

# Document and Analysis of Dongzhai Drum Tower in Guizhou Province

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## Abstract:

China is a big family of 56 different nationalities, different nationalities have their unique habits and ways of living. This is closely related to its historical background and geographical location. Therefore, this article will investigate and study the Dongzhai drum tower, the authors will find out the relevant background and historical data of the Dongzhai drum tower by looking for information, and analyze the function, characteristics, technology, structure and significance of this building. Besides, the authors will put forward and explain the problems facing the Dongzhai drum tower. The Dong nationality is one of the oldest ethnic minorities in China, the structure and layout of the drum tower have high research value. Through the study of this assignment, the authors have a deeper understanding of the architectural form and structure of this area, on this basis, the authors also have more thoughts and ideas about the protection of traditional buildings.

## Keywords:

Dongzhai Drum Tower, Urban Culture, Urban Heritage, Urban History, Structure, Layout, Techniques, Construction, Architectural Form

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## 1. Introduction

The Dongzhai drum tower is a unique public building of the Dong nationality. It is also one of the important symbols of Dongzhai. The building has a long history of about 2000 years. During the Three Kingdoms period, Zhuge Liang once conducted a war in Guizhou. To facilitate the command, he built a tall building in the camp and placed a bronze drum in the building to convey the command with the sound of drums, this tall building gradually evolved into the drum tower. [1] The Dongzhai drum tower is mainly located in the Dong autonomous prefecture, Guizhou province, China. The area is mainly dominated by the ethnic minority Dong. Local people have been living in concentrated areas since ancient times, this village is so large that there are thousands of households and dozens of households living together. [2] Therefore, drum tower is a symbol of the local as a surname group and is also called a village with the same surname and the same drum tower. [3]

Drum tower is regarded as a symbol of the Dong nationality's unity and craftsmanship. This is because Dong people tend to live together in groups, and each surname is relatively concentrated. Therefore, when building a village, people built their drum tower in the center as an activity place for the same people. [4] Therefore, people with different surnames have their drum towers. Generally speaking, the whole village will build a big drum tower together to serve as an event venue for the whole village to host major events and welcome foreign guests.

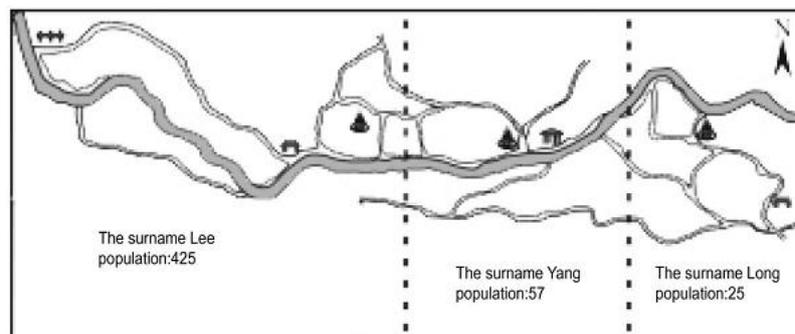
## 2. Historical Background and Issues

Drum tower was a symbol of village authority and a center of political activity. When major things happen, people will also discuss or convene in the drum tower, which shows that the drum tower still has the nature of a courtroom. Nowadays, drum tower is more used as a place for entertainment, especially in special festivals. People will hold different traditional activities here, which also attracts many tourists from other places to visit. [5] Therefore, drum tower has the characteristics of long history, diverse uses, beautiful shape, and unique structure. It has very important historical, scientific, artistic and national cultural values. [6] This article mainly refers to the discovery and research of regional culture by historians to ensure that it provides diversified urban planning directions and design angles for mankind. [7]



**Figure 1.** The aerial view of Dong village (photography: Jialiang Zhang).

It is undeniable that there are still some practical problems in the protection of Dongzhai drum tower at this stage. Although the state has issued protection policies and corresponding measures for the Dongzhai drum tower, due to the large area of the Dong village, about 180,000 square meters, and the traditional way of living is adopted, that is different villages have their drum towers, and they also have different customs and lifestyles.[8] Therefore, the protection measures cannot be fully applied to all the drum towers in the entire village. The effectiveness of protective measures will also be reduced to varying degrees, and even some negative effects may occur. [9] Therefore, it is necessary and urgent to study how to effectively protect the Dongzhai drum tower with different characteristics.



