

AN EMERGENT SPACE FOR SOCIAL FLUCTUATION



財團法人全坤建設文教基金會
2010台灣區建築系所 學生競圖

都市集合住宅未來篇





THE VERTICAL VILLAGE

an emergent space for social fluctuation >>

PHASE I
informal urbanism research:
an emergent space for social fluctuation
>> Nan Ji Chang public housing

PHASE II
high rise residential building design:
the vertical village
>> Model in Sin-Yi development district



PHASE I

informal urbanism research:

an emergent space for social fluctuation

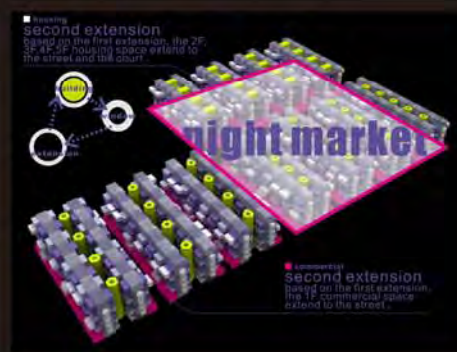
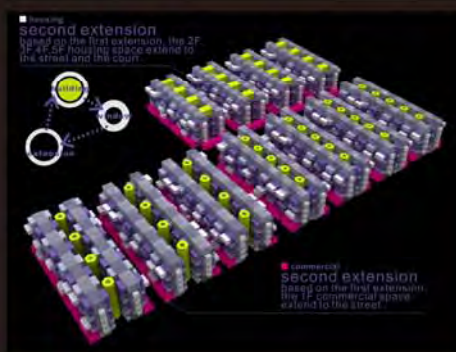
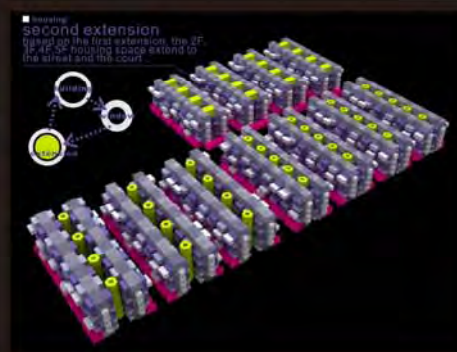
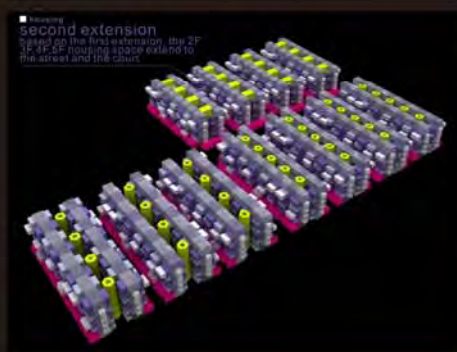
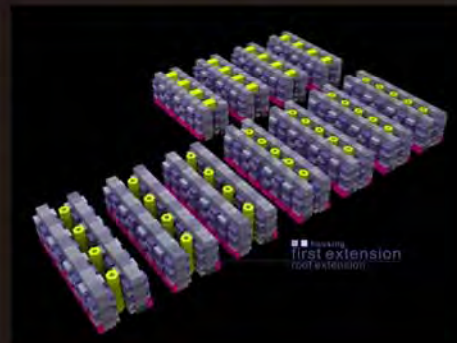
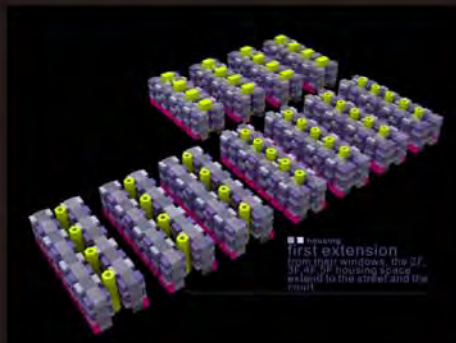
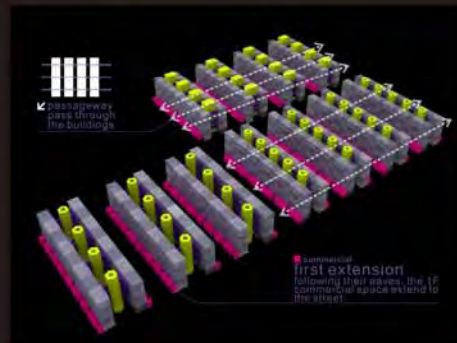
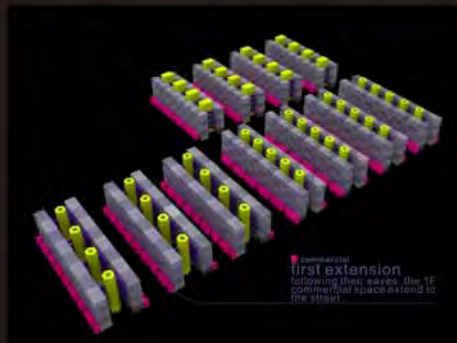
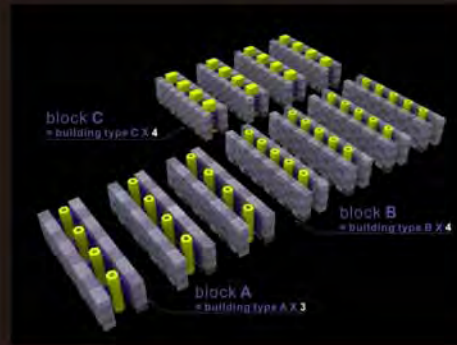
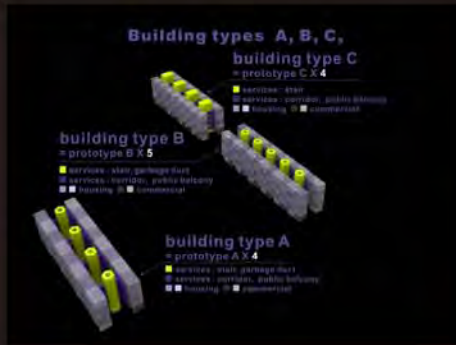
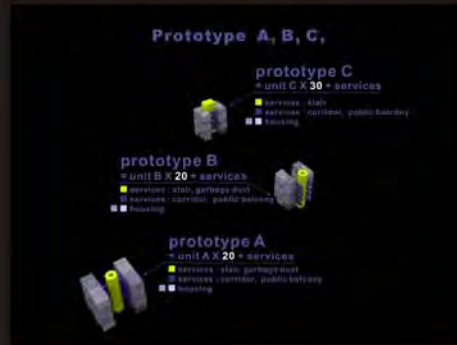
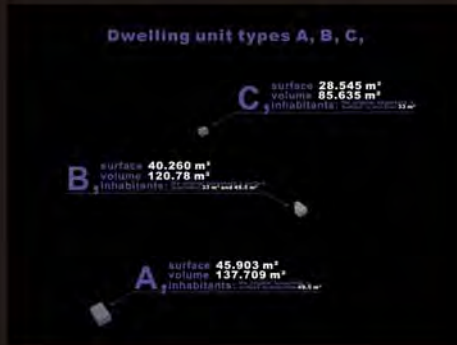
>> Nan Ji Chang public housing



The phase 1 **Nan Ji Chang public housing** is a beginning of the housing development in Taiwan in 1964. The housing type changed from traditional courtyard and row houses to the public housing for cost effect and physical environmental comfort.

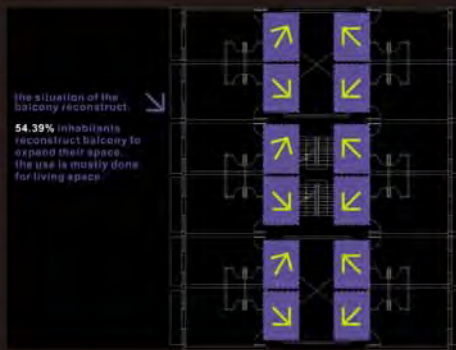
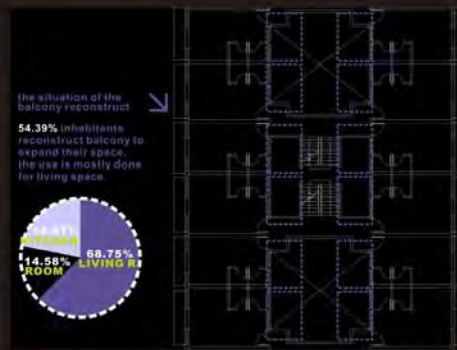
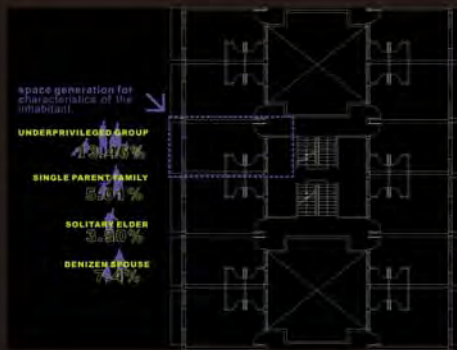
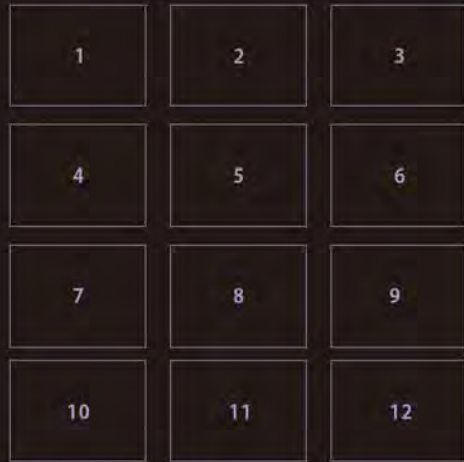
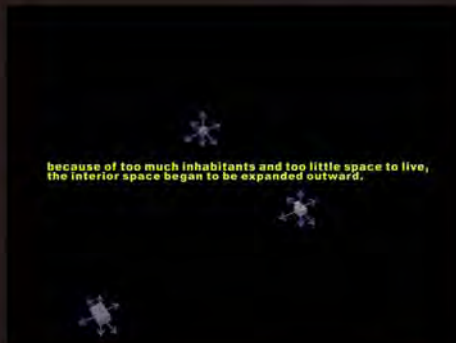
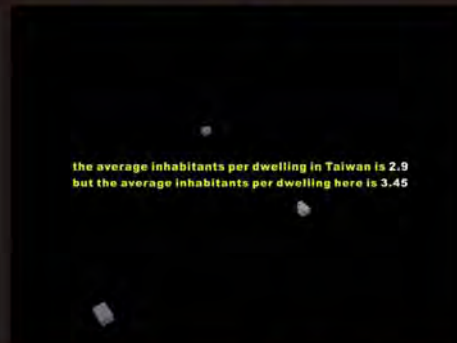
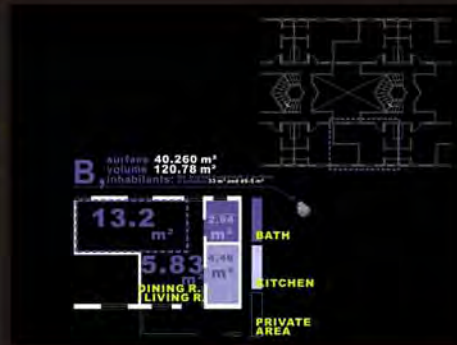
However when the Taiwan society is approaching an aging population as well as a great diversity of family types, the existing housing types are hard to respond the relationship between different inhabitants and their dwellings. **The emergent space for social fluctuation** emerged based on the housing types here.

