

# Architectural Form of Asei Old Church on Asei Island Sentani, Papua

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**Abstract**—The present research investigates the impact of local culture on the architecture of the Asei Sentani Old Church (GKI Filadelfia) in Papua, Indonesia. A qualitative descriptive approach was used to collect primary and secondary data via interviews, observations, documentation, and a literature review. This church, located on Asei Island in Lake Sentani, combines traditional Papuan architecture with typical Christian building elements. The structure is an important part of Indonesia's cultural heritage, representing the country's diverse religious and cultural traditions. The analysis of architectural elements reveals shape, massing, facades, doors, interiors, and transitions. This structure was originally constructed from sago fronds and thatch, but after being destroyed during World War II, it was rebuilt with materials left over by allied soldiers. The building is divided into three sections: the main church, the school, and other support facilities. The building's facade is composed of zinc, wood, and stone, with a striking main door. The interior features tiled floors, concrete walls, wooden ceilings, pillars adorned with Adam and Eve statues, and bells that have since been replaced with gas cylinders. Transitional elements, such as doors and windows, stand out because they are made entirely of wood and do not contain any glass. The use of nako windows at the top of the church room improves light and air circulation. This study sheds light on the integration of local culture and Christian religion in church architecture, as well as the significance of preserving cultural heritage to strengthen community identity and unity.

**Keywords**— Architecture, Asei Sentani Old Church, Elements, Papua.

## I. INTRODUCTION

The Indonesian nation is diverse in terms of ethnicities, religions, races, cultures, traditions, and customs, therefore it's no surprise that each region or place has its own charm for those who know it [1]. Indonesia's government recognizes the diversity of cultures and religious beliefs, making the country appealing to anyone. The government also acknowledges the existence of a stream of belief, which is a religious tradition of each region or location, with varying producers and implementation [2]. One of them is Christian belief; it is well known that there is a history of Christianity's introduction into Indonesia, which is closely related to the development of church buildings. Christianity entered Indonesia through the influence of missionaries who arrived in the 16th century, primarily from Europe. Initially, Christianity's presence in Indonesia was limited to the interactions between European traders and indigenous people. However, over time, Christianity's influence grew and expanded not only in one region, but also in others throughout Indonesia. When it comes to the history of building development, churches are an

important type of Christian art and culture in the field of architecture. Church architecture is a place of worship for Christians that has functional requirements and influences the shape of the structure [3]. The development of church buildings in Indonesia reflects the process of acculturation and adaptation of Christianity to local cultures. Churches in Indonesia serve not only as places of worship, but also as hubs for religious, social, and cultural activities within the community. Churches in Indonesia have evolved architecturally since the beginning of Christianity. Initially, church buildings in Indonesia were dominated by colonial architectural styles with European influence. These early churches followed the gothic, romanesque, or baroque styles that were popular in 17th to 19th century Europe. However, as the times changed and Christianity evolved, so did the architectural style of churches. During the colonial period, particularly in the nineteenth and early twentieth centuries, many churches were constructed in the neo-gothic style, which combined European architectural elements with local touches. In the post-colonial era, the richness of local culture had a greater influence on church architecture development. Churches built during this period tended to incorporate traditional Indonesian architectural elements such as wood, carved ornaments, and *alang-alang* roofs. Indonesian church architecture reflects the country's cultural religiosity and religious diversity. The diversity of building forms was also influenced by cultural developments at the time, and ornaments or decorations vary in shape and meaning [4]. The design and construction of churches in Indonesia vary by region. For example, the previously mentioned Tua Asei Church building in Papua is an important example of Christianity's adaptation to local culture. The church combines traditional Papuan elements with colonial architecture, resulting in a distinct architectural identity. The architectural development of church buildings in Indonesia reflects the country's Christian history, as well as the process of acculturation and adaptation to local culture. We can appreciate this cultural heritage and understand the church's important role as a guardian and interlocutor between religion, culture, and society in Indonesia by studying its history and the development of church buildings.

