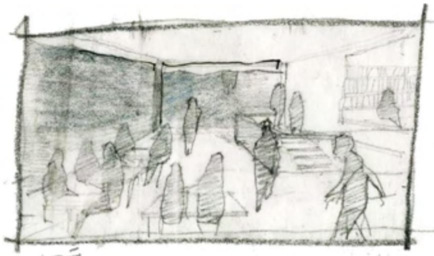


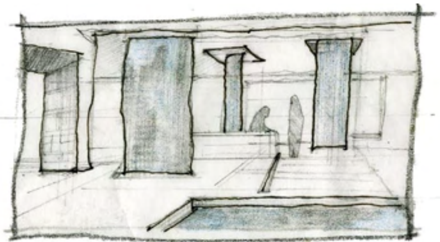


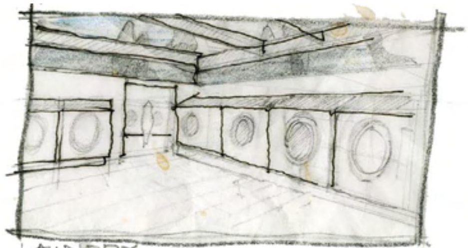

OWENS

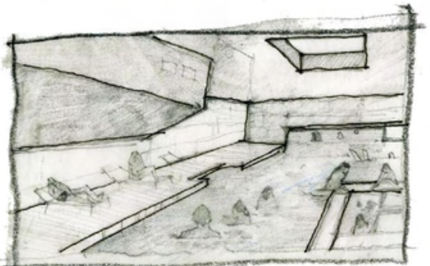


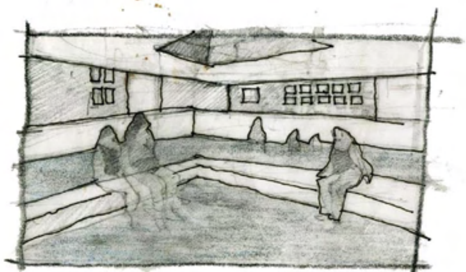

Schematic Plans Exploring Overlapping Structural Grids


CAFÉ


ENTRY-LOBBY

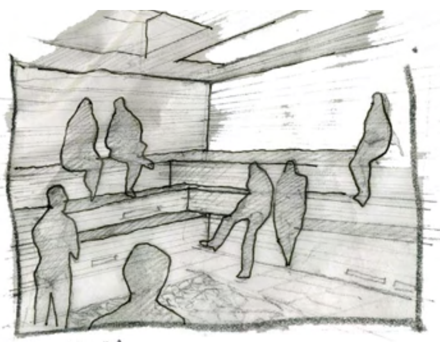

LAUNDRY

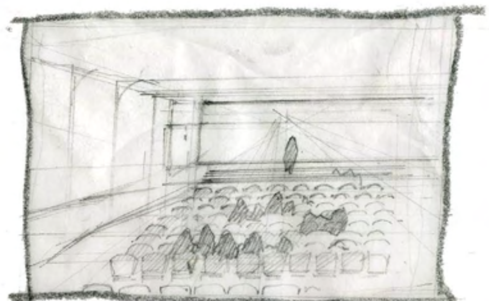

GREAT BATH

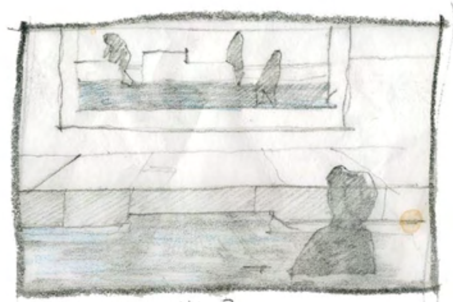

OUTDOOR BATH

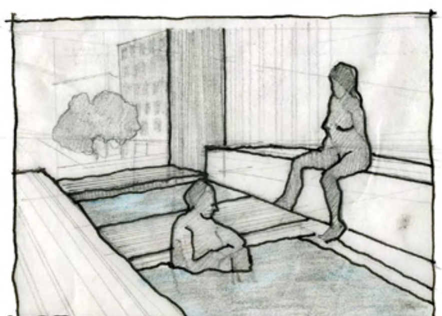

WATER SLIPS F/ 1 POOL TO ANOTHER

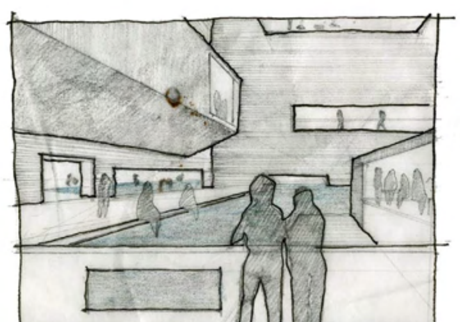
Process Vignettes

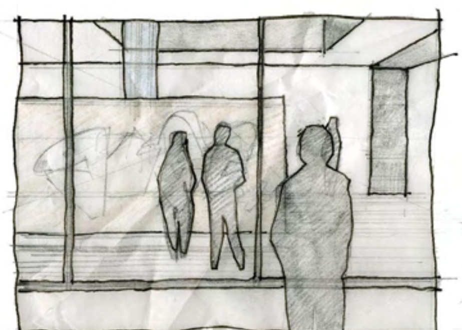

LACONICUM

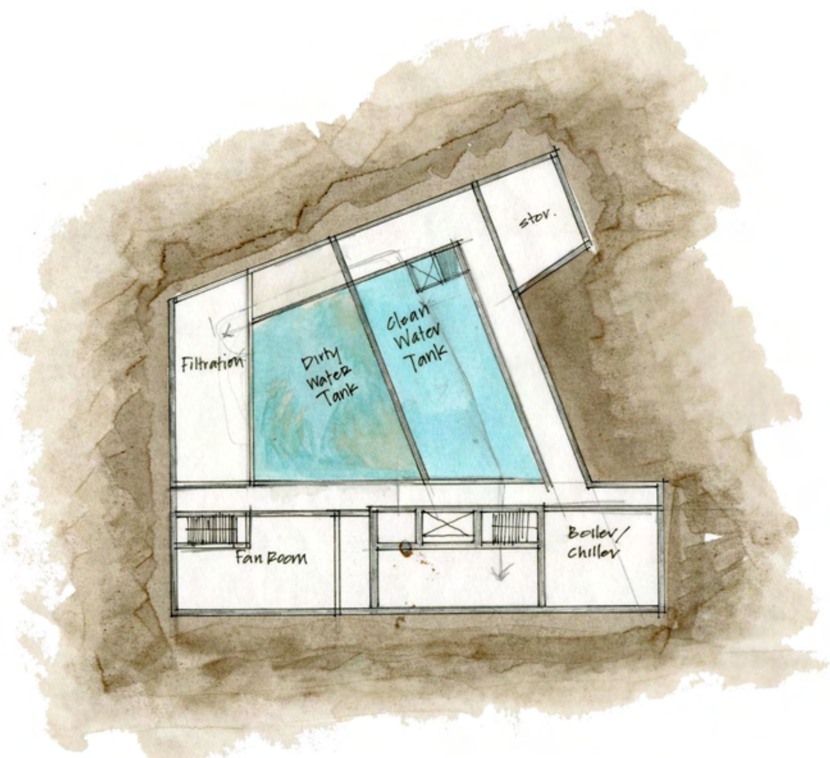

TEL


VIEW INTO CHILL?

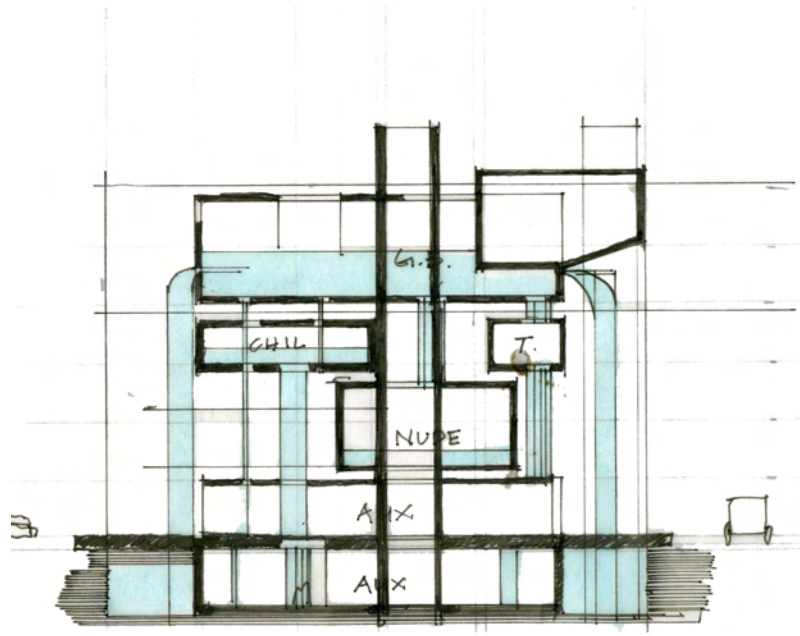

NUDE CALDARIUM


GREAT BATH

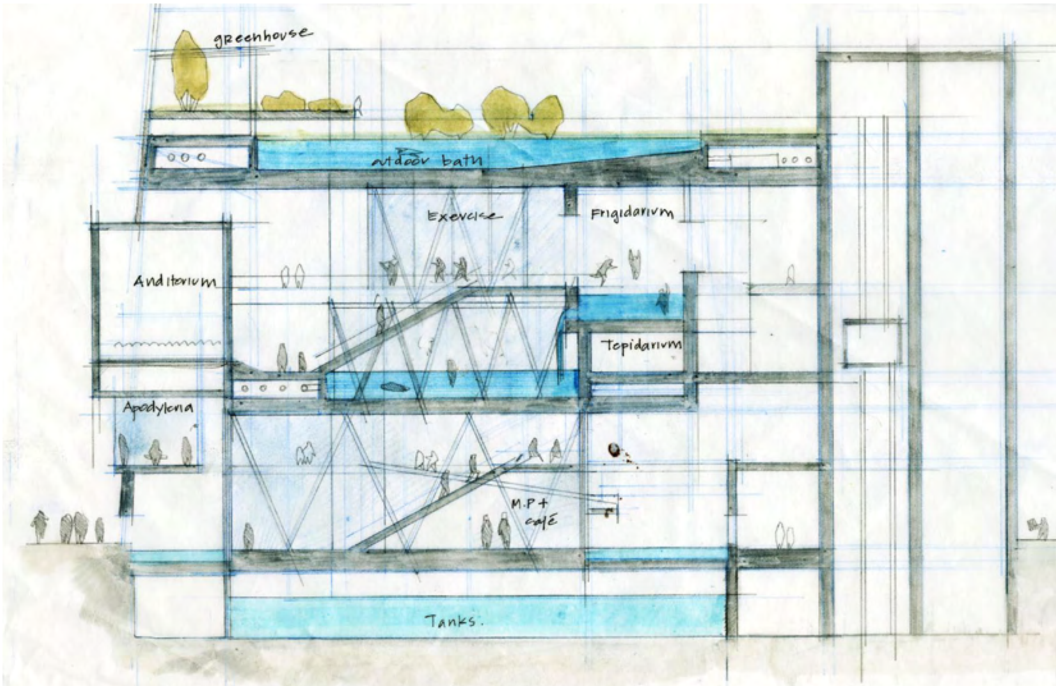

STREET ART GALLERY

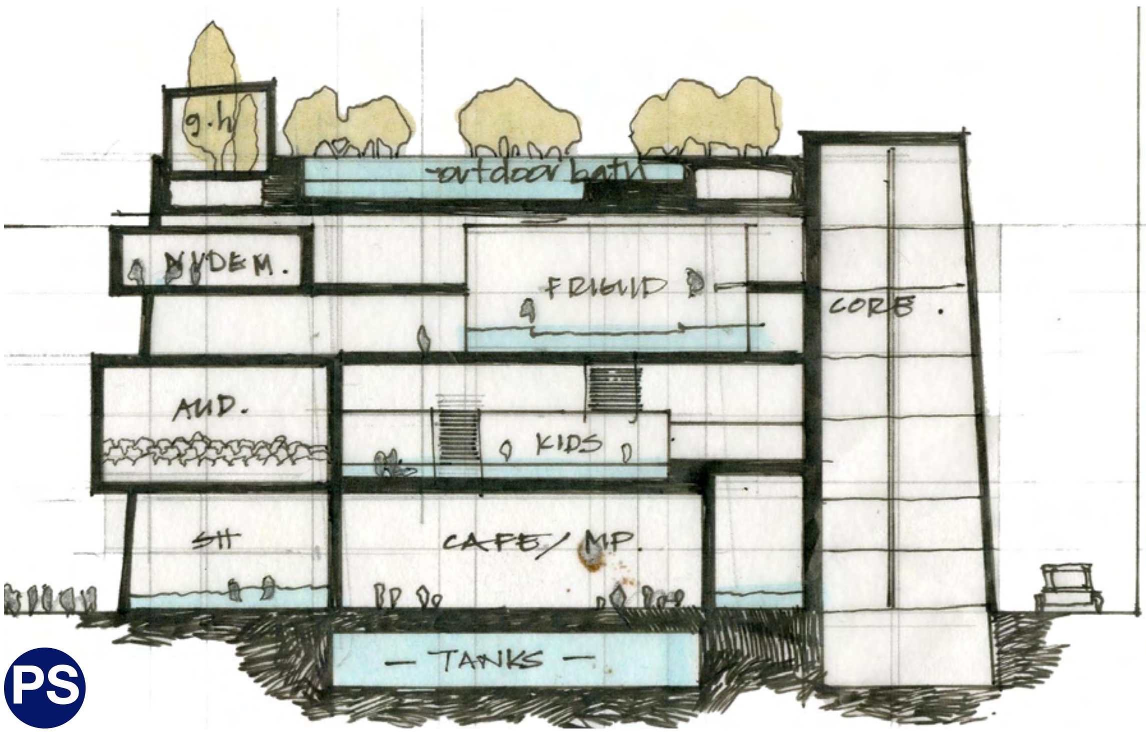



Original Proposal for Subterranean Water Tanks




Schematic Section

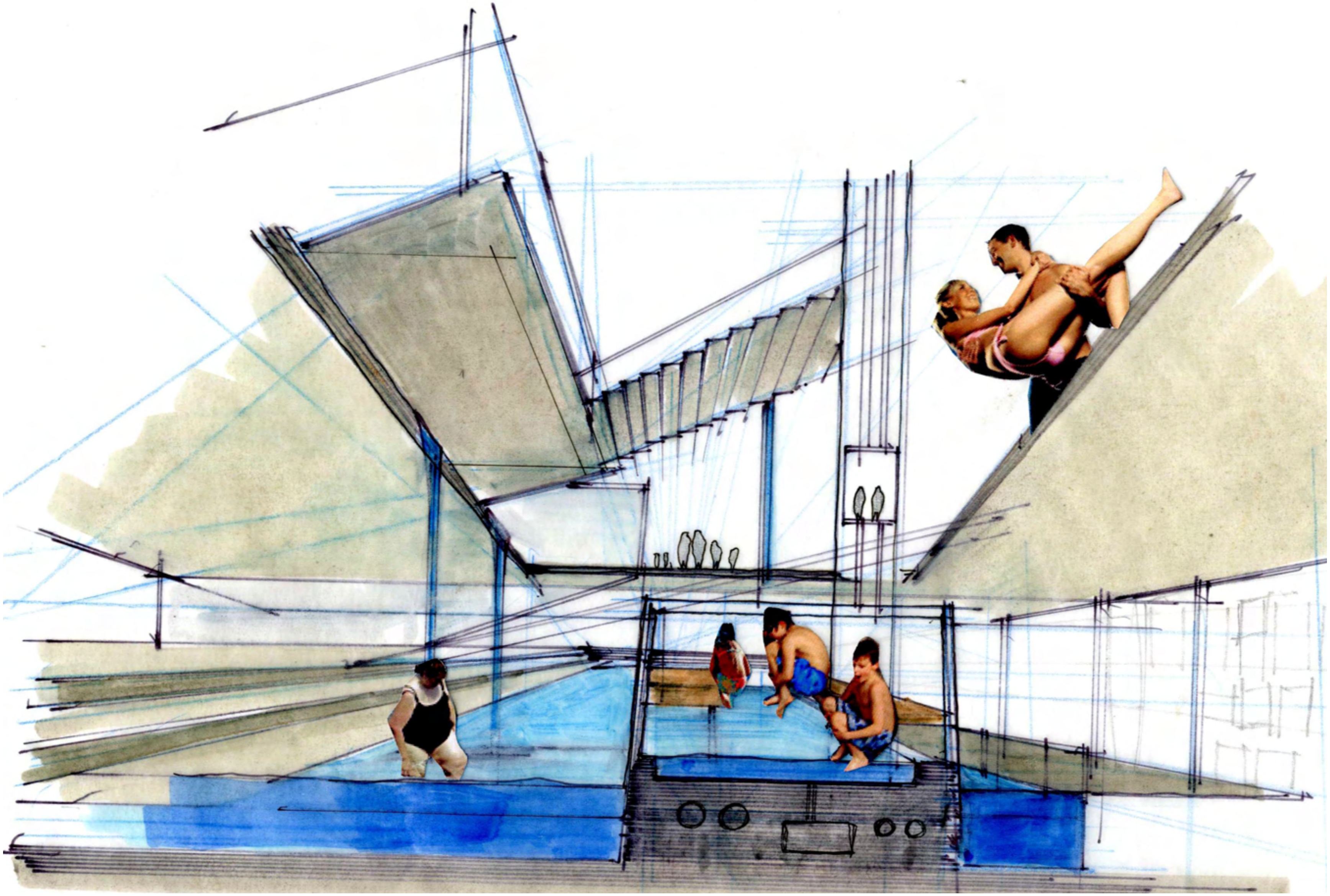



Schematic Sections


Lecture
Kids
Kids
Kids
Kids
Kids
LECTURE THEATER
great bath

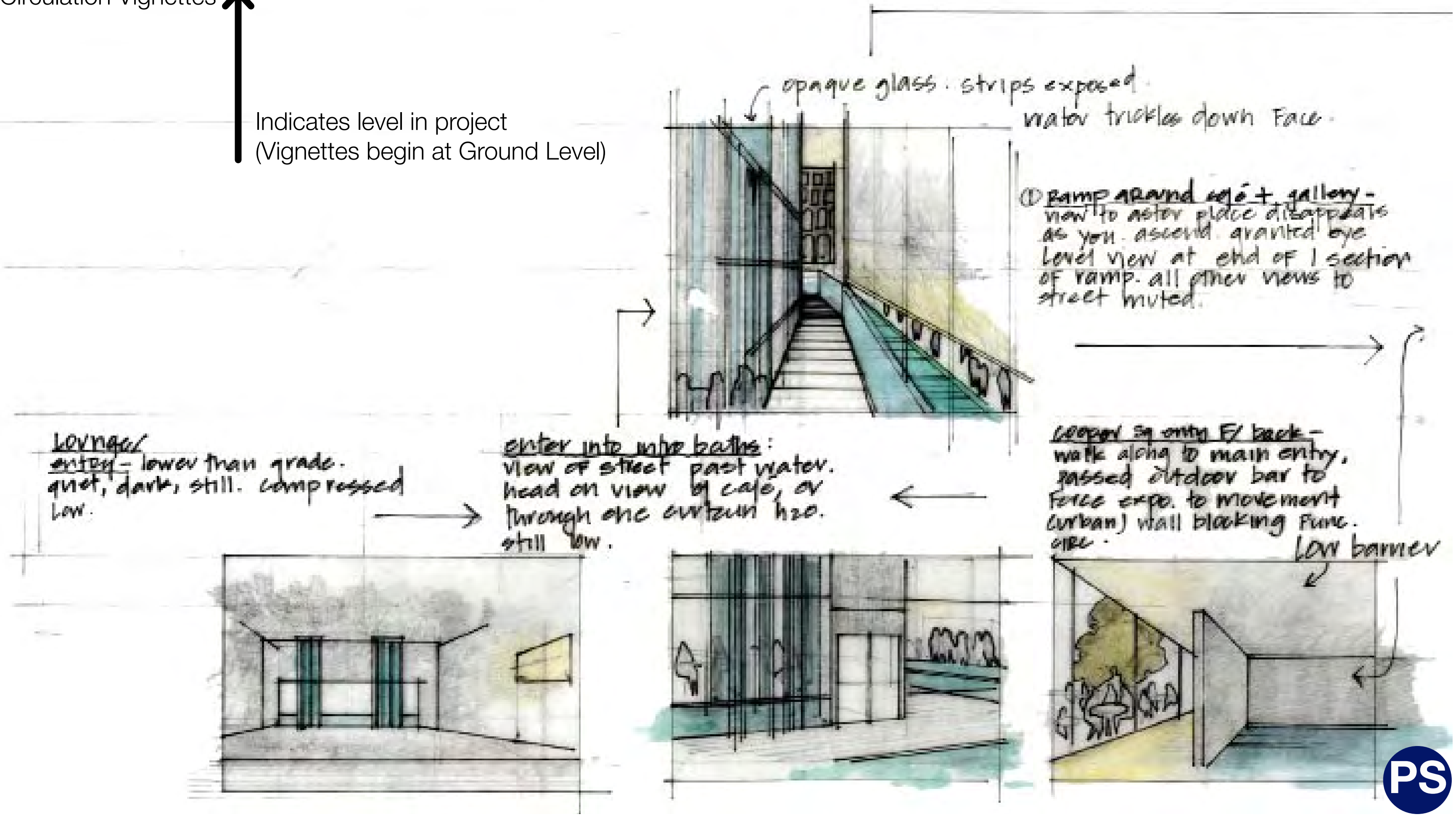
Great Bath

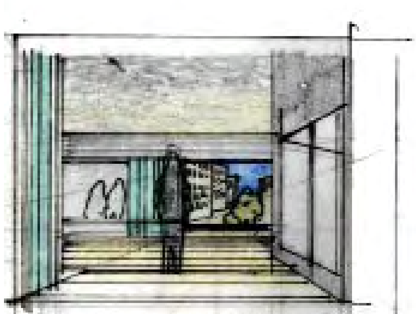


Great Bath

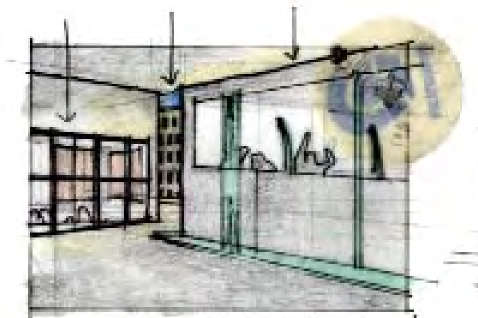
Circulation Vignettes

Indicates level in project
(Vignettes begin at Ground Level)



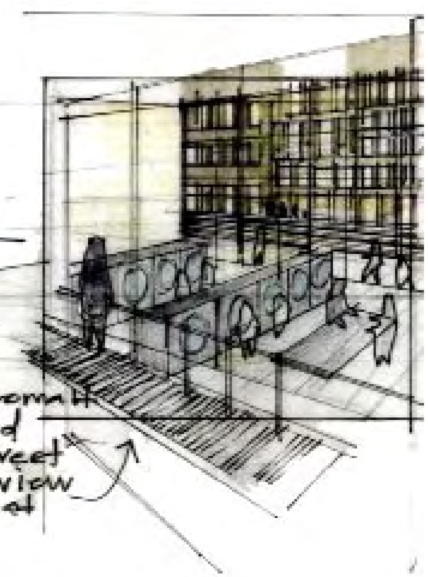


Top of Ramp/stair → View out to Astor Place. Changing Rooms in Front w/ view inside.



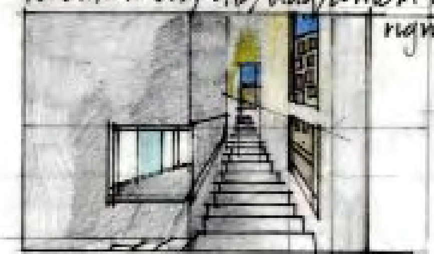
Wrap around café/MP 2nd time. Changing Rooms opaque glass to mute activity within. View chest + up. Store pops up through Floor, see activity below, also lets in light f/ below b.c. Rest of Floor is kept relatively dark.

Walk past laundromat when it pops into 2nd Level. View to street through laundromat, view down into laundromat

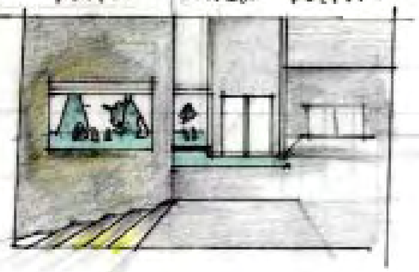


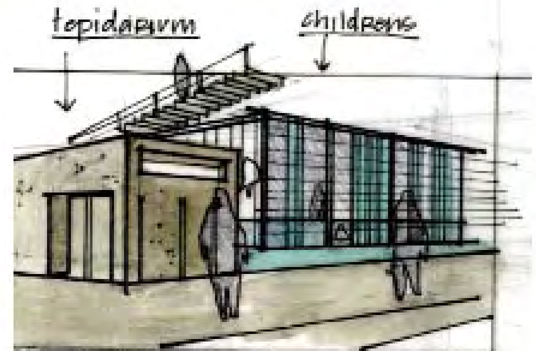
2-3 Level Stair

Stair to 3 Level pops out of footprint. Bath side is quiet + dark w/ views of quiet bath beyond. reveals to busy site/bldg/context on right



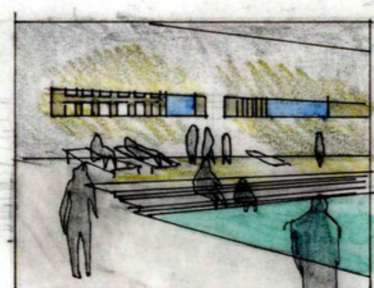
Top of stair – cut out reveal of baths (childrens – fast) before landing is met. Turn corner to see great bath + childs bath.



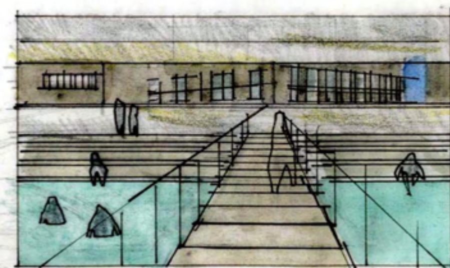



hen walking to tepidarium, view of hilds is covered in h2o, over opaque lass block. Tepidarium in solid net volume. when exiting tepid, onfronted immediately w/ ransparent view of childs.

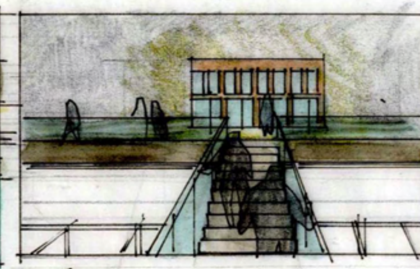
library, quietly sits closer to circ. pops out to st. see slit where site gets exposed. Maybe kept open during day to hear urban/street movements/ → cars, bus, ppl etc.

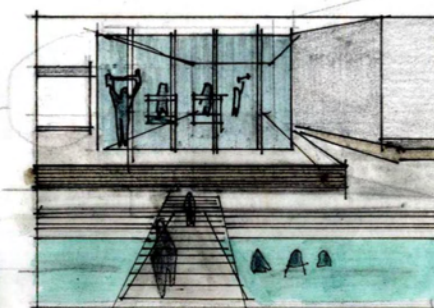


as turn corner past tepidarium,
see g.b. lounge platform.
Reveals to bldgs on LaFayette st.
can see out of them from far
away, but above eye level when
one is next to them.



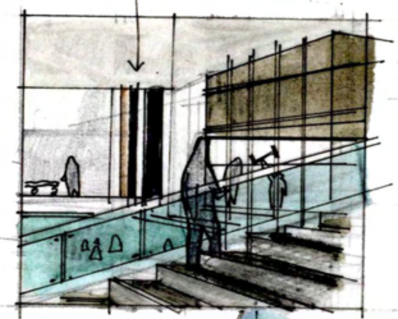
as ascending up (or comming
down, be given view of
LaFayette. as you move down, it
gets harder to see out. 'descent/
ascent' to F/ bath zone.

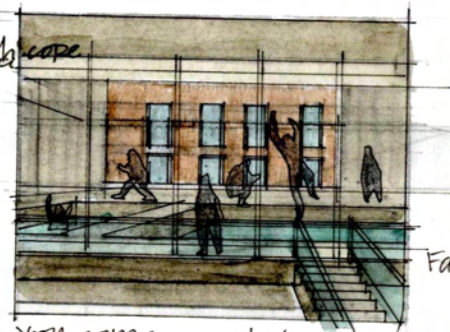




climb stair F/ under exe.
room. as you turn around,
you get a full on view of
the transparent exercise
room

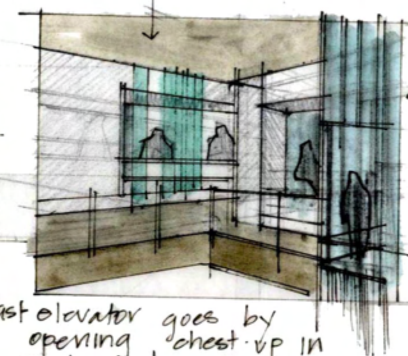
view of plumbing @ an [illegible]scope



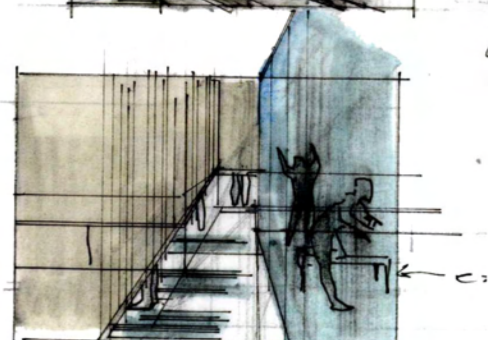


You come up stair + look into transparent Frigidarium w/ view out onto cooper sq. + into cooper union bldg.

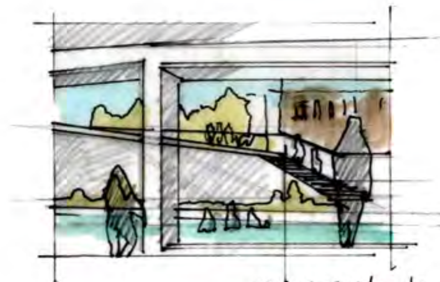
nude men's

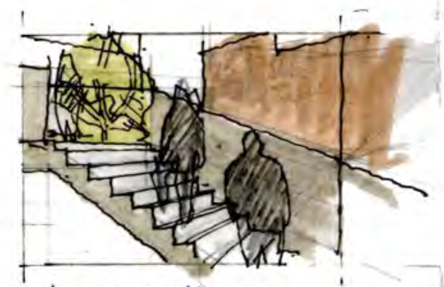



Fast elevator goes by opening chest up in male nude bath. people in laconicum have selective view of the elevator

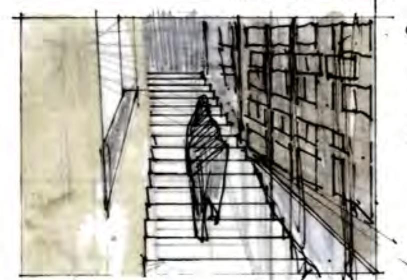


women's nude bath revealed @ Feet- awareness of presence. to go up to next level, must walk through this tight, down lit space. Feels Alley like, to exit into main space + be Filled w/ light + etc.





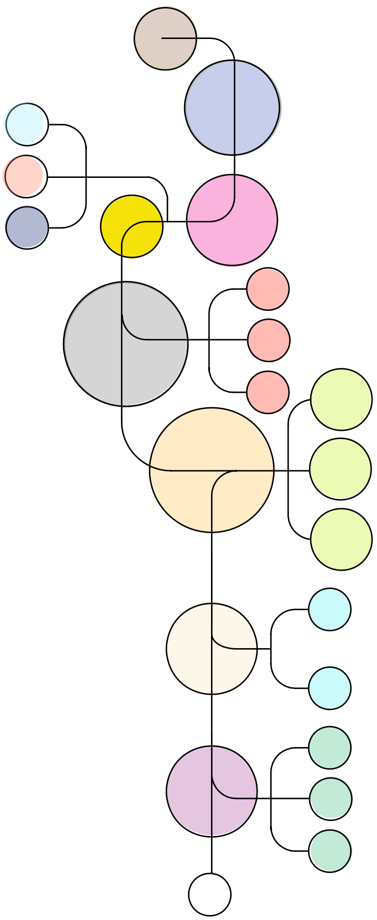
ascent to outdoor bath – juxtapose still green + water w/ views of surrounding context. parapet height kept just above eye level



as you walk up to outdoor bath, you exit onto stair that hangs out over Lafayette w/ punched openings looking into s. pow baths.

as walk by laconicum see fast Lafayette through slow laconicum.

# Client + Users C U



**Clients:**

The Community Advocates and Rich Philanthropists

A collection of local community advocates, which includes some very wealthy philanthropists, are serving as the main clients for this project. They desire an exploratory project that will address contemporary design issues. They desire a public bathhouse, because they believe this will bring commerce, through tourism, to the area, and will provide a unique community focus and center.

The Cooper Union for the Advancement of Science and Art

The Cooper Union for the Advancement of Science and Art is also interested in this project and is considering donating a substantial sum. They foresee two benefits: firstly, they believe that the public bath would be an excellent recreational / relaxation space for students, and they plan on working with the bathhouse to establish ct class within the bath – a truly innovative idea. The board of trustees and students would arrive in their swimsuits, and sit in the warm baths while they either discuss business or participate in class, respectively. Other spaces that could be rented out would be the lecture hall, visitor's quarters (for visiting lecturers or professors), greenhouse or baths. However, this facility is not an educational facility, and will only be used for special events, lectures or workshops.

The City of New York

Another client is the City of New York, as they will have an interest in the public nature of the project, even if they will be providing only a small portion of the funding.

new york community advocates
& the rich philanthropists


SIGILLUM CIVITATIS NOVI EBORACI 1625

C U

**Users:**

Local residents

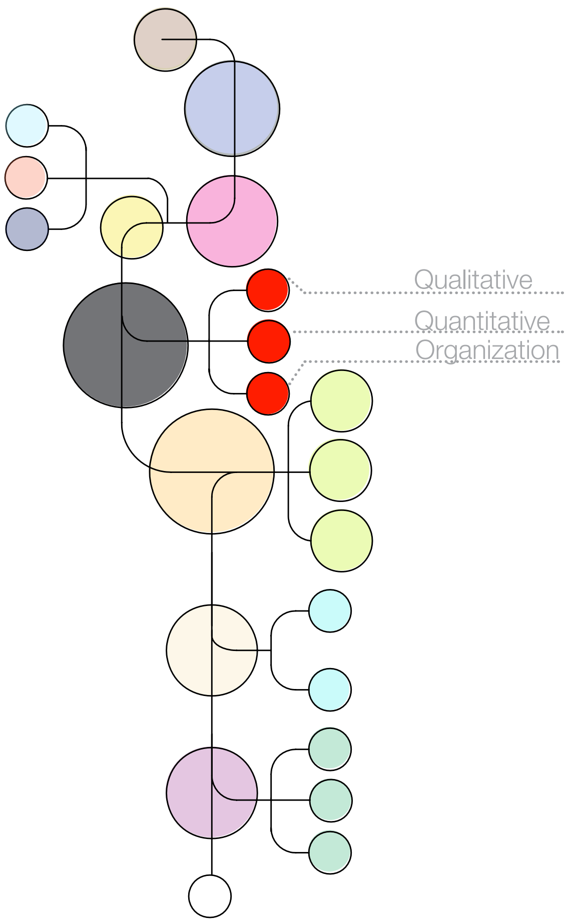
Permanent residents to the NoHo and East Village areas, as well as other neighborhoods of southern Manhattan, will be the primary users for this building. Residents, as well as their children, will be the primary audience and will be encouraged to use the baths and their services. There will be special events, such as film screenings and workshops, to draw in these users.