**an emergent space for
social fluctuation >>**



1	2	3	4
5	6	7	8
9	10	11	12

- 1 南橋場住宅單元主要依據空間大小分為A,B,C三種型態
- 2 根據三種型態所產生的原型(服務單元,住宅單元)
- 3 由原型所產生的建築型態(服務單元,住宅單元,商業活動)
- 4 由建築型態所組成的小型街區
- 5 初步擴張:一種商業店家會利用現有的街道結構將商業空間向街道延伸
- 6 一種商業區每棟樓之間都有街道可做橫向性的連結
- 7 初步擴張:二,三,四,五樓的住戶會利用窗口將他們的居住空間向街道以及內庭延伸
- 8 初步擴張:五樓住戶頂樓加蓋成為第六層
- 9 二次擴張:以第一次擴張為基礎,二,三,四,五樓的住戶又再次將居住空間往街道以及內庭延伸
- 10 因此擴張,將增建視為建築物,在建築物間置,以間置為結構再增建成為在此地的特殊鐵環環套
- 11 同樣的,一種商家也會在增建的地方再加上兩層,並以間置為基礎再一次進行擴張
- 12 因為建築物一種彼此環疊,在一種的商家成為了小型商業區也就是今天所見到的南橋場夜市



- 1 南機場A型住宅單元平面使用現況
- 2 南機場B型住宅單元平面使用現況
- 3 南機場C型住宅單元平面使用現況
- 4 在臺灣每戶住宅的平均面積為108.57m²
然而在南機場不論ABC三種類型面積均小於平均值
- 5 臺灣每戶公寓的平均住戶為2.9人
但在南機場每戶平均住戶為3.45人
- 6 由於太多的人口以及太少的居住空間，導致住戶將居住範圍向外擴張
- 7 一對夫婦的空間使用模式
- 8 當這對夫婦有小孩後，擴充他們的居住面積，來因應居住需求
- 9 夫婦年老後孩子離開家庭，將之前的填補改為居住空間
- 10 在此地區的居民特徵，有較高的老人比以及單身住戶
- 11 中庭的增建狀況：54.39%的住戶將他們的居住空間往中庭延伸，然而中庭的增建以客廳居多，餐廳次多，當臥房減少
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the average inhabitants per dwelling in Taiwan is 2.9
but the average inhabitants per dwelling here is 3.45



**because of too much inhabitants and too little space to live,
the interior space began to be expanded outward.**



the average surface of apartments in Taiwan is 108.57 m²



space generation for characteristics of the inhabitant.

UNDERPRIVILEGED GROUP

13.46%

SINGLE PARENT FAMILY

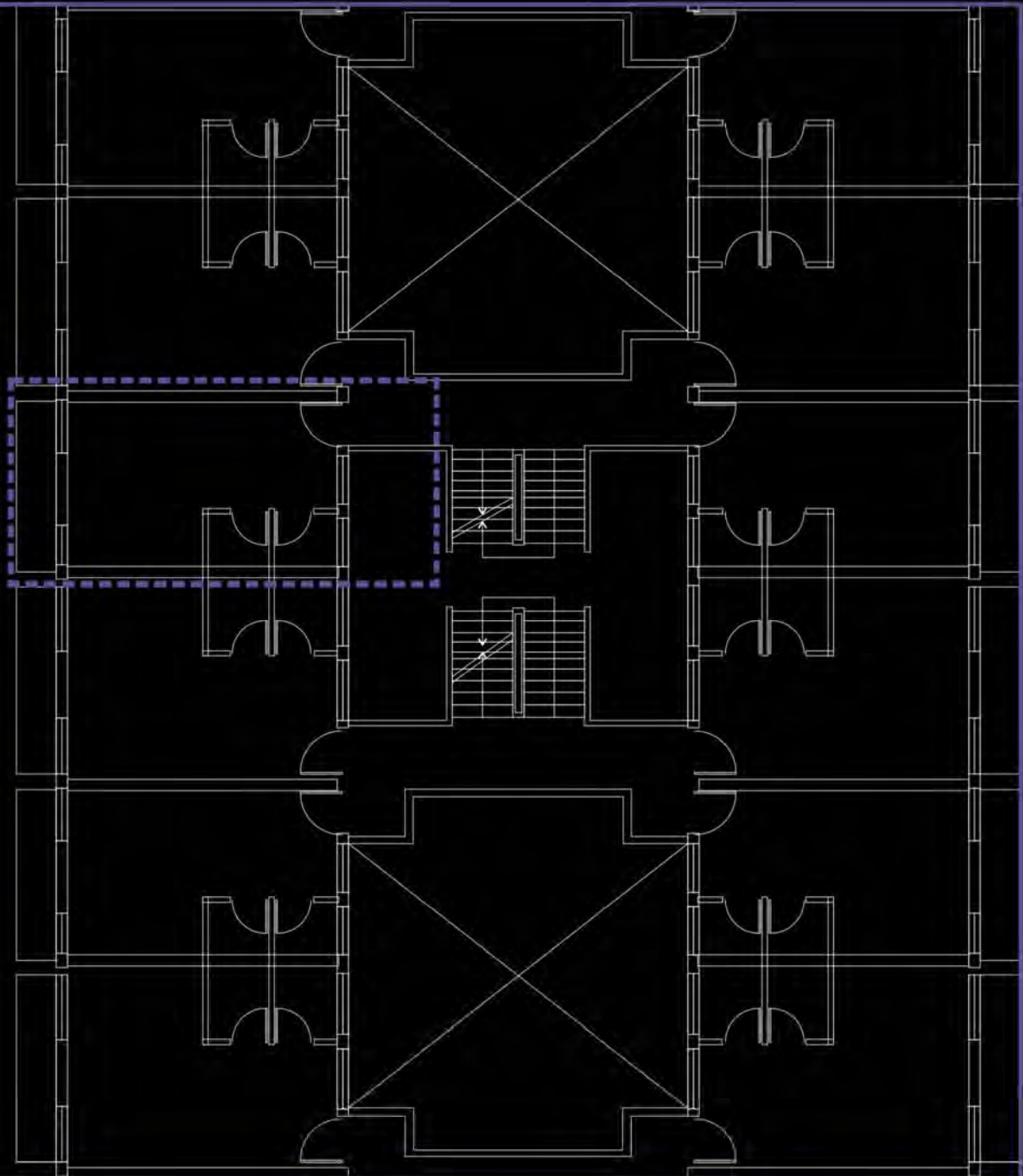
5.01%

SOLITARY ELDER

3.90%

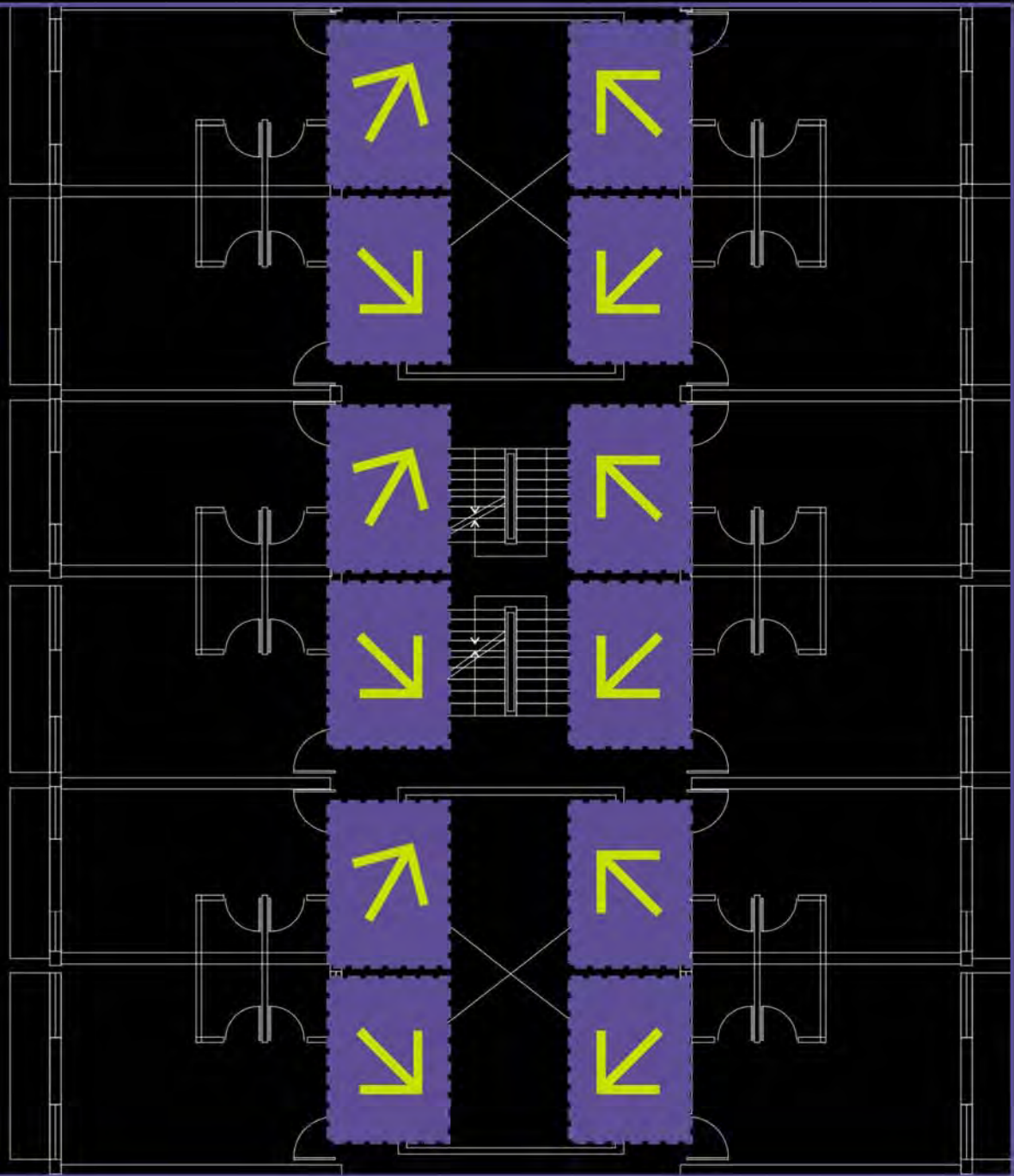
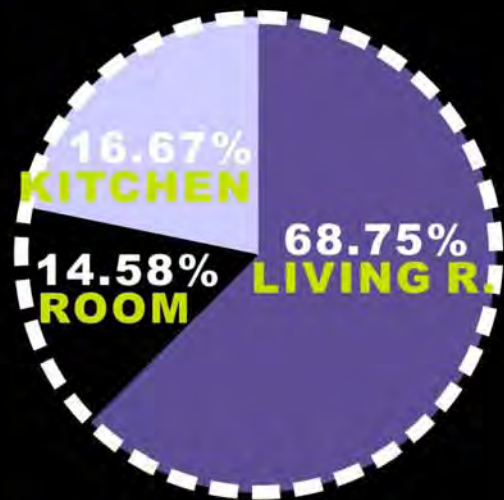
DENIZEN SPOUSE

