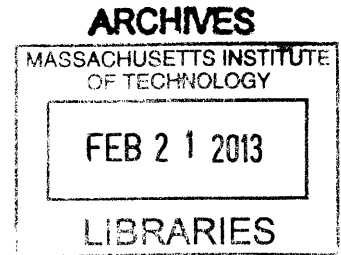


# PRECARIOUS LUXURY

by

Alan S. Lu

B.A., Architecture 2009  
University of California, Berkeley



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

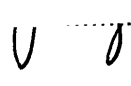
FEBRUARY 2013

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Signature of Author: .....  .....

Department of Architecture  
January 17, 2013

Certified by: .....  .....

J. Meejin Yoon  
Associate Professor of Architecture  
Thesis Supervisor

Accepted by: .....

Takehiko Nagakura  
Associate Professor of Design and Computation  
Chair of the Dept. Committee on Graduate Students



## **THESIS COMMITTEE**

### **ADVISOR**

Meejin Yoon  
Associate Professor of Architecture, MIT

### **READERS**

Mark Foster Gage  
Associate Professor of Architecture, Yale

Nader Tehrani  
Professor of Architecture, MIT  
Department Head

Michael Lee  
Principal  
Lee & Associates



# **PRECARIOUS LUXURY**

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Alan S Lu

Submitted to the Department of Architecture on January 18, 2013 in Partial  
Fulfillment of the Requirements for the degree of

MASTER OF ARCHITECTURE

THESIS SUPERVISOR

J. Meejin Yoon

ASSOCIATE PROFESSOR OF ARCHITECTURE

## **ABSTRACT**

Due to the market collapse prompting more secure investments and increasing government regulation and incentives to integrate low income units into luxury residential developments, this thesis seeks to integrate two allergic constituencies within a single typology type: housing. Among these two parties, varying requirements are necessary, yet within present culture, there is evidence of a movement towards mashups or collaborations between high and low, high culture and street culture, which is also to be reflected within the program. Thus, the program itself is rethought of clusters that are used by both constituents, in different capacities as opposed to the current model of housing unit with amenity. Building upon the topologies and spatial conditions seen in minimal surfaces, the project uses the surface as an instrument for separation, combination, and conditions in between in an effort to manage and filter space, environment, culture, and social conditions. The resultant is a housing typology that provides the particular residents with what they typically need and expect from housing, yet seeks to unite and elevate the current level of habitation for both parties.



## ACKNOWLEDGEMENTS

### Thank you

To Meejin, for putting up with me through the years and helping me develop professionally and personally.

To Nader, for also putting up with me and convincing me to fight for something, whatever it may be.

To Mark and Michael, for supporting my thesis and giving me insight to issues beyond architecture.

To Judy, for always being there for me.

To my classmates, for all the good times.

To my family, for everything.





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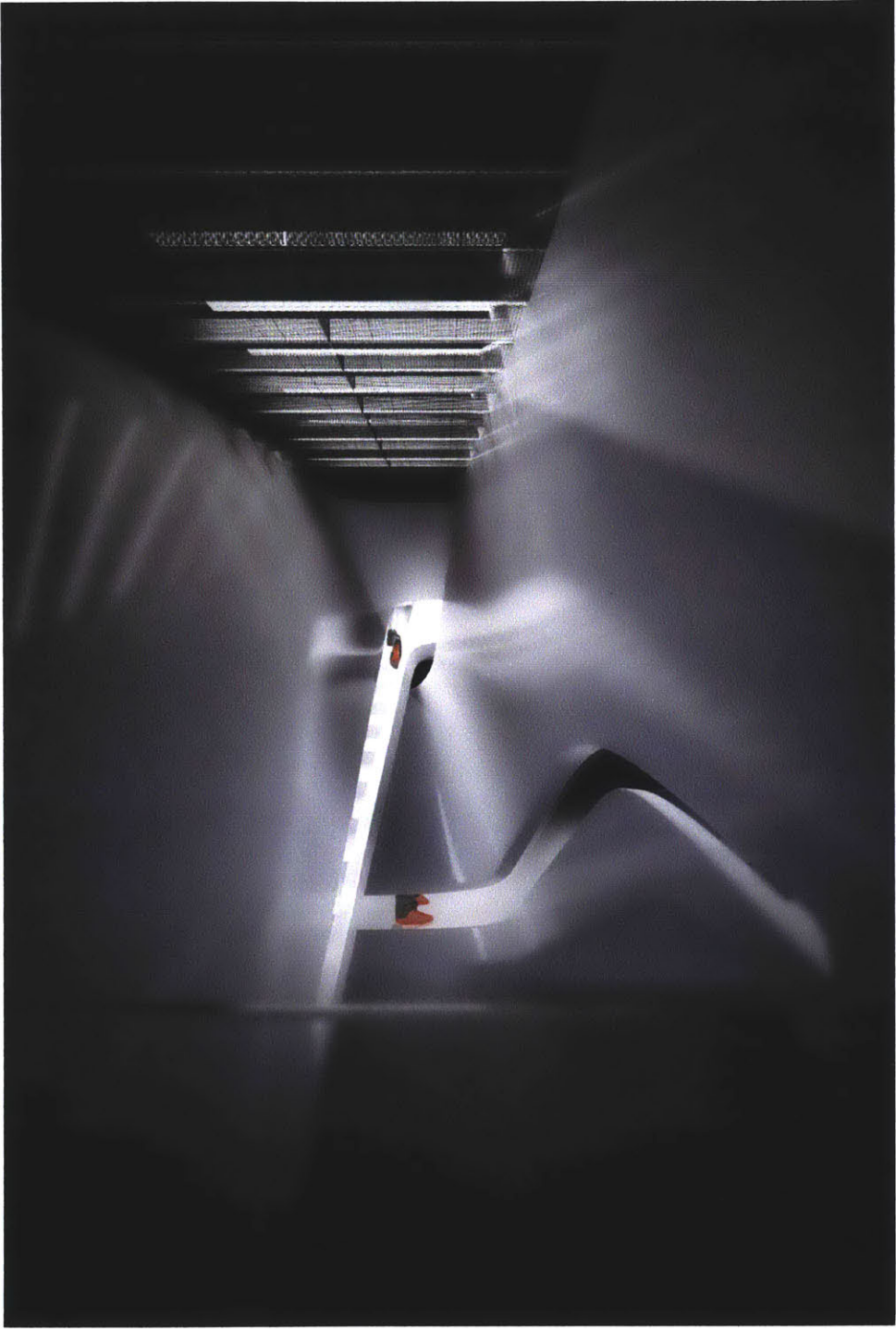
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# PRECARIOUS LUXURY



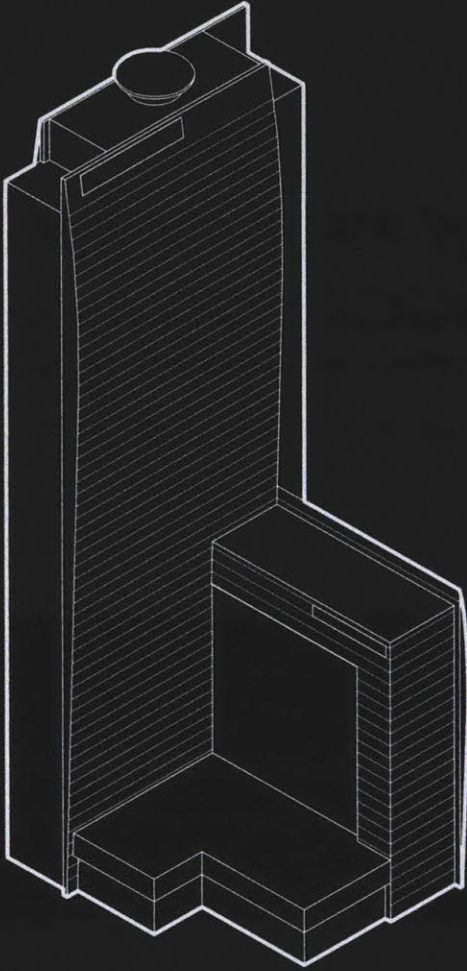


Interior View



# I PREMISE

---



## RITZ CARLTON LOS ANGELES

---

COMPLETED 2010  
2012 - 50% SOLD  
224 UNITS TOTAL, 1.3-9.3 MILLION RANGE  
AVG PRICE 4.5 MILLION  
506 MILLION UNCAPITALIZED YR TO YR

\*NOT INCLUDING HOLDING COSTS  
\*\*VACANCY - NON DEDUCTABLE EXPENSE

*Source: Ritz Carlton, Curbed L.A*

**~50% VACANCY VS. 2% VACANCY**  

---

**FOR PURCHASE CONDO VS SRO**

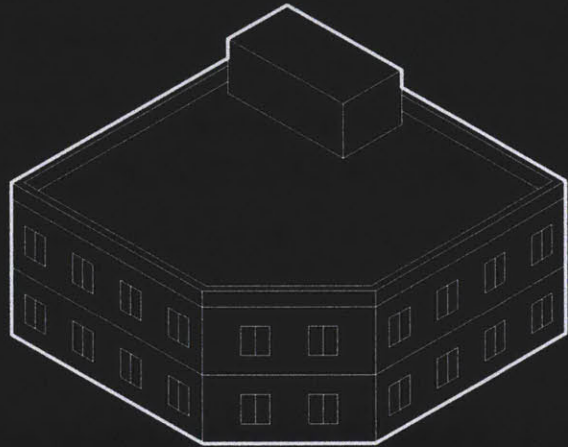
*The current market is a renters market where an increase in the difficulty in securing loans and slow job growth has diminished the demand for purchasing real estate in the downtown L.A area*

## YANKEE APARTMENTS

---

COMPLETED 2005  
2012 - 4% VACANCY  
80 UNITS TOTAL, \$600-1200 MILLION RANGE  
SCHEDULED GROSS RENT INCOME  
\$69120/MONTH

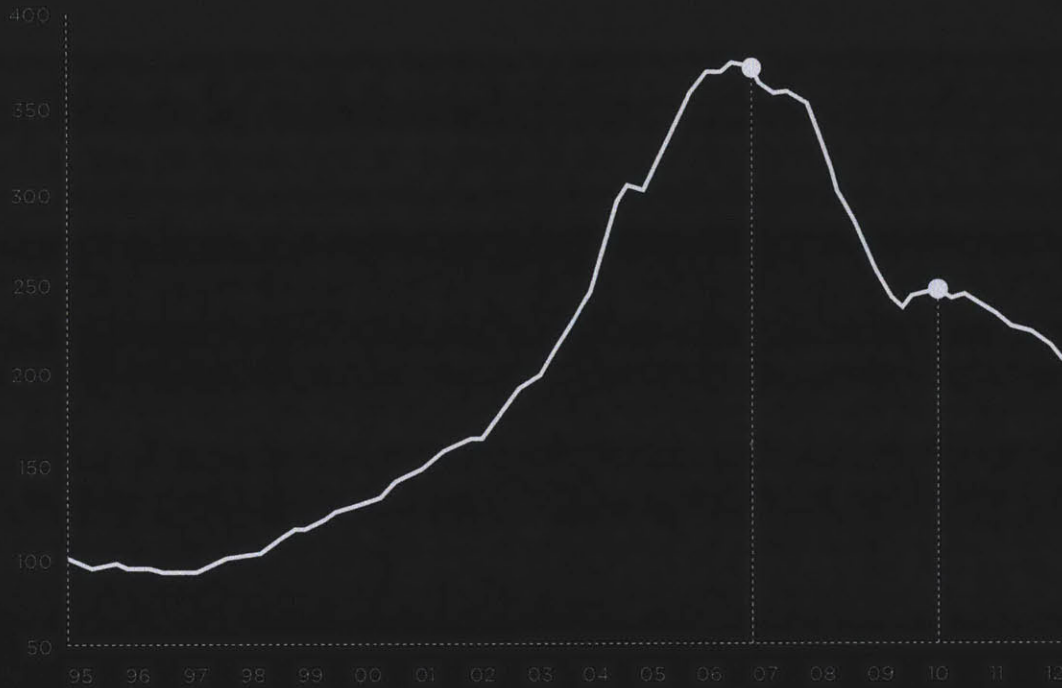
*Source: SRO Housing.org*



## DEVELOPING THRESHOLDS

The issue at stake in this thesis arises from two conditions. First, the economic collapse brought on by the housing market in 2008 saw the failures of several luxury condo developments and the creation of an extremely tight money market. While luxury apartments were sitting unsold, several developers were forced to declare bankruptcy when costs to hold the property became

too overbearing and banks called back their loans. On the other hand, affordable housing such as SROs operated at a profit for the most part even through the recession. The robustness of affordable housing as an investment vehicle is thus important. Secondly, increasing government subsidies and grants are motivating the inclusion of affordable housing in developments.



## CONDO PRICE INDICES

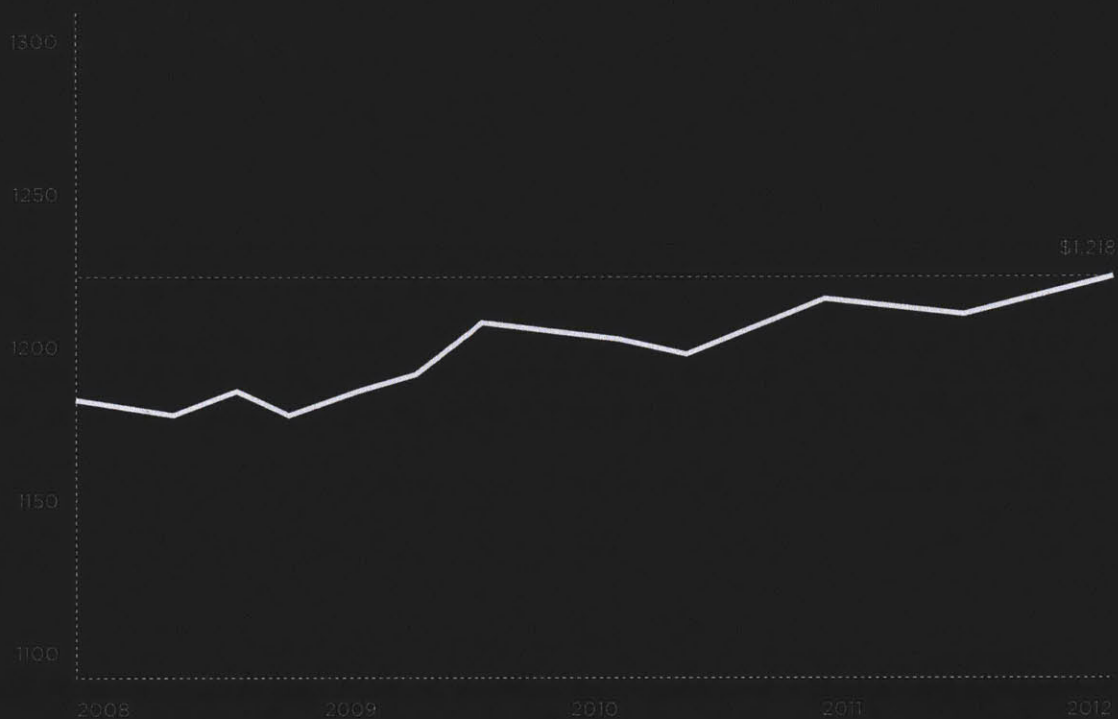
LOS ANGELES, CA

*Source: S&P Indices, Fiserv  
1995 - 2012*

A closer look at the economics of housing show the sharp decline in prices seen from 2007 to 2012. During this five year period, construction diminished, and several projects underway were either foreclosed or stalled. This prompts the question of whether this typology of housing itself is adequate and robust enough to handle economic flows. If real estate cycles are typically seen in ten year cycles, is architecture powerless to such capital devices and at the

mercy of the market? In striving for a more robust typology, the thesis looks to incorporate another typology that is more resilient to change - one that remains profitable even through undesirable market fluctuations. Such a typology of interest would be affordable housing, namely SROs or Single Resident Occupancy Units. As seen in the Rent Index chart, this typology of housing fared relatively well during the time luxury condos were seeing drastic declines.





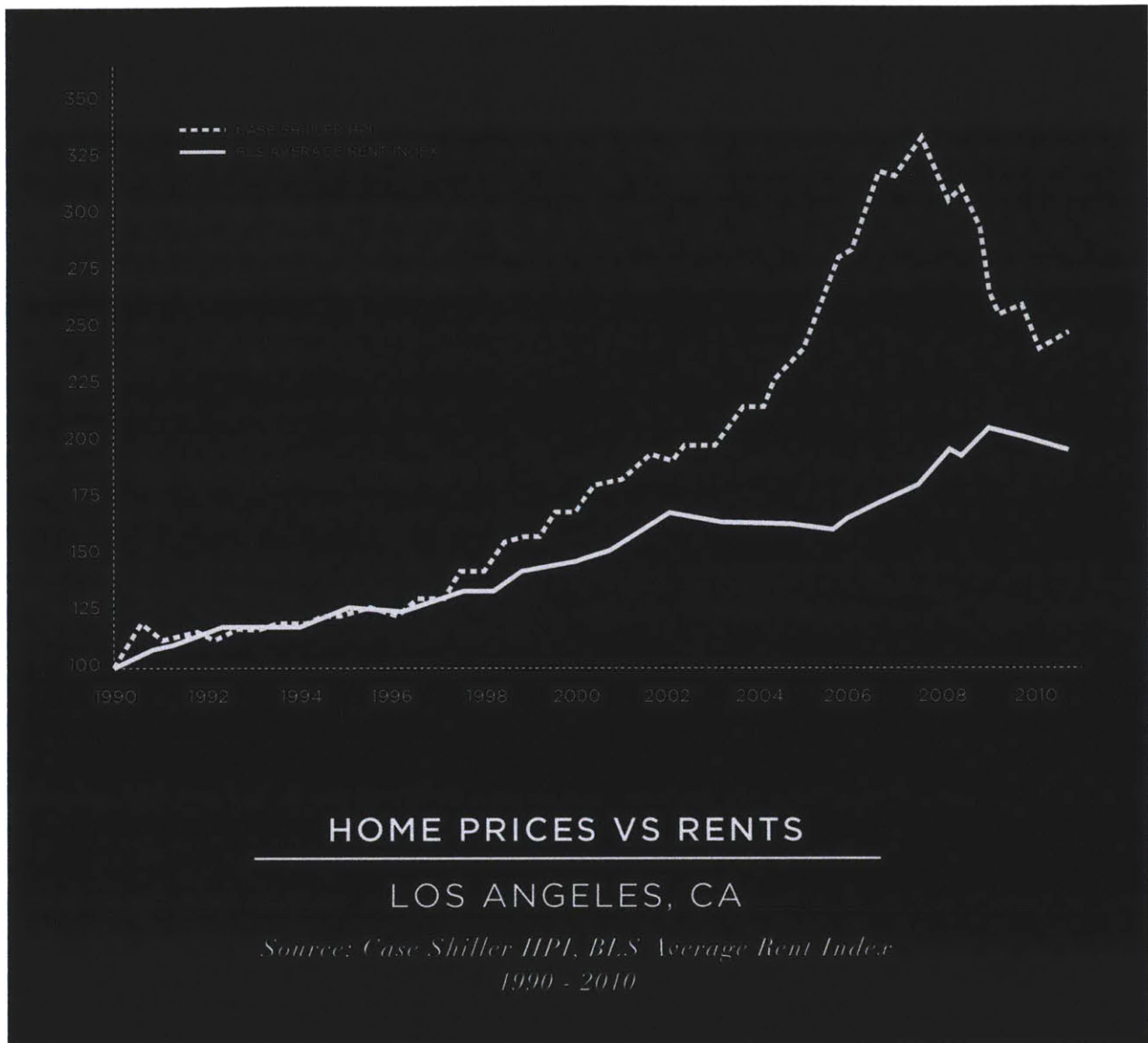
## RENT INDEX

### LOS ANGELES, CA

*Source: Zillow Rent Index  
2008 - 2012*

Thus, the thesis proposes that these two typologies be combined within a single building as an exploration and argument for the coexistence of two allergic constituencies. This phenomenon is not entirely novel as many developments are already regulated by local codes, yet this project seeks to push the boundaries of this system to the extremes in incorporating ultra high end condo units with selling prices of one million or higher and single resident

occupancy units that are leased at below market rate. This combination will undoubtedly bring about several issues both spatially, culturally, and socially.

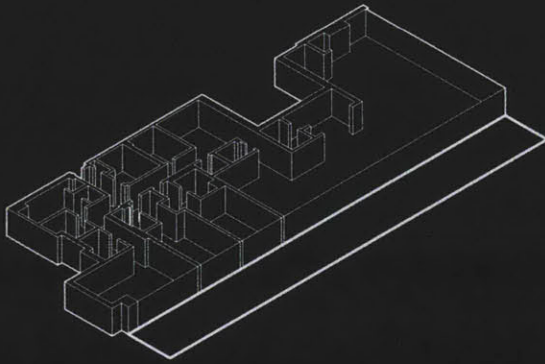


The goal is to produce a coherent building that through an economic argument of robustness or the ability to architecturally hedge risk through program goes beyond what is currently offered on the market. In the graph above, pairing these two typologies together may offer a more resilient solution to the problems of expensive luxury developments. Albeit, more problems will arise in terms of the internal organization of the building, which this thesis seeks

to address and solve.

## GOVERNMENT REGULATION

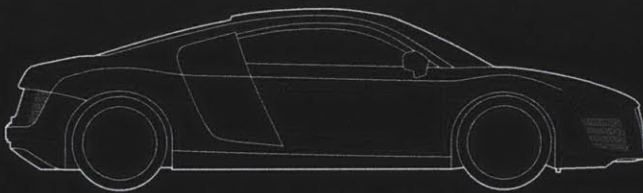
The second issue or premise concerning this proposal is the increase of government regulation and incentives for incorporating affordable housing program into residential developments. If this phenomenon continues, it is imperative that developers and architects be able to incorporate such requirements in a novel way. The typical model is to isolate such units into the bottom or unseen part of the building. If this typology is inherently required and necessary, this project argues that it can be done in a more deliberate and calibrated way. Within our culture today the boundaries between high and low are increasingly blurred, and there may be opportunities to exploit upon these rifts in classical boundaries. As much as a social argument, the economic benefits may also be well worth it. Large tax breaks and funding incentives prompt a bigger look into how such systems could be desirable both for public policy and private investment.



### LUXURY UNIT

---

4000 SQ FT MAXIMUM / 4 BR, 4.5 BATH



### LIFESTYLE

---

AMENITIES + SERVICE



### LUXURY TENANT

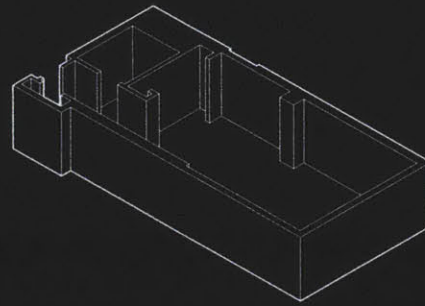
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ANNUAL SALARY - \$10,000,000+

## CULTURE

The residents themselves invoke a challenge in their combination into a single building type. On one end of the spectrum, the resident in the luxury condo expects relatively large spatial conditions, even in a condo within downtown. Amenities and service are non negotiable, and disposable income is such that one can pay for such services. To these residents, location, prestige, and security are key factors, and a successful development must be able to incorporate these elements successfully. On the other end of the spectrum, the SRO resident has a whole other set of priorities and requirements. The spatial requirements of the SRO unit are much

smaller at approximately 300 sq ft, and lifestyle choices are also in sharp contrast to the luxury residents. Emphasis is placed on cost effectiveness and having essential standards and living needs. Salaries are also quite disproportionate, with the qualifications for affordable housing requiring a salary level around minimum wage and below. Yet with these two vastly different parties, there exists a zone of overlap. This space of confluence is what begins to shape the project, directing it to become more than a building with two parts.



### SRO UNIT

---

300 SQ. FT.



### LIFESTYLE

---

COST EFFECTIVE, ESSENTIALS



### SRO TENANT

---

ANNUAL SALARY < \$32,000



Moments of Collaboration

Within present culture, there is a trend towards the mashup or collaboration between high and low. This can be seen across at least six categories as seen in the diagram on the left. Within these spaces, the thresholds of high end and low end begin to dissolve, with brands and activities seeking partnership and collaboration efforts to appeal to the market. Beyond collaborations are activities such as sporting and party culture where the conventional lines between rich and poor are at moments less ingrained and absolute. For example, Target doing a collaboration with Neiman Marcus during the Christmas holiday, featuring cross branded products at both stores. Also, artists such as Kehinde Wiley and Barry Mcgee who originated as street artists now having exhibitions and artwork at Moma and other highly regarded institutions of fine art. Within these parameters, how can architecture begin to harness and draw upon this

cultural phenomenon? The project proposes that such spaces for these activities must become integral to the building and form itself, and as such embraces the idea of mixing as a trend that will continue to increase. The goal is to create an architecture that has a spectrum of spaces ranging from private to public and those in between, providing containers for varied activities and interactions. These six categories will drive the development of the program, and will be instrumental in determining what activities are enabled by the building. The old model of static segregation is no longer a viable one, and this project situates itself in a changing social atmosphere. Undoubtedly there will always be rich and poor, but a third space has just begun to emerge.

