

Buildings Visual Character Framer on Apartment-Mall-Rental Office Mixed Use Building Design Study in Banjarmasin City

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Abstract

By the fast development of society needs, society service facility to accommodate those need is also developing, mixed use building is a building which is able to facilitate society activities, with the building façade as the identity of each function within, which presents the building image. Façade is front appearance or outside building which reflects the building image with aesthetic element, resulting on the meaning of the mixed use building function. The unattractive appearance of the building can cause the low quality of buildings visual character. This study uses/employs descriptive research method, which analyze visual character on mixed use building, which include three different function. On those three building characteristic function, unity character on building visual character is taken, so that it can be used as design standard in order to another new building can be built fairly with the existing building which then strengthen the zone identity. The existence of unity on the visual character on those three buildings with entrance, opening, ornament and roof components, and the other character consist of symmetric rhythm, geometry, proportion scale, color and material composition.

Keywords: visual character, façade, mixed use building

I. INTRODUCTION

Banjarmasin city has 98.46 km² area or 0,26% of South Kalimantan province area, which consist of 5 sub districts and 52 villages. Banjarmasin city is called “One thousand river city” since there are lots of rivers pass through Banjarmasin area. Banjarmasin city is in between two districts namely Banjar and Barito Kuala district, as seen in Fig. 1 below.

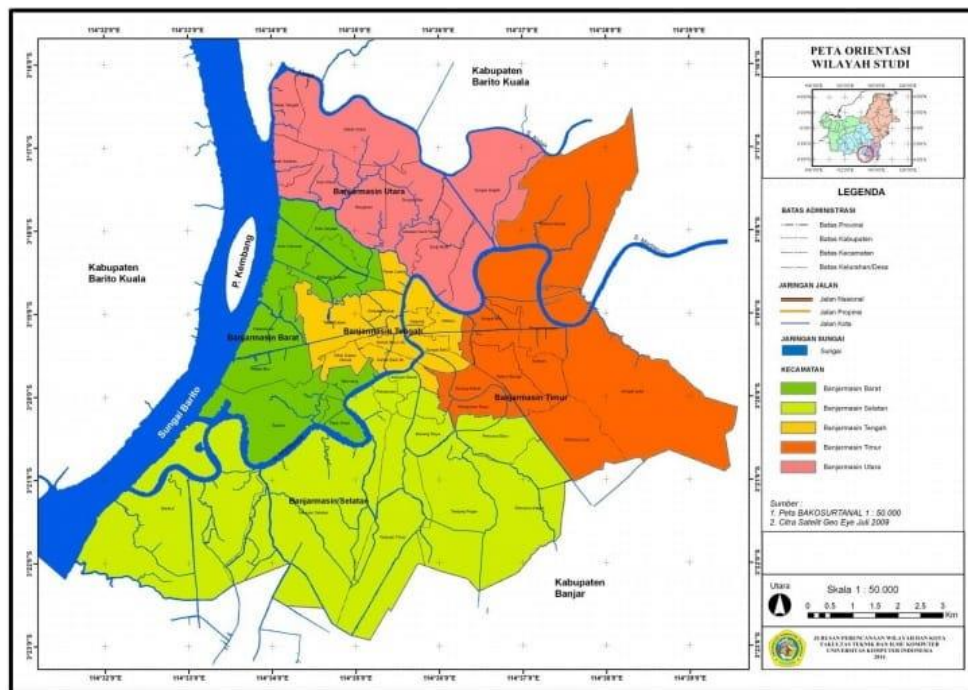


Figure 1. Banjarmasin Administration Border Map
Source : Dakira. 2019. <https://peta-hd.com/peta-kota-banjarmasin/>
(access on Januari 17, 2022)

Banjarmasin city as the governmental, office settlement, trading and service center, is one of the gates to national economic activity. Therefore, mixed use building design has potential on Banjarmasin city development to increase local economy development based on the data from Regional Development Plan of Banjarmasin city in 2015. Zone issues on mixed use building design in this city is not only known as its crowd and hot character and the numerous horizontal city spreading, but also the lack of water absorption area in the surrounding.