7.4%



the situation of the balcony reconstruct.

54.39% inhabitants reconstruct balcony to expand their space. the use is mostly done for living space.



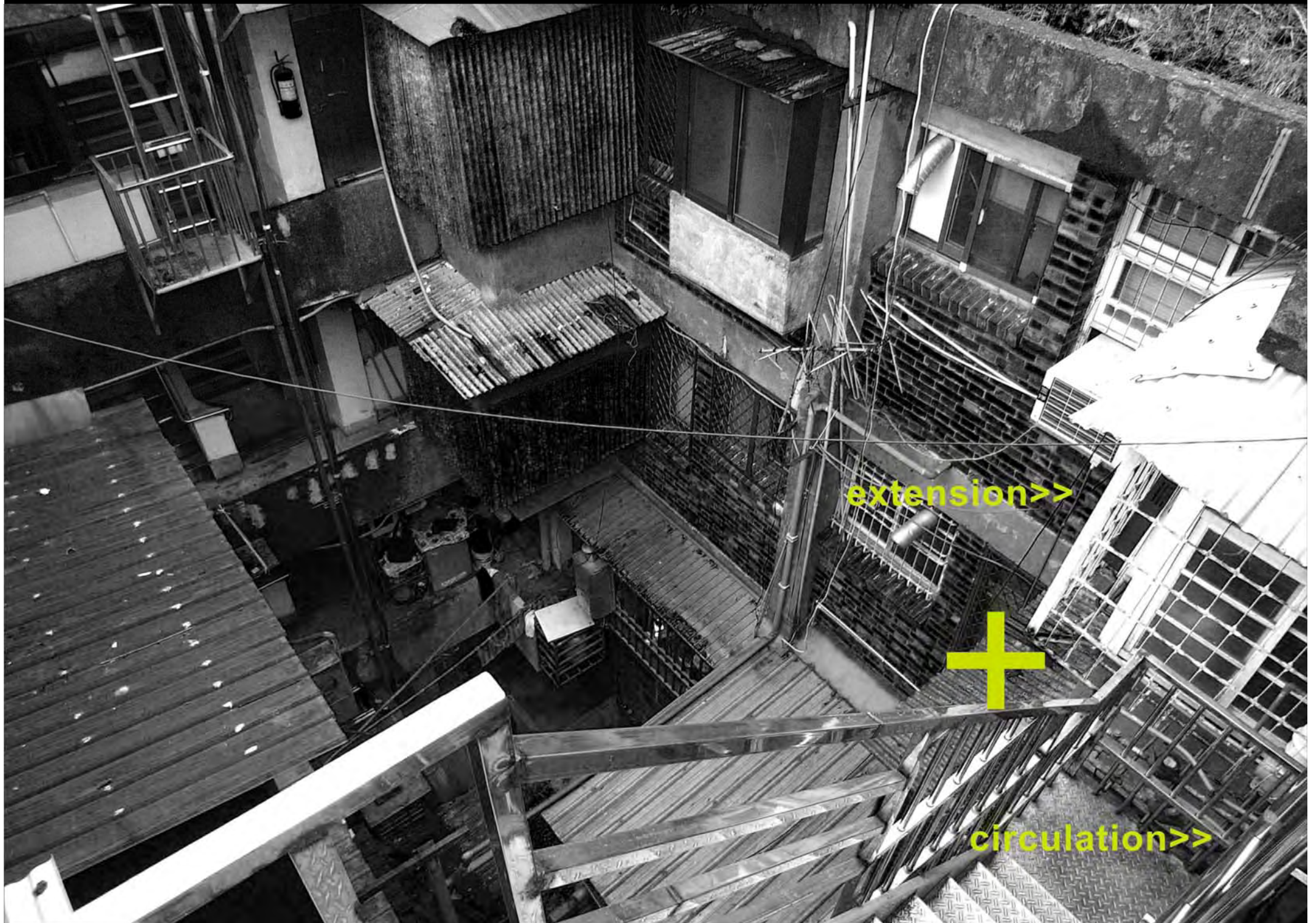


**social scenarios:
public space as a
living room.**

the extended living
space generation
made the neighborhood
relationship more
complexity.

an emergent
space for social
fluctuation





extension>>



circulation>>



= ?

PHASE II

**high rise residential building design:
the vertical village**

>> Model in Sin-Yi development district



1. Plot size: 90m x 40m (3m sidewalk along two sides)
2. Housing units: start with 50 units, later to be extended to 80 to 100 units. Up
3. No height limit. (If it is airy and porous, it can go quite high. Limits come from the structure they choose.)

Site condition >>

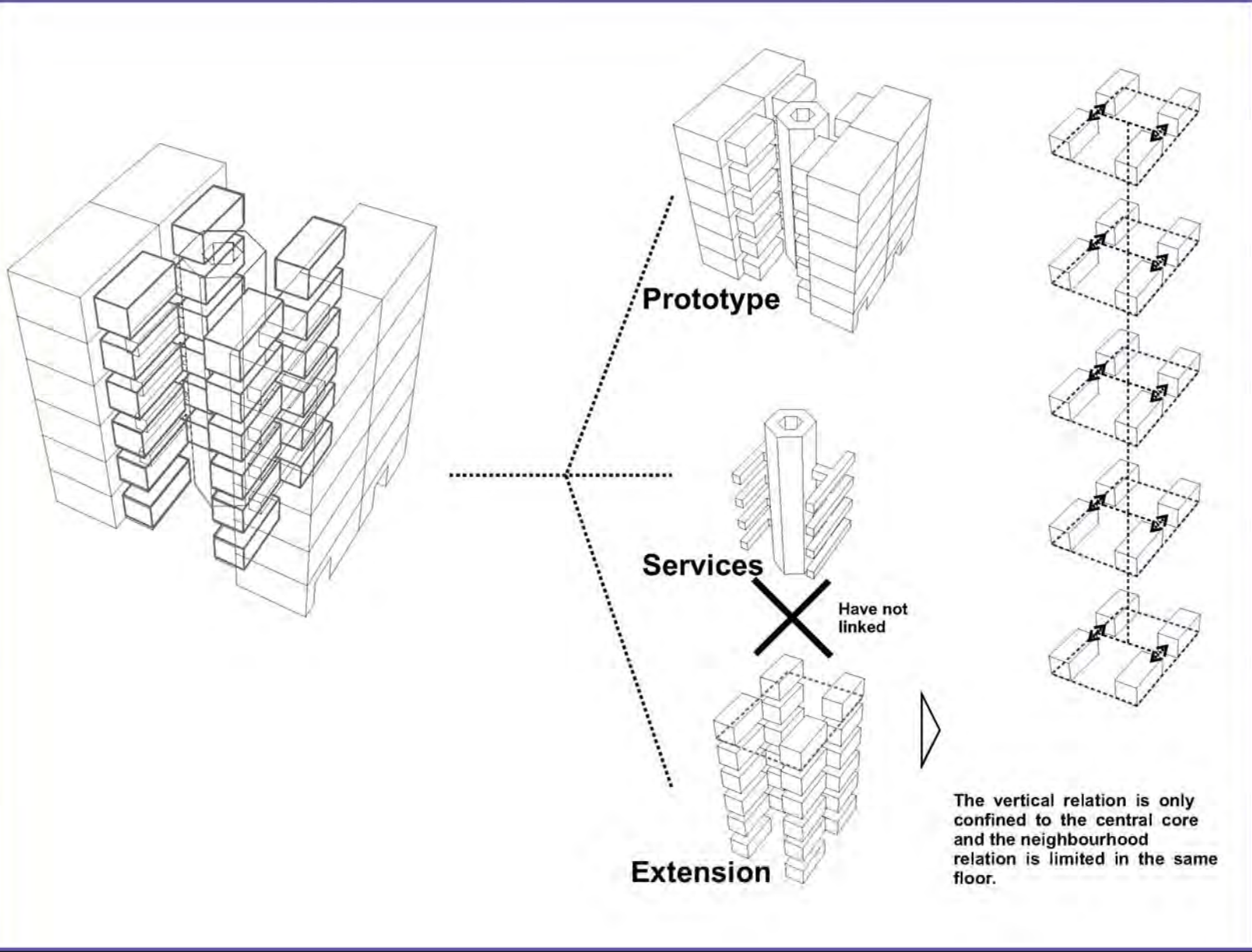
PROJECT

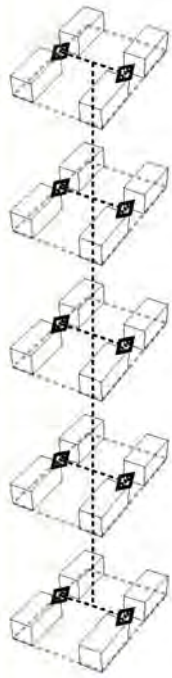
an emergent space for social fluctuation >>

