

DESIGNING A NEW BUILDING IN HISTORIC SETTING:
A CASE STUDY OF NATIONAL LIBRARY OF LAOS



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การออกแบบอาคารใหม่ในพื้นที่ประวัติศาสตร์ กรณีศึกษาหอสมุดแห่งชาติลาว



นางสาวแอนนิตา สุทธิพงษ์

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาสถาปัตยกรรมศาสตรมหาบัณฑิต

สาขาวิชาการออกแบบสถาปัตยกรรม

คณะสถาปัตยกรรมศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

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ในช่วงยุคอาณานิคมฝรั่งเศส ประเทศลาวได้ตกเป็นอาณานิคมของประเทศฝรั่งเศสตั้งแต่ปี ค.ศ. 1893 ในระหว่างนั้น องค์ประกอบทางสถาปัตยกรรมแบบฝรั่งเศสได้ถูกผสมผสานเข้ากับสถาปัตยกรรมลาว และ ถูกปรับเปลี่ยนให้เข้ากับสภาพภูมิอากาศของประเทศลาว (ภูมิอากาศร้อนชื้น) สถาปัตยกรรมอาณานิคมแบบฝรั่งเศสได้มีผลกระทบต่อสถาปัตยกรรมในหลายเมืองและจังหวัดในประเทศลาว โดยเฉพาะ เวียงจันทน์ ในช่วงเวลา 30 ปีภายใต้การปกครองของฝรั่งเศส เวียงจันทน์เป็นจังหวัดหนึ่ง ที่แสดงให้เห็นถึงผลกระทบของสถาปัตยกรรมอาณานิคมฝรั่งเศสมากที่สุดในประเทศลาว เนื่องจากมีโครงการก่อสร้างอาคารขนาดใหญ่เป็นจำนวนมาก อย่างไรก็ตาม หลังจากที่ประเทศลาวได้รับเอกราช ประเทศลาวก็ได้มีการพัฒนาไปอย่างต่อเนื่อง อาคารในสมัยอาณานิคมหลายแห่งได้รับการปรับปรุง เพื่อให้สอดคล้องกับวัตถุประสงค์ต่างๆ เช่น อาคารที่พัก สำนักงาน และอาคารพาณิชย์ ในขณะเดียวกัน เจ้าหน้าที่ขององค์กรที่เกี่ยวข้องก็ได้ตระหนักถึงคุณค่าทางประวัติศาสตร์ของมรดกทางสถาปัตยกรรมดังกล่าว ซึ่งเป็นเอกลักษณ์ด้วยรูปแบบ และ ลักษณะเฉพาะของสถาปัตยกรรมอาณานิคมแบบฝรั่งเศสที่มีคุณค่า และ ควรจะได้รับการเก็บรักษาเพื่อให้คนรุ่นใหม่ได้ชื่นชมและศึกษาเรียนรู้ความเป็นมาของประวัติศาสตร์ทางด้านสถาปัตยกรรม.

อย่างไรก็ตาม ในการปรับปรุง ซ่อมแซม และ การประยุกต์ใช้ของอาคารในสมัยอาณานิคมฝรั่งเศส นั้น มีเพียงกฎข้อบังคับท้องถิ่นที่มีบทบาทสำคัญในกระบวนการเท่านั้น ซึ่งกฎดังกล่าวนี้ไม่เพียงพอต่อการเก็บรักษาคุณค่าหลัก และ เอกลักษณ์เฉพาะของสถาปัตยกรรมอาณานิคมแบบฝรั่งเศส การศึกษานี้เป็นการหาเกณฑ์ของประเภทการใช้งานพื้นที่ใหม่ที่เหมาะสมให้แก่อาคารในสมัยอาณานิคมฝรั่งเศส กรณีศึกษาอาคารหอสมุดชาติลาว นำเสนอความเข้าใจเกี่ยวกับสถาปัตยกรรมอาณานิคมแบบฝรั่งเศสในเมืองเวียงจันทน์ โดยการศึกษารายละเอียดสถาปัตยกรรมดังกล่าวอย่างลึกซึ้ง เพื่อนำไปสู่การเสนอแนะแนวทางสำหรับการออกแบบอาคารใหม่ที่เชื่อมต่อกับอาคารหอสมุดแห่งชาติลาว โดยการนำเอกลักษณ์เฉพาะของอาคารในสมัยอาณานิคมฝรั่งเศสนี้ไปใช้ในการออกแบบ

การศึกษาค้นคว้าเริ่มจากการพิจารณาสถานการณ์จริงของโครงการอาคารหอสมุดแห่งชาติลาว ซึ่งจะมีการปรับปรุงและย้ายไปยังสถานที่ตั้งใหม่ โดยสถานที่ตั้งเก่าจะถูกนำไปปรับปรุงเป็นโรงแรม ดังนั้น การศึกษานี้จึงรวมถึงการศึกษาศักยภาพ และ ความเป็นไปได้ของการใช้พื้นที่อาคารหอสมุดแห่งชาติลาวในเชิงเศรษฐกิจ และ สังคม ในขณะเดียวกัน ก็มุ่งเน้นไปที่การเก็บรักษารูปแบบสถาปัตยกรรมอาณานิคมแบบฝรั่งเศสของอาคารหอสมุดแห่งชาติลาวมาใช้ในการออกแบบอาคารใหม่ในพื้นที่ประวัติศาสตร์อีกด้วย

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CHAPTER 1

INTRODUCTION

Presently, in Laos, more than 200 colonial buildings registered to be heritage list for conservation (In 2000 by Institute of Urban Planning, Ministry of Public Works and Transportation), restoration has become increasingly common as the authorities have realized the historical value of this unique architectural legacy. There were only two types of French colonial buildings constructed during the colonial era: office buildings and residences. The French colonial architectural legacy consists of two-story brick and wood, which are the main components with tile roofs, wooden shuttered doors, windows, and some art-deco decorations with mortar materials, high ceilings, thick-walled bearing structures, etc...

However, according to the development in Laos, several colonial buildings in both conservation area and common area have faced a massive change in the last two decade. In common areas, some of them have been abandoned or demolished to construct a new building as there is no regulation regarding protection while in the conservation areas or heritage sites most of the colonial buildings have been renovated and expanded for the particular purpose. As a result, many sectors including the government, International organization are concerning regard to conservation of those old buildings as its unique architectural styles and characteristics are valuable and should be preserved for the new generations to see as well as acknowledge the background of the past. Moreover, it is one of the tourist attractions in Laos, attracting numerous tourists to visit Laos every year which contributes economic of the country. In order to preserve the value of colonial building particularly in conservative areas to correspond with the development, this paper

aims to find the appropriate criteria of renovation and expansion of colonial building by taking the architectural project of the Library of Laos.

1.1 Problem statement

Due to the development in the country and the government policy. The government plan to improve the national library by building the new national library in the outer zone which has the larger landscape for construct a standard and contemporary library. As a result, the old library which located in the heart of Vientiane will be given for concession to generate a benefit from the old library.

In the meantime, the Lao National Assembly has identified the tourism industry as one of the nation's priority development areas. Many measures including the relaxation of visa, infrastructure improvement have been applied to boost the tourism sector. But one of the most important measures is the foreign investment. Laos allows the foreign investor in constructing tourism facilities such as hotels, guesthouses, resorts, restaurants, etc.. Therefore, The Library will be granted for a concession for the five-star hotel which corresponds with the Lao government policies and pathway of development.



Figure 1. 1 Urban Planning zone in Vientiane 2010-2030

In conclusion, it can be seen that the following are the problem statement of this study:

- French Colonial Buildings in Vientiane has been converted to various purposes such as hotel, restaurant, commercial building, etc.
- A local regulation play a crucial role in terms of building conversion which is not adequate to preserve the core value and the uniqueness of the French Colonial architecture.
- The thesis title “New Building in Historic Setting” is chosen in order to be one of the guideline regarding the French Colonial Building renovation.
- National Library of Laos is chosen as a case study due to its current situation as its old building will be converted to business purpose.

However, in the transformation of French Colonial building process in Vientiane, several factors in many different aspects need to be considered such as development pressure (globalization), economy, conservation and social aspect, which play an important role of all the changes in order to achieve the highest benefit for both the government and the investor.

Factor determining the transformation can be seen in this following contents:

Development pressure: the development pressure or Globalization played a vital role than the others factors, the most of French Colonial building which is mostly used as a government office building located in Vientiane conservation area today, which Lao government plans to relocate this government office building to the city's outer (Land Use Plan 2010-2030). In accordance with the city's plan, those Colonial office buildings tend to convert into others function and purposes such as restaurants, boutique hotels, etc, where the investor can create more income from this tourist attraction area.

Economic factor: the second factor is the economy. After the tourism industry has been considered to be the nation's priority development areas. The Lao government has implemented various strategies to encourage the tourism sector. Such as relaxation of visa, enhance the infrastructure of the country, promote Lao tourism to the international. These approaches lead to the pressures of the tourism sector which continuously growing. According to the Tourist Arrivals Statistics (figure 1.2) the number of tourists visiting Laos increase sharply. Thus, it can be seen that the number of accommodation is a crucial determinant for supporting the tourism in Laos. Consequently, the Lao government has encouraged both domestic and foreign investors to invest in the tourism industry. To obtain not only income for the country but also enhance the tourism industry particularly in the capital city.

Many Colonial buildings in the conservation area of Vientiane had been converted mostly for commercial purposes such as restaurants, shops, guesthouses, hotels, coffee shops, etc. Because of the tourism industry are growing and highly affect to the transformation. The transformation from residential or office to commercial activities would be possible depending on the physical layout of the plan, in fact, because of a lack of most suitable space for such activities such as rooftop, veranda or courtyard. Nevertheless, semi-private spaces such as corridors and bedrooms are comprehensively used instead.

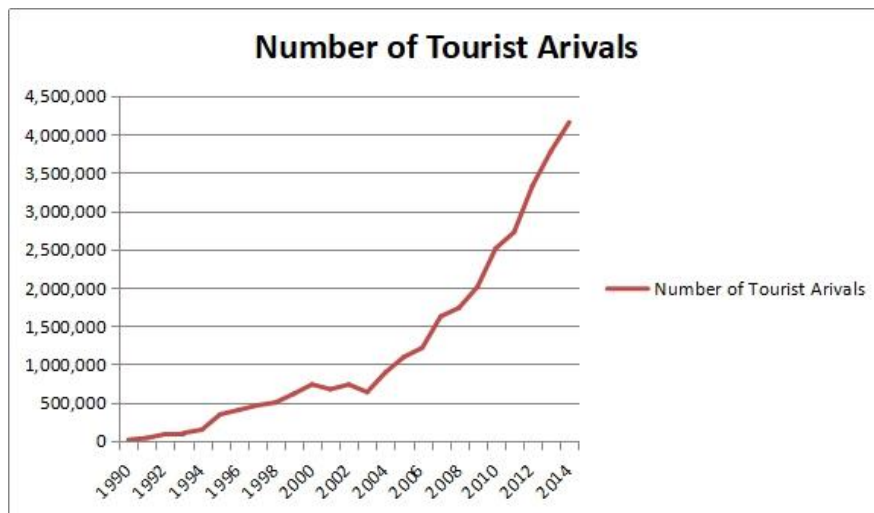


Figure 1. 2 Tourist Arrivals Statistics (Source from Tourism Development Department)

Social aspect: the social aspect is the last factor of the transformation, even this did not play a large role according to the changing from the traditional to the contemporary lifestyle. Religion is one of the major factors which guided the formation of the house; a house is more than a structure surrounded by things. The form and functioning are truly influenced by the relationship of the culture and its environment according to the resident backgrounds in terms of housing experiences and religion.

The French Colonial building transformation in Vientiane capital city has been done to facilitate new function, space use, commercial and various purposes. In the traditional period, building's forms were suited to the needs of people, however, in this contemporary period, building's form and space were not design in concordance with people's current lifestyle. Most owners of French Colonial house in Vientiane have converted their house to serve the tourism business according to economic growth, government development plan and the subsequent increase in the cost of living nowadays.

Conservation factor: conservation is one of the essential factors that determine the colonial building transformation. Particularly in the conservation area where the old national library is located. It is the action taken to prevent decay, in the field of historic

preservation, building restoration is the action or process of accurately revealing, recovering or representing the state of a historic building, as it appeared at a particular period in its history, while protecting its heritage value. Restoration work is performed to reverse decay or alterations made to the building. The various concepts of conservation which are the protection, preservation, repair, restoration, adaptation, renovation, reconstruction and rehabilitation are employed to not only preserve the meanings and values of the buildings or the places but also to correspond with the Lao tourism concept which is Cultural Tourism.

As a result, the government has imposed regulation and law to control typology of building transformation, and also published several protection and management requirements such as the protection of the monuments and religious building, Law on urban heritage protection, Law on national heritage enacted in 2005 and Law on Environmental Protection.

Moreover, the UNESCO is also a crucial player in the conservation. They have co-operated with Lao government regarding conservation and protection of heritage buildings. Therefore. The transformation of the colonial building must comply with the conservation and regulation that imposed by the government and UNESCO.

The transformation factors of the French colonial buildings can be seen in numbers of factors, wherein development pressure, economy, conservation, and social aspect factors. The transformation is based on the change of building function, building form and facade, and building structure. The transformation influences of function converted from the office to commercial purpose by using the ground floor and the upper floor as the semi- private space, providing specific spatial types of functioning.

The transformation of building form and facade is a combination of the old colonial buildings and modern construction in accordance with the new lifestyle, new materials, climate conditions, political conditions and also the owner's need. The transformation of

building structure was converted from the old building material "wood and brick" with the traditional construction style to the static and permanent construction "brick, cement and steel" which is more durable and could easily fit the need of the occupants.



Figure 1. 3 French Colonial Building in Vientiane (Source: Author)

1.2 Purpose of the Study

- The study aims to offer the criteria for determining an appropriate functions and concepts for Library building for the sake of preserve its historical values and to find a design concept for a new building;
- To study the significance of the historic buildings such as the Colonial buildings in Vientiane, emphasize on a case study of National Library of Laos;
- To conclude an appropriate new function and offer the solutions for architectural design of the new building to connect with the existing National Library of Laos by applying the identity of the colonial building to a design.

1.3 Scope of the Study

This study addresses out the significance of historic buildings and French colonial from observation of a Colonial Architecture in Laos especially in Vientiane Capital city from 19-20th century by using National Library of Laos as a case study due to its significance of location, conditions and future threats.

The study's literature would span from the background of the French colonial period, the impacts and its influences to the buildings in Vientiane. Therefore, this study would help to illustrate the relationship between the architectural development and the significance of Colonial building, focuses only in the office Colonial building type. Therefore, the significance and the development of architectural design in another Colonial building type, the Residential Colonial building, will be analyze in further study.

1.4 Benefit of the Study

- Offers a profound understanding of the significances of historic building, its historical values and characteristics;
- Offers an understanding about the criteria to determine an appropriate concepts and new functions, in order to apply them to another historic building which also has same needs to be conserved;
- Offers proposes solutions of architectural design of a new building which connects with the historic building, which can improve the knowledge on the concept of conservation of historic buildings in Laos or elsewhere.

1.5 Research diagram

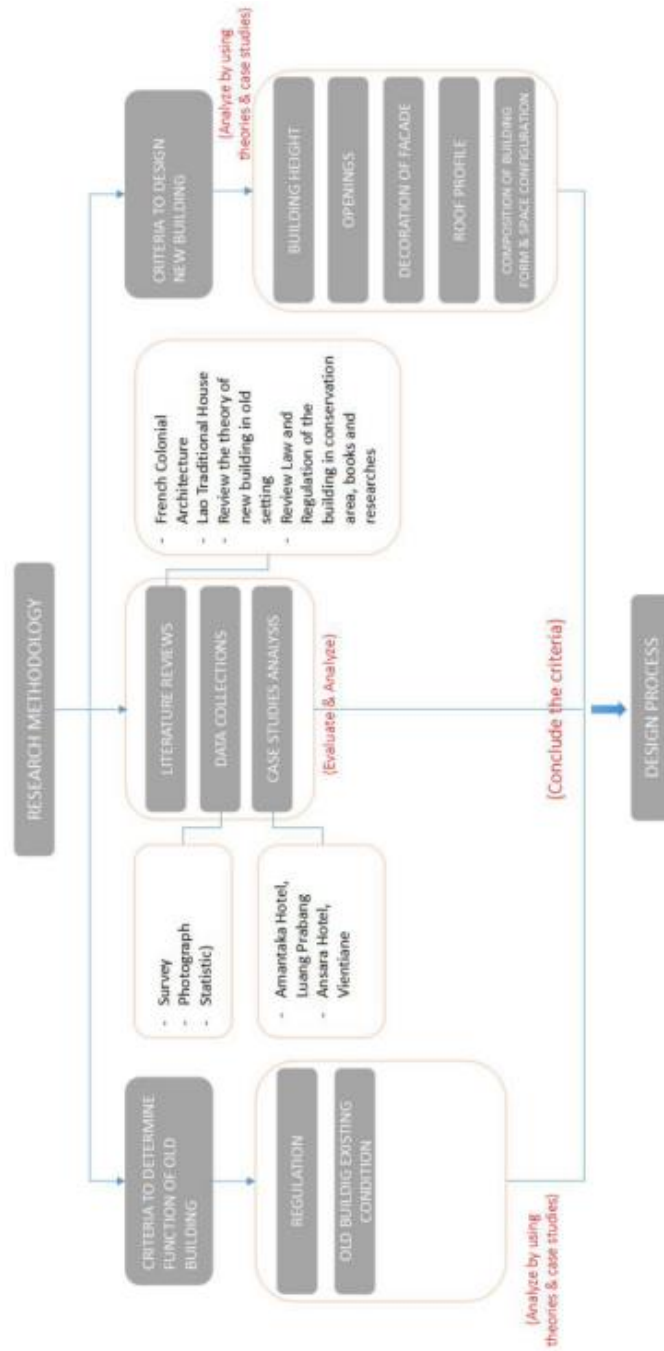


Figure 1.4 Research diagram

CHAPTER 2

RESEARCH METHODOLOGY

This study will be conducted throughout many steps. Firstly, finding the variants that influence the criteria of the design, by study the literature reviews such as background of French colonial architecture, French colonial architecture in Vientiane, influences of French colonial to Lao architecture and its identity, also review the theory of new building in old setting as well as review Law and Regulation of the building in conservation area.

Secondly, collect data related to those variants then analyze to find an appropriate new function of an old building as well as criteria of designing a new building connecting to the old building base on theories from the literature reviews, the examination of secondary data sources and direct observation was done through the selected case studies of French Colonial buildings with an outstanding characteristics and old historic context.

Thirdly, site survey was carried out, and photographs were taken. The data collection employed photographs and measurements of the existing National library of Laos to document the use patterns of the function, site layout, form, materials and construction methods.

2.1 Literature reviews

When discussing architectural influences by French Colonial architecture rule on Lao architecture, it would be too narrow if focusing only on architectural elements and techniques migrated from French or elsewhere, yet other factors such as the building form, building functions, structure and materials indirectly affect the outcome of French Colonial architecture in Laos.

This following contents would give an alternative explanation about the understanding on French Colonial architecture, characteristic and furthermore, how traditional Lao house transformed into French Colonial house and its relationships in Vientiane nowadays.

2.1.1 French Colonial architecture in Laos

In studies about the French colonial architecture in Vientiane, there were only two types of French colonial era which are office buildings and residential buildings. The French colonial architectural legacy consists of two-story brick and stucco, the thick walled structures were modified with balconies and verandas. The style was modified according to the traditional art, culture, and tropical climate of Laos.

Under the rule of French colonization, France introduce many kinds of building innovations to Lao architecture, especially to the traditional Lao house. The evolution was made in terms of factors such as materials, structural system, some western decoration styles, utilized modern materials mixed with local materials and integrated traditional form with western style.

From 1893 - 1953 Laos was colonized by France. At the same period, modern architecture in Europe was growing rapidly and also spreading its influences throughout the world. During the French rule, French architecture elements has infiltrated Lao Traditional Architecture and adapted for use with the climate in tropical countries by spreads in Vientiane and Luang Prabang most, which is now a combination between Lao Architecture and French Colonial Architecture and also has become a feature of the architecture is unique and valuable to Laos cities which continue to be protected until nowadays.



Figure 2.1 Ministry of Information, Culture and Tourism (left) and Presidential Palace (right)



Figure 2.2 Colonial building in Ministry of Education (left) and abandon Colonial House (right)



Figure 2.3 Lao National Museum (left) and Ecole de Medecine (right)



Figure 2.4 Kua Lao restaurant (left) and Nam Ngum 2 power company (right)

French made modest impacts on the Architecture of several cities and towns including Luang Prabang, Vientiane, Thakhek, Savannakhet, Salavan and Champasak

province. In Vientiane, many excellent Colonial French Architecture examples may still be seen today mostly in older part of town, Vientiane city has been developing along Mekong riverside since 1917 according to the socio-economic was rapidly growth . The city has been expanded and develop parallel with Mekong River, as well as along the 3 main streets of the city which are Lane Xang, Setthathirath and Fa Ngum road.

