

On the Korean Front Line

The FAR Game

Constraints Sparking Creativity

Foreword

Myung Jin PARK

Chair and CEO, Arts Council Korea, Commissioner

Arts Council Korea (ARKO) has been trying to put contemporary Korean art and architecture into the spotlight of the international art scene since the establishment of the Korean Pavilion at the Giardini in Venice. The 15th International Architecture Exhibition, 2016 Venice Biennale will be the 10th biennale for ARKO since the Korean pavilion became the 26th and last national pavilion at the Giardini, and so it will be a meaningful event for examining our works and achievements so far.

For this exhibition, Alejandro Aravena, a Chilean architect and winner of the Pritzker Prize, has announced the theme 'Reporting from the Front', and is asking us to think about the role of architecture on the front lines of our lives. His question refers to how our society understands and processes current issues through architecture, and the role of architecture in bringing positive change to people's lives in the process. In other words, it's about the fundamental value of architecture.

Sung Hong KIM, the curator of the Korean pavilion, answers this with a theme intrinsic to the battle being waged on the front lines of Korean architecture, entitling it 'The FAR Game: Constraint Sparking Creativity'. The theme indicates that 'Floor Area Ratio' has a very deep and close relationship with Koreans' daily lives and so with contemporary Korean society. The Korean pavilion, through the analysis of enormous amounts of data on six hundred thousand buildings in Seoul, will attempt a shrewd study of the FAR Game and its deep roots in Korean society. Through this study, we will be able to come to understand the FAR Game within a socio-cultural context, and at the same time, we will be able to witness an exciting application of architectural fundamentals related to Aravena's suggested theme.

Based on a global network and a knowledge base which has been built up over the last 20 years of operating the Korean pavilion, ARKO will continue its efforts to making the Korean pavilion a stepping stone to overseas expansion of Korean art and architecture.

Finally, we would like to express our gratitude to all the curators, participating artists, architects, staff, essay contributors, generous sponsors and all other individuals who have given support and energy to the Korean pavilion for the 2016 International Architecture Venice Biennale.

Curatorial Foreword

WHY THE FAR (Floor Area Ratio) GAME?

Sung Hong KIM,
Curator

Of the few dozen articles on architecture and urbanism I have contributed to the Korea Joongang Daily, it was the one entitled “The FAR Game” that received the biggest response from readers. While FAR (Floor Area Ratio) appears to be technical jargon for professionals, it seems that almost every Korean either knows what it is, or has heard about it. If you type *yong-jeong-nyul* (용적률, 容積率, the Korean word for FAR) on Korean search engines, an endless stream of news, articles, and commentary pops up. The word speaks to the hunger for living space in a hyper-dense environment, as well as the desire to satisfy that hunger by any means possible, whether by proper planning and tactics or through trickery and obfuscation. It touches both the rich and the poor, the white-collar and the blue-collar, as they navigate their lives together in and around the urban fabric. Upon reading that article, where I had stated that without a doubt it is FAR that drives the architectural character of Korean cities, a renowned urban researcher told me I had hit the nail right on the head.

On seeing that Alejandro Aravena proposed the theme “Reporting from the Front” for this year’s Venice Biennale, my immediate thought was that the play of the FAR Game was the real battle being waged on Korea’s architectural front lines. The fact is that 99% of Korean architects must play the game in order to survive. An architect rarely gets a commission unless they can convince clients that their design proposal has larger rentable floor areas than their competitor’s.

In Korea, most clients and land owners are paying for the invisible quantity of the building, not the visible quality of the architecture. Buildings themselves are often not valued in the real estate market. The average lifespan of a building is shorter than that of a human being. If a new building can provide an increase in FAR, then demolition and reconstruction are sought. It is not uncommon to see celebratory banners when a building fails its structural stability test, because it means the demolition will be approved.

The FAR Game is particularly relevant to South Korea due to its recent history of unprecedented economic growth. In 1962, when the first Building Act and Urban Planning Act were established, South Korea’s GDP per capita was less than \$100 USD. Over the next 50 years it grew more than 300 times while land prices multiplied more than 600 times. This led to “compressed growth” and hyper-density in the country’s urban industrial hubs, with the Greater Seoul Metropolitan Area being the prime example. Combined with plot-based building regulations and an irregular and heterogeneous urban grain, Korean urban architecture has not been able to escape from the desperate and complex drive to augment living space that characterizes the FAR Game.

