

**Urban Envelopes – An Architecture of Adjacency and Difference**

by

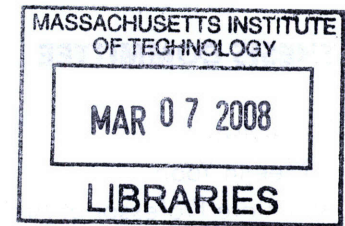
Peter J. DePasquale

Bachelor of Science In Architecture  
University of Virginia, 2001

SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARCHITECTURE  
at the  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
FEBRUARY 2008

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# **Urban Envelopes – An Architecture of Adjacency and Difference**

by

Peter J. DePasquale

Submitted to the Department of Architecture  
on January 17, 2008 in Partial Fulfillment of the Requirements for the Degree of Master of Architecture

## **ABSTRACT**

In a contemporary world of rapidly dwindling resources and the sprawling consumption of landscape, it is important to look at the role of boundary, spatial differentiation and the value of spatial diversity while recognizing that the city, like nature, is composed of interdependent parts. Rather than figures apart and a value of transparency over opacity, the perpetual negotiation of figure and ground while maintaining necessary distinctions is of the utmost importance – establishing an order of separation without division. By delineating boundaries, human responsibility can establish and hold its place in the animated, complex and constantly changing nature of the city. The texture of this negotiation at the building envelope reinforces ideas of self while negotiating relationships with others. As the shared boundary of architectural and urban space, the interconnectedness, thickness and representation of envelopes suggest new types of textures and figures as well as a critical, infrastructural, role for architecture in the city.

By establishing a link in the loops of operation at the scale of the wall, building type and block topology, this thesis formulates an analytical methodology that avoids both the scenographic, hierarchical and function based idea of traditional space and the universal and detachedness of modern space. Instead, through a critical and design-oriented re-interpretation of the existing non-site condition at New York University, space can be constructed to mediate between itself and surrounding Greenwich Village and SoHo. This implies the need to reconsider programmatically the role of real estate and commercialization in preserving their institution and infrastructure – and the materials of these transitions/mediations. In articulating the line between architectural and urban space and between complimentary and contradictory programs, NYU can articulate its own significance on a cultural and architectural level to make a civic project.

Thesis Supervisor: J. Meejin Yoon  
Title: Associate Professor of Architecture

## **THANK YOU**

To my committee - Meejin, Eric and Michael

Arindam for thesis prep

Becky for understanding me

Mom, Dad, Paulie and Lu

The Yoonitards - Matt Chua, Justin Shea and John Snavelly

Sarah Dunbar and Buck Sleeper for your help

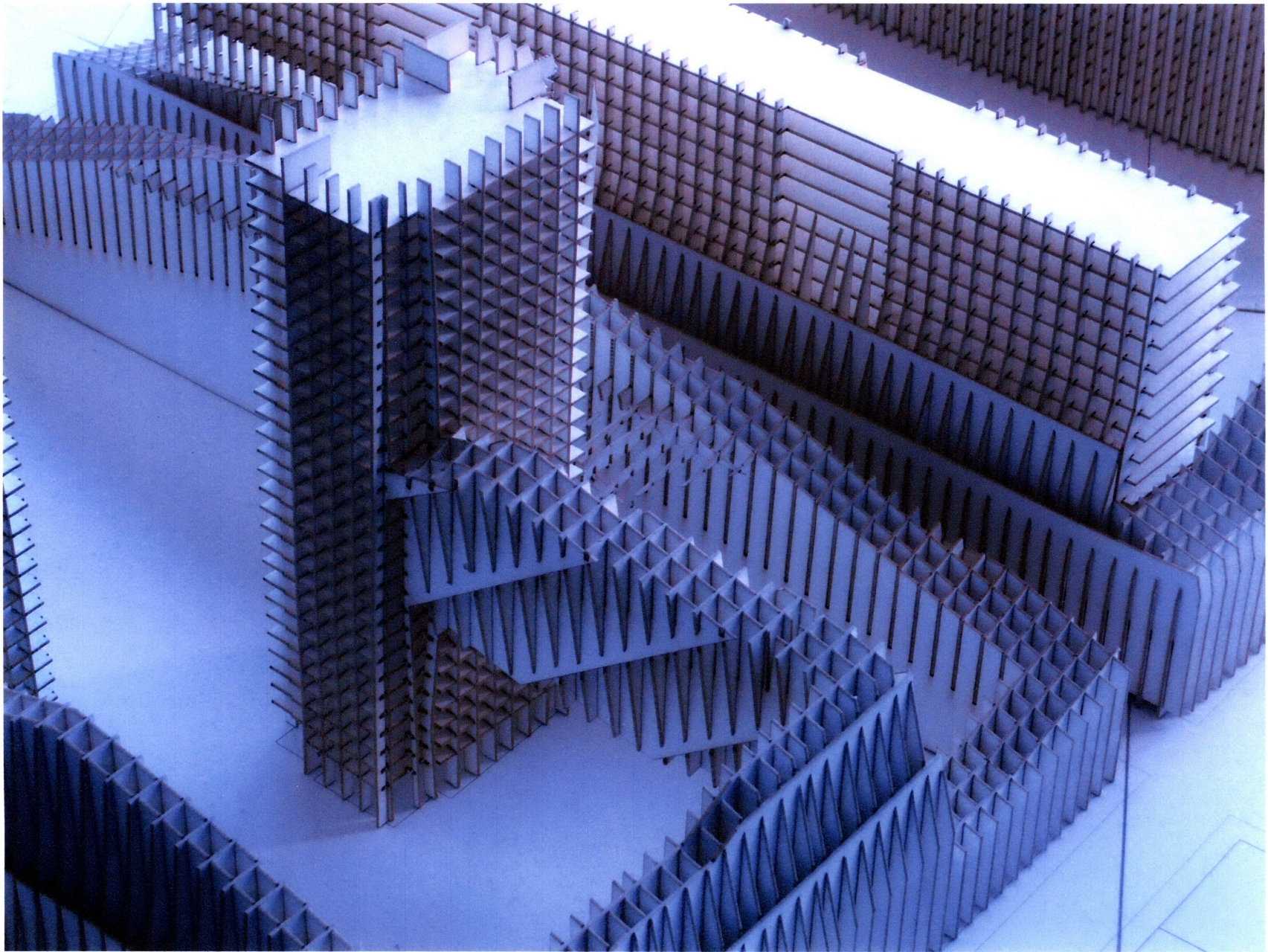
Casey Renner for saving my ass

Mom, Meejin and Becky for carrying me through to the finish. I could not have done this without you.

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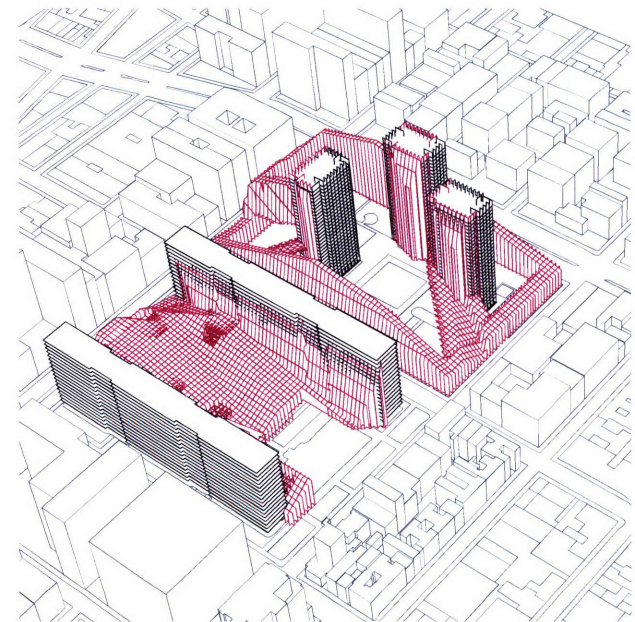


# URBAN ENVELOPES

## An Architecture of Adjacency and Difference

**The Appropriation and Modification of  
New York University for Growth and Expansion**

**Peter DePasquale M.Arch. Thesis**



# PREMISE

## **Urban Envelopes**

Interconnectedness as  
Method to Extend Program  
and Reciprocity Upward,  
Sideways, Downward and  
Across

**Constructional System -**  
Material of Boundary

**Typological Form -**  
Programmatic Difference  
and Adjacency

**Topological Organization  
of Architecture and City**

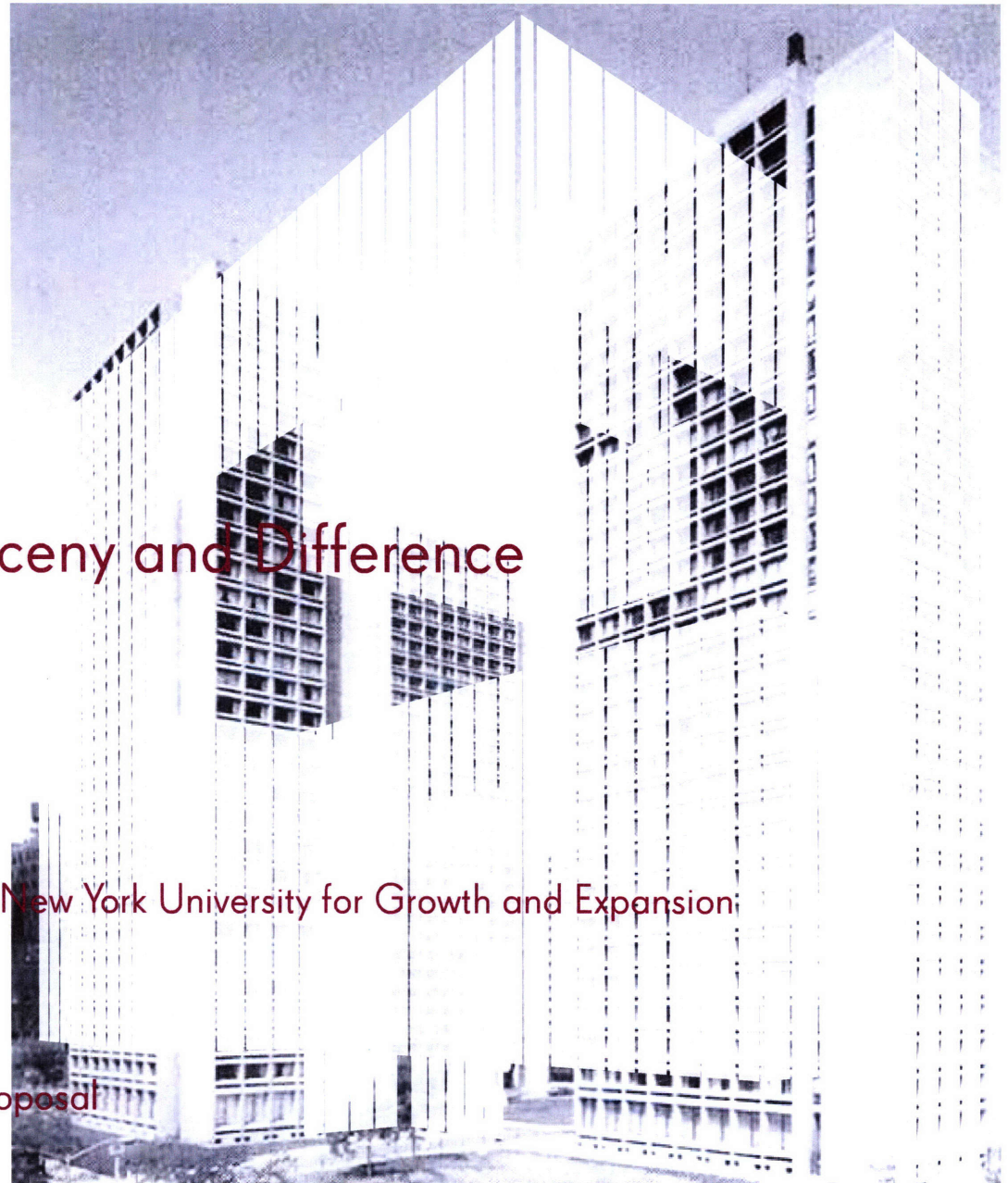


# Urban Envelopes

## An Architecture of Adjacency and Difference

The Appropriation and Modification of New York University for Growth and Expansion

Peter DePasquale M.Arch. Thesis Proposal



## **PREMISE**

On October 17, 2006, Met Life agreed to sell Stuyvesant Town to Tishman Speyer Properties and the real estate arm of BlackRock for \$5.4 billion. This turnover of existing public housing in New York City has signaled major economic shifts, increasing values and changes of ownership; whereas they were once controlled by the government, they are now increasingly owned and run by private developers who are, in turn, less inclined to engage with neighbors and urban territory in a meaningful way. The simultaneous development of terrain vague, smaller pieces of the city and the reclamation of infrastructure as architecture suggests a rapid increase in density simultaneous with population growth – and as the purchase of Stuyvesant Town suggests, the potential for existing complexes

as sites for future development. As economics, politics or material depletion begin to determine a limit to cities (to curb fabrication, modularity and mobility) in such unprecedented growth, new construction will be required to meet existing infrastructure and buildings to shape integration. Urbanism alone can no longer define issues of built form and public-private relation within its boundaries. The question becomes: As the nature of urban boundary and ownership changes, can architecture negotiate new levels of density in ways urbanism no longer can?

In a contemporary world of rapidly dwindling resources and the sprawling consumption of landscape, it is important to look at the role of boundary, spatial differentiation and the value of spatial diversity while recognizing that the city, like nature, is composed of interdependent parts. Rather than figures apart and a value of transparency over opacity, the perpetual negotiation of figure and ground while maintaining necessary distinctions is of the utmost importance – establishing an order of separation without division. By delineating boundaries, human responsibility can establish and hold its place in the animated, complex and constantly changing nature of the city. The texture of this negotiation at the building envelope



reinforces ideas of self while negotiating relationships with others. As the shared boundary of architectural and urban space, the interconnectedness, thickness and representation of envelopes suggest new types of textures and figures as well as a critical, infrastructural, role for architecture in the city.

Faced with new social demands and technological possibilities, Modernism envisioned a world of autonomous and independent figures in a field of unlimited space, erasing distinctions and seeking a certain unattainable truth. The movement and its detractors abandoned the existing city, both in terms of geography and in wholesale demolition, and replaced it with disparate architectural elements. Ironically, the anti-urban segregation of architecture from the city inspired the replication of the city it left behind on the interior of buildings. Corridors were suggested to provide a level of publicness and participation equal to that of the city. An emphasis on socialism and uniformity were to breed a culture of co-existence and equality. LeCorbusier advocated these strategies to transform society into a more efficient environment with a higher standard of living on all socioeconomic levels. He argued that this transformation was necessary to avoid the specter of 'revolution' that would otherwise shake

society. In October and November of 2005, revolution happened in the form of riots in the northern suburbs of Paris inspired in architectural organization by LeCorbusier's own design. The enclaves of mono-functional buildings and their autonomy from the city resulted in alienation and loss of identity, which came to the point of crisis. In reality, upwardly mobile people move out of such situations, and the ones who stay are generally the poor, trapped in a downward spiral of social marginalization. This thesis supposes that rather than representing ideas of socialism and blanket equality, differentiation and integration can provide the socialization inherent in the nature of the traditional or organic city. Whereas the belief that architecture and the formless primacy of space could solve all of the problems of society, a break is proposed in the consistency of ideology from building type to urban topology. Difference, and the urban tensions and conflict as a result, act as stimulants for the city versus the stagnation of utopia.

By studying the interaction between urban boundaries and the thickened boundary of architectural space at the envelope, a spatial and constructional logic of differentiation and advantageous sharing of territory can be developed. This logic and the cultural,

ecological, aesthetic and decorative implications of the envelope provide a strategy for a formal break between architecture and urbanism so they can operate in reciprocity. Rather than buildings operating in physical and theoretical independence, I instead ask: How can we build a better grid of connectivity? And as connectedness and density bring a new intimacy: How is the necessity of difference and choice maintained? Once projects such as Stuyvesant Town are no longer receiving the benefits of government subsidy and rent control, nor the generosity of openness in the competition for space in the densified city, greater emphasis is placed on architecture to negotiate social and cultural relationships. Here architecture, through its political positioning, can create a socially correcting scenario. The constructional and programmatic renovation of these projects can retranslate the fixed response of modernism into something that starts to actively represent how private interests, as an active participant in civil society, can make good (public) works within the urban landscape that benefit everybody.

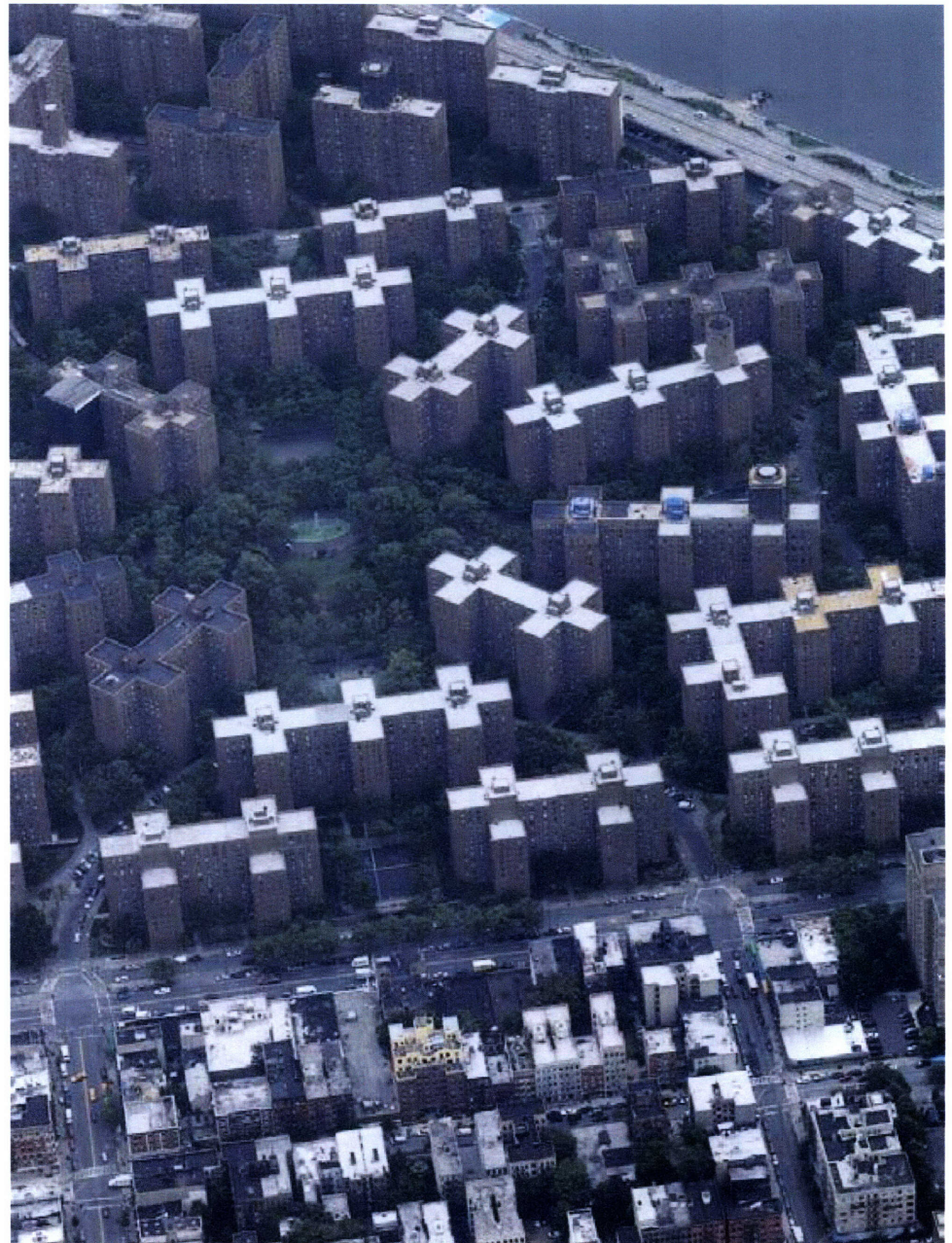
In the case of urban porosity as site for development in New York City, the constructional typology dictating large volume buildings with small footprints is once again becoming a given for cost

and spatial reasons. Ideas traditionally in the realm of urbanism such as generosity of public spaces, definition of edge conditions and social relationships, are increasingly determined by building typology and construction method. The housing projects built by Robert Moses and The New York Housing Authority during their period of 'Urban Renewal' were a previous attempt to reorganize buildings of this typology -inspired by the Voisin Plan and Ville Contemporaine of LeCorbusier, with emphasis on mobility by car and a maddening fixation on reduced land coverage as a cure to society's ills. Without a defined relationship between buildings or from building complex to its immediate context, the mono-functional enclavism and social marginalization of the French suburbs were unnecessarily repeated. Yet, in the context of projected population growth and density in New York City, the problematic open gaps between buildings and ill-defined outside boundaries of existing modernist complexes may inherently evoke unique opportunities for architecture to shape integration.



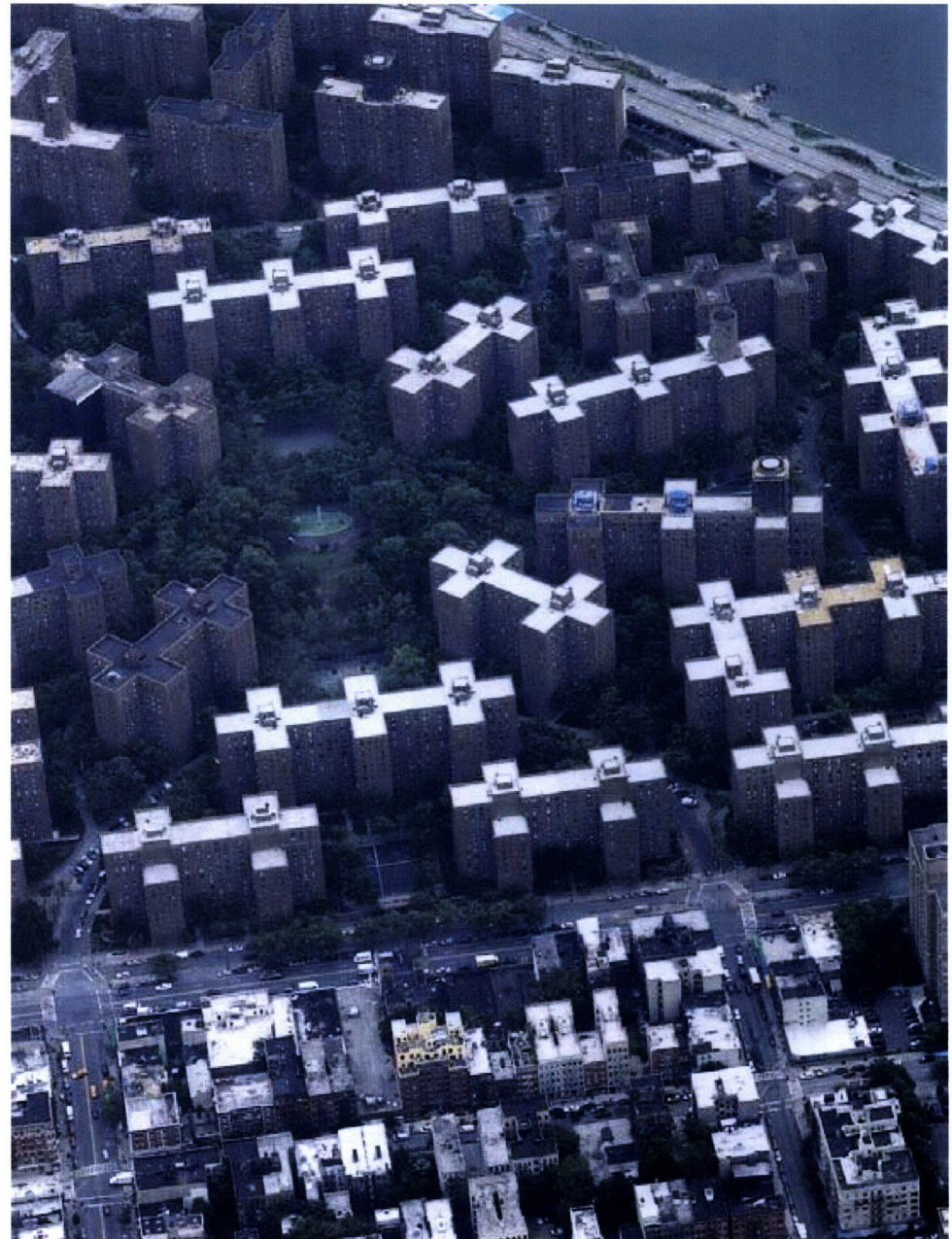
## Point of Intervention

reciprocity of architecture  
and urbanism





open gaps between buildings and ill-defined outside boundaries may inherently evoke unique opportunities for architecture to shape integration

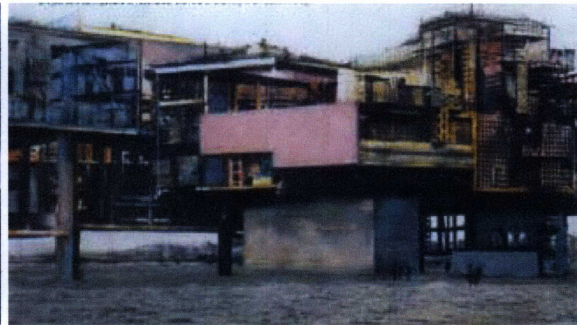






interiority of an idea about urbanism

completely removed from city



as apart from the city as the modernist war reconstruction it was critiquing

didn't the traditional, organic city provide for the spectacle? why leave it behind completely?



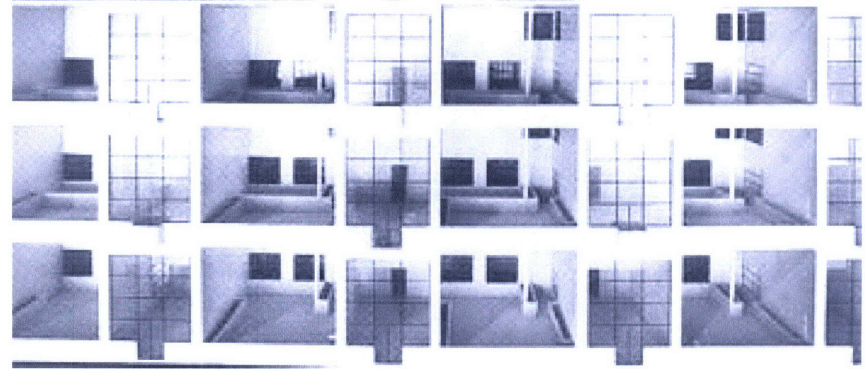
interiority of an idea about urbanism - inherently anti-urban

(plate glass windows establish a non-porous relationship between inside and outside)

# Modernism and its detractors abandoned the existing city



**socialism**



**versus**

**socialization**





Stuyvesant Town works because:

affordable by government subsidy/price control

exquisitely maintained

generous space between buildings

adjacency and definition by the  
Manhattan grid

There are good examples, but  
**not** because of **architecture**

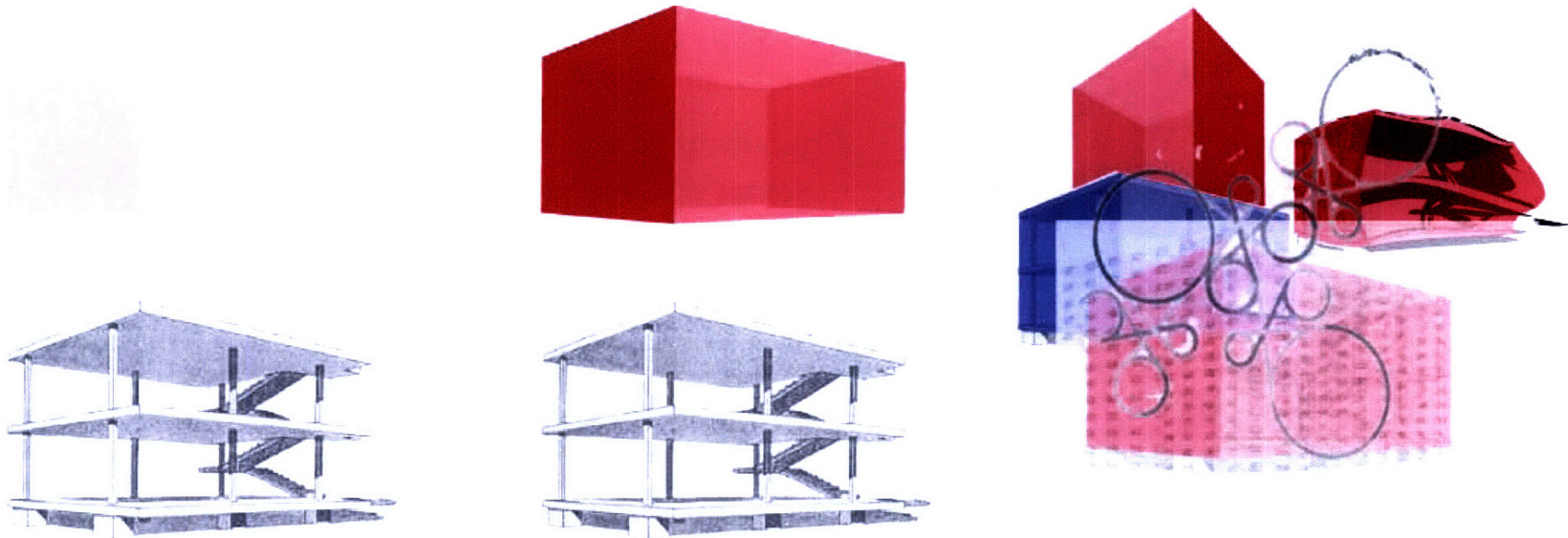


if densification and multi-loading of buildings become givens in the tightening of the urban boundary, the question becomes:

how can the urban and infrastructural ideas of Stuyvesant Town be writ as architectural intervention?

**Can architecture negotiate new levels of density in ways urbanism no longer can?**

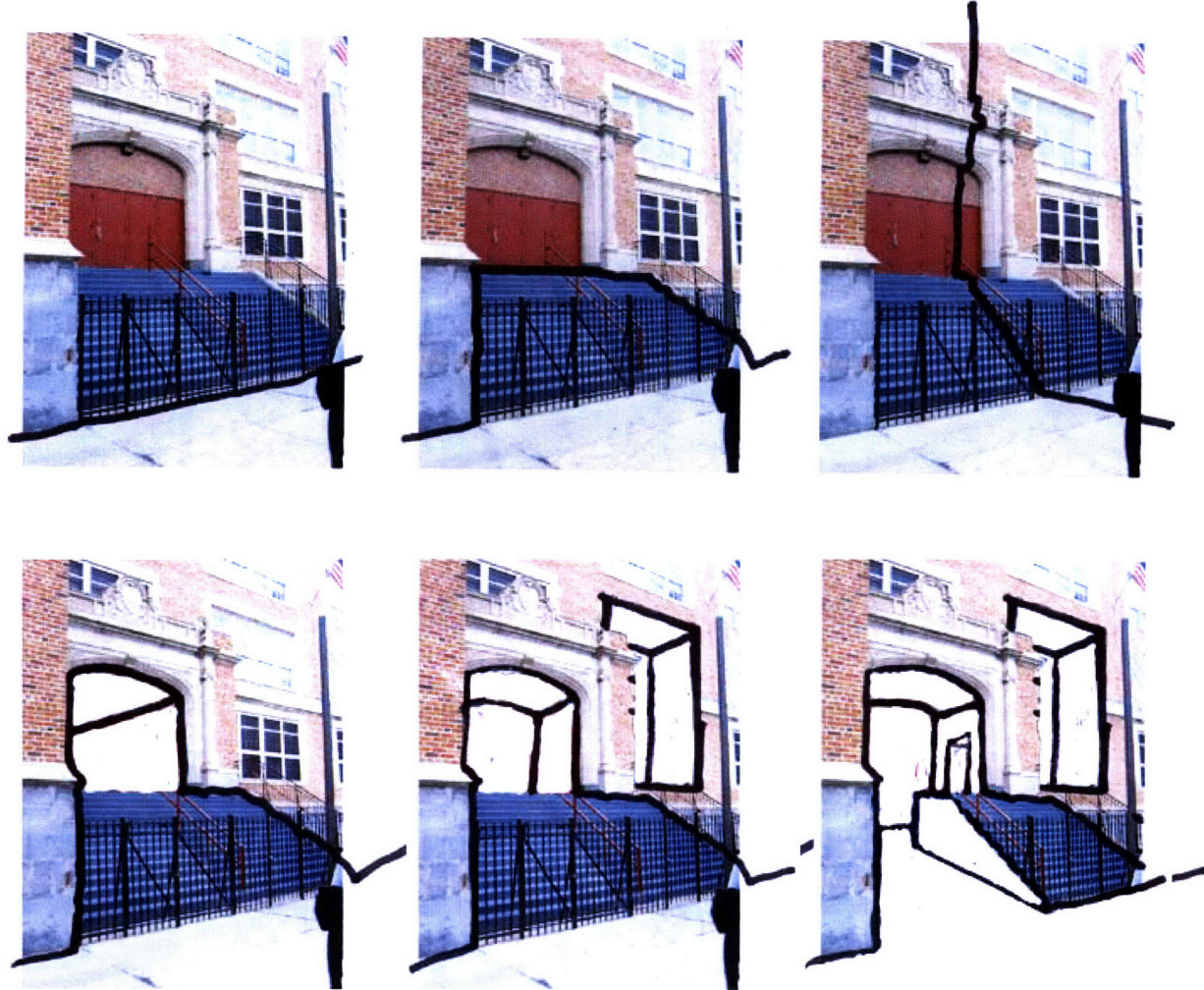




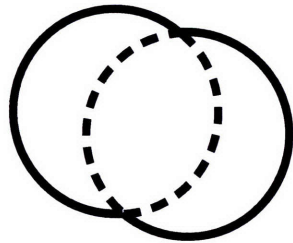
**Proposal**

# Urban Envelopes

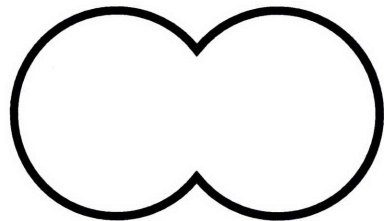
**interconnectedness, thickness** and **representation** will establish an order of separation without division - buildings can no longer operate on their own



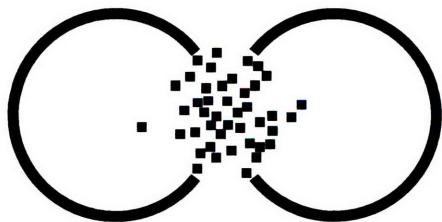
envelope is the articulation of the line between architecture and urbanism



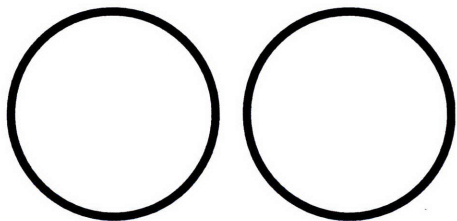
Blur



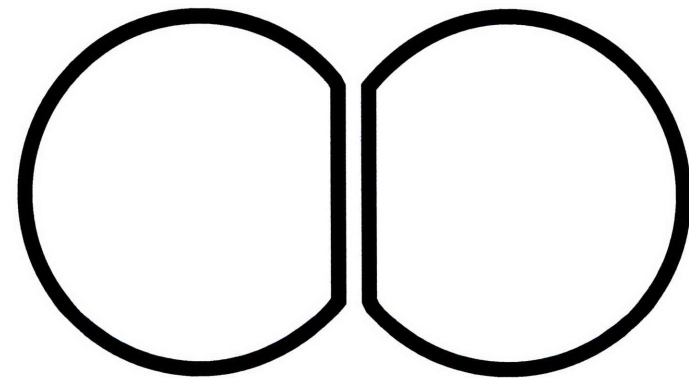
Hybrid



Pixelation



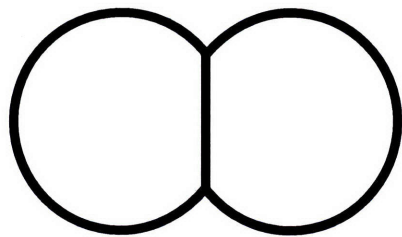
Parallel



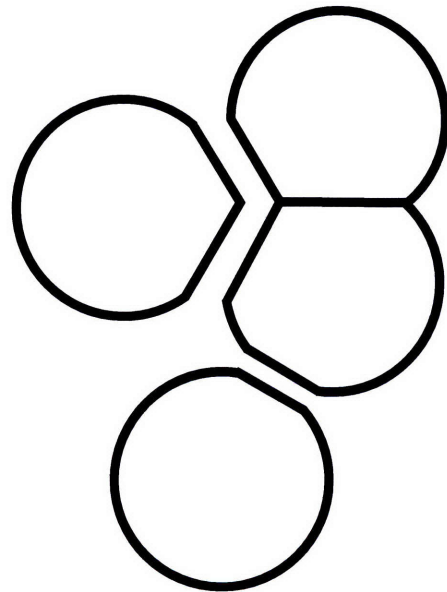
**Proposal**

**difference** - interface establishes order of separation without division

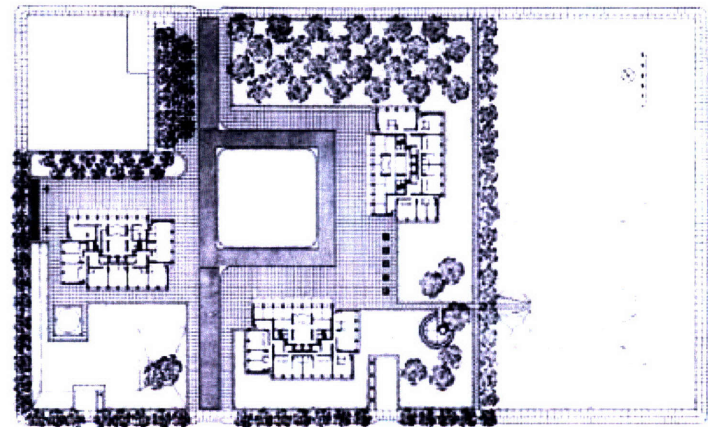




dialogue



multilogue

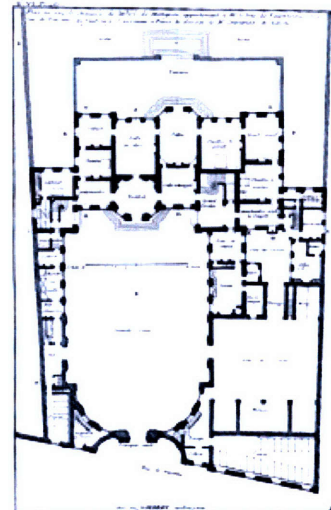


Rather than operating physically and theoretically off the grid: **How can we build a better grid of connectivity?**





Court

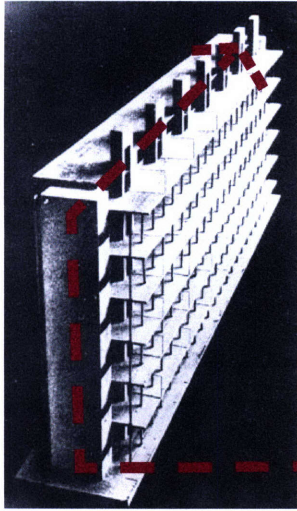


Vestibule



Corridor

envelope is built of **thickness**, layers of wall and space, mediating connectivity and levels of publicness



Single Door Entry - Elevator - Corridor

**thickness** must translate vertically as a sectional system of spatial reasoning and representation emerges in negotiating new density



Representational



Constructional

TEM - BOTH ECONOMICAL AND ECOLOGICAL - WHERE ENERGY WOULD FLOW THROUGH  
PETUAL MOTION ENGINE - ALL OF DK WOULD BE LIKE A SINGLE HOUSEHOLD WHERE  
IS WASTED. NO BIPRODUCT A DEAD END. A SOCIETY IN ECOLOGICAL SYMBIOSIS.



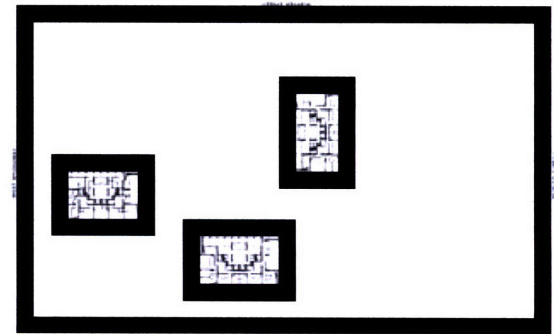
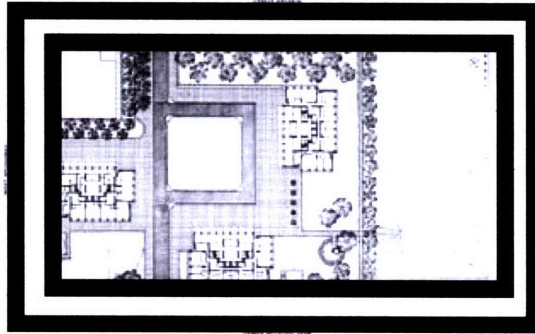
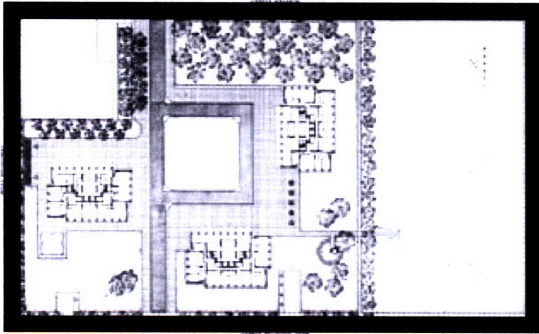
Ecological

## Precedents





Site



## Existing Conditions

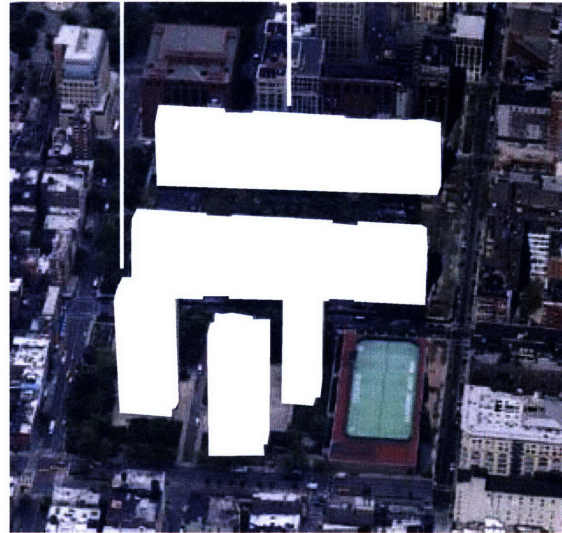
Moses



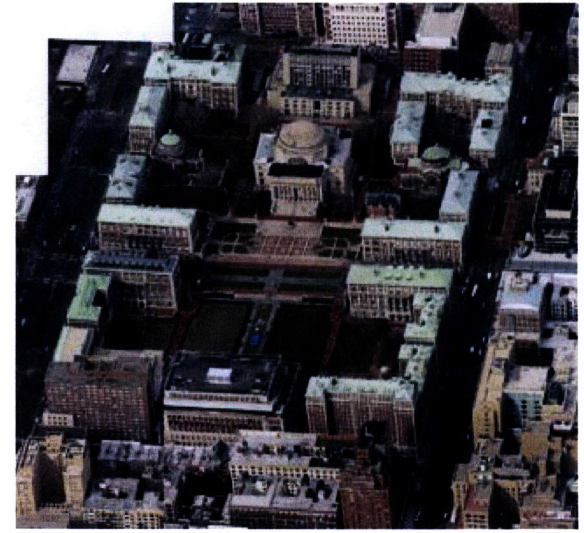
Title I / LoMEX

Pei

Weiner (Sert)



Modernist Housing



NYU vs. Columbia

## Context - Appropriation and Modification



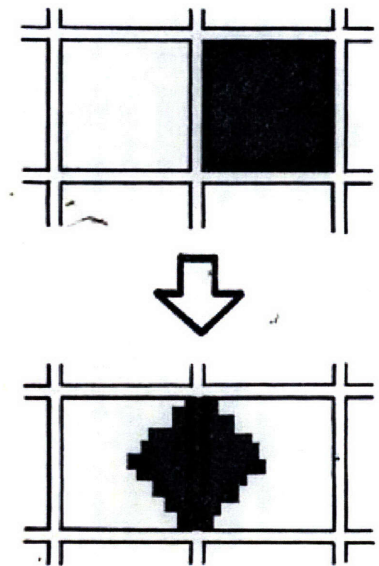
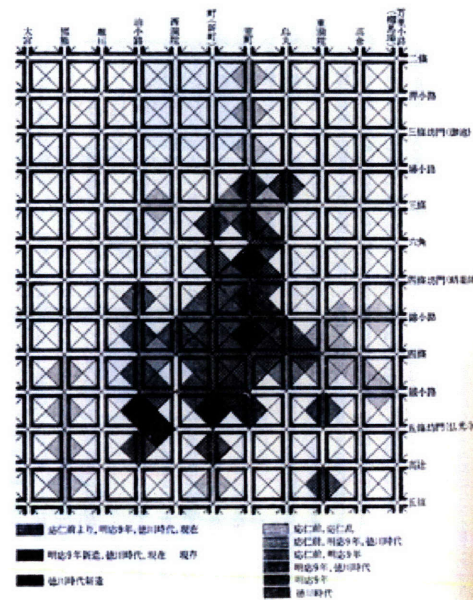
degree to which  
architecture and the grid  
(urbanism) are unified  
and define the city plan



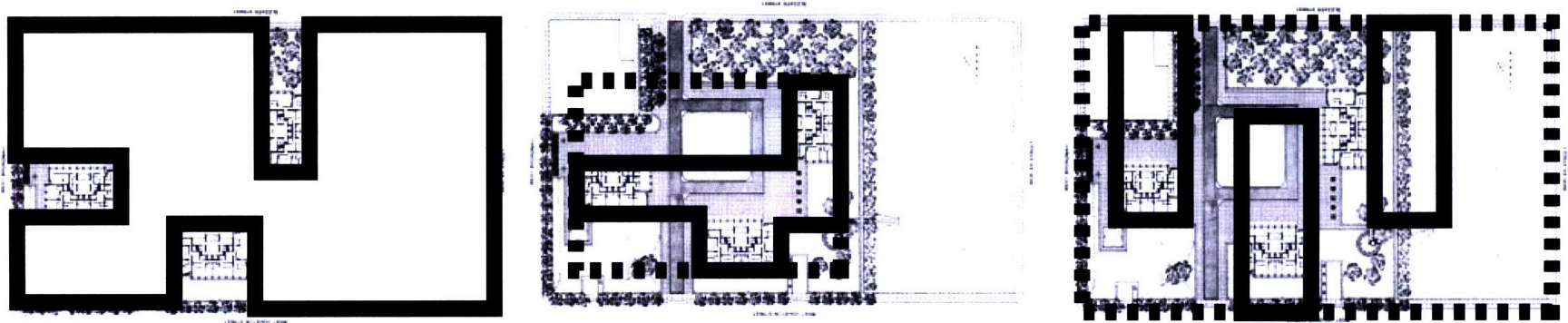
breaking consistency of  
ideology

material negotiates sta-  
bility

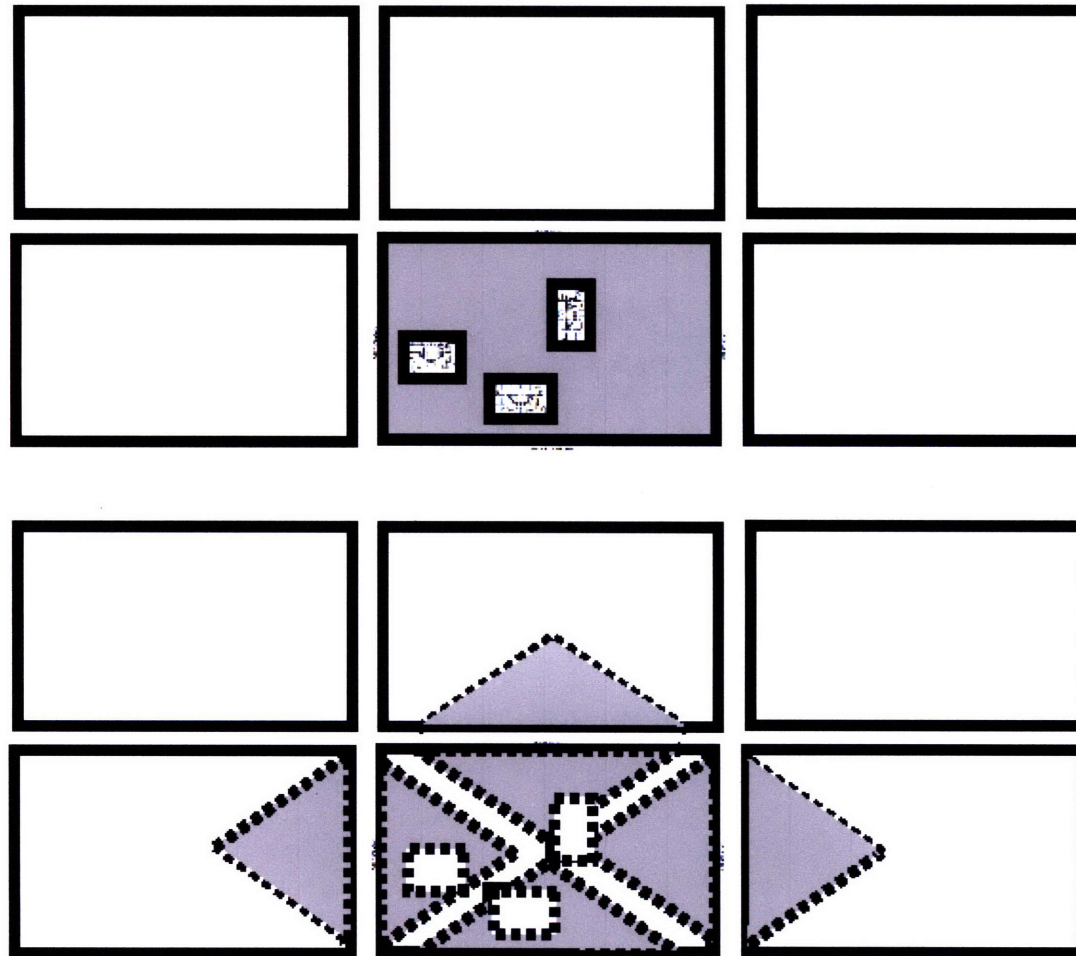
establishing boundaries







## Constructional System and Topology of the City



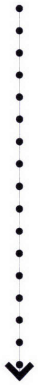
Depth of the Block in the Vertical and Horizontal Dimensions



What can a development minded consortium partnered with a research institution achieve together?