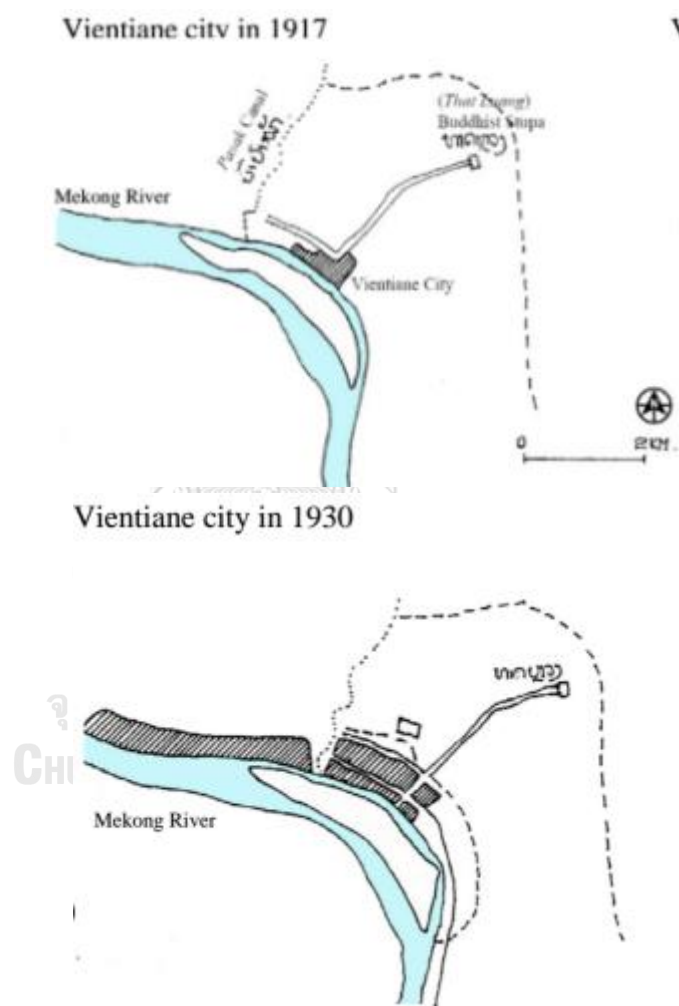


Figure 2.5 Transformation of the capital city of Vientiane from 1917-1953

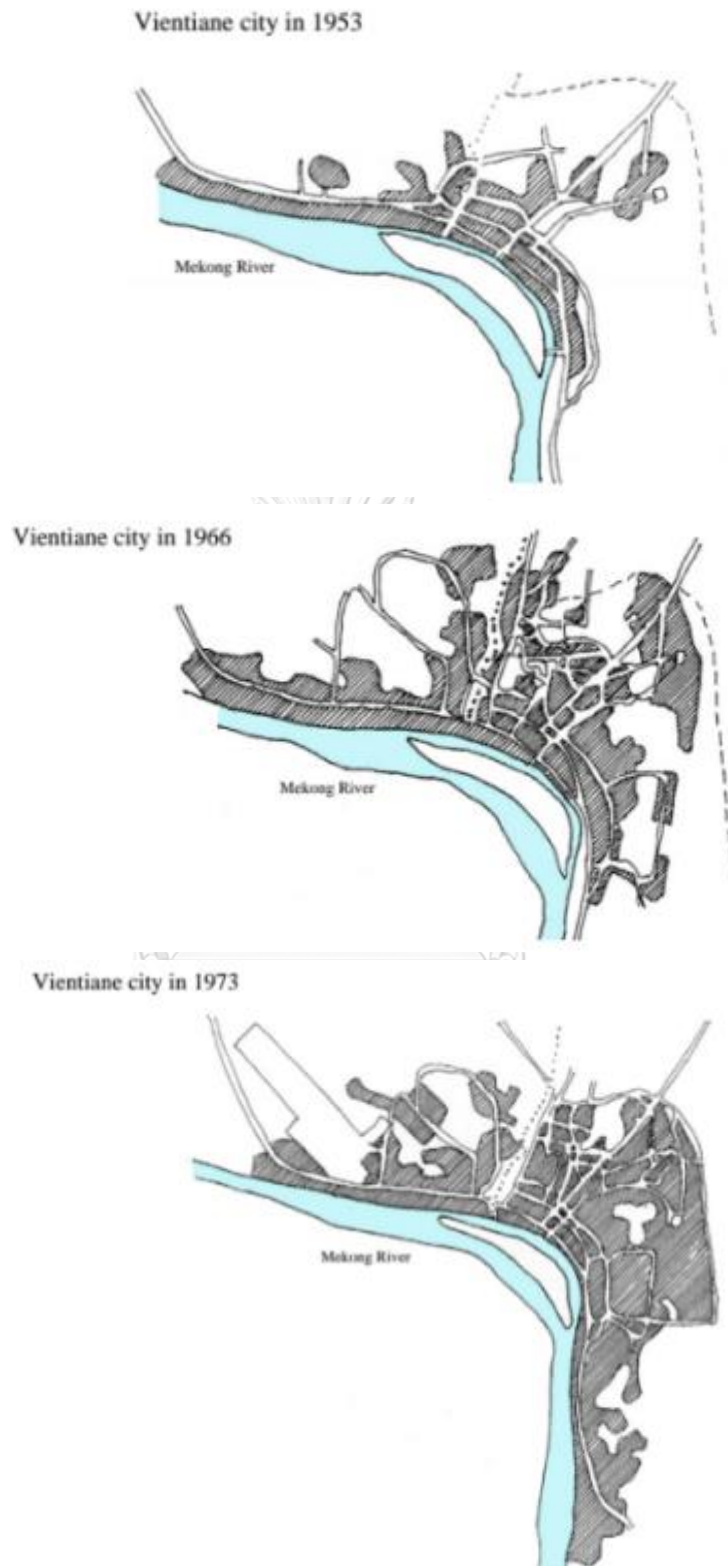


Figure 2.6 Transformation of the capital city of Vientiane from 1966-1973

Nowadays, more than 200 Colonial Buildings in the older part of Vientiane, which has been built since 1960-1983 and registered to be heritage lists for the conservation and restoration are responsible by the Lao government such as The Urban Research Institute, Ministry of Public Works and Transport.

In 2000, the importance of the cultural values still continue, Department of Museums and Ancients has assigned the responsibility in survey and registration of the historic building which still preserve their both historical and architectural values to The Urban Research Institute, Ministry of Public Works and Transport, in older part of Vientiane for example: Lao traditional residential, French Colonial Residential and Office building, religious building, towns, which conducts by identifying the age of the buildings, cultures, memories, etc... in 2001 Laos government has been announces to the older part of Vientiane to become the National heritage preservation area. Thus, Restoration has become increasingly common in Vientiane, preservation rather than demolition, is becoming the order of the day.

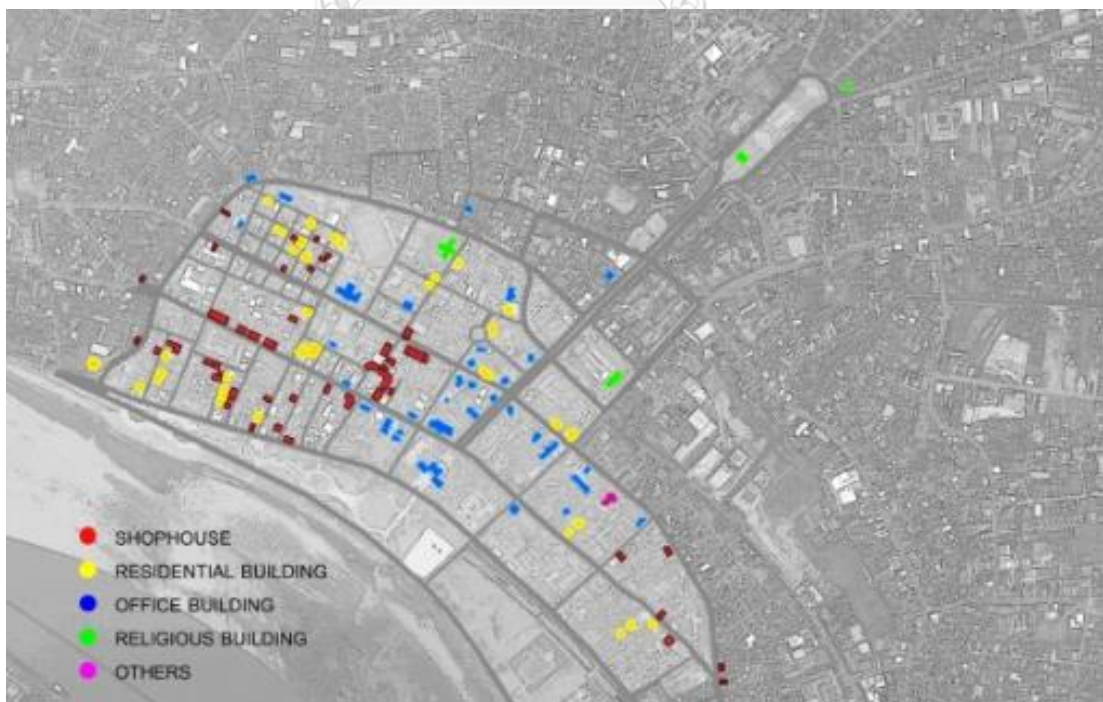


Figure 2.7 Types of French Colonial buildings in Vientiane Capital

The French Colonial Building in Laos, especially in Vientiane, mostly has been constructed along Mekong riverside during the Colonial era there were only two types of Colonial Buildings which is Office Buildings and Residential Buildings. As elsewhere in Indochinese Colonies countries such as Vietnam or Cambodia, Provincial French Architecture design was modified to suit the hot and humid tropical climate through the addition of internal corridors, the verandas and balconies.

2.1.2 French Colonial architecture in Vientiane

In Vientiane today, we can find many extraordinary Colonial buildings in various type of buildings such as the Colonial administrative buildings or the Colonial office buildings, Lao Colonial houses or the residential Colonial buildings, shophouses as well as the religious buildings.

Several studies of Vientiane's colonial building have been made, In "Le Patrimoine et la ville contemporaine" (2002) study, it studies Colonial building in 8 different types such as the traditional Lao building, Lao Colonial building, French colonial building, shophouse, community building, modern building and mixed building. Conducted by identifies the physical aspects of each building type such as the roof, openings, decoration, architectural elements, materials, construction method, land use and it spatial design throughout the survey of floor plans, elevations and photos. According to the survey, the openings of Colonial building is mostly similar, the size of window and door are much more high and big than Lao house. The decoration is apparently duplicates from the geometric shapes especially the design of the baluster, blowhole roof facade and stucco which are the significances of Colonial architecture.

2.1.3 The characteristic of French Colonial architecture in Vientiane

Through observation of pictures, plans and many documents, most of the French Colonial Buildings are often build in the large land, surrounded by many huge trees, a

spacious yard around the building encircled by the brick blowhole walls. Often found a two-story building with a rectangular shape, both downstairs and upstairs which sometimes shaped differently, the pattern of the main entrance of the building often have the stucco work above with large scale and splendid, the upstairs often provided long corridors surrounded.

“**Wall**”: the “Wall-Bearing System” with the use of brick as the main material with the thickness of ≥ 40 centimeters;

“**Roof profile**”: mostly can be found as the “Gable Roof”, “Hip Roof” or “Half Hip Roof”. The length of the eaves is not too long, eaves serve to keep rain water away and reduce the sun intrusion. The angle of the Colonial building roof usually lower than Traditional Lao houses blend together with the wooden strut. The roof facade is brick and plaster with the western pattern. “Din Kho” is the only one material to covers this type of building;



Figure 2.8 Pictures of the use of Din Kho roof tile of Colonial building

“**Door**”: wood mixed with glass, the closed-aperture above the door and window provide the day lighting into the building. Another type is the wood louver doors, in order to allow the good deal of incoming light and ventilation which the door in this type of building is higher and bigger than the traditional Lao house’s door. Usually using the double doors with the harmonic stucco decorations with the window;



Figure 2.9 Pictures of the entrance doors of Colonial building

“Window”: mostly similar pattern with the door often found in two layers which included a wood louver shutters on the outside and a half wood and glass on the inside. There is some stucco at the top and bottom of the window shaped in the geometry;

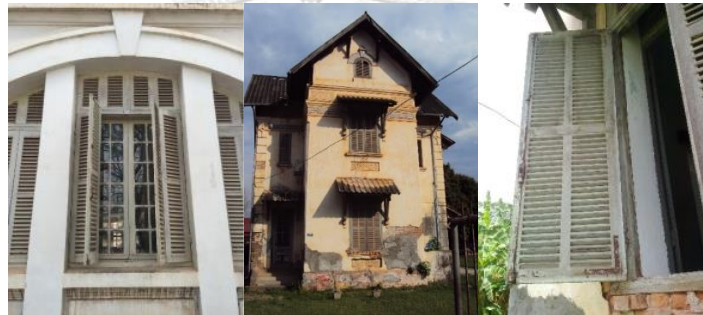


Figure 2.10 Pictures of windows design of Colonial building

“Stair”: usually have only the stair inside the building, using wood in both staircases and stair banisters. Often have a wooden louver aperture in between the ground floor and second floor. Meanwhile, the stair at the entrance of the building was built from brick, staircases more than 4steps shaped in the arch curve shape and don't have any banister;

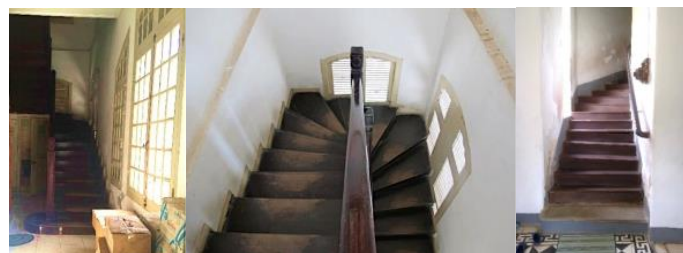


Figure 2.11 Pictures of U-shape wooden stair of National library of Laos and Another Colonial Building

“**Decoration**”: often uses a various pattern such as the geometry shapes or the western arch mostly found at the beam stucco on the building facade and above the openings, the blowhole above the windows, wooden struts, etc;



Figure 2.12 Pictures of stucco design above window, wooden strut and wooden floor

“**Structure**”: this type of building are often use the wall-bearing system, which has no column included together with the wooden roof structure covered with “Din Kho tiles”, often lift the platform up from 50 to 60 centimeters. In constructing administrative buildings and houses, the French introduced European construction techniques and materials. The restriction on the use of brick which were used only for temples from previously;



Figure 2.13 The use of brick and some part of wooden roof structure

2.1.4 The transformation of the Traditional Lao house into French Colonial house

The transformation of Lao traditional house in Vientiane Capital and Luang Prabang has been done mostly to accommodate new function and variety of commercial enterprises, either through partial improvement or reconstruction, as there was a certain degree of flexibility in the process of fulfilling the current needs of the residents. In the traditional period, house form was compatible with people’s need, yet, in the contemporary age, most owners of traditional Lao houses have converted their house to serve the tourism business due to the economic growth and the subsequent increase

the living cost. The adaptation of the houses to suit the people's needs was allowed for the transformation of the traditional houses. However, house spaces were not designed in accordance with the current lifestyles.

The influencing factors that impact on the Traditional Lao architecture by French Colonial architecture is the introduction of modern construction methodology, materials, decorative elements, technology and structural systems. Nevertheless, western trends, economics, politics, Lao art culture, the local environment and social virtue also the factors that impacted on the Traditional architecture through changed its form, function and building composition.

In comparison between Traditional Lao house and French Colonial house functions, the ground floor is built high off the ground with hardwood stilts embedded either into the ground or on the stones, an open ground space could be used for socializing and as a multipurpose space such as relaxation space for family members, work and interacting with neighbors during the daytime. In compare with the Colonial house ground floor which is the close space or enclosed space with diverse uses, but serve increasingly for private uses or individual space such as cooking, eating, receiving guest and relaxation space for family members during the daytime and increased use during the night time. However, the change of open space into private enclosures decreased some natural lighting and inhibited ventilation to some parts of the dwelling, led to the lack of outdoor space for family activities such as washing, drying clothes, lack of greenery which are the important keys to maintenance of the living conditions in inner areas in Vientiane. Nevertheless, despite the change of the complex space function found in the transformation houses, the traditional sensitivities of Lao culture and Lao people are still reflected in the living room, the size of which is large to facilitate multipurpose activities as well as the traditional Lao house function. These included, for example: the large floor

area using for Traditional Lao celebrations or the housing ceremonies called “Baci” (Vongvilay, Shin, Kang, Kim, & Choi, 2015).


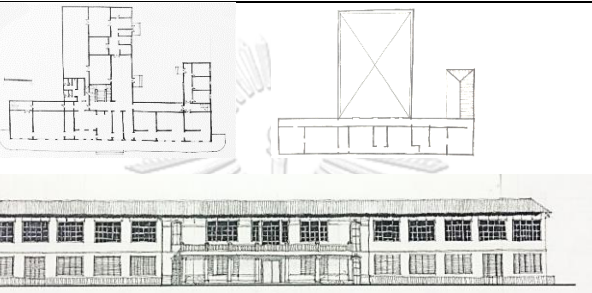



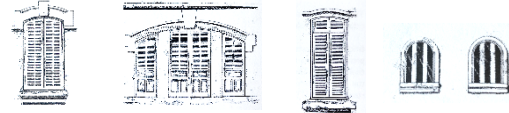
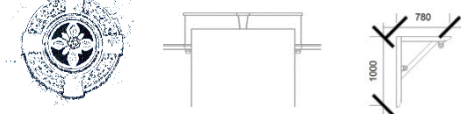
Parameter	French Colonial Architecture	
	Styles	Characteristics
Building function		<ul style="list-style-type: none"> -Ground floor is semi private space -Upper floor is private space
Building form and facade		<ul style="list-style-type: none"> -Two storey building, symmetry between both floor, symmetry façade, geometry form shape, have “porch” at the building entrance
Stairs		<ul style="list-style-type: none"> -Brick and plaster
Roof facade		<ul style="list-style-type: none"> - Brick and plaster - Mix pattern
Rails		<ul style="list-style-type: none"> - Brick and plaster - Modern style
Openings		<ul style="list-style-type: none"> - Wood and plaster - Western style
Decorations		<ul style="list-style-type: none"> - Mortar material - Western pattern

Table 2.1 Typical French Colonial Architectural elements in Vientiane

Traditionally, the space use on the upper floor of Traditional Lao house is served for family oriented activities such as cooking, eating, sharing sleeping space or bedroom space without any interior partitions, also the location where the Buddhist altar was located. According to the kitchen and washing areas at the back of the house. In contrast, the upper floor of the French Colonial house was used only for individual purposes and more private spaces consists of the bedroom adjacent with the toilet inside.

In terms of the comparison between building form, facade design and building composition of Traditional Lao house and French Colonial house, the house form and its architectural elements were converted from built high off the ground to new form house and become more compact dwellings. The transformation is the integration of old traditional building and modern construction according to a new Western lifestyle, climate conditions, economic growth, new materials and technology.

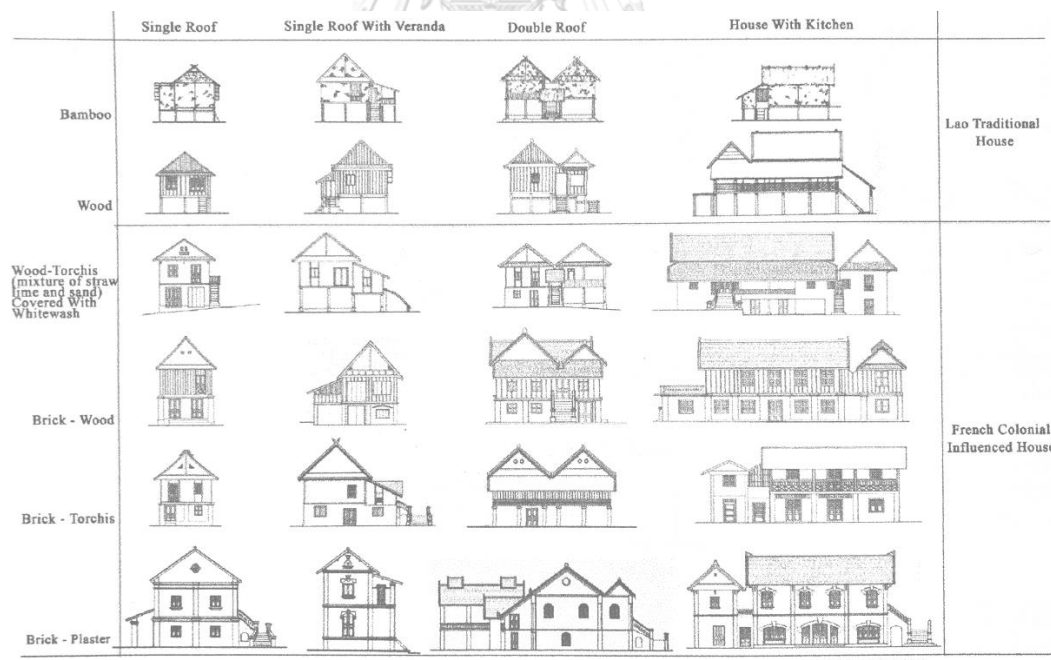


Figure 2.14 The evolution of the traditional Lao house into Colonial House (Source: La maison du Patrimoine, 2001)

In discussing about Traditional Lao house, Post and lintel structure were commonly used in this type of dwelling, the use of local materials such as wooden structure, clay tiles, timber roof, timber and bamboo mat wall together with traditional structural methodologies, yet, the transformation of structure and materials from dynamic and flexible in terms of the maintenance and durable factors, the traditional construction style was converted to static and permanent construction of Colonial house which is more durable such as brick masonry wall structure, cement, clay tile roof and brick wall with plaster have been increasingly incorporated in the ground floor and reinforcement of the structure.

No.	Categories	French Colonial Buildings	
		Charateristics	Influences factors and reason for transformation
1	Building Function	Ground floor: enclosed space with diverse uses, serve for private uses or individual space such as cooking, eating, receiving guest and relaxation space for family members during the daytime	the transformation influence of function was converted from "residential" to "commercial" and other purposes due to the growth of tourism industry and highly affect to the transformation
		Upper floor: used only for individual purposes and more private spaces consists of the bedroom adjacent with the toilet inside	
2	Building form and facade	The French colonial architectural legacy consists of two-story brick and stucco, the thick walled structures were modified with balconies and verandahs, mostly designed the openings as the symmetrical façade as well as building's floor plans.	most of french colonial buildings form and facade was changed due to the impacts of the building restoration such as building extensions, window awnings, signboard installations, etc
3	Structure and materials	<ol style="list-style-type: none"> 1. Brick masonry wall bearing structure 2. Used wood, brick and plaster 3. Traditional construction methodology 	changed to use brick, cement and steel which are more durable and easily fits the need of the occupants

Table 2.2 Characteristic and influences factors of French Colonial Building

2.2 Review theory of new building in old setting

“The changes in the city represent the history of the past and the present state of the civilization it is part of” in accordance with Tusnad (2003), a primary for analysis and

consideration for incorporating a new building in an old setting is to examine the implications and issues involved in how one may accommodate new buildings to old environments. By propose assort of criteria which can be used to clarify and describe the different aspects, which will need to be considered in fusing old settings and new buildings. Their criteria consist of 7 different issues such as:

- Grain;
- Mass/Plot Width;
- Building Line;
- Skyline/Silhouette;
- Colour/Texture;
- Scale;
- Visual Density.

In discussing about new building, especially facade design, In essence, facades are designed for private interests, whose actual interest may differ from the public interest of good place-making. Moreover, a successful facade design is a contemporary design problem, going beyond the visual-aesthetic role of facades, (Carmona, Heath, Oc, & Tiesdell, 2012) and (Buchanan, 1988) argues that facade should:

- Create a sense of place;
- Mediate between inside and out, and private and public space, and provide gradations between the two;
- Have windows suggesting the potential presence of people, and that reveal a “frame” internal life;
- Have character and coherence that both acknowledge conventions and enter into a dialogue with adjacent buildings;
- Have composition that create rhythm and repose and hold the eye;

- Have a sense of mass and materials, which should be combined with an expression of the form of construction;
- Have substantial, tactile and decorative materials, which are natural and which weather gracefully;
- Have decoration that distracts, delights and intrigues.

Additionally, Integration from the “old” to the “new” is more likely called “fitting-in”, which can be identified from different approaches to establishing harmony with the existing context such as the “stylistic” which is only one aspect of fitting-in. However, the visual criteria for example: scale, rhythm, etc, are often be more essential.

For the harmonious of new building integration into old contexts, according to the RFAC introduced 6 criteria such as: siting, massing, scale, proportion, rhythm and materials (Cantacuzino, 1994).

On the other hand, the approach of “contrast” or “juxtaposition” affects the new building design by some apparent concessions to the visual character and existing spatial.

Moreover, in “Building Renovation & Recycle” by Edgar Lion has mentioned that the restoration can be divided into 4 types such as:

“Old building - Same use”: in case of an old building which in need of huge renovation because of its old use and structure, also the need of facade renovation

“Old building - New use”: the old building that need to change old building function to the new purpose also the need of improving building image

“New building – Same use”: the renovation of small building elements in order to improve the use of building

“New building – New use”: this particular renovation is to renovate building function more than improve building image in order to fit with the need of new purpose of space

In Highfield (1987) has mentioned about the overall criteria on building renovation in order to preserve the building structure as the same condition, also the preservation of the architectural elements of the old building. It has suggested that the renovation should preserve the building facade and building roof. Nevertheless, some of the inside elements can be replace or change in order to fit with the need of new building function.