Papua has a rich cultural diversity, with people who uphold their traditions and cultural values. Papua is known as a holy land or the "Little heaven that fell to earth" because of its cultural diversity, language, and traditions [5]. As is the case with the Tua Asei Church, which combines traditional Papuan architecture with local materials. Ornamental motifs

are typically applied to flat fields on components of residential buildings, houses of worship, or other structures whose presence not only makes a beautiful impression but also has value and meaning for the maker [6]. Asei Old Church, also known as Philadelphia Church (GKI Filadelfia), is located in Asei Besar Village, East Sentani District, Jayapura Regency, Papua. The existence of this church began with the spread or entry of the Christian influence brought by Gr. Daud Pekade traveled from Sangir Talaud to Sentani Papua. The Church building was originally built at the foot of the Island hill, but it was destroyed during World War II and then rebuilt. Asei Village is primarily inhabited by indigenous Papuans who practice communal culture, resulting in close family relationships and mutual reliance [7]. So, after World War II, the community worked together to rebuild the Church worship building using the remaining materials from allied soldiers. The symbolic elements contained in the object of the house of worship building play a role in creating a sacred atmosphere in the building and can provide a unique character that reflects the essence, philosophy, and applicable regulations [8].

This study is expected to provide a better understanding of the impact of local culture on the shape of architectural elements. The descriptive qualitative method will be used to investigate this research. In addition, this study will highlight the integration of local culture and Christianity in this church building. The findings of this study are expected to provide new insights into preserving cultural identity, strengthening community unity, and ensuring the sustainability of cultural heritage.

## II. MATERIALS AND METHODS

This study takes a qualitative descriptive approach. The approach is used to analyze, describe, and summarize various conditions based on data collected in the field, such as interview results or field observations [9]. The researchers in this journal used descriptive qualitative research to collect primary and secondary data in depth by interviewing several trusted informants, including tribal chiefs or confidants in Kampung Asei, the local community surrounding the original Kampung Asei, and the local government. In addition, documentation, observation, and literature research will be conducted. This research method will provide a more in-depth understanding of how local culture influences the form of architectural elements. The findings of this study are expected to provide new insights into preserving cultural identity, strengthening community unity, and ensuring the sustainability of cultural heritage.

The research was carried out at the Asei Sentani Old Church (GKI Philadelphia). The research is being conducted in Asei Besar Village, East Sentani District, Jayapura Regency, Papua. The Asei Old Church research site is on Asei Island, which is located in the middle of Lake Sentani. Because this island is not directly connected to the mainland, visitors must travel by speedboat. Lake Sentani's people generally live on the lake's shores and islands, where they form villages [10]. Lake Sentani is home to approximately 24 villages, including Abar, Asei Kecil, Asei Besar, Atamali, Ayapo, Babrngko, Dondai, Doyo, Hobong, Ifar Besar, Ifar

Kecil (Ifale), Kwadeware, Netar, Puay, Putali, Sebeaiburu, Simporo, Sosiri, Waena, Yabuai, Yakonde, Yobhe, Yoboi, and Yoka. Houses on Asei Island, like those in other coastal communities, are built by driving wooden poles into the lake's bottom, though some are quite large stilt houses. The presence of settlements on the lake's edge contributes to the area's beauty and attractiveness.

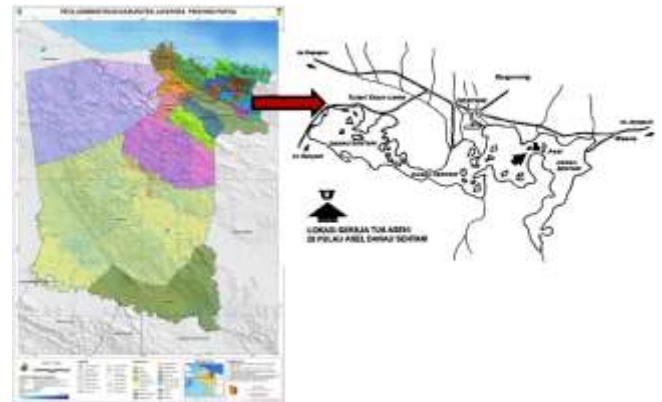


Fig. 1. Location of the old Asei Sentani Church on Sentani Island

Asei Old Church is located on Asei Island at  $02^{\circ}36'17''$  LS- $140^{\circ}34'49''$  East (54 M 0453358 mU-9712083 mT). The church building is about 375 m<sup>2</sup>, and the land it owns is about 1,500 m<sup>2</sup>. According to information obtained from the Minister of Culture and Tourism's 2007 Regulation, the Filadelfia Gki Sentani Foundation owns the Tua Asei Church. Around the object, there are several boundaries, including tombs to the north and east, YPK Filadelfia Asei Elementary School to the east, and tombs to the west.

