



## Design of a Culinary Arts Gallery in Binjai City with a Tropical Architectural Approach

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**Abstract.** *The planning for a Culinary Arts Gallery in Binjai City is intended as a forum for culinary and cultural diversity in Binjai City to be better known and developed. Binjai City is a city with various ethnicities and cultures in it. This cultural diversity comes from the city's residents, including tribes; Malay, Toba Batak, Karo, Chinese, Javanese, and other tribes. The cultural diversity of the city of Binjai has resulted in the growth of various cultural characteristics in the form of culinary specialties in the city of Binjai such as tau kua heci and Binjai's typical rambutan cake which gives the city its identity. Furthermore, the cultural and culinary diversity of the city of Binjai has the potential to be developed in terms of economics and tourism. Therefore, it is necessary to have a planning study for a Culinary Arts Gallery in Binjai City that can accommodate the culinary arts of Binjai City so that it is easier to introduce it to the wider community in the form of a Culinary Arts Gallery. This plan is intended to accommodate culinary activities and functions as a forum for arts and cultural activities for the people of Binjai City.*

**Keywords:** Binjai, Culinary, Culture, Gallery, Study

### 1. INTRODUCTION

Indonesia is a country that is rich in various kinds of cultural arts and culinary flavors from each region. Cultural and culinary arts in Indonesia continue to develop in line with the times. The Minister of Tourism and Creative Economy of the Republic of Indonesia, Sandiaga Salahuddin Uno, said culinary is the largest contributing subsector to the creative economy's gross domestic product (GDP). Based on data, the culinary subsector contributed IDR 455.44 trillion or around 41 percent of the total creative economy GDP of 1,134.9 trillion in 2020 ([kemenparekraf.go.id](http://kemenparekraf.go.id)) [1]. This shows the growing development of culinary tourism in Indonesia.

The city of Binjai is a city with a variety of cultural arts and culinary characteristics. Binjai City is one of the cities in North Sumatra Province, Indonesia[2]. The cultural diversity found in Binjai City comes from its people that consist of various tribes, including Malays, Bataks, Chinese, Javanese, and other tribes. The existence of various ethnicities gives the city its culinary and cultural characteristics. The cultural diversity existing has resulted in the growth of several kinds of cultural arts in Binjai City, such as dance, craft arts, music, and various other types of art. The cultural diversity of the city of Binjai has also resulted in the

growth of many different cultural characteristics in the form of typical culinary delights in the city of Binjai such as tau kua heci, tofu balek Binjai, Kalimantan ice mix, rambutan syrup, ifumie Binjai and the typical Binjai rambutan cake which gives the city its identity. Furthermore, the cultural and culinary diversity of the city of Binjai has the potential to be developed in terms of economics and tourism. Based on the table from the Binjai City Central Statistics Agency (<https://binjaikota.bps.go.id/>), shows that the number of restaurants in Binjai City has increased, namely 446 restaurants in 2023. The increase will reach 291 restaurants compared to 2022 as seen in Table 1[3].

**Table 1.** Number of Restaurants by District in Binjai City, 2020-2023

Subdistrict (1)	2020 (2)	2021 (3)	2022 (4)	2023 (5)
Binjai Selatan	11	13	20	97
Binjai Kota	35	32	47	70
Binjai Timur	12	16	19	107
Binjai Utara	14	16	42	107
Binjai Barat	21	22	27	65
Kota Binjai	93	99	155	446

This shows that culinary tourism is highly popular and growing in Binjai City. The Binjai City Government also often holds cultural and culinary arts performances such as the Binjai Art & Culinary Festival which is expected to be able to promote the culinary and cultural arts of Binjai City for the development of the tourism industry and community economy in Binjai City [4].



The potential for cultural and culinary arts can later become a means to attract tourists and the public to get to know and further develop the culture and culinary specialties of Binjai City so that their sustainability is maintained. Not only to preserve the existing culture and culinary characteristics but also for development in the economic and tourism sectors of Binjai City. Therefore, a container or place is needed to accommodate all the culinary enterprise and cultural arts activities of the people of Binjai City so that they can be enjoyed by all components of the local community and tourists, namely by having a Culinary Arts Gallery.