It is true that a clear identity for Korean architecture has been blurred amid the struggle between conflicting agendas: demolition vs. regeneration, privatization vs. nationalization, aesthetics vs. practicality. But underneath all of these considerations, the FAR Game always rages. It is easy to dismiss the FAR Game as a symptom of unscrupulous greed, and perhaps this is why theorists and critics rarely talk about it openly. However the reality is that, rather than resisting it, architects in Korea must welcome the tension between the desire for

maximum floor area and the building rules that restrict it, and use that tension to spark creativity and innovation.

The FAR Game Exhibit at the Korean Pavilion is designed to track changes in the game after the global economic crisis of 2008, and highlight the best examples of creative responses to the demands of FAR. Our team of six curators have analyzed the data and have worked to enroll participants and select materials that will illustrate not only the harsh realities facing Korean architecture and cities, but also the ways that our industry is making small changes for a better life as Aravena proposes.

Before I applied for this curatorship I spoke with a close friend, who encouraged me to go ahead if I could enjoy the process and not get caught up with trying to impress people. This made me think of Paulo Coelho's modern vanity fair satire "The Winner Stands Alone," set at the Cannes Film Festival. The Venice Biennale itself could be perceived as a vanity fair for closed circles of people increasingly detached from the reality of everyday life. However, I choose to see it as a platform for different perspectives from otherwise unheard voices. I represent my country here not to seek recognition, but to open a discussion with architectural professionals as well as the interested public about why the FAR Game matters in Korea and to architecture in general.

The FAR Game is a kind of self-portrait of Korea. Rooted in our past, it will continue to exert itself on the development of architecture in Korea well into the future. A *far game*, indeed.

The FAR Game: Constraints Sparking Creativity

By Sung Hong KIM, Eungee CINN, Keehyun AHN, Seungbum KIM, Isak CHUNG, Da Eun JEONG, Richard Enos

The front line of the architectural battles waged in Korea inexorably runs through its capital city of Seoul. Korean architects may think they have the vision of field generals, but when handling their missions in Seoul, they are often asked to operate more like foot soldiers.

The Korean urban architect works under the constant pressure of two opposing forces. One comes from Seoul's hyper-density; the greater Seoul metropolitan area, representing 12% of South Korea's land mass, is home to nearly half of the citizens of the entire country. Hence plot prices are at a premium, and the architect is always under strict orders to augment useable floor area in order to maximize a developer's and land owner's profits. The other is an urban building regulatory system where strict and unyielding rules give public officials little discretion for negotiation.

Korean architects must therefore always be prepared to perform a high-wire balancing act. Their endeavor to deal optimally with these opposing forces in the planning and execution of their buildings is known euphemistically as 'playing the FAR Game'.

Facing this tug-of-war between private profit and public regulation, how is the Korean architect truly to ply his trade, and infuse his work with some form of aesthetic or socio-cultural considerations? The answer from today's Korean architects, evidenced by the 36 buildings showcased in this exhibit, is to use the constraints brought on by the FAR Game to

spark their creativity rather than allowing those constraints to stifle it.

The main target is medium-scale multi-family houses or mixed-use buildings, which in earlier times would not have been on the radar of most architects. Yet, as this exhibit will show, these projects are now providing fertile grounds for creative responses to the intense high-stakes pressures of the FAR Game.

01. WHAT ARE THE RULES OF THE GAME?

The FAR Game Defined

Any and all architectural projects in Seoul, whether large-scale demolition and reconstruction projects or piecemeal regeneration, first have to consider the viability and the return-on-investment (ROI) for the land owner and developer. The unparalleled migration to the capital city in recent history and the ensuing high demand for living and working space led to a rapid rise in the cost of land.

As a consequence, it is natural that land owners and developers would urgently seek to maximize the useable floor space in the buildings that will be constructed for them in relation to the actual size of the land plot. In architectural terms, the relationship between these two values is called Floor Area Ratio (FAR).