Asei Island and the Asei Old Church are fascinating places to study due to their natural beauty and the uniqueness of the settlements that line the lake's edge. The combination of natural beauty and elements of local culture that have survived on Asei Island creates a unique context for understanding and appreciating the architecture of Asei Old Church, as well as the influence of local culture on the church's construction. The purpose of this study is to delve deeper into the impact of local culture on church architectural elements and how it contributes to the preservation of cultural heritage in the area.

## III. RESULT AND DISCUSSION

The term "cultural heritage" is defined in Undang-Undang Nomor 11 Tahun 2010 Pasal 1 Ayat 1, which states that cultural heritage in the form of material objects includes buildings, objects, areas, structures, and cultural heritage sites [11]. Asei Sentani Old Church in Papua is a historical structure that is significant culturally in the context of Christian church architecture. In this section, we will go over the findings and discuss an in-depth analysis of the church's most prominent architectural elements.

### *Analysis of Architectural Elements in Asei Old Church*

The findings revealed that the Asei Old Church structure is still intact today, particularly in its architectural elements. It is one of the buildings (BCB) preserved by the government and

the surrounding community, which means that it must be protected in order to maintain its authenticity.

*Form and Mass Elements*

Form and mass elements in church building architecture are important factors that can influence the identity and visual characteristics of a religious structure. Form and mass refer to the building's exterior appearance, which includes the size, proportion, and composition of the elements that comprise the structure as a whole. The combination of form and mass elements reflects the architect's design philosophy and artistic expression while also illustrating the church's role in society.

The shape of the Asei Sentani Old Church building has only changed once since its construction, when it was destroyed by allied forces. As a result of the bomb attack, the building was destroyed and then rebuilt in large numbers by the surrounding community using the remnants of allied soldiers' building materials.

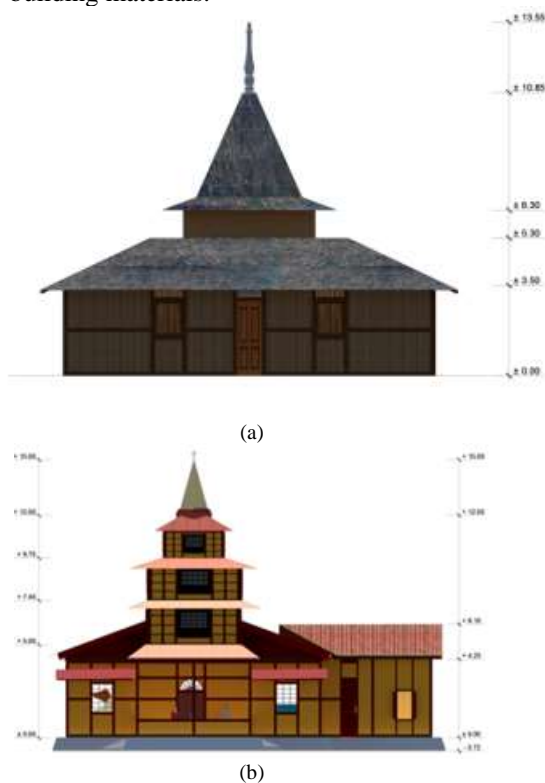


Fig. 2. Old (a) and new (b) Church building designs

The Asei Old Church began with a simple structure made of sago fronds (gaba-gaba) and thatch. The shape of the building that was rebuilt by the surrounding community was then overseen by a local carpenter named Wolfram Wodong, whose design was obtained from one of Germany's technical schools.

The Asei Sentani Old Church consists of five buildings that are classified according to their functions. The first mass is held in the main building of Asei Sentani Old Church, which serves as a place for Christians to worship and conduct church-related activities. The second and third masses are held in Church-owned school buildings. The fourth mass is a structure that houses the teacher's and principal's rooms. The

fifth mass is held in a public toilet building.



Fig. 3. Siteplan of Asei Sentani Old Church on Sentani Island

The Asei Old Church's space arrangement is divided into two functional parts: the tower and the worship space. While in the Asei Old Church, there is an extra space in the form of a consistory room. For the church's tower, which is located in front of the main building. Because of its large size, this section of the tower serves as an orientation for public spaces throughout the site, and it is purposefully exposed as a landmark and focal point. The tower in this structure serves as a warning and invitation for Christians to come to worship. The tower is complemented by the presence of bells, which are frequently used in various celebrations. However, the bell is now located beside the Church rather than in the Church tower. The bell beside the church has been replaced with a gas cylinder. This occurred because the original bell from the Church was known to have been damaged, and the surrounding community no longer used it.