ABSTRACT



SPECIFIC

APPROACH

Intent

**Proposal for a formal break between architecture and urbanism**

Develop spatial and constructional logic of differentiation and advantageous sharing of territory in increasing urban densities - DIFFERENTIATION

RESEARCH

Implication

By simultaneously studying effect of larger boundaries of urban territory with the thickened boundary of architectural and urban space - ENVELOPE, BOUNDARIES WITHIN BOUNDARIES

DESIGN

Content

Renovation and Proposal for New Urban Housing Projects in Queens, NYC - Introduce differentiation to current typology and develop new methods of interconnectedness and responsibility - URBAN HOUSING

Origin of interest / BEEF

1. Dissatisfaction with sp natural resources.
2. The rate of urban grow
3. Sociability versus moc
4. Physiomy and hum and activators.
5. Frustration of utopian and benefits of the ex
6. Hiddenness necessar without division .

Defines a method of sentation: the **DIAGR**

THESIS STATEMENT ONE

As the nature of urban boundary and density changes, so must the texture of the shared boundary betw

THESIS STATEMENT TWO

The legibility, orientation, thickness and interconnectedness of envelopes suggest new types of ar

INSIDE-OUT CITIES  
study of  
urban wall as it relates  
to arch. tectonics

analysis of public  
housing typologies  
through envelope

DESIGN  
HOUSING

rawling consumption of landscape and

th is over one million per week.

ternist notion of socialization.

an posture as social communicators

proposals that dismiss the problems

isting city.

ry for establishing an order of seperation



organization and pre-

AM & SECTION (????)

reen arch. and urbanism - ENVELOPE

chitectural textures and figures.

GN

SING PROJECTS

**No blur, no blend**

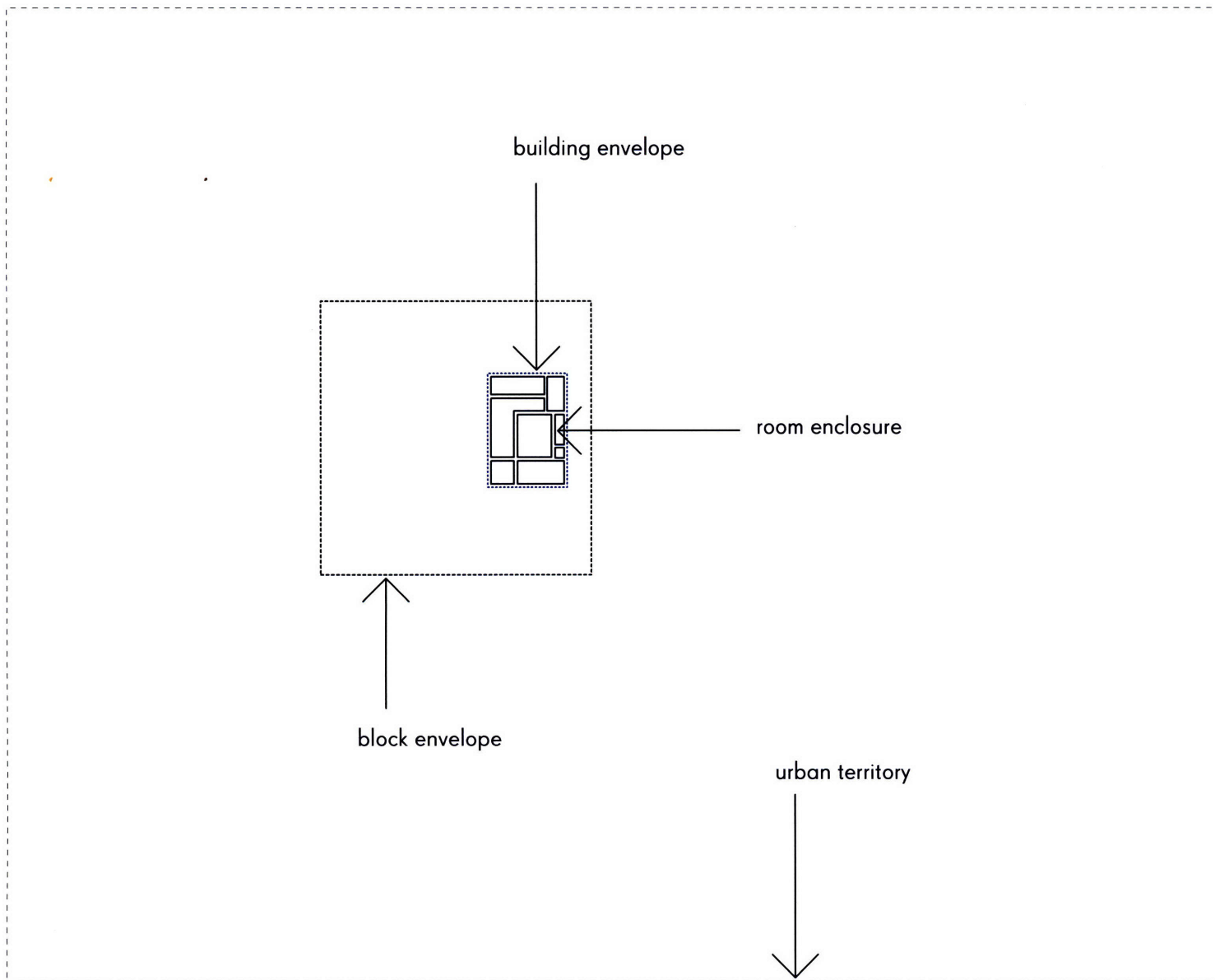
**Difference, seperation, adjacency - Porosity and Resistance**

**New urban density places greater emphasis on architecture to negotiate social and cultural relationships.**

**Thesis Prep Structure**

# PRINCIPLES OF URBAN ENVELOPE





territory : territory  
block : block  
building : building  
room : room

### Scales of Envelope

## PRINCIPLES OF URBAN ENVELOPE

The increasing autonomy and self-reference of buildings from their immediate building and spatial context has led to the construction of a paradigm of control and closure that defines the condition of contemporary building. The boundaries of these systems are in question from the exterior by forces of unprecedented density and intimacy and from the interior by demands of the individual. The aim of this thesis is to research the architectural implications of these border conflicts at the envelope in order to develop new models of enclosure that define radical environmental conditions of opening and closure, to produce interdependence and its consequent positive and negative space.

The interconnectedness, thickness and representation of

envelopes suggest that architecture can order a basic underlying framework that can take on the organizational, and arguably urban, role of infrastructure. There is potential for buildings to perform together socially and structurally and to share/exchange energy, sunlight, air, access, insulation and views, thereby tempering individual needs with advantageous relations of the collective. The interaction of buildings, and in turn envelopes, suggest symbiotic adjacencies and neighbors; orientation and relation to all other envelopes. With delineating the inside and outside of a single building or room come the ideas of together-apart and in contact/at a distance with its neighbors. Instead of abiding by the strictly hierarchical priorities of one realm, the life of communities is sustained by both individual need and multiple levels of public interaction operating in two-way relation; they can not be understood apart from each other.

Just as the human face has a thickness composed of many layers of skin and muscle stretched over bone and is expressive of abstract thought and emotion, envelopes require enough material and intellectual dimension to appropriately bond two necessarily discrete conditions of inside and outside. The constructional and spatial thickness of envelopes must be three dimensionally coordi-

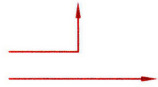
nated with structure, to modulate in depth and the spaces between layers, and provide space for specific responses and functions by a true engagement with the world, unlike the self referential nature of two dimensional facades. Existing typologies prioritize efficiency in the simple stacking of rooms and controlled sequence of single door-elevator-corridor. A thickened envelope can mediate spatial connectivity and hierarchy of public space within architecture through transitions that promote participation and afford choice.

Direct perception of architecture by the representation of envelope takes place within a building, between buildings and in bilateral relation between architectural and urban space. The orientation of an envelope is an expression of public legibility that deflects and deforms to the needs of the larger unified space it looks out onto and which hides, obscures and sometimes reveals the private mind behind. As a consequence of the vertical condition created by a tightening of the urban boundary, a sectional system of spatial reasoning and representation emerges. Interactions will take place on multiple levels rather than that of ground/street, requiring the modulation of experience not only in the horizontal dimension, but upward, downward, diagonal and across. Buildings have ceased

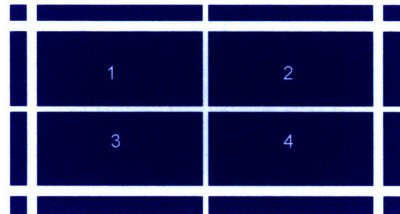
to speak a specific, distinct, public, private, cultural or commercial content. Instead, alternating levels of opacity, sidedness, shifting hierarchies and hiddenness of façade must determine multiple readings of architectural space and specificity in the city and the reading of city from the space of buildings.



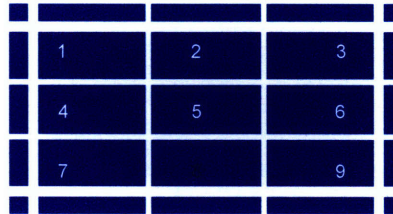
A : Most Public  
 one turn perpendicularly  
 two turns straight



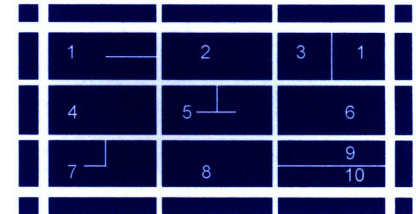
A One Subdivision



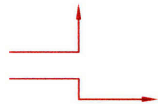
A Two Subdivisions



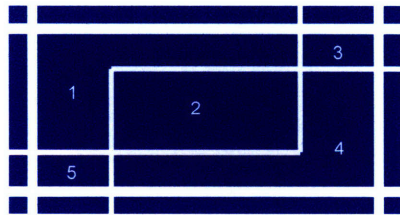
A Evolution



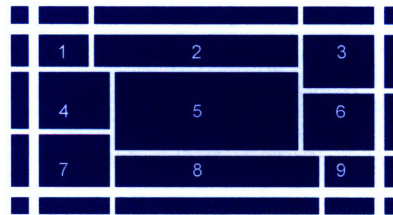
B :  
 one turn perpendicularly  
 two turns straight



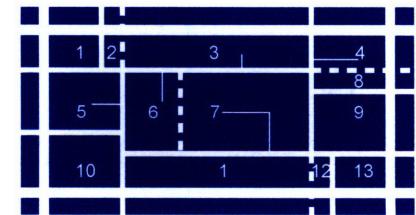
B One Subdivision



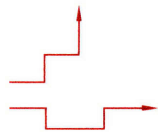
B Two Subdivisions



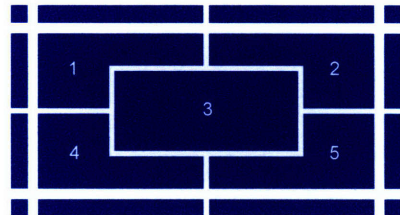
B Evolution



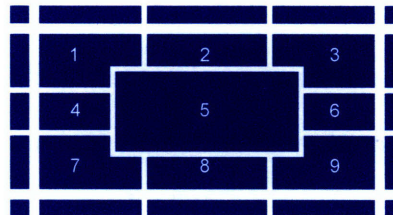
C : Least Public  
 three turn perpendicularly  
 four turns straight



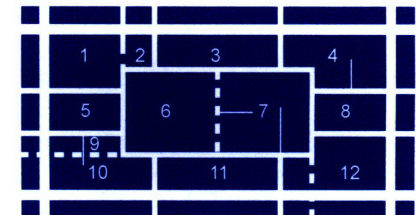
C One Subdivision



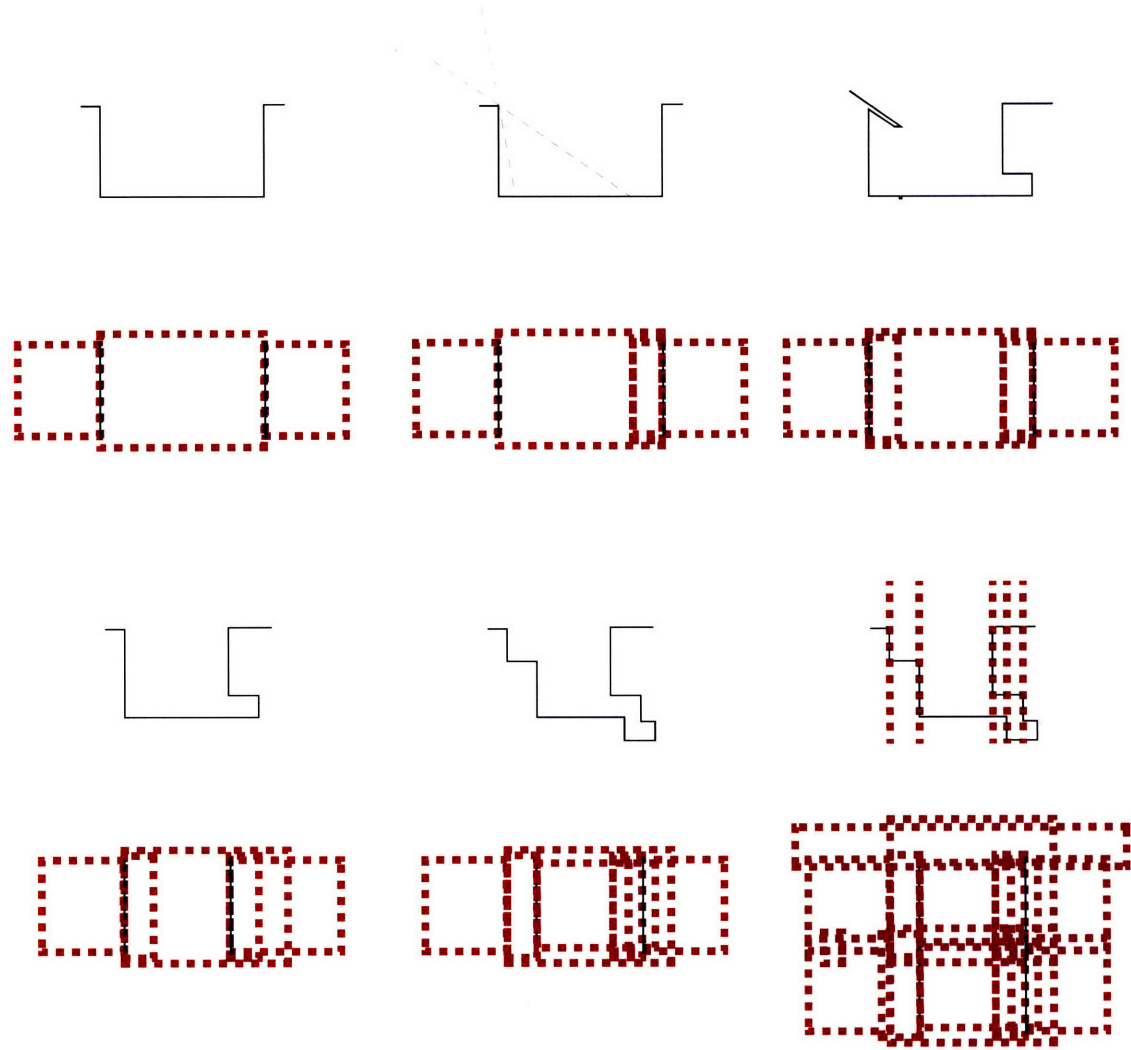
C Two Subdivisions



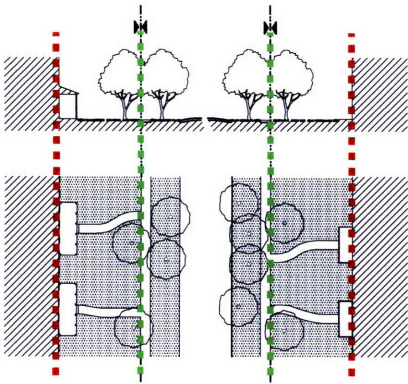
C Evolution



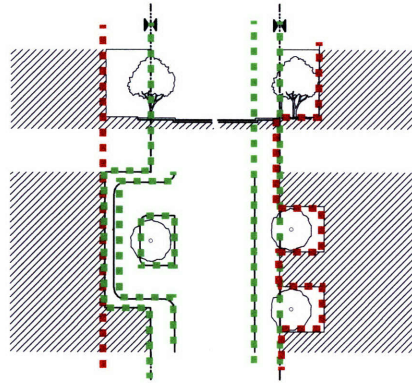
## Urban circulation morphology



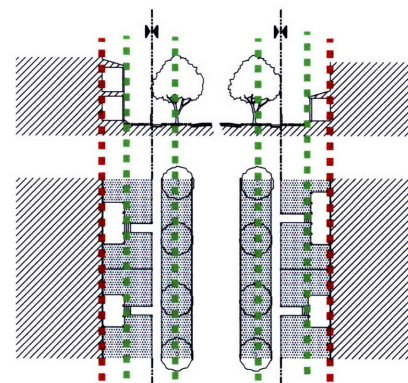
Overlapping zones



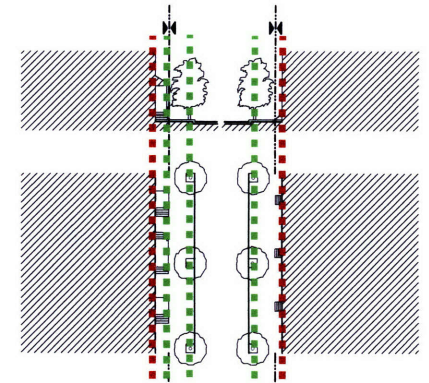
Common Yard



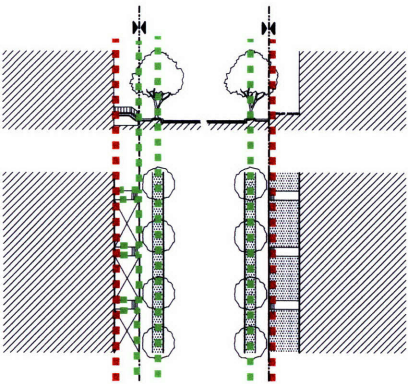
Forecourt



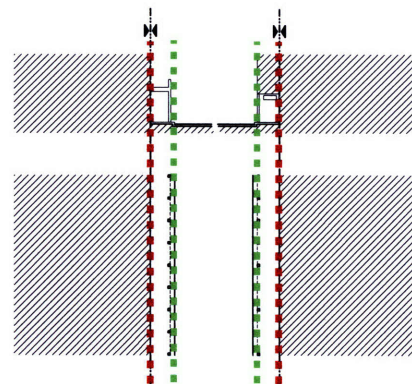
Porch and Fence



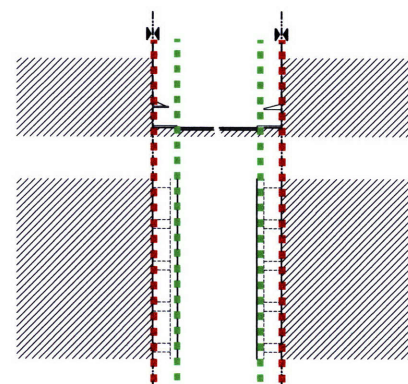
Stoop



Door Yard or Lightcourt



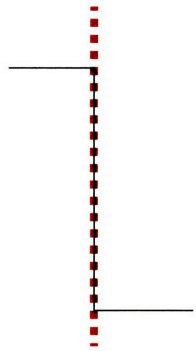
Gallery



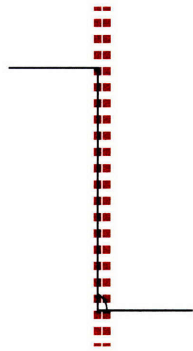
Shopfront Awning

## Transect theory revised

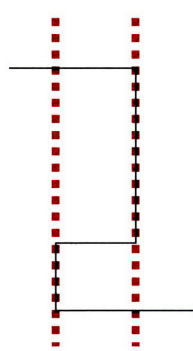




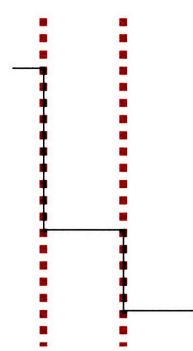
Level



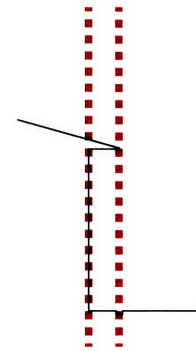
Inuyarai



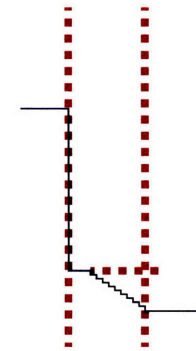
Internal Arcade



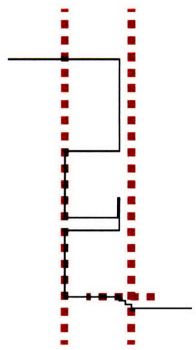
Balcony



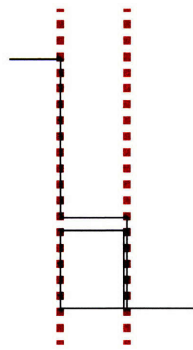
Drip Edge



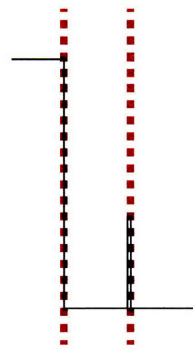
Stoop



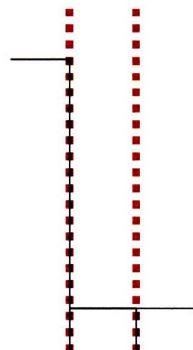
Porch



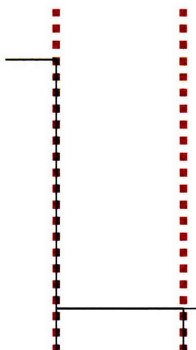
External Arcade



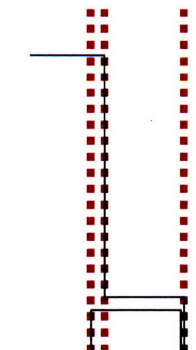
Fence



Moat

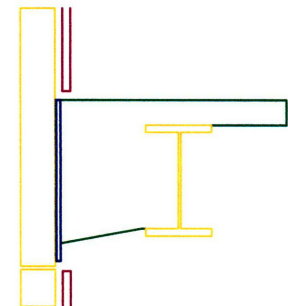
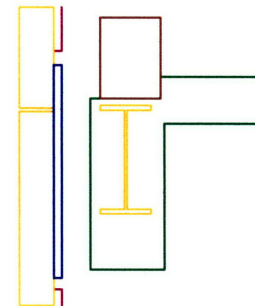
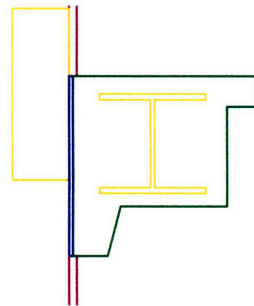
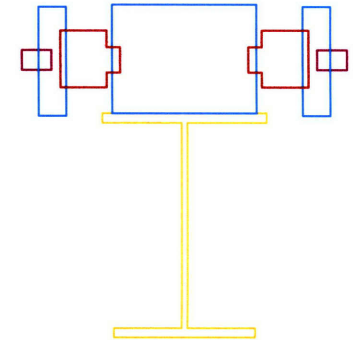
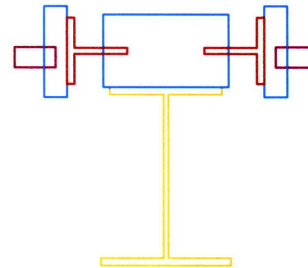
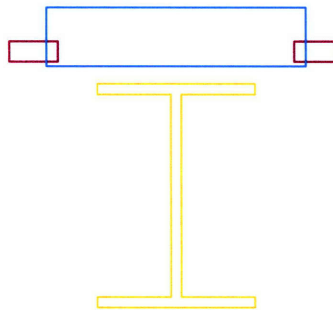
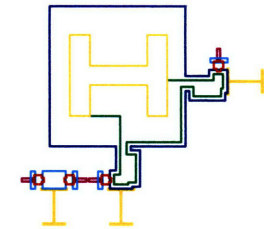
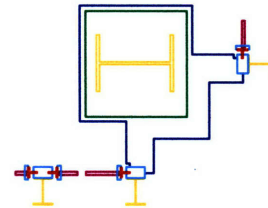
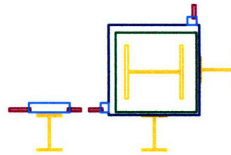
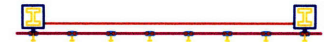


Canal



Mixed

**Ambiguous zone between architecture and urbanism**

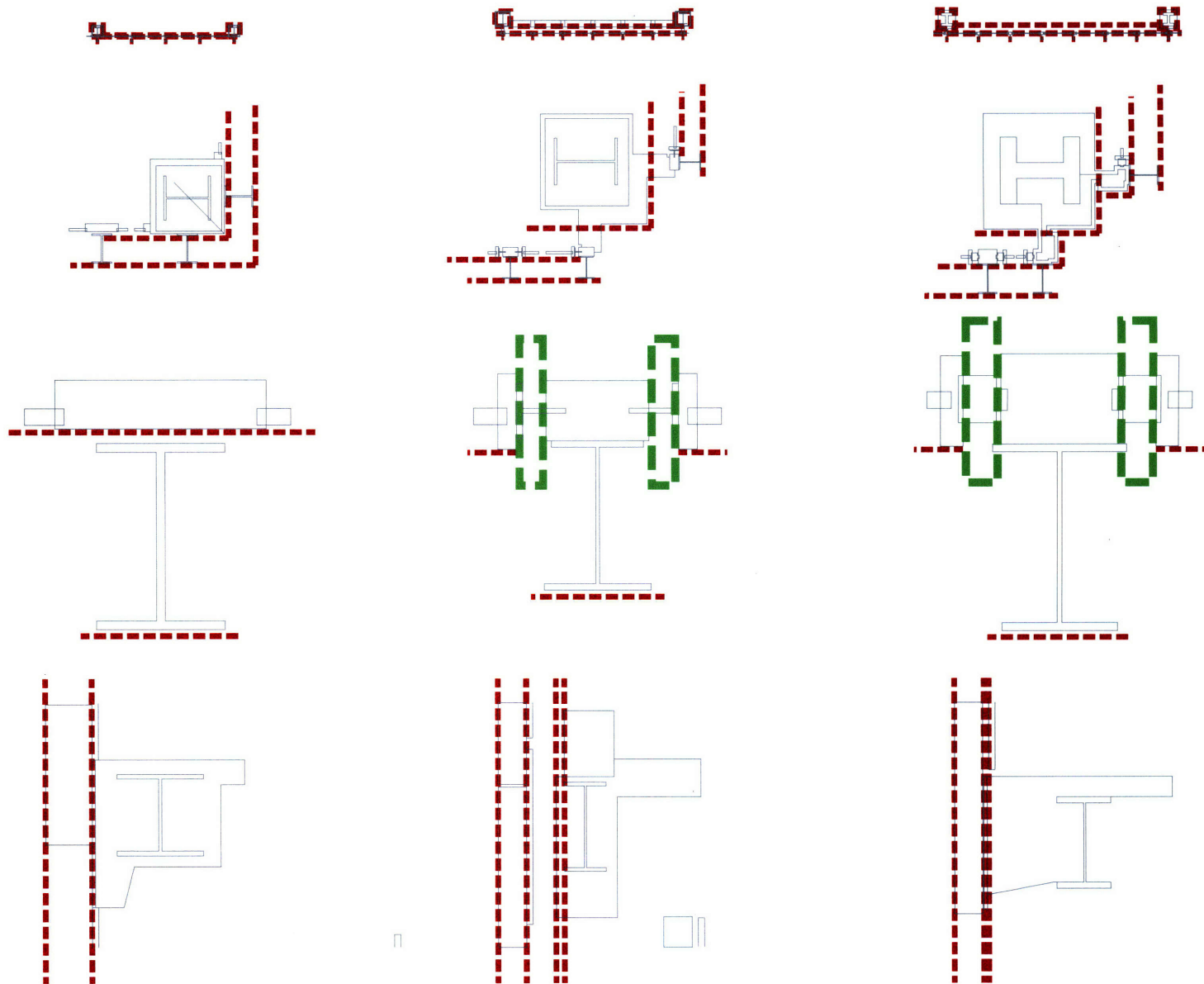


Lake Shore Drive Apartments

Seagram's Building

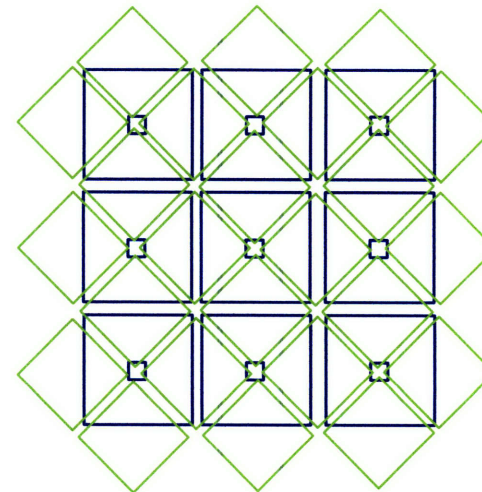
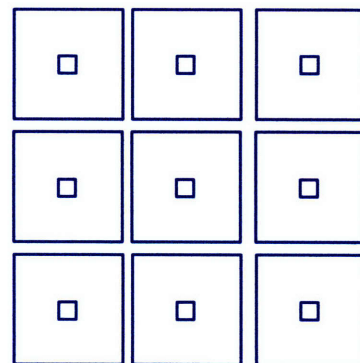
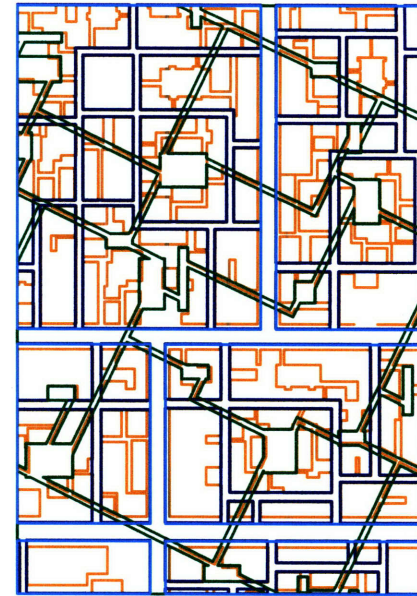
Shopfront Awning

**The Vocabulary Problem - Mies**

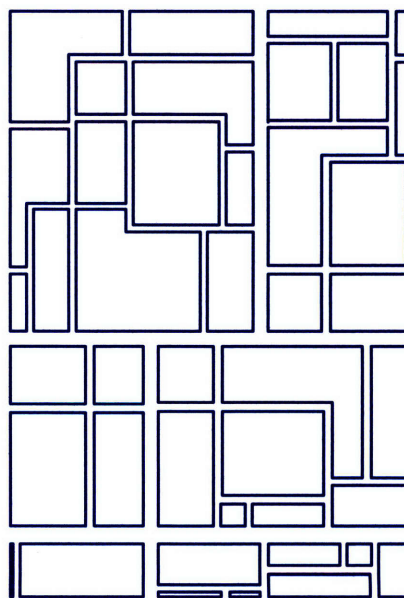
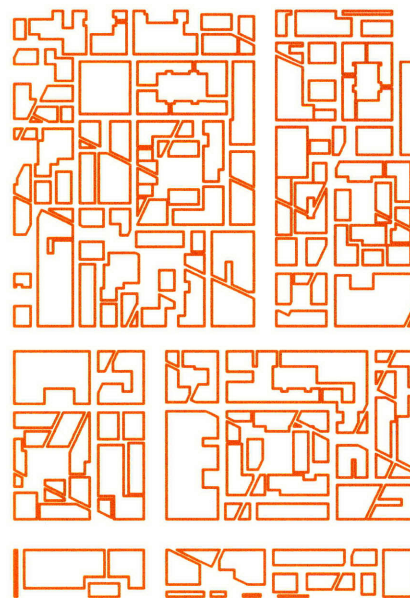
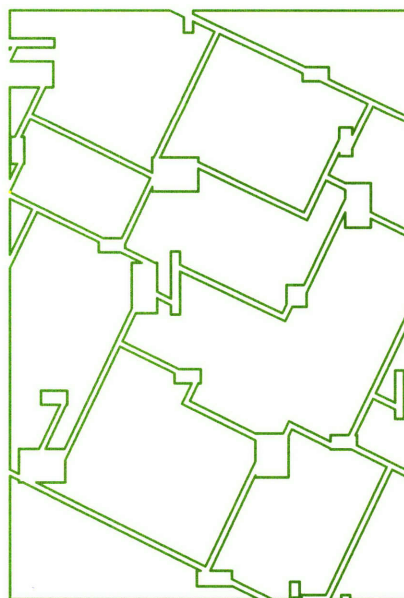
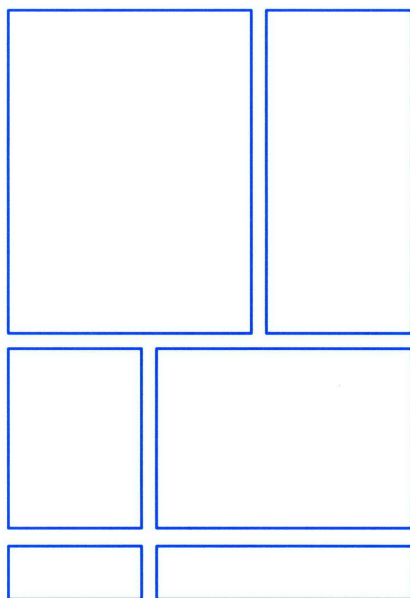


Unpeeling the wall according to publicness, light and air

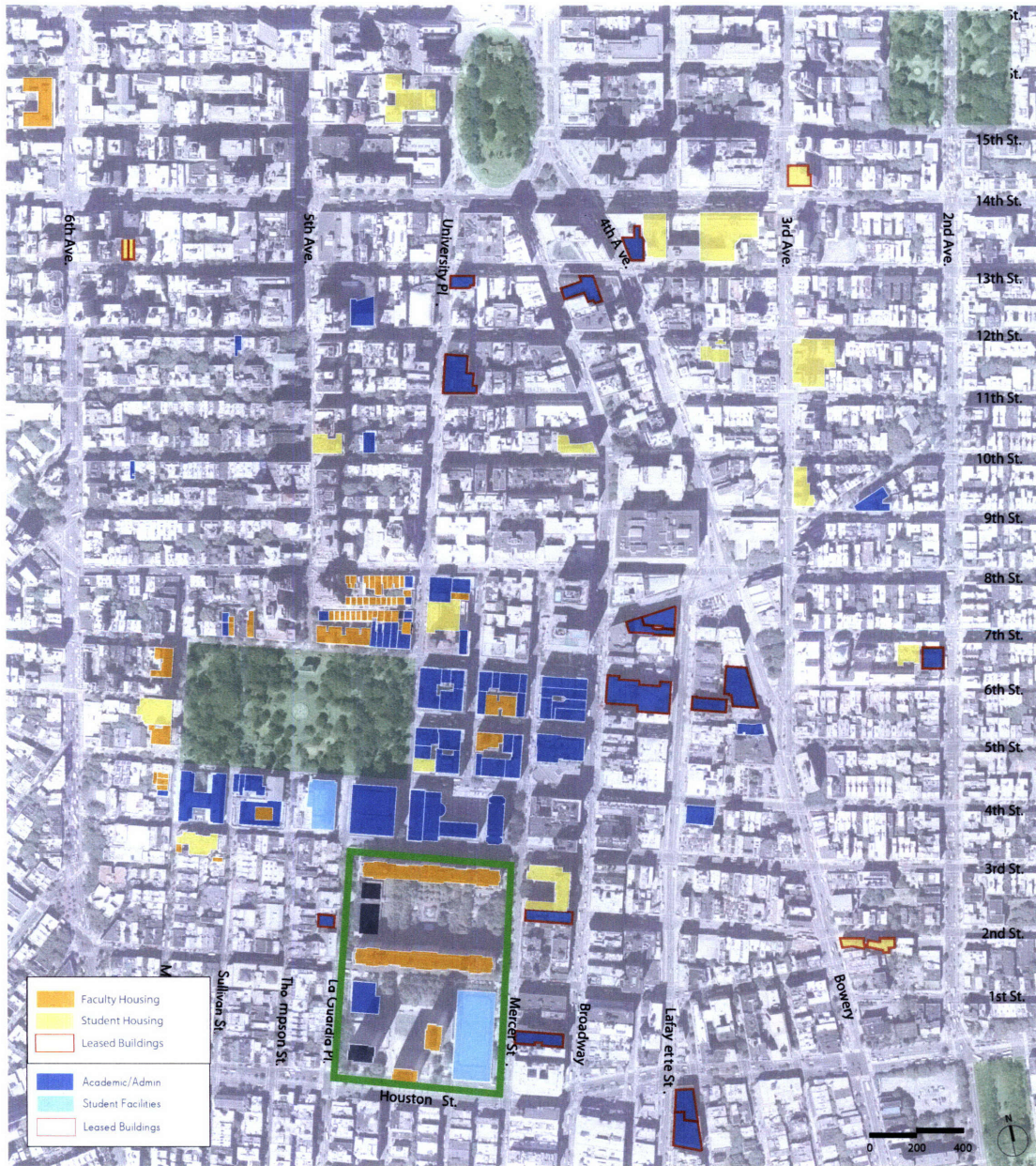




**Superimposed spatial systems and nesting scales**



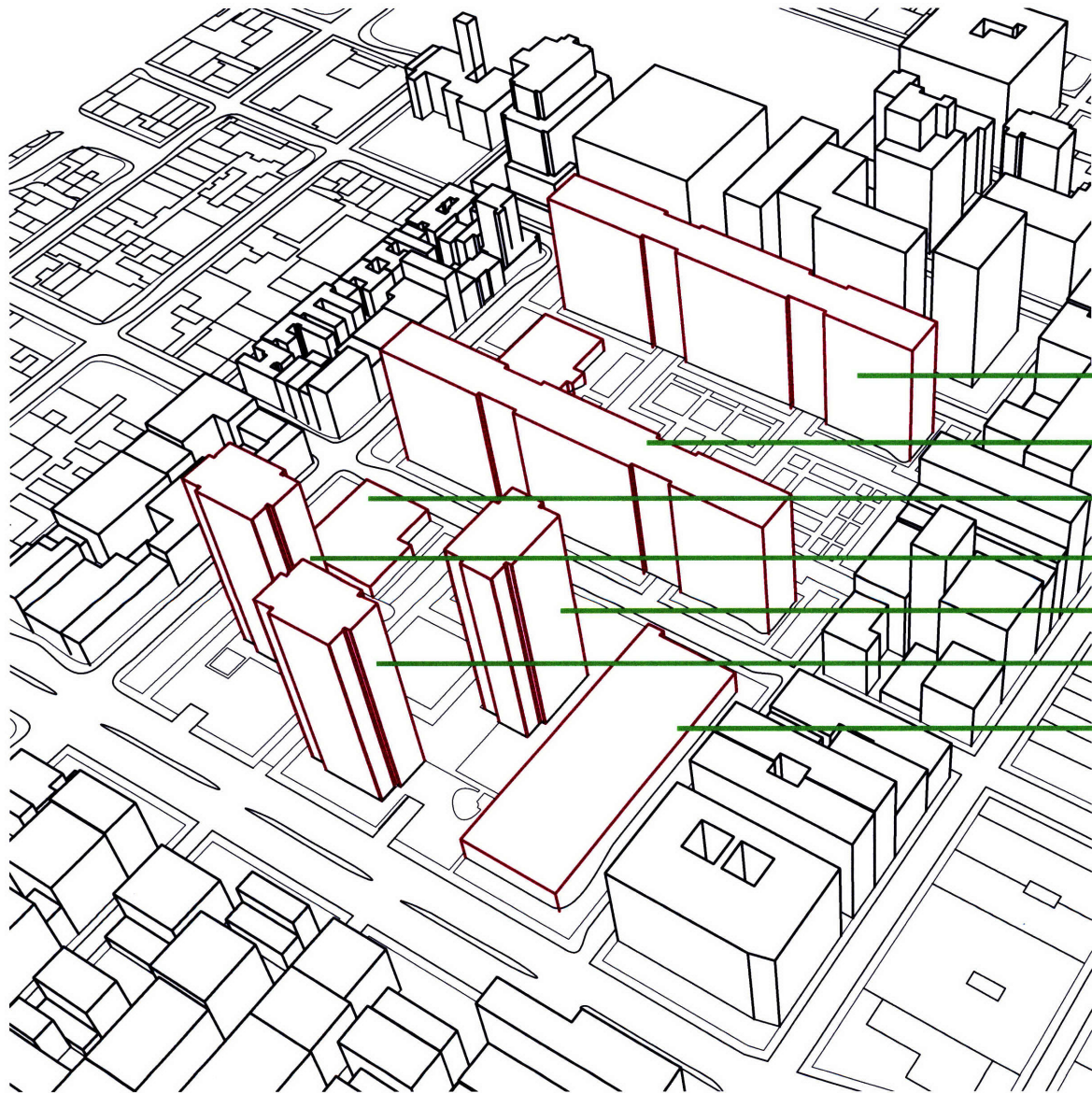




New York University Campus

Site





- Washington Square Village
- Washington Square Village
- Associated Supermarket
- Silver Tower
- Silver Tower
- Silver Tower
- Coles Sports and Recreation Center

## SITE

Within the context of Title I of the U.S. Housing Act of 1949 as carried out by Moses and his attempt to negotiate between public and private claims on land use, was the evolving development of New York University. The expansion of higher education was part of a three part strategy (along with housing for the middle class and establishing the city's cultural preeminence) to strengthen the center city in an age of decentralization, suburban drift and urban decay. Slum clearance and the allocation of federal funding for public housing were provided as tools to counter the private university's space problems and enable the institution to transform itself while consolidating in Greenwich Village - reversing a shift of operation to the Bronx. With no fence, gate or legible boundary, in contrast to

the walled campus of Columbia University, NYU has become part of the city fabric. Yet two blocks of the campus, failed Title I private development projects, are plagued by a series of problematic voids, gaps and ambiguous zones symptomatic of Title I complexes. NYU in name only, Washington Square Village and the Silver Towers are highly regulated in their empty zones by fences and gates dictating the flow of traffic and people through the blocks. The modernist legacy of space - look but don't touch - has been preserved, rendering the spaces between buildings empty and inhabitable. Here it is clear that empty or non-developed space in the city does not make it public, but rather creates a void - in Greenwich Village and in New York University.

Having only recently shed its reputation as a commuter school (in the past decade) and previously resisting the shift to the Bronx, NYU is once again being forced to reconsider the nature of their campus. With a stated objective of maintaining the size of the student body, while decreasing the student-faculty ratio, a shortage of available housing for faculty has put the university at a distinct disadvantage in recruiting. Current initiatives have been centered around purchasing buildings and complexes in other parts of Man-



hattan - but at rental prices affordable only to some tenure and a selected few junior and adjunct faculty, often with commutes of over an hour. Combined with a projected shortage in classroom space, the solution for two decades has been flight to satellite enclaves or disparate buildings at the expense of developing new urban, institutional and social infrastructure – redundant to the existing Greenwich Village campus - or simply having to exist without them at all.

Embedded within the history of Moses' transformation of New York and the Lower Manhattan Expressway, the problem of modern American housing (with buildings by Sert and I.M. Pei) and the nature of urban campus – the continued growth and densification of New York University from within and the role of architecture in the transition that will ensue are the point of intervention for this thesis project. At the southern boundary of Greenwich Village, negotiating the northward retail expansion of SoHo, NYU can further exploit its connectivity to New York City and reinforce its own territory through renovation and infill while preventing flight into off-campus areas. Connectedness is the spirit of the city (though this connectedness may not be physical) and these two loose-fit sites offer a potential for growth and connectedness different from the tabula rasa – to

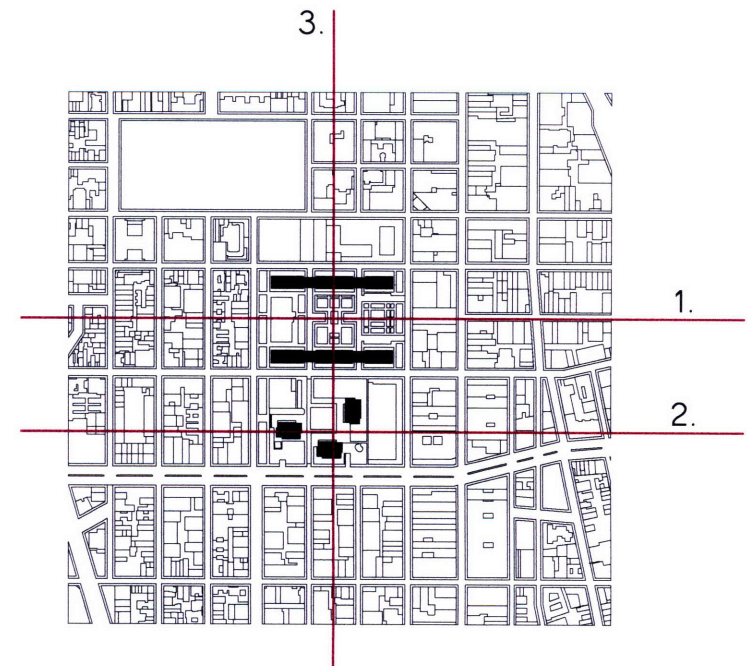
preserve and expand the infrastructure of the institution itself.

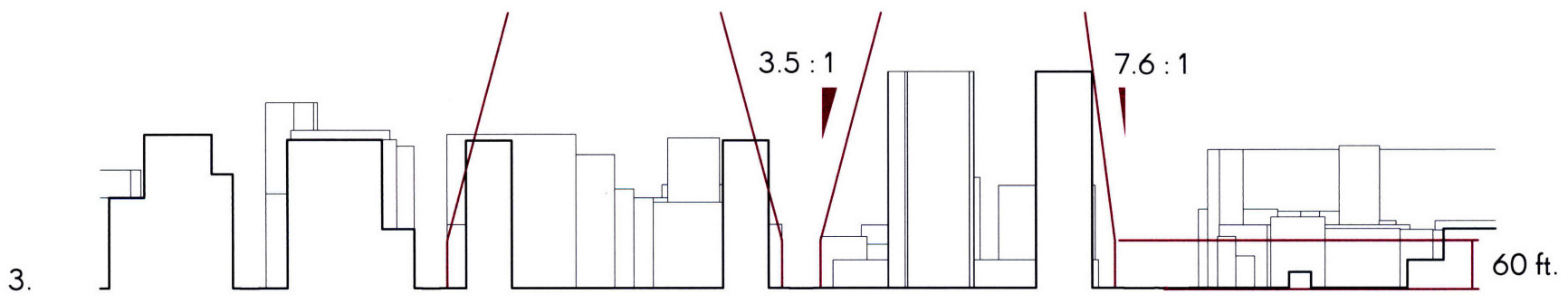
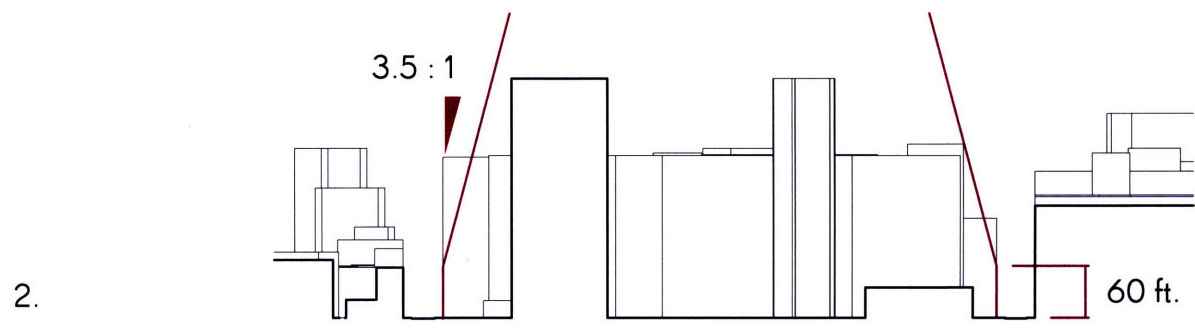
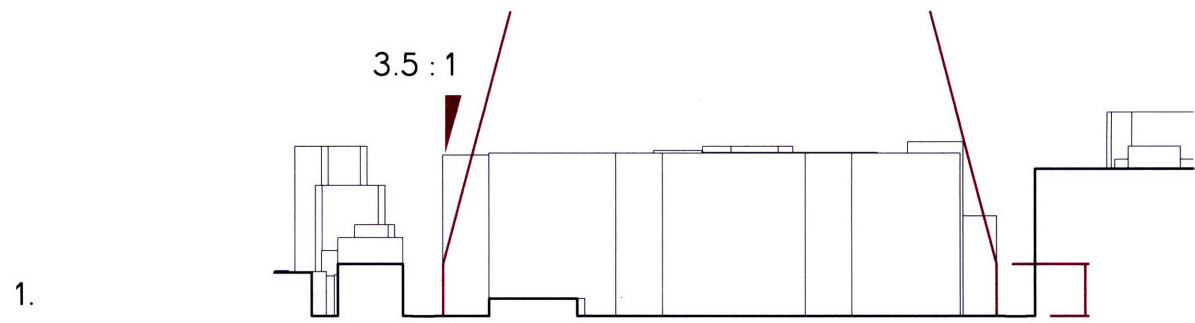
Here new boundaries, spatial differentiation and spatial diversity can be introduced to the existing Washington Square Village (Sert) and Silver Towers (Pei) housing projects by virtue of an architectural envelope which necessarily promotes interdependence and local self-reliance. In retrofitting the existing conditions the goal is not simply infill more architectures or urbanisms, but the densification and multi-loading of architecture as an urban strategy to shape the growth of NYU. The complexity and rigidity of the existing built form guarantees a solution what will be conflicted and complex – potentially dirty and ugly – to satisfy the institutional needs of NYU and external pressures of real estate and commercialization in its immediate context. Just as the AOL Time Warner Center in New York, and the components of Lincoln Center embedded within it, is financially fueled by retail leases and the Mandarin Hotel – there is the potential for NYU to embrace the hotbutton complexity of people, cars and retail infringing on NYU from SoHo below. Could parking for 2000 cars or an indoor shopping center as a northward retail expansion of funds public spaces and prevent the flight of NYU to outlying areas, sustaining the life of the institution? What can a de-



velopment-minded consortium partnered with a research university achieve together? A great deal of controversy for one - a new model for formally interesting infill in slab and tower conditions is another.

