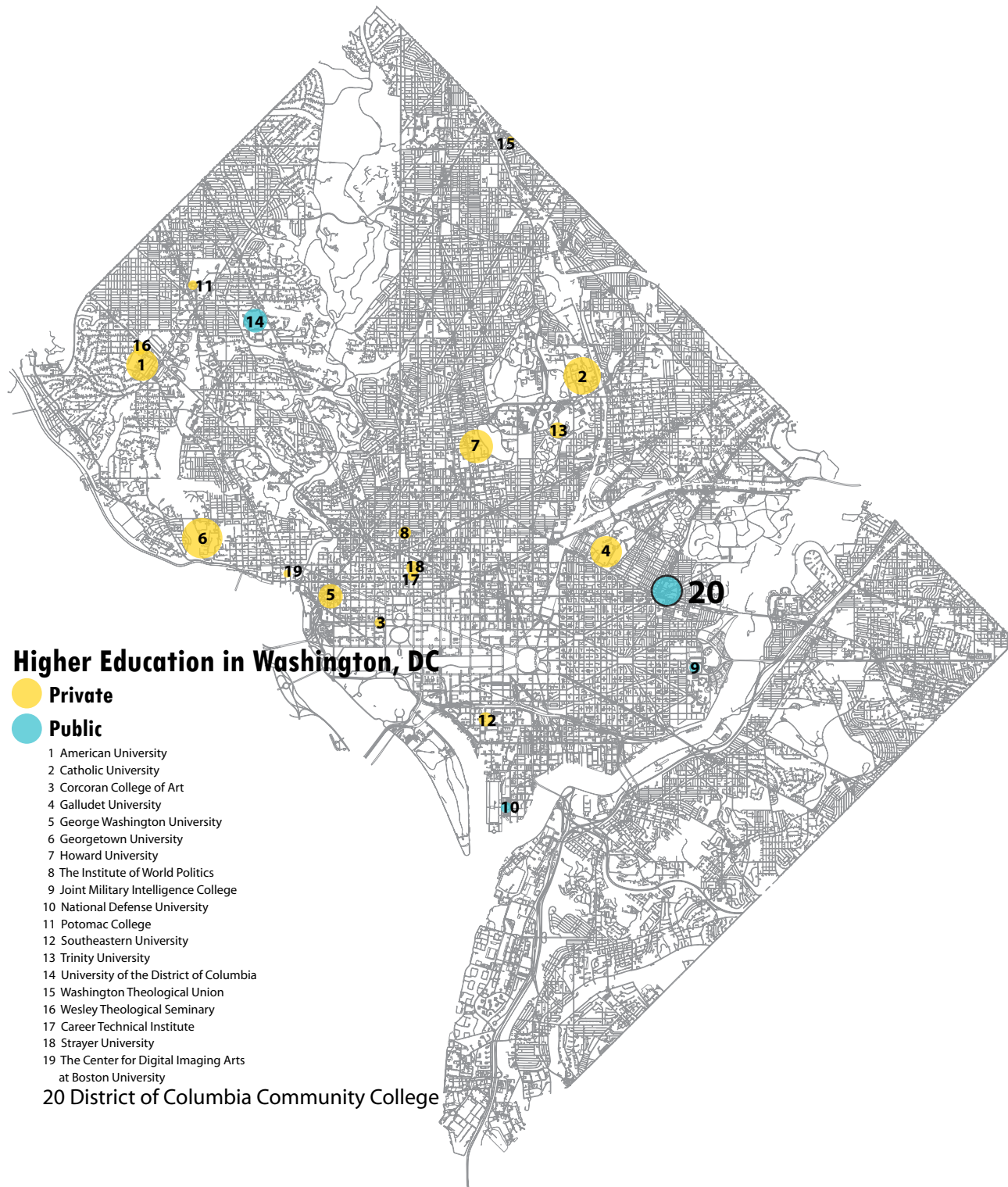




LEARNING THE CITY:

A Community College and Mixed-Use Neighborhood for Washington, D.C.



LEARNING THE CITY: A Community College and Mixed-Use Neighborhood for Washington, D.C.

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

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ABSTRACT

As city dwellers, we are students of our environment, continuously learning how to interact with and contribute to the urban realm and to the world at large. This thesis explores how a school can expand the culture of a neighborhood, how a neighborhood can shape the identity of a city, and how a city can cultivate the growth of a person.

The project consists of a master plan for a community college, mixed-use neighborhood, traffic circle, and streetcar station. Within the larger plan sits a Library and Student Center, which emerges as the iconic piece of architecture for the school and the neighborhood.

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For all the professors, peers, mentors, friends, and colleagues who have inspired me realize to this pursuit of architecture, I am incredibly thankful.

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And for my parents, who have given me their unwavering support and love throughout it all; I am eternally grateful.

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INTRODUCTION

To live in the city is to learn from the city.

The design of this project was inspired by the site, where large empty lots are surrounded by an array of neighborhoods, retail corridors, and arterial roadways. This chaotic composition not only demonstrated a need for thoughtful redesign, but also revealed an opportunity to invoke L'Enfant's symbolic plan of Washington. I realized that anything built here to restore vitality to the neighborhood had to be both physically and culturally substantial.

With just under twenty institutes of higher learning in Washington, D.C., only three schools are public (two of which are small military academies), and no community colleges exist. I saw this fact as an unfortunate reality, but also as an opportunity to design a community college and mixed-use neighborhood in an under-served part of town.

Because the school is present in the city, and I wanted the city to be present in the school, I incorporated a variety of academic, retail, office, and residential functions into the master plan. I also envisioned a variety of public spaces, from the scale of a shaded park bench to the scale of a soccer field. I also designed the streets to improve connections between adjacent street grids, while orchestrating bike lanes, crosswalks, and a street-car line to better connect the area to the rest of the city and encourage public transit.

In addition to conceptualizing the master plan, I also charged myself with designing the signature building for the community college: a library and student center. The library represents the gateway that once inhabited the site, when it was a boundary edge of the city. It is both a passageway into the school and a place of transition to your identity as a college student. The general floor plan is like a plaza, with a central public space (for books) surrounded by private spaces (for study carrels and meeting spaces). An auditorium, bookstore, and café also inhabit the library, and encourage a social and interactive learning environment. Overall, the library contributes to both the vitality of the college and the community, providing a place of learning to D.C. residents, who can be students of the school and will always be students of the city.



VIEW OF THE CITY

When I first embarked on my thesis project, I knew I wanted to pursue a topic related to transit and urban design. From this vague starting point, I began studying different pockets of the city that I felt were under-served by mass transit and needed design attention. These were areas of the city that were isolated, and as a result, struggling economically and culturally. I soon focused my attention toward the Southwest, Southeast, and Northeast quadrants of the city and felt most inspired by the H Street district in Northeast, because of its history, urban potential, and the revitalization efforts that were already underway.



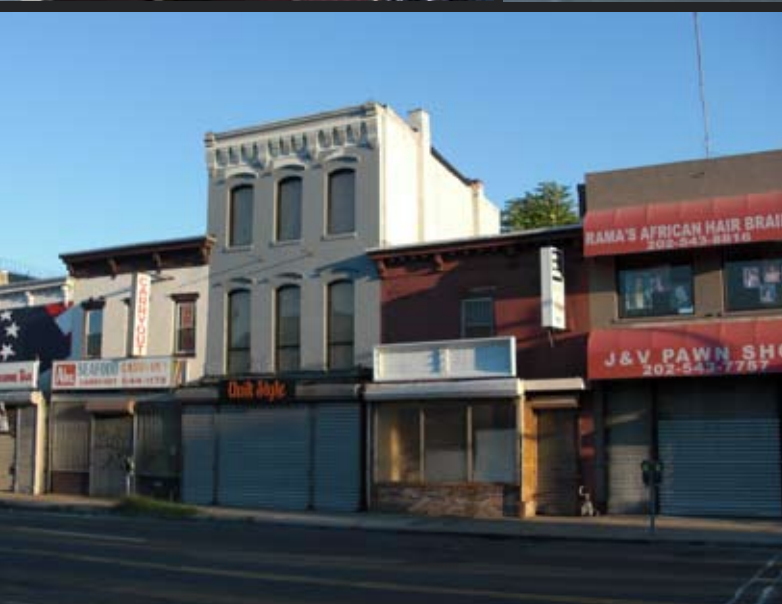


VIEW OF THE STREET



VIEW OF THE STREET

In order to more fully understand the existing character and qualities of H Street, I simply began exploring it, block by block.



Collages of the city blocks of H Street NE



VIEW OF THE STREET

H STREET FESTIVAL | SEPTEMBER 20, 2008





VIEW OF THE STREET

Delving deeper into the area and the history surrounding H Street, I learned that between the wars it was a bustling commercial district that attracted many Washingtonians from all over the city. It was also served by a streetcar line that ran from the Treasury Building to its termination at 15th Street NE, where DC's first Sears Department store was established. After WWII, it suffered the same fate as many other urban commercial districts across the U.S. when significant populations moved from the city core to the suburbs. H Street's slow decline culminated after the 1968 race riots, when many of its remaining businesses were ravaged or burned to the ground; the residue of this event still remains in some of the dilapidated storefronts along the strip.

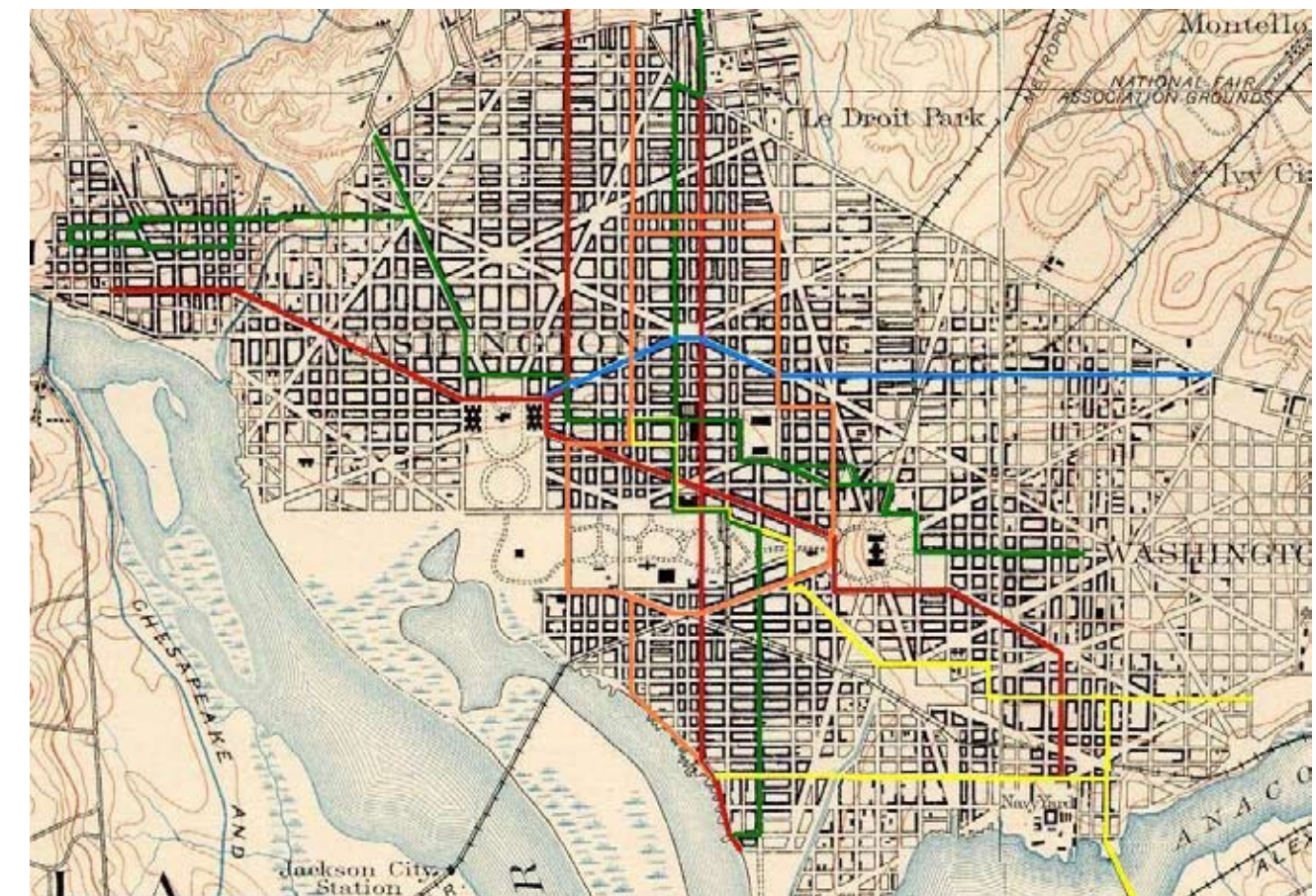
After the 1970s, attempts were made to rebuild and clean up the area, but the weak economic stability of the surrounding neighborhoods kept the corridor from regaining any strong commercial footing. When the Metro system failed to install a subway line anywhere within walking distance of H Street, this further discouraged new businesses or residents investing in the area.



Columbia Railway Car Barns ¹



Aftermath of the riots of 1968 in Washington, D.C. ²



Map of Washington, D.C.'s streetcar system, 1888 ³



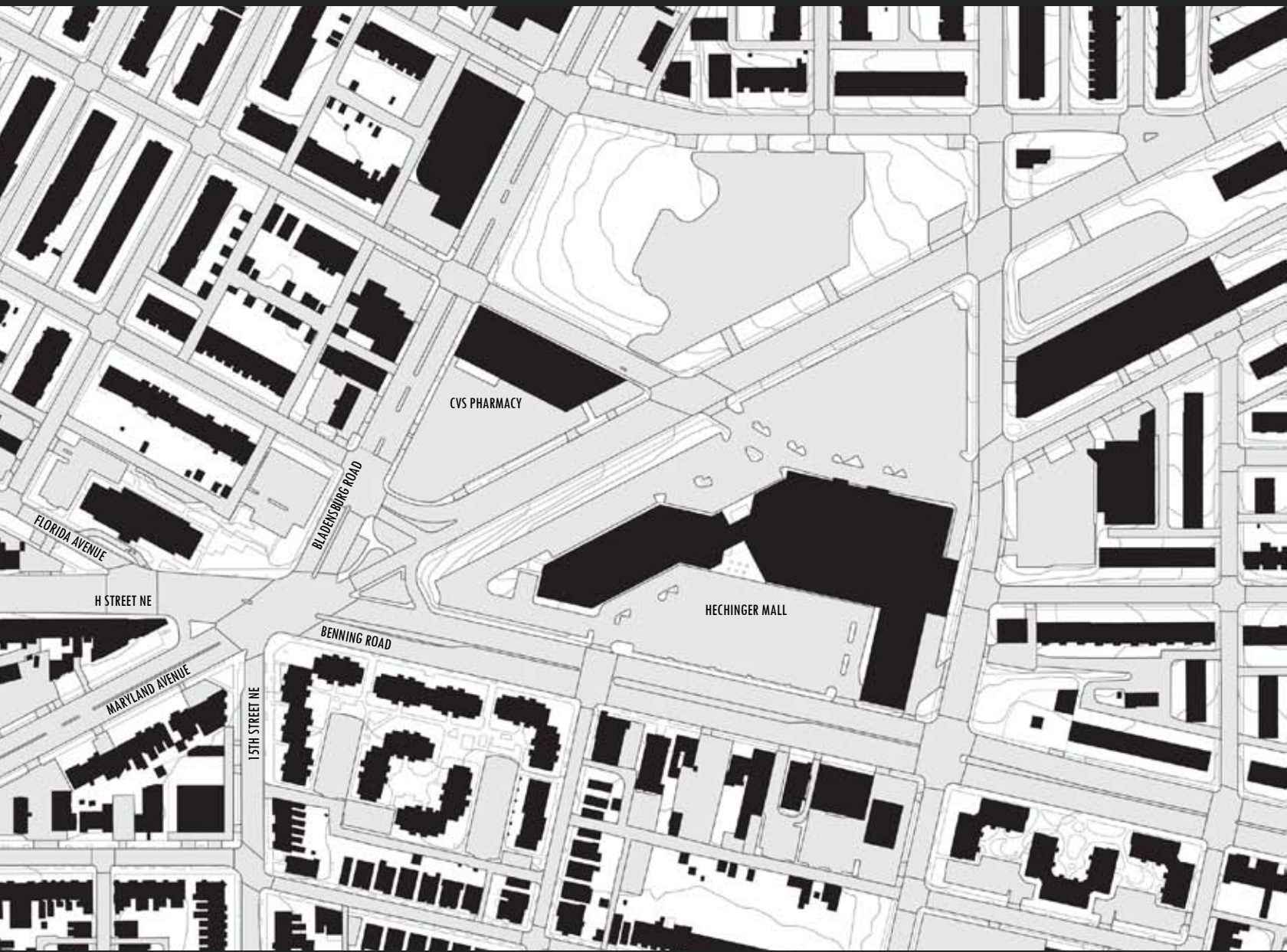
VIEW OF THE SITE



VIEW OF THE SITE

It was through these initial visits to H Street that I found the site for my project. Once I found my site, the direction of my original thesis idea shifted. The site inspired me to take on a different kind of project, one that not only addressed my initial interest in urban design and mobility, but one that also presented a chance to consider the design of a public space and the architecture that shapes it, and how together this sense of place might provide cultural or learning opportunities to a neighborhood that so desperately needs a stable, economic, and cultural core.