The problem for land owners is that Korea, especially in its hyper-dense urban centers, has long maintained strict limits on FAR for each zoning area, as part of the urban rules that all building designs are subject to. And so, it is the interplay between the triad of land, rules, and building that makes floor area ratio so important. The endeavor to design buildings with the most useable floor space possible in the context of these variables is known in Korea as the *FAR Game*.

The Players

The FAR Game consists in the interactions of three players: the consumer demanding suitable living/ working space, the supplier attempting to deliver it through maximizing floor area, and the controller restricting it based on the dictates of urban building rules.

While the intensification, amplification and verticalization of buildings that came as a result of the mass migration to Seoul had been a boon for the construction industry, it left architects with few voluntary decisions in their building designs. Developers and contractors had the challenge of rising land prices that directly impacted their ROI, and more and more they began to dictate design elements to the architects that would maximize a building's floor area. In other words, it was really the developers and contractors, not the architects, who first took the initiative in the FAR Game.

After the financial crisis of 2008, however, both direct consumers (land owners) and indirect consumers (potential buyers) began to sense the decay of the 'real estate myth,' the idea prevalent in Korea for the preceding 50 years that growth in the housing market would go on forever. Controllers—government institutions that are supposed to stand for the public

good—began to notice signs of economic uncertainty in large-scale development and redevelopment, and consequently turned their attention to piecemeal renewal and regeneration.

A demographic transition in Korea—caused by declining birth rates, a decrease in population, an increase in the number of single households, and an increase in the number of elderly—forced a restructuring of typologies in the urban architecture. The younger generation kindled a desire to live in the inner city and enjoy a new urban culture, causing an increase in the demand for affordable small-scale residential and retail spaces.

One of the consequences of this rising demand was an emerging new role for architects in the small and medium scale building market. Previously, these buildings were essentially designed and executed by the developers, following standard building code, with little or no input from actual architects. The projects were considered too small, and paying commission to an architect was seen as reducing ROI without providing any tangible benefits.

After 2008, however, land owners started awakening to the possibility that if they did hire architects for their design ingenuity, they could increase and ameliorate the useable floor area, and would attract better tenants and be able to solicit higher rent. This is how architects in Korea began to become players in the FAR Game.

Playing the Game in Korea

Step 1: Calculate FAR (and BCR)

The first step for Korean architects is to know how much floor area they actually have to work with for their design. The Korean word for Floor Area Ratio is *yong-jeong-nyul* (용적률, 容積率), which actually means ‘volume ratio,’ and not ‘area ratio.’ Thus, there is some discrepancy between the definition of FAR in theory and its application in practice. Between the planes of two-dimensional surfaces and three-dimensional volumes is where the FAR Game is really played. So while FAR is calculated this way,

$$\text{FAR} = \text{gross floor area} / \text{plot area} \times 100$$

the FAR Game involves design strategies to increase not only floor area but also volume. In order to do this, not only is the Floor Area Ratio considered, but another metric as well called the Building Coverage Ratio (BCR). BCR represents the relationship of the built area to plot area, and is calculated as follows:

$$\text{BCR} = \text{built area of a building} / \text{plot area} \times 100$$

The built area is defined as the footprint of a building projected from 1m above the ground level.

In the diagram we see a one-storey building that occupies half the plot. Hence the building’s FAR would be 50% and its BCR would also be 50%. If the building was 4 stories high the FAR would be 200%, and 10 stories high would make the FAR 500%. The BCR remains the same for all three buildings.

The actual limits imposed by the government vary based on the zoning of the region the architects are building in. Note the chart below:

Step 2: Create the Building Envelope

The next step for architects is establishing a hypothetical 'building envelope', which is a three-dimensional figure that encapsulates the shape of the maximal area the building can legally occupy, measured by floor area, storey height and number of stories.