**Figure 2.** Partial map of Dongzhai population distribution (from Shiyuan).

### 3. The Layout of the Dongzhai Drum Tower in Guizhou

Drum tower is an iconic building of the Dong village, and it is also the heart of this village. Drum tower is mainly divided into Xieshan-style and Zianjian type roof in form. Drum towers are all connected with fir, no nails, no wooden wedges, and even no drawings are needed for construction. [10] People mainly use the tenon-and-mortise structure and principle of the lever to build the drum towers, so the overall structure of the building is exquisite and beautiful, with a long drum hanging on the top floor. [11] Drum towers are generally more than ten meters high, ranging from several floors to more than ten floors, so they are high-rise buildings in Dongzhai.

Compared with residential buildings, it is different in height, function, and shape. The drum tower was built in the shape of a fir, similar to the pagoda. Due to the building is built to facilitate people to have a meeting place, so in Dong villages, people often build houses around their drum towers. [12] In the Dongzhai village, a tall drum tower stands in the center, and the residents are surrounded by it, spreading layer by layer according to the mountain. This pattern reflects the cultural connotation of Dong nationality 's affinity and unity. [13]

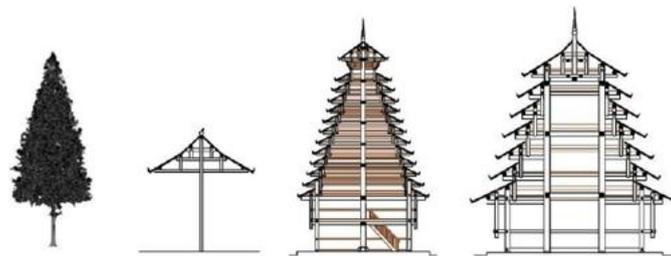


Figure 3. The development of drum tower (from Shiyuan).

The planes of the drum tower are all even numbers, generally square and hexagonal. In front of the drum tower, there is a site made of bluestone slabs, and a stage is often built beside it. The facades are all oddnumbered eaves, ranging from three layers to as many as seventeen layers, with a height of about 20 meters. A cowhide drum is placed in the highest cabinet. [14]

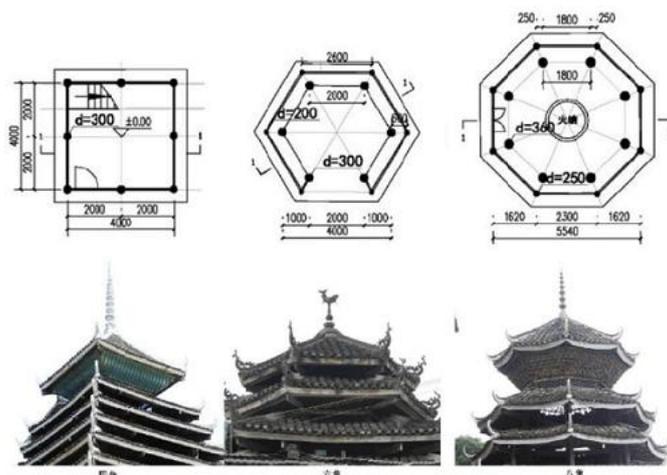


Figure 4. The geometry of drum tower (from Shiyuan).

## 4. Techniques

### 4.1. Construction

The drum tower is a wooden structure with two types of tower and pavilion. The tower-shaped drum tower also named as the dense eaves tower, has about a dozen floors. There are 4 pillars stand in the center of the drum tower to support the building beams, and 4 pillars outside support the pavilion eaves, the columns are connected by tenon-and-mortise structure, although the structure is still very stable even though no nail. [15] The shape of the lower part of the drum tower is similar to a pavilion, and the upper part is like a pagoda, so the drum tower is beautiful in appearance and quite imposing. The shape of the pavilion-shaped drum tower is different from that of the tower-shaped drum tower. It looks more like a residential building, but the appearance of the heavy eaves also shows its striking position and lofty status in the village. [16]