The site includes the starburst intersection where H Street NE meets with Florida Avenue, Maryland Avenue, 15th Street NE, Bladensburg Road, and Benning Avenue. The remainder of the site is northeast of this intersection, where a huge rip in the urban fabric occurs. This placeless environment is inhabited by large empty lots and a mediocre shopping center that has little relationship to the street.



Site Plan of the existing area



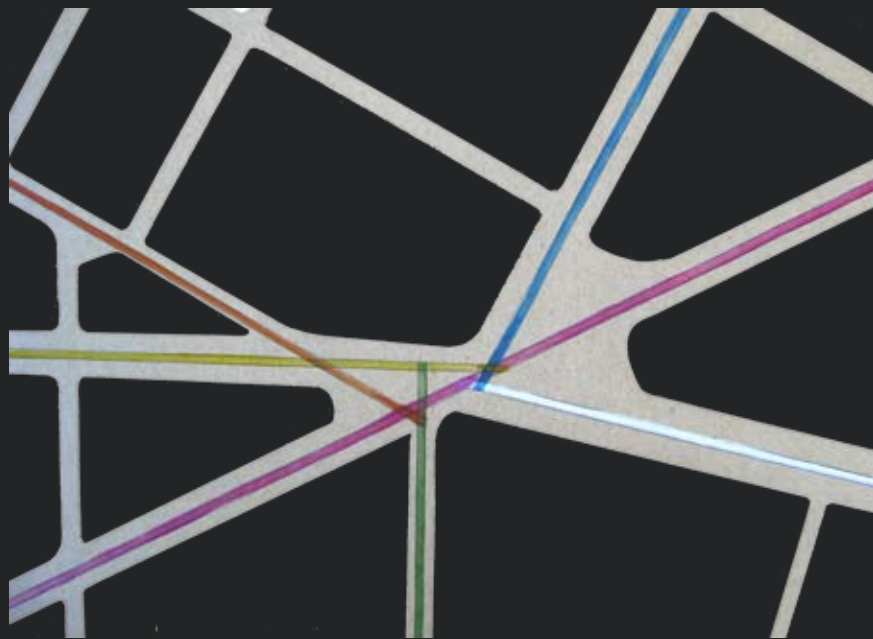
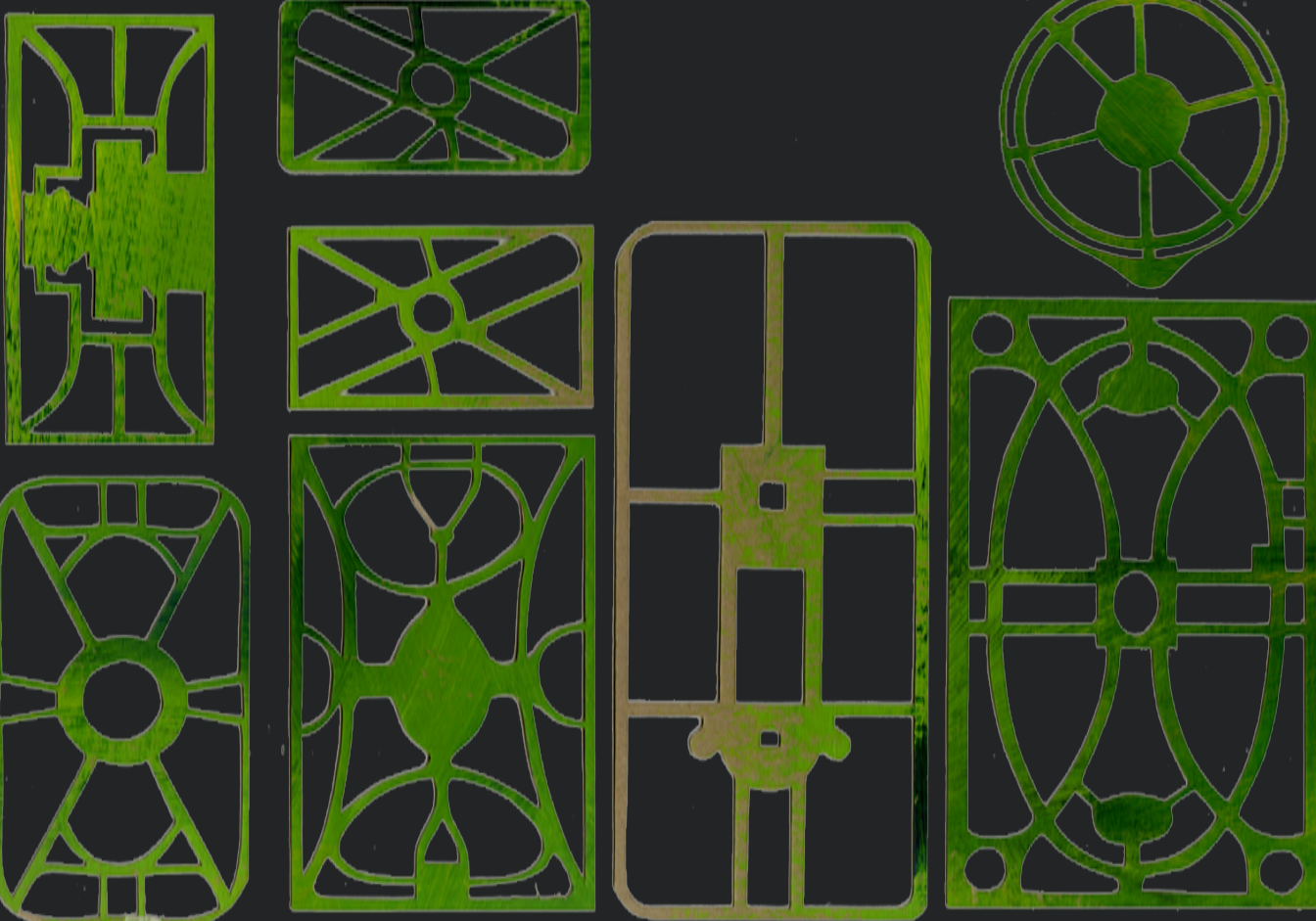
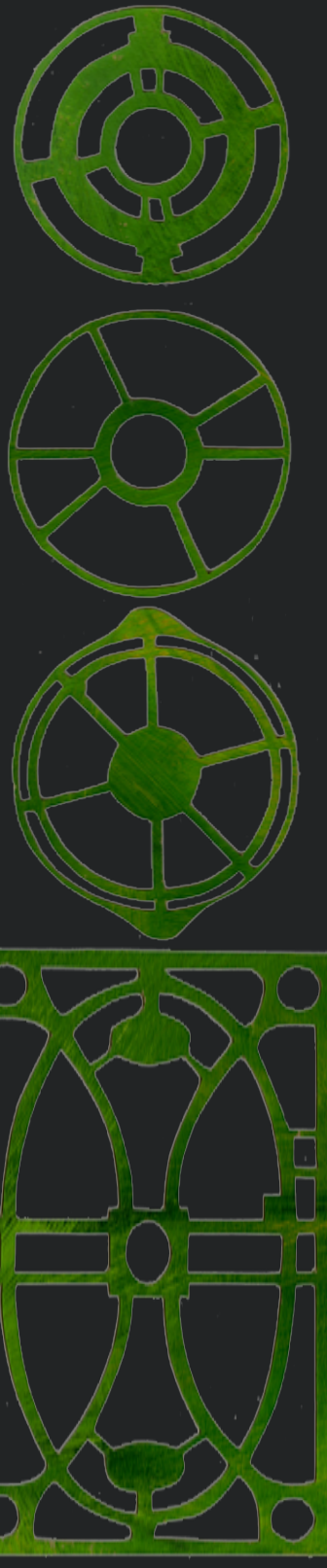


Diagram of the starburst intersection with accompanying cut-outs of the major circles and squares of Washington, D.C.



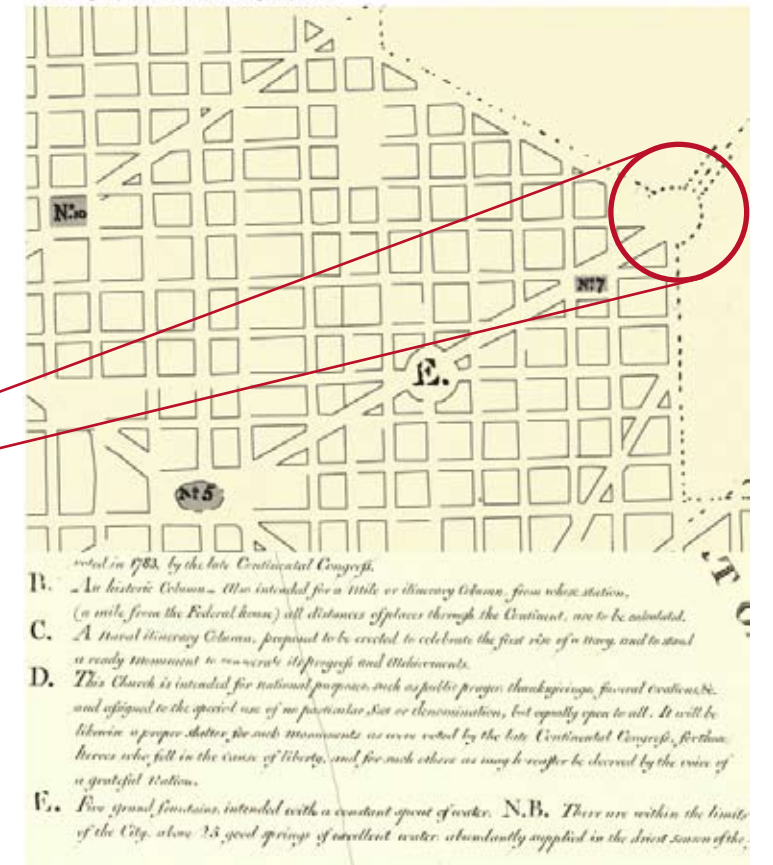
VIEW OF THE SITE

The asymmetrical confluence of six streets results in a frightening and complex intersection, with expansive pedestrian crossings and an absence of bike lanes. One of my first design challenges was to address the intersection and determine whether a circle or square in the spirit of L'Enfant's plan of Washington could focus these streets and define a new sense of place. By invoking the spirit of L'Enfant, I could relate my site to the rest of the city and symbolically connect it back to the Capitol building. I also wanted to stitch together the different street grids that came together here and introduce a stasis amidst the chaos. In relating this space back to the H Street corridor, I explored how it might become a destination at the end of a long 'hallway.'

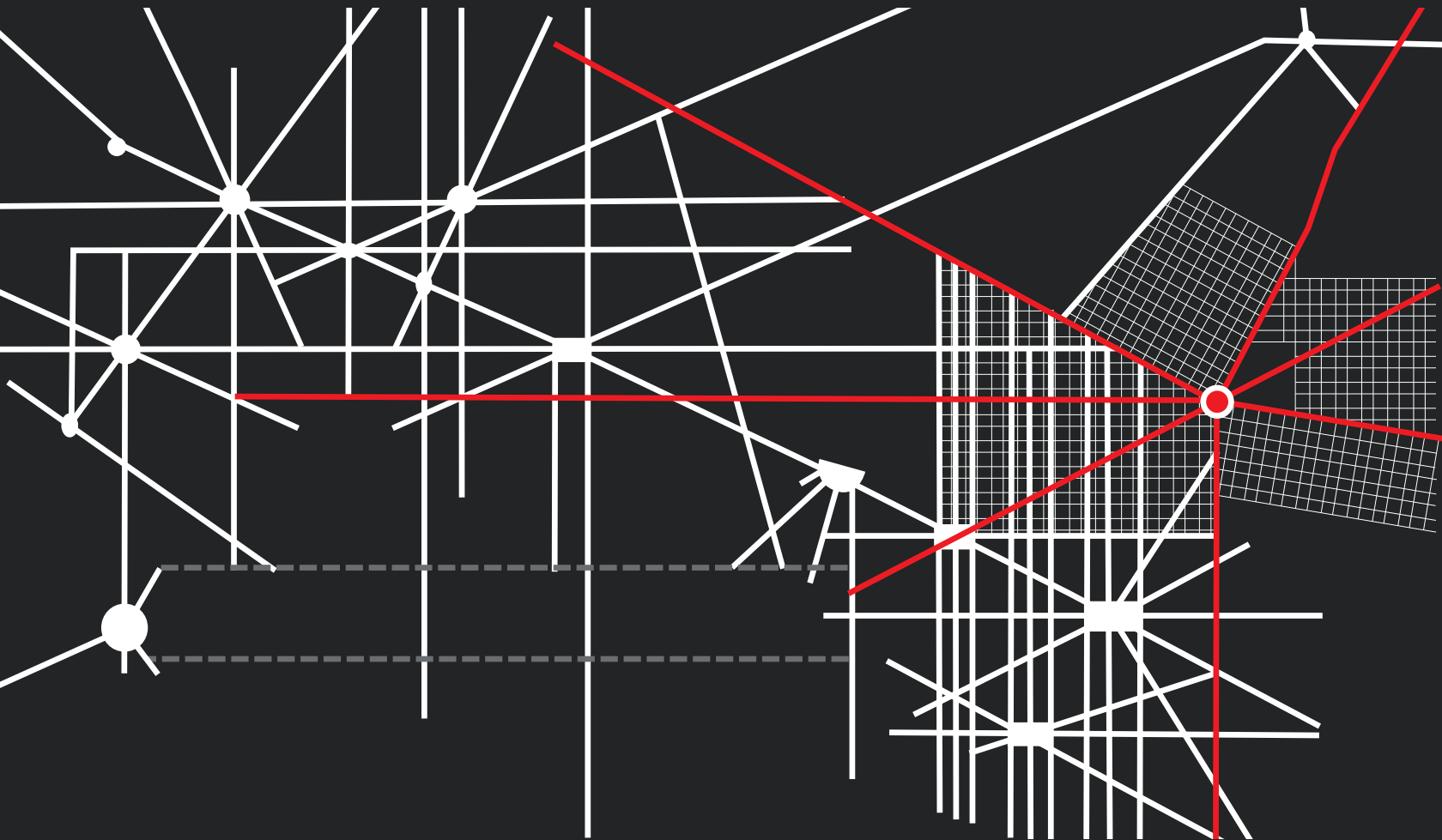
One of the reasons this intersection is so unique is that it was once the very edge of the city. This edge was first defined by L'Enfant's 1791 plan, and through his use of a dotted line L'Enfant suggests a latent desire for a circle.



L'Enfant's 1791 plan for the City of Washington ⁴



From L'Enfant's 1791 Manuscript Plan of the City of Washington (excerpt) ⁵



Site diagram showing the relationships among the streets, street grids, circles and squares of Washington



VIEW OF THE SITE

To understand the history of the site in greater detail, I gathered different maps of my site through time including an overlay of L'Enfant's 1791 plan. Through this exercise I was able to see the history of my site all at once, in layers that revealed how the different street grids emerged and how different structures came and went. Where the old city met the new, there was once a desire for H Street to continue east, without interruption. These layers of information inspired my drawing over the site and I soon arrived at several iterations as to how a new public space could be formed around a new, dense composition of buildings, how new streets could be carved in order to weave the various street grids back together, and how this new place could relate to the city as a whole — both physically and symbolically. Meanwhile, in the back of my mind, I was still considering how a new transit system — be it light rail, rapid bus transit, or something more futuristic could interact here.



Site maps layered through time.



