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Philosophy of View Tower Form in The Cipanas Dam Area

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ABSTRACT

One of the sectors that is progressing and is growing rapidly, especially in Indonesia today is tourism. Tourism has an important role in increasing the income of a region. In terms of employment, the tourism sector can also be a solution to reduce the unemployment problem which is currently rife in various parts of the country. In terms of cultural diversity and natural beauty, Indonesia can become one of the unique tourist destinations in this regard, one of which is Dam Tourism. This study aims to determine that the aesthetics of the building form can be achieved through geometric shapes. Most of the viewing towers that have been built are only concerned with functions, without paying attention to the overall visuals, this is very unfortunate because this viewing tower is one of the most visited building objects when there are visiting events, both from agencies, elementary schools, high schools junior high school, as well as visits from universities, even visits from general visitors. The research method used in this study is descriptive with a qualitative approach, where descriptive qualitative method is a research method based on the philosophy of postpositivism used to examine the condition of natural objects (as opposed to experiments) where the researcher is the key instrument of data collection techniques carried out manually. trigulation (combined), data analysis is inductive/qualitative, and qualitative research results emphasize meaning rather than generalization. The results of the research from the basic concepts of geometric shapes, functionally, the Tower of View in this Rest Area can maximally observe what facilities are in this dam building. Of course, it is supported by the highest elevation of the land on which the Tower of View building stands.

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1. INTRODUCTION

At this time tourism seems to be progressing rapidly. The number of tourists visiting Indonesia increases every year. Apart from that, domestic tourism is also developing beyond the tourism situation a decade or two ago. If pay attention from year to year, the government pays great attention to the development of tourism for two reasons, namely tourism activities, especially those related to the arrival of foreign tourists, are one of the foreign exchange earners and play an important role in increasing income in Indonesia and tourism as an industry provides opportunities. quite a large amount of work in creating new jobs in Indonesia(Akbardin et al., 2020)(Ghassani et al., 2019)(Laili, 2019)(Permana & Wijaya, 2013).

This research aims to find out that the aesthetics of building shapes can be achieved through geometric shapes. The reasons tourists visit tourist attractions have shifted, no longer just to fill their free time. On one of the web pages, dated April 26, 2011, Secretary of the Director General of Tourism Destination Development of the Ministry of Culture and Tourism at that time, Winarno Sudjas, said "Tourist trends are starting to show that they are changing, from previously traveling because they wanted to fill their free time, now tourists are starting to relate to hobbies, lifestyle and adventure aspects" (Permana et al., 2018)(C. S. Permana et al., 2020)(Sudjas, 2016)(Wijaya et al., 2020).

The building is a work of art in the field of architecture. In essence, architectural works are the real result of the imagination and creativity of experts to make life more enjoyable and more perfect than previous life. Because this results in architecture becoming increasingly widespread and diverse, covering all aspects of life and its review becomes multifunctional regarding aspects of function, structure, and aesthetics, which in the end, functional aspects will be related to aesthetics.

Michael Leyton in his book entitled ''Shape as Memory – A Geometric Theory of Architecture'' put forward a new theory about geometry which is an entire restructuring of science. This is a radical understanding of design and is a new foundation for geometry as a new foundation in architecture, where form is a way of reconstructing history. The object from which one can find information regarding the past is called memory storage(Leyton, 2006)(Nurrahman et al., 2022).

Construction on the Cipanas Dam began in 2018 with an implementation period until 2022. The dam, which is one of the National Strategic Projects (PSN) to support national water and food security, has a fairly large capacity, namely 250 million m^3. With a capacity of that size, the Cipanas Dam will be able to irrigate an irrigation network covering an area of 9,243 hectares of agricultural land in Sumedang Regency and parts of Indramayu Regency. It is hoped that the supply of irrigation water from the Cipanas Dam can help farmers increase their planting intensity compared to the rain-fed method which is only once a year. (Wamenarno, 2020).

Tourism in Indonesia is a sector that has bright prospects and extraordinary potential to be developed as a sector that contributes to the country's large foreign exchange. This is supported by Indonesia's geographical location and extraordinary cultural diversity, making Indonesia an attraction in the eyes of the world. (Amsyah, 2019).

More specifically, Dam Tourism has been a breakthrough in recent years, as a place that has its character as a tourist location. One of the dams which is a National Strategic Project that is being built is the Cipanas Dam which is located in 2 (two) regions, namely Sumedang Regency and Indramayu Regency, West Java. This multifunctional dam also has other functions to meet raw water needs with a capacity of 850 liters per second and has the

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potential to become a source of a Mini Hydro Power Plant (PLTMH) of 3 MW. (Wamenarno, 2020)(Permana et al., 2020).