*Facade and Main Door Elements*

The facade represents or expresses various aspects that can be seen visually. The development of a building facade is heavily influenced by socio-cultural changes in society, as well as the conditions and trends that exist at the time of design. Ching stated that the visual form equipment that becomes the object of transformation and modification of the form of elements on the building facade includes figure, size, color, texture, position, orientation, and visual inertia (Ching, 1979). The Asei Sentani Old Church building's facade elements and main door have distinctive shapes. The shape of this facade element is made up of remnants of materials used by allied soldiers in ancient times. The building's facade is mostly made of zinc, traditional wood, and stone, indicating a rich combination of Christian architectural elements and local culture. The front of the church can also be identified as an entrance because it has a type of terrace with a tower containing a bell holder.

This main door measures 1.25 m x 2.20 m. The front and back main door frames are painted brick red. The frame's color has remained consistent since the beginning of construction. In fact, not only the door and frame are still the same, but the 2-leaf door model is also still maintained. The height of the main door and the design of the facade indicate the importance of



this church in the local community and its existence as a historic place of worship.

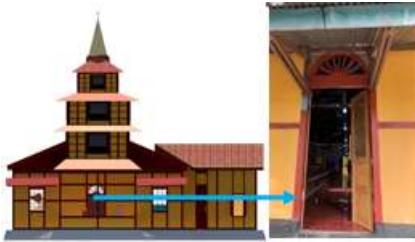


Fig. 4. The main door of the Old Asei Sentani Church

*Space-forming interior elements*

The main building of Asei Old Church contains several elements that enclose the space, including floors, walls, ceilings, pillars, and bells.

1. Floor

The floor of Asei Old Church was originally made entirely of cement plaster. However, over time, the floor's surface became cracked, necessitating restoration by the surrounding community. During the restoration, the cement floor was replaced with white ceramic tiles, which were then partially replaced with red ceramic tiles. The tiles remain different colors because the local community lacks the funds to restore them.



Fig. 5. Ceramic Old Church Asei Sentani

Moreover, the exterior porch of the church shares the same floor color as the main church structure. However, there is an interesting feature: on the outside of the staircase floor, which is still covered in cement, there is an inscription '1-1-1950' alongside typical Papuan carvings. The date listed on one of the trap steps represents the date the Church was inaugurated, with the condition that it be rebuilt by the government.



Fig. 6. Ceramic Old Church Asei Sentani

While the inside of the consistory room uses the same ceramic material as the church. However, the only difference is the color. The consistory room is still painted the same color, white.



Fig. 7. The floor in the Church Consistory Room

2. Walls

The walls of the former church edifice were composed of gaba-gaba, or sago fronds. Nevertheless, the current walls are composed of wood on the wall list and concrete walls, as the structure was demolished and rebuilt by the neighborhood. The identical model, which is a list formed both horizontally and vertically, is seen on the walls of the consistory room and the church worship area.



(a)



(b)

Fig. 8. Church room wall (a) and Consistory Wall (b)

Mr. Cornelius Ohee, the main point of contact, stated that the walls of the church's worship area sustained significant damage somewhere around the year 2000. As a result, portions of the Church's severely damaged walls were destroyed since they were deemed to be brittle. The people who live nearby and are churchgoers wanted to demolish the back wall in addition to fixing it. But the regional office of the Irian Jaya Ministry of Education quickly stopped this as the local government became aware of it. The Irian Jaya Regional Government then renovated the building in 2001 and designated it as an Old Church site.

3. Ceiling

The Asei Sentani Old Church's ceiling is shaped like a gable that extends from west to east and tapers upward. The primary component of the roof frame is composed of wooden

poles that are 10 cm thick. A grid-like structure is formed by connecting the poles in the middle with transverse wood. There are wooden poles limiting the lattice.

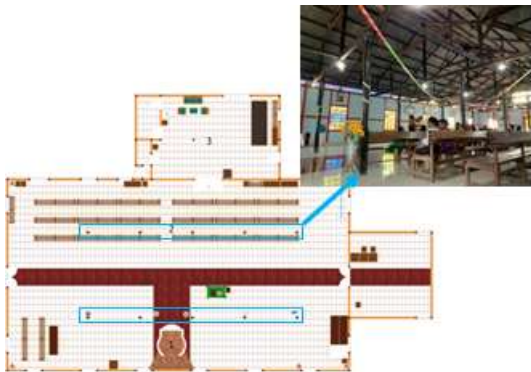


Fig. 9. Church ceiling

Using pegs as high as 3.3 meters, ten wooden poles support the roof's framework. The number of clans that live on Asei Island determines how many supporting poles are needed. The clans are Asabo, Nere, Puhirri, Pouw, Kere, Modouw, Yapese, Ohee, Ongge, Pepoho, and Asabo. On the right-left side, the poles are arranged symmetrically in a row of five, with a sculpture ornament carved on top of the pole closest to the door.