The Culinary Arts Gallery is a building or space planned to accommodate typical Binjai City culinary activities such as the MSME bazaar selling typical Binjai City food products and typical Binjai culinary souvenirs. This Culinary Arts Gallery functions as a forum for displaying artistic and culinary works from Binjai City artists of various ages for all people to enjoy their uniqueness. The culinary art gallery is also a social space

connecting culinary and art lovers from several circles and especially as a means to attract the interest of the young generation in the city of Binjai in developing creativity in arts and culture so that existing culture can be preserved, developed, and maintained. Because the location for planning the Culinary Arts Gallery is in an area with a tropical climate, the theme that will be applied to the building will use a Tropical Architecture theme. This theme focuses on the building planning process to overcome problems that may occur in tropical climate areas, as well as by paying attention to

environmental aspects, materials used, circulation, and vegetation around the building to provide maximum comfort and building function for users of the Culinary Arts Gallery[5]. *Comparative Study of Buildings with Similar Functions* Several buildings with similar functions can be seen in Table 2.


**Table 2.** Buildings with Similar Functions.

Buildings	Explanation	Figure
Hawker Center, Singapore	Hawker Center is home to around 30 stalls serving quality food. This place connects food, comfort, and social interaction in one hawker center. The Hawker Center has 3	
	floors, namely: The first floor, functions for snack stalls with directly cooked food. This section has the longest operating hours and is located on the ground floor for maximum visibility to attract people inside. The second floor functions by placing kiosks. The third-floor functions as a wet snack stall. (source: <a href="https://www.asiaone.com/food/new-hawker-centres-prices-easy-digest">https://www.asiaone.com/food/new-hawker-centres-prices-easy-digest</a> ).	
World of Food, Amsterdam (TedSchulten dan Harvey Ottengarasi)	This building houses an exotic food market in an old parking garage that has been spectacularly converted. Working with developer Lingotto, architects Ted Schulten and Harvey Ottengarasi transformed an abandoned parking lot. Armenian, Egyptian, and Liberian dishes are served	
	alongside the finest dishes of Thai, Caribbean, and	
	Indonesian cuisine. Even McDrive, student pubs, and	
	Italian espresso corners are available. The garage consists	
	of heavy concrete blocks with a large open floor space. The	
	building uses concrete construction. By cutting holes in the	
	thin flooring between the joists, a greater height with	

	lots of	
	natural light is created. Thanks to the parking floor, all	
	slopes are connected [6].	

*Comparative Study of Buildings with Similar Themes.* Several buildings with similar themes can be seen in Table 3.

**Table 3.** Buildings with Similar Themes.

Buildings	Explanation	Figure
Tropical WhiteHouse, Malappuram Kerala	This house is located in a valley and surrounded by steep, hilly terrain. The first visual perception that may be obtained is an indication of the entry of sufficient light into all parts of the house. Oriented along a north-south	
	direction, the building takes into account natural conditions	
	such as wind flow direction and sun path, typical elements	
	of tropical architecture have been absorbed into the	
	building's core zoning layout. For example, locating all	
	semi-private and informal spaces such as the living room,	
	office, and library to the south ensures reduced use of	
	artificial light sources as sunlight is abundantly available	
	during conventional working hours. In addition, due to the	
	overall hidden and emergent mass, there is constant and	
	unimpeded air circulation between the outside and the	
	inside of the building[7].	
Tropical House1, Vietnam	The buildings with a tropical philosophy take green space as the main core that surrounds the entire house. The	
	courtyard on the 1st floor and the connecting rooms are	
	very flexible, connected to facilitate airflow to circulate	
	harmoniously to cool all the spaces. The house is	

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approached by an open verandah that combines garden and car parking, punctuated by architectural block separations that create open spaces between the plots to increase natural access surfaces. The architectural facade of the building creates a layer of blue that is reminiscent of traditional Vietnamese memories, this layer of glass will reduce the intensity of sunlight on the building, and in addition, it will increase the privacy of the living space inside. On the roof, where direct exposure to natural light will be set, a garden will be arranged to a cultivated vegetable garden providing clean vegetables for the house, increasing activity for parents and children[8].