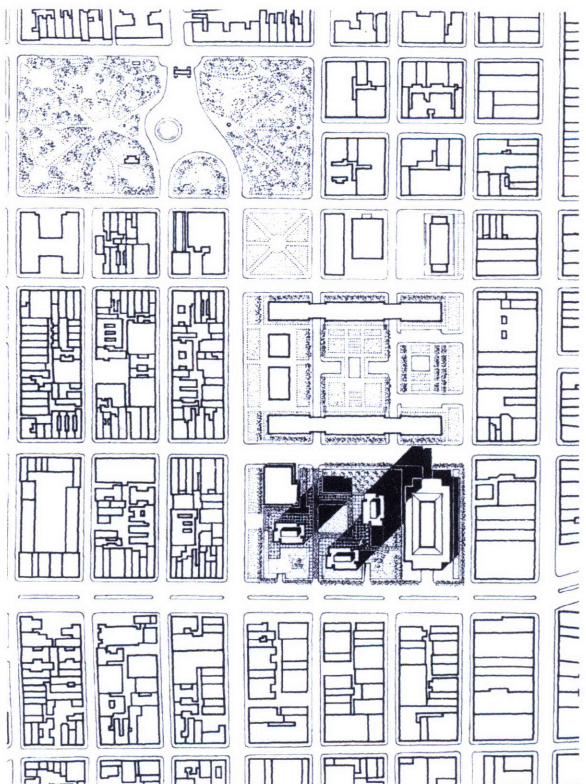
The methodology for negotiating the changing needs of NYU and New York City should not be simply inventing new methods of formalizing. Realizing the problematic of pure formal invention and dispatching it over various scales and disciplines - and failings that methodology brought before is of the utmost importance. Instead we should utilize new possibilities for program mixture and construction method to extend program upward or sideways or downward in ways not recognized as possible to establish the limits of architecture and its essential differences from urbanism. Delineating the line of separation between urban and architectural space and between architectural spaces at the building, room and block envelope becomes the method of developing reciprocity and connectedness in three dimensions.





**Setback Height and Solar Exposure Plane**













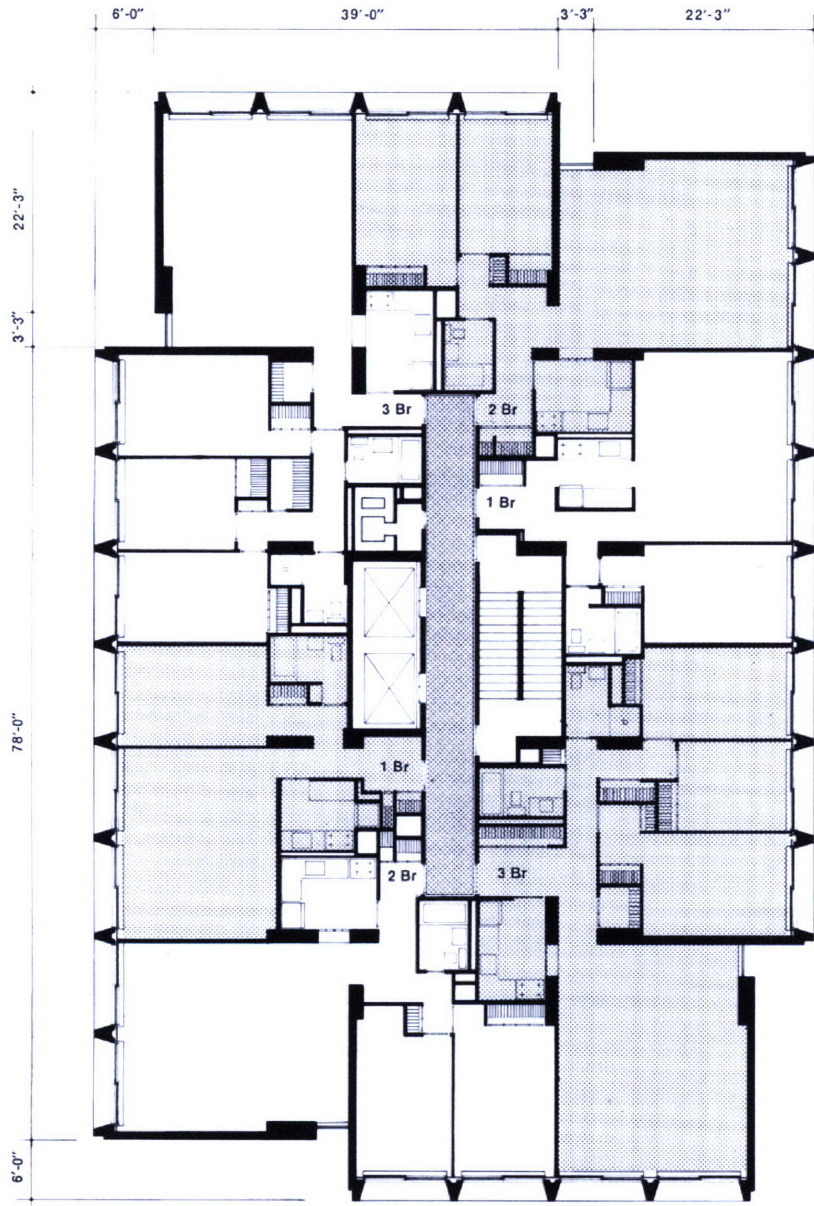
Silver Towers - I.M. Pei





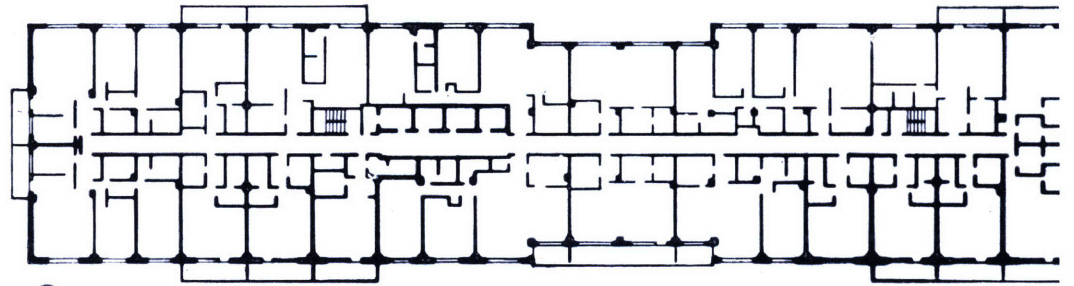
Washington Square Village - Paul Lester Weiner







0 5 10 20 30 40 50

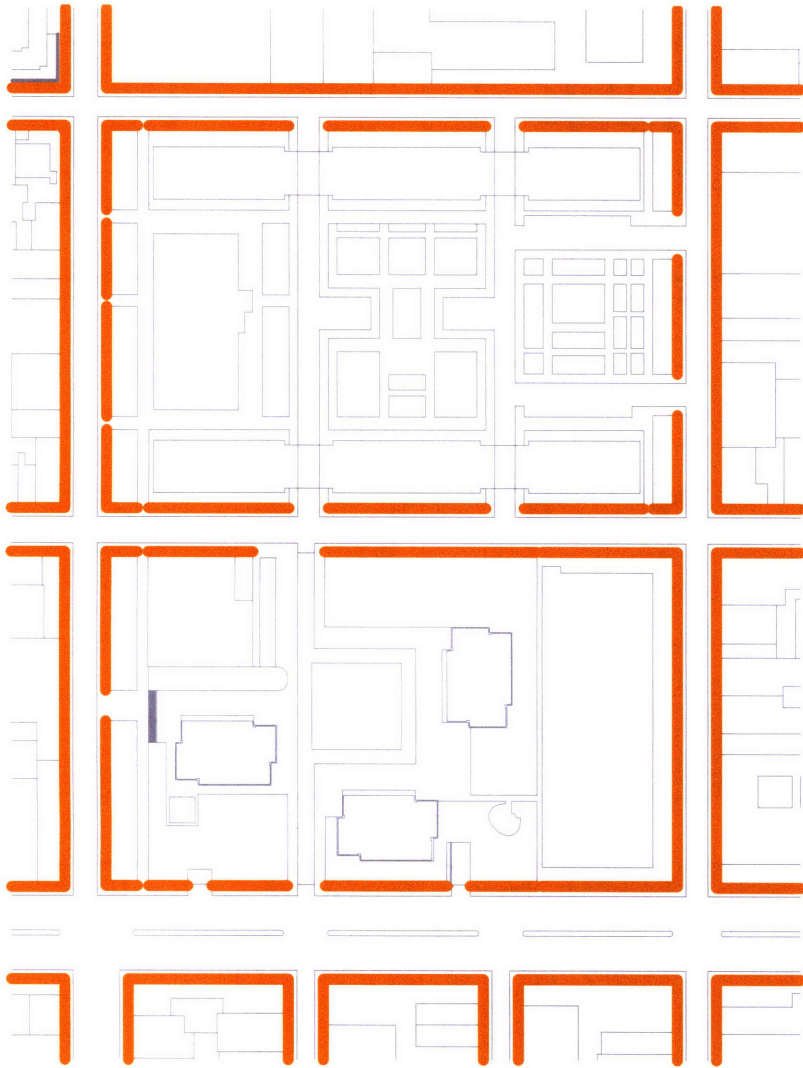


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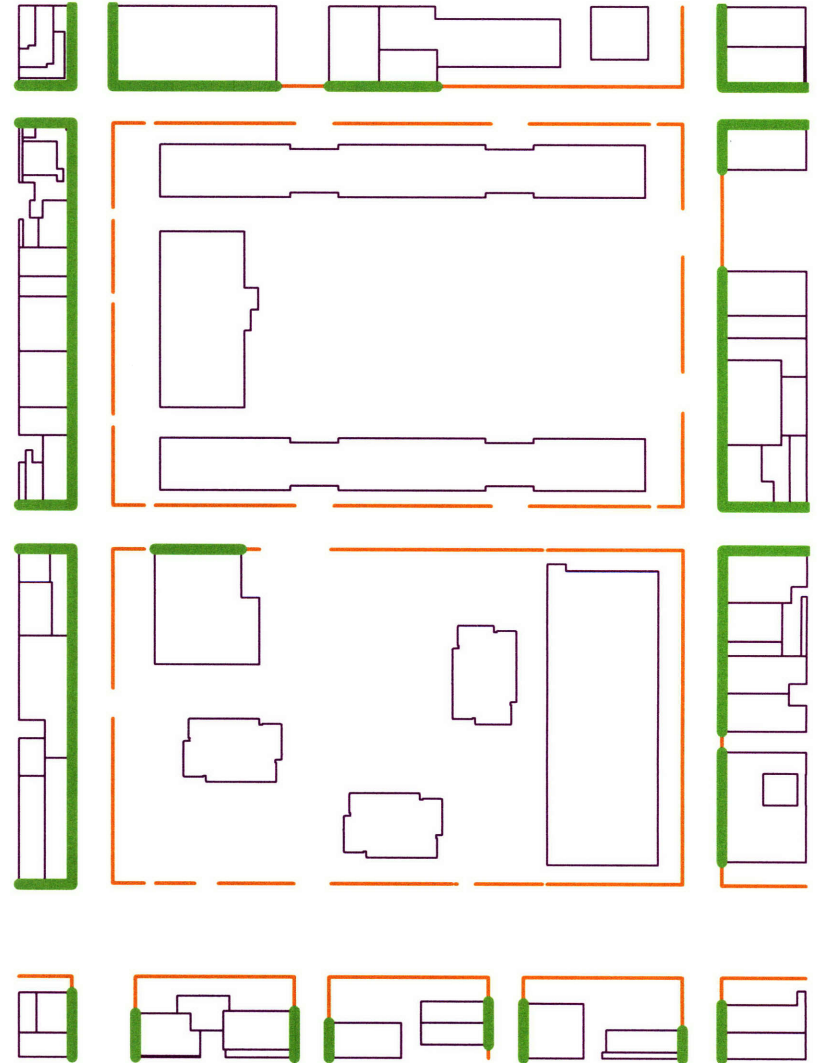


Typical Floor Plans



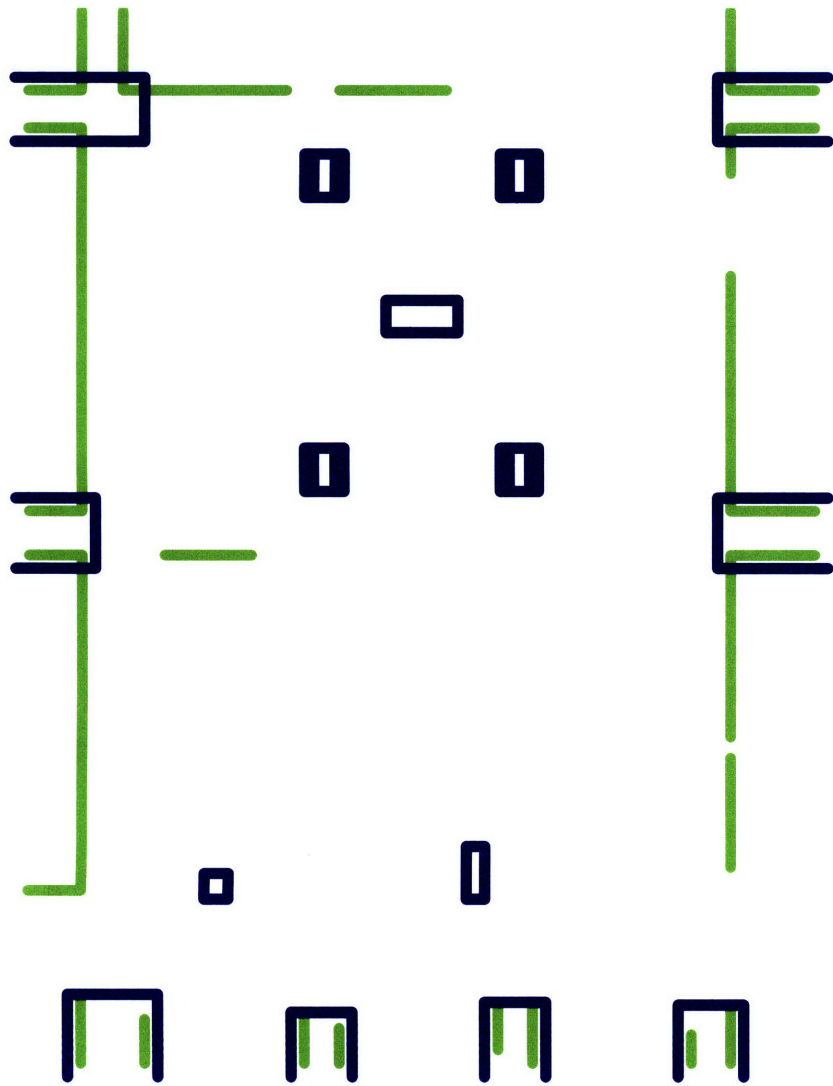


Edge of Sidewalk

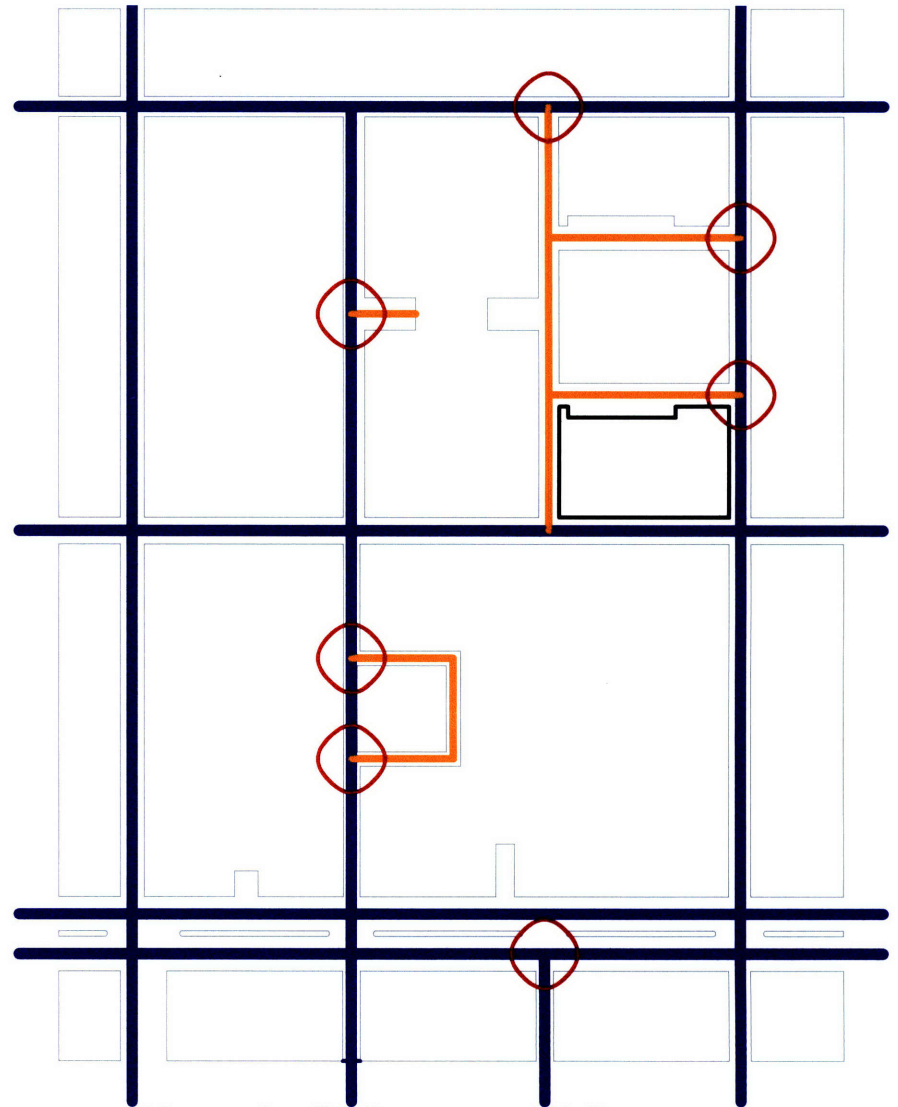


Frontages

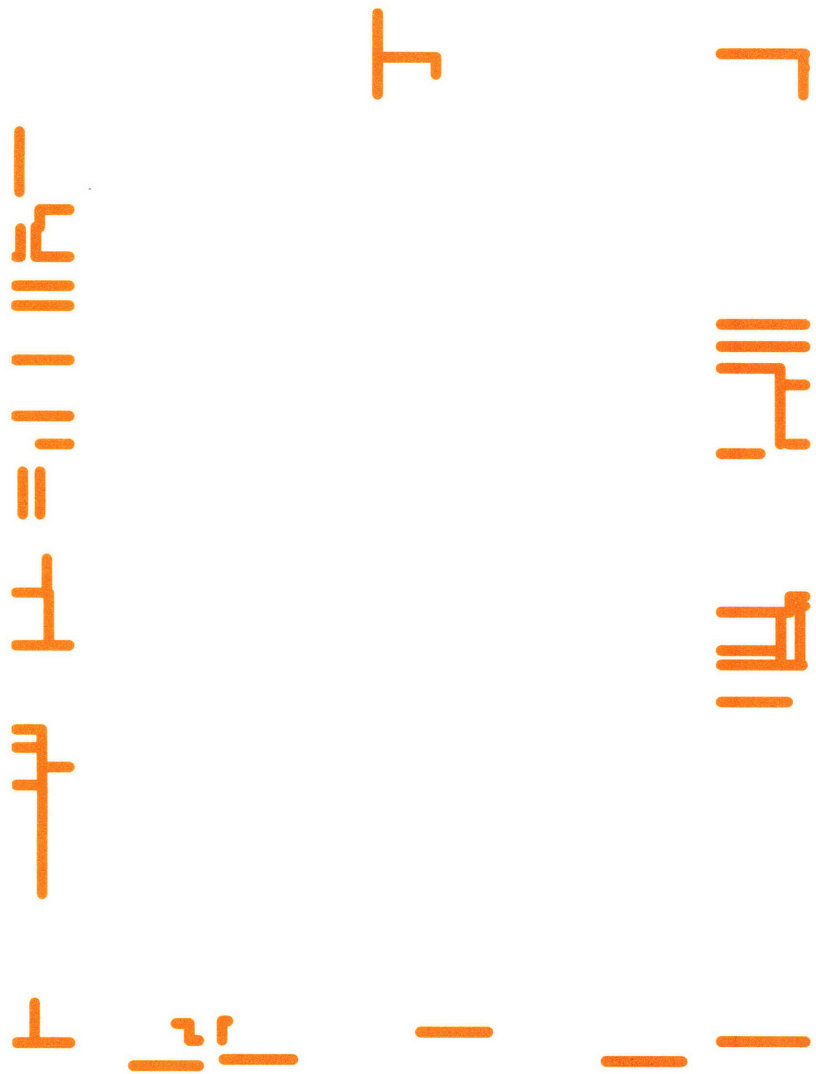




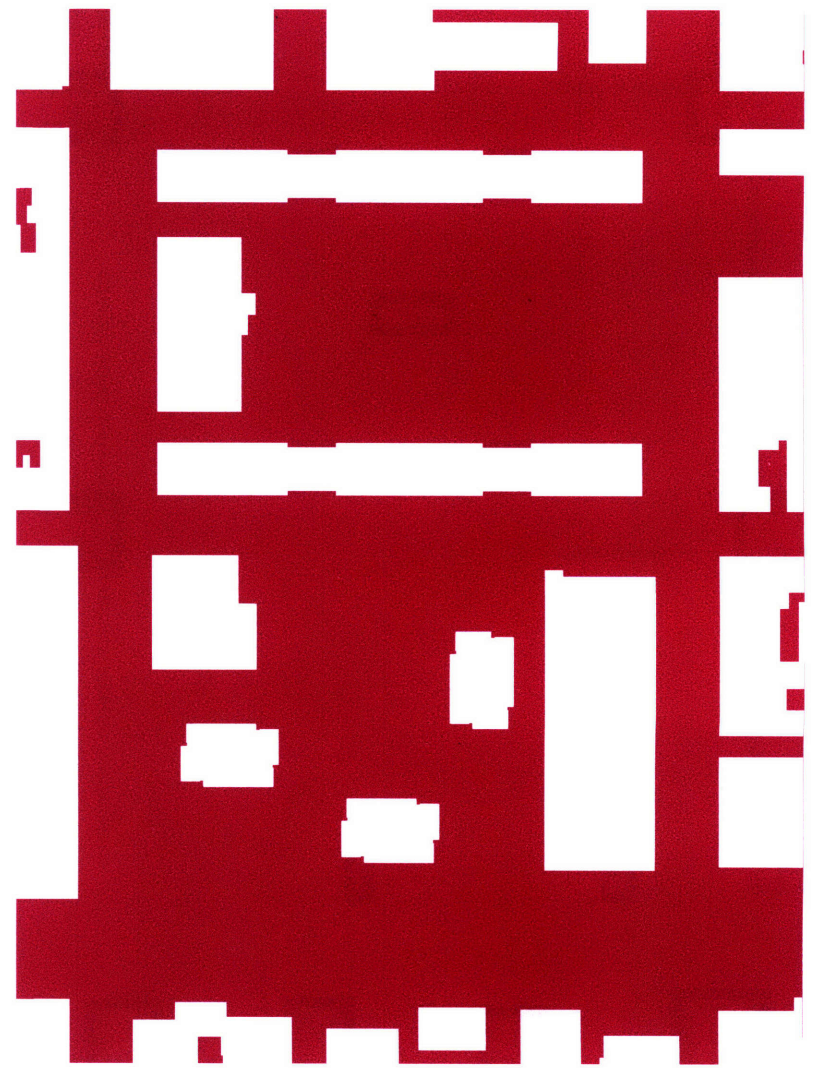
Zones Of Sectional Overlap



Hierarchy Of Streets and T Connections

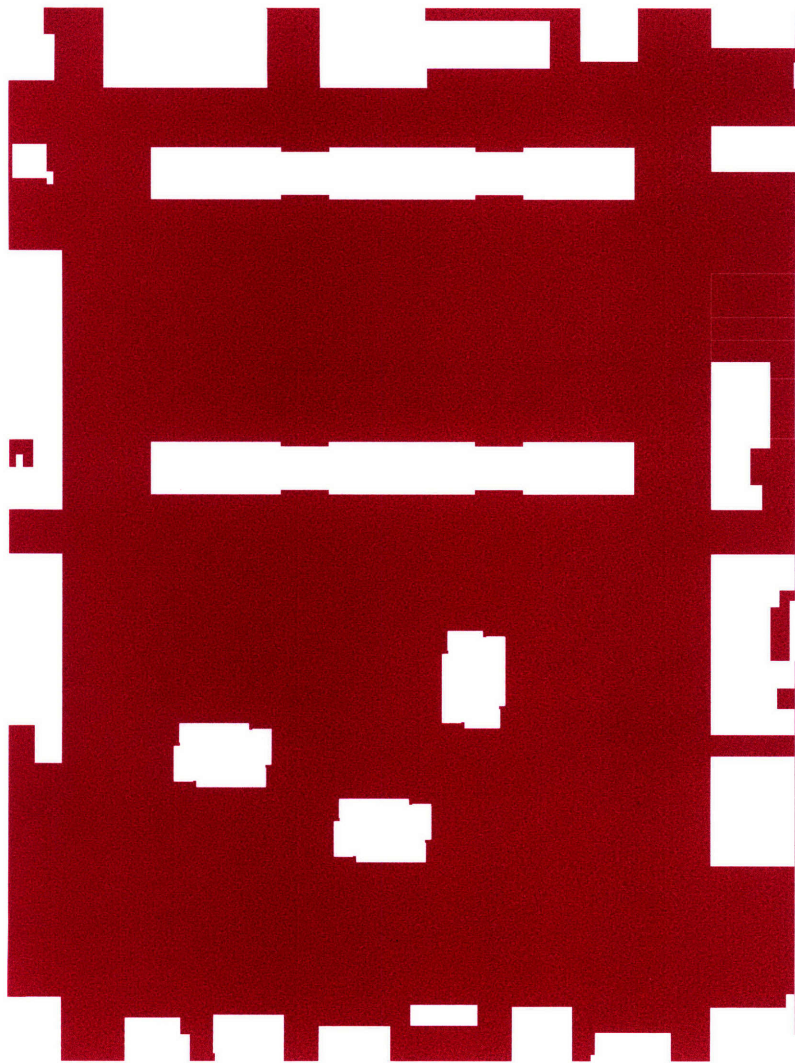


Party Walls

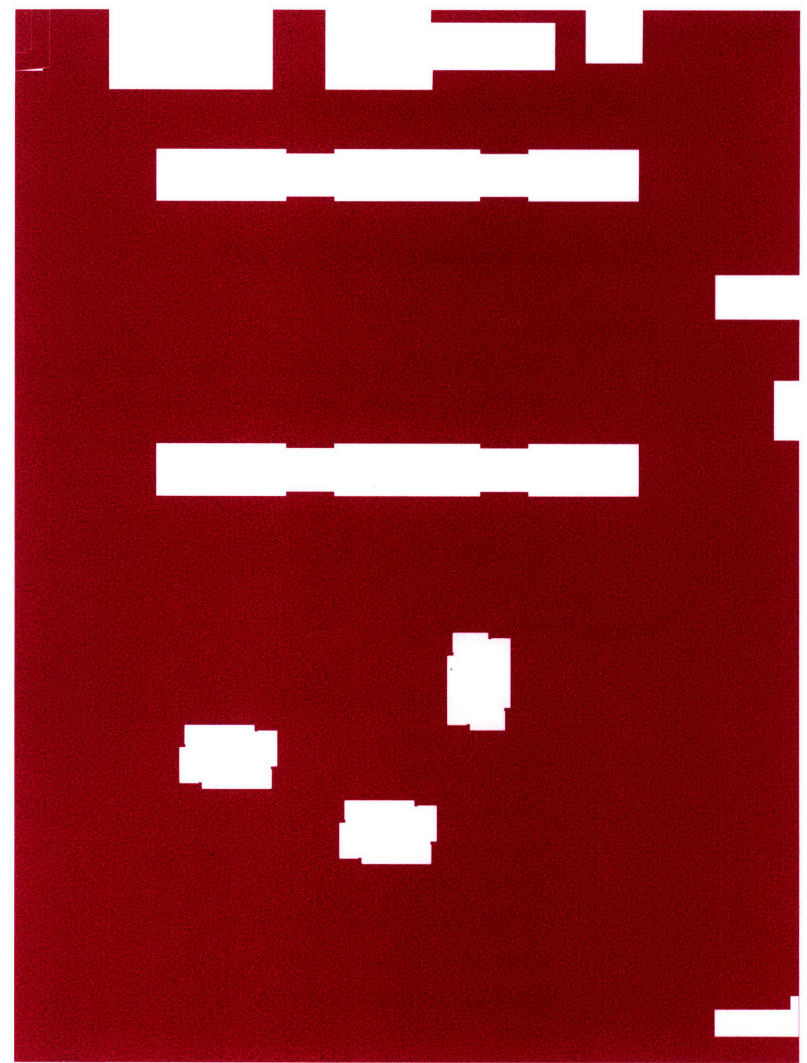


Space Between Building and Sidewalk





Space Between Buildings Plus 50 Feet



Space Between Buildings Plus 200 Feet



**NYU projects a need of 6 million square feet over next 25 years.  
This is simply too much.**

Student Population Projections	2007	2031
Undergraduate	21,000	24,000
Graduate	20,000	22,250
Global	0	7,000

**5,500 more students in NYC by 2031**

Observations

NYU doesn't need this much space, it needs to use space more efficiently - NYU doesn't have Friday classes  
Academic space can be found. Housing for a growing student population and generating enough income to sustain a business in NYC are greater concerns.  
Building a large amount of program that is not NYU - letting in bounds - promotes campus mission of being in and of the city, alleviates financial pressures.  
Currently 95 sq. ft. per student, Columbia is 250 sq. ft.

Existing Southern Blocks

	units	sq. ft.	sq. ft. floor pla	Max FAR	floors
Silver Towers (non NYU)	174?	127,500	7,500	3.44	30
Silver Towers	174	127,500	7,500	3.44	30
Silver Towers	173	127,500	7,500	3.44	30
University Village	600plus 1	532,100	31,300	3.44	17
University Village	550	532,100	31,300	3.44	17
entire north block		280,000			
entire south block		245,000			
open ground space north		198,000			
open ground space south		166,000			
open space plus 30 north		217,000			
open space plus 30 south		223,000			

Project the existing blocks becoming either a community facility - 6.5 FAR - or commercial, C6-1 - 6.0 FAR.

**The Southern Blocks can accommodate an additional 1.5 million sq.ft. of program.**

**Residential**

	NYU 2031 project	<b>Project Projection</b>	number of unit	typical size per unit	notes
Undergraduate Students	1,000,000 GSF	<b>210,000 GSF</b>			600-700 sq.ft. per 2 students
Garden Apartments					
Mid-Rise Flats					
Dormitory					
Grad Student	1,300,000 GSF	<b>320,000 GSF</b>			600-800 sq. ft.
Garden Apartments					
Mid-rise Flats					
High Rise Point Tower					
Faculty	700,000 GSF	<b>390,000 GSF</b>			700-1200 sq.ft.
Duplex					<i>1,000 – 1,200 sq. ft.</i>
Townhouse/Rowhouse					<i>1,200 sq. ft.</i>
Garden Apartments					<i>700 – 1200 sq. ft.</i>
Mid-rise flats					<i>700 - 1,200 sq. ft</i>
High-Rise Point Tower					<i>700 - 4,000 sq. ft</i>
Public Housing / Non-University Affiliates					
NYU Retirees					
Dining Halls					
Small communal kitchens					
<b>Academic</b>		<b>150,000 GSF</b>			

**Program**





**Parking**

**90,000 GSF**

Monthly  
Public

**Access/Docking**

**Technical Floors (Built In)**

**Non-Assignable Space (Built in)**

6,000,000 GSF  
throughout NYC

**1,500,000 GSF**

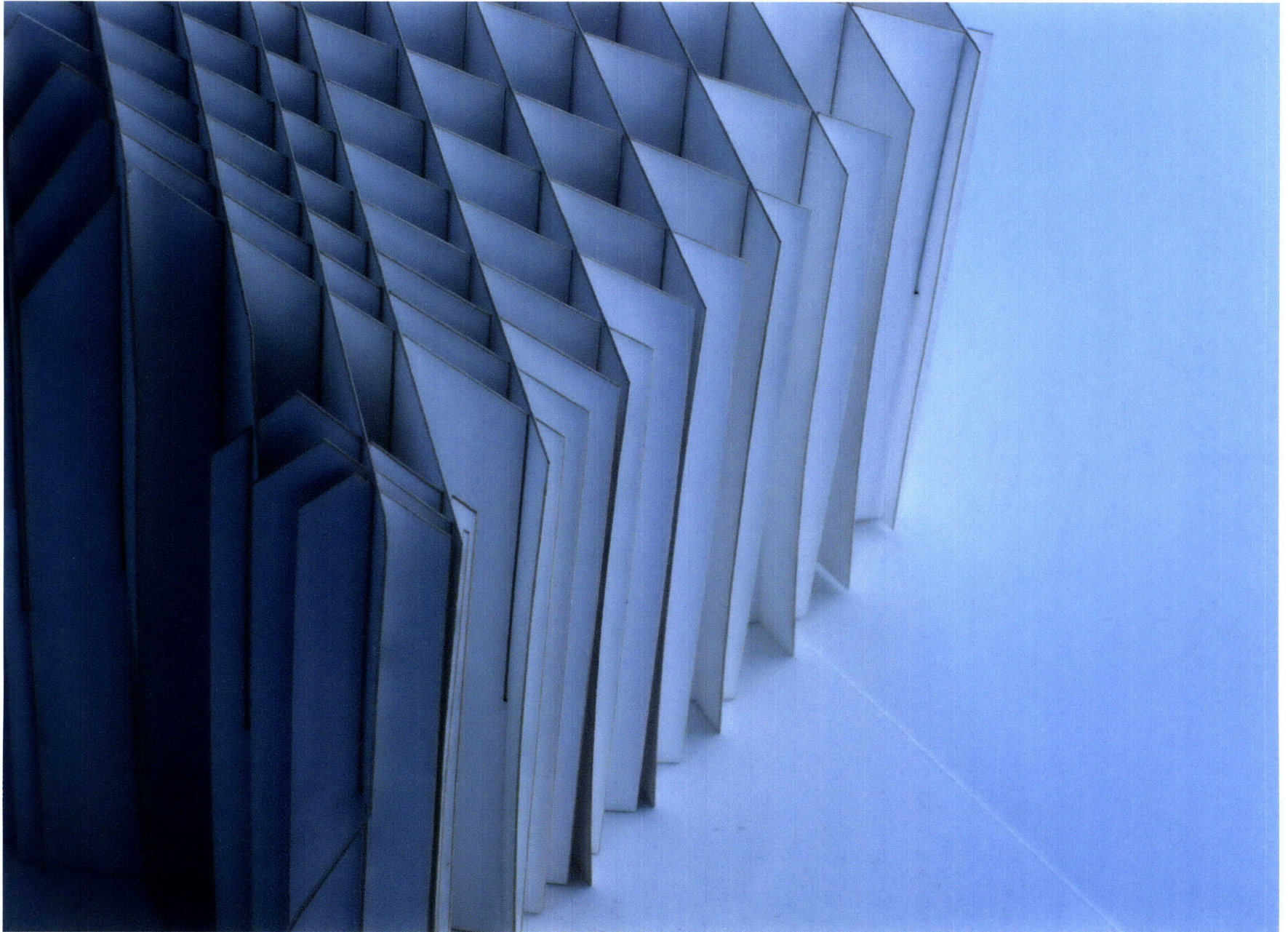
**new program on existing NYU campus**

**Renovation of existing 1.7 million sq.ft. of program.**

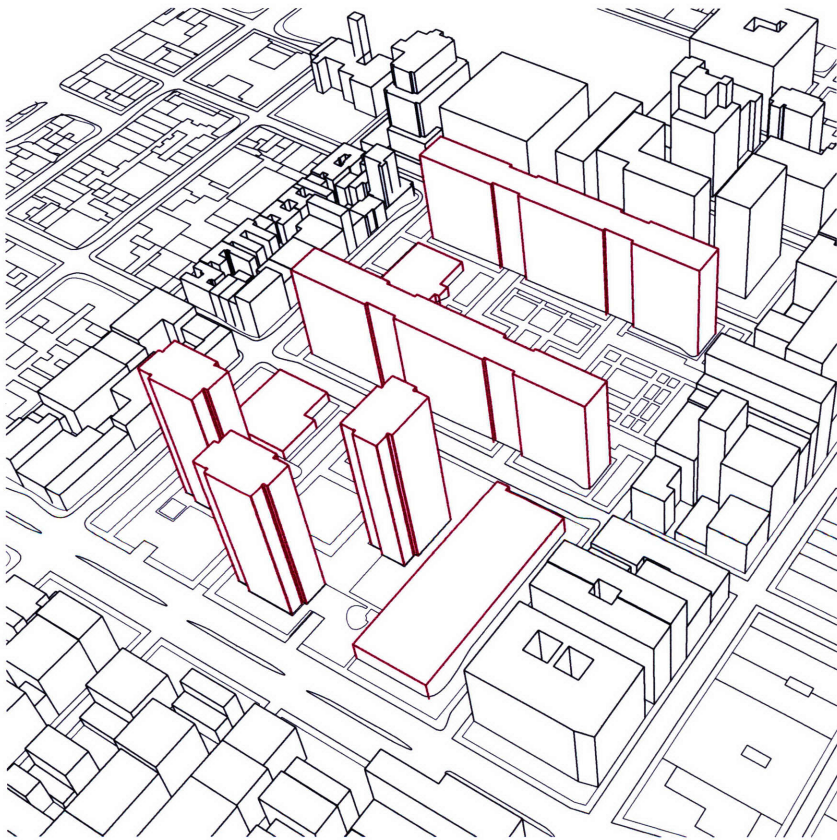
**Program**

# **STRATEGIES TO EXPAND NYU**

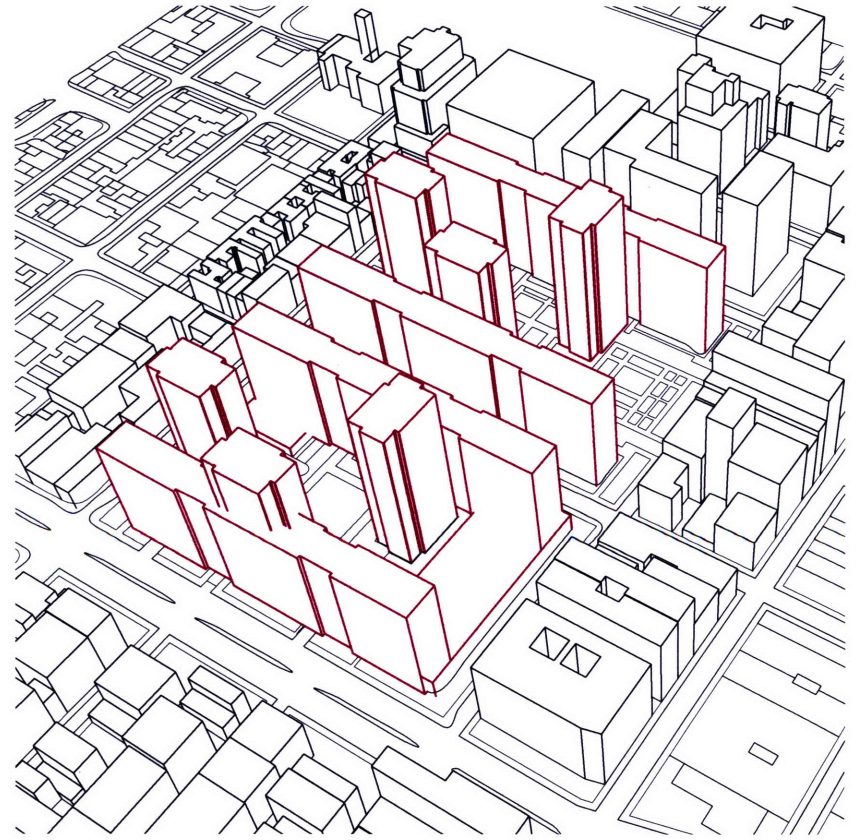






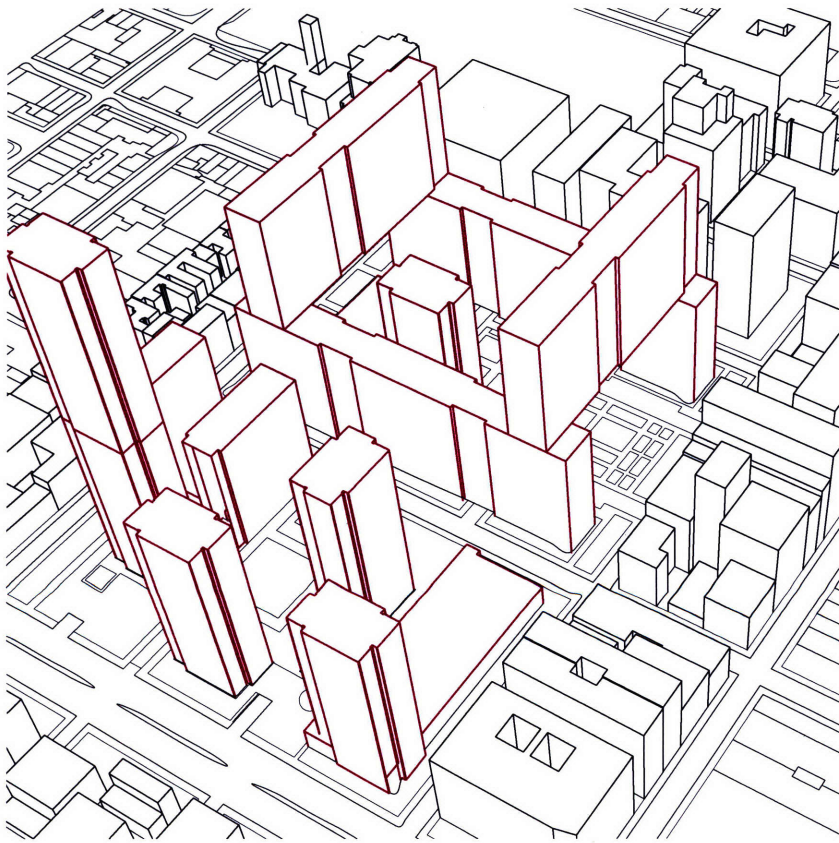


Existing - R7-2 - 3.44 FAR

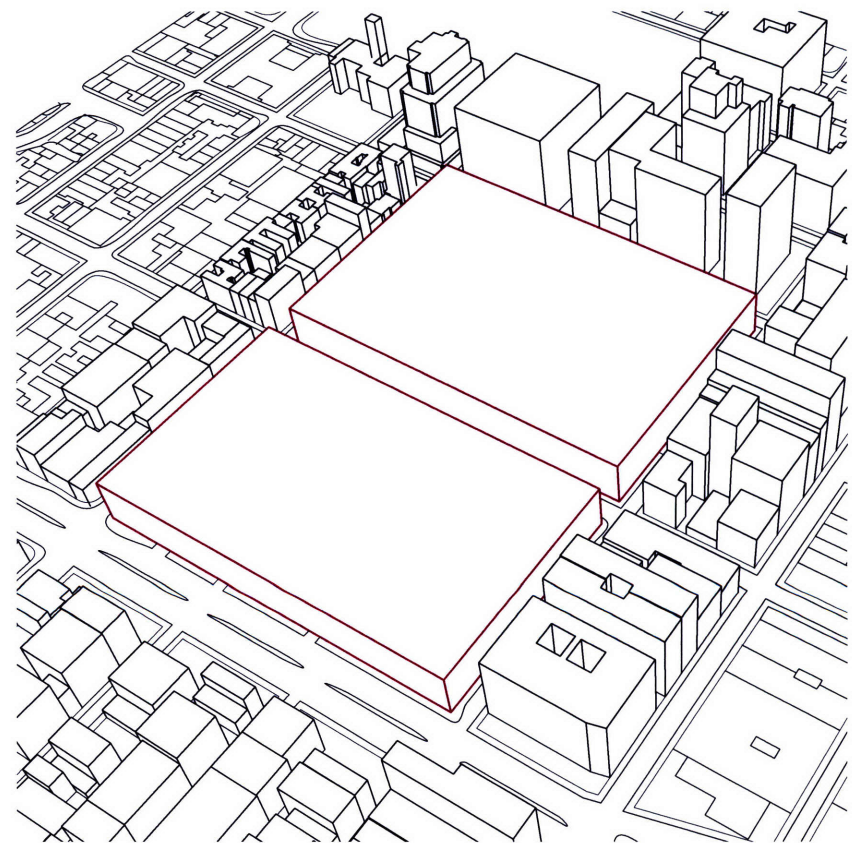


Proposed - C6-1 - 6.0 FAR

**Floor area ratio**

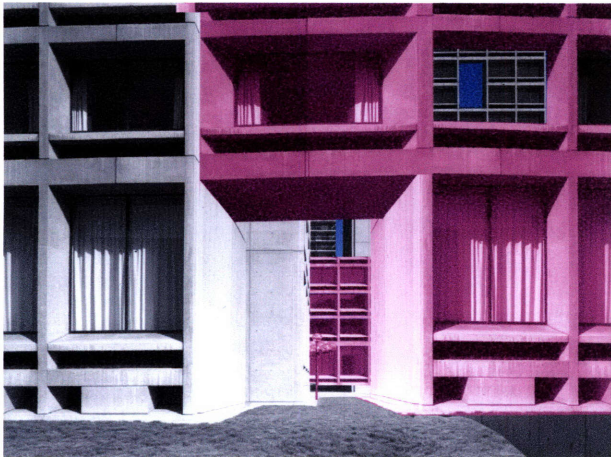


Proposed - C6-1 - 6.0 FAR



Proposed - C6-1 - 6.0 FAR





Fill

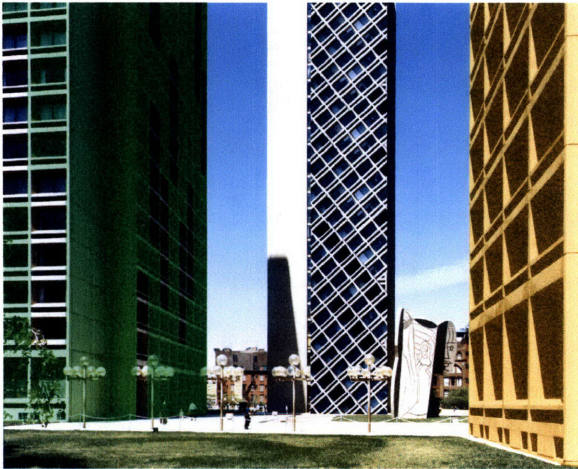


Bridge



Cut - Divide

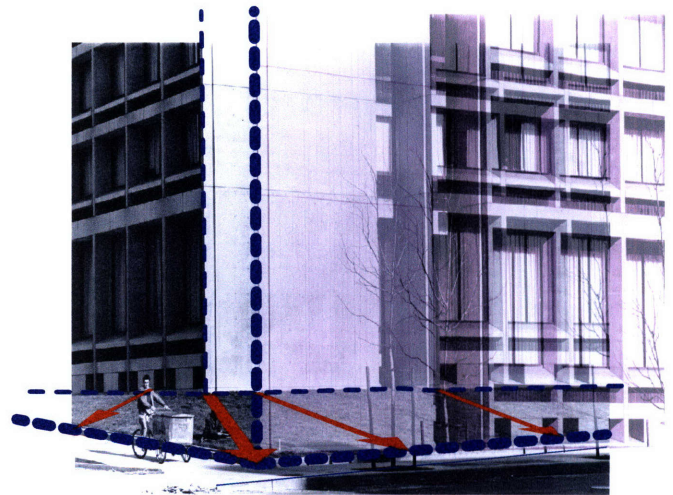
## Surgery



Difference



Sidedness



Frontage



## **STRATEGY FOR ENVELOPES OF CONNECTEDNESS TO EXPAND NYU**

The boundaries of the NYU campus at Washington Square Village and the Silver Towers are being questioned from the exterior by new forces of density and infiltration of SoHo and from the interior by demands for growth and expansion from the University. The notion of envelope will be used to question both the structure of social environment of the urban campus and focus directly on the abilities of an architecture to mediate the instability of physical environments.