## SITE

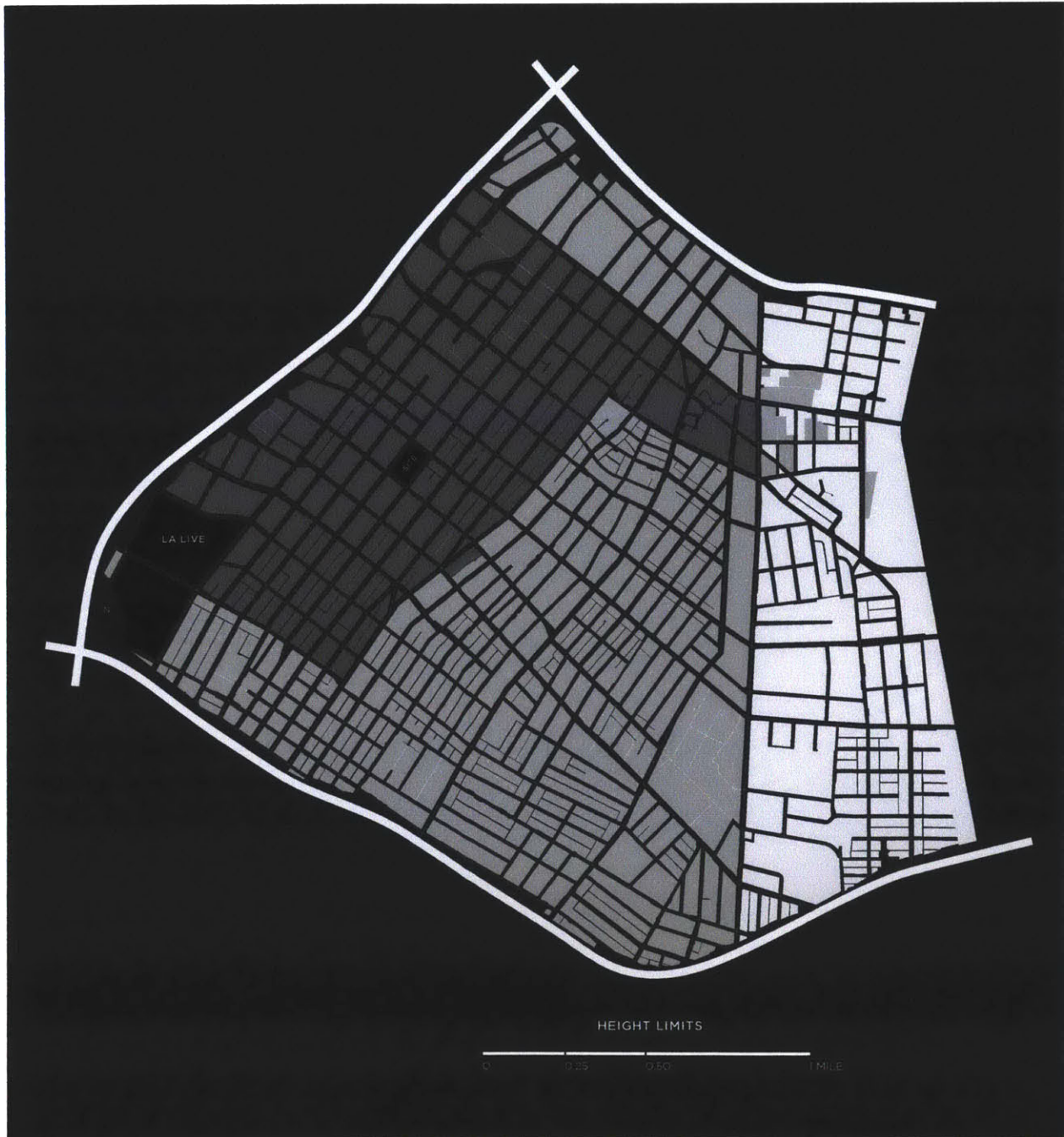
The thesis lands in Downtown Los Angeles as a site through which the questions of social mobility may begin to manifest and deploy. In a traditional metropolitan area, the intensity and activity at least experientially usually are felt at the city center (right figure). However in Los Angeles, the opposite is actually true, with peripheral areas such as Hollywood and the San Gabriel Valley being perceived as the areas with more activity and entertainment options. Since the Staples Center Sporting complex and L.A. Live was completed, the situation has improved, but not by much. Downtown remains a relative wasteland compared to the rest of LA after 5pm. Thus, there lies an opportunity for this area to be looked at in terms of a project that aims to

unite and revitalize an area prone to overlooking. Momentum is currently building for downtown to break out as a respectable and intense neighborhood, and this thesis seeks to create that environment.



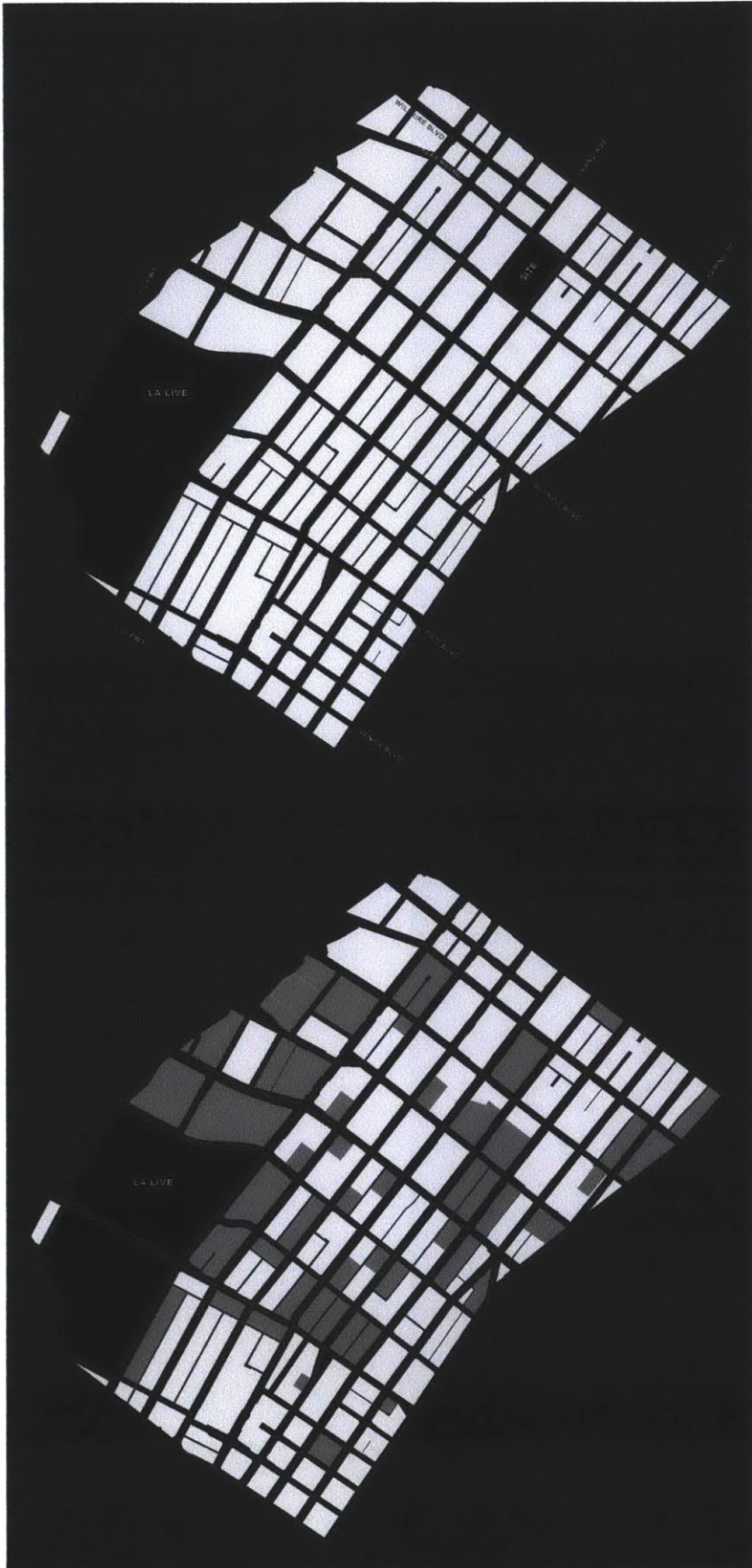


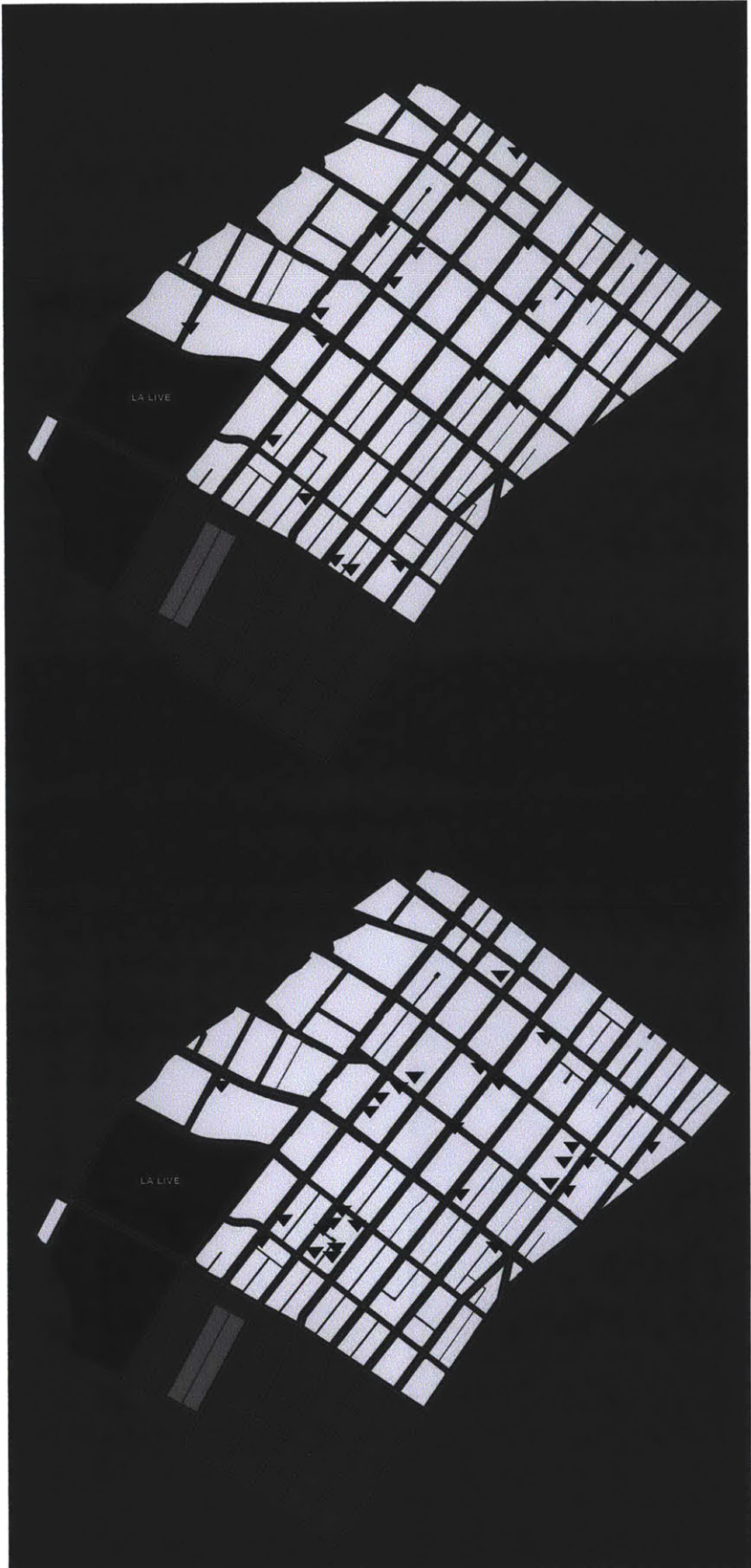
Left: LA County Right: Downtown LA



Clockwise from Right: Site, Surface Parking, Socioeconomic Density







Top: Rental  
Bottom: Purchase

## %!# Parking

Parking in downtown LA is a gift and a curse. Gift in the sense that it is relatively cheap enough to land a spot in a (somewhat) secure lot for a few hours on weekend nights or offer a place for dirty dog and taco stands to congregate, but a curse in the sense that it has single handily limited development in the downtown area for the past few decades. At current, downtown contains "more parking spaces per acre than any other city in the world...adding them at a rate of 1,000 a year for a century". Frank Gehry's Disney Concert Hall, built atop an old parking lot runs 128 annual shows by contract to offset the construction costs of new subterranean parking the city required to have built. It will take decades to pay off.

However, parking, both public and private, serve as lucrative financial opportunities. In 2011, parking related fines within Los Angeles came to \$166,700,840. For private investors and parking lot owners, it gets even better. In total, private parking in LA takes in approximately \$850 million every single year, with certain lots in downtown producing over \$12 million with very few overhead expenses. While previously owned by "lotmen" in the mid to late 20th century, private companies have bought and consolidated most of the lots, landbanking them until better

financial opportunities come along. Problem is, these properties produce so much money, projects that might be risky or less financially proven rarely are even considered. Why bother if you already have a cash cow that requires no feed?

Not until recently has a revitalized interest in downtown LA as a viable center of investment and building has property been (slowly) turned into commercial or residential uses. This thesis seeks to situate itself in one of the largest surface lots (8th St. & Grand Ave.) as the site for a capitalistic intervention. Sensitivity to the parking situation necessitates a consideration of how the lot will be maintained or dismantled, with the hope being that what replaces it is more productive in a public context, and just as financially viable.

Additionally, the market of renting and buying at current is at a level that seems to be able to absorb the demand for a new residential type development featuring both for purchase and affordable rental. The figure to the left shows the number of rental properties and sales properties available at current. Demand is currently on the rise, and this project will speak directly to that demand.

## DISCOURSE

Taking upon the role of the social as an architect involves taking on a complexity of issues that goes beyond just the building itself. But before jumping to those issues, it is pertinent to discuss why architecture should engage the social in the first place. The modernist approach clearly withered when leaping up to address the social in a utopian fashion. Post modernity shielded itself from it through a cool distancing still shivering from the fear of failed modernism, and relegating it to the realm of social scientists. Yet, the global condition has in a way revived the needs for an architect to address the social, if not a matter of repositioning, but a matter of relevance. In the new age of trimming the fat, architecture if it cannot contribute in some way to the uplifting of society finds itself on the chopping block as the creations of icons and symbols seems to be waning except for the select few. Engineers can optimize, developers can capitalize, and artists can make art, what does it leave to us? What becomes critical, then, in this reinterest in the social is a wariness and almost quiet and cautious confidence. As Sanford Kwinter asserts, "The most exciting task for architects today is to invest new ways of organizing talent and knowledge and imagination". (Kwinter) This describes a mode

of practicing, but can be extended to describe the way architects could and should potentially micromanage the very inhabitants of their buildings in a dynamic way. Kwinter goes on to state that an innovative architect is one "who sees buildings as one link in the chain of the a social-design problem". The architecture in this case, becomes a facility through which social issues and goals are to be constructed and tested. This undoubtedly becomes a both social and political process, and necessitates the disintegration of the distancing mechanism seen in the autonomous project.

If architecture is to regain a further level of unfettered agency, it cannot duck its head beneath the sand, but rather must engage itself in the messiness that is the social, political, and financial. However, the uneasiness still remains. As Jonathan Crisman questions, "What if, rather than lingering on agency, we broke the rules and approached the social head on?...as we deal with the possibility of a socially conscious project, we do so with an understanding that society's gain is our gain." (Crisman)

That gain is both a social, political, and financial one. But only by engaging in this messiness, is there something to gain at all. As the saying goes, you can't win if you're not even in the game. Taking this all

on, how does this translate into the mode by which we operate? Is it the coyote or the monkey that R.E. Somol describes?

Perhaps it is a little bit of both. Confidence plus the ability to hedge. We know the coyote never catches the roadrunner, and thus, there must be a negotiation of something in between. These dichotomies are rarely helpful beyond a ideological stance, and when applied to how one operates becomes limiting in its restrictions on reach. It does not seem too far fetched that something optimal may lie somewhere that negotiates the big idea with incorporation of risk management. It might be wishy-washy and flip floppy, but I'd rather eat the damn bird.

What is it architects organize? They are not only organizing space, but are organizing people through that space. The very act of social engineering necessitates the impacting of the subject in a provocative way, whether explicit or inexplicit. The decision to segregate or combine are just one set of issues in the possible configurations of the public and private sphere. While it is certainly impossible to guarantee a set of behaviors, except perhaps by force, it is the hope that through space and tectonics, one can guide and provide impetuses, knowing

that one hundred percent success is unattainable, maybe even fifty percent success is unattainable, but maybe ten percent is enough, and contingencies can be designed for the rest.

In beginning to tie all of these issues together, the thesis seeks to address: the need for more robust buildings, the architect as a social engaging construct, and the importance of the subject and behavior in architecture, it becomes clear that the project cannot rely on a singular typology, but rather one of extreme mixed use under one "roof". The condenser that Rem Koolhaas defines as "a programmatic layering upon vacant terrain to encourage dynamic coexistence of activities and to generate through their interference, unprecedented events," (Koolhaas) is necessitated to produce a trajectory of effects and occurrences that would otherwise be inadequate with just housing. If the social we seek to affect exists in a capitalistic system, then that system should be one that such a project truly engages in to preserve some notion of reality with a hint of cautious utopianism. Thus, the capitalistic condenser arises as a term that describes in what the project seeks to accomplish. Tension will surely arise, but the intent will be to unpack it through the capacity of architecture.

## PRECEDENTS

Through an analysis of precedents both proposed and built, a better idea of how multiple people can be situated in a large complex with a varying amount of facilities and programs. These socialist condensers seek to transform the way in which people live through architectural configurations, albeit the end goals are a foil to what this thesis is invested in. Nevertheless, it provides an opportunity to investigate the production of social conditions within an architectural typology, and how programmatic relationships are calibrated and positioned within the whole.

These precedents find themselves situated in Russia and China, both sites of a proletarian movement, and with architects and builders looking to provide dwellings and lifestyles corresponding to the political agendas of the state. Many of these Chinese types were developed from ideas that spread from Russia, and exhibit several similarities.

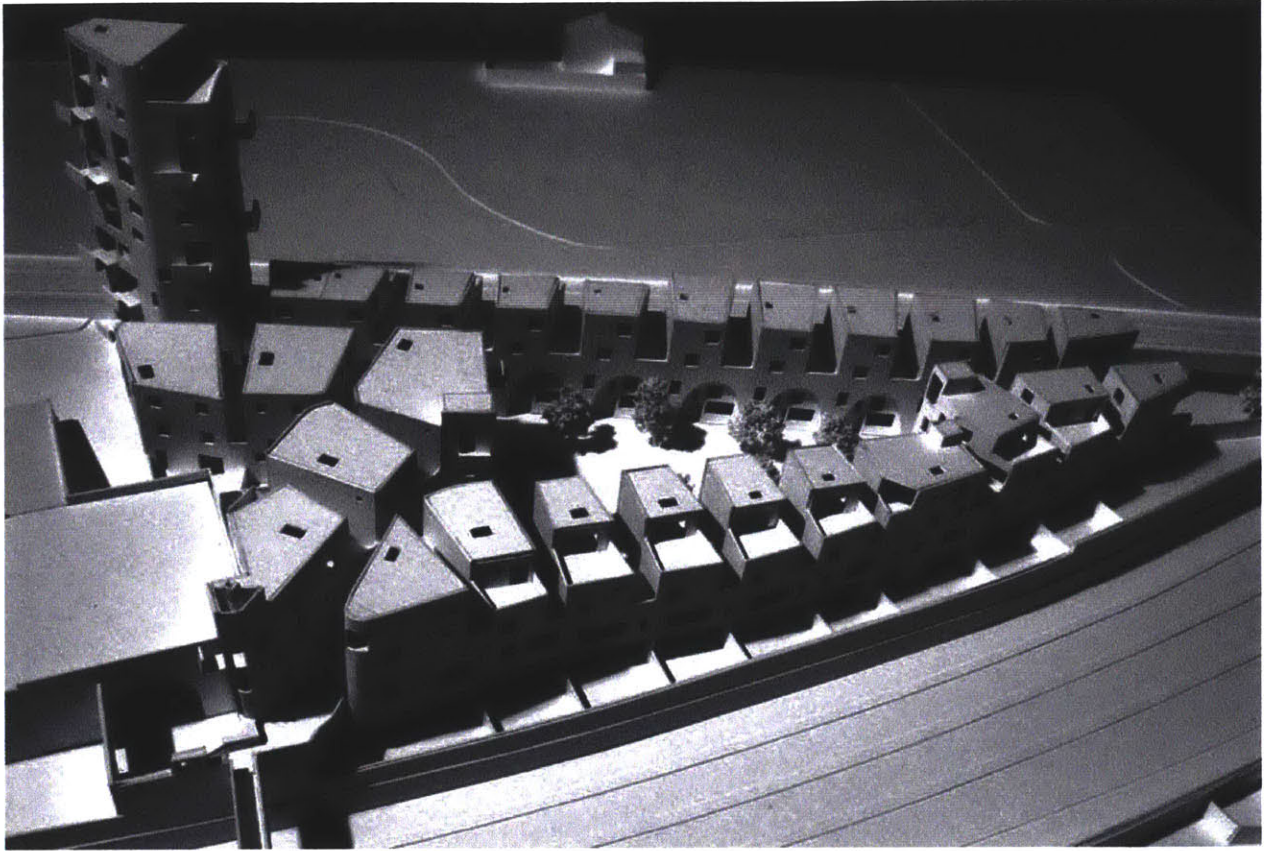
In addition, seminal projects such as Moshe Safdie's Habitat 67 and Fleet

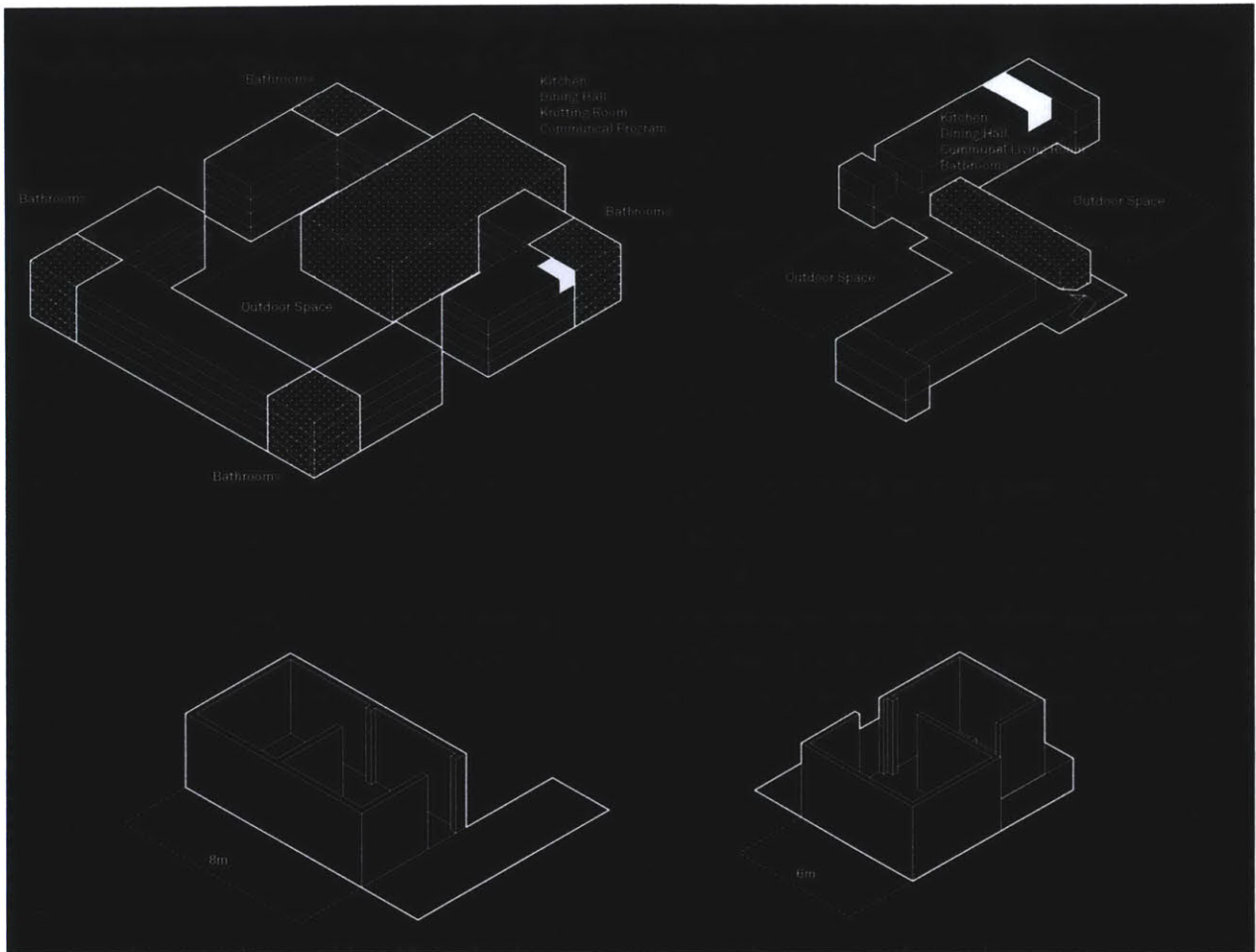
Street Hill provide reference points through which to learn from in terms of housing typologies.

