

A Place To Dream
Peter O. Nettelbeck

Thesis submitted to the faculty of the
Virginia Polytechnic Institute and State
University in partial fulfillment of the
requirements for the degree of
Master of Architecture in Architecture

Marcia F. Feuerstein
Paul F. Emmons
Susan C. Piedmont-Palladino

February 17, 2012
Alexandria, VA

Keywords: Dream, Imagination, Row
House

"The house we were born in is more than an embodiment of home, it is also an embodiment of dreams. Each one of its nooks and corners was a resting place for daydreaming. And often the resting place particularized the daydream. Our habits of a particular daydream were acquired there. The house, the bedroom, the garret in which we were alone, furnished the framework for an interminable dream, one that poetry alone, through the creation of a poetic work, could succeed in achieving completely. If we give their function of shelter for dreams to all of these places of retreat, we may say, as I pointed out in an earlier work, that there exists for each one of us an oneiric house of dream-memory, that is lost in the shadow of a beyond of the real past."¹ -Gaston Bachelard

1. Bachelard, Gaston. *The Poetics of Space*. Trans. Maria Jolas. 1956. Boston: Beacon Press, 1994. Print 15

Acknowledgements

Marcia for you patience and wisdom
Paul for you insight and perspective
Susan for your passion and high standards
Melinda for your humor and encouragement

Table of Contents:

1. The Site	1
2. Public Housing	4
3. Master Plan	5
4. The Window	7
5. The Dream Well	13
6. Bibliography/Image Credits	50

List of Images:

1.	Dream Well	ii
2.	Washington DC	1
3.	Sanborn Maps 1-2	1
4.	Transportation Map	2
5.	Existing Site Plan	3
6.	Proposed Site Plan	3
7.	Existing Site Photos 1-3	4
8.	Master Plan	6
9.	The Window	8
10.	Dream Space Sketches 1	9
11.	Distorted Dream	9
12.	Falling Men	10
13.	Dream Space Sketches 2	10
14.	Study Model Pictures 1	11
15.	Study Model Pictures 2	12
16.	Dream Well Pictures	13
17.	Row House Sketches	14
18.	Sun Study	15
19.	Dream Well Key	16
20.	Drawing Key	18

21.	Basement Plan	19
22.	First Floor Plan	21
23.	Second Floor Plan	23
24.	Roof Plan	25
25.	Side Elevation	27
26.	Side Section	29
27.	Front Elevation	31
28.	Front Section	33
29.	Rear Elevation	35
30.	Site Model Picture 1	37
31.	Site Model Picture 2-3	38
32.	Model Picture 1 front	39
33.	Model Picture 2 rear	40
34.	Model Picture 3 side	42
35.	Model Picture 4-7	43
36.	Model Picture 8	44
37.	Renderings 1-4	45
38.	Renderings 5	46
39.	Dream Space Sketches 4	47
40.	Renderings 6-7	47
41.	Row House Details	48
42.	Row House Drainage Details	49

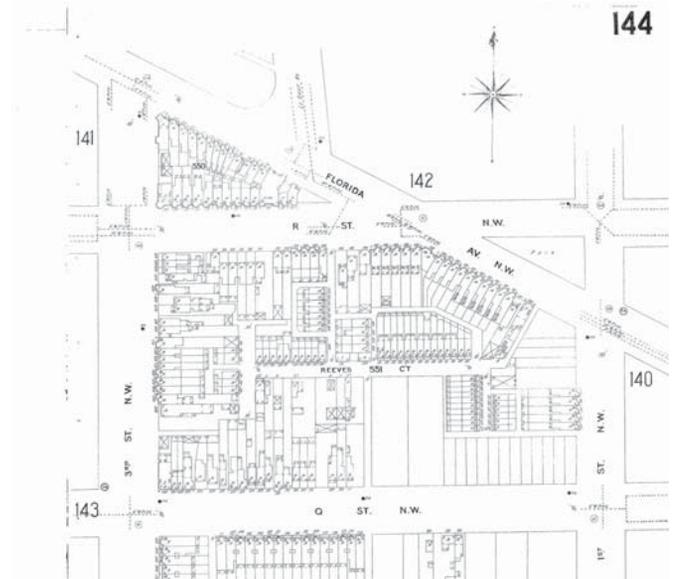


Washington DC

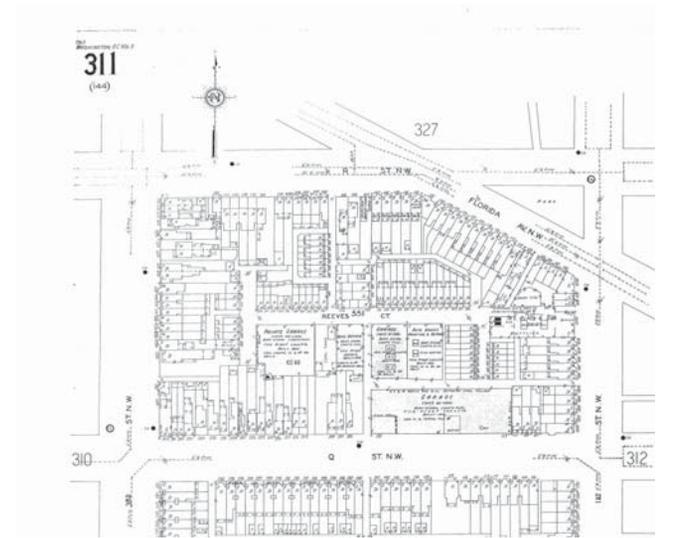
THE SITE

This site is located in the 100 block of R St. NW. This section of the city was initially developed around the turn of the century with a focus on density. The original building types on this site were densely packed two and three level row houses situated adjacent to the road. These can be seen in the Sanborn maps to the right. The original site had a court (Reeves) that ran west to east which allowed more row houses on the interior of the block. In 1918, on the bottom right corner of the site a garage was constructed facing Q Street. The site remained this way until the existing public housing project was constructed.

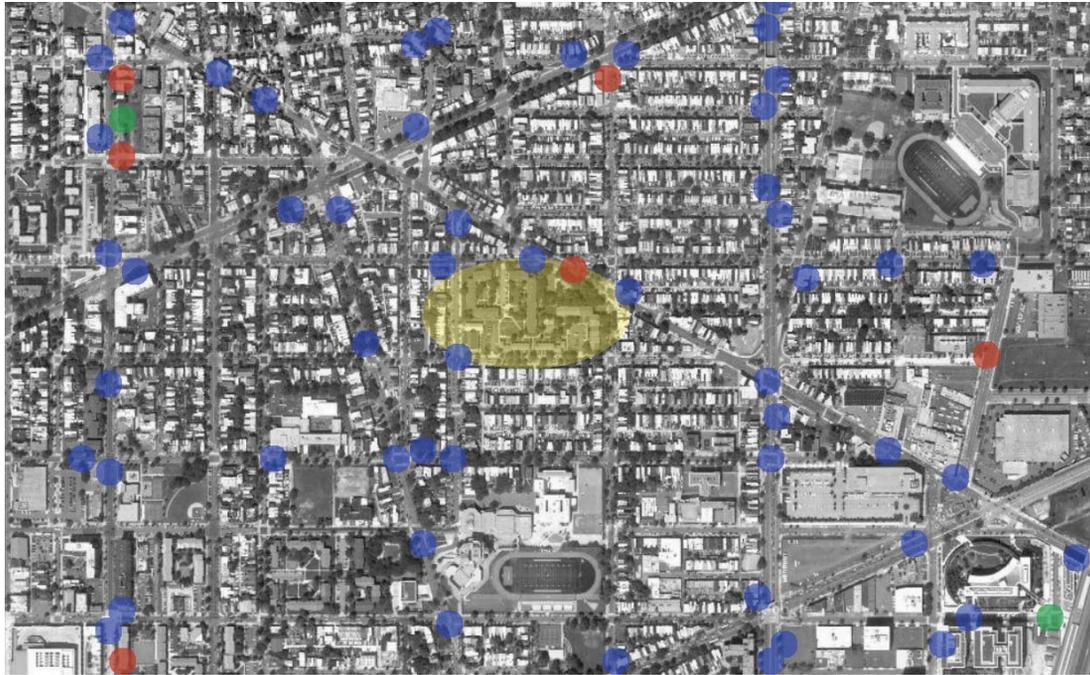
1903-1916



1927-1928



Sanborn Maps 1-2



metro bus stop bike share

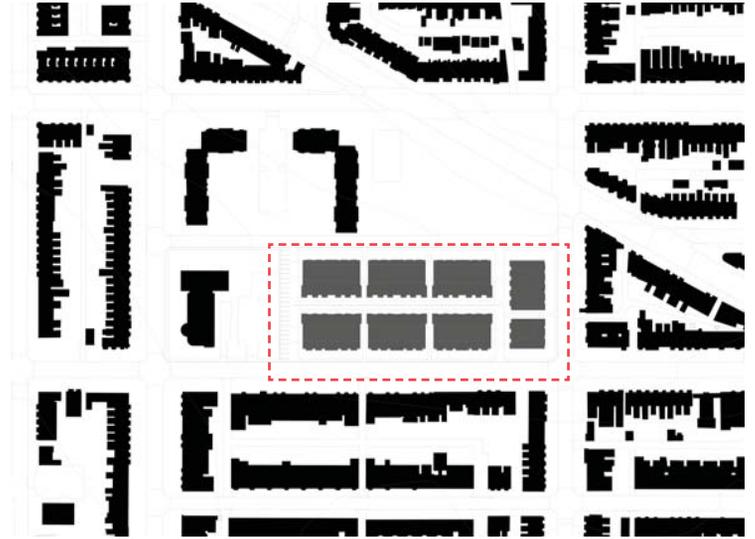
Transportation Map

The current site is well connected to all parts of the city with public transportation. Within a half mile radius of the site there are bus lines, metro lines, and a bike share station (see Transportation Map). The site is mainly made up of four level garden style apartments set back from the road. These apartments do not fit well into the current fabric of the city due to their size, distance from the road, and bland repetitive design. The current building design does not take in consideration the location on the site. The same building type is placed on the site with no regard for orientation or the neighborhood around it. There are also multiple housing projects throughout the city that use the same bland building design.

These factors influence how the current residents use the site and interact with the neighborhood around it. Residents will be less likely to interact with their neighbors because they will have little contact with them. Currently, they are able to drive directly into the housing block without intermingling with anyone across the street. The buildings also do not have a stoop or front porch so they are not able to take part in everyday neighborhood interactions on the street. The bland repetitive design of these houses will also affect how the residents take care of their surroundings. Since little thought was used to design these units the residents will have little incentive to take care of them.