University students

The university will rent the building at times and students may use the baths for recreation and relaxation. University students are incredibly influential in determining the success of certain projects, and their influence will not go unnoticed. However, because the area has a slight dislike for the local universities, as they have contributed to a disputed gentrification of the area, they will not be the primary users. The local residents will take precedent and privilege over the students.

Tourists

The hope is that the public bath will become as renown as Peter Zumthor's Thermal Vals in Switzerland. His baths draw many visitors each year, which stimulate the local economy and contribute to local revenue. Because New York already has a booming level of tourism, it will be easy to attract some of this already-established public.




Many decisions involved in the design process take place at the moment that he program is decided upon. The most obvious decision is what activities will transpire within a certain space. And from this programmatic decision evolve other design conclusions: program can determine the form, sequences, emotions, and of course, movements that will occur within a building.

In this project, the first decision is not so much what actions will take place in a building, but rather what movements will occur. The desired movements will determine the program. The program will be one of two critical components to this exploration into the ability of movement to transform an environment.

The building typology should have a specific movement type and speed, be it physical or non-physical, fast or slow. However, a building with a slower-based program, with speed being the exception rather than the rule, offers a clean canvas upon which to investigate movement and perception. A program with a great amount of inherent motion, such as a football stadium or train station, has movement built-in regardless of what is done to manipulate these movements; there may not be as many opportunities for exploration, and the manipulated organization of movement may go unnoticed.

Awareness and perception will be altered by the occupants' ability to recognize contrast between various movement speeds and types in their surroundings. These differences can be subtle; for example, the passage of a person besides a small, still pool. Such subtle interactions would work best at a smaller scale. If these subtle interactions were to happen at a large scale, they would go unnoticed and lost; no one would not notice this still small pool if it were in the middle of Times Square. On the other hand, If more dramatic interactions occurred at a smaller scale, they may be overpowering. Consider if water were spraying ferociously out of a tiny faucet, making hissing noises and shooting water everywhere, while being located within a still quiet space. Any kind of condition that would result form this combination of movement type and speed would be lost due to the exaggerated movement of the water at such a small scale. There is a correspondence between scale and the degree of intensity in the organizational relationships of movement.

But what movement interactions would work best at large scales? The relationships that occur at this scale must not be overpowered; thus, more dramatic, obvious movement relationships would work best at a larger scale. The movements would not be lost, nor would they be overpowering. The movement relationships that occur at the building, or program scale, would be considered the largest scale of movement manipulation. However, the program would need something to which it could interact, nest, layer, reveal itself within, etc. The only element that could stand on par with program, scale-wise, would be the site. Thhis component must be of equal scale. In order to create these dramatic movement relationships, two movement extremes must be put in juxtaposition with the other. Thus, the program must have movements that differ with the movements of the site (i.e. slow program = fast site, fast program = slow site.)

Out of these two options, I have selected the former (fast site = slow program). This type of program has a more focused feel – an ability to remedy the multiple distractions of modern society, instead of encouraging it, from within its walls. Furthermore, there is a type of absurdity to having a 'stiller' program within a hectic site. This will not only allow for obvious interactions of movement on a large scale, but will ensure that the more subtle mixing of different movements, which could occur on the interior, at a smaller scale, are not lost.

Roman Bath, Bath, England

Women at a New York Public Bath


Jewish Miqveh


Islamic Wudu'


Christian Baptism

A typology that embodies slower movements, and which would work well in a busy site, would be a public bathhouse. The primary component of a public bathhouse, the baths, harbor an activity that humans have always participated in. Bathing and washing are filled with a variety of movement types, but occur at generally slower speeds. However, this is not to say that fast speeds to not transpire in the bath house – there are opportunities for these movements as well.

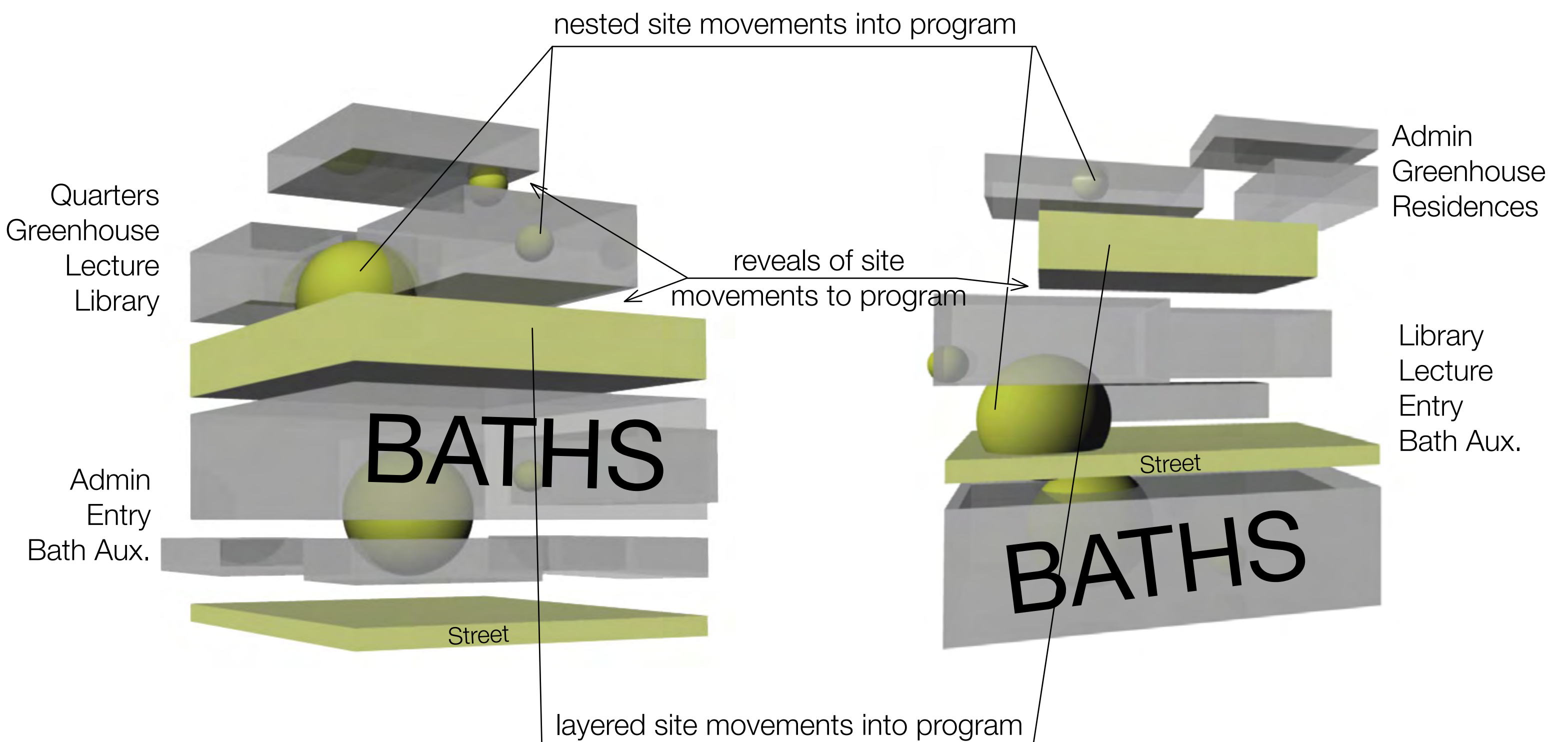
Bathing is filled with both this physical movement, such as scrubbing, plunging, soaking and rinsing in order to remove contaminants, odors and dirt, as well as the less tangible motions of ritual and procession. One's personal bathing ritual can be as moving and important as a religious bathing ritual. By going through the motions associated with bathing, we undergo various emotions. We may feel renewed and refreshed, we may feel relaxed and calmed. The movements and process involved with bathing are integral in inducing certain experiences.

Bathing's ability to transform into a ritualistic process has lead many religions to incorporate bathing into various ceremonies (for example, the Jewish Miqveh, the Islamic Wudu', and the Christian Baptism). In these ways, the movements affiliated with bathing can either be deeply personal or connected to a broader cultural and religious context.

Bathhouses, especially those dating from the classical period, were not mere perfunctory places to clean – they were considered communal gathering places. Often, visitors came from varying demographics and incomes, be they landlords or slaves. There would be discussion, reading, and relaxation – even eating and drinking. Original prototypes contained areas for physical activity before bathing; however, in this project the idea is that the stimulating site that surrounds this program will serve as the 'heightened activity' from which the visitor transitions away from through the bathhouse. This urban public bathhouse shall contain programmatic pieces that compliment the overarching slow movements affiliated with bathing (such as a library or lecture hall). Of course there will be bursts of activity within the baths (splashing through the pools or jumping into a cold plunge) but the overall movements will be slow and calm.

P

The classical typology of the public bathhouse also lends itself to the denser, busy urban site in which it will be located. Public baths were created with the idea that not everyone in a city had access to their own private water source. In this way the bathhouse became public and accessible to all urban residents and demographics. In this way, this modern bathhouse will distinguish itself from a spa; it will remain public for the urban population. Yet, this bathhouse will also distinguish itself from the perfunctory bathhouses of the turn of the century. It will be more luxurious, but a luxury that anyone can experience. This bathhouse is to be a place of recreation and relaxation.

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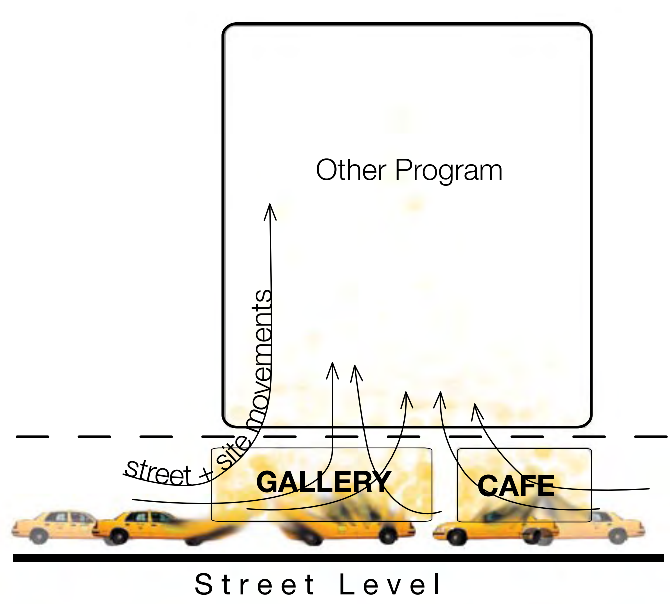
Program S Qualitative 1

Entry: Once inside, the entry must be a place of sudden quiet. This area should provide the visitor with a 'moment', a time to notice the stark different between this place and the outside. There should be minimal movement in this space, and a type of static, solid quality should persist. It cannot be too large, so as not to seem impersonal. There will be a small reception desk, a lounge with seating, and restrooms.

Café / Bar: The café will serve as way to extend the movements of the street into the bathhouse building. It should be a place of lively conversation and activity. This café should host poetry slams and readings, discussion groups, and even small music performances. This type of café atmosphere is popular and prevalent with the selected site and neighborhood, so it should find a target populace quite easily. The café will aid in connecting the bathhouse and street.

Multi-Purpose / Gallery: This space will fulfill the same role as the café in connecting the street life to the bathhouse. It should be a little more quiet than the café, and will host rotating exhibitions and art displays. In order to confirm the gallery's role in helping the street, or site, to 'enter' the building, the displayed art can be of a public, pop or graphic nature. The gallery can find a niche as a place where street graffiti artists can perform. In this way, the gallery can contain street life and actions while not being quite of the street. Local school children can also exhibit art here, in an effort to tie the building to the physical area of the neighborhood.

Administration: The Bathhouse must have an area for those that will run the daily workings of the building. There will be an office for the coordinator and an assistant. There will also be a separate office for an events coordinator, as the building will be used to hold occasional lectures and small classical concerts. More daily events, such as workshops those that occur in the baths,




Transition of site and grade-level street movements into building by the gallery and cafe

P 1

libraries and gardens will require planning and organization.  There will also be a large office for maintenance, and a conference room.

Baths:  The baths will be organized in two primary sequences.  There will be a more structured bathing scheme, which is based on the rigorous 'Turkish' baths, and there will be a more leisurely progression, which has an order, but one not as strict.  There will also be a separate set of baths allocated for nude bathing only, as well as an outdoor bath.  Each bath has specific temperature and size characteristics, and with these traits, there own types and speeds of movements.

Men and Women's Apodyteria:  These rooms are where visitors will undress, store their belongings, and have access to restrooms and showers.  This is the first stage of the sequence, and should be, like the entry, a relatively calm place.  It should have a mild to cool temperature, and be a darker, ambient room.  Light should be natural, and provided from above.

Tepidaria:  The tepidarium is the formal start and end to the bathing ritual, and is an extension of the quiet moment that began in the apodyterium.  This room does not contain seating, because it is not a place where one stays.  It should have a low ceiling to give the sense of heaviness.  It may have natural light, but the light must be filtered.  The temperature should be warm in order to acclimate the bather before moving into or out of the hotter or colder baths.

Laconicum:  From the tepidaria, the visitor has the option to enter the laconicum or caldarium.  The laconicum is a fashioned like a sauna: it contains no water, and is characterized by a dry, hot heat.   It is a very extreme room. This room has seating that is staged, with the lower seats in the middle of the room and the higher seats on the perimeter.  As the visitor adjusts to the extreme heat of the room, they can progress up to the higher, hotter seats. The heat would prohibit fast movements, but in warming up the muscles, it would prepare for future movements made elsewhere. This room cannot be too large, because the temperature would be difficult to control, but it cannot be too small; a small space plus extreme heat would cause discomfort and feelings of claustrophobia.

Caldaria:  Of the two hot rooms, the caldarium is meant to be less intense, but still hot, with a bathing pool and seating areas.  This bath has more movement than the laconicum, because of the presence of water.  It could be airier than the laconicum, and would host more movement and social exchanges.  However, it would still be a relatively quiet, slow room due to the heat and how this retards movement.

Great Bath:  This room is the central bath, and can be reached from any of the other baths; however, it is less integrated with the nude bathing sequence. The great bath is the largest, where the air and water are comfortable at warm to tepid temperatures. The neutral tem-

peratures accommodate a great amount of activities, from swimming and bathing to lounging and socializing. It will be the most open and well lit of the baths, and will provide lots of nooks and alcoves where bathers can collect and gather. This room should be filled with the hum of chatter and the sound of moving water.

Outdoor Bath: Will function as an outdoor version of the Great Bath, with partial exposure to the outdoor environment. The bath can be heated in winter, and kept cool in summer.

Children's Bath: This would be a smaller shallow pool, meant for children and their parents. It would be an offshoot of the great bath, and would be of a similar temperature. The children's bath would ideally be filled with a great amount of motion, provided by the children.

Frigidarium: A nonchalant bather could enter this cool room from the great bath, but a more rigorous bather could enter from the caldarium or laconicum for an invigorating shock. To accommodate both serious and relaxed bathers, this room contains two pools: a shocking cold plunge pool, and a cool swimming bath. This room will be noisier than the warm rooms, but less boisterous than the great bath. It would contain more moderate movements with the cool swimming bath and very vigorous, extreme motions from the cold plunge.

Nude Baths: The nude sequence would contain its own apodyteriums, tepidariums and caldariums for each sex in a separated sequence. These nude baths would be of a smaller scale, but embody the same temperatures, motions and scales as their larger counterparts. There would be the option for a nude bather to dress, and then join the other bathers in the great bath.

Lecture Hall: This would be a small auditorium, with stadium-styled seating, similar to a university lecture room. Public lecture series, a class or group discussions could be held in this room. There should be access to natural light in this room, which can be covered when a dark room is required for presentations.

Classics Library: The Library would be open to the public, like the rest of the facility. In the spirit of antiquity, the book collections would be of classical nature. In having a specific focus, the collections may attract interested professionals and academics who could contribute to the facility. There would be comfortable spaces and nooks to read, as well as discuss.

Interstitial Levels: The interstitals are comprised of the inbetween space that exists between bathing levels. Due to the required depth of the floor plates to accomodate both structural loads as well as the pool depths, and the pool's accompanying systems, a sepereate subfloor has been inserted. These interstitial levels provide a great deal of space for the pool's pumps and filtration systems - something considrered outside of the typical percentage of mechanical and circulation requirements. Most importantly, the interstitials provide controled environments through which the visitor will travel en route to their bath. Speed can be slowed and influenced by controled lights, materials, etc. The absence of directed activity (i.e. bathing) provides a renewed focus to one's motion through the project.

P 1

# Program S Quantitative 2

*This program has been updated to coincide with the final project. All subsequant diagrams are process work that were developped over the course of the project.

| Area | Unit S.F. | Total S.F. |
|---|---|---|
| **Entry** | | |
| Entrance | | 470 |
| Information | | 200 |
| Reception | | 950 |
| Multi-purpose / Gallery | | 1725 |
| Gallery Office | | 120 |
| Cafe / Bar 1850 775 | | 1850 |
| Cafe Kitchen and Prep | | 775 |
| Outdoor cafe seating | | 800 |
| Laundromat | | 650 |
| Shop | | 700 |
| Restrooms | | 400 |
| | | **8640** |
| **Administration** | | |
| Coordinator Office | | 150 |
| Assistant Office | | 150 |
| Visitor Office | | 150 |
| Events Office | | 140 |
| Maintenance Office | | 300 |
| Maintenance storage | | 700 |
| Storage | | 200 |
| Conference | | 350 |
| Restrooms | | 200 |
| | | **2140** |

| Area | Unit S.F. | Total S.F. |
|---|---|---|
| **Baths** | | |
| Tepidarium (warm) | | 1000 |
| Caldarium (hot - humid) | | 660 |
| pool (400 s.f.) | | 200 |
| Laconicum (hot - dry) | | 660 |
| Frigidarium (cool) | | 1416 |
| cool swim pool | | 300 |
| cold plunge | | 500 |
| Great Bath Hall (warm) | | 6650 |
| swim pool | | 2820 |
| storage | | 85 |
| Restrooms | | 600 |
| Children's Bath Hall | | 1340 |
| pool (500 s.f.) | | |
| Nude Tepidaria | 2 @ 350 | 700 |
| Nude Caldaria | 2 @ 400 | 800 |
| Nude Frigidaria (cool) | 2 @ 300 | 600 |
| cold plunge (100 s.f. ea.) | | |
| | | **18331** |

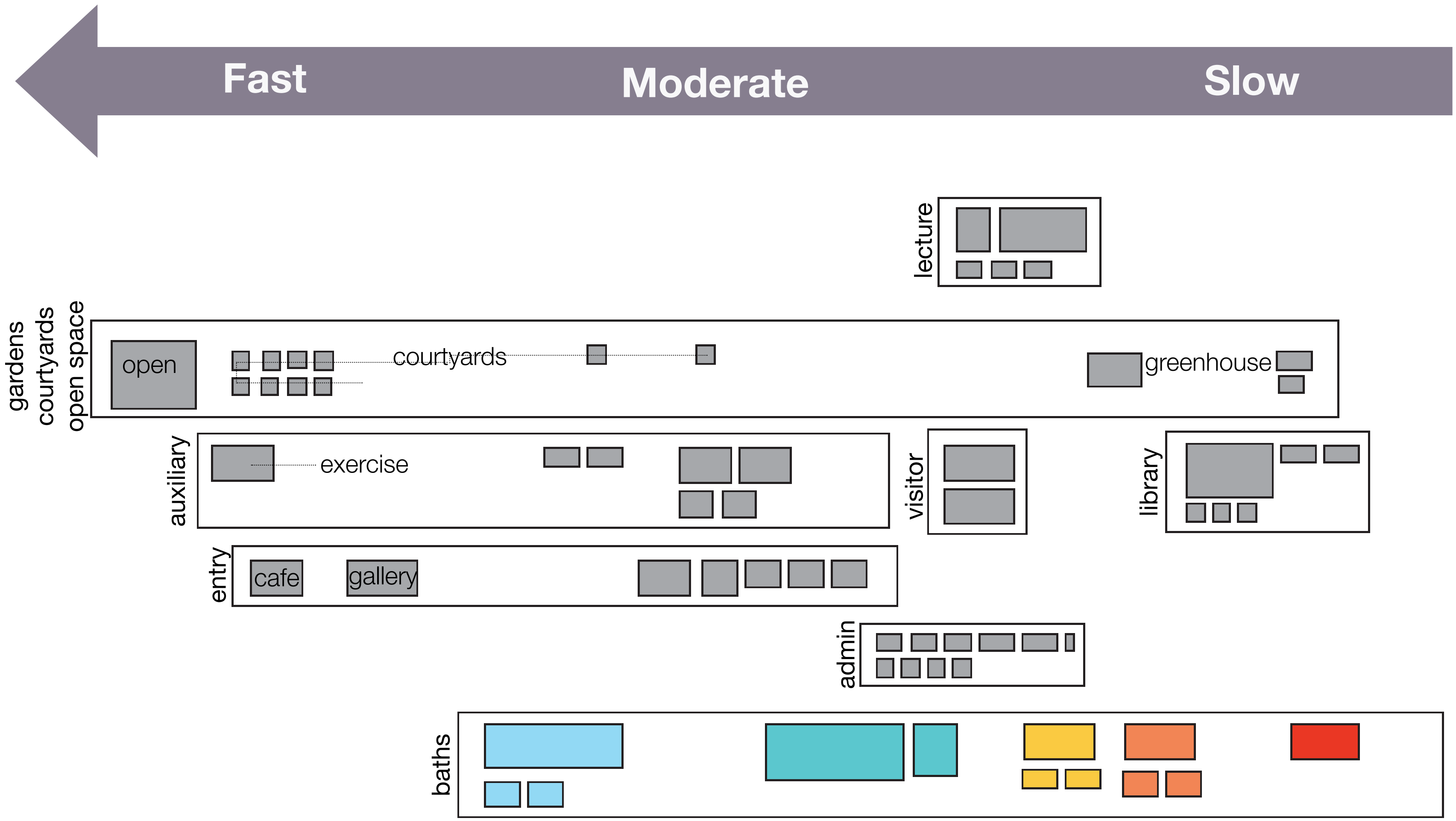
P 2

| Area | Unit S.F. | Total S.F. |
|---|---|---|
| **Bath Auxiliaries** | | |
| Exercise Room | | 900 |
| Men's Apodyterium | | 1200 |
| Lockers | 300 | |
| Showers | 150 | |
| Restrooms | 300 | |
| Changing | 450 | |
| Women's Apodyterium | | 1200 |
| Lockers | 300 | |
| Showers | 150 | |
| Restrooms | 300 | |
| Changing | 450 | |
| Nude Men's Apodyterium | | 200 |
| Nude Women's Apodyterium | | 300 |
| General Bath Storage | | 400 |
| | | **4300** |
| **Lecture Hall** | | |
| Tickets | | 300 |
| Lobby | | 1000 |
| Auditorium | | 1680 |
| Restrooms | | 300 |
| Storage | | 50 |
| | | **3330** |

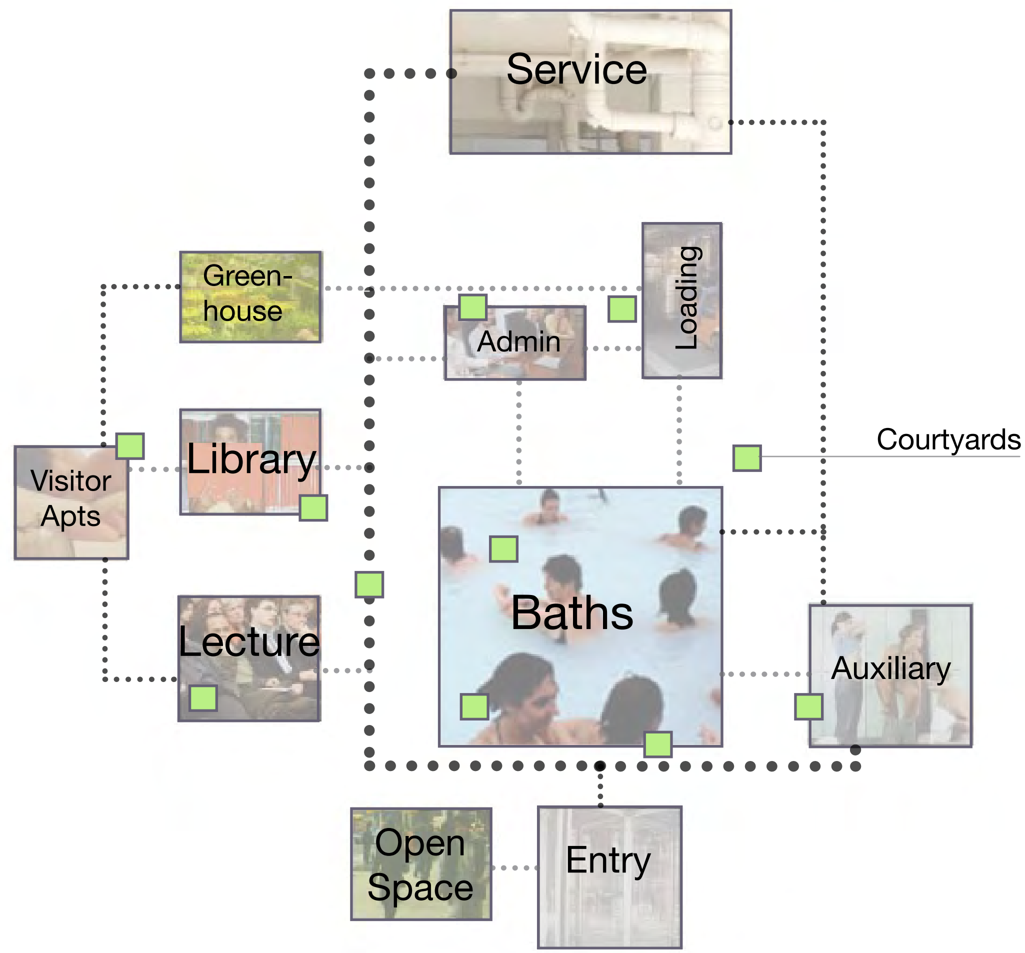
| Area | Unit S.F. | Total S.F. |
|---|---|---|
| **Classics Library** | | |
| Reading | | 260 |
| Stacks | | 1500 |
| Circulation | | 200 |
| Office | 2 @ 100 | 200 |
| Storage | | 100 |
| | | **2260** |
| **Intestitial Levels** | | |
| Interstitial Level 1 | | |
| Basins | | 6638 |
| Circ, Mech, Storage | | 9691 |
| Interstitial Level 2 | | |
| Basins | | 4000 |
| Circ, Mech, Storage | | 7000 |
| Interstitial Level 3 (Non occupiable) | | |
| Basins | | 3359 |
| Mech + Storage | | 12000 |
| | | **42688** |
| **Service** | | |
| Loading | | 2000 |
| Control Rooms | 7 @ 150 | 1050 |
| | | **3050** |
| **Water Tanks** | | |
| (26761 ft3) | 2 @ 175 per floor | |
| | 8 Floors | **2800** |
| **Subtotal** | | **87539** |
| Total (subtotal + .50 circ and mech.) | | 131,308 |

# Program S Organization 3

Program and Movement Speed

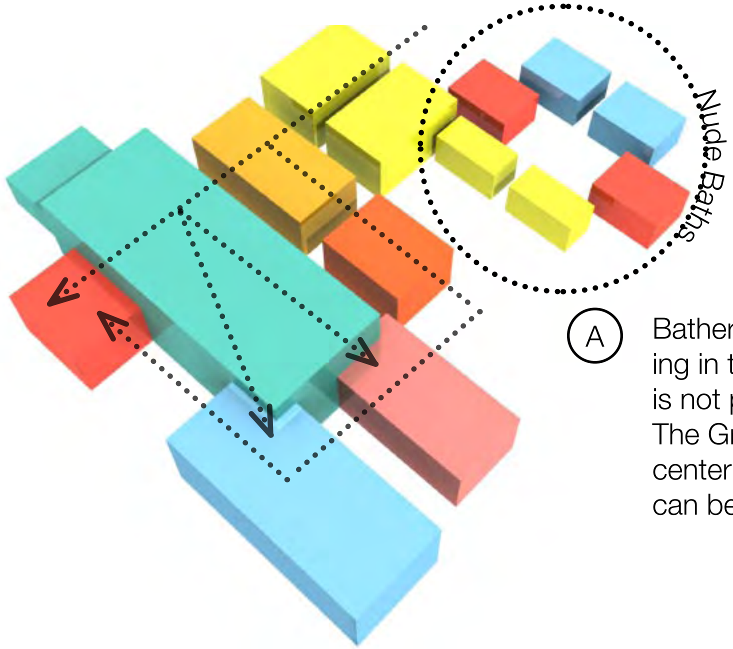



P 3


Service
Green-
house
Admin
Loading
Library
Visitor
Apts
Courtyards
Baths
Lecture
Auxiliary
Open
Space
Entry

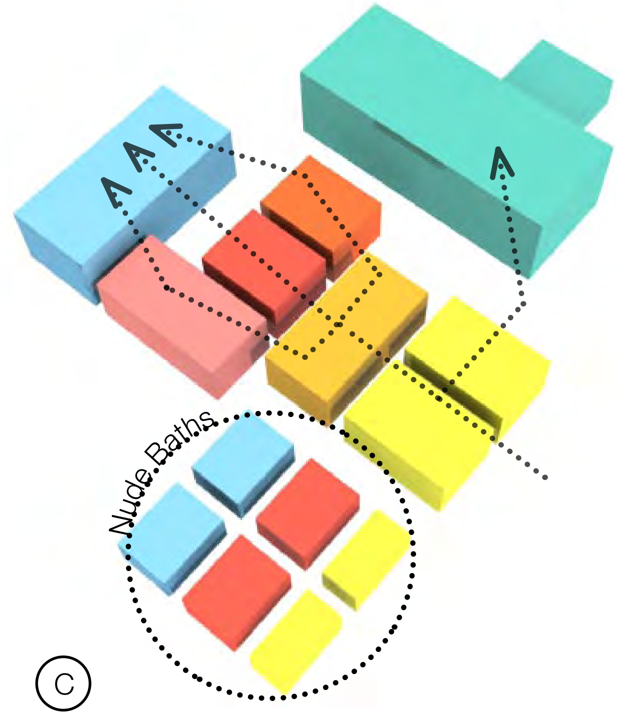
P 3

Organizational Options for Baths



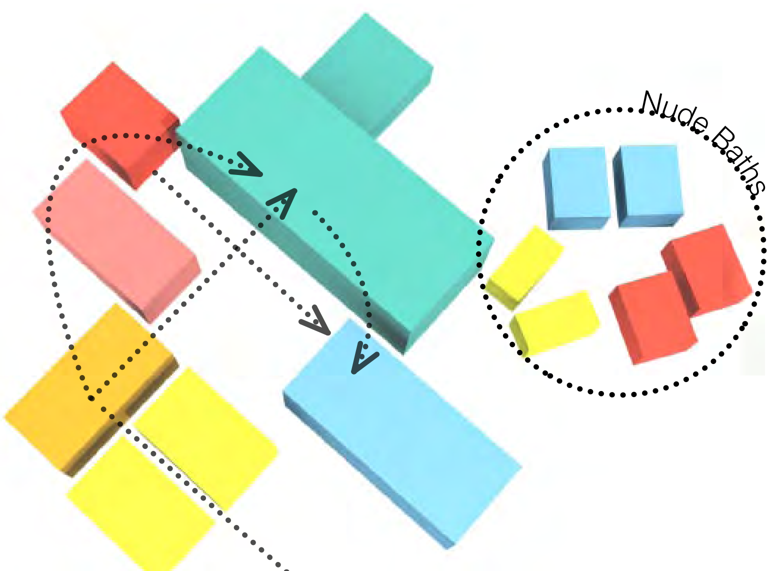

A

Bathers have the option of bathing in the order they chose; there is not predetermined sequence. The Great Bath serves as the center from which all other baths can be reached.




B C

Bathers have the option to follow the rigorous Turkish bathing sequence, or to cut directly to the Great Bath from the Apodyteria




Apodyteria

Tepidaria

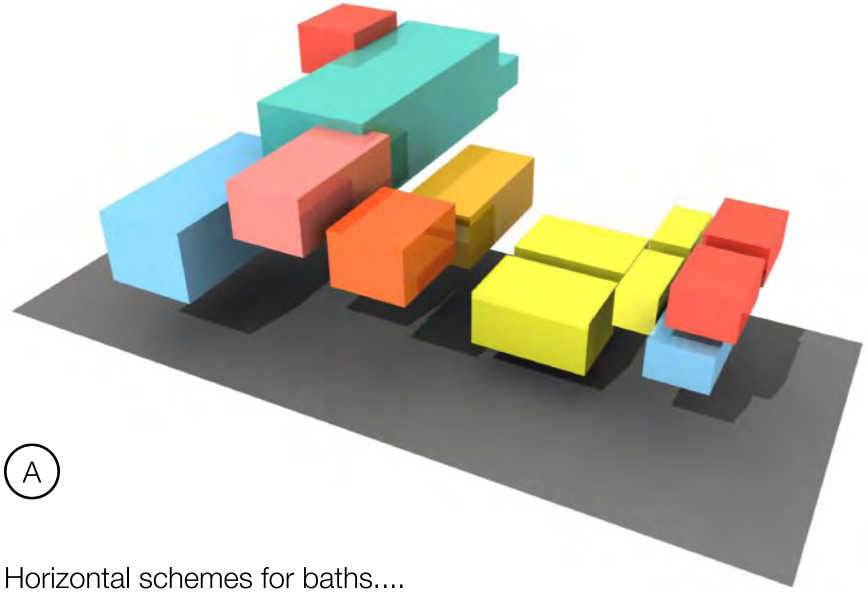
Exercise

Caldaria

Laconica

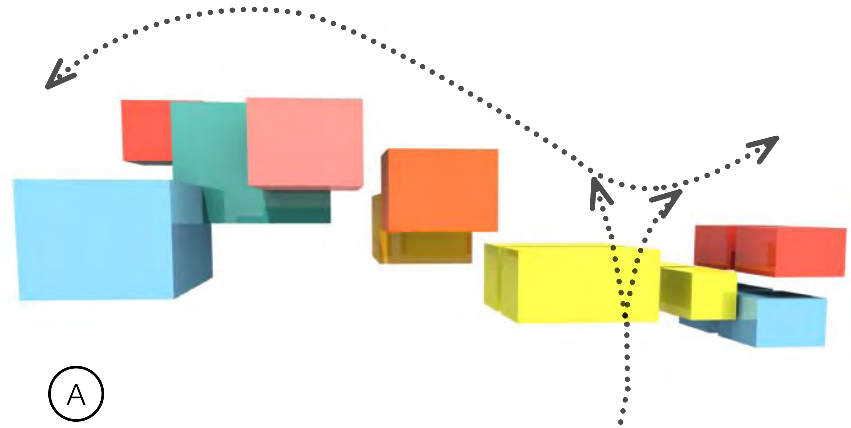
Frigidaria

Great + Children's Bath



A

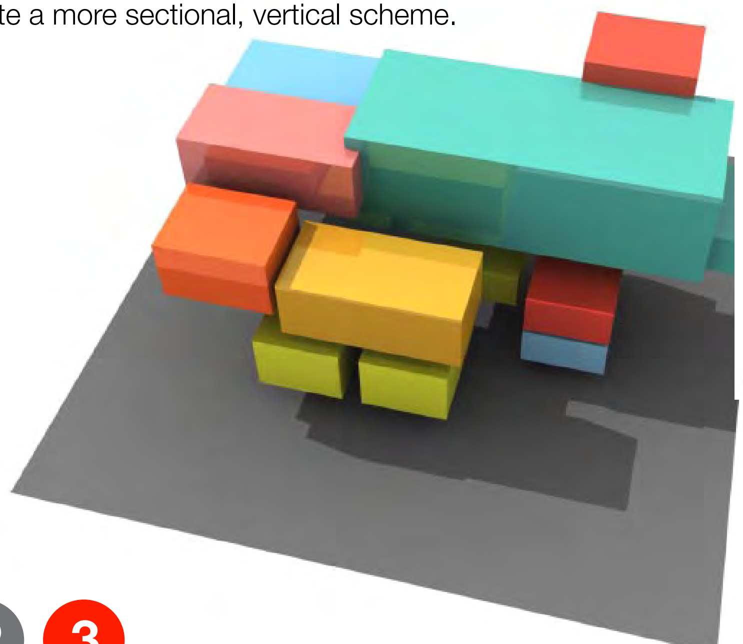
Horizontal schemes for baths....