Connectedness, thickness and representation are studied on three scales – building envelope, typological form and urban topology. By determining reciprocity through physical or non-physical connectedness with environment, the objective was to identify

reiterative feedbacks between small scale and large scale, between plans and section, the architectural and the urban.

Building Envelopes, as wall, ceiling and floor were studied as material transitions between building and environment, as boundaries that define opening and closure - the material of physical interdependence, sustainability, accountability and shared use.

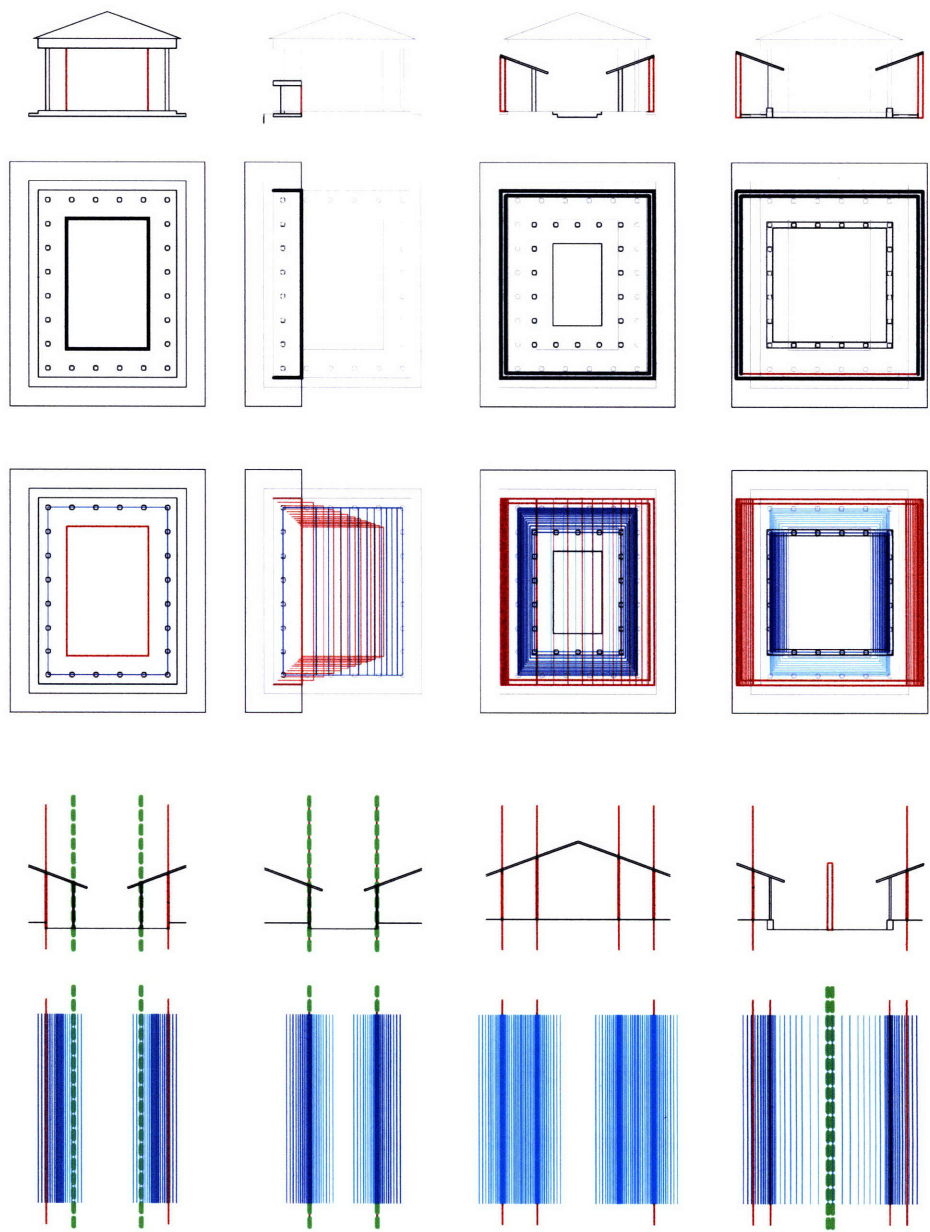
Typological Forms were studied as the repercussion of programmatic relationships – introducing a variety of activities and urban qualities, densification, opening of slabs and facades, variation of scales and non-repetition of public and private programs to the insufficient NYU site. The monotonous beauty of the Pei and Sert buildings is indicative of the greater problematic of the homogeneity of program. The all-pervasive, only-housing activity program, must be tempered with conflicting programs as a stimulant to modify NYU to meet its anticipated needs.

Urban Topologies, the urban or block envelope– mediating not only architectural and urban space, but autonomy of the enclave itself with its surrounding context. The setbacks of the NYU blocks create a wall no different than that of the Columbia precedent in resisting any relationship to its community, nor does it craft the type of

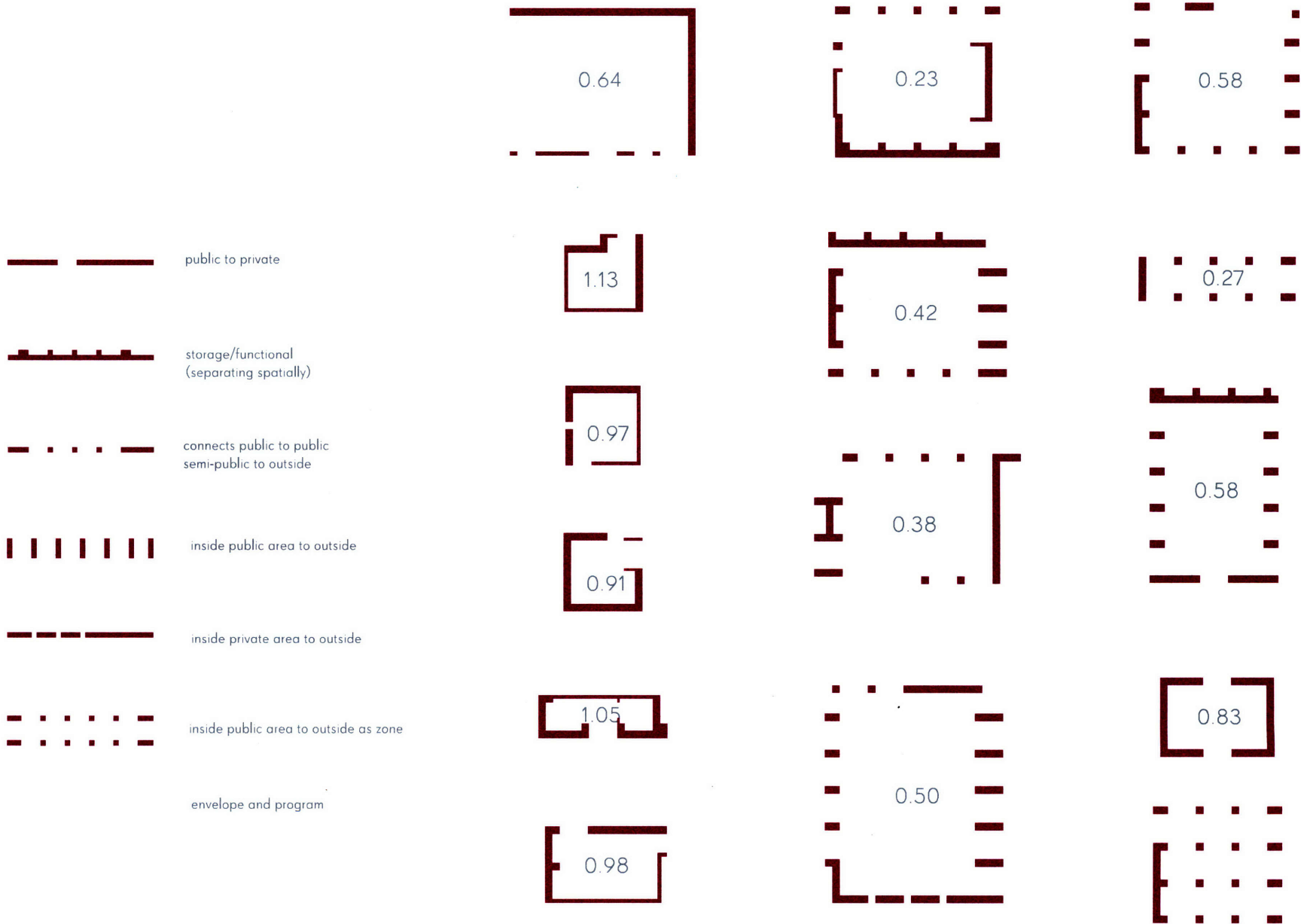


interior space of the walled campus typology. It is an ugly mix resulting in a lack of hierarchy in urban space and modulation in section, prescribing use rather than affording choice. of Greenwich Village.

In approaching the 'post-occupation' site of NYU it will be essential to question the consistency or difference of these three conditions. For LeCorbusier in the Voisin Plan, symmetry and repetition traced through the structural frame in its vertical repetition, through the typological form of the building, into the city's form through the order of the architecture. Breaking consistency of ideologies – in material, in typology and in urban topology – and the cascading effect of architecture to urban type is essential. Rather than the cumulative effect of structural grid, vertical circulation systems, glass curtain wall and roof garden as a sequence of complete withdrawal, elevation, elevation, isolation – I propose affording choice, community, collaboration, the responsibility of use and acknowledging the limits of our abilities as architects. Establishing walls, program and arrangements of difference – looking simultaneously inward and outward – the new symbiosis of technology, geometry and biology can create a grid of connectedness that maintains the existence of NYU as an institution and project as an active participation in the context

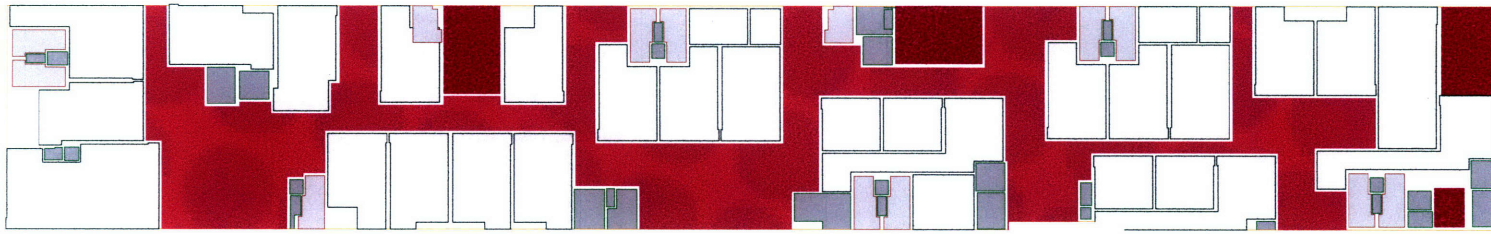


Outward facing turned inwards

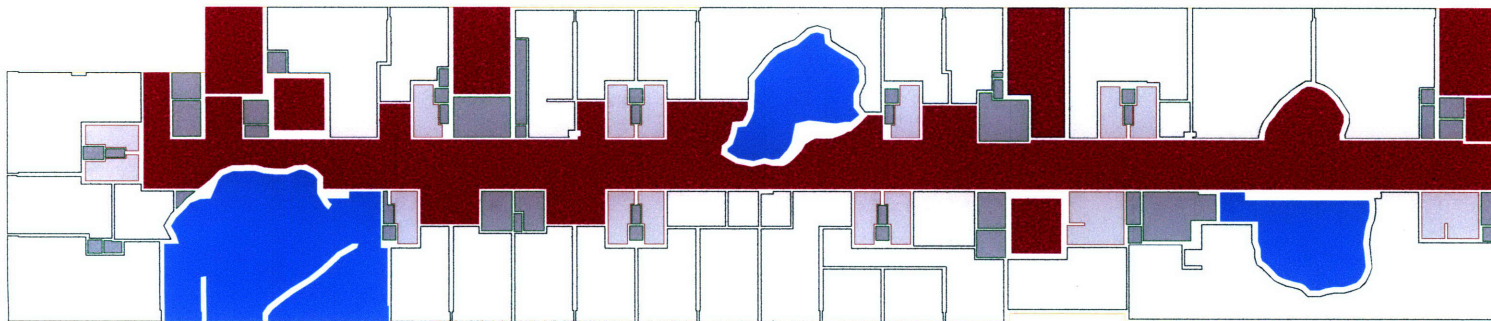


Wall type according to publicness and program

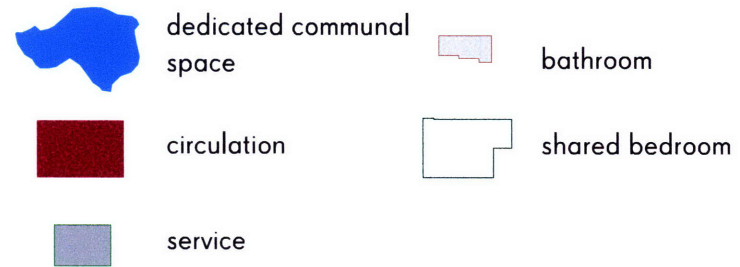




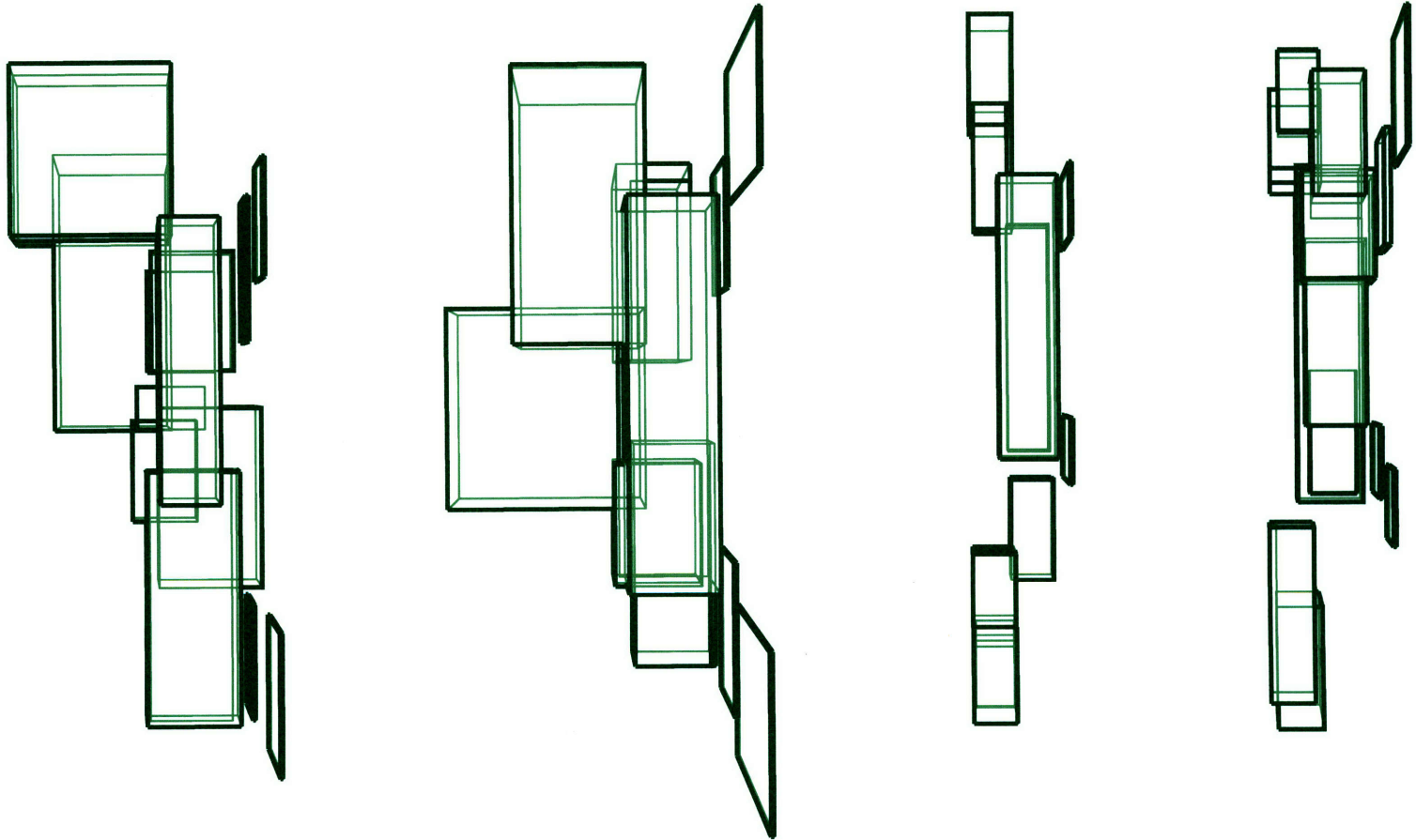
Proposal



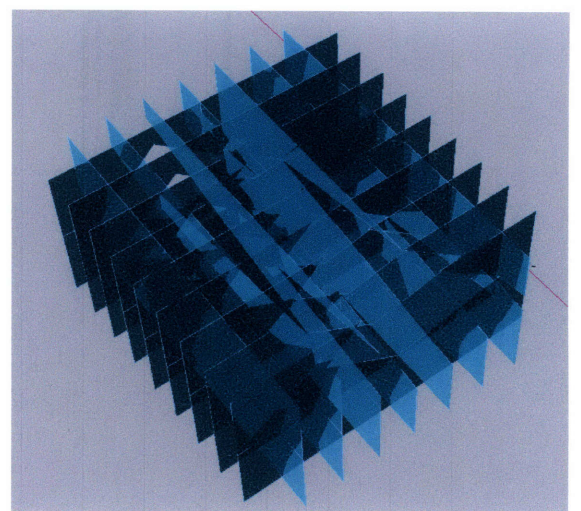
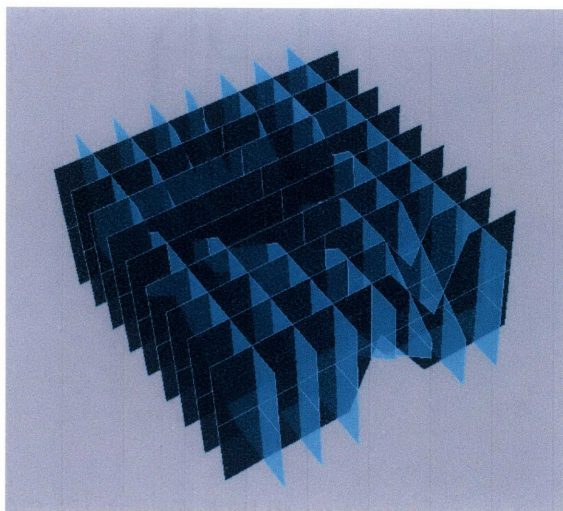
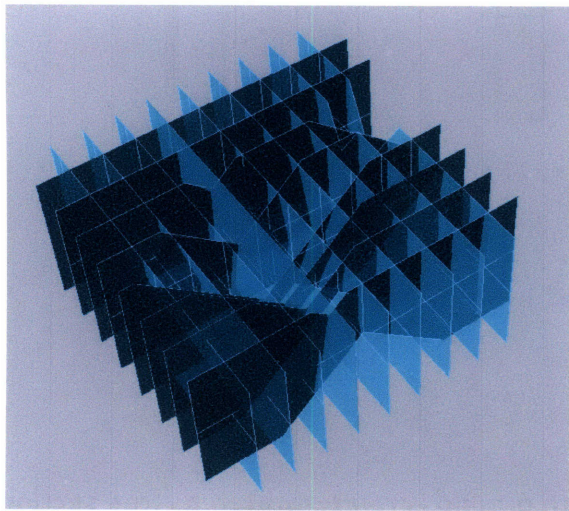
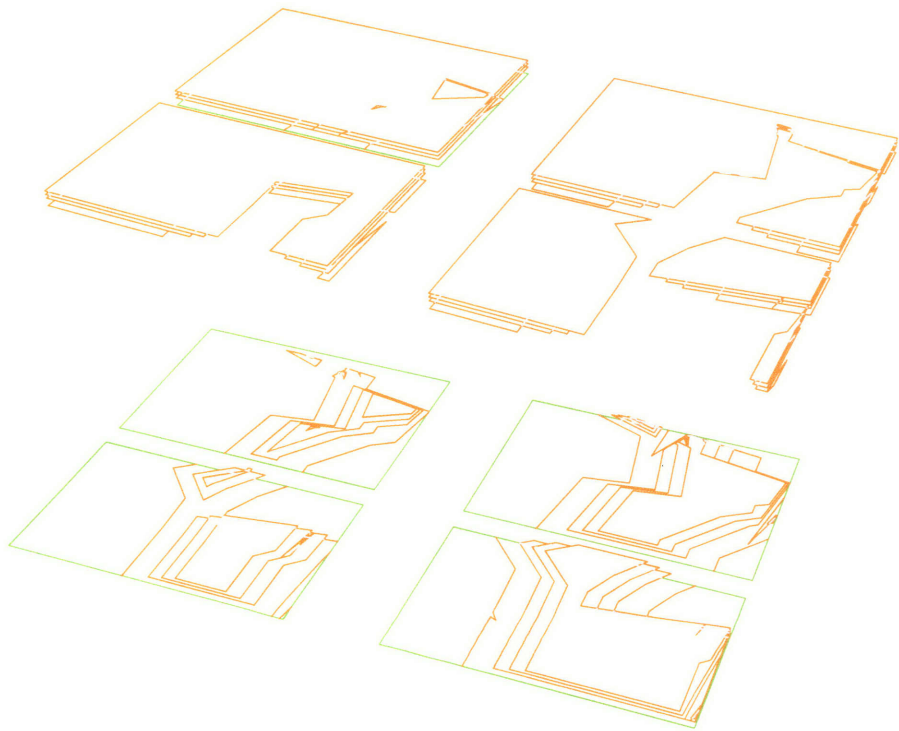
Simmons Hall - Steven Holl



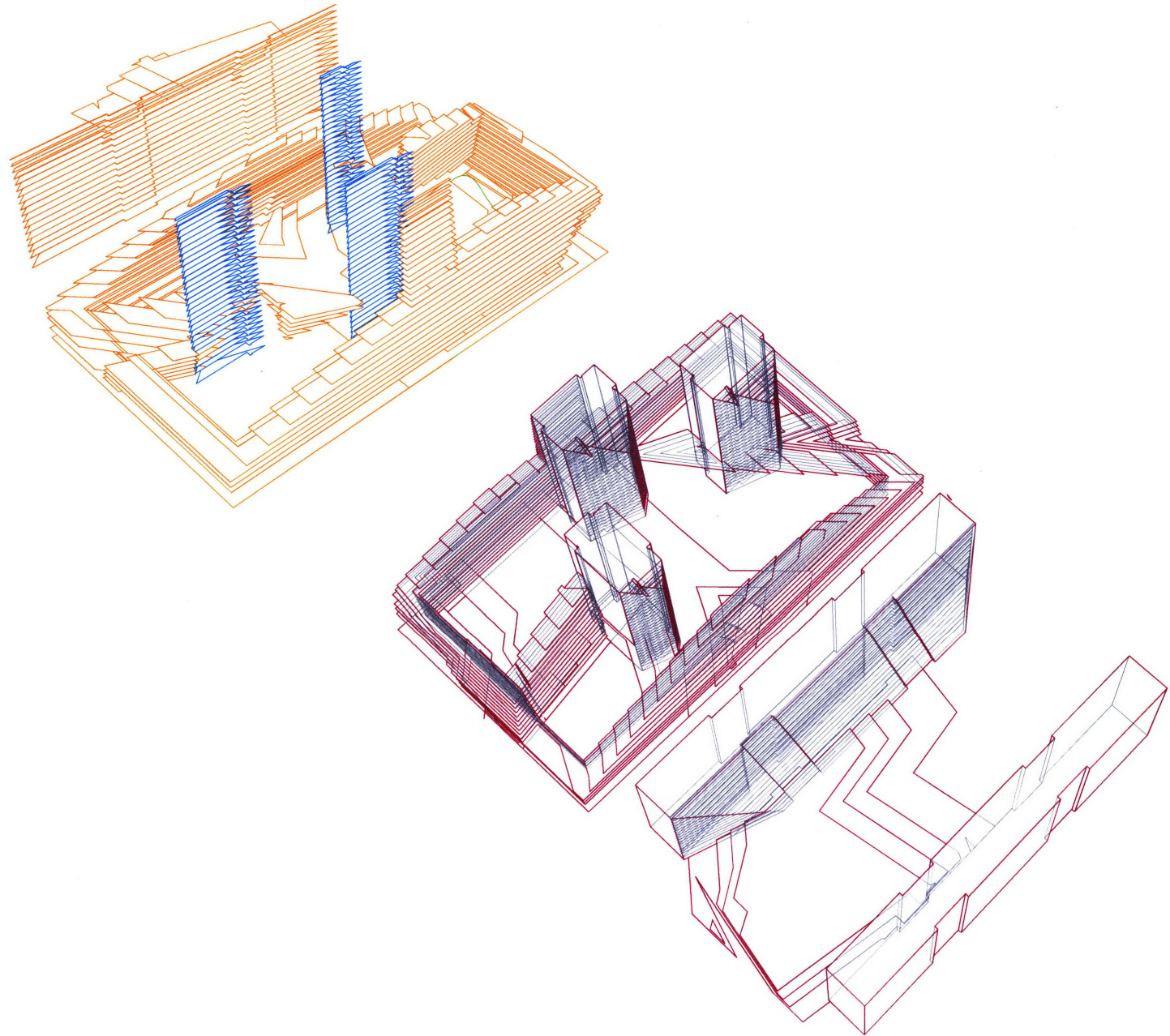
Circulation as communal space



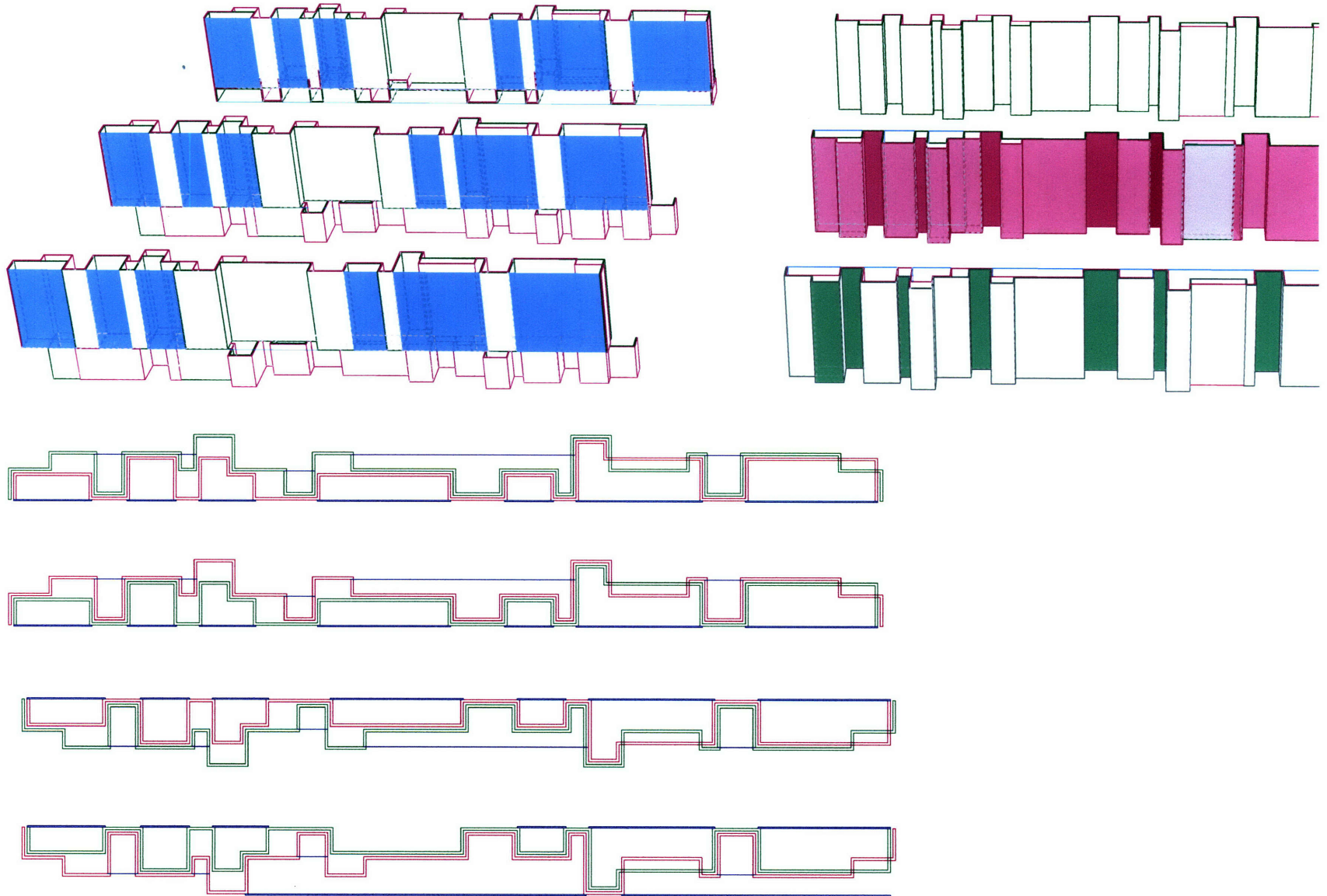
**In new intimacies modern ground is reinterpreted as free section**





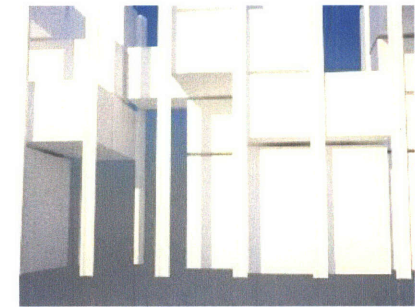
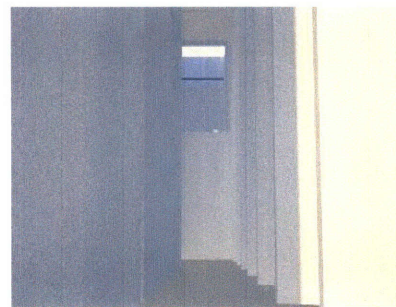
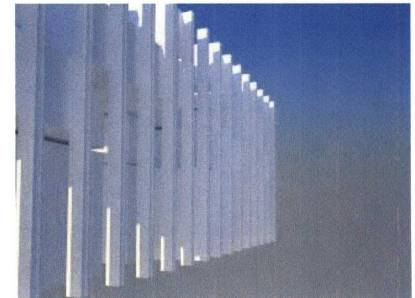
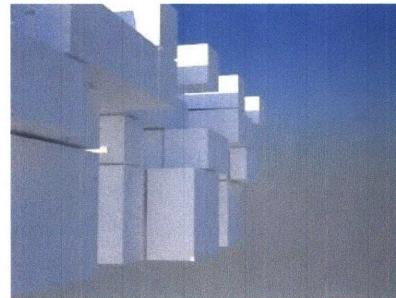
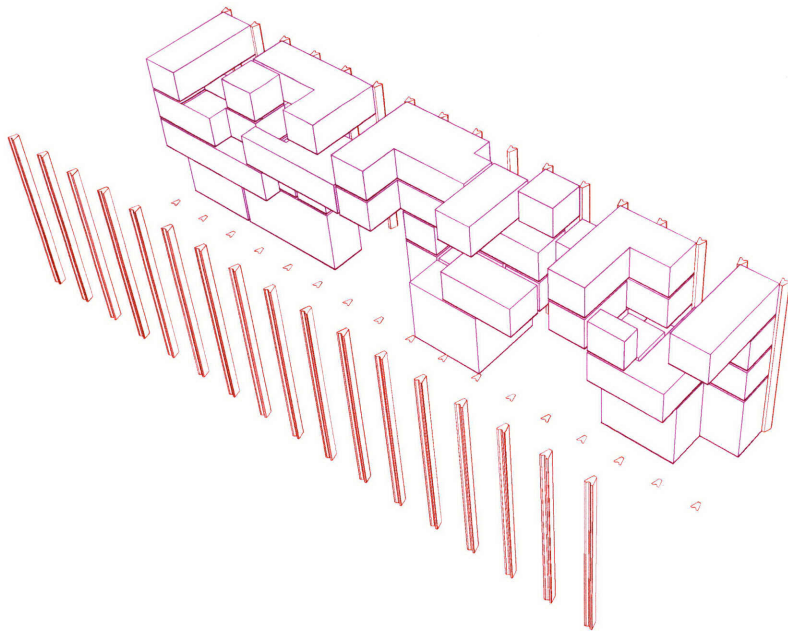
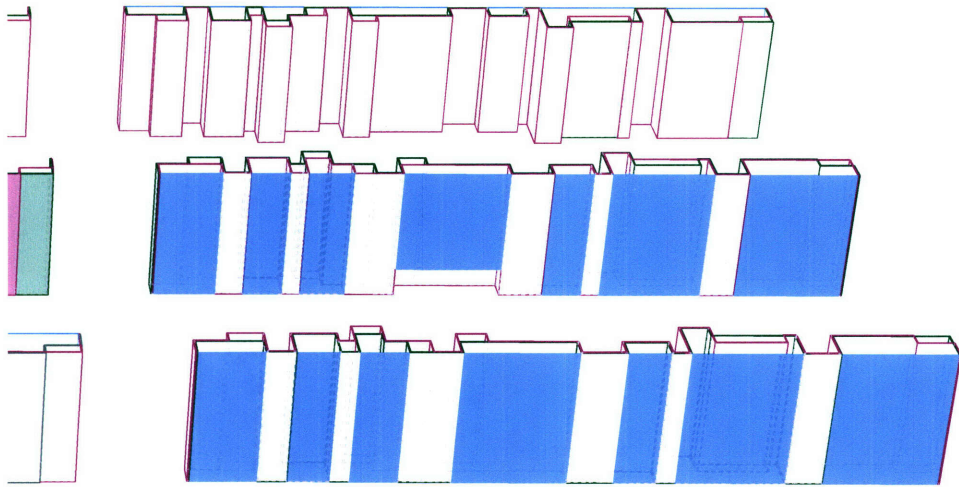


**Opportunities for value addition grow exponentially by thickening vertical and horizontal surfaces**

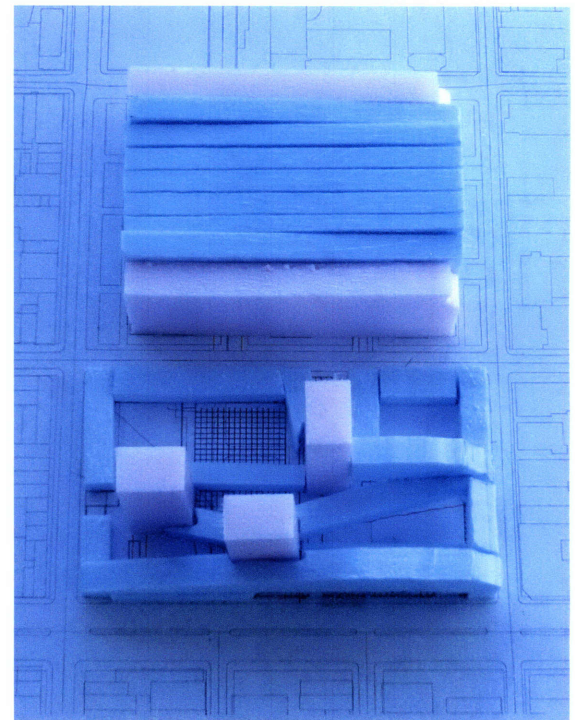
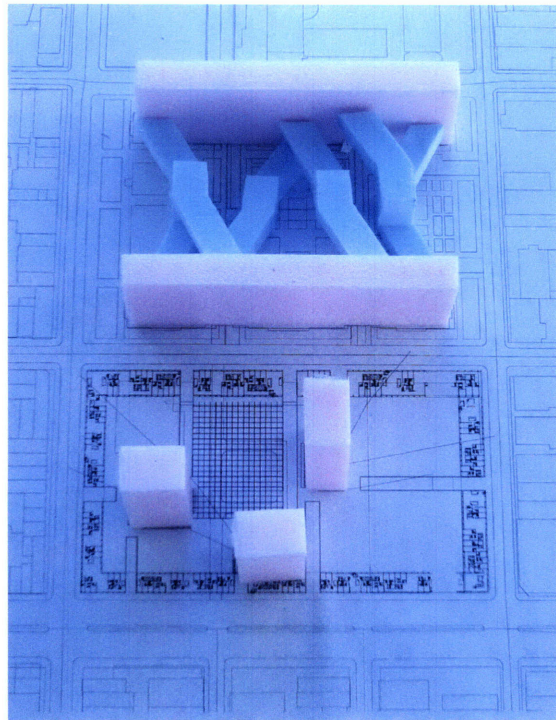
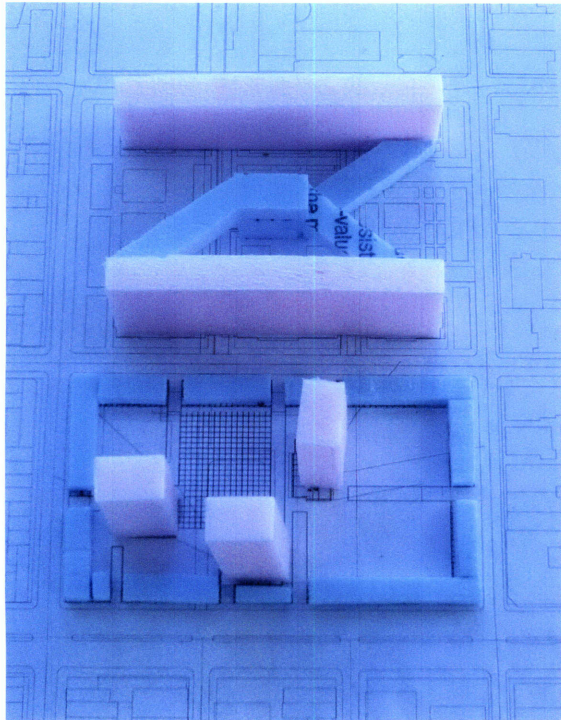


**Alternating programs with direct adjacency**



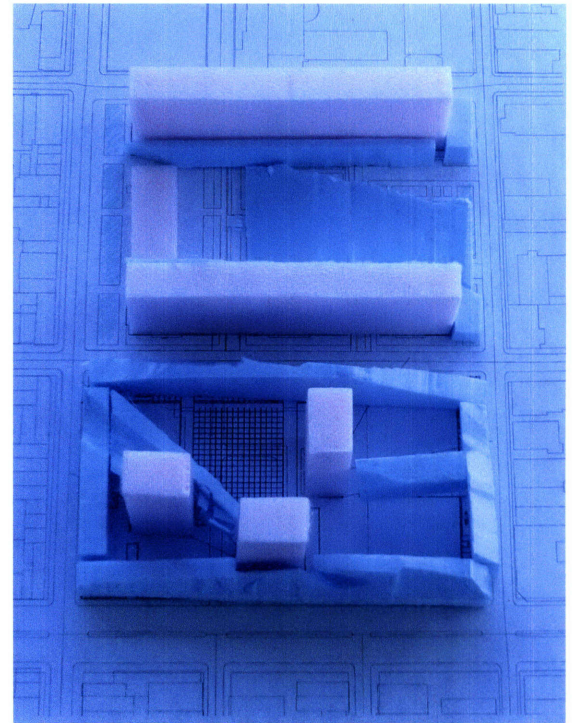
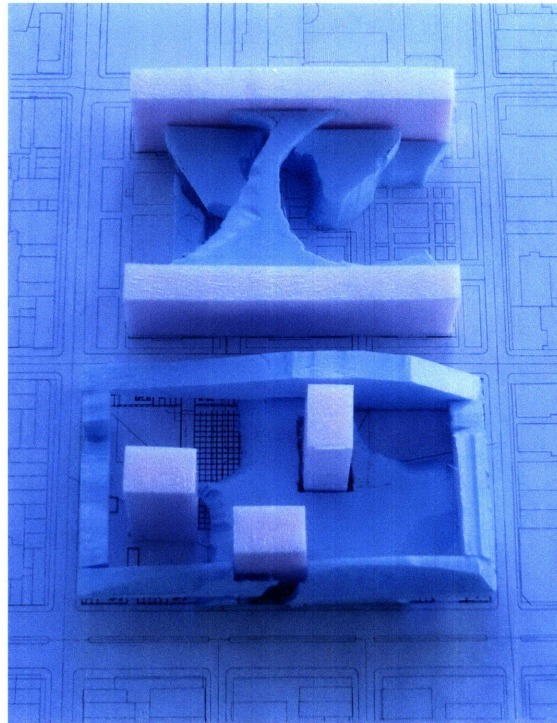
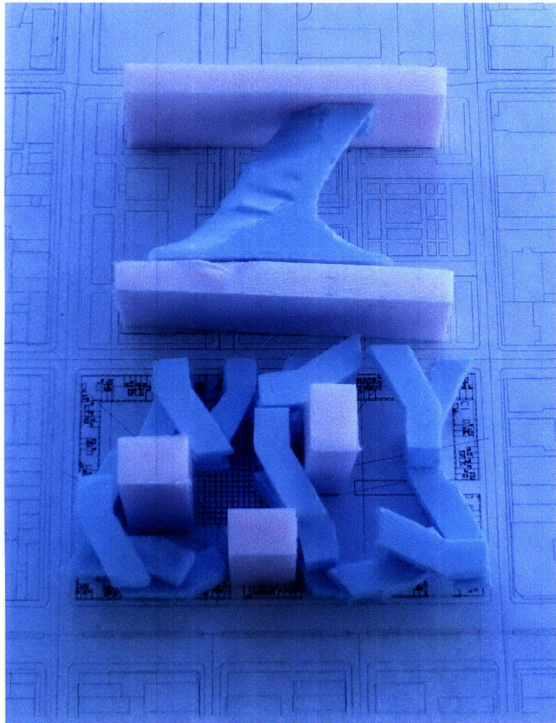






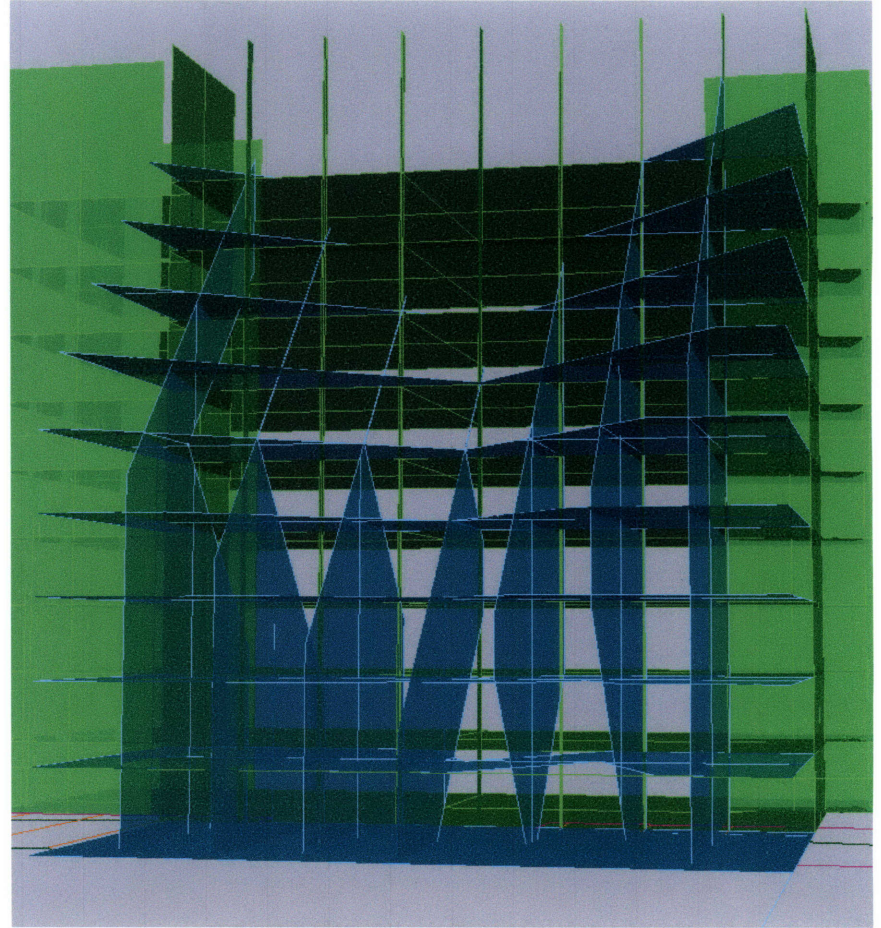
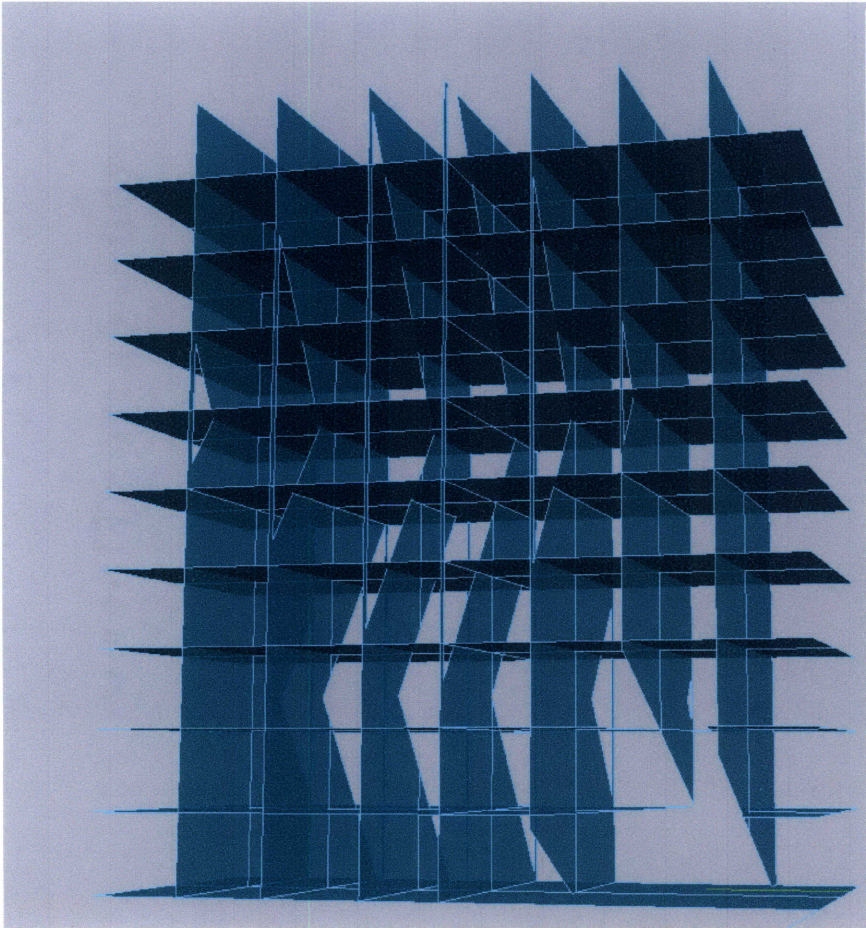
## Site massing studies





