

ABSTRACT

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SEEKING WISDOM IN TRADITION:
THE PROMISE OF FUTURE HOUSING

Ju Eun Kim, Master of Architecture, 2015

Directed By:

Assistant Professor, Hooman Koliji, Department
of Architecture, Planning and Preservation

As a result of rapid development in the last 40 years, modern Korean housing has experienced the indiscriminate vertical growth of high-rise slab construction which has overlooked both the traditions of the Korean family and society that were embodied in the traditional house. This has compromised cultural and generational relationships, created conflicts among neighbors, and isolated people from nature thereby causing disconnection between Koreans and their own unique cultural elements. Contrary to the current housing conditions, Korean desire for a healthier environment and cultural standing in the world keeps rising. This thesis will introduce design strategies and concepts to help mitigate these problems in contemporary housing by proposing a new type of housing in Seoul, Korea that supports the tradition and characteristic of Korea. It will identify the essence of tradition embodied in the traditional house, and re-envision contemporary design ideas for Korean society that can lead to new types of and more enlightened housing for its future.

SEEKING WISDOM IN TRADITION: THE PROMISE OF FUTURE HOUSING

By

Ju Eun Kim

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Advisory Committee:
Professor Hooman Koliji, Chair
Professor Garth Rockcastle
Professor Madlen Simon

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Chapter 1: Introduction

Architecture should not only define and perform an effective physical boundary of living space, but should also hold its users' cultural values to maximize the quality of their lives. After the government-sponsored '*New Community Movement*,'¹ which arose during the developmental period of the 1970s-80s, Korean society achieved rapid urbanization throughout the country. This resulted in the loss of traditional housing and consequently resulted in the loss of connection between the Korean citizens and their cultural traditions and values that were embodied in the traditional house.

The government had tried to inculcate Koreans with the idea of making the apartment the symbol of the modernization of the nation. The majority of modern housing in Korea today is high-rise apartments that are built to a similar, low, and common standard by developers. Apparently justified so more houses can be provided on limited land. These houses reflect the density of the modern urban lifestyle and compromise the great traditions. It seems natural to address efficiency and globalization today, but each individual within his/her custom has his/her own unique cultural elements that are woven into and visible in the architecture of the region. Modern Korean society is still formed by older beliefs and deeply rooted in the theories of the past; however, modern housing turns its back on important and

¹ Saemaul Undong

valuable Korean traditions and their complex connections to Korean culture. Typical modern housing in most cities in Korea disconnects people from family, neighborhood and community. Korean society is founded on the communal perspective rather than the Western ‘individual-oriented’ perspective, thus, the urbanization has negatively impacted family units – how families interact – and Korean society as a whole. The housing in contemporary settings abandons the richness of outer and common spaces and dominantly focuses inward which some architects call an ‘autistic’² living environment. Koreans have suffered recent societal conflicts such as: compromised cultural relationships between different generations, conflicts among neighbors, and human isolation from nature. This lower standard of housing for accommodating its rapid growth has contributed to a reduction of cultural well-being.

This thesis will uncover the major principles of Korean traditions and explore solutions to support Korean identity in contemporary housing with their cultural principles, and ultimately, re-envision contemporary Korean housing with new insights and principles for a more progressive and optimistic future for Korean society.

² Park, Chul Soo. Apartment. Mati. 2013.

Chapter 2: Theories and Principles in Korean Tradition

Compound Idea of Taoism, Buddhism, and Confucianism

In general, the main ideas from the ancient Chinese philosophies of Taoism, Buddhism and Confucianism are not identical and there is some discord. While the Taoist philosophy focuses on balancing two opposing energies to achieve cyclical growth in order to complement each other, the Buddhist follows a journey to enlightenment through the inner discipline of meditation for a happy life. The latter, Confucianism, teaches self-cultivation through moral behavior and ways of establishing social harmony through a structured society. This has been deeply saturated in the daily lives of Koreans today and remains a fundamental part of the Korean society.

These philosophies however emerged and blended together throughout the history of Korea. Because of the close geographical proximity of Korea and China, Korea has maintained a close relationship with China and, since ancient times, adapted to many of the ancient Chinese philosophies and theories. When these philosophical ideas were adapted to Korean culture and applied to traditional architecture, they blended together, became easier to adapt to architectural forms, and eventually created the Korean aesthetic concepts. Therefore, each philosophical principle is grouped with the other similar principles later in this document for easier transformation from philosophical to architectural principles.

Philosophical Concepts

Taoism

The major concept of Taoism is the movement of chi energy. It teaches that ‘men and nature’ are under the influence of chi energies and they must live in harmony with each other to balance their lives. Under this philosophy, it is very critical to understand that everything in the universe is formed by opposing energies known as yin and yang and everything is constantly evolving to complement each other. This shows how Koreans believed that nature influenced the desirability of human habitation, and because of this belief, traditional Korean housing will be meaningless if it is located in isolation from nature. Even today a number of housing complexes have been built to follow this belief in order to receive good fortune and a pleasant living environment that is close to nature.

Buddhism

The Buddhists believe in the law of ‘cause and effect’ and the ‘doctrine of reincarnation,’ teaching that individual has a moral responsibility as each person’s actions may cause an effect. Under the Buddhist theory, people should accept everything as is while living in harmony with nature and seek happiness through the inner discipline of meditation.

Confucianism

According to the Confucians beliefs, all relationships among people are not equal and there must be a hierarchy determined by personal and social factors, such as

friendship and family connection. The Confucians do not think human beings as individuals, but as parts of a greater relationship with many people. It says society should be ordered by a meritocracy and people should see each other in terms of their relationships and social roles. Confucianism approaches social harmony through a structured society and enforces a moral system of behavior between generations as it promotes interdependent relationships with other people. It also teaches self-control, moderation, and balance.

	Philosophy	
TAOISM	• HARMONY with nature, BALANCE	—————→ • HARMONY
	• YIN & YANG	—————→ • CYCLICAL GROWTH
	• INFLUENCE of ENERGIES	—————→ • COSMOLOGY
BUDDHISM	• REINCARNATION	—————→ • CYCLICAL GROWTH
	• HARMONY with nature	—————→ • HARMONY
	• MEDITATION (EMPTY MIND)	—————→ • COSMOLOGY
CONFUCIANISM	• SOCIAL HARMONY	—————→ • COSMOLOGY
	• BETWEEN GENERATIONS	—————→ • HIERARCHY
	• INTERDEPENDENT	—————→ • COSMOLOGY
	• HIERARCHY	—————→ • HIERARCHY
	• MODERATION	—————→ • MODERATION

Figure 1 Transformation of Philosophical Principles *Source: Author*

Transformation of Philosophical Principles

In order to translate the terms of each philosophy into architectural principles and ultimately identify them in building form, it is necessary to first translate every philosophical principle into transitional terms before finally identifying them in architectural principles. After translated into transitional term between philosophical

and architectural words, all ideas are grouped under similar concepts regardless of the philosophical origin. Because all philosophical ideas were blended together throughout history, it is possible to group similar ideas beyond their philosophical boundaries.

Taoism: Harmony, Yin & Yang, Chi Energies

The yin and yang philosophy is derived from the principles of Taoism. According to its beliefs, everything in the universe is formed by opposing energies known as yin and yang; therefore, illness or unsuccessfulness is a result of an imbalance of these two energies. The energies create the universe and keep moving and transforming the world as they express themselves as yin and yang. The complementary yin and yang movement can be identified as ‘cyclical growth,’ while the influential chi energies represent ‘cosmology’ as a transitional term between philosophical and architectural term.

Buddhism: Reincarnation, Harmony, Meditation (Empty Mind)

The idea of reincarnation means ‘being born again’ after death. The rebirth occurs across five or six varied forms, including human, animal, and supernatural being. The rebirth idea is translated into the transitional term ‘cyclical growth’ while the concept of harmony stays as ‘harmony.’ In addition, the empty mind idea is translated into ‘cosmology’ since the objective of meditation is to empty the mind and reflect and meditation affects the meditator in that he or she becomes one with the world in order to better understand others and the world around him or her.

Confucianism: Social Harmony, Generations, Interdependent, Hierarchy

The ideas of social harmony and interdependence translated into the concept ‘cosmology,’ and hierarchy and system between generations as ‘hierarchy.’ As the beliefs of Confucianism are still heavily rooted in the Korean society, the idea of social harmony and interdependence is the most important concept that formed the ‘communal perspective.’