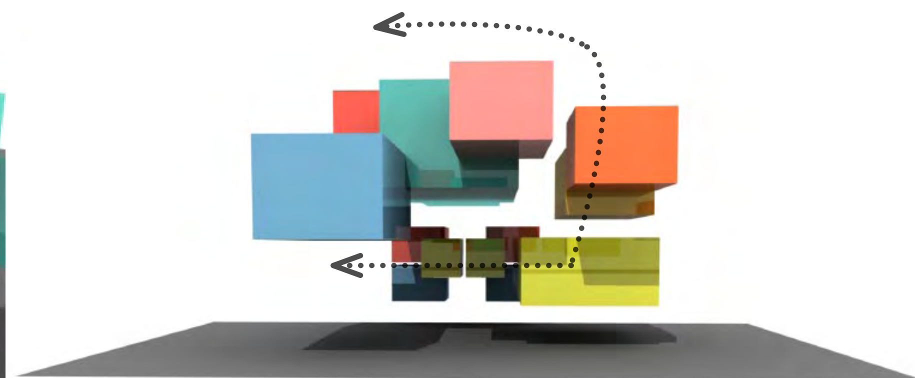
A

Historical baths are typcially not organized vertically, but given site conditions, a vertical organization may be necessary.

Horizontal scheme that has been pushed to create a more sectional, vertical scheme.



B



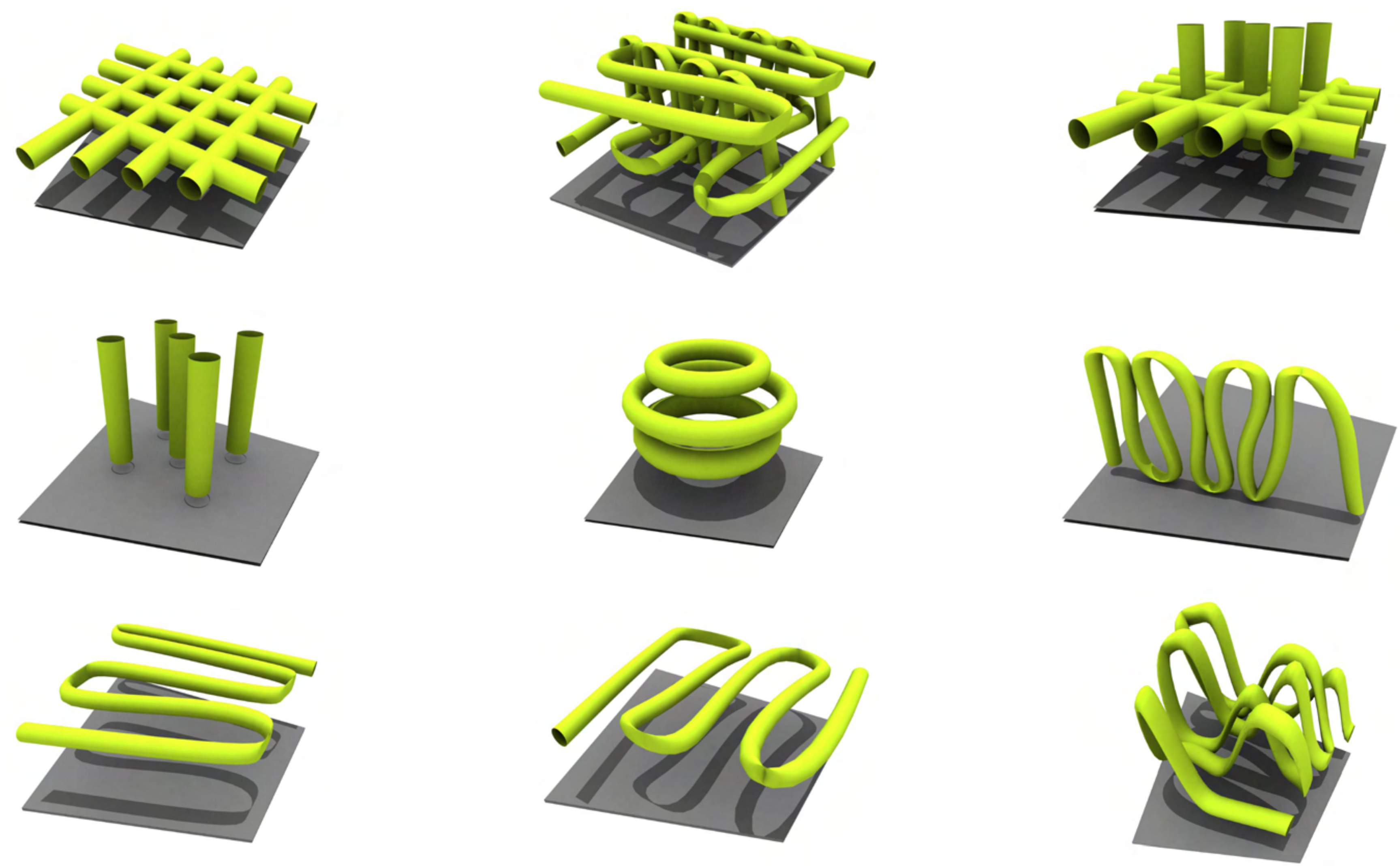
B

Program pushed inward to create a more vertical orgaization to fit site constraints.

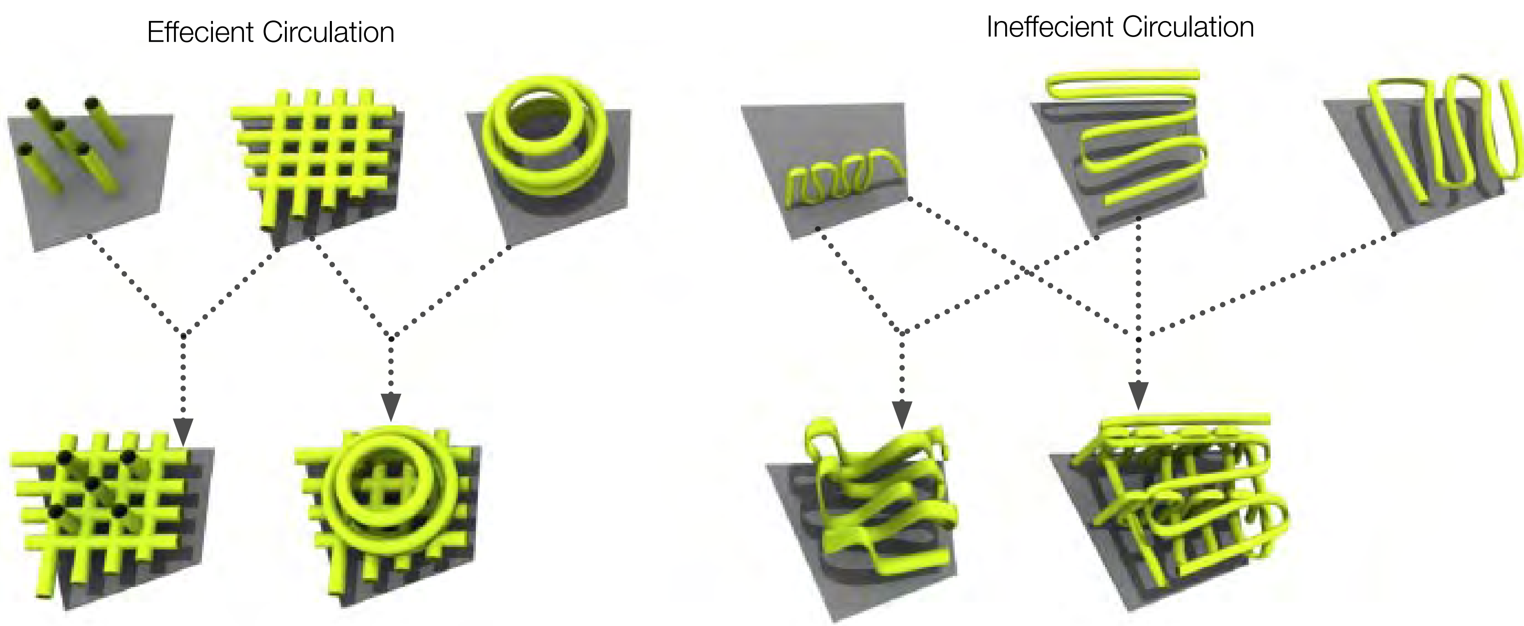
P 3

Internal Movements:  Circulation Patterns + Organizations:

Circulation offers one of the most obvious methods by which movement can be manipulated within a building, as its sole purpose is to transport people and things from one point to another.   These diagrams aim to investigate different strategies for circulation.  In shaping and designing circulation, movement and motion is being manipulated and designed as well.



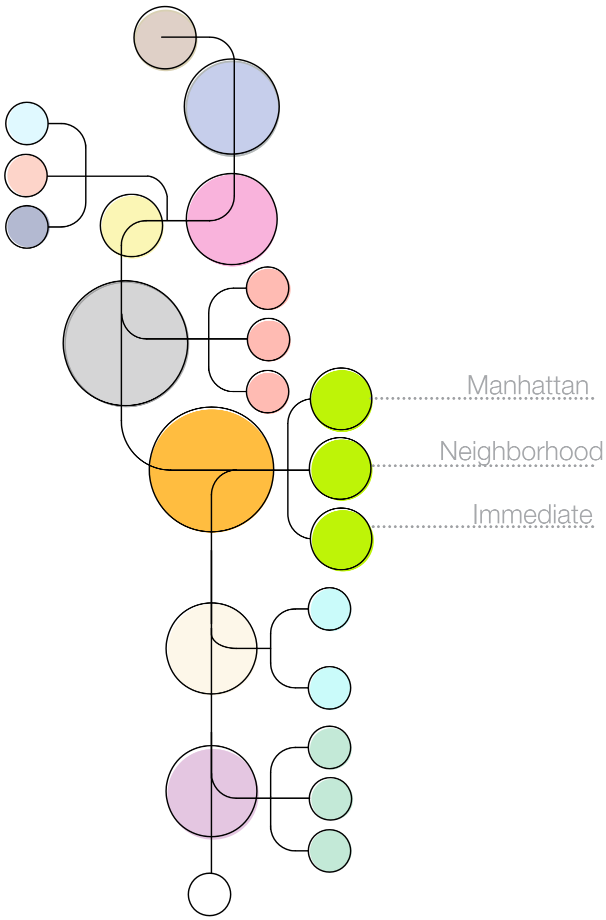
P 3

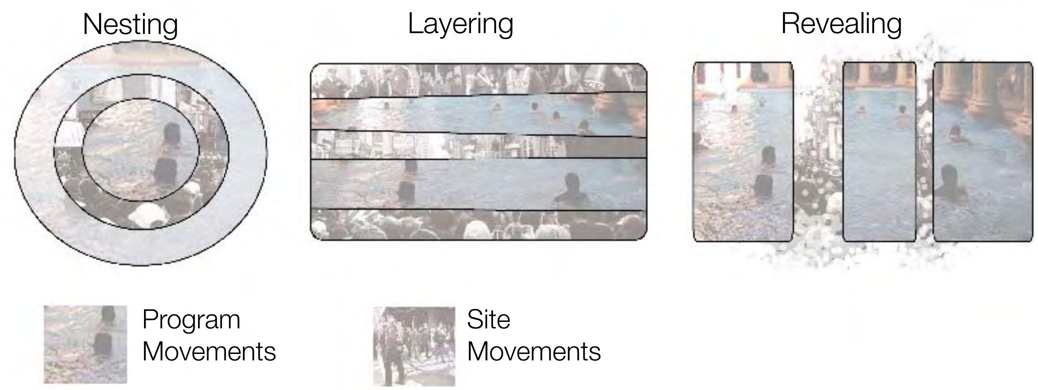



Certain circulation patterns are perfunctory.  These are the type of movements that are of a purely function nature, and are essential in order for the building to live.  There are also non-essential circulation patterns – patterns where one may not be traveling to get to a destination as quickly and efficiently as possible, but to enjoy the process.  If these are considered as fitting into the categories of movement (of having different characteristics such as speed and type) then investigations can be made as to what occurs when two non-like circulation patterns interact with each other.  The more rigid, efficient patterns can be nested and layered within the more flexible inefficient patterns.  Other manipulations can occur when efficient movement is placed within a non-efficient circulation pattern and vice versa.  Furthermore, the various circulation patterns can encounter the different movement types and speeds in the programmatic spaces.

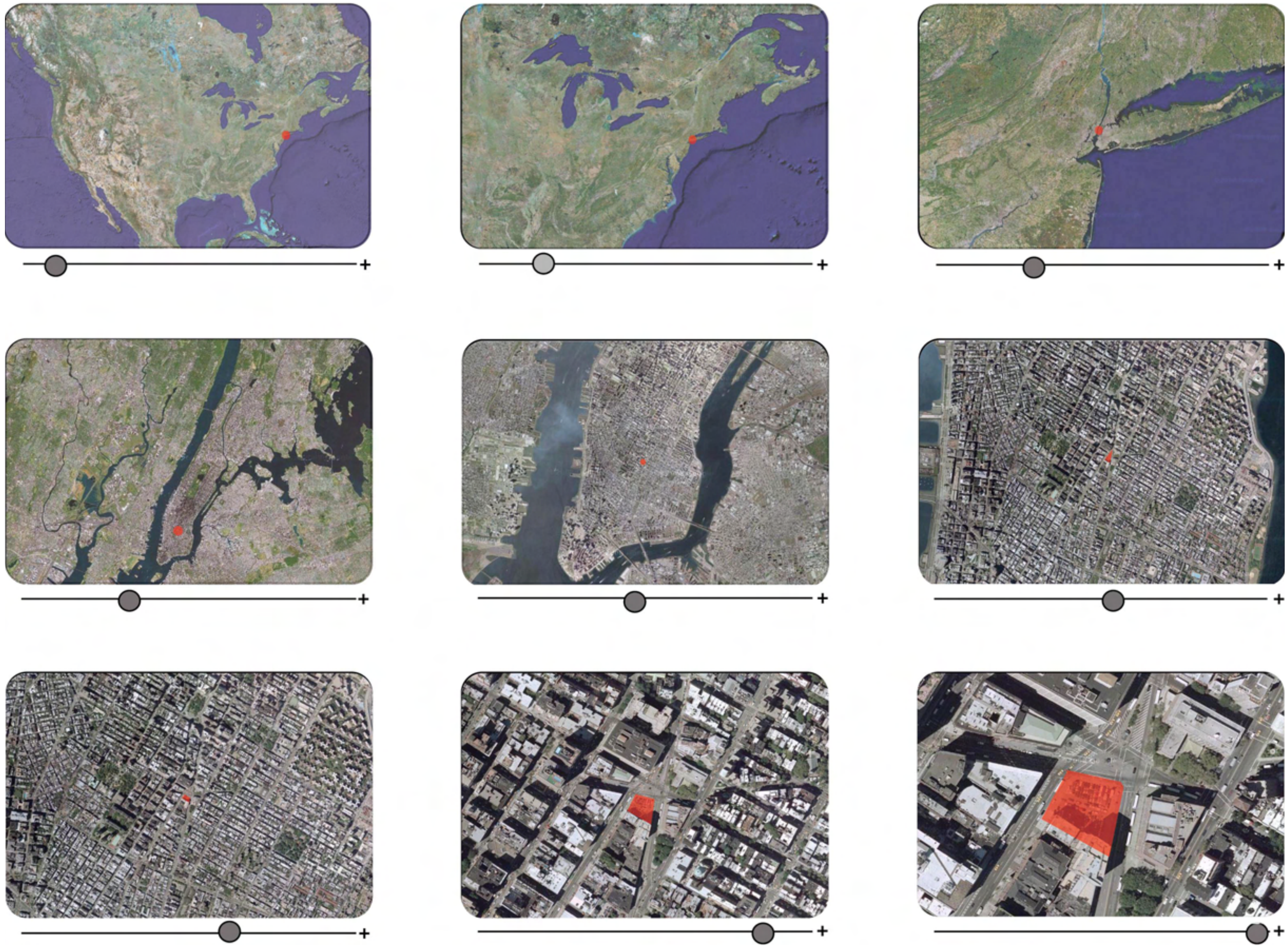
P 3

# Site S




After determining that there would be a slower, calmer program (the public bath-house), it was at the same time decided that the site would be a busy, fast-moving urban location. By setting up two movement extremes, an investigation can be made involving  the program and site, and the way they and their movements are organized architecturally. Through this organization, the difference movements can be manipulated so as to create unique and unexpected circumstances that high-light the surroundings in which they take place.



**Manhattan, New York**

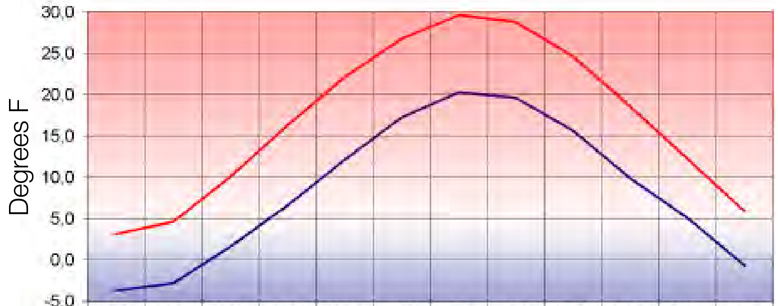
Of all the ‘fast’ cities in the world, New York is one of the fastest. It is brimming with movement at various scales, types and speeds. There is, on the broadest scale, the movement of the seasons. New York is within a temperate zone, where all four seasons are experienced. The transitions between seasons can be viewed as a more abstract movement, while the respective ways that people move during the various seasons is very literal and physical. People may hurry during winter because they are uncomfortable in the cold, and they may be sluggish during the city heat waves. Or, alternately, people may be quicker in the summer, as heat can make people more agitated. The urban condition also creates various local weather patterns, such as wind speeds created by the presence of streets and buildings. New York’s varying temperatures and weather are contributors to the city’s movements.

New York has a population that is constantly in flux. Many residents do not live in the City all of their lives – they rotate in and out. Living in such a dense urban population requires a certain mindset that many people seem to lose after a period of time. There are also several universities, which also support a rotating population. Tourists, which come to New York in droves, also form their own fleeting populace. These changing populations contribute to the overall high level of movement within this tumultuous city.

New York also hosts a spectrum of entertainment and cultural venues and is the worldwide capital of busy activity. People are constantly in motion, whether going to museums, restaurants, bars, clubs, shops, performances, work or school. Manhattan, specifically, is very dense and at any given time, is constantly in flux with people moving between theses various destinations.

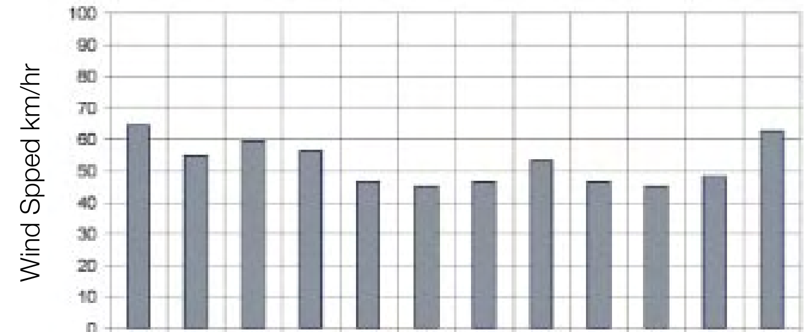


New York Weather Charts



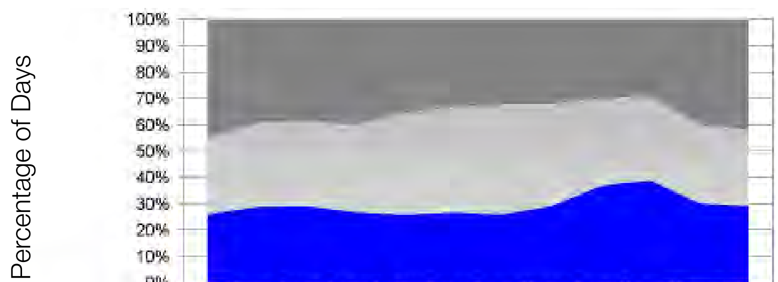

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Max | 3,1 | 4,6 | 10,0 | 16,2 | 22,1 | 26,7 | 29,6 | 28,7 | 24,6 | 18,5 | 12,2 | 5,8 |
| Min | -3,7 | -2,8 | 1,6 | 6,6 | 12,1 | 17,2 | 20,2 | 19,6 | 15,6 | 9,8 | 5,1 | -0,7 |

Average Montly Temperature



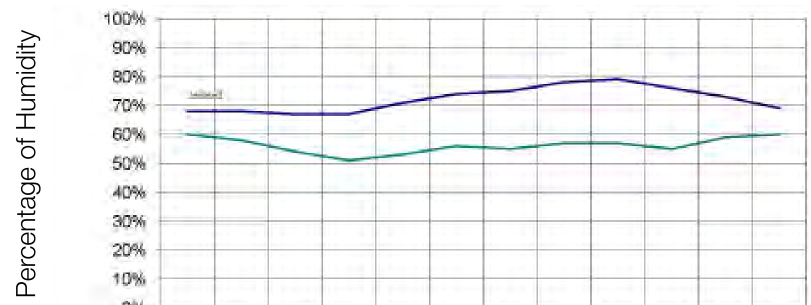

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| km/h | 64 | 55 | 60 | 56 | 47 | 45 | 47 | 53 | 47 | 45 | 48 | 63 |

Average Monthly Windspeed




| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cloudy days | 14 | 11 | 12 | 12 | 11 | 10 | 10 | 10 | 9 | 9 | 12 | 13 |
| Parly Cloudy days | 9 | 9 | 10 | 10 | 12 | 12 | 13 | 12 | 10 | 10 | 9 | 9 |
| Clear days | 8 | 8 | 9 | 8 | 8 | 8 | 8 | 9 | 11 | 12 | 9 | 9 |

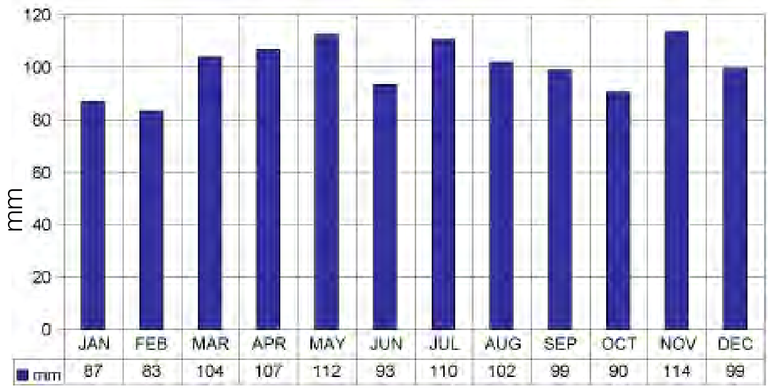
Monthly Clear, Cloudy and Partly-cloudy Days




| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Afternoon | 60% | 58% | 54% | 51% | 53% | 56% | 55% | 57% | 57% | 55% | 59% | 60% |
| Morning | 68% | 68% | 67% | 67% | 71% | 74% | 75% | 78% | 79% | 76% | 73% | 69% |

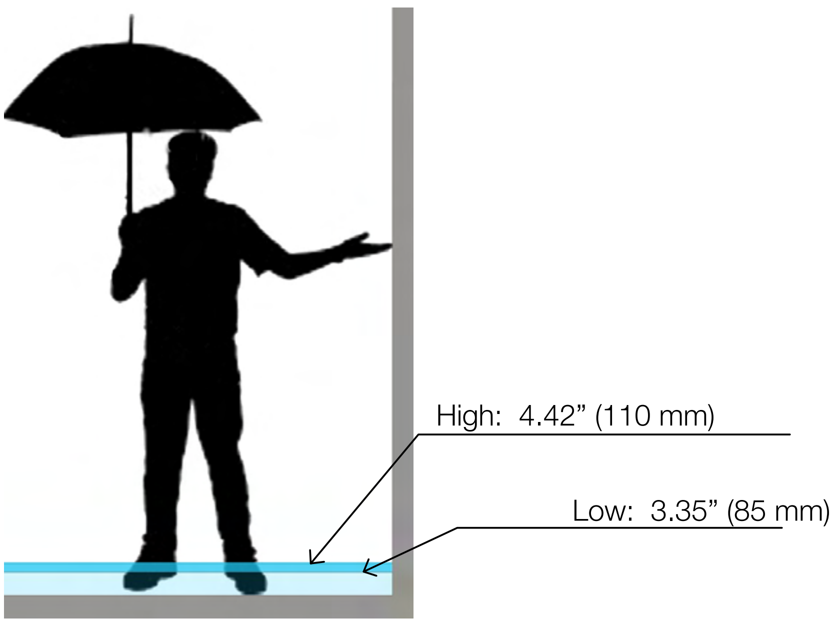
Monthly Humidity

S 1



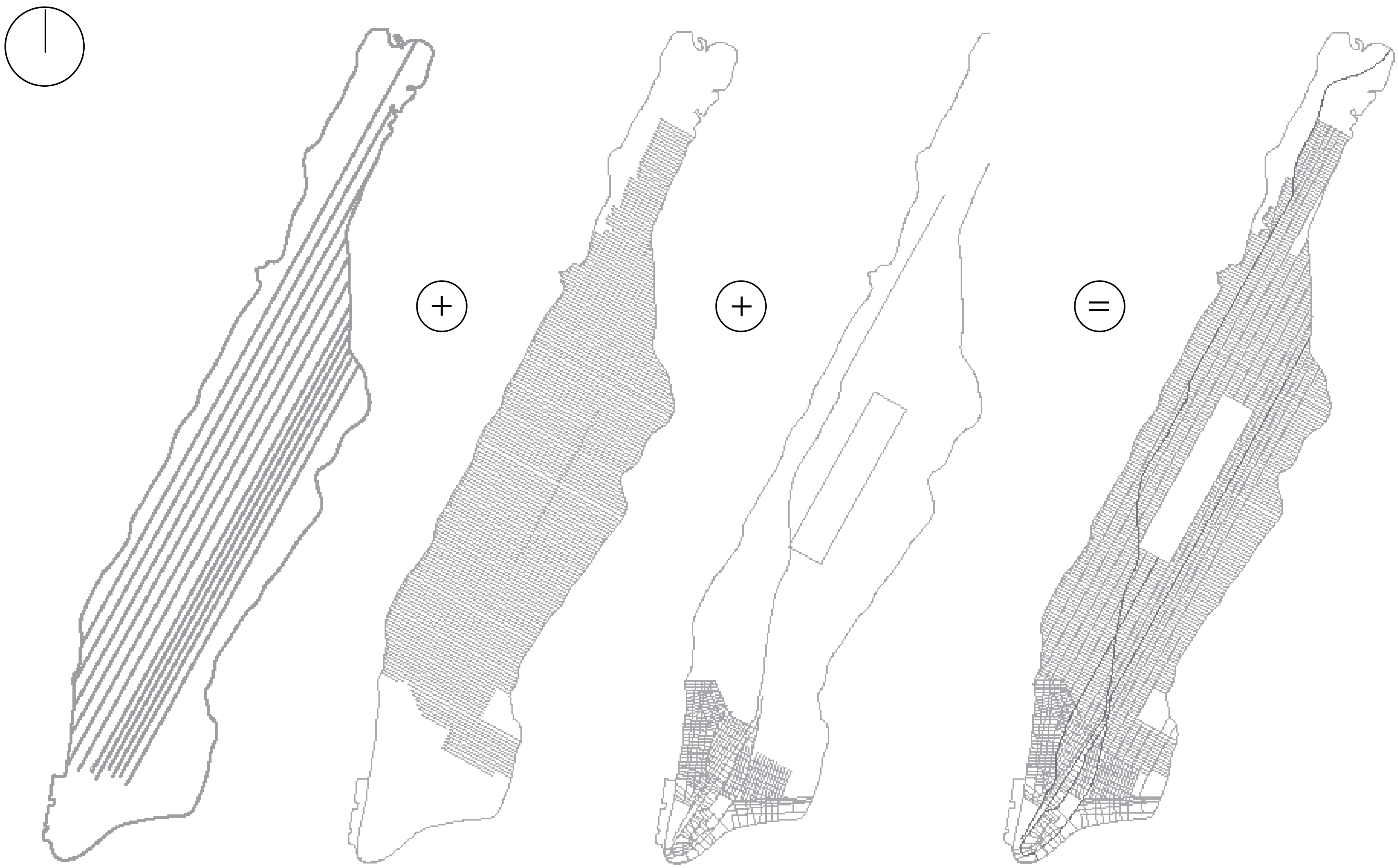

Monthly Percipitation


Monthly Snowfall




Yearly Percepitation


Yearly Snowfall



12 Avenues
on a North-South Axis

150 Streets
on a East-West Axis

Grid breaking elements:
Old New York City
Non-grid streets
Central Park

Complete Manhattan Island

S 1


1. Normal grid condition:

Possibility of two converging streets
Possibility of two exposed building faces

2. Grid intersected by one non-grid street:

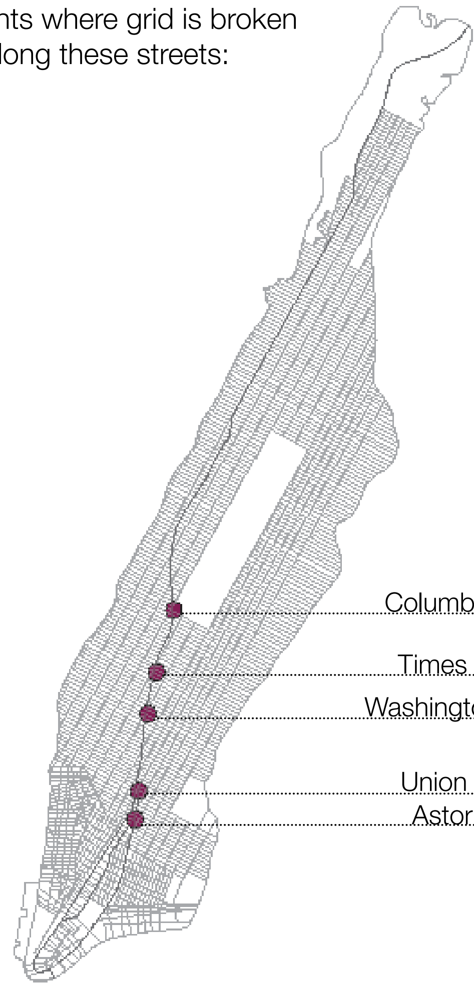
Possiblility of three converging streets.
Possibility of three exposed building faces.

3. Grid intersected by two non-grid streets:

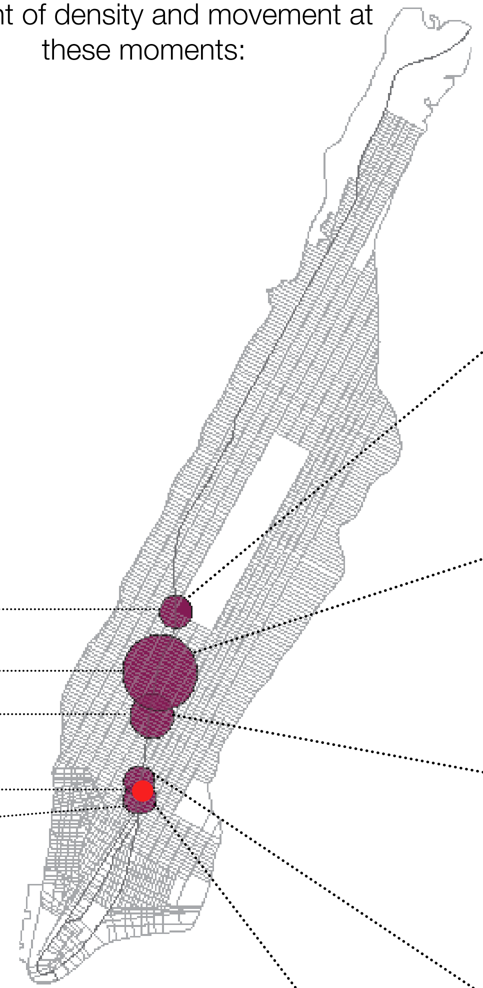
Possibility of four converging streets.
Possibility of four exposed building faces.

The intersection of the rigid New York city grid by irregular roadways, such as Broadway and Lafayette, create unique moments in the urban fabric.  The grid by itself allows for only a certain number of streets to converge. This condition limits the amount of traffic that enters these intersections as well as the number of a building's facades that are exposed to the street. The less traffic that is in a given area, the less density and the less movement.  If a building has a limited exposure to the street, it has less of a presence with those people that visit or use the area.  Buildings with a greater presence are more likely to be frequented and visited, thus increasing the amount of people density and movement.  For example, a clothing store with one storefront window will not draw as many people as a store with two storefront windows.  The amount of building that is exposed to the street, plus the program within the building (a store will draw in more public than an office building) contributes to the overall densities and movement.  When one or two irregular street breaks this grid, the streets interact with the grid to increase the maximum amount of streets that converge and exposed building facades.  Thus, a site with more movements, such as one where the grid is intersected by one or two irregular streets, would work better than one that locked within the grid.