2.3 Review background of conservation

2.3.1 The history of Conservation of Historic buildings

Conservation is the action taken to prevent decay, in the field of historic preservation, building restoration is the action or process of accurately revealing, recovering or representing the state of a historic building, as it appeared at a particular period in its history, while protecting its heritage value. Restoration work is performed to reverse decay, or alterations made to the building. The various concepts of conservation are the protection, preservation, repair, restoration, adaptive, renovation, reconstruction and rehabilitation in order to preserve the meanings and values of the buildings or the places.

As well as the scope of conservation, especially scope of conservation heritage has now emphasized on the tangible such as the surviving physical relics, places, sites, town or landscape and also an intangible values such as the special events in the past, mythologies, personalities moreover the folk memories in order to well-known understand.

The most important things of the conservation is to preserve the historic values, as well as to preserve aesthetic architectural and artistic values, improved economic and use values such as income for the heritage and income for community that built from conservation projects, and not only to improve the social and spirituals values but also improve the scientific and educational values as well. The restoration is to turn the buildings into the original, but on the other hand some people say the restoration is a lie, we should not touch the old buildings. This idea is changed or restoration the building to the finished one style, they are called the destroyer.

In order to preserve those values, the person who has an important role are the stakeholder in the conservation such as the local communities, the development agencies, the university learning institution, the traditional caretakers of heritage, the government agencies, the private sector, the heritage trusts and the non-government organization.

In the field of conservation on traditional approach such as the repair, renovation, restoration and reconstruction, deterioration of the monasteries or the Buddha images make interest for the restorer to be a part of the research or the conservation's project in order to cooperate with the responsible agencies. The example of the conservation such as replaced the tiles, rebuild the new building in a new style with a new scale by the craftsman built or leave it like it was in the original style to study further. Moreover, conservation spirit of the place is more important than the physical such as donating money for built the monasteries from people whom believe in spirit of Buddhism.

Another field of conservation on the international approach such as the inventory, restoration and anastylosis on the historic monuments or the archaeological sites in order to defining the identity values of the buildings and the places. For example, do the research about the history of the sites or ask the local people around the sites or community in order to identifying the positive and negative impacts following the three

aspects such as the physical, social and environment. Moreover to protect the cultural and authenticity of the place and also has the community awareness and economic development.

Expanded conservation practice such as the historical, architectural and archaeological values are necessary from the monument to the cultural landscape. In order to improve the cultural values and the socio-economic values community involvement. For example, reconstruct some part of the monuments to protected it in a new building. as well as do the conservation management plan based on all the charter or principles of the conservation such as identify the significant of the sites, then develop the management policy, develop the heritage management strategies, implement the heritage management and also do the monitor and evaluate in order to promoting local people centered approaches to the conservation.

According to the preservation of those values, the UNESCO (Engelhardt, Educational, Unakul, Unesco, & Endrina, 2007) has played an important role by set up the criteria to ensure the proper identification, protection, conservation and presentation such as:

- The articulation of the structure's heritage value in order to convey the spirit of place through the conservation work;
- The appropriate use or adaptation of the structure;
- The interpretation of the cultural, social, historical and architectural significance of the structure in the conservation work;
- The understanding of the technical issues of the conservation or restoration in interpreting the structure's significance;
- The use and quality control and appropriate building, artisan and conservation techniques;

- The use of appropriate materials;
- How well any added elements or creative technical solutions respect the character and inherent spatial quality of the structure;
- The influence of the project on conservation practice and policy locally, nationally, regionally or internationally;
- The on-going socio-economic viability and relevance of the project and provision to its future use and maintenance;
- The complexity, sensitivity and technical consistency of the project methodology.

2.3.2 Conservation in Laos

In the book Theory of Design of Faculty of Architecture of the National University of Laos described the conservation as below:

- The less of interference is the best conservation;
- Conserving and preserving are better than restoring or repairing, yet, restoring and repairing are better than demolish and reconstruction or rebuilt;
- The changes of conserving and restoring should following the scope of the study. It must contain the suggestion and commendation from the reality (the physical), it cannot be changed by some people in the project;
- We have not restoring or repairing an archaeological places, memorial or monument but we are repairing its architectural elements and materials;
- Conserving and restoring are not an actions to return to the works of art, yet, to understand the original exquisite of the aesthetic, symbolic and individual characteristic of it. However, what was added or applied to the memorial are need to be switch, changing or moving into a negative impact;

- Conservation is part of a positive development in the new modern period, not to force into the prosperity purposes, conservation is not to be replaced, but, it attracted the human attentions;
- The changes of conservation or restoration are not necessary to be imitate, illegal or in rivalry with the original;
- Conservation should be useful instead of imagination;
- Conservation is not a luxury or wasteful, not an emotions than imagination, not only an artificial or superficial;
- The basic objective of conservation is not to be seized with the time, but, an intermediaries control of the changes;
- It is to understand the current situation as well as products of the past and the adaptation for the future.

Another important point is the care of cultural heritage in Laos after the establishment of the French protectorate in 1893, during the nineteenth century was interested from many groups of people living in the country and from others country as well as studies of the history and ancient inscriptions, promoting Lao people centered approaches to conservation. In order to cope with potential issues of heritage conservation, the Government of Lao PDR has, since 1989, begun to create new heritage legislation and has established institutions and developed relationships with institutions specializing in heritage conservation, with international organizations and with donor countries. It can be seen from various conservation project of the archaeological sites and historic monuments which are important in terms of the history and culture such as the conservation project of Wat Phou Champasak, That Luang Monument and many religious buildings in Laos.

In Vientiane Capital today, various excellent examples of preserving historic buildings still can be seen although most of them have been restored such as Krung Thai

Bank Vientiane Branch, Khop chai deu restaurant, Kua Lao Restaurant, etc. Due to the significance of the conservation these day, many associations who get involved with conservation has given the cultural heritage value more important. Besides look at the archaeological value, also giving the important to buildings and urban areas which still preserved historical and cultural values. It can be seen from the establishment of Luang Prabang national heritage site in 1993 from the Ministry of information culture and tourism in order to protect and conserve the heritage, cultural, historical and natural values to the new go on generations.

After that, Lao government presented Luang Prabang to UNESCO to be the World Heritage town. Therefore, in 1995 it was listed as the world heritage site for unique and well preserve not only cultural but also natural like other world heritage sites.

In 2000 Lao still kept emphasizing on the conservation of cultural, department of museum and antique object assigned the institute of town plan (Institute of Public work and Transport) to being the host for observation and registration of historic and architectural buildings in old town areas of Vientiane such as: Lao residential buildings, colonial buildings (residences and offices), religious buildings. Evaluate by age, custom, continuity, remembrance. In 2001 Lao government announced that areas are the center of Vientiane old town which is national heritage preserving areas.

As we already known, Lao government today increasingly emphasize the conservation especially they contribute the value of culture and economic-social. According to the 8th national social-economic development plan they involved a contribution value of culture and economic-social as a way of country development.

From the study of evaluating for conservation, it can be concluded that the way to conserve buildings and the view of old towns. Have to study and acquire fully understanding in heritage resources administration, start with the classifying type of heritage. Then study the value of heritage.

Belong Mekhong river area or Vientiane old town area is the zone that has group of building including offices, residences, religious buildings, commercial buildings. It is meaningful to history and culture and important to architecture which is unique and demonstrates an evolution of old buildings. Preceding related agencies did not pay enough attention to value of culture. It has the only department of town plan who simply determine categories, duty and appearance of buildings but they did not perform to be factual in another word it is just a plan for future. As a result, in order to conserve these areas they have to study how significant of it, illustrating the conservation of these areas, considering the value of culture such as: utility of unique, art, science and it's rare. In the meantime, they have to educate value of contemporary economic-social including the benefit of economic, value of usability, the utility of social and political-educational. In order to find the way for conservation they should also consider together with architectural characteristic, the criterion for categorizing buildings such as: elegance, planning, technology progress, historical, etc. Then operate an appropriate technique and method to conserve the buildings and areas to present the next step in conservation.

Lao government are also published several protection and management requirements: the protection of the monuments and religious building, Law on urban heritage protection, Law on national heritage enacted in 2005, Law on environmental protection 1999 as well as the articles, provisions, Laws, focused on the historical, cultural and natural heritage.

2.4 Case studies

This study has selected the case studies according to these criteria:

- French Colonial building in Vientiane Capital and Luang Prabang, located in the conservation area of the city which has been renovated and turned into others purposes mostly Boutique hotel and resort, yet, also selected from the building that well-preserved in terms of the architectural characteristic, elements and values;
- Study French Colonial Building in Bangkok which has been turned into the Luxury Boutique hotel and high rise building incorporated with the old Colonial building.

In order to understand the concept of the new building in old setting, illustrate the case studies by categorized the architectural elements such as facade design, the openings of building, guest room types, the old and new function of space, and how the building has been applied and renovated into new building.

2.4.1 Case studies of Boutique hotel in Vientiane Capital and Luang Prabang, Laos

In study these following case studies, is to find an order of architectural elements, for the sake of the understanding on how the new integrated with the old building. This will be discussed and defined in the section below such as: site space area, roof profile, building height, openings and composition of building form.

2.4.1.1 Ansara Boutique Hotel, Vientiane Capital

This unique visual boutique hotel is located in Quai Fa Gnum Street in the centre of the Vientiane Capital on historical area nearby the Mekong River, surrounded by many tourist attractions and temples. The hotel has 24 rooms and 4 suites. All of the hotel buildings designed as the Colonial architecture, modern style and traditional Lao decoration combine in this intimate boutique hotel.



Figure 2.15 Map of Ansara Boutique Hotel, Vientiane (Source from Ansara Hotel official website)



Figure 2.16 Masterplan of Ansara Boutique Hotel, Vientiane Capital (Source from google earth)



Figure 2.17 Bird eyes view of Ansara Boutique Hotel, Vientiane Capital (Source from Ansara Hotel official website)

“Building height”: from the case study, Ansara boutique hotel two existing front buildings which are the original old buildings, currently used as the hotel lobby and hotel restaurant, it is a two stories building with a similar height to the typical French colonial buildings that can be seen in the same historic area of Vientiane city.

The ground and the second floor are the same height, the height of the roof is usually less than or equal to the height of the ground and second floor. In addition, the base of the colonial building was raised from the ground for 1 meter. In order to design the new building in the back, it consists of 3 buildings which including the standard and villa building types.

The design of the 3 stories standard building, the architect did not apply the use of “the building base” of the original building, but only maintaining the height of the building from the ground to the third floor at the same height of the original, for aesthetics and functional use of space to add one more storie to meet with the amount of hotel room needed. Furthermore, the 2 stories villa building was also built same height as the two front buildings as well as applied the base of building, yet, it height is slightly lower than the base of the front building because the 3 new buildings are designed by incorporating French colonial and Lao traditional style together which has been adapted some architectural element such as the openings to create a harmonious atmosphere.

Another important thing to note of the new building design is the reduction of the roof height, because the limitations of the Urban regulation in this particular area.



Figure 2.18 Building base of Ansara boutique hotel



Figure 2.19 The entrance of Ansara Boutique Hotel (Source from Ansara Hotel official website)

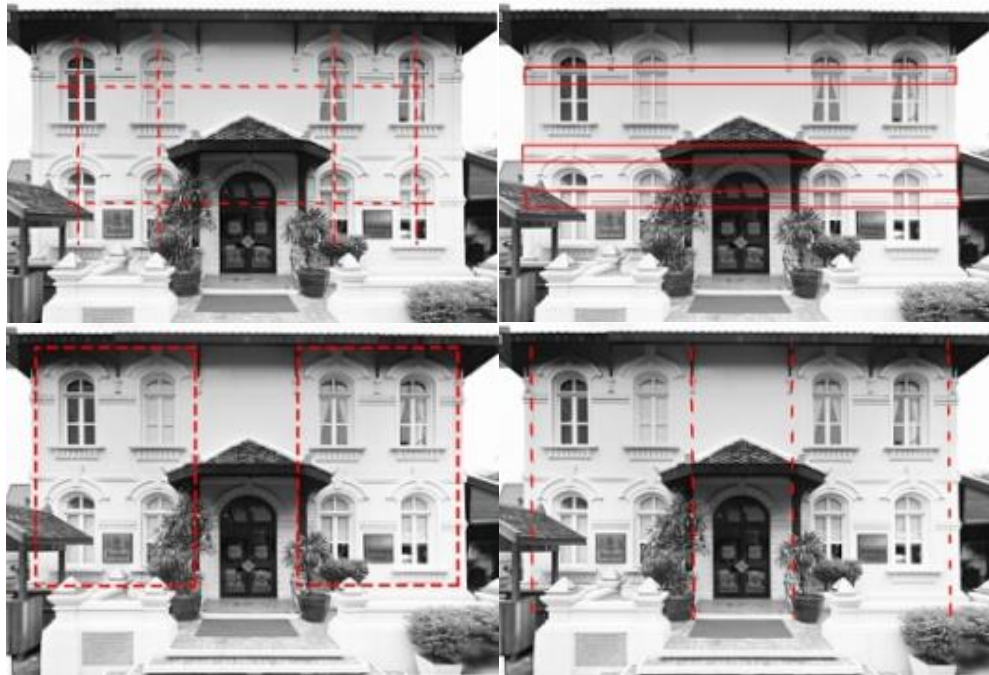


Figure 2.20 The symmetric of the windows and stuccos design on the facade of Ansara Hotel



Figure 2.21 Windows types of Ansara Hotel (Source by Author)



Figure 2.22 Doors types of Ansara Hotel (Source by Author)



Figure 2.23 Windows types of Ansara Hotel (Source by Author)



Figure 2.24 The stairs decorations of Ansara Hotel (Source by Author)



Figure 2.25 The decorations of reception and dining room of Ansara Hotel (Source by Author)

2.4.1.2 Amantaka Hotel, Luang Prabang

Amantaka is a luxury hotel in Luang Prabang, Laos. The hotel, located in a French Colonial former hospital, is operated by Aman Resorts and opened in September 2009. The hotel is located in the north western part of the city in the old town area, several meters from the Mekong River and approximately 400 meters northeast of the Royal Palace. The hotel encourages the education of the guests in traditional Lao culture and hires such cultural advisers to teach the guests on a regular basis in traditional Lao customs and practices.



Figure 2.26 Amantaka Hotel, Luang Prabang (Source from the hotel official website)



Figure 2.27 Map of Amantaka Hotel, Luang Prabang (Source from google earth)

The building dates to the French colonial period constructed in early 1900 and was used as a provincial hospital until 2005, 15 restored building are protect by UNESCO

world heritage status and fully in line with UNESCO requirements. The hotel is located in a French Indochinese colonial building, characterized by its low height and extensive width, containing many pilasters to support the roof. It is set in gardens and is painted in white with a red-orange roof. The hotel name, Amantaka, is derived from the Sanskrit word Aman meaning "peace" and the word taka, meaning "Teacher of the Buddha".

A boutique hotel, it contains 24 lavish suites, encircling a central courtyard and is designed with a mixture of traditional Lao furnishings and contemporary. The suites range in size from 71 to 117 square meters and include eight suites, four pool suites, eight Khan Pool suites, two Mekong pool suites and two Amantaka pool suites. The suites are accessed through louvered doors from the courtyard. All of the rooms have a king-sized bed center of the suites beneath a traditional high ceiling. The rooms are painted in white and have mahogany or dark wood furnishings and windows. The pool suites offers private pools and also the Amantaka special suites provided spa treatment room as well as the indoor and outdoor dining area.



Figure 2.28 The long corridors and decorations of Amantaka Hotel, Luang Prabang

(Source from the hotel official website)



Figure 2.29 Master plan of Amantaka Hotel, Luang Prabang (Source edited by author)



Figure 2.30 Layout of Amantaka Hotel, Luang Prabang (Source edited by author)

Khan Pool Suite	Mekong Pool Suite	Khan Pool Suite	Khan Pool Suite	Suite	Suite	Suite	Khan Pool Suite	Amantaka Pool Suite
Suite								
Pool Suite		Suite (8)	159 sq.m	- Interior space - Verandah & Garden		71 sq.m		
Pool Suite		Pool Suite (4)	159 sq.m	- Interior space - Verandah & Garden & Pool(7x5)		71 sq.m		
Pool Suite		Khan Pool Suite (8)	207 sq.m	- Interior space - Verandah & Garden & Pool(9x5)		75 sq.m		
Pool Suite		Mekong Pool Suite (2)	204 sq.m	- Interior space - Verandah & Garden & Pool(9x5)		102 sq.m		
Pool Suite		Amantaka Pool Suite (2)	347 sq.m	- Interior space - Verandah & Garden & Pool(9x5)		117 sq.m		
Suite								Amantaka Pool Suite
Khan Pool Suite	Mekong Pool Suite	Khan Pool Suite	Khan Pool Suite	Suite	Suite	Suite	Khan Pool Suite	Amantaka Pool Suite

Figure 2.31 Layout of guestroom of Amantaka Hotel, Luang Prabang (Source edited by author)

“Roof profile”: the roof of most buildings are one layer gable roof, others buildings such as the reception building are 3 layers roof covered with “Din Kho” with the same texture and color in every buildings included the old building and restored buildings in accordance with the heritage protection requirement of the city in terms of limitation of the height, roof angle, colors and materials. The length of the eaves is quite short. The angle of this Colonial building’s roof usually lower than Traditional Lao houses in the same area, it can be seen approximately around 30-45 degrees without the wooden strut. The roof facade is sometimes used brick and plaster with the western pattern.



Figure 2.32 Roof types of Amantaka suites and reception building (Source from the hotel official website)

“Openings”: two types of doors have been used in this luxury Colonial hotel, most of the doors along the corridor and generally used the 2 layers door (double-doors) which are wooden panel door half glass and louver doors with the closed-aperture above the door in order to provide natural light and air into building, in the other hand, some have been used 1 single layer wooden panel door half glass, both types are applied in the same green color and material in every buildings.



Figure 2.33 Doors types of Amantaka Hotel Luang Prabang

Types of windows are mostly related with the doors, usually found in the 2 layers wooden windows which are the wooden aperture layer and the glass layer. On the outside, there is the decoration of the stucco above the window using western pattern, also using same material and color, the difference between this Colonial building and others Colonial building in the same area are the size and style, some style might have the closed glass aperture above the window.



Figure 2.34 Window types of Amantaka Suites (Source from the hotel official website)

“Stairs”: Amantaka hotel is the one storey Colonial building with its high ceiling and shady verandas, the stair of this hotel could be seen as the front stair of the suites entrance and way down to the private pools and courtyard at the back of hotel Suites. For the material, mostly used the polished stone floor same as the walkway floor.



Figure 2.35 Types of stairs of Amantaka Suites (Source from the hotel official website)



Figure 2.36 The decoration of Amantaka dining room, walls and walkway (Source from the hotel official website)



Figure 2.37 Amantaka hotel before the restoration, Luangprabang, Lao PDR

2.4.2 A case study of the Embassy of Brunei Darussalam in Vientiane, Lao PDR

The original twin buildings were first built in 1930 as administrative offices building and also stood as prominent examples of French Colonial architecture in Vientiane Capital. Later on the building were converted and were the residences for the minister of Public works and the minister of Education until 1975. Both houses fell into disrepair over the year, when plans to restore them for the embassy were explored.

The original building has 2 stories, both particular 87 years old buildings has the extensive damage that were vacant for years had suffered on a result of neglect and time. For example, the damage of several architectural elements such as walls, pillars, stucco, plaster, building's base, etc.



Figure 2.38 Before and after the restoration of the Embassy of Brunei Darussalam in Vientiane, Lao PDR (Source from the Embassy of Brunei Darussalam in Vientiane, Lao PDR, 2014)

The restoration in 2014 has been started and spent over 2 month on the documented on each building from outside to inside by drawings, photography and measurement.

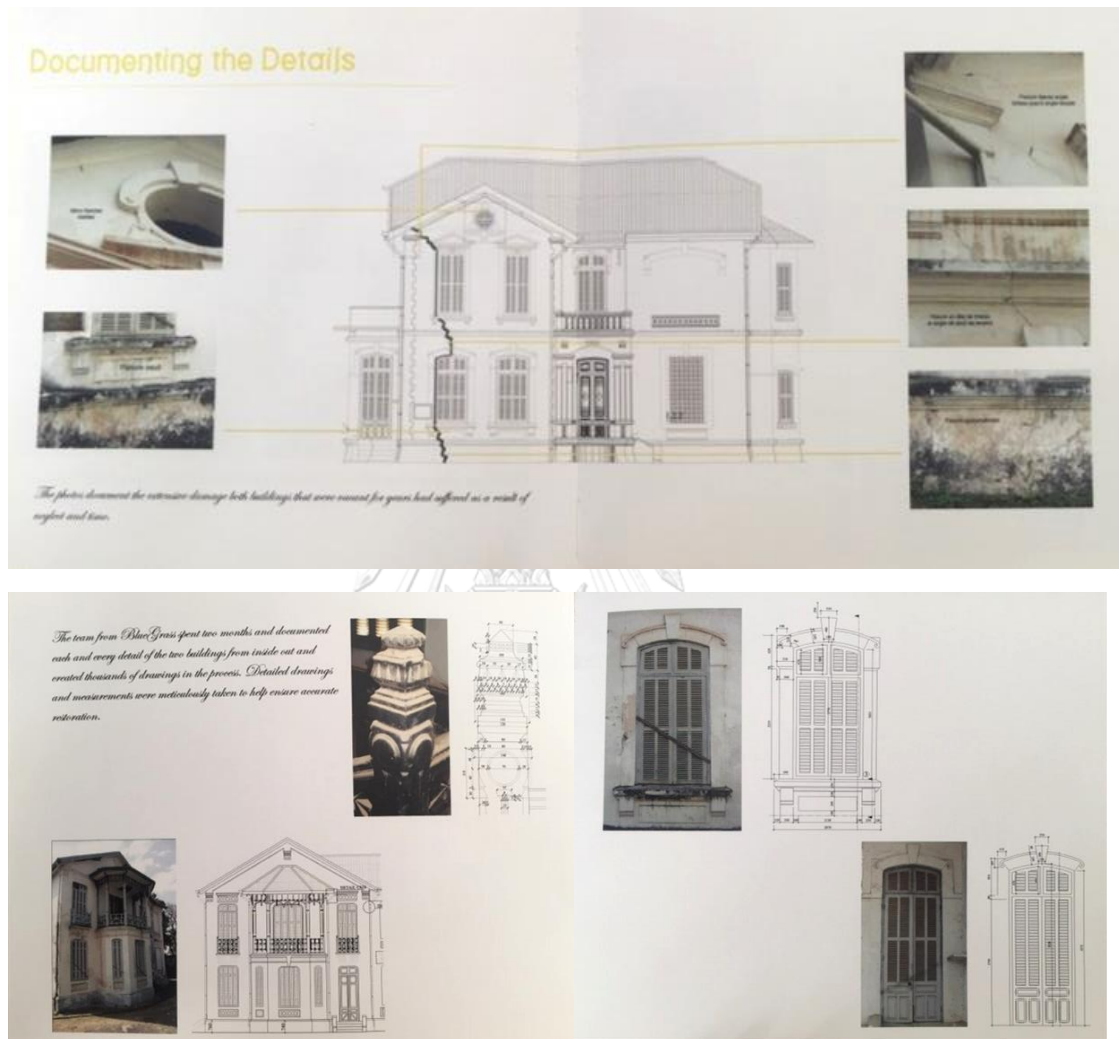


Figure 2.39 Documenting the details of architectural elements (Source from the Embassy of Brunei Darussalam in Vientiane, Lao PDR, 2014)

Their first conceptual design was to clone the original French style buildings while embellishing them with subtle elements that were unique to Laos and Brunei. This design would facilitate to the preservation of the historic French Colonial styled buildings by a request made by both the Ministry of Foreign Affairs and the French embassy in Lao PDR.