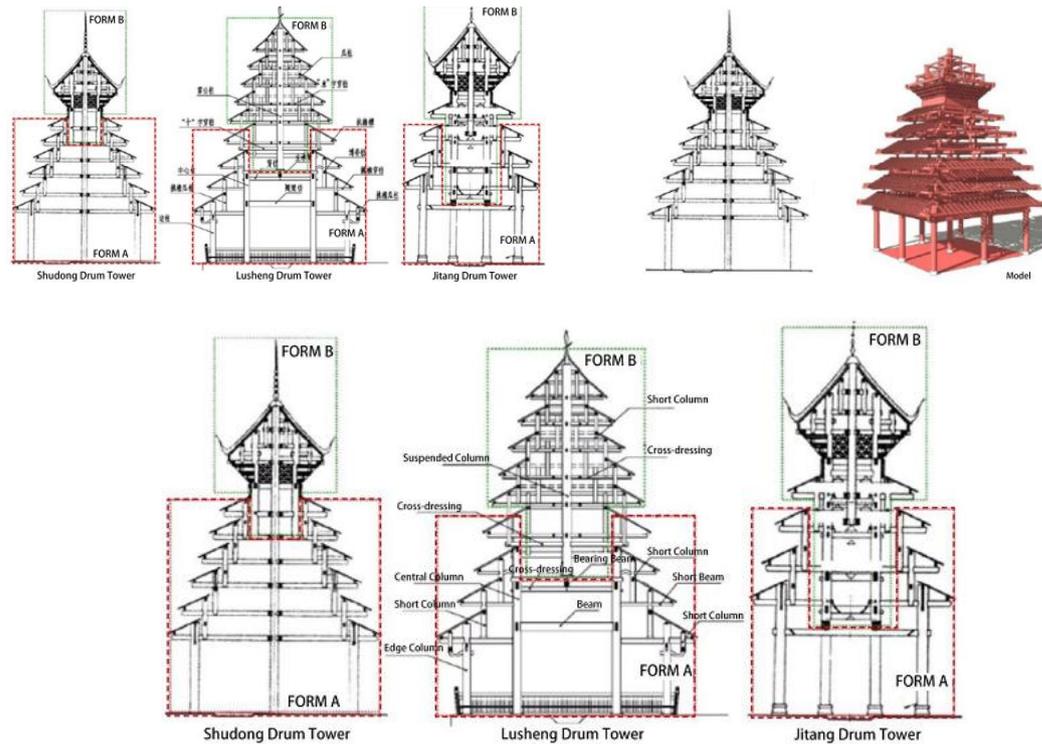


Figure 5. The construction of the tower.

#### 4.2. Fengshui

Fengshui In yin-yang gossip, the singular represents yang and prosperity, so the number of floors in the drum tower is singular. Besides, the traditional drum tower has a main column in the center, four load-bearing columns and twelve eaves columns around it.

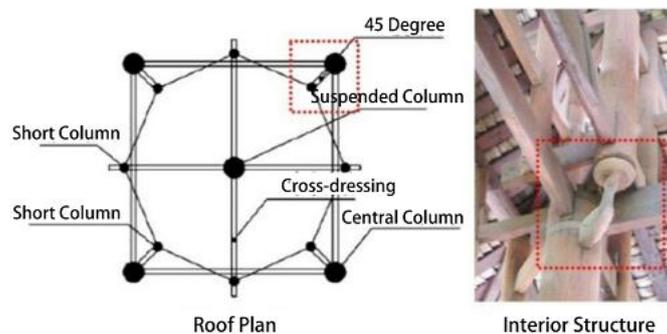


Figure 6. Drum tower looking up plan and internal structure.

[17] The number of these columns symbolizes one year, four seasons, and twelve months, and it also represents the good wishes of people. [18] Therefore, Dongzhai drum tower is a symbol of auspicious prosperity. It has important art and cultural relic value. [19]

#### 4.2. Decoration

In the design and decoration of the top of the drum tower, the roof of the building is gourd-shaped and faces the sky, and the pillar decoration absorbs the elements of the pagoda. [20] In addition, to the historical and cultural stories, the paintings in the drum tower also have some meaningful carved murals, such as dragon and phoenix patterns. [21] There are exquisite colored sculptures and paintings everywhere in the drum tower, including birds, beasts, flowers, fishes and insects. These murals directly reflect the local people's longing for a better life and their love for nature.



*Figure 7. The combination of traditional ethnic decoration and drum tower.*

### 5. Conclusions

The Dongzhai drum tower is a characteristic building of ethnic minorities in Guizhou. The unique terrain and ethnic customs have created its unique architectural form. It not only represents the spirit and belief of the Dong people but also shows people the unique and outstanding local architectural layout, techniques and construction. However, with the development of society and the increasing demands of people on building functions and space to create more flexible spaces and multiple-use requirements of modern lifestyles, traditional architectural forms should also be continuously developed and updated.

The Dongzhai drum tower is one of the most representative elements of Dong 's culture. It can truly reflect the political, economic, social and cultural status of the past historical period of this place. It is the material carrier of civilization in the area and subtle cultural influence. The Dongzhai drum tower is the best material to shape the local characteristics. Therefore, we should protect the building from being destroyed by the outside world more effectively, and carry out deeper protection and research on it, giving the drum tower a new definition and life.

### Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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