This dam, with a total inundation area of 1,315 hectares, will also be used as a flood control water reservoir for the Indramayu area and its surroundings because it can reduce flood discharge by 250 m^3/second and has the potential for educational tourism.

There are various facilities to support a dam building, one of the dam facilities includes the View Tower, which functions as an observation place around the dam so that it can be monitored in its entirety during OP (Operation and Maintenance) when the dam has started to function.

Most of the viewing towers that have been built are only concerned with function, without paying attention to the visuals as a whole, this is very unfortunate because this viewing tower is one of the building objects that is visited a lot during visiting events, both from government agencies, elementary schools, secondary schools. first, high school, as well as visits from universities, even visits from general visitors

2. RESEARCH METHODS

The research method used in this research is descriptive with a qualitative approach. According to(Sugiyono, 2016)Qualitative descriptive method is a research method based on the postpositivism philosophy used to research the condition of natural objects (as opposed to experiments) where the researcher is the key instrument. The data collection technique is carried out in a triangulated (combined) manner, data analysis is inductive/qualitative, and the results of Qualitative research emphasize meaning rather than generalizations. Qualitative descriptive research aims to describe, depict, explain, explain, and answer in more detail the problems to be studied by studying as closely as possible an individual, a group, or an event. In qualitative research, humans are the research instrument and the written results are in the form of words or statements that correspond to the actual situation.

In qualitative research, data collection usually uses observation, documentation, and interview methods. Also do not ignore the possibility of using non-human sources of information, such as documents and available records. The implementation of data collection also involves various other supporting activities, such as creating rapport, selecting informants, and recording data/information resulting from data collection.

Qualitative data is data that cannot be calculated or is non-numerical. Qualitative data analysis techniques are generally a conceptual discussion of a problem. Several qualitative data analyses carried out included:

- Content Analysis
  Content analysis techniques are needed when we have to understand the overall themes in the qualitative data we have. In this research method, we can apply certain themes or ideas. This kind of parsing of textual data helps us find the most common data sets.
- Narrative Analysis
  Narrative analysis techniques focus on how an idea is communicated to all related parts. Narrative qualitative data analysis techniques can help us understand and develop the culture of an organization such as a company. Narrative qualitative research methods also help us in creating marketing strategy plans.
- Discourse Analysis
  Apart from narrative analysis techniques, discourse analysis techniques are also used to analyze people's interactions. The difference between the two lies in focus. The qualitative

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research method of discourse analysis focuses more on the social context in which communication between respondents and researchers occurs.

The subjects in this research were the Cipanas Dam Area; while the object of this research is the View Tower. In this research, in general, the data collection process uses main methods that are interrelated and complementary, namely: Observation and documentation techniques. Data analysis is aimed at looking more broadly at the potential and problems, as well as how many opportunities can be developed in the planned area.

3. THEORETICAL REVIEW

Geometry will always be present in architecture from various building points of view. Both the application of plans and building facades, two-dimensional and three-dimensional cannot be separated from geometric shapes. Judging from the overall elements. These forms may influence the design of architectural concepts. (YES Yatmo, nd)**.**

The other side of geometry is the order it creates. Humans tend to want to produce order in their lives. Architecture, which is a facility for meeting life's needs, is also required to apply order. So that the forms created cannot be separated from regular forms. Geometric shapes appear to strengthen the impression of space and create order in it.

Geometry is a part of mathematics that discusses points, lines, planes**,** and space. Geometry deals with abstract concepts that are given symbols. Some of these concepts are formed from several elements that are not defined according to a deductive system. Geometry is a system in mathematics that begins with a basic concept, namely points. The points are then used to form lines and the lines will form a plane. In the field**,** you will be able to construct various flat and polygonal shapes. Polygons can then be used to arrange spatial shapes (Bird, 2004)**.**

Another definition states that geometry is the introduction of broad shapes, volumes, and areas. Building geometric concepts in children begins with identifying shapes, investigating buildings, and separating ordinary images, such as quadrilaterals, circles, and triangles. Learning concept positions, such as below, above, right, and left lays the initial foundation for understanding geometry. Geometry concepts relate to basic ideas that are always related to points, lines, planes, surfaces, and space(Nurahman et al., 2023)(Suyanto, 2005)**.**

Geometric concepts are abstract, but these concepts can be realized in semi-concrete or concrete ways. Geometric shapes are divided into two, namely flat shapes and space shapes. Space shapes are shapes that have volume, for example, cubes, cones, cylinders, balls, blocks, and others. Meanwhile, flat shapes are geometric shapes that have long sides and areas, for example, quadrilaterals, circles, rhombuses, rectangles, triangles, etc.