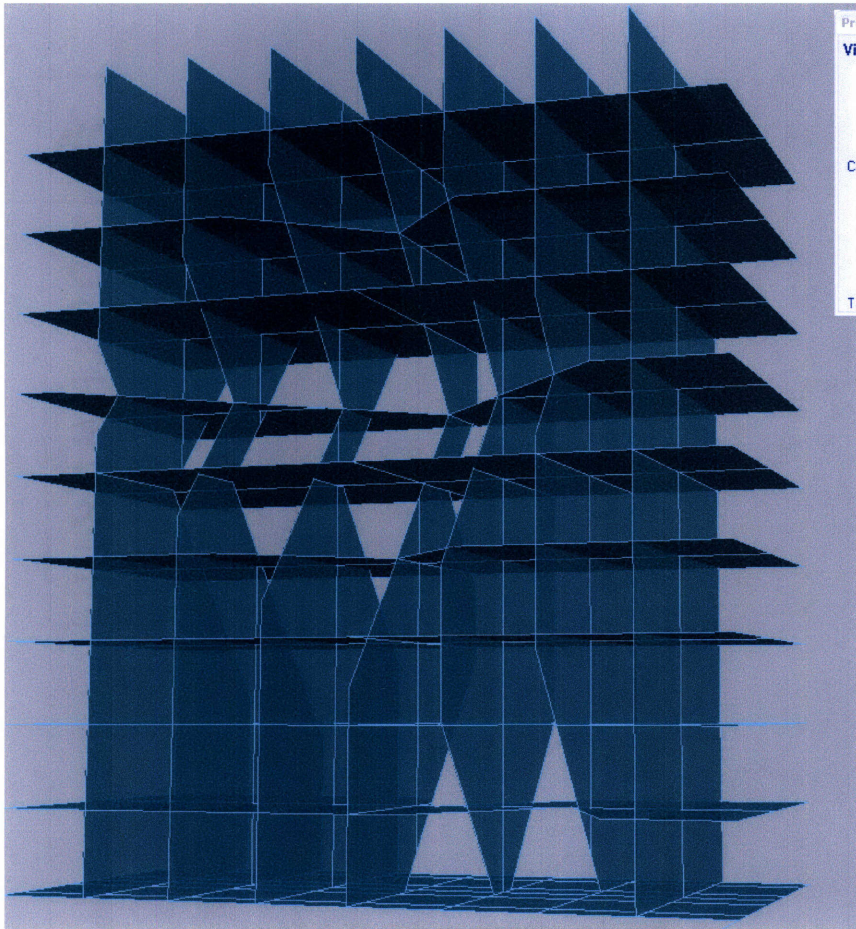
Final Massing



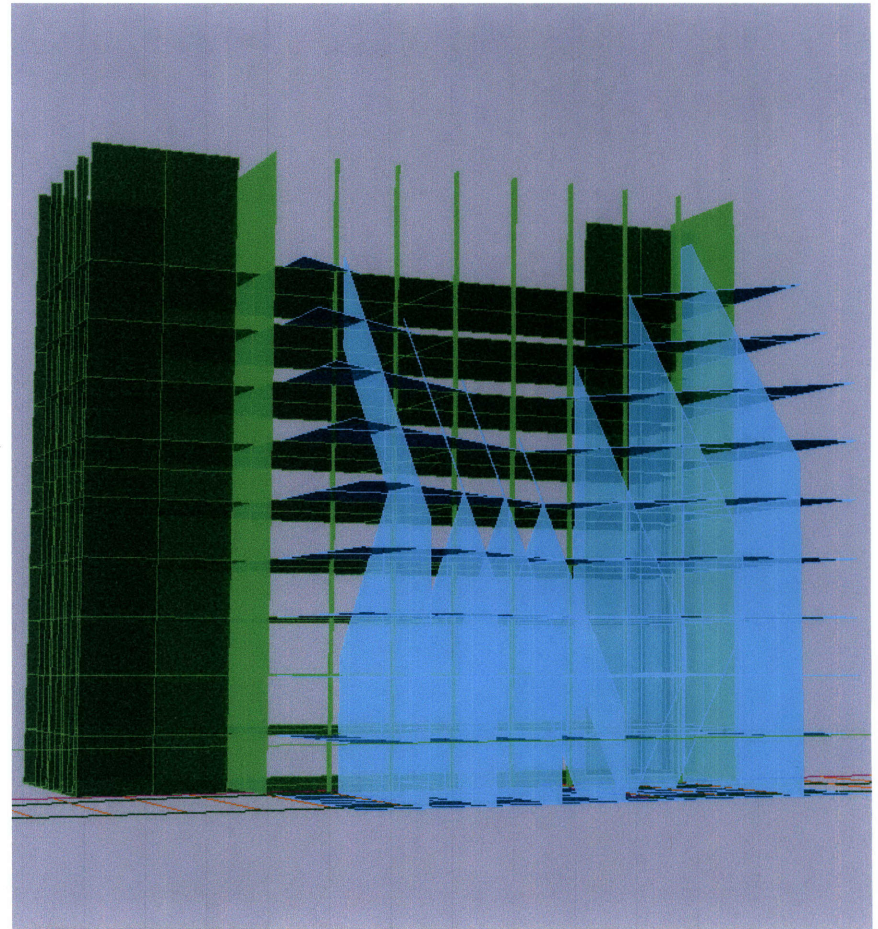


Carving according to publicness, light and air

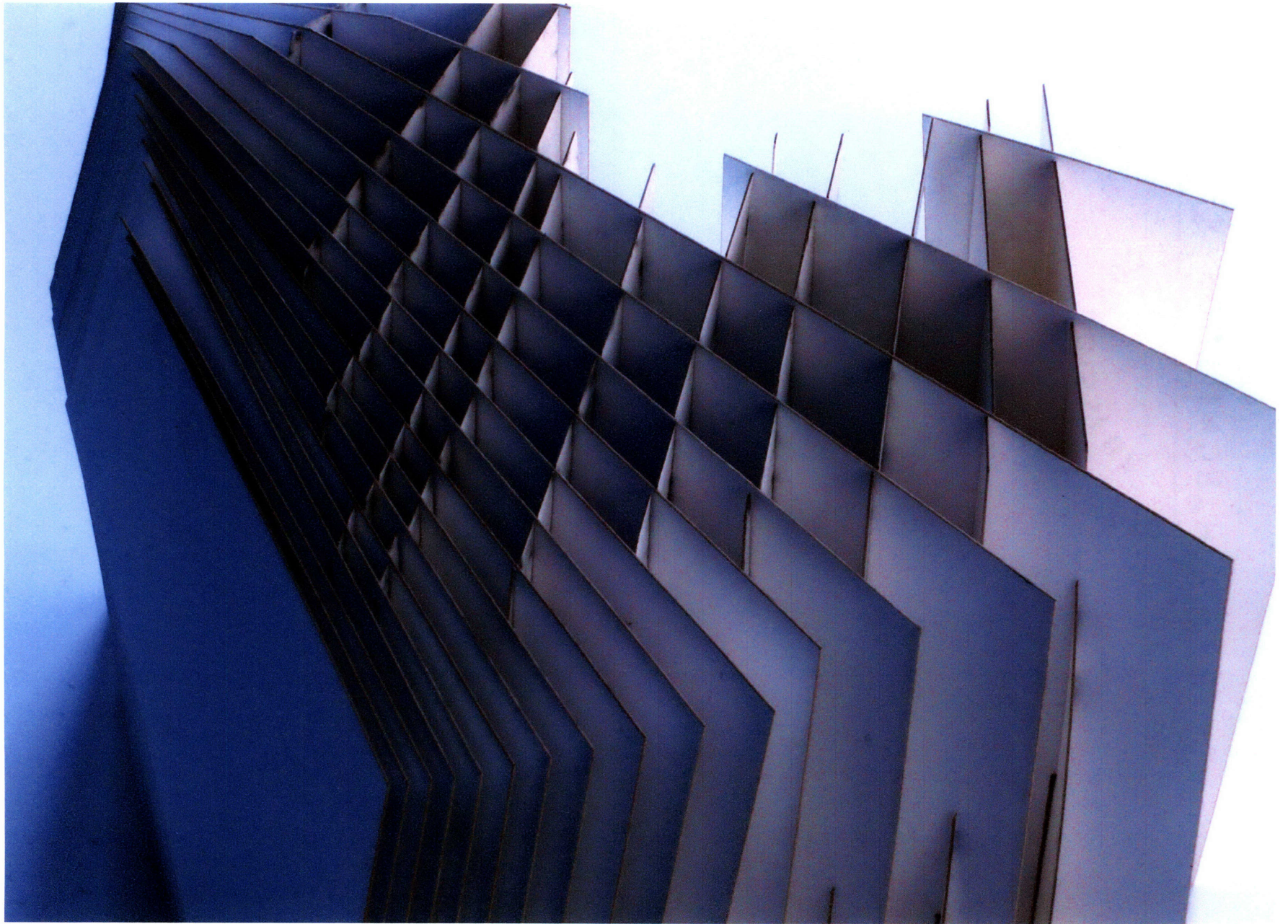




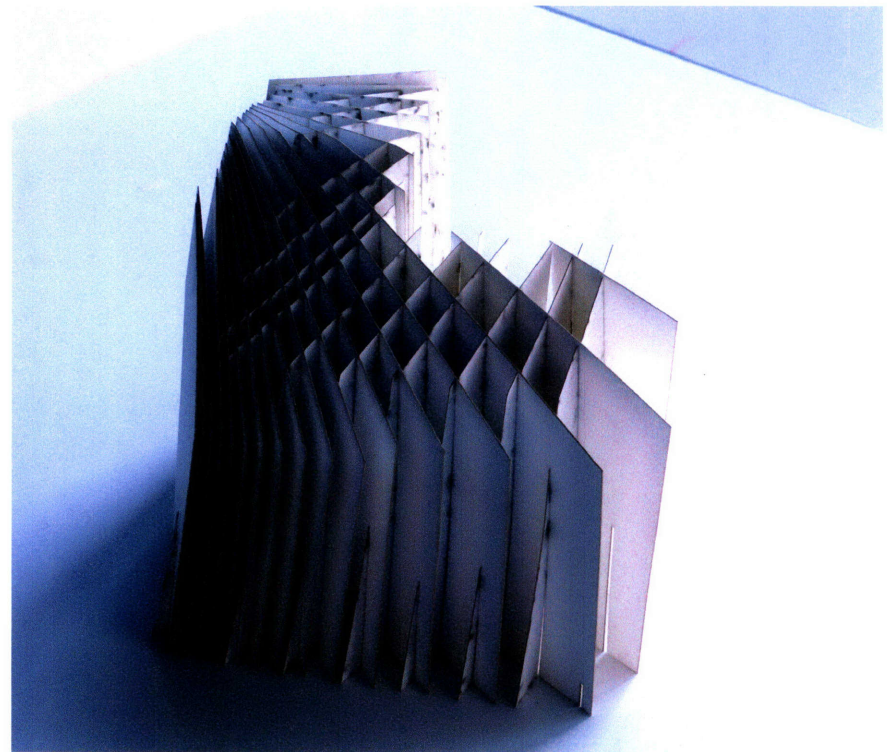
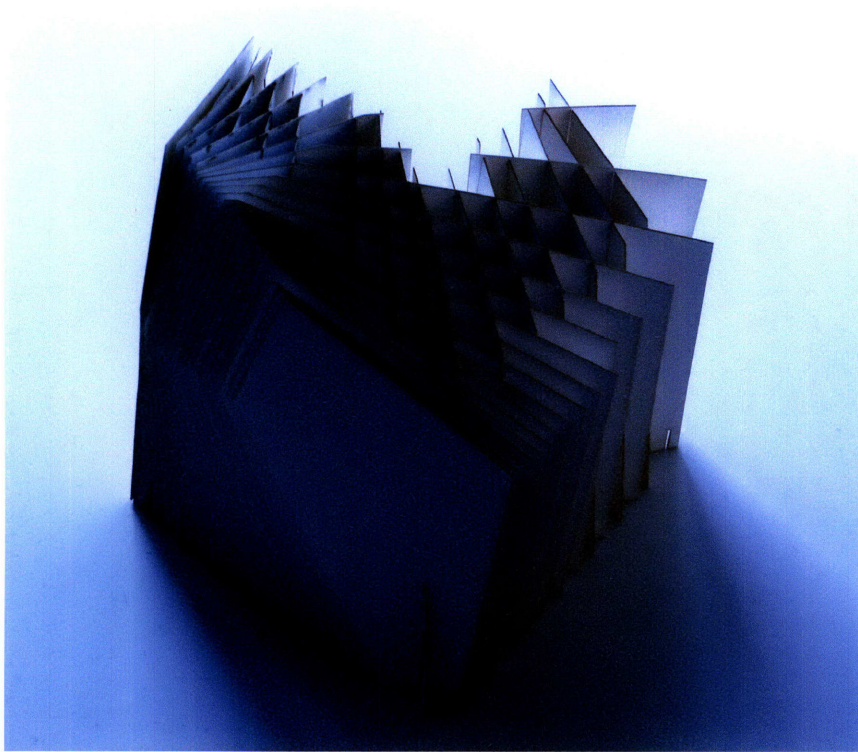
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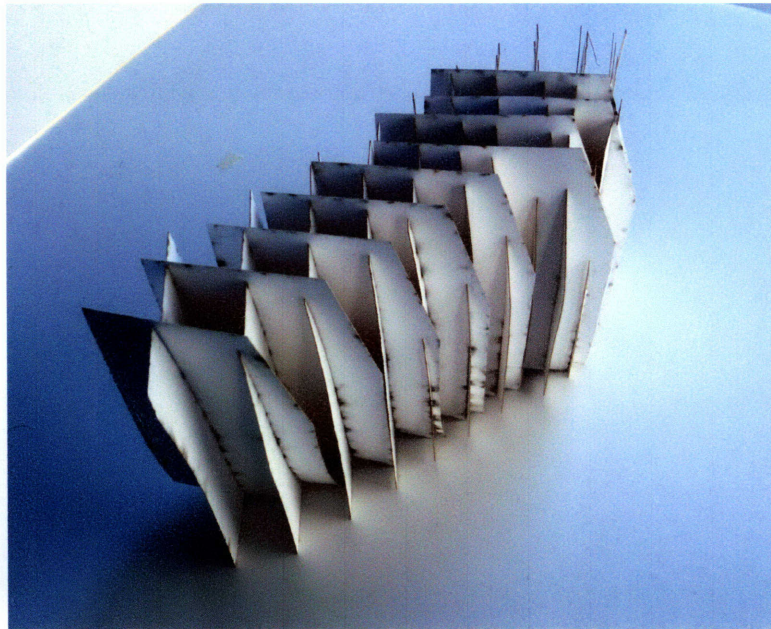
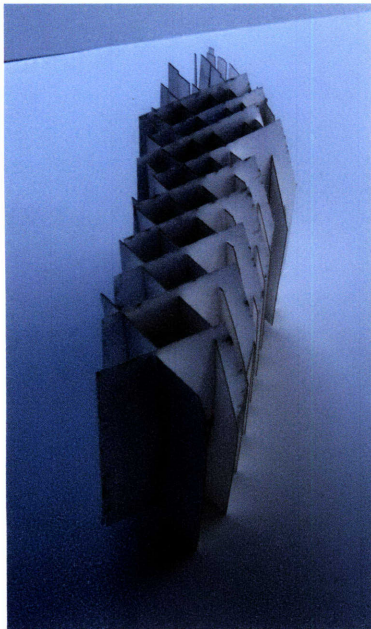
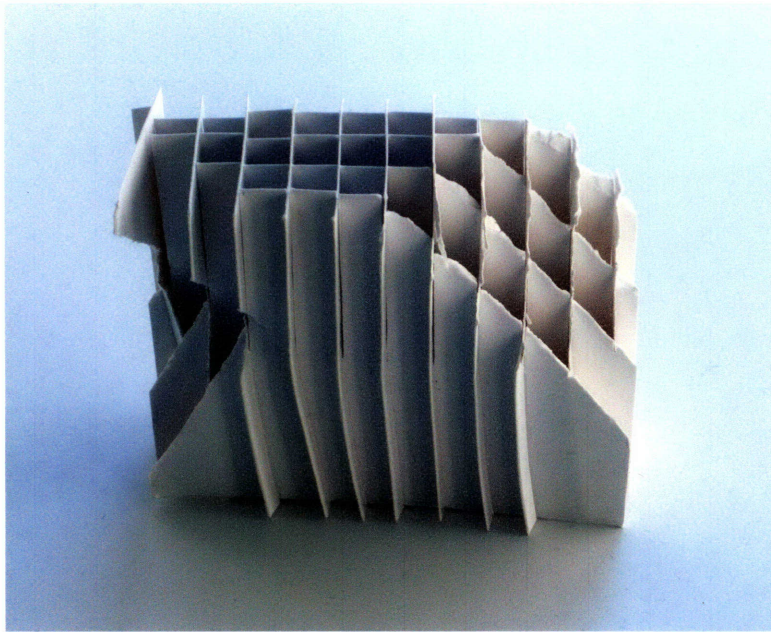
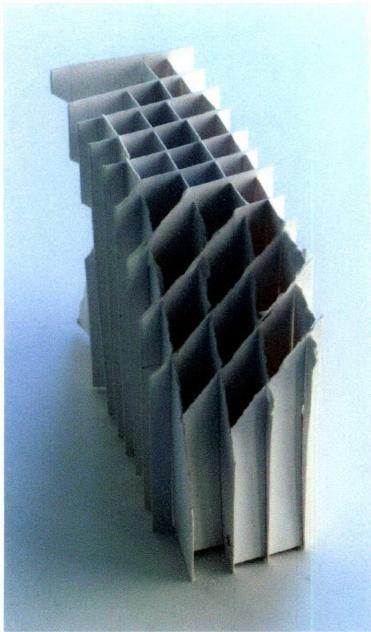




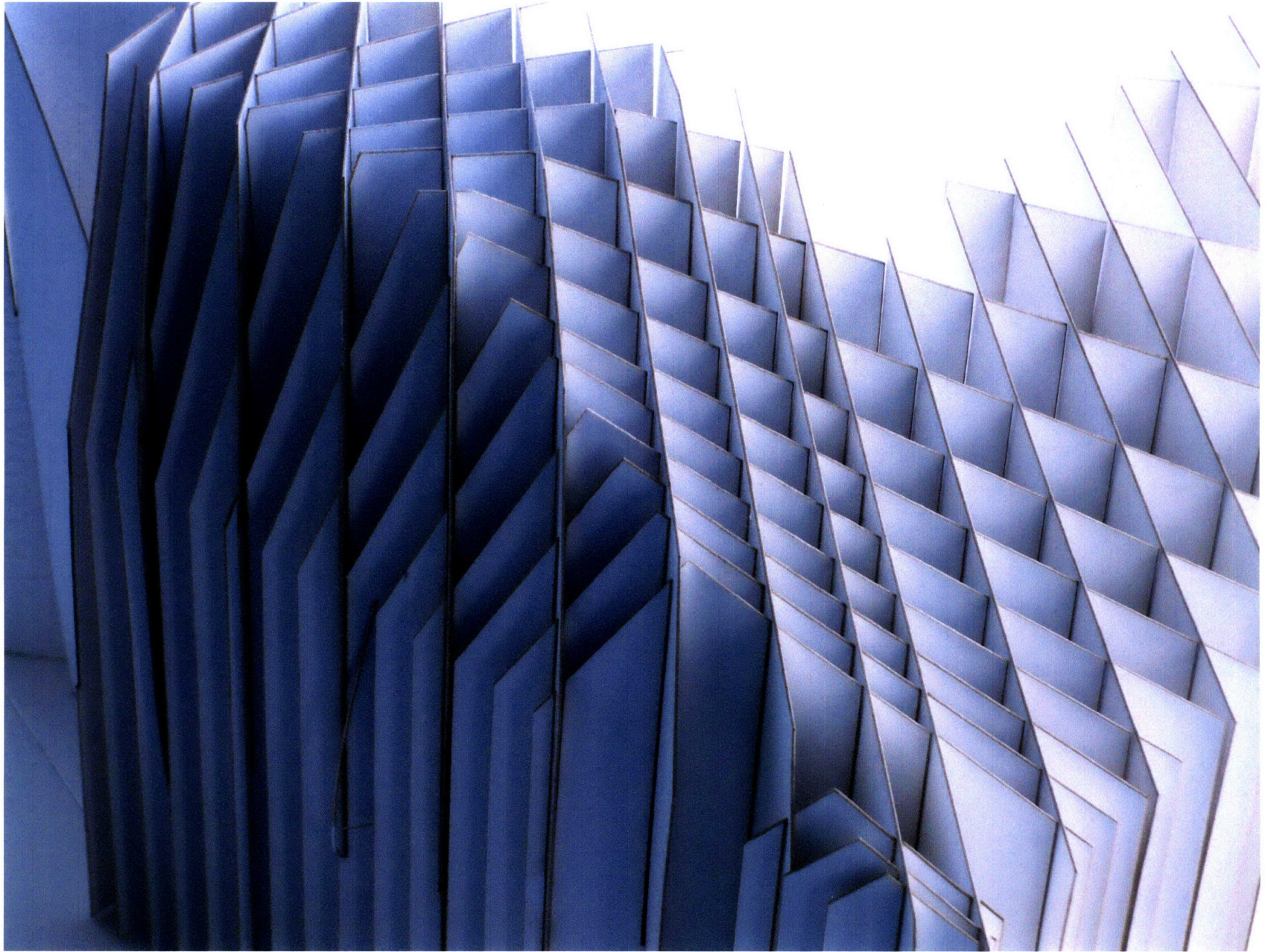


**Adapting eggcrate for specificity and performance**

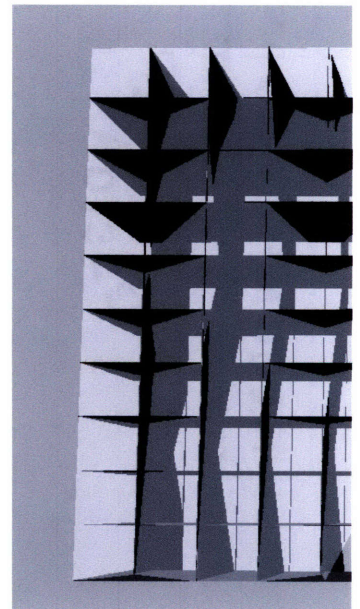
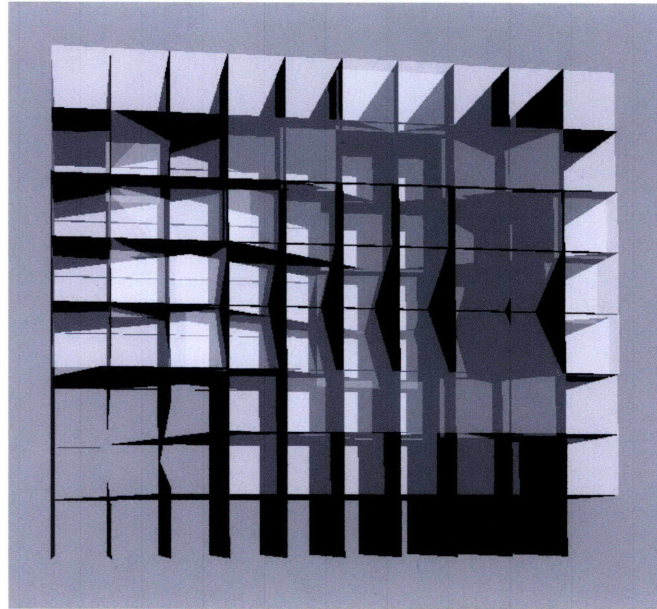
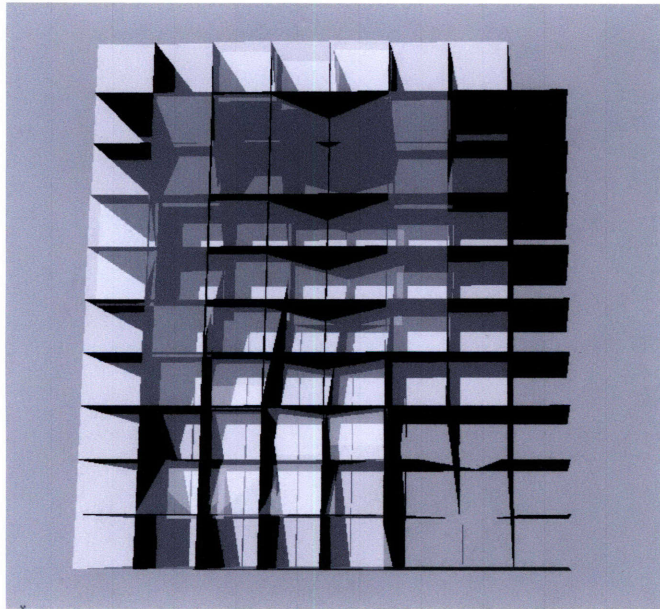




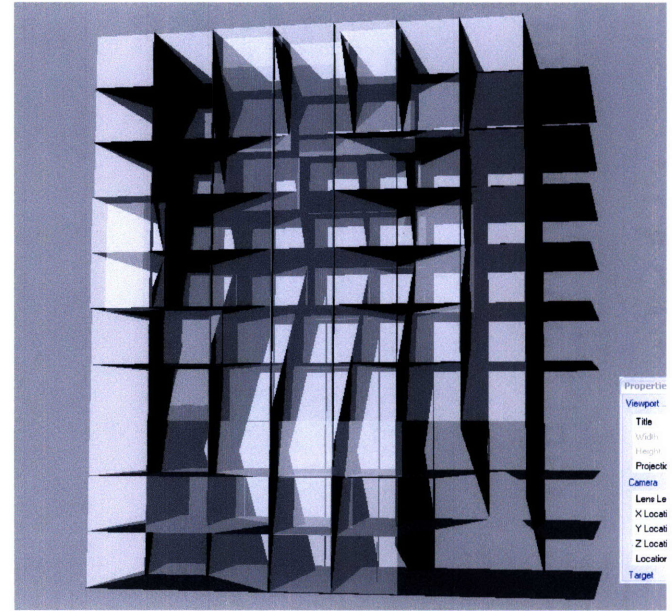
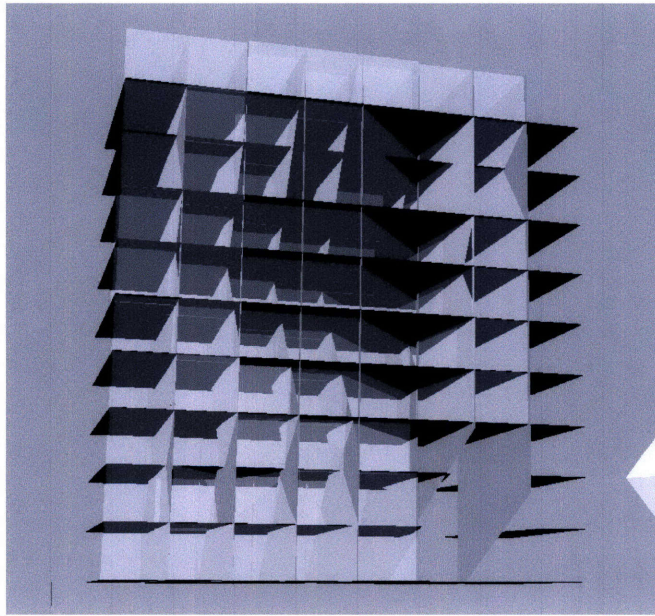
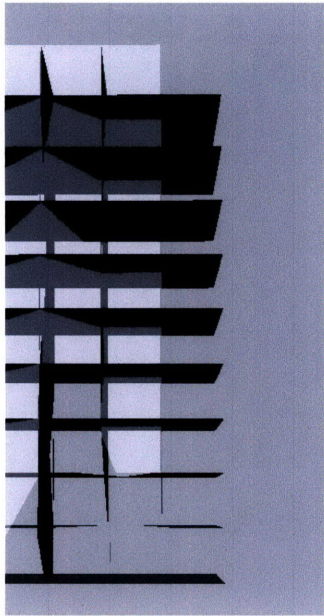




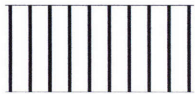
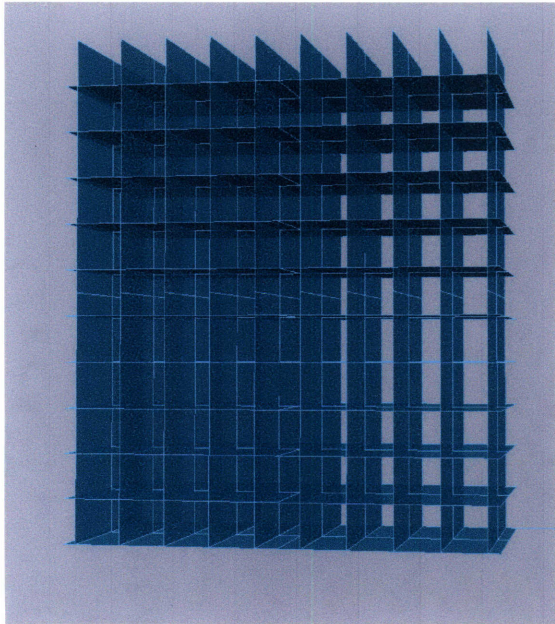




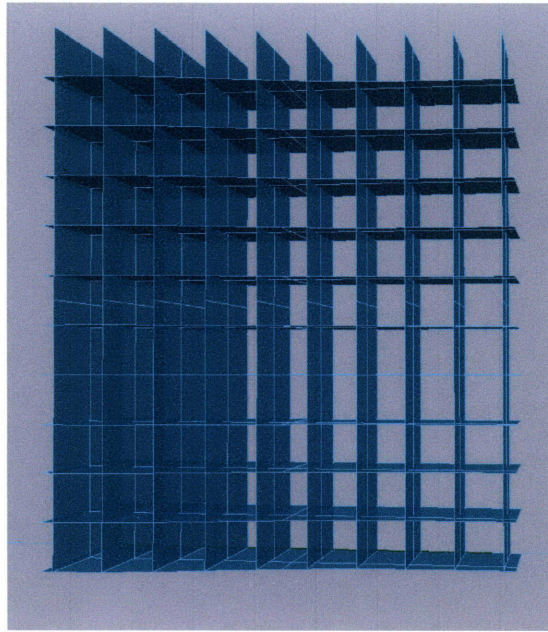




Setting of glass to determine legibility, thickness and orientation

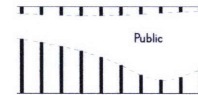
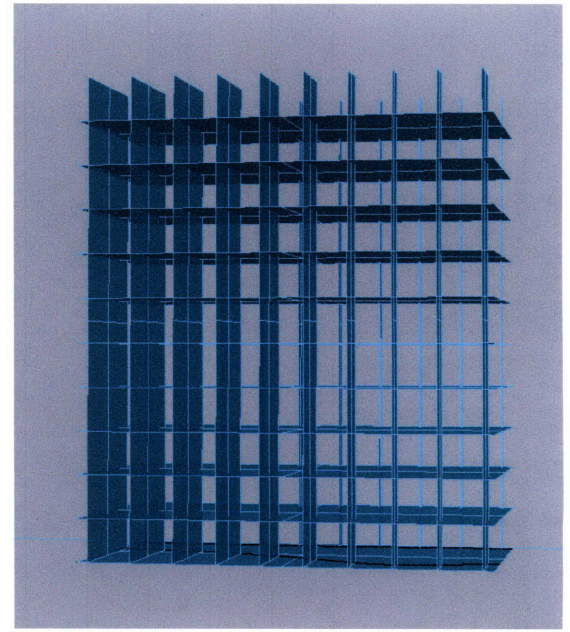


Extruded Eggcrate



Solar Envelope  
Volume Differentiation

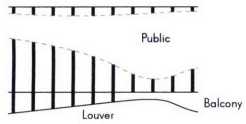
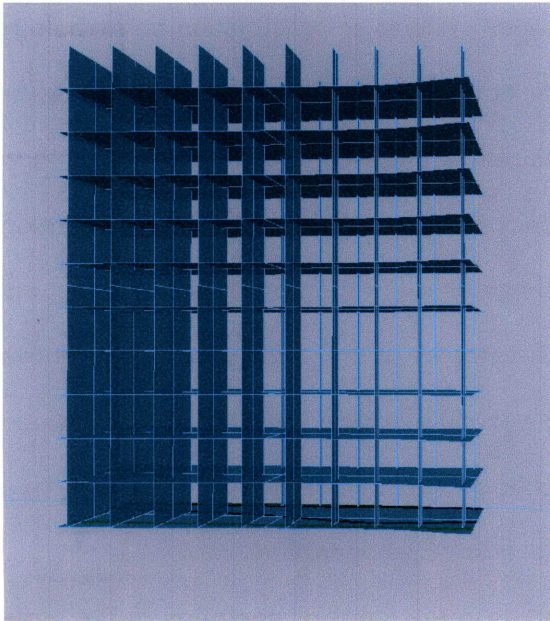
Site Strategy



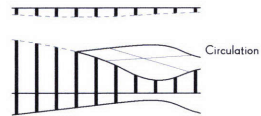
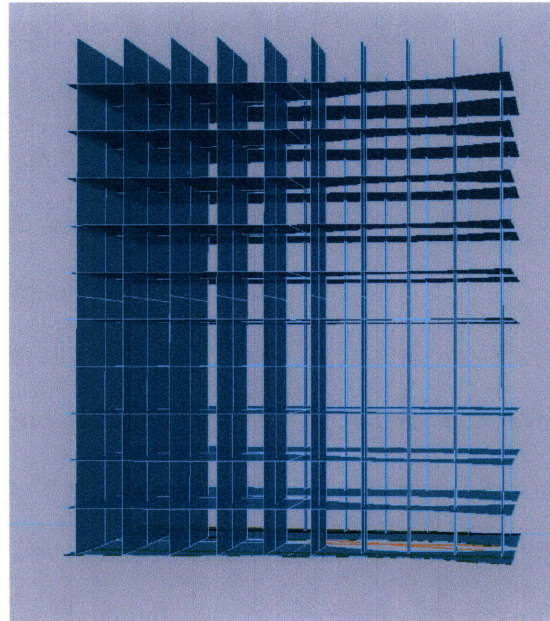
Public

Program

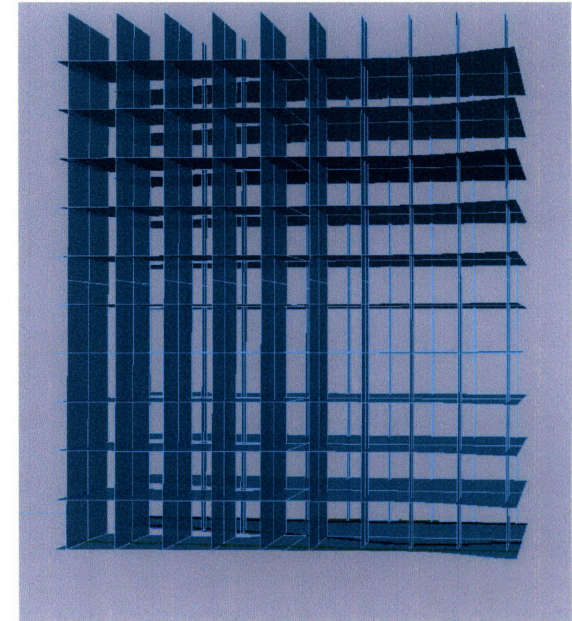




Specificity and Performance



Specificity and Performance



Architectural operation as urban strategy

## INTRODUCTION TO DESIGN

Post war housing construction and modernist models have remained fixed in response as urban problems have increased in alternating trends of decentralization and urban growth. The role of architecture will be reconsidered due to dwindling resources and the need to re-engage with existing urban infrastructure and buildings. Structural and spatial concepts will determine how buildings are brought together in urban environments – to craft negative space and interdependence as an urban strategy. The forthcoming necessity to live directly adjacent to and in intimacy with neighbors will require a new order of separation and hiddenness defined by the envelope; in turn, they will be responsible for negotiating our own responsibility of use and sharing these responsibilities with others.

In responding independently to the demands of the exterior and interior of buildings, architecture currently performs to prescribed regulatory functions instead of asking something of them. This gap in ideology between systems of construction and typology and the urban and climatic environment in which they exist lies physically at the building envelope. Stratification and division rather than juxtaposition and adjacency have resulted in a lack of correlation between construction technologies and program at the architectural scale and the absence of hierarchy at the urban. As an alternative to the enclavism and segregation of space, the concept of envelope must be reconceptualized as a tissue of alternating connectivity and disconnect of scales of boundary and operation.

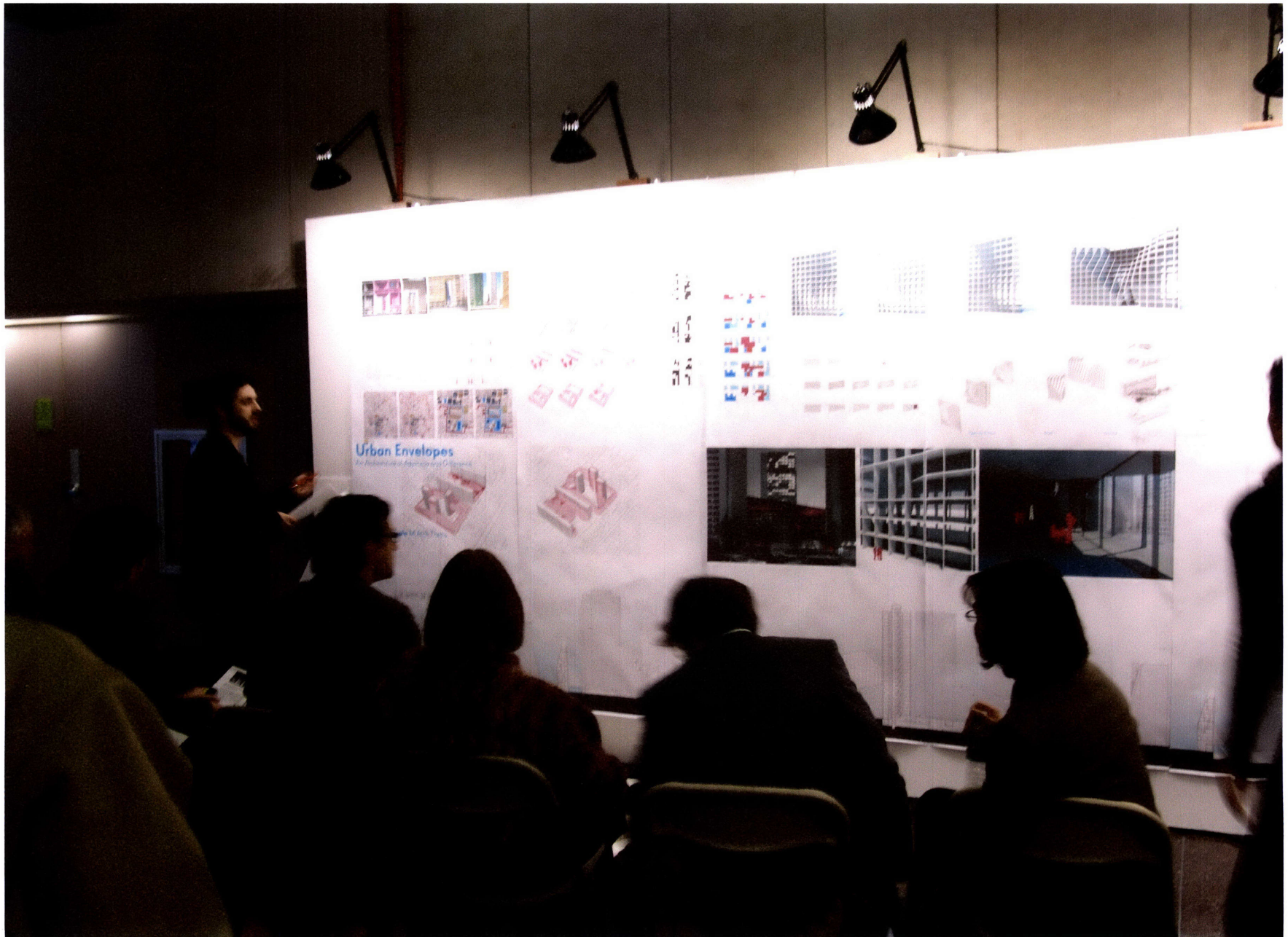
By establishing a link in the loops of operation at the scale of the wall, building type and block topology, this thesis will formulate an analytical methodology that avoids both the scenographic, hierarchical and function based idea of traditional space and the universal and detachedness of modern space. Instead, through a critical and design-oriented re-interpretation of the existing non-site condition at NYU, space can be constructed to mediate between itself and surrounding Greenwich Village and SoHo. This implies the

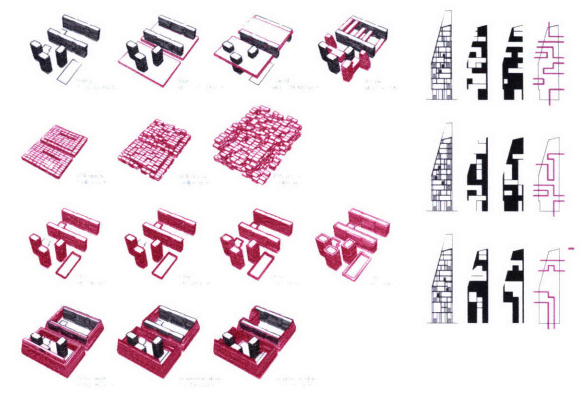
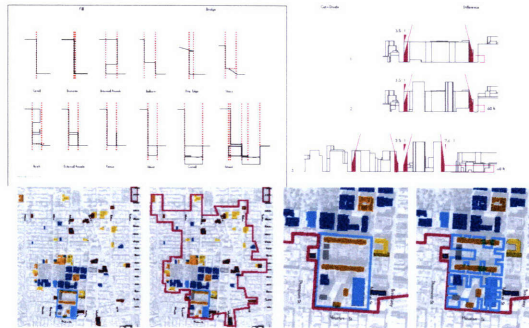


need to reconsider programmatically the role of real estate and commercialization in preserving their institution and infrastructure – and the materials of these transitions/mediations. In articulating the line between architectural and urban space and between complimentary and contradictory programs, NYU can articulate its own significance on a cultural and architectural level to make a civic project.

# FINAL PRESENTATION



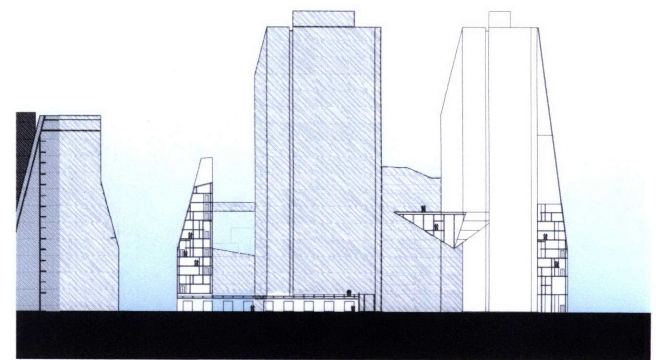
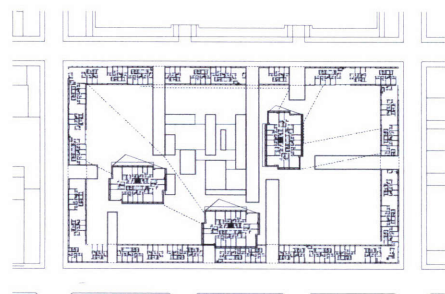
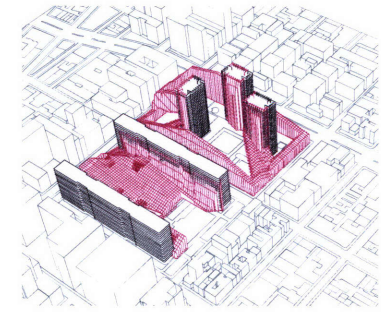
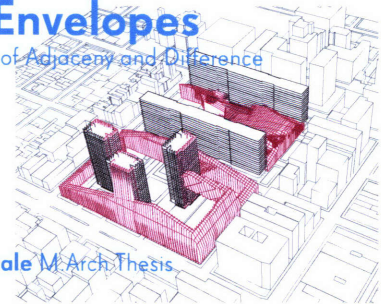




# Urban Envelopes

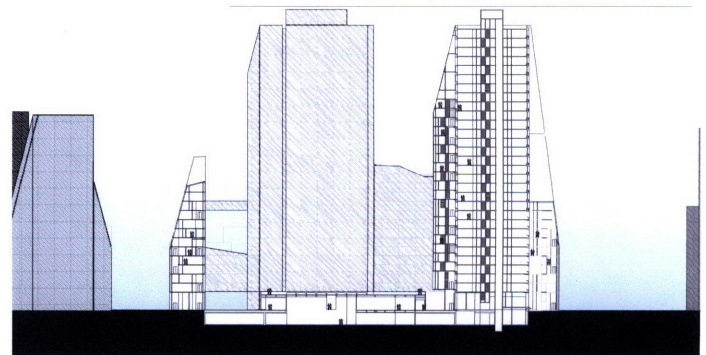
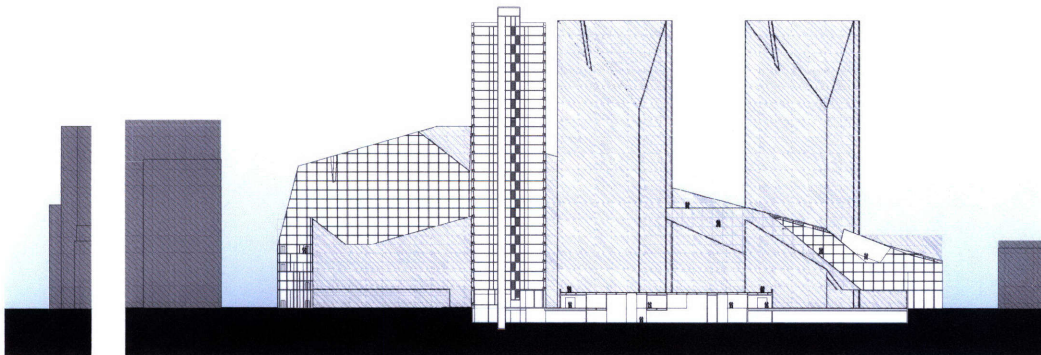
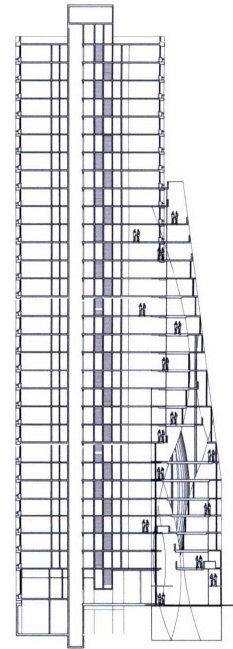
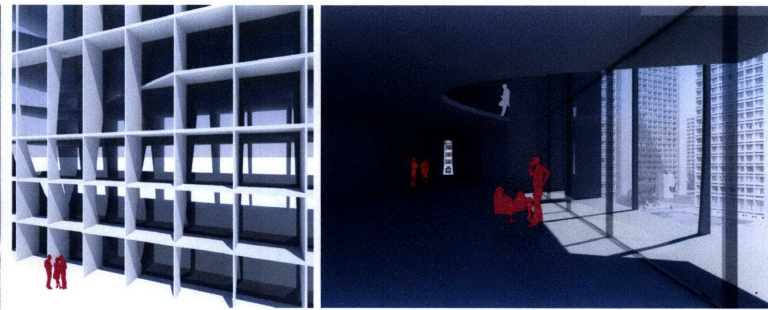
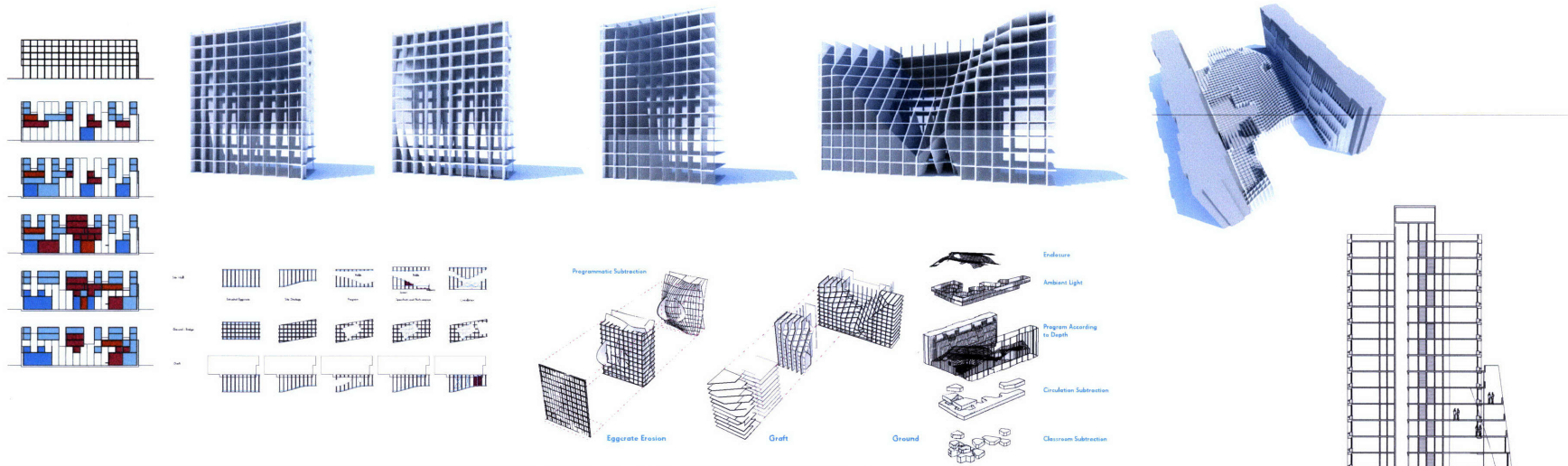
An Architecture of Adjacency and Difference

