

Study of Ethnic Architecture Application in the Design of Kelurahan-Mojosari Office in Mojokerto Regency

Moch Nur Faqih, Junianto Hadiwiryono, and Erna Winansih¹

¹Magister of Architecture Program, Graduate School, Merdeka University Malang, Indonesia

*Corresponding Author: faqihmaridjan@gmail.com

ABSTRACT

Ethnic architecture is an architectural form developed from traditional architecture. This concept is obtained from the cultural traditions of a nation in a particular area. Basically, Ethnic Architecture is a culture that has existed for a long time. The application of Ethnic Architecture can be applied to various kinds of buildings, including residential buildings, religious buildings, cultural buildings, and even government office buildings. For this reason, the concept of ethnic architecture must be introduced to the community so that the identity of an area is still maintained. One of the village office designs that carries the concept of ethnic architecture is the Mojosari village office in Mojokerto. The concept of ethnic architecture in the office design needs to be studied further so that the concept can be transmitted to other urban village office buildings. The use of ornaments in this office design mostly applies the typical Majapahit ornaments where the ornaments symbolize the characters of the Javanese and Balinese people. The texture that is presented comes from local materials, namely by exposing bricks. The use of contrasting colors based on the characters of the Javanese-Bali ethnicity. The atmosphere created is also ethnically nuanced from the area. By expressing Majapahit culture through the design of office buildings, we can make the building a place for the embodiment of national identity in the Mojokerto region. So that the local value of Mojokerto culture is maintained and sustainable. This study intends to describe and determine the application of the concept of Ethnic Architecture in the Kelurahan Office building. The method used in this research is descriptive qualitative method in case study planning.

Keywords : Village Office; Government Buildings; Ethnic Architecture; Ethnic group; Culture; Style.

1. INTRODUCTION

1.1 Background

Architecture as part of the culture of a nation has also experienced a strong current of modernization. Buildings with a modern style make every city around the world have similarities so it is very difficult for us to identify an area or building (Sari, Harani, and Werdiningsih, 2017). So that these characteristics are not lost, the presence of the concept of Ethnic Architecture can be used as a tool to preserve the culture of a nation. Cultural preservation in the architecture is also expected to improve visual and sustainable quality (Hantono, 2017).

Ethnic architecture is an architectural form developed from traditional architecture. This concept is obtained from the cultural traditions of a nation in a particular area. Basically, Ethnic Architecture is a culture that has existed for a long time. The application of Ethnic Architecture can be applied to various kinds of buildings, including residential buildings, religious buildings, cultural buildings, and even government office buildings. However, the application of the concept of Ethnic Architecture has not been widely found, especially in urban village office buildings. The kelurahan office is experiencing the burden of cultural degradation due to strong modernization. Even though the village office has a very high locality aspect so that it has the potential to be an identity figure for an area (Fanggidae, Subroto, and Nareswari, 2019).

For this reason, the concept of ethnic architecture must be introduced to the community so that the identity of an area is still maintained. One of the village office designs that carries the concept of ethnic architecture is the Mojosari village office in Mojokerto. The concept of ethnic architecture in the office design needs to be studied further so that the concept can be transmitted to other

urban village office buildings. How is the application of the concept of ethnic architecture in the Mojosari village office? What aspects are applied?.

1.2. Problem Formulation

There has been no depiction of Local Cultural Expressions, especially in government buildings, even though Mojokerto Regency has a very strong history of Majapahit.

1.3. Troubleshooting Ideas

Analyze what aspects of Majapahit history are continuous with the object of the building and can be used as new images/icons, sourced from literacy/information on various facilities about the history of Majapahit itself.

2. LITERATURE REVIEW

2.1 “Kelurahan”

The “Kelurahan” consists of the “Lurah” and the “kelurahan-apparatus”, such as the Village Secretary and Section for a maximum of 4 (four) Sections as well as functional positions (PP 73, 2005). Formation of a village meets the following requirements; (1) Population min. 900 souls or 180 Heads of Families, (2) Area min. 7 Km², except for more densely populated areas of 5,000 inhabitants, (3) Work areas can be reached to improve services and community building and, (4) Have an office government, smooth communication network, adequate communication facilities, and generally adequate.