Location: Taipei Sin-Yi development district B6
Building size: 40m x 28m x 96m
Housing units: 80 to 96 dwelling units.
Program: housing, community activity facilities

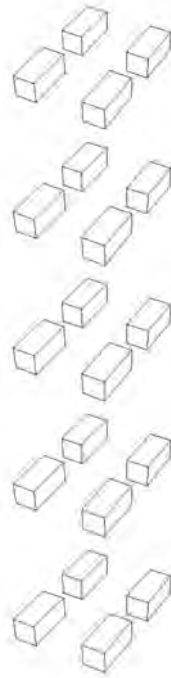
前言：
台灣都市化程度極高，大多數人住在都市環境中，而集合住宅又是最高效的居住型態。集合住宅可以在有限的土地上容納較多的居住人口。「多層」和「共用」是其特點；相對的綠地少、私密性差、生活空間受壓縮。現在的集合住宅中，人關在自己的小窩內，雖然人和人住得很近，但鄰里關係並不好，住在離地數十公尺的高度，竟像隔了天。因此人和土地也隔了天。在台灣的都市中，集合住宅的型態可能是不得已的必然，不過集合住宅的問題似乎未必都是必然的，台灣傳統厝的保守，以及法規的限制，使得台灣集合住宅永遠脫不了傳統長相。台灣的住宅型態正逐漸發展為以經濟考量為主的均質模式以及這建築的特有台灣文化，我們是否能以其他方式來改善這些現況，是否能以某種方式強化這些場所，使其重新具有活力，同時能注入高密度的容納力，兼顧經濟效益與生活品質，使一般中產階級也有機會入住在透過建築手法所創造的儀式化特殊空間，不再是一遍不變的三房兩廳，這建築的有趣性是否可以有效發揮變成台灣特有的新建築型態？本案希望探索可以表達台灣社會狀況的新建築型態且能擺脫傳統模式的限制。

操作手法：
本案嘗試以現存台灣非正式都市現狀(informal urbanism)，以唐樓與公寓住宅型態為出發點進行探討，根據城市空間不斷擴張的需求，面臨高密度發展的狀態，鄰里形成了相當緊密的社群關係，並也結合了極其濃厚的地方獨特性，是一種特有的「都市生態」。本案在此尋找一種方法，在2030年台灣城市面臨日益增進的發展需求與台灣世有鄰里生態能相互融合，以垂直向上的方式延伸鄰里關係的發展。





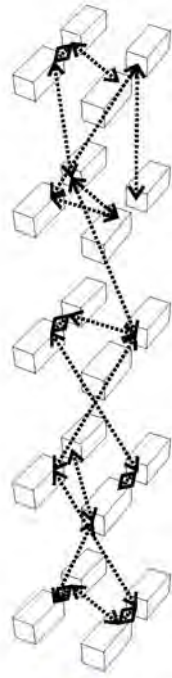
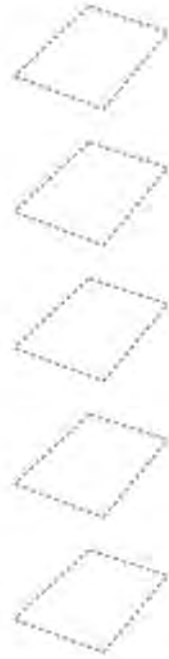
2D



extension / circulation



neighbourhood relation



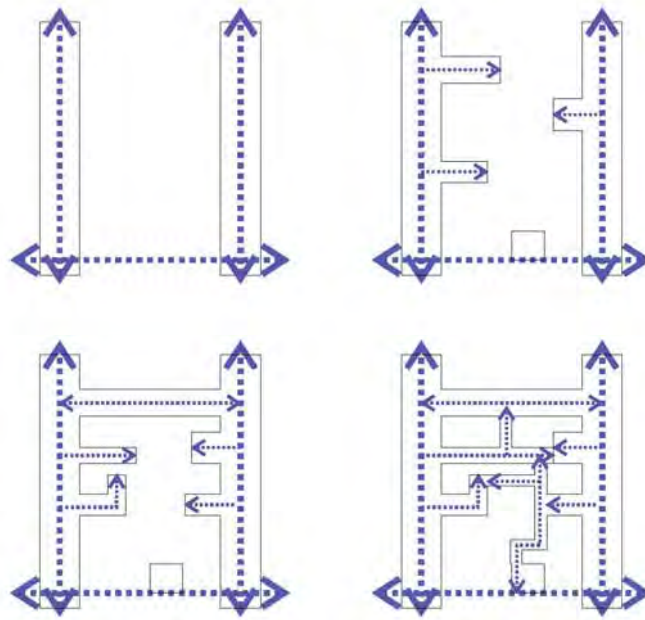
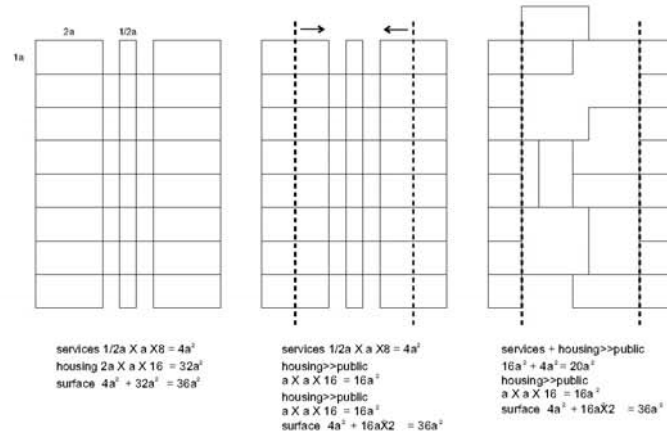
3D

merge extension and circulation

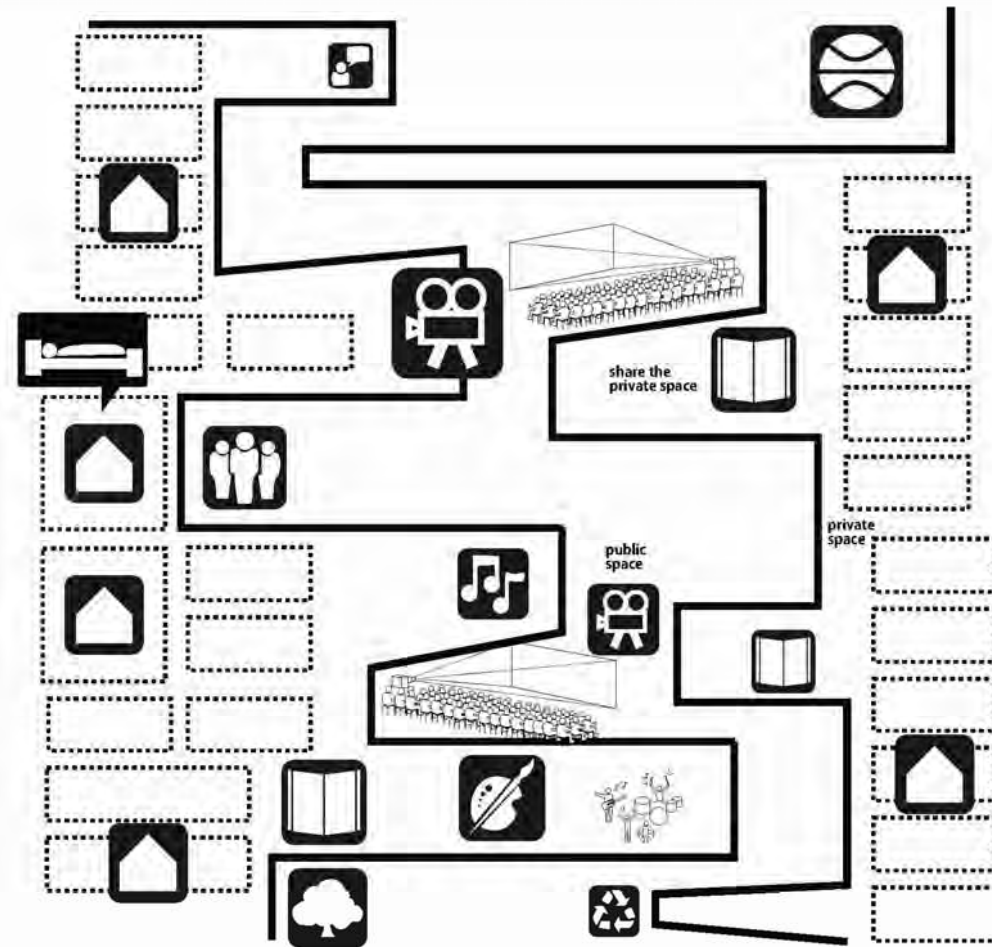


neighbourhood relation





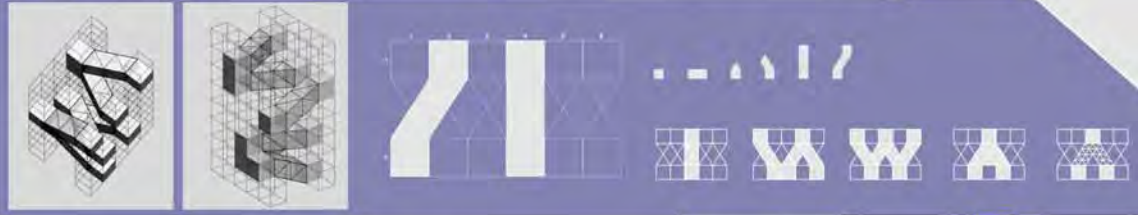
emergent space and circulation for social fluctuation