From the definitions above, it can be concluded that geometry is a science in the mathematical system that studies lines, space, and volume which are abstract and related to each other, having lines and points so that they become symbols such as squares, triangles, and circles and others.

4. RESULTS AND DISCUSSION

The Viewing Tower is a building that functions as an observation facility during OP (Operation & Maintenance) later, or when the Dam is operational.

There are 2 floors of the building, Floor 1 is a Diorama Room which is presented Visually, both in the form of Animation displays and Mockups that tell the story from the start of the Dam construction until its completion. Apart from the main dam which is the main building,

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the functions of other buildings built in the Cipanas Dam area from upstream to downstream are also explained. Then the 2nd Floor functions as an Observation Room where visitors can observe the dam area at 3600.

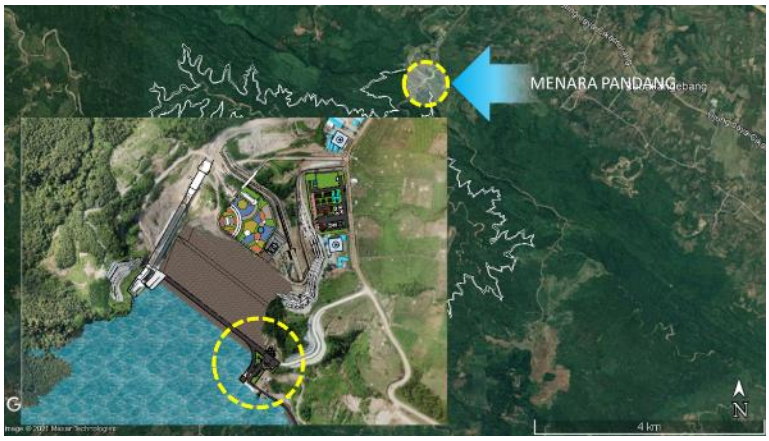

Figure 1. Location of Viewing Tower

The overall shape concept of the View Tower building is a combination of 3 (three) basic geometric shapes, namely: Circle, Triangle, and Quadrilateral. With a building design formed from basic geometry, this viewing tower building looks modern, and simple and has character.

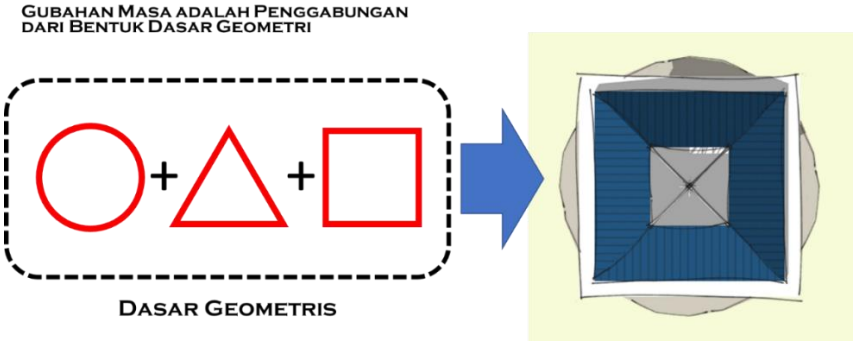

Figure 2. Basic Concept of View Tower Shape

Figure 3. Function of the View Tower Building

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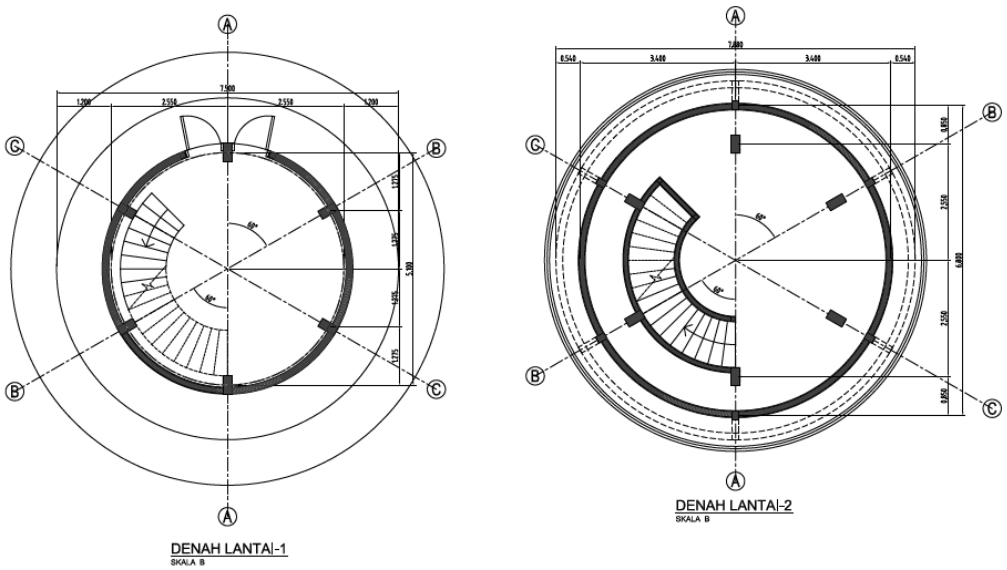