There are 29 types of services in the kelurahan according to the Service Standard Operating Procedure (SOP). The Technical Requirements for Government Buildings are guided by PERMEN PU 45 2007 concerning Technical Guidelines for the Construction of State Buildings, such as:



Figure 1. Urban Village Organization Structure

- Building layout requirements, such as distance between buildings, building height, ceiling height, building base coefficient, building floor coefficient, green baseline coefficient, building boundary line, architectural form, yard fence, as well as environmental facilities and infrastructure such as vehicle parking, accessibility people with disabilities, drainage, garbage disposal, waste disposal, and yard lighting.
- Requirements for structures and building materials, such as foundations, floor structures, columns, beams, roof trusses, as well as roof slopes, floor covering materials, outer and inner wall materials, ceiling covering materials, roof covering materials, frame materials and doors.
- Utilities and Safety Facilities in buildings, such as the need for clean water, rainwater drainage channels, dirty water disposal, the need for septic tanks and infiltration, means of security against fire hazards, the need for electrical resources, lighting, air conditioning, vertical transportation facilities if needed, disabled access, telephone and lightning rod.

2.2 Majapahit Architecture

In the Mojokerto Regency RPJMD, 2005-2025, it is stated that the Development of Public Building Objects in Mojokerto Regency is directed to elevate the local culture of Majapahit History as an icon in the planning of Mojokerto Regency government buildings.

Majapahit is a kingdom centered in East Java, Indonesia, which was founded around 1293 to 1500 AD. This kingdom reached the peak of its glory in controlling a large area in the archipelago during the reign of King Hayam Wuruk, (1350-1389). Majapahit was also the last Hindu-Buddhist kingdom to rule the archipelago and is considered the largest empire in Indonesian history. According to Negarakertagama, his power stretched from Java, Sumatra, the Malay Peninsula, Kalimantan, to eastern Indonesia.

The architecture of the Majapahit Kingdom can be said to have been lost, various archaeological studies from the discovery of the site at the site of the former Majapahit kingdom (Trowulan District, Mojokerto Regency) have attempted to reconstruct the architecture of the Majapahit Kingdom through the embodiment of the Majapahit house which had been built on a scale of 1: 1. (Tjahja Tribinuka, 2014).

Basically, temple reliefs do not always realistically show a picture of the shape of buildings in the past, because the temple reliefs usually tell a certain chronicle of stories such as the story of Ramayana, Sudhamala, Bubuksa and Aking Handle, Sri Tanjung and others. An observation has been made, that the reliefs that tell the chronicles of certain stories actually show the shape of buildings similar to the royal heritage sites. For example, the reliefs of Candi Bentar at Candi Jago, Malang Regency have a similarity to the shape of the Candi Bentar Gate at the Wringin Lawang site, Trowulan sub-district, Mojokerto Regency. (Tjahja Tribinuka, 2014).



Figure 2. The relief of the gate in the form of a short temple at Candi Jago, Malang Regency



Figure 3. Wringin Lawang Temple, Trowulan District, Mojokerto Regency. Showing the shape of the gate of the Candi Bentar type, which is the same as the relief at Candi Jago, Malang Regency

Even with the image instructions on the temple reliefs of the Majapahit Kingdom, it can be seen in full the existence of building clusters in a landscape. It can be seen that the paduraksa gate type actually has a high and long wall fence surrounding the clusters of buildings in the form of a hall.

If observed, the clusters of buildings inside the paduraksa-shaped gate are similar to traditional Balinese architecture. This is understandable because it is said that the people of Majapahit at the end of the kingdom's power were pressured by the attack of the Demak kingdom and carried out a massive exodus to the island of Bali. Most of the Balinese themselves also admit that they are descended from the Majapahit community (Tjahja Tribinuka, 2014).

2.3 Ethnic Architecture

Ethnic architecture is composed of two words, namely Architecture which means the study of buildings, and Ethnic which is commonly called ethnicity. Ethnic architecture is an architectural concept related to the culture of a nation. According to Narrol (1964) in Liliweri (2009), ethnicity is a human population that can reproduce so that humans can maintain their lives where in this case they have a common culture, forming their own interactions so that they can be distinguished by other groups (Liliweri 2009).

Ethnicity or ethnicity is one type of identity that forms a new group based on the same preferences between humans. Ethnic identity is a point of view related to the behavior of the nation, knowledge, belief in ethnicity or nation, and also the traditions of that ethnicity (Perceka, Fahmi, and Kurniadewi 2019). The boundaries of ethnic groups are determined based on the characteristics set by the group itself (Romli 2015).

Ethnic architecture is a style produced from traditional elements. Ethnic style is a change in traditional design from a homogeneous cultural state to a heterogeneous cultural state. In this case, ethnic architecture presents a design image of traditional elements to a building. Ethnic architecture is a variety of architecture that can be formed from materials according to local natural conditions (Aulia Widya Chandra, Dedi Hantono, 2021). This ethnic architecture, which is thick with meaning and philosophy, depends on the mindset of the people towards the beliefs they hold.