VIEW OF THE SITE

I studied views from the site as a way to visually connect it to different parts of the city. While this intersection is no longer the boundary line of D.C., it still feels like an edge, where the 'old' city meets the new. Currently, this is a very fragmented urban space, with different street grids mashing together. To represent this condition, and also convey the different views from the site, I constructed a worldview kaleidoscope that I could use to take photographs of these views and express the fractured condition of the area. In turn, I also saw the kaleidoscope itself as representing a tower that contained these views, which led me to think about incorporating a viewing tower into the site. By inhabiting the tower, you could simultaneously perceive your relationship in space to the Capitol Building, the Anacostia River, the Arboretum, and the H Street corridor.



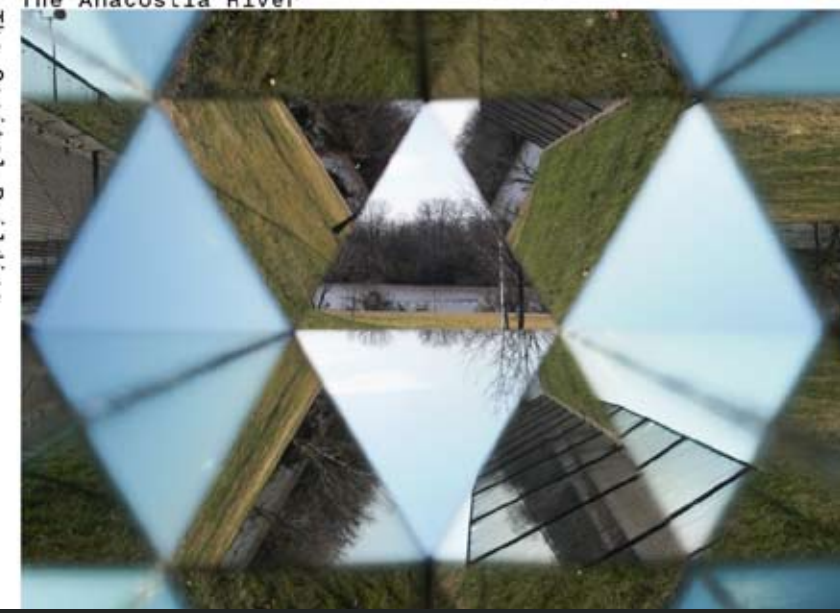
The Atlas District



The National Arboretum



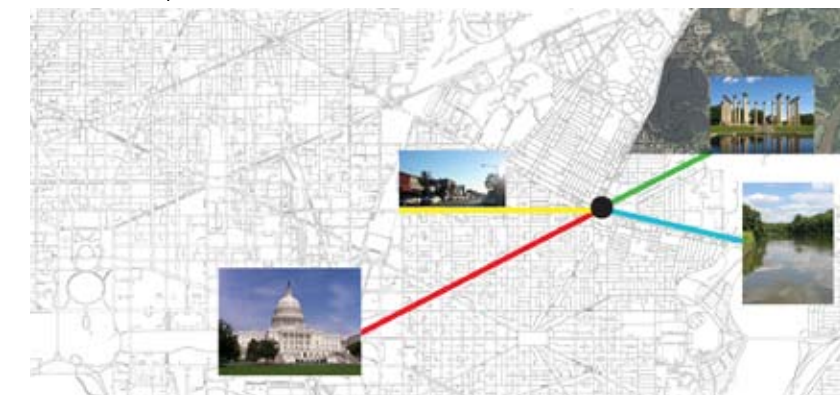
The Capital Building



The Anacostia River



Worldview kaleidoscope



Views from the site



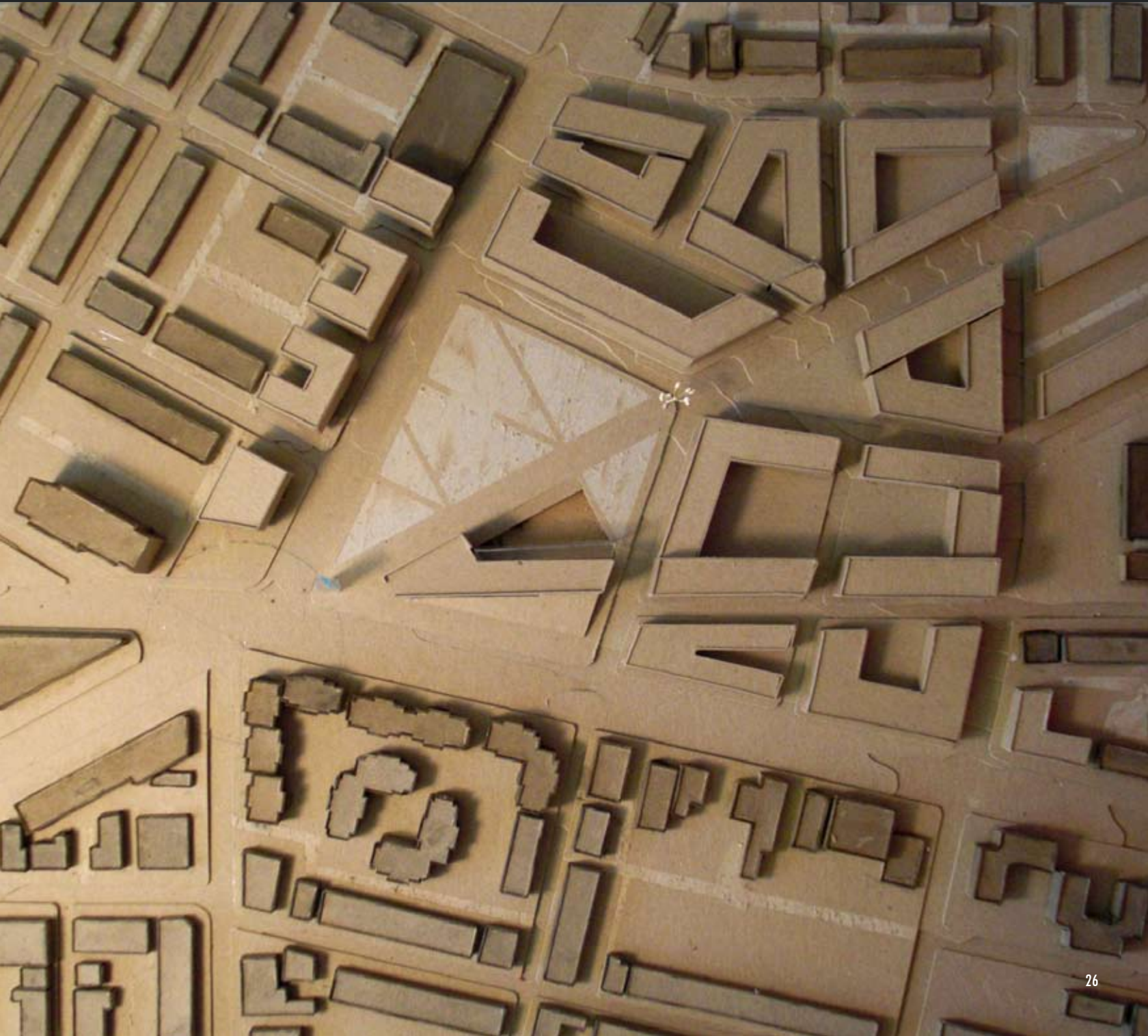
VIEW FROM ABOVE



VIEW FROM ABOVE

The first design challenge that I gave myself was to address the intersection. Simultaneously I worked on various iterations of the master plan, seeing how ideas from the plan might then inform the intersection.





VIEW FROM ABOVE

Through the process of analyzing the urban design opportunities inherent in the city and the site, I was inspired to design a community college and mixed-use neighborhood.

I committed to an initial scheme that allowed me to define a large public plaza north of Benning Road and framed by the main buildings of the community college and retail. Here, the plaza is shaped by the surrounding streets and dominated by the axis of Maryland Avenue. A viewing tower and the library for the community college inhabit the plaza along the implied line of H Street, with a monumental stair facing south along Benning Road.



Scale comparison between Dupont Circle and the Community College plaza



Site Model: First iteration





VIEW FROM THE GROUND

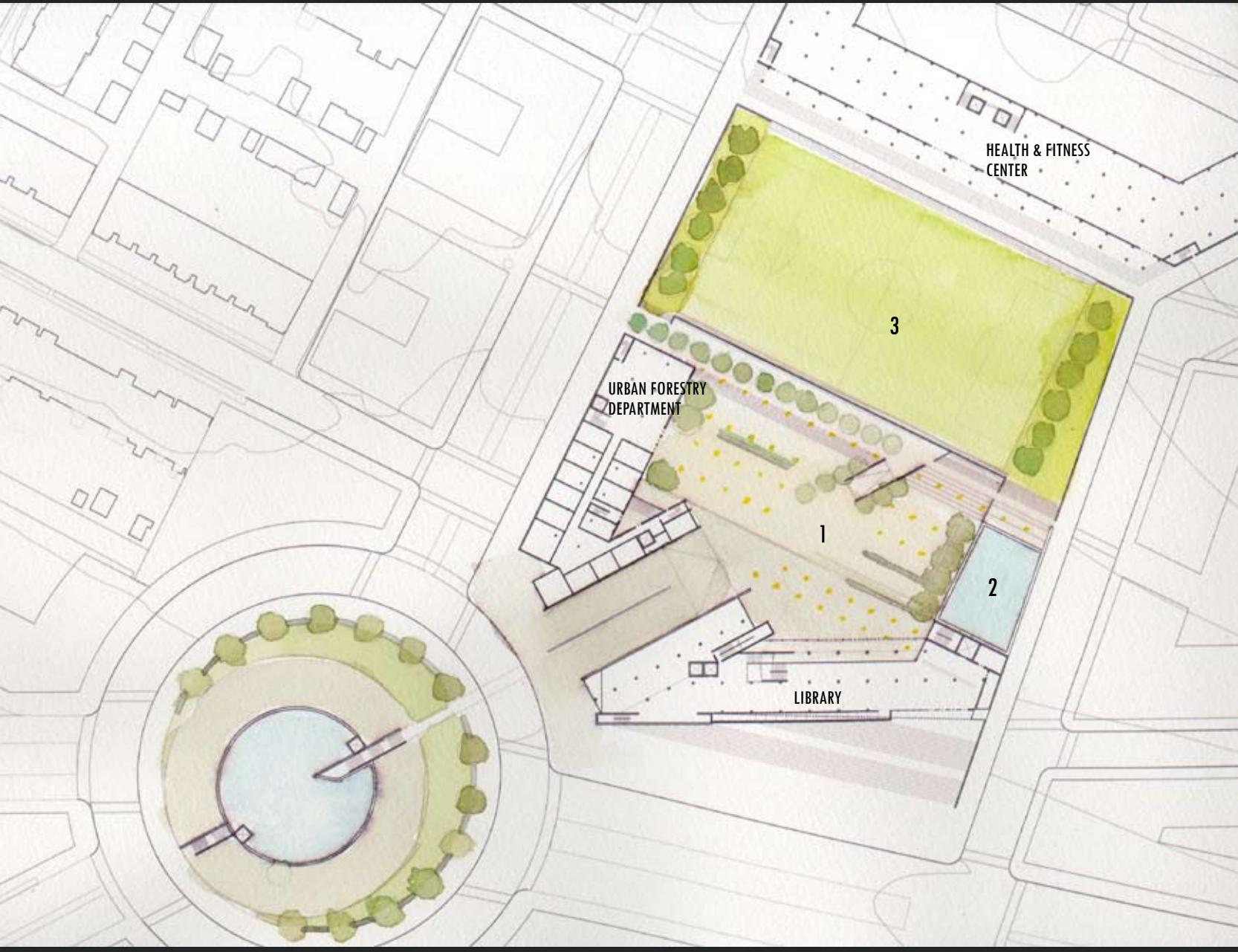
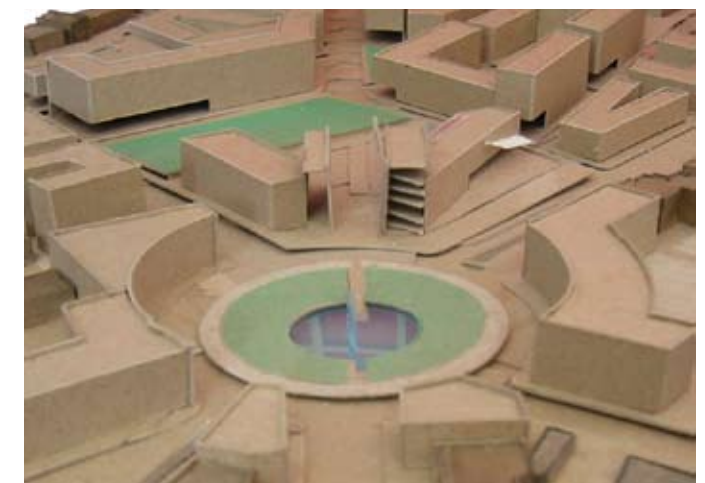
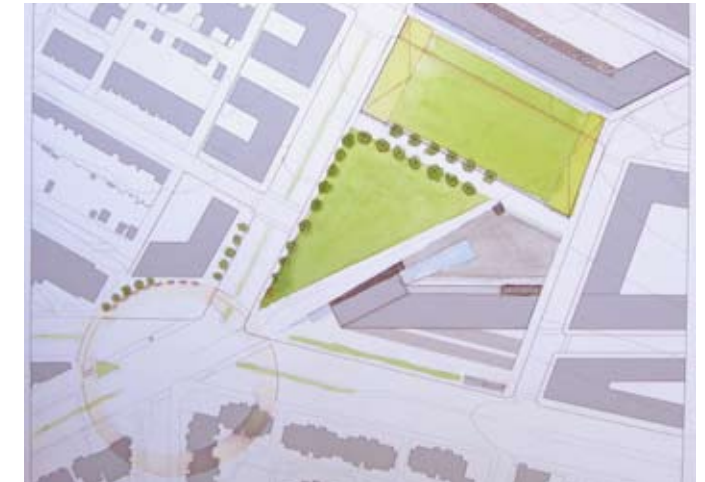
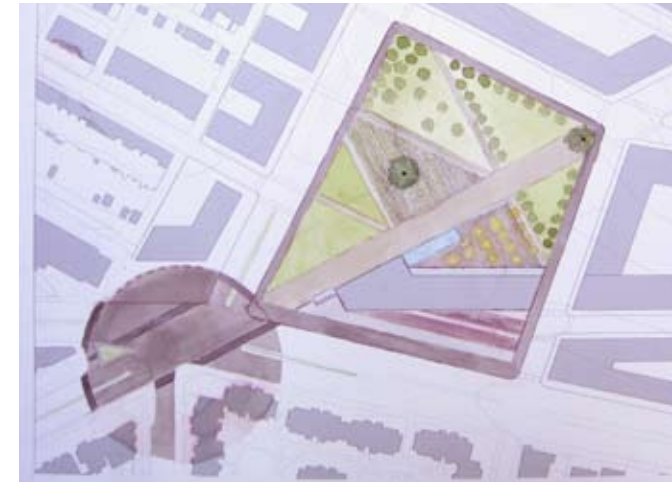


VIEW FROM THE GROUND

Not satisfied with the spatial qualities of my initial master plan, I returned to the starburst intersection, realizing it was a crucial element to the design. To give this area a definitive identity and clear sense of place, I carved a circle into the ground.