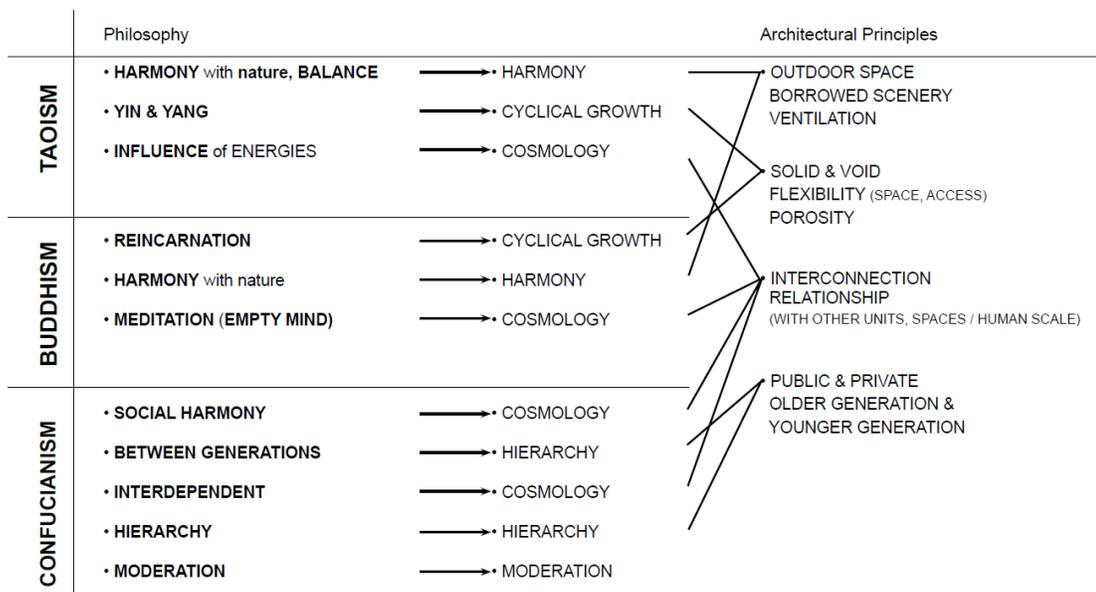


Figure 2 Architectural Principles of Philosophy *Source: Author*

Architectural Principles of Philosophy

Cyclical Growth

The philosophical terms are then translated into architectural terms in order to identify them in buildings. The two opposing energies in harmony, ‘cyclical growth,’ represent in architectural form as follows: ‘solid and void,’ ‘flexibility’ in terms of space and access, and ‘porosity.’ In Korean houses, the diverse-sized windows and

doors located in various positions allow changes in relationship to adjacent spaces. Deep eaves control daylight and shadow and multi-layered paper doors allow one to divide the house into different atmospheres. Non-structural wall with ceiling to floor-height windows and doors between columns on the structural grid allows for changes in room size to meet different uses. By closing and opening different doors, each space reads differently – sometimes as a closed solid room and sometimes as an open void outdoor space. A series of turned spaces and adjacent interior and exterior spaces make a dynamic spatial relationship that can be read in many different ways.

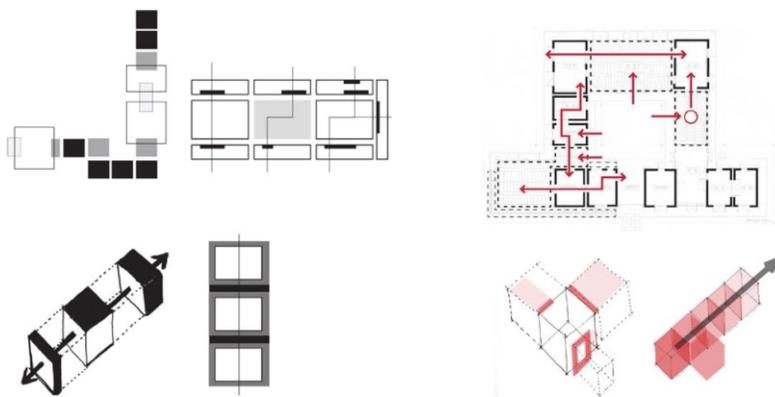


Figure 3 Architectural Principle – Diagram: Cyclical Growth (Left), Flexibility (Right)
Source: Author

The space of traditional Korean house is constantly changing. Boundaries are overlapped and edges become meaningless. Based on the Buddhist theories, the state of the universe can be defined as cylindrical thought in that everything in the universe flows through oneness and connects to every other thing. There are no starting and ending points and one step in progress has never existed by itself. Flexibility of space derives from many different factors, including the user’s mind set, the state of light at different times, the weather depending on the season, and family events. Traditional

Korean housing has a changeable composition within its grid. The house consists of small rectangular cells and provides both changeability and regulation as the cells grow and differentiate, and its grid composition appears solid and void with repetitive juxtaposition of enclosed and open spaces. The house grows proportionally along the grid. The sliding doors between the rooms, which are defined by columns, can be fully open or folded upward to adjust the size of the space based on the occupant's needs. The boundary of each room is not so distinct, but constantly changeable to meet the occupant's need at any time. For instance, two adjacent rooms can be combined to serve a large number of guests for a special occasion. Overlapping spatial relationship occurs with this system.

Cosmology

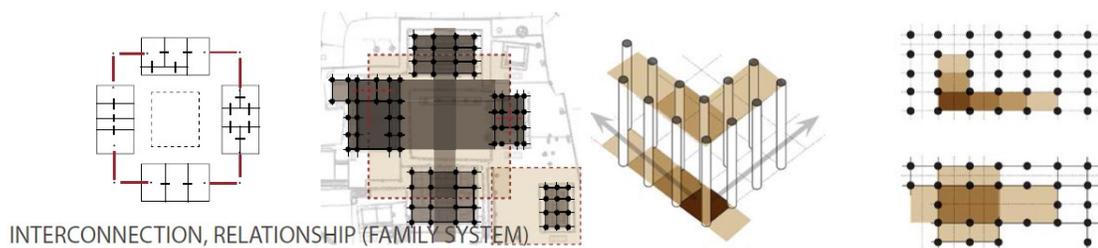


Figure 4 Architectural Principle – Diagram: Interconnection & Relationship *Source: Author*

In order to visually represent the philosophical term ‘Cosmology’ – the most important concept rooted in Korean tradition – in architecture, cosmology is translated into ‘interconnection’ and ‘relationship’ with other units, spaces and human scales. As one of the distinct characteristics of traditional architecture, many Korean houses in the past consisted of more than one building; even though there were also

single-houses. The relationship among quarters or buildings within a house provided a stable continuity and flow of movement as taught by the old belief of cosmology. Because the traditional Korean houses are designed within a grid system, each building is in relationship with other surrounding buildings on a larger scale, and each room is in relationship with other rooms on a smaller scale. Within the primary grid system, the secondary division happens according to human scale. Each primary grid further divided with the human's shoulder width in order to allow residents to move comfortably within each space; therefore, each grid breaks into four segments of a human's shoulder width and this dimension works as a secondary non-structural grid system throughout the house. This logic helps to explain the idea of 'cosmology' in architectural form in that all parts of a house relate together and work within the same system.

Harmony



Figure 5 Architectural Principle – Diagram: Outdoor Spaces & Borrowed Scenery *Source: Author*

Harmony between human and nature has been transformed into many different forms in architecture. The Korean traditional housing has a sufficient number of 'outdoor spaces' or courtyards in order to bring nature into the house and remain visible by the people in the house. It is called 'borrowed scenery' which means that nature or the

landscape is visible through open doors and windows so residents inside the house can enjoy the natural scene as a framed artwork. The courtyard was a very crucial element in traditional Korean housing as it had a number of different roles to play with the other parts of the house. The different courtyard configurations were generated in responding to different criteria, such as functional, practical, climatic, social and cultural needs. The courtyard served as a work place, meeting place, resting place, and playground based on the users and their needs. Since there were no divisions between the courtyard and the indoor space, the courtyard served as an extension of the interior dwelling space. The courtyard also functioned as the main route from the public realm to the private dwelling realm. One had to pass through the courtyard to move from the outside the house to any room in the house. It also connected all rooms or spaces in the house and worked as a shared space as well as the center/heart of the house that brought daylight deep into the house.

In addition to the idea of communion with nature, the traditional housing incorporated the idea of ‘borrowed scenery’ to create a connection and a sense of harmony between the man-made house and nature beyond the wall. Koreans were more careful about choosing a site and a building configuration in order to take full benefit of the views provided by the surrounding site rather than having fully designed inner gardens like those seen in Japan or China. In order to have multiple views seen from the inside of house, buildings usually have a deflected form with sharp turns toward either nature or the other quarters/buildings of the compound. With open windows and doors to the outside, it is almost like having a living artwork frame on the wall to

allow the resident to enjoy the scenery changes in different weather conditions. The concept of emptiness comes into play here as well to bring nature inside and blurs the boundary between the inside and outside.