Meanwhile, the second concept design finished in late 2007 by two Lao architects Phetlamkham Sounthonevichith and Leesith Manesay which reflects many Arabic design styles. Later on the third concept design was designed in a year after (2008) and inspired by modern geometric architecture, which designed by Kabil Sompongchaikul of Ruja Corporation co., Ltd, Thai architect.

Nevertheless, the final design has been concluded which created by Jean Christophe Marchal to preserve the original design and structure of both buildings with the new introduction of new construction techniques and materials.

“The Embassy was a chance to unite 3 cultures. I see it as the marriage of the land of Laos, house of France and the people of Brunei” (Jean Christophe Marchal, 2014).



Figure 2.40 New building of the Embassy of Brunei Darussalam in Vientiane, Lao PDR
(Source from the Embassy of Brunei Darussalam in Vientiane, Lao PDR, 2014)



Figure 2.41 New building of the Embassy of Brunei Darussalam in Vientiane, Lao PDR
(Source from the Embassy of Brunei Darussalam in Vientiane, Lao PDR, 2014)

New building design especially the decoration for example the Golden motifs of Arabic origin bring out the Brunei culture to life on the French pillars as well as the golden decoration on building facade and building base. .

2.5 Summary of case studies analysis

In accordance with above case studies shows the important of the roof style, most of the design of new building generally applied the same roof's styles as the old French Colonial buildings, thus, the new designs were only change the materials of roof's structure such as the use of cephact monia instead of its original material which is "Din Kho", also the use of steels instead of wood structures.

Generally, in comparison to the building height of each building's type, there are different various dimensions of building height. French Colonial building is one of a unique example, which often found in the single building with 2 stories height (Thippathat, 2002). Roof's height is often equally to the building height of each floor or 1/3 of the ground floor to the roof of building's height. An average of French Colonial building height from the survey in Vientiane city, it can be seen from 4-5 meters per floor, which made this building as the dignified, enormous and strong building. Because of the fact that this particular building style served only as the government office nor residential.

Noticeably, this architectural style also have "the building base" which were made building much more higher than it used to be, 60-100 centimeters height in average, which made this colonial building looks glorious and respectable in terms of building images, as one of the characteristics of this building style that deserve for preservation in case of having a new building construction on the same historic site for the concordance between the old and the new.

As can be seen from the case studies of the new building in old setting showing above, the height of the building is often similar to the original buildings, it is still able to maintain the height ratio of both building height and roof height. From the case study, Ansara boutique hotel two existing front buildings which are the original old buildings, currently used as the hotel lobby and hotel restaurant, it is a 2 stories building with a

similar height to the typical French colonial buildings that can be seen in the same historic area of Vientiane city. The ground and the second floor are the same height, the height of the roof is usually less than or equal to the height of the ground and second floor.

In addition, the base of the colonial building was raised from the ground for 1 meter. In order to design the new building in the back, it consists of 3 buildings which including the standard and villa building types. The design of the 3 stories standard building, the architect did not apply the use of “the building base” of the original building, but only maintaining the height of the building from the ground to the third floor at the same height of the original, for aesthetics and functional use of space to add one more storey to meet with the amount of hotel room needed.

Furthermore, the 2 stories villa building was also built same height as the two front buildings as well as applied the base of building, yet, it height is slightly lower than the base of the front building because the 3 new buildings are designed by incorporating French colonial and Lao traditional style together which has been adapted some architectural element such as the openings to create a harmonious atmosphere. Another important thing to note of the new building design is the reduction of the roof height, because the limitations of the Urban regulation in this particular area.

Through various case studies and literature reviews from both in Laos and abroad, it can be seen that most of the case studies which situated in conservation area or historical area seems to applied concept of “*adaptation*” from an old architectural style building into the new building in terms of the architectural design, building’s elements, facade as well as the decoration and interior design due to law and regulation, building height, limitation of the land, the city’s scape as well as the responsible to preserve and respect value of an unique characteristic of Colonial architecture which seems sooner disappear nowadays.

2.6 Data collections

In addition, this research is collecting the data in the following aspects: the physical survey on site (National Library of Laos), photograph in and out of the building and the surrounding area, sources documents and interview to study the needs of the design:

- Study the physical aspects of the building such as the layout, floor plan, scale, proportion, materials, etc;
- Land use and location of the building are also needed to be consider, to know which area or zone of the city that the site or the building was located;
- Study the structural system and method of the building to see if it is possible to transform to another function or space, and to decide which materials and which structure elements can move, or change, or demolition, or just retain it as its old contexts;
- Study the law and regulation of the site and historic building.

CHAPTER 3

NEW BUILDING IN OLD SETTING

As it is mentioned in the problem statement that National Library of Laos will be relocated to the outer zone of Vientiane city according to the government development plan. Therefore, this project is born to respond that developments.

In 2001 Laos government has been announces to the older part of Vientiane to become the National heritage preservation area. Thus, restoration has become increasingly common in Vientiane, preservation rather than demolition, is becoming the order of the day. Factors influencing this concept are the universal standard requirement Local requirement as well as the Site condition. The aim of this study is to find the appropriate new concept for the site project which is “new building in old setting”, the researcher want to use the concept of “*adaptation*” in order to design the new building by applying the adaptation of the old building function and architectural elements into the same context.

In accordance with the government policy and after conducting research, it can be seen that Hotel is the most appropriate alternative for this site. There is a broad variety type of hotel. Nevertheless, In order to determine the type of the hotel, the author has considered various aspects such as the existing physical building (French colonial building), the location of the site (historical area), the limitation of site area which fit for Boutique hotel.

3.1 A type of the new design building in old setting

The concept of boutique hotel can meet the concept of research which is preserving core value of French colonial style. The reason that *"the Boutique Hotel"* style is suitable for this particular design project:

Firstly, due to the historic building regulation force to preserve this existing French colonial building while this building is able to answer the requirement of Boutique hotel style in terms of the unique architectural style of historic building.

Secondly, the boutique hotel usually requires a small area which is firmly fit for this particular site area. In addition, the restriction of the site area plays a significant role in defining types of hotel in terms of the design programme. For instance, another hotel style like the modern luxury hotel would require a comprehensive space area for its design programme. Moreover, the standard and the rules of Boutique Hotel also correspond with this site such as the guest rooms start from 2 to 3 or until 50 to 60 rooms. Mainly small boutique hotels are renovated from the old building while still maintain the historic atmosphere likewise the National Library of Laos.

Lastly, this site is not only located in the conservation zone, but also in the central business district (CBD). Likewise, most of the boutique hotels located in the conservation zone of the city, as can be seen through various case studies in the previous chapter where the tourist can achieve not only the historical value of the historic boutique hotel itself, but the location also can be reminding them of the historical and cultural values of the old conservation area. Besides, it is also situated in the CBD area where the high return on investment is essential. Consequently, Luxury is appropriate as it can provide a high return on investment. Thus, this design project would be a luxury boutique hotel.

Additionally, the area of the site plays an essential role in determining the classification of the building. Particularly to find out an appropriate type of the building to

acquire the highest benefits from the site. “*The boutique hotel*” is one of the high potentials classification of hotel that best suite with this site. Referencing from the case study that has mentioned in chapter two due to its similarity resemblance in terms of site area, location and possibility of the programme which will be applied to this site.

Consequently, based on these rationales, the luxury Boutique hotel can be considered as the most appropriate type of hotel for this design project with the concept of preserving the character of French colonial building (NLL) by applying the similar architectural style.

3.1.1 Programming

In order to determine program, there are several factors needed to consider including the Universal standard requirement of the boutique hotel, constraints of the site, local regulations and design concept.

The program will be mainly identified through the architectural design standard from Times Saver Standard principle of the building type. However, the primary challenge in programme design is the site's constraints as well as the local regulation. As a result, some programme has been adjusted from the Universal standard to meet the site condition.

3.1.2 Users and Programme

Selected Site	
Address	Setthethirath Road, Xieng Ngneune Village, Chanthabouly District, Vientiane
Landlord	Private entrepreneur (under the Ministry of Information Culture and Tourism in the past)
Land Size	3,300 sq.m
Urban Zone	Conservation area
Height Limitation	≤ 20 meter

Table 3.1 Table of Site Information

Space	Area (sq.m)
Lobby and Front area	397.5
Restaurant	351
Recreation & Leisure facilities	166.4
Massage & Wellness facilities	172
Back of the house	294
Guestroom	1591
Parking	333.5
Total Area	3305.4

Table 3.2 Table of the relationship between spaces and users

	Space	Users				
		Hotel guest	Restaurant	manager	staff	Massage Guest
1	Lobby and Front area	●	●	●	●	●
2	Recreation and Leisure facilities	●	–	–	●	●
3	Restaurant	●	●	–	●	●
4	Massage and Wellness facilities	●	●	–	●	●
5	Back of the house	–	–	●	●	–
6	Guest room	●	●	–	●	●
7	Parking	●	●	●	●	●

Table 3.3 Table of space area

Programming					
No.	Space	Quan.	Area (sq.m)	Users	Floor
1	Lobby and front area		305.8	Hotel guest and staffs	1
	1.1 Reception area	1	40	Hotel guest, outside customer, staffs	
	1.2 Souvenir shop	1	22	Hotel guest, outside customer, staffs	
	1.3 Main lobby	1	183	Hotel guest and staffs	
	1.4 Front office	1	26	staffs	
	1.5 Luggage	1	15	staffs	
	1.6 Toilets	4	19.8	Hotel and restaurant guests	
	30%		397.5 sq.m		
2	Recreation and leisure facilities		128	Hotel guest and staffs	1
	2.1 Library	1	44	Hotel guest	
	2.2 Pool (7x12)	1	84	Hotel guest	
	30%		166.4 sq.m		
3	Restaurant		270		1
	3.1 Main restaurant – 58 seats	1	191.25	Hotel guest, outside customer, staffs	
	3.2 Main kitchen	1	42.5	staffs	
	3.3 Main kitchen storage	1	21.25	staffs	
	3.4 Pantry	1	15	staffs	
	30%		351 sq.m		
4	Massage and wellness facilities		132	Hotel guest and outside customer	1
	4.1 Massage Lobby & Reception area	1	23	Hotel guest and outside customer	
	4.2 Massage Storage	1	12	Hotel guest and outside customer	
	4.3 Massage room	4	150	Hotel guest and outside customer	
	30%		172 sq.m		
5	Back of the house		226	staffs	
	5.1 Service			staffs	
	5.1.1 Storage	2	22.25	staffs	
	5.1.2 Garbage	1	9	staffs	
	5.2 Housekeeping area			staffs	

	5.2.1 Housekeeping room	4	43.75	staffs	1
	5.2.2 Cleaning equipment storage	1	17	staffs	1-3
	5.2.3 Laundry	1	23	staffs	1
	5.3 Staff area			staffs	
	5.3.1 Staff lounge	2	40	staffs	1
	5.3.2 Locker & changing room & Toilet	4	30	staffs	1
	5.4 Mechanical room	1	16	staffs	1
	5.5 Maintenance room	1	16	staffs	1
	5.6 Security room	1	9	staffs	1
	30%		294 sq.m		
6	Guest room 21 rooms:		1224	staffs	
	6.1 Standards 42.5 sq.m	16	680	Hotel guest	2-3
	6.2 Suites 102 sq.m & 85 sq.m	6	544	Hotel guest	2-3
	30%		1591 sq.m		
7	Parking		256.5		
	7.1 Guest parking			Hotel guest and outside customer	1
	7.1.1 Cars	13	175.5	Hotel guest and outside customer	1
	7.2 Staff parking			staffs	1
	7.2.1 Cars	3	45	staffs	1
	7.2.2 Motorcycles	18	36	staffs	1
	30%		333.5sq.m		
Total Floor area			3305.4 sq.m		

Table 3. 4 Table of programming

Moreover, in designing the new building in the old setting as the luxury boutique hotel, the architect needs to find the vital criteria for corresponding with the concept. The criteria can be divided into 2 main criteria including the criteria of finding an appropriate new function for existing NLL building and the criteria of designing the new building in old setting.

3.2 Criteria to determine an appropriate new function for old building (National Library of Laos)

A case study of National library of Laos is one among many French colonial buildings that needs to change and convert into other purposes. According to the low adaptability of building, criteria of selecting the new appropriate uses or functions for the old Colonial building conducted by determined these following issues:



Figure 3. 1 Criteria to determine an appropriate new function for old National Library of Laos building

3.2.1 Regulation of historic building:

The regulation has a great influence on the overall design of the project, in both renovation and extension. Although the design of this project has involved the desires of the investor regarding economic, the architect has to consider the universal design of boutique hotels while conforming to the domestic regulation.

In discussing the criteria for choosing the National Library of Laos building's function, the very first important factor is regulations. Commonly, in the general context of design in both new construction and building extension, the architects must acknowledge and function under the Universal design standard of the particular buildings. Regarding to the hotel design, there are several components and facilities that define the overall design such as restaurant, coffee shop, bar, library, swimming pool, and spa. Even though the desire of owner is involved in determining the number of facilities and other components, there are some limitations and rules of circumscribing facilities and elements

of the hotel as these compositions define the not only the type of hotel but also grade of hotel. As a result, it has to comply with the standard the universal design.

On the other hand, according to the historic building regulation, which is the agreement of Minister of Ministry of Information, Culture and Tourism (No. 95/TV at Vientiane, Laos 28/02/2005) article 5.2 regarding preserving national heritage in terms of demolishing, repair, renovation, construction of temples, religious buildings, historical building, museum, old and new buildings, nevertheless, this building is not allowed to reconstruct, break or even drill to install the water system. As a consequence, to comply with the universal standard in terms of facilities, the ground floor and the second floor should be set the hotel facilities which does not need the large area, does not need the toilet or shower room and also does not need to expand the existing space while all of the new functions could provide the high privacy feeling for hotel guest as it will be located in the historic building.

3.2.2 Existing condition of National Library of Laos:

“**Space configuration**”: the room's layout of the ground floor and upstairs are symmetric, surrounded by long corridor and stairs on the left-right side of the building. The layout features adapted from the west to the hot and humid climate in Laos, in order to have a well-ventilation system, while the sunlight cannot get directly into the room. The building features a two-story building with thick 40 centimeters walls. National library of Laos, the building space is relatively tiny. The plan of ground floor and the second floor construction is divided into many square rooms and has only corridors to connect it. Hence, it is not meet the new function that would requires large space like “**one single space**” such as “hotel Lobby” or “restaurant”.

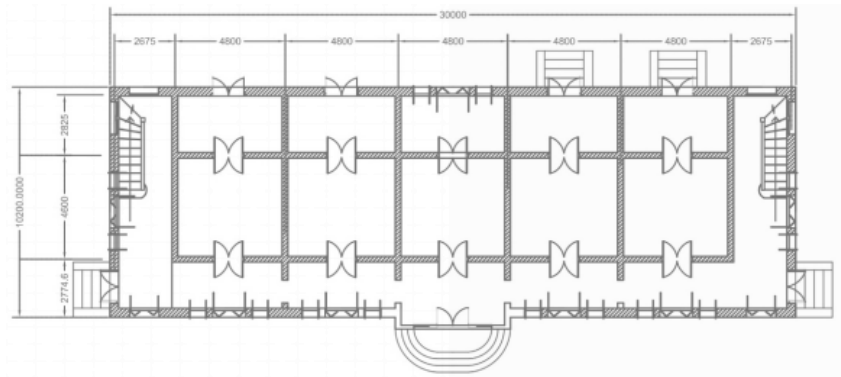


Figure 3. 2 The existing ground floor plan of National Library of Laos

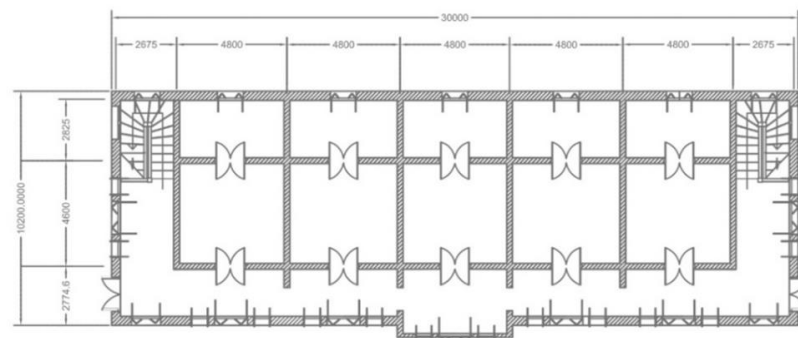


Figure 3. 3 Existing second floor plan of National Library of Laos

The National Library of Laos, a two-storey building, 10,2 x 30 meters, there are 5 entrances to the buildings: front, 2 sides (left and right) and 2 back sides of the building.

“**Structural system**”: In terms of the National Library of Laos existing building’s structure, the building is made without steel reinforcement, the roof is covered with “Din kho” tiles, but then switch to a tile CPAC Monier until today. It was constructed by using the wall-bearing system, in fact, it can created the restriction of the space extension, we cannot tear down the wall or any facade’s elements due to limitation the building structural system, the idea of old building would be retain it as its old contexts according to the rules of the conservation of the historic buildings as mentioned above.

The Lao National Library is a construction which has low ability in adjust function. In another word, it is a Low adaptability building due to various reasons including limitations of fabric, type of building, the condition of a historic building. Therefore,

according to the researcher, there are some step for choosing an appropriate function and use the existing condition of the building to achieve the highest benefit.

Firstly, the function should not take huge area because the regulation is not allowed to deconstruct or break any part of the building to expand the space inside the building.

Secondly, at the second floor, the function should be highly private and different as it is placed in the historic building, it should illustrate that it is not only common service area, but it must demonstrate values of the buildings and acquire a unique feeling from the guest. For instance, in the design standard of various case studies usually set the hotel lobby or reception at the front. However, in this case, the building space (Lao National Library Building) is relatively tiny. Hence, it is not meet the feature that requires huge space like one single space such as "Hotel Lobby" or "Restaurant".

In conclusion, the researcher has chosen a new function of the National Library of Laos that can link the public guest and hotel guest and it is a highest possible feature, which are "Library" and "Souvenir shop" at the ground floor in order to conserve the history of the historic building also to respect it old function values, as well as placing a highly private "Lao traditional massage" service at the second floor to acquire a unique feeling from the hotel guests.

Floor	New functions for existing building (NLL)	Reasons and benefits
1 st Floor	1. Library	- to follow the standard and also to conserve the value of the old function which is the library. Moreover, it will be set as a mini-museum to show the history of the building.
	2. Souvenir shop	- the function are not take huge area because the regulation is not allowed to deconstruct or break any part of the old building structure to expand the space inside the building.
2 nd Floor	3. Traditional Lao Massage service	the function is highly private and different as it is placed in the historic building, it can demonstrate values of the buildings and acquire a unique feeling from the hotel guest

Table 3. 5 Table of new functions for the old building (National Library of Laos building)

Due to the role of hotel design which requires various service facilities to facilitate the hotel guest, also the restriction of existing space, consequently, the service area will be placed at the front of the land which attracted to the main road.

“New function at the ground floor”: the architect wants to add *“the souvenir shop”* and *“the library”* into this old building as those services do not require large space. The building is arranged for the reading area for the guest to follow the standard and also to conserve the value of the old function which is the library. Moreover, it will be set as a mini-museum to show the history of the building.

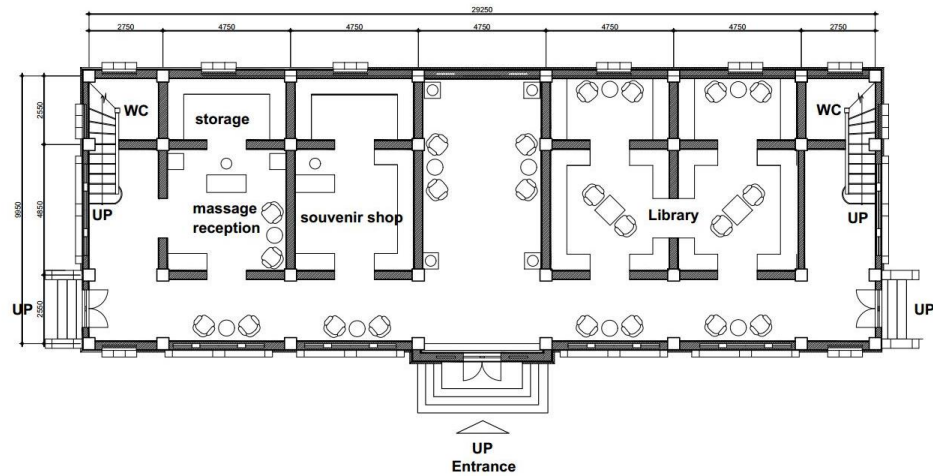


Figure 3. 4 Old building 1st floor new function

“New functions at the second floor”: the function should be highly private and different as it is placed in the historic building, it should illustrate that it is not only common service area, but it must demonstrate values of the buildings and acquire a unique feeling from the guest as *“the traditional Lao massage service”*.

The plan of the second floor construction is divided into many square rooms and has only corridors to connect it. Nevertheless, in the general hotel standard, it typically comprises of full service of a spa such as Sauna, treatment, shower room, etc. which include the water and plumbing system. On the other hand, according to the regulation, this building is not allowed to reconstruct, break or even drill to install the water system.

As a consequence, to comply with the universal standard regarding facilities, the second floor will be set as “the traditional Lao massage” which does not need the large area and also the shower room while providing high privacy.

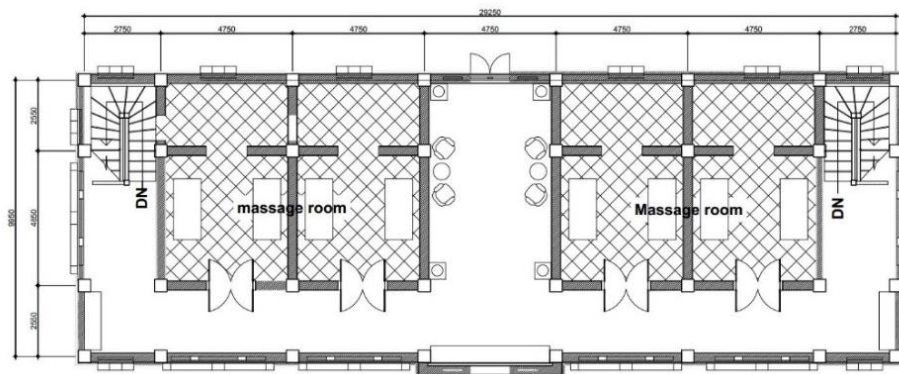


Figure 3. 5 Old building 2nd floor new function

Thus, the researcher has chosen a function that can link the public guest and hotel guest and it is a highest possible feature, which is Library, Souvenir shop and Massage service. In many case studies, the architects typically place the most dominant function of the hotel in the old building. For example, when they are focusing on the food service, they will put the restaurant in the old building. In the same way, if they are focusing on the massage service, they will place the luxury spa with a full service in the old building to gain the value of services.