Existing Site approx. number of units: 82



New Site proposed number of units: 88

Above are the new and existing density site diagrams. The new site plan fits more units into the same area and is able to interact better with the neighborhood around it.



Existing Site Photos 1-3

PUBLIC HOUSING

The original intent of this project was for it to continue to be run as a government housing development. There are many reasons why public housing projects succeed or fail. Oscar Newman has shown that there are two important physical factors that determine the success and safety of a housing complex: project size, and number of units per entry.

According to Newman, the least amount of crime occurred in row houses and the most amount of crime occurred in high rises. In high rise buildings there tend to be more places for crime to occur without getting caught. Newman states that "A family's claim to a territory diminishes proportionally as the number of families who share that claim increases"². According to this logic, fewer units per entry into a building would increase a family's claim to a territory, and thus make it safer. Newman also noted that a large amount of crime occurred in the outdoor public space that was set apart from the street. All of these factors have placed a roll in the final design of this project.

2. United States. Department of Housing and Urban Development, Office of Policy Development and Research. Newman, Oscar. Creating Defensible Space. 1996, 17

Master Plan

The overall layout consists of 88 units. Each building contains two units, one on the top two floors, and one on the bottom floor. The units facing north and south are grouped together in sixes. Three units are mirrored around a center line, creating the other three. The units facing east are mirrored around an alley, five units north of the alley and 3 units south of the alley. Between the groups of units are sidewalks which allow access to the back alley.

There were many decisions made to weave the proposed master plan into the fabric of the existing neighborhood. Aligning and continuing alleys from adjacent blocks with allies in the proposed master plan carry on the transportation pattern into the newly developed area. Setting the distance from the road for the proposed buildings, the same as the buildings across the street was another decision to blend the neighborhood conditions with the proposed site.

There are two alleys which run north to south and one that connects the two which were designed for automotive traffic. These allies allow for fire truck access and wheel chair accessibility to the bottom units. The western alley also has handicapped and car share parking spots. The car share spots combined with other exiting forms of public transportation are designed to meet the transportation needs of the residents. The alleys are to be covered with porous pavers which allow rainwater to drain into the earth. The porous pavers also allow a nice outdoor space for children to play and residents to walk.

To ensure that there is enough green space for the residents, the project includes an outdoor green area located on the roof in back of the row houses. The green space would be continuous between the adjacent units and would allow for travel between them. This open space provides large safe grassy areas for residents to exercise and play. This green area is only accessible through the row houses which make it safer. There are two private patios/terraces located toward the front of the house and separated from the public roof spaces by a lockable gate. The terraces are completely private and protected. The front patio spaces provide residents a private place to relax, grill out and entertain.



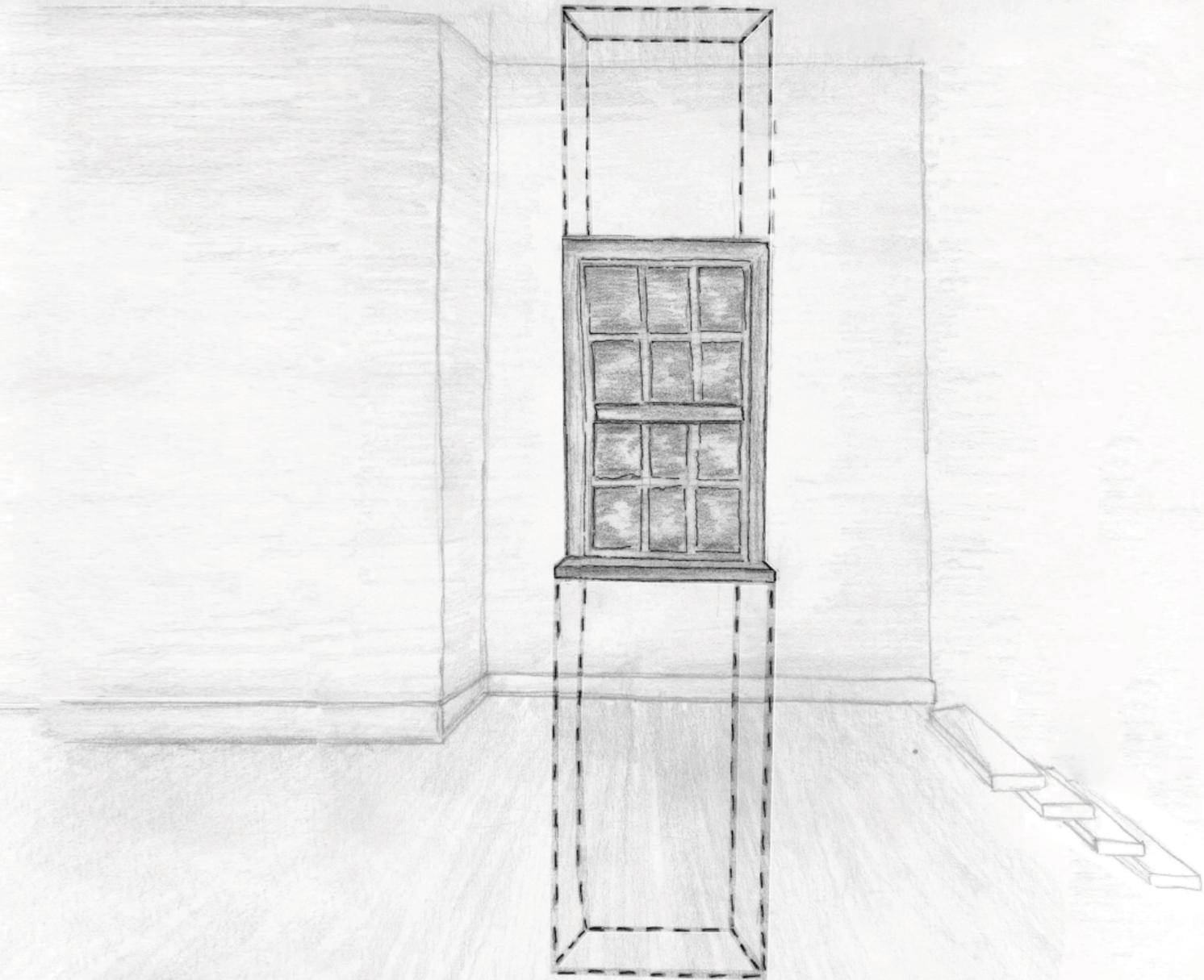
Master Plan

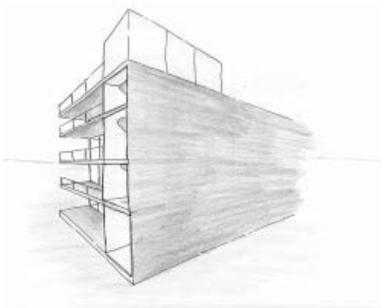
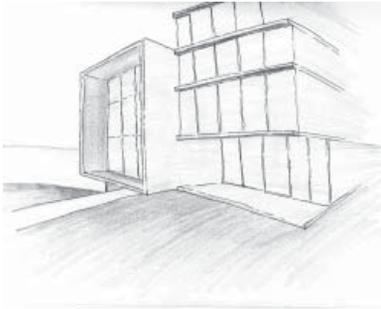
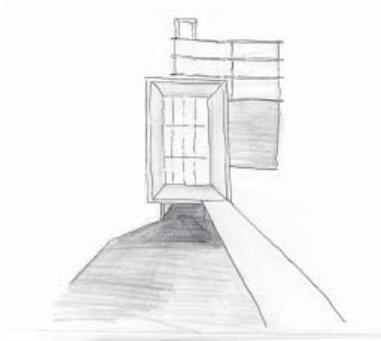
Above is a view of the new master plan showing the system of public and private roof terraces and green spaces.

The Window

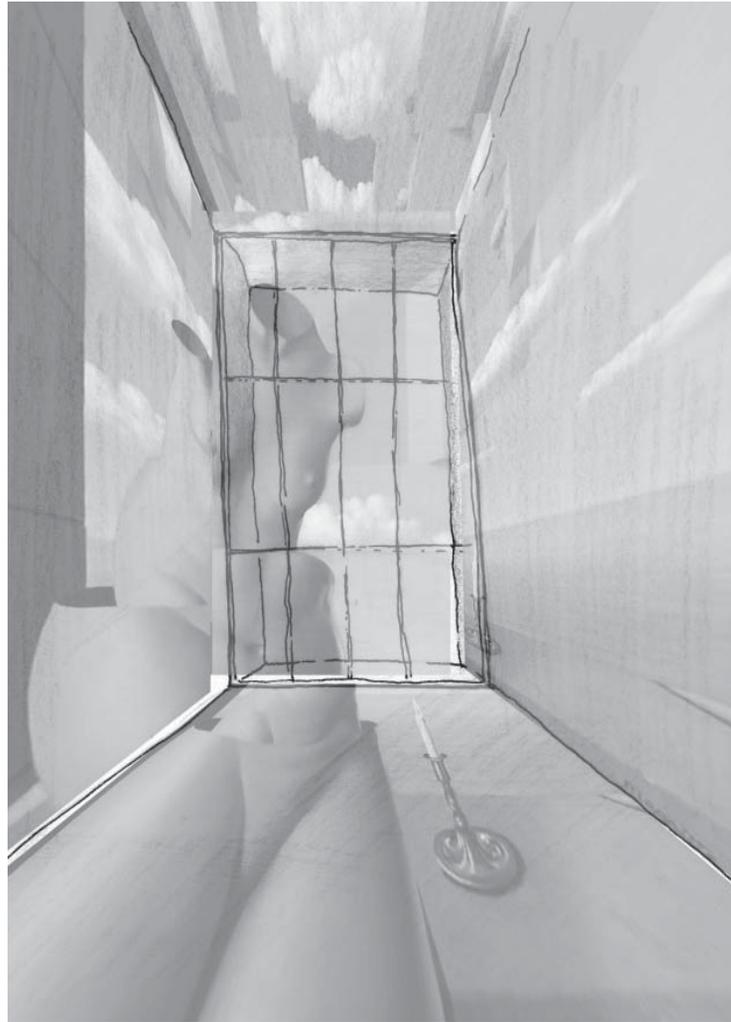
My grandparents' house was filled with quirks and oddities that were perfect dream spaces. One space in particular allowed my imagination to travel. In the center of the second floor of their house was a window that led to a light well. When I was a child, I tried my hardest to figure out where the light well traveled, but could not see where it terminated. This window was my place to dream. For a time, I was sure this well traveled all the way through the earth and opened at the other end. At other times it was a portal to another world. I had fond memories of that well and the imaginary worlds that came from it. This light well was the inspiration for this thesis and design project, and led me to create a place to dream, contemplate, and imagine.

