# The Trends of Apartment Design in Ho Chi Minh City, Vietnam

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Abstract: Vietnam, a developing country, is witnessing a rapid urbanization as a result of the process of modernization and industrialization. Recently, Ho Chi Minh City, the most developed city in Vietnam, reveals intense housing development for offering housing sources to meet the huge demand of the people. This research is a survey to explore the major trends of contemporary apartment design through the 27 latest apartment projects including 79 blocks and 1055 flats in total. The result of the survey implies trends of today apartment design in Ho Chi Minh City and the relationship of building typology, apartment layout and housing value. The results indicate that hall access, double-loaded corridor and combined type are the most favorable typologies. Most of luxury apartment are inclined to apply the hall access type of building and having the 3B+ flat layout pattern. The low-cost apartment has a tendency to apply the 2A and 2A+ flat layout patterns and double-loaded corridor type. However, there is not any clear trend of designing common apartments. Single-loaded corridor and 1B flat layout pattern are seldom applied in high-rise apartment design.

*Keywords:* apartment design; housing development; Ho Chi Minh City; Vietnam

## 1. INTRODUCTION

Vietnam, a developing country, is witnessing a rapid and intense urbanization as a result of the process of modernization and industrialization. Quick urbanization interests a great amount of labor forces and thus requires a multitude of accommodation. Apartment high-rise building is largely acknowledged being the only alternative to solve the lack of housing issues in the massive urban. Ho Chi Minh City, the most developed city in Vietnam, recently has a remarkable increase in developing the apartment high-rise building for meeting the great demands of people. Recently, a large number of apartment projects have been constructed, forming the modern high-rise living style and cityscape. Despite the proliferation of apartment high-rise buildings, the housing cost has been the main obstacle obstructing people access to apartment residences. Besides, apartment living quality is also the principal concerns of a majority of the population. The fact is that there is scarcity of study responsible for the trends of today high-rise apartment building design. Therefore, it is necessary to systematically survey the situation of the apartment high-rise building in Ho Chi Minh to define the primary tendency of developing highrise residences. The survey is deployed in order to find out the

critical issues in today apartment projects in Ho Chi Minh City under the lens of architectural design and market matters. This survey will explore the foremost tendencies of ongoing apartment design and the correlation between housing cost and flat form and value.

This research is a survey to explore the major trends of apartment design through the 27 latest apartment projects including 79 blocks and 1055 flats in total. These projects are categorized into three groups represented as luxury, common and low-cost apartments and apartment building typologies are divided into single-loaded corridor, double-loaded corridor, hall access and combined types.

The results indicate that hall access, double-loaded corridor and combined types are the most favorable typologies. In which, hall-access type is often applied for luxury apartment and double-loaded corridor type is utilized for the low-cost apartment while there is no clear tendency of application to the combined type. The results also reveal the relation between flat value and layout. The results of this survey are the foundation for criticizing the upcoming apartment design in Ho Chi Minh City. These results will assist in the construction company to find the solution for a cheaper cost while maintaining the quality of living.

## 2. OUTLINE OF RESEARCH

The survey carries out on the data of 27 recent finished and on-going high-rise apartment projects in Ho Chi Minh City, which varies from 15 to 35 stories. Table 1 indicates the list of 27 apartment projects involving 79 blocks with 1055 flats as objects of this survey. Data is primarily collected from various sources, including websites, enterprises and government offices. The twenty-eight projects then divided into three groups represented as luxury (A), common (B) and low-price type (C), according to the cost of the apartment which was informed by real estate companies and main suppliers at beginning of the year 2014. The low-cost apartment has the price up to 13 mil.VND per sq meter. The common type has a cost ranging from 13 to 18 mil. VND per sq meter and the luxury apartment is as expensive as upper 18 mil.VND per sq meter. The total includes seven projects of A type (21 blocks), sixteen projects of B type (45 blocks) and five project of C type (13 blocks) (Table1)

Location	Apartment project name	Level	No. of Block	No. of Projects
District 2	Hoang Anh River View	А	3	7
	Homyland 2	В	2	
	Thao Dien Pearl	А	2	
	Thu Thiem Xanh	С	2	
	Tropic Garden – Phase 1	А	2	
	Estella	А	4	
	Parcspring	В	3	
District 4	Galaxy 9	В	2	1
District 6	Him Lam Cho Lon	В	6	1
District 7	Belleza	В	6	5
	My Phu	В	1	
	Park Residence, Phase 1	В	2	
	Hoang Anh Thanh Binh	А	3	
	Era Town – Area 1	В	5	
District 8	Carina Plaza	В	3	2
	Giai Viet	В	4	
District 9	Pho Dong	С	1	2
	The Eastern	В	2	
District 11	Tan Phuoc – Phase 1	А	2	1
Binh Thanh District	Everville	С	5	1
Tan Binh District	The Useful Apartment	В	1	1
Thu Duc District	4S-2 Riverside Linh Dong	В	3	6
	Central Light – Phase 1	С	1	
	Emerald	В	3	
	Lan Phuong MHBR Tower	В	1	
	Sunview Town	C	4	
	Tecco Tower	В	1	
Nha Be Province	Phu Hoang Anh - Phase 1	А	5	
Total	-	-	79	27

## Table 1: Objects of the Survey

# **3.** GENERAL FINDINGS

# 3.1 Building Typology

The building typology is fallen into four groups: single-loaded corridor, double-loaded corridor, hall access, combined types (

Table 2).