3.3 Criteria to design a new building in Old French Colonial Setting

“How to design the new buildings connecting with the National Library of Laos building?”

In designing a luxury French Colonial Boutique Hotel connects with old library building (National Library of Laos) as purposed, towards the case studies and literature reviews which the author has mentioned previously, it can be conclude into these following criteria:

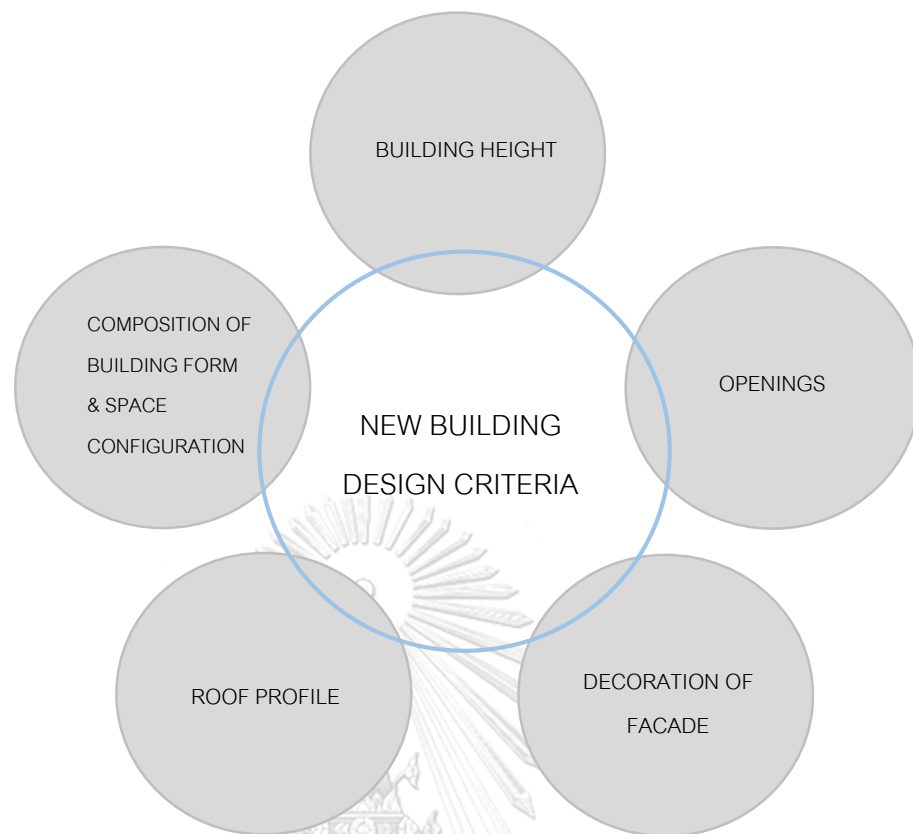


Figure 3. 6 Criteria to design a new building in Old French Colonial Setting

3.3.1 Building height

Generally, in comparison to the building height of each building's type, there are different various dimensions of building height. French Colonial building is one of a unique example, which often found in the single building with 2 stories height (Thippathat, 2002).

Roof's height is often equally to the building height of each floor or 1/3 of the ground floor to the roof of building's height. An average of French Colonial building height from the survey in Vientiane city, it can be seen from 4-5 meters per floor, which made this building as the dignified, enormous and strong building. Because of the fact that this particular building style served only as the government office nor residential.

Noticeably, this architectural style also have "the building base" which were made building much more higher than it used to be, 60-100 centimeters height in average, which made this colonial building looks glorious and respectable in terms of building images, as

one of the characteristics of this building style that deserve for preservation in case of having a new building construction on the same historic site for the concordance between the old and the new.

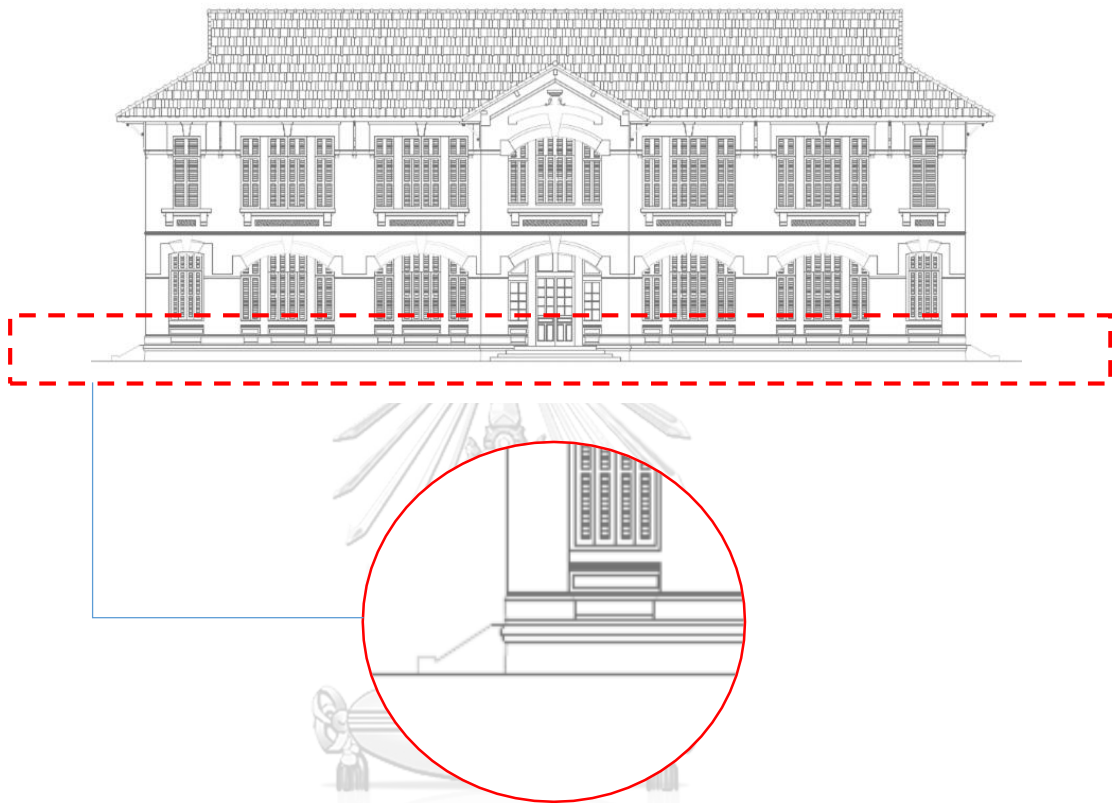


Figure 3. 7 Building base of the National library of Laos building

As can be seen from the case studies of the new building in old setting showing above, the height of the building is often similar to the original buildings, it is still able to maintain the height ratio of both building height and roof height.

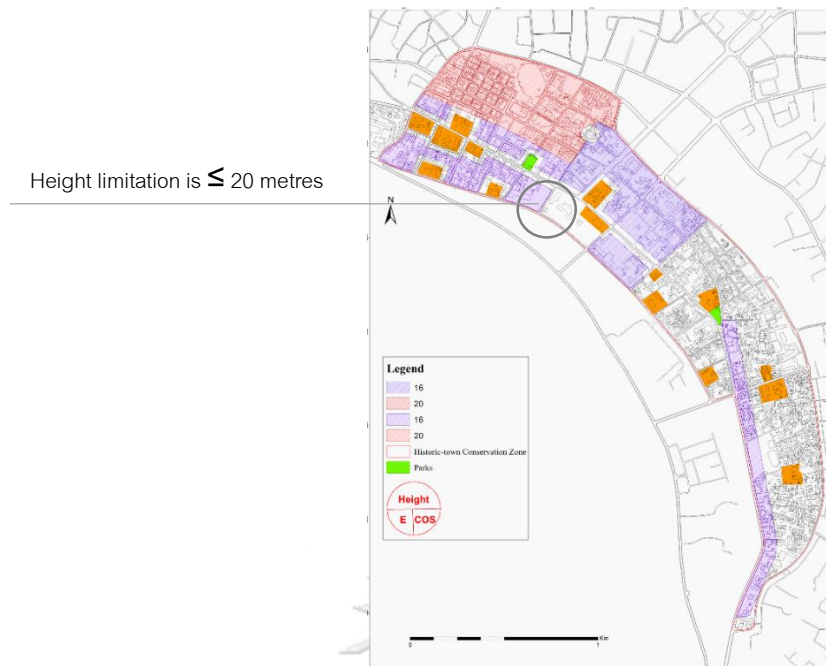


Figure 3. 8 Height limitation of the site in Conservation area (ZPP-Ua zone)

3.3.2 Openings

The openings are often found as two-layers with a wooden louver shutter on the outside and a half wooden-glass on the inside along with the stucco decoration in geometric shape at the top of the doors and bottom of the windows. This type of openings allows a good deal of incoming light and ventilation, as well as protects the inside space from the direct sunlight. Additionally, the closed-aperture above the door and window does not only provide more daylight into the building but also contribute the unique aesthetic to the building which made the building looks grand.

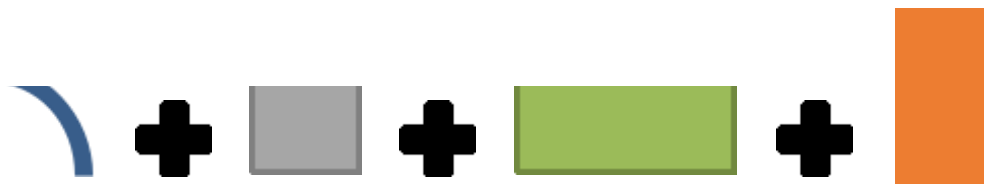


Figure 3. 9 Geometric shapes using in openings

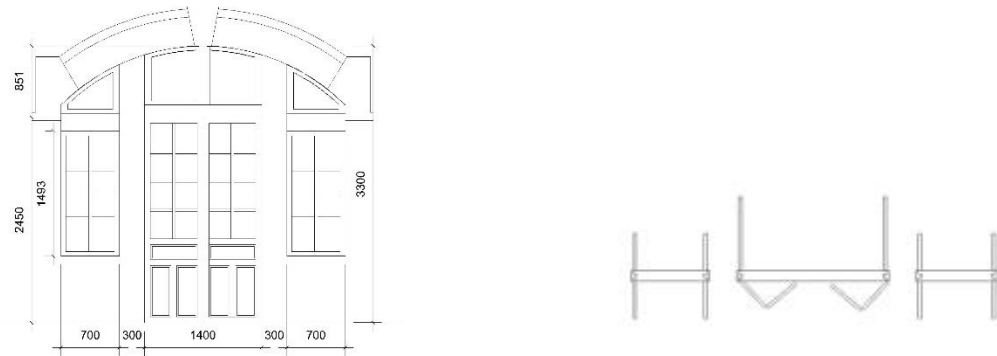


Figure 3. 10 Double layers door and window's style

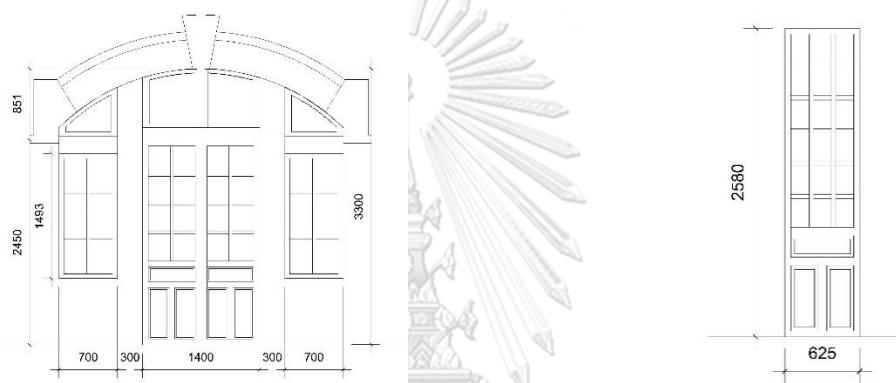


Figure 3. 11 Double layers door and window's size

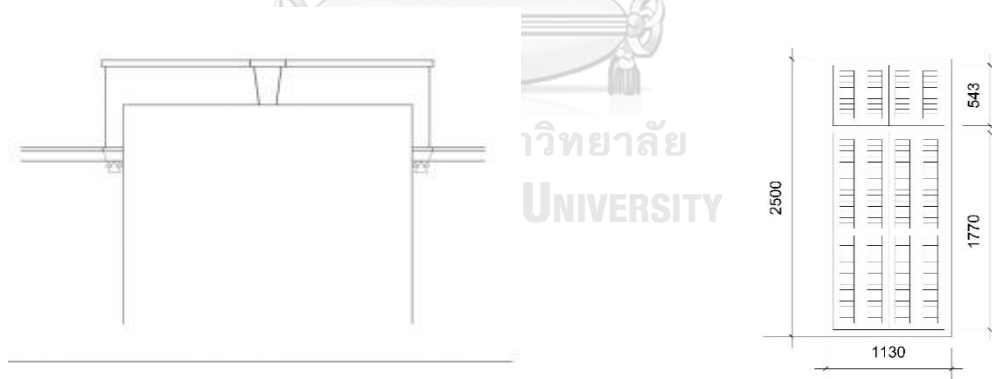


Figure 3. 12 stucco above openings and wooden window

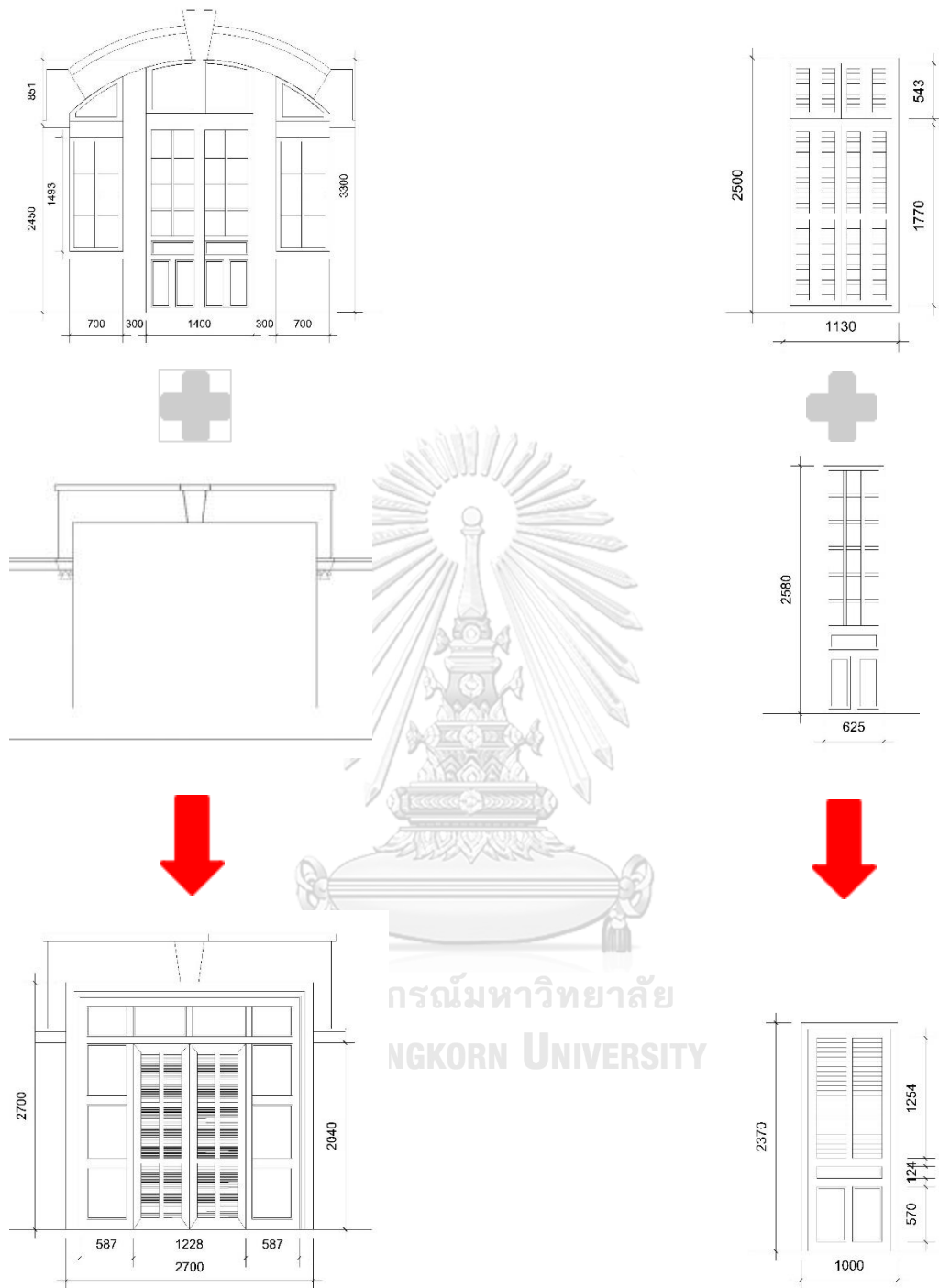


Figure 3. 13 New openings styles using in the new building

3.3.3 Decoration of facade

In discussing the French colonial facade decoration in Vientiane, mostly used the geometric shape such as square, rectangle and arch in decorating building facade in terms of architectural elements. The geometric shape can be seen through the openings, the wooden struts, stuccos and the curve out of plaster on the wall which are the unique elements that indicate the character of this particular architectural style (Le Patrimoine). Besides, the horizontally and vertically alignment of facade components and its decoration are the key elements in the reading of the building facade. The unique characteristic of French colonial facade is the composition of its elements which is the symmetry and alignment of the openings and stuccos.

According to above theory and case study, it can be concluded that the key elements of French colonial facade are not only the symmetry and alignment of openings and stuccos but also the geometric shapes of those components (openings, stuccos) which demonstrated in the National Library of Laos building.

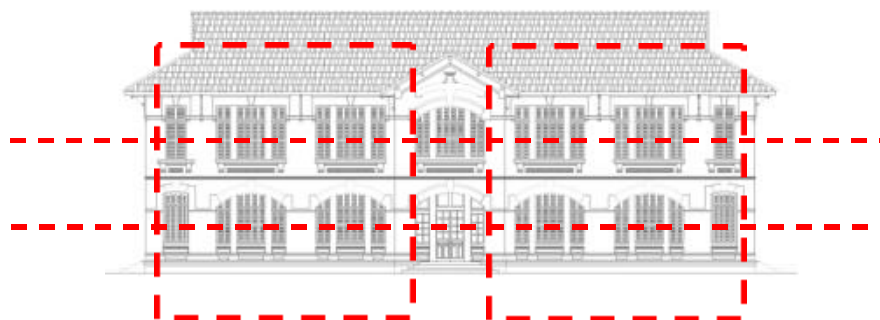


Figure 3. 14 Symmetry alignment of facade component

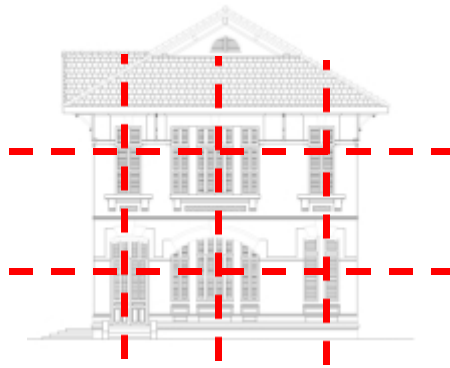
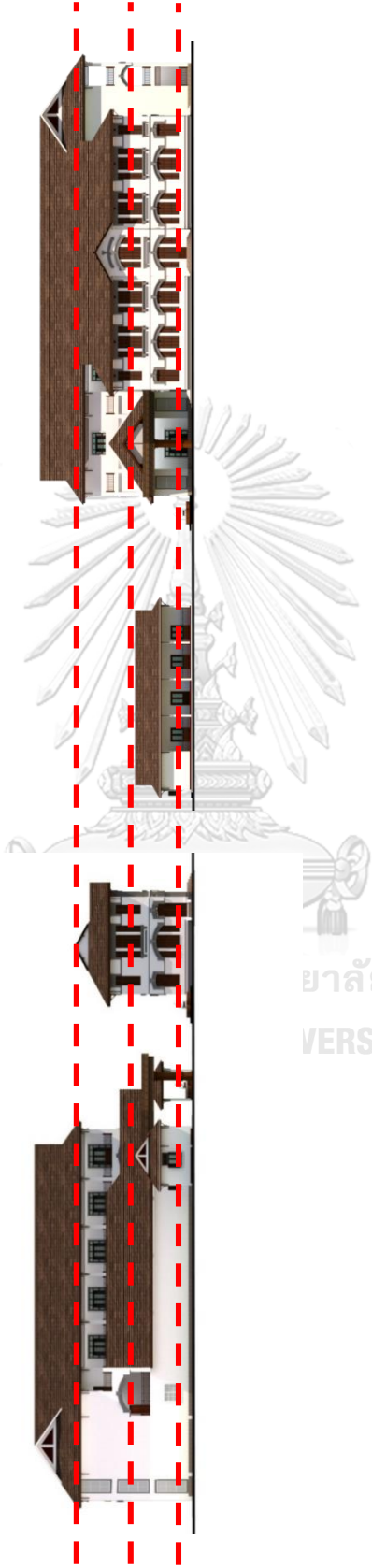


Figure 3. 15 The horizontally & vertically alignment of facade components

The size of facade components which is the openings would be decreased and some of its details would be eliminated due to the concept of making the new design to look more modern but still keep the same context.

As a result, to preserve the essence of the French colonial facade which indicate the value of uniqueness appearance, the new facade design in the new building would apply rectangle shape of the openings and stucco above openings while the design of the symmetry of facade components cannot be applied in the new building facade due to the new building form. However, the horizontal alignment of the facade components is used in the new facade design to maintain the old building context.



- Apply same rectangle shape of openings and stuccos
- Non symmetry façade components
- The horizontal alignment of the facade components is used

Figure 3. 16 The new façade design in the new building

3.3.4 Roof profile

There are two principal types of French colonial roof style mostly found in Vientiane which is "Gable Roof" and "Hip Roof". The length of the eaves is not too long; eaves serve to keep rainwater away and reduce the sun intrusion. The angle of the Colonial building's roof usually lower than Traditional Lao houses blend together with the wooden strut. The roof facade is usually decorated by plaster with the western pattern or wooden louver. "Din Kho" is the only one material to covers this type of building.