I have not seen my grandparents' house with its light well in more than 20 years. As I was imagining it, I was not sure if the window had mullions or a decorative trim. There were a lot of specifics that were hidden from my mind but my imagination was able to fill in the details. Dreams are very similar to our memory. Both are based on reality but are distorted through our imagination.



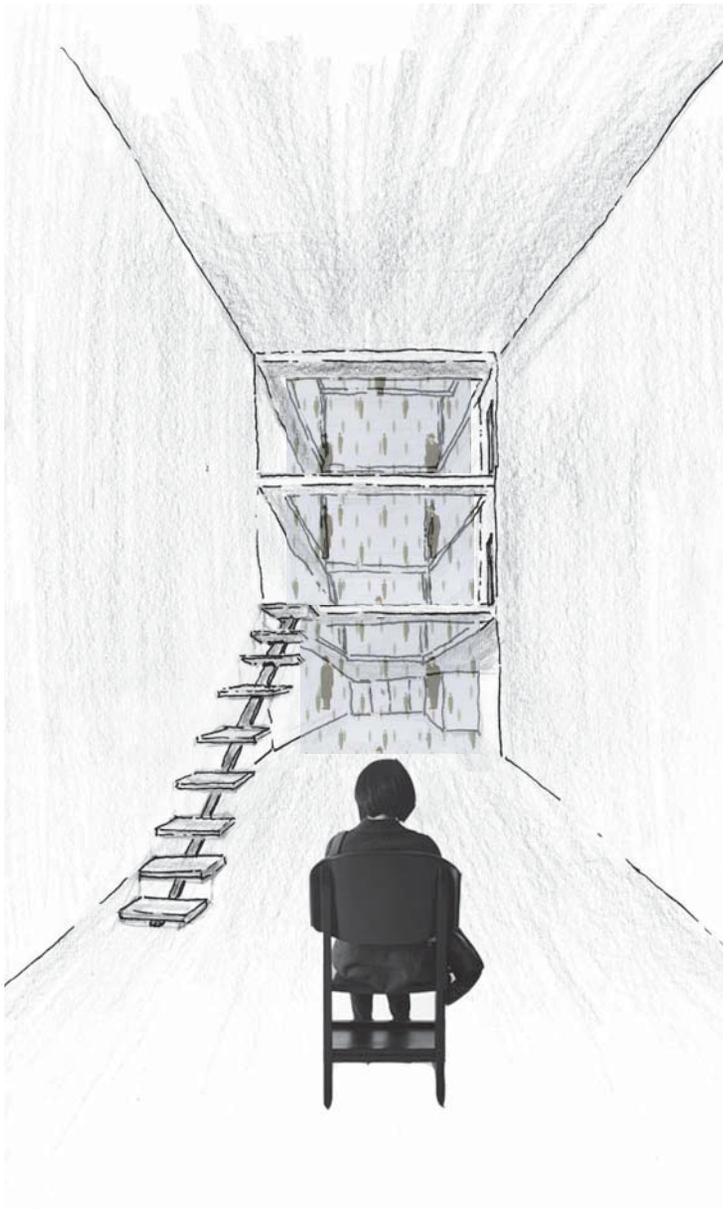


Dream Space Sketches 1

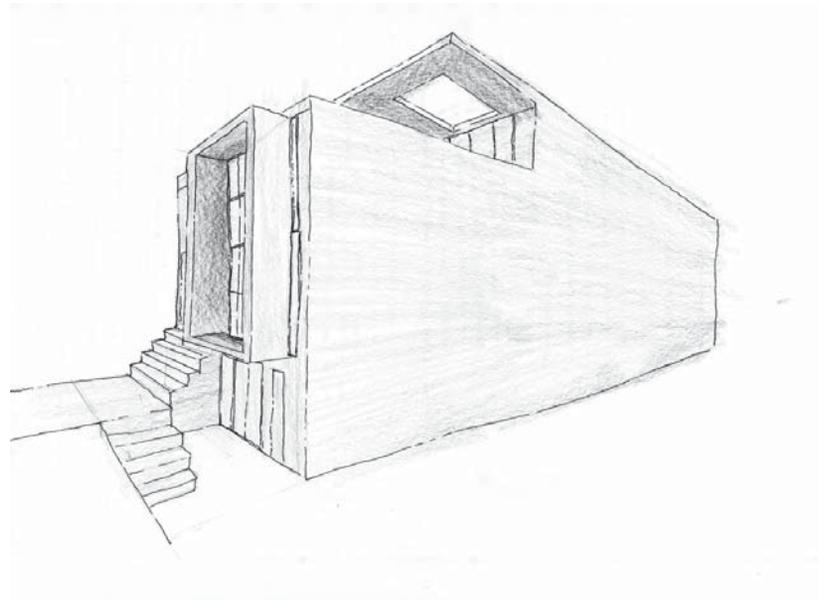
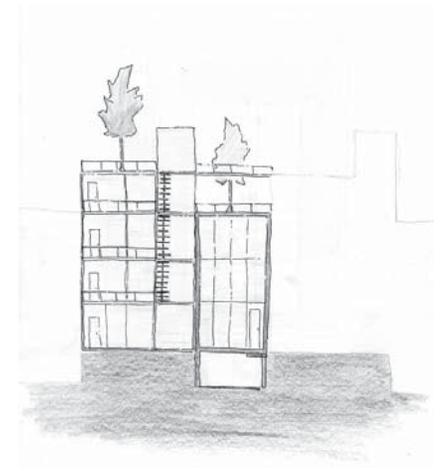
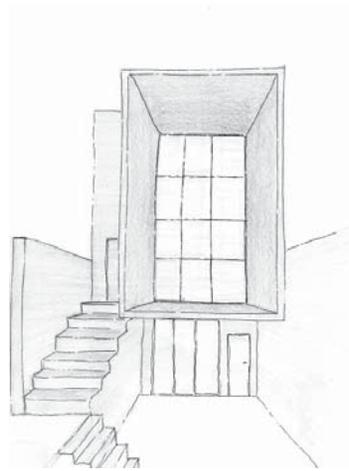


Distorted Dream¹

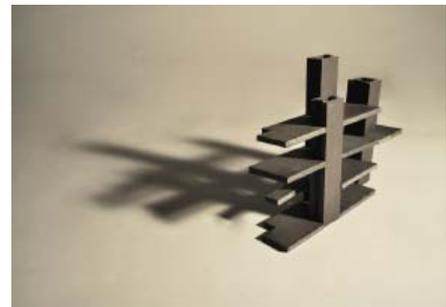
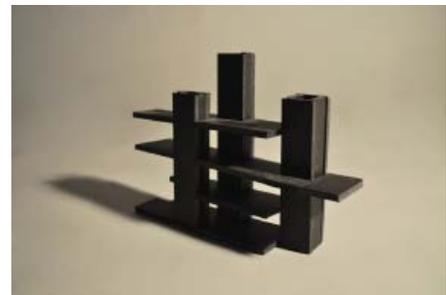
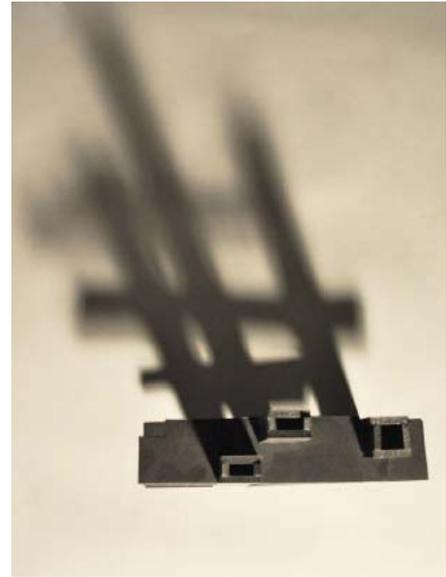
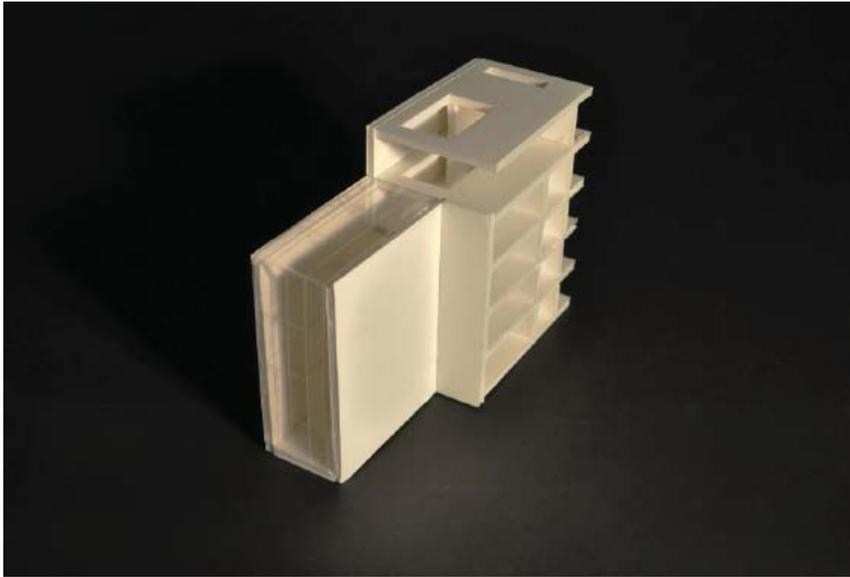
Dream space sketches 1 and 2 are an exploration into form and dream characteristics. Distorted Dream collage and Falling Men collage are an attempt to capture the space that holds a dream. Both collages overlay a Rene Magritte painting onto an interior perspective. The Magritte paintings were chosen for their dream like distorted themes.



