



## **STUDY ON CITY PHYSICAL EVOLUTION IN THE OLD TOWN OF VIENTIANE CAPITAL, LAOS**

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### **ABSTRACT**

The old town zone of Vientiane capital is the historical importance and foundation zone of Laos. The evolution of the city was initiated in the old inner city wall with its estimated area of about 150 hectares during 450 years that is the dominant essential to develop and lead to the city growth. Since 1986 which was the new changeable period, Vientiane has played an important role in term of social-economic and management until present.

The main objective of the thesis is to present the study concerning physical evolution of