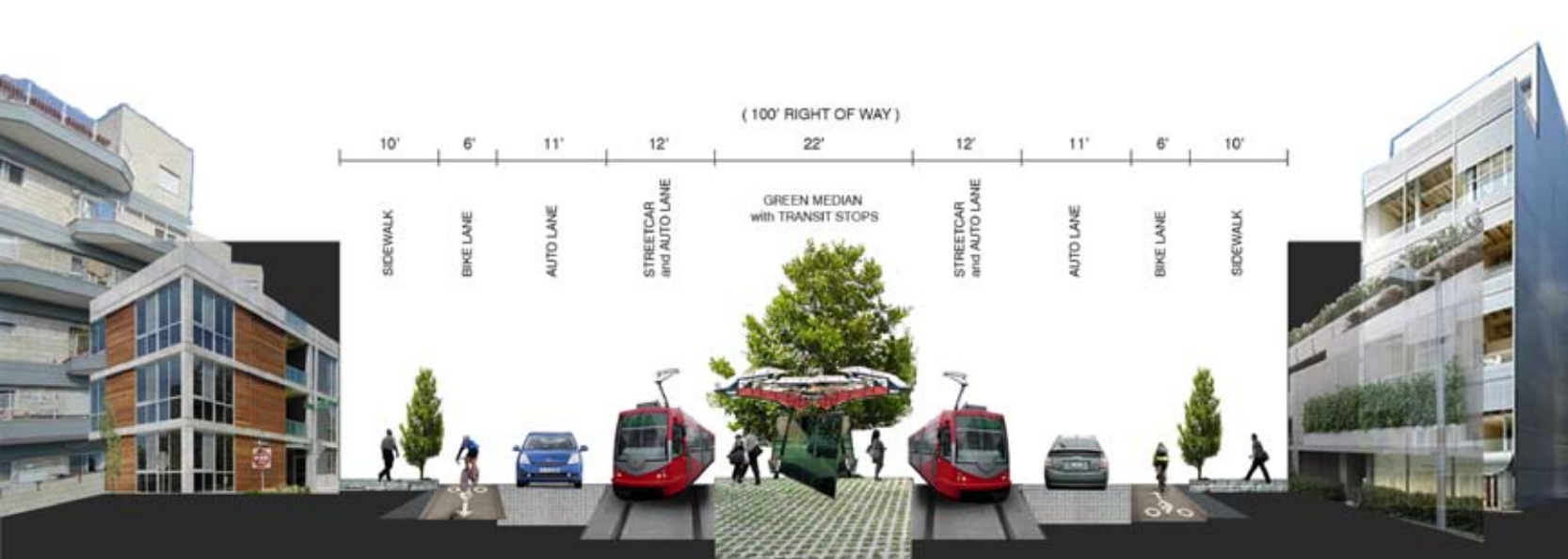
I redefined the plaza to contain an additional academic building and three primary zones. The first is the paved area adjacent to the buildings for sitting and gathering in the sun or shade. The second element is a two story structure that is connected to the library that contains a memorial space for the cemetery that was once on this site, and sheltered bike parking at the plaza level below. The third element is the athletic field, which provides a place for play between the Health and Fitness center and the Library — it is the symbolic link connecting the mind to the body.

Watercolor studies of the circle and plaza

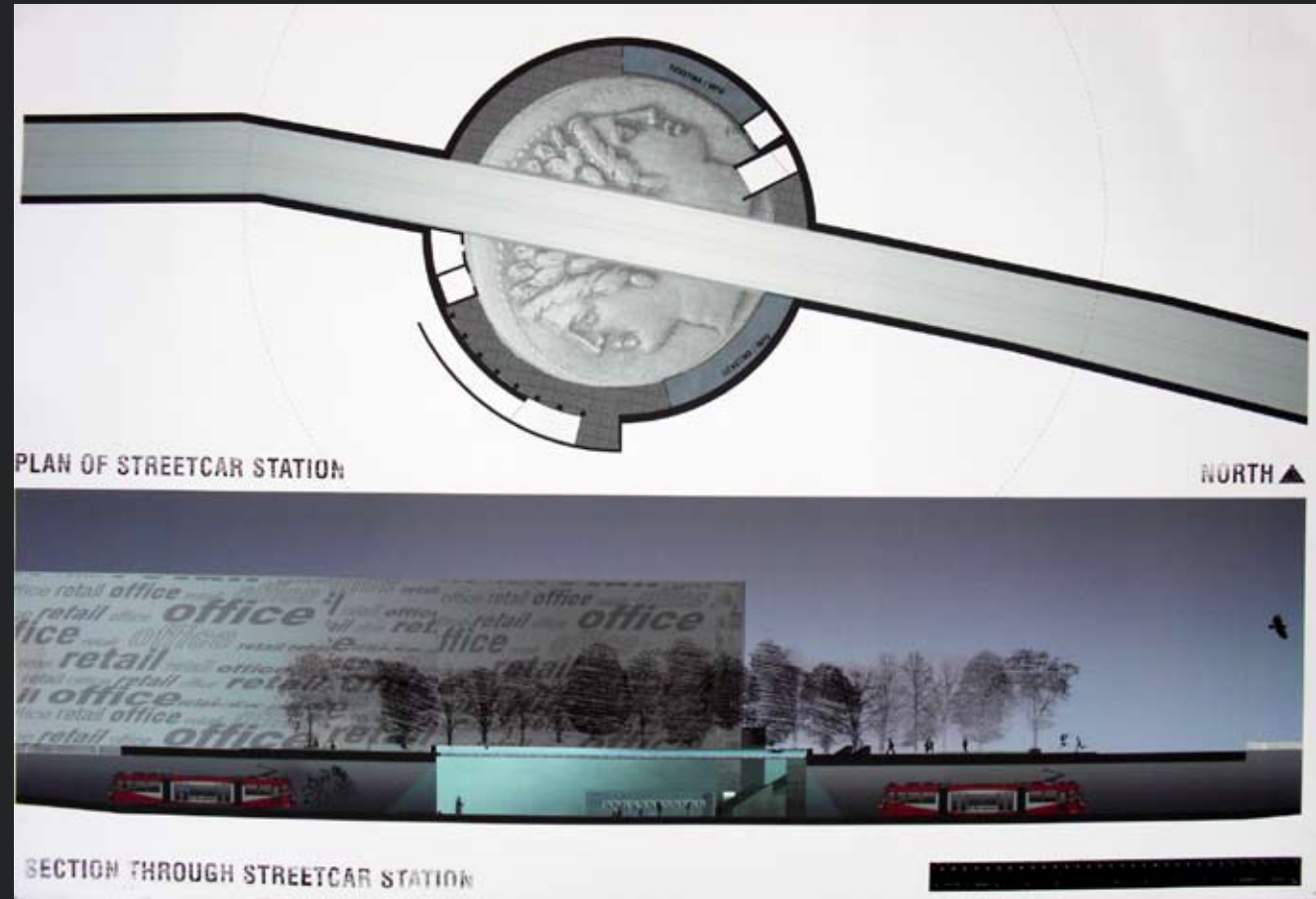


Second iteration of the master plan highlighting the circle and a redefinition of the plaza

Site Model : second iteration



Illustrative section through H Street



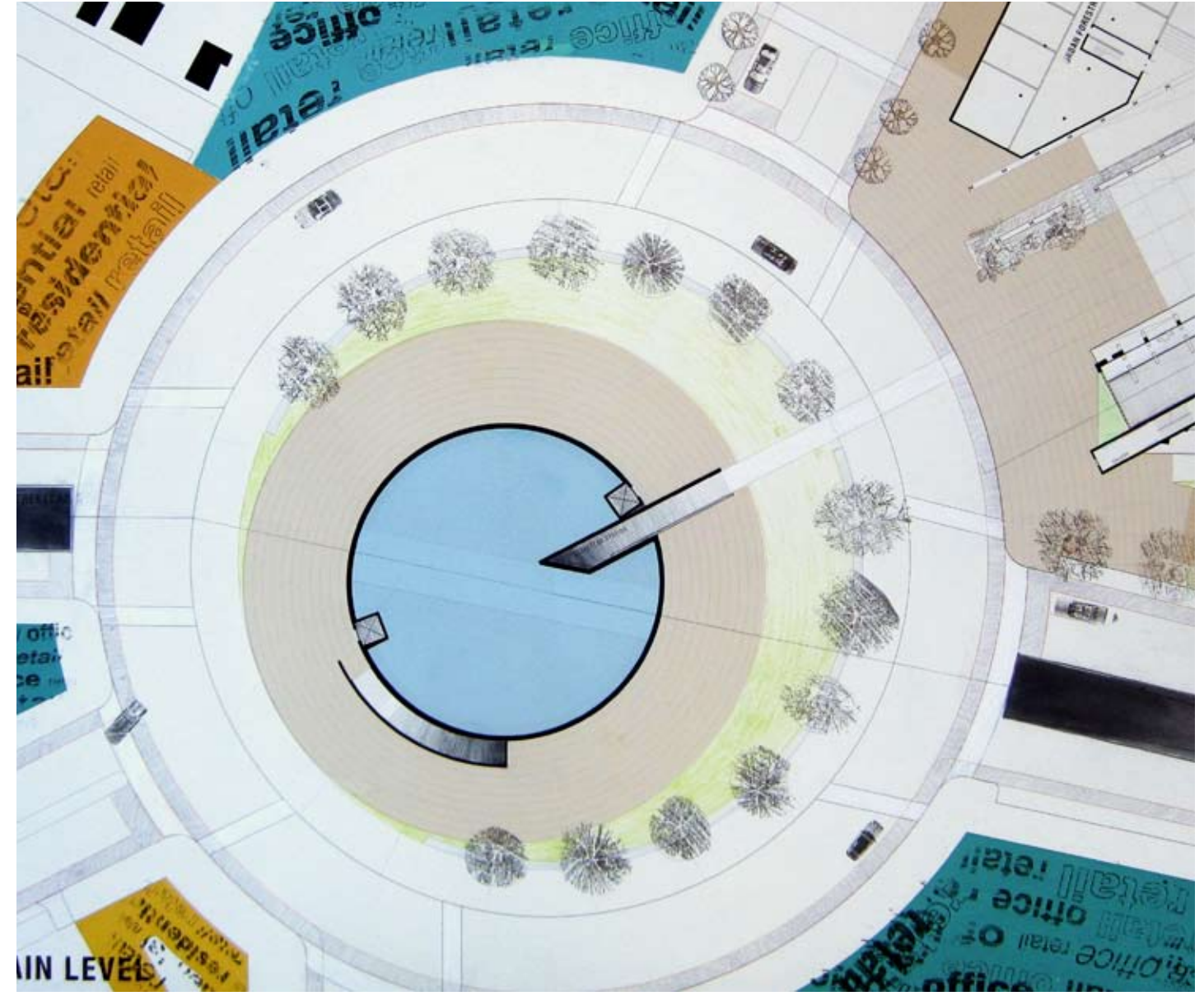
PLAN OF STREETCAR STATION

SECTION THROUGH STREETCAR STATION



VIEW FROM THE GROUND

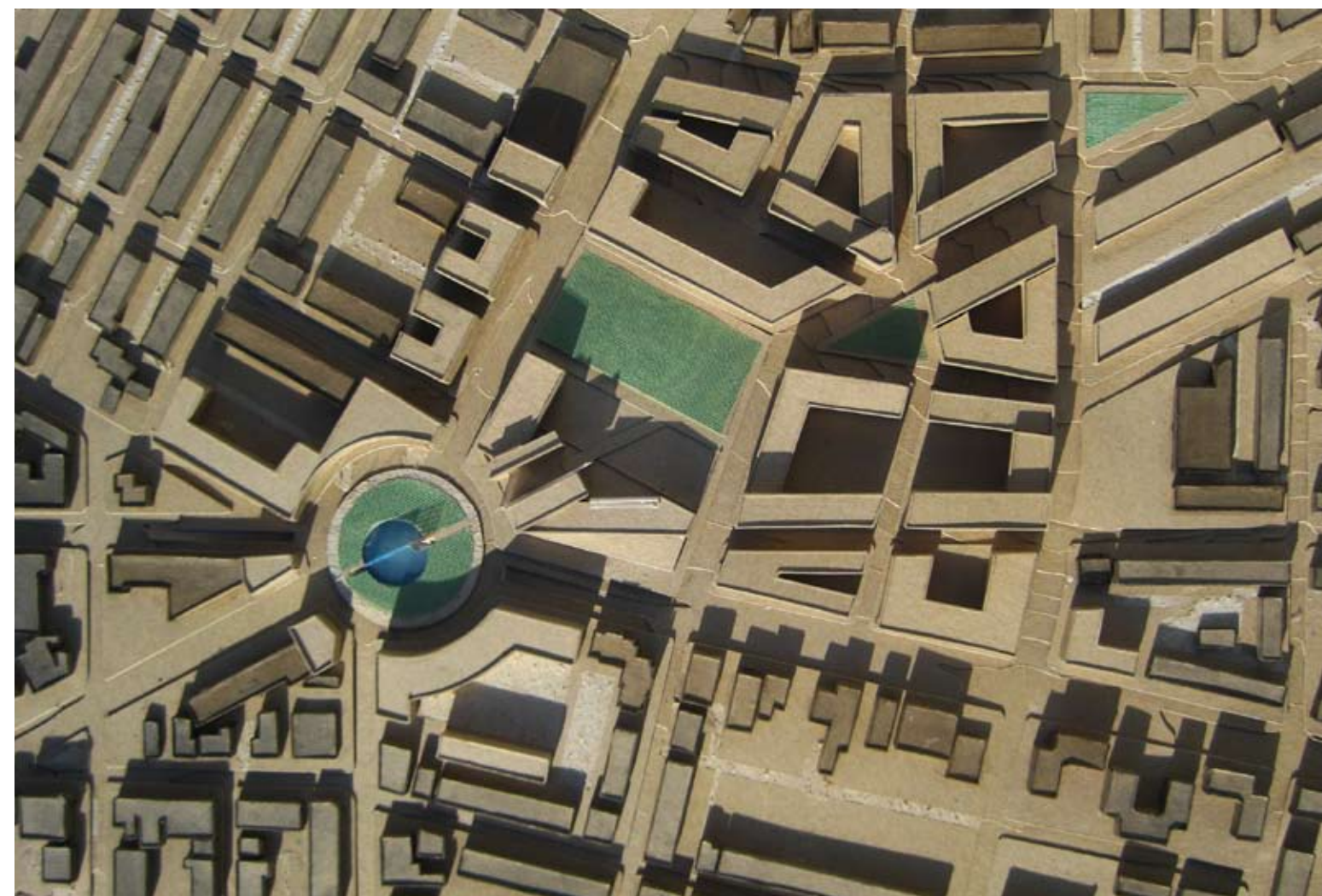
The circle bestowed a green space that belonged just to the community, while the plaza could then belong more to the identity of the school. The circle also presented an opportunity to celebrate the streetcar. The streetcar dips below the circle and pauses at a platform lit by the translucent pool of water above. At the street level, the perimeter of the circle is defined by a ring of retail, office, and residential buildings.