When designing an ethnic style, it is very important to know what the design characteristics of the area are. In terms of designing the concept, there are aspects that need to be considered, including the following: 1) Cultural philosophy based on long-standing traditions; 2) Spatial planning (macro and micro spatial planning) and building forms related to philosophy; 3) Space-filling elements include a combination of ethnic elements such as the use of ornaments, textures, colors, the atmosphere created, as well as visible harmony.

3. OBJECT STUDY

3.1. Existing Condition

The location of the object is on Jl. Mosque No.70, Rw. III, Mojosari, Kec. Mojosari, Mojokerto Regency, East Java. The main function of the Mojosari Village Office is as an office and service room for the Mojosari village government and other public facilities. Existing Land Area ±308 m².

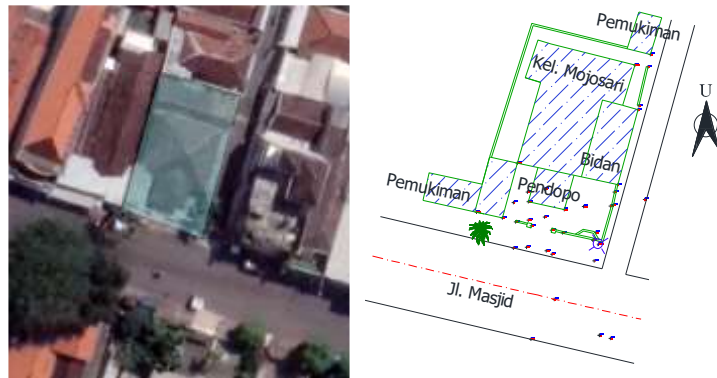


Figure 4. Location and Existing Layout of Kelurahan Office Planning



Figure 5. Existing Situation of Urban Village Office Planning

3.2. Spatial and Building Form

In the arrangement of a space, there is a macro-scale (large-scale) and micro-scale (small-scale) spatial arrangement. The macro-scale layout in this case is the city layout, while the micro-scale layout is the building layout. The macro spatial layout of the Kelurahan Office is part of the Catuspatha concept which is a legacy of the Majapahit kingdom. The Catuspatha concept includes a castle as the center of government, traditional markets as an economic center, wantilan as a cultural center, and open space as a local recreation area (Aulia Widya Chandra, Dedi Hantono, 2021). The following is presented in Figure 6, namely the Catuspatha Concept.



Figure 6. The concept of Catuspatha

The layout of the building in the building is divided into two, namely horizontally and vertically. The layout of the Mojosari sub-district office building is horizontally based on the Tri Mandala concept which was developed into the Sanga Mandala concept along with the times. The Tri Mandala concept is a zoning division based on the function of space. Hierarchically, they form a segment consisting of main (upper level/holy), middle (middle level), and nista (lower/dirty level).

The concept of Tri Mandala in the building is that private spaces are placed on the top floor such as the office of the Village Head. Then on the lower floor to the ground floor the receptionist and

meeting hall for the village community are placed. The following is presented in Figure 7, namely the Tri Mandala concept.

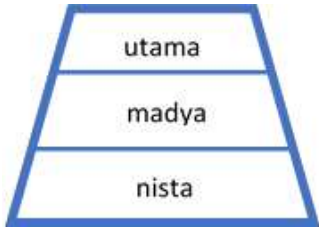


Figure 7. The Tri Mandala Concept

In addition, there is the Sanga Mandala concept which is the concept of a Javanese-Bali Traditional Architecture space which was adopted by the buildings of the Majapahit heritage. This concept is a development of the Tri Mandala concept which is a merger between the earth's axis (mountain-sea) and the sun's axis (west-east).

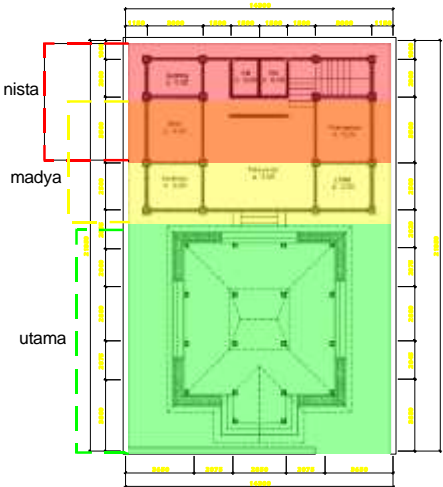


Figure 8. Horizontal Layout of Mojosari Village Office

While the vertical layout of the building in this office design building applies the Tri Mandala concept. This concept includes the head, body, and feet. In Figure 7, an image of the Tri Mandala concept is presented vertically at the Mojosari Village Office.