4. Pillars

Ten wooden pillars support the Asei Sentani Old Church. As previously mentioned, this pillar at the end of the structure, next to the main entryway, has a sculptural adornment etched into the top of it. The two sections on the left and right have this sculpture adornment. The first individuals that God created on Earth are represented by the statue as Adam and Eve.



Fig. 10. Old Church Pillar Asei (a) Left side of Hawa and (b) Right side of Adam

The hand-carved statue decoration representing Eve is situated on the left pillar. The statue is ninety centimeters tall. The right side of the same statue ornament, which is shaped like Adam, is likewise carefully crafted. The height of the Adam statue is 70 cm. Mr. Cornelius Ohee claims that the statues of Adam and Eve were created with the intention of bringing people into the Church.

5. Church Bells

The front porch of the church was once home to the church bells. This church bell is situated atop a tall tower in front.

Bronze is used to make the bell. The bell used to serve as a summons to worship and a reminder for Christians. The bell is attached to a rope that will be pulled when it is ready to be rung. The bell's sound then reverberated through the tower's openings and windows. But after the authorities repaired it, the bell is no longer able to ring.



Fig. 11. The Old Church bell of Asei now

Large oxygen cylinders are believed to have been used to replace the bell following the restoration. The bell was positioned in the front of the churchyard, outside the building. Even though the original bell is no longer in use, the bell tube is still utilized as a stand-in for the bell throughout the local neighborhood.

Transition Element

Because it can serve as a bridge connecting the inside and exterior of a building, the transition element is a crucial component of design. The Asei Sentani Old Church's windows and doors will be among the topics of discussion.

1. Floor

The front and rear entrance doors of the Church building, along with the consistory doors, are the door portions that will be covered in the sections that follow.



Fig. 12. The location of the doors on the Old Asei Church

Regarding the front and rear of the Church building's main door, which were previously covered in Figure 4. Additionally, the door type for the church's main door and the



consistory door from the interior are nearly identical. The front door of the consistory features a door that is... centimeters in size. The door is made of wood, much like the other doors. The door is painted a rich brown color.

2. Windows

There are two different kinds of windows in the main building of the old Asei church that will be talked about. There are two different kinds of windows: single- and double-leaf windows. It is known that there is no coating or glass covering on either of the windows. There are fourteen windows lining the walls of the church building's main window: four in the south, six in the north, two in the west, and two in the east. This church building's main window has a classic appearance because it is constructed of wood and lacks glass or shutters. The window has a maroon paint job. The window is maintained in terms of security and upkeep even if it is not made of glass. The church room's main window has a similarly straightforward style devoid of any decorations.

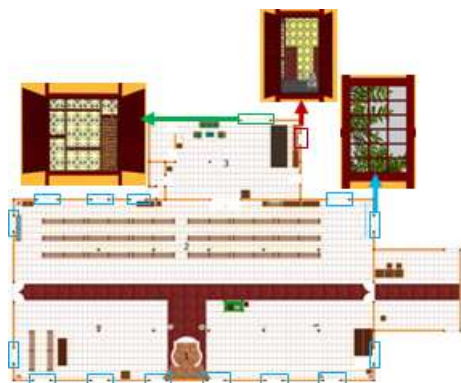


Fig. 13. The location of the windows on the Old Asei Church

Furthermore, the window in the consistory room adjacent to the church has a model of a window with a wooden crepe window model on the front and side. Both window models in the consistory are identical to windows in the worship chamber that do not have glass as a cover or coating. Both of these windows employ iron trellises. The two windows in the consistory room are maroon red with a silver iron trellis. According to Mr. Cornelius Ohee, this German design is distinguished by its German architectural influence, which can also be observed in the shape of the wide windows with a box pattern.