Mixed use building which is also usually mentioned as multifunction building consist of one or several mass building which applied and directly connected each other with different function. It will combine between home facility, business facility and entertainment facility which usually possessed by one developer (Savitri, 2007).

It is an integrated design which comprises of various building function located in a city area which caused by the limited space, land high price, yet it has a strategic location with high economic value, thus the complex structure occurs where all of the function and facilities is connected each other on the powerful integration frame, so it has effective and efficient space usage, easier society-need-service and the environment become more comfortable. The function of the two or more buildings, the position of the building masses can be side by side or only consist of one building mass which is made stacked.

The factors which become efforts to design mixed use building is the investors potential in Banjarmasin, which has great potential to attract vast investors, in developing the infrastructure. The Regional Development Planning Agency of South Kalimantan has mapped the investment potential that can still be offered to domestic and foreign investors as the Government Work Plan 2018 has been established.

Those factors also becoming the basic of mixed use building design and planning, which is an integrated of building designed by dwelling, shopping center and office settlement function which potential in Banjarmasin city development to increase local economy development.

This mixed use building design study emphasizes on contemporary concept which refers to contemporary architecture principle by Schirmbeck (1988), using expressive and dynamic arrangement, open space image, transparent façade, outside space harmony, ultimate comfort, landscape exploration and sturdy building application.

Based on the mixed use building placement, there are four configurations on a mixed use area (Sumargo, 2003), those are:

- a) Mixed use tower, has a single structure of mass and building height with several function which is placed in those layers. Generally mixed use tower is high rise building
- b) Multi towered Megastructure, is a mixed use building with architecturally joint towers with atrium on the lower part. Generally, the atrium is functioned as shopping center. On multi towered megastructure, the components on the podium become the main matter since it is the assemble point between the building users.
- c) Freestanding structure with pedestrian connection is an arrangement concept on mixed use area which is the compilation of several single mass which integrated each other on the pedestrian path.
- d) Combination, is a mixed between those three profiles on the mixed use area.

However, façade is the most important architectural element which is to express function and sense of a building (Krier, 1988). Façade is not merely about fulfillment of “natural requirement” determined by the organization and space behind. Façade conveys the culture circumstances by the time when the building was built, façade expresses establishment criteria and creativity on ornamentation.

This research on mixed use building design study is focused on visual character of the building. According to Shirvani (1985), a good visual character is initiated by the harmony between physical shapes on a particular area, related to the connection occurs between the elements on a circle, whereas physical elements as building visual character framer consist of building height, building style, material, texture, color and signage.

According to Ching (1994) building façade components include entrance, ground floor zone, windows, border railing, building roof, signage and also ornaments. On the other hand, compositions of the facade building include geometry, symmetry, rhythm, contrast, scale and proportion.

II. RESEARCH METHOD

The research methods applied on design study of mixed use building envelope in Banjarmasin city use primary data. Primary data which is survey and exploration of data existing (access, circulation, sun path, wind path, topography, vegetation, sound, noise, view, orientation, drainage and the other utility). Secondary data is created to explain about the observed variables through elements which give characteristics on that visual character building façade. The observation was done through literature research and implementation of design so that result design solution (Fig. 2).

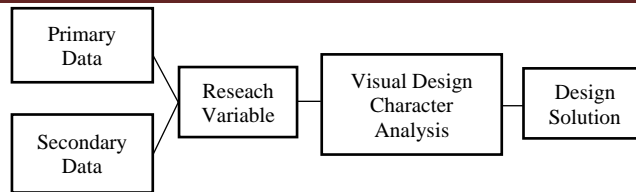


Figure 2. Research Flowchart
Source: Researcher's analysis, 2022

This study uses descriptive research methods, Sugiyono (2018) highlights that descriptive research method is to recognize independent variable value, whether it is one or more than one variable (independent) without making any comparison or relating to other variable. It means that this research only investigate the variable circumstance itself without any influence or relation towards other variable such as in experiment or correlation research. This research method uses research variable, according to Sugiyono, (2018) research variable basically is anything in any form, which determined by the researcher to study, so the information about that matter can be acquired, and then the conclusion can be drawn.