Top: Fleet Street Hill

Bottom: Habitat 67







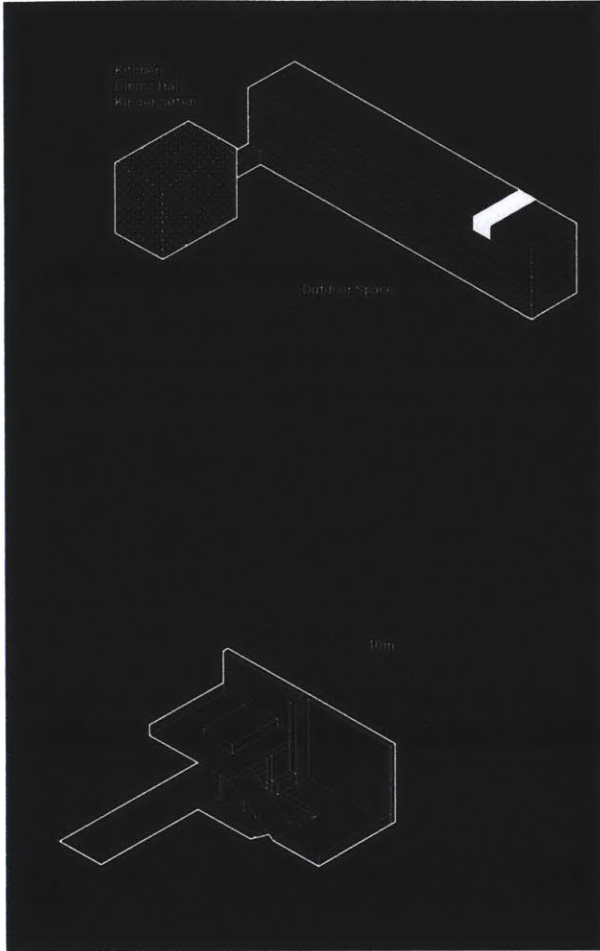
Hongshulin Big Socialist House (1958)  
Tianjin, China

This project emerged as a self initiated community, starting out with a dining hall and kindergarten. With government support, plans were produced for the construction of housing blocks to supplement additional programs that were to be added. Most facilities were consolidated into highly specified communal areas, such as dining halls , needle-working room, and even breast-feeding room. The housing units were proposed to have at most two bedrooms for families with a

small balcony. The residence to communal program ratio was roughly 40 percent to 60 percent (Yi).

Panyu People's Commune (1954)  
Guangdong, China

Low rise residential blocks made up of small dwelling units coupled with large cooperative facilities create a commune that was able to house 6232 residents. Open corridors gave access to the rooms that featured



Narkomfin Communal House (1930)  
Moscow, Russia

A prime example of Russian socialist housing, the Narkomfin building was originally dedicated to workers at the Commissariat of Finance, and was a testing ground for the OSA's dedication to proliferating a communal way of life.

The development of different units corresponded to different levels of collectivism, and the units took on a split-level section, creating an interior corridor when aggregated with other units. Communal programs included kitchen, lounge, gym, and child care. These "heath" programs were located on the periphery, away from the domestic space, thus separating those aspects of life encouraging the group versus the private (Yi).

only a bedroom and living room space, and restrooms and kitchens were centrally located on each floor for shared use. Configured in an interlocking L shape in plan, courtyard spaces were created in between the blocks (Yi).

From Left: Hongshulin  
Socialist House, Panyu  
People's Commune,  
Narkomfin



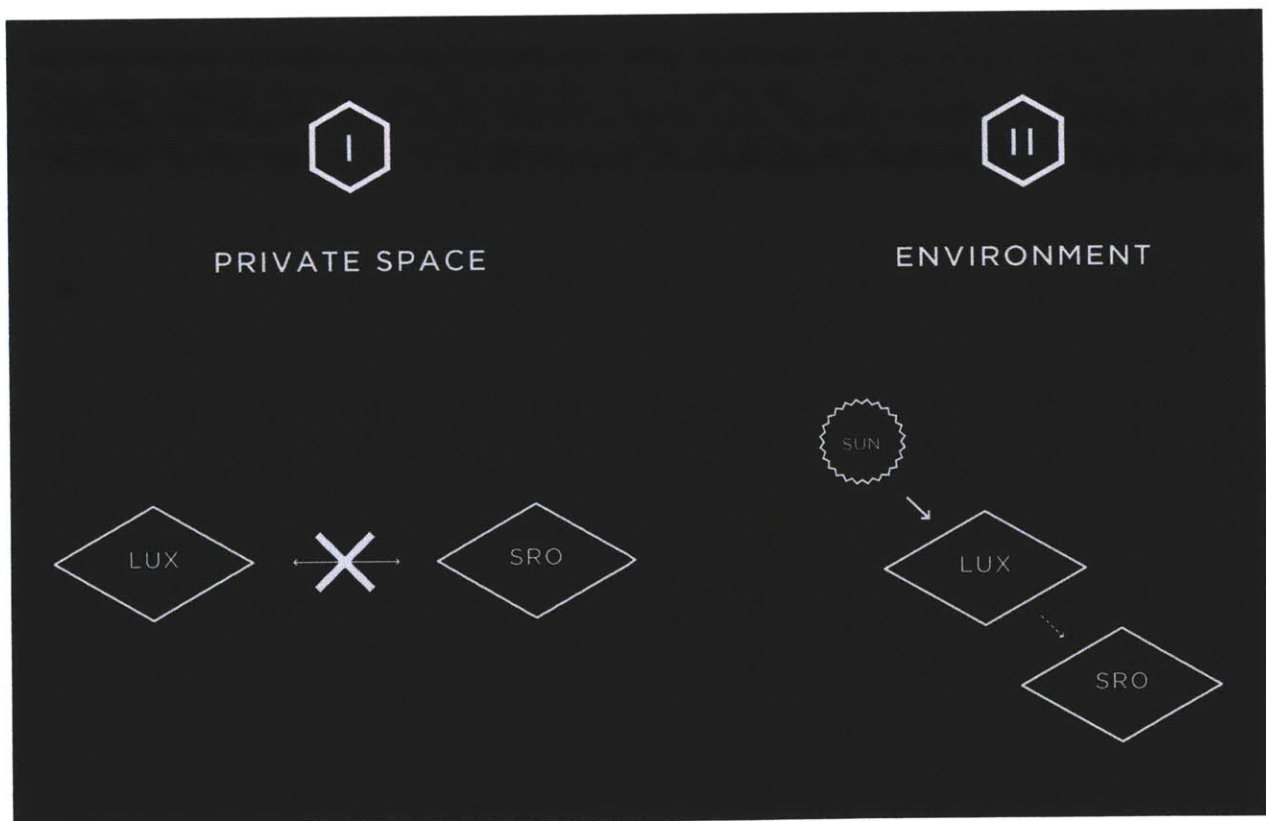
## II POSITION / CRITERIA

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## DEVELOPING THRESHOLDS

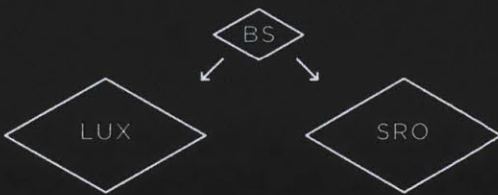
If two constituencies that are normally adverse to each other are to be united within one building, a range of thresholds must be developed to properly cope and instigate certain conditions. On one end, there is the complete separation of private space where the luxury units are inaccessible to the SRO units. This is meant to preserve privacy and security for both resident types. Next, a filtering of environment is established so that the luxury units get the main access to natural resources, with the SROs receiving a filtered effect, affected by the behavior and conditions in the luxury units. Building systems such as HVAC

and wet walls are to be shared among residents. Next, mashups spaces are to exist within the poche of the building, providing opportunities to combine and socially mix. This condition is integral to the project in that it is predicated on the trend of cultural and commercial mashups we see in society today. Views are afforded from luxury to SRO, playing on the voyeuristic nature of the building, and the inhabitants within. Finally, a unified aesthetic must unite the building, and make it cohesive enough to camouflage the distinctive differences of the residents within.

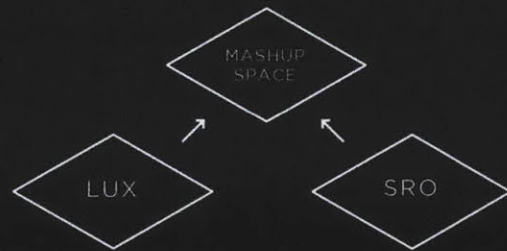




**BUILDING SYSTEMS**  
(POCHE)



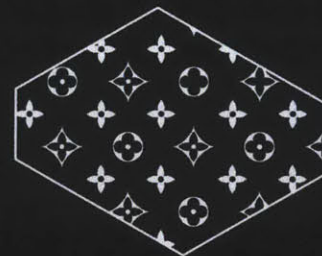
**MASHUP SPACE**  
(POCHE)

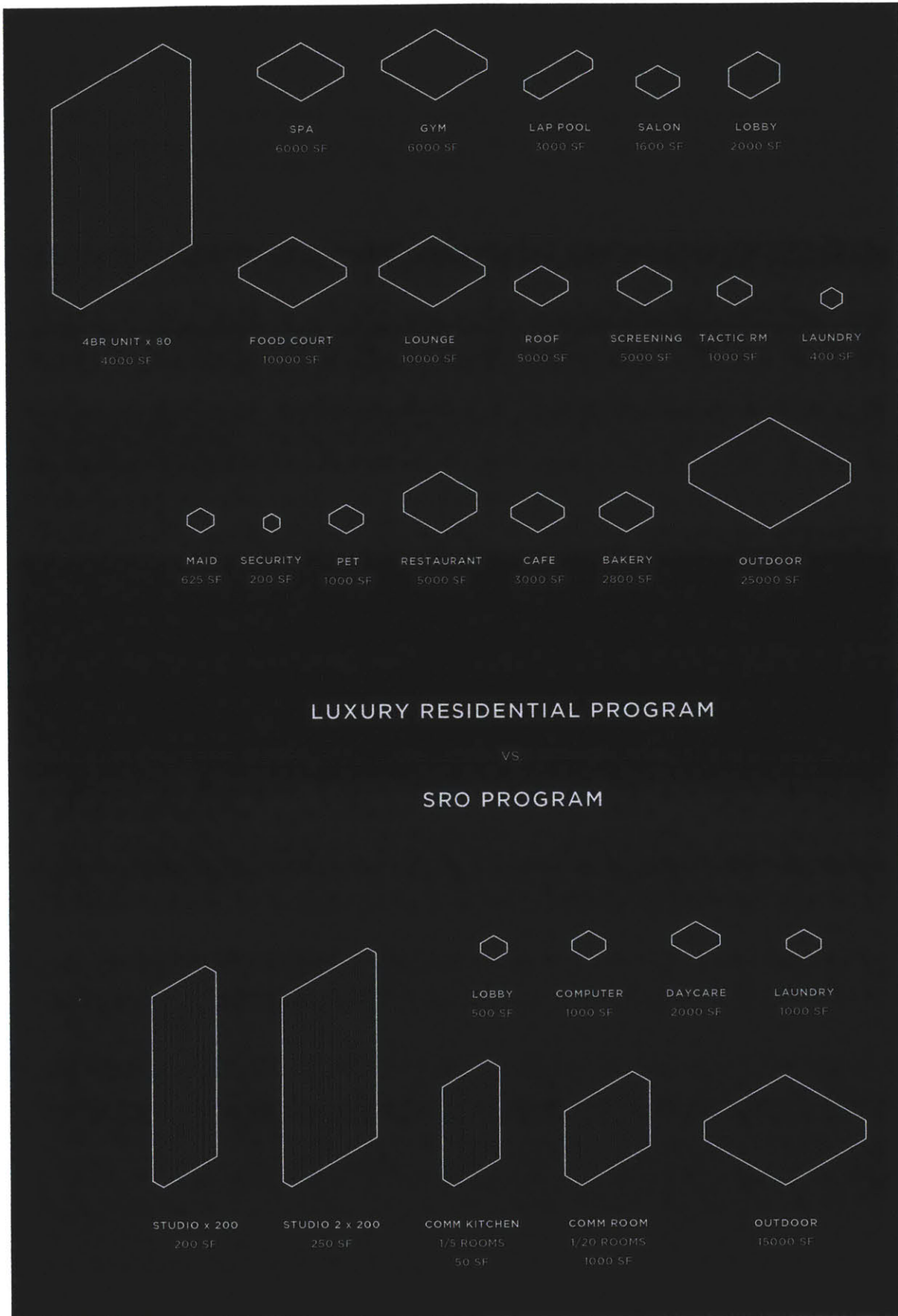


**VIEWS**



**UNIFIED AESTHETICS**







## **REPROGRAMMING HOUSING**

Typically, affordable housing and luxury housing are seen as two distinct entities, even if they exist within a singular building. On one side, there are large units with a multitude of amenities, and on the other, small units with a limited set of amenities. This leads to clear separations and isolations within the building, one that has only one distinct threshold of separation, perhaps connected by a means of circulation. However, to embrace the cultural trends mentioned earlier, a reprogramming of space is necessary to capitalize on the range of amenities available to residents. This requires drawing from the previously outlined areas of intermingling that happens already within our culture.

## LIVE



4BR UNIT x 80  
4000 SF

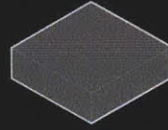


5RO 2 x 640  
200 SF



SKY LOBBY  
2800 SF

## PARTY



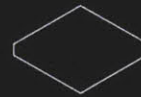
NIGHTCLUB  
15000 SF



VIP  
5000 SF

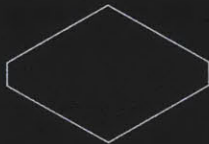


ROOF  
5000 SF

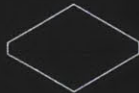


PRIVATE LOUNGE  
10000 SF

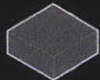
## SHOP



MID TIER  
25000 SF

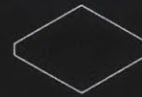


HIGH END  
10000 SF



COLLAB / POPUP  
5000 SF

## EAT



FOOD COURT  
10000 SF



RESTAURANT  
5000 SF



POP-UP SPACE  
3000 SF



BAKERY  
2800 SF

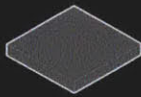


CAFE  
2000 SF

## BEAUTIFY



SPA  
8000 SF



GYM  
6000 SF

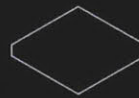


LAP POOL  
3000 SF



SALON  
1600 SF

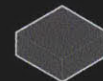
## ART



GALLERY  
10000 SF



STUDIOS  
10000 SF



EXHIBITION SPACE  
5000 SF

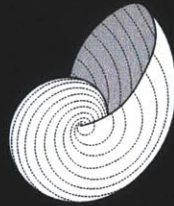
Thus, a reprogrammed housing situation would order amenities into clusters of activity represented by areas that have both separate requirements and spaces, but also the potential to intermix. For example, within the party cluster, there would be a difference between table service and the bar, yet the dance floor would be a place of convergence and activity where the boundaries between residents is less important. The other clusters would be defined as live, shop, eat, beautify, and art. Within these clusters, at least three spaces are potentially created - one for Luxury, one for SRO, and one for when they interact. Not all have clear divisions, and when developed further, boundaries begin to get fuzzy, and a more organic and fluid experience can potentially evolve.

## **GEOMETRY - MINIMAL SURFACES**

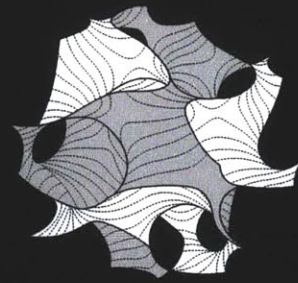
Using the simple wall as a starting place for separation, the limits of a orthogonal plane in creating distinctive moments and spaces becomes limited, prompting an exploration into minimal surfaces. Through an exploration of varying geometric sets, spatial conditions are studied and the ability for surfaces to morph between normative walls and floors is categorized (Susquehanna University).



HELICOID



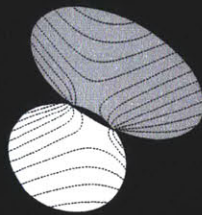
SHELL SURFACE



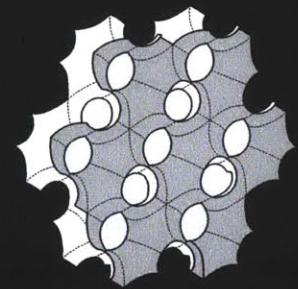
GYROID SURFACE



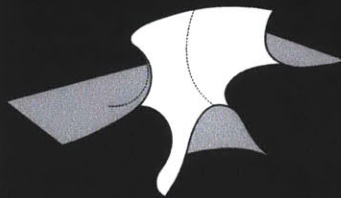
HYPERHELICOIDAL



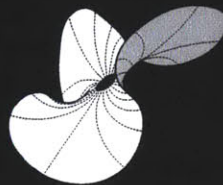
HYPERBOLOID SURFACE



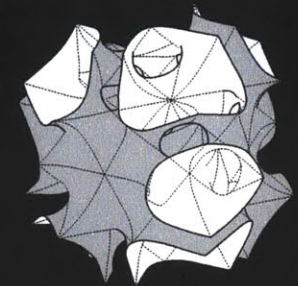
SCHOEN GW SURFACE



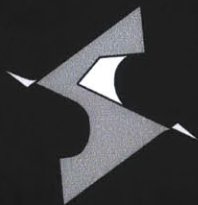
COSTA MINIMAL SURFACE



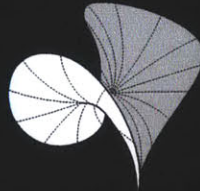
INVERTED BOY SURFACE



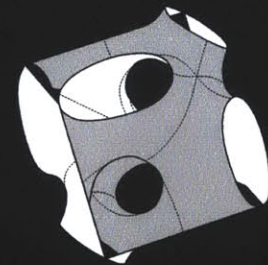
SCHOEN COMPLEMENTARY D SURFACE



FISCHER KOCH S SURFACE

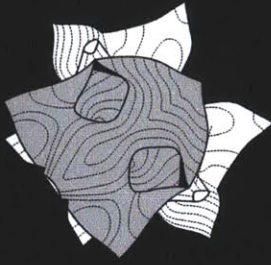


ENNEPER SURFACE

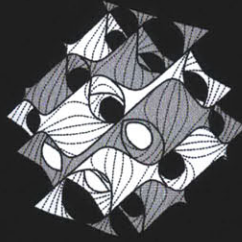


STARFISH SURFACE 2-1 GENIUS 31

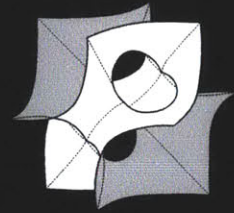
Upon understanding some of the basic minimal surfaces, delving into more complex surfaces yields inversions of space that can potentially house and foster complex relationships and juxtapositions. Moreover, these geometries are able to be mirrored and aggregated into larger complexes, potentially becoming a hierarchy of space from macro to micro. A sense of disorientation is also apparent within the surfaces, created the ability to disguise and hide within the topology.



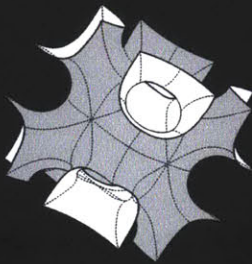
$\sin(4 \cdot x) + \sin(4 \cdot y) + \sin(4 \cdot z) + 4 \cdot x \cdot y \cdot z$



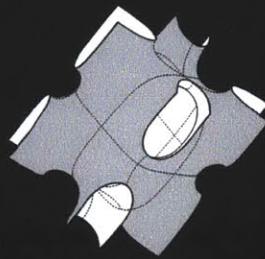
SCHWARZ D SURFACE



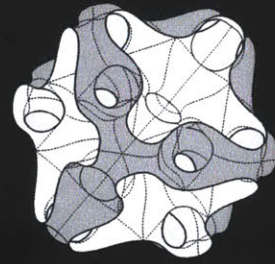
SCHOEN BATWING SURFACE



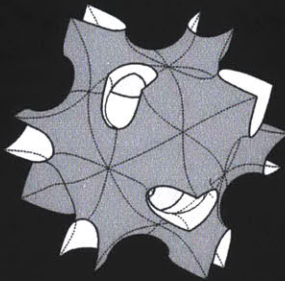
SCHOEN I-WP SURFACE



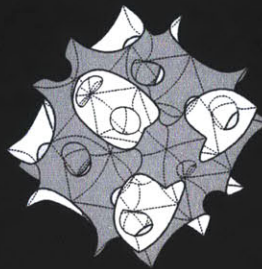
SCHOEN F-RD(r) SURFACE



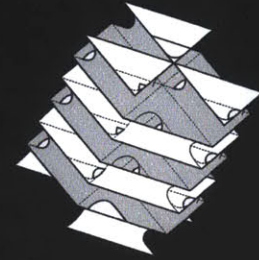
SCHOEN MANTA SURFACE GENUS 15



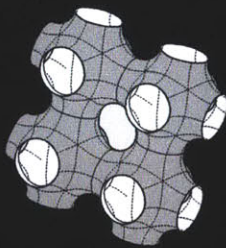
NEOVIVUS SURFACE



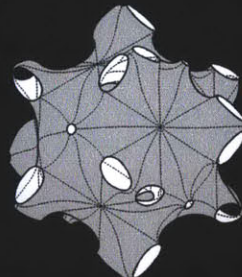
SCHOEN BATWING SURFACE



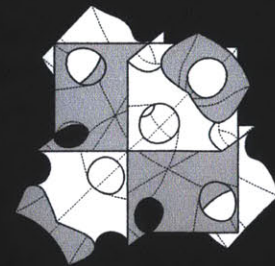
SCHWARZ H SURFACE



SCHWARZ P SURFACE



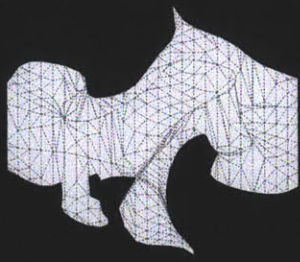
COMPLIMENTARY P SURFACE C15



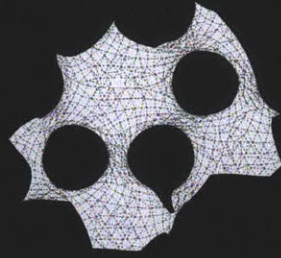
DISPHENOID SURFACE GENUS 31

To truly understand these surfaces, however, a methodology of breaking down each surface to its base elements, and then reappropriating them into usable space is necessary. This is due to the fact that in a minimal surface, only one point of that surface is potentially flat or inhabitable. For the sake of architectural integrity, this thesis assumes that residents will desire to live with something resembling floors and walls, albeit not as rigid as normally conceived. Thus, the minimal surface is disassembled to produce a surface that is no longer minimal, but retains similar topologic qualities as its predecessor. The original surfaces are also in this case treated as meshes, as they are only operable in this form, rather than their origins from a mathematical formula. This process allowed for the study of which modules and topologies were suitable for spatial conditions and requirements of the program.