Falling Men²



Dream Space Sketches 2



Study Model Pictures 1



Study Model Pictures 2

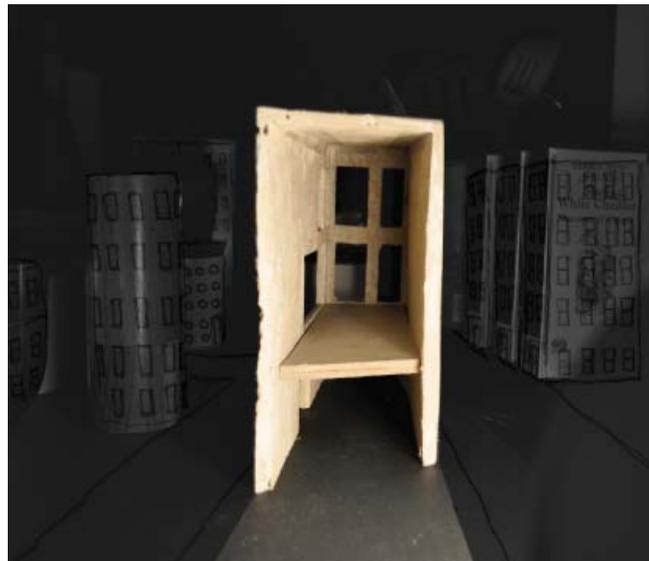
Study model pictures 1 are a massing study of the dream wells. Their mass and shadows helped inform the width and height of the final dream wells, as well as positioning of the row houses on the site. Study model pictures 2 were a more advanced study of the row house conditions. Light and shadow consistently inform the overall design. The main issues that were discovered from this model were associated with egress and circulation. The final design takes these issues into consideration and will be discussed in the plan descriptions.

THE DREAM WELL

Daydreams can occur anywhere but are most poignant and memorable in places that have oneiric characteristics³. Exaggerated heights, varying degrees of transparency, and connection with nature and the outside world, are a few of these characteristics. Each of the row house units includes three dream wells that allow light to enter deep into the row house. These dream wells act as a structural element to hold up the building, and have their own material palette to help define the dream space. The walls and floors are constructed of concrete using wood flooring as formwork. The formwork is placed parallel to the front edge of the well, which provides a marker to measure the light as it enters the space. Floors outside of the dream well will be wood inset into concrete.

In the front dream well there is a double height space that allows the upper bedroom a connection to the outside world and the living area below. This is a wonderful place for a child to spy on adults below or lookout onto the neighborhood and dream of an imaginary life outside of the house. In the basement unit there is a direct view to the sky through a vertical dream well. The second and third floor of the row house has access to this light well through an opening filled with a translucent panel such as "Kalwall", as well as, glass.

Curtain walls are placed at the end of the wells with operable louvered windows to allow fresh air into the house. The mullions act as structure for the louvers and are an interruption in the curtain wall, which breaks up the monotony of the glass. Apertures in the wells allow residents to pass through into the other parts of the house. Other openings are filled with translucent panels or glass depending on their location.



Dream Well Pictures

3. Oneiric- Of, characteristic of, or relating to dreams; dreamlike



SIPS PANEL

LIGHT BUT NO
VIEW

FIVER PARK SW
- CHARLES GOODWIN

- PRIVACY & SHARING

- THINK ABOUT AUSTICS

- ARCHITECTURAL DECISION TO CREATE
PRIVACY

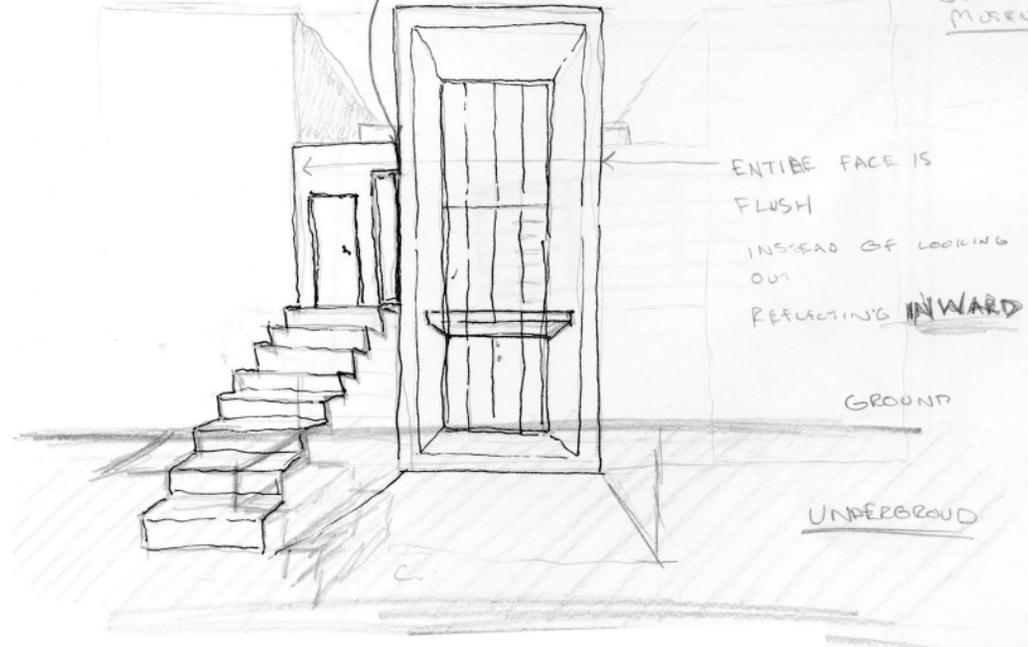
- BUILD A COUPLE TO GET SENSE OF

- KALWAL PANELS HIGH INSULATION

WHAT THE CITY REQUIRES
FOR PLANNING
HARRIS TREGONIE
GREAT GREEN
SPACES

BUILDING
MUSEUM

REVEAL
TURNS INTO FRAME



ENTIRE FACE IS
FLUSH

INSTEAD OF LOOKING
OUT
REFLECTING INWARD

GROUND

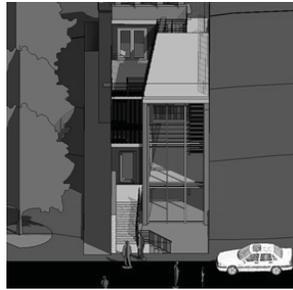
UNDERGROUND

Row House Sketches

Row House Sketches were used to figure out the depth of the sunken garden in front of the house. The plan sketch was used to figure out circulation.



1 ft. overhang



10 am



noon



3 pm



6 ft. overhang



10 am



noon



3 pm

Sun Study

This sun study was used to evaluate the effects of extending the horizontal dream well in front of the curtain wall at one and six foot distances. The one foot overhang allows considerable amounts of sun into the living room while the six foot overhang provides large amount of shade over the course of the day. This study proves that this is an effective way to manipulate the sun.

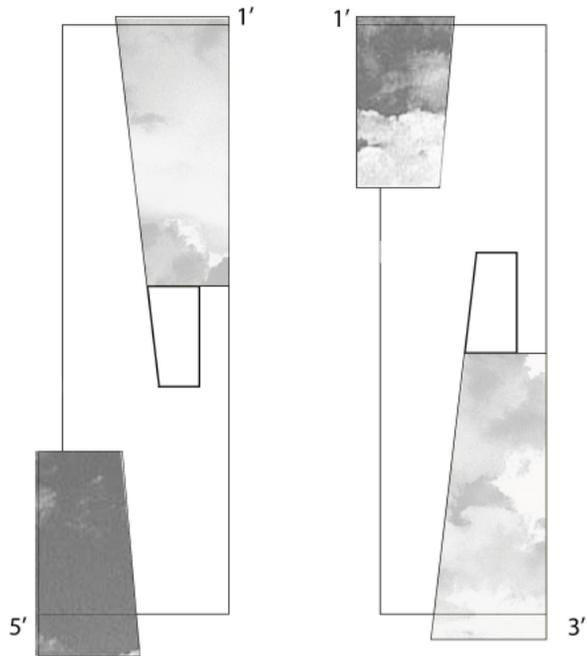
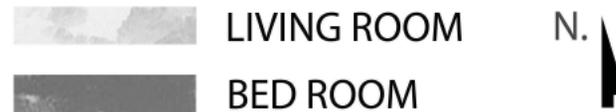
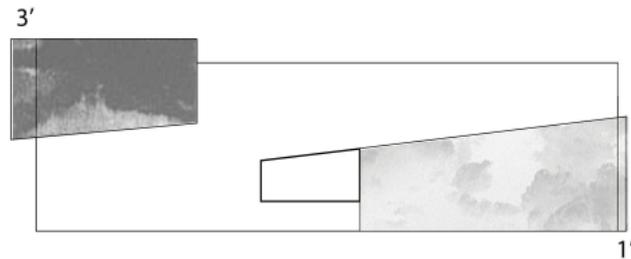
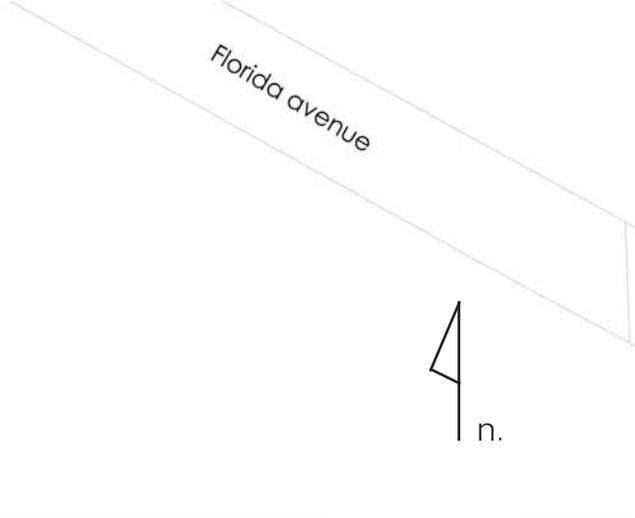
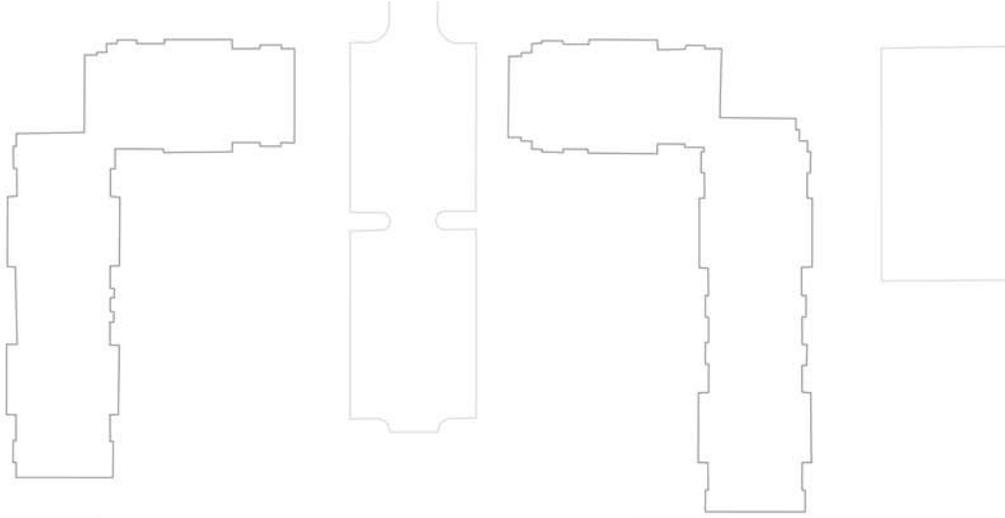