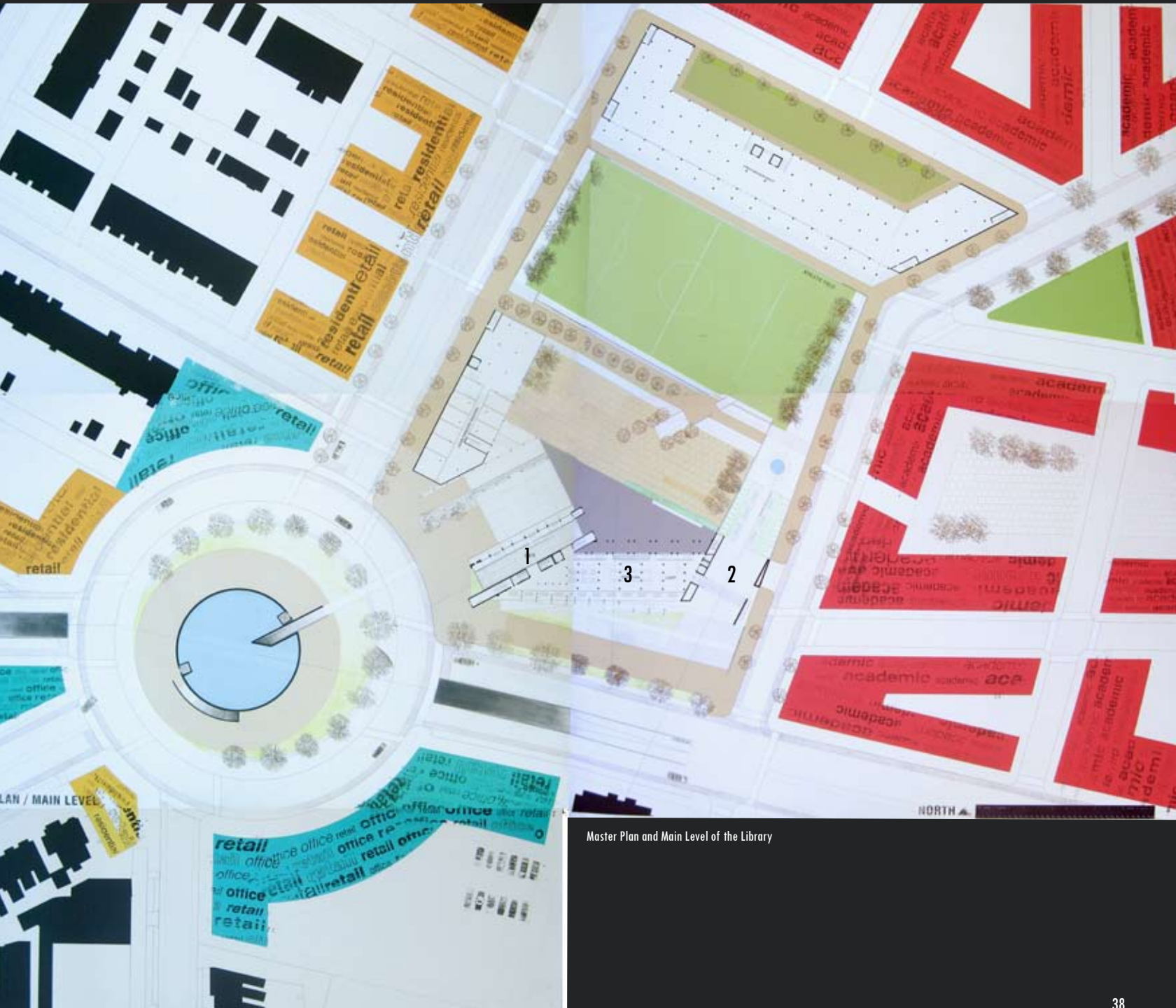
VIEW FROM THE GROUND

Site model of the final master plan





VIEW FROM WITHIN

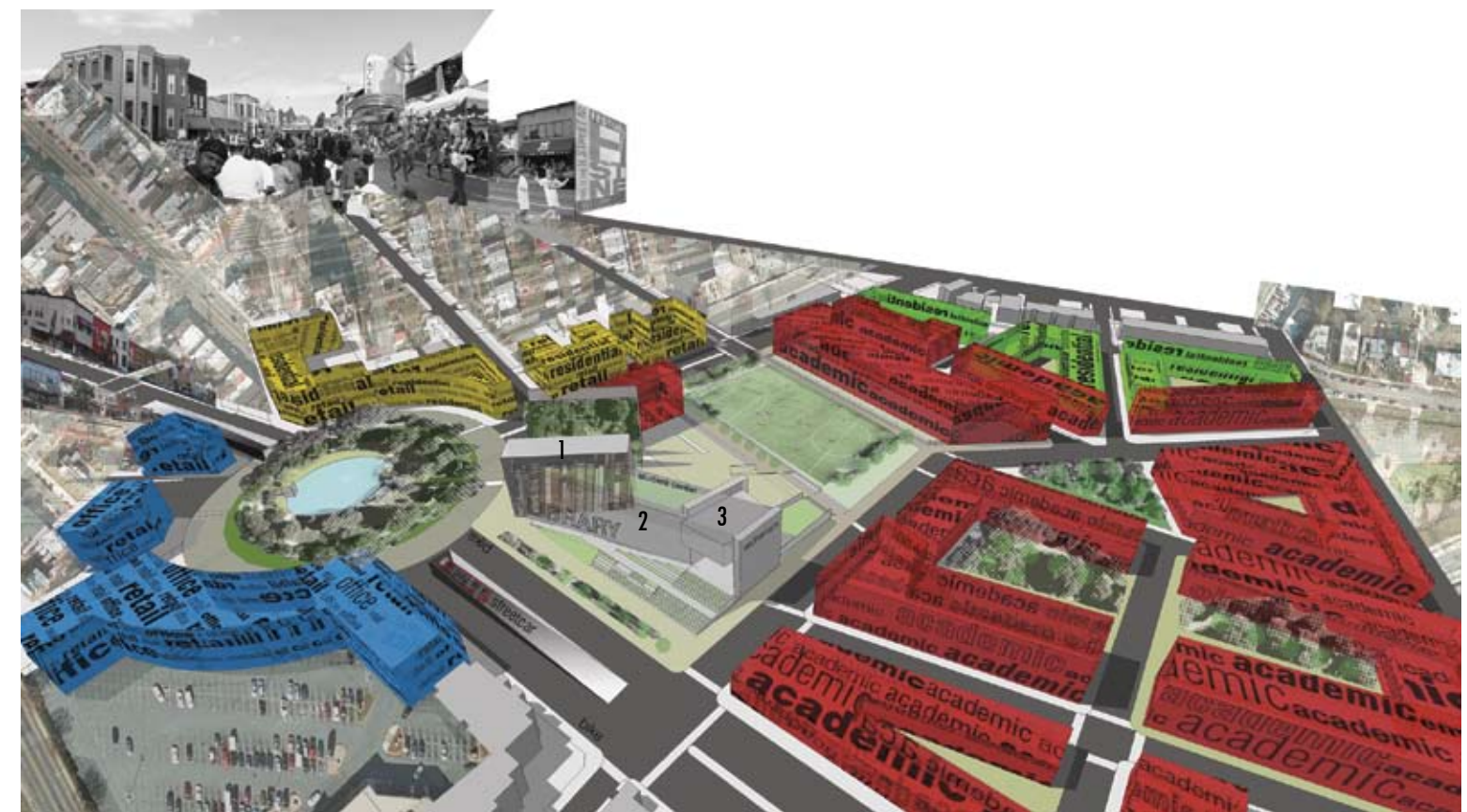


Master Plan and Main Level of the Library

VIEW FROM WITHIN

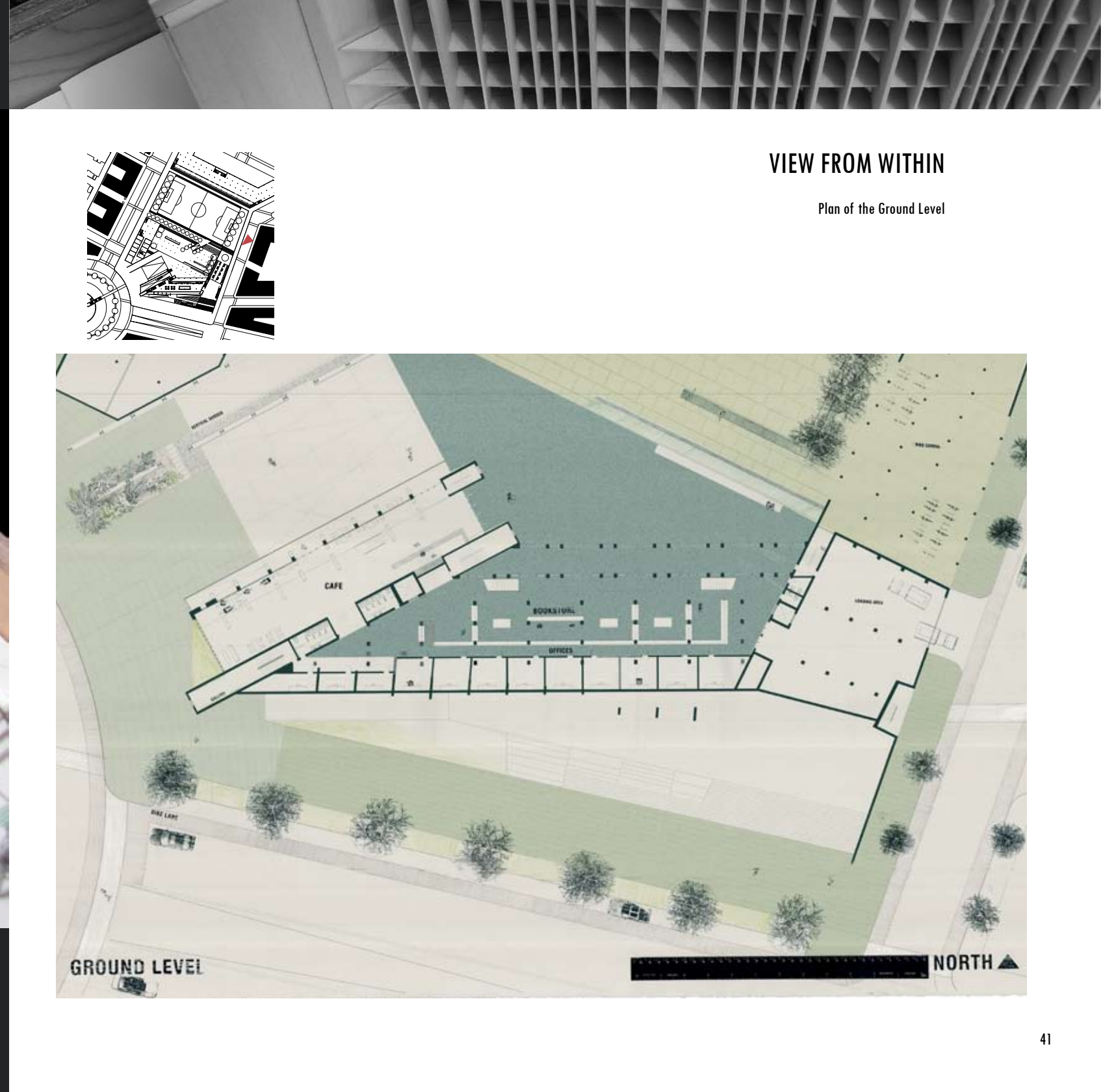
Simultaneously as I was refining the master plan, the circle, and the plaza, I was also designing the signature building for the Community College — the Library & Student Center. The massing and geometry of the building are influenced by adjacent streets and sight lines. Three volumes comprise the massing: the tower, the main bar, and the suspended auditorium and entryway.

1. The tower contains a café with three mezzanine levels, four levels of book stacks above, and a Map Room that houses special collections of maps of Washington.
2. The main bar contains research areas, book stacks, study carrels, meeting rooms, and a bookstore at the plaza level.
3. Two walls frame and define the main entrance to the library and support the auditorium and terrace above. A double skylight through the suspended auditorium illuminates the entry, while views beyond reveal the memorial space and plaza.



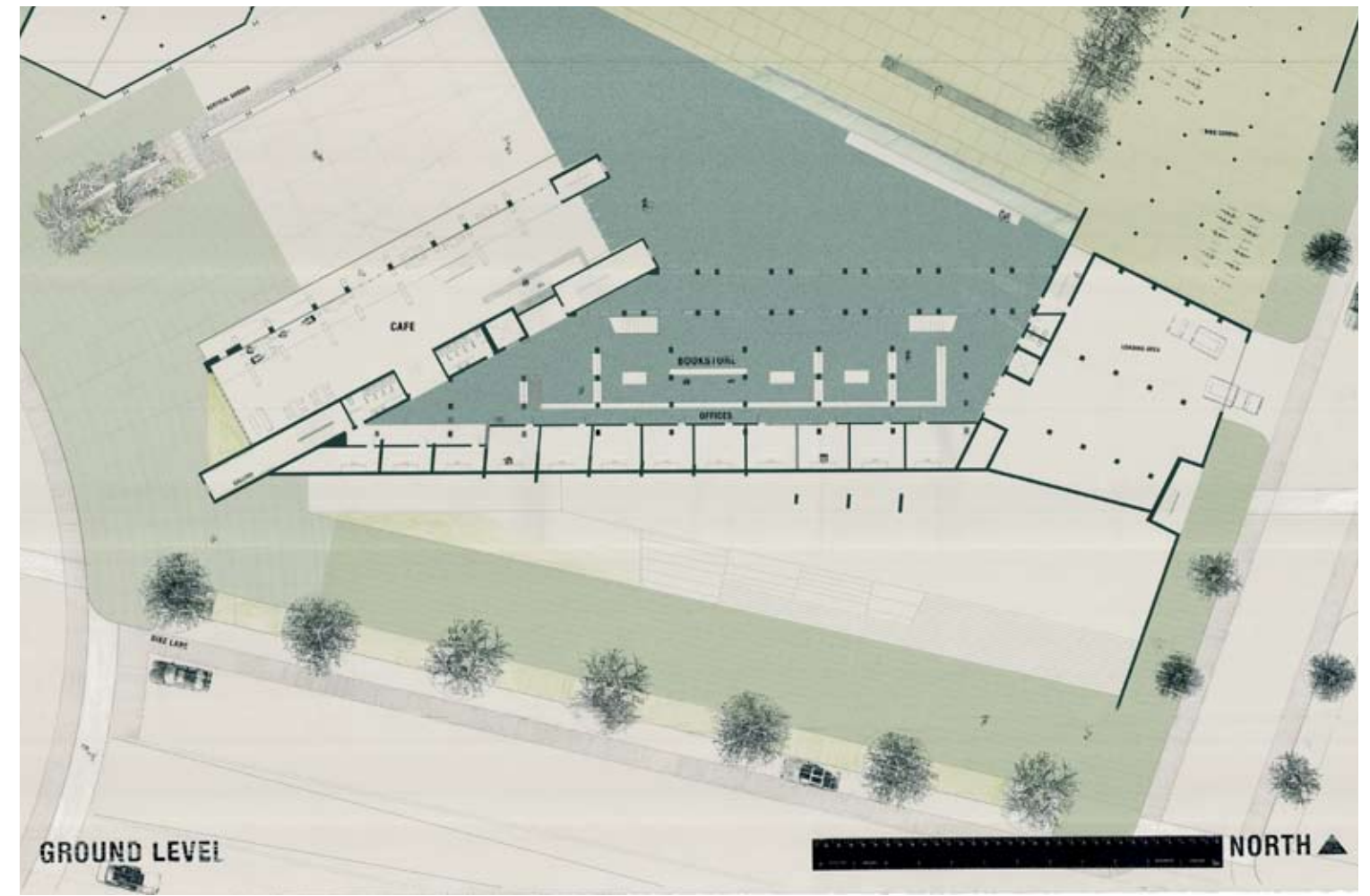
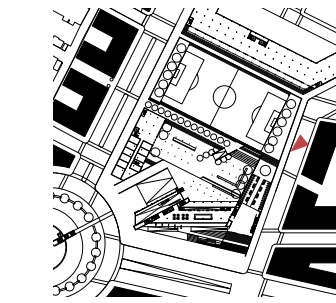
Bird's eye view of the master plan with building programming

■ ACADEMIC ■ RETAIL / OFFICE ■ RETAIL / RESIDENTIAL ■ RESIDENTIAL



VIEW FROM WITHIN

Plan of the Ground Level



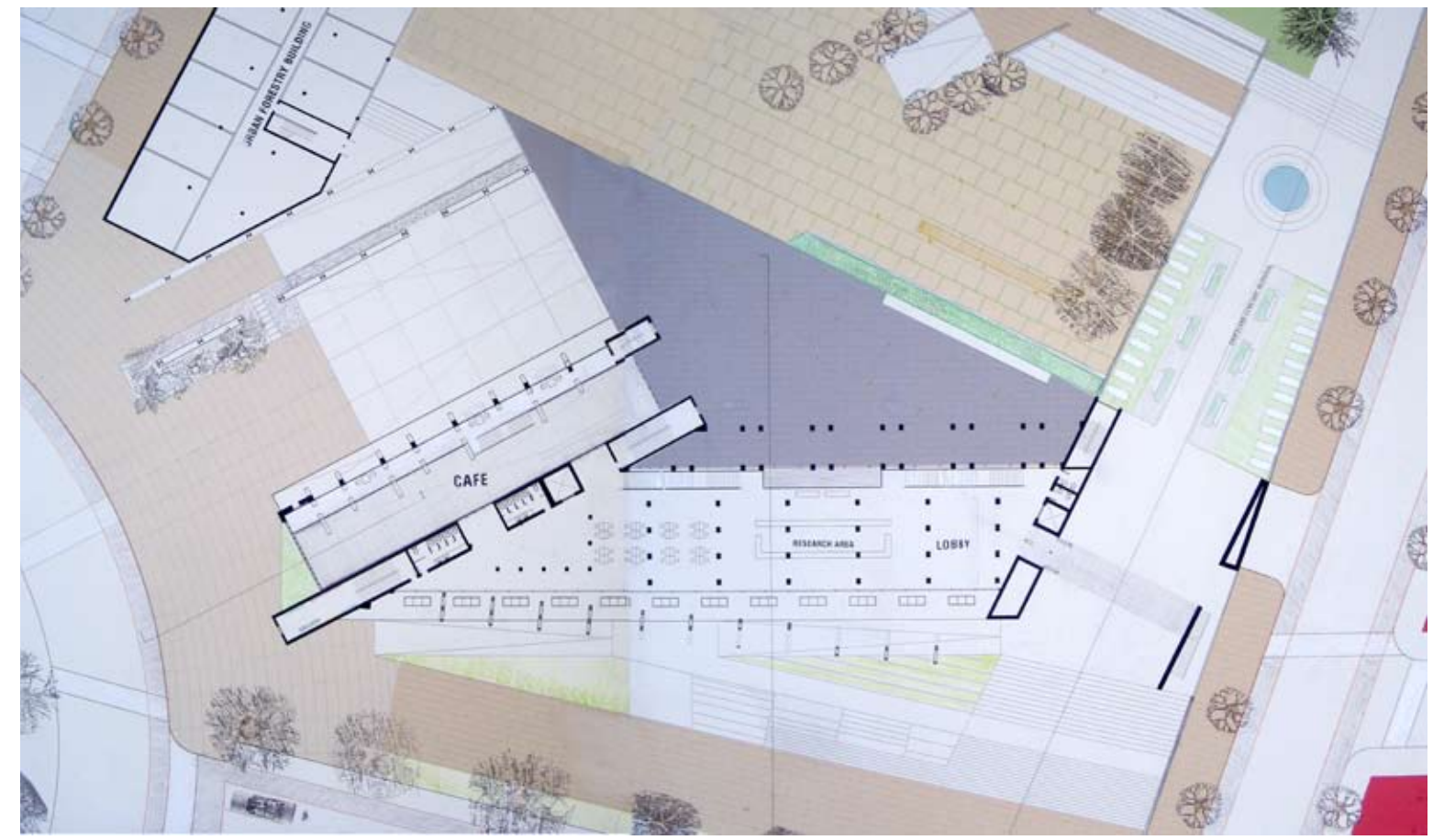
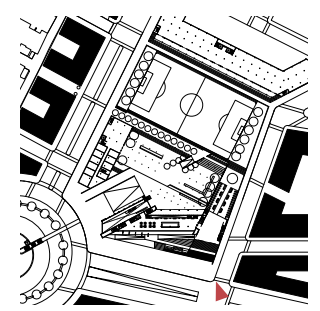
GROUND LEVEL