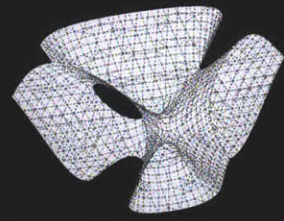




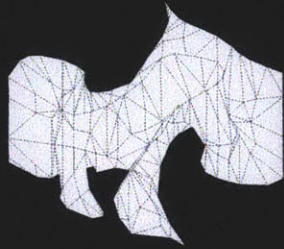
BASE GEOMETRY



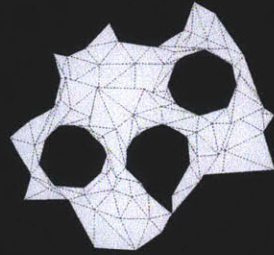
BASE GEOMETRY



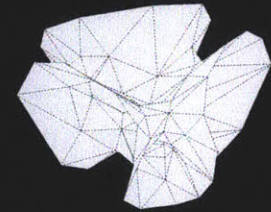
BASE GEOMETRY



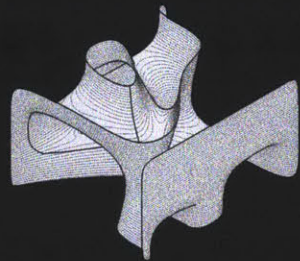
REDUCED GEOMETRY



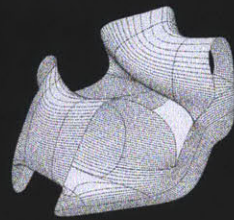
REDUCED GEOMETRY



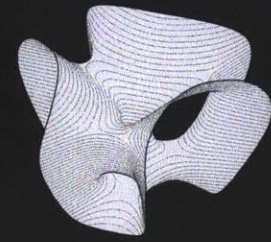
REDUCED GEOMETRY



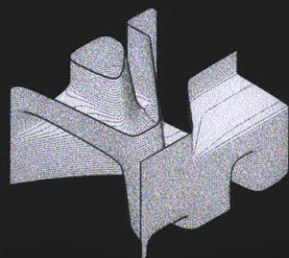
REMODELED



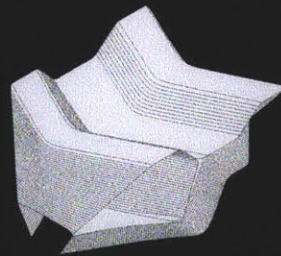
REMODELED



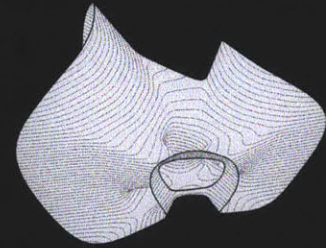
REMODELED



TRANSFORMED

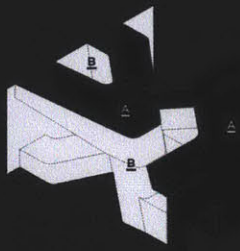


TRANSFORMED

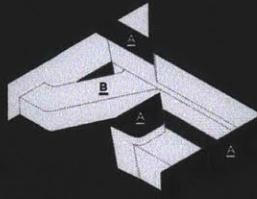


TRANSFORMED

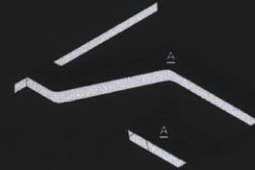
Upon remodeling, the different spaces and their qualities were analyzed, showing distinctly where one space stopped and one space started. By cutting away parts of the remodelled module, it is apparent that at different moments in space, the spatial configurations change and shift. In one section, space A may exist, where in the next both space A and B may exist. At this stage, the surfaces begin to be more specific in space, increasing in size and depth for certain programmatic requirements, and shrinking for smaller spaces. However, even in these studies, limitations on space remain, due to the inherent duality of a single surface - there is always just A and B. What about C?



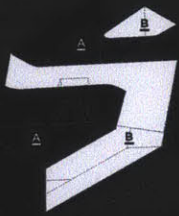
PLAN A\_01



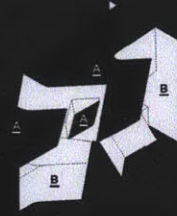
PLAN A\_02



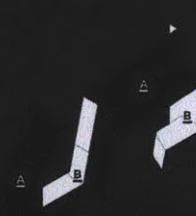
PLAN A\_03



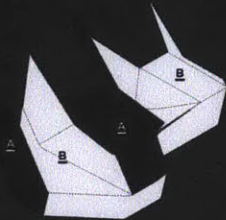
SECTION A\_01



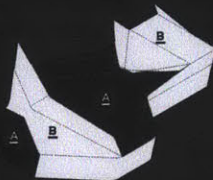
SECTION A\_02



SECTION A\_03



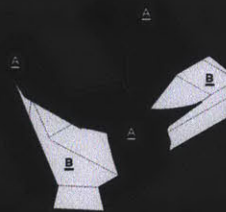
PLAN B\_01



PLAN B\_02



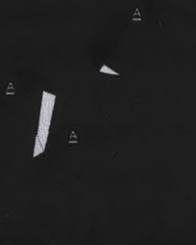
PLAN B\_03



SECTION B\_01



SECTION B\_02

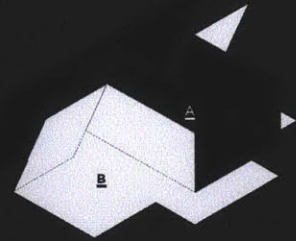


SECTION B\_03

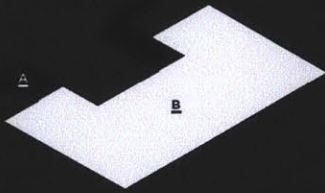
In creating a custom surface that is able to accept the requirements of the program and produce the necessary cultural effects, a single base surface is used. This surface is then divided to create two spaces, and extruded to increase surface area. Through specific extrusions, spaces can be extended, connected, and tunneled through. Once again creating interlocked space that has the potential to weave two different constituencies through each other, without being totally conscious of it.



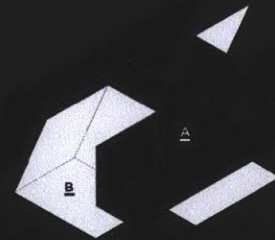
BASE SURFACE



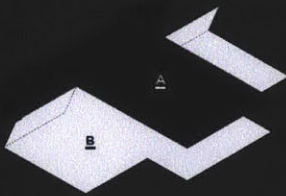
EXISTING SURFACE



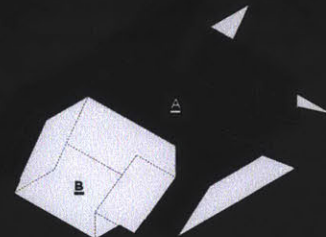
SURFACE DIVISION



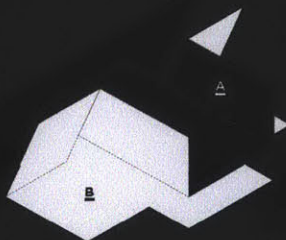
SURFACE EXTENSION



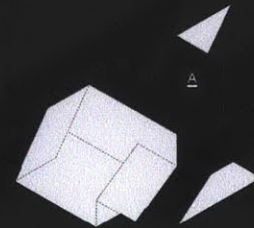
SURFACE EXTRUSION



SURFACE CONNECTION

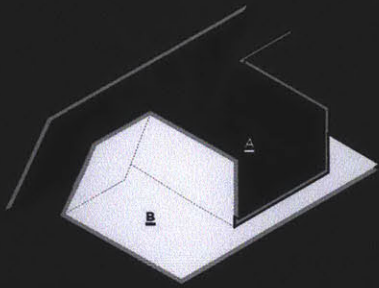


SURFACE / SPATIAL INTERLOCKING

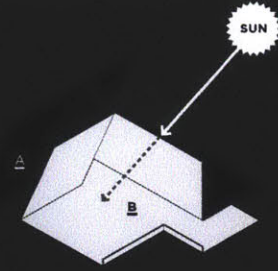


CONNECT / EXTEND

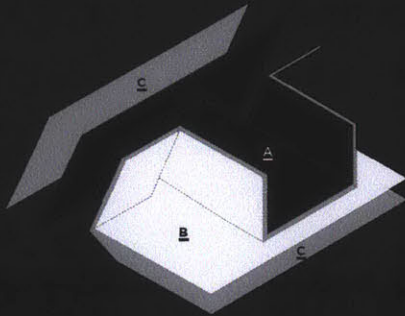
To expand the duality inherent in the surface, the method of offsetting is necessary to create a third space or C space. This space has the potential to become the mashup space that is defined in the program. Depending on the offset distance, this C space can serve varied purposes ranging from small crawl space or building systems space to larger amenity spaces. All three of these spaces become firmly embedded within the surface, and are not prone to dislocation or infringement. Additionally, between the spaces lies the opportunity for environmental effects as well as views to be implemented from within. Through openings in the surface, or material treatments, various effects can be achieved to heighten the perverse effects taking place within the building. All these factors and methods will be noted and properly executed to create a surface that provides the range of thresholds established as necessary to the project.



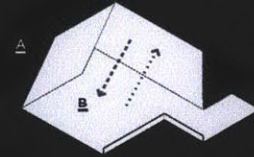
OFFSET SURFACE



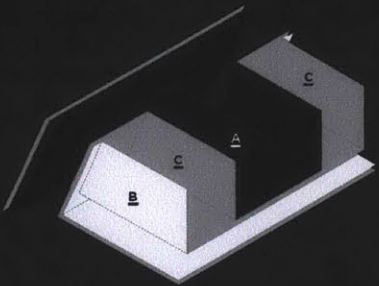
ENVIRONMENT



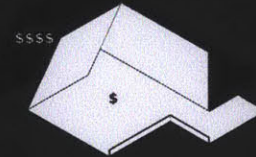
POCHE PRODUCTION



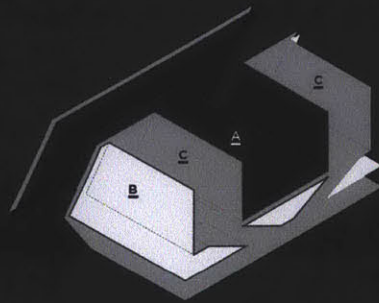
VIEWS



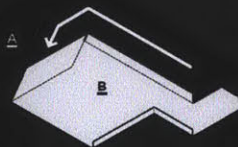
THIRD SPACE PRODUCTION



SOCIAL DIVISION



EMBEDDED SPACE



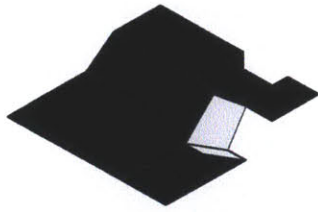
RESOURCES



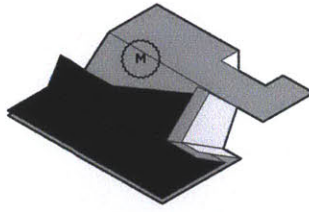


# III DESIGN STRATEGY

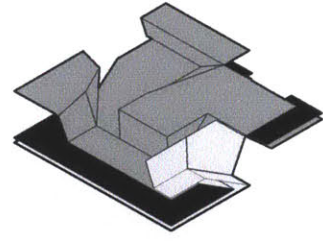
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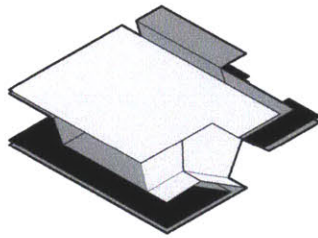
**SRF 01**  
LOBBY SPACE x2



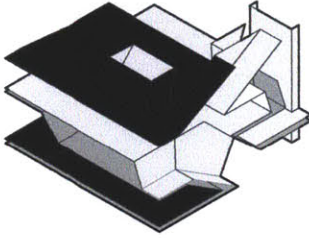
**SRF 02**  
MASHUP SPACE



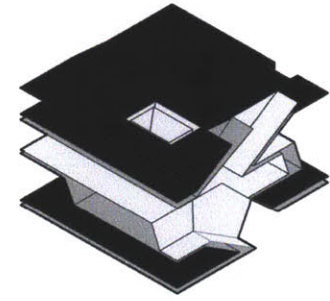
**SRF 03**  
MASHUP SPACE x2



**SRF 04**  
SRO SPACE



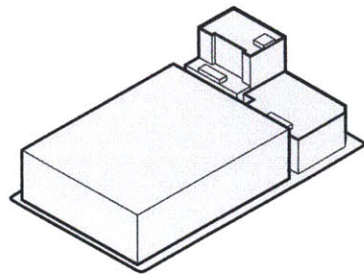
**SRF 02**  
LUXURY SPACE



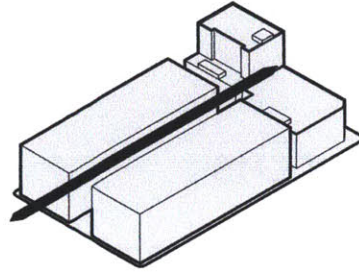
**SRF 03**  
AMENITY SPACE

## ADAPTING SURFACES

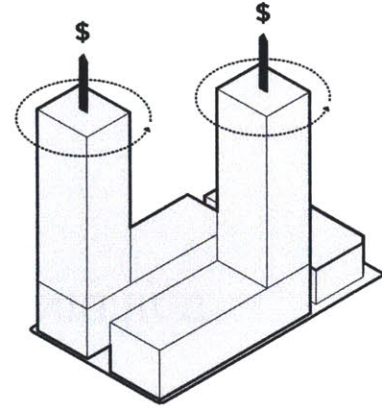
In negotiating the surface and adapting them to be useful for programmatic and relational means, a method of spatial definition is necessary. To develop the module that is to be replicated and transformed throughout the building, a base surface that represents the lobby is used. From this surface, another additional surface is offset, and altered to provide a mashup space. Further developing the original surface results in a module that contains both SRO and Luxury space within.



**FAR = 3.0**  
FULL BUILDOUT



**FAR < 3.0**  
20% OPEN SPACE REQ.



**FAR = 6.0**  
EXPANSIVE VIEWS

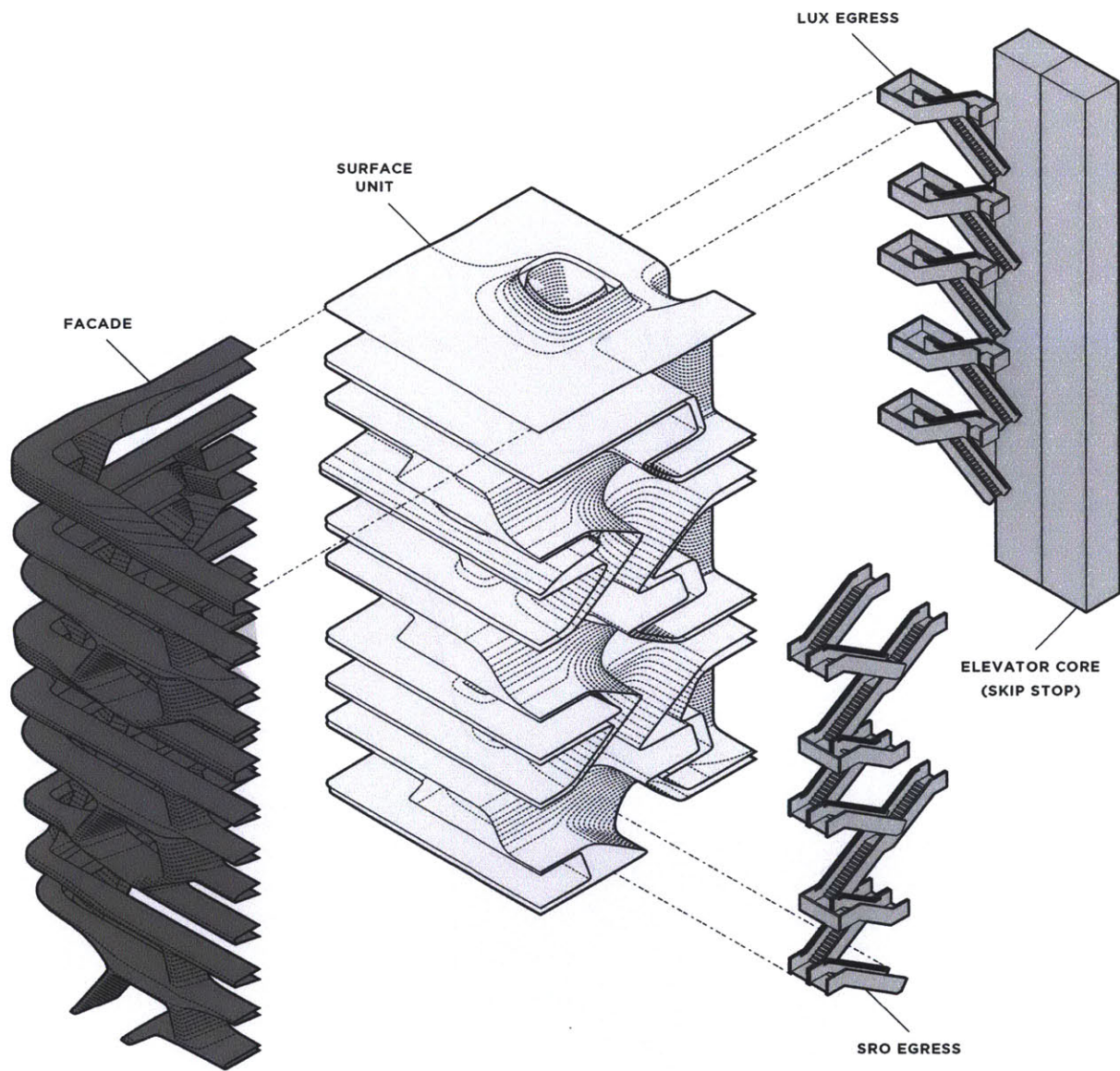
## MASSING

The massing follows a simple strategy of maximizing the FAR allowable on the site, much like a developer would be interested in doing when analyzing the size of the project. With a full extrusion of the site, with 3 floors, a FAR of 3 is reached. An interior promenade is created by dividing this block in half, also allowing for a required 20% open space requirement to be fulfilled. To achieve the FAR of 6.0 that is the most allowed by zoning on this site without air transfer rights, two short towers are added upon the plinths to push the FAR of the project to 6.0 .

## **BUILDING SYSTEMS**

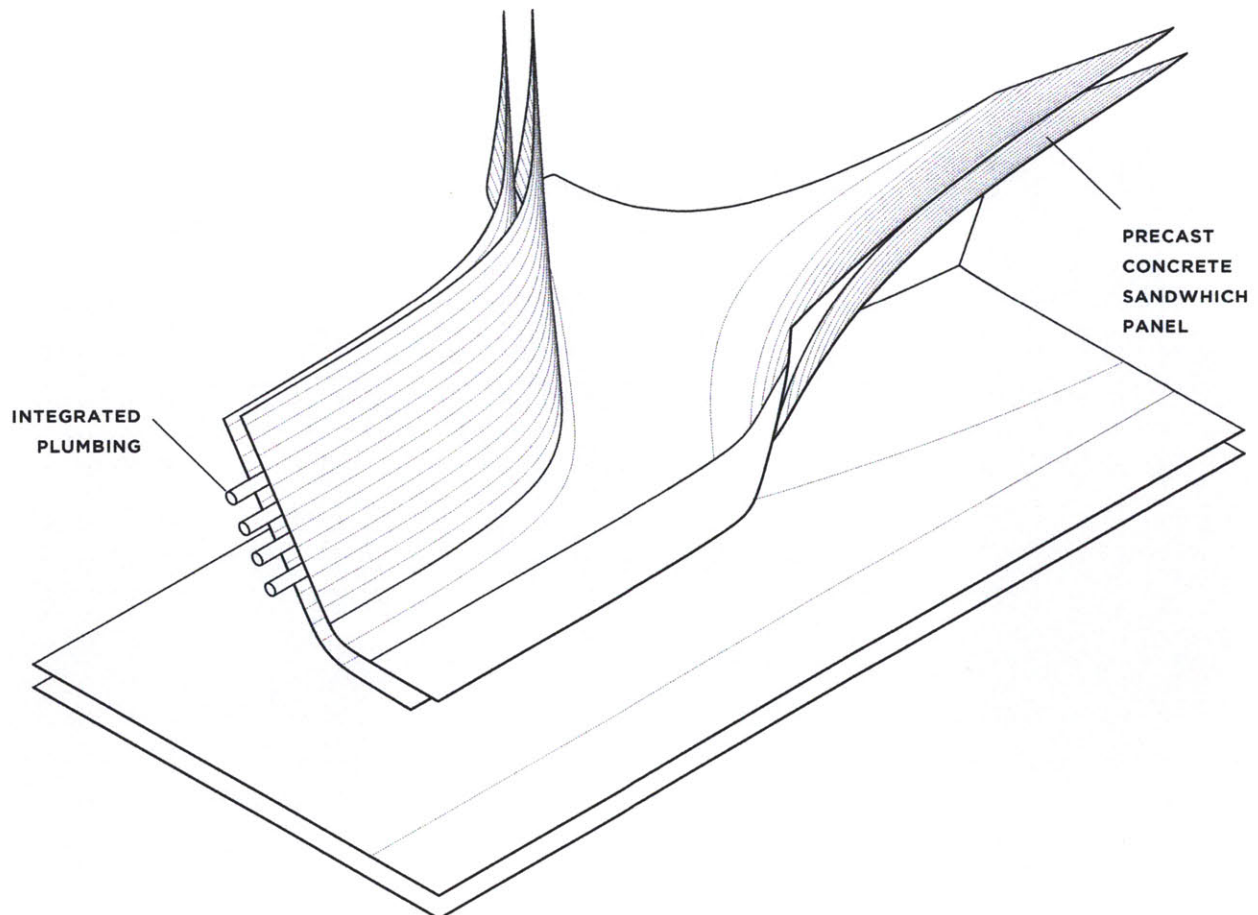
The building consists of three main elements - the layered surface housing the program, circulation, and facade. The interior surface is calibrated to accept various programs including the different unit types and amenities. The circulation systems are split between SRO and Luxury, with two skipstop elevators providing separate access for the two resident types. The facade is composed of an exaggerated mullion system that follows the boundaries of the surface as they combine and separate.

# BUILDING SYSTEMS AXON



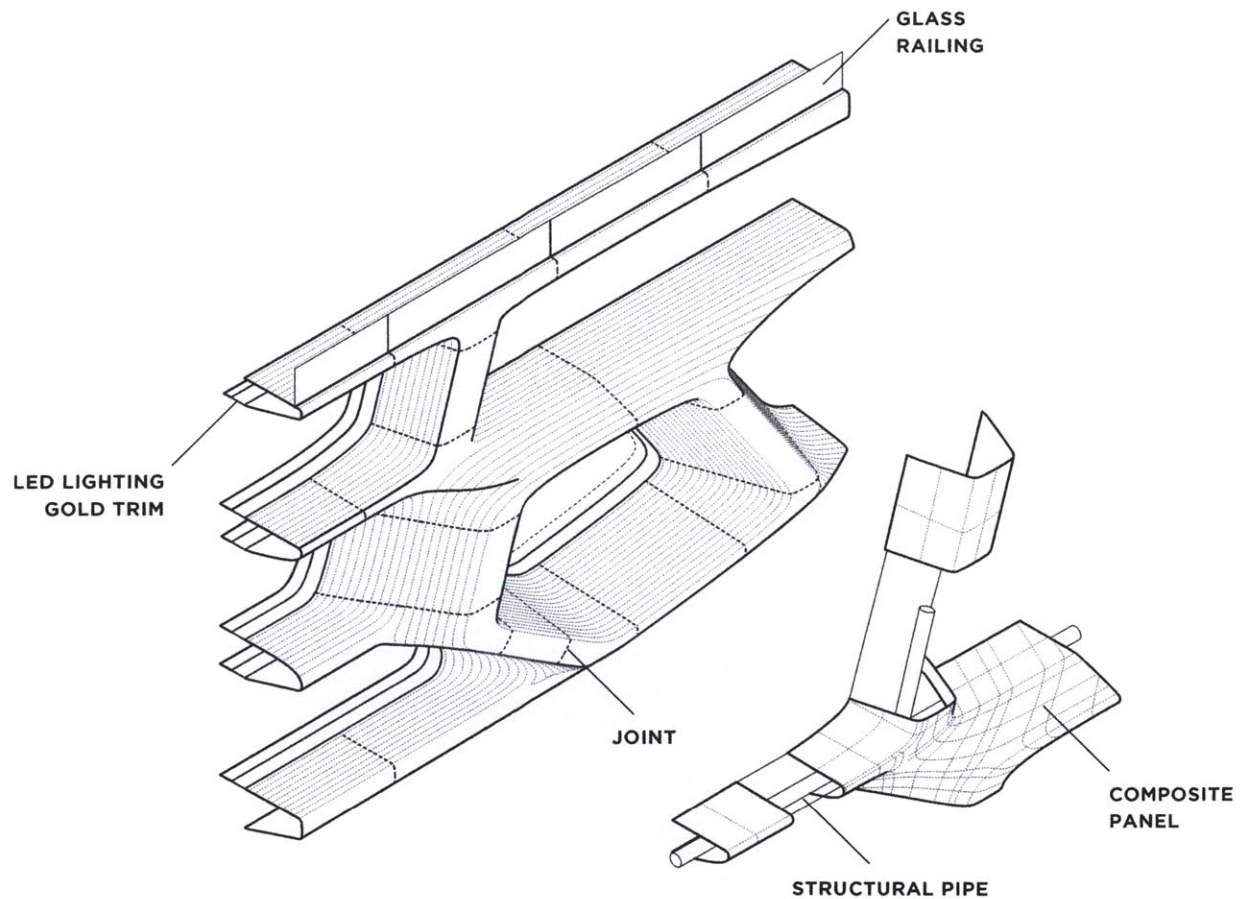
## BUILDING SYSTEMS cont.

The surface itself is conceived as a precast concrete sandwich panel that has embedded resource management. The module can be divided into several parts that are able to fit on a flatbed truck and shipped to the site and assembled. This method of construction also ensures that the typology of the building is rigid, and the SRO residents are protected against building conversions.