The adjacent composition of buildings to the outdoor area allows natural cross ‘ventilation’ and helps Koreans feel that nature is brought into their houses.

Hierarchy

The hierarchical social system is influenced in the layout of traditional housing in Korea. Order was maintained within the family by the Confucian principles “achieving social harmony with a structured society” and the separation of men and women. Furthermore, superior and inferior became the fundamental elements in the layout of traditional housing. Today Koreans differentiate people less on gender, but more based on his or her role, like ‘public vs. private ’and‘ older generation vs. younger generation.’ The greatest influence that Confucian principles left on the Korean culture is respecting the elderly. This principle teaches that the family is the center and comes before the individual with its emphasis on respect for one’s ancestors. The traditional houses usually provided more private space for each member of the family and more shared spaces for communal activities.

Chapter 3: Precedent Analysis

The precedents for this thesis are organized with the traditional Korean architecture in mind and the application of each principle.

Yin and Yang

1. Residence, Chosun Dynasty

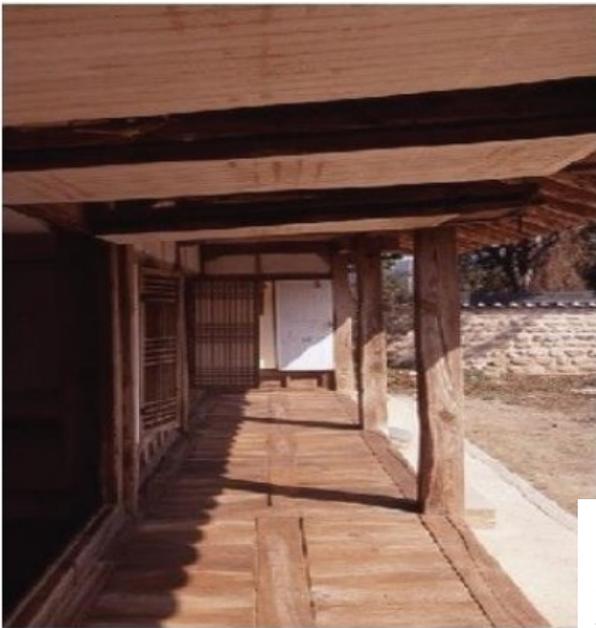


Figure 6 Yin&Yang
Residence, Chosun Dynasty
Source: Photo from Jackson, Ben. *Korean Architecture: Breathing with Nature*

Dark & Light

The transitional space, *maru*, between the courtyard and the rooms covered by the roof is an example of light and shadow of yin and yang theory. Throughout the day, the amount of shadow and light will change and affect the space differently and represent the constantly evolving opposing forces. Dark shadow only comes down to the *maru* at noon creating a high contrast against the bright courtyard. But, the

shadow moves and draws deep onto the *maru* area around sunset and sunrise which creates different shaded areas than other parts of the day. The space looks different throughout the day.

2. Namcheondaek Residence, Haehoe Village, Andong



Figure 7 Yin&Yang
Namcheondaek Residence
Source: Google Image
http://m.blog.daum.net/_blog/_m/articleView.do?blogid=0MJ5T&articleno=6566862

Dark & Light

The sliding paper doors of the house let the light in and create a great contrast between the darkness of room and the lightness of outside. Depending on the weather, the amount of daylight will also change the contrast between light and dark. Various elements of nature like wind and sunlight is a great way to visualize the yin and yang's cyclical movement.

3. Gwangpunggak Pavilion, Soswaewon Garden, Chosun dynasty



Figure 8 Yin&Yang - Gwangpunggak Pavilion, Soswaewon Garden (Closed&Open)

Source: Google Images

http://m.blog.daum.net/_blog/_m/articleView.do?blogid=0Z0hS&articleno=1492

http://www.doopedia.co.kr/photobox/comm/community.do?_method=view_slideshow&GAL_IDX=101012000712453&position=

The paneled doors can either be lifted up during the summer or kept closed during the winter. The doors can fasten onto ceiling rafters with hooks and make the *taechong* a wide open space allowing the fresh air to circulate around the house. This also allows the flexibility of space.

Harmony

Gwangpunggak Pavilion, Soswaewon Garden, Chosun dynasty



Figure 9 Harmony - Gwangpunggak Pavilion, Soswaewon Garden

Source: Google Image

http://m.blog.daum.net/_blog/_m/articleView.do?blogid=0FEtp&articleno=10614757

One of the greatest examples of creating harmony with nature is Soswaewon, a garden of the Chosun dynasty. The building in this garden greatly represents harmony with nature when all four sides of walls are lifted up leaving only its posts as the man-made structure. The surrounding nature can be seen without any obstruction and the boundaries between the inside and outside of the building become vague. An inhabitant must feel like he or she is sitting outside in nature (i.e. feeling the wind blow, hearing the birds chirp, etc.) all while doing inside tasks such as reading a book or eating a meal. In other words, there is duality with vague separation happening throughout traditional architecture.

Hierarchy

1. Unjoru Residence, Chosun Dynasty

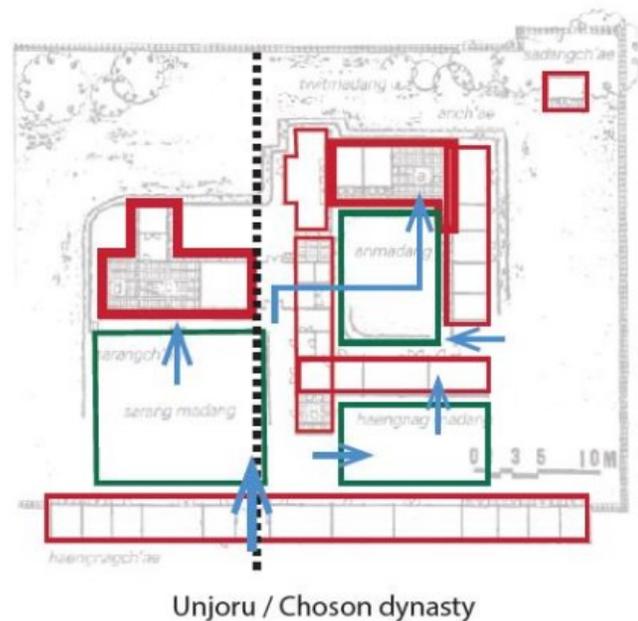


Figure 10 Hierarchy – Unjoru Residence, Kurye
Source: Author edited over image from *The Garden as Architecture Form and Spirit in the Gardens of Japan, China, and Korea*. pg.140 underlay

The first thing to meet upon entering the main gate is the men's quarter, *sarangchae*. The women's quarter is located on the back side of the entire house compound surrounded by the *sarangchae* to the left and *hangrangchae* to the south. In order to get to the *anchae*, women's quarter, one must pass through the men's courtyard and quarter. The locations of the various living spaces were determined by the user's role in the family. There is an ordered system among the quarters to let all parts of the house work as one. The axis through the house doesn't seem to divide the house in perfect half and the layout is not symmetrical, but Korean architectural layouts more often show an 'asymmetrical balance' which – to create order – conform to many different criteria.

2. *Wunjoru Residence, Chosun Dynasty*

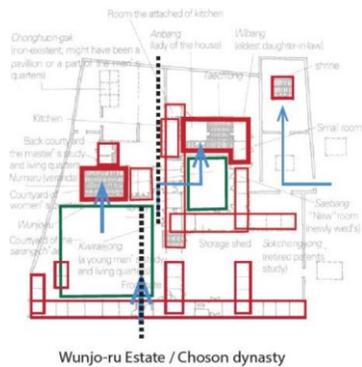


Figure 11 Hierarchy – Wunjoru Residence
 Source: Author edited over image from *Hanoak: Traditional Korean Homes*, pg.44 underlay

One faced the men’s quarter upon entering the front gate as well. The library and the study space were connected to the men’s quarter, while the kitchen was located next to the women’s quarter. There was an extra courtyard in the back for the women’s place. A separate access to the shrine from the side of the house was provided.

3. *Extended Family Kim Residence Complex, Chosun Dynasty*

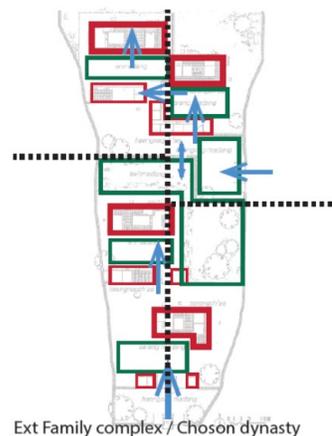


Figure 12 Hierarchy – Ext. Family Residence Complex, Kochang
 Source: Author edited over image from *The Garden as Architecture: Form and Spirit in the Gardens of Japan, China, and Korea*, pg.143 underlay

For the family compound residence, the house was centered on the family and provided a supportive network for the related households. Each household owned its own courtyard and private living space, but still connected to other members of the house. It provided a balanced amount of private and shared spaces among the households.