The National Library of Laos building employed the Gable Style roof with the porch in the center of the building which is the main entrance. The structural roof system use timbers and its cover material is "Din Koh," The plaster is used to decorate at the roof facade. The height of the roof is one-third of the building height

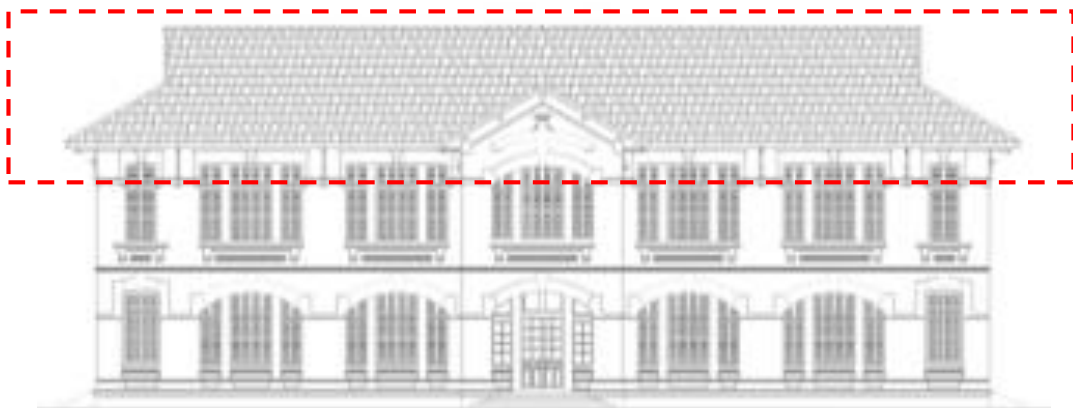


Figure 3. 17 Gable roof style of existing National Library of Laos

The roof is mostly scale of 1/3 of building height, normally 4-5 meters which can be seen the "porch" as the entrance in the center of building and "wooden strut" covered with "Din koh tile". Roof facade decorated by plaster with western pattern or wooden louver.

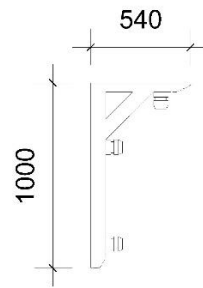


Figure 3. 18 Wooden strut style

In Amantaka Hotel, it can be notice that the roof of most buildings is one layer gable roof, others buildings such as the reception building are 3 layers roof covered with “Din Kho” with the same texture and color in every building included the old building and restored buildings in accordance with the heritage protection requirement of the city in terms of limitation of the height, roof angle, colors and materials.

Nevertheless, it can be said that the roof style, cover material “Din Koh tile”, “the Porch” and “the decorated plaster” are the essence of the National Library of Laos roof which plays a crucial role regarding its identity and value. As the concept design is to preserve value and maintain the old context, The new building design, therefore utilized the same roof style “Gable roof” in the same scale of the roof height (1/3 of building height) to be in harmony with the National Library of Laos building in terms of scale. Furthermore, the cover material “Din Koh” which is the most dominant component in the roof which nowadays is rare and expensive is replaced by CPAC in the same color and pattern which is much more durable while the structural roof materials are changed from timbers to steel in order to support the CPAC. The decorative plaster is also employed in the new building while the porch is still used for the main entrance but not in the center of the building because of the limitation of building form and its function.

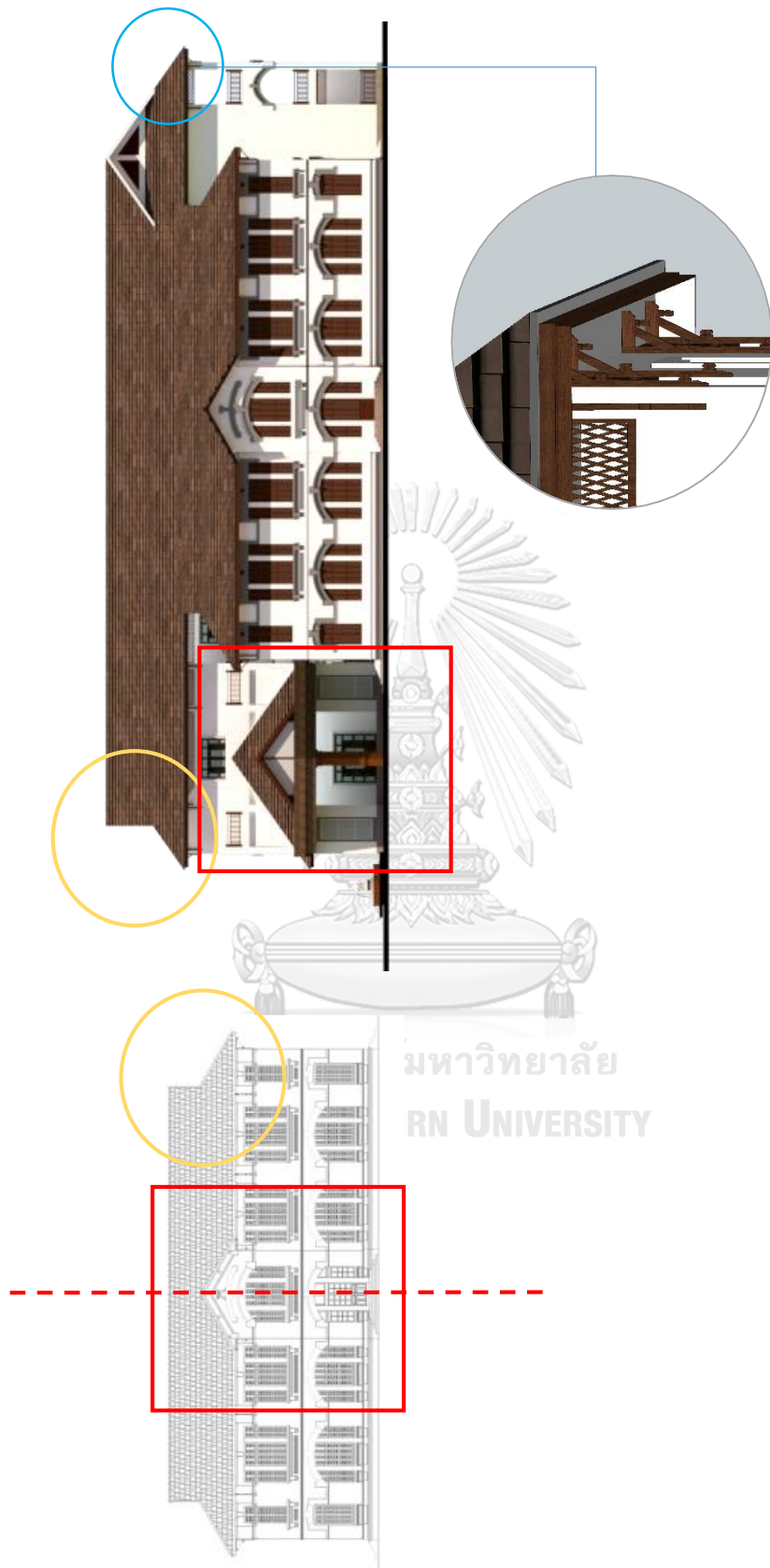


Figure 3. 19 The components between the old and the new building's roof

3.3.5 Composition of building form

Normally French colonial buildings in Vientiane is located in the large area surrounded by trees and have huge spaces around the building and the area bordered by the moderate-high brick fence. The building form of French colonial offices is usually designed in simple geometric shapes such as rectangle which parallel with the road and symmetry between the ground floor and second floor.

The building form of National Library of Laos just like ordinary French colonial buildings which is rectangle shape and located parallel to the road. Yet, the building was placed in front of the land which left an enormous space at the back. On the inside, National Library of Laos was designed as one single rectangle box, one form was used and leaving the internal space to become more complex which shows as the aligned square rooms surrounded by a long corridor on the front side of both ground floor and second floor.

Owing to the existing condition of the land is the rectangle which has the length belonging from the front to back, the building extension has to be set align the property. And also need to enlarge from the side to establish a parking area for the guest as well as hotel employees with the new entrance. Furthermore, the property has been divided into the public area and private area. The public area consists of a library, souvenir shop, massage, restaurant to facilitate not only the hotel guests but also external visitors. Consequently, the service area is placed at the front of the land which attracted to the main road.

On the other hand, the private zone which comprises of guest rooms is reserved solely for the hotel guest and employees. It is the new buildings which turn the facade to the scene of a pool and garden in order to provide a peaceful feeling and exclusive privacy.

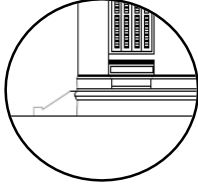
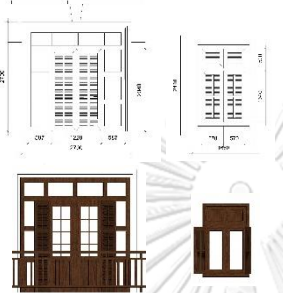


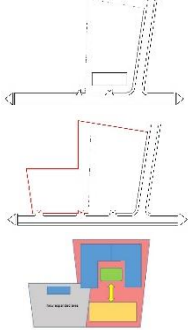
No.	Architectural Elements		Reasons and benefits
1	Building height		<p>The new building would maintain building height ratio ≤ 20 meters as the original building, apply building base 60 meters height as one of the characteristics of this building style that deserve for preservation in case of having a new building construction on the same historic site for the concordance between the old and the new and to respect the height limitation.</p>
2	Openings		<p>To comply the new design building with the same colonial context, the original openings style of National Library of Laos was implied. The design of new openings consisted of the same double layers doors and windows as well as the wooden-louver. The size of openings was decreased to fit with the height and the limited space between each pillar. The original wooden blowhole was replaced by the glass to create a contemporary visual perspective.</p>
3	Decoration of facade		<p>The size of facade components which is the openings would be decreased and some of its details would be eliminated due to the concept of making the new design to look more modern but still keep the same context. Apply same rectangle shape of openings and stuccos. Non symmetry facade components. The horizontal alignment of the facade components is used</p>
4	Roof profile		<p>Using the same Gable roof style, scale of 1/3 of old building height. Covered with "din koh tile", roof facade decorated by plaster with western pattern or wooden louver also have "Porch" as the lobby entrance</p>
5	Composition of building form		<p>Owing to the existing condition of the land is the rectangle which has the length belonging from the front to back, the building extension has to be set align the property. And also need to enlarge from the side to establish a parking area for the guest as well as hotel employees with the new entrance</p>

Table 3. 6 Table of French architectural elements applying into the new design building

CHAPTER 4

DESIGN PROCESS

According to the design programme mentioned in previous chapter, it can be seen that the programme is divided into 2 categories as follow:

4.1 Old building functions

Due to the role of hotel design which requires various service facilities to facilitate the hotel guest, also the restriction of existing space, consequently, the service area will be placed at the front of the land which attracted to the main road.

At the 1st floor, the architect wants to add "the souvenir shop" and "the library" into this old building as those services do not require large space. The building is arranged for the reading area for the guest to follow the standard and also to conserve the value of the old function which is the library. Moreover, it will be set as a mini-museum to show the history of the building.

At the second floor, the function should be highly private and different as it is placed in the historic building, it should illustrate that it is not only common service area, but it must demonstrate values of the buildings and acquire a unique feeling from the guest as "the massage service".

The plan of the second floor construction is divided into many square rooms and has only corridors to connect it. Nevertheless, in the general hotel standard, it typically comprises of full service of a spa such as Sauna, treatment, shower room, etc. which include the water and plumbing system. On the other hand, according to the regulation, this building is not allowed to reconstruct, break or even drill to install the water system. As a consequence, to comply with the universal standard regarding facilities, the second

floor will be set as "the Laos traditional massage" which does not need the large area and also the shower room while providing high privacy.

Thus, the researcher has chosen a function that can link the public guest and hotel guest and it is a highest possible feature, which is Library, Souvenir shop and Massage service. In many case studies, the architects typically place the most dominant function of the hotel in the old building. For example, when they are focusing on the food service, they will put the restaurant in the old building. In the same way, if they are focusing on the massage service, they will place the luxury spa with a full service in the old building to gain the value of services.

4.2 New building functions

"Lobby and front area": according to various case studies, it can be noticed that the lobby or hotel reception are usually placed at the front of the hotel. However, in this case, the building space (Lao National Library Building) is relatively small. Hence, it is not meet the feature that requires massive space like one single space. Therefore, the architect has located the hotel lobby in the new building which is the main hotel entrance. The hotel lobby consists of the reception, tour agency, lobby hall, front offices, toilets and also the luggage area while the guest can enjoy the view of garden and swimming pool.

"Restaurant": at the ground floor of the new building, a middle space is set as the hotel restaurant because its ideal location which hotel guest can obtain different perspective such as swimming pool view as well as the view of the old National Library of Laos Colonial building from the restaurant table. The restaurant is set as the international cuisine eatery which available for both the hotel guest and outside customers. The eatery is designed indoor, the zone is decorated as the colonial to maintain the consistent harmony, it is purposed to provide a feeling of historical atmosphere. The hotel kitchen serves all-day dining for the restaurant customer. Besides, the hotel kitchen is not only

serving inside the restaurant or room service but also serving snacks and drinks for the hotel guest at the lobby while the guest can enjoy the view of garden and swimming pool.

“**Guestrooms**”: according to the universal design standard of the boutique hotel and the hotel star rating requirements. The boutique hotels guestroom is ranging from two to sixty rooms. Moreover, the types of the room must be categorized obviously by the size, decoration, furniture, facilities in the room. Thus, guestrooms in the new building are divided into three types in twenty-one rooms including standard rooms (16 rooms) and the executive suites (6 rooms) which are located in different floor.

The standard rooms are placed on the new building at the ground floor, the second and also the third floor while the two executive suites are situated above the lobby area on the second floor which has a higher privacy than others area, also, other four suites are located on the right corner of the second floor and third floor which can provide different perspective.

In term of the room area, it is different from one to another. The standard room has 42.5 sq.m while the executive suite room have 85 sq.m and 102 sq.m respectively.

The site has been expanded for the parking lot and it has been arranged to four functions including drop off area, customer parking lot, staff parking lot and also for some of back of the house. In detail, the criteria for hotel design stated that the customer parking lot requires 40% of the total guestroom which mean in this project the customer parking lot requires at least 9 parking lots as there are 20 guestrooms.

For the other programme such as “back of the house” and “the swimming pool” are designed to meet the universal standard requirements of the boutique hotel while fitting with site condition in terms of sizes and elements.

4.3 Site analysis

The site is chosen in the center of Vientiane old town where surrounded by various places of tourist attractions and contains multiple types of French Colonial buildings in this area such as shophouses, houses and government office buildings. In comparison with other areas, this conservation area has the highest commercial value including hotels, guesthouses, bars, restaurants, spas, banks, bookshops, souvenir shops, handicraft shops, etc. Its scale only allows cars to reach in a single lane.

In front of the site is called "Nam Phou" area, which is the most famous and important fountain of Vientiane. After being renovated in 2012 and reopened to the public and tourists to visit and enjoy the facilities, Nam Phou fountain has a clear French touch, located in a plaza in the center of Vientiane surrounded by many international restaurants. During French Colonialism, the area was designed as a market before being developed into a fountain 50 years ago. This particular fountain always has been a meeting place for locals and foreigners to spend time relaxing and more recently staged many events such as Lao New Year celebrations.

More importantly, the site is situated in Setthathirath Road which characterizes the old core of the city, dominates the urban scape with its locations on the commercial district running at right angles to the axis of Lane Xang Avenue connects to Presidential Palace, Vientiane Memorial, That Luang Stupa and many ancient temples such as Wat Sisakat, Wat Ongtue, Wat Phra Keo, That Dam and Wat Inpeng. Due to the site location, it can be seen that this site location are very convenient and appropriate requirements for the hotel guests that want to discover the history of the city in the concept of historical and cultural tourism.

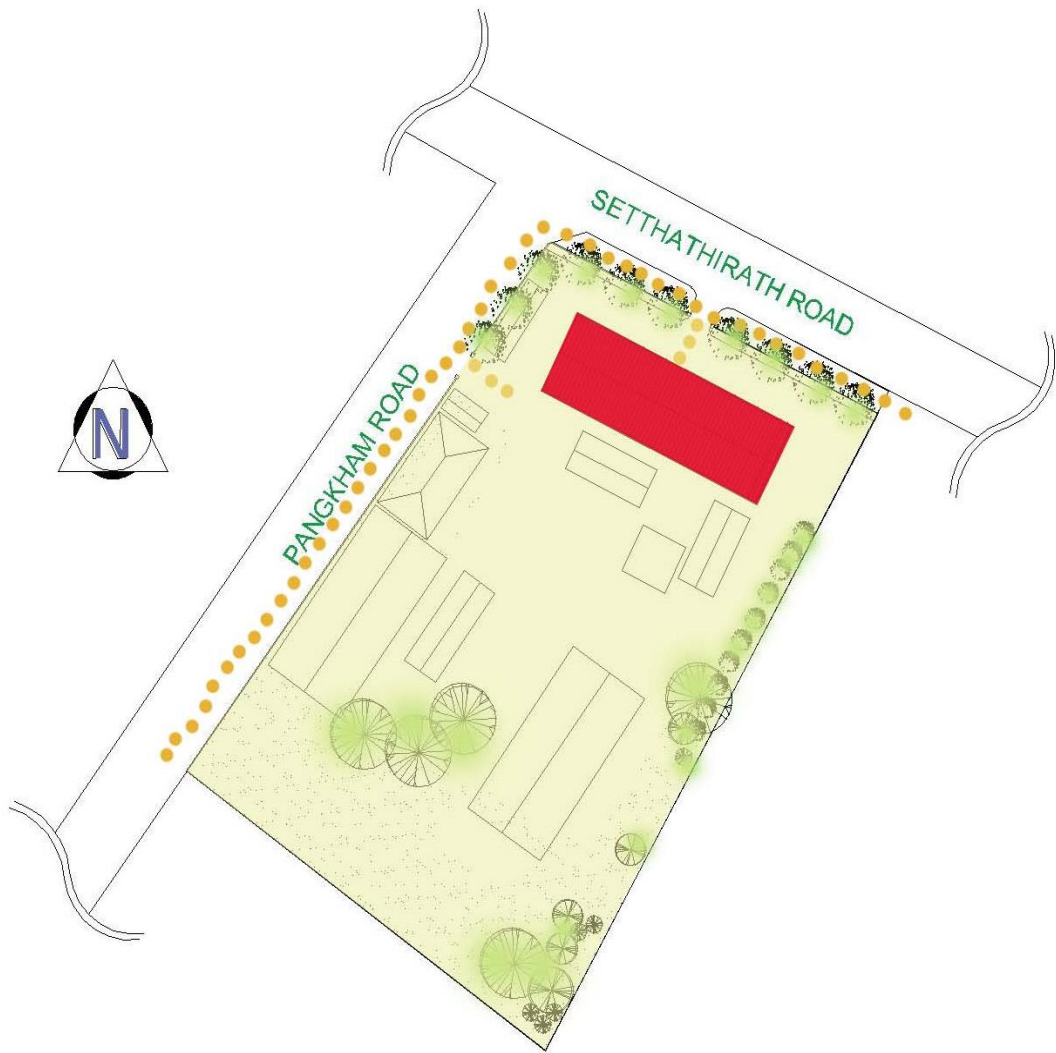
4.3.1 Accessibility

The site can be accessed by two ways (Figure 5.1). Most people enter the site through the main entrance from the main road, Setthathirath road, where they can only

park their car beside of the sidewalk (Figure 5.2). Some people approach by the left side entrance which provides the motorcycle and car to park mostly for the library's staff (Figure 5.3).



Figure 4.1 Two ways of existing site approaching



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Figure 4.2 Two ways of existing site approaching



Figure 4.3 The main entrance from Setthathirath road



Figure 4.4 Side entrance from Pangkham road

4.3.2 Surroundings



Figure 4.5 Surroundings of the site

- North: Setthathirath Road
- East: Lane Xang Hotel
- South: Lane Xang Hotel
- West: Pangkham Road

4.3.3 Existing conditions

A two-stories building encircled by a brick wall on all four sides, maintains the big Plumeria and Longan trees around the site, with small courtyard and garden at the front and side of the building that people cannot see the building clearly from both sides of the

streets. The layout of the site, lays the library building in front of the site (north) parallel to the Setthathirath road opposite with the fountain area.

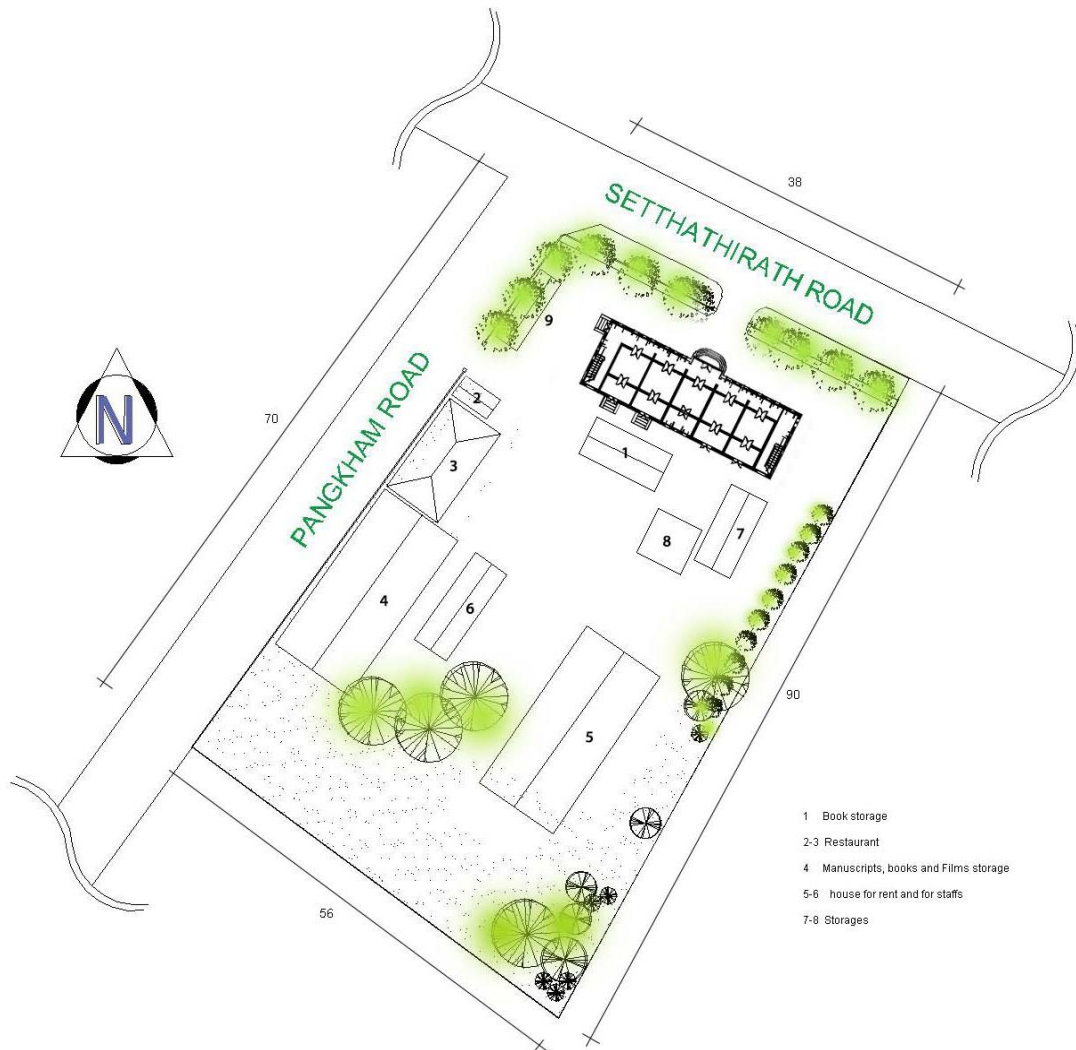


Figure 4.6 Existing layout of the site

The back includes small buildings which is layout in a very scattered way such as the books storage, manuscripts storage, dormitory for staffs, restaurant for staffs ... (figure 1.9) and has the open space in the middle, which the author understood that those small buildings were built after the library building, as well as provided motorcycle and car parking for library staffs.