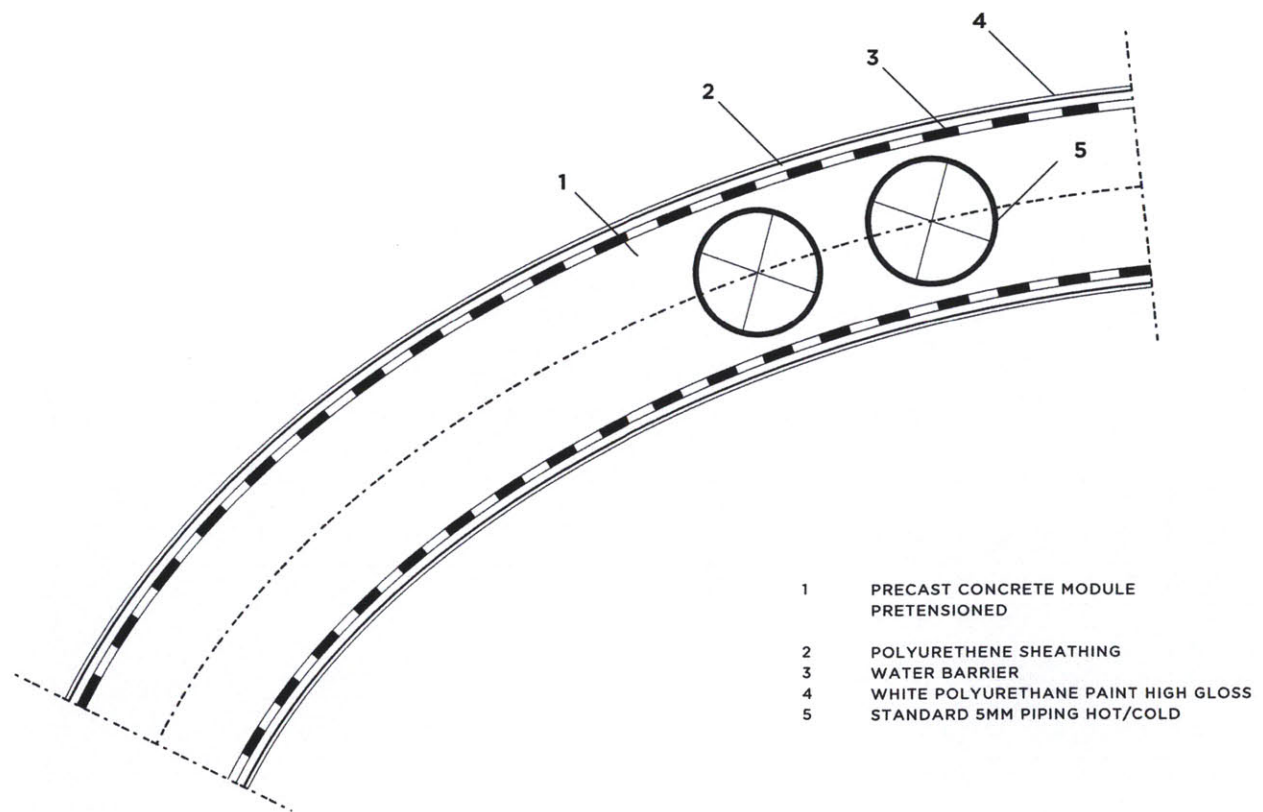
## BUILDING SYSTEMS cont.

The facade is generated from the profiles of the interior surface, and is fabricated in panels out of composite material. The finish is a matte black with LED lighting that accentuates the shapes. The intended effect is an overall blending of the building that mixes the perception of the interior spaces, giving a building with two varied interiors one cohesive image and iconographic viewing. Panels are attached to structural pipes that are fixed to the concrete sandwich.



## BUILDING SYSTEMS cont.

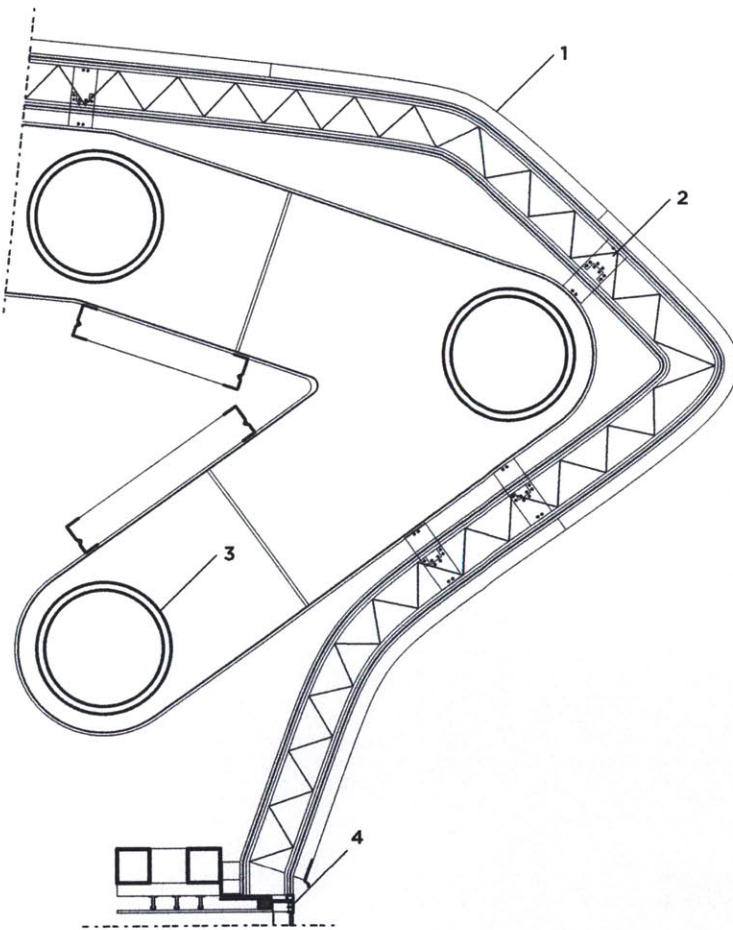
The detail of the concrete sandwich panel mentioned earlier has embedded building systems such as insulation, waterproofing, as well as piping and HVAC. Pipes are accessible through small openings within the concrete shell if maintenance is needed.





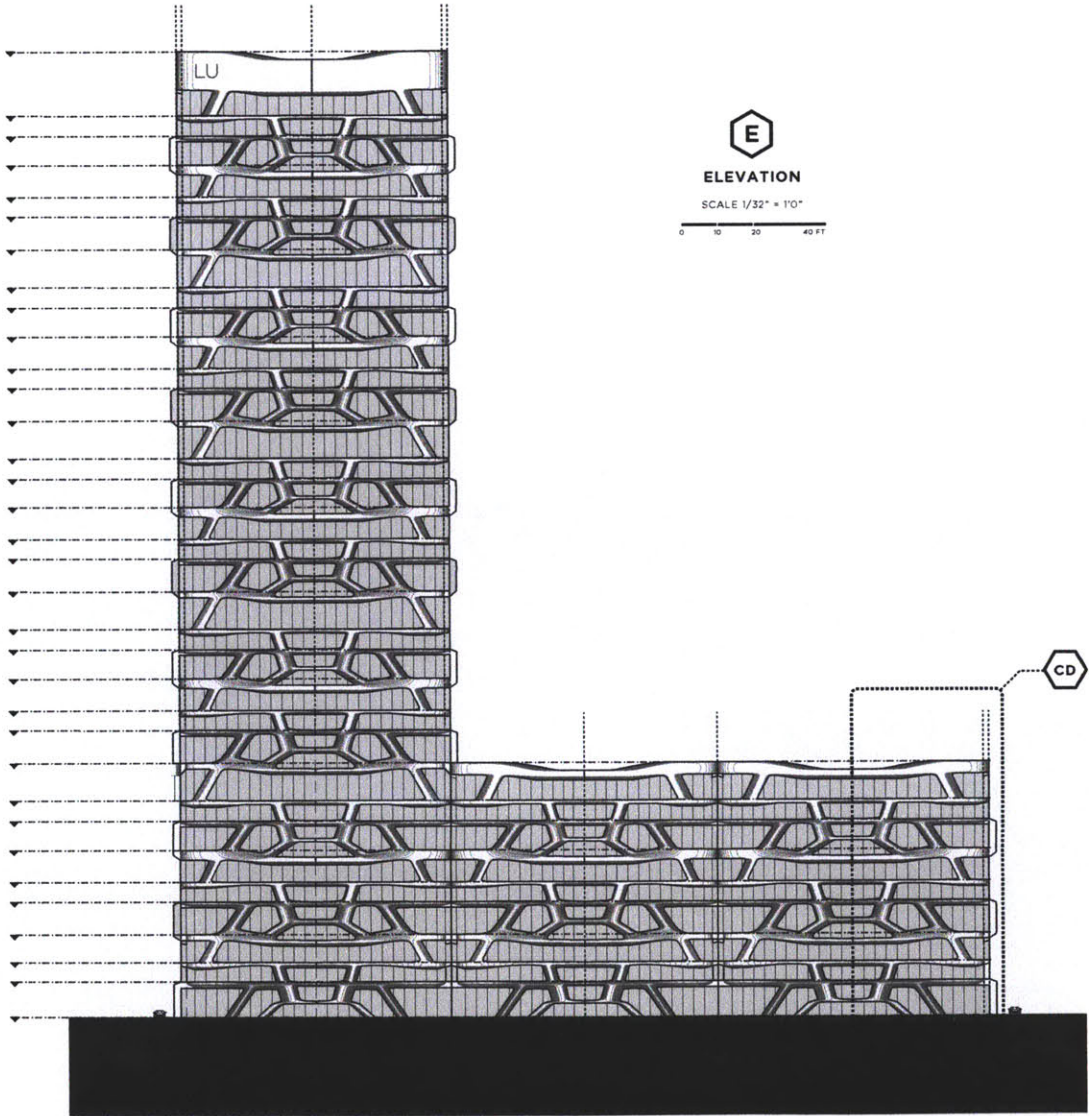
## BUILDING SYSTEMS cont.

Within the panels of the facade, insulation and LEDs are embedded and the whole composition is attached to steel structural piping. The glazing contains an embedded screen that blocks exterior views, but allows for views outward. The glazing is also double e rated.



- 1 FACADE CONSTRUCTION  
1MM COMPOSITE PREFORMED  
SHEETS WITH 50 MM STANDING  
SEAMS  
POLYTHENE SEPARATING LAYER  
200 MM NON COMBUSTABLE  
MINERAL WOOL; VAPOR BARRIER
- 2 STEEL CONNECTION
- 3 STRUCTURAL STEEL SECTION
- 4 WINDOW  
ALUMINUM POST AND RAIL  
CONSTRUCTION LINING TO BENCH,  
LINTEL AND REVEALS.  
12MM GLASS DOUBLE E

ELEVATION



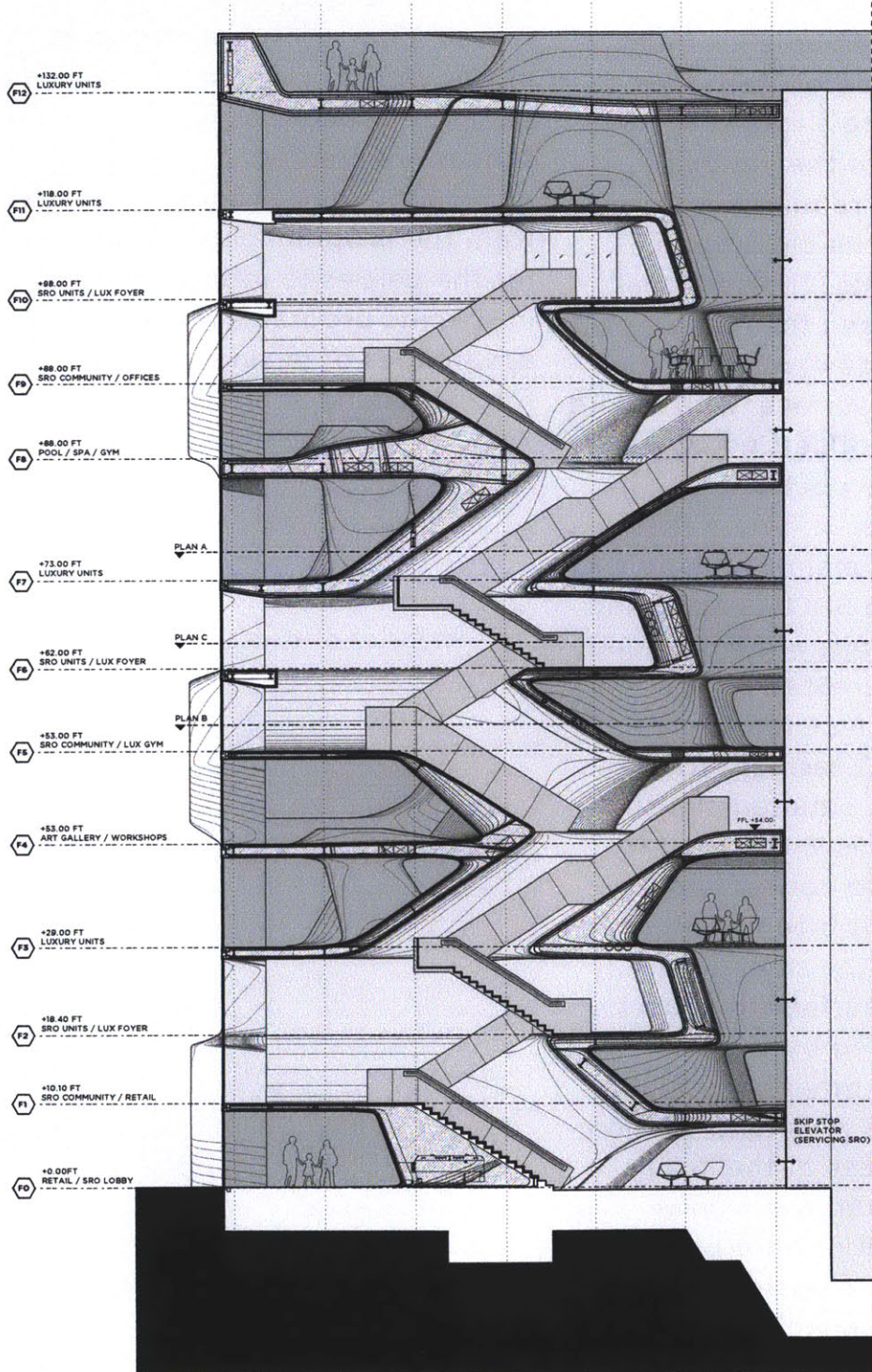
## SECTIONS

Various sectional conditions are created within the surface ranging from complete separation to complete mixing, and opportune moments of specific mixing in between. The development of the surface through earlier steps was necessary to create a robust system that could adapt to the various spatial conditions required as per the program and the calibration of cultural moments. The sectional relationship between the two parties is also made explicit by the undulating of the surface, with a third space created by offsetting layers, existing within the poche.

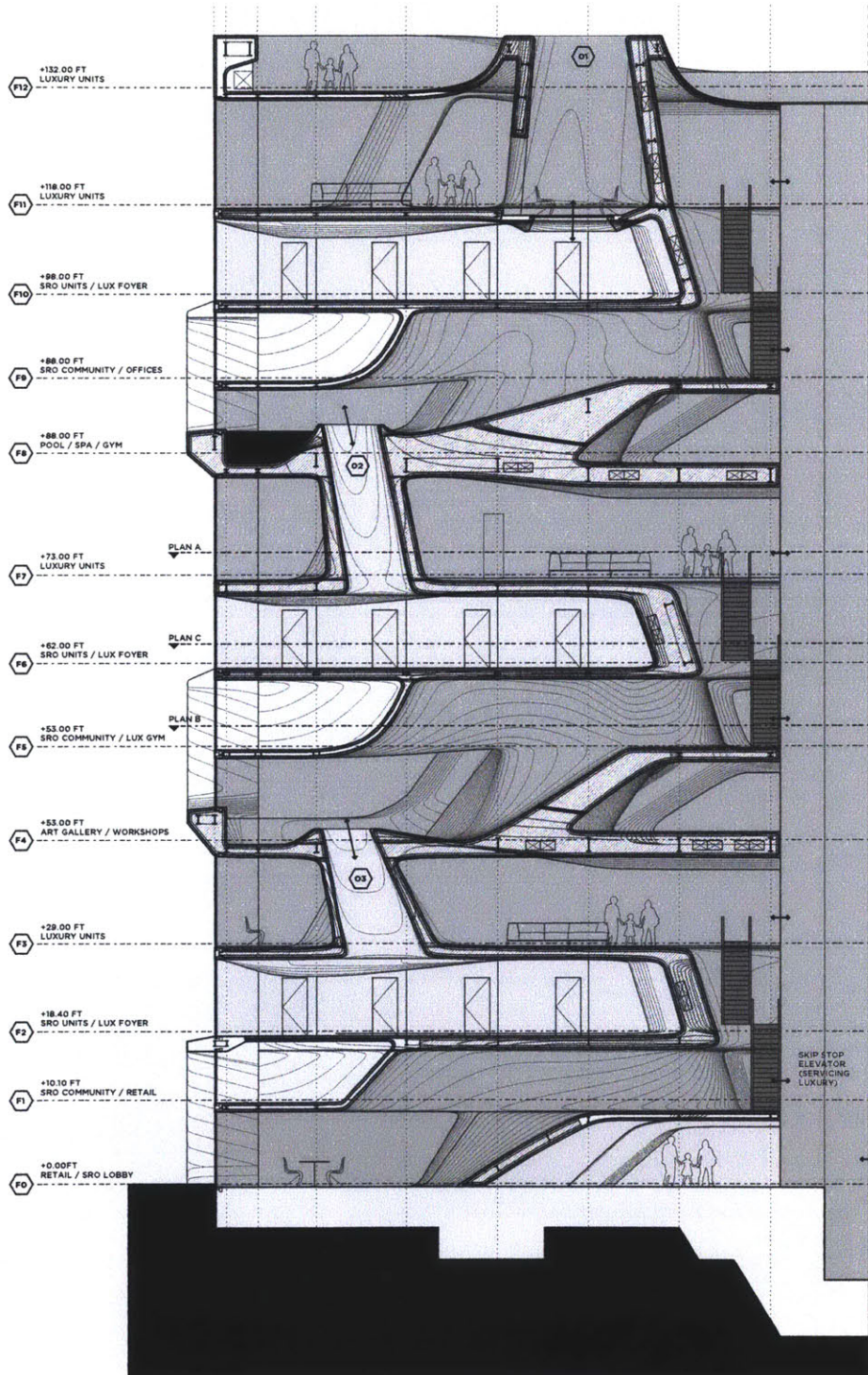
In Section A2, the main circulation and egress for the SROs is apparent, while the luxury units are embedded within the figure created by the SRO circulation. The circulation first brings an SRO resident to the community space, situated in a split level condition. This is intended to bring more use and connection to this space, which is often overlooked and placed off to the side. On the other side of the surface, the luxury units are penetrated by the SRO circulation, yet at times gain double height spaces as a resultant. Section A5 shows the egress of the luxury units, and their multi room units that occupy an entire floor plate. The luxury units are again shown to have penetrating funnels that bring

effects and environment from the luxury amenities from above. This includes water from the indoor lap pool, and also sunlight from the interior courtyard. The following two sections show conditions of mixing or occupying the poche where staggered spaces as well as isolated spaces are created. These uses include the joint program that arise from the program clustering, allowing for the parties to intermingle and mix in specific programs that harness the advantages of mixing, rather than forcing mixing in an unspecified way.