Chapter 4: Site | Context | Place

City scale - Seoul, Korea

Geographical Setting

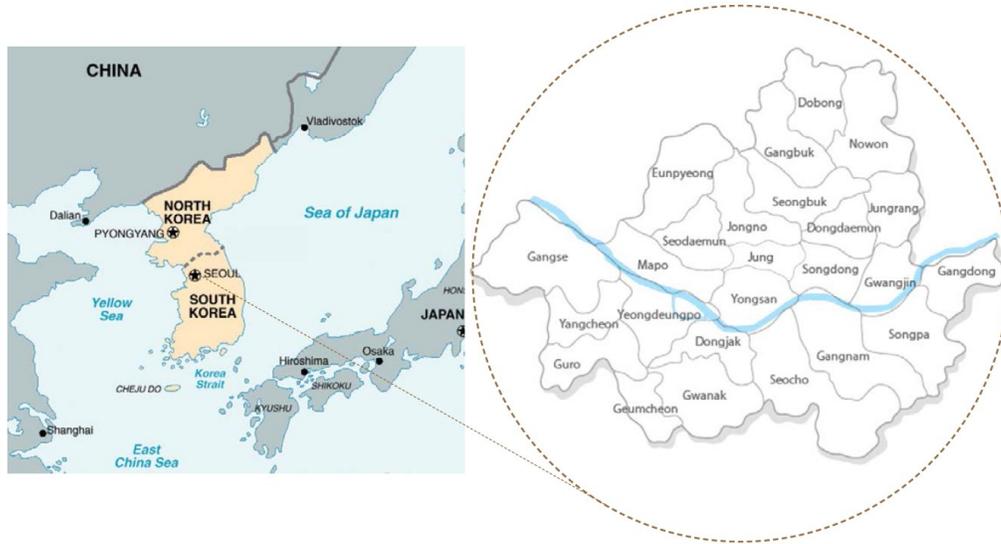


Figure 13 Geographical Setting – Seoul, South Korea & 25 Districts in Seoul

Source: Author edited on image from

http://tour.junggu.seoul.kr/tour/eng/h01_intro/h110_greeting_06.jsp &

<http://images.rigzone.com/images/news/library/maps/7/6235.jpg>

Korea is a peninsula situated in the eastern corner of Asia, facing China in the northwest and Japan to the east. North Korea is located north of South Korea, across the demilitarized zone (DMZ). The capital city, Seoul, is the largest and most populated city in South Korea and it is located in the northwestern part of the country. Approximately 75% of the land is covered by mountains and mountain ranges. One of the largest rivers in South Korea, the Han River runs through the middle of Seoul and divides the city entirely into two districts known as the Gangbuk, north of the river, and the Gangnam, south of the river.

Seoul consists of 25 districts – or ‘*gu*’ – including the oldest ones in the middle Jongno-gu and Jung-gu. The city was first founded as a capital in 1394 during the Chosun dynasty and started from the central Jongno-gu area.

Population

With the developmental movement in the 1970s, the population of Seoul increased and the city experienced rapid urbanization, which now houses almost 1/3 of the entire Korean population. By 1985, 65.4% of Koreans lived in urban areas and today Seoul has become a megacity with its population of over ten million people. With the population of the surrounding Incheon metropolis and Gyeonggi province, the Seoul Capital Area houses more than half of South Korean residents. It is known as the world’s second largest metropolitan area.

Climate

Korea lies between 38°N and 33°N latitude and 126°E to 132°E longitude. The climate of Korean peninsula is relatively mild due to having both the inland and oceanic climates. Although Korea has four distinct seasons, spring and autumn tend to be short and summer and winter long. The rainy season occurs from June through August providing 50-60% of the annual precipitation. The duality found in the climate of long and extreme summer and winter weather produce a very distinctive characteristic of duality in traditional Korean architecture, named *ondol* ‘heating-floor’ and *maru* ‘wood-floor.’³ Despite its small land size, each region of Korea

³ Hong, Hyung Ock et al. Hanoak Traditional Korean Homes. Hollym International Corp. 1999.

developed different layouts of houses and used different amounts of the opposing floor elements adapting to the climate and natural setting.



Figure 14 Monthly Mean Temperature and Precipitation in Seoul
 Source: Korea Meteorological Administration <http://kma.go.kr>
<http://www.mcst.go.kr/english/koreaInfo/aboutKorea/general2.jsp>

Existing City Condition

Since its first selection as the capital in 1394 during the Chosun dynasty, central Seoul hosts a number of historic sites and traditional architecture. One of the world's most convenient and safe metro systems offers easy access to most historic sites even for very young children and foreign travelers. More than 12 lines of metro connect most of the important parts of the city and the existence of a subway station is a crucial matter for people when buying a house.

Seoul has continually been named as the capital of Korea since the Chosun dynasty and with the growing population during the urbanization in 1970s, the city boundary has expanded and most of the surrounding rural areas were converted into urban use and houses. The boundary of Seoul from the old historical city fortress – which was constructed during the Chosun dynasty – on the north part of the river had expanded

to the north outer area of the fortress and to the south part of the river accordingly in the 1970s. After the developmental period of the 1970s, Seoul reached its maximum expansion and started developing satellite towns around Seoul, in the Seoul Capital Area. Today five historic palaces from the Chosun dynasty and several traditional residences remain inside as well as some residences outside of the fortress boundary in Jongno-gu district.

Because of the order of the city development process, the north part of the city, Gangbuk, is formed by smaller, narrower and organic street shapes as compared to the later super block system development of the south part, Gangnam, which was prepared and planned well before its development started.

The city government has been trying to re-develop old parts of the city and recently put a lot of effort into either preserving or building traditional houses within the re-developed planning. Responding to the rising demands of residents seeking alternative living environments and a new trend of revaluing the traditional housing, there are a number of new 'Hanok' traditional housing towns planned by the government. For the site selection process, I have looked into these historic towns in Seoul while looking into the other parts of the city. In accordance with the traditional living environment and including the most important characteristics, the site must be surrounded by nature, have easy access to public transportation (particularly the metro), be either within or neighboring a residential area, and have diversity in generation in order to make the site an ideal place for a multi-generational living complex.

Site Scale – Bukchon, Jongno-gu (district), Seoul

Location

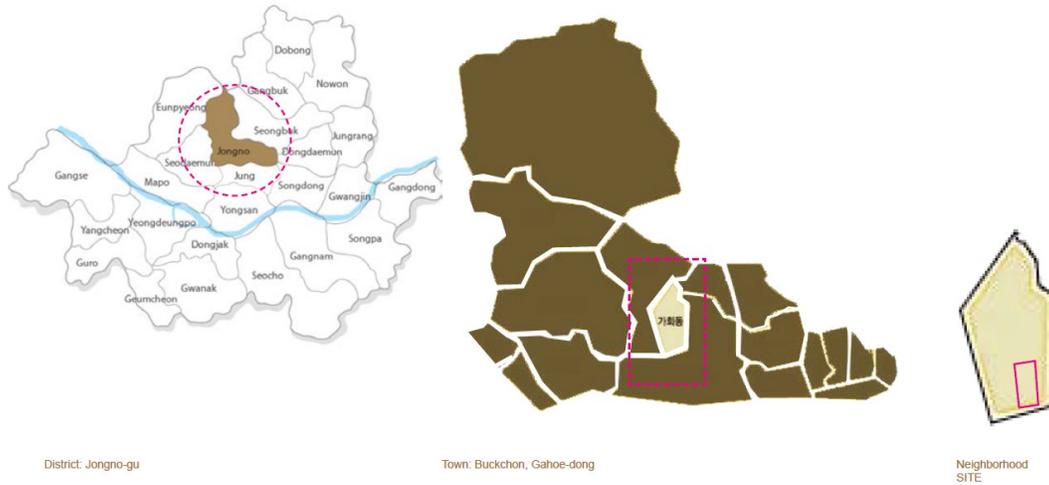


Figure 15 Site Location *Source: Author edited on image from tour.junggu.seoul.kr/tour/eng/h01_intro*



Figure 16 Bukchon Neighborhood Figure Ground *Source: Author*

The selected site for the thesis project is in the Bukchon neighborhood in Seoul. Bukchon neighborhood is in the town of Gahoe-dong in Jongno-gu, the oldest district in Seoul. It is well-known for its historic traditional Hanok village located between the two famous palaces, Gyeongbok and Changdeok, and north of the smaller Unhyun residence palace from the Chosun dynasty. Because the area was first developed as a residential district for the upper ruling class during the Chosun dynasty (1392-1910) and has continually been replaced with urban Hanok houses from 1900 until today, Bukchon still contains about 900 traditional houses spread across the area. Because the site is situated in the oldest district within the original fortified boundary of Seoul, the area has a number of traditional edifices from palaces and shrines, to houses, temples, and bridges. The site was chosen specifically because it is unique in that it blends both tradition and modernity together and seemed to be the perfect location to house the proposed contemporary housing that incorporates the traditional Korean principles.