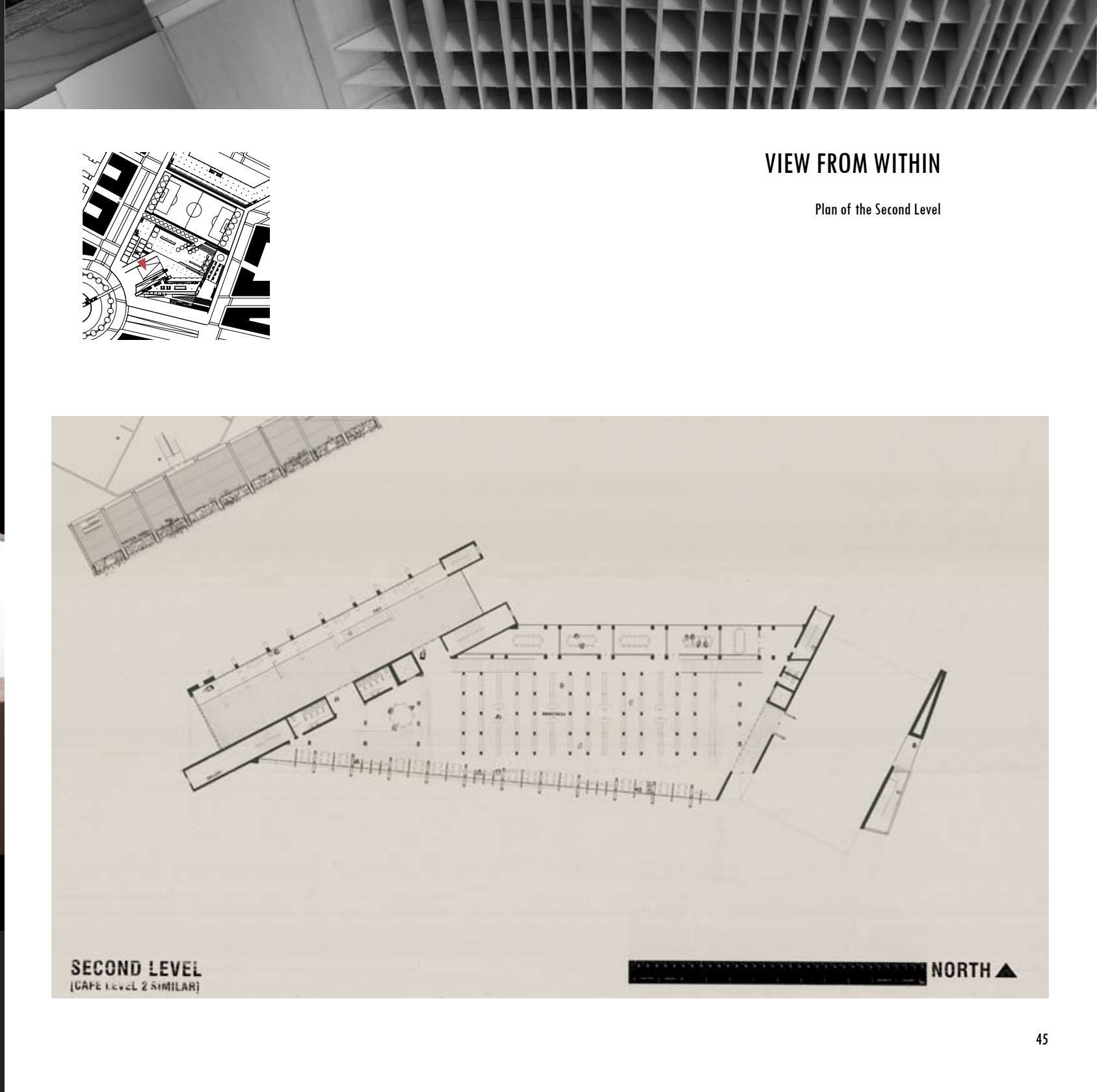
NORTH



VIEW FROM WITHIN

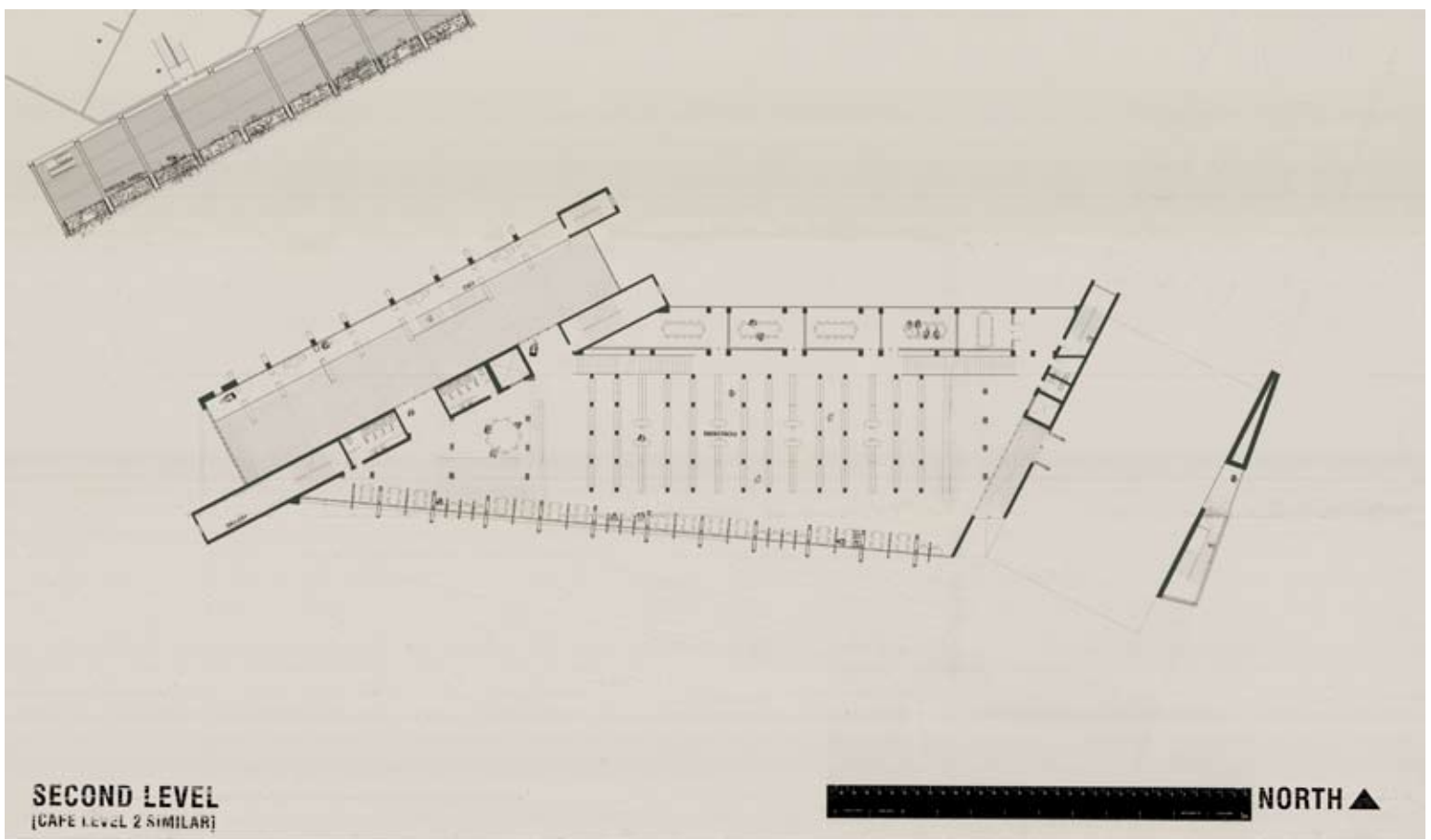
Plan of the Main Level

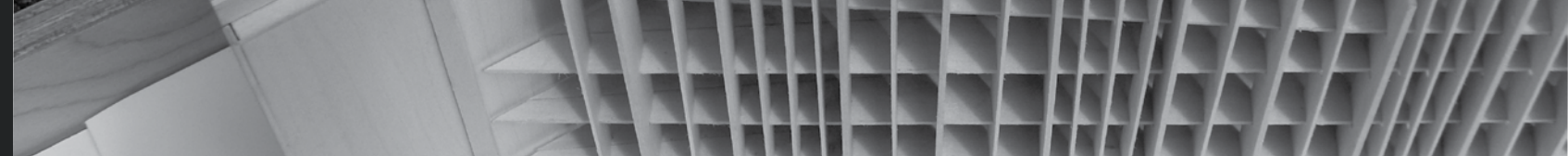




VIEW FROM WITHIN

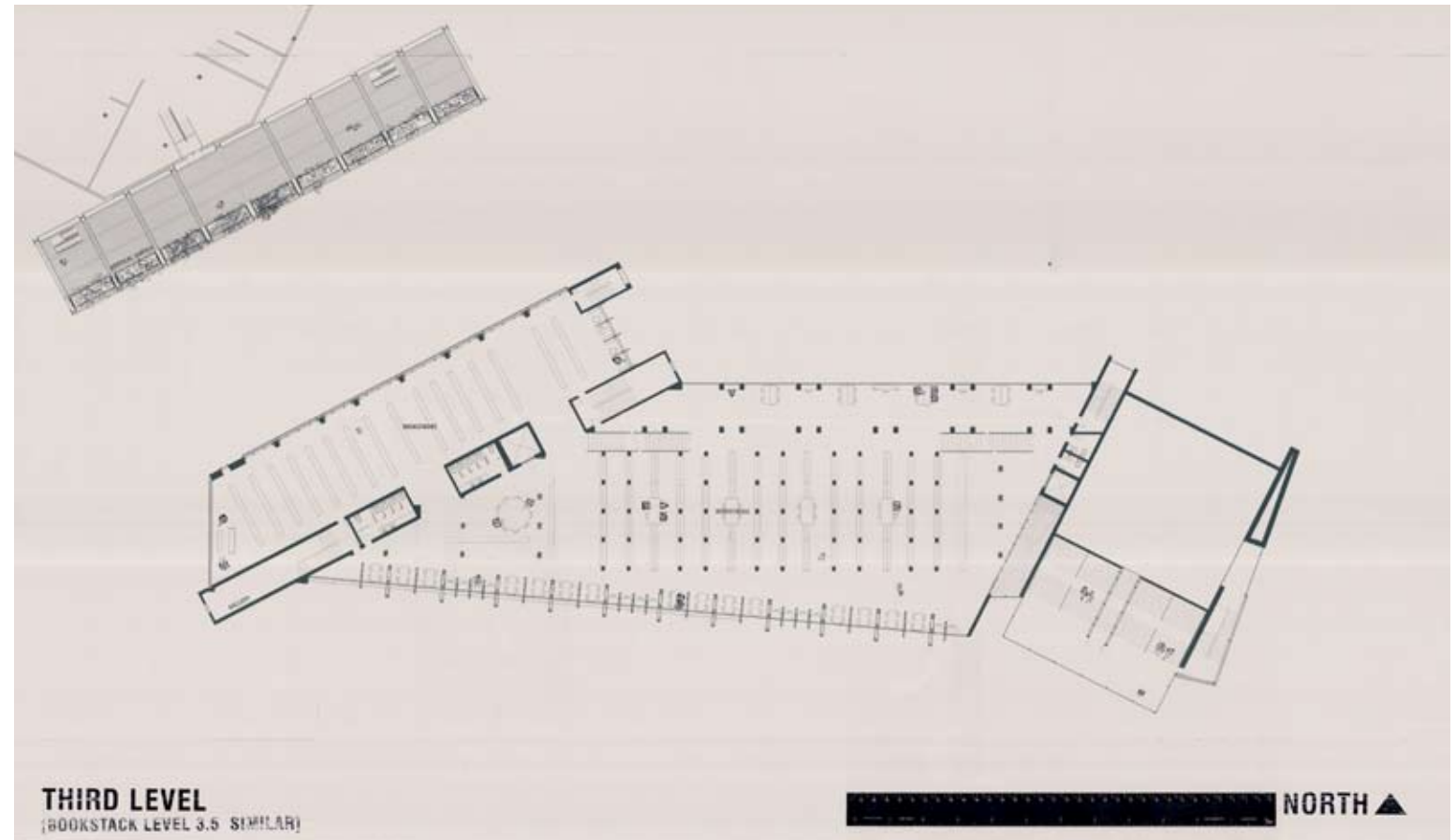
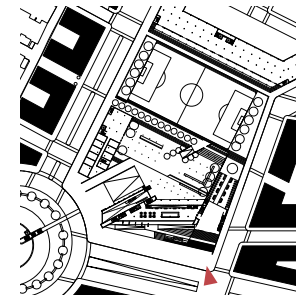
Plan of the Second Level





VIEW FROM WITHIN

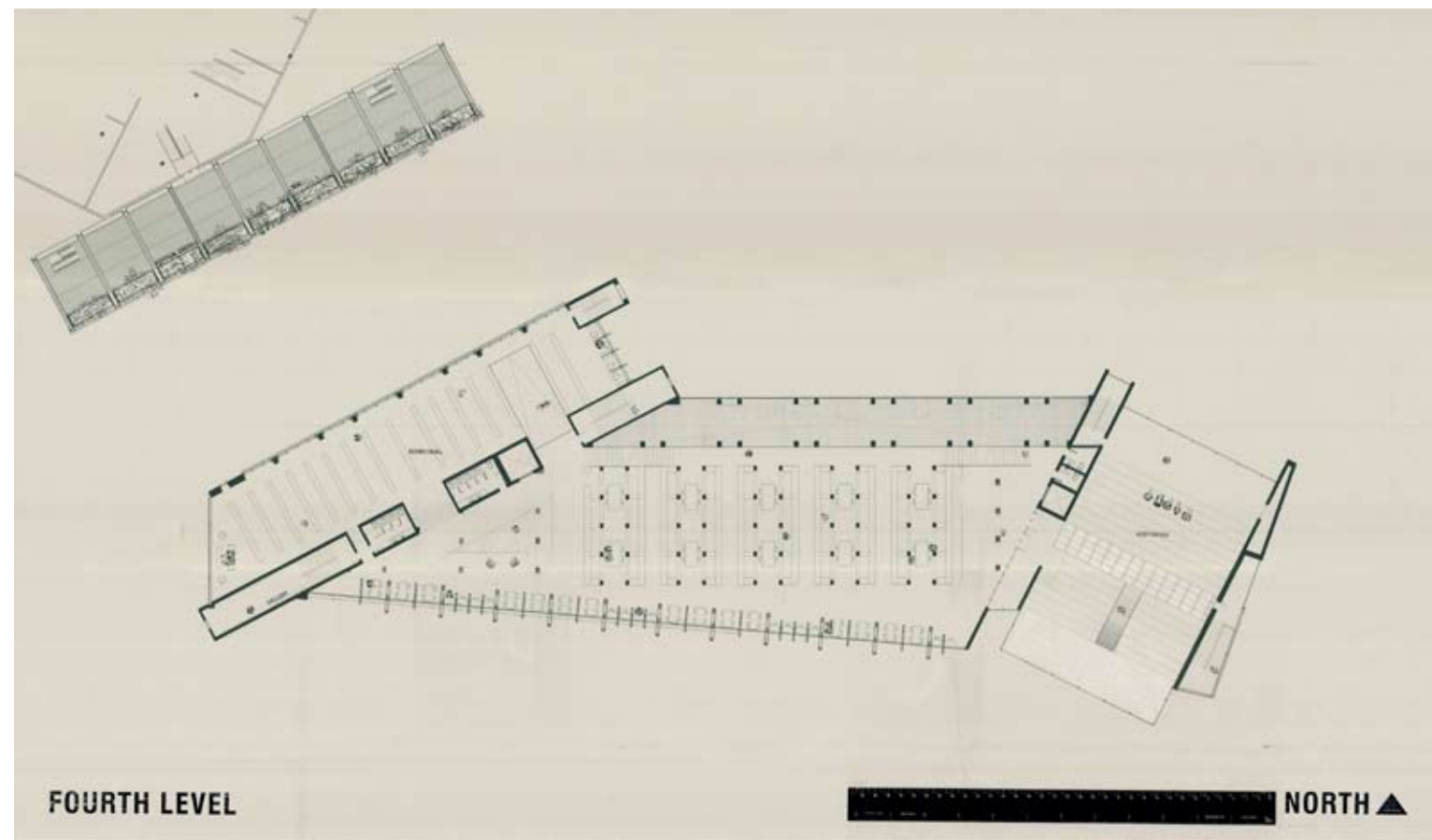
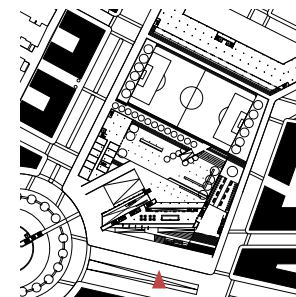
Plan of the Third Level