To properly create the building envelope, the architect has to factor in the five most critical regulations:

- minimum distances from the site boundary
- street width diagonal plane control (abolished in 2015)
- north-south orientation setback and diagonal plane control
- maximum height and number of floors (for multi-family housing and for areas regulated by the 2002 District Unit Plan)
- required number of parking spots in relation to floor area

Step 3: Allow for Exemptions

There are some building elements whose floor areas are exempt from the FAR calculation in Korea.

- underground floor area
- ground floor parking area with pilotis (support columns)
- balcony with a depth of less than 1.5 meters
- attic with a height of less than 1.5 meters
- exterior areas enclosed by walls whose opening ratios are greater than 50%
- handicap elevator areas (from 2014)

It is incumbent on the architect to utilize these exemptions to the fullest extent possible within the framework of their design. A large part of playing the FAR Game is taking advantage of the additional floor space afforded by these exemptions.

Step 4: Organize Space Considering All Requirements

The challenge here for architects is to arrange rooms, corridors, and hallways to accommodate the specific functions required by clients without losing floor area or volume within the envelope.

Step 5: Extend the Building Envelope with Formal and Configurational Innovations

In order to maximize rentable space and minimize un-rentable space, architects need to be masters in formal and configurational innovation, and sometimes outright invention.

Diagram A (Steps 1-3): A hypothetical building envelope, regulated by the limits of urban building regulations

Diagram B (Step 4): A hypothetical building mass, accommodating the specific functions required by clients without losing floor area within the envelope

Diagram C (Step 5): The extended volumes or surfaces developed through formal and configurational innovations

Diagram D: The realized building

02. HOW IS THE FAR GAME PLAYED?

(밀줄은 패널)

Korea has been criticized by outsiders as the 'Apartment Republic.'

But more households still live in medium-rise multi-family houses than in high-rise apartment buildings.

Changes in the Construction of Multi-Family Houses and Apartment Buildings

Stereotypical Medium Multi-Family House

In residential zoning areas in Seoul between the 1980s and 2000s, many one and two-storey single-family detached houses were replaced by three and four storey multi-family houses. This including both *dagagu juteak* (rental properties) and *dasedae juteak* (properties for sale) that were no more than 660m² and 19 units. They were gradually mixed with *keunsaeng* (small retail spaces) on the ground floor.

Traditionally, these structures were designed on purely pragmatic grounds by local builders and developers without any professional design training. The compactness of the buildings, together with narrow adjacent roads and an insufficient parking area, makes these buildings undesirable living spaces.

Naturally they were not favored by the upper middle class, who wanted to own the more profitable apartment unit. If the real estate speculation and construction boom lasted, these structures would have been replaced by high-rise apartment complexes or commercial buildings.

Instead, smaller-scale redevelopment has become predominant, allowing young architects to enter this tough market after 2010.

Our exhibition demonstrates how they play the FAR Game in a way that differs from the purely pragmatic focus of local builders and developers.

In 2015, the total gross floor area (GFA) of high-rise apartment buildings comprised 61% of the GFA of all residential buildings, while multi-family houses accounted for only 24%. But when it comes to number of households, it is a different picture: 1.66 million households (46.1%) live in multi-family houses, whereas only 1.61 million households (44.8%) live in apartment buildings.

The average size of a multi-family house is 354m² and 2.9 storeys, where an average of 8.3 households are in one multi-family house. Each household occupies a living space of 43m². By contrast, the average apartment building is 7,202m² and 9.5 storeys, where an average of 63.1 households are in one apartment building. Each household occupies a living space of 114m².

Most multi-family houses will have to face some form of regeneration by 2020 according to urban planning guidelines and requirements for Seoul.

Multi-Family House, Yeonnam-dong, Seoul

Profiles of the Main Residential Building Typologies in Seoul

The FAR Game in the 36 Buildings

The 36 buildings selected are each represented by two models. One is a hypothetical building mass accommodating the specific functions required by clients without losing floor area within the envelope, the other is the realized building.

The 36 buildings chosen represent a cross-section of the typical urban architecture in Korean cities, using Seoul as the core. These buildings exemplify the unique vision of Korean architects seeking to maximize FAR while providing a sense of spaciousness and freedom. The geometrical and compositional inventiveness gives an ever-densifying city a distinct identity. This is part of an urban culture which creatively absorbs the daunting population magnetism of Seoul and turns it into an advantage.