Scale and Circulation



Figure 17 Bukchon Neighborhood Scale & Circulation *Source: Author*

The area is formed by smaller, narrower and organic alleys that connect intimate scales of buildings most of which are only accessible by foot, not by vehicle. The metro line goes right by the site and one of the six entrances to the metro station is located at the south west corner of the site while the local bus goes around the site every 10-15 minutes for convenient accessibility in the area. Bukchon is a walking friendly neighborhood with alleys that average three meters in width and that branch off from the one-way and two-way major streets. The city gives a Bukchon walking tour and it is well visited by tourists on a daily basis. This creates the heaviest pedestrian circulation path that goes around the site.

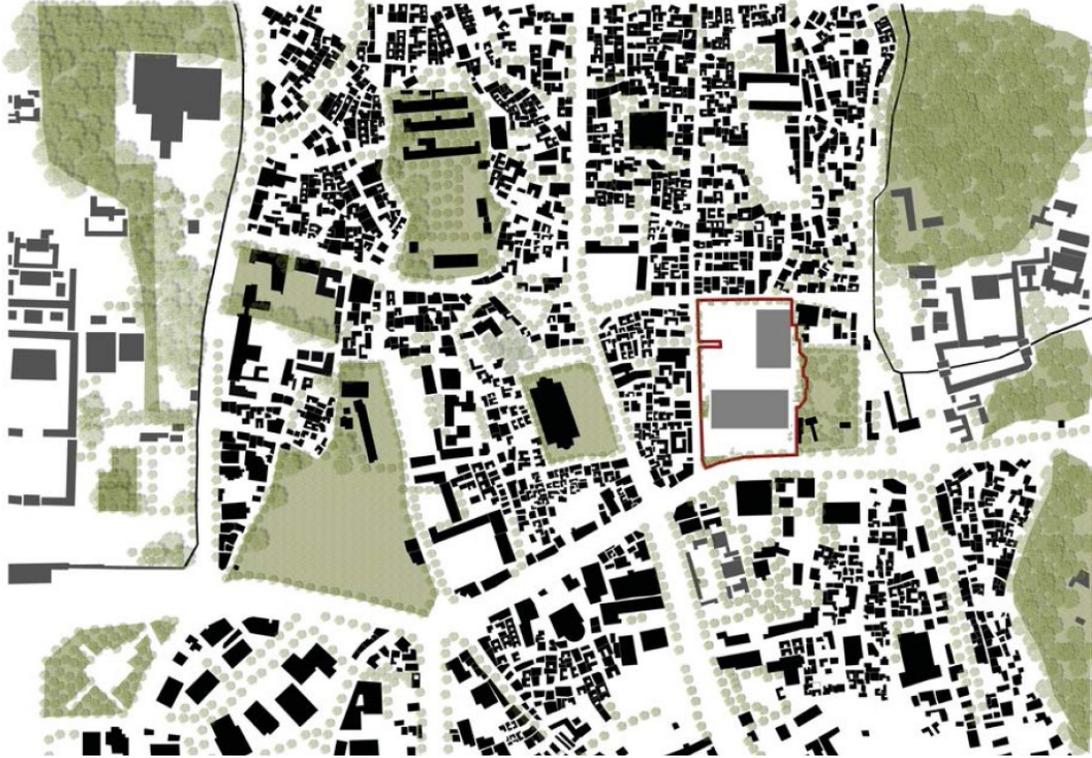


Figure 18 Bukchon Neighborhood Figure Ground & Green Space *Source: Author*



Figure 19 Bukchon Neighborhood Existing Streets *Source: Author*

Special Condition - Historic Alleys

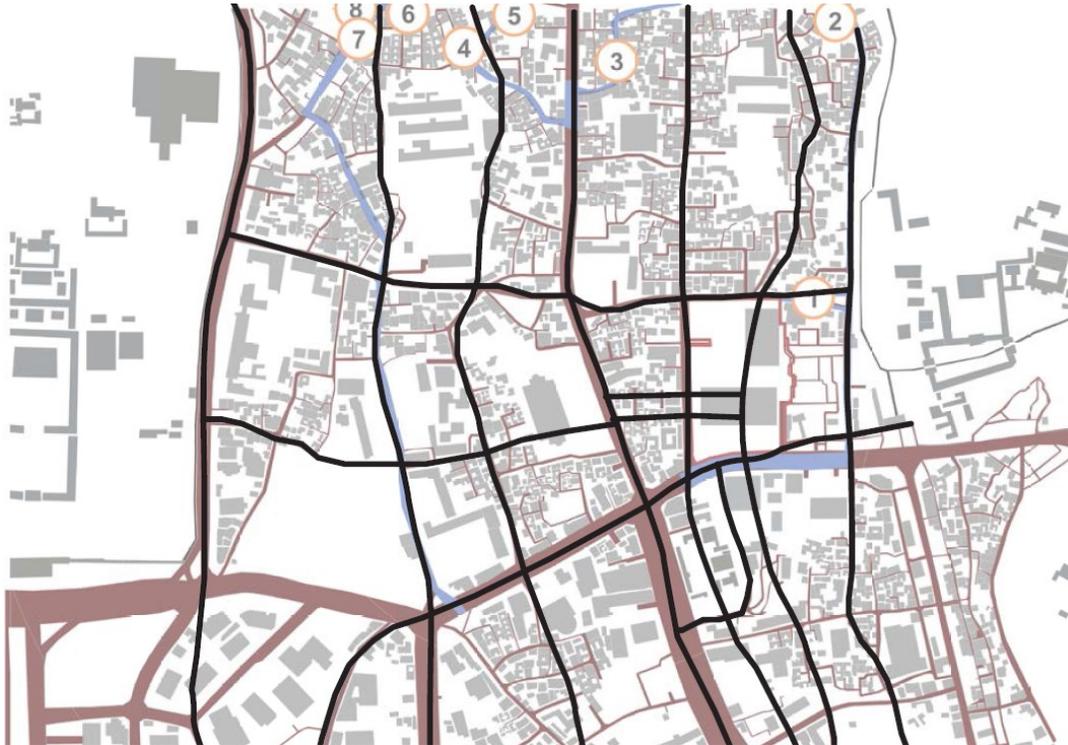


Figure 20 Bukchon Neighborhood Old Streets Restoration and Overlay *Source: Author*

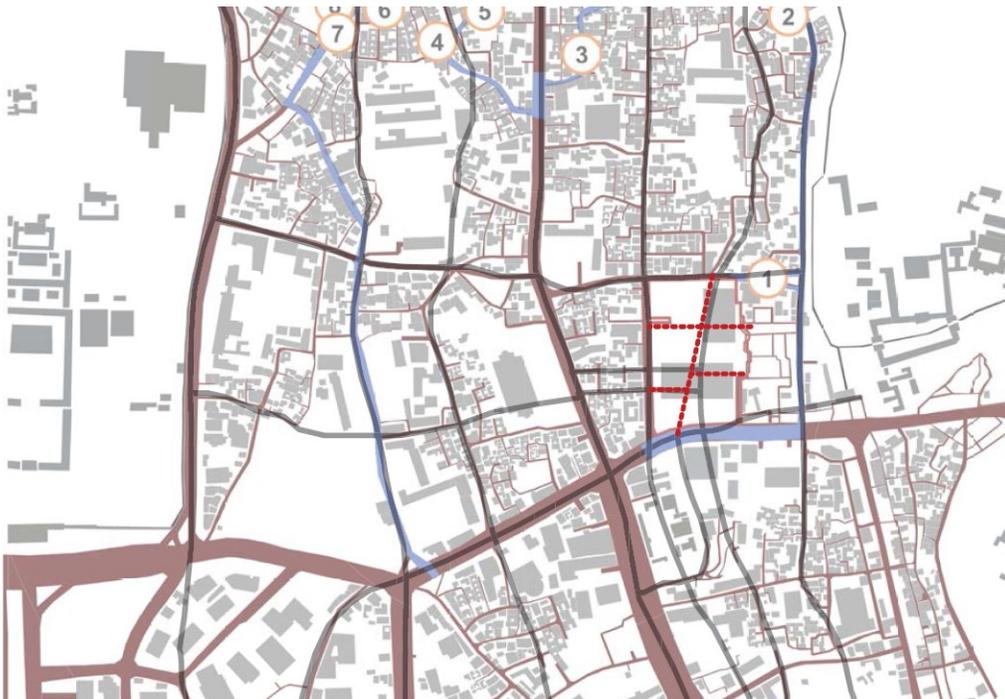


Figure 21 Bukchon Neighborhood Connection of Old Streets *Source: Author*

There are several older alleys that follow the stream in the Bukchon area and that pass through the site. Many of the older streets are still in use today, but some have disappeared in order to develop smaller lots into bigger lots for different buildings. At the site of this project, a number of small urban traditional houses and their alleys were removed for a large lot that housed Hwe-Mun High School in 1906. The high school moved to the Gangnam, the south part of the Han River, after the developmental period. The site has been owned by the Hyundai Mobis headquarters since then. The scale of the site and the buildings on the site are too large as compared to the surrounding buildings and their lot sizes.