Diagram of masterplan showing various orientations

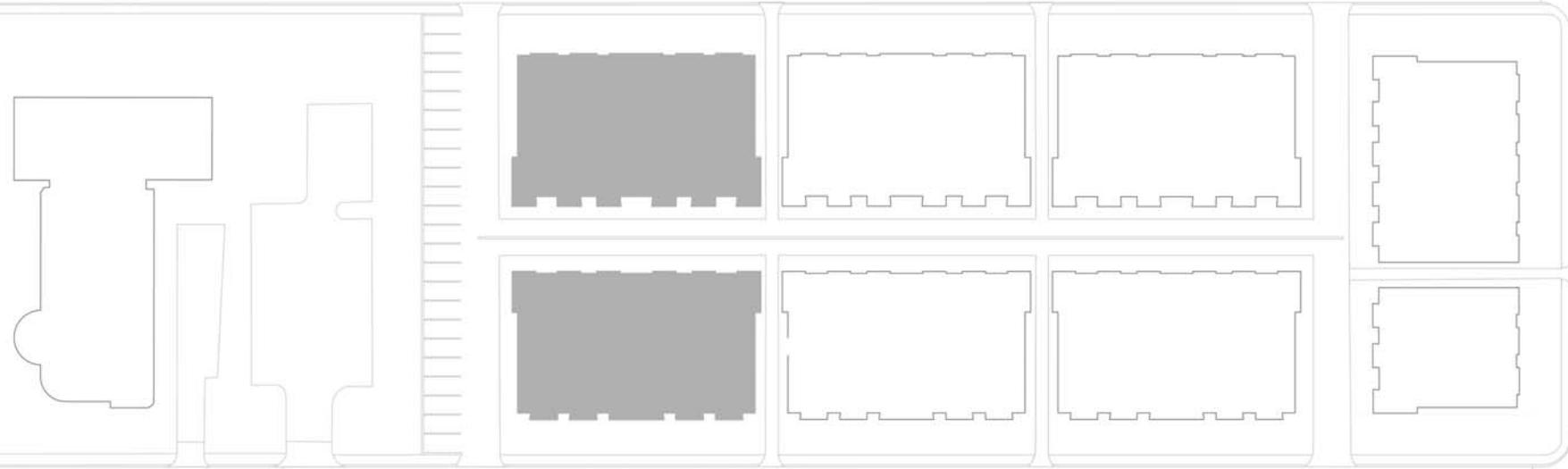


Dream Well Key

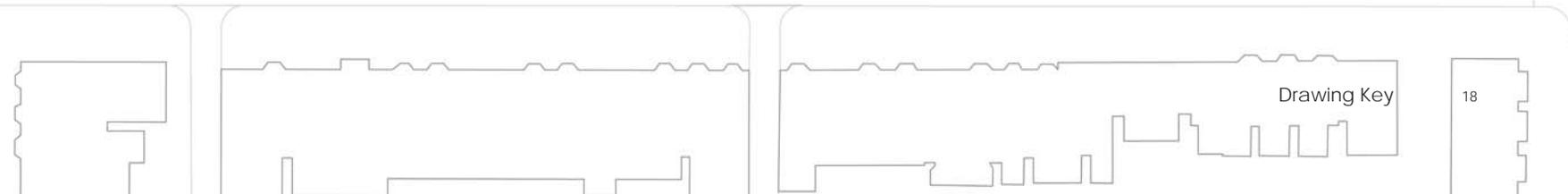
While units have the same basic layout each one has unique conditions based on their location on the site. The corner/end units have additional openings on the side allowing more light into the row house. Units also vary based on their orientation to the sun. Dream wells are pulled in front of the of the curtain wall to allow more or less light into a room. Bedrooms were designed to accept diffuse soft light, so the dream well is pushed forward protecting the bedroom from direct light. Living rooms were designed to receive a moderate amount of direct light, so the dream wells offer protection from the sun. When facing north both bedrooms and living rooms receive indirect light so the minimum overhang is selected. As the above diagrams show, the units facing north have a one foot overhang in the living room and a five foot overhang in the bedroom. Units facing south have a three foot overhang in the living room and one foot overhang in the bedroom. Units facing east have a one foot overhang in the living room and three foot overhang in the bedroom.



Quincy street



Q street



Drawing Key



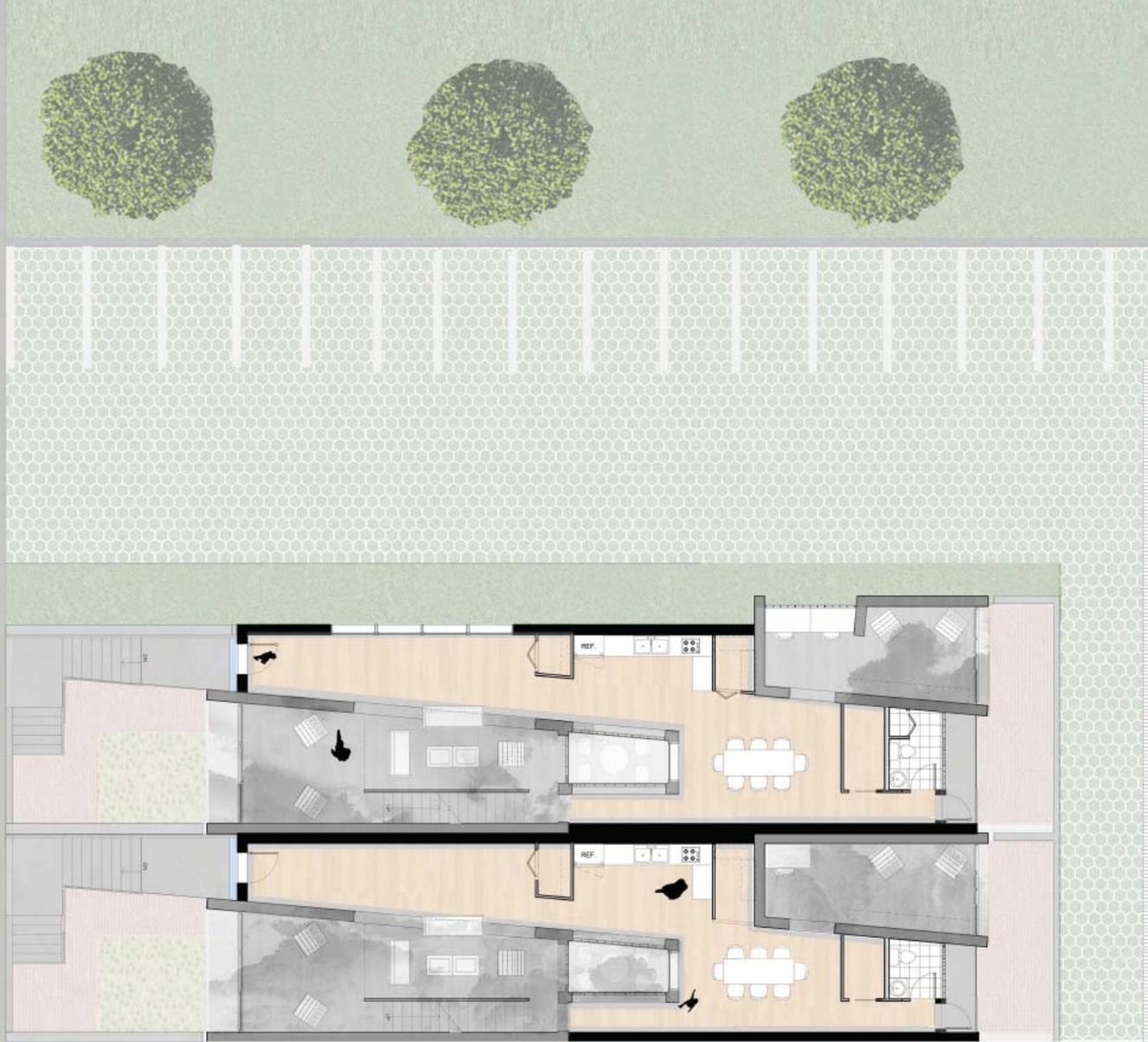
Basement Plan

The Basement has two bedrooms located in the front and rear dream well. The vertical dream well terminates in the center of the basement allowing views to the sky, and natural light deep into the space.



Basement Plan





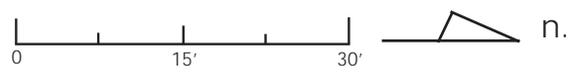
First Floor Plan



All of the dream wells are slanted in plan at a five-degree angle. This creates a pathway through the building, and opens up the plan in the center of the row house to allow space for a kitchen. The first floor has a double height space in the front dream well, which connects to an upper bedroom. The rear dream well contains the library and office.