Literature review of building façade can be used as reference to search research variable. The research variable which will be used are as follows:

A. *Building façade components*

- entrance
- opening
- ornaments
- building roof

B. *Building façade compositions*

- rhythm
- symmetry
- geometry
- scale and proportion

C. *Building façade elements such as building color and material.*

III. RESULT

A. *Building façade composition analysis*

a) Entrance

The visual character of entrance on apartment function has dominant character, it is the location in the middle of symmetry of the façade field axis line, the drawn outside shape with shield canopy in the shape of combination roof and also marked with protruding column on the shield side, the floor elevation raises and ornament on the building envelope (Fig. 3).



Figure 3. Apartment Entrance
Source: Researcher's Analysis, 2022

The entrance visual character on mall building function is dominated by entrance location which laid in the middle of symmetry of the façade field axis line, the drawn outside shape with shield roof in the shape of combination roof and also marked with protruding column on the shield side and ornament on the shield (Fig. 4).



Figure 4. Mall Entrance
Source: Researcher's Analysis, 2022

The visual character of entrance on rental office function has dominant character, it is the location in the middle of symmetry of the façade field axis line, the drawn outside shape with shield canopy in the shape of combination roof and also marked with protruding column on the shield side, the floor elevation raises and ornament on the shield (Fig. 5).

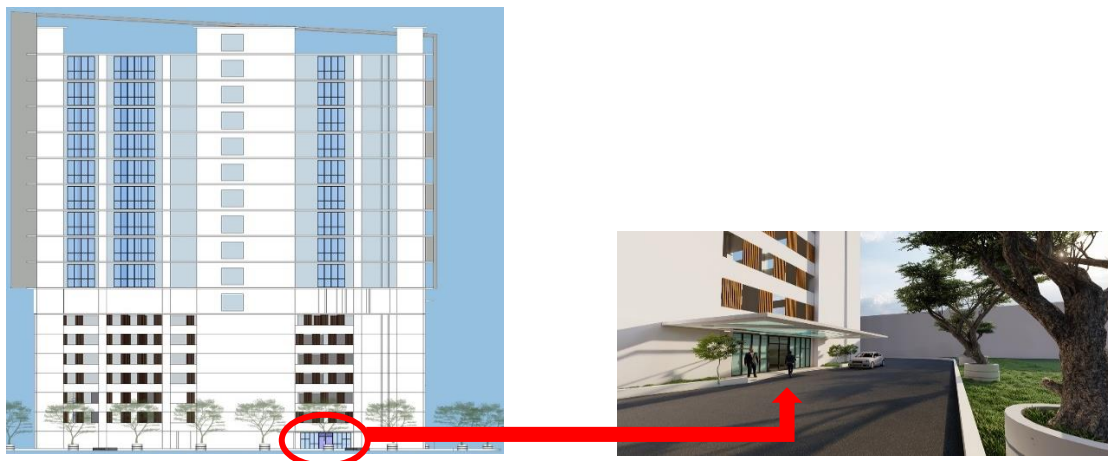


Figure 5. Rental Office Entrance
Source: Researcher's Analysis, 2022

b) Opening

The dominant opening character on apartment building is balance composition and has powerful verticality elements because the opening door height is in line/equal with the opening window height. The opening location which is categorize on wall and column field with aluminum frame material, clear glass, iron railing and also ventilation with glass material. Thus it gives monumental impression (Fig. 6).



Figure 6. Opening on Apartment
Source: Researcher's Analysis, 2022

Opening character on mall building is marked by balance opening composition, opening shape located on entrance, the dominant opening type are door and window with aluminum frame material, clear glass (Fig. 7).