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## 2. METHODOLOGY

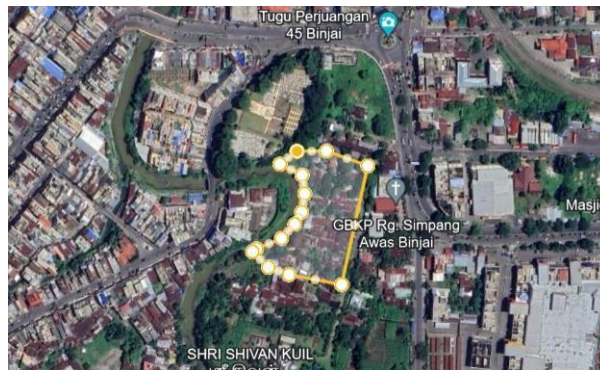
The research method applied to design is a preliminary survey to determine the design location to collect data related to the planning study that has been determined by making direct observations in the field. Location determination is based on the following criteria: analysis of the city structure, access to the site, size of the site, service area around the site, and vegetation around the site. The Culinary Arts Gallery as a place for cultural and culinary activities in Binjai City is best located in the trade center area and easily accessible to all levels of society and tourists. Then, with a comparative study of buildings, the data obtained was taken from scientific journals, websites, books, and literature related to the research title. The results of this research are then used as a reference in building design.

## 3. RESULTS AND DISCUSSION

### Project Description

The design of this building is located on Jalan Tennis, East Binjai District, Binjai City, North Sumatra with an existing land area of  $\pm 1.1 \text{ m}^2$ . The planning location area is designated as a Trade and Services Area. The existing condition around the site is a trading area. This location was chosen because it met the location selection criteria used as a reference.

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**Figure 1.** Site Location  
*Source: Google Earth*

### Analysis of Space Requirements

Space requirements are grouped based on the function of the space and the activities carried out, namely reception activities, management activities, main activities, and supporting activities. Based on the analysis of activities in the design of the Culinary Arts Gallery, the space requirements for facilities will be grouped

based on the type of activity. The following types of activities and space requirements in the Culinary Arts Gallery can be seen in Table 4.

**Table 4.** Space Requirements Based on Type of Culinary Arts Gallery Activities.

Type of Activities	Space Requirements
Reception Activities	Hall ATM Centre Information Center
Management Activities	General Manager's Room of Culinary Arts Gallery Assistant General Manager's Room Financial staff room Personnel staff room Engineering staff room Kitchen staff room Meeting room Employee office space Lavatory

Main Activities	Food retail area Restaurant area Kitchen space Cooling room Indoor dining area Outdoor dining area Transaction area Snack and souvenir center Demo/cooking classroom Lavatory
Supporting Activities	Musholla Gallery Performance area Garden area Children's playground area
Service Activities	Parking area Security post Loading dock Generator room Pump room MDP Room Control room and CCTV Elevator machine room Waste processing room Cleaning service room Warehouse

The amount and space requirements used refer to several kinds of literature. Based on the type of user activity, the total area required for space in designing the Culinary Arts Gallery is as follows (Table 5).




**Table 5.** Total Space Requirements for Culinary Arts Galleries.

Name of Activity	Space
Reception Activities	191,2 m <sup>2</sup>
Management Activities	306.82 m <sup>2</sup>
Main Activities	7343.83 m <sup>2</sup>
Supporting Activities	96,07 m <sup>2</sup>
Service Activities	1347,29 m <sup>2</sup>
Total Area	9285.21m <sup>2</sup>





### Site Location Analysis

Analysis of the selected site/site is an analysis of accessibility at the site, analysis of wind direction, analysis of sun orientation, analysis of vegetation around the site, analysis of views around the site, and analysis of noise around the site. Site analysis results can be seen in Table 6.