Building Use

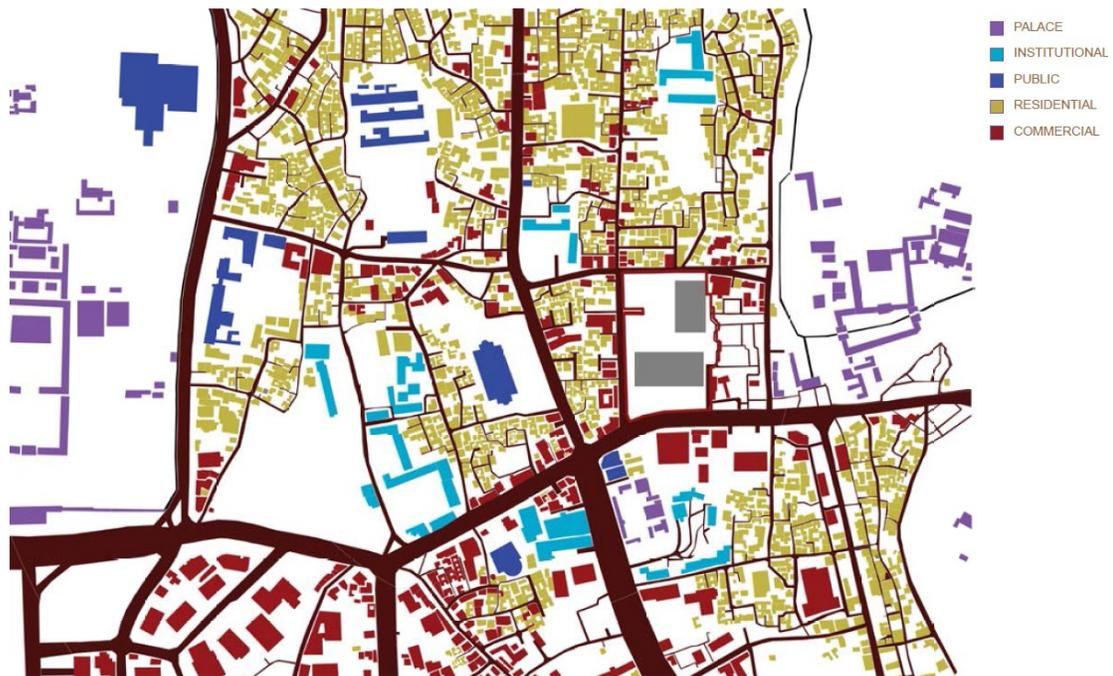


Figure 22 Bukchon Neighborhood Building Use *Source: Author*

The Bukchon area is heavily residential, around 70% of the buildings are for residential use; however, commercial buildings have been developed along the major pedestrian and transportation circulation accesses. The area has a high number of educational and public institutions from public schools (elementary, middles, high schools) and colleges to public facilities like the public library and art museum.

Opportunities

Since the development of Seoul, local people have used public transportation as their primary source for travel. The fact that the site is less than a minute from the metro and bus station was an advantage point in deciding to choose the site. Located in the midst of an historic residential district and bordering the newly developed and highly-dense commercial district on the south, the site contains great opportunities to demonstrate the possibilities of the new insight for future housing that supports the deeply-rooted traditional lifestyle and identity of Korean. A great number of institutions of all ranges in the area support the opportunity that the site can be developed as a multi-generational living complex.

Chapter 5: Final Design and Conclusion

Design Approach

Proposal for the Site

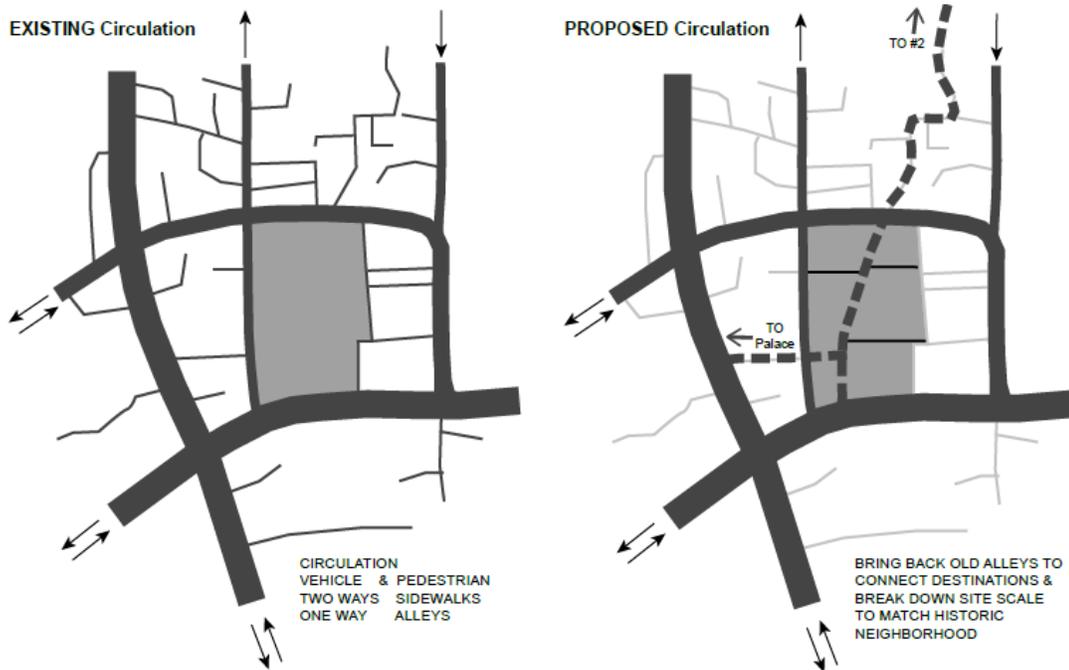


Figure 23 Existing & Proposed Circulation *Source: Author*

The master plan for the entire site will focus on providing better circulation access and on creating smaller scale blocks that match the surrounding blocks. In order to break down the scale and improve its pathways, the older alleys were restored and laid over the site. The new pathways in the lot follow the existing three-meter wide alleys in the adjacent blocks and connect pedestrian movement into the site. The old alleys were restored to work as a major pedestrian and vehicle pathway that runs through the site

to connect major east-west streets to one of the tourist destinations along the historic alley. A few old alleys were restored to connect the site to the surrounding existing alleys. Each portion of the site consists of a cluster of residential buildings and has specific programs on the ground level to meet residential needs related to the surrounding area.

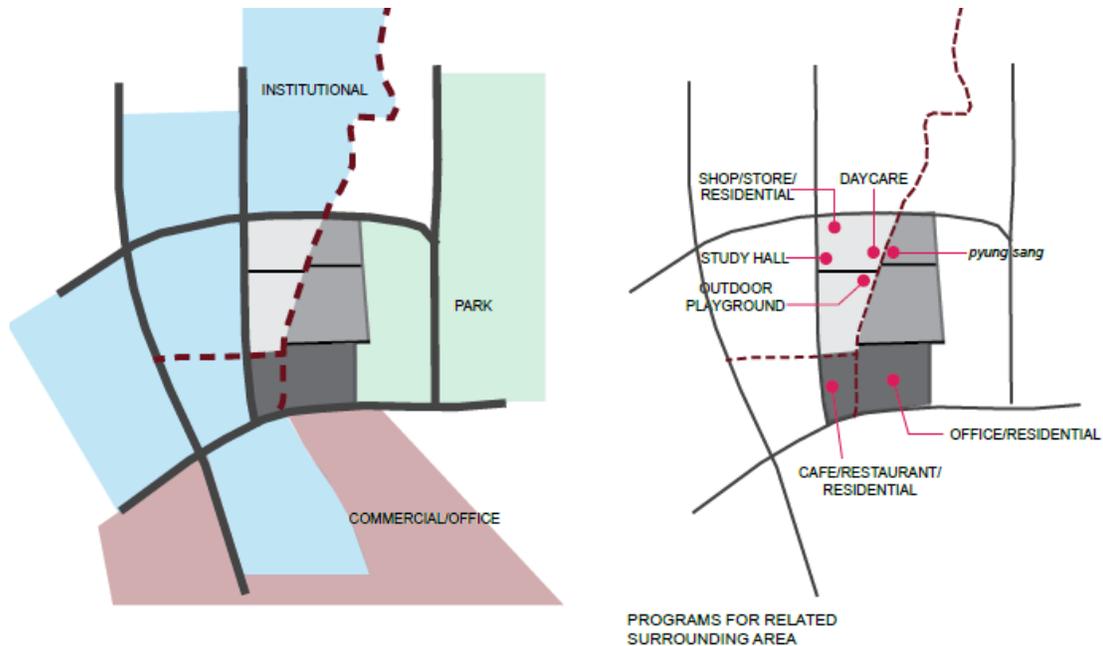


Figure 24 Site Development Process – Programs for Related Surrounding Area *Source: Author*