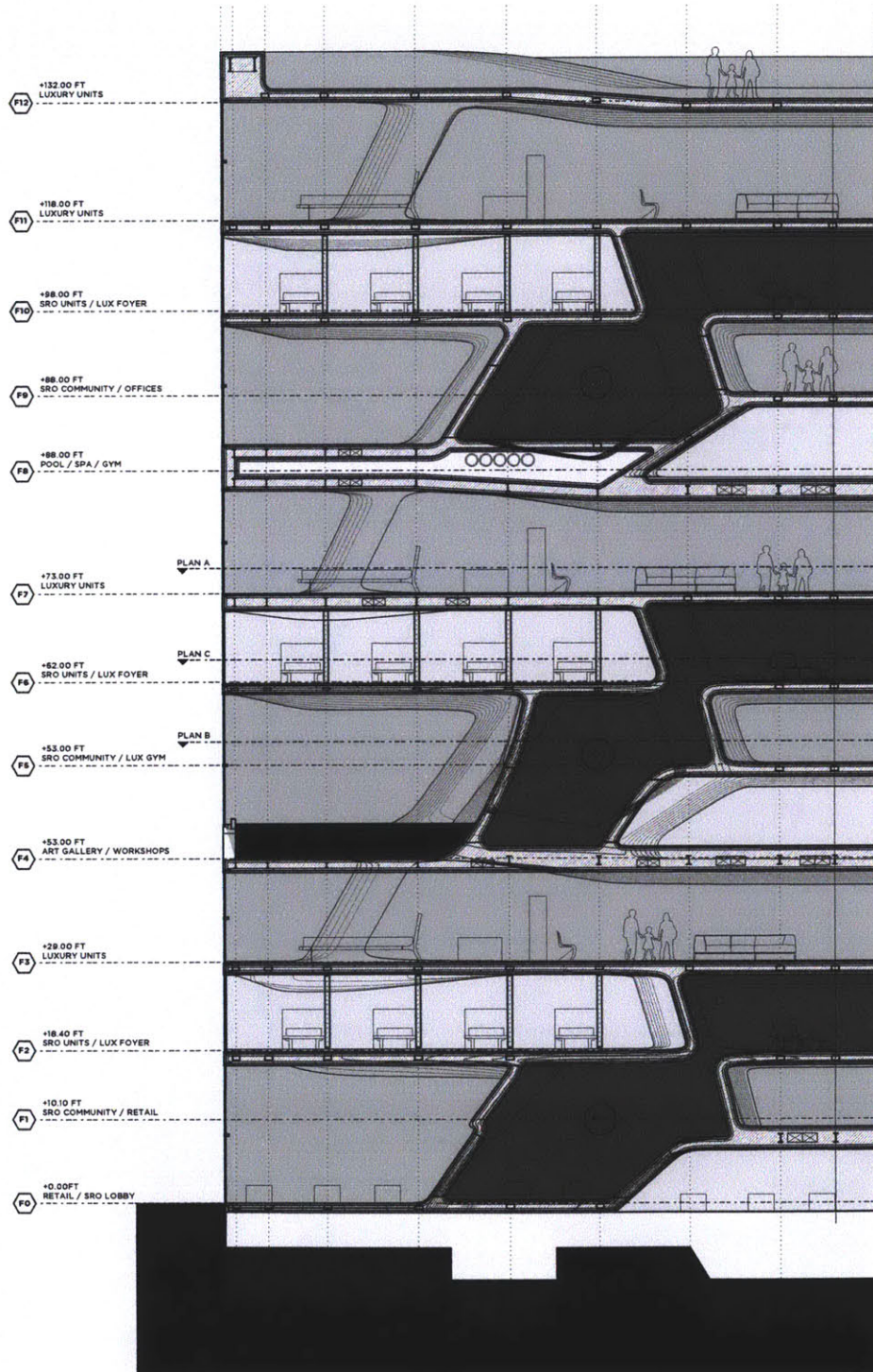
# SECTION A2



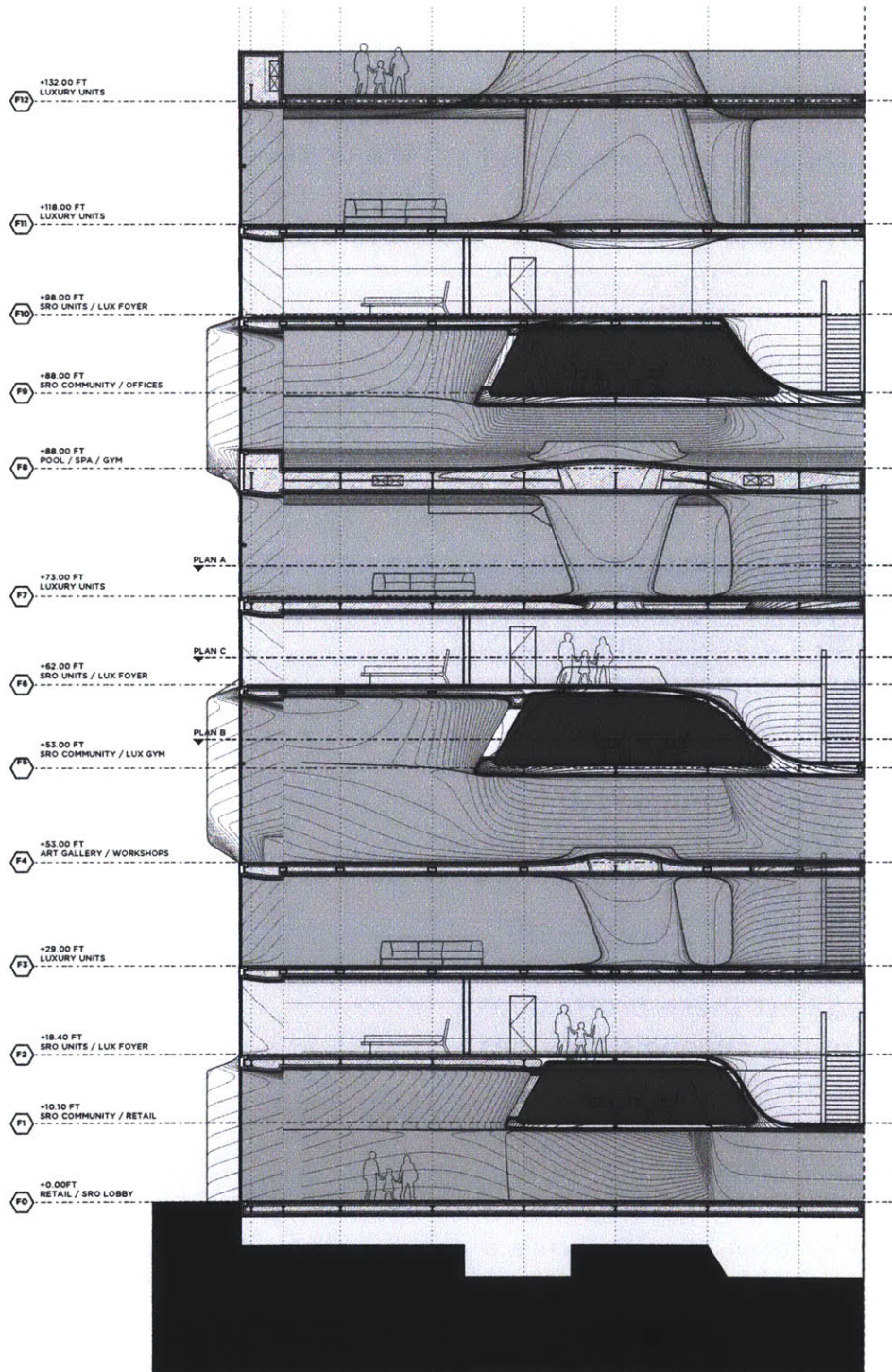
# SECTION A5



# SECTION A8



# SECTION 00



## PLANS

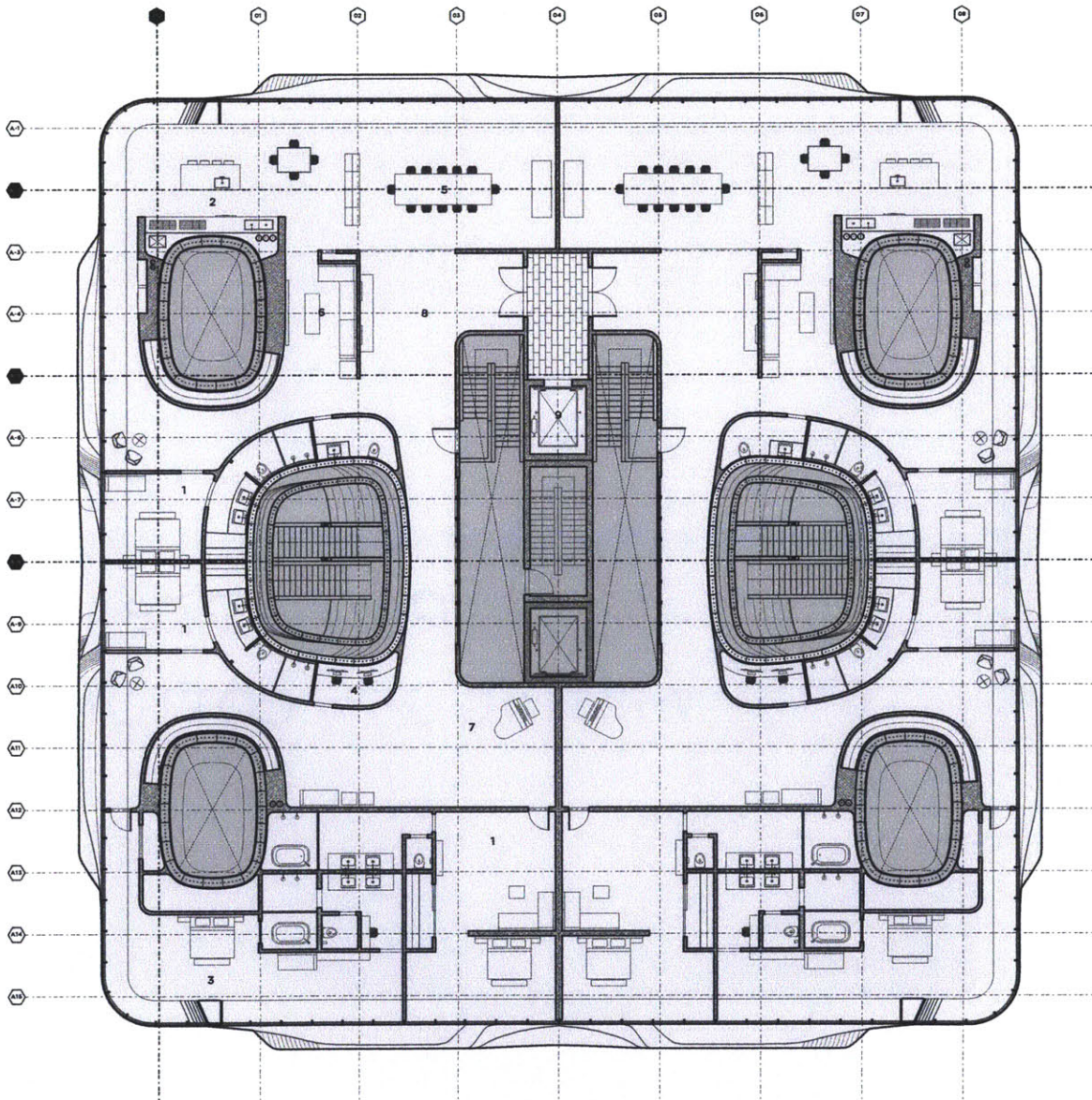
In plan, layouts are arranged in a familiar way, albeit in a way that conforms to the inverse nature of the surface within. Programs are arranged horizontally in a seemingly regular floor slab typology. However, seepage of different spaces begins to happen at a smaller scale, enabled by the interior surface, and areas of intersection are prevalent. Admittedly, there is an interior tension apparent in the plan layouts. The typology of housing and all of its rigid guidelines and requirements prompts a compromising of sorts, between freeform surface and orthogonal wall.

In Plan A, which corresponds to the luxury unit plan, two units are mirrored with a elevator and two stairs that provide access to two main entrances. Within this plan, openings can be seen coming through the floor, creating moments of connection between the space above and below. However, the luxury unit itself is relatively undisturbed, with opportune program being situated around or against these protrusions. The poche of the channels provides the wet wall for the bathrooms and kitchens within the luxury unit, again providing dual functionality as a building system, and a means of defining thresholds. Plan B shows a floor where all three types of spaces coexist around the surface, with the

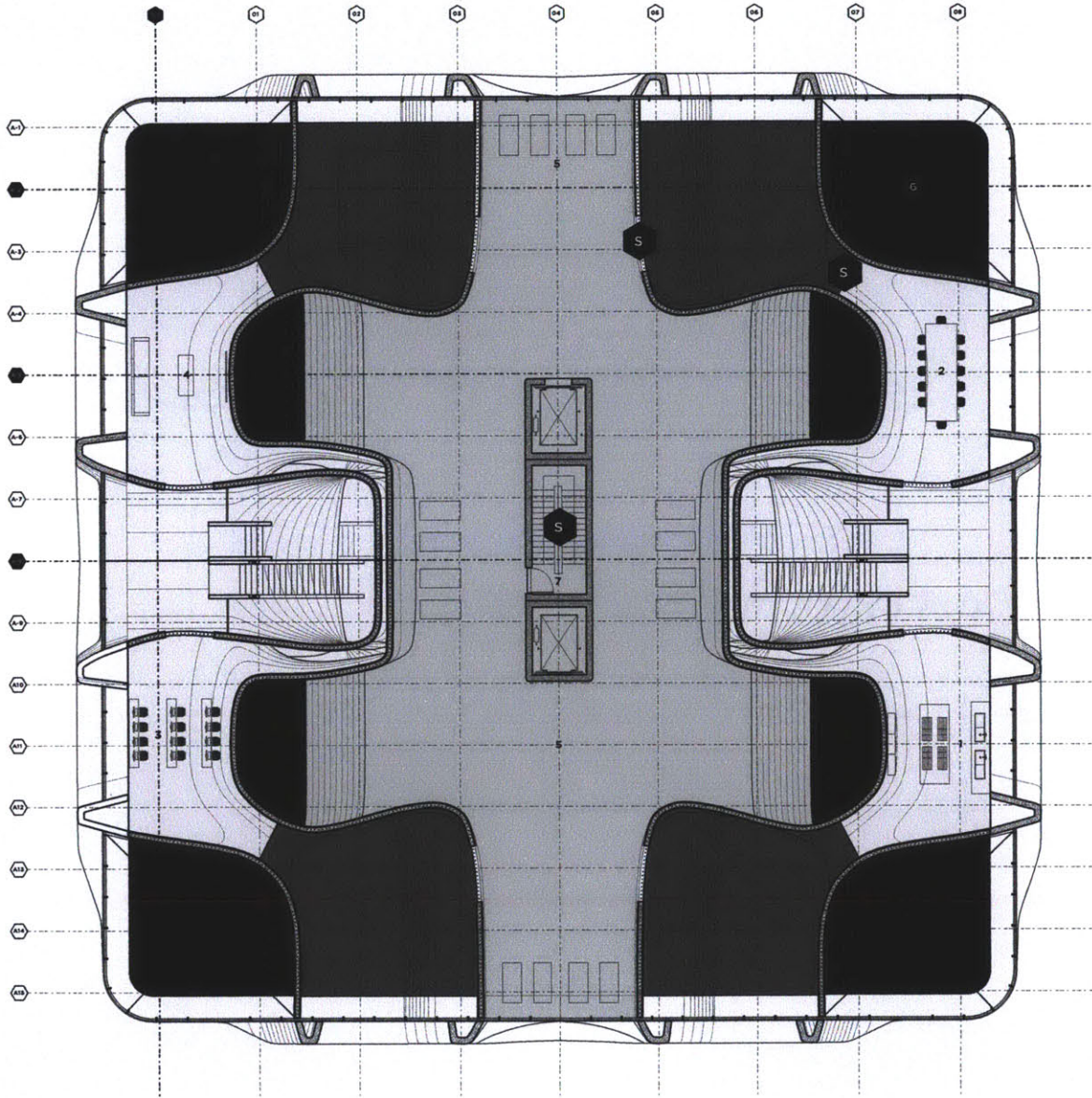
gym space of the luxury unit as well as the lap pools intertwined with the community rooms and computer rooms of the SROs. In between is the mixing space, for example the heavy weight lifting area and boxing ring. On Plan C, the SRO floor, the jacuzzi pools are situated for access from all the units, while the units are arranged on the perimeter to maximize views to the exterior.



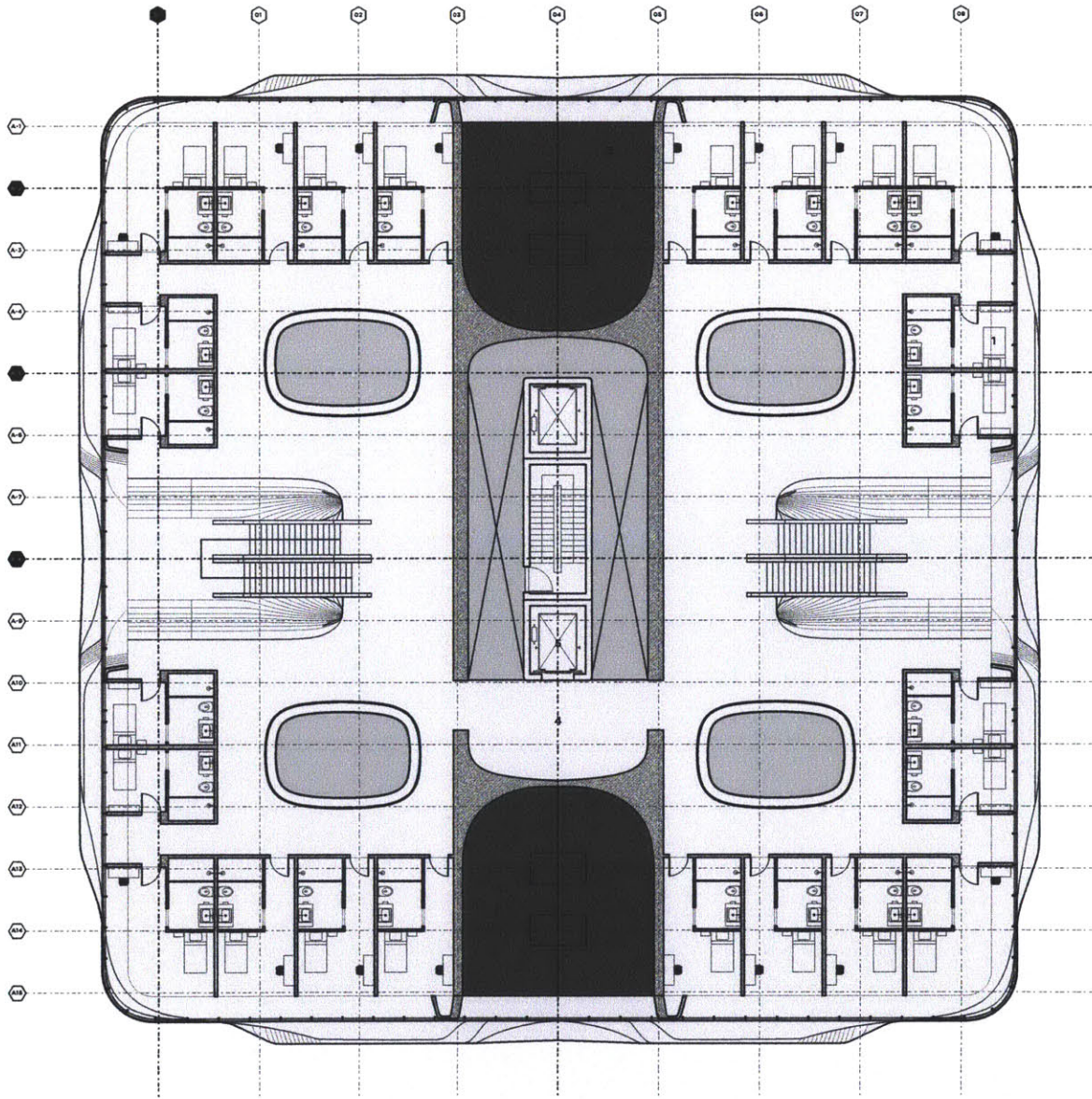
# PLAN A



# PLAN B



# PLAN C

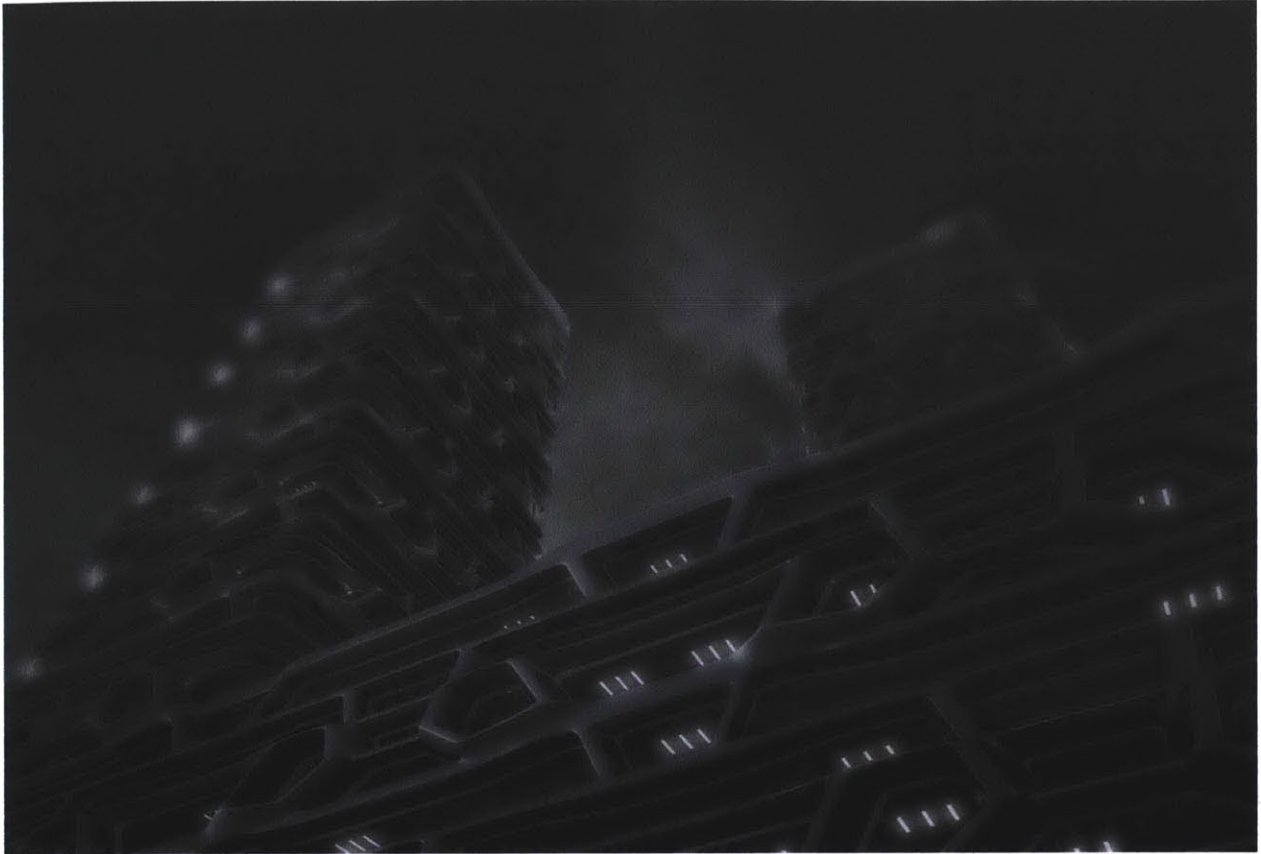


# IV MARKETING

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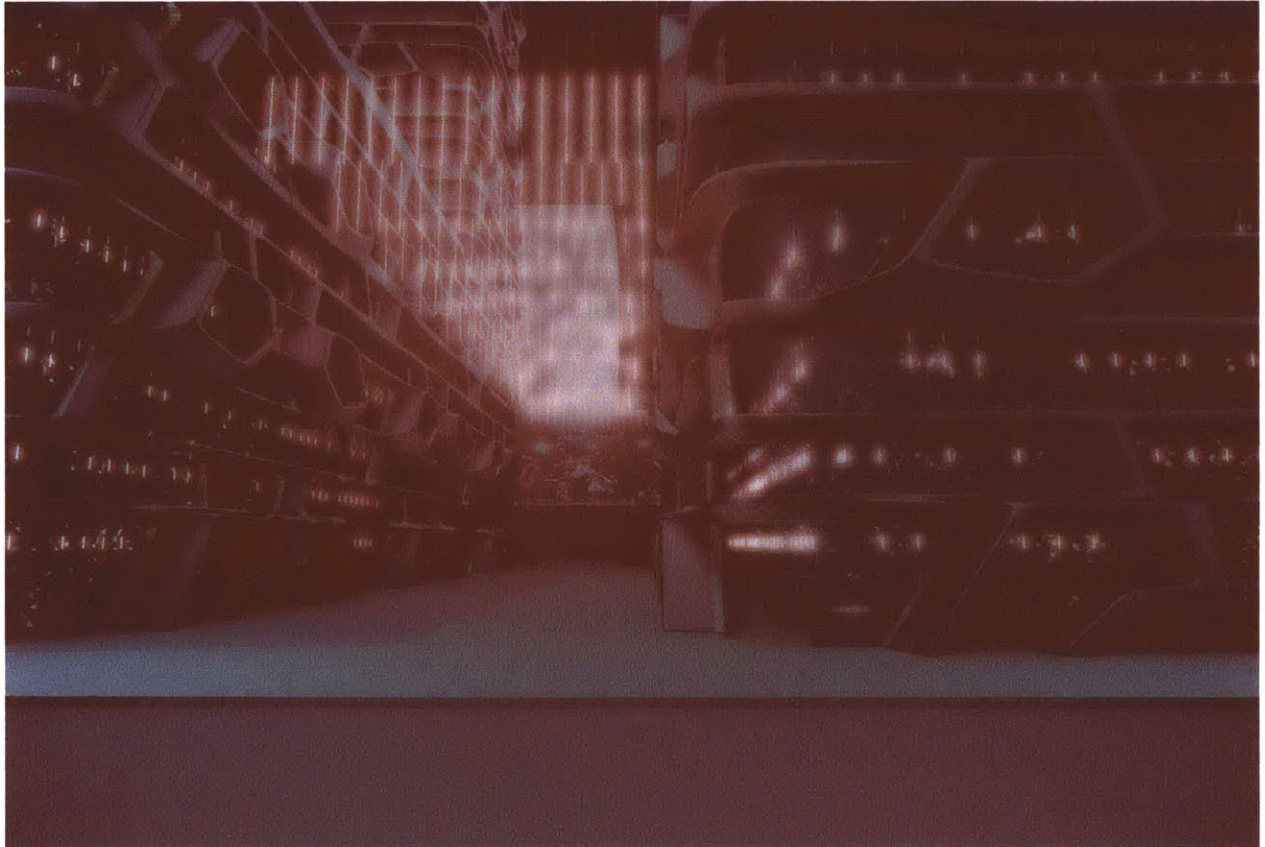
## IMAGES

The use of imagery as a method of representation was integral to the understanding of the project. These series of renders show views from the exterior of the building, and also on the interior. Corresponding spaces are features such as luxury lobby with SRO lobby, and luxury courtyard with SRO skylight. At the end of the section, a marketing campaign featuring all the images is composed to provide a glimpse into how these different spaces could be marketed towards the different parties. However, it is the goal to mix these images up as to create a representational system that would appeal to both the high and low market. The inherent agenda was to create spaces for the SROs that even the luxury residents would find appealing, and would want to use, thus creating a mutually beneficial relationship between the two spaces.



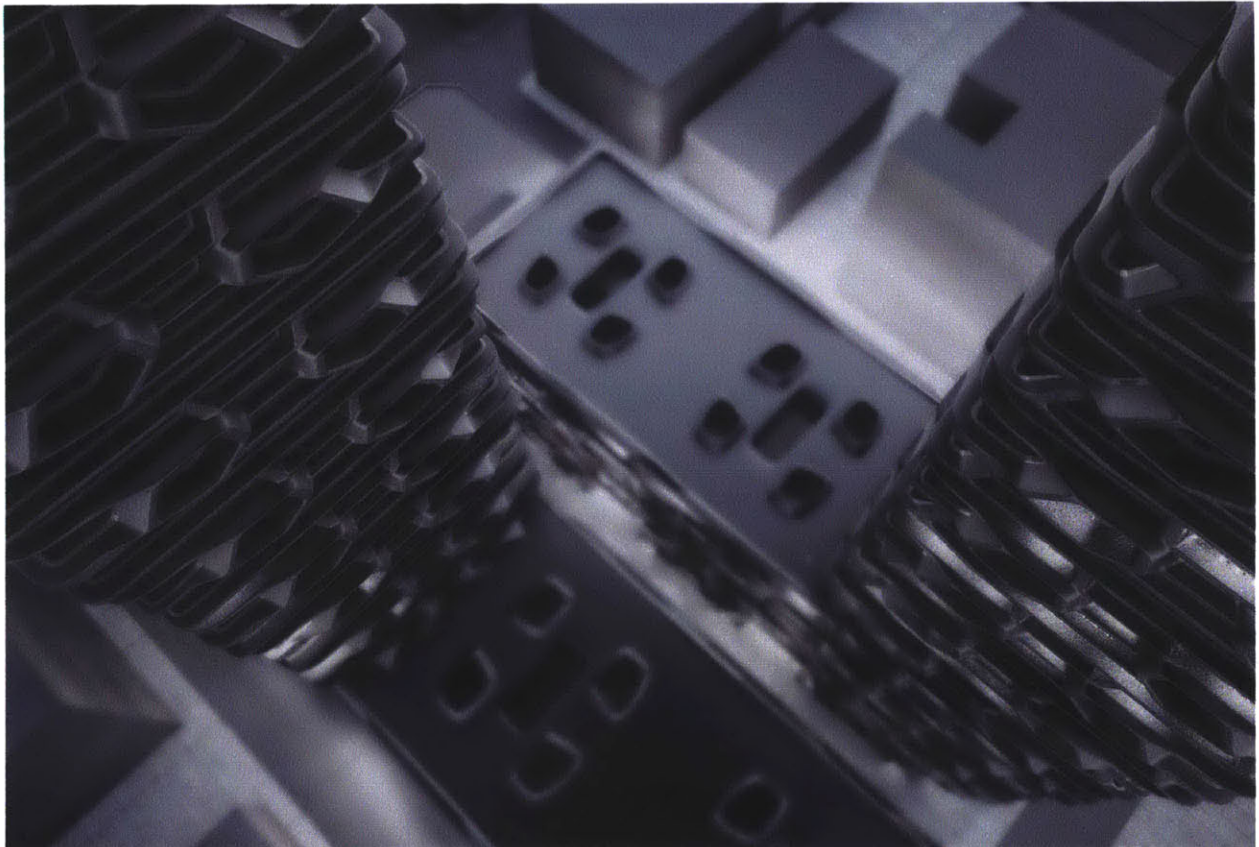


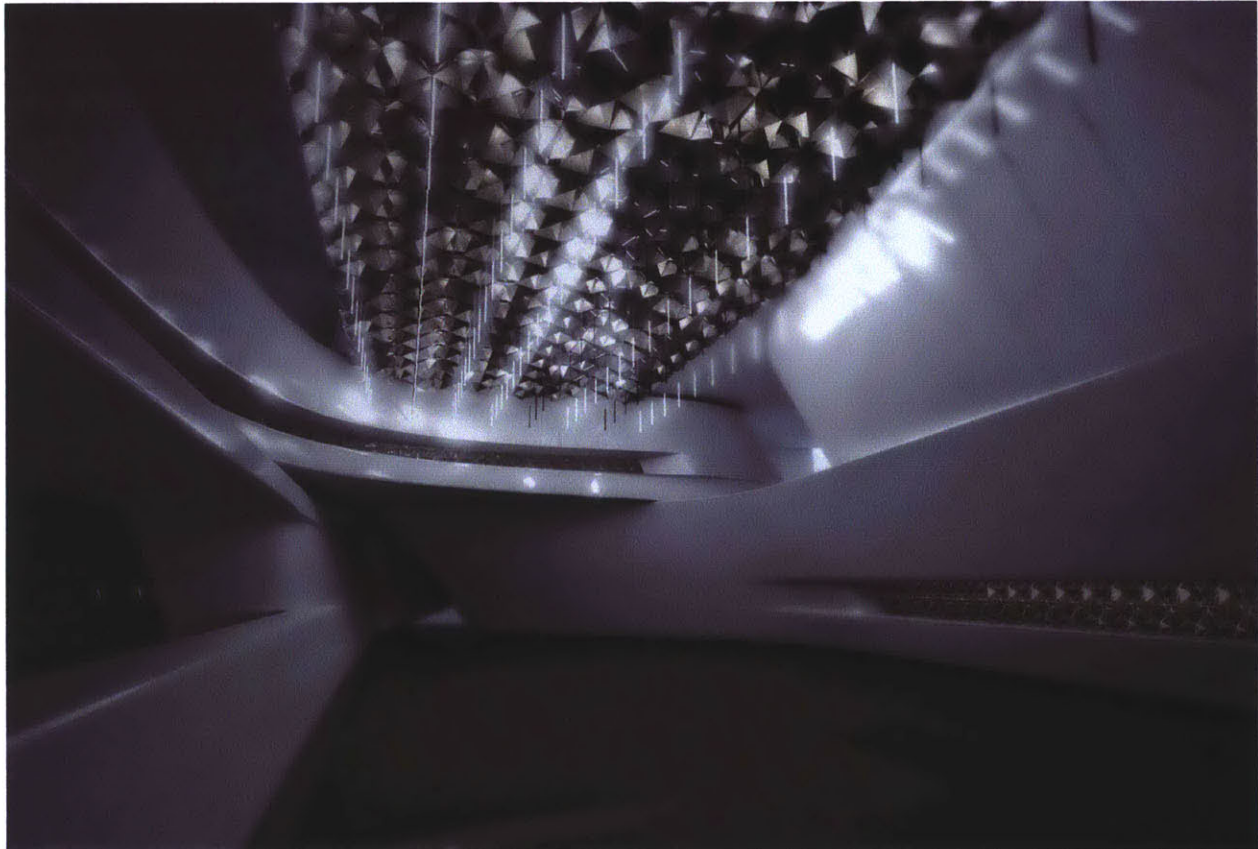
Clockwise from Left: Street View, Courtyard View, Tower View.