Moments where grid is broken along these streets:




Amount of density and movement at these moments:



The movement is of a vehicular scale, with little pedestrian movement

**Columbus**

Too much movement.

**Times**

Too little movement.

**Madison**

The movement is pedestrian with little vehicular movement.

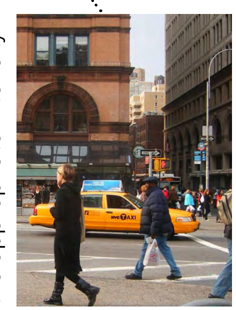
**Union**

Every site that is at the intersection of a non-grid street with the grid does not necessarily translate into an appropriate 'fast' site. Some sites are too busy, and too full of movement. In these locations would drown out the program and its movements. Some sites have too little movement, where there would be no site motions to interact with the program. Other sites have too much of one type or speed of movement. Too many vehicles result in movements that are not easily altered or permeable; these movements become almost too powerful and fast. A site with a great amount pedestrian movement and no vehicular movement lacks the speed that is necessary. A balance is needed in types and speed, and this is found at Astor Place.

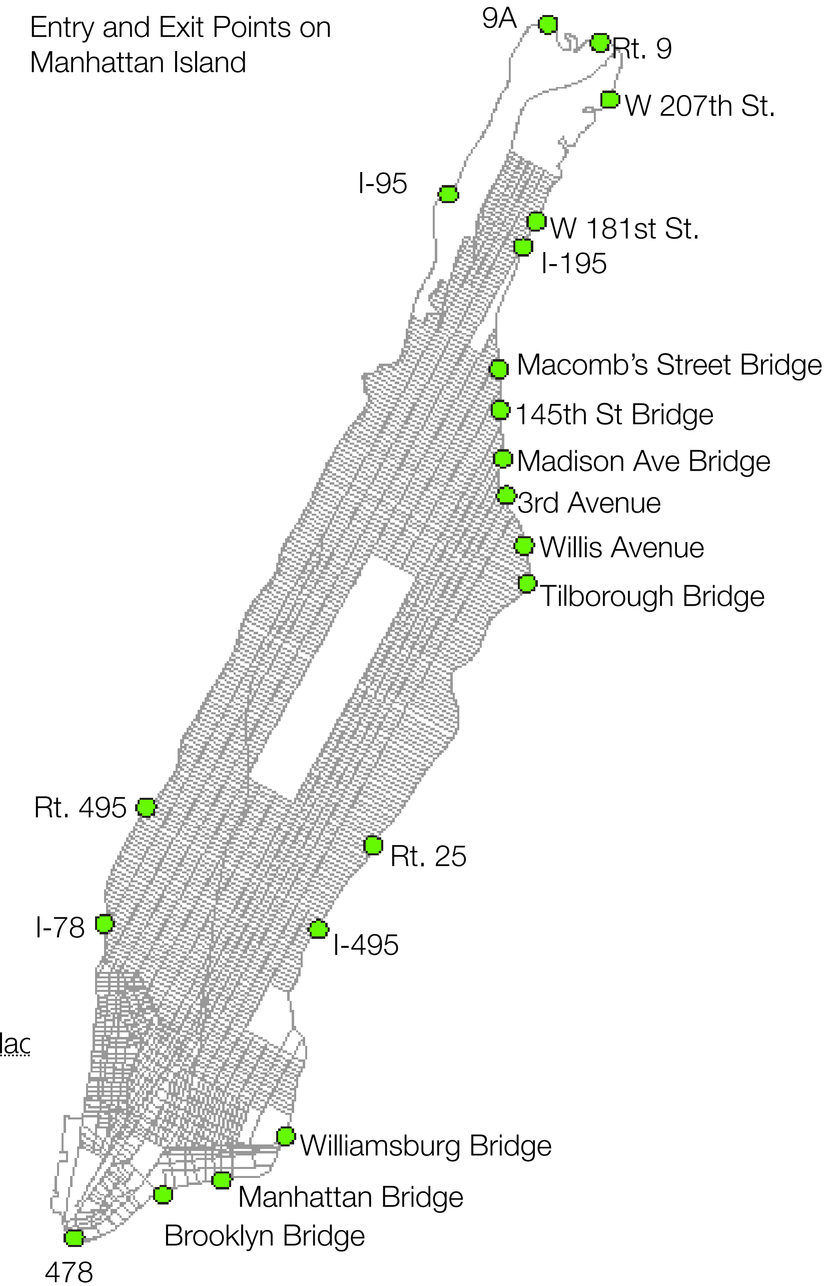
S 1

**Astor**

Movement is from a variety of sources, and at the appropriate intensity.

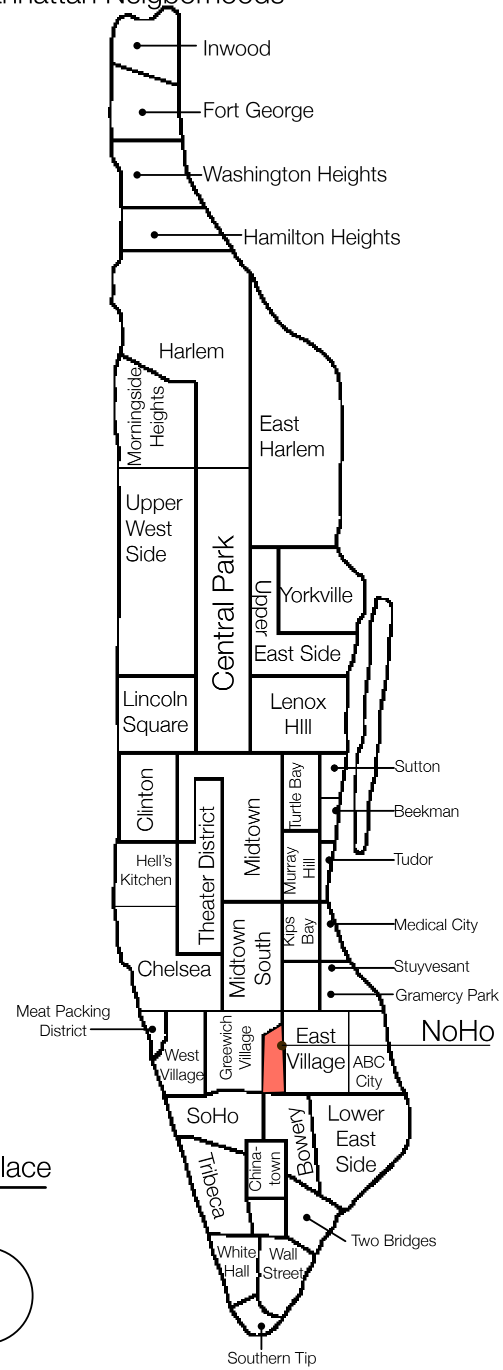



Green Spaces
N
W
E
S
Manhattan
Astor Plac


Entry and Exit Points on Manhattan Island
9A
Rt. 9
W 207th St.
I-95
W 181st St.
I-195
Macomb's Street Bridge
145th St Bridge
Madison Ave Bridge
3rd Avenue
Willis Avenue
Tilborough Bridge
Rt. 495
Rt. 25
I-78
I-495
Williamsburg Bridge
Manhattan Bridge
Brooklyn Bridge
478
S
1

New York Subway Map


Manhattan Neigborhoods



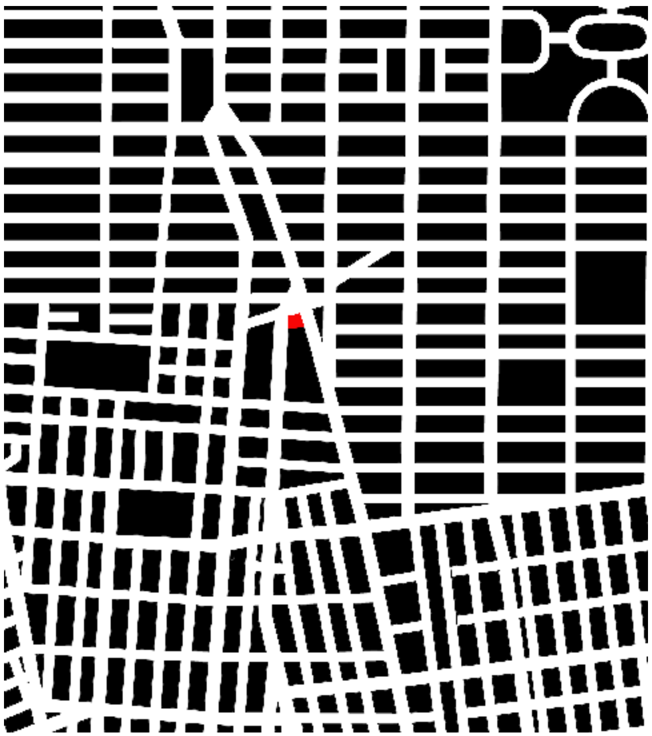

**No Ho (North of Houston)**:

The selected site is located within the No Ho neighborhood, located in the south-eastern portion of Manhattan Island. It is a very small neighborhood, and takes on many of the characteristics of adjoining East Village. The site, in fact, borders East Village.

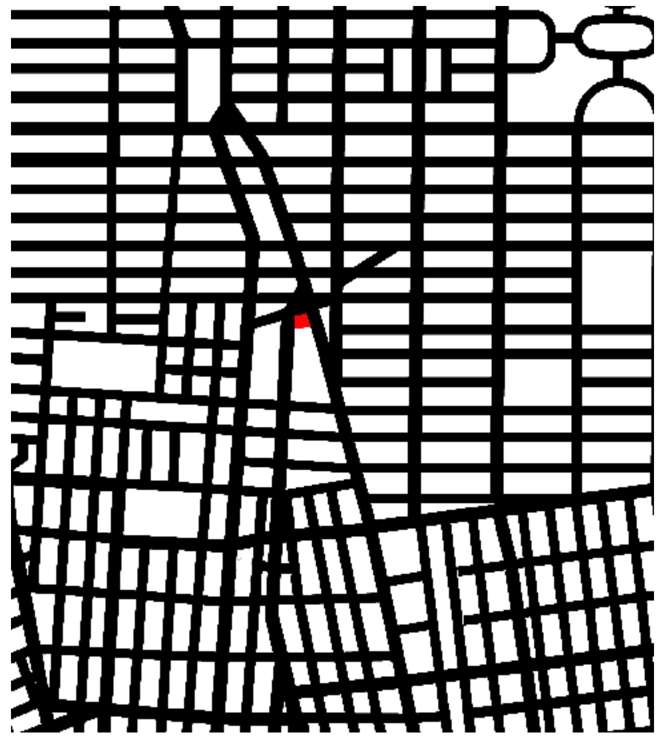
The location is known for its offbeat, sub-cultural society. Many bohemians, artists and social rebels moved here after their home in Greenwich Village became too conformist. The area was also an integral park of the New York punk scene in the 70s and 80s, contributing to its subversive reputation. Since Thompkins Park, the old center of the punk scene, was restored, the neighborhood has seen the number of drug addicts and squatters decrease. The city and residents worked to restore much of the neighborhood, and by doing so have helped No Ho and nearby East Village acquire a less 'shady' reputation. The area is still considered young and hip, and it draws many visitors to its trendy shops and nearby elite universities (New York University and The Cooper Union). Among the residential population, there is a large amount of professionals as well as students.

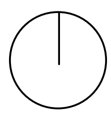
# Site S Neighborhood 2

Building blocks within the grid.

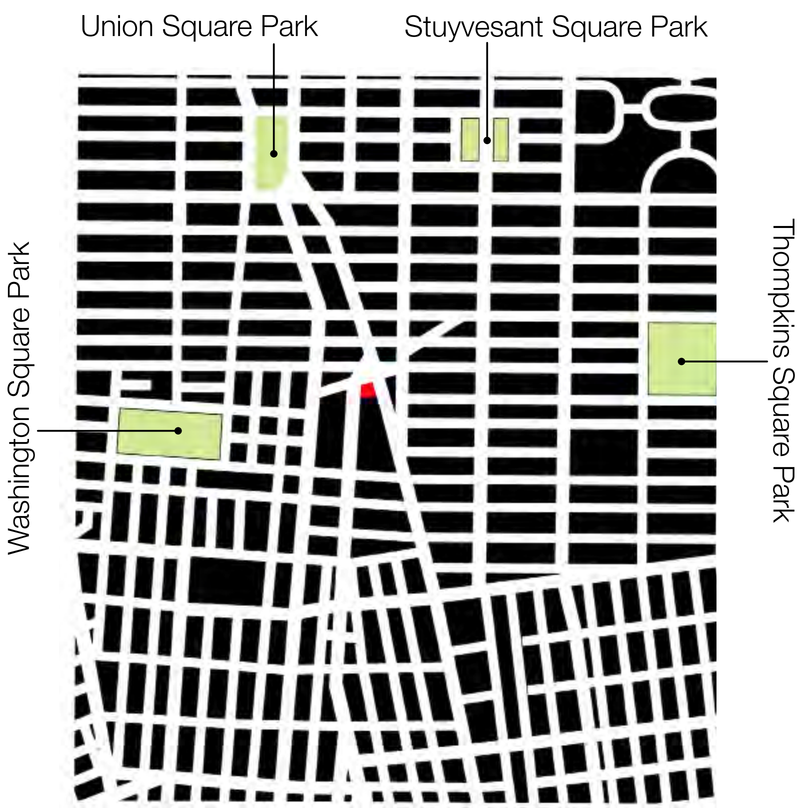


Streets within the grid.

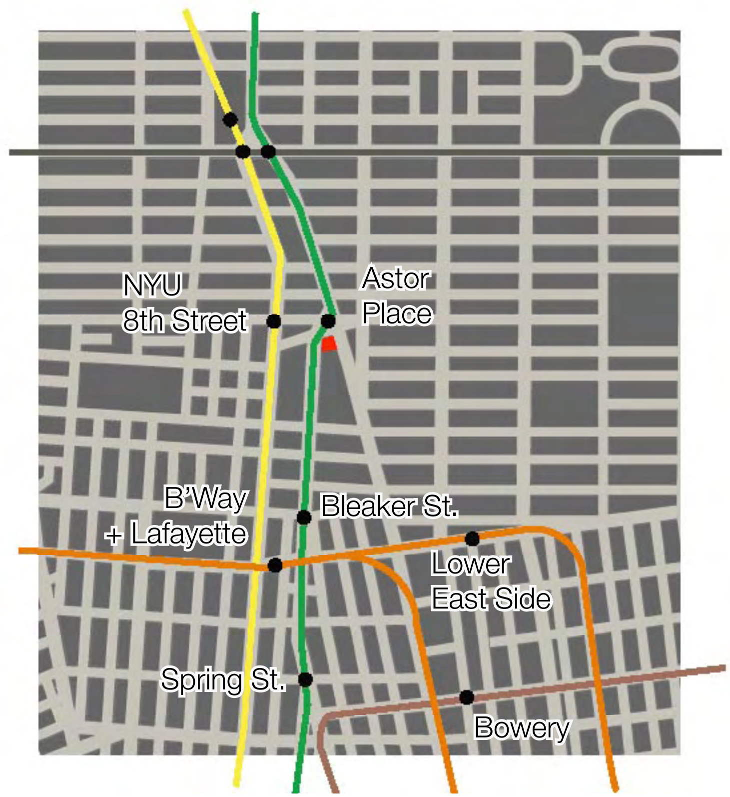




The neighborhood is an excellent harbor for movement: there are day movements (shops, work, university) and night movements (bars, restaurants, clubs). There are also movements made by people, leaving for and coming home from, work and school. East Village also has the feel of a neighborhood with a great amount of cultural and social exchange.

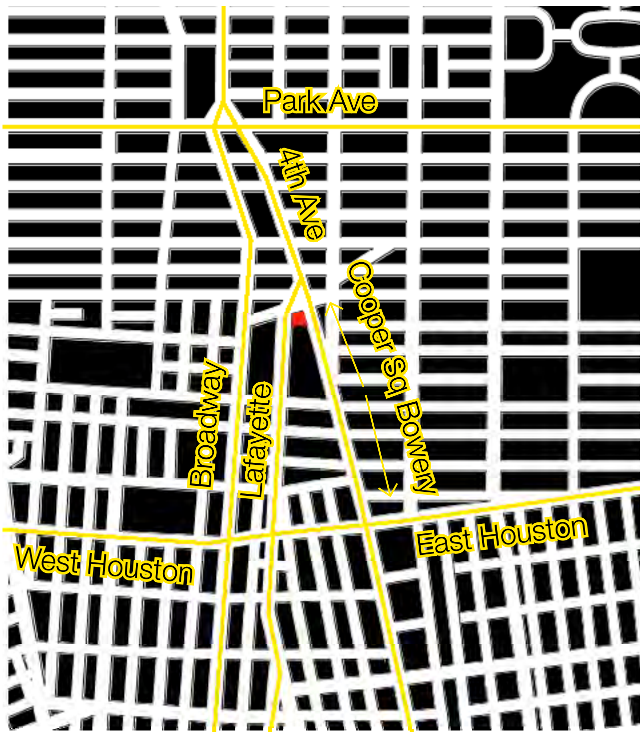



Green Space




Subway

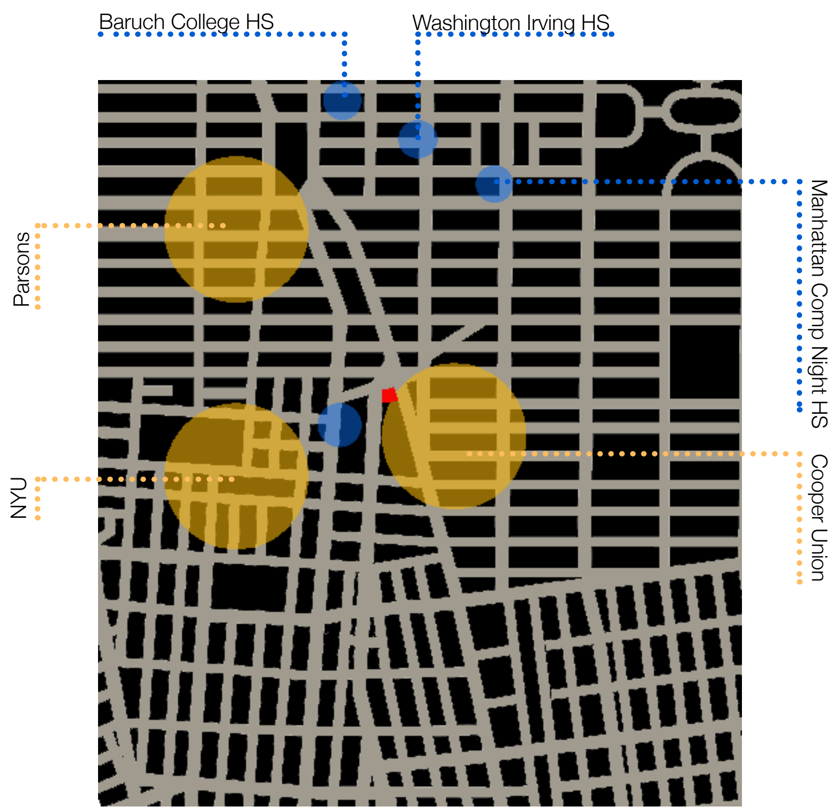
S 2




Major Streets

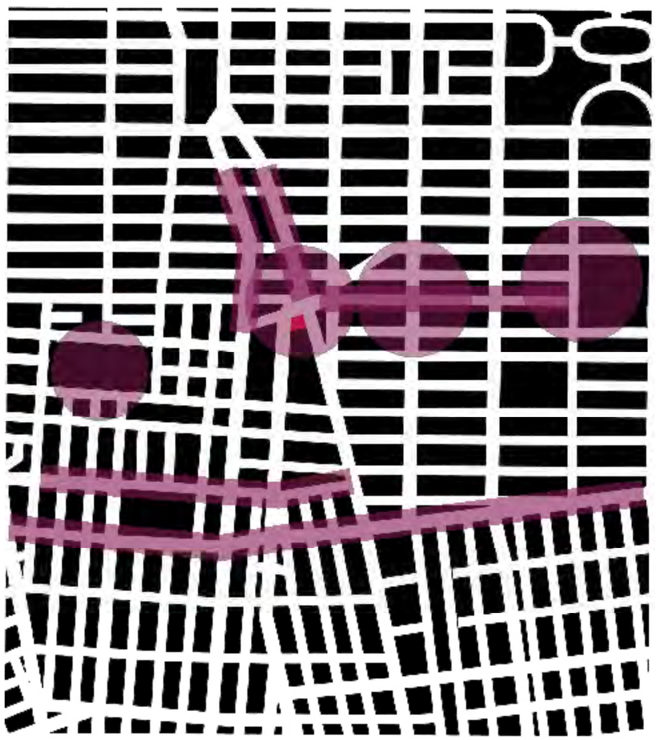
Parking
(Garage or Lot)

S 2

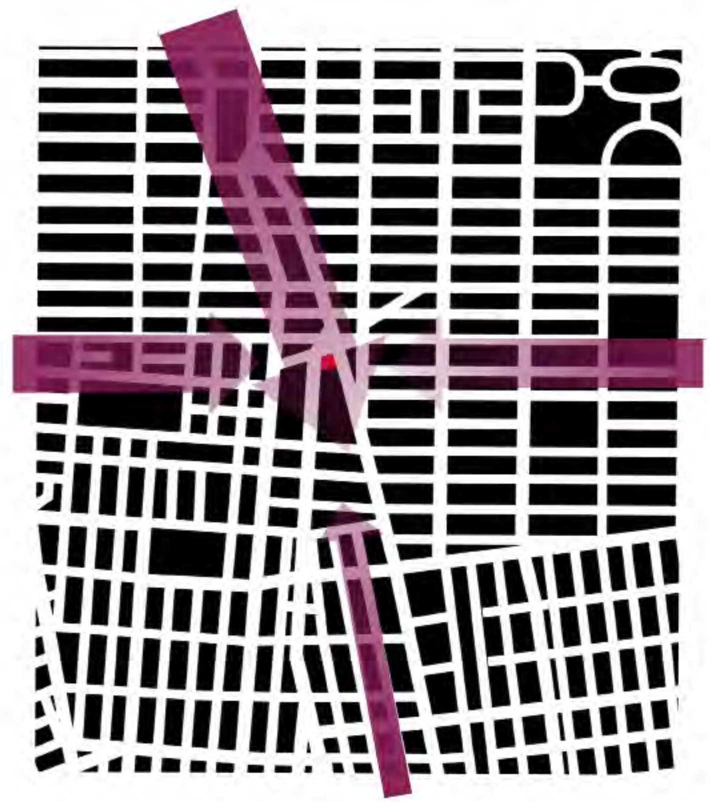



Nearby Universities
and Schools


Points of Interest



Areas of High
Pedestrian Density



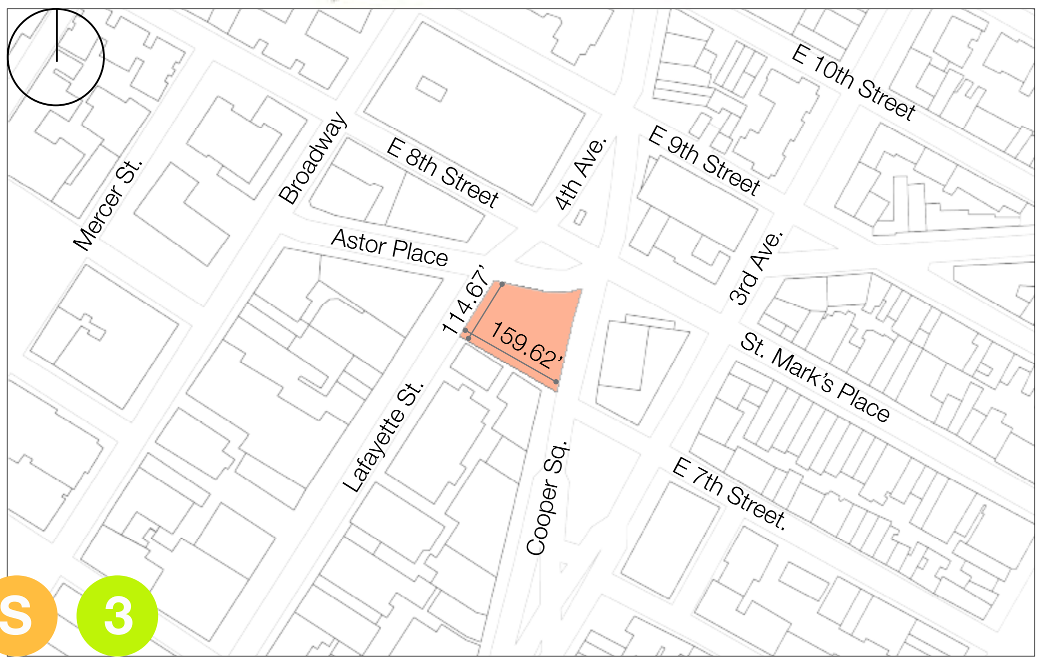
Voume and Direction of Movement
from Other Urban Areas

# Site S Immediate 3

Astor Place Basic Lot Information

| | |
|---|---|
| Registered Street Address: | 447 Lafayette Place<br>New York, NY 1003 |
| Block No.: | 544 |
| Lot: | 7502 |
| Lot Area: | 17837 sf. |
| Lot Frontage: | 114.67 ft. |
| Lot Depth: | 159.62 ft. |
| Zoning: | C6-2 |
| Zoning Map No: | C12 |
| Longitude: | 40° 43' |
| Latitude: | 74° 00' |

Lot Dimensions
Street Names




The site at Astor Place predates the existence of the grid, hence its nonconformity with the grid, and the great amount of irregular streets that converge at this location. The lot was once home to the Astor Place Opera House. The playhouse was the site of a riot after a performance of Shakespeare's *Macbeth*. The local Irish immigrants were feeling great outrage towards the English over the potato famine, and consequently rioted outside the theater where an English play was being performed. The police fired into the crowd and 18 people were killed. The theater never recovered from this incident and was eventually destroyed. The site has been used as a parking lot for many years, but has

Arial View of Site

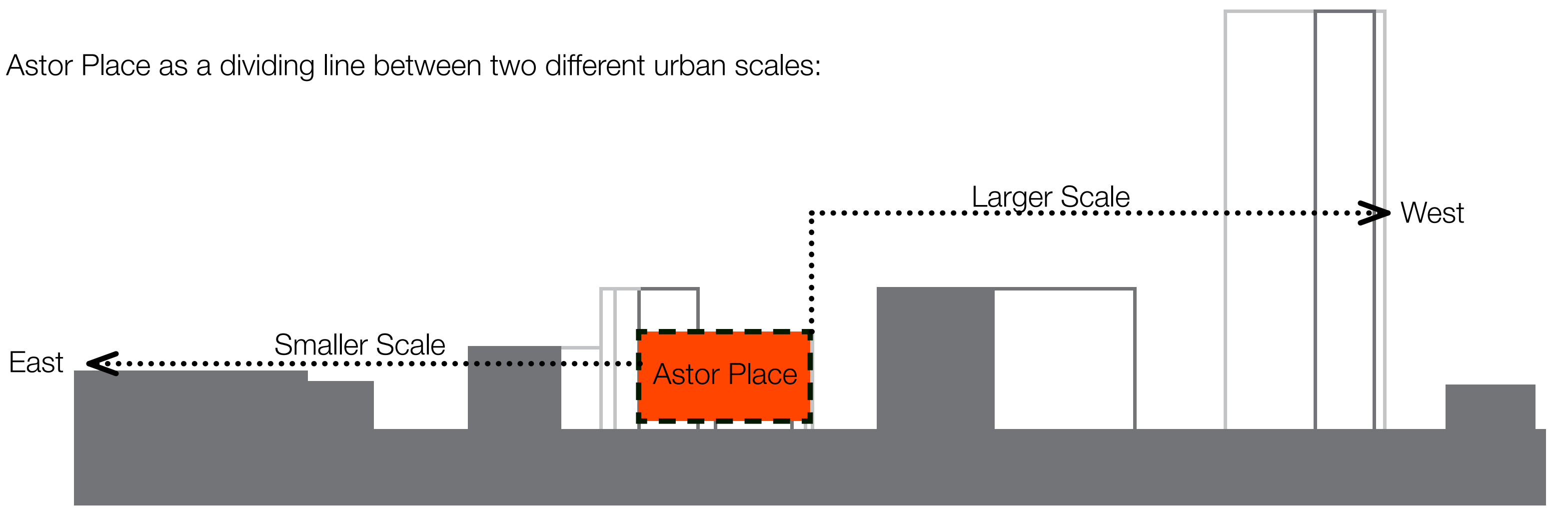
S 3

recently seen the erection of an ugly high rise commercial and residential building.

Astor Place is a bustling, popular destination. It borders Cooper Union, which has a steady population, as well as the beginning of St. Mark's Place, a popular street filled with specialty shops, retail and cafes. There is also plenty of housing, so there is a vibrant and varied residential population. Astor Place, being at a major intersection, sits between two very different urban scales. To the west, are larger scaled urban housing and commercial buildings, and to the east, are much smaller and older residential and retail. This site has the ability to absorb the various scales that border it.

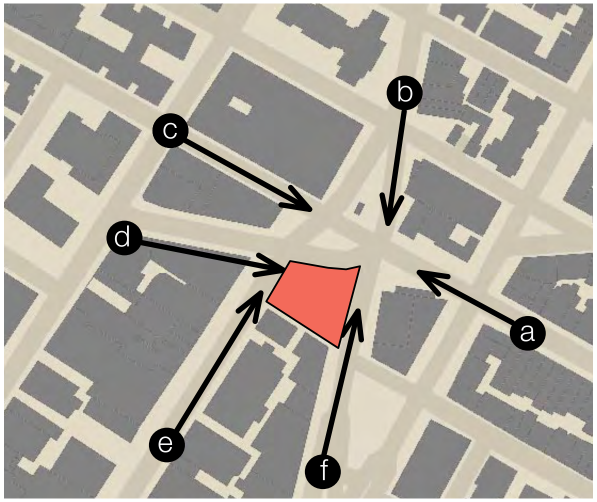
Astor Place is located at the convergence of four major streets. This is not very common in New York City, which operates on a rigid grid layout. In most intersections, there is the convergence of only two streets. Astor Place, however, is in the borderlands of the grid. In this area, the oldest parts of New York, located in the southern portion of the Island, transition into the newer regularized grid of streets and avenues. The older parts of the City predate the grid, but were still organized into a loser, more disorganized, grid-like pattern. Where these two areas meet, there are unique convergences as the old part is mashed into the new. Intersections where more than two streets converge are more likely in this area due this shift. If more streets converge, then more people as well as traffic converge. There is more movement than if just two streets met by themselves.

Astor Place as a dividing line between two different urban scales:




Astor Place also represents a pocket where a non-linear street snakes through, and intersects with, the grid. In this location, Lafayette Street is the 'rogue' street, whose bend creates the eastern border of Astor Place. The Bowery also functions in this manner: it courses up into Astor Place from the south, being more North-oriented then the other streets on the grid. The fact that two irregular streets intersect with the regular streets of the grid creates the great amount of convergences at Astor Place. The same scenarios can be seen in other parts of the city, such as Times and Union Squares. Such areas as Astor Place, Time and Union Square result in high levels of densities due to the intersection of more than two streets. With more streets, come more traffic, more people, and more subway and bus stops. People, as well as streets, converge at these areas. Often they are meeting places, and are constantly filled with people. When there are such large densities, there are also more opportunities for movement.