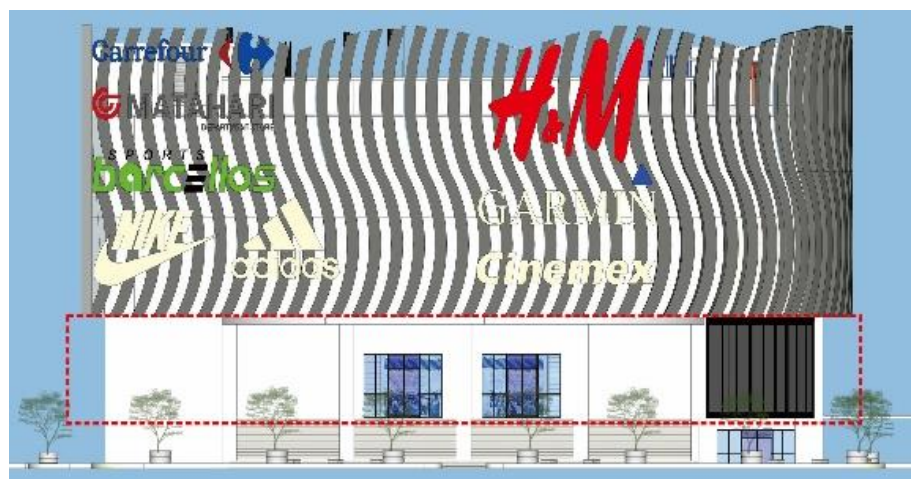


Figure 7. Opening on Mall
Source: Researcher's Analysis, 2022

Opening character on rental office building is marked by massive composition and balance opening composition, vertically lengthening opening shape, opening location which categorized on wall field and bordered by column, the dominant opening type are door and window with aluminum frame material, clear glass which gives monumental impression on the building (Fig. 8).



Figure 8. Opening on Rental Office
Source: Researcher's Analysis, 2022

On those three building function, there is similar opening character towards its facing direction. The opening which facing southwest, northwest and west is dominated by fixed windows type with material to filter sun heat or fixed window type with sun shading extension. The opening which facing the opposite side, northeast, east and southeast use window type with clear glass material and massive composition with balance opening.

c) Ornaments



Figure 9. Ornament on Apartment
Source: Researcher's Analysis, 2022

The dominant ornaments on apartment building laid on the building front wall as façade and all at once also the building aesthetic elements and bring about different sense (Fig. 9). On mall building, dominantly laid beside of the building which facing east (Fig. 10). Meanwhile, ornaments on rental office laid on the building front wall (Fig. 11).

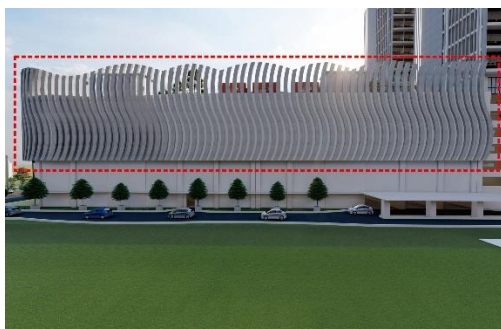


Figure 10. Ornament on Mall
Source: Researcher's Analysis, 2022



Figure 11. Ornament on Rental Office
Source: Researcher's Analysis, 2022

Characters of the shape, motif and ornament material on the three function has the same characteristic which is regular form, the dominant ornaments motif is geometry shape with strict line elements and ornament material which made of aluminum also the balance color with the frame and roof.

d) Building Roof

Apartment, mall and rental office function has similar roof building character. The dominant roof shape is flat/slab shape which has vertical and horizontal element, combined with leaning roof shape. The leaning/slope level is between 30°-60° suitable with tropical roof shape with use dominant slope level 30°. Roof material trimdeck made of still coated with aluminium with dark grey color or terracotta color. Roof elements strengthen buildings visual character since roof is important part on visual impression framer (Fig. 12).