Year of Construction: All 36 buildings were built after 2010.

Location: 34 buildings are in the Greater Metropolitan Seoul Area, with 29 in the city of Seoul proper. The other 2 are in Busan, the second largest city in Korea.

Size: With the exception of the five largest buildings, the average gross floor area for the exhibit buildings is 747m². They average 6 stories with one underground floor. The average plot size is 292m². The average FAR is 201%. These figures reflect the averages for urban architecture and plots in Seoul.

Program: The functional program of 23 of the buildings is residential, or a mix of residential and retail. They represent the typical urban architecture in Seoul.

Zoning: 24 buildings were built within urban areas formulated by the predominant urban planning tool, Land Readjustment (LR), in the 1960s and 1970s. The majority were built in General Residential zoning, and represent the typical residential areas in Seoul.

Architects: All of these buildings were designed by architects from small studios. Many are just starting out within the Korean architectural community. Some of them feel they are still in the minor leagues when it comes to designing more stratified structures. Hence, being knowledgeable about and skillful at the FAR Game is not only desirable for these architects, it is a prerequisite for their survival.

Design Tactics

The FAR Game confronts and challenges some of the basic principles and elements of architecture. It imposes itself not only on the scale of a building but also on the organization of fundamental elements of a building— plan, volume, and section. The architect must develop tactics to address each of these elements in order to fulfill the demand for maximum floor area and volume. Most of the 36 buildings exemplify several of the following design tactics.

Planimetric Tactics: Refers to efforts to make the most out of every square meter of usable floor area regulated by BCR and FAR limits, by reducing common areas such as corridors and nooks while expanding rentable areas. The shape, width and depth of floor plans are carefully adjusted and squeezed to fit inside the horizontal perimeter. The balcony,

penthouse, and courtyard, which are exempt from the FAR calculation, are added or augmented.

Volumetric Tactics: The practice of shifting focus from two dimensional floor areas to three dimensional volumes. After fully obtaining the floor area, an architect extends volumes, usually employing irregular polygonal shapes, to reach the limits of hypothetical planes determined by the building regulations.

Layers of perforated building surfaces, sometimes using improvised formal shapes, are attached.

Sectional Tactics: Architects reduce the ceiling height in order to be able to add one or more storeys within the overall height of the building envelope. While a standard ceiling height in modern Korean residential buildings is 8', a reduction of 10% is often enough to be able to add one more floor to make a five storey building. Where clients prefer an increase in the height of their building rather than in its width, an architect increases the number of storeys on the top, and reduces the corresponding amount of floor area in the middle, similar to slimming the waistline of a body. The underground floors and the attic, which are not included in the FAR calculation, are also designed as livable and rentable areas. It is like solving a three dimensional puzzle.

Sectional Perspective (p.38)

The architects built as many micro-houses as possible on a narrow and deep site. By dividing volumes three-dimensionally, they tried to find hidden spaces which are invisible in the two-dimensional plane. Through this process, they successfully designed small, yet comfortable one-bed units.

Sectional Perspective of Case Number 24 (Tetris House) out of 36 Buildings

03. WHAT ARE THE FORCES AT PLAY IN THE FAR GAME?

Hyper-density

Seoul is one of the most populated, densest, and most concentrated cities in the world.

After the Korean War, the capital city of Seoul became the uncontested center of industrial development, and as a consequence the population of the city took off. Seoul's population was 1.6 million in 1955, 3.5 million in 1965, 8.4 million in 1980, and over 10 million by 1990. Over the course of 35 years, Seoul's population grew more than 6 times, while South Korea's population merely doubled.

It took only 46 years for Seoul's population to go from 1 million to 10 million.

It took only 46 years for Seoul's population to reach 10 million from 1 million. Compare that with London, which went from 1 million to 8 million in 129 years, or New York City which took 127 years to accomplish the same feat.

Seoul is found in the upper right part of the graph with cities such as Mumbai and Lagos, making Seoul one of the most populated, densest, and most concentrated cities in the world. Half of the population of South Korea resides in the Greater Seoul Metropolitan Area, with about half of that, or over 10 million people, living in the capital city proper.