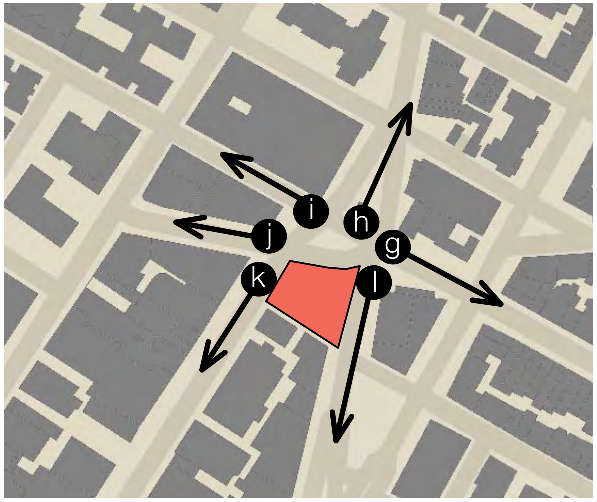
S 3




Views

a
b
c

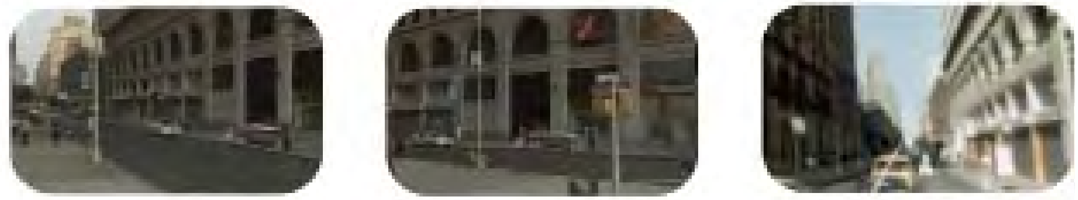
d
e
f




g

h

i



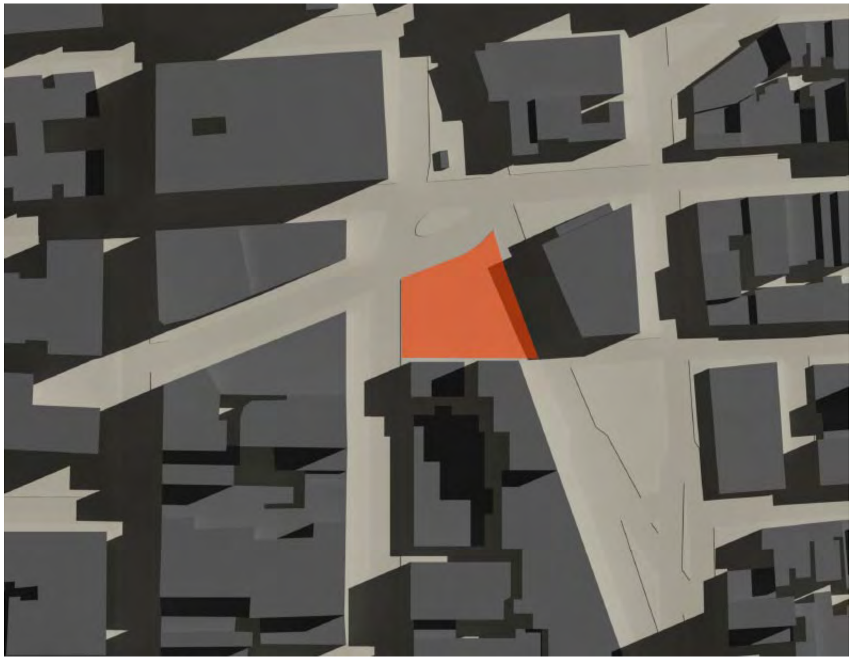
Views

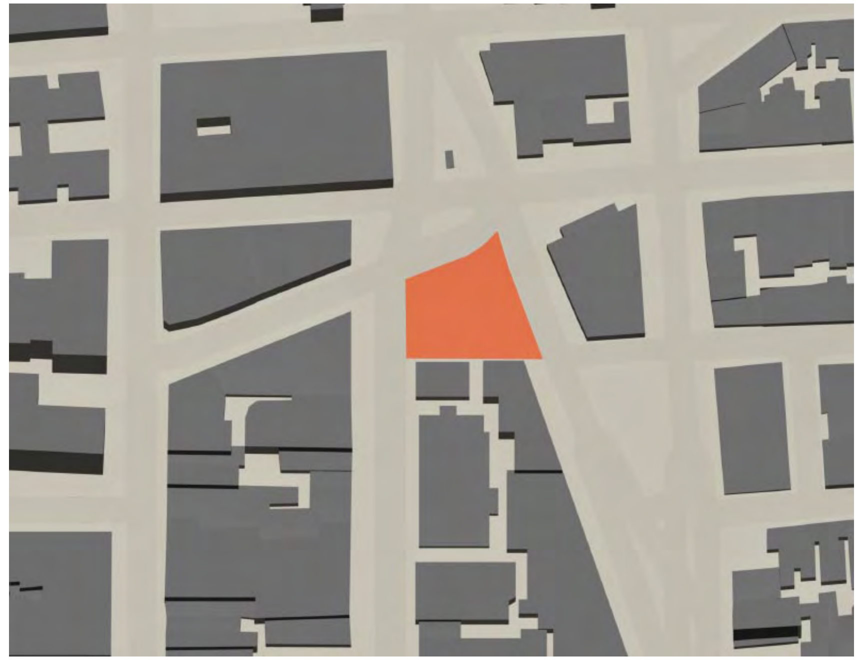
j

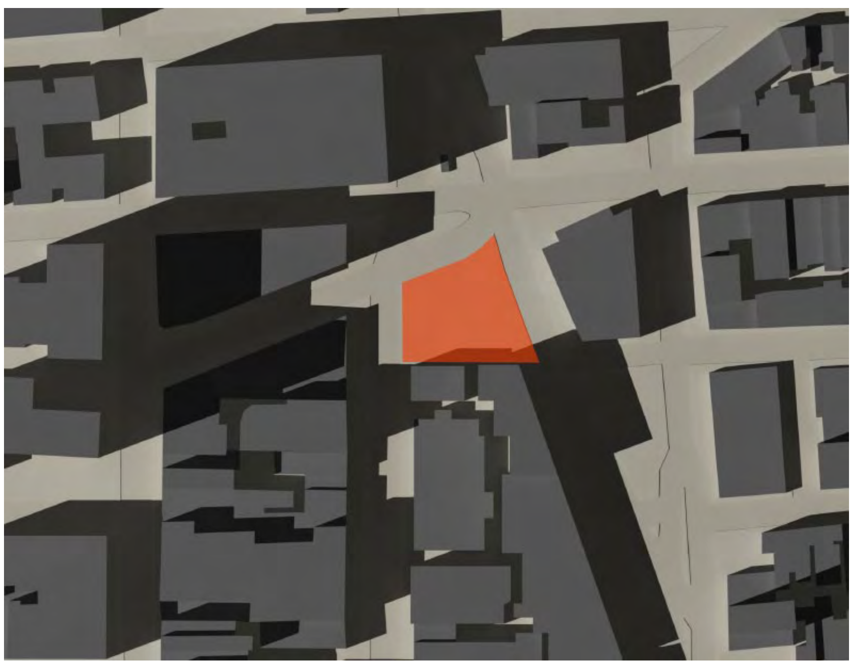
k

l

S 3





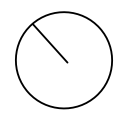


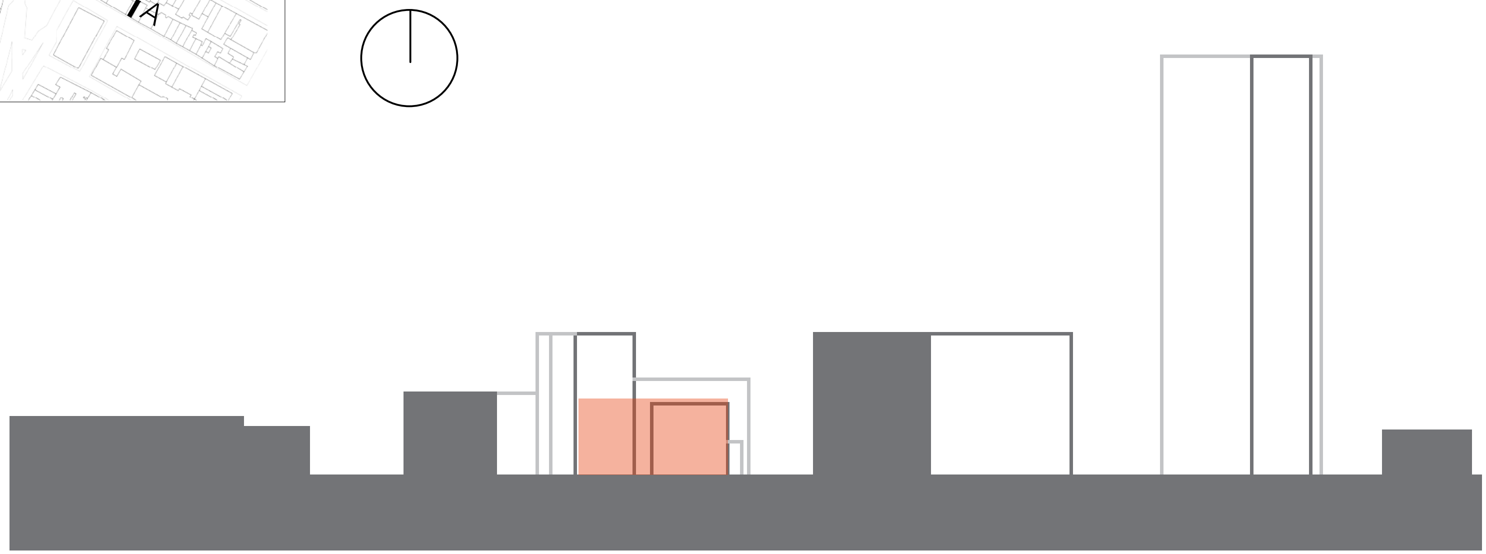
Daylighting on Site

Upper Left:  Morning Light

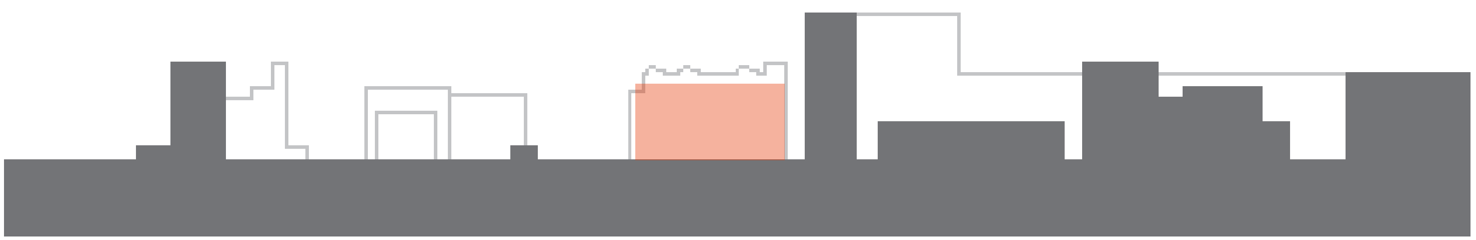
Upper Right:  Noon Light

Lower Left:  Afternoon Light



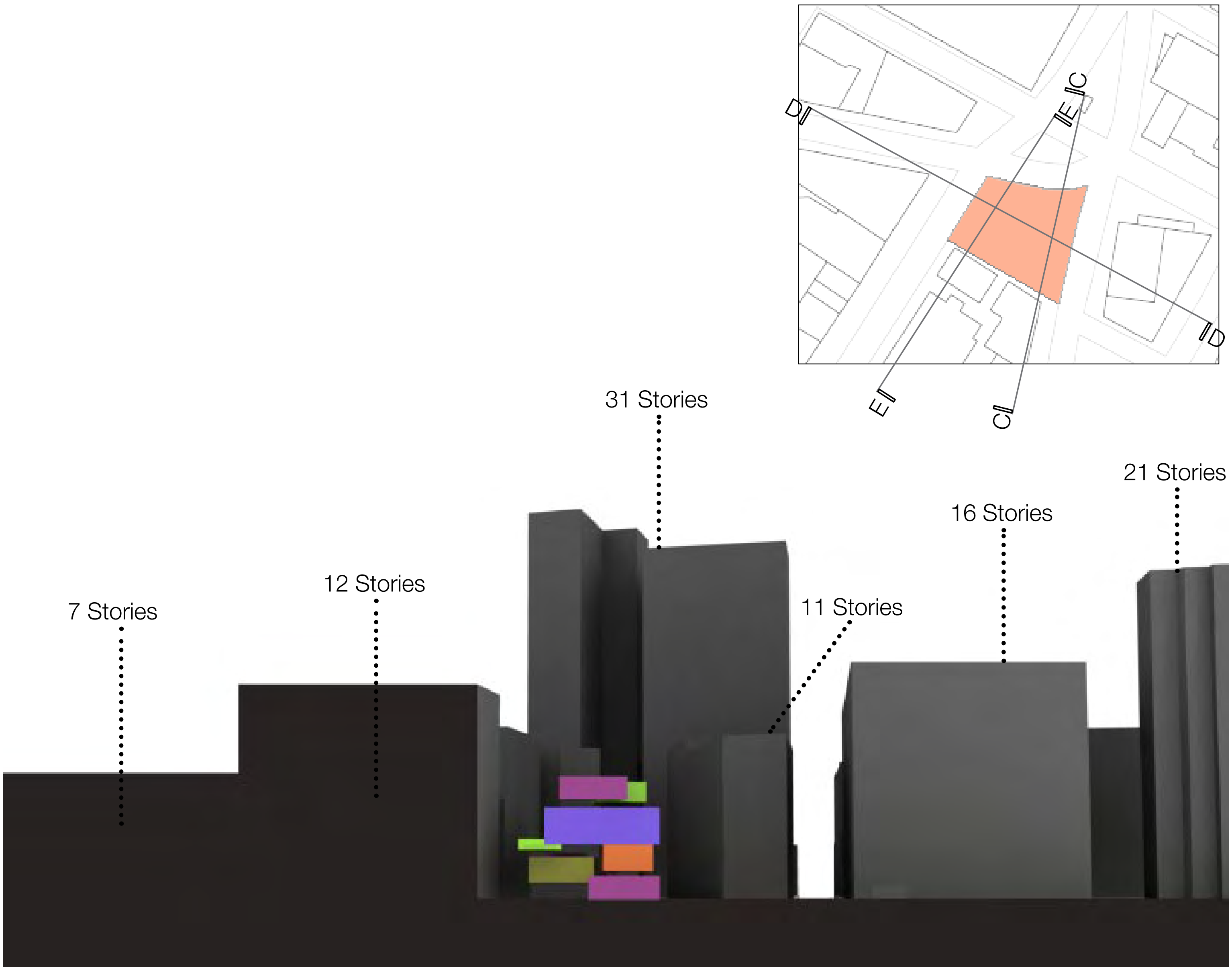



Ⓐ Section Looking South



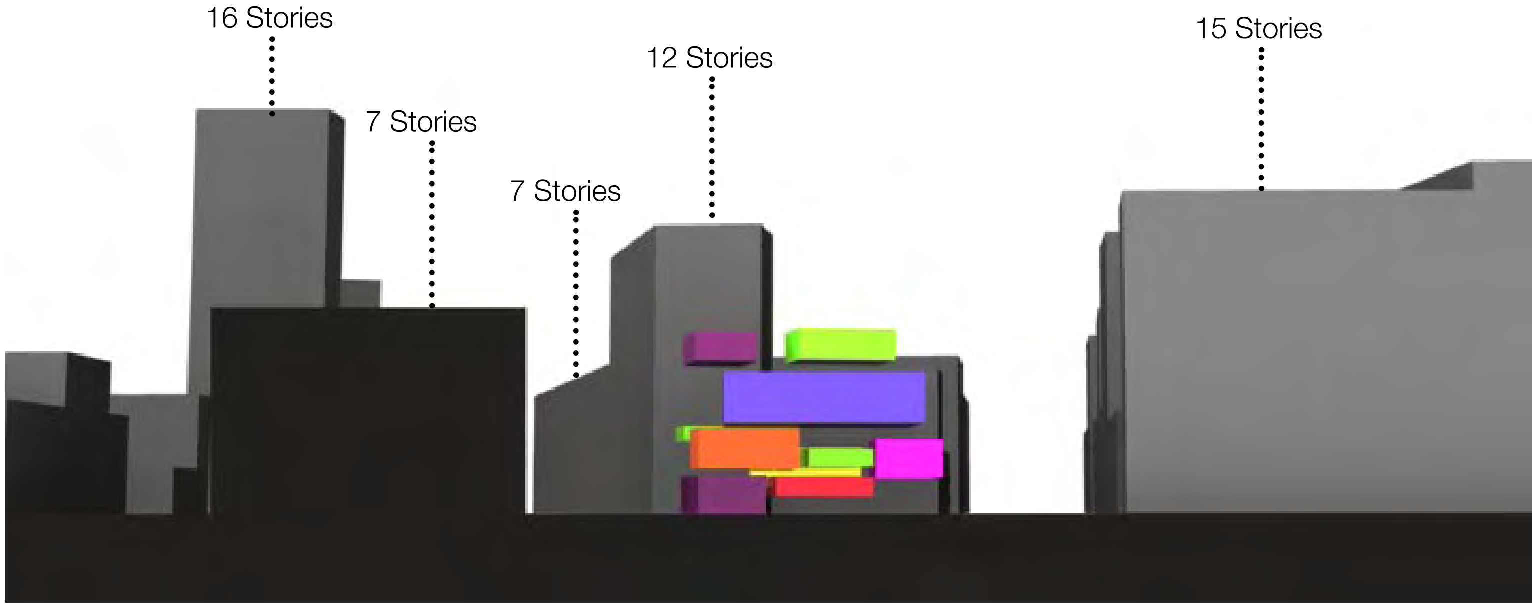
Ⓑ Section Looking East

S 3

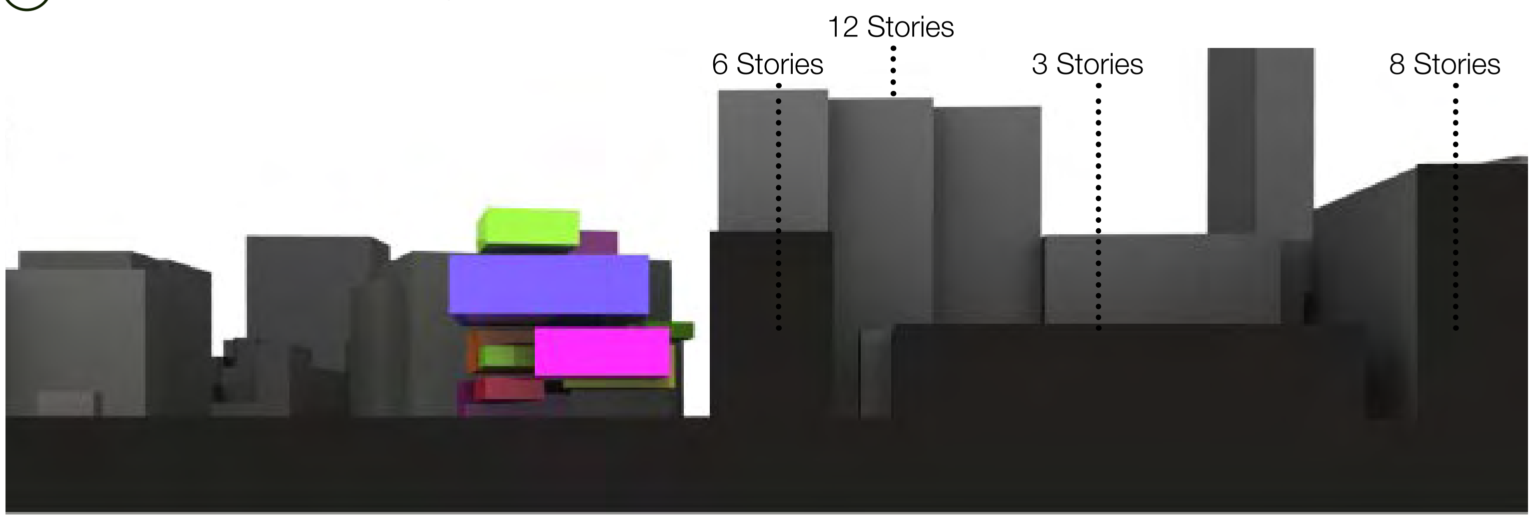



Ⓒ Sectional Perspective Looking West

S 3

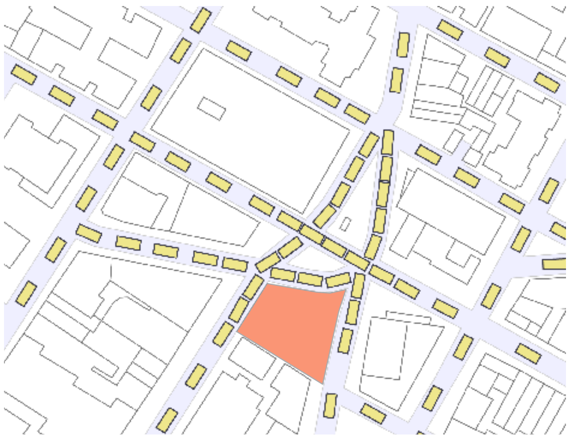



C Sectional Perspective Looking South




D Sectional Perspective Looking East

S 3

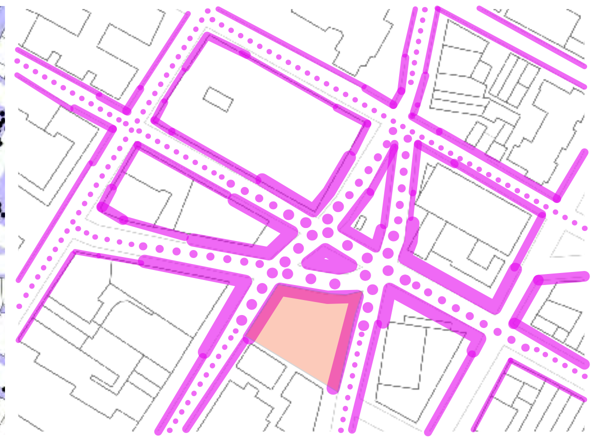


Vehicular Densities

Vehicles

Pedestrian Densities

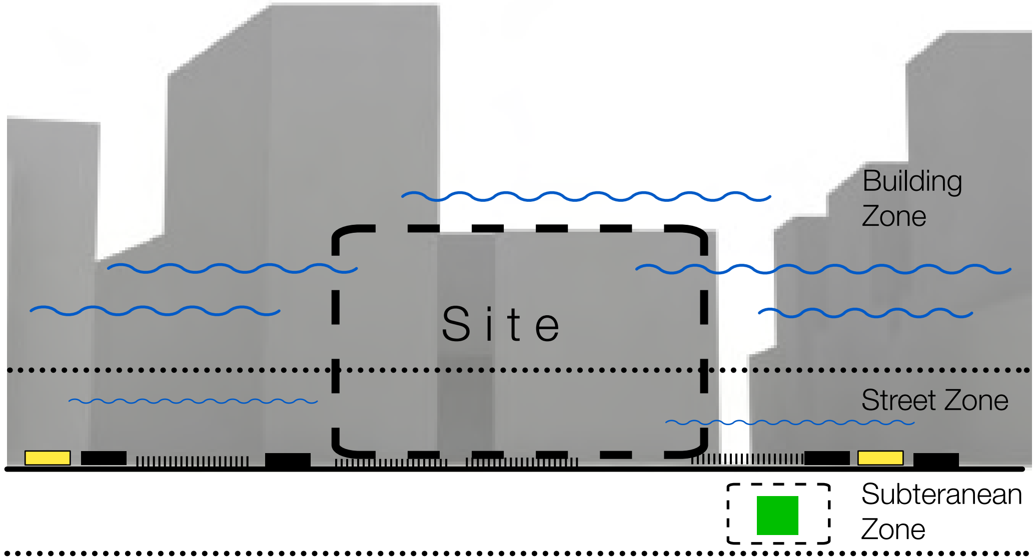
People

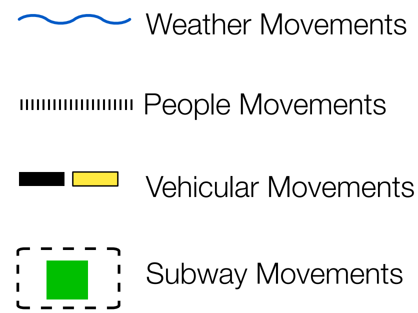


Movements that result from high traffic and pedestrian densities.

| | | |
|---|---|---|
| Pedestrian | High Amount of Movement | |
| | Low Amount of Movement | |
| Vehicular | High Amount of Movement | |
| | Low Amount of Movement | |

S 3



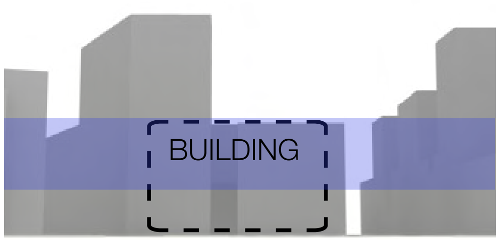

Different Motions that occur
at various heights, or levels,
on site.

The site extends beyond what is occupied at grade level.  Site exists up in the air, where the only other occupants are fellow buildings, as well as on grade level and below grade.  Each ‘zone’ contains its own movement types and speeds.  The upper level, the ‘building zone’ receives exaggerated winds that have built up through a wind tunnel effect.  Wind arrives on the island, generally from the West and Southwest, and is squeezed through the narrow openings provided by streets and buildings.  The wind increases in force, and at this high level, they can be quite strong.  The strong wind can also exaggerate other weather movements such as those made by rain and snow.

Much movement exists at the street level.  It is here that we are most familiar with, as we occupy this stratum most of the time.  Here we find movements derived from cars, people, weather etc.  This zone is rich in movement.

The subterranean level, especially in an urban context, has its own movements.  The subway courses underneath the perimeter of this

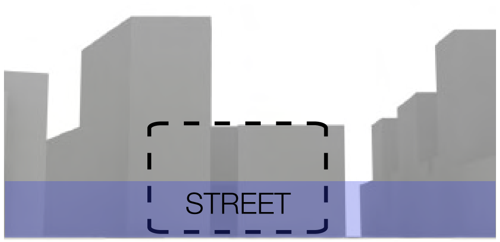
After evaluating the zones of the vertical site that are the most rich in movement, the possible locations of the main programmatic element, the baths, can be determined. Each zone offers various movement types and speeds, and has its own benefits for the sectional location of the baths.




Subtle movements.

Unique, unexplored weather movements.

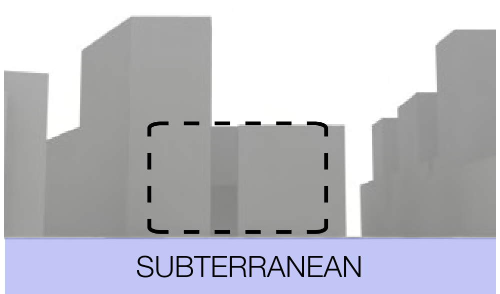
Would create a subtle, rather than dramatic reaction when organized and paired with the subtle movements of the baths.




Subtle to dramatic motion.

Weathermovements.

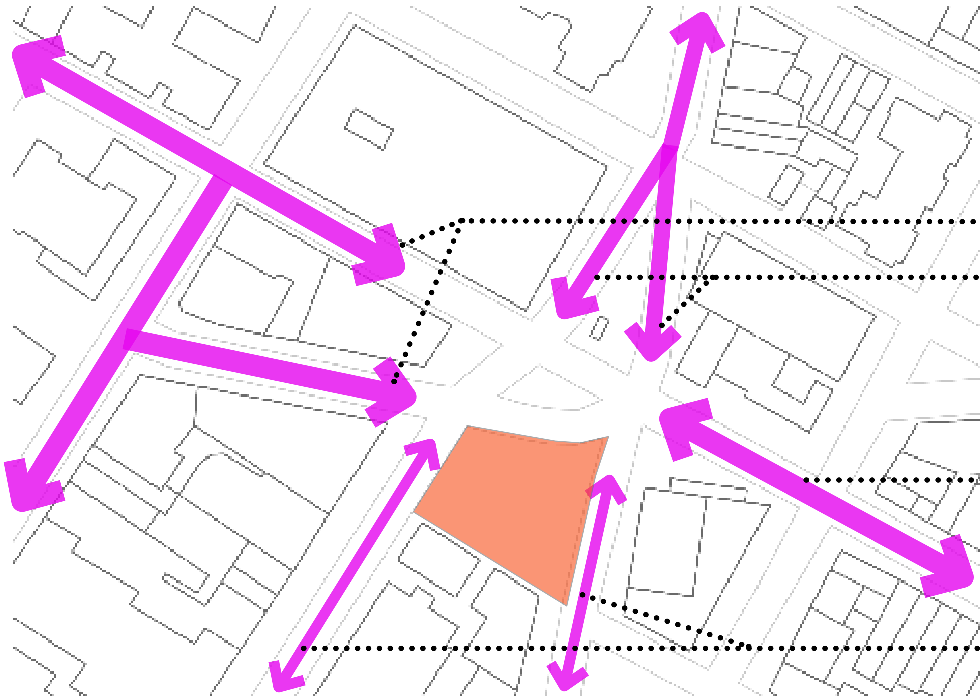
Would create dramatic effect when organized and paired with the subtle movements of the baths.




Subtle to moderate motion.

Weather movements.

Would create moderate effect when organized and paired with the subtle movements of the baths.



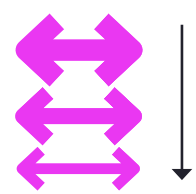
Students from NYU, as well as local residents.

Tourists from Uptown, students from Columbia University, and residents.

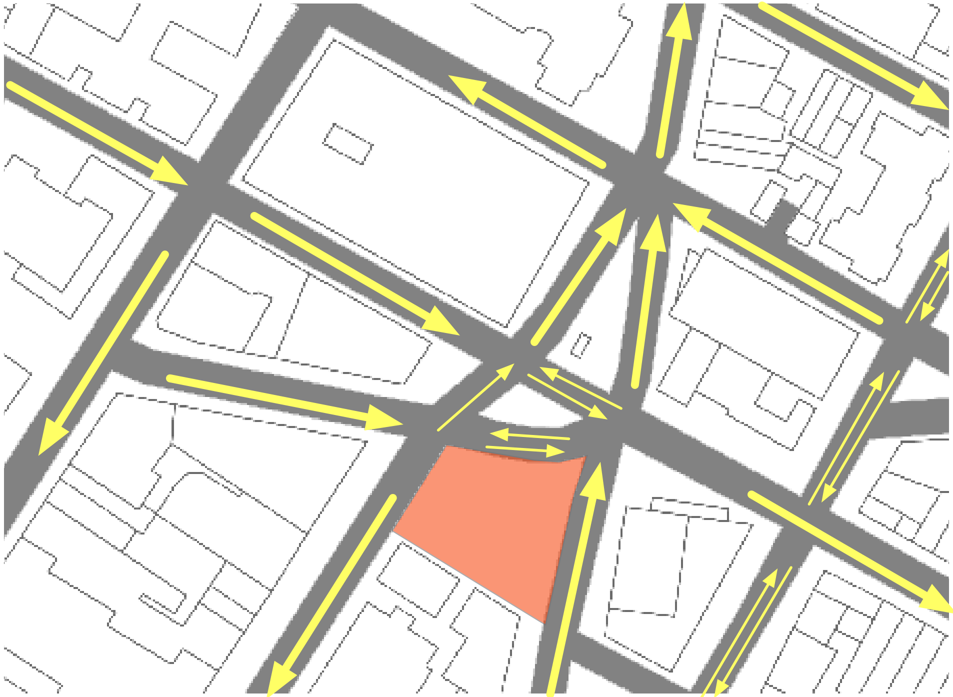
Residents and visitors of St. Mark's Place, Thompkins Square Park, Losaida and Alphabet City.

Residents and visitors of the Bowery, Houston and Beeker Steets. Tourists who may be visiting the business district, museums or other cultural landmarks.

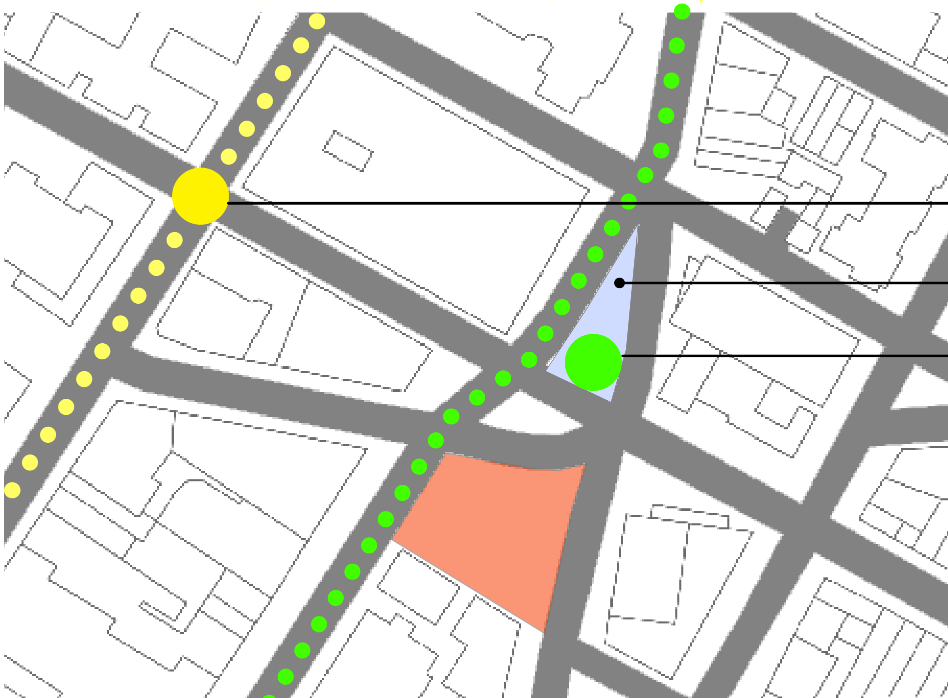
People are drawn to Astor Place either because it is en route to their destination, or because it is home, or because of the lively scene that awaits there. Bars, restuarants, cafes, theaters, clubs and shopping attract many of the visitors to this busy intersection.



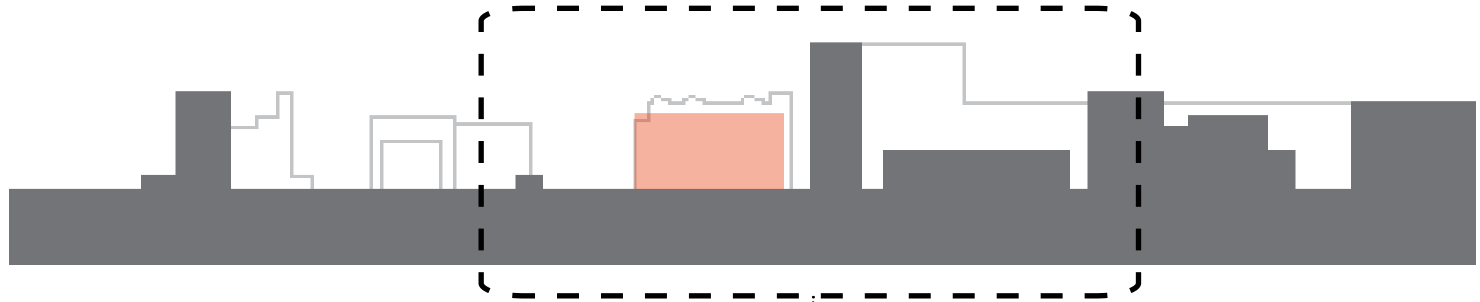

Amount and Direction of Movement



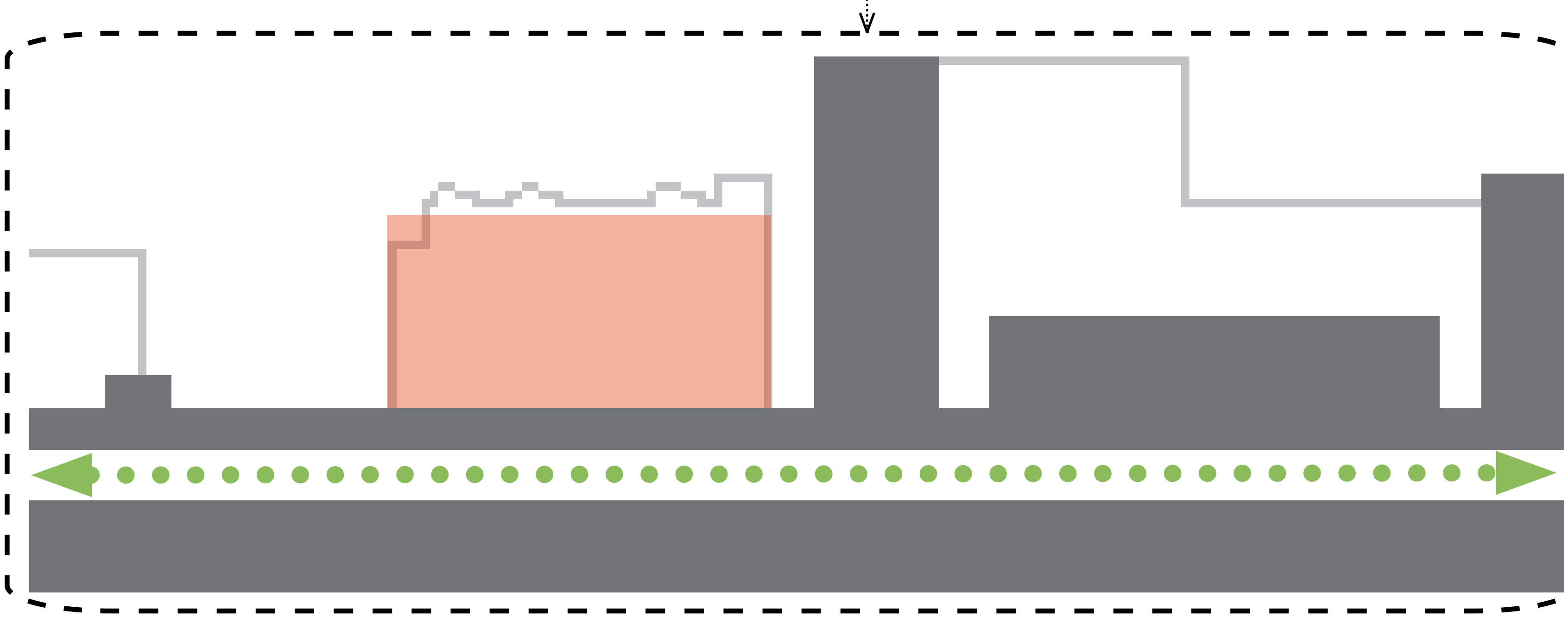
Street Directions




Subway + Bus Stops



Sectional Subway Diagram



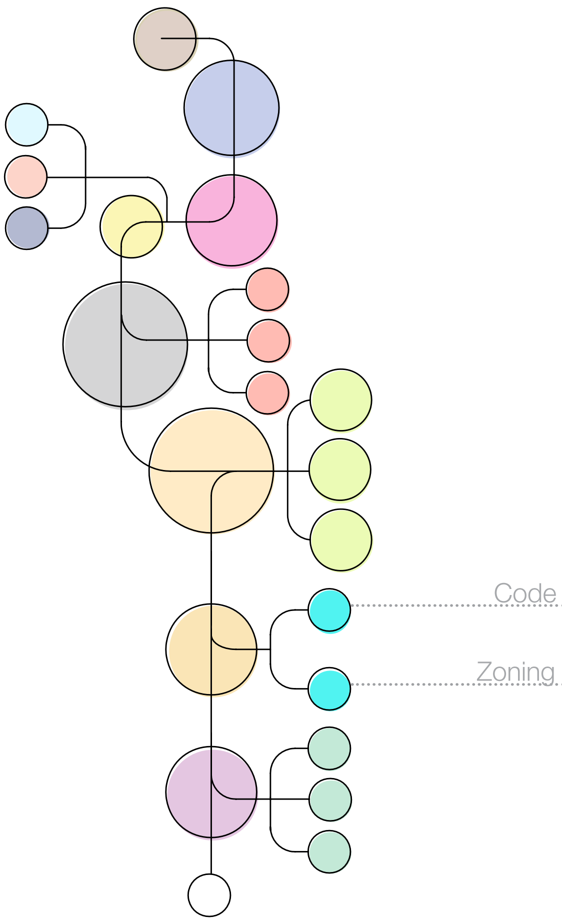
S 3

Public Facilities + Institutions
Mix Residential + Commercial
Multi-Family
Industrial + Manufacturing
One + Two Family
Office
Green Space

S 3

# Regulatory Environment R

**Code 1**




*From the  International Business Code*

**Use Group Classification**:
**A-2, A-3, M, R-2, B**

This public bathing facility is falls under an Assembly Group A (303.1) classification as determined by the International Building Code.  Assembly Group A permits the gathering of persons for either civic social or religious reasons, for recreation, or for the consumption of food or drink.  More specifically, this building will be classified as type A-2, as food and drink will be consumed in the café, as well as type A-3.  Type A-3 allows for assembly for recreational or amusement purposes; these types of assemblies will occur in the lounge, gallery, baths, lecture hall, library, greenhouse etc.  There will be no spectators to these assemblies, only the participants themselves; thus, it is not necessary to define this building as an A-4 type of classification.  Because the building will contain a café, which will sell goods, as well as a gallery space that could potentially sell items, this building will also be classified as Mercantile Group M (309.1) classification. ).  There is also an administrative component, thus this building also qualifies as a Business Group B.  Lastly, because there will be two visitor apartments in the complex, whose residents will not be permanent but will be there for more than 30 days, this building also qualifies as Residential Group R-2 (310.1 occupancy.