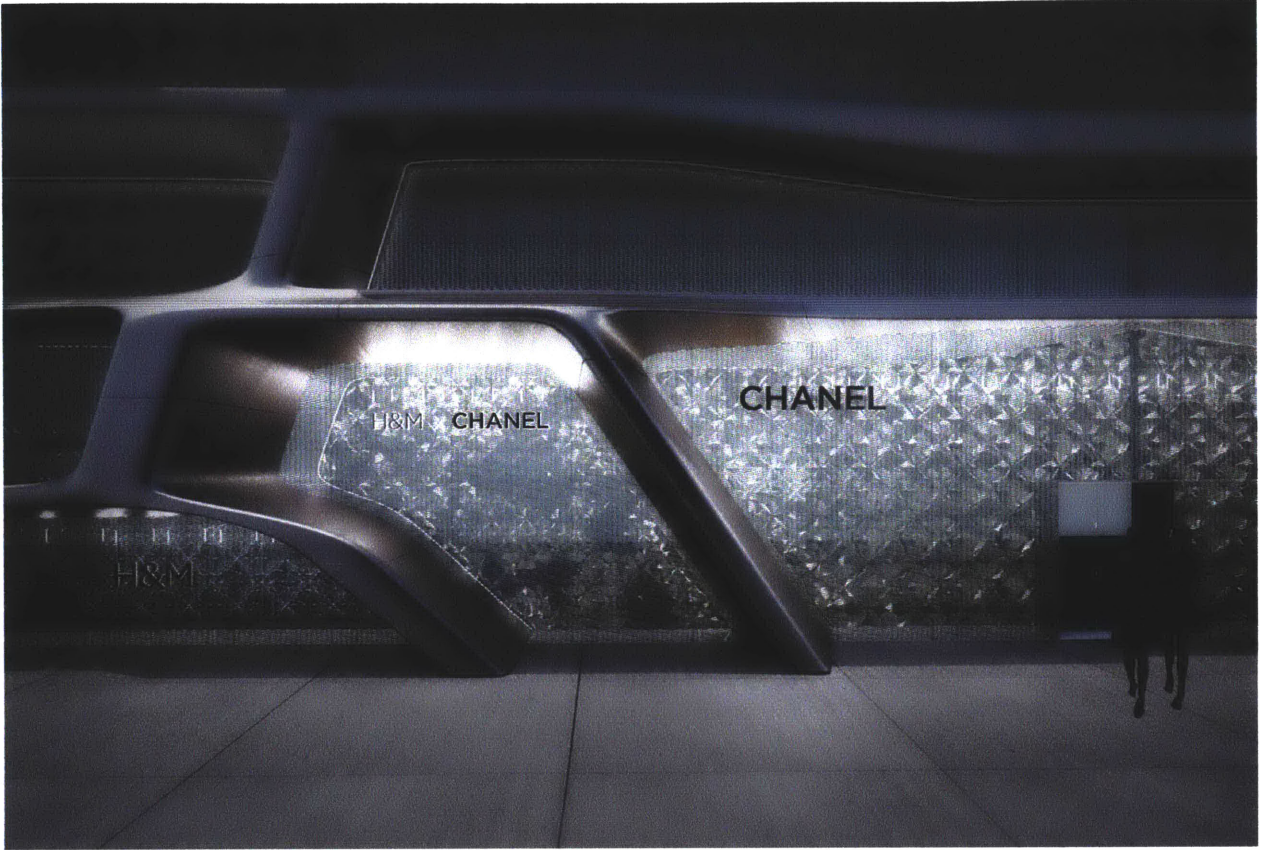




Clockwise from Left: Tower View, Aerial View, Interior Courtyard View.

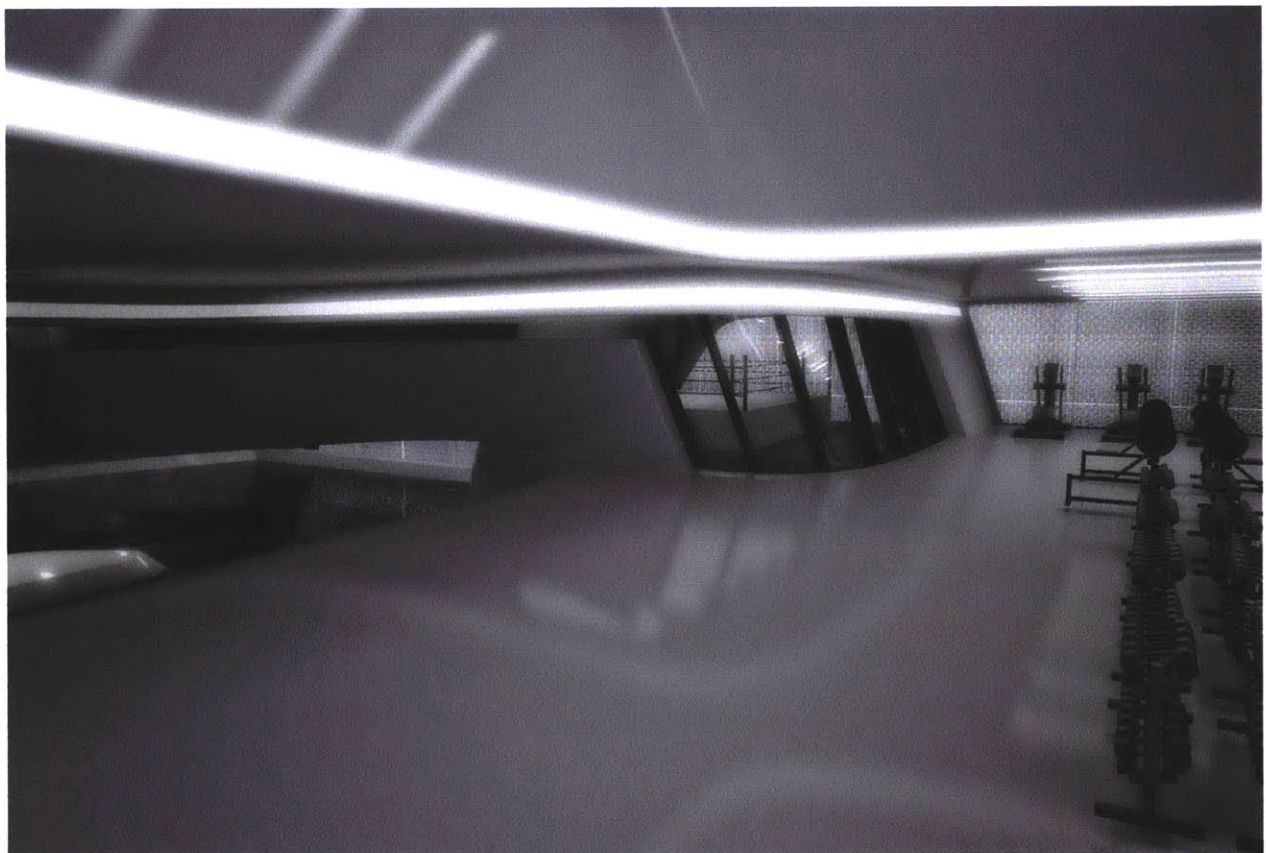


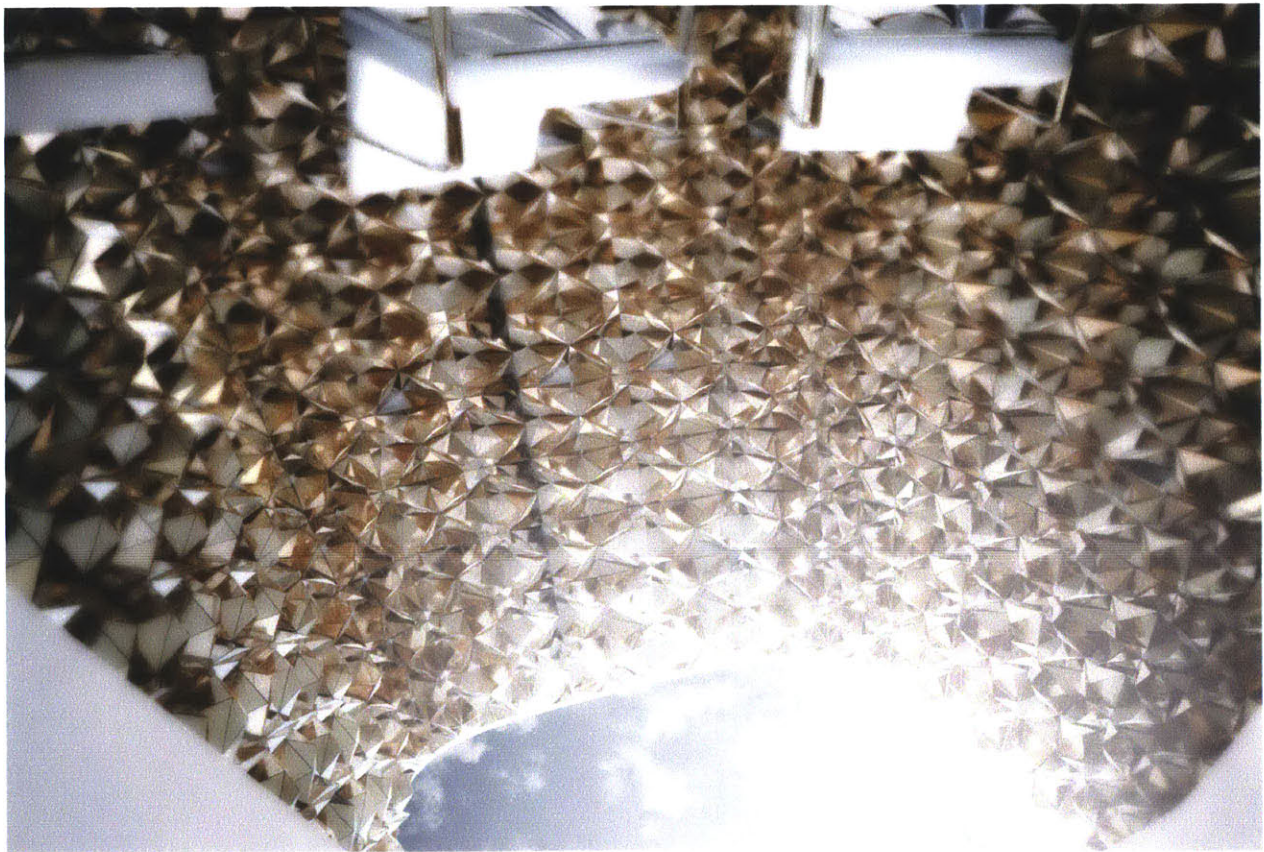
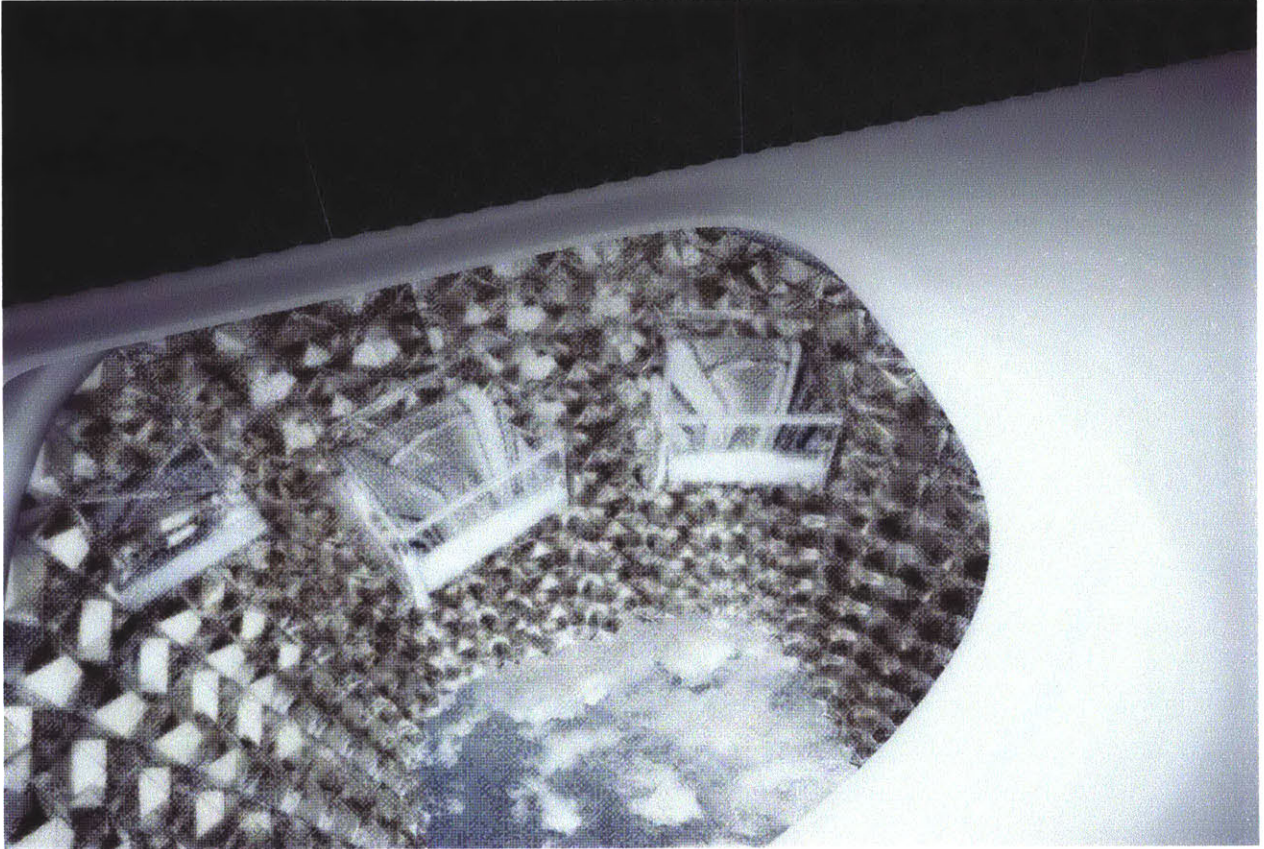


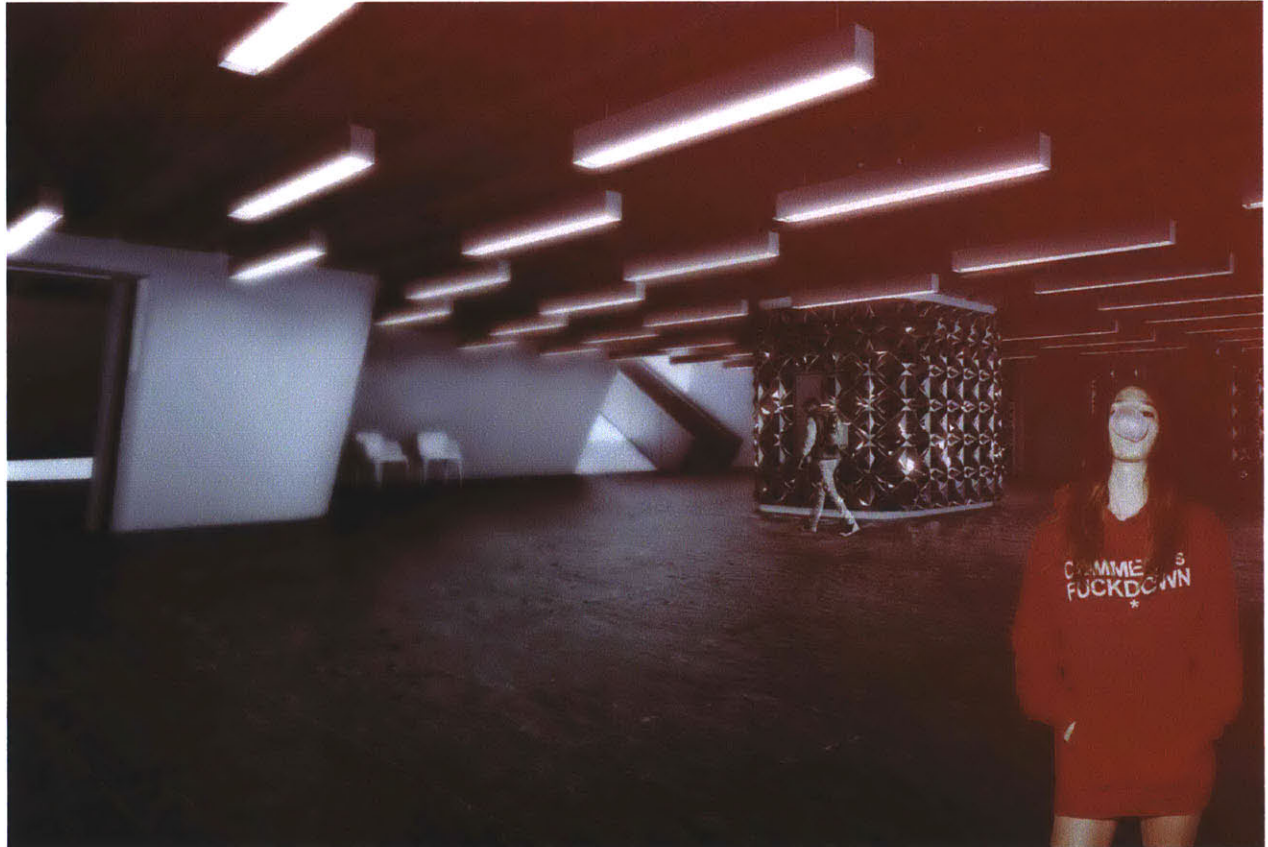
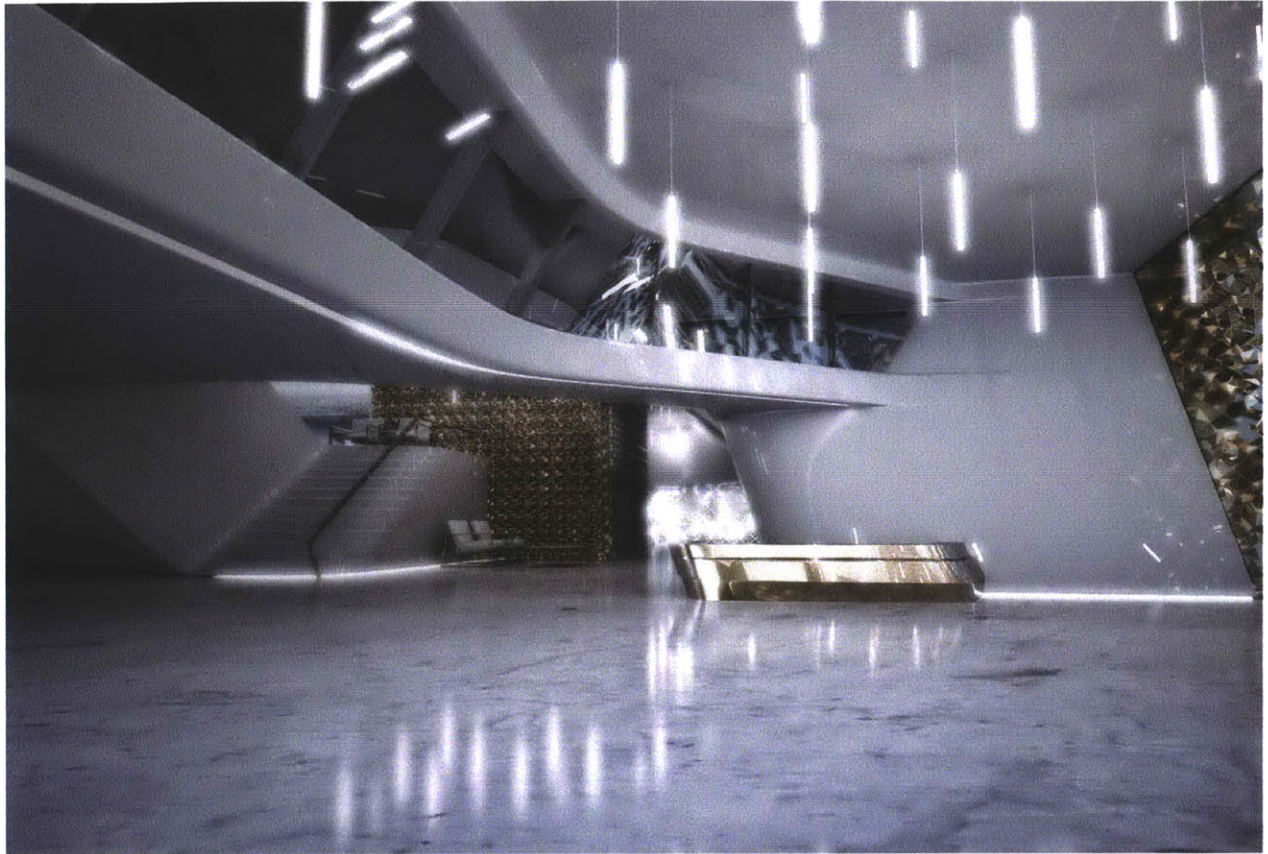


Clockwise from Left: Rooftop Infinity Pool, Retail View, Club View.