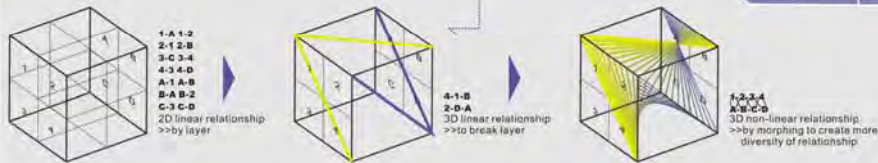
generating social scenarios

PROTOTYPE STUDY

public space prototype system



1



PROTOTYPE STUDY

public space prototype system



2

PROTOTYPE STUDY 1

+

PROTOTYPE STUDY 2

=

PROTOTYPE STUDY 3

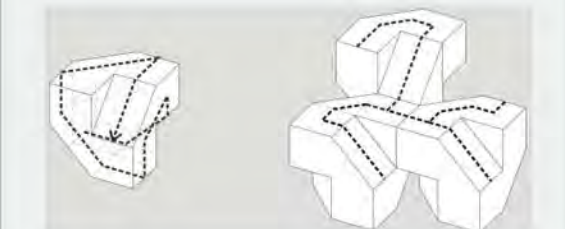
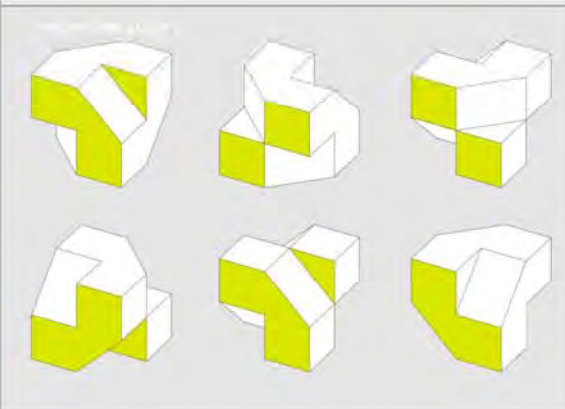
概念模型研究一
以平行的邊角格排列方式將原有
點型連結方式打破所提出的單元模型
，每個單元由同一層面的平面圖提供
為立體連結關係。不過連結方式還是
一片對一片的線性關係。

概念模型研究二
將單元間從線性關係變成3D的關係
連結，並發展出單一規矩的各種排列
可能。

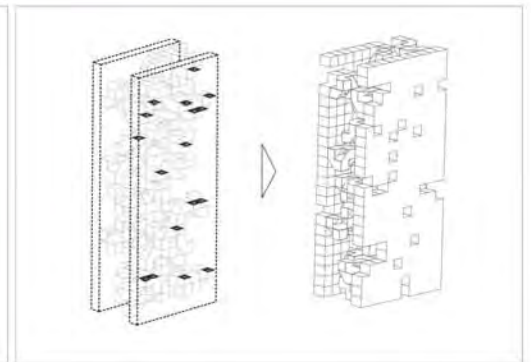
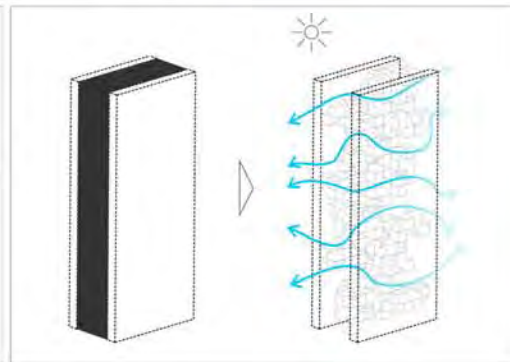
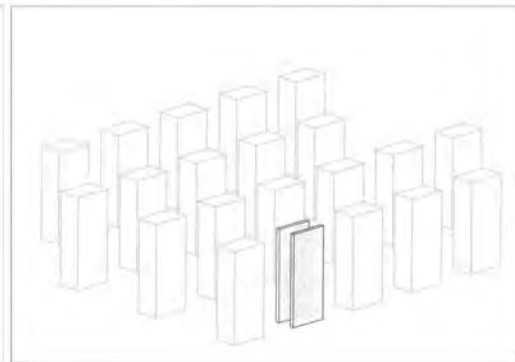
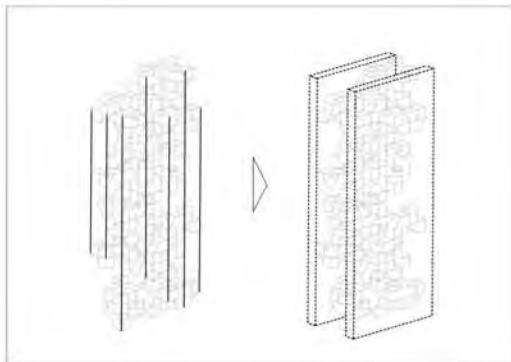
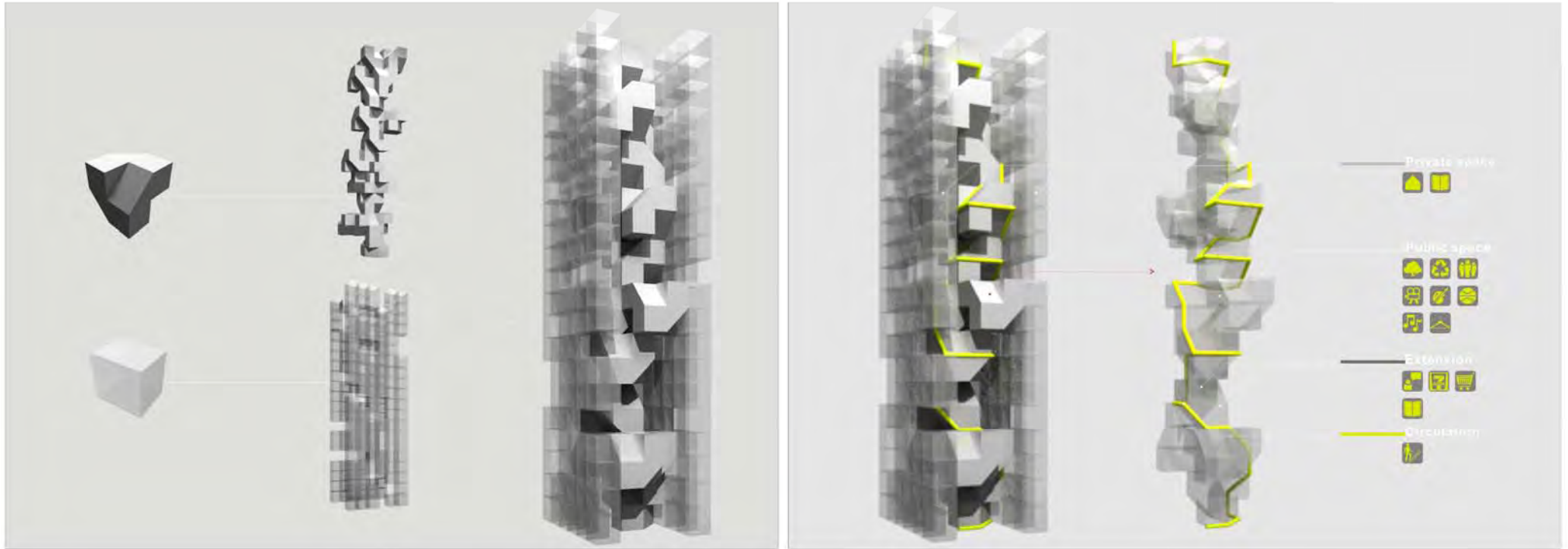
單元模型研究三
將模型研究一的有效率連結加上模型
研究二多元強韌的連結方式所提出的
點型關係模型。除了從空間兩種方式
的匹配外，也提供單元與單元間的
動線使用可能。

PROTOTYPE STUDY 3

public space prototype system

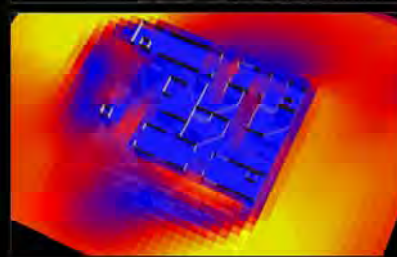
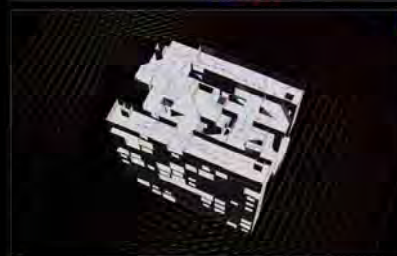
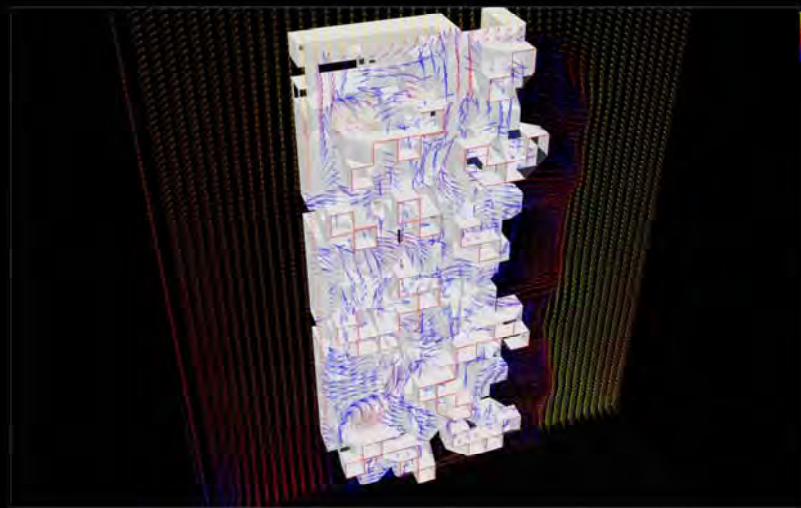
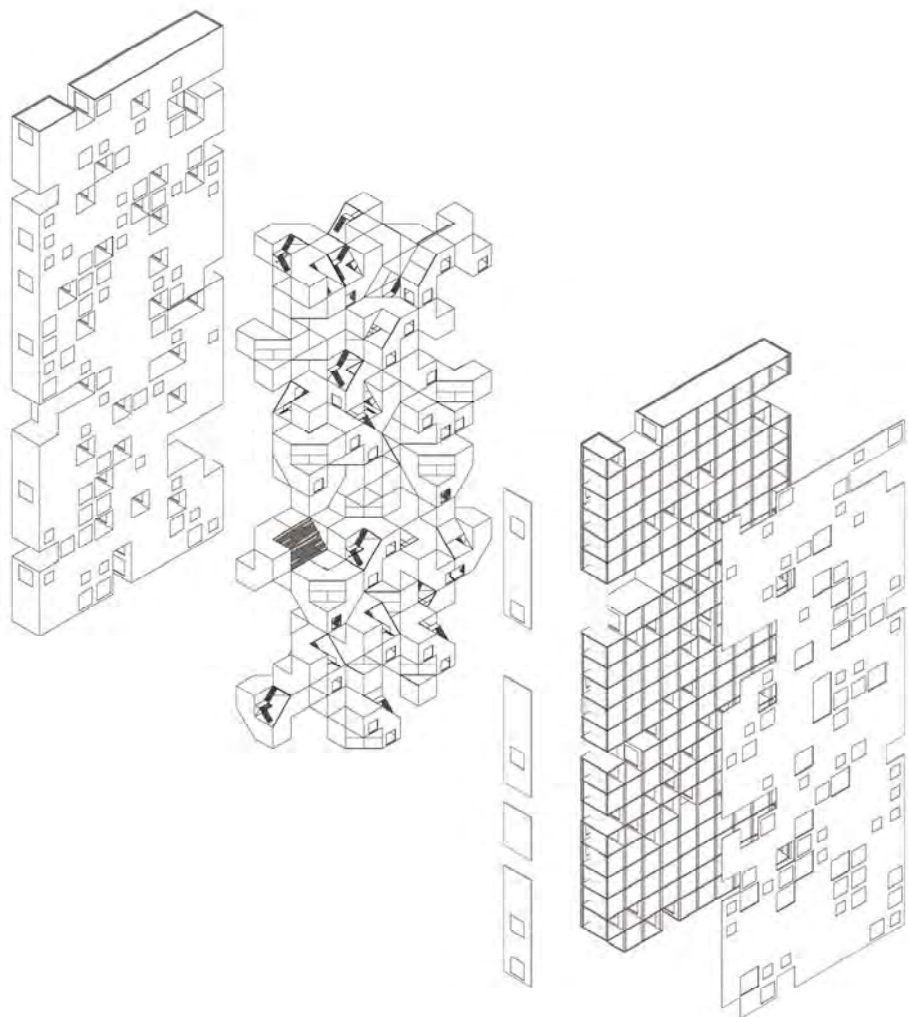