Figure 12. Roof Building
Source: Researcher's Analysis, 2022

B. Building façade composition:

e) Rhythm

The rhythm characteristic on those three building function has similar feature. It is repetitive elements such as column, opening and ornaments. The dominant repetitive type is shape and size repetition in approaching the axis line. The dominant repetitive pattern on column and opening is symmetrical horizontal linear pattern, while ornament pattern uses sequential pattern based on the size which adjust to the roof line (Fig. 13).

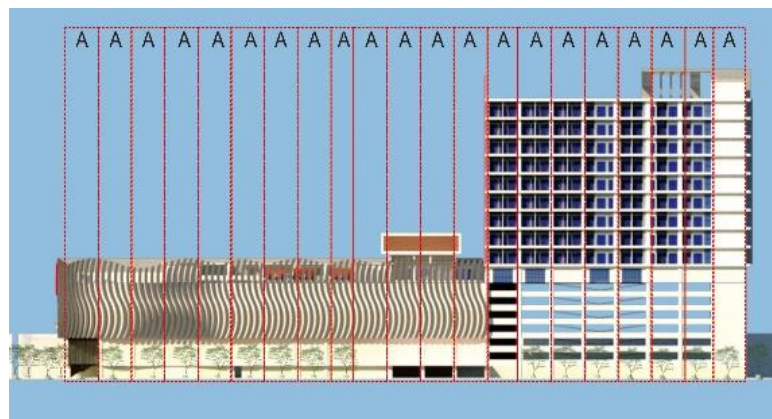


Figure 13. Façade and Column Rhythm
Source: Researcher's Analysis, 2022

f) Symmetry

The symmetry characteristic on those three building function has similar feature. It is axis line which laid on the center of the field and once at a time also axis of access. The symmetry balance shows formal impression match with the building function (Fig. 14).



Figure 14. Symmetry Characteristic
Source: Researcher's Analysis, 2022

g) Geometri

The symmetry characteristic on those three building function has similar feature. It is the dominant geometric field type of façade framer consist of horizontal rectangle, trapezium arranged vertically with the order from the bottom is rectangle field as building field, also rectangle, trapezium and triangle field as roof framer (Fig. 15).



Figure 15. Building Perspective
Source: Researcher's Analysis, 2022

h) Scale and proportion

The differences on proportion characteristic feature on those three building function is the roof and building height proportion. It is dominantly balance on and rental office apartment building function. It has higher character compared to mall building, while on mall function has characteristic that is greater building, compared to apartment and rental office (Fig. 16).