First Floor Plan

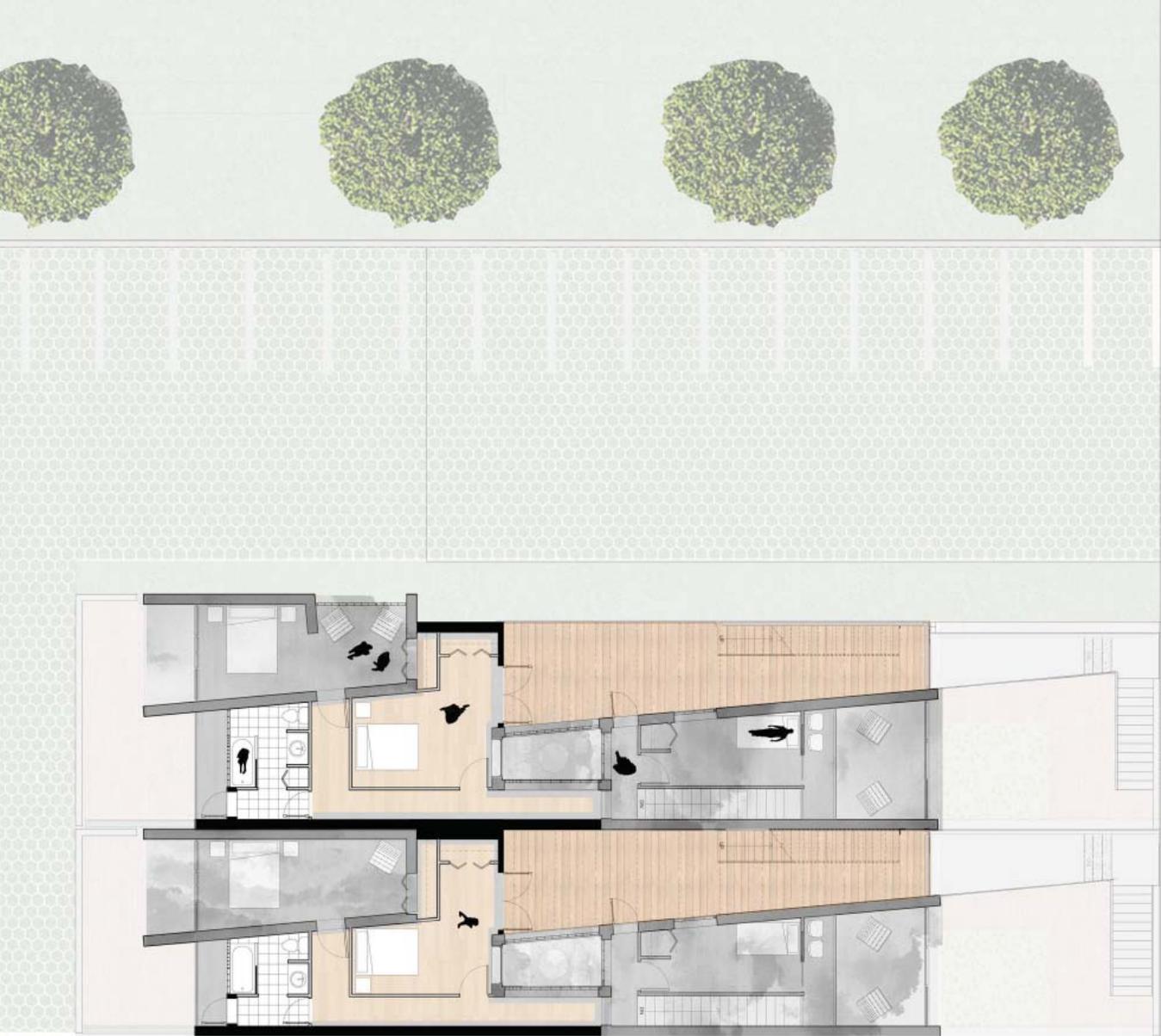




Second Floor Plan



There are three bedrooms on the second floor, two in the front and back dream wells, and one connected to the vertical dream well. Two of the bedrooms also connect to the lower patio space, allowing for egress. A stairway on this patio allows access to the roof. This patio is protected by a sunscreen, which wraps the corner of the outdoor space.

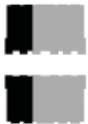


Second Floor Plan

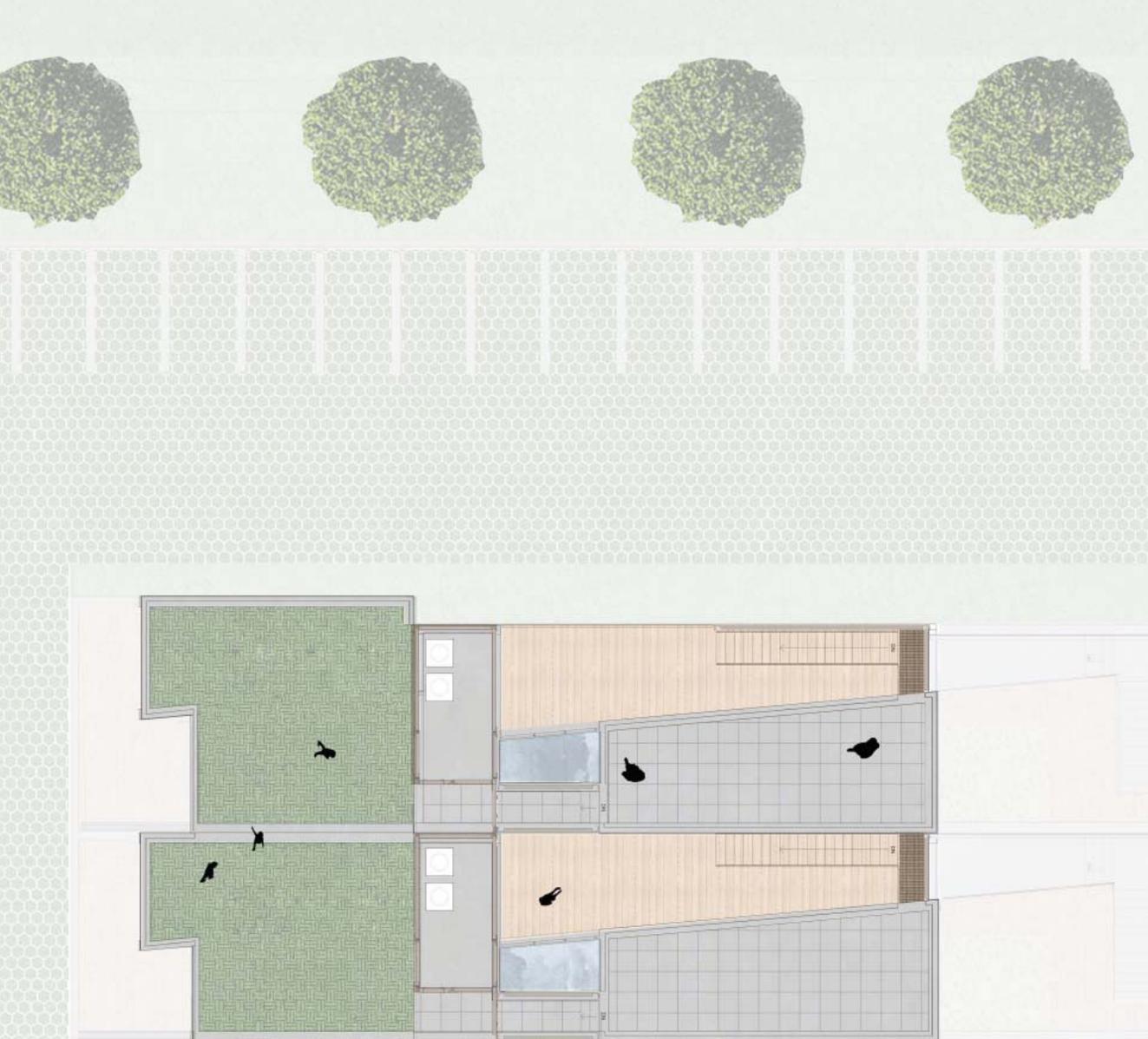




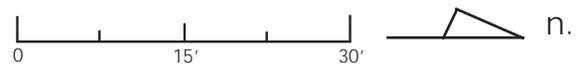
Roof Plan



There is a second private patio space on the roof level. It connects the back outdoor green space through a gate. This green space is continuous for all adjacent row houses.

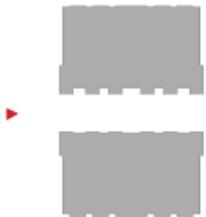


Roof Plan

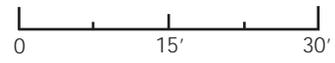




Side Elevation



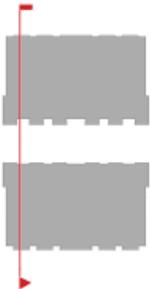
This is a side elevation facing east. The building to the left is the existing apartment complex. To the right are existing row houses built during the turn of the century. In the distance, are the backs of row houses from this same complex, and further in the distance there are more existing row houses. On the row house facade the extra windows and translucent wall panels are visible. The slope of the ground also becomes evident.



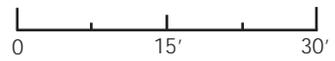
Side Elevation



Side Section



This eastward section, cuts the building through the vertical dream well. From this drawing, the double height space in the front dream well is visible. The sunken garden in front of the row house leads to the basement entrance. Towards the rear of the row house the bathrooms are stacked on top of each other.

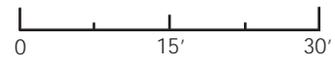


Side Section



Front Elevation



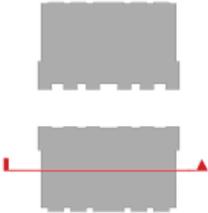


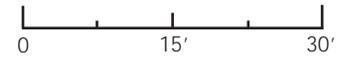
Front Elevation

This front elevation is facing north. Mt. Sinai Baptist Church is just east of this complex. The building in the distance is the existing apartment complex. A curtain wall with louvered windows fills in the dream well. A sunscreen on the second level, east of the dream well, offers privacy for the bottom patio.



Front Section



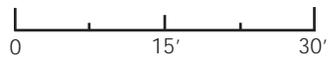


Front Section

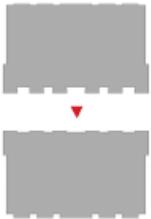
This north facing section is cut through one block with six units. It cuts the building through the vertical dream well. Here we can see how residents use the private patio, and vertical dream well space.