1	2
3	4
5	6

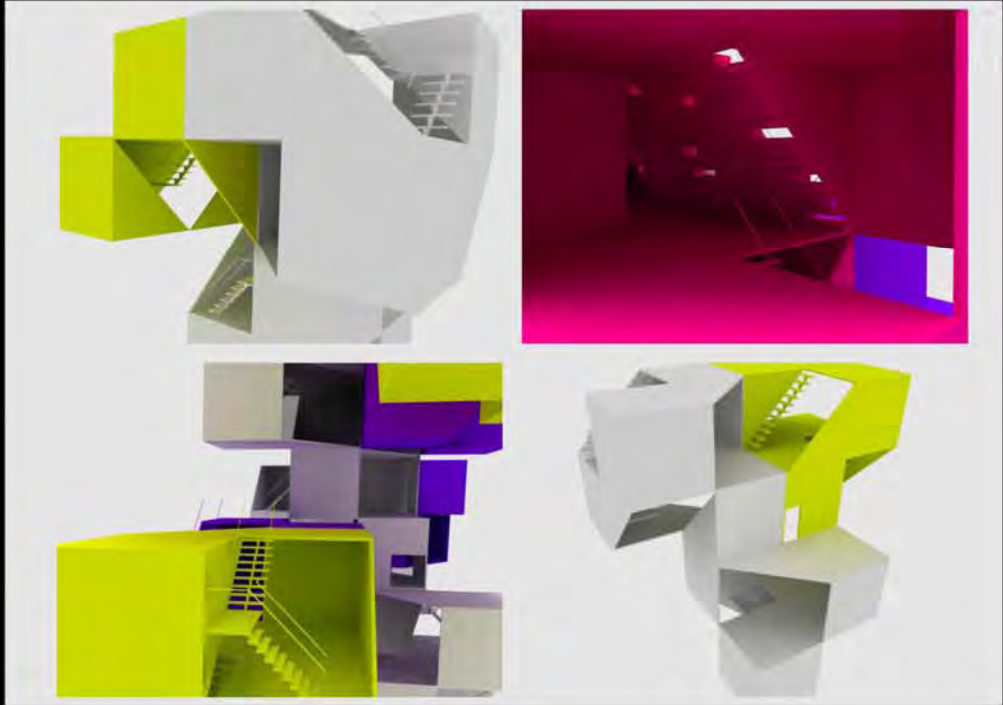
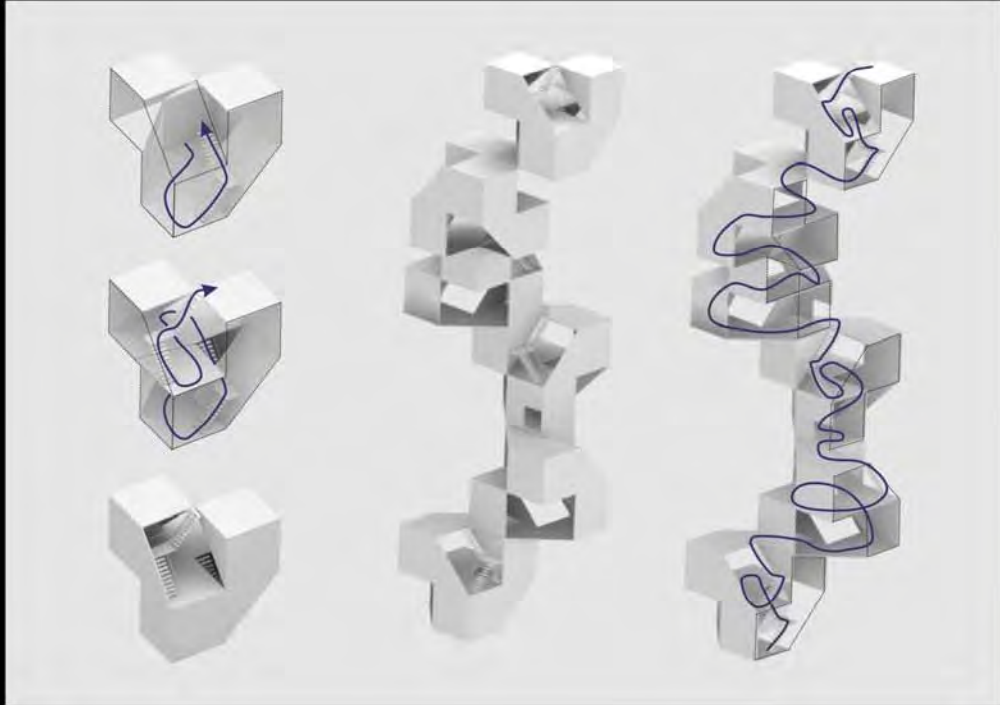
- 1 將單元分為公共跟私密兩部份，住戶除了有複雜的鄰里互動外也保有最基本的隱私空間。
- 2 將延伸出來的空間單元做堆疊所產生的大樓中庭動線，整合動線以及公共空間
- 3 將電梯設置於兩側的量體，達到中央單元堆疊的最高自由度
- 4 此種形式的建築在外觀上與一般建築無異，住宅對於都市而言是低調的背景建築
- 5 中央公共區域採光與通風
- 6 中間單元與兩側量體的連接定義了單側同一樓層彼此間的界線，集合住宅每戶將不再是單一的複製品，每戶的大小與邊界都有不同的定義

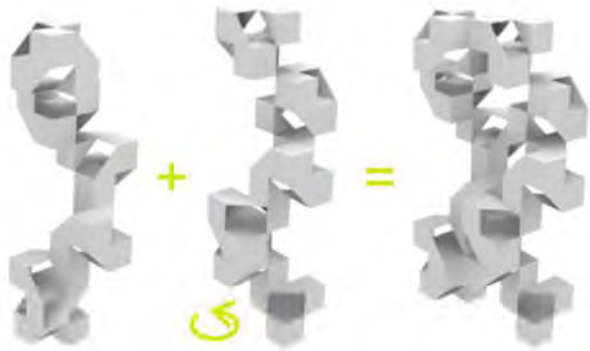


物理環境：

台北市地處副熱帶季風氣候區，屬於炎熱潮濕的氣候環境，夏季氣溫約為25.2°C-28.8°C，相對於其他季節，主動式空調系統需求較大，因此分析重點為夏季，夏季主要風向為東風，風速約為3.8 m/s，分析結果顯示，中央單元內通風效率良好，中央單元錯落式設計有利於冷熱空氣的交換，室內風速最高介於1.5m/s-2m/s左右，為適宜人居住的風速。

本設計大樓中央單元如波浪樓，可以削弱高層較強的風速，並且能夠達到良好的室內通風環境，因此可以大幅降低空調需求，達到節能減碳的效果。





public extension for main circulation
essentials: circulation, shop, etc.