As a consequence, Seoul's housing construction could not keep up with the accelerated demand for more physical living space. An urban planner calculated that, between 1960 and 1980, about 800 people moved into Seoul every twenty-four hours, meaning that on average a 20-storey apartment had to be built each day.

Land Price

Seoul's land prices continued to grow between 1990 and 2015, most dramatically between 2002 and 2008.

Between 1964 and 2015, the official total land price of South Korea grew more than 680 times. If that price is calculated in Korean Won, it grew more than 3,000 times. A more striking fact is that Seoul's total land price represents about 30% of the total land price of the whole of South Korea.

The real transaction prices of land are higher than the official prices, sometimes double in Seoul. In 2015, a plot in a prime location of downtown Seoul reached \$80,000 USD per square meter.

In Seoul a building is considered as the stacking of land.

It is no wonder that developers and clients pursue the maximum FAR relentlessly to compensate for the rising land acquisition prices.

Compressed Growth

Rapid economic growth accelerated the Far Game in Seoul.

The growth of land price exceeded the growth of nominal GDP in Korea over the last 50 years.

In 1964 South **Korea** was one of the poorest countries in the world with a GDP per capita of \$106. By 2014, Korea's GDP per capita had reached \$27,953 USD. Seoul led the expansion and concentration of capital. Seoul's GDP per capita in 1985 was \$2,706 USD, and it reached \$31,448 USD in 2014.

Building Scales and Typologies

Building typologies were polarized drastically after Korea's 1997 foreign exchange crisis.

Amidst amplification and verticalization of the urban architecture, building scales and typologies were differentiated and polarized. These changes were most drastic between Korea's foreign exchange crisis in 1997 and the global financial crisis in 2008. The horizontal

layers in the graph indicated how building storey were planned and constructed in response to the changes in building rules.

Amid fluctuation in the construction of the two major residential building types since the 1990s, the supply of apartment buildings has exceeded that of multi-family houses for the last 20 years. However, as the economic profits of large-scale apartment development were no longer guaranteed after 2008, the construction of apartment buildings dropped rapidly, while that of multi-family houses continued to increase. As of 2015, the supply of these two types reversed, which is a new phenomenon in the history of residential buildings in Korea.

While the two major building types—the apartment building and the multi-family house—were polarized from the 1980s, small retail spaces (keunsaeng) were combined with the medium-rise multi-family houses, and became the prototypical mixed-use buildings in Seoul.

The mixture of residential and retail spaces within Residential Zoning areas is common in Korean cities. It is because urban and building rules allow most retail functions in Residential Zoning. But the fundamental reason for this phenomenon is the higher ratio of self-employed.

The higher ratio of self-employed in Korea affects the retailization of medium multi-family houses.

In 2014, the ratio of self-employed in Korea was 26.8%, the 4th highest behind Greece (35.4%), Turkey (34.0), and Mexico (32.1%) among OECD member countries. Between 2013 and 2014, the average of all OECD member countries was between 16.3% and 17.1%.

The FAR Game in Statistics

These two infographics demonstrate how the FAR Game is played in direct response to changes in the urban building rules.

The infographic on the left shows the stepwise distribution of FAR with some intervals. The distribution of FAR is clearly demarcated into three different periods: before 1997, where storey limits were more stringent than FAR limits; between 1998 and 2003, when a plan was announced to intensify FAR limits; and after 2003, where FAR limits were sub-categorized and intensified.

On the right infographic the two highest peaks are shown at 100% and 200%, which coincides with the FAR limits for different zoning areas. This demonstrates how the FAR Game really is a concerted effort to capture every possible millimeter of space allowable.

The discrepancy between the current FAR and buildable FAR puts pressure on developers and architects, as a 200% FAR ratio is considered the minimum threshold for new development.

Today, the average FAR of about 602,548 of the 634,201 buildings in Seoul is 145%.

Characteristics of the Urban Fabric

The Superblock

Gangnam is representative of a planned grid pattern consisting of superblocks.