R 1

**Fire Resistance + Mixed Use Occupancy:**

Because more than one occupancy group will be in this building, it is defined as a Mixed Use Occupancy (508.1) and in this situation, certain degrees of fire resistance must be used. Table 508.3.3 states that when a Assembly Group A, Mercantile Group M, Business Group B, Residential Group R are used in combination, there must be at least an hour of required separation when an automatic sprinkler system is used, and at least 2 hours when no automatic sprinkler system is used.
Allowable height and areas must be limited to the most restrictive occupancy allowances within the Mixed Use Occupancy. In this case, the building is limited to the Assembly Group A height and area restrictions.

**Height Area Limitations:**

For Assembly Groups A-2 and A-3, under Type II A Construction (which allows for the active or passive protection of all elements of the structure) there is a height maximum of 3 stories at 65’ with the maximum floor area of each floor to be 15,500 $ft^2$. Mercantile Group M is limited to 4 stories at 65’, with the maximum floor area to be 21,500 $ft^2$ and Business Group is limited to 5 stories at 65’ with the maximum floor area to be 37,500 ft2. Residential group R-2 is limited to 4 stories at 65’, with the maximum floor area to not exceed 24,000 $ft^2$.

Total height can be increased by 1 story, or 20’, with the installation of an automatic sprinkler system (504.2). An automatic sprinkler system can also increase the area of a building with more than one story by 200% (506.4.1)

**Applicable Floor Areas in Sq. Ft. per Occupant:**

| | |
|---|---|
| Pools: | 50 gross |
| | 15 gross (decks) |
| Residential: | 200 gross |
| Library: | 50 net (reading) |
| | 100 gross (stacks) |
| Locker Rooms: | 50 gross. |
| Assembly w/o Fixed Seating (Gallery + Lounge) | 7 net (chairs only) |
| | 5 net (standing space) |
| | 15 (tables and chairs) |
| Assembly with Fixed Seating (Lecture): | Depends of size of seat |
| Mechanical and Equipment Rooms: | 300 gross |

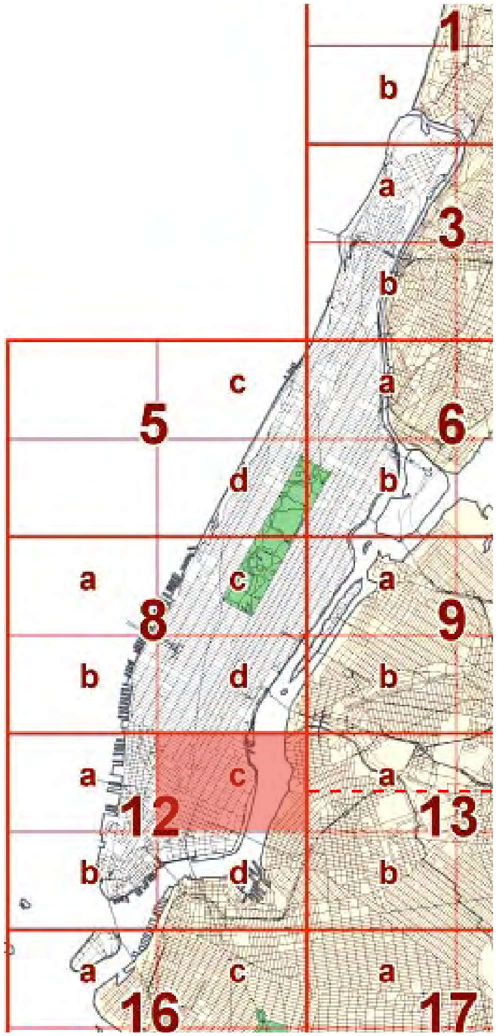
**Egress + Exit Travel Distance:**

As an overall rule, if a story has 500 person occupant load, there must be 2 exits to the outside per story.

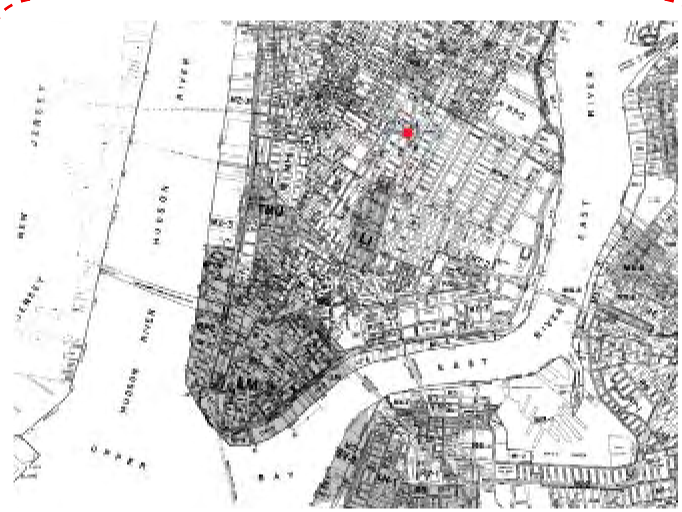
Under Mixed Use Occupancy, egress requirements will be applied respective to the occupancy of the space. Where multiple occupancies utilize portions of the same egress systems, the egress requirements should adhere to the more restrictive of the occupancies.

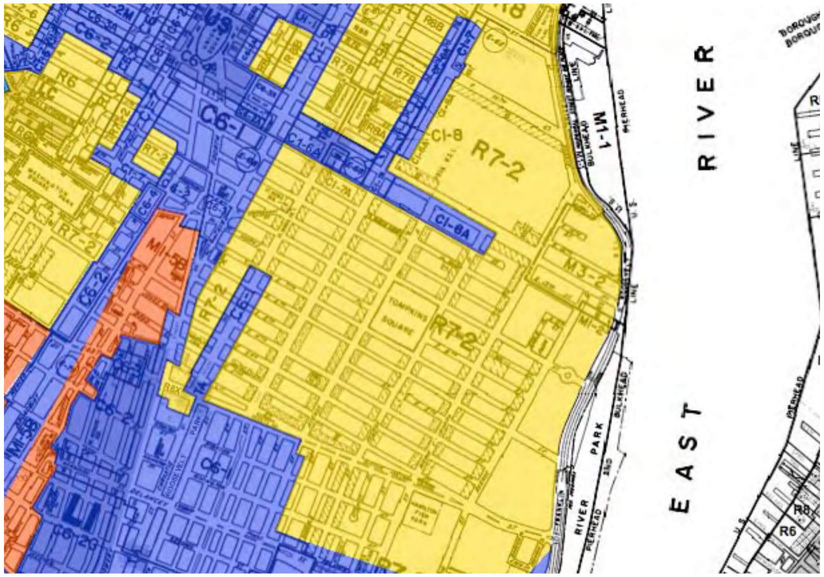
Under an Assembly Group A or Mercantile Group M occupancy, a space with one means of egress cannot exceed a 49 maximum occupant load. Thus, most rooms in this project, except for restrooms, service and storage must contain two means of egress.

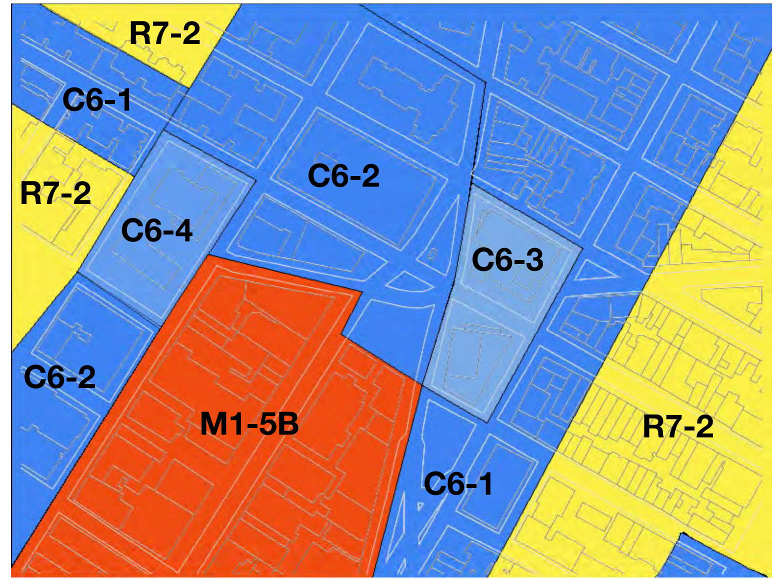
Group A, M, B and R occupancies can be at most 200’ from an exit if it is without a sprinkler system, and 250’ if it is with a sprinkler system.




NYC Zoning District 12C






Residential   Commercial   Manufacturing

*From the New York Zoning Resolution*

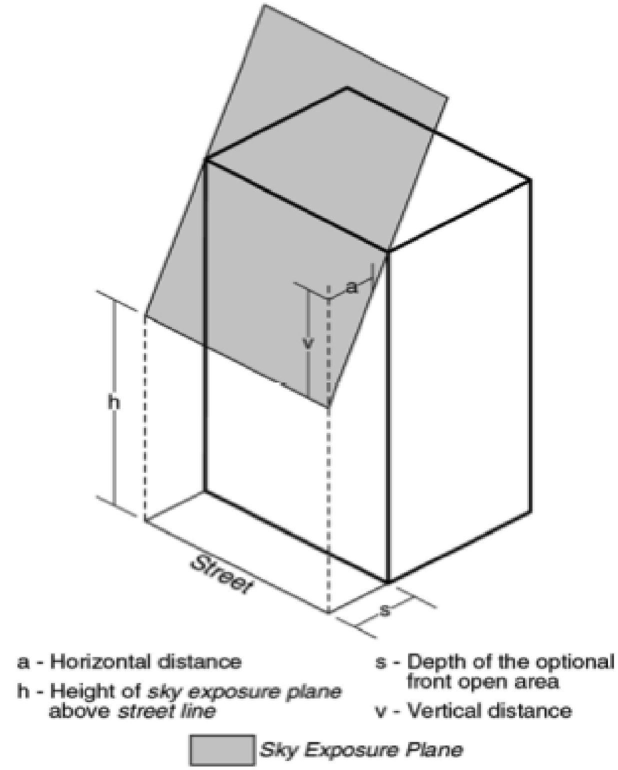
The selected site is zoned as C6-2, which indicates a general commercial district that is outside of a central business district.  This district, along with C-5 districts, is among the most developed of commercially zoned land. The suffix (in this case, a 2) indicates that they zoned area has an obligation to the local residential context, and that it is to maintain a “harmonious relationship” with the buildings in the area.

**Floor Area Ratio:**

New buildings in a C6 district must follow a floor ratio of 6.00.  This means that the total square feet of the building cannot exceed the square feet of the site multiplied times six.

Site Area x 6 = Maximum Building Area

Additional bonuses in square footage are granted if the new building has an arcade, public plaza, or front yard.




**Sky Exposure Plane:**

The sky exposure plane ensures that no building over a certain height obstructs sunlight from reaching street level.  This is achieved by pulling back the building façade in accordance with a ratio between vertical distance and the initial setback distance.

**Set Backs + Vertical Limitations:**

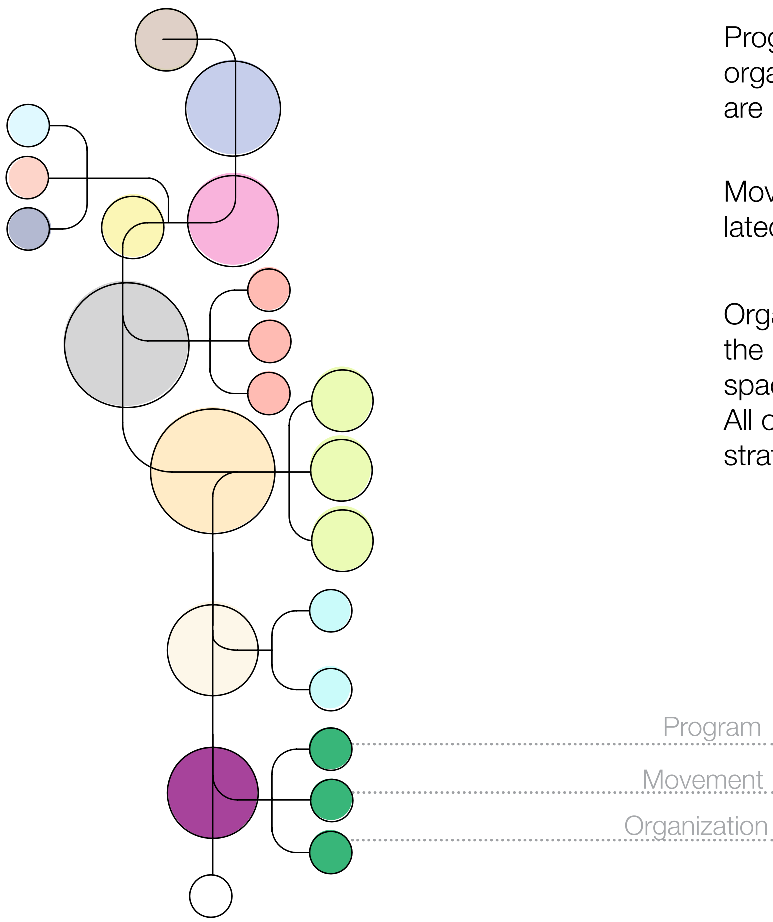
Set back dimensions are determined based on the width of street that is being faced. (Either narrow or wide, usually corresponding to major or minor streets.)  There are also predetermined height restrictions based on the district in which the building is located.  For a C-6 district:

Districts:  C1-7, C1-B, C1-9, C2-7, C2-8, C4-2F, C4-7, C6, C8-4

| Initial Set Backs Distance | | | | Narrow Street | | Wide Street | |
|---|---|---|---|---|---|---|---|
| Narrow Street | Wide Street | Max Height of Front Wall | Height Above the Street | Vert. Distance | Hor. Distance | Vert. Distance | Hor. Distance |
| 20’ | 15’ | 85’ or 6 Stories, or whichever is less. | 85’ | 2.7 | 1 | 5.6 | 1 |

R 2

# Precedent P




Program Precedents:  Exemplify the bathhouse typology and demonstrates how to organize the baths, how one moves through the bathing sequence, how systems are incorporated, etc.

Movement Precedents:  Exemplify different ways that movement can be manipulated through art and architecture.

Organization Precedents:  Exemplify different ways to organize movements.  While the precedents may not be organizing movements, and may be simply organizing space or objects, they demonstrate methods that could be applied to movement. All organizational precedents show nesting, layering and revealing organizational strategies.

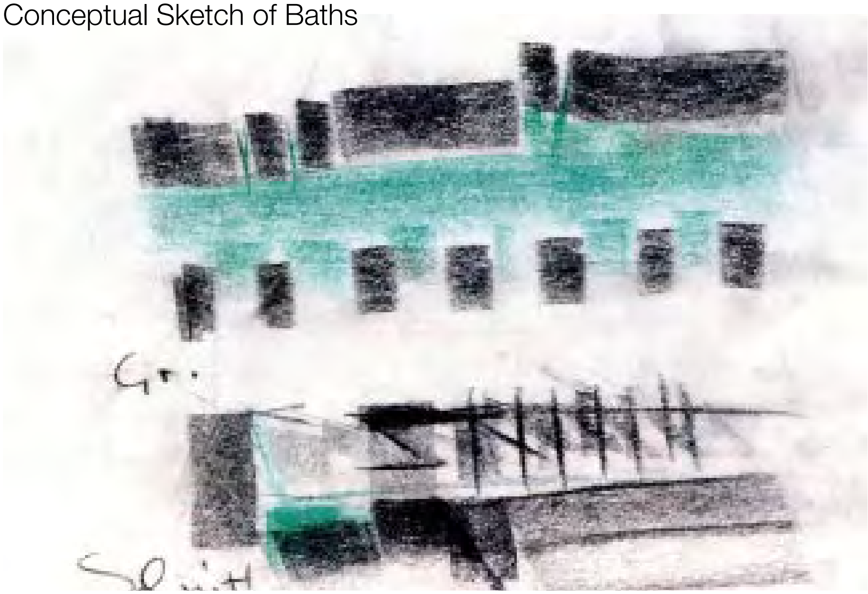
P

# Precedent P

## Peter Zumthor
## Thermal Vals, Switzerland 1

Main Facade

Conceptual Sketch of Baths



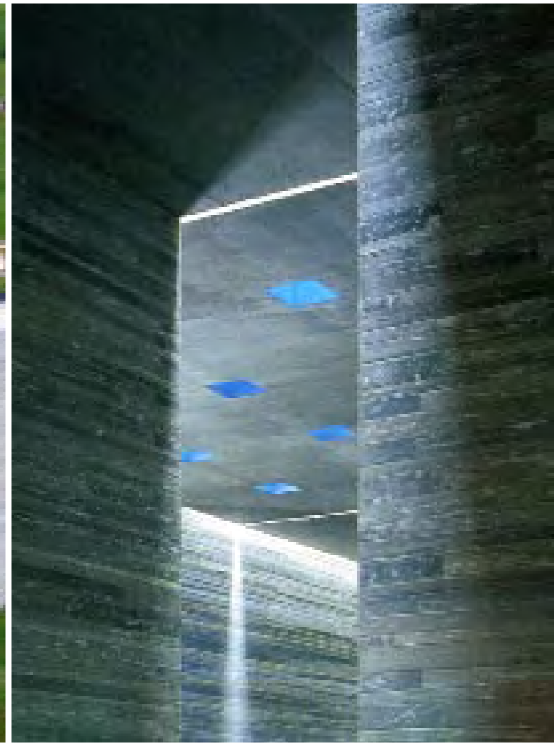
The Thermal Baths in Vals, Switzerland, have, like many classical baths, are based on a natural hot water spring. The site has evolved over time, from a hotel, to a simple bathing shack, to the building of Peter Zumthor's spa.

The project called for an assortment of bathing and therapy areas. Each bath is at a different temperature, like a typical Roman bath. The various baths, on the upper level, are arranged in concentric organization, allowing for the visitor to pick and chose which baths they would like to enter and in which order. The more extreme baths, the fire and cold bath, are situated in the center, to allow for easy transitions between the different temperatures if the visitor chooses the more rigorous Turkish method of bathing (moving from hot to cold baths and vice-versa to achieve an energizing and cleansing effect.)

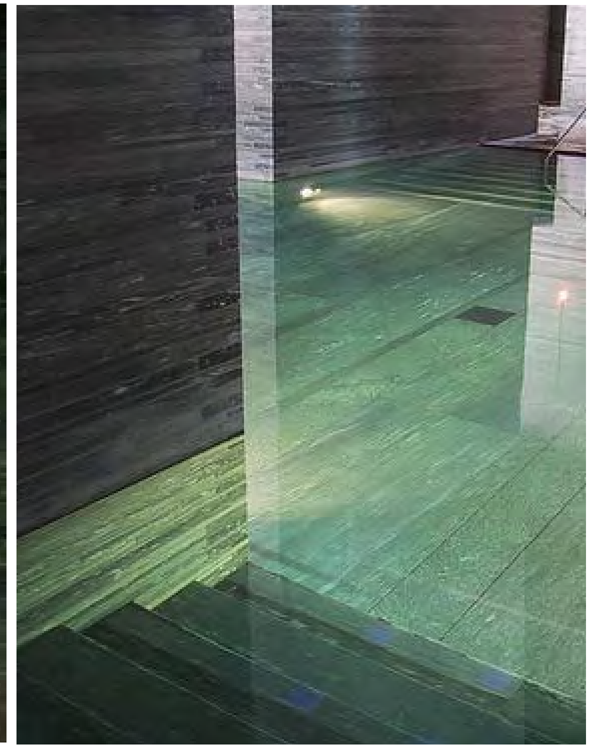
The entrance to the baths is nestled within the 'rock' of the slope on which the building is located. To enhance the feeling of 'being of the earth' Zumthor used a native stone and layered the material to build monolithic forms. The occupiable space feels as if it was the part of the mountain that have been carved out or washed away. As one moves deeper into the baths, one becomes more exposed to the site. At the southern end of the baths, the building is left open, without a roof and with large openings in the façade. This allows for the site to stream into the building. The outdoor temperature is a contributing factor to the temperature of the outdoor bath. If the outside is cold, the bath is kept warm, and vice versa. The boundaries between building and site are extremely clear in the interred portion of the building, while becoming eroded and blended at the perimeter.

P 1

Exposure to site at perimeter.

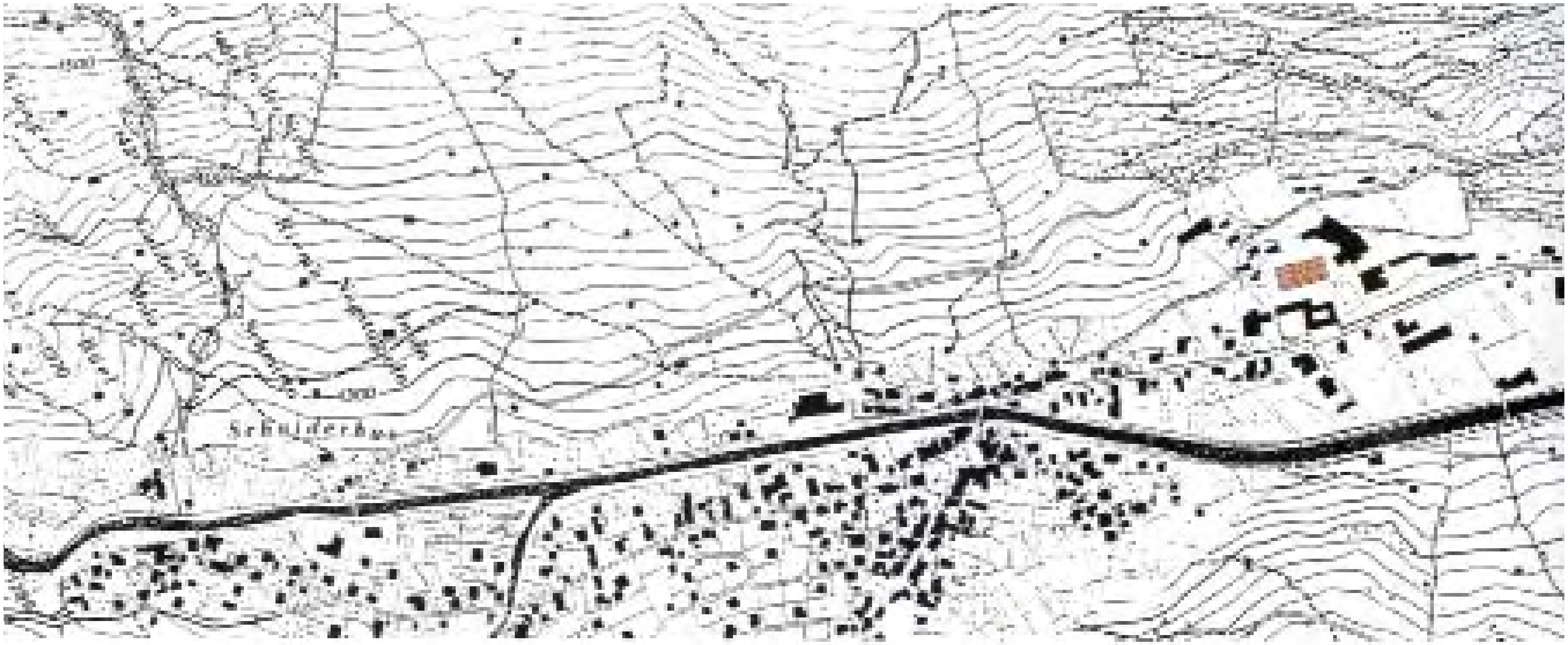


Exposure to site at center of baths.



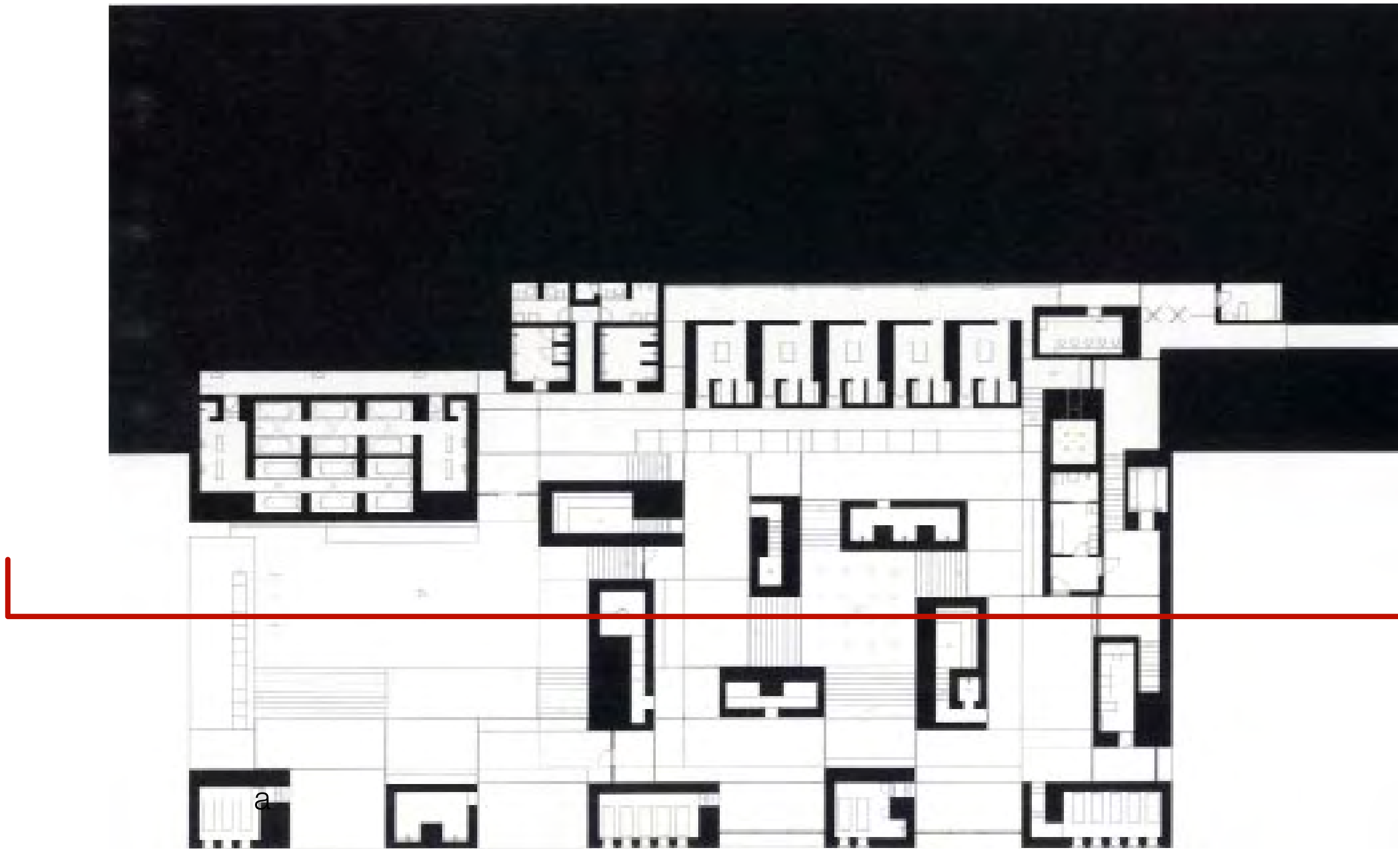
Main bath at center.