Peter DePasquale M.Arch Thesis

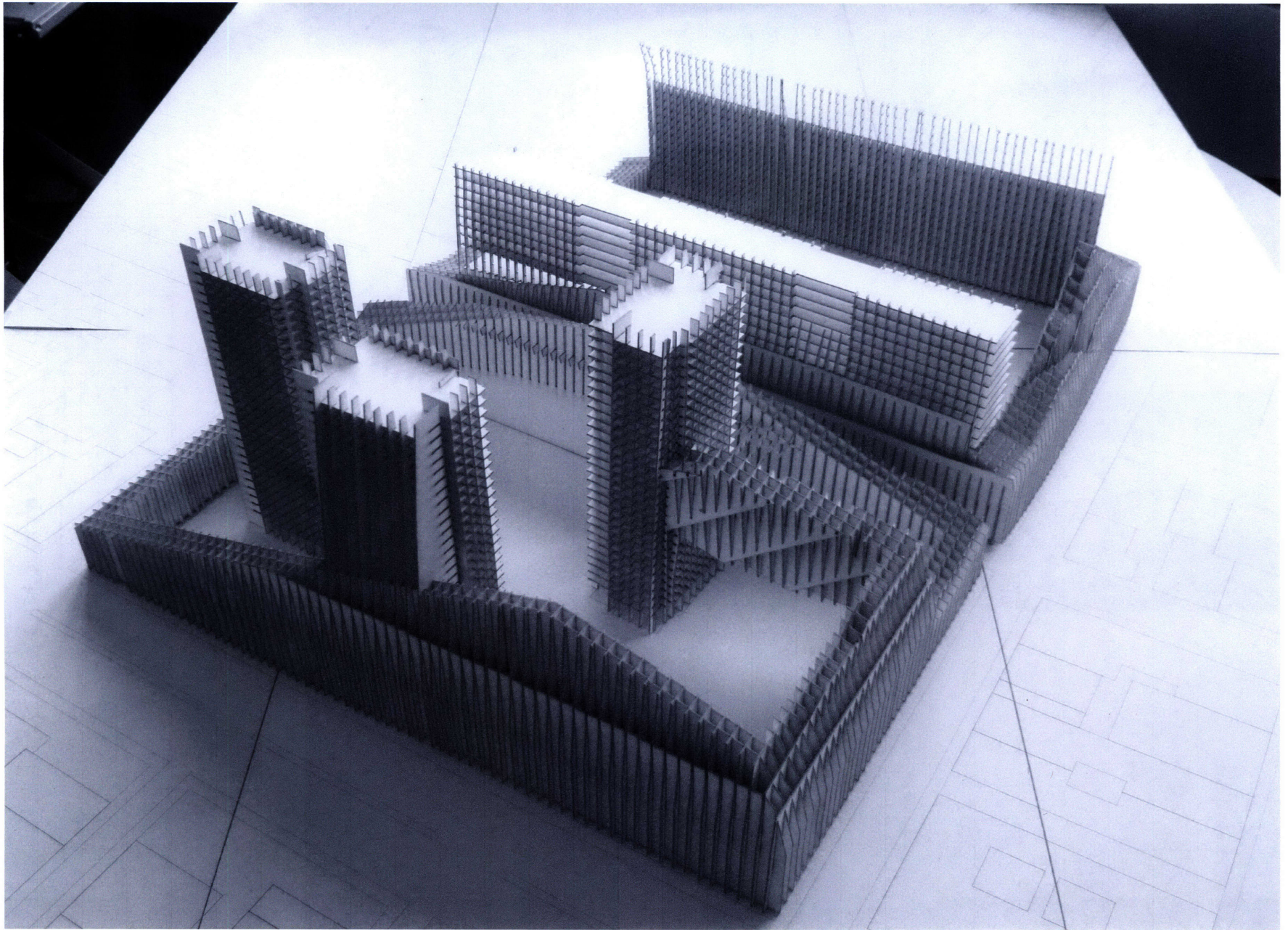


Final boards

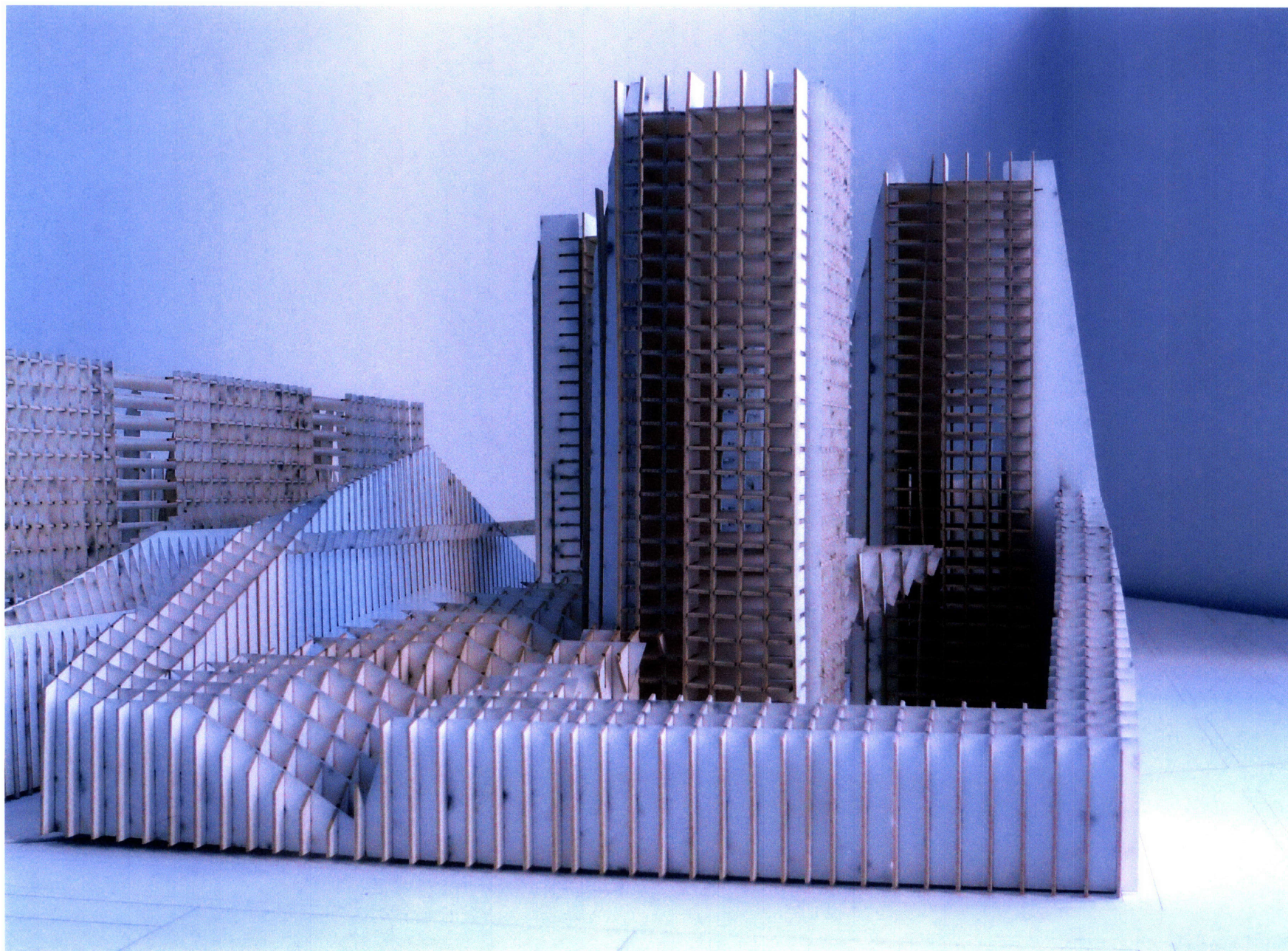




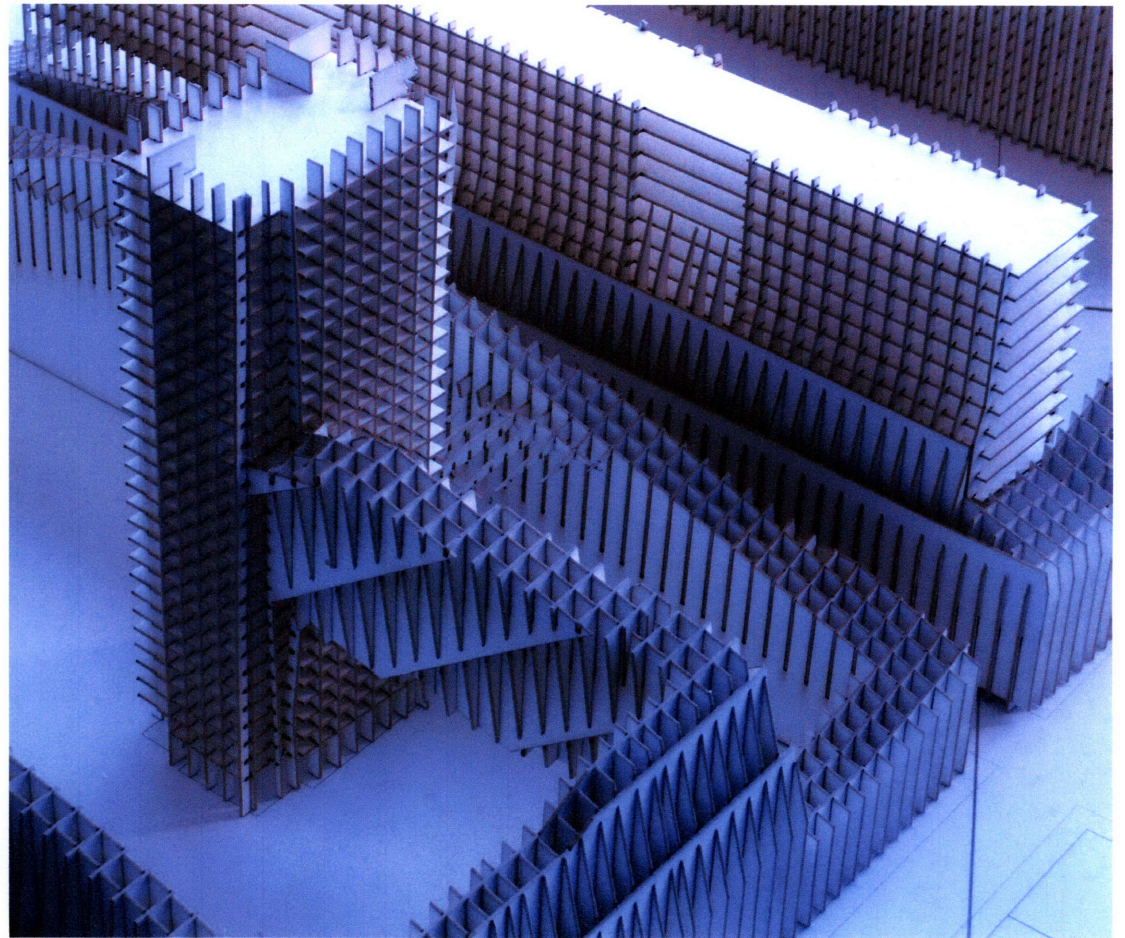
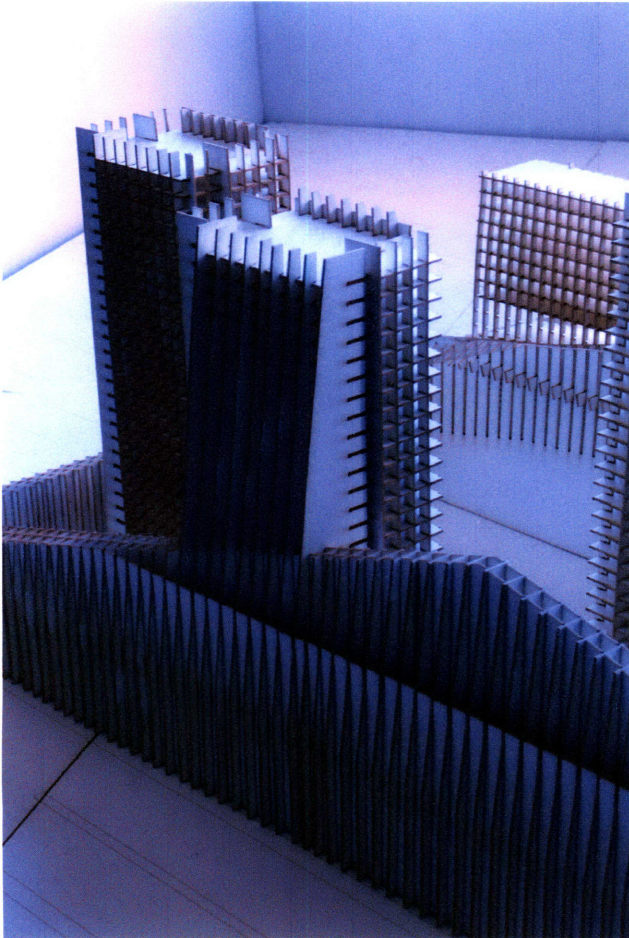






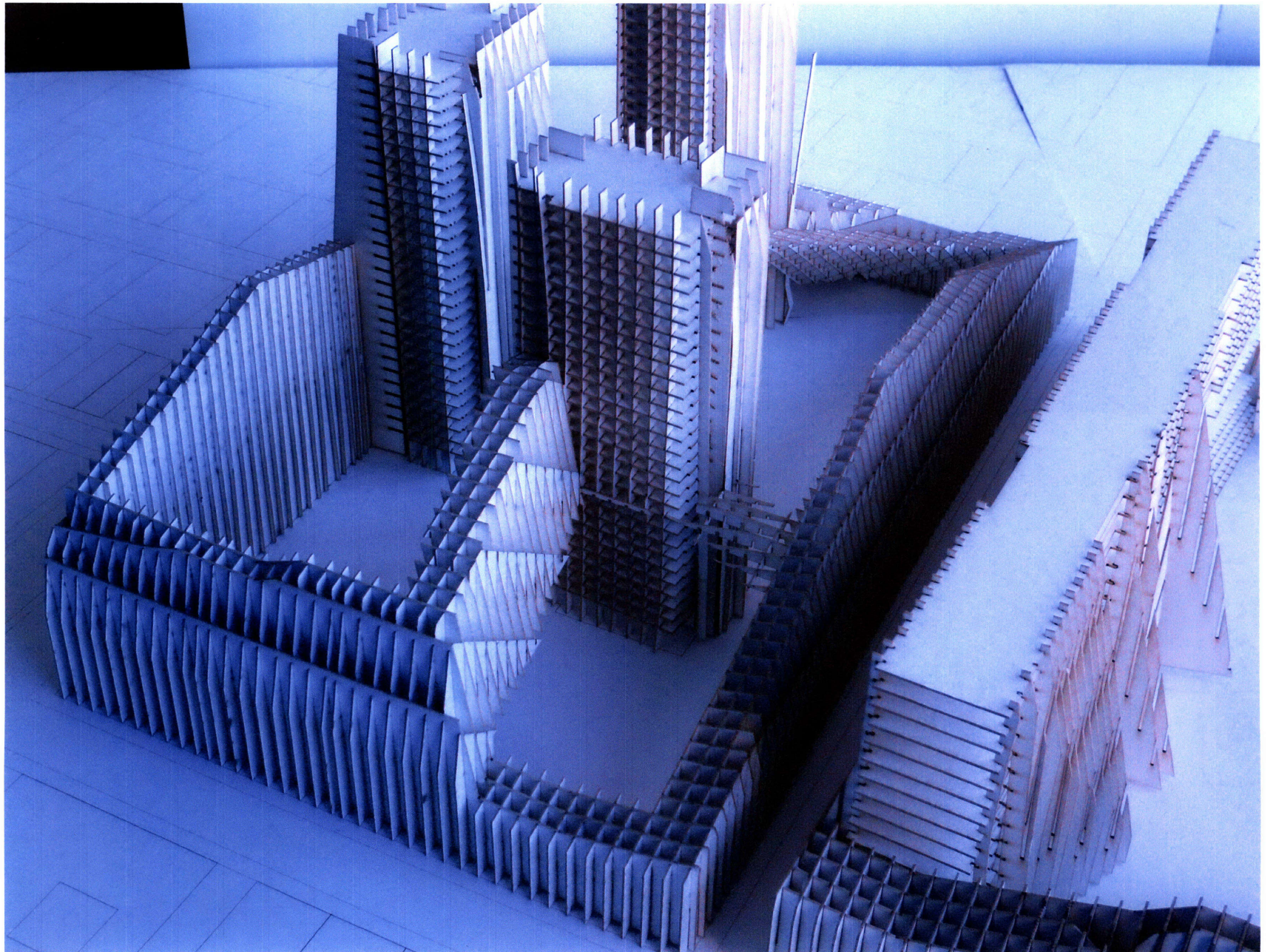






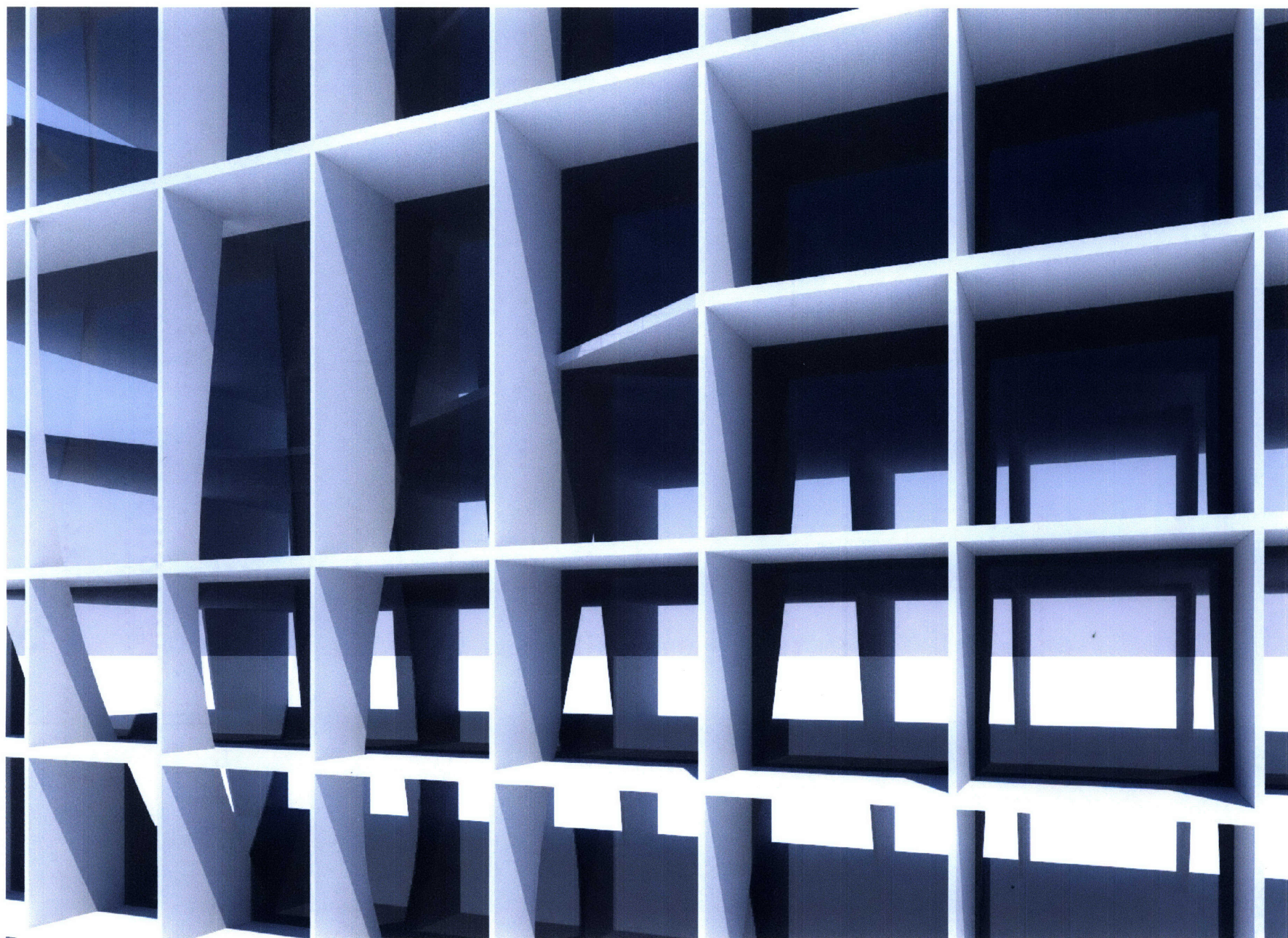
Final model

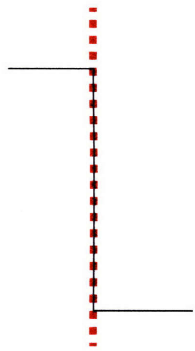




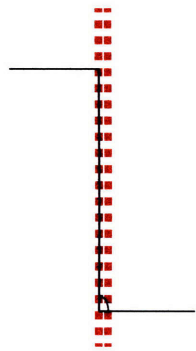
# FINAL DESIGN



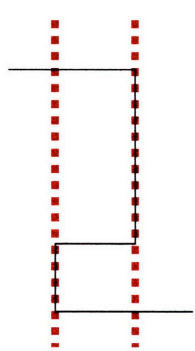




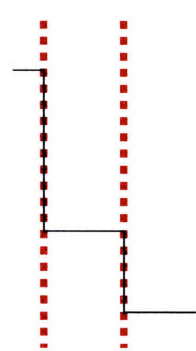
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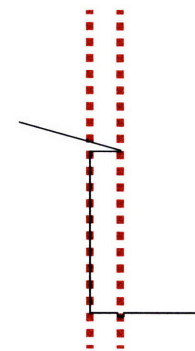
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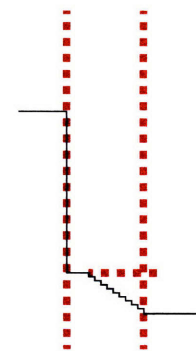
Internal Arcade



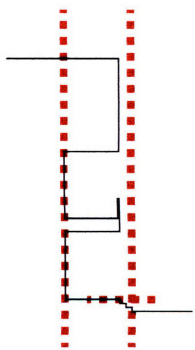
Balcony



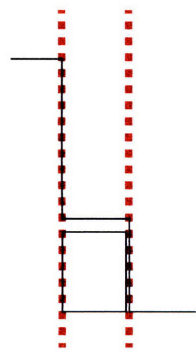
Drip Edge



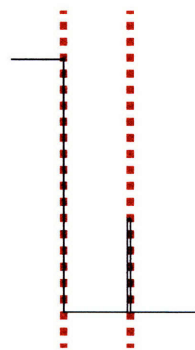
Stoop



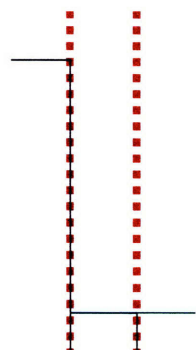
Porch



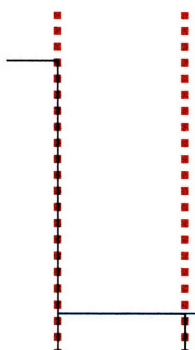
External Arcade



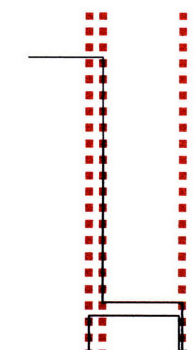
Fence



Moat



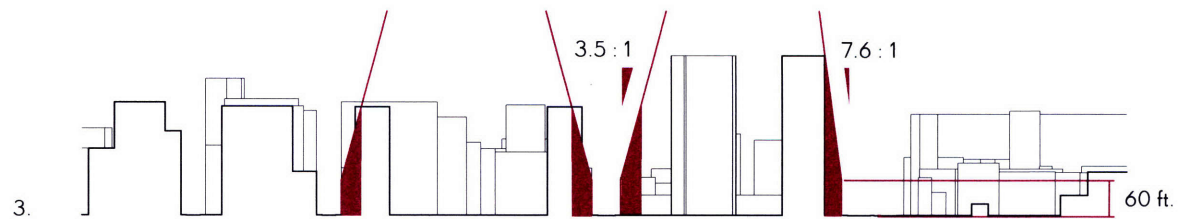
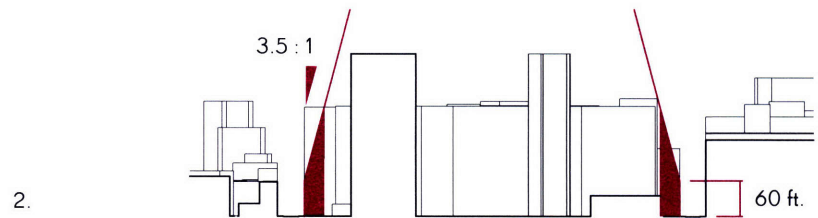
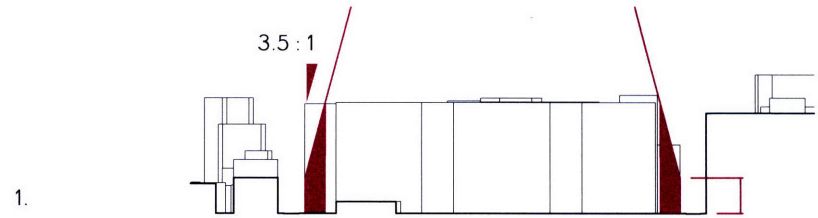
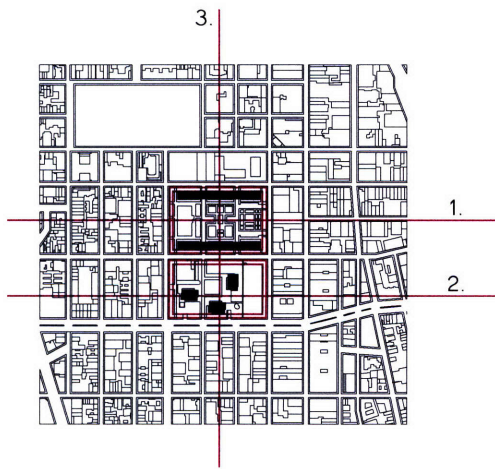
Canal



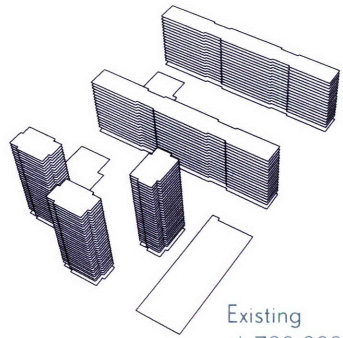
Mixed

**Ambiguous zone between architecture and urbanism**

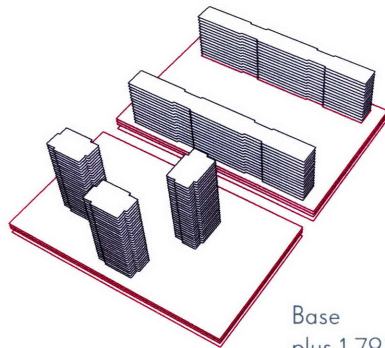




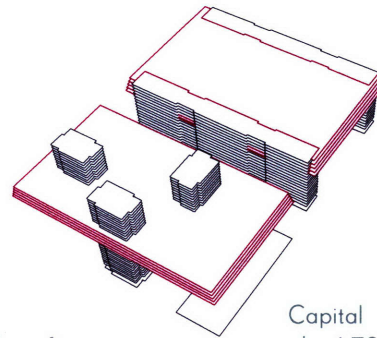
Setback height and solar envelope plane as site for development



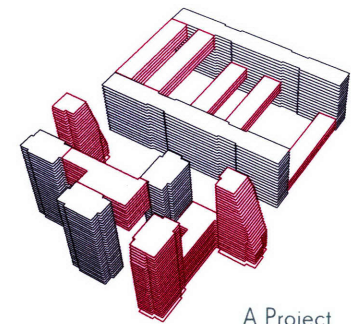
Existing  
1,700,000 sq. ft.



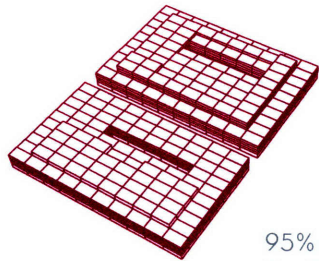
Base  
plus 1,793,528 sq. ft.



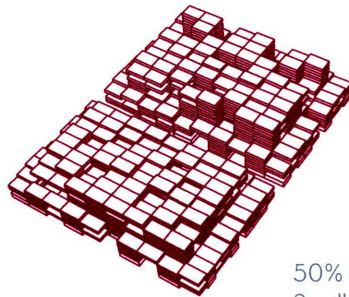
Capital  
plus 1,709,420 sq. ft.



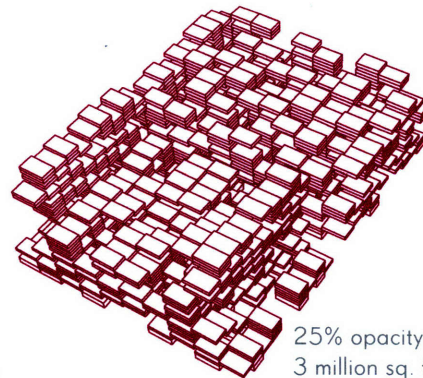
A Project  
plus 1,197,118



95% opacity  
3 million sq. ft.



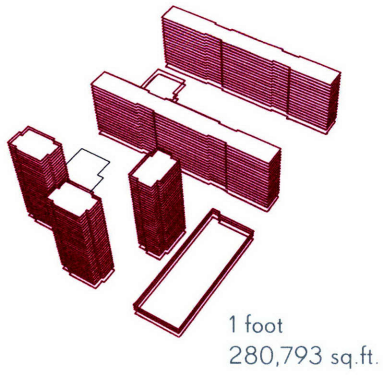
50% opacity  
3 million sq. ft.



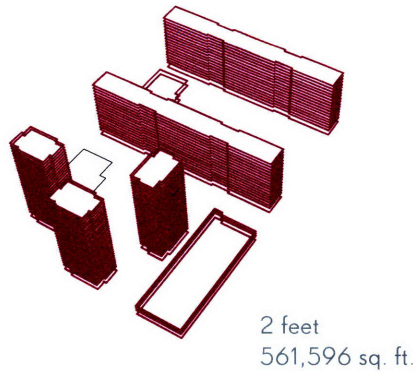
25% opacity  
3 million sq. ft.

## Methods of value addition

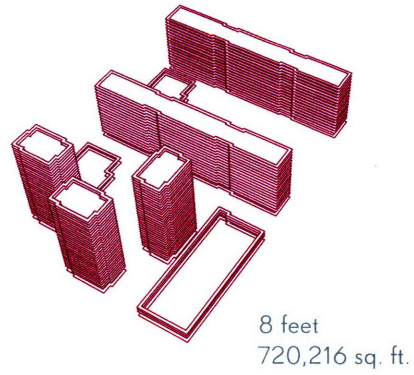




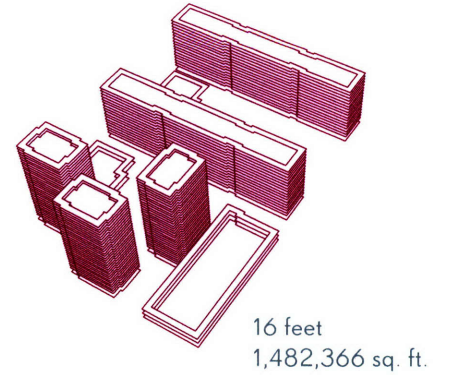
1 foot  
280,793 sq. ft.



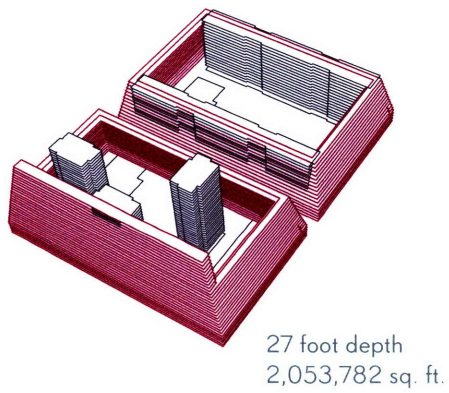
2 feet  
561,596 sq. ft.



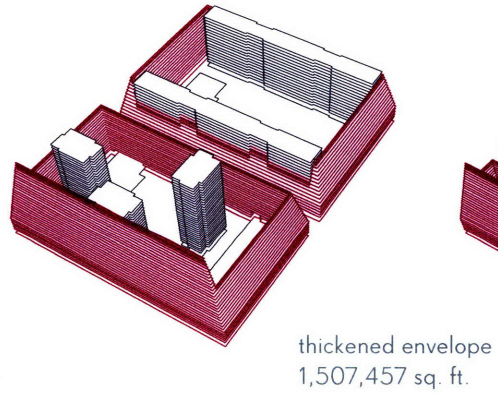
8 feet  
720,216 sq. ft.



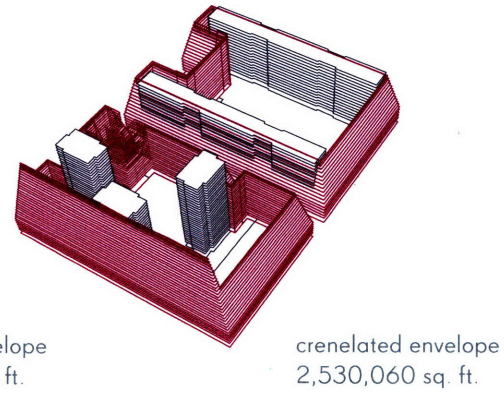
16 feet  
1,482,366 sq. ft.



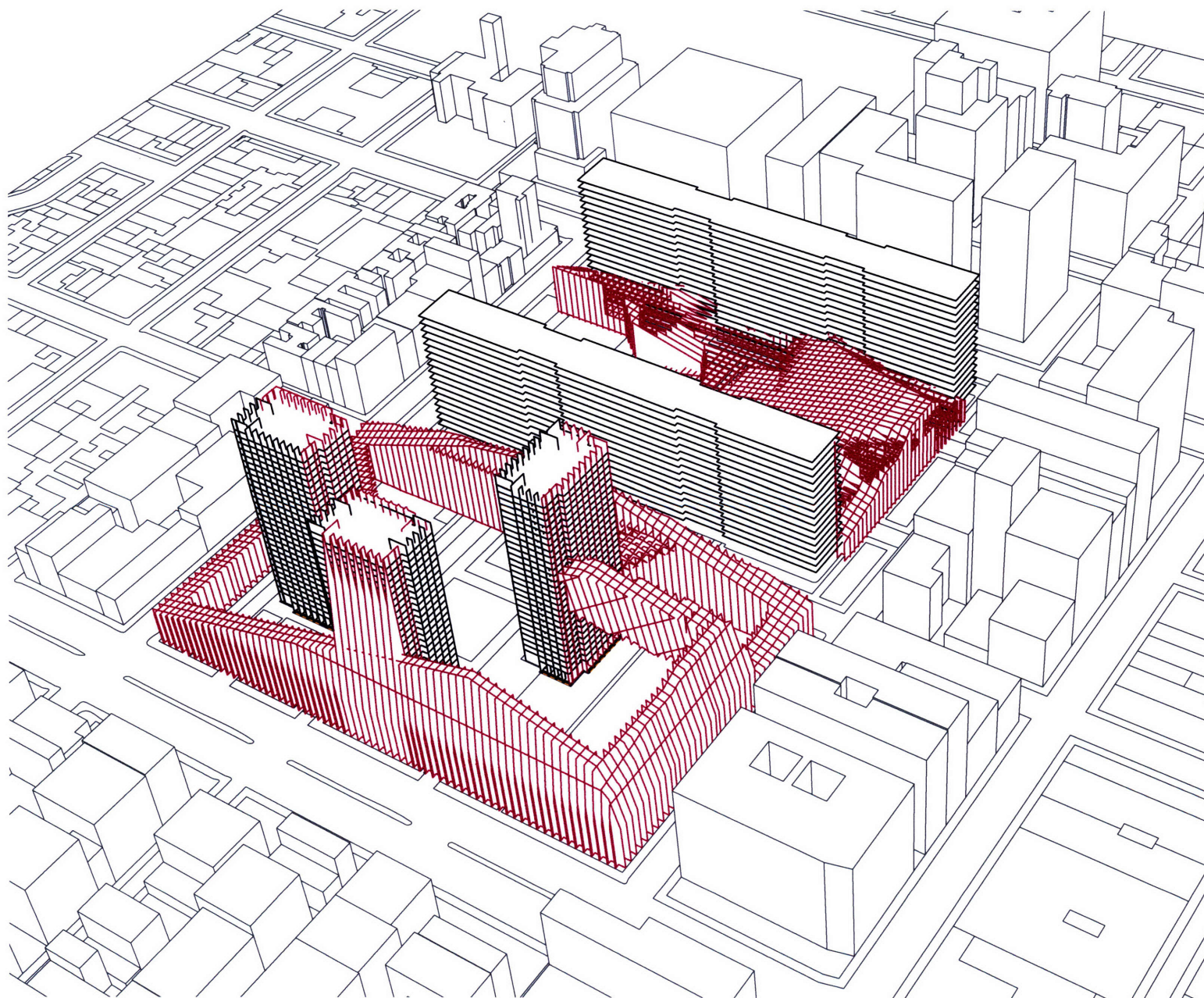
27 foot depth  
2,053,782 sq. ft.



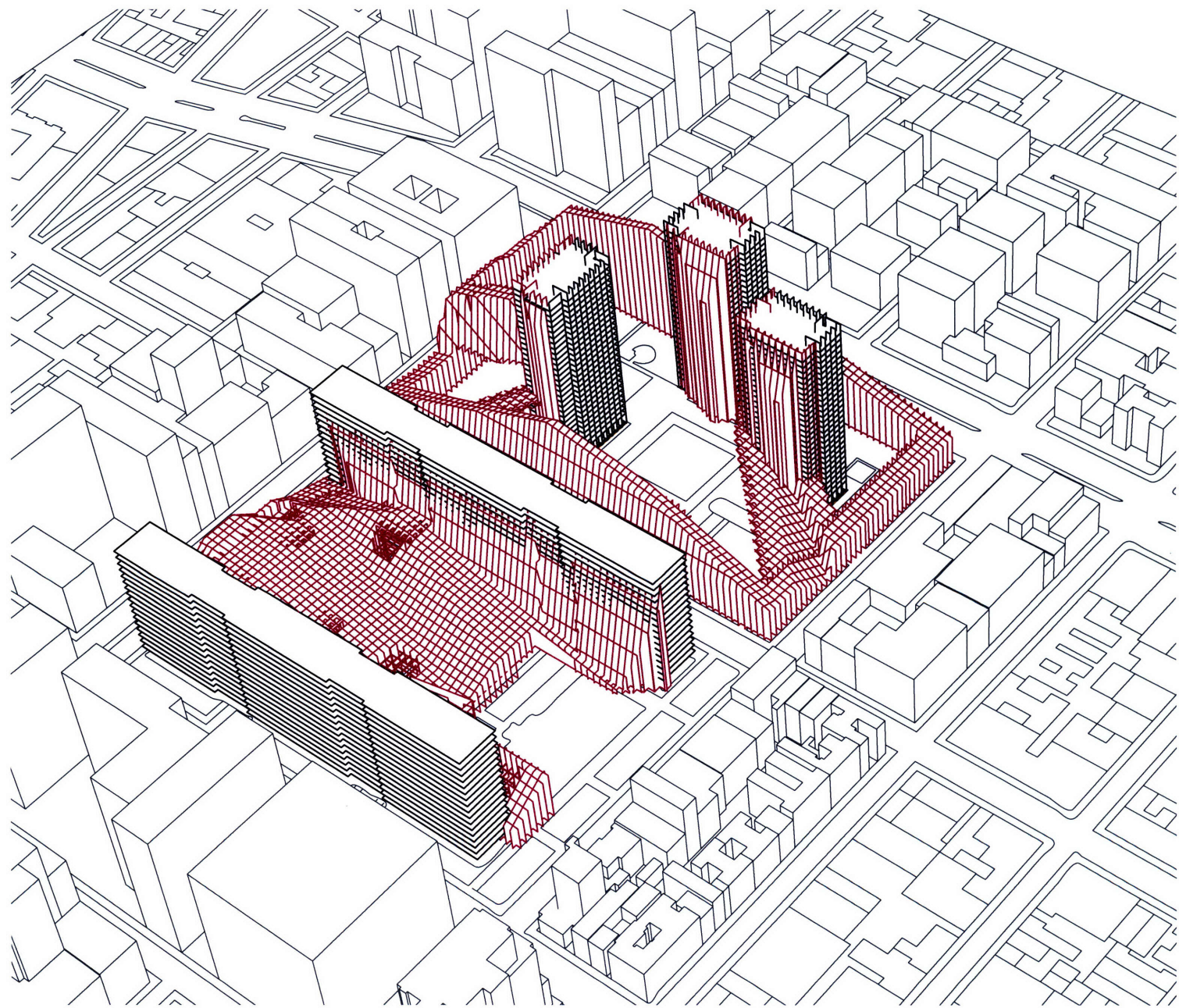
thickened envelope  
1,507,457 sq. ft.



crenelated envelope  
2,530,060 sq. ft.



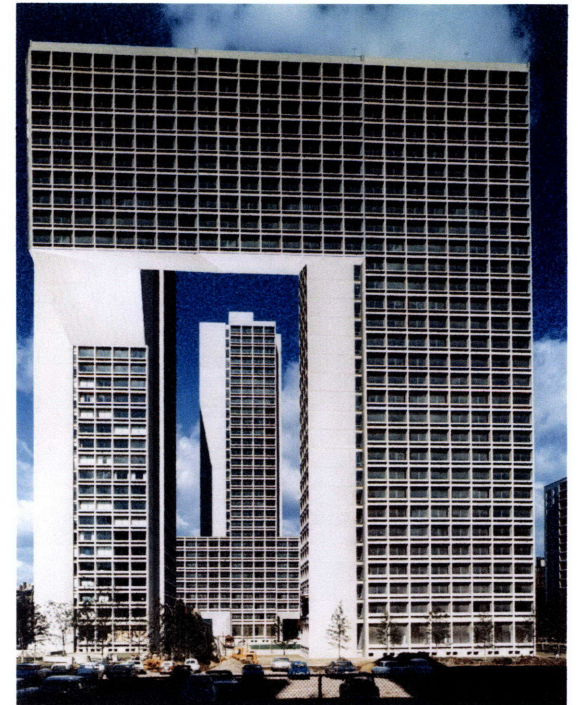








Fill



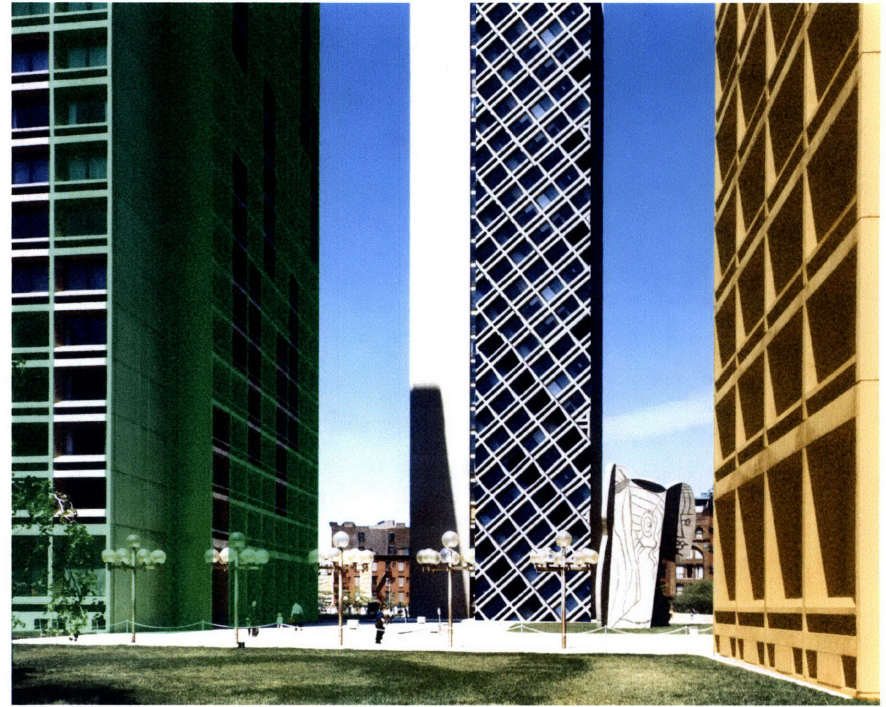
Bridge

Surgery



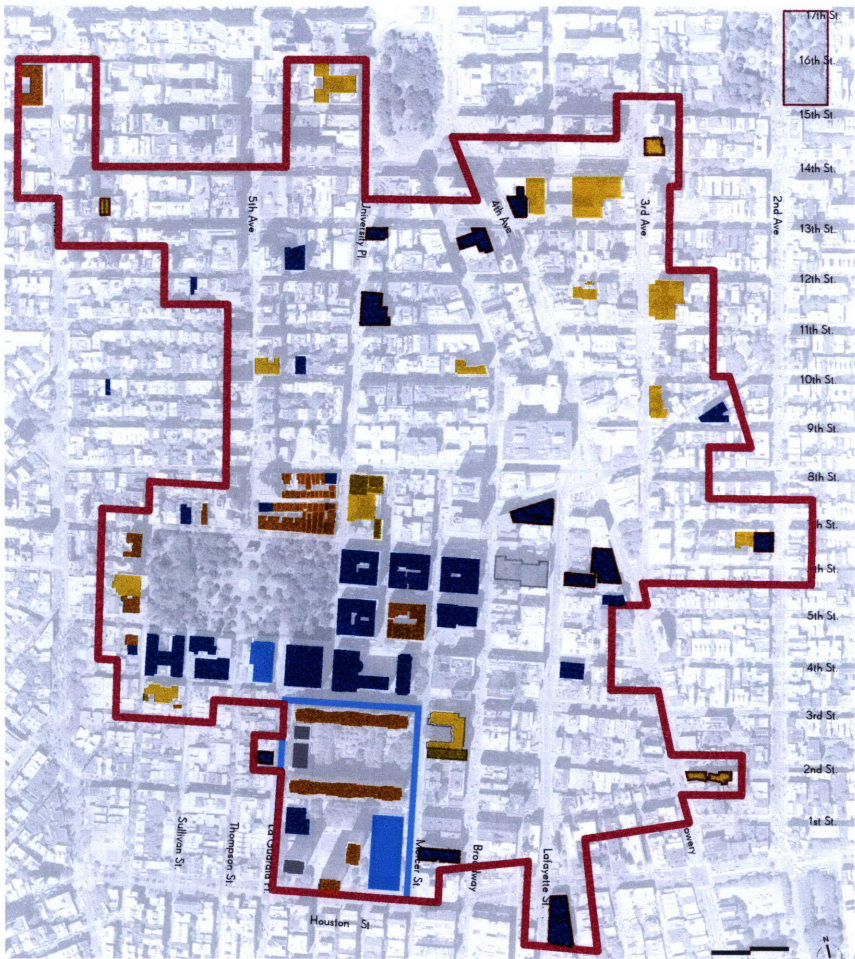


Cut-Divide



Difference

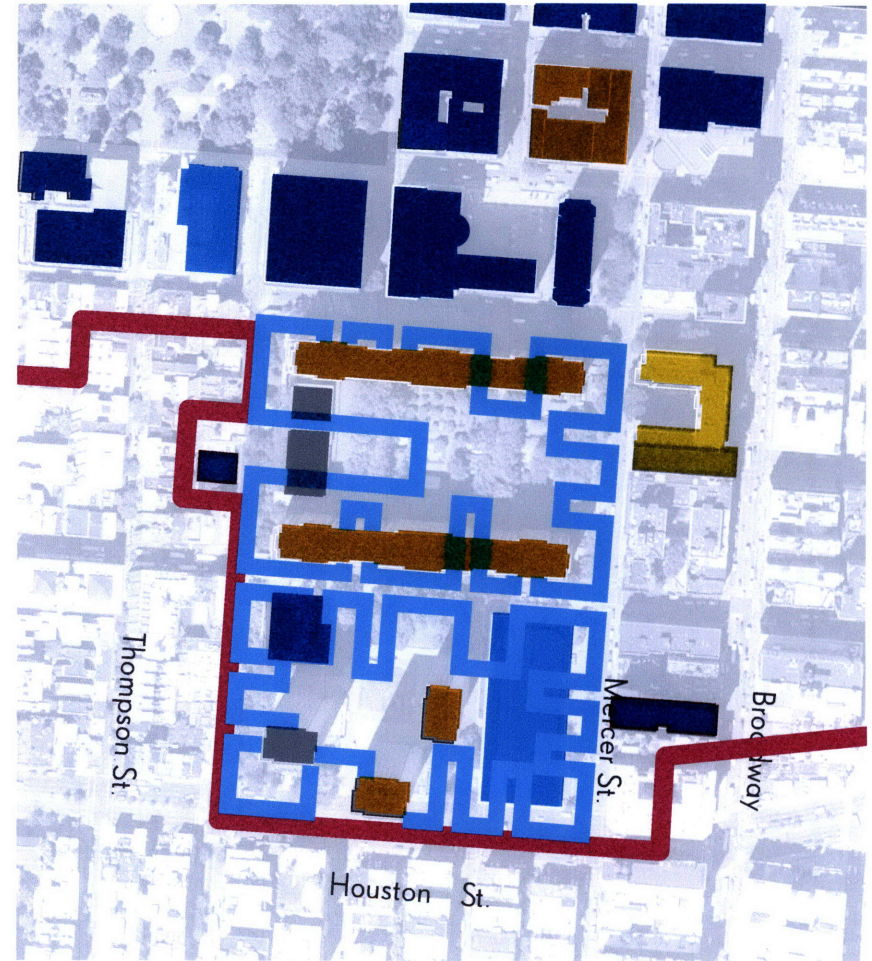
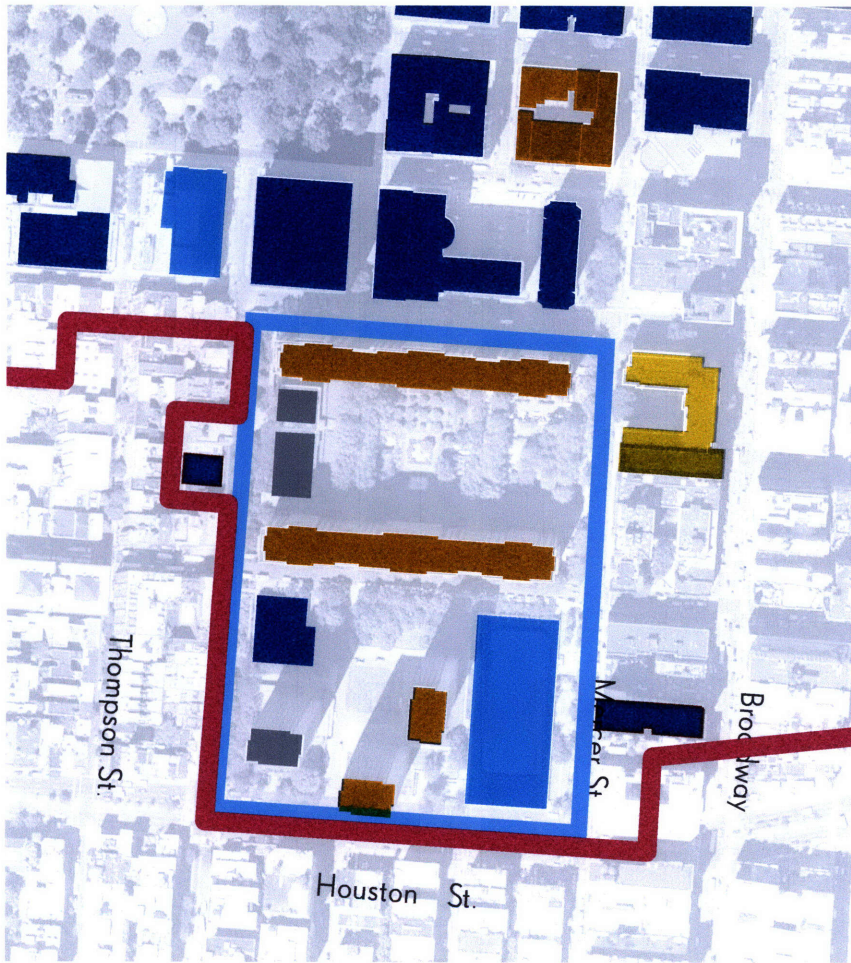