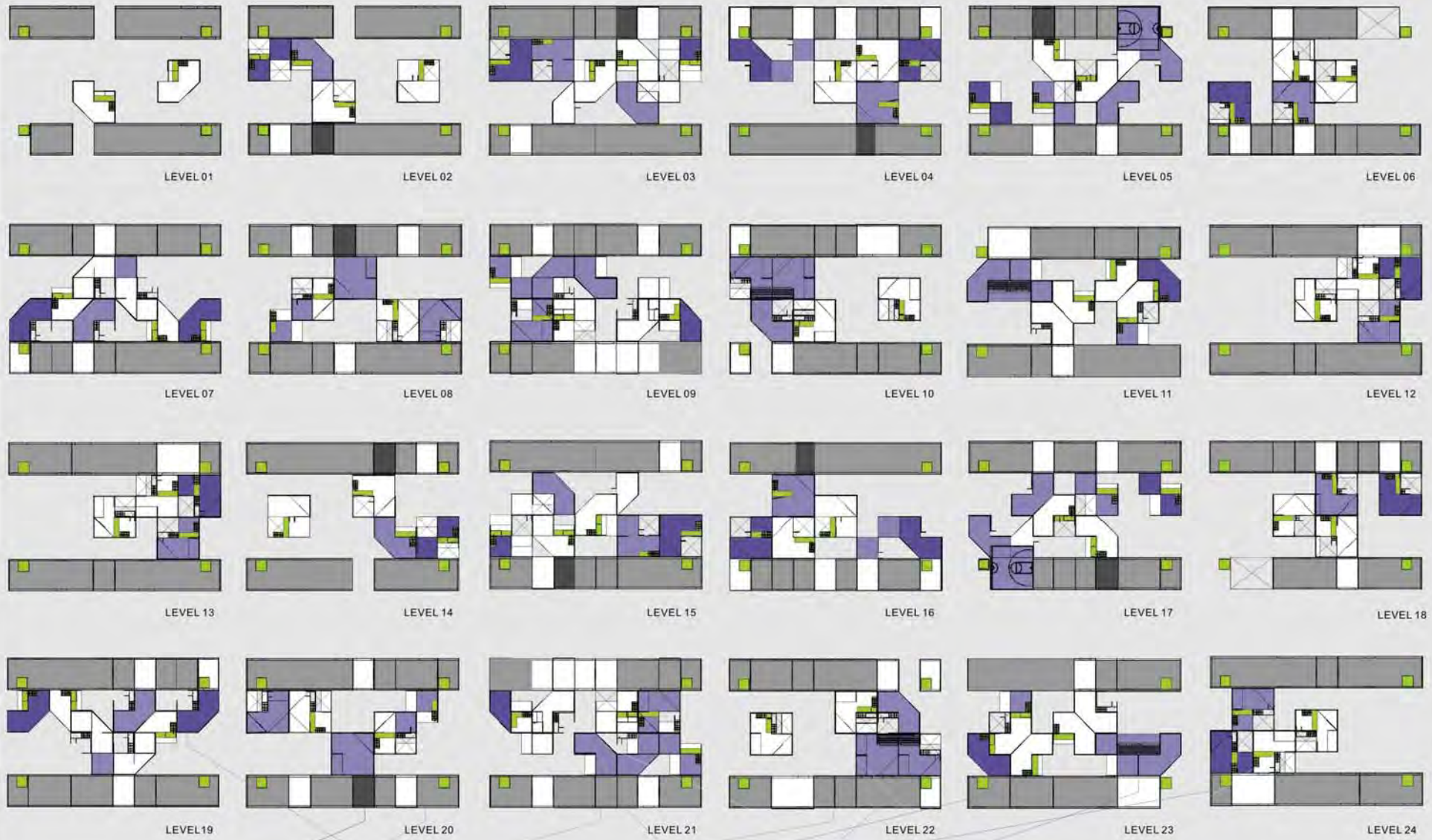
public extension for community activity
essentials: court, reading room, etc.

community activity
essentials: theater

public or private extension living space
essentials: living room, kitchen, balcony

private living space
essentials: bed, wc, shower



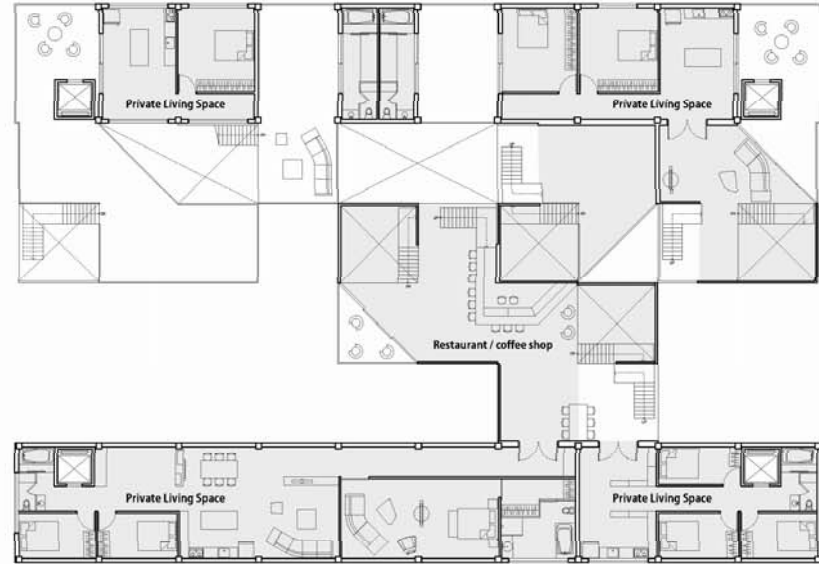


FLOOR PLANS

public or private terrace
 public or private corridor
 private living space essentials: bed, wc, shower
 public or private extension living space essentials: living room, kitchen, balcony
 public extension for community activity essentials: court, reading room, theater, etc.
 public extension for main circulation essentials: circulation, shop, etc.
 circulation essentials: stair, elevator.



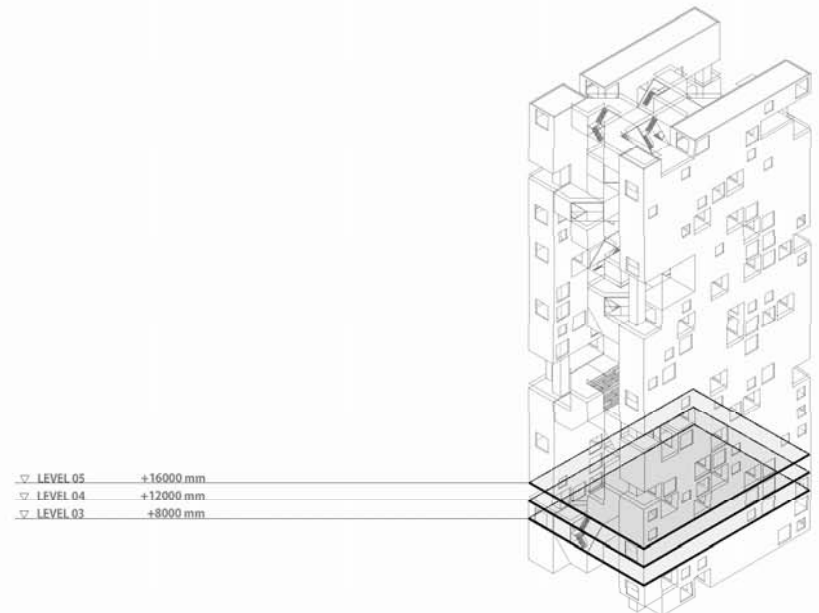
LEVEL 03 4M 1M 0



LEVEL 04 4M 1M 0



LEVEL 05 4M 1M 0



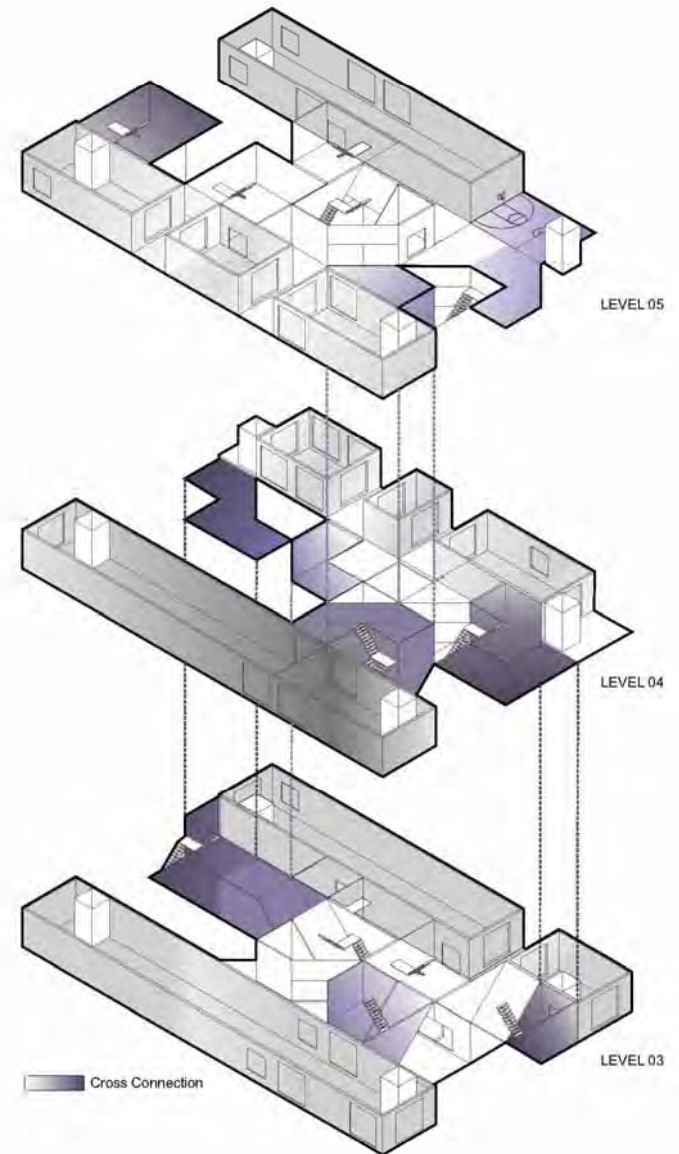
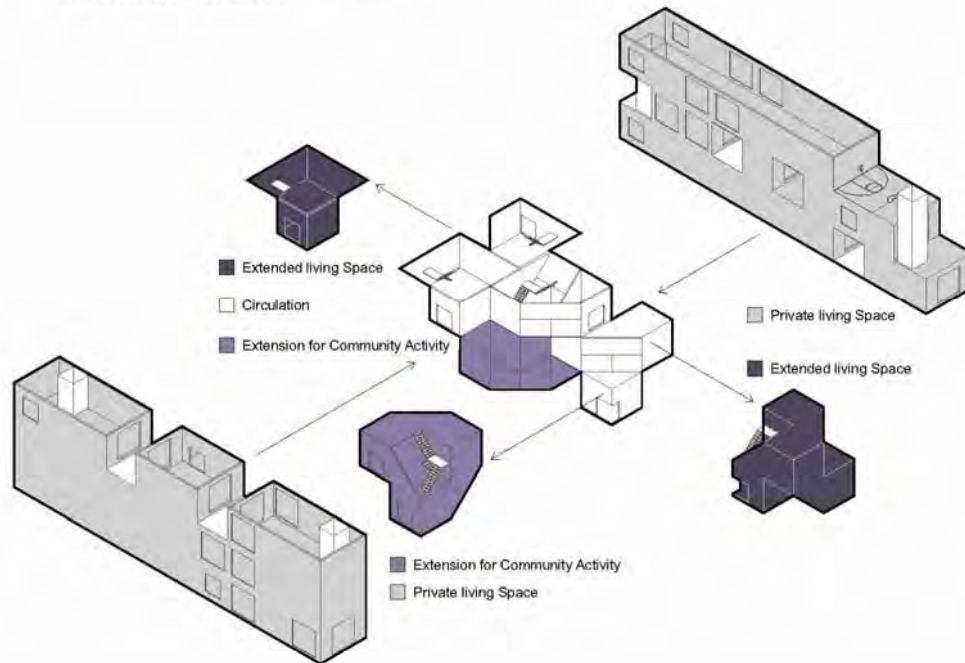
- ▽ LEVEL 05 +16000 mm
- ▽ LEVEL 04 +12000 mm
- ▽ LEVEL 03 +8000 mm