P 1



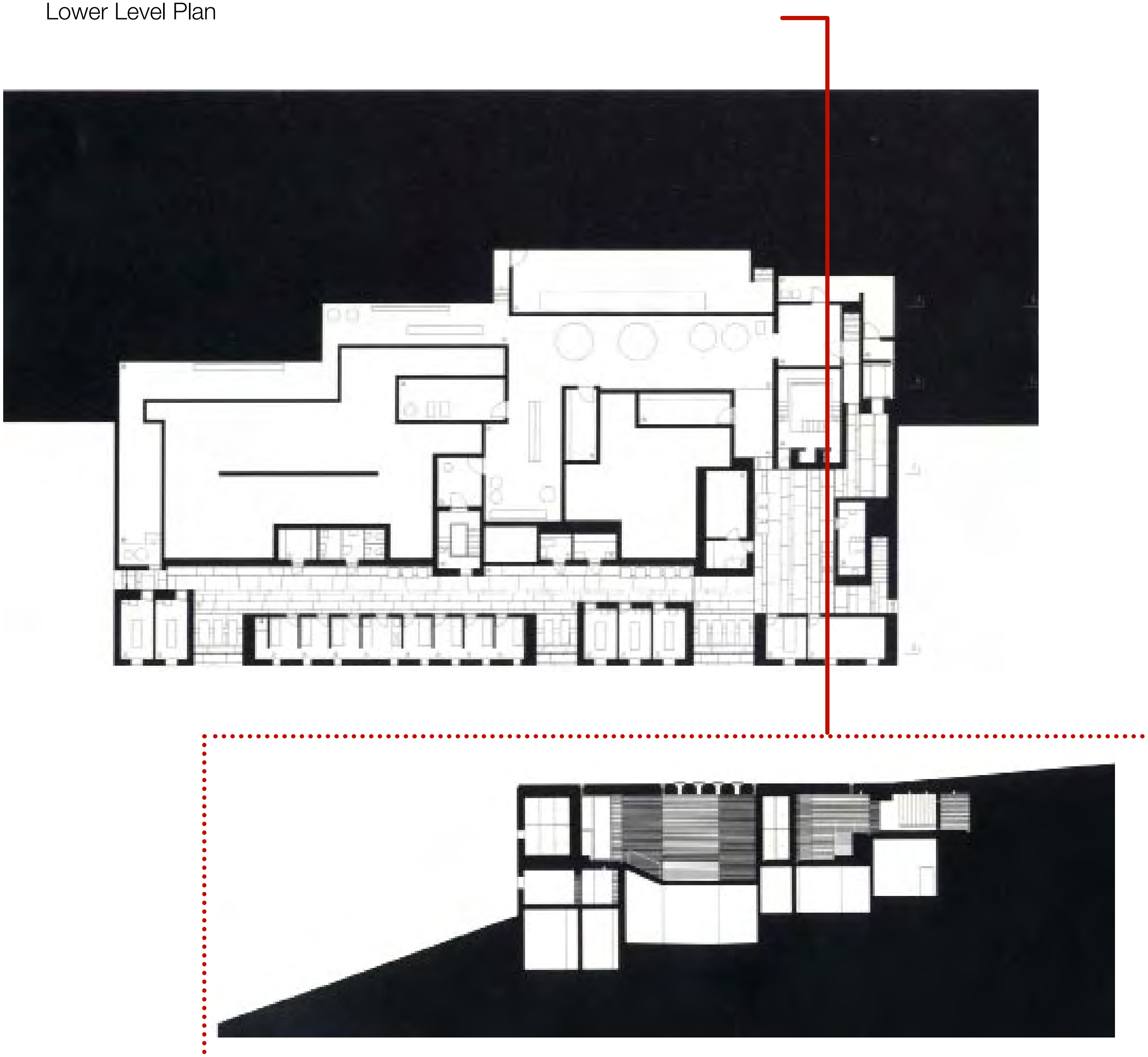
Site Plans

Upper Level lan



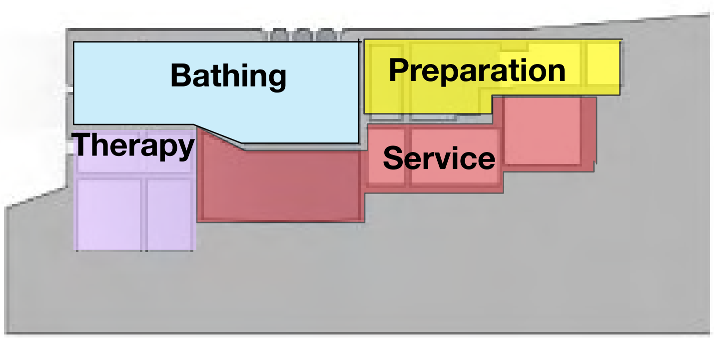
P 1

Lower Level Plan



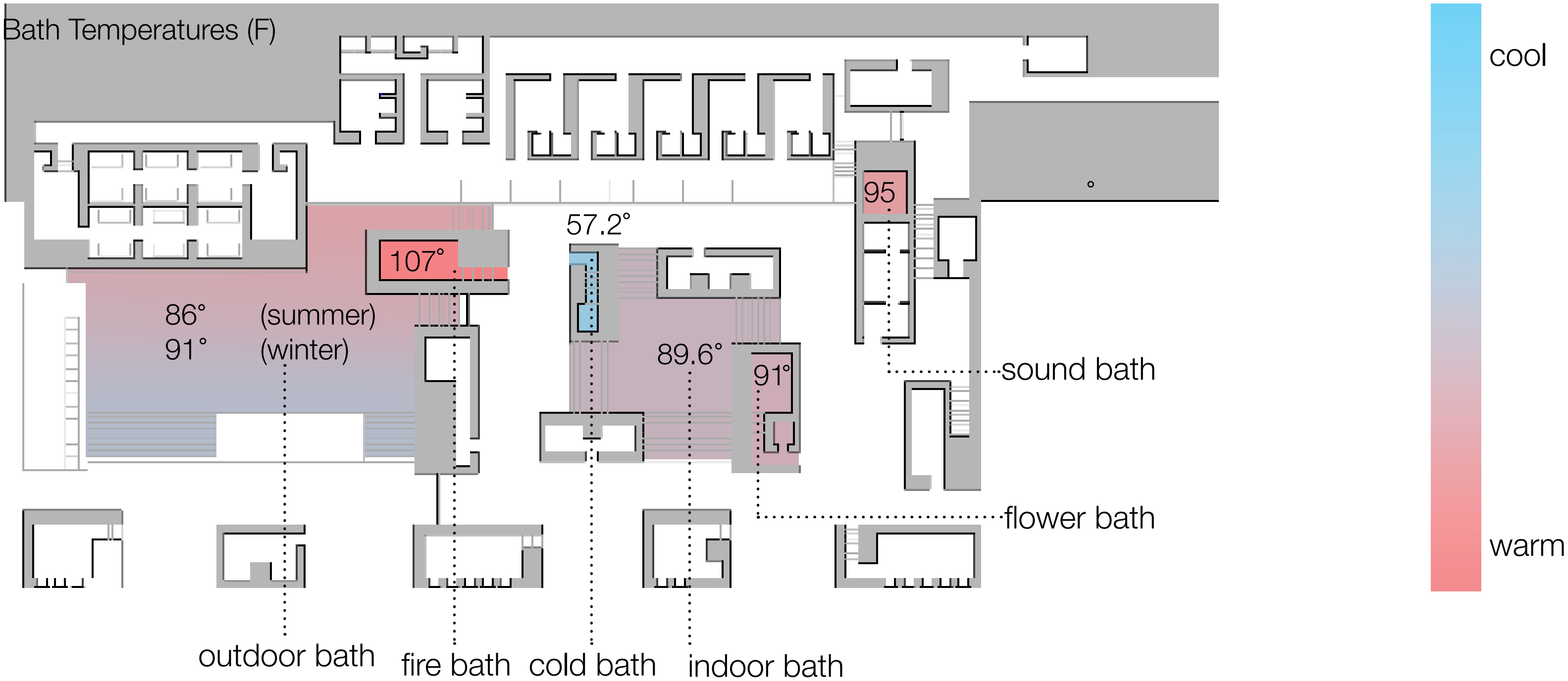
P 1

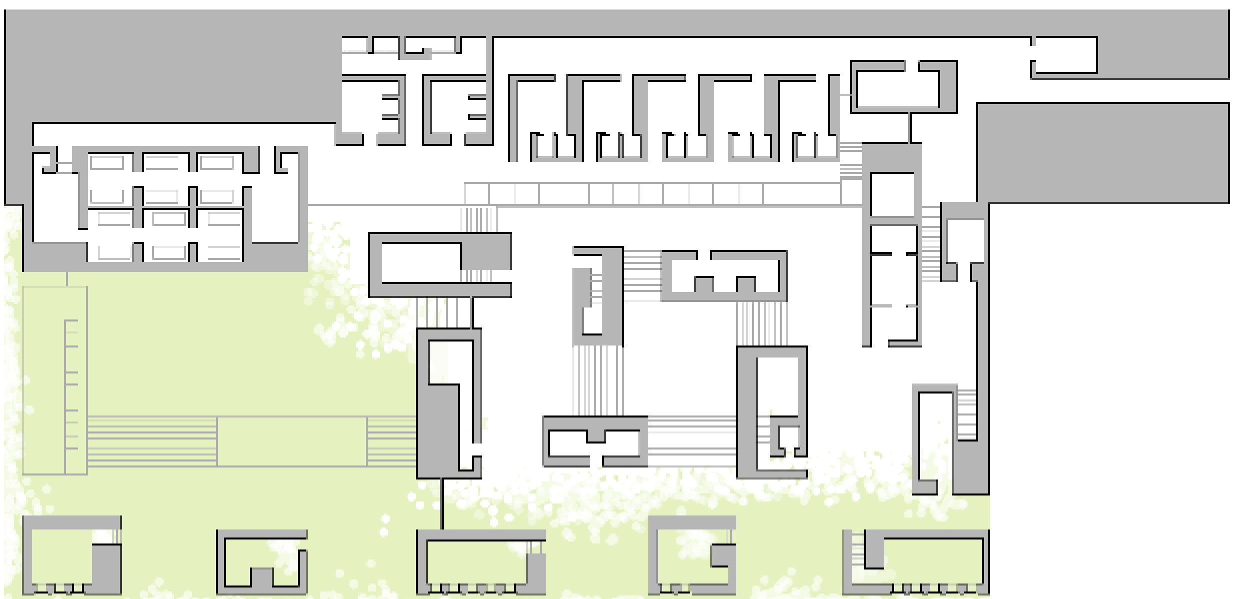

The main bathing level of the thermal baths consists of four primary programmatic pieces. Firstly, the visitor enters upon the preparation areas - a place to undress and to stow items before entering the baths. There are also areas to prepare for exit - private showers and a room where one can reapply their make-up. The next spaces are the baths, which vary in temperature and are dispersed throughout the space. Among the baths are rooms where the visitor can actively wash, get a drink of water or receive a massage. The showers here are more public and experiential than in the preparation area, and are meant for rinsing or even further relaxation. These spaces are used for activities that support the act of bathing. The last component of the program are support areas, which include a room for waiting bath attendants and a storage room.



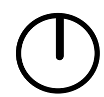

The main programmatic elements, bathing and therapy, are based on the site-exposed portion of the building, while the prepartion and service areas are on the interred portion near the entrance.

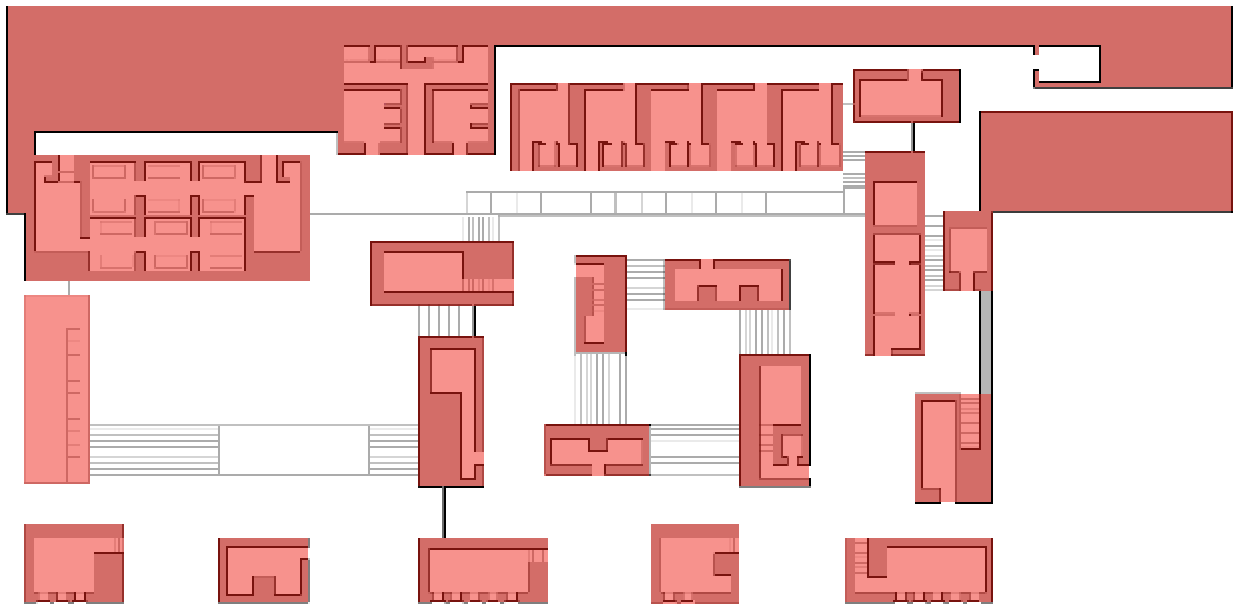
P 1

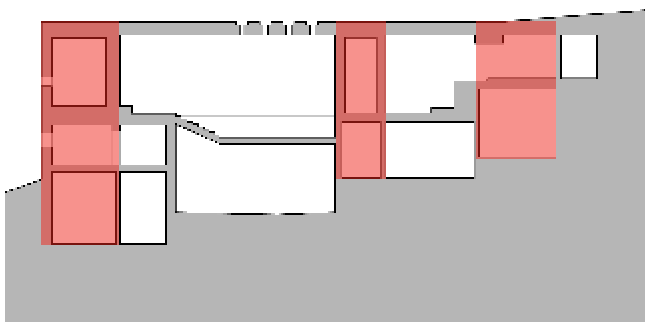


Portion of baths open and exposed to site.



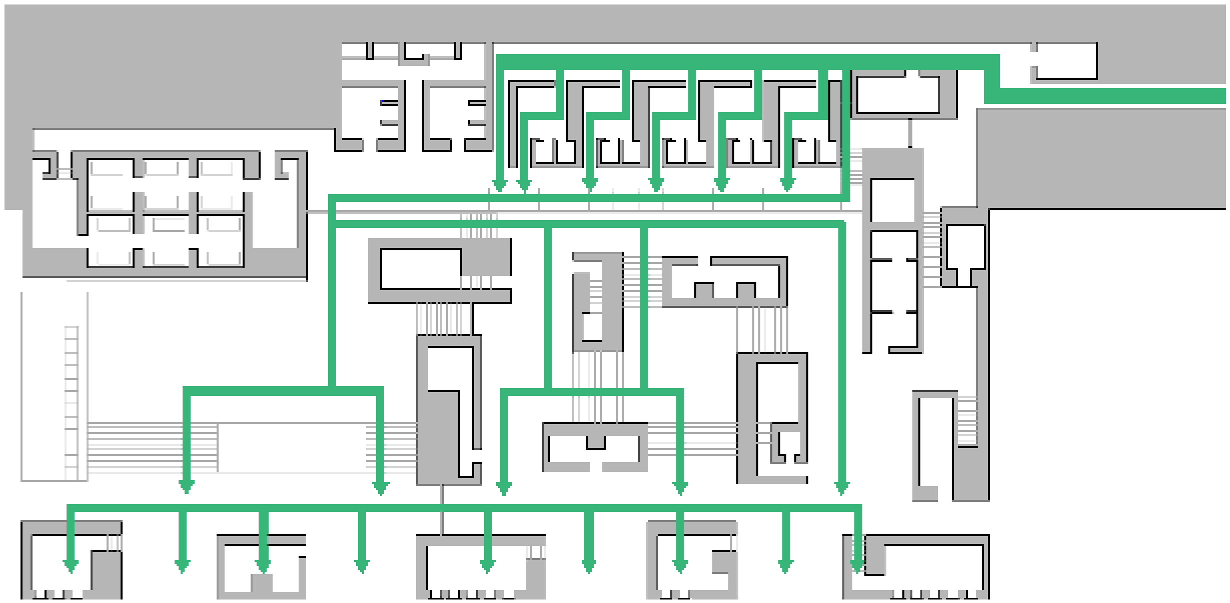




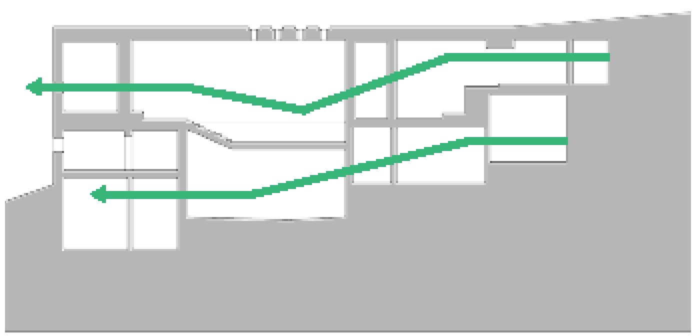
Structure

The baths are erected using load-bearing concrete. On the lower level, the concrete structure is homogeneous, and up above, the concrete separates into stone tables. This results in the occupiable stone ‘boxes’ that appear on the upper level, but appear indiscernible on the lower levels. These boxes are structural, as they transfer the loads down and into the lower levels. On this lower mostly-service based level, the boxes lose their obvious form, as they get absorbed into Zumthor’s monoloitic concrete structure.

P 1



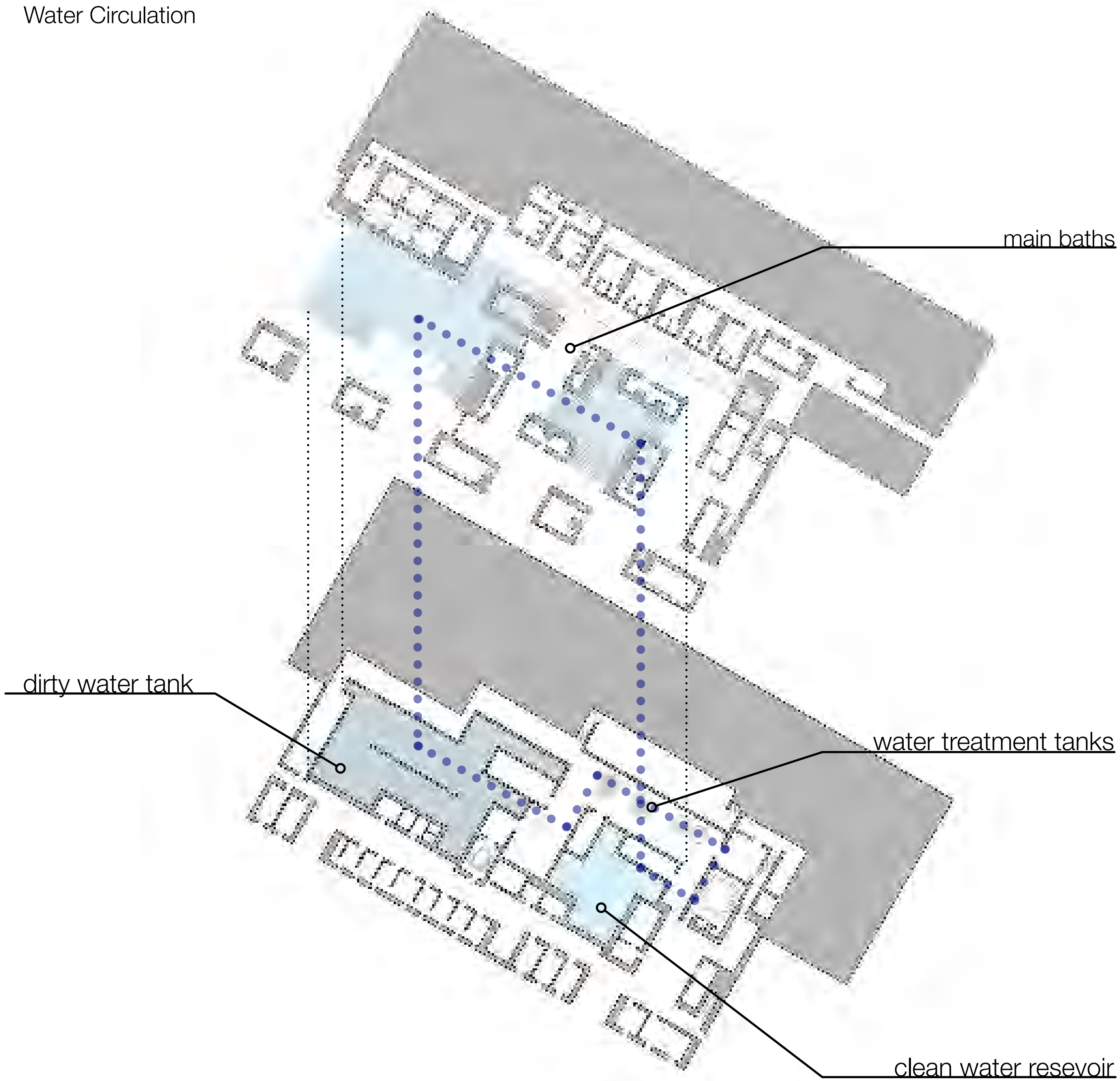
Circulation



One begins by entering in the denset area of the complex. The visitor proceeds through the space by moving from the preparation, to bathing, to resting and therapy places. As they move through, they get progressively closer to the outdoors, and the spaces become more lit and less dense.

P 1

Water Circulation




P 1

# Precedent P

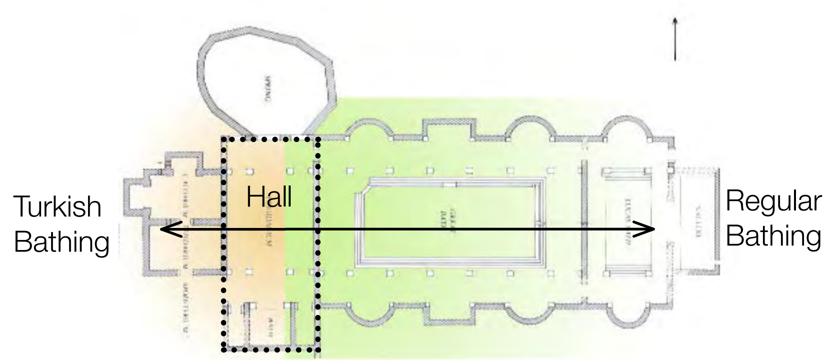
## Roman Baths, Bath, England 2

Great Bath

The Roman Baths in Bath, England embody a typical classical public bathhouse. These baths were a place of relaxation, conversation, cleansing and health. This particular bathhouse was situated around a hot spring as many baths, including the Thermal Vals, are currently.

These baths demonstrate a trend that has persisted into modern bathing practices. Visitors were given a choice as to the type of bath they would like to partake in. There was the general bathing, which involved a leisure swim in the Great Bath, the largest of all bathing halls, or a more rigorous Turkish bathing session. These different sets of baths were divided by a hall which served as an assembly space. This hall was considered a 'cold' room and could be lumped into the Turkish baths to the west. Over time, the bathing rituals changes, and the baths adapted. The Turkish portion added new baths, such as the cold plunge bath, to augment the sequence. The West Baths feature a more concentric organization that those of the linear main baths.

Cold Plunge Bath



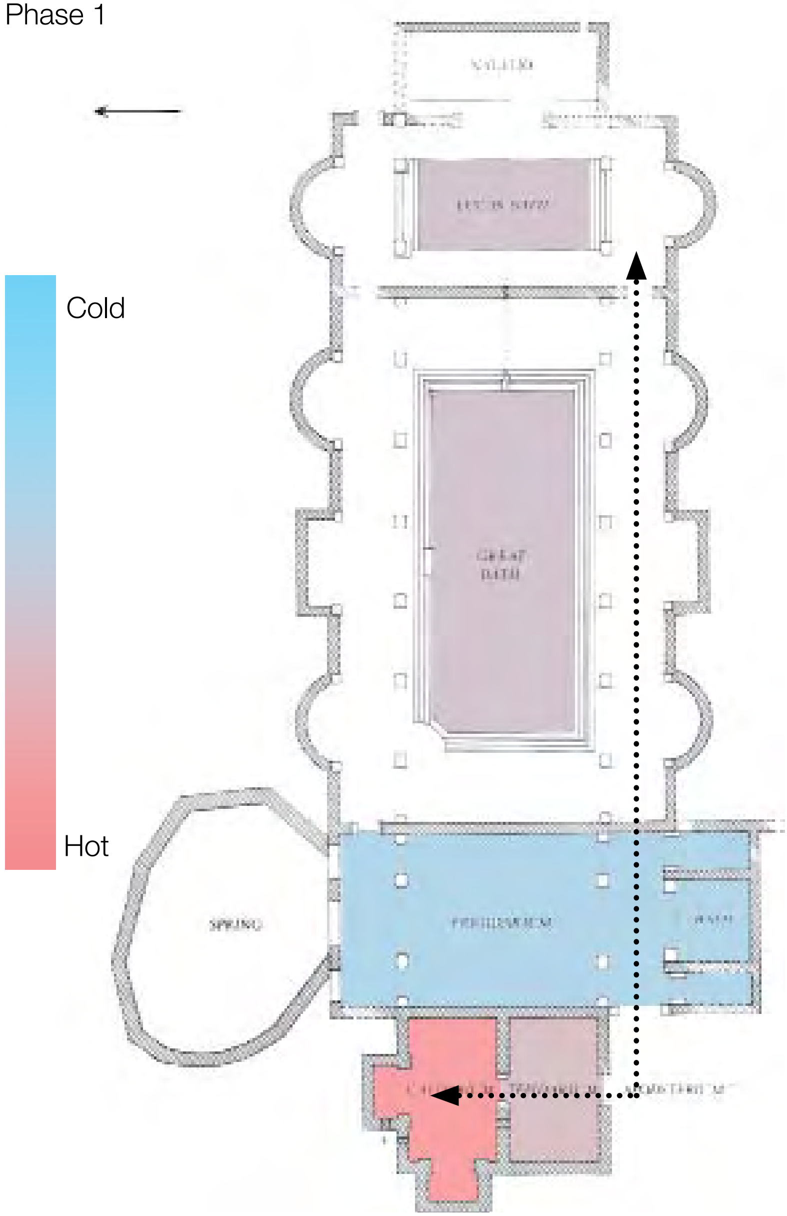

P 2

Site Plan

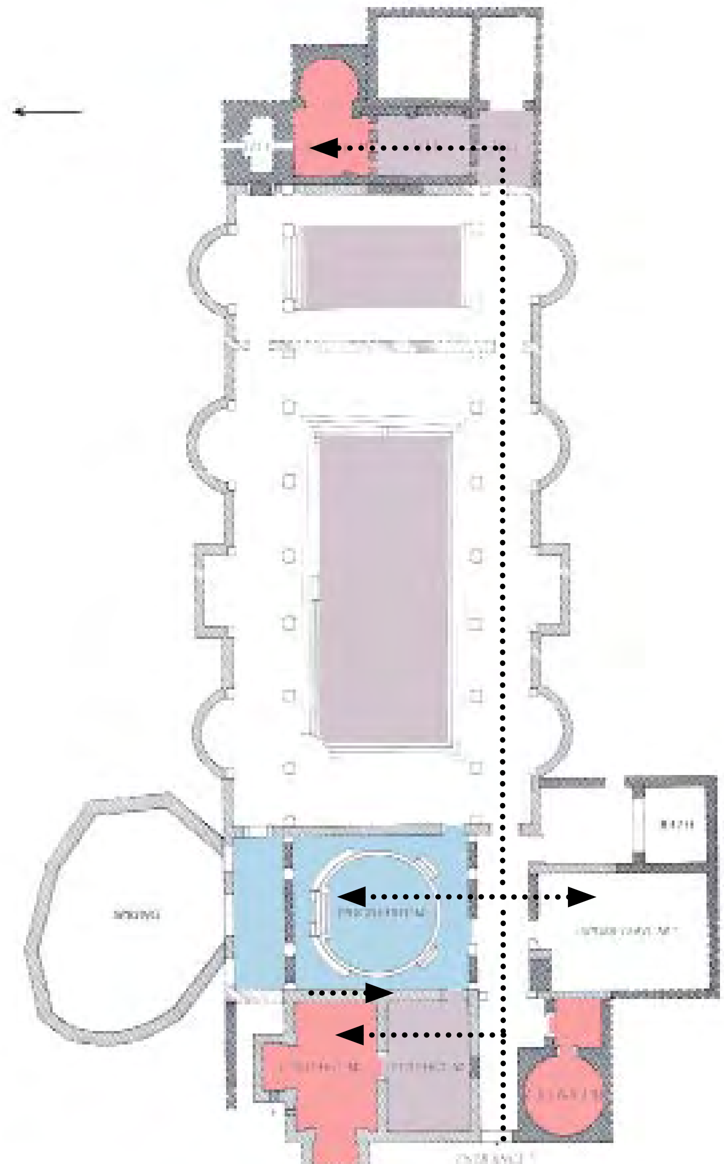
P 2

Bath Temperatures and Circulation

Phase 1

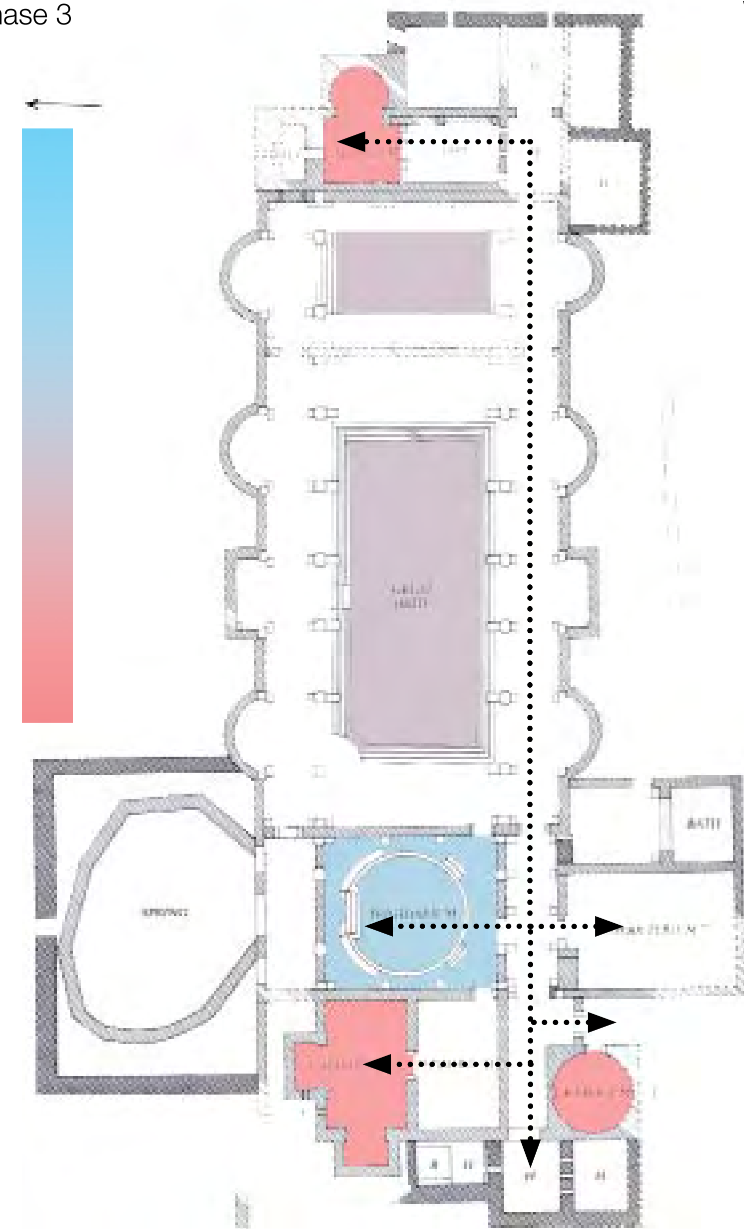



Phase 2

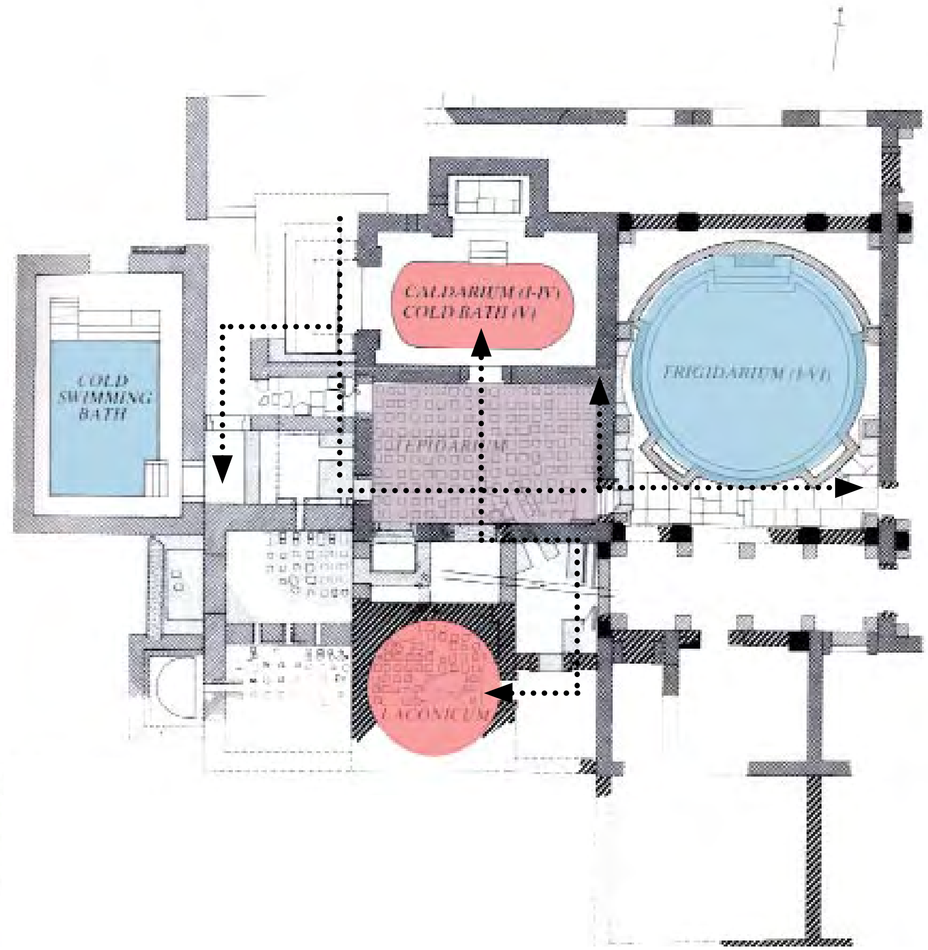


Bath Temperatures cont.

Phase 3



West Baths

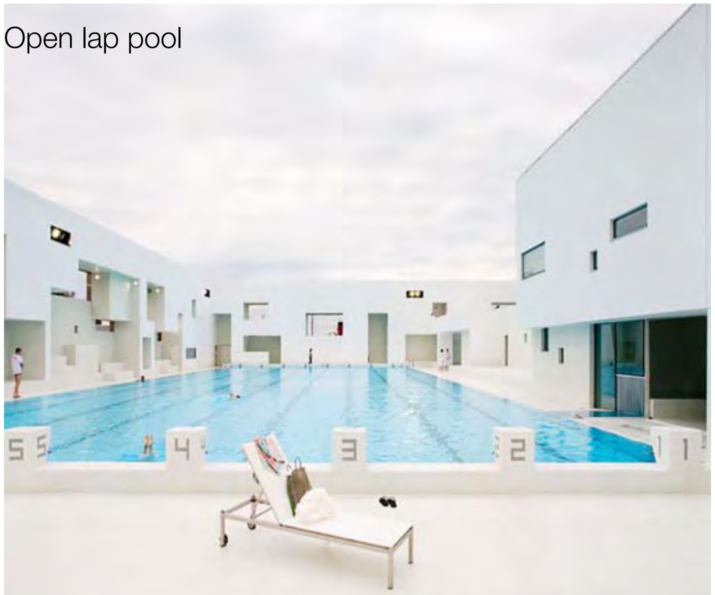



P 2

# Precedent R

## Jean Nouvel
## Les Bains des Docks
## Le Havre, Paris

3



Open lap pool

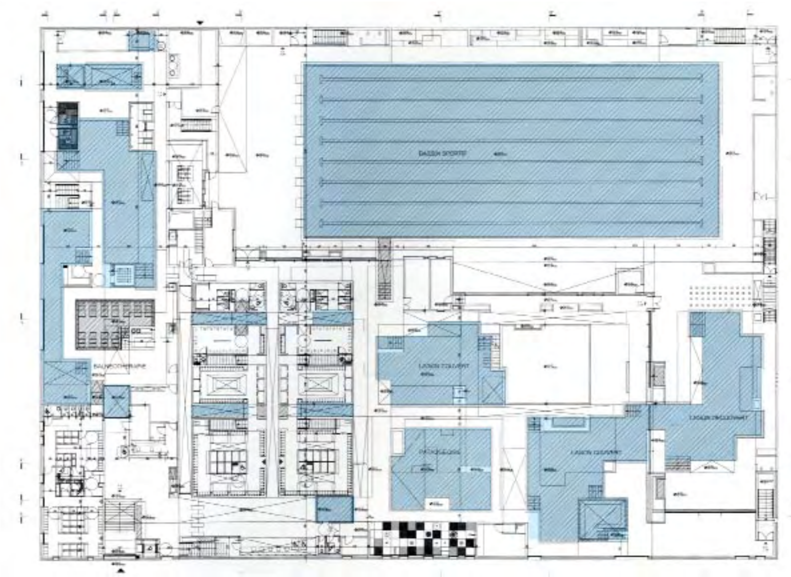
Covered bathing areas

Jean's Nouvel's Les Bains des Docks, in Le Havre, Paris, present a modern working public bath. The aesthetics and colors of the complex convey a still serenity, broken up by the movements of the water and the occupants. This project shows the various traits of water: it can be still as glass or filled with motion.

Nouvel also demonstrates how certain emotions can be conveyed through color and form, as in the children's bath. This small bath is a recessed area of explosive, jubilant color. In this way, Nouvel has conveyed a 'feel' of excitement, even when no one is in this space. The same idea can be applied to the creation of movement. Movement, like excitement, can be 'felt' even when it is not actually present – if the space and form is manipulated in a certain way.