VIEW FROM WITHIN

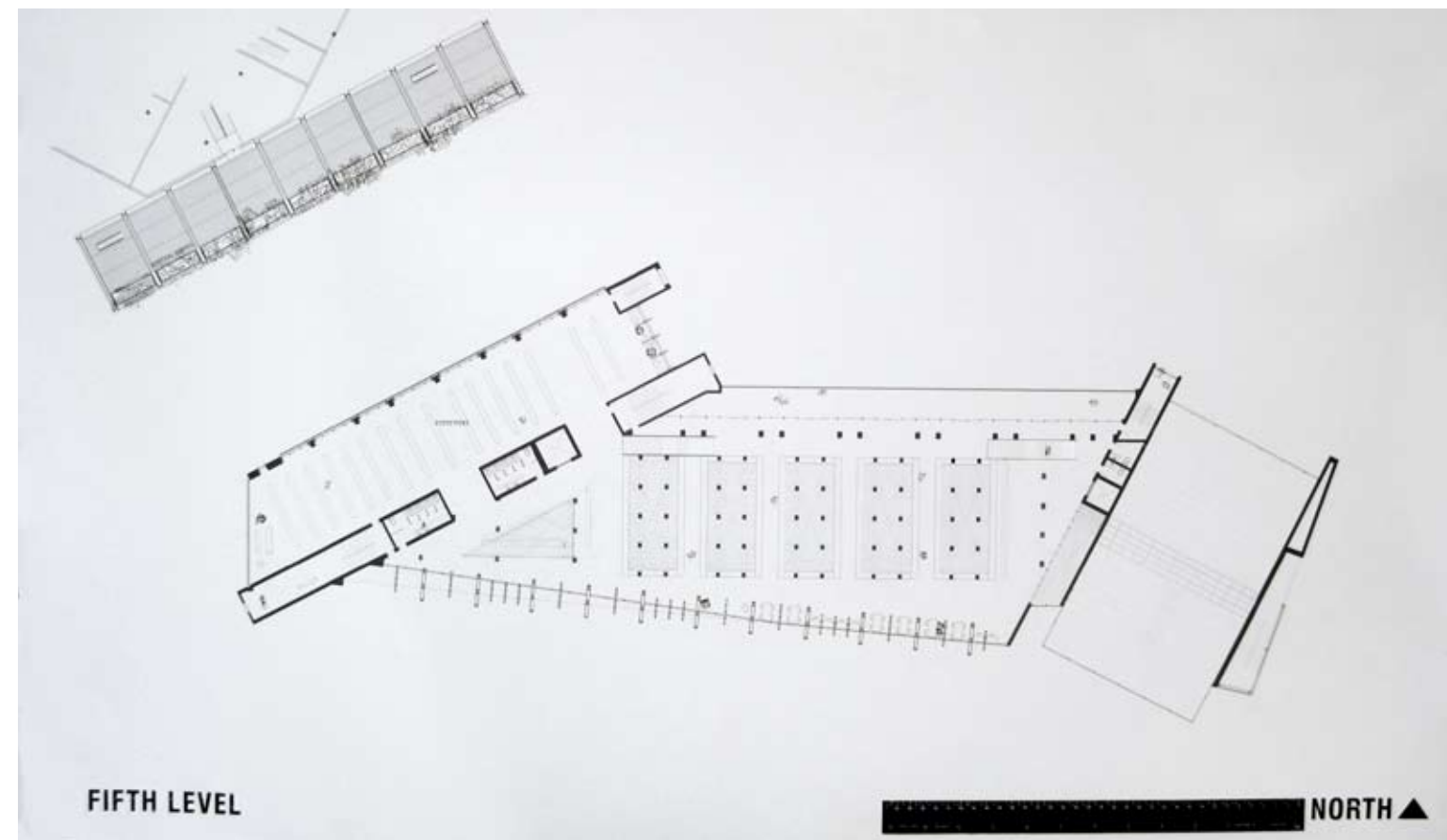
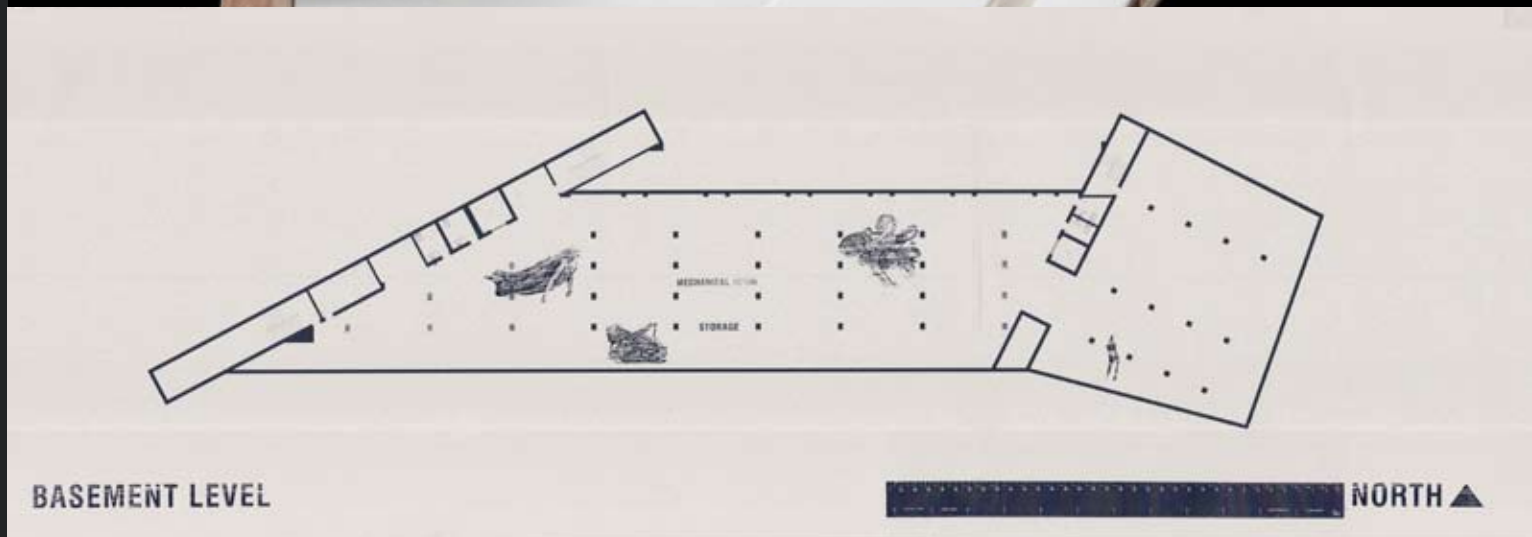
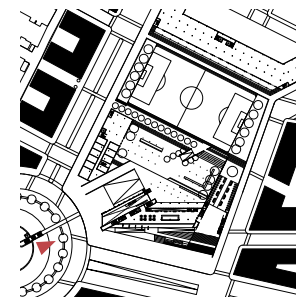
Plan of the Fourth Level

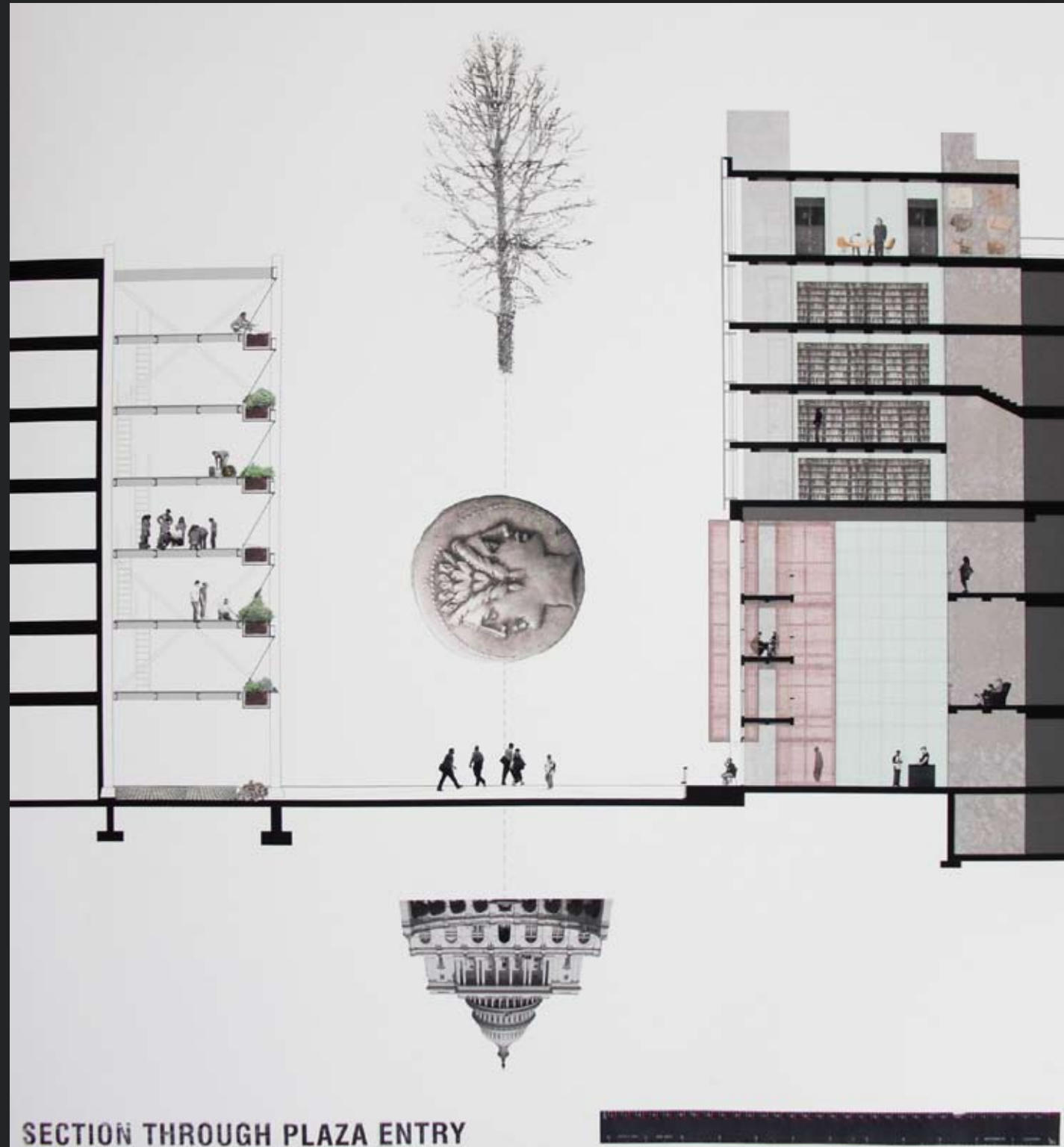




VIEW FROM WITHIN

Plan of the Fifth Level and Basement Level



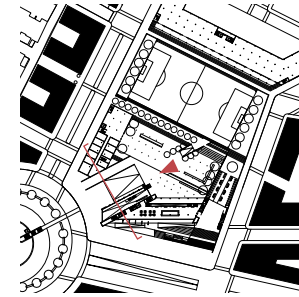


SECTION THROUGH PLAZA ENTRY



VIEW FROM WITHIN

Section through plaza entry & opposing perspective

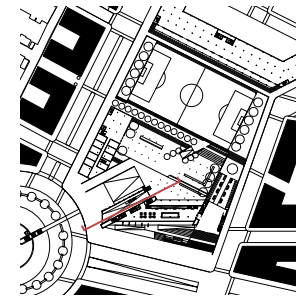


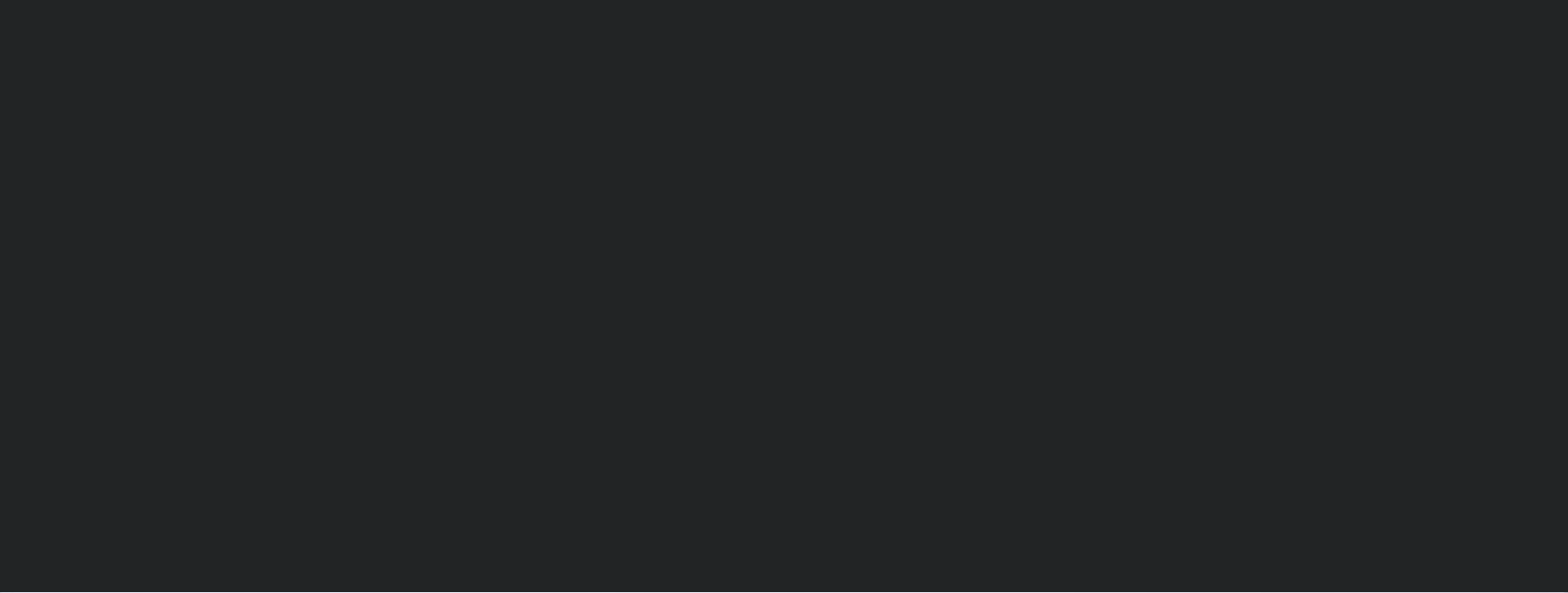
Perspective looking southwest towards the Capitol Building



VIEW FROM WITHIN

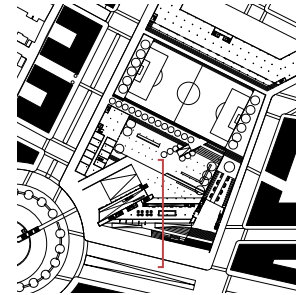
Section through stack tower with glass wall detail & kaleidoscope view of the Capitol Building