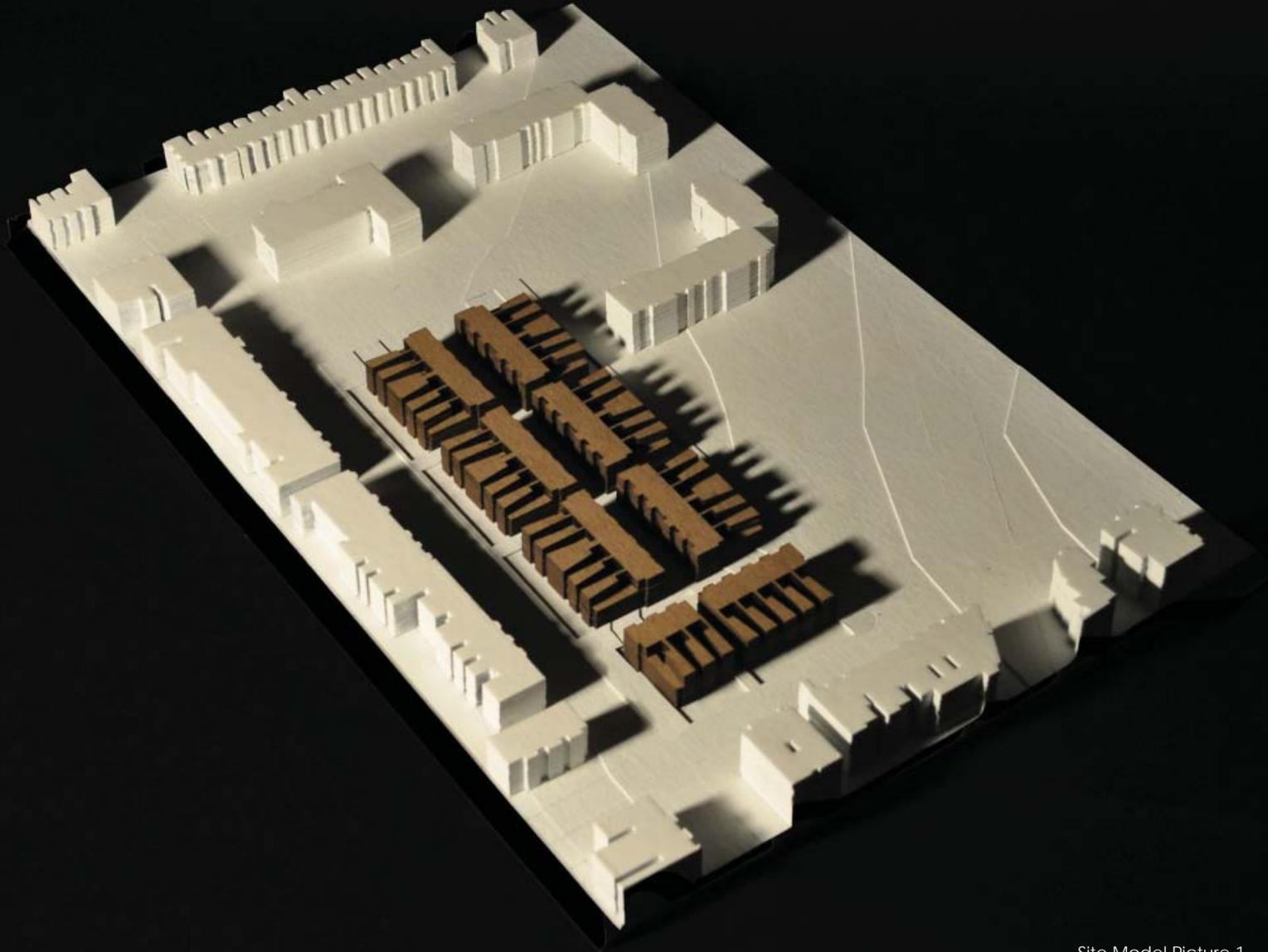
Rear Elevation

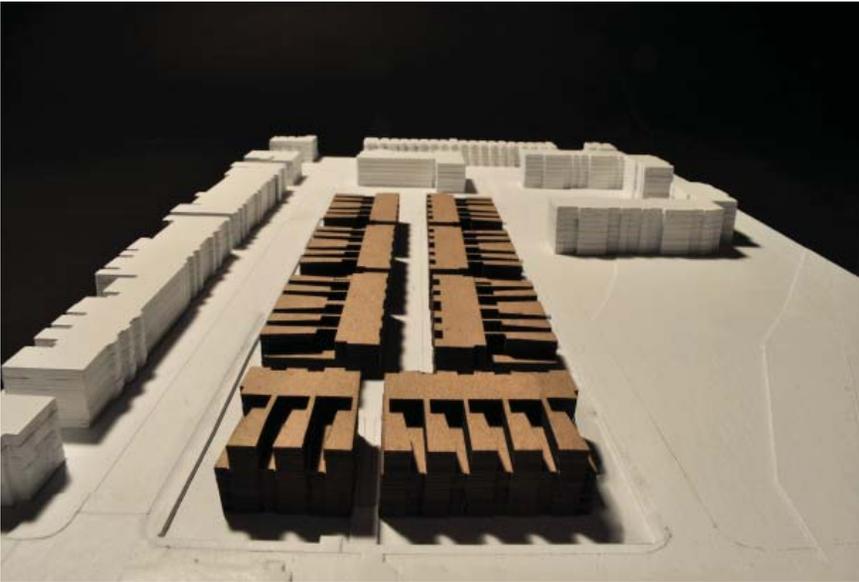


This rear elevation faces south from the back alley. The curtain wall in the rear dream well has lowered windows to allow fresh air into the building. Translucent panels to the left of the dream well allow diffuse light into the rest room. A balcony is also situated to the left of the dream well.



Rear Elevation





Site Model Picture 1 shows the overall master plan layout around midday. Site Model Pictures 2 and 3 show the relationship between the new units and the existing neighborhood block. They also indicate how the existing system of alleys that thread through the existing neighborhood is integrated with the new masterplan.

Site Model Picture 2-3

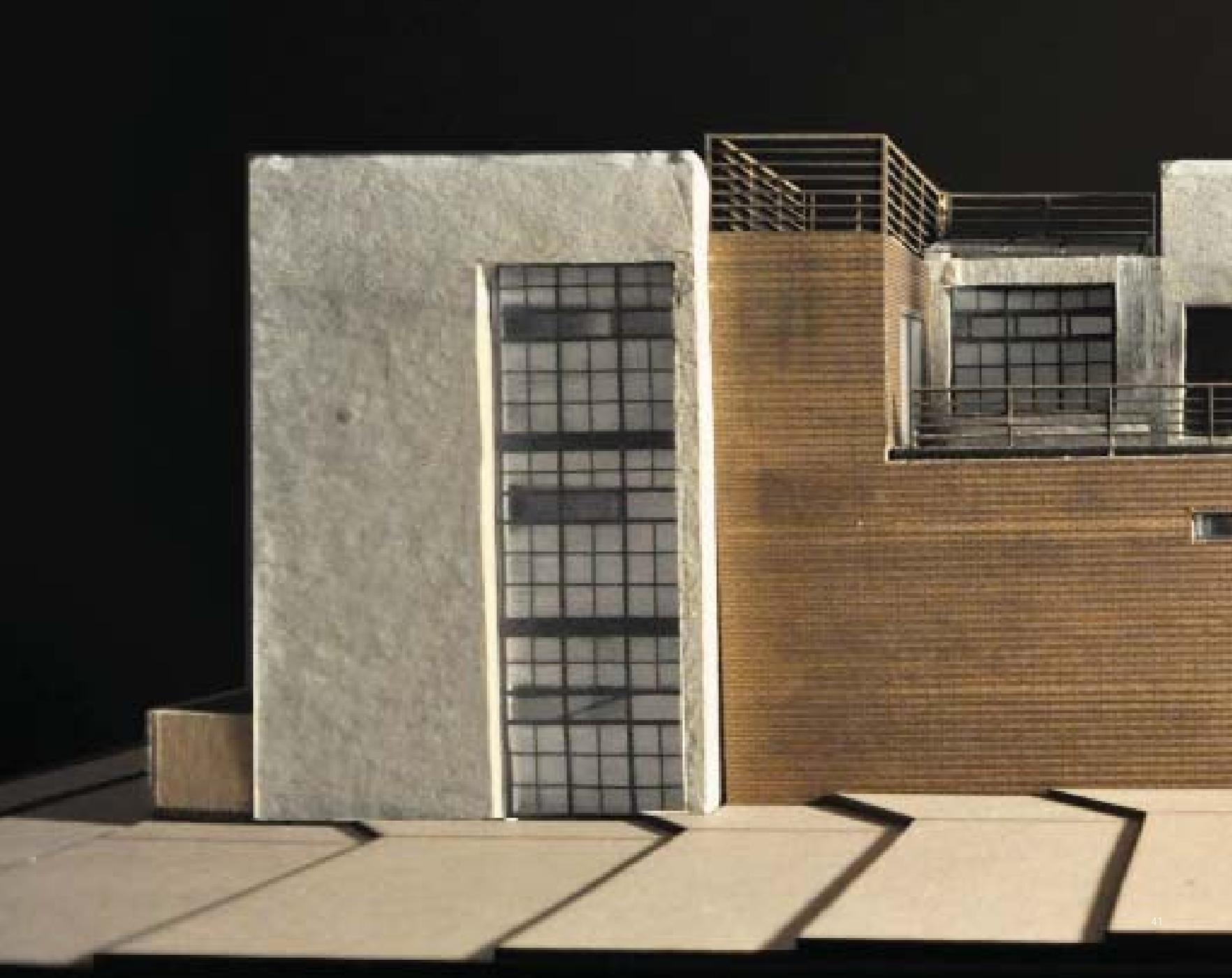


Model Picture 1 front



Model Picture 1 shows the front facade of the end unit facing north. Model Picture 2 shows the rear facade facing south. Model Picture 3 shows the side facade facing east. These models were used for solar studies. The photographs reveal how light penetrates the end unit.









Model Picture 4-7

Model Picture 4-8 show how light enters the building at different times of the day. Model Picture 4 shows late afternoon sun entering the rear dream well from the side opening. Model pictures 4 and 5 are both taken from the alley and reveal soft diffuse light in the back dream well. Model Picture 7 reveals the shadows cast on the roof patios.



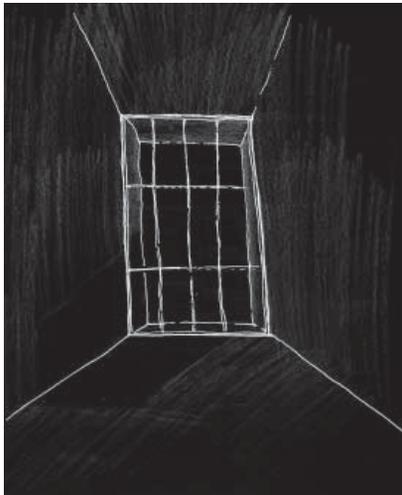
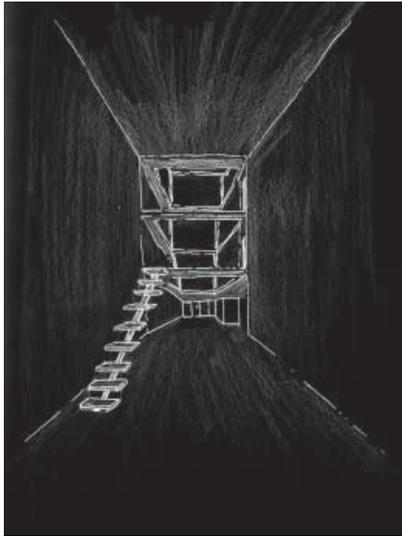


Renderings 1-4

Renderings 1-5 show life in the row houses. Rendering 1 shows the front facade from the street, 2 reveals a view from the basement up the central dream well to the sky, 3 shows a view of the central dream well, lite up with natural light from the first floor, 4 displays the protected alley used for by children to play, 5 reveals the continu-ous green space on the roof to the rest of the housing.