Gangnam, South of the Han River, approximates the typical urban grid pattern in Seoul today. Gangnam is the single largest area (2,688 ha) to undergo Land Readjustment (LR) in Korea, and it has become the new commercial and business center while supporting upscale residential areas.

Land Readjustment is an urban planning tool used to consolidate disparate and fragmented land parcels into contiguous tracts, while building public infrastructure that included roads, parks, rivers, and sites for public buildings. Nearly 40% of the urbanized area in Seoul was organized by this urban planning tool. Among the 36 buildings showcased in this exhibit, 24 were built in LR project areas.

Because this area was modeled under a comprehensive plan, the grid pattern of streets, blocks, and plots is quite functional, unlike irregular and discontinuous old areas in Seoul. As a consequence they remained relatively untouched by the subsequent planning tools.

If a block is defined as the area surround by roads that have separate driveways and a pedestrian sidewalk, Gangnam consists of superblocks and layers of smaller sub-blocks surrounded by undivided roads or narrow alleys. The block chosen as an example here is 965 by 852 meters.

Zoning Layers in the Superblock

This horizontal shift of zoning within a block can be compared to the layers of an onion. Entering a block is like peeling a layer off; you see more onion, but the onion is getting smaller.

The superblock consists of more than two zoning areas. The perimeter of the block is bordered by either Commercial or Quasi-Residential areas in a linear pattern, while the inner blocks are divided into Class-3, Class-2, or Class-1 General Residential areas. Each zoning area has different FAR and BCR limits.

The superblock between Gangnam Metro Station and Yeoksam Metro Station consists of Commercial, Class-2, and Class-1 General Residential zoning areas. The General Residential areas within secondary roads were planned for single detached houses by LR projects in the 1970s.

Along the wide street, a new business corridor with high-rise office buildings is formed, while the areas in the middle were packed with medium rise residential and commercial buildings, converted from single storey houses from the 1970s.

One superblock is divided into smaller sub-blocks, about 6 by 6 sub-blocks on the average, which are further divided into plots. The plots are adjacent with 4, 6, and 8 meter-wide streets depending to their location.

The small plots, narrow adjacent roads, and plot-based buildings rules make for a unique dense and compact urban fabric.

The average plot size in this Gangnam superblock approximates the average plot size in Seoul today.

The chosen superblock between Gangnam Station and Yeoksam Station consists of about 1,340 plots. More than one third of these plots are between 200 and 300 square meters, which approximates the average plot size within Seoul today. This is about three times the average residential unit size defined by the Korean Government.

Typically, one building is built on each plot in LR project areas. Compare this with the planning of high-rise apartment buildings, where dozens can be assigned to a single plot. Due to the small plots, narrow adjacent roads, and the restrictive plot-based buildings rules discussed earlier, it is virtually unavoidable that seeking to reach BCR and FAR limits will create a dense and compact urban fabric with buildings side by side.

04. ARTIST PERSPECTIVES ON THE FAR GAME

In this section, drawings, photographs, and videos span the cityscape and bring its built structures into view, individually and collectively, to expose the scars of FAR Game battles won and lost. Each artist renders the vivid reality of the lived urban space from their own perspectives, going beyond the analytical investigations held in board rooms and drafting rooms. This section puts a different face on the FAR Game, one which expresses the collective sentiments as well as collective desires of the citizens that inhabit the city.

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Seongeun KANG

Using fine calligraphic brushes, Seongeun KANG details the façades of multi-family houses, with a simple elegance that belies their banal designs. Star and flower patterns on the façades appear detached from the buildings, which exude the compartmented functionality that is often a consequence of the FAR Game played haphazardly. *Their Houses* captures the anonymity created by builders who don't fully take ownership of their craft, and reflects a form of unconscious thinking that still pervades large swaths of everyday life in the city.

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Seung Woo BACK

Seung Woo BACK has photographed thousands of multi-family houses in Korea over the years. He often creates images that capture a tinge of the poverty that Koreans have tried to erase from their memories. While Seoul tries to measure up to the prestige other global cities, the awkward and disjoint appendages in these buildings mock such an endeavor, as they chronicle a disorganized and desperate search for additional living space. While the FAR Game can result in the continuation of a cultural identity rooted in a difficult past, these photographs can serve as a clarion call to the next generation of Korean architects, who are tasked with reshaping the urban battleground to reflect the nation's highest aspirations for a

new identity, even as they continue to be tethered to the reins of the FAR Game.