Design Objectives

The overall design objectives for the multi-generational living complex are as follows: revitalize community relationships among neighbors, encourage multiple generations to build closer relationships, provide sufficient elements of nature to establish comfort and sensitivity, include open space for different occasions, provide flexibility in determining boundaries for each space that meet different uses, and support the Korean lifestyle, culture, and society.

Final Design | Conclusion

The main design approach for the building is to develop a multi-generational housing complex to serve the Korean residents' lifestyle and to support their cultural identity. On the master plan of the entire site, the broken down lots on the left and south part of the site house the commercial programs (restaurants, cafés, small stores, and offices) to follow the existing street conditions. To give connect the site to the institutions around the area, there are several programs planned for residents of various ages – a playground and a study hall on the left side of the buildings and a sitting area (*pyung-sang*) for older residents that is located closer to the park and quieter area of the site.

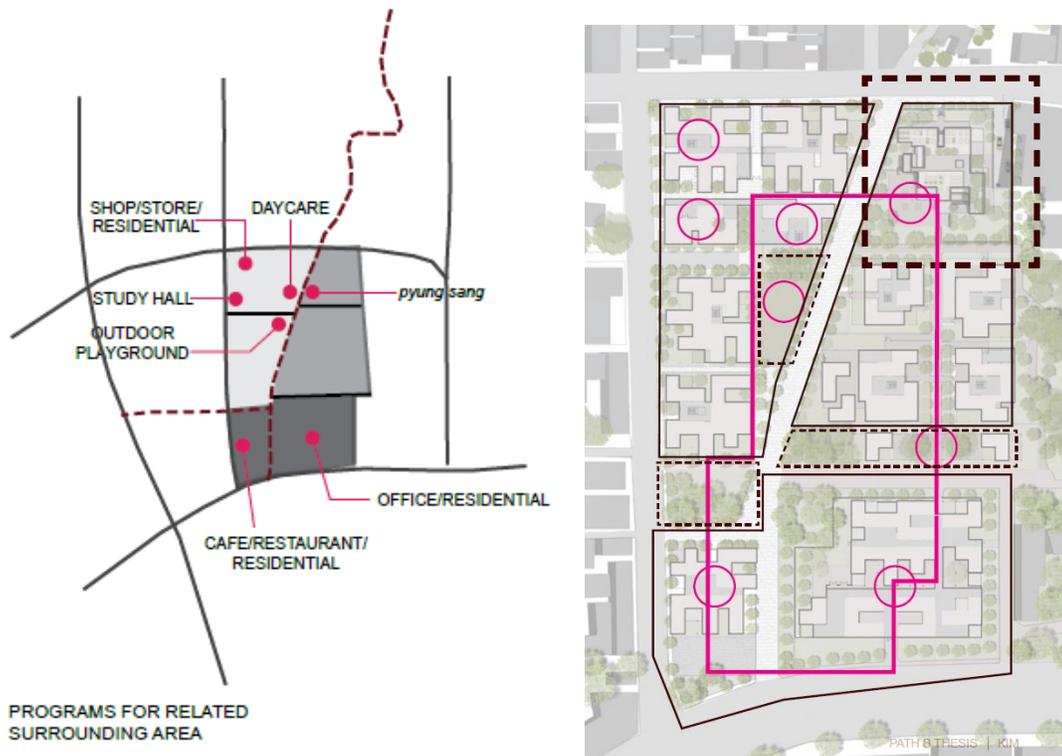


Figure 25 Site Development – Programs for Related Surrounding Area *Source: Author*



Figure 26 Site Master Plan *Source: Author*

The main approach from either side of major streets (Changdeokgung 1-gil, Yulgok-ro) is the diagonal 30' street which is also accessible by vehicles. Four additional alleys were added on the east and west side of the site to continually connect the pedestrian accesses from the adjacent blocks and for maximum pedestrian experience throughout the site and beyond to the neighboring areas. (Changdeokgung-gil, Gyedong-gil) This will provide a better access from the metro station to the walking tour destinations 1 and 2.



Figure 27 Perspective of South East Facade *Source: Author*

The multi-generational housing complex borrows the colors and materials to bring back the design of the traditional house. For example, the dark brown columns and window/door frames divide and add playfulness to the white stucco applied facade throughout the building. The placement of the columns is based on the new grid system and is re-sized to 15'x15' instead of 10'x10' due to the change in the average

human size from the old Chosun Korean to the modern Korean in order to provide a comfortable atmosphere throughout spaces by determining space based on human scale.



Figure 28 Building Plan – Housing Complex *Source: Author*

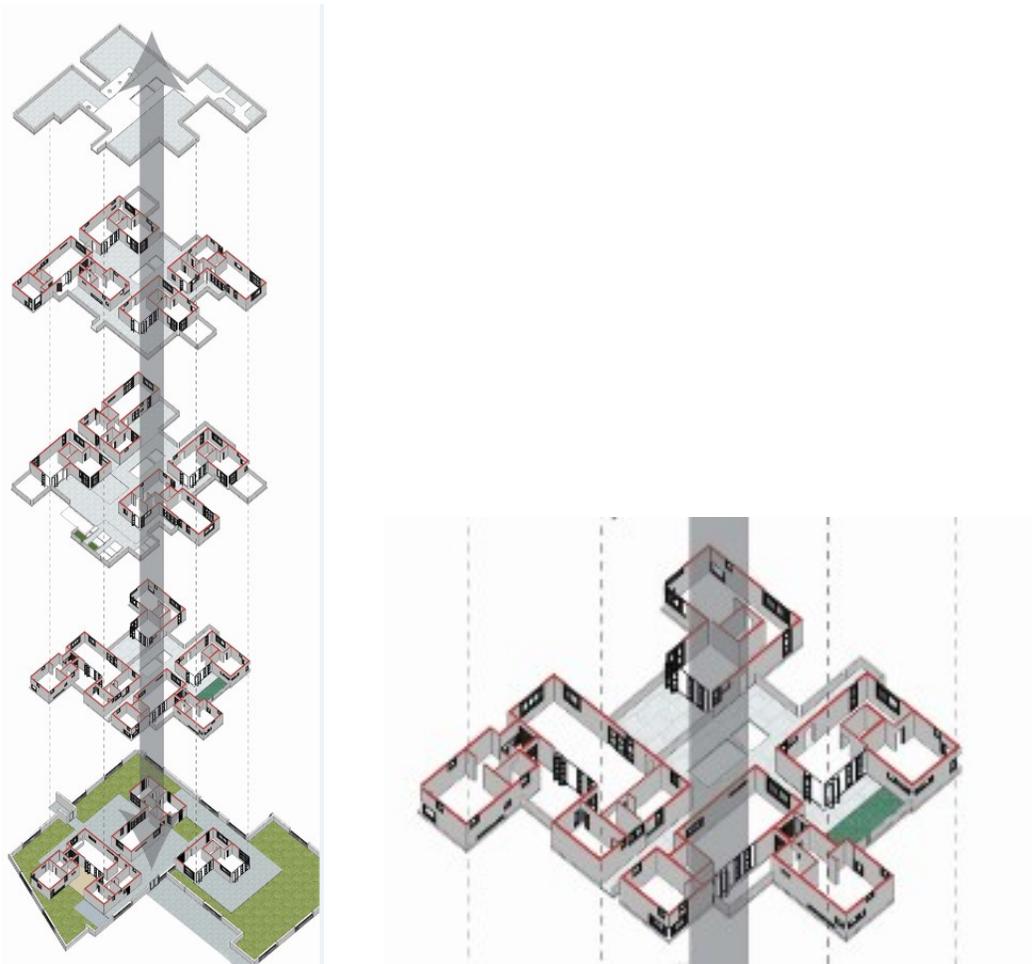


Figure 29 Indoor & Outdoor Space Diagram *Source: Author*

The main feature of the housing complex is the outdoor space that can be used by a single unit or by multiple units together. The greater idea of cosmology and more specifically flexibility and porosity between solid and void spaces appear throughout each unit and building. These ideas are translated (in architectural form) into indoor and outdoor spaces that are adjacent to each other and that provide various spatial sequences and relationships. The boundaries between each space are very flexible, operated by full height glass doors, not only within the house between rooms, but also between indoor and outdoor spaces.