Figure 4. Plan of the Viewing Tower

The floor plan of the 1st floor of this viewing tower building has a diameter of 5.10 meters, while the 2nd floor has a diameter of 6.80 meters. From these dimensions, Floor 1 has a capacity of 1 person, and Floor 2 has a capacity of 20 people. On Floor 1 there is 1 door as the main access to this building, apart from that there is a circular staircase that functions as a connection between Floor 1 and Floor 2.

The highest elevation of the Maindam is +136.00 above sea level, while the View Tower is at +140.00 above sea level, which means that the viewing tower building is 4 meters above the main dam, plus the height difference between the 1st & 2nd floors is 3.4 meters high. , so that visitors on the 2nd floor can observe the entire dam building very freely from various directions.

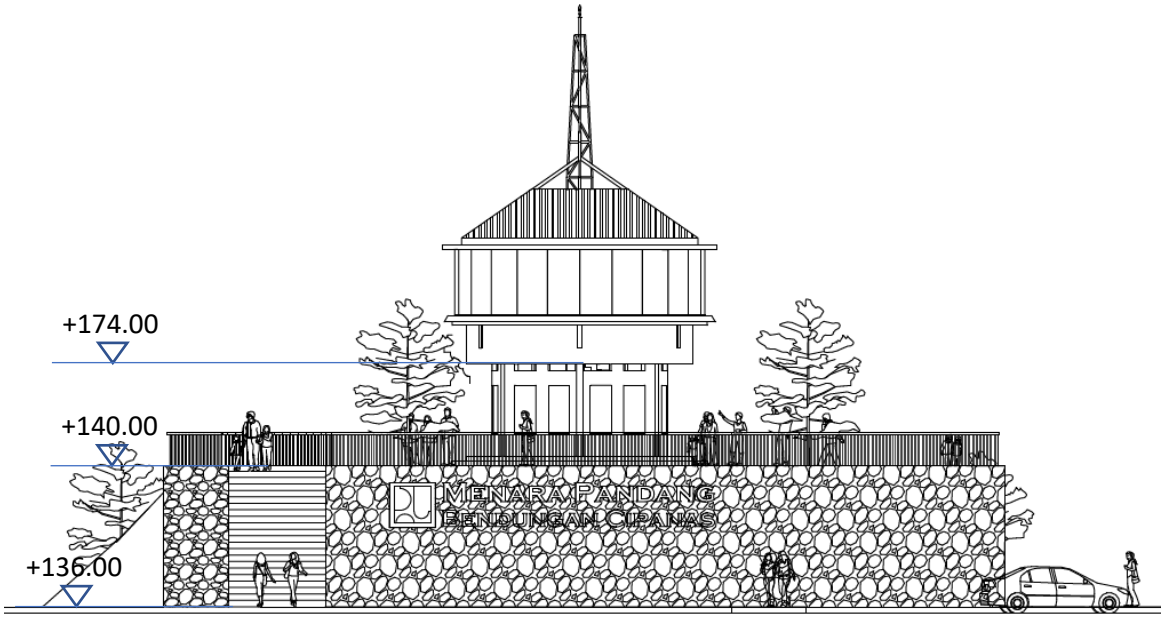

Figure 5. View of the Viewing Tower and Elevation of the Maindam

This Viewing Tower is one part of the Rest Area at Cipanas Dam. Apart from functioning for OP (Operational & Maintenance) purposes, this Rest Area also functions as an educational tour for other general visitors, such as: related agencies, universities, high schools, junior high schools, even elementary schools.

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Figure 6. View Tower Building as Part of the Rest Area

Figure 6. Bird Eye View Rest Area

5. CONCLUSION

Geometry is a science in the mathematical system which studies lines, space and volume which are abstract and related to each other, having lines and points so that they become symbols such as squares, triangles, circles, etc.

With the basic concept of geometric shapes, the View Tower in the Rest Area can optimally observe what facilities are in this dam building. Of course, it is supported by the highest elevation of the land where the View Tower building stands.

Apart from that, the colors applied from the basic colors of the PU (Public Works) logo are very "Eye Catching", so they can attract the attention of visitors.

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