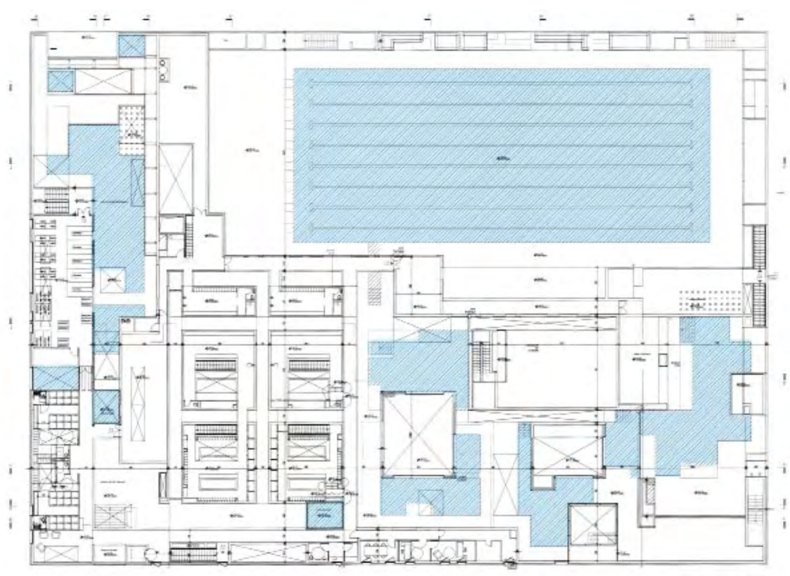
Children's bath

P 3



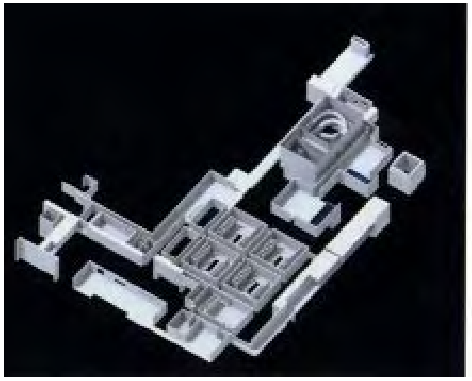
Upper Level Plan

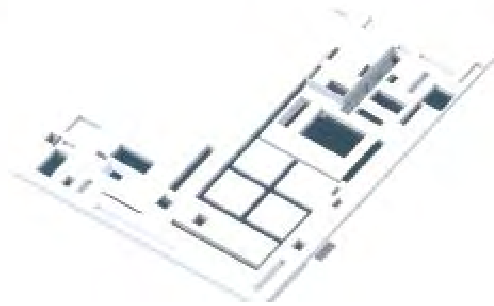
Like Zumthor’s baths, Nouvel organizes the baths in a free, non-rigid layout so bathers can bathe as they chose.



Lower Level Plan

P 3





The baths fuction as a stacked layers of pools, therapy areas and serice.

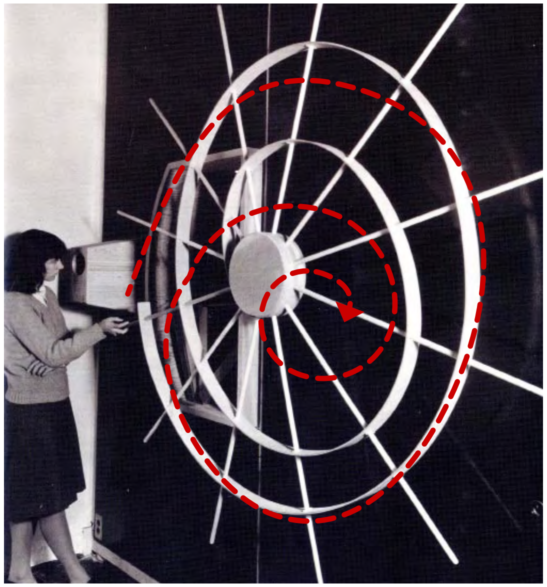
An early conception of the children's bathing area. The bold colors and images help to animate the space and make it appealing for the chosen audience.

P 3

# Precedent P

## Frederick Kiesler
## Art of this Century Gallery
## New York, New York 4

a) Abstract Gallery



b) Kinetic Gallery

c) Surrealist Gallery

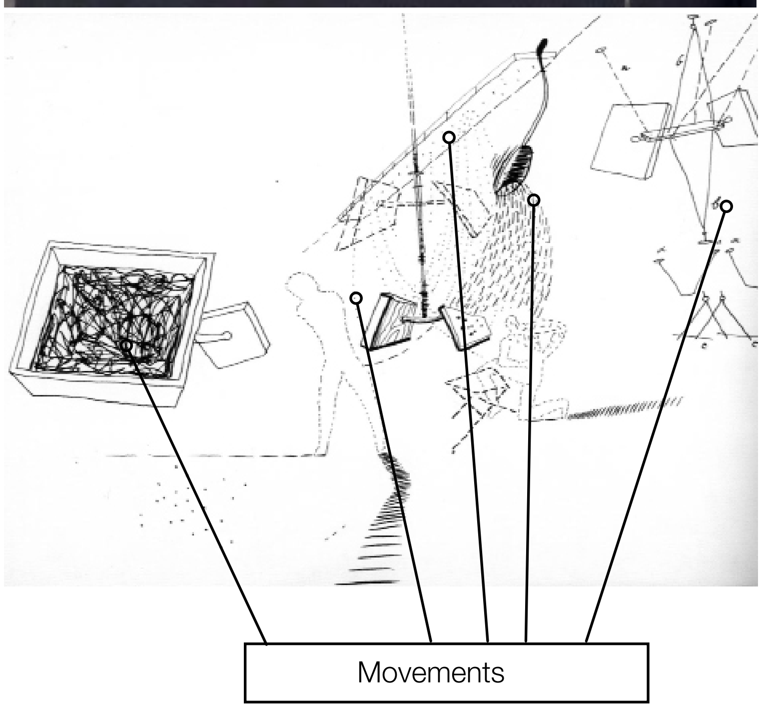
Frederick Kiesler developed new ways to manipulate movement in his Art of this Century Gallery, which was commissioned by the art-collecting mogul Peggy Guggenheim. The gallery displayed avante garde art by the likes of Jean Arp, Georges Braque, Giorgio de Chirico, Salvador Dalí, Max Ernst among others. Guggenheim and Kiesler decided that new art should be displayed and experienced in new ways. In order to create a novel experience, Kiesler incorporated movement into the gallery. The introduction of movement into the act of viewing art changed how the art was perceived and understood:

a) In the Abstract Gallery, art was suspended on cables that were strung between the ceiling and floor. While the art did not move, the way in which it was displayed to allow the viewer to move around the art in an unprecedented way. The art was now three dimensional, and had a front and back. This path of movement created a new perspective and understanding in viewing the art.

b) The Kinetic Gallery allowed for the viewer to control devices that controlled the viewing of art. A giant wheel could be turned or a lever could be pulled in order to bring images into a viewing box. In this gallery, the painting moved instead of the viewer. By letting viewer operate these devices, they were able to operate the speed in which they viewed the art. This method was simply different from the traditional viewing of art on a wall plane, and thus, the viewer felt a different response or relationship to the art that then would have under normal art-viewing conditions.

c) In the Surrealist Gallery, neither viewer nor painting is in motion, however, a certain type of movement is implied. The art is displayed on a curving, rather than flat, wall plane. The art's flatness is brought to the forefront, and it appears to levitate off the wall plane. The curve alludes to a motion and action and because it is once again not the norm, it changes how the art is typically understood.

Pulling a lever to view a painting



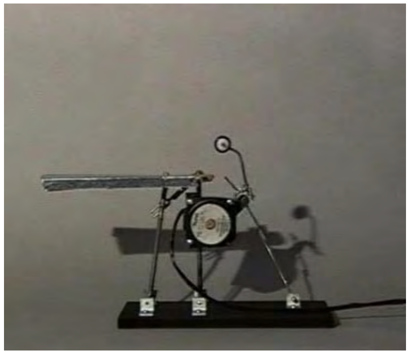
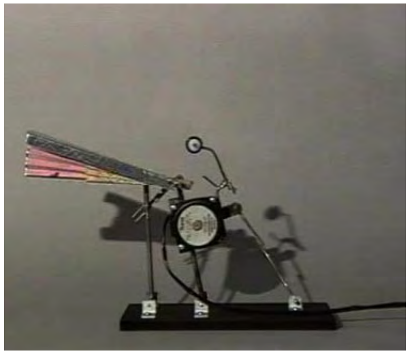

Kiesler's designed movements

P 4

# Precedent P

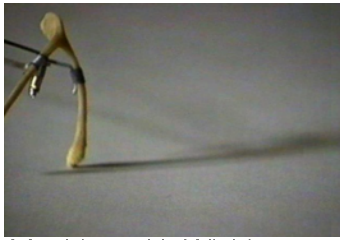
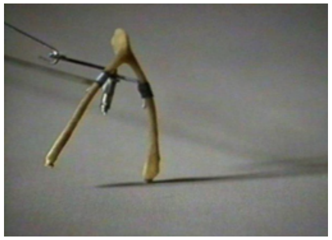
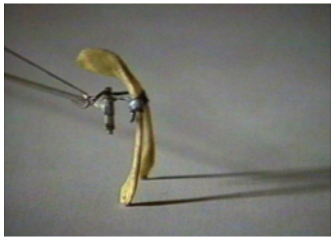
## Arthur Ganson *The Machines* 5

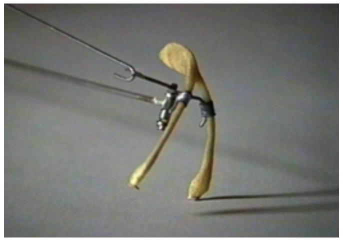
Arthur Ganson creates art that moves. Generally, there are two components, or layers, to his moving art. There is the machine, which looks like some kind of early 20th century proto-type, with gears, pulleys and insect like arms. Then there is the typically inanimate object that he is animating. The machine gives life to the object. The object's movement is unexpected, and a surprise - this is especially true in the video recordings of the pieces. The stage is set by first showing the machine; either the object hasn't been moved yet, or the camera does not show it moving at first. Then, as one acclimates to the machine, the moving object is introduced. Ganson's works create feelings of surprise and pleasure: how odd, but how cute, to see a wishbone walking around on its two 'legs.' Ganson experiments with the element of surprise through the layering of different moving parts.

*Machine with Chinese Fan*

In this piece, the machine slowly lurches forward and eventually flips out the fan. This piece plays on the originally-intended movements of the fan - instead of the fan being fluttered by a human hand, it is snapped open by the machine. The movement of the object is not so strange, as the way and method in which it is being moved.



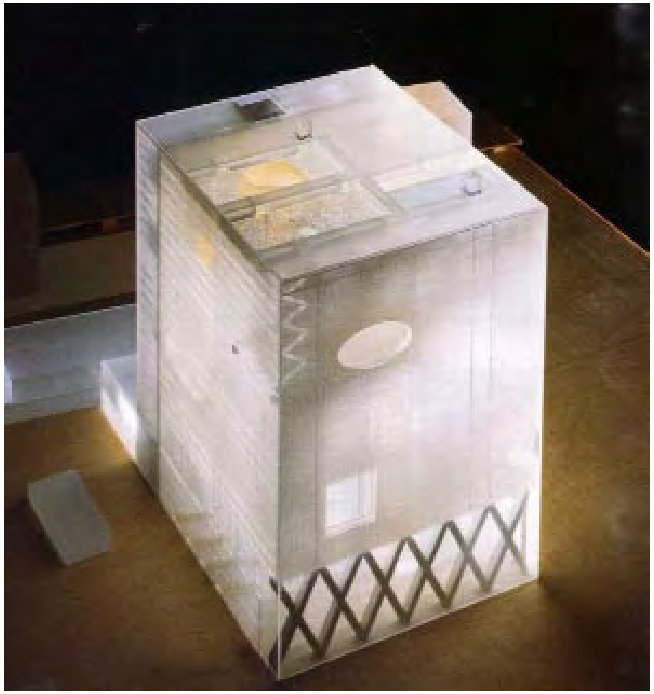
*Machine with Wishbone*

P 5

This piece shows a machine, with two extended metal arms, moving a wishbone. The wishbone looks as if a child were playing with it, making it waddle around on its two 'legs'. There is some irony in this piece - bone, which was once living and within a moving animal, is moving once more.

# Precedent P

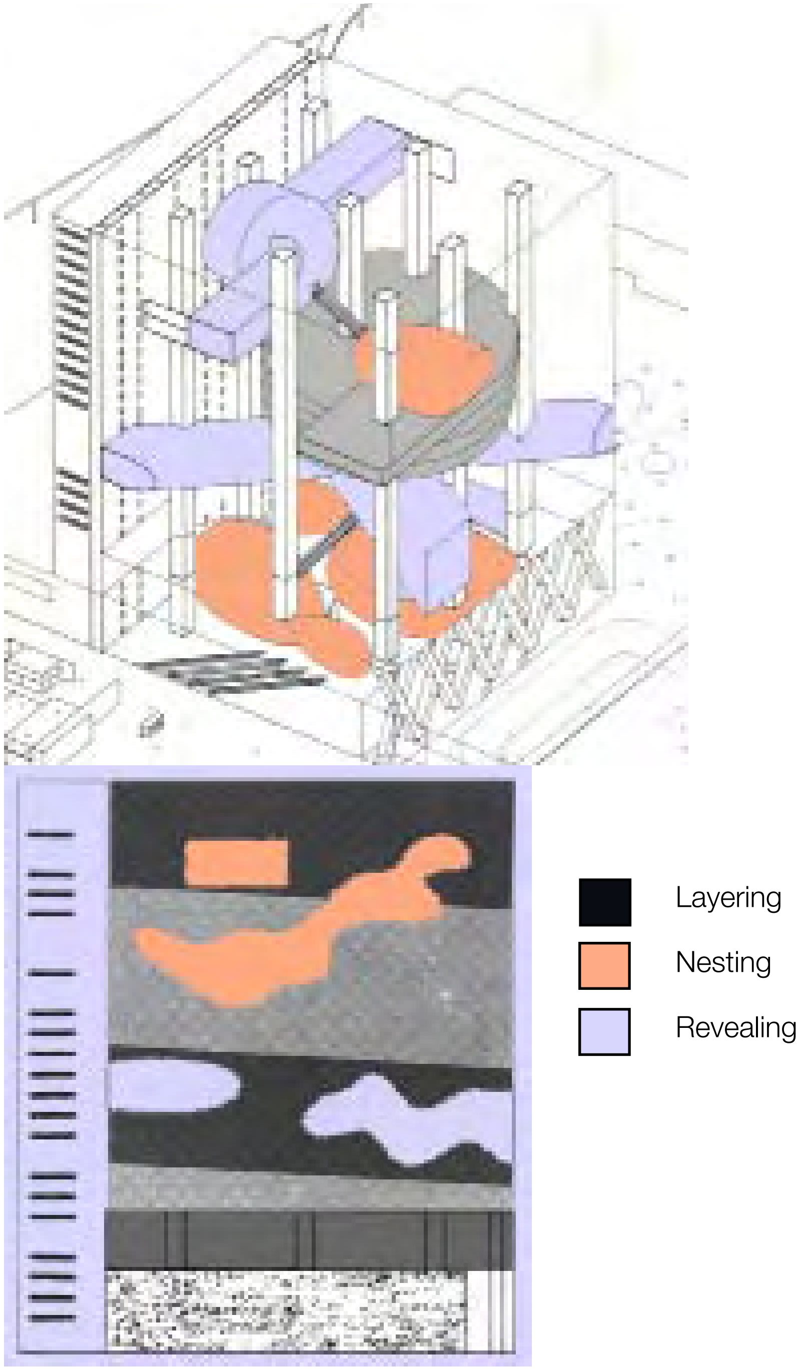
## OMA / Rem Koolhaas
## Bibliothèque Nationale
## Paris, France 6



Rem Koolhaas' Très Grande Biblio-thèque was a competition submission to the French Government in 1989. The project called for a 'very big library', one to accommodate many smaller libraries, including a library for 'moving images, recent acquisitions, references, catalogues and scientific research.' The project was derived from this large volume of information that would be contained within the confines of the building. The various public spaces, such as auditoria, lecture halls, etc., would be carved out of this solid 'block' of information. The form thus appears as a enormous cube that has been whittled out and carved away to expose public voids.

It is the organization of these voids that illustrate how one can layer, reveal and nest within a building. While this particular project's goal was not to create movement through these techniques, it still serves as an illustration as to how this can be accomplished through form.

P 6




P 6

Layering:

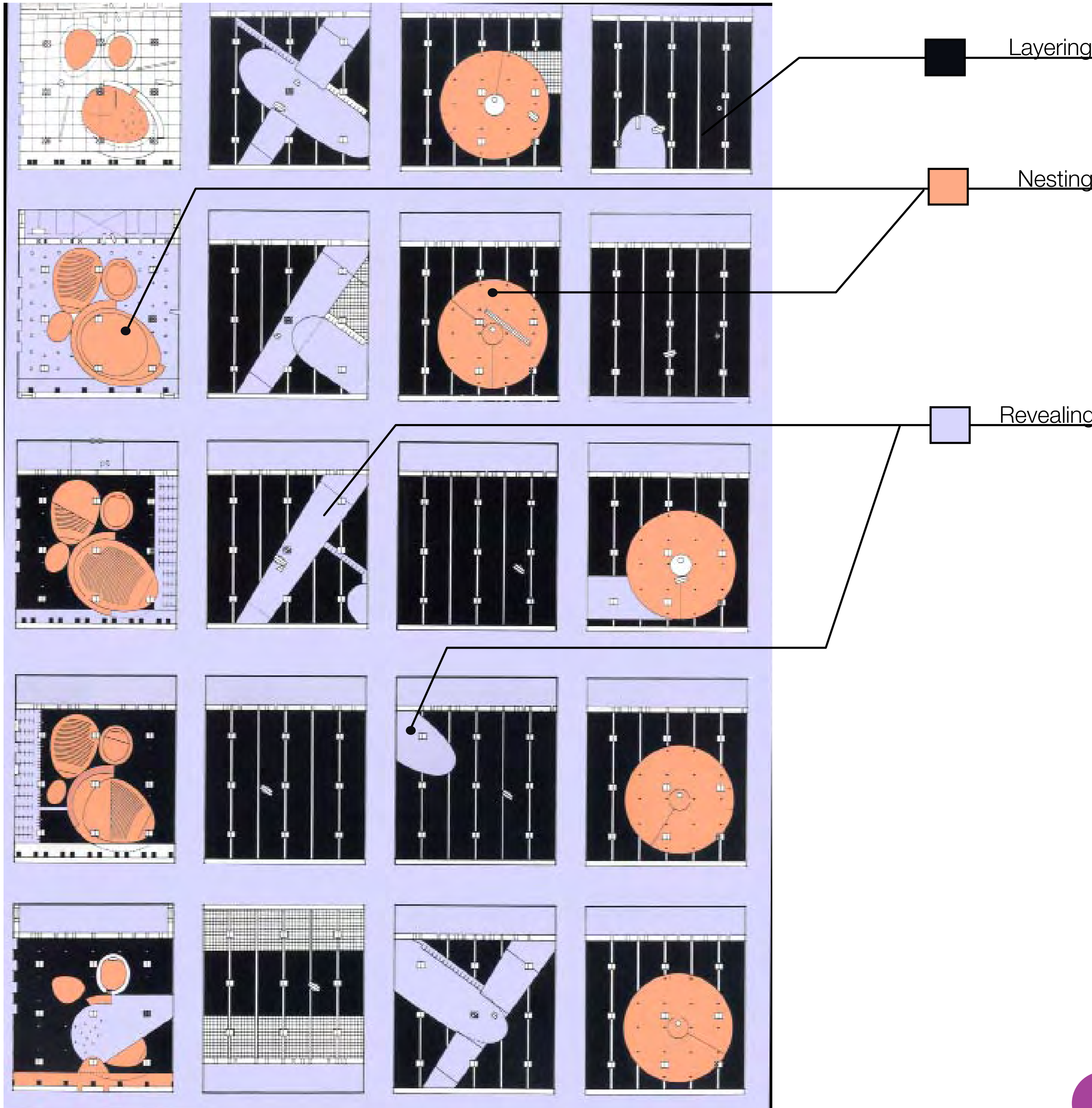
Layering occurs when Koolhaas stacks program. In the plans, this occurs through the simple stacking of floors that contain the information solid; it is the most obvious way to layer form. Layers can be organized horizontally or vertically, and can be experienced in two ways. For horizontal layers, side to side, and for vertical layers, bottom-top or top-bottom. An elevator or stair allows for one to experience a vertical layer, and a moving sidewalk or people mover allows for one to experience a horizontal layer. A layer will not be read as a layer if it is entered from a direction that is not intended (entering a vertical layering system from the side, for example.)

Nesting:

Nesting occurs when the Bibliothèque's voids become wrapped around by the solid layers. When this occurs, every portion of the void comes in contact with the solid, and there is a hierarchy of volumes or space. In layers, the hierarchy depends on which layer is entered first, and even then, it may not be a hierarchy but merely a sequence or order. When something is nested, as in the voids within the solid, the relationship is clearly defined. The void is IN the solid, and the solid is AROUND the void.

Revealing:

Revealing occurs in the library whenever the voids come in contact with the perimeter of the building. When this happens, a portion of the void is exposed to the outside world. This is evident in views of the façade (volumes that break from the solid become apparent and obvious from the exterior). People could look up and into these voids and gain an understanding of what's going on in there. The inside of the building is revealed to the outside and vice versa. Unlike nesting, this relationship can change readily. One element, the outside world, is much more temperamental and changing than the highly controlled interior of the building. Thus, when this world changes, so will the building that is connected through this reveals change as well.




P 6

# Precedent P

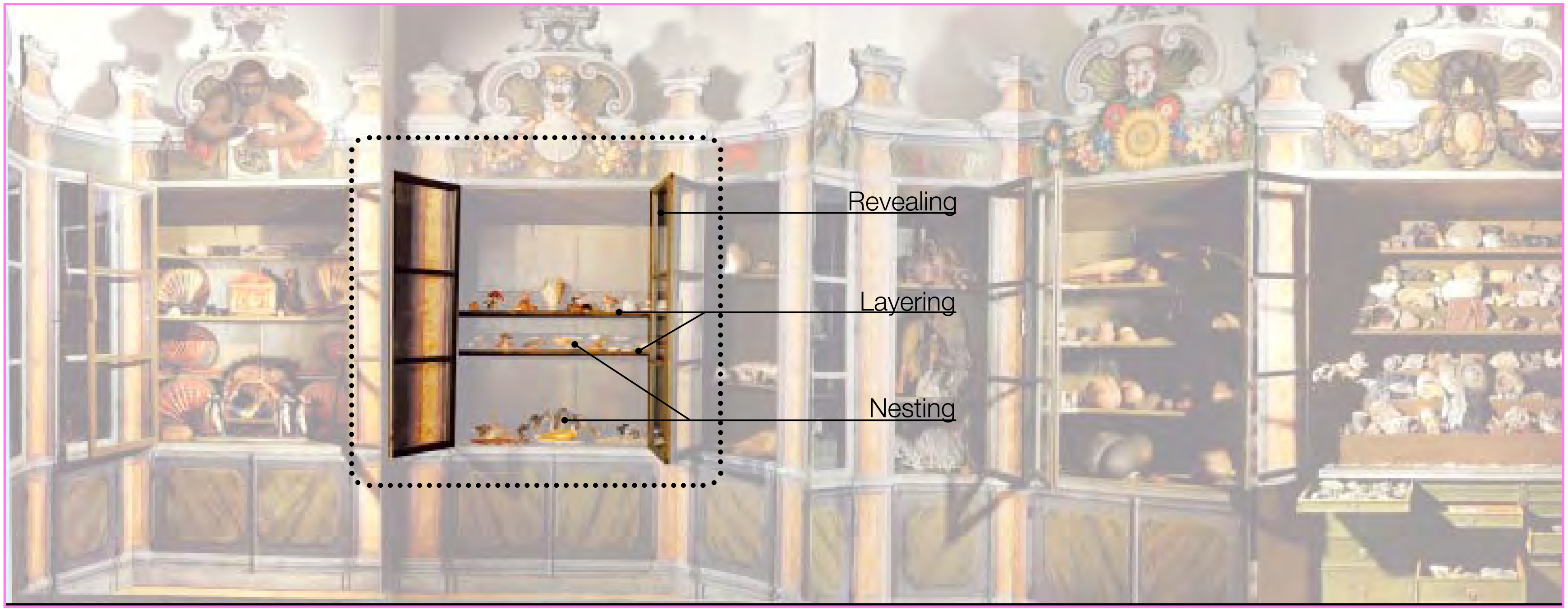
## Cabinets of Curiosity 7

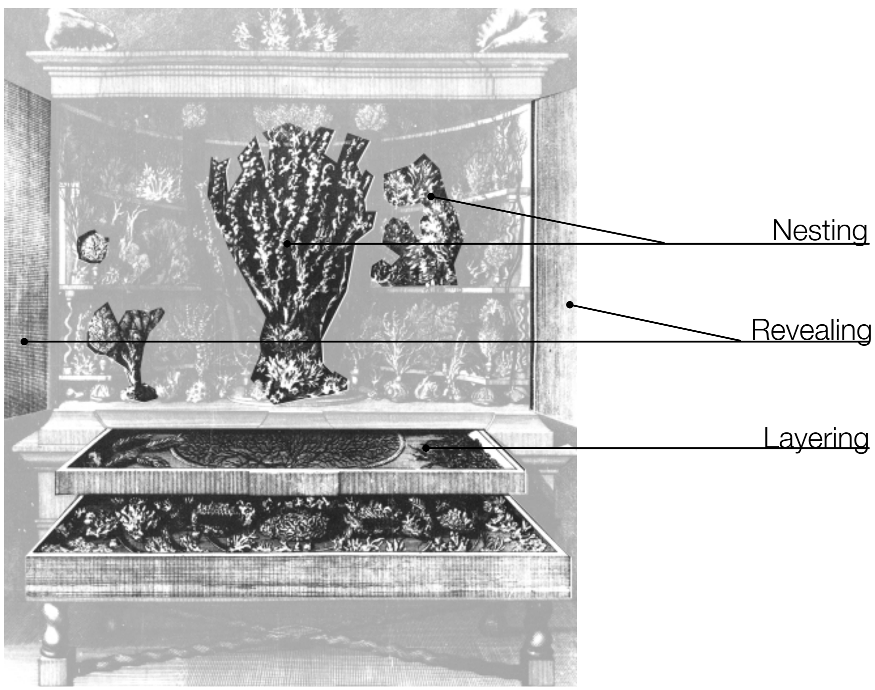

Cabinets of Curiosity were created during the Renaissance as a place to store precious or foreign items. In a way, they were the proto-type to the modern museum. A cabinet of curiosity was something like a large jewelry box. The outside was adorned with precious items and were carved and painted with ornate designs. The cabinets were then opened to reveal shelves and drawers that contained more precious items. These items ranged from historic, scientific, to even small miniature works of art.

The cabinets had a certain level of mystery to them – hence being called cabinets of 'curiosity'. One wanted to know what was inside the cabinet; one to want to open, to pull, or to explore. Curiosity was initially fulfilled by the opening of doors. This act revealed the treasures within. Further treasures could be found by pulling out drawers: these items were nested within the cabinet. The remaining items were stacked on shelves, or layered.

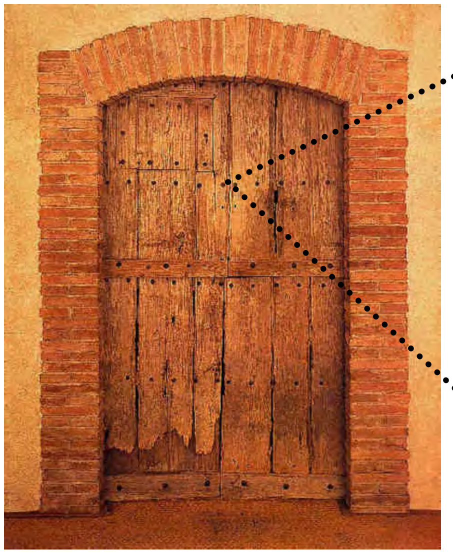
The revealing, layering, and nesting of the objects were crucial in creating the overall experience of the cabinet of curiosity. These organizational methods created a narrative or sequence crucial to the experiences created in the cabinets.

A Closed Cabinet of Curiosity




Revealing, Nesting and Layering in Cabinets of Curiosity



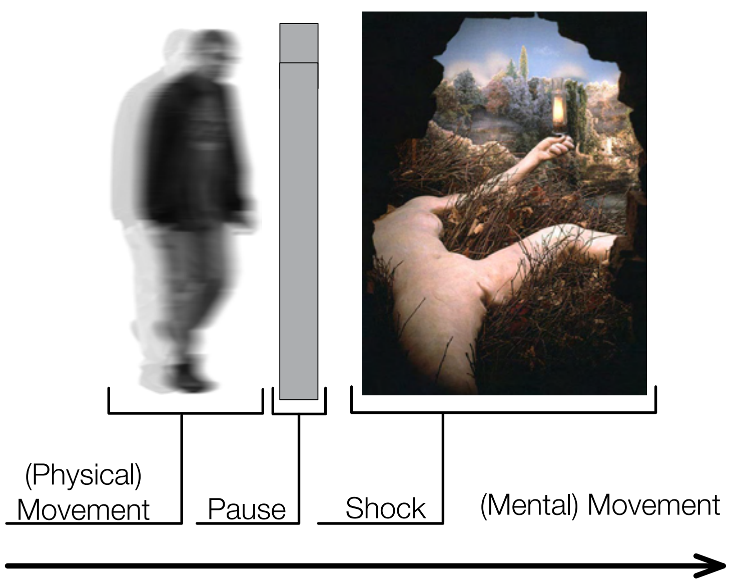
*Etant Donnés* was Marcel Duchamp's final piece before his death, and, do to the graphic nature of its content, was thought to be one of his most shocking works. The work is installed in its own room at the Philadelphia Museum of Art. Within a wall in this room, there is a door created by Duchamp. On the door, there are two eyeholes. The viewer steps up to the door, and does not open it, but puts their eyes against the holes and peers inside. Behind the door is a painting. It is of a nude woman, legs spread towards the viewer, while she reclines on a landscape.

The piece contains both physical, mental, and narrative movement types, all of which take place a various speeds. There is the slow, physical approach to the door. The people in the museum room may even be milling around slowly as they wait their turn. Then, the movement slows as the viewer positions their eyes next to the two viewing holes that are carved into the door. Then there is a moment of silence and stillness. The body stills as the eyes adjust to the light behind the door, and the brain pauses, as it has not yet taken in what lay beyond. Then, the mind sees the painting. It is unexpected, rude, and risqué. The body may jolt or move with the mind's understanding. In viewing Duchamp's piece, the viewer has engaged in a sequence or narrative of stitched together episodes and movements.

The methods of revealing, nesting and layering all work to manipulate movements that give this art its particular effect. In layering, the various participants of the narrative - the viewer, the door and the painting are layered against one another. The fact that the still element, the door, is placed between the more active elements, the viewer and painting, highlight and exaggerate the movements felt in the viewer and created by the painting by comparison. If the viewer could directly access and approach the art, like in a typical museum, the surprise and shock would not exist. The sandwiching of a pause between these two elements heightens their effects.



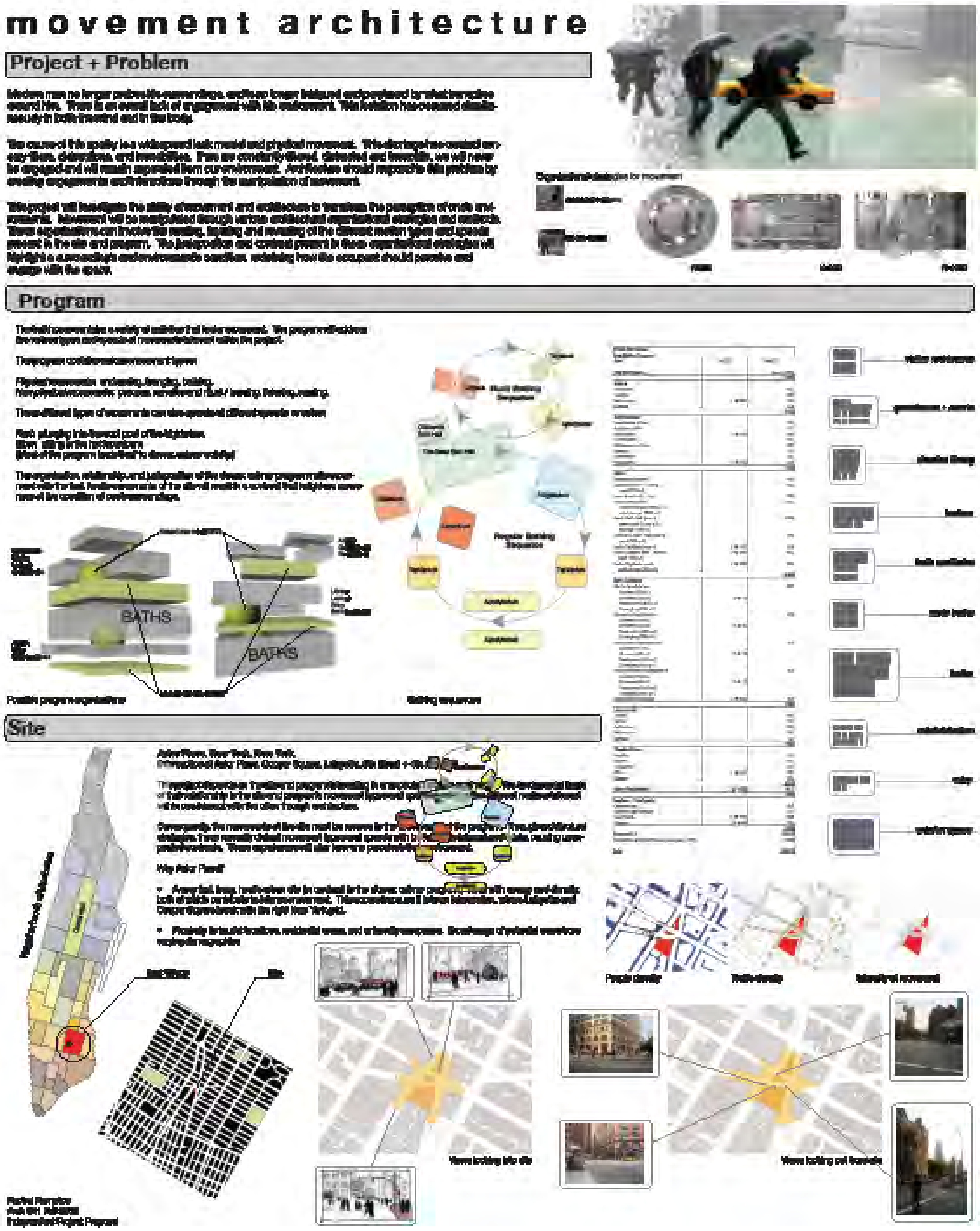
Nesting works in a similar way to layering, in that each element takes meaning from other elements through adjacencies and relationships. However, nesting speaks more to a hierarchy or degree than layering. In *Etant Donnés*, the painting


is nested within the space behind the door; or, the stirring movement is nested within the still movement. The movements would be different if the door were nested within the painting. Nesting creates certain movements by order and hierarchy. Layering is based on a process or sequence, and Nesting is based on a hierarchy

Revealing creates movement through the use of contrast. By revealing, one can make connections between two disparate elements. The eyeholes in the door provide a link between the viewer and the painting. Through this link, the viewer is exposed to something that they were previously not exposed to and not expecting. The unexpected is a surprise because it greatly contrasts the expected or the norm. A contrast such as this can cause one's mind to move, as it is calculating the difference in the contrast, (coming to grips with the shock of the painting) or it can cause the body to move (as in a jolt or twitch).

P 8


movement architecture
Project + Problem
Program
BATHS
BATHS
Site

Gate Board

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