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Figure 4.7 Existing elements of site



Figure 4.8 Elevation A of existing National Library of Laos

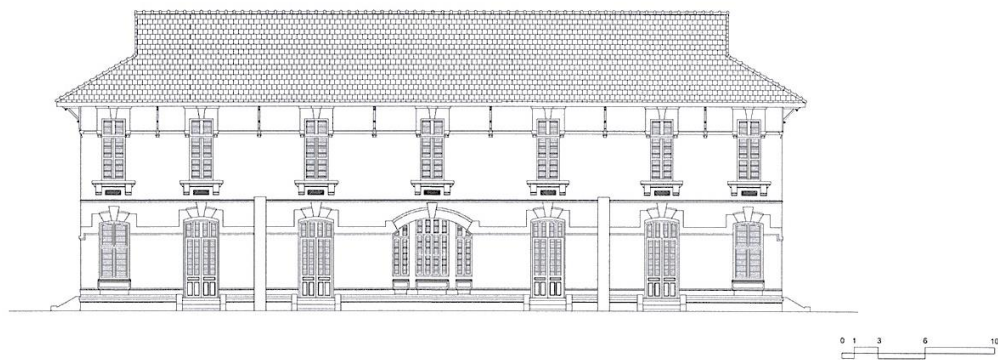


Figure 4.9 Elevation B of existing National Library of Laos

มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าธนบุรี
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Figure 4.10 Elevation C of existing National Library of Laos



Figure 4.11 Elevation D of existing National Library of Laos

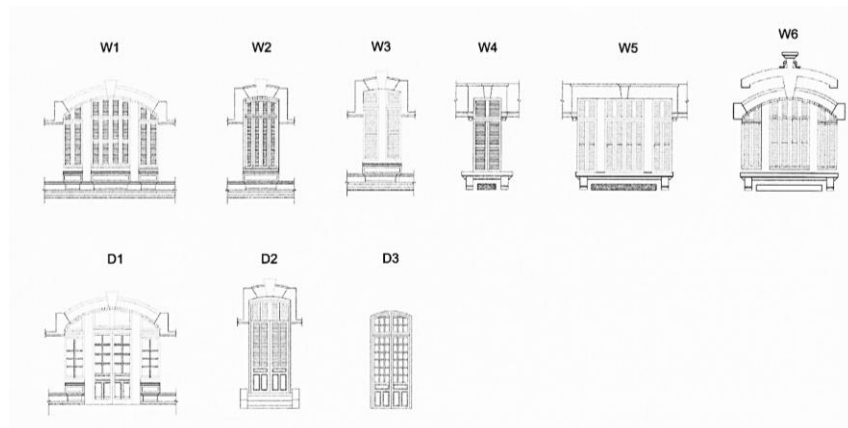


Figure 4.12 Different types of doors and windows of existing National Library of Laos



Figure 4.13 Photo of existing National Library of Laos



Figure 4.14 Roof structure of existing building

National Library of Laos existing building's structure is made without steel reinforcement, the roof is covered with "Din kho" tiles, but then switch to a tile CPAC Monier until today. It was constructed by using the wall-bearing system, in fact, it can created the restriction of the space extension, we cannot tear down the wall or any facade's elements due to limitation the building structural system,



Figure 4.15 Facade design of existing National Library of Laos

4.3.4 Law and Regulation

The site of this study located in the conservation area of Vientiane for its cultural and historical significances of this capital city (Zpp-Ua zone, based on the project for Urban Development Planning study in Vientiane Capital city, figure 5.11 Urban Planning of Vientiane 2010-2030). Therefore, the height would be limited to 20 meters, the proportion of land use would be 75% and the offset between each building in the site must be over or equal to 3 meters.

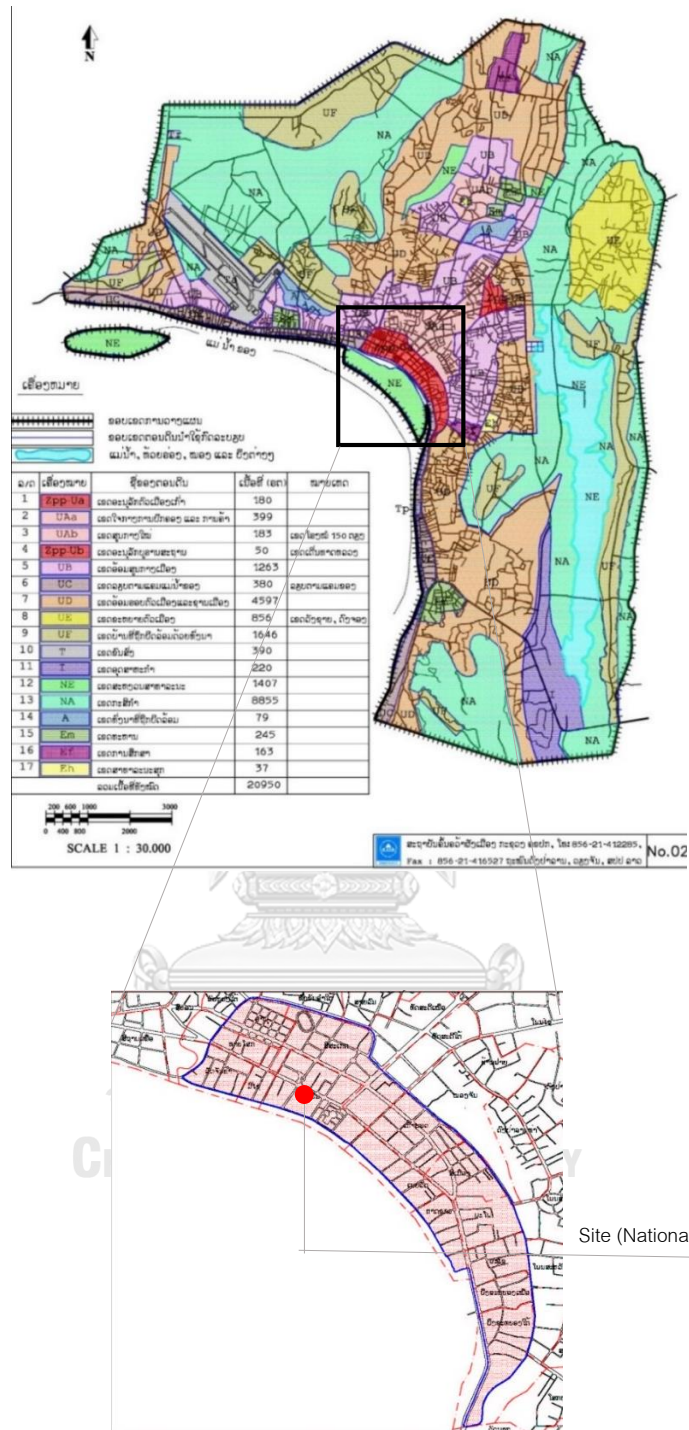


Figure 4.16 Urban Planning of Vientiane 2010-2030

4.4 Design Concept

By following its original scale of old building (National Library of Laos building), this project aims to create not only the sense of visual but as well as the physical experience of French Colonial building. Noticeably, a new connecting building would be designed using a different kind of structure which is the reinforce concrete integrate with steel roof structure mix with timber which are more durable and easily to maintenance.

4.5 Design development

“Masterplan”: The site has been expanded for the parking lot and it has been arranged to four functions including drop off area, customer parking lot, staff parking lot and also for some of back of the house. In detail, the criteria for hotel design stated that the customer parking lot requires 40% of the total guestroom which mean in this project the customer parking lot requires at least 8 parking lots as there are 20 guestrooms.

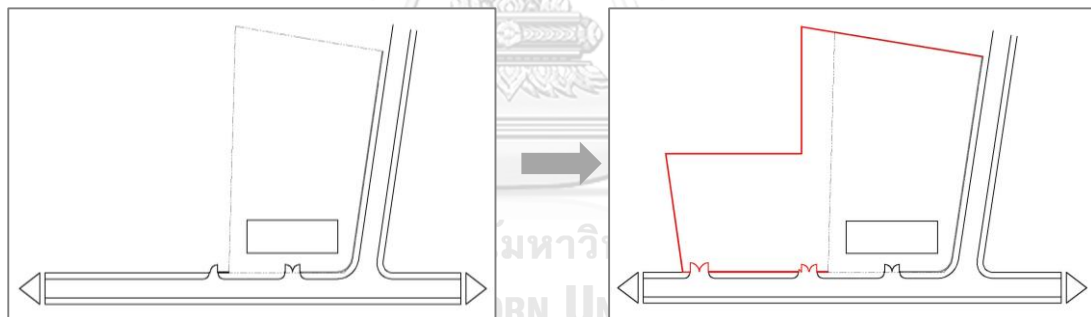


Figure 4.17 Existing land site (left) and extended land site (right)

Furthermore, the hotel have 3 entrances which are the new main hotel entrance for hotel guest that come by car, hotel van and bus. The second entrance is the existing entrance that located in front of National library of Laos building which can welcome the guest who want to visit the library inside the building directly from the road. The last entrance is sub-entrance provided for hotel staff, garbage area and loading area.

For instance, the site is divided into public area and private area, it can be seen that the private area which is the new building are located at the back of the site while the

lobby, swimming pool and large courtyard are placed in between, in order to separate the old building and the new building, but in the meantime, the guest can still see the views of the old French colonial building from every corners of new the building as to make the most benefit of the site area. The setback dimension between the building's outer wall and the fence structure is 2 meters according to the regulation policy.

“Floorplans”: the new building form has been adapted from the original building floorplan, as can be seen that the National library of Laos building form is mostly used the simple rectangular shape while having many square rooms inside and connected with the long corridor. Therefore, the new building form is also using the rectangular shape but lays it as the U-shape. On the inside, the new building also provide the square rooms connected with the long corridor, it can provide not only the hishest benefit of the space but also to keep the same propotion to make it more easier to create the original roof style by using the same horizontally proportion ratio of the old building which is 1-2-1 from the ground floor to the third floor. As it can be said that the corridor is the most vital space of defining hotel circulation system design. Moreover, the circulation core such as two stairs and 3 elevators are placed at the left back corner and the right back corner of the building.

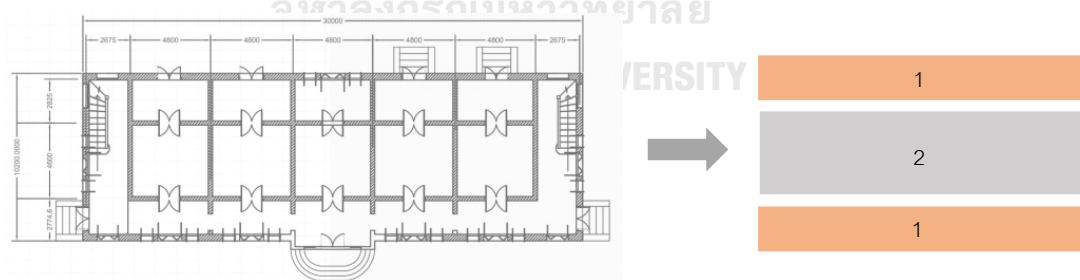


Figure 4.18 The horizontally proportion ratio of the old building 1-2-1

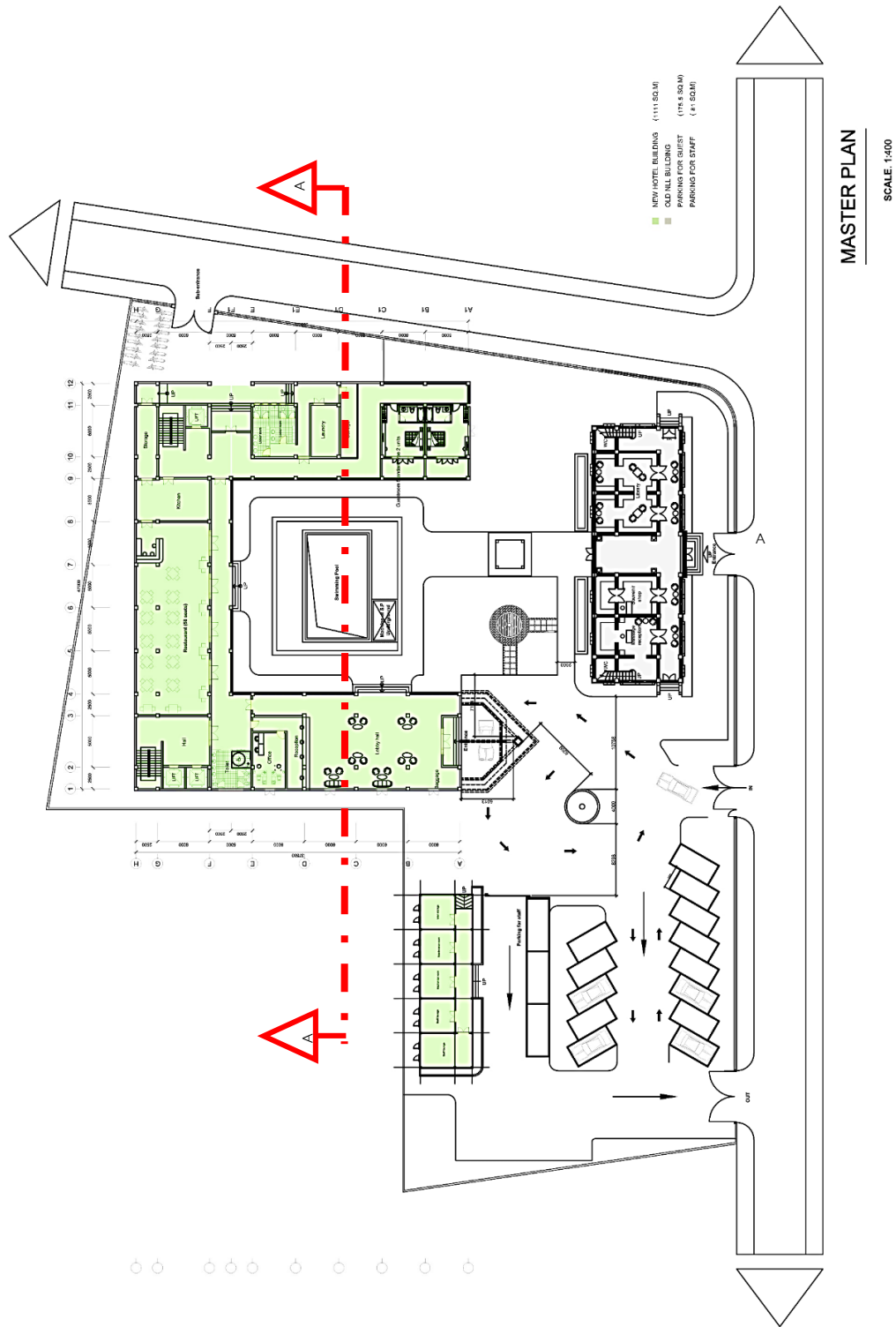


Figure 4.19 Masterplan

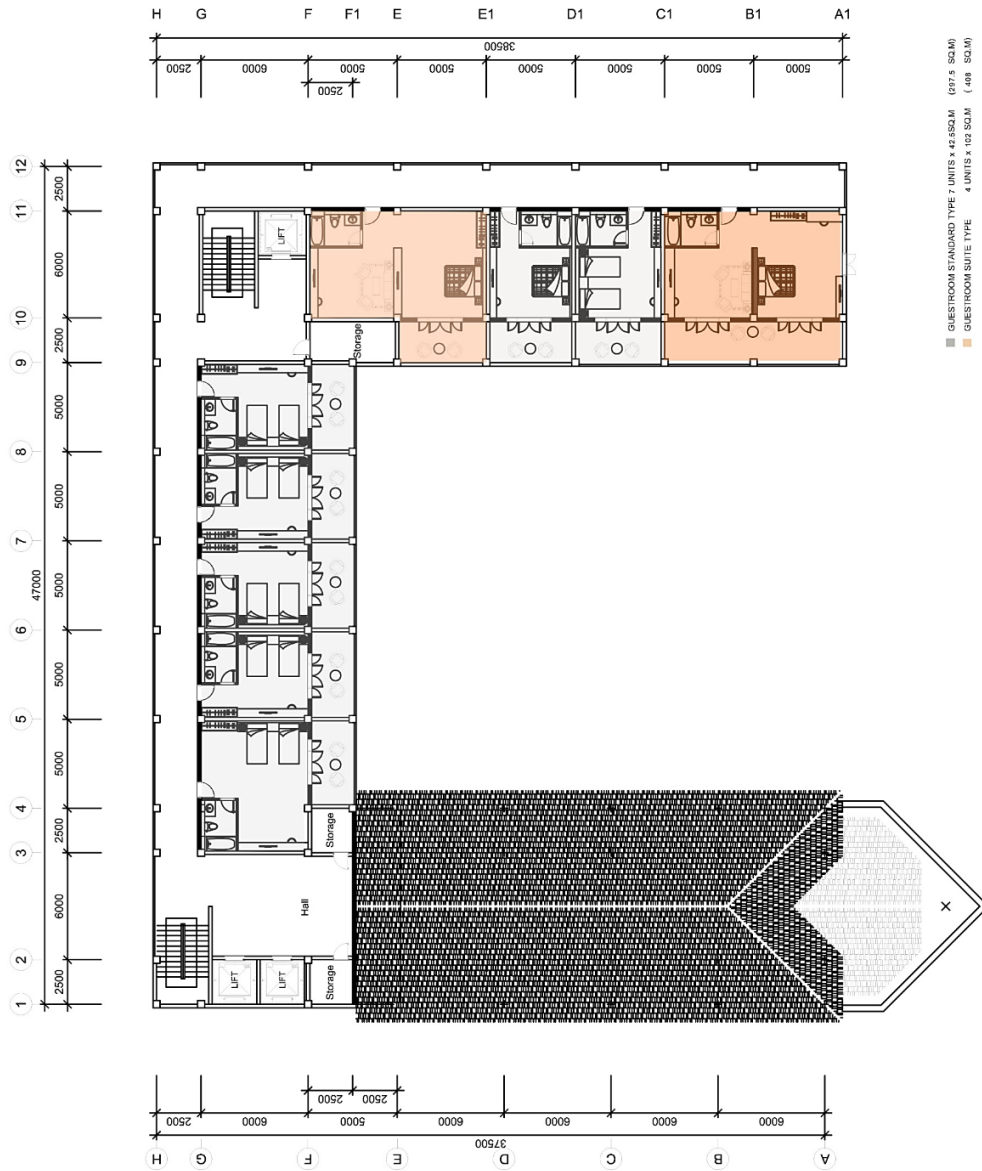


Figure 4.20 Second Floor Plan of New Hotel Building

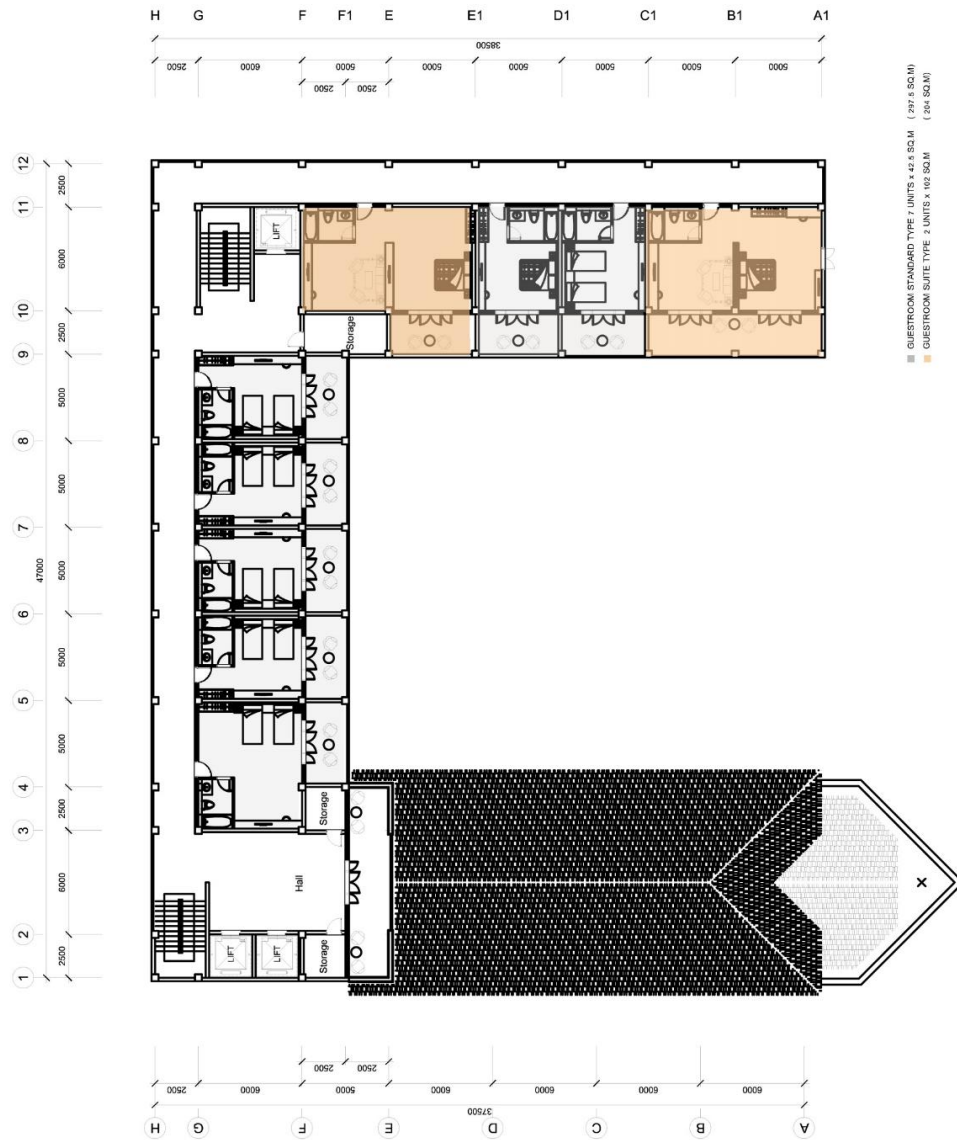


Figure 4.21 Third Floor Plan of New Hotel Building

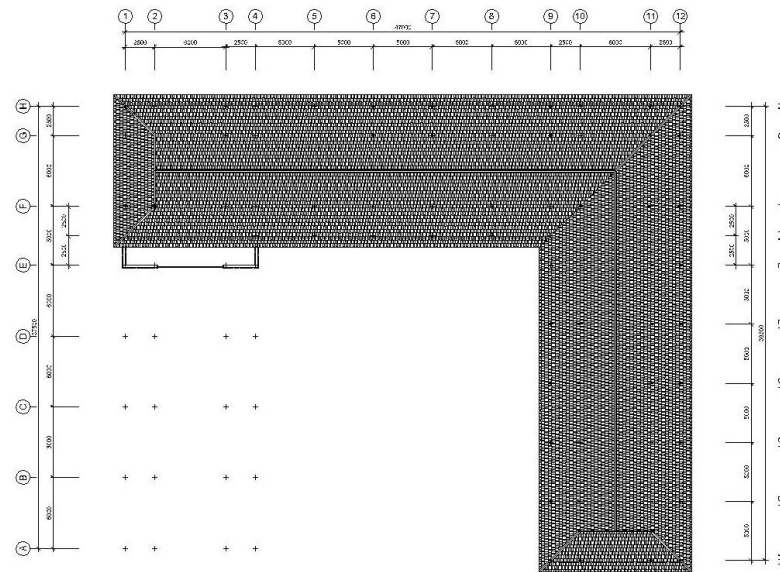


Figure 4.22 Roof Plan

“Elevations”: as to maintain the same French colonial context, the architect want to design the new building by using the same building height, building base and similar roof height of the old building, by following the regulation. Furthermore, the French colonial architecture characteristic has been applied by re-design the openings, decorated with the adapted stucco, wooden strut and similar facade design in order to create the sense of French colonial aesthetic not only into the new design building but also to preserve the continuation of street facade as the surrounding buildings of the site are mostly designed as the French colonial style which are the characteristic of this conservation area.