# Table 2 Patterns of four types of apartment building typology



The data indicate that the combined type, hall access and double-loaded corridor type are the most popular typology of apartment design in Ho Chi Minh City. As can be seen from Fig. 1, of 79 blocks, combined type is the most dominant typology accounting for 39.24% (31 blocks). Hall access and double-loaded corridor types are roughly equal percentage with 30.38% (24 blocks) and 27.85% (22 blocks) respectively. Single-loaded type is seldom applied in apartment design with only 2 blocks (2.53%).



Fig. 1 Number of apartments in terms of building typology

#### 3.2 Direction of Apartments



Fig. 2 Distribution of direction of flats

The direction of the apartment is critical in terms of natural ventilation and solar heat prevention. The distribution of direction of 1055 flats is shown in Fig. 2, which indicates that apartment design in Ho Chi Minh has a tendency to avoid west and east direction. Since most of apartment building typologies are combined type and hall access type, northwest, southeast, northeast and southwest are the most favorable direction for ensuring that large portion of flats has the equal quality in direction. Besides, north and south are more preferred than east and west, which prevents flats from the direct sun rays in the morning and afternoon. This trend of direction is proper and essential for high-rise apartment building in Ho Chi Minh City.

Fig. 3 show that over 90 percent of low-cost apartments are designed in double-loaded corridor and combined type, in which, roughly 60 percent is double-loaded corridor type and 30 percent is combined type. Meanwhile, there is no luxury apartment applied the single-loaded and double-loaded corridor type. In other words, entire luxury apartment utilizes the hall access and combined type. The common type is evenly found in double-loaded corridor, hall access and combined types. Single corridor is rarely implemented for high-rise apartment in Ho Chi Minh City (only 4.44%). Although single-loaded and double-loaded corridor apartments possess a lot of ecological features, they are not seen as favorable choices for high quality apartments. This clearly takes into account the effects of the economic factors in designing the apartment building since corridor type wastes more space for circulation.

#### 3.3 Correlation between Flat Value and Building Typology



#### Fig. 3 Distribution of flat value and apartment building typology

#### 3.4 Correlation between Flat Layout and Building Typology

Trends of flat layout pattern take account of the quality of living environment.

Table 3 indicates the category of flat layout patterns in terms of opening potentials to nature. Column signs (1, 2, 3 and 4) represent at increasing levels of the opening potentials on front edge. Row signs (A and B) mean two and three units of the apartment's depth while the row signs (A+ and B+) represent for increasing levels the opening potentials on the side edge.



#### Table 3 Distribution of flat layout patterns

Note: L: Living room; B: Bedroom; B<sup>m</sup>: Master bedroom; K: Kitchen



Fig. 4 Distribution of flat layout patterns in various building typologies

Fig. 4 shows the correlations between flat layouts and building typologies. According to Fig. 4, the 2A is the most dominant

pattern (56%) in the double-loaded corridor type of apartment buildings. Meanwhile, the 3B+ is the majority of flat pattern (44.4%) in the hall access type of apartment building. The combined type has an equal distribution of the 2A, 2A+, 2B, 2B+, 3A, 3A+, 3B+ while 3B pattern is not popular in this combined type. The 1B pattern is rarely applied in apartment design while 4B+ only appears in double-loaded and hall access types.

#### 3.5 Trends of High-rise Apartment Design

Combination between Fig. 3 and Fig. 4, the survey reveals the significant findings in high-rise apartment design in Ho Chi Minh City. Most of luxury apartment are inclined to apply the hall access type of building and having the 3B+ flat layout pattern. The low-cost apartment has a tendency to apply the 2A and 2A+ flat layout patterns and double-loaded corridor type. However, there is not any clear trend of designing common apartments. Single-loaded corridor and 1B flat layout pattern are seldom applied in high-rise apartment design.

#### 4. CONCLUSION

The survey indicates the trend of apartment building design in Vietnam recently. Through the survey, it can be clearly found that Vietnam apartment design takes the earliest period of providing residences for public. Low-cost apartment has a tendency to select the double-loaded corridor type of building with a small apartment and less opening potentials to surroundings. Mean while, luxury apartment could be found in hall access and combined type, especially hall access type providing the larger apartment and maximizing lighting and natural ventilation potentials.

#### **Figure Sources**

Table 2: Images extracted from various websites of real estate enterprises.