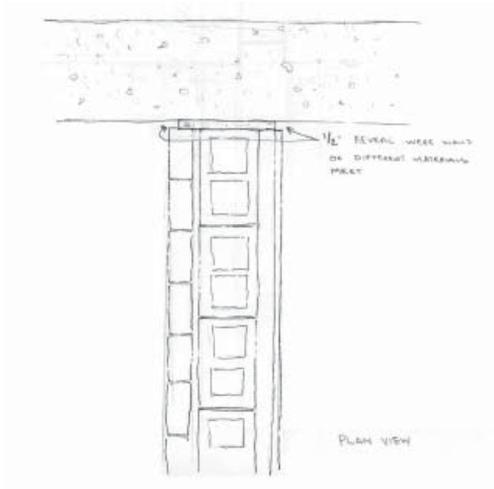
Renderings 5



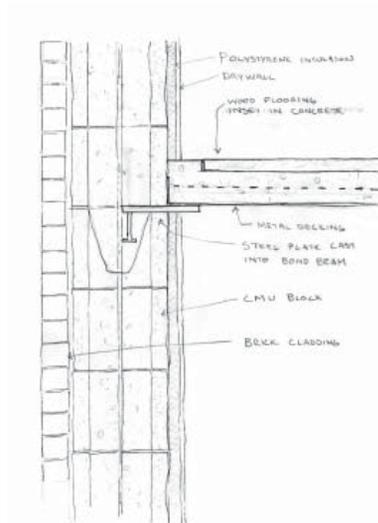
Dream Space Sketches 4

Renderings 6-7

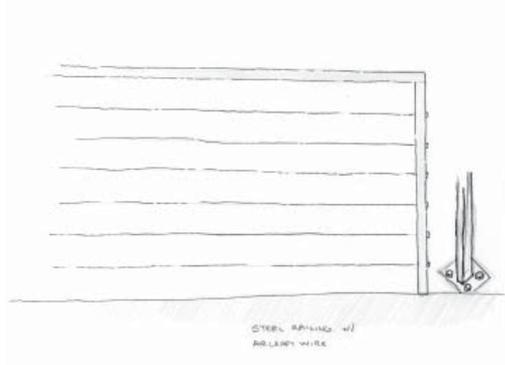
Above is a comparison between the early sketches on the left and the final renderings on the right. The early sketches evolved into a functioning building design while keeping the original design intent.



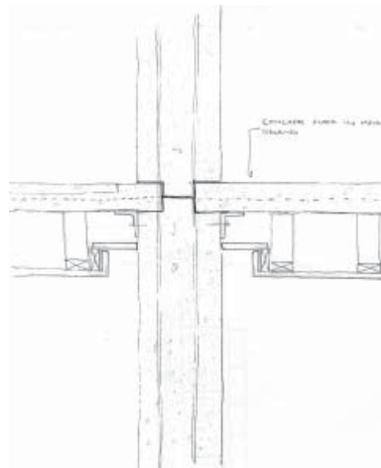
Transition Detail
used in a facade transition from brick to concrete



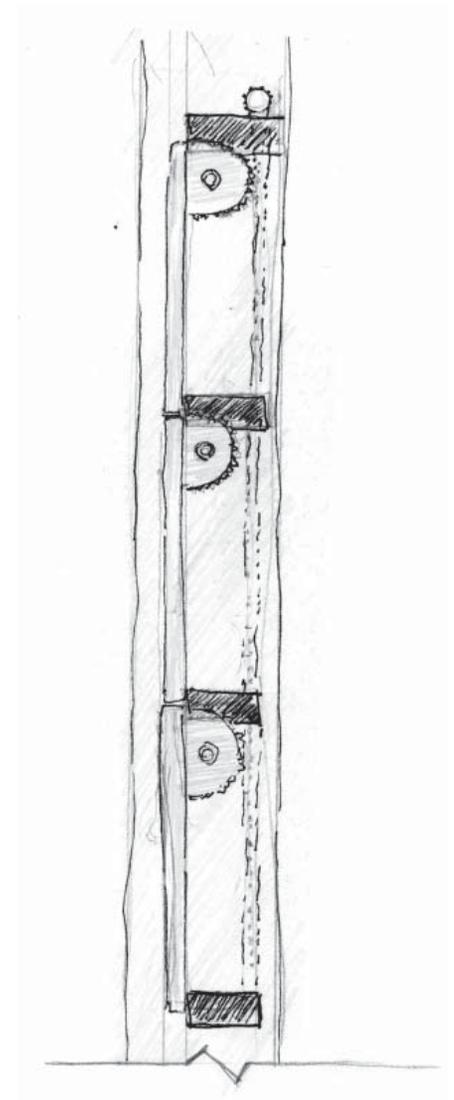
Wall Detail 1
used for exterior walls outside of the dream wells



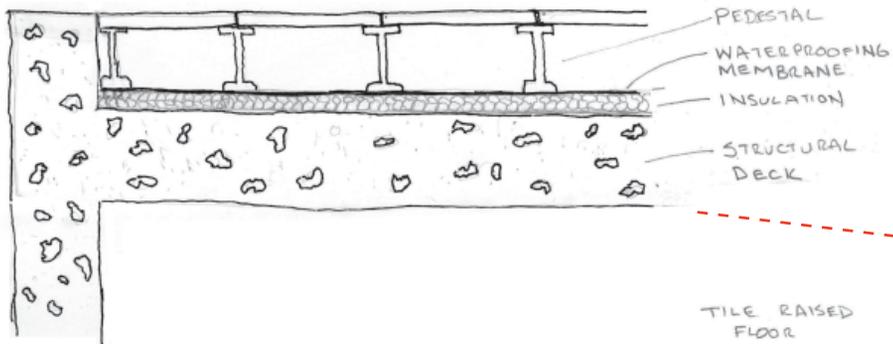
Wire Railing
used on roofs and end unit side patios



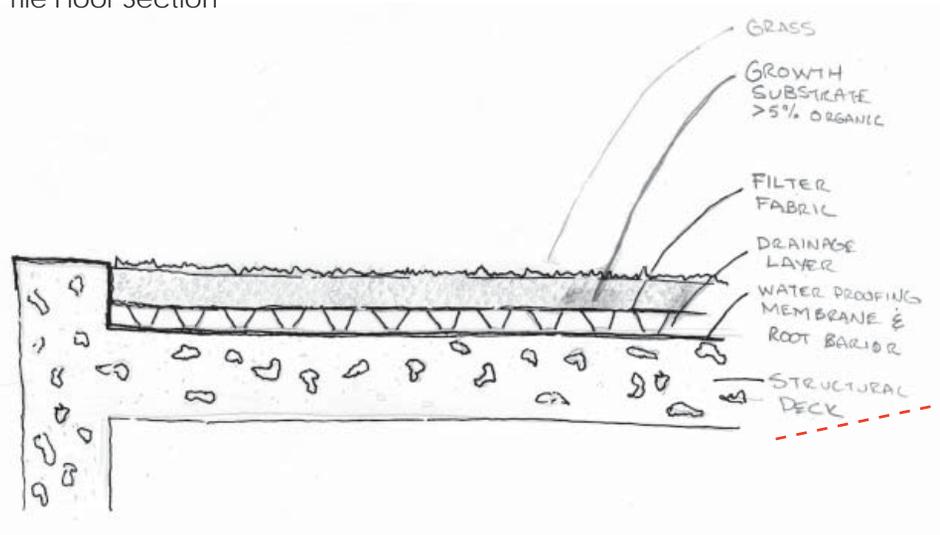
Wall Detail 2
used for walls that separate the dream well and the rest of the house



Louvered Window Detail
used in the curtain wall system in the front and rear dream wells



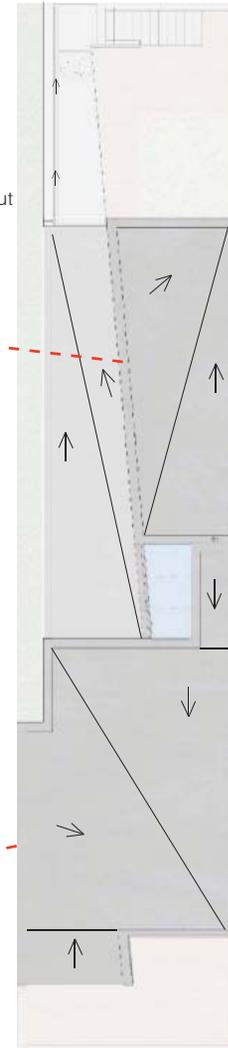
Tile Floor Section



Green Roof Floor Section

copper downspout to disperse water onto street

copper downspout to disperse water into rain garden



copper downspout to disperse water into porous pavers in the alley

Bibliography

United States. Department of Housing and Urban Development, Office of Policy Development and Research. Newman, Oscar. *Creating Defensible Space*. 1996

Bachelard, Gaston. *The Poetics of Space*. Trans. Maria Jolas. 1956. Boston: Beacon Press, 1994. Print

Bachelard, Gaston. *Water and Dreams: An essay, On the Imagination of Matter*. Trans. Maria Jolas. 1942. Dallas: Dallas Institute Publications, 1999. Print

"Great Lakes Water Institute Green Roof Project." Great Lakes Water Institute, Wisconsin Aquatic Technology and Environmental Research. University of Wisconsin—Milwaukee. Web. 12 November 2012. <<http://www.glwri.freshwater.uwm.edu/research/genomics/ecoli/greenroof/roofinstall.php>>.

Insurance Maps of Washington DC. Sanborn Maps. New York: 1928. Digital Sanborn Maps. 2008. ProQuest, LLC. 14 November 2010

Insurance Maps of Washington DC. Sanborn Maps. New York: 1903. Digital Sanborn Maps. 2008. ProQuest, LLC. 14 November 2010

Kirby, James R. "Greenroofs.com: The NRCA Green Roof Systems Manual 2007 Edition." Greenroofs.com: Recommended Readings. Web. 07 November 2011. <<http://www.greenroofs.com/readings.htm>>.

"RiverSmart Homes." Ddoe. Web. 07 November 2011. <<http://ddoe.dc.gov/riversmarthomes>>.

Sendak, Maurice. *In The Night Kitchen*. 1970. New York: Harper Collins, 1995. Print

Washington DC. Google Maps. Google, 2012. 21 Feb. 2012

Image Credits

1. Magritte, Rene. *Golconde*. 1953. Menil Collection, Houston. Web. 7 April 2011.

2. Magritte, Rene. *Megalomania*. 1948. Hirshhorn Museum, Washington DC. Web 7 April 2012.

All images are those of the author unless the image is credited by a number below the image. I consider images used from other sources as being reproduced under the "Fair Use Doctrine" for one-time use for educational purposes