Clockwise from Right: Courtyard View, Skylight View, Gym View







Clockwise from Right: Luxury Lobby, SRO Jacuzzi, SRO Lobby

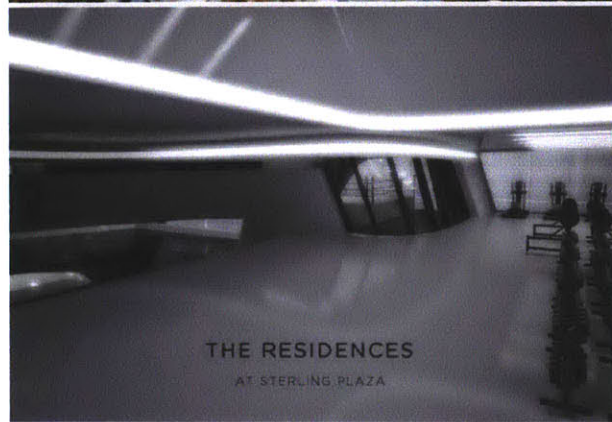
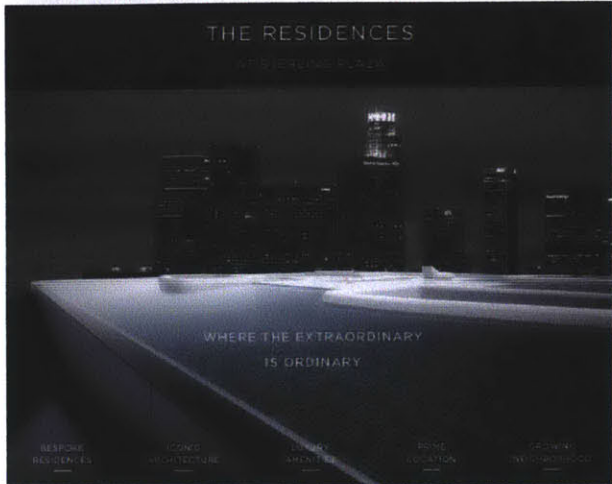




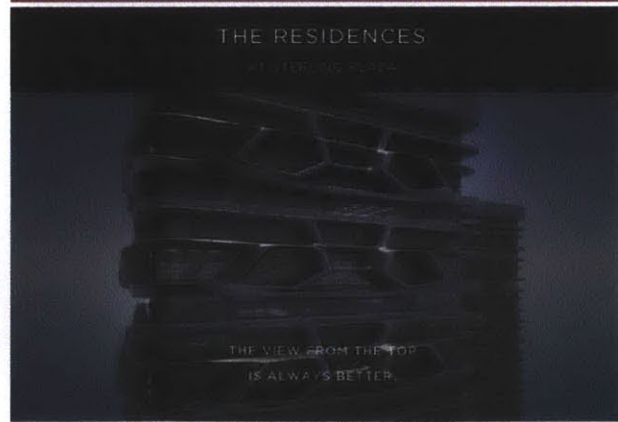
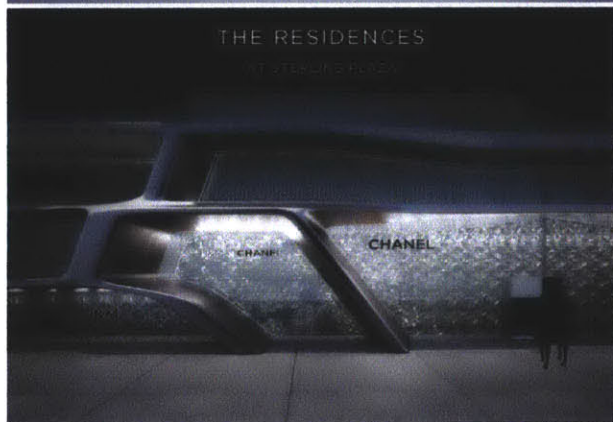
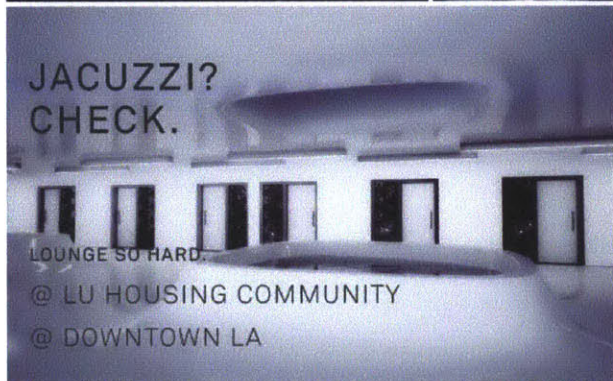
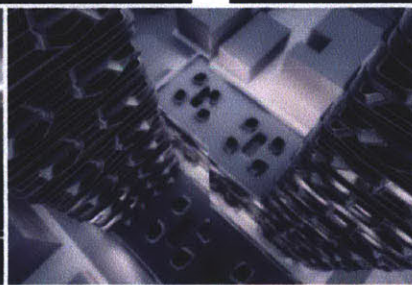
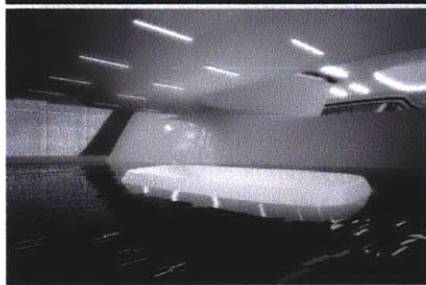
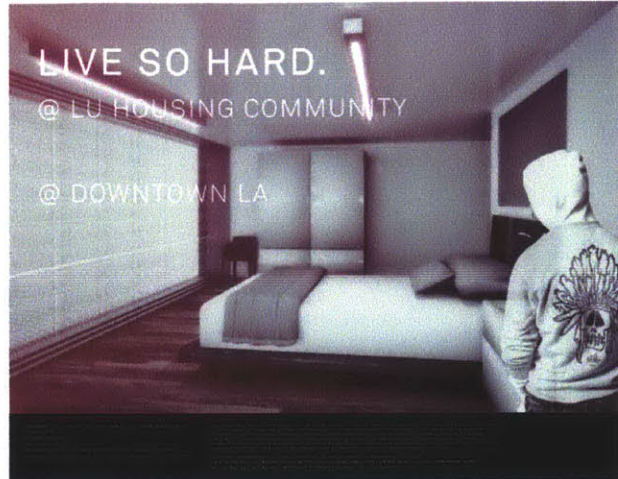
Left: SRO Unit, Right: Luxury Unit





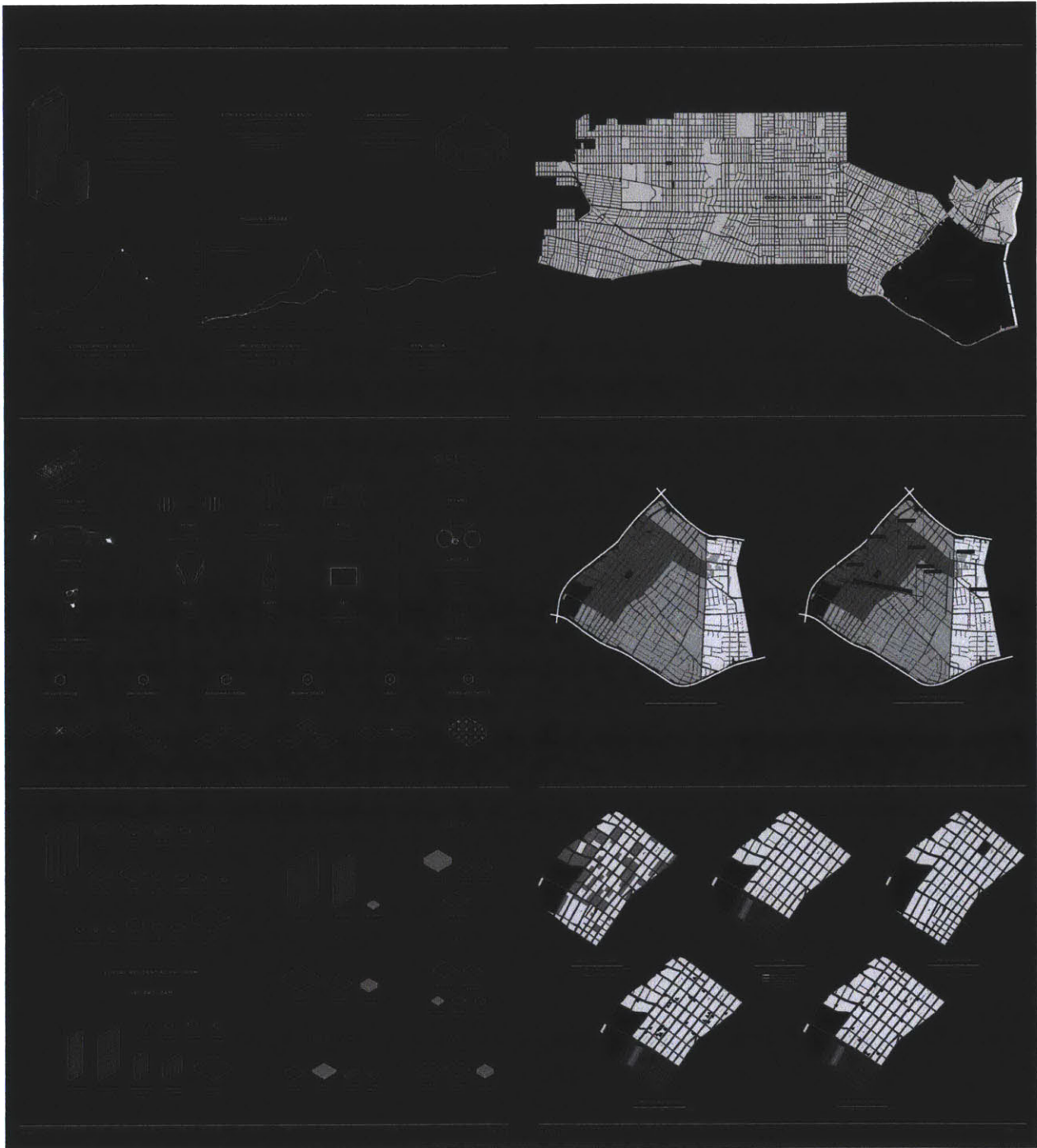


Marketing Campaign

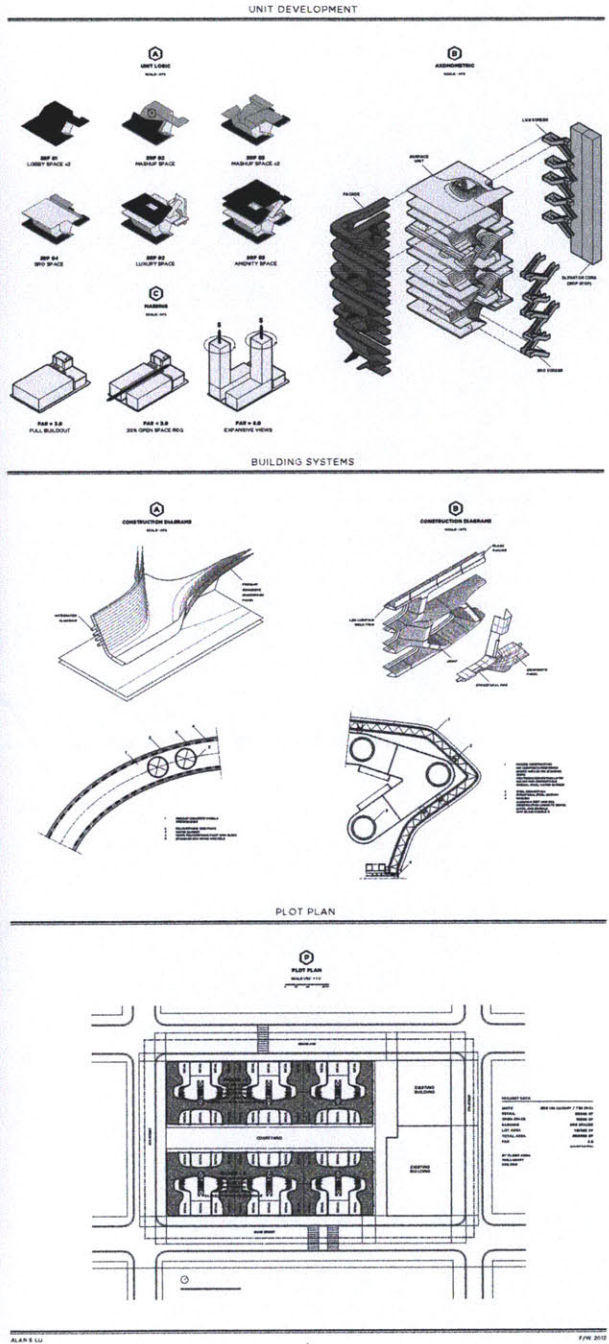
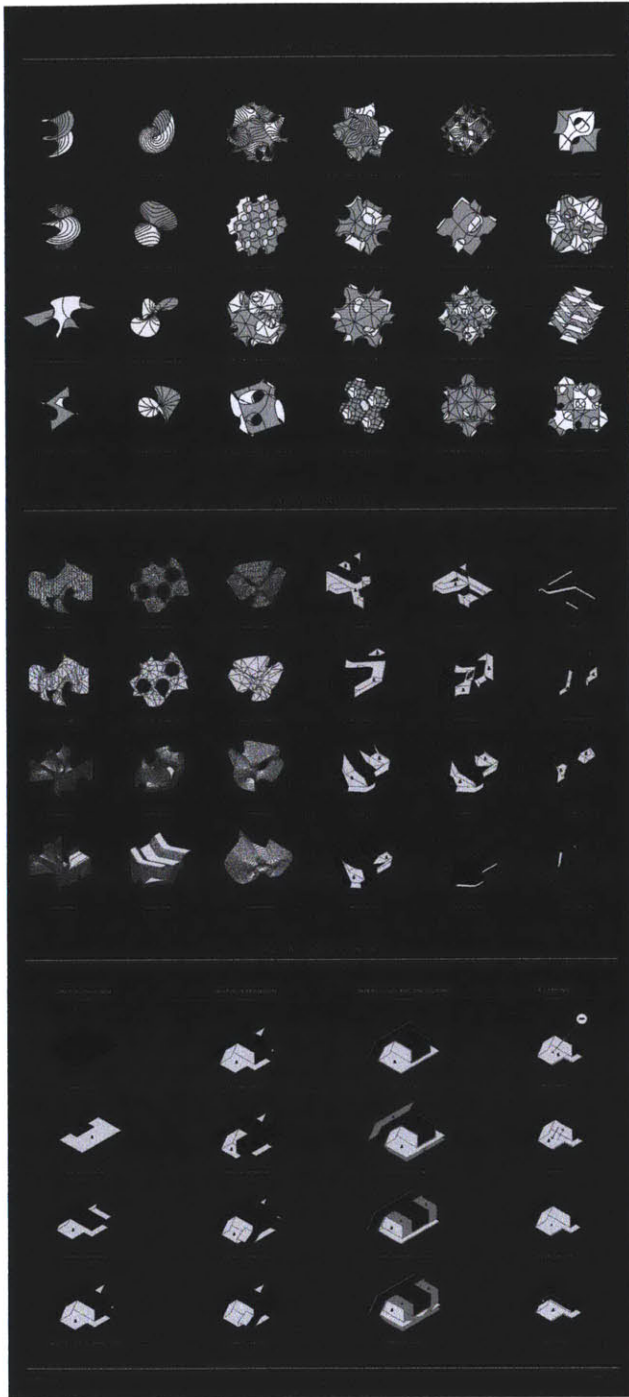


**V**  
**APPENDIX**

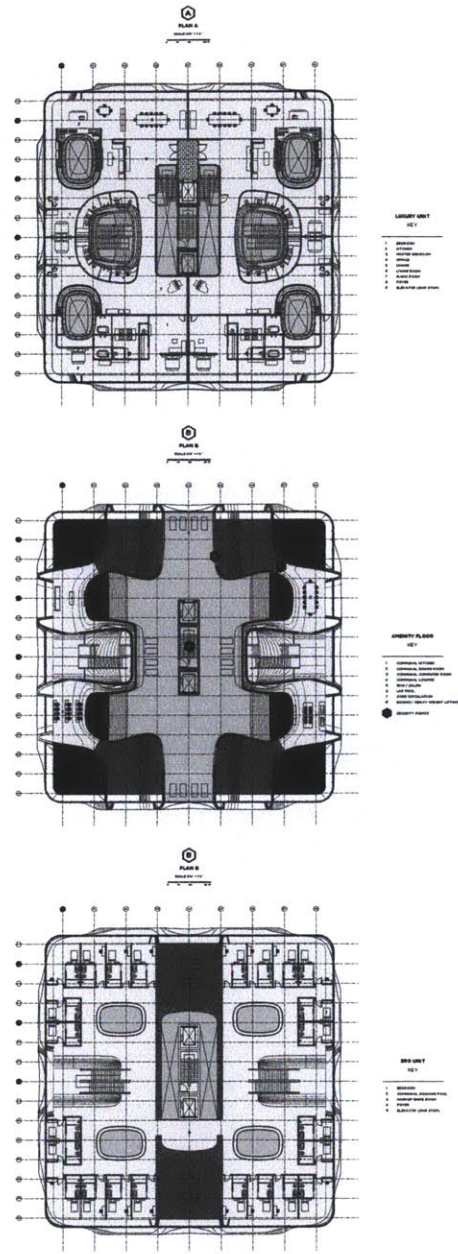
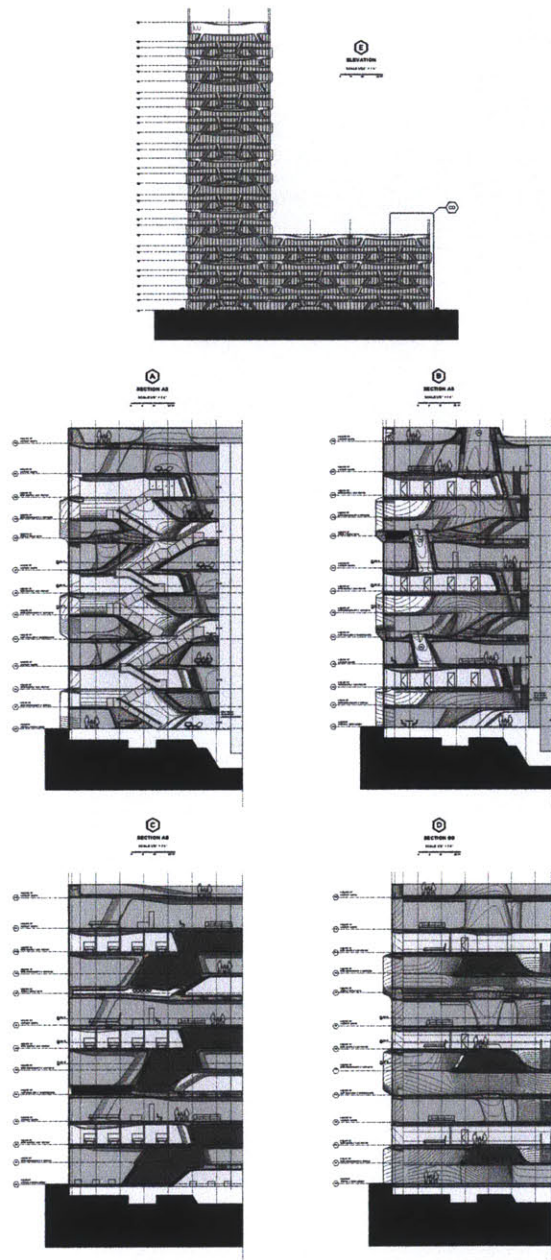
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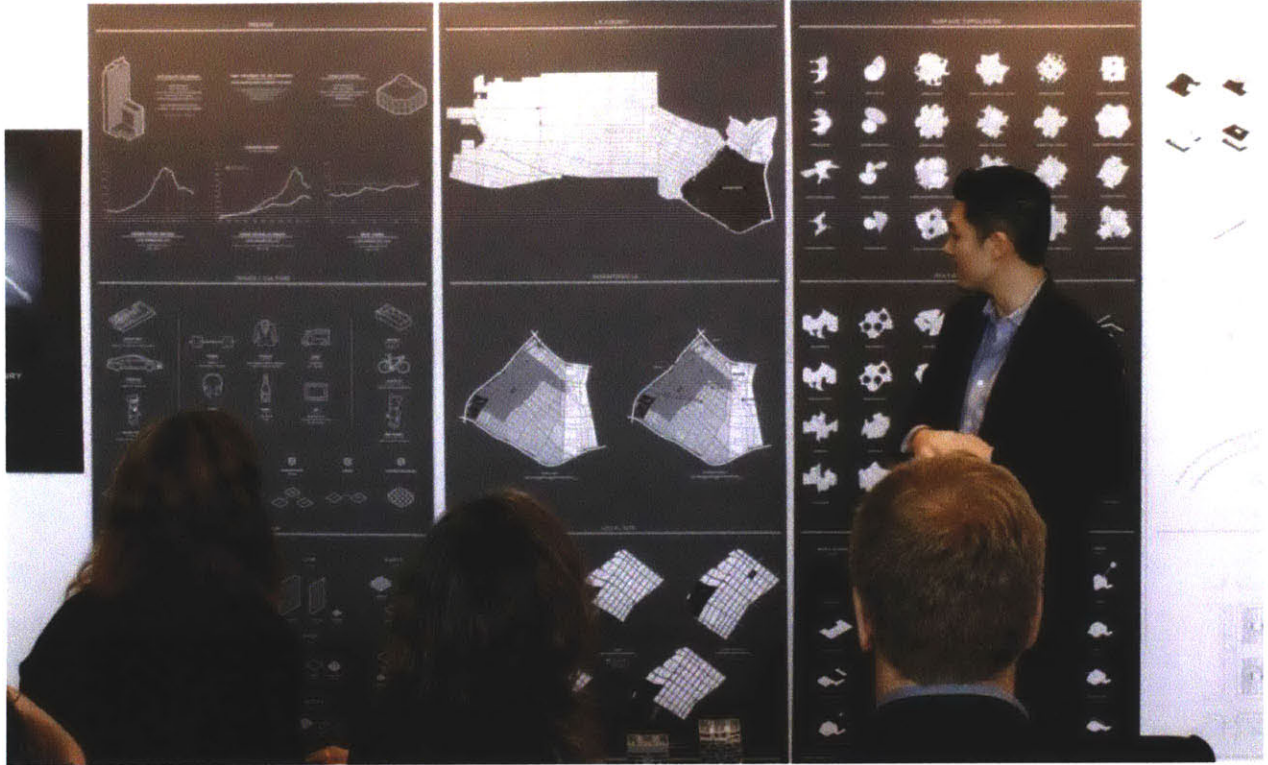
Final Board 1, 2



Final Board 3, 4

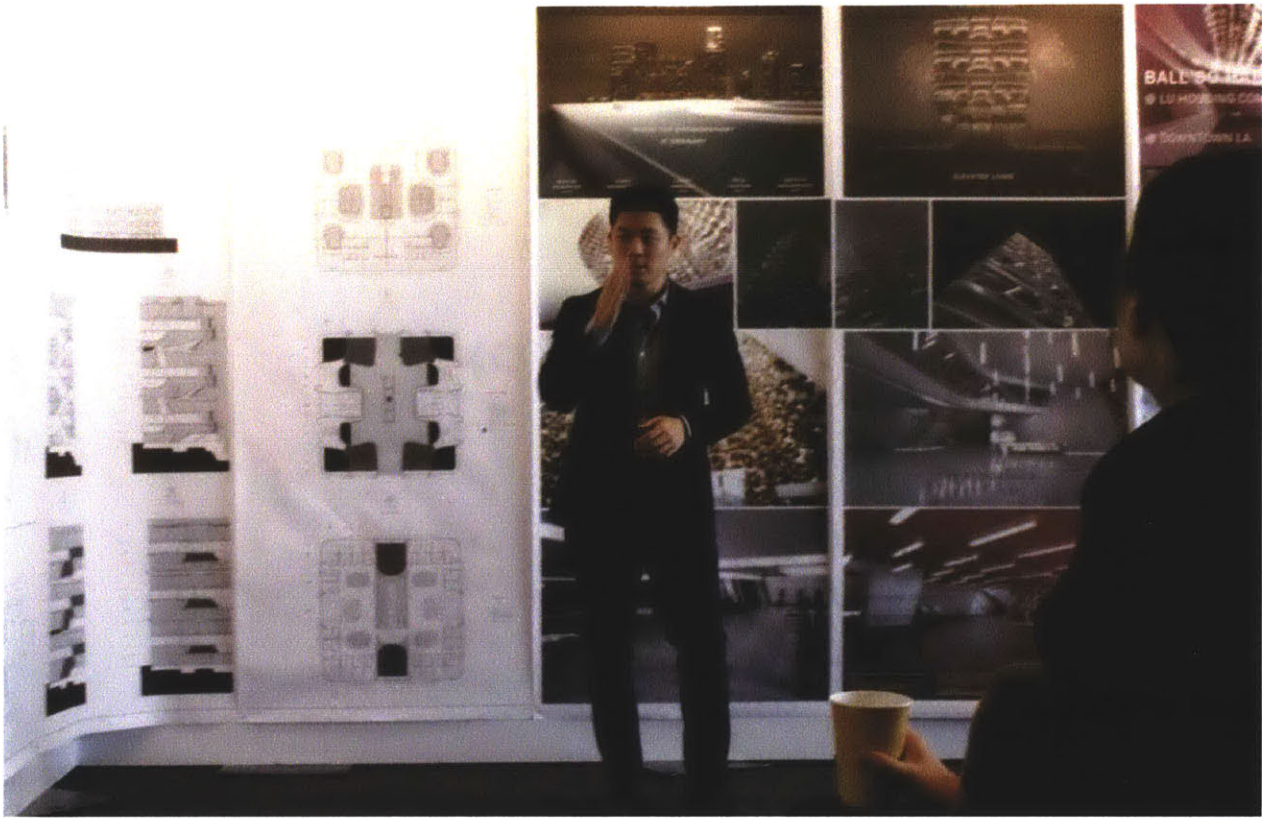


Final Board 5, 6



Final Review/Defense





Final Review/Defense

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# **PRECARIOUS LUXURY**

by

Alan S. Lu

B.A., Architecture 2009  
University of California, Berkeley

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 2013

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