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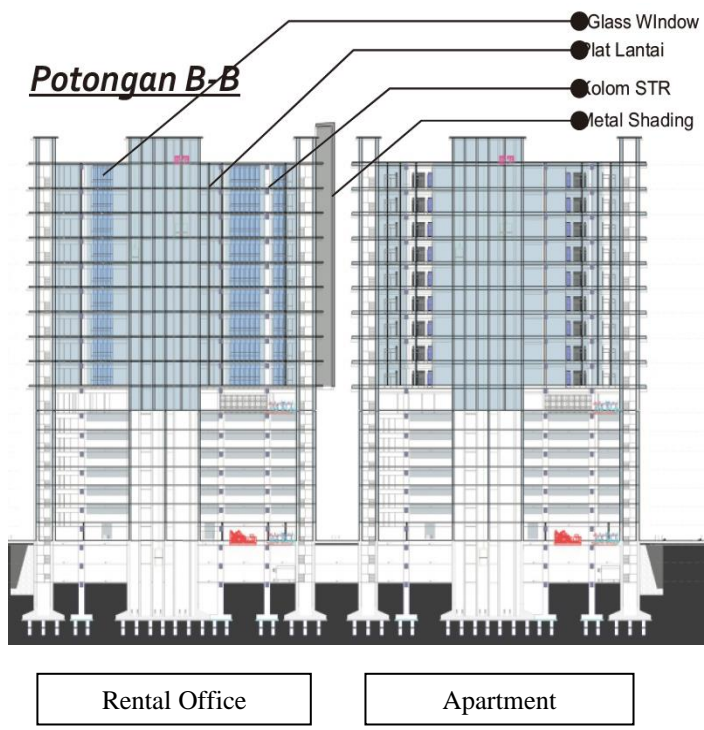
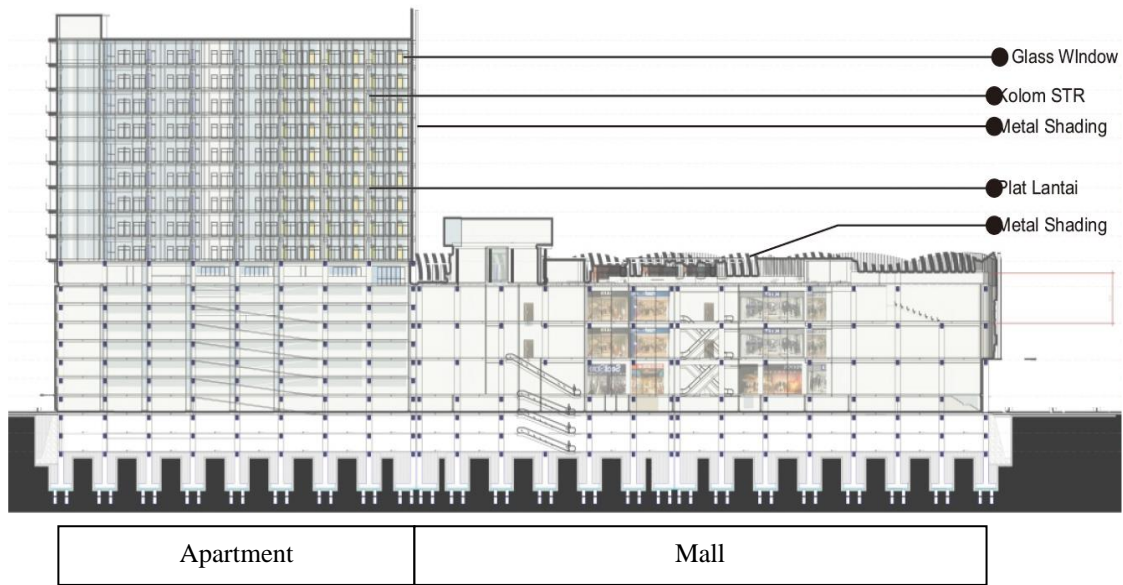


Figure 16. Scale on Building
 Source: Researcher's Analysis, 2022

The other analysis result of scale and proportion (Fig. 16) shows similar feature of three functions. Scale adjust to Indonesian average height dimension, dominant entrance dimension is 220 cm height and 80-100 cm length. Distance between floor to floor at basement is between 3 m height, at podium of mall is between 6 m height, at apartemen and rental office is between 4 m height. Building length is greater than building height.

C. Building façade elements analysis

a) Building color

The dominant color character on those three building function is the neutral color usage out of color circle. It is white, grey and cream. While several building use less contrast color as each building identity (Fig. 17).



Figure 17. Color Elements on Building
 Source: Researcher's Analysis, 2022

b) Building material

Mostly the building use clear glass building material as the window filler, aluminum material on the frame, steel-aluminum material on the sloping roof, concrete material on the roof slab, metal material on façade framer and brick wall material with color paint finishing.