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Yeondoo JUNG

Yeondoo JUNG's *Building Recollections* documents fragments of streetscapes in an aging urban neighborhood. Images of buildings composed of a series of photographs seem frozen at first, but upon closer observation the images crawl slowly across the screen, as if to emphasize the plodding persistence of an impoverished identity. Monologues from everyday people reinforce the way residents identify with their homes, and in that way are also caught maintaining a stagnant sense of self. Here the FAR Game is a context for the accumulated memories of their lives, which follow in lock-step the notion that desires for space and freedom will never fully be realized.

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Kyungsub SHIN

Kyungsub SHIN provides a macro view for each of the 36 buildings in the main exhibit with photographs from a distance, sometimes from the sky. While the backdrops to most of the buildings look fairly standardized and flat at first, a heterogeneous and chaotic fabric soon comes into view. More difficult is to actually discern the buildings designed by architects, those which purport to impose themselves positively on the cityscape. It underscores the breadth of the task ahead for today's architects, who mostly play the FAR Game one building at a time, hoping to slowly transform the identity of the city.

05. Why does the FAR Game Matter?

From the outside, the FAR Game might appear to be nothing more than an unavoidable consequence, especially within the borders of hyper-dense urban centers, of the insatiable desire for wealth on the part of land owners and developers. This exhibit's examination of the FAR Game in Korea, however, especially of the ways that it changed after the global economic crisis of 2008, leads to important points of further exploration on several levels.

The Impact of Architecture on Society

The FAR Game is a powerful lens into the current frontiers of Korean society as expressed by the scale of buildings in the cities and the urban fabric. It reveals a form of embedded physical DNA that reflects the psyche of contemporary Koreans. Where we see the desire for space as an expression of freedom, both from external oppression and internal confusion, we find what is great about Korean culture: resiliency, fervor and diligence. When we see the desire for space simply as a way to accumulate greater wealth, we find greed and duplicity still present. If cultural identity and the lived environment have an iterative influence on each other, then it is not impossible to say that the architect and the architecture they design wields the power to slowly transform a nation's self-image. It is thus encouraging that a new generation of architects in Korea have discovered a niche in the market that will allow them to play the game with greater emphasis on quality of life and emerging cultural values for the urban middle class.

Innovative Design Tactics Inside and Out

The FAR Game gives rise to a host of design tactics that are truly out of the box, by necessity, and impose themselves on the organization of fundamental elements of a building— plan, volume, and section. This exhibit highlights attempts by architects to creatively absorb hyper-density by crossing over from quantity to quality, and to turn the motivation of short-term individual profit into the realization of long term public benefits. While the FAR Game in Korea used to imply maximizing a building's rentable space without regard for the lived experience of occupants or the building's relationship to the urban fabric, architects today are employing tactics that are convincing landowners of the value not only of creating a better living environment for inhabitants, but also of stimulating more activity between private and public space, and between the building and its urban environment.

An Alternative Model for Urban Regeneration

The FAR Game in Korea has gone through changes with the decline of large-scale demolition and reconstruction projects. With the city of Seoul turning its attention and efforts to piecemeal transformation, an opportunity has opened for budding development agencies and young architects. While this may not draw the attention of massive star-studded construction projects, the process does foster a slow but resilient form of urban regeneration on a smaller scale within sub-blocks. At this more personal level of development, a new economic and social dynamic is cultivated. From the supplier side, small and medium-sized business is stimulated, leading to a nimbler and better trained army of laborers, workers, builders, and contractors; subsequently, the relationship between supplier and consumer improves, as suppliers have a more attuned ear to changing consumer demands. Following this example, economic stagnation and a city's inability to implement wholesale reconstruction of vast sections of the city can turn out to be a blessing in disguise. The efforts highlighted in this exhibit become instructive for large cities that have lost touch with the goals and values of their citizens.