- Faculty Housing
- Student Housing
- Academic/Admin.
- Student Facilities
- Leased Buildings

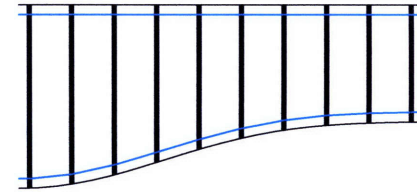
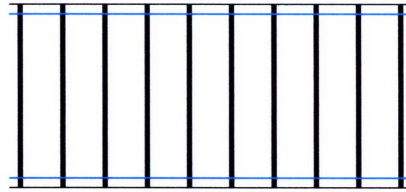
Continued outward expansion of NYU



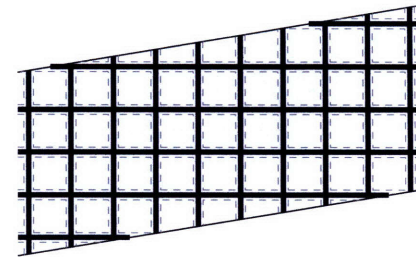
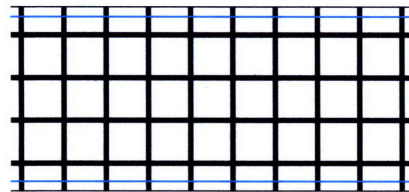


Letting into bounds of the homogenous slab and tower blocks

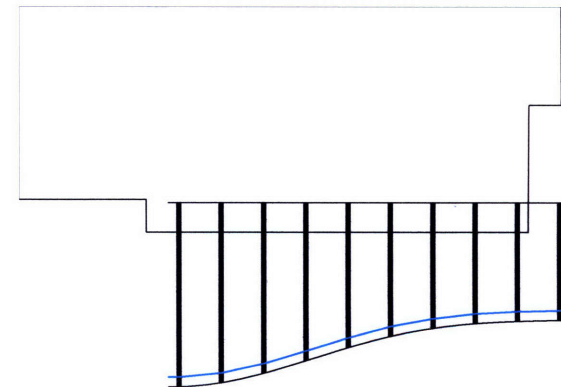
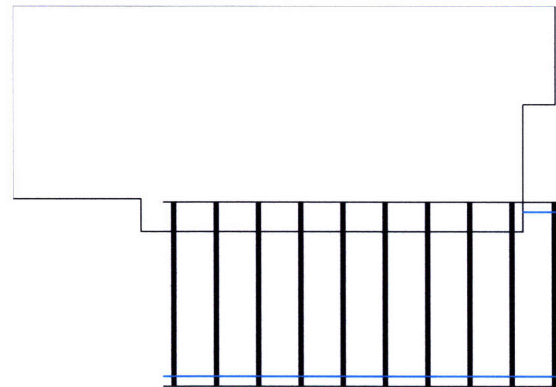
Site Wall



Ground / Bridge



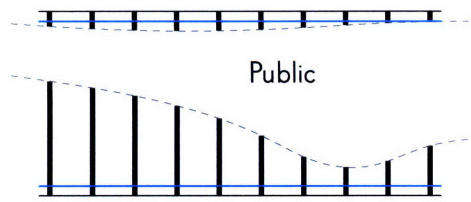
Graft



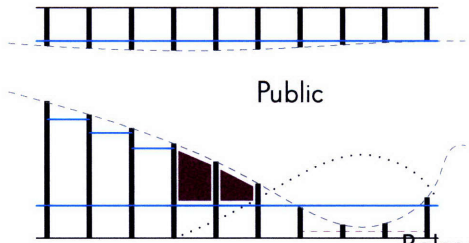
Extruded Eggcrate

Site Strategy





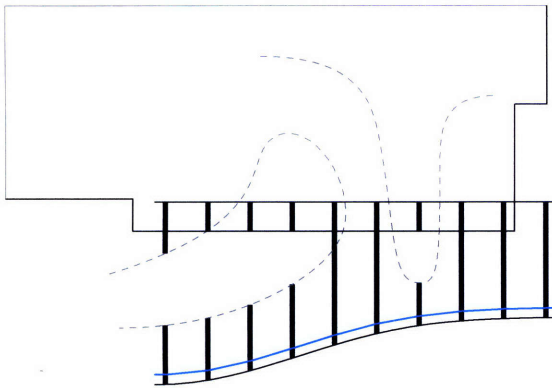
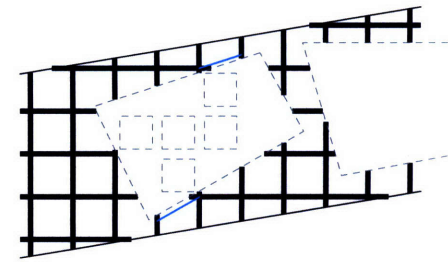
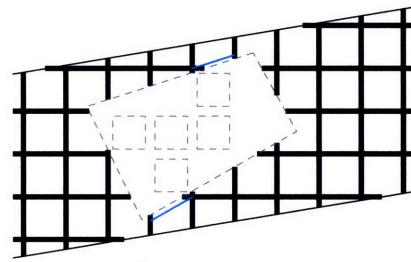
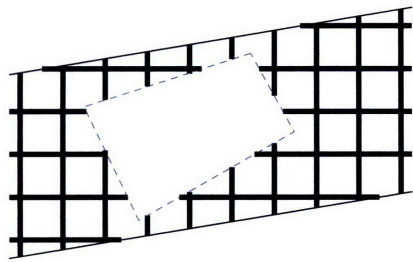
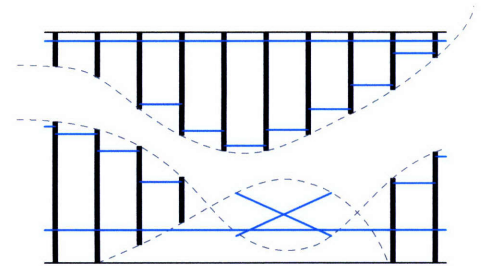
Public



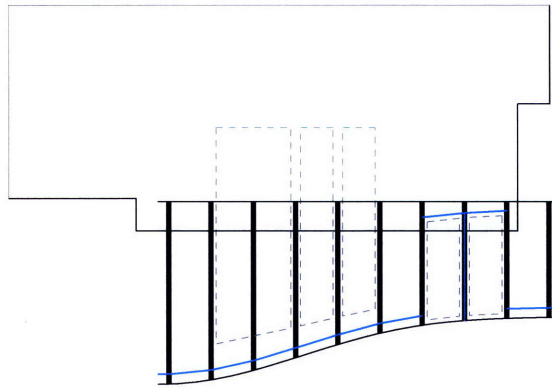
Public

Louver

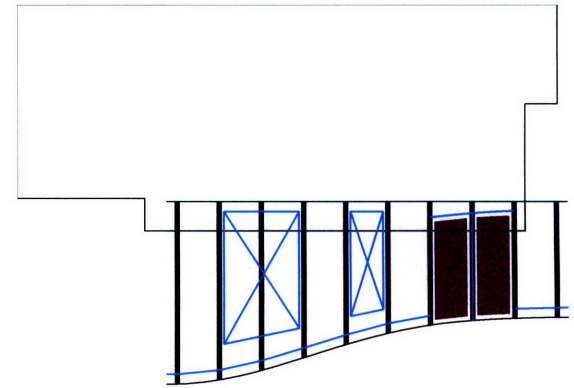
Balcony



Program

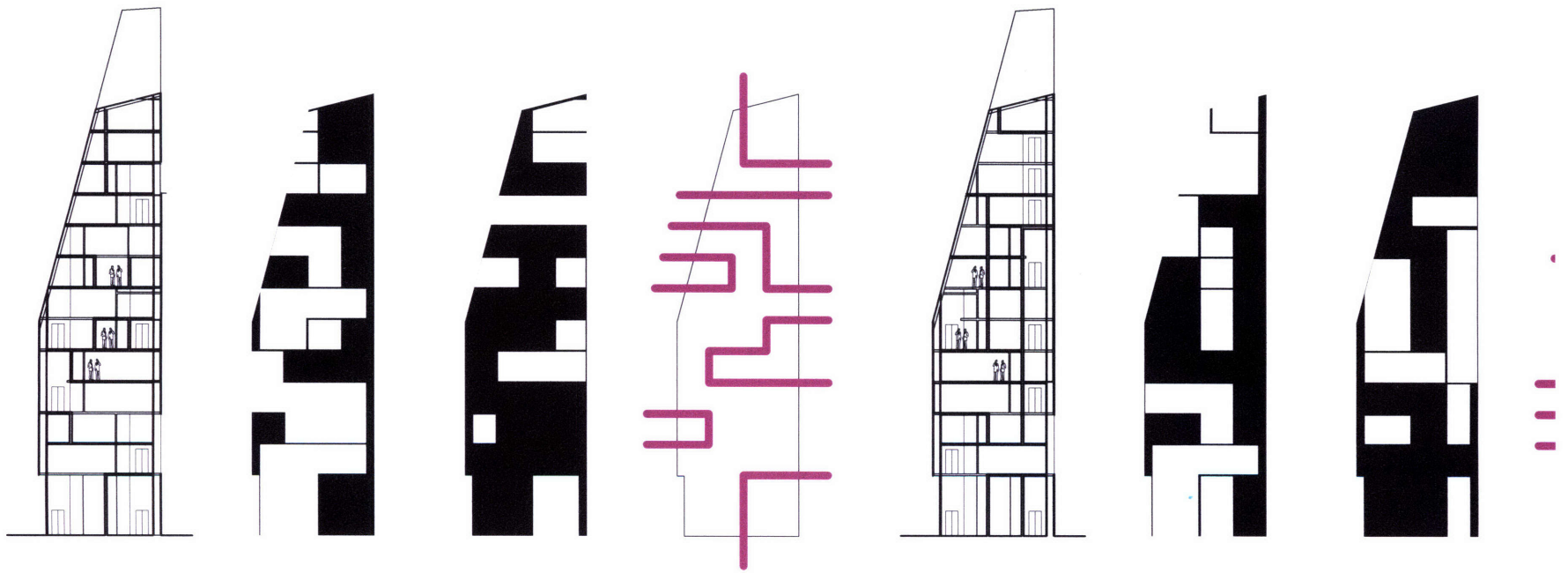


Specificity and Performance



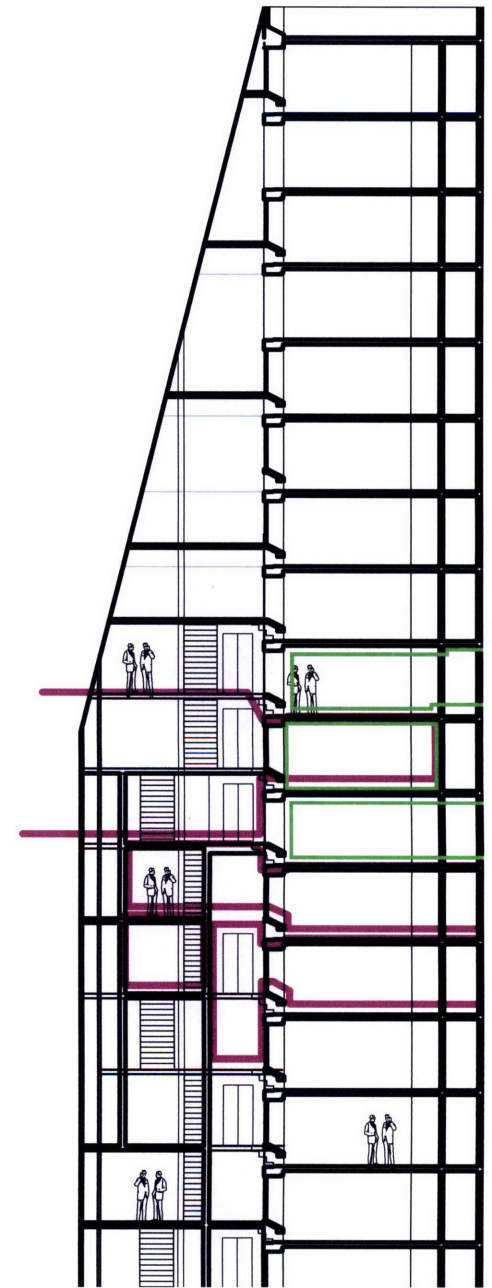
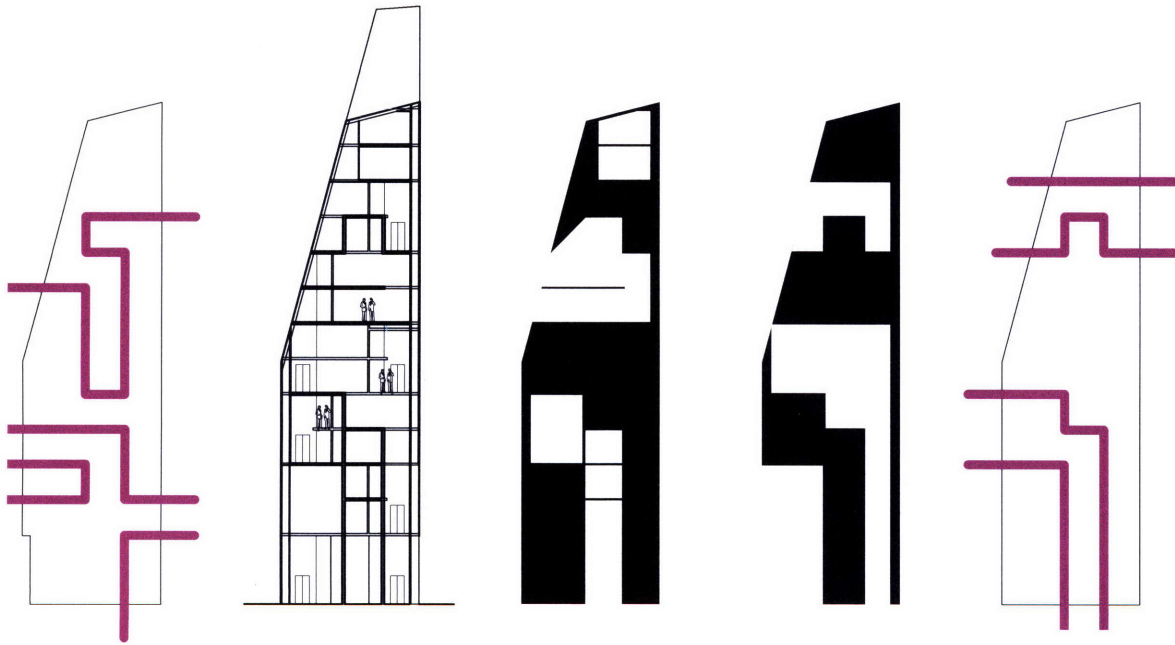
Circulation

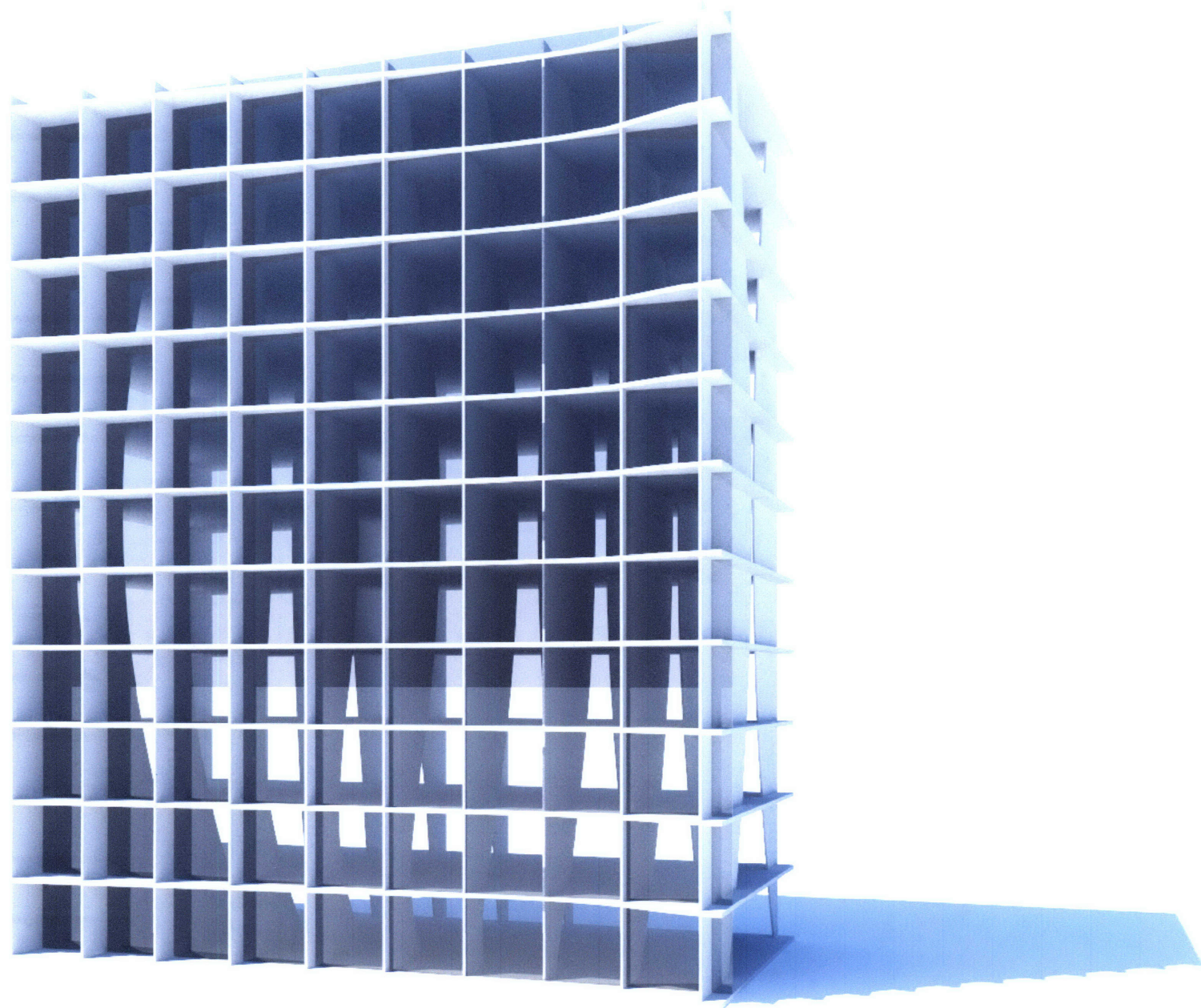
**Eggcrate operations**



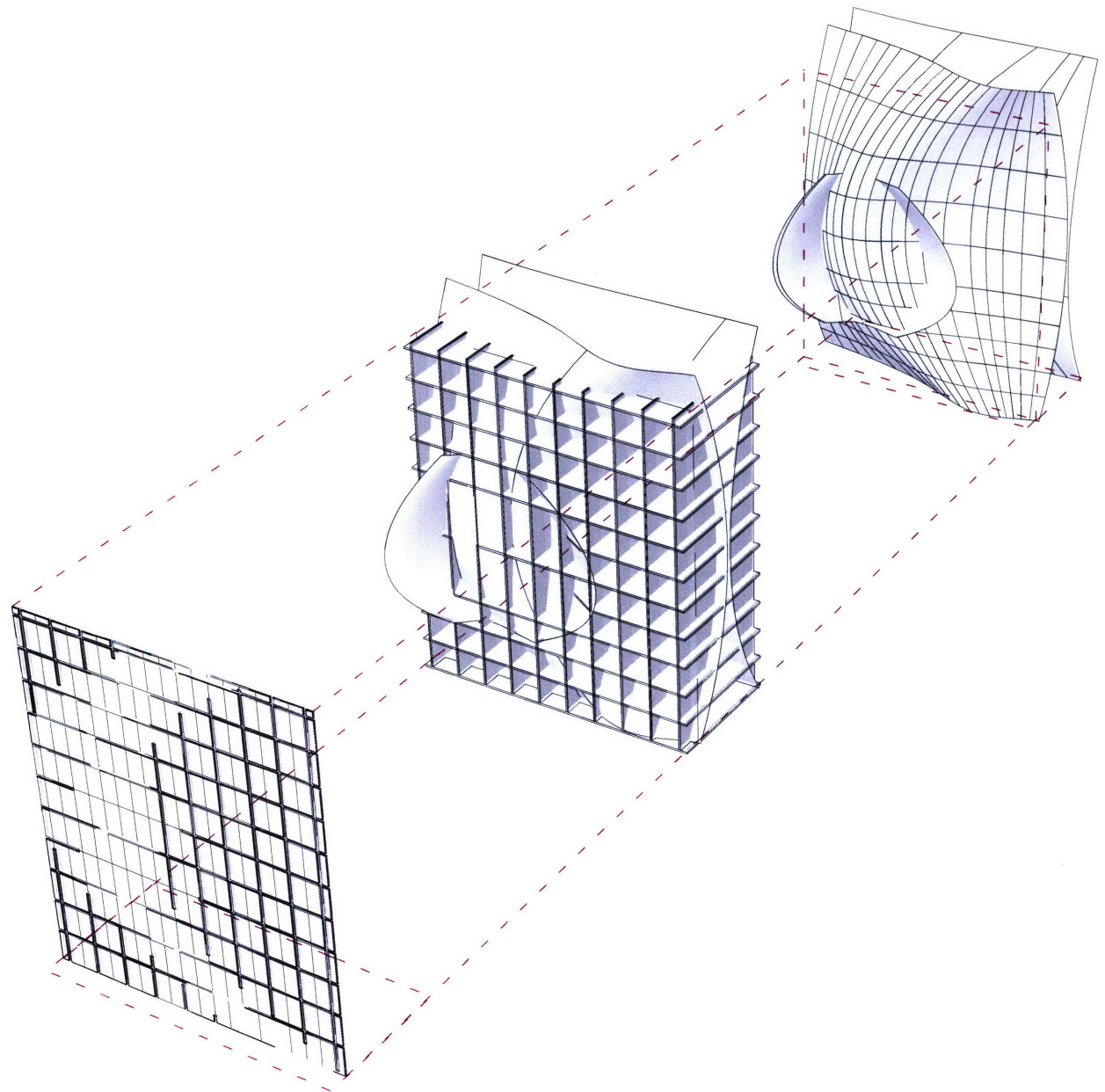
Separation and adjacency in new urban intimacies - Zippering space

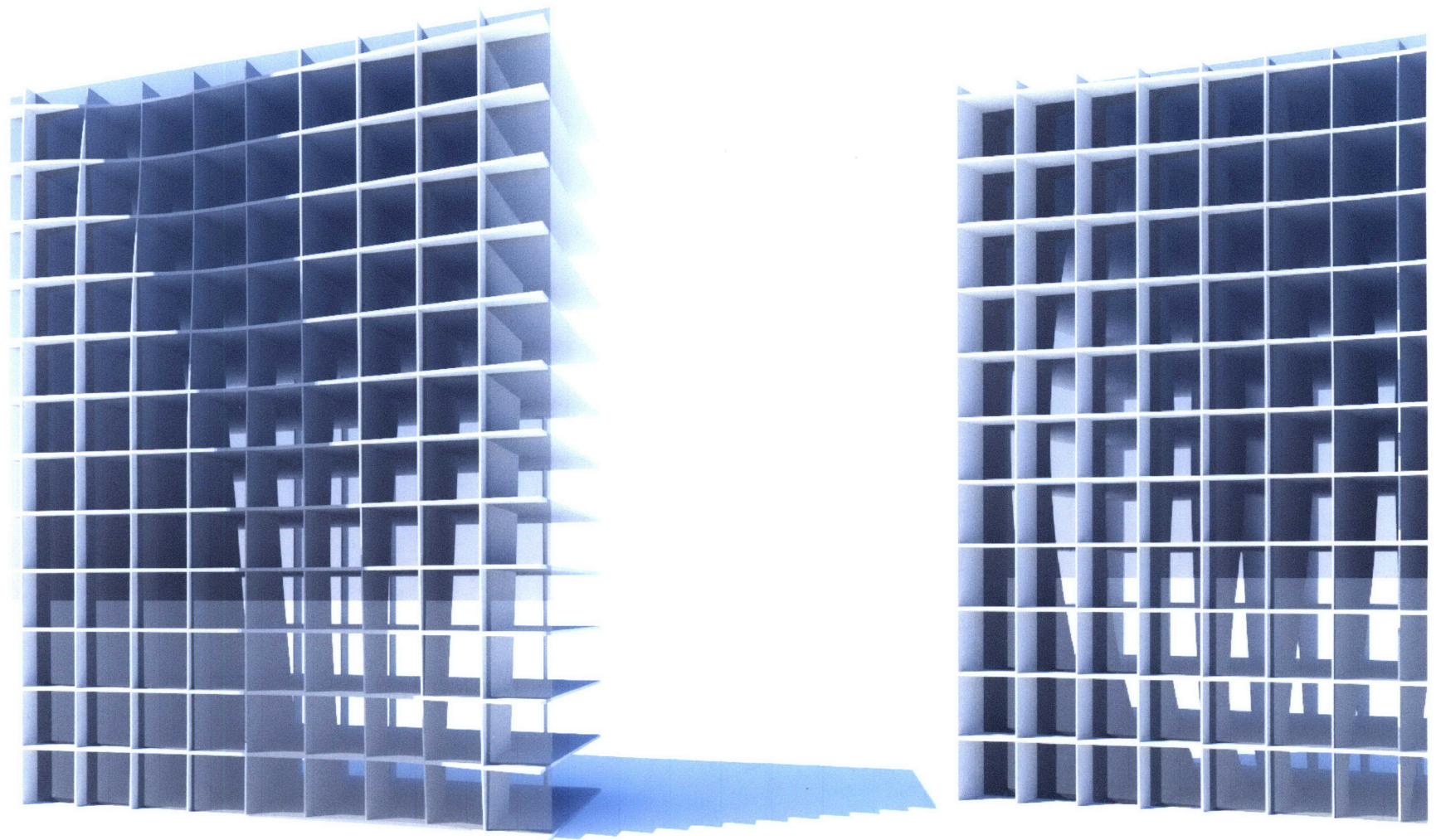






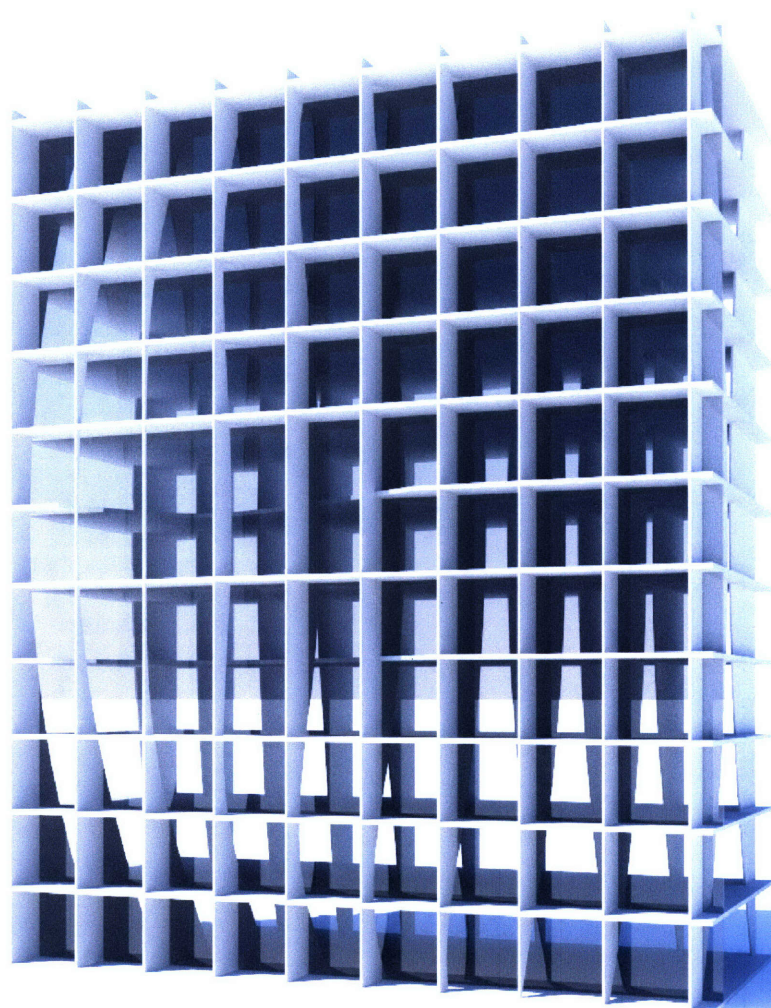
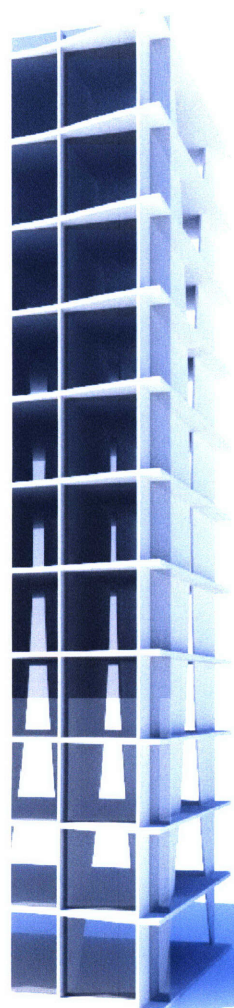


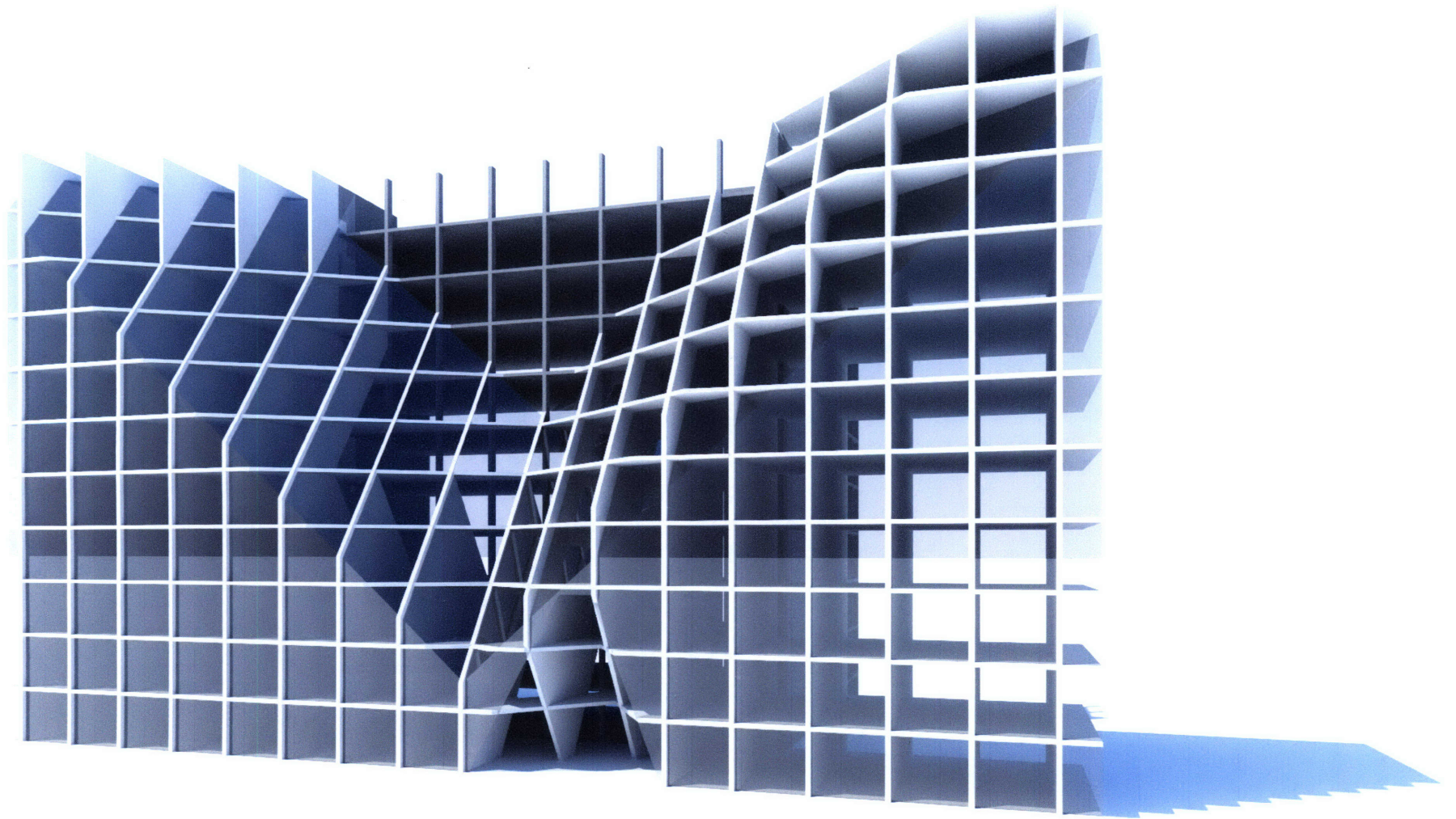




**Modulation along the block envelope**

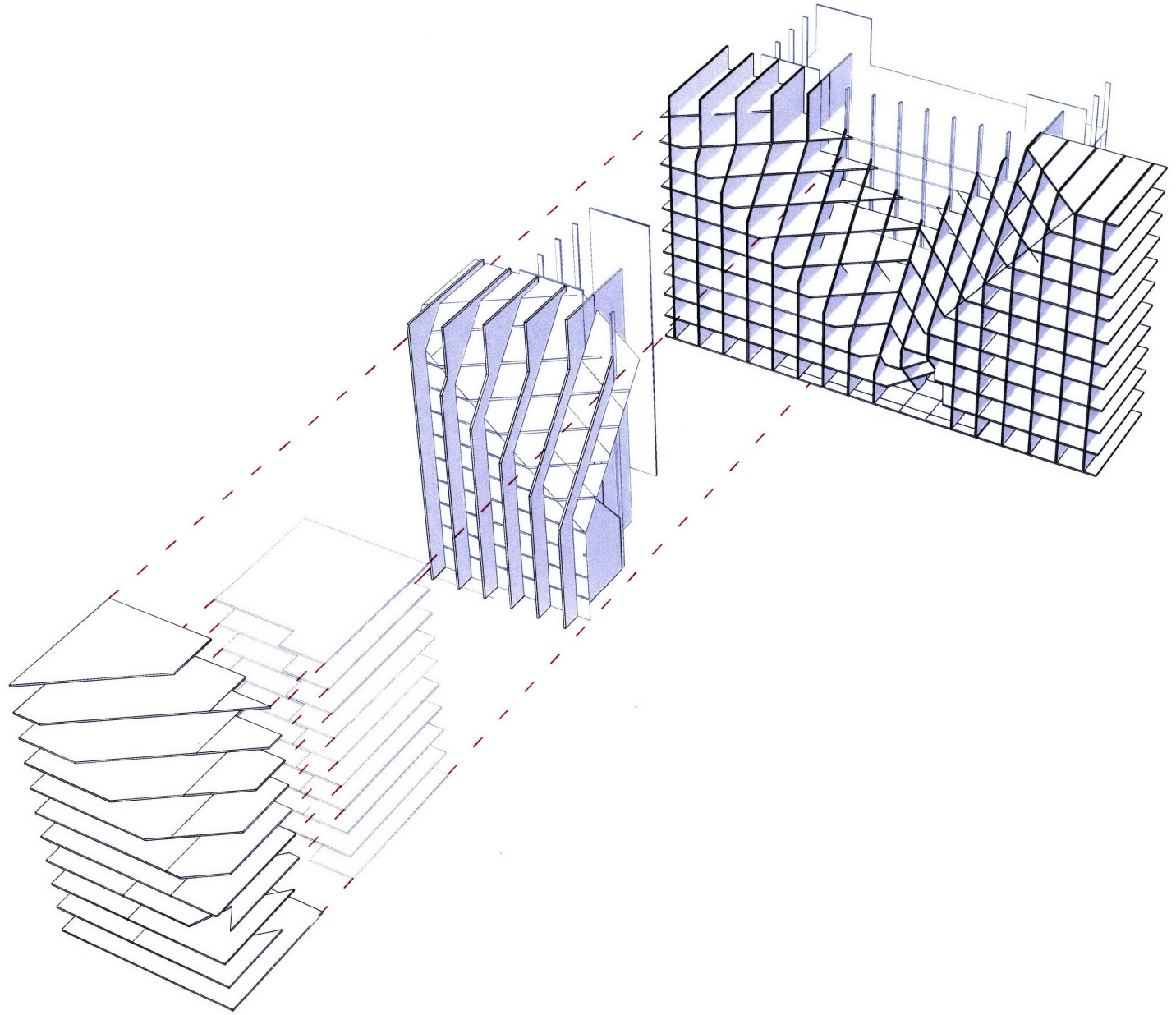


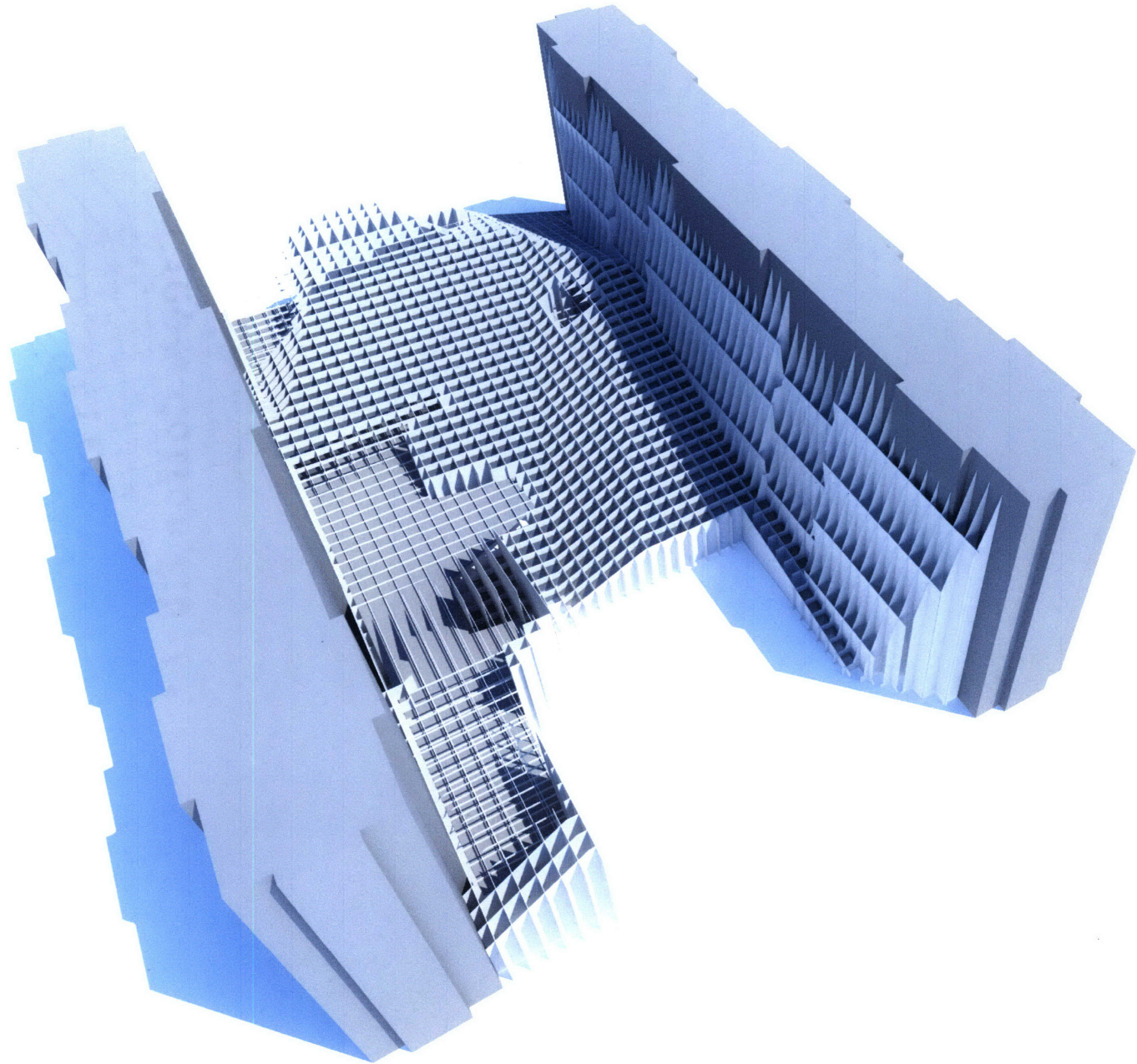




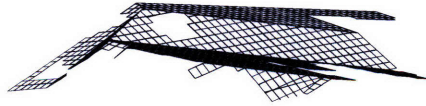
**Grafting onto existing towers**



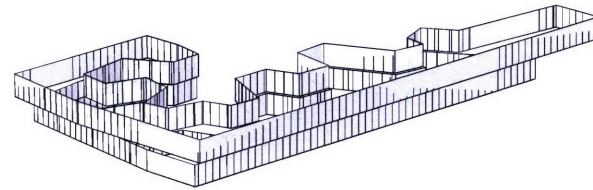




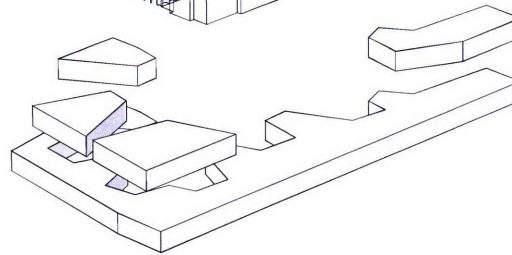
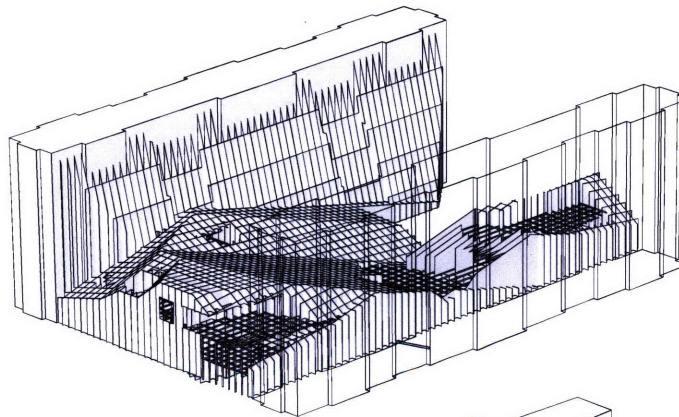




skylight

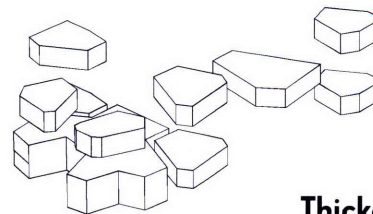


vertical glazing



circulation subtraction

classrooms



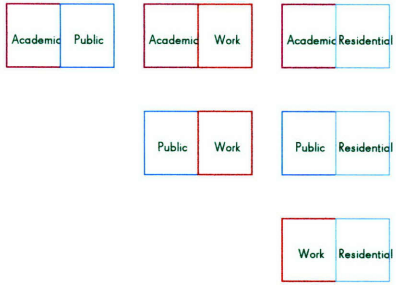
**Thickening ground plane to accomodate program**

	Academic	Public	Work	Residential		Academic	Public	Work
Undergrad Dorms	<input type="checkbox"/>			<input type="checkbox"/>	Academic Residential	<input type="checkbox"/>	<input type="checkbox"/>	
Grad Housing			<input type="checkbox"/>	<input type="checkbox"/>	Work Residential			
Faculty Housing			<input type="checkbox"/>	<input type="checkbox"/>	Work Residential			
Large Classrooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Academic Public Academic Work			
Big Lecture Hall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Academic Public Academic Work			
Small Lecture Hall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Academic Public Academic Work			
Computer Classroom	<input type="checkbox"/>		<input type="checkbox"/>		Academic Work			
Study Ab. Office	<input type="checkbox"/>	<input type="checkbox"/>			Academic Public			
Medium Classroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Academic Public Academic Work			
Small Classroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Academic Public Academic Work			
Large Laboratory	<input type="checkbox"/>		<input type="checkbox"/>		Academic Work			
Small Laboratory	<input type="checkbox"/>		<input type="checkbox"/>		Academic Work			
Banquet Hall	<input type="checkbox"/>	<input type="checkbox"/>						
Central Library	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Facilities and Equip.	<input type="checkbox"/>		<input type="checkbox"/>					
Gym		<input type="checkbox"/>	<input type="checkbox"/>					
Large Library Archive	<input type="checkbox"/>		<input type="checkbox"/>					
Small Library Archive	<input type="checkbox"/>		<input type="checkbox"/>					
Admin Offices	<input type="checkbox"/>		<input type="checkbox"/>					
Faculty Offices	<input type="checkbox"/>		<input type="checkbox"/>					
Restaurants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Shops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Second Public								
Social Housing		<input type="checkbox"/>						