On the second floor, a 4-person unit and a 2-person unit can be combined when each individual unit is opened fully to the exterior living room. This is an example of first-generation and second-generation family members living together and allows them to have their own living space while also allowing them the option of a communal space for their needs.



Figure 30 Second Floor Plan *Source: Author*

The one person units are also designed with the idea of living in close relationship to neighbors; the residents access their units through exterior spaces that are also used by neighbors. The exterior spaces serve the residents' daily needs just as the

traditional courtyard (*madang*) used to for tasks such as hanging laundry, drying vegetables, making *kimchi*, and barbecuing with friends. The clustered floor plan with multiple units on each level is designed to encourage communication between neighbors and ultimately allow residents to have a closer relationship and develop a willingness to look out for each other.



Figure 31 Fourth Floor Plan *Source: Author*



Figure 32 Ground Floor Plan *Source: Author*

Additional public sitting areas on the ground level (outside of the 5' wall in front of the building) are provided for residents from any house on the site. Traditional type of benches in a raised platform shape (*pyung-sang*) are located on the ground next to the main diagonal street to allow people to easily watch kids playing in the playground across the street.



Figure 33 Section Perspective *Source: Author*

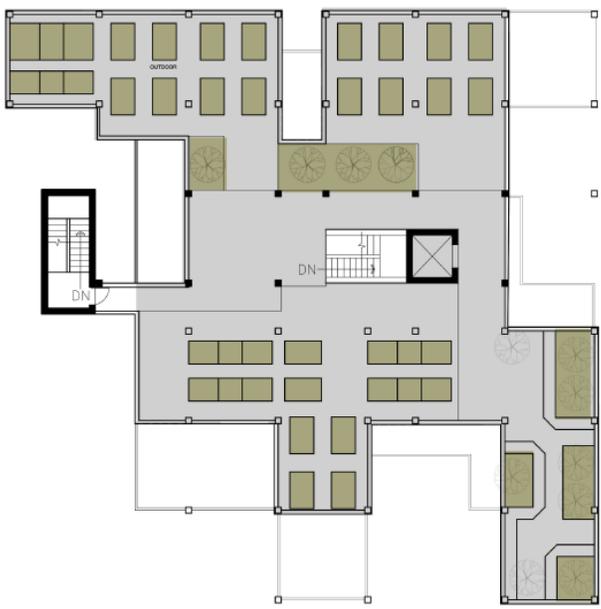
The section perspective drawing shows the void and solid relationship between the inside and outside spaces and the flow of space throughout the building. The breeze flows through all spaces and provides cross ventilation for every unit, and the daylight comes into the interior through glass windows and also through the exterior spaces around the units. The outdoor communal spaces on each level receives daylight that penetrates through the sides of the low wooden fence and also through the main staircase in the center that is covered with the glass roof on the top floor.

The third floor is specifically designed for retired elders who would like to live close to their peer group. There is a number of moderate-sized vegetable gardens on the same floor with the units for one-person and two-person households. Singles and couples are encouraged to share the gardening experience with the neighbors. The additional gardening space on the roof is also provided to all residents in the building; people can share the produce with one another and interact with different generations.



3RD FLOOR PLAN 

Figure 34 Third Floor Plan *Source: Author*



ROOF GARDEN 

Figure 35 Roof Garden Plan *Source: Author*

For every unit from type A to type D, each unit ensures to separate the private and semi-public spaces while simultaneously connecting them to shared or communal space. As such, the spaces transform in size or in relationship with other spaces for different uses.

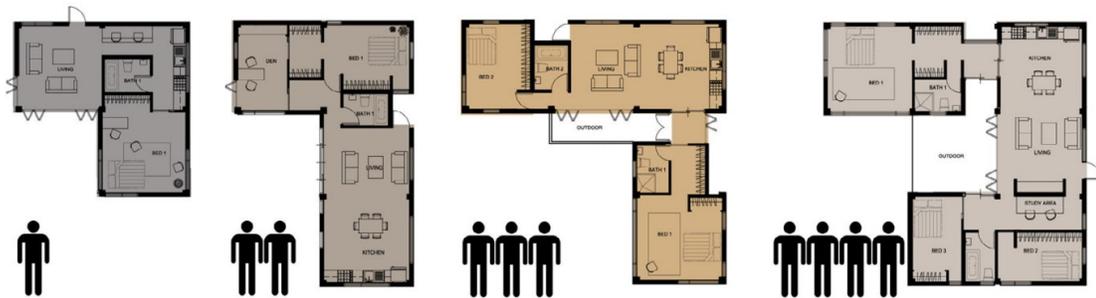


Figure 36 Unit Plan – Type A, B, C, D (from left to right) *Source: Author*

There are two main grid systems that were used in spatial planning and for the structural system in traditional houses and the proposed buildings for this project utilize the same strategies for its special planning. The primary grid in the traditional house is usually (approx.) 10'x10,' giving 10' distance for each *kan* or the space between two columns within the grid; in the past, people believed (approx.) 10' was the most comfortable size for a user in the space. The primary grid is further divided into four segments with a secondary human scale grid that is the width of an adult human shoulder – 3' to 4' (door width). The primary grid for the proposed building is resized to 15'x15' and that grid is applied throughout the entire building in spatial planning by combining adjacent '*kans*' to define the appropriate size for each program and space. The private spaces are further developed by the secondary human scale grid system. The living rooms, dining rooms, and kitchen are more open and

flexible while the bedrooms, dens, and study areas are more regulated and connected to the 4' transitional spaces. The units for single (type A) and for couple (type B) have semi-public space (living room) and private space (bedroom) that are connected with the shared spaces (kitchen, bathroom and den). The bigger units (type C and D) for more members of a family provide separate privacy for the children's space and the parent's space just as the traditional house provided private spaces for each family member. The units also have shared spaces like the living room and kitchen that connect all spaces together.



Figure 37 Perspective of the Second Floor Garden *Source: Author*



Figure 38 Perspective of the Outdoor space between Unit A & D *Source: Author*

For instance, the unit type D allows children to have their private tutors to come and study at the study area in the children's space without interrupting parents in the living room or in the kitchen. In unit type B, the wife can have a house party with the full floor-to-ceiling terrace doors open onto the outdoor area and make the entire living room extend to the communal space outside of the house (unit) while the husband can enjoy his own time in the private section of the house and freely travel from his bedroom to the den or bathroom and then leave house without walking through his wife's group of friends. From operable living room folding doors, Units A and C on the fourth floor open onto the communal outdoor area to combine the interior and exterior space of each unit and let the semi-public space of both units flow continuously for special dinner parties.



Figure 39 Unit Type D Floor Plan *Source: Author*

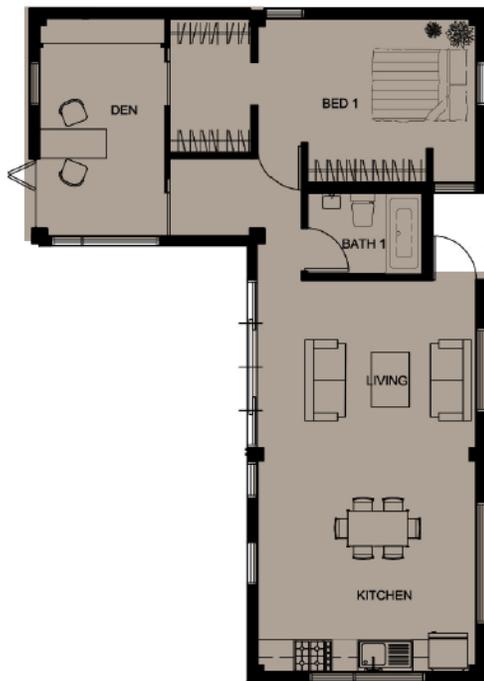


Figure 40 Unit Type B Floor Plan *Source: Author*

The architectural principles from the traditional theories are applied in every possible scale to this thesis project; in city, site, building, and unit scale. The proposed multi-generational housing complex visually and systematically adapts the major essences in Korean tradition to support the Korean lifestyle and identity while blending tradition and modernity to re-envision contemporary Korean housing for a more progressive and optimistic future for Korean society.

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