VIEW FROM WITHIN

Transverse building section & perspective looking northeast



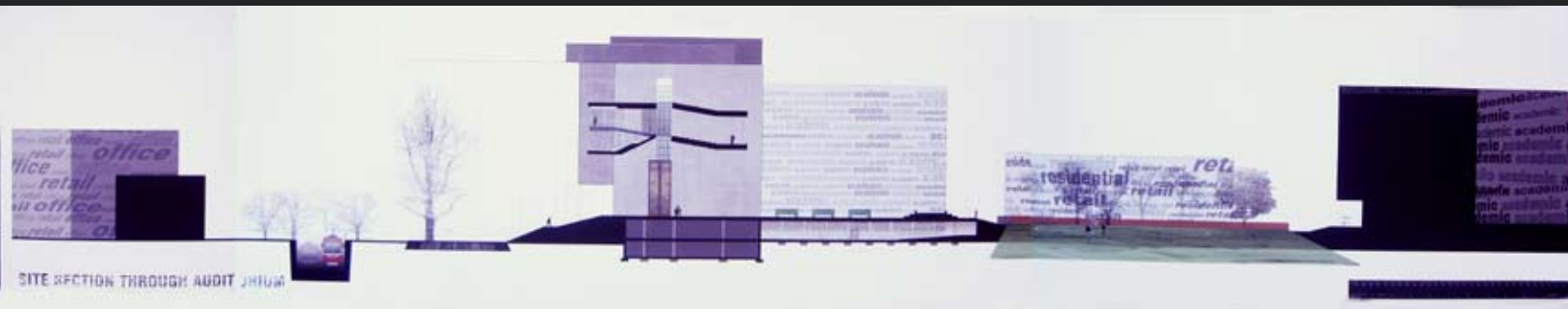
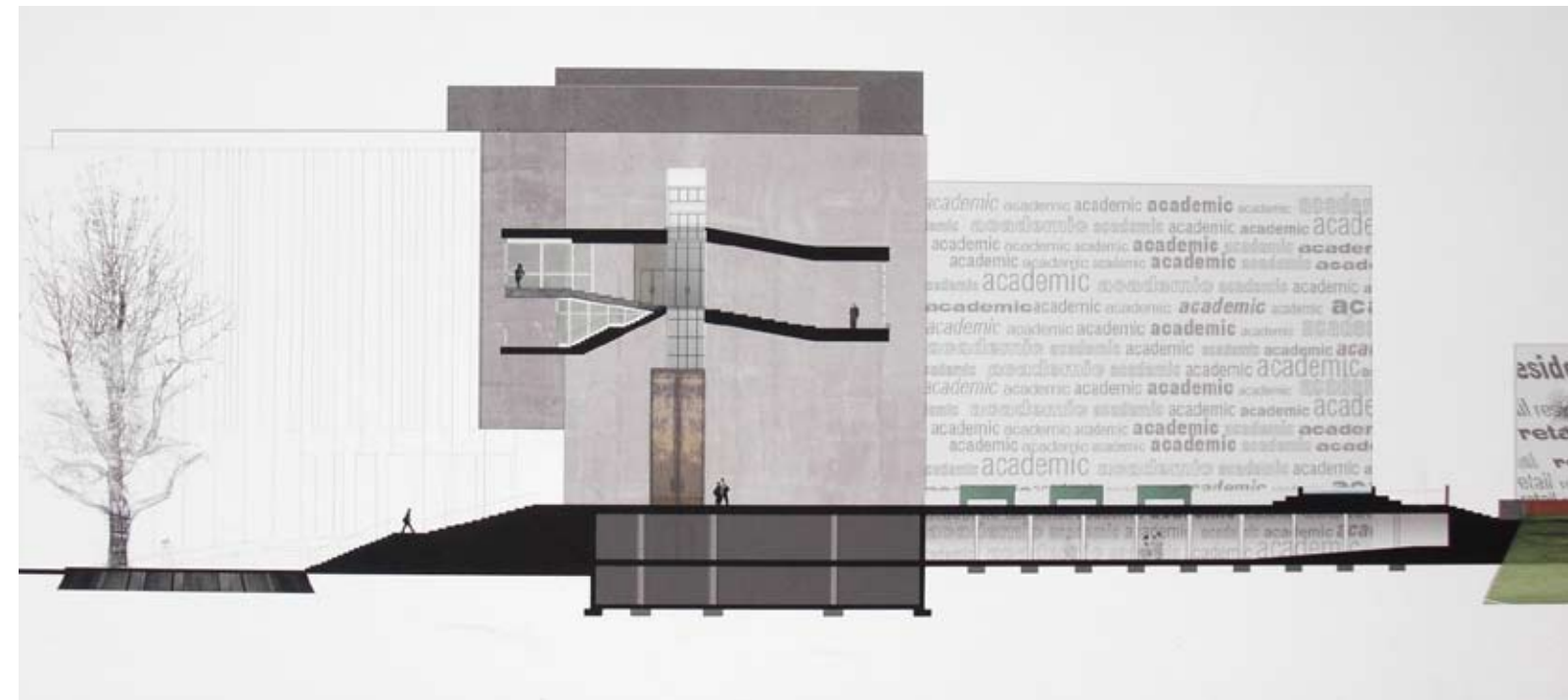
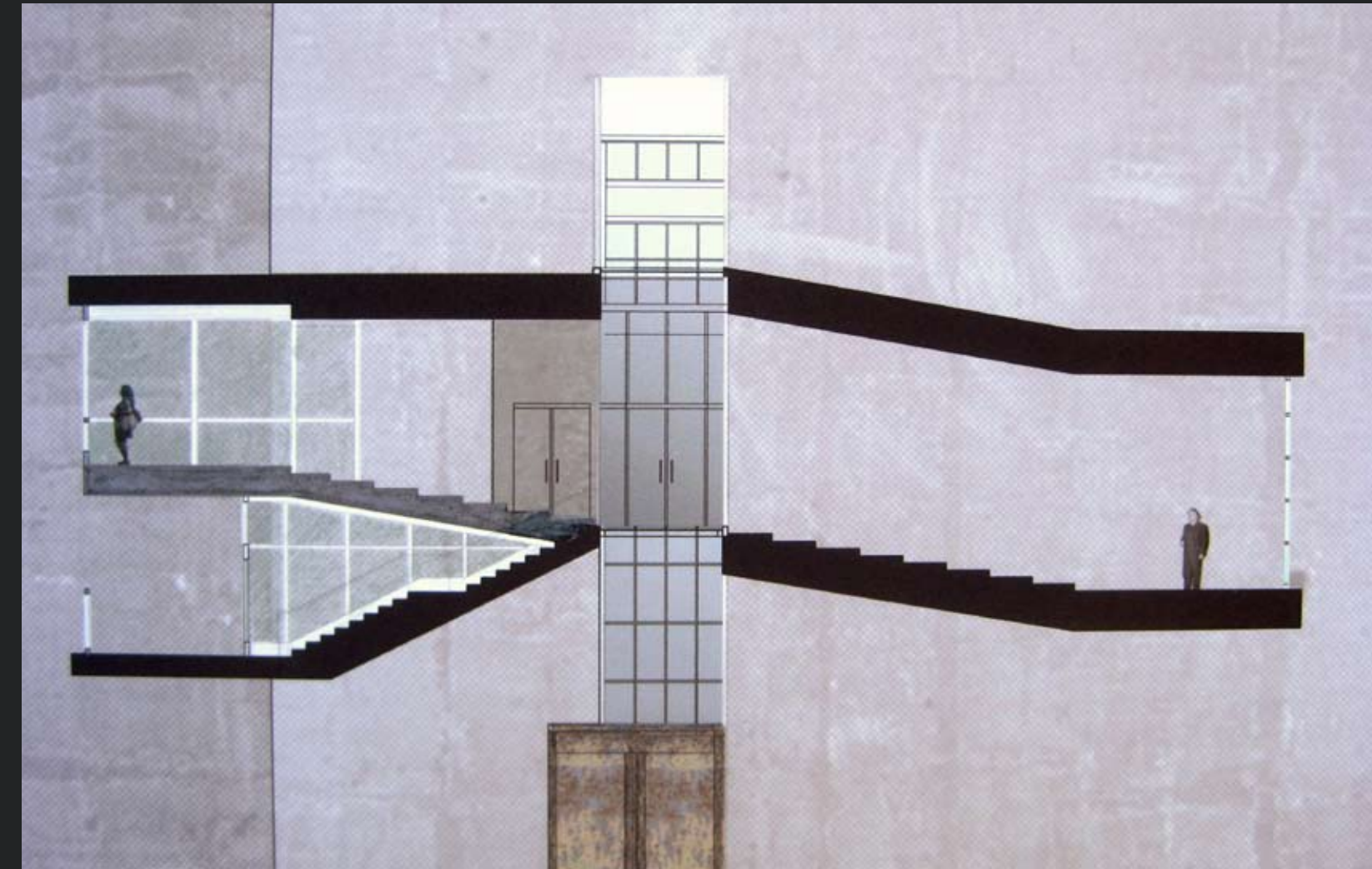
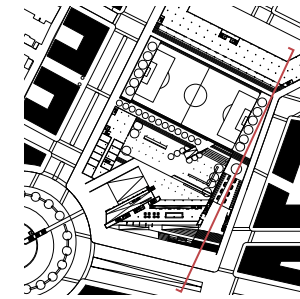
TRANSVERSE BUILDING SECTION

Perspective looking northeast



VIEW FROM WITHIN

Section through auditorium and site



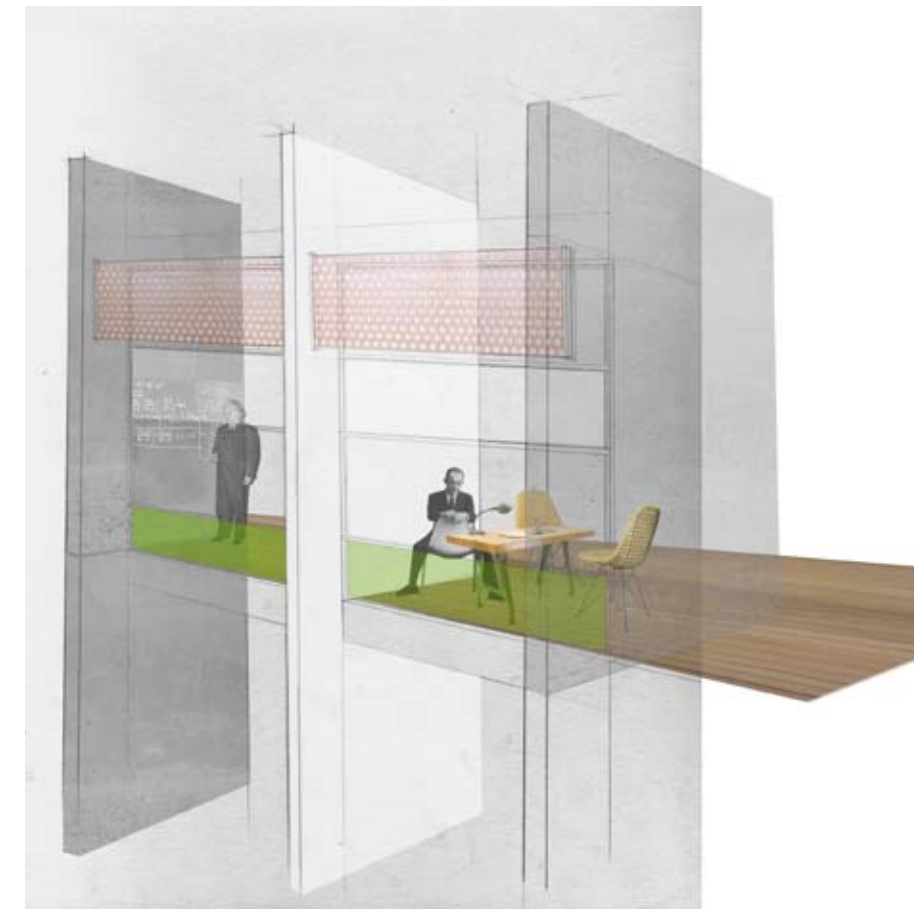
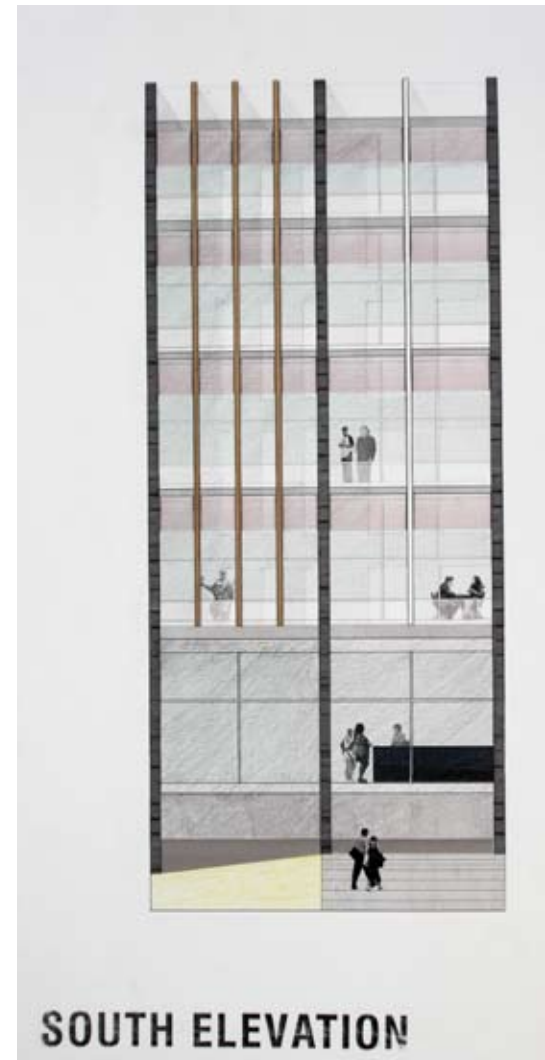


Early studies of the south facade and study carrels

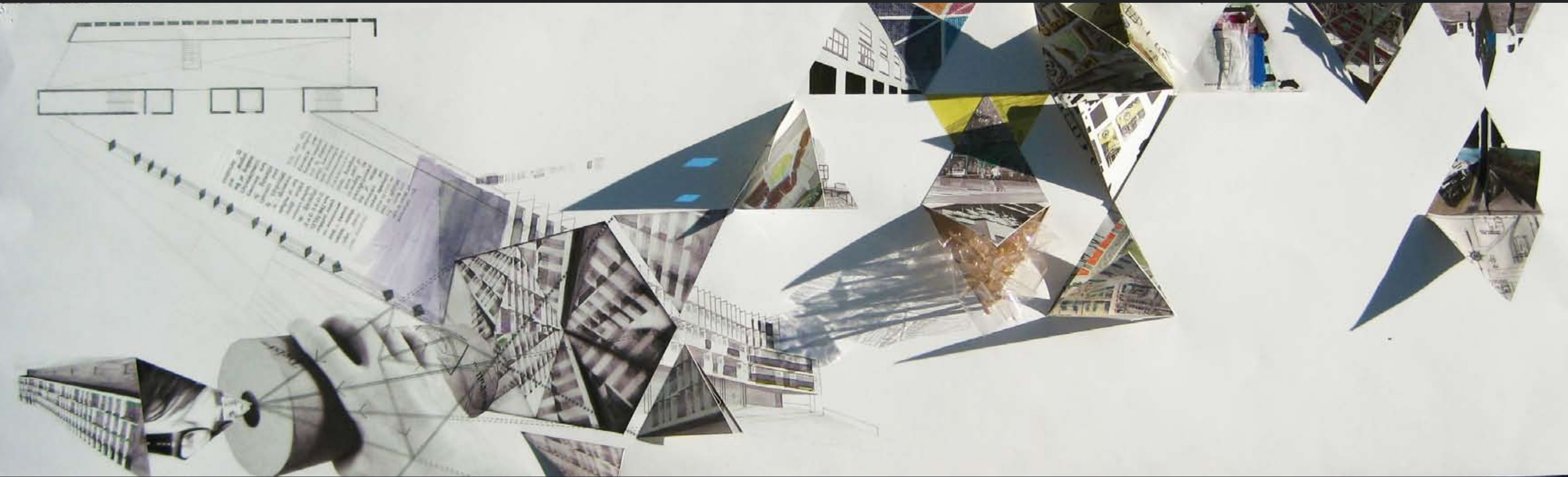


VIEW FROM WITHIN

A series of study carrels delineate the south facade. The light in each space is modulated by different kinds glass and copper mesh screening, along with the architectural dividers that define and cast shadows on the study carrels. These fins are wrapped in wood, stone and slate. The wood fins provide cozy dividers for quiet individual study. The stone fins transition to a pin up wall on the interior, while the slate fins provide a chalkboard surface, both designed for group study and interaction.



Concept sketch for study carrels



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