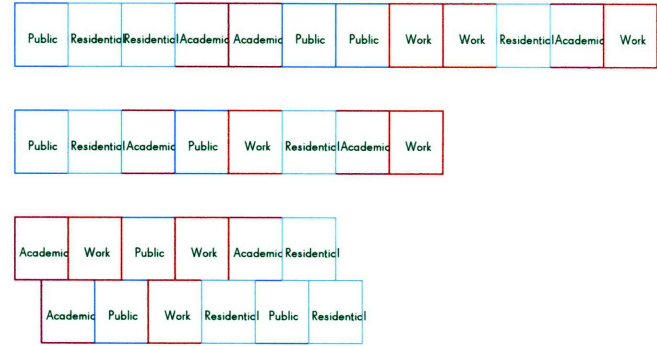




## Dualities



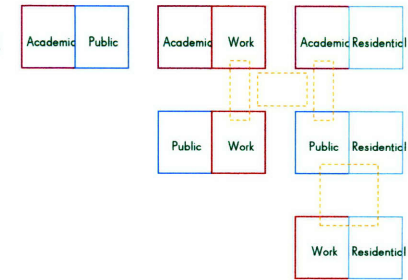
## Chain



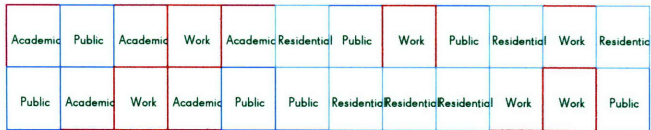
## Contrast



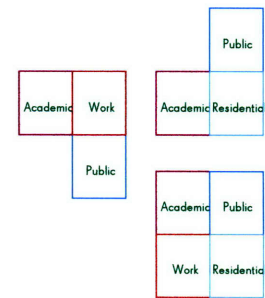
## Dualities



## Alternate



## Clusters

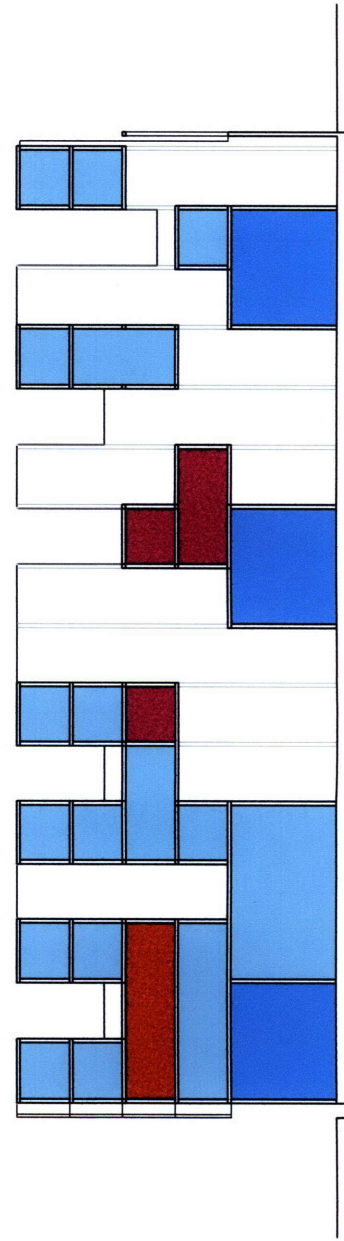
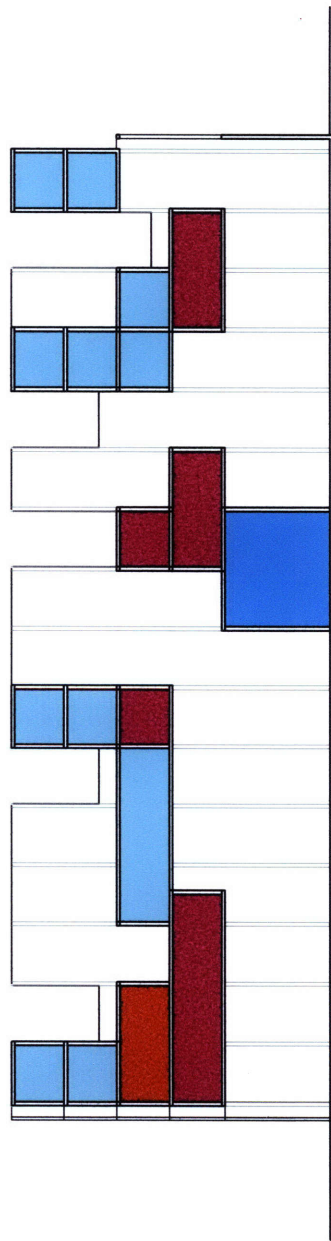
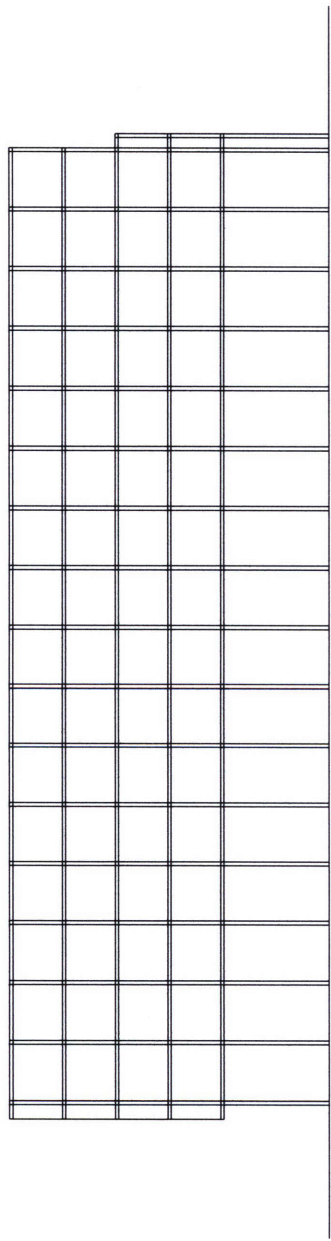
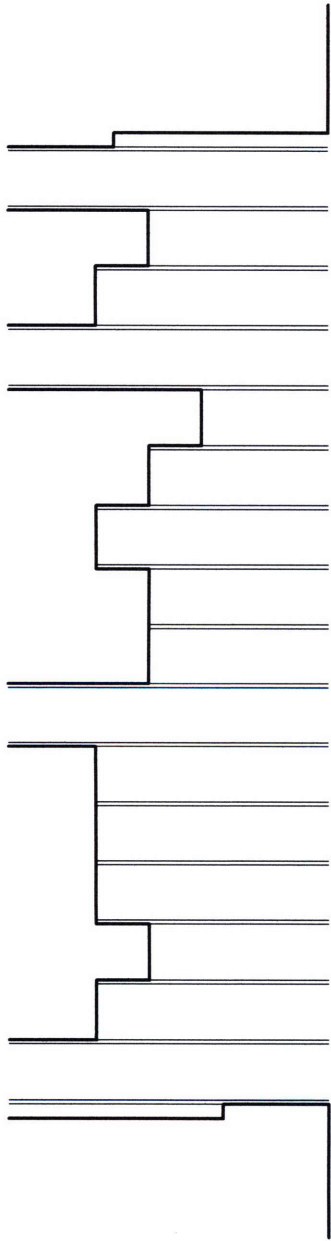


## Programmatic juxtapositions

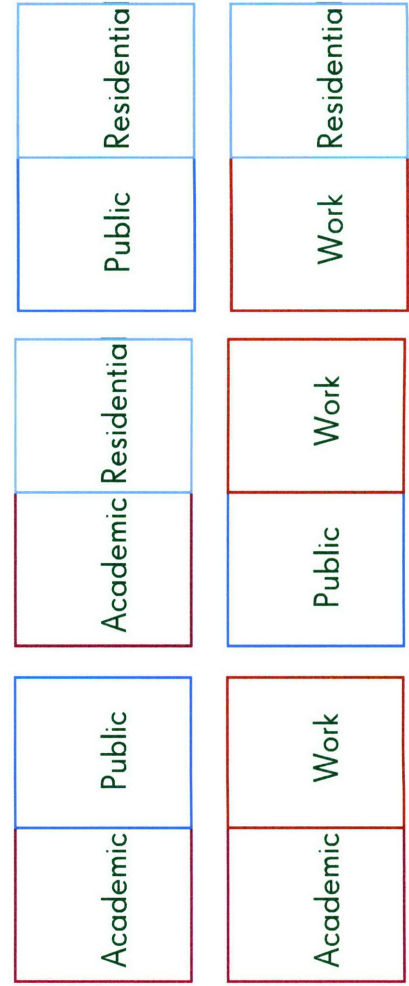
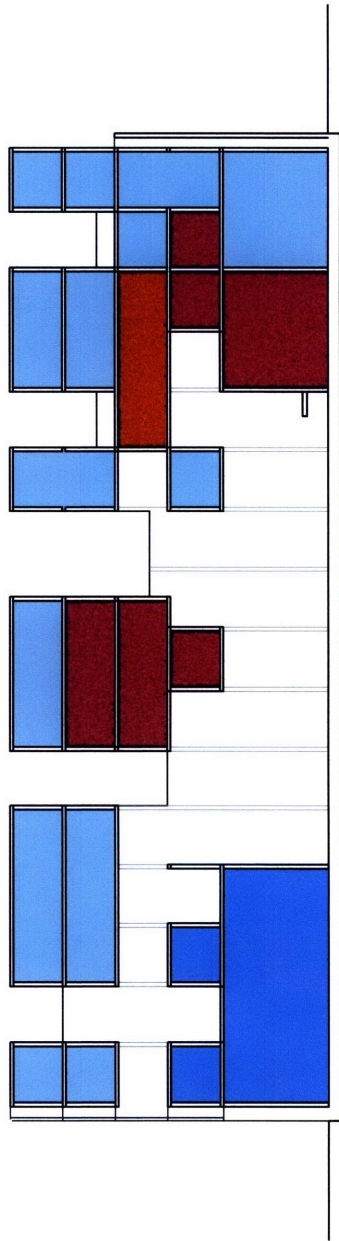
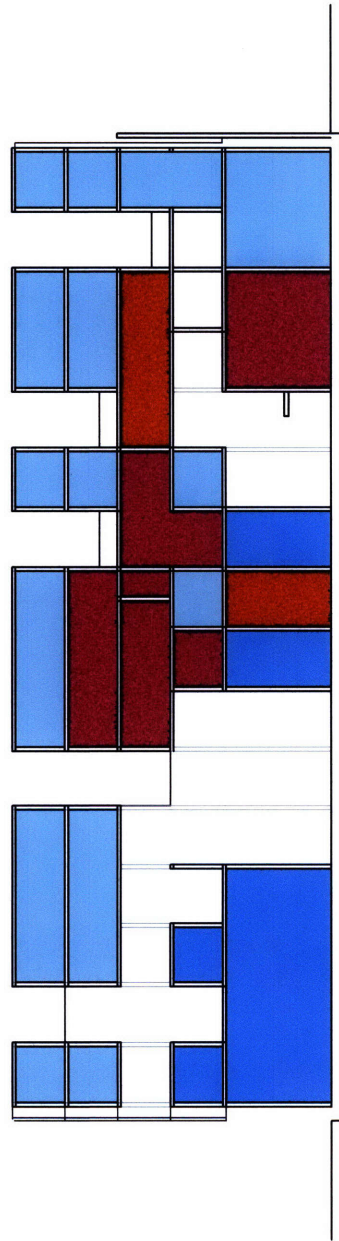
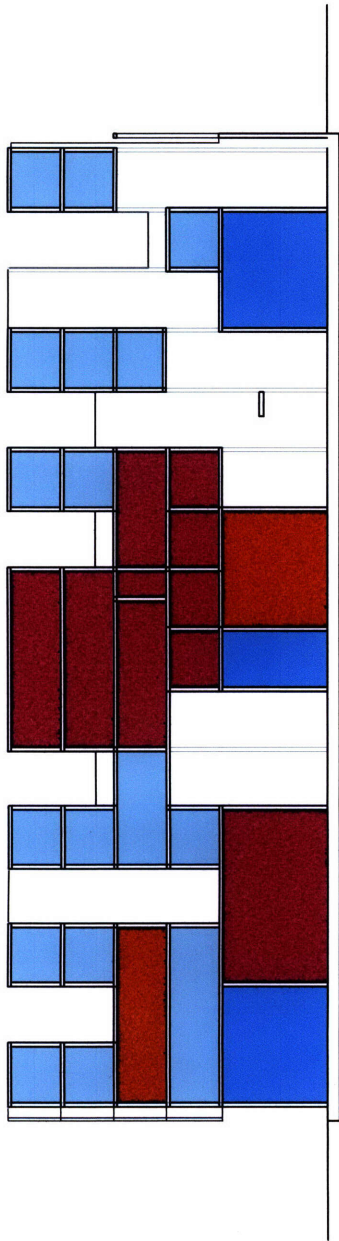


Academic	Public	Large Classrooms Big Lecture Hall Small Lecture Hall Study Abr. Office	Medium Classrooms Small Classroom Banquet Hall Restaurants	Shops Galleries Recreation Space Outdoor Space	
Academic	Work	Large Classrooms Big Lecture Hall Small Lecture Hall Computer Classroom	Medium Classrooms Small Classroom Large Laboratory Small Laboratory	Facilities and Equip. Large Library Archive Small Library Archive Admin Offices	Faculty Office Restaurants Rentable Workspace for Alumni
Academic	Residential	Undergrad Dorms			
Public	Work	Gym Shops Galleries Grocery Store			
Public	Residential	Shops Social Housing Day Care Elderly Care	Galleries Recreation Space		
Work	Residential	Grad Housing Faculty Housing Facilities and Equip. Faculty Offices	Luxury Housing		

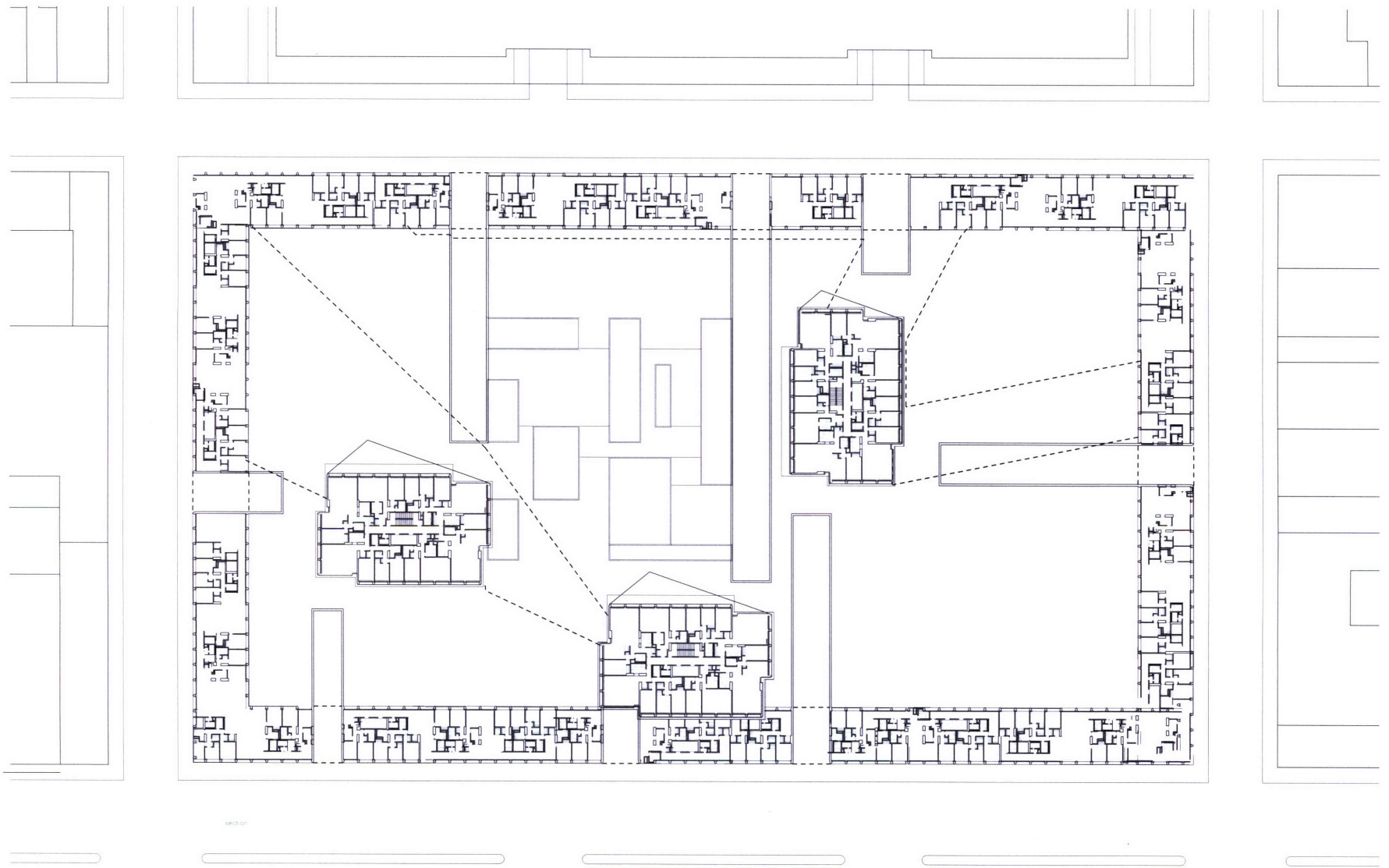
**Final program**





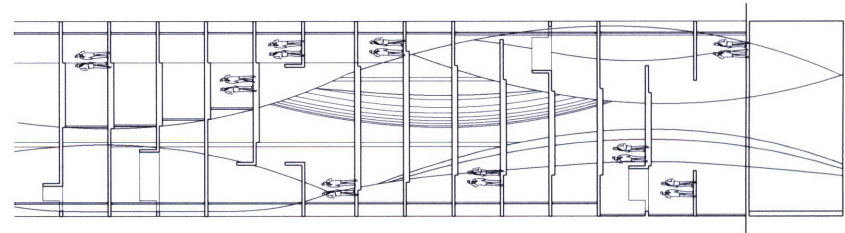
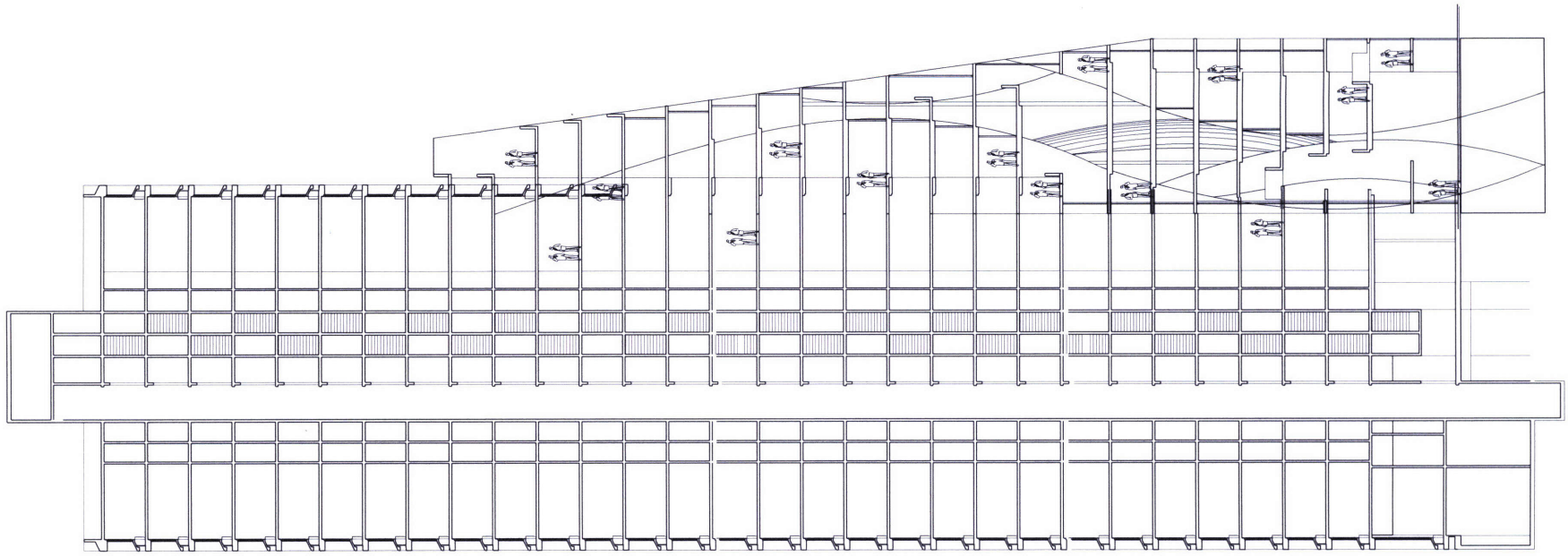


Programming difference and adjacency

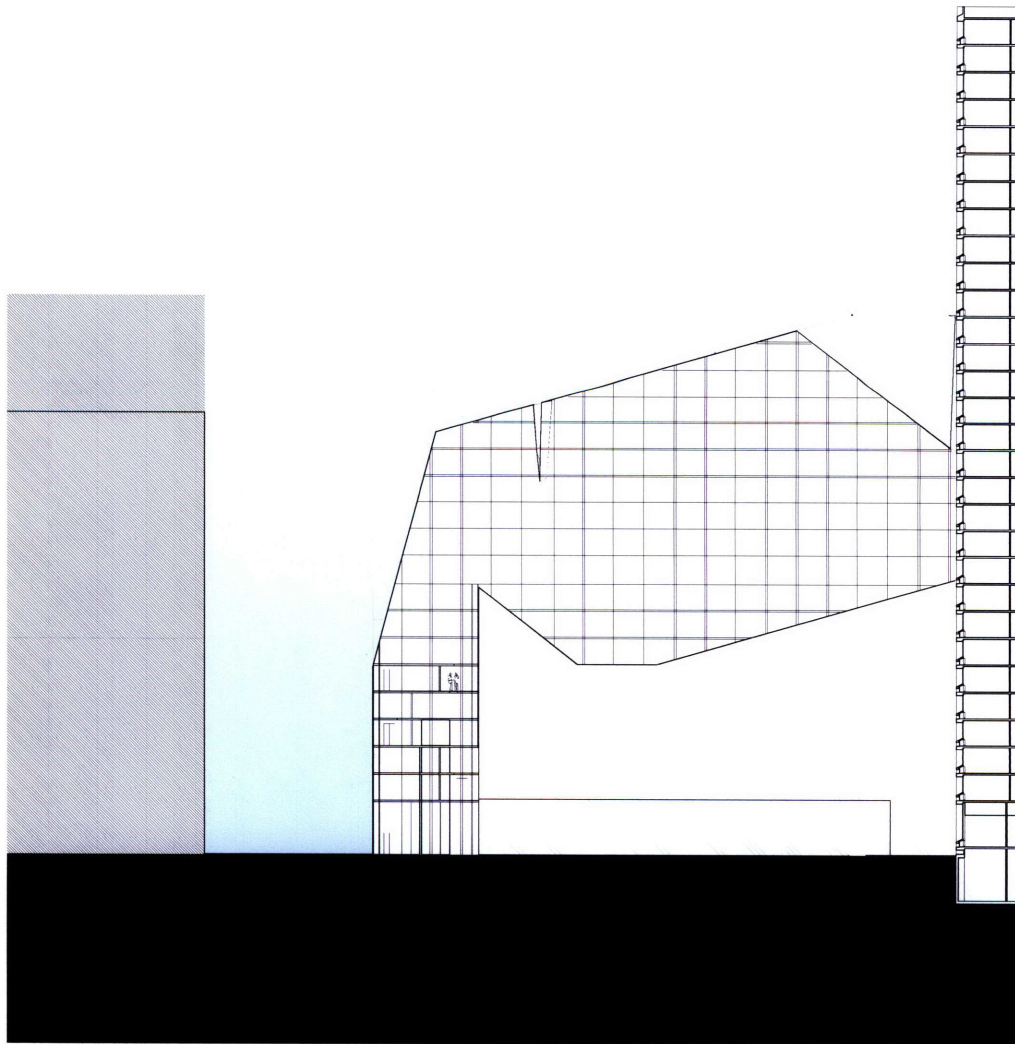


South block plan

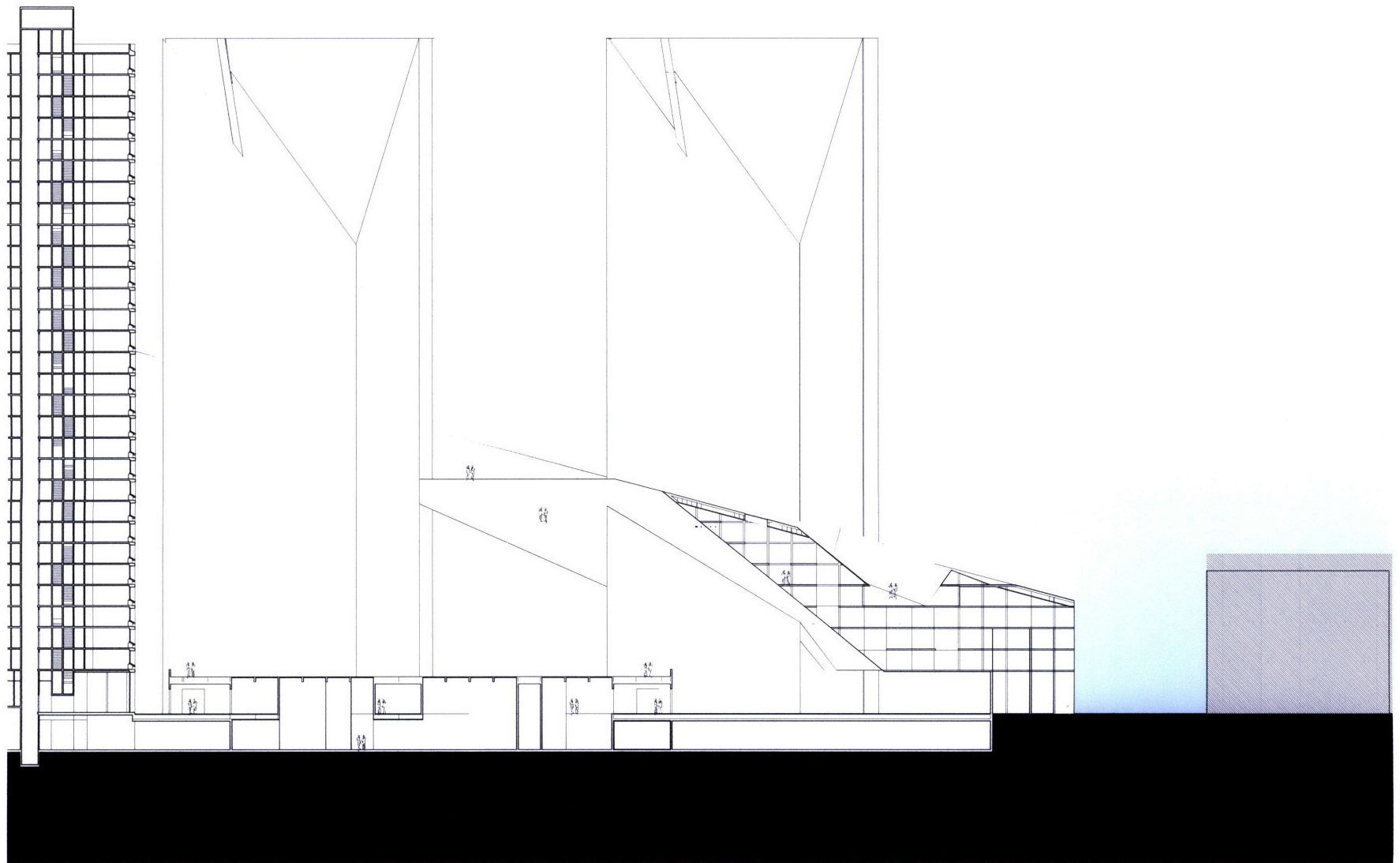


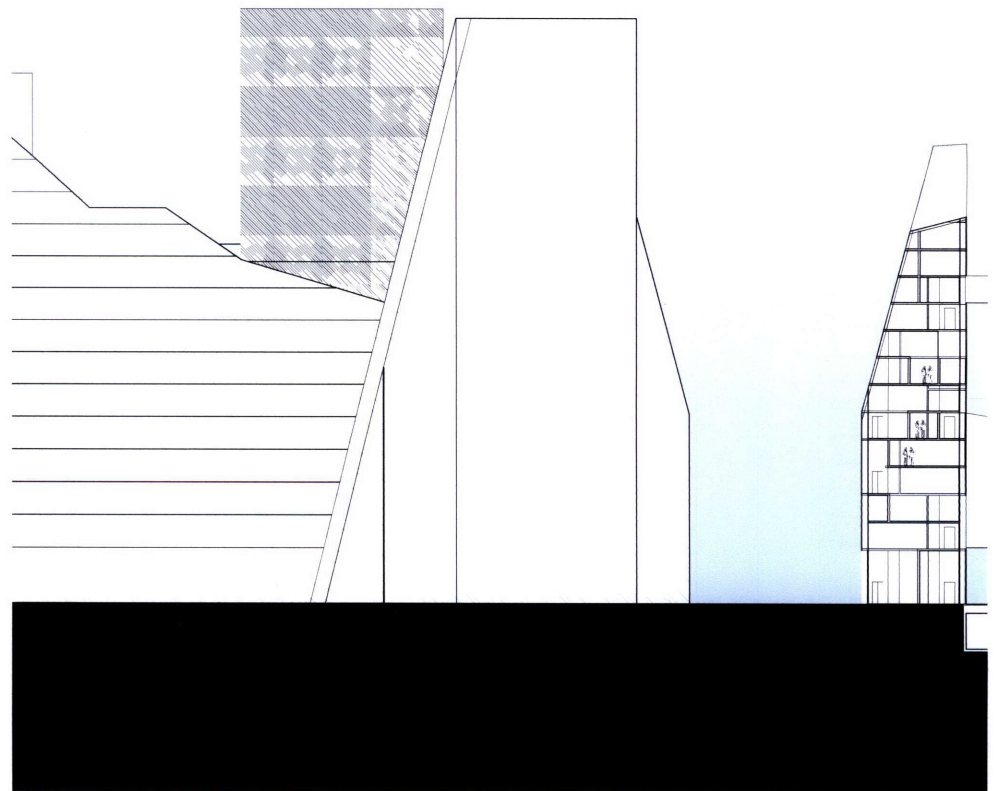


Typical sections

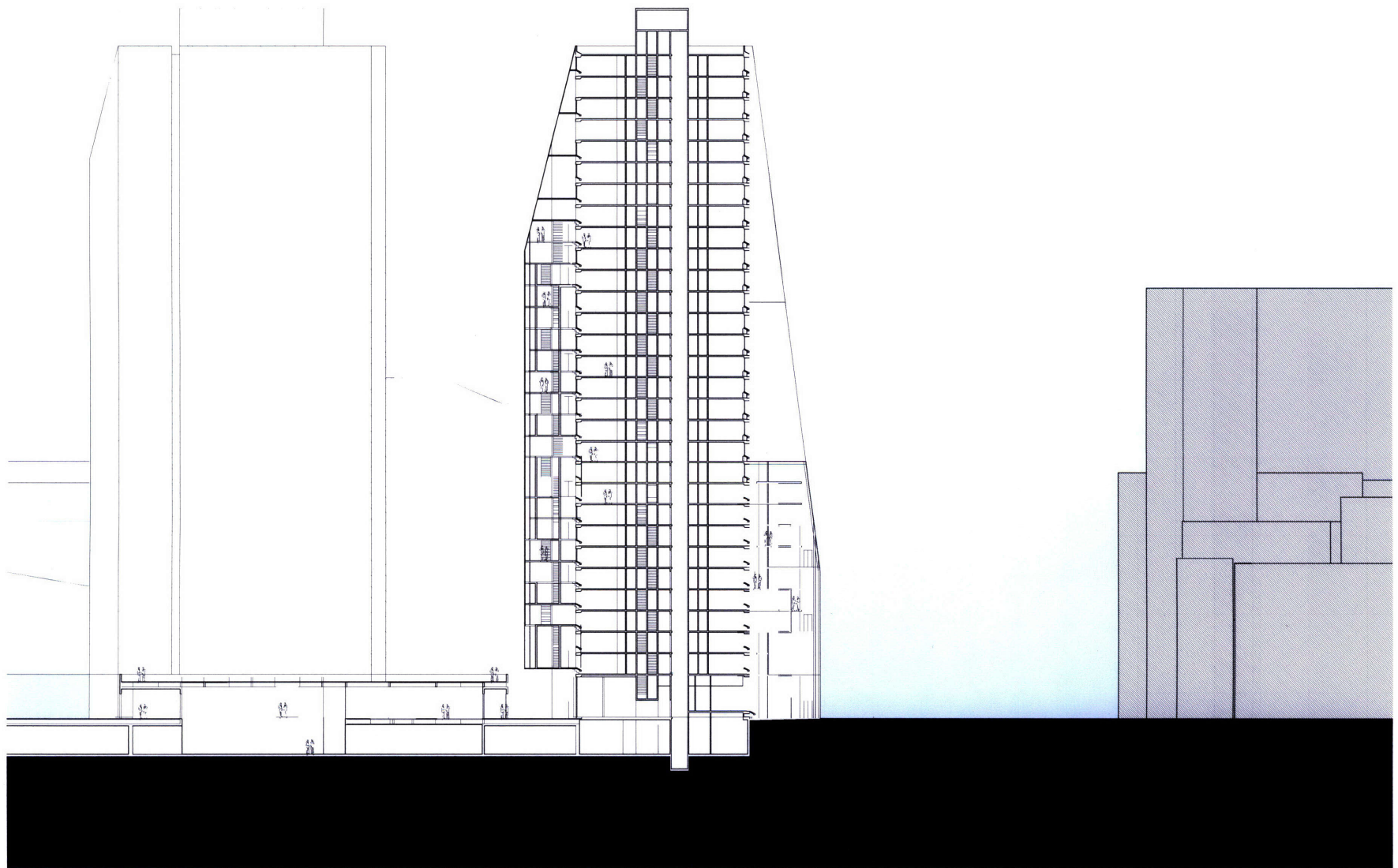


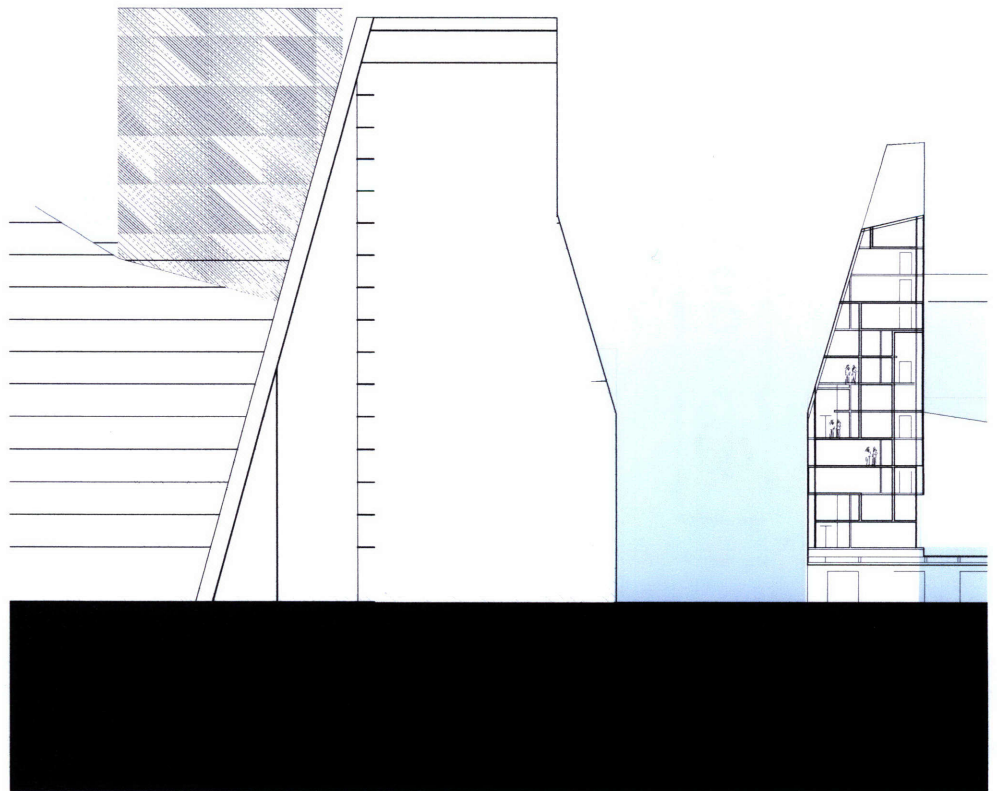




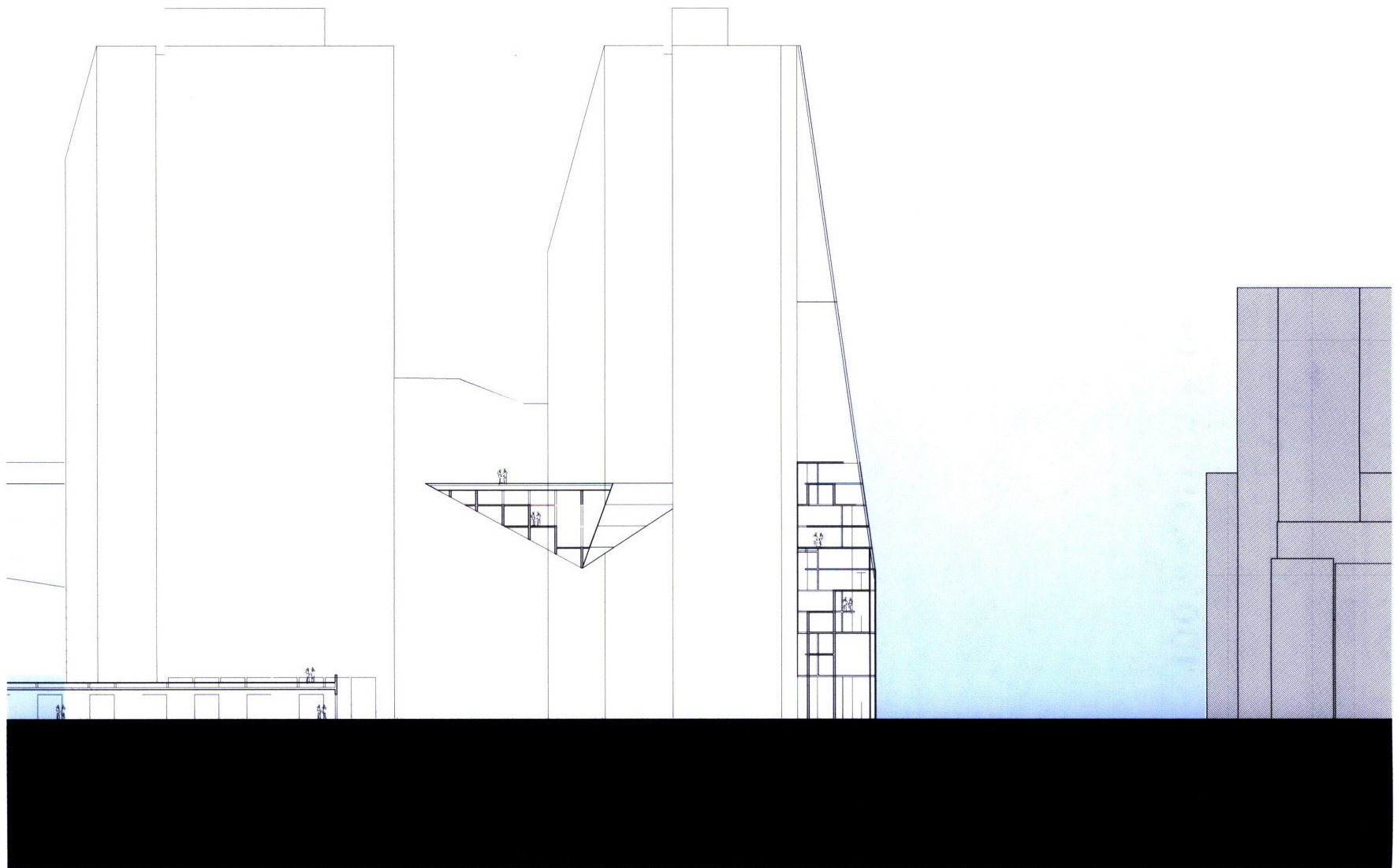




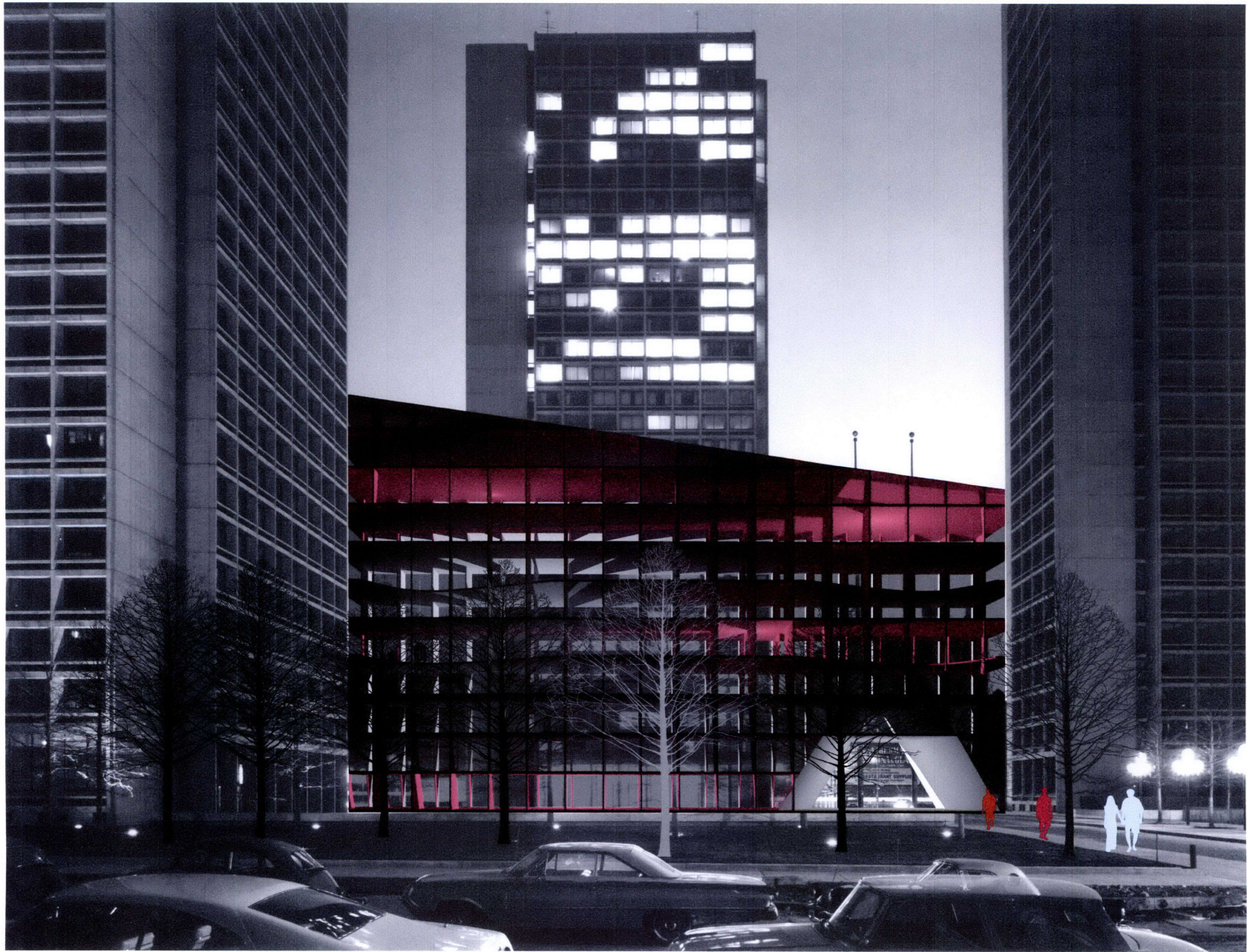




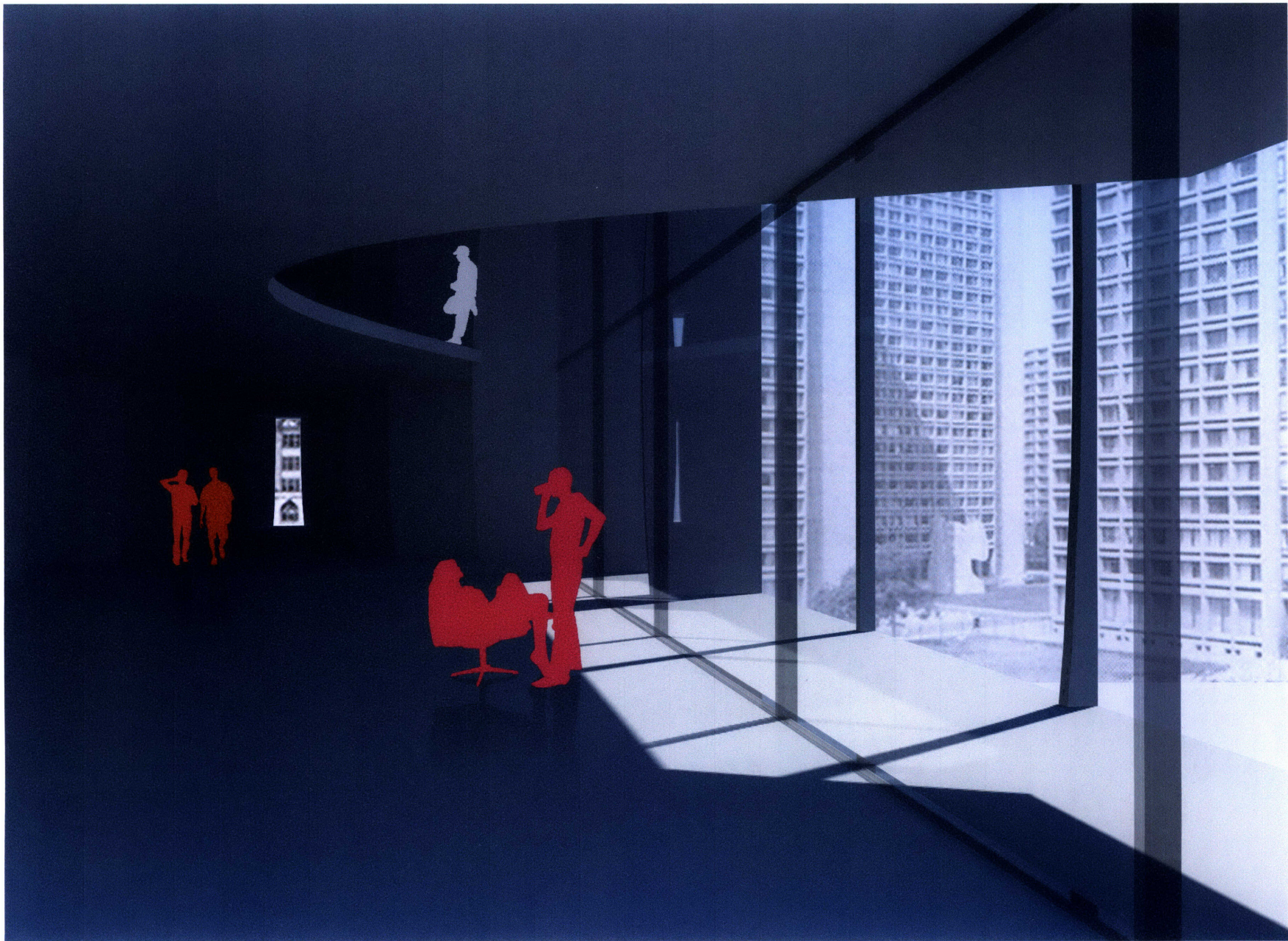




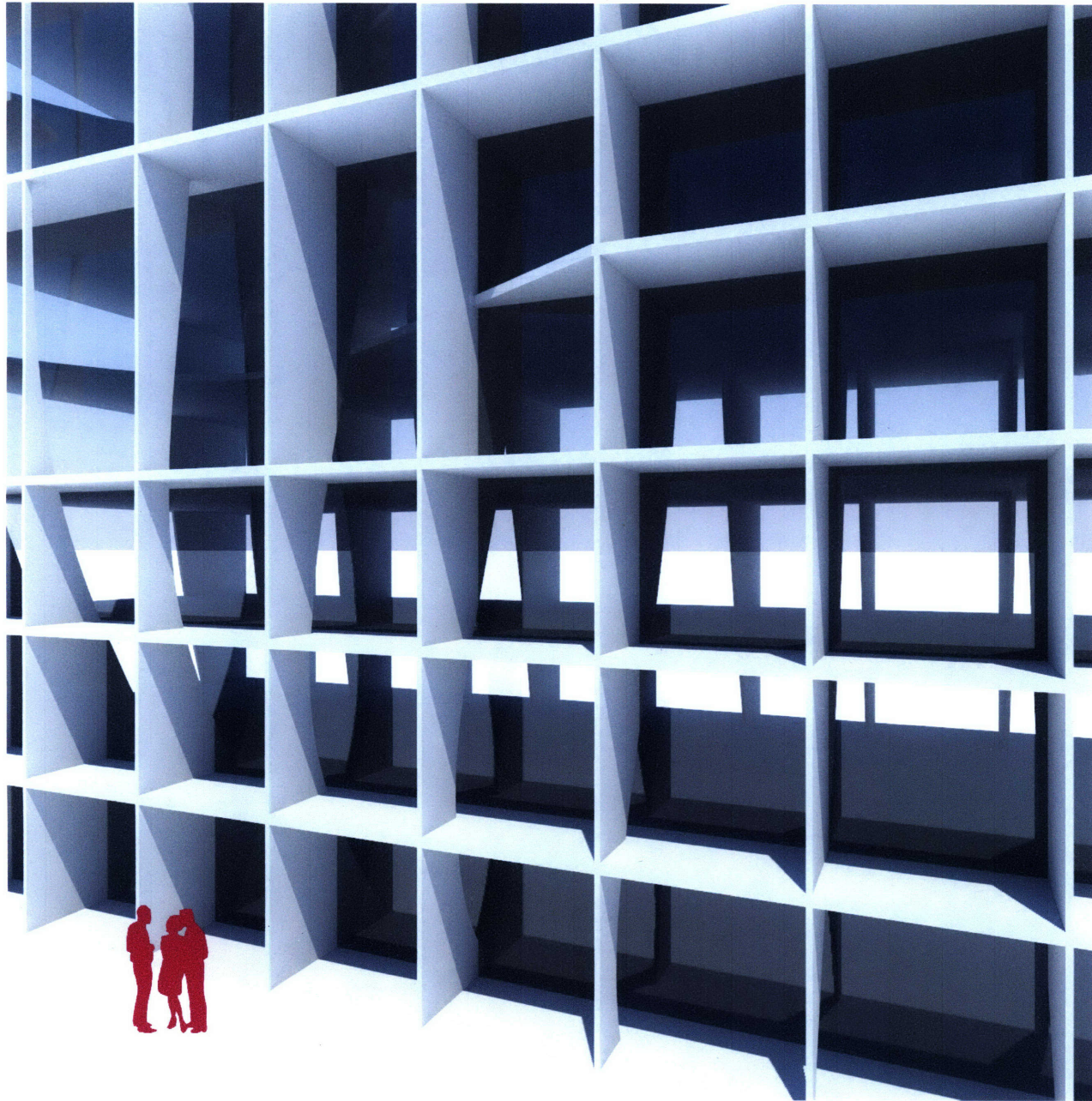












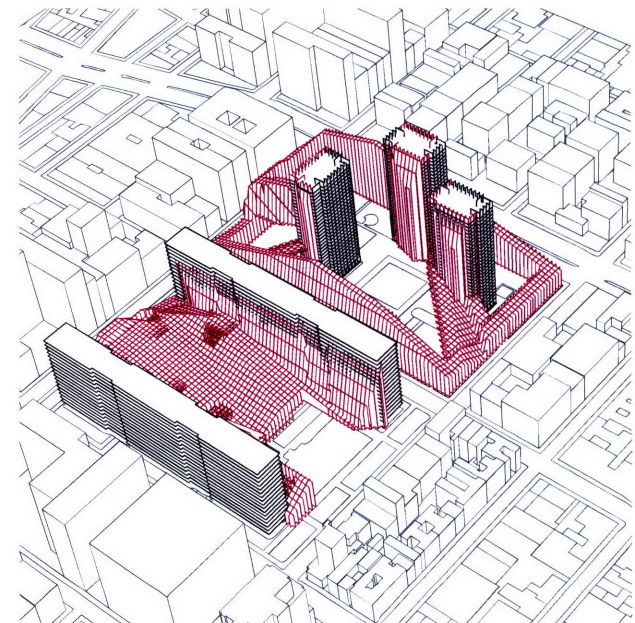


# URBAN ENVELOPES

## An Architecture of Adjacency and Difference

**The Appropriation and Modification of  
New York University for Growth and Expansion**

**Peter DePasquale M.Arch. Thesis**



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