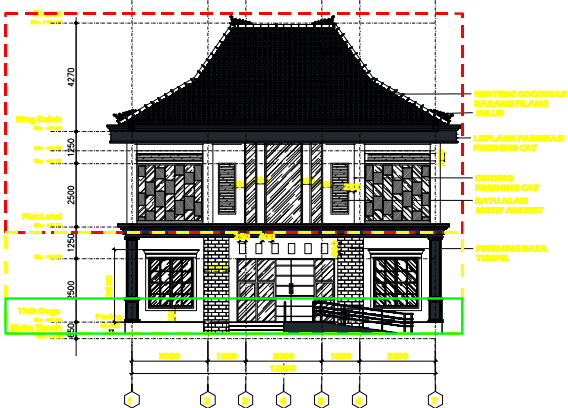


Figure 9. Vertical Layout of the Village Office

The style of the building owned by the Mojosari Village Office is that it contains elements of Hinduism and elements of ancient Java. The ancient Javanese element in this case comes from the influence of the Majapahit Kingdom. This can be seen from the embodiment of ornaments and building forms that are applied to the office. In this office there is also a typical traditional form,

namely Gapura. Gapura is a building often used in Hindu-Buddhist architecture spread across Java and Bali. The gate serves as a transitional door to a main building.

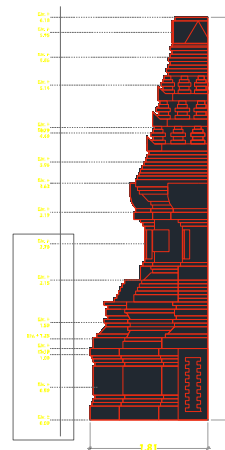


Figure 10. Details of the Gapura

The use of the roof in this office uses an adaptation of the traditional Javanese roof shape which has a high philosophical value, namely the tajug and limasan roof types. This is because of the very strong Javanese influence brought by the Majapahit kingdom which later developed in the archipelago. This roof shape is widely applied to various types of buildings in Bali and Java. The roof of the Mojosari Village Office can be seen in Figure 11 below.

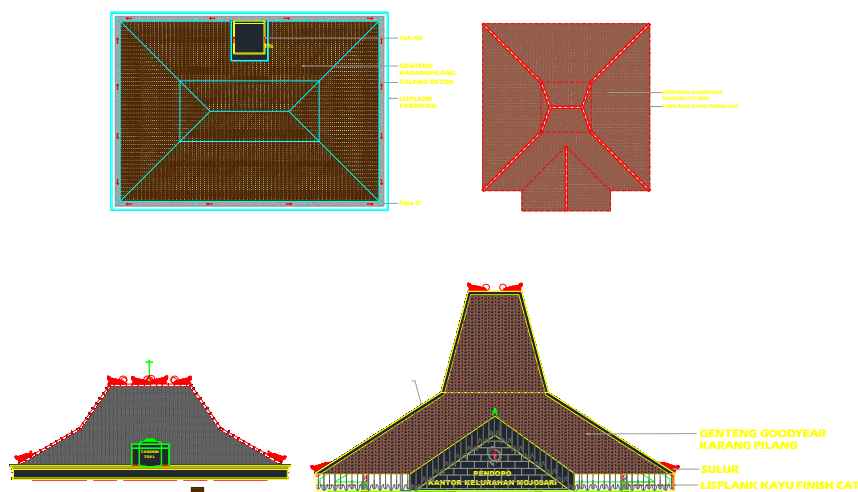


Figure 11. The shape of the roof of the Mojosari Village office building

3.3. Ornament Use

The application of ornaments in the design of the Mojosari village office is located on the exterior facade of the building, precisely on the front view of the office. On the facade of the front of the building, ornamentation is dominated by pepalihan or palih decorations. Pepalihan is a decoration consisting of a pile of stones so that it is clear that the line formed from the arrangement of stacked bricks is clearly visible. This characterizes the firm attitude of the Majapahit nation. These pepalihan decorations are found in various types of buildings in Java and Bali. In addition to the exterior facade of the building, this pepalihan decoration can also be applied to a column or building pillar. Figure 12 presents the details of the pepalihan ornament on the exterior facade of the Mojosari Village Office.