No.	Site Analysis	Figure
1.	Analysis of accessibility at the site	 <p> <span style="color: green;">→</span> : Incoming and outgoing circulation of users  <span style="color: yellow;">→</span> : Main road         </p>
2.	Analysis of wind direction and sun orientation	 <p>           U Wind direction in this areatends towards northeast of the site.         </p>
3.	Analysis of noise around the site.	 <p>           U             <span style="color: yellow;">—</span> : Low noise             <span style="color: orange;">—</span> : Medium noise             <span style="color: red;">—</span> : High noise         </p>

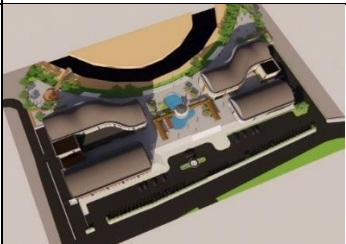


4.	Analysis of views around the site.	
5.	Analysis of vegetation around the site	





### Design Results

The design of the Culinary Arts Gallery uses a tropical architectural approach. The concept of building form that is the basis and used in this design is dynamic and geometric shapes. The use of dynamic shapes aims to give the impression of being free and not rigid and to attract the attention of visitors. Open space in buildings is used and applied as green space and circulation. Wood material used as a secondary skin aims to minimize the entry of sunlight into the building. After analyzing the comparative studies and literature needed to be applied to the design of the Culinary Arts Gallery, the following design results can be seen in Table 7.

**Table 7.** Design Results Analysis.

No.	Figure	Explanation
		The mass of the building is designed in a wavy shape with a curved roof on the building to make the building appear dynamic and attractive to visitors to the Culinary Arts Gallery. Asymmetrical shapes are used to create a dynamic and non-monotonous impression of the building.

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		The concept of outdoor space in this building consists of a playground area for children which is a pavement made of EPDM rubber or ethylene propellene rubber because it is more synthetic and also covered with synthetic grass. There is also an outdoor area equipped with trees and shade plants as well as garden chairs for visitors to rest, an online motorcycle taxi waiting area, and a pedestrian area to accommodate various activities that support the use of the building.
		The building facade is combined with Tropical Architecture, namely the use of secondary skin with wood material to minimize the entry of sunlight into the building, open areas are also applied to the building to make it easier for air to enter and leave the building. Glass material is also applied to add an open impression to the building. The wood material used in the building is used to integrate the natural atmosphere around the site into the building.
		Shows the main stairs to the building after passing the dropoff area and then flows visitors into the site, namely they can go to the souvenir center building, gallery area, and culinary center. There is a pool in the middle as a link between the buildings and the visitor seating area which is equipped with shade trees. This area also has a roof that functions as shade if it suddenly rains.
		The culinary area consists of two floors, on the first floor there are retailers with various types of food to choose from, on the second floor there is a restaurant area, there's also an outdoor seating area available for visitors who want to sit outside while enjoying food. The culinary area is designed to be open without being covered by walls to flow air into and outside the building.
		Visitors can also access the river and garden area at the back of the building via stairs down towards the river, there is also bridge access where visitors can look directly into the river.

#### 4. CONCLUSION

The building design study was based on the need to develop culinary and cultural tourism in Binjai City. This design aims to accommodate culinary and cultural arts activities so that these activities can grow and become an activity identity that can attract tourists to visit. This design is expected to help the development of the tourism industry in Binjai City. This design applies tropical architecture because the Culinary Arts Gallery's planning location is in an area with a tropical climate, so the building design is

expected to be capable of responding the tropical climate and overcoming problems that may occur in areas with a tropical climate.

The choice of location in Binjai City is precisely on JL. Tennis was chosen based on several considerations such as ease of access to the site and the choice of location was felt to be good enough to reach the community because the design location chosen was in the city center.

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