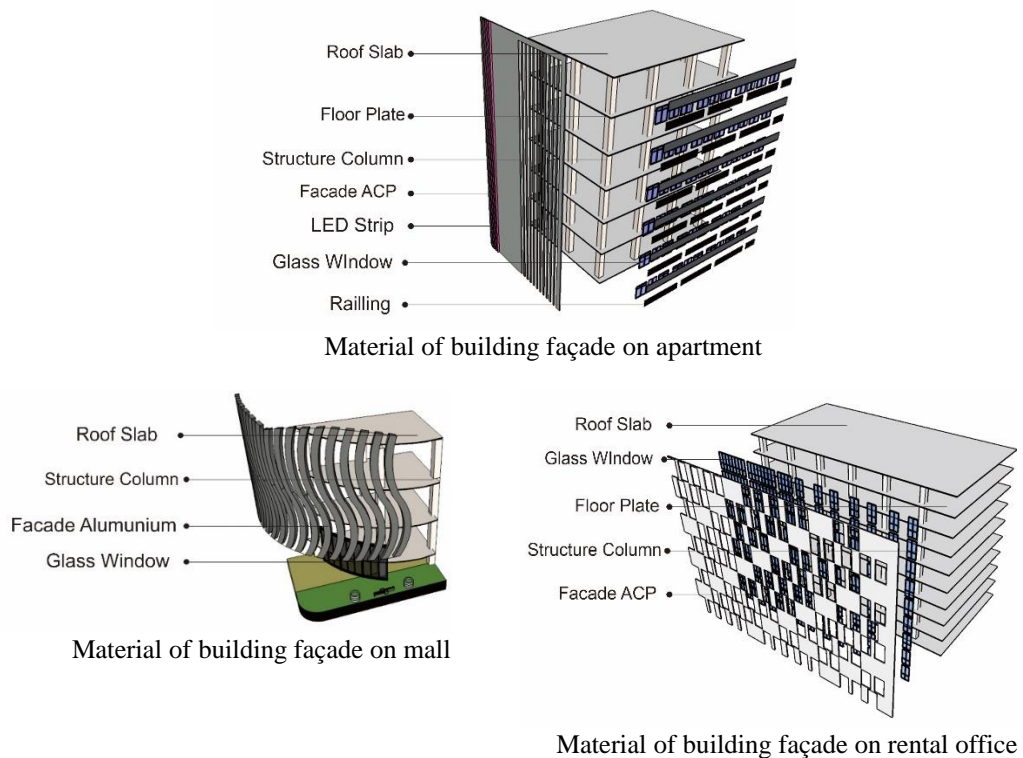


Figure 18. Material of Building Façade on Apartement, Mall and Rental Office
 Source: Researcher's Analysis, 2022

Materials are used at apartment, mall and rental office based on each function (Fig. 18). Residence of apartment need comfortable visual. Most of the mall walls are designed to be closed, so that mall visitors focus on seeing the items on display, is called visual stop. The building envelope of the rental office building is designed predominantly using glass material, get natural light in the room and reduce using of artificial light during the day, so it will minimize the use of building electricity.

IV. CONCLUSION

The existence of unity on visual character on the three building laid on the same of the façade element composition and neutral color. Façade design criteria which has been formulated is expected to be the unity of each building. It is based on the building façade characteristic of the three building. Unity character is taken from those three characteristic, to be the standard criteria so that the new building can be built harmoniously with the existing building and strengthen area identity.

Several façade elements used as unity character are as follows:

- a) Roof shape dominant in flat shape with vertical & horizontal elements combined with sloping roof, sloping roof level is 30° and made of steel coated aluminum material with dark grey color.
- b) Dominant ornament components laid on the building front wall as a façade and an aesthetic to result different meanings. The dominant ornaments motif is geometry shape with strict line elements and ornament material which made of aluminum also the balance color with the frame and roof.
- c) The symmetry composition use balance symmetry. It is axis line which laid on the center of the field and once at a time also in approaching the axis line. The symmetry balance shows formal impression match with the building function.
- d) The rhythm composition on repetitive elements such as column, opening and ornaments. The dominant repetitive type is shape and size repetition in approaching the axis line. The dominant repetitive pattern on column and opening is symmetrical horizontal linear pattern, while ornament pattern uses sequential pattern based on the size which adjust to the roof line.
- e) The geometric composition is the dominant geometric field type of façade framer consist of horizontal rectangle, trapezium arranged vertically with the order from the bottom is rectangle field as building field, also rectangle, trapezium and triangle field as roof framer.
- f) The color elements use the neutral color as dominant color as unity character of each building. Building use clear glass building material as the window filler, aluminum material on the frame, the building use steel-aluminum material on the sloping roof, concrete material on the roof slab, metal material on façade framer and brick wall material with color paint finishing.

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