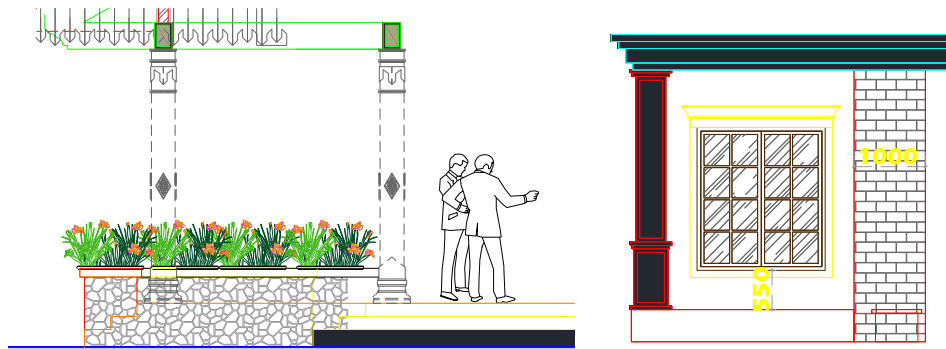


Figure 12. Transition and Composition of Stone Material

The ornament of the building's pavilion also contains elements of the Majapahit ornament. The Majapahit ornament is one of the ornaments that is still used as decoration in various types of buildings, including office buildings in Mojokerto. Apart from being a building decoration, this Majapahit ornament can also be applied to other objects such as carvings on tables or cabinets. This ornament has the basic form of "Surya Majapahit" which symbolizes the patriotic character of the Javanese Ethnic.

However, the Majapahit ornament used in the design of this village office is dynamic. The ornament only takes the basic shape of the shield without any other decoration. In Figure 13, an image of the Majapahit ornament is presented on the pavilion pole.

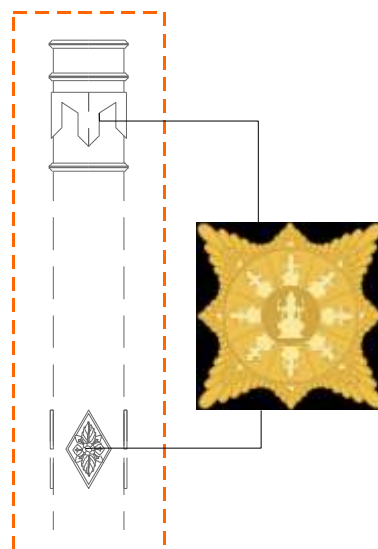


Figure 13. Surya Majapahit ornament on the pavilion

On the roof of the village office design, there are murdha decorations on the middle roof ridge, right edge, and left edge. Murdha is an ornament that has a shape like a crown. In Figure 14, a detailed picture of the decoration on the roof of the Mojosari village office is presented.

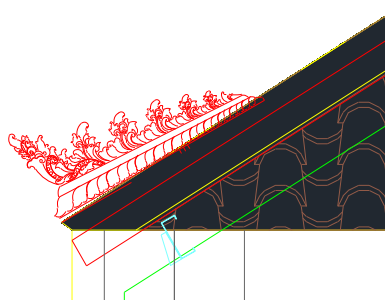


Figure 14. Murdha decoration on the roof

Overall, the materials used in the construction of the Mojosari Village Office used local materials. There is a play of textures on the exterior facade of the office building. On the exterior facade of the building, the resulting smooth texture of wall paint. While the slightly rough texture comes from the texture of the bricks that are arranged. The choice of brick material in the design of the Mojosari village office is because the brick material is used as the main material in the construction of a building in Java, including this building. This is one of the prominent characteristics of buildings in Java.

3.4. Design Visualization



Figure 15. Visualization of Mojosari Village Office Design with the theme of Majapahit Ethnic Architecture

4. CONCLUSION

The application of the concept of Ethnic Architecture in the design of the Mojosari Village Office building can be seen based on the important aspects forming the Ethnic Architecture, including cultural philosophy, spatial planning and building forms that take traditional elements, as well as space-filling elements containing ethnic elements including regional ornaments, colors, textures based on local materials, visible harmony, and the atmosphere created in the building. All of these components can reflect the ethnic character of a particular region through the embodiment of the building being built.

The use of ornaments in this office design mostly applies the typical Majapahit ornaments where the ornaments symbolize the characters of the Javanese and Balinese people. The texture that is presented comes from local materials, namely by exposing bricks. The use of contrasting colors based on the characters of the Javanese-Bali ethnicity. The atmosphere created is also ethnically nuanced from the area. In designing a distinctive style, it is necessary to know the characteristics or characteristics of the Mojokerto region. To get a thick Mojokerto ethnic feel, it takes a lot of traditional elements that are taken to be applied to the building design. By expressing Majapahit culture through the design of office buildings, we can make the building a place for the embodiment of national identity in the Mojokerto region. So that the local value of Mojokerto culture is maintained and sustainable.

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