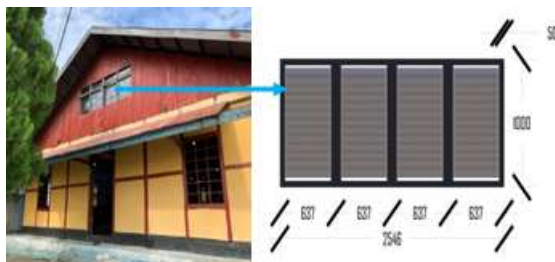


Fig. 14. The location of the window on the spire of the old Asei Church

In addition, the building's tower features a one-leaf window form. There are eight windows built on the tower. The windows are composed of wood painted a light brown

tint. From the base of the tower to the top, all of the windows are the same model.



Fig. 15. The location of the window at the back of the old Asei Church

It is said that there are nako windows in the upper back of the church room. The usage of nako windows is intended to maximize sunshine and air circulation while reducing the need for lights or fans in the room. This is done in order to lower building operational costs.

Space Filler Element

Components Components that have a part in filling, beautifying, and giving significance to church space are often referred to as space fillers in church buildings. The pulpit of the word's minister will be discussed as the space filler element in this instance. Since some of the other furniture in the main church structure lacks aesthetic value or is influenced by particular design styles, it is not covered in this discussion.

1. Pulpit of the Minister of the Word

In many architectural contexts, but particularly in the liturgical context, where the building houses the pastor, who is the congregation's primary interpreter of God's word, the church pulpit plays a pivotal role. In addition to serving as a physical container for speakers, the role is recognized for its significance as a symbol in the spread of religious ideas. The pulpit in a church is often positioned so that the congregation can see it easily. Similar to the Tua Asei Sentani Church, the congregation's seating area faces the pulpit, which is situated in the middle of the space. The island hill's mother rock, located precisely where the church pulpit is, is marked. The surrounding neighborhood attempted to level the hill at first because of its steep tread position, but it proved to be challenging to remove. The mother stone was saved at the behest of the Ondofolo, the customary chief of the tribe, and the church pulpit was placed there during the reconstruction of the Asei ancient church following its destruction in battle. The local community interprets the pulpit's location as indicating that God is positioned at the top.

Figure 16 depicts a detail of the Tua Asei Sentani Church's pulpit, which is located in the center of a curved part that has been damaged and lost. The arch has been absent since the pulpit was relocated to the top of the hill following the destruction of the church structure, which was originally placed at the bottom of the hill. Cement plaster and bricks make up the pulpit.

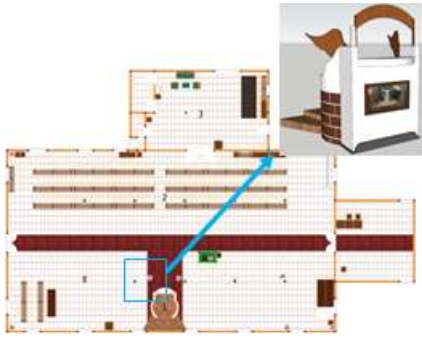


Fig. 16. The location of the pulpit in the old Asei Church

The exposed bricks on the right and left sides of the church pulpit are painted dark red, with white stucco. On the left and right sides of the pulpit, there are clearly apparent wing shapes made of wood painted brown. On the front of the pulpit, there is also an ornament representing Jesus with his hands raised and the sun shining in the upper right. The manually created drawing features an inscription at the bottom that reads, 'Earth is the Base of My Feet'. There are two trap stairs on both the left and right sides of the church pulpit.

#### IV. CONCLUSION

Based on the results of the research discussed above by the author about the architectural form of Asei Sentani Old Church, it can be concluded that: (1) The architectural form can be analyzed with various elements such as form and mass elements, facade and main door elements, interior space-forming elements, transition elements, and space-filling elements; (2) The results of the analysis show that the Asei Old Church not only provides a visual understanding of these. The building's shape and mass elements are noted for their distinct shapes and masses that reflect a specific architectural style and time period. The church's shape is also recognizable and reflects its individuality. Elements like doors and windows connect the inside and outside spaces, while transitional elements like the main door send a welcoming message to visitors. Filler features like the minister's pulpit become the focal point of spiritual communication, whereas interior components like flooring, walls, and ceilings create a distinct environment.

As a result, a thorough examination of the architectural features used in the construction of the Tua Asei Church on Sentani Island allows for a better understanding of their qualities and significance. These features serve not just physical functions, but also provide symbolic and spiritual values that enhance the worship experience and connect the church to its cultural and religious identity. By evaluating these features, we can gain a better understanding of how architecture can define identity and express religious messages, foster links between congregations and houses of worship, and contribute to the preservation of Asei Sentani Island's cultural history.

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