Combinations of Programs

單元整合

將住宅與公共空間以及社交場整合在此系統中，除了滿足基本的高住宅活動需求外，更提供了額外對於垂直水平三度空間中無邊際的空間使用模式與方法的可行性，不確定的使用自由應使居住方式更具靈活性。

兩個為私居住宅，中央為主要動線，配合延伸出來的社交空間以及住宅空間，單元整合後將具有高度彈性的使用模式，可依不同的需求將機能延伸進入其他領域。





SITUATION GROUND LEVEL 01 1/2000





West



South



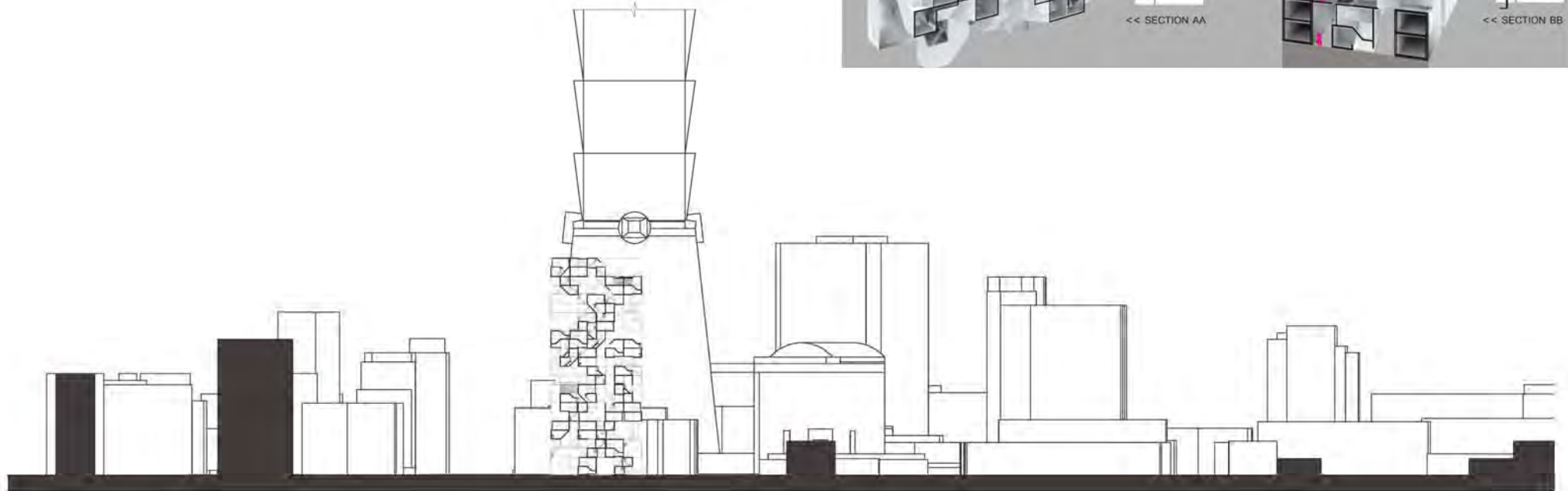
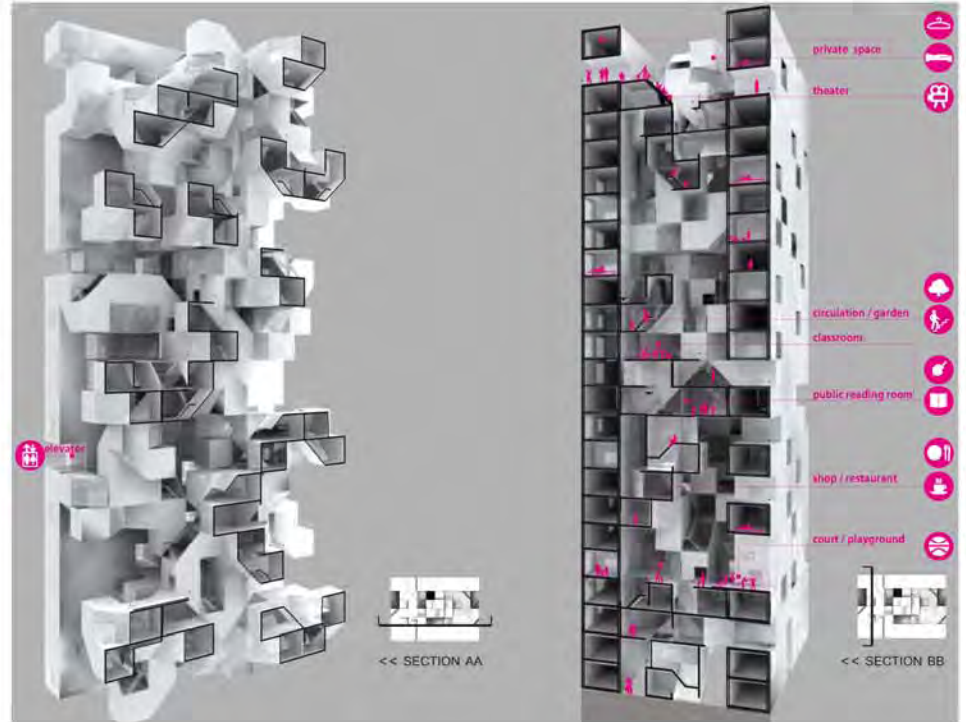
East



North

ELEVATION

- ≡ ROOF +98
- ▽ 24F +92
- ▽ 23F +88
- ▽ 22F +84
- ▽ 21F +80
- ▽ 20F +76
- ▽ 19F +72
- ▽ 18F +68
- ▽ 17F +64
- ▽ 16F +60
- ▽ 15F +56
- ▽ 14F +52
- ▽ 13F +48
- ▽ 12F +44
- ▽ 11F +40
- ▽ 10F +36
- ▽ 9F +32
- ▽ 8F +28
- ▽ 7F +24
- ▽ 6F +20
- ▽ 5F +16
- ▽ 4F +12
- ▽ 3F +8
- ▽ 2F +4
- ▽ 1F 0

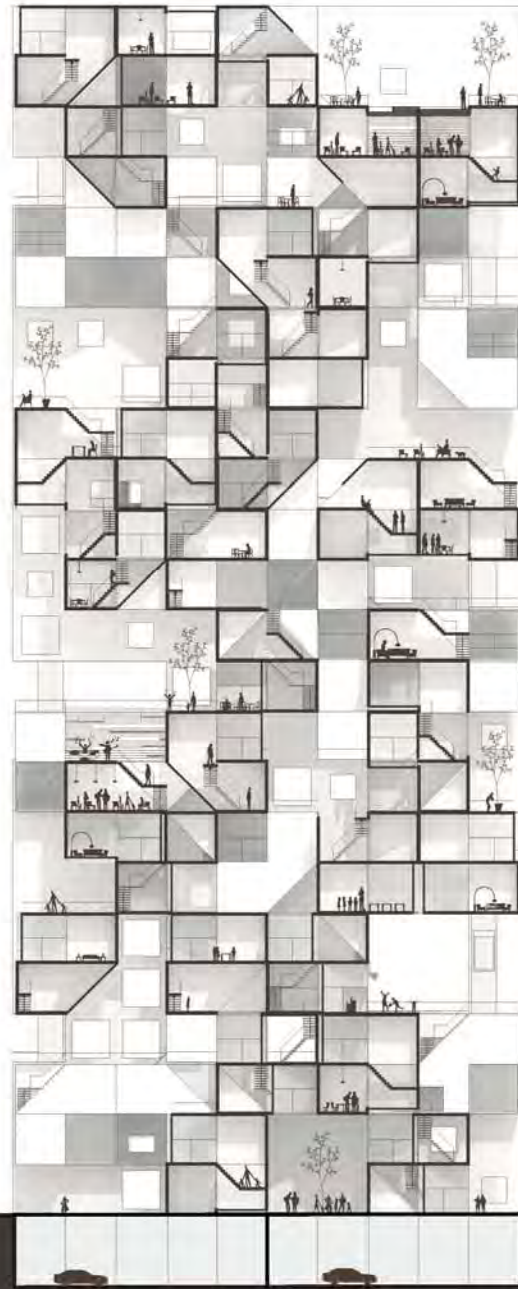


ROOF +96000
 LEVEL 24 +92000
 LEVEL 23 +88000
 LEVEL 22 +84000
 LEVEL 21 +80000
 LEVEL 20 +76000
 LEVEL 19 +72000
 LEVEL 18 +68000
 LEVEL 17 +64000
 LEVEL 16 +60000
 LEVEL 15 +56000
 LEVEL 14 +52000
 LEVEL 13 +48000
 LEVEL 12 +44000
 LEVEL 11 +40000
 LEVEL 10 +36000
 LEVEL 09 +32000
 LEVEL 08 +28000
 LEVEL 07 +24000
 LEVEL 06 +20000
 LEVEL 05 +16000
 LEVEL 04 +12000
 LEVEL 03 +8000
 LEVEL 02 +4000
 LEVEL 01 0000



SECTION A-A

ROOF +96000
 LEVEL 24 +92000
 LEVEL 23 +88000
 LEVEL 22 +84000
 LEVEL 21 +80000
 LEVEL 20 +76000
 LEVEL 19 +72000
 LEVEL 18 +68000
 LEVEL 17 +64000
 LEVEL 16 +60000
 LEVEL 15 +56000
 LEVEL 14 +52000
 LEVEL 13 +48000
 LEVEL 12 +44000
 LEVEL 11 +40000
 LEVEL 10 +36000
 LEVEL 09 +32000
 LEVEL 08 +28000
 LEVEL 07 +24000
 LEVEL 06 +20000
 LEVEL 05 +16000
 LEVEL 04 +12000
 LEVEL 03 +8000
 LEVEL 02 +4000
 LEVEL 01 0000



SECTION B-B

