

The FAR Game: Constraints Sparking Creativity

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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.

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

The exhibition consists of five sections: 1) What are the rules of the FAR Game? 2) How is the FAR Game played? 3) What are the forces at play in the FAR Game? 4) Artists perspectives on the FAR Game, and 5) Why does the FAR Game matter?

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 actually means 'volume ratio' and not 'floor 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.

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

So while FAR is calculated this way, the FAR Game involves design strategies to increase not only floor area but also volume. In order to do this, not only is the FAR 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:

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

The built area is defined as the footprint of a building projected from 1m above ground level. The actual BCR and FAR limits imposed by the government vary based on the zoning of the region.

GRAPH: Relationship between Plot, BCR and FAR

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, bearing the five most critical building and exemption regulations in mind:

GRAPH: The five most critical building and exemption regulations for the FAR Game

Step 3: Allow for Exemptions

Some building elements are exempt from FAR calculation, like underground floor area, ground floor parking area with *pilotis*, balconies with a depth of less than 1.5 meters, attics with a height of less than 1.5 meters, exterior areas enclosed by walls whose opening ratios are greater than 50%, and handicap elevator areas.

A large part of playing the FAR Game is taking advantage of 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.

[Text and Images extracted from *The FAR Game: Constraints Sparking Creativity*, SPACE Books, 2016. The book is published in conjunction with the exhibition at the Korean Pavilion, Biennale Architettura 2016]