Figure 4.23 Elevation - A of New Hotel building

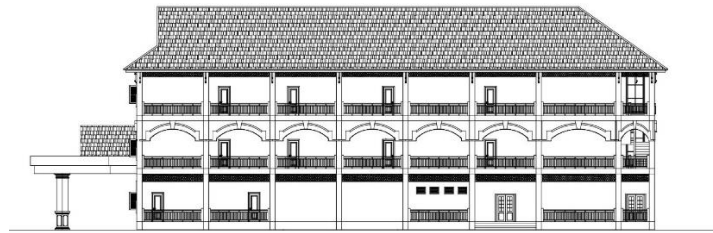


Figure 4.24 Elevation - B of New Hotel building

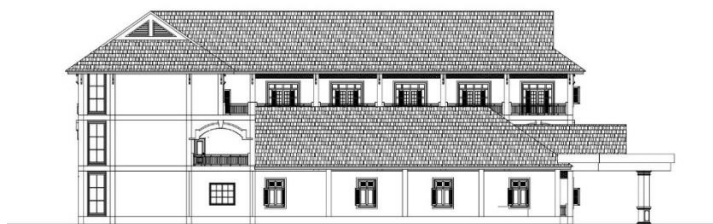


Figure 4.25 Elevation - C of New Hotel building

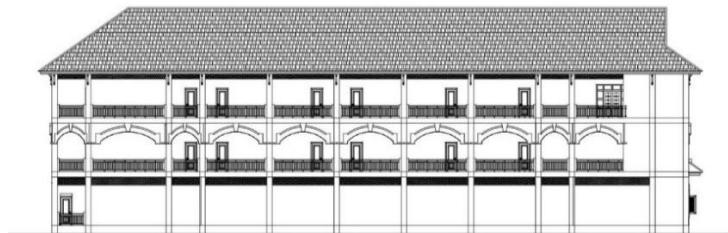


Figure 4.26 Elevation - D of New Hotel building



Figure 4.27 Section A-A



Figure 4.28 Elevation – A



Figure 4.29 Elevation – B



Figure 4.30 Elevation – C



Figure 4.31 Elevation - A



Figure 4.32 Elevation - B

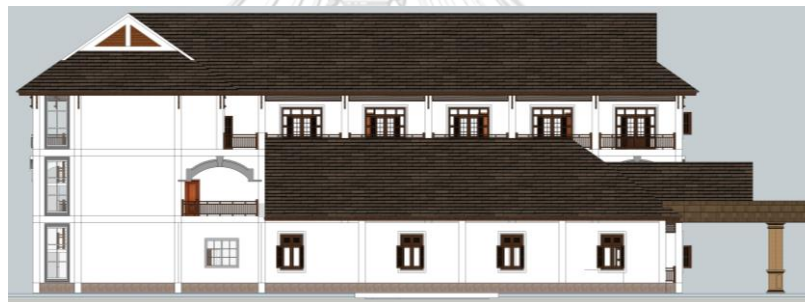


Figure 4.33 Elevation - C



Figure 4.34 Elevation - D



Figure 4.35 Bird eyes view of the hotel



Figure 4.36 Perspective view A



Figure 4.37 Perspective view B



Figure 4.38 The views of hotel lobby design



Figure 4.39 The views of Standard guestroom design



Figure 4.40 The views of Suite guestroom design



Figure 4.41 Design model of the project



Figure 4.42 Design model of the project

CHAPTER 5

CONCLUSION

The objective of the thesis is to design the new building in old historic setting through a case study of National Library of Laos. However, before designing process there is some research has been done. As the author desire, the project to be realistic and practical, the National Library of Laos is chosen as the case due to its current situation as the Lao government is planning to relocate the National library to a new site. Thus, the old National Library of Laos building which is the conservation building is given for concession to generate a benefit from the old library.

Firstly, the location of the National Library of Laos plays a vital role in determining a type of building. After collecting data related to the National Library of Laos location, it can be found that hotel is the most suitable function according to the increase of tourists and development policy of Lao government. Secondly, a type of accommodation which is the luxury boutique hotel is defined by various factors including site area, regulation, and location.

This thesis offer the criteria for determining an appropriate new function of the existing library building, also, to find a design concept for a new building by applying the identity of French Colonial architecture to the new design. According to the low adaptability of National Library of Laos building, criteria of selecting the new appropriate uses or functions for the old Colonial building conducted by determined these following issues: “Regulation of historic building” and “Existing condition of the building”

In conclusion, the researcher has chosen a new function of the National Library of Laos that can link the public guest and hotel guest and it is a highest possible feature, which are “Library” and “Souvenir shop” at the ground floor in order to conserve the history

of the historic building also to respect its old function values, as well as placing a highly private “Lao traditional massage” service at the second floor to acquire a unique feeling from the hotel guests..

Furthermore, after this study has been conducted, towards the case studies and literature reviews mentioned in chapter 3, it can be seen that this study has mentioned various crucial criteria in designing a new building in historic French Colonial Setting such as: “Building Height”, “Openings”, “Decoration of facade”, “Roof profile” and lastly “Composition of building form and space configuration”.

The new design criteria and the design outcome can regenerate building value, meanwhile, this study can be a consideration for the future study on related topic, as an architect, before we insert new function or program into site, it is necessary to understand not only the physical aspect of building but also the need and the appropriate decision which should imply with all the related local regulation, current situation of site in order to develop good concepts of sense of place in respect of authenticity of place and local culture.

Restoration has become increasingly common in Vientiane, the aim of this study is to find the appropriate new concept for the site project which is “New building in Old setting”, the researcher wants to use the concept of “*adaptation*” in order to design the new building by applying the adaptation of the old building function and architectural elements into the same context. A local regulation plays a crucial role in terms of building conversion which is not adequate to preserve the core value and the uniqueness of the French Colonial architecture. Therefore, the thesis title “New Building in Historic Setting” is chosen in order to be one of the considerations regarding the French Colonial Building renovation.

As a consequence, the following important factors are also need to consider as one of the consideration in designing the new building in old historic French Colonial setting in Vientiane:

“Site condition arrangement”: the new building should leave open space for greenery, ventilation and natural lighting, there also should be a space between the new design building and existing building in order to respect the old building values and create space between the old and the new. Therefore, the new additional building should be sited at the back in order not to impair the character of the existing building.

“Understand the existing building and surrounding buildings”: understand building type and architectural style, building function, building maintenance building development (building infill design), floorplan, size, scale and proportion, wall, doors and windows, floor, other architectural elements as well as the structural system, water and electrical, sanitation and drainage system.

In addition, the new design building should also consider the harmony of the surrounding buildings, in order to create the same context, as well as the appropriate land use for tourism and service sectors regarding generate income to the site.

“Understand the historic building regulation, related laws and local policy”: the new design building should follow the maximum building coverage ratio of the site which mostly located in the conservation area in Vientiane city which is 60%, the rest will be a green space to conserve the quality of air circulation and natural lighting.

Furthermore, the building setback in Vientiane conservation area mostly is between 2 to 3 meters, which the new building should refer to the related local policy in particular area. The building height is also important in terms of the overall district facade, the new structure can exceed the average height of existing building but should not exceed the height of 20 meters regarding the regulation, as well as understand the regulation on

building storey, building orientation, roof shape, color and material using in the new building.

Nevertheless, the design of the new building should also maintain the characteristics, conform to pertinent regulation and does not destroy the value of the old building.

5.1 Limitation of study

This study is somehow a starting point of the topic of the new design building in historic French Colonial setting in Vientiane, Laos. However, there are several valuable studies of French Colonial Building in Vientiane and other provinces in Laos, but only the history, photos and data collection on basic architectural survey was mentioned nor the intensive conservation theory and case study, also the architectural elements details such as form, scale or size. This study can be better if can include some related studies in Vientiane of French Colonial building conservation. It might lead this study to a wider but more precise theory.

5.2 Suggestion of future study

This study is focus on the relationship between historic setting and French Colonial architecture in Vientiane, Laos. It identifies old French Colonial building in conservation zone of Vientiane capital as one of the most completed French Colonial heritage in the city.

On the other hand, the rapid growth of urban development is damaging its significant due to public ignorance of this factor. In the last part of this study proposes the architectural design, a luxury boutique hotel, as the site is located in the city center, in order to increase more income from both local and foreigner while also regenerate value of French colonial building. The research part can be improve with more studies of French colonial building in Vientiane both office building and residential building type.

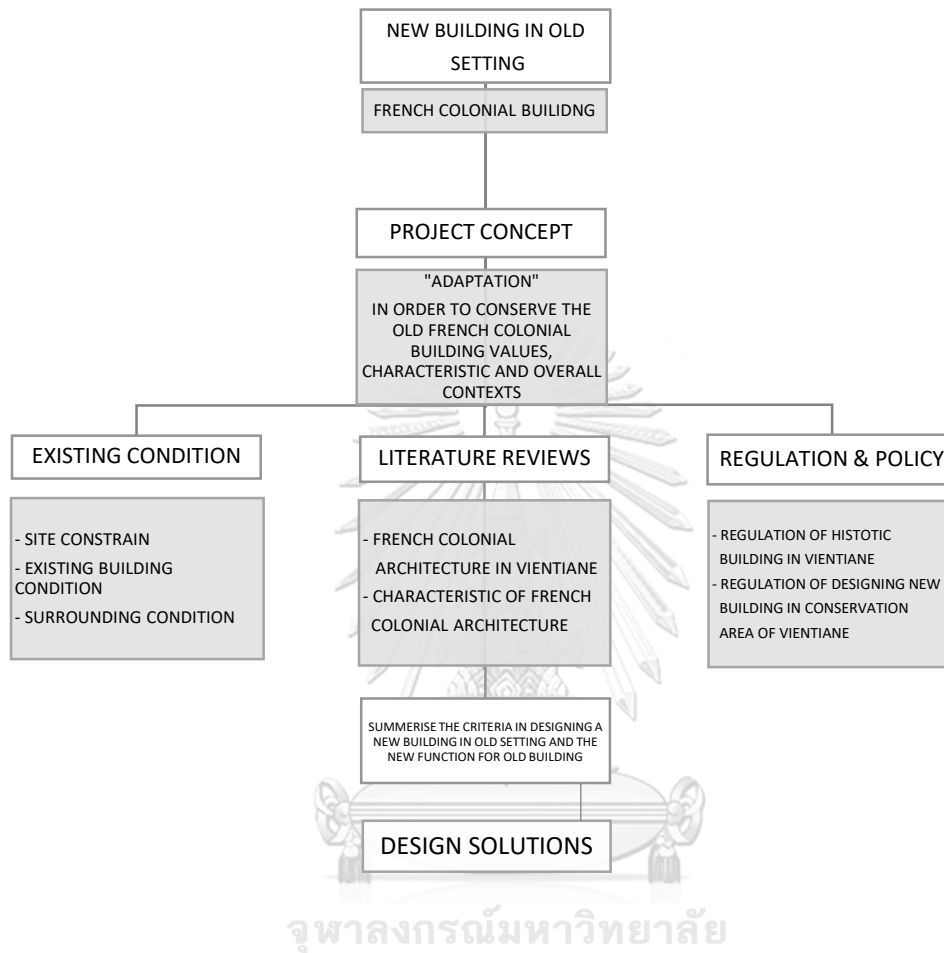


Figure 5.1 Diagram of the consideration for designing the new building in old historic French Colonial setting in Vientiane

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APPENDICES

จุฬาลงกรณ์มหาวิทยาลัย
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APPENDIX A

จุฬาลงกรณ์มหาวิทยาลัย
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1. The agreement of Minister of Ministry of Information, Culture and Tourism (No. 95/TV at Vientiane, Laos 28/02/2005)

Regarding preserving national heritage in terms of demolishing, repair, renovation, construction of temples, religious buildings, historical building, museum, old and new buildings. Based on the ordinance of Lao president regarding national heritage conservation No. 03/PPT 20/06/1997, based on Lao law and based on the decree of Prime Minister of Laos concerning organizing and activities of Ministry of Information, Culture and Tourism (No. 25/NY, Vientiane 21/03/1999).

Article 1. Purpose

In order to preserve the national heritage concerning arts, architecture, historic building, cultural hall, museum, old and new building, and Buddha image to be with Lao people.

Article 2. The terms of reference of this agreement

Apply for the whole country particularly in renovate temples, Archaeological sites, Historic buildings, stupas, Cultural Hall, Exhibition Hall, Museum, Old buildings, Buddha images that are repaired or create or construct which lied on the conservation sites and old buildings category.

Article 5. The type of rehabilitation, renovation, and new construction

The conservation of national heritage in terms of arts, Lao architecture in the construction and renovation of the temples, historic buildings, stupas, cultural hall, museum and both old and new constructions.

Article 5.1 The direction of renovating the artworks, architectures, and old buildings which are the national heritage that is over 50 years old including a regional, national and international the renovation must utilize the original material while attempting the least amount of modification.

Article 5.2 The direction of new construction of temples, religious buildings, the construction nearby the old buildings (the old buildings in the conservation list). The new construction must be harmonious with the atmosphere, view, surrounding environment

and conditions of the site by applying the original architectural style. Furthermore, the new construction cannot be higher than the height limitation of the conservation zone regulation.

Nevertheless, the stated regulation above does not mean that it will be exclusively relying on the regulation. It must take consideration of another factor such as existing conditions, the policy of development.

The basic regulation for the renovation project practicing in both rural and urban areas focusing on reserve the identity and style of architecture which consist of: the building material must be the same as the old building which considers individually for each case such as:

“Roof”: the structure of roof must be wood and the roof material must be the same as the old one in terms of size and shape. It can be “Din Kho tile” or wooden;

“Wall”: made of wood, bamboo, brick;

“Floor”: the ground floor can be lay by wood, “Poon say” or tile;

“The Upper Floor” must be wooden or brick;

“Openings”: Made of wood in the same shape and style;

“Ceiling”: Made of the combination of bamboo, rice straw, plaster or wooden.

The new construction project must perform under basic principles that concentrate on maintaining the architectural identity and authenticity of the particular areas. As a result, some of the local and original material must be utilized but in the contemporary method. The main local material including wooden, bamboo, brick, plaster and “Din Kho” also the new building construction project in the city should correspond with the surroundings and city environment.

Article 7. Prohibition

Disallow to deconstruct the religious construction as well as the buildings in the conservation list. Demolish, alteration and enormous expansion are prohibited. The renovation is only allowed after conducting the presentation and discussions with specialists from the ministry of information, culture and tourism.

Prevent construct or restore the Buddha image, temples, hall, or any building related to religion before granting from the related ministry. Any project that has constructed before this agreement but still not complete have to temporary stop and require the permit from the relevant department.





2. Definition of Boutique Hotels

Mainly Boutique hotels have a range of rooms from 2-3 rooms to 50-60 rooms. For small Boutique hotels that have a few room mostly is renovated and developed from old buildings, and attempt to keep not only structure but also atmosphere of historic to attract travelers. In the meantime, it provides excellent facilities and special services due to a small number of room. They can give a closely and thoroughly services to their customers which better than many big hotels. The small Boutique hotels can succeed without rely on well-known hotel brands in order to expand proportions of markets. Therefore, they can reduce expenditures and do not need to invest huge amount of money like big hotels. I simply need a creative idea of design and decoration to being harmonic and retain the value of the buildings. Boutique Hotels have unique identity and have their own style which come from ideas of design, locations, designs and decorations that base on the concept which is construct the hotel by keeping all unique elements, different and incorporate.

3. Classification of Boutique Hotels

It can be classified into many different purpose, it may depends on location, type of customer, management and other elements. As a result, it can be seen that it not very clear to identify type of boutique hotels because it depend on its purpose.

However in terms of the hotel style, it can be identified into 4 different types:

“Historic Hotel” is the resident that transform from historical buildings which has long history. It widely seen in old town conservation areas and nearby many religious places;

The accommodations that have modern design and express its identity and customers call “Hip Hotel”;

Hotel with the luxury designed called "Boutique Luxury Hotel" or "Designer Hotel" with 4 stars and 5 stars, it critically designed every component emphasizing benefits of space utilization, furniture and various decoration details. Boutique luxury hotels mostly focused on the target customers which are an educated European travellers who like cultural travel, work in the management level and have high ability to pay. Generally managed by the network hotel that stress out the hotel design as the main important point,

yet, the hotel service is still maintained to uses the 5-star hotel standard services such as: "W Hotel Bangkok";

Hotels that giving the importance to the detail of the guests as the principle called "Life Style Hotel" such as highlight the customers who tend to health care attention by providing the health spa service, outdoor Yoga activity or selling organic food and drink as: "The Metropolitan Bangkok", emphasis on customer who interest on arts and design, groups customers that need a quiet atmosphere pleasant to relax in nature and a more private, the group focused on saving energy reduces global warming under the green concept, groups want to see new novelty or groups who want to stay close with the local peoples and environments.

Business management form can be divided into 2 hotel types such as:

Boutique Hotels which owns and manage by the owner, mainly a hotel operator small and medium business by low investment and inexperienced. Hotels are quite small and have a limited number of guestrooms. The owners are inspired to revive the building without making too much profit but focusing mainly instead on adding value to historical buildings. Boutique hotel is suitable for the project owners who are the landlord themselves as it is the way to add value to the assets as well as create income for the owners;

Boutique Hotels managed by the professional hotel management from the overseas Hotel management network. Generally have a number of guestrooms more than the previous types , tend to focus on designing a Boutique Hotel with a small scale but together with the 5 star quality, runs to create characteristic and unique identity in both service and the decoration of the hotels;

The Hotel location is one of the important factors for commercial success and can be divide Boutique Hotel into 2 different types:

"City Hotel" this hotel type underscores the importance of the location in the economic zone, because of comfort and luxury of the area are located. The design and decoration of this hotel type is physically different from the resort design and decoration,

therefore, be consistent with history and art in the particular places, has fostered the atmosphere and emotions between guests and the building;

"Resort Hotel" has to be different, unique identity and elements and also not convey too much luxury although the hotel was located in the important area, as well as the Boutique Hotels in the city centre. But yet, must locate at the quiet area, far from the city, either island or mountain, modern design but still preserve the natural aura and aesthetic of the location also need to provide the high service quality than the hotels in the city, as might offer spa or private swimming pool service as the outstanding service.

From the above description suggests that Boutique Hotels can categorize by several factors according to the hotel location, mode of administration and the type of the accommodation which in each factor was also having different group targets to presents various alternatives for the guests.

Therefore, this project design is categorized to the luxury 5-stars hotel because of an appropriate space of the facilities of the rating hotel criteria as mentioned above are complete, the accommodation for tourism's standard category 5-stars hotel and resort of the Ministry of Information and Culture detailed as follows:

3.1 Location, environment and parking

3.1.1 Provide parking area not less than 40% of Guestroom

3.1.2 Provide slope path as well as facilities for people with disabilities in access hotel lobby.

3.2 Lobby hall, public toilets, elevator and hotel circulation

3.2.1 Lobby hall

3.2.1.1 Provide waiting area with an appropriate amount of facilities, same as size, type and hotel stars

3.2.1.2 Provide appropriate amount of safety boxes (must have in all of the guestrooms)

3.2.2 Public toilet (Lobby area)

3.2.2.1 Toilet's width should not less than 0.9 meters and 1.20 meters of each toilet area

- 3.2.2.2 Height of ceiling should not less than 2.40 meters
- 3.2.2.3 Provide at least a proper 2 toilets
- 3.2.2.4 Provide at least 2 urinals (for men toilet)
- 3.2.3 Hotel circulation
 - 3.2.3.1 Separate between the hotel guest and staff circulations
 - 3.2.3.2 Provide specific circulation for hotel guest luggage transfer
- 3.3 Standard guestroom (Including terrace, walkway and toilet)
 - 3.3.1 Walkway or guestroom's terrace (every floors)
 - 3.3.1.1 Should not less than 1.50 meters
 - 3.3.1.2 An average height of ceiling should not less than 2.40 meters
 - 3.3.1.3 Provide the sprinkle with an appropriate spot
 - 3.3.2 Guestroom area should not less than 40 sq.m (Included toilet nor terrace)
 - 3.3.2.1 Guestroom height should not less than 2.70 meters
 - 3.3.3 Guestroom furniture
 - 3.3.3.1 Provide closet depths not less than ≥ 0.55 meters and ≥ 1.10 meters width
 - 3.3.3.2 Single and twin beds $\geq 1.20 - 2.00$ meters
 - 3.3.4 Guestroom details
 - 3.3.4.1 Bedroom area
 - 3.3.4.1.1 Television
 - 3.3.4.1.2 Refrigerator
 - 3.3.4.1.3 Telephone
 - 3.3.4.1.4 Internet access - wireless
 - 3.3.4.1.5 Air conditioning
 - 3.3.4.1.6 Minibar (Coffee-tea maker)
 - 3.3.4.1.7 Desk
 - 3.3.5 Toilet in Guestroom
 - 3.3.5.1 Hot water Boiler
 - 3.3.5.2 Bathtub

3.3.5.3 Hair dyer

3.3.5.4 Toiletries

3.4 Suite and Executive floor

3.4.1 Should not less than 5% of total guestrooms

3.4.2 Provide \geq 60 sq.m of area use (Included toilet nor terrace)

3.4.3 Restaurant, coffee shop, bar and kitchen

3.4.4 Dining area

3.4.5 Provide food service

3.4.6 Serve international food

3.5 Kitchen

3.5.1 Toilet (specially for restaurant not use together with lobby)

3.6 Swimming pool

3.7 Toilet

3.7.1 Provide shower room

3.7.2 Provide at least 1 toilets and 1 urinals

3.8 Pool bar

3.9 Administration

3.10 Security

3.10.1 Provide fire exit and staircase which are located in an appropriate area

3.10.2 Security system

3.11 Back of the house

3.11.1 Laundry

3.11.1.1 Provide appropriate amount of laundry equipment with great ventilation

3.11.2 Garbage

3.12 Special activities

3.12.1 Provide indoor and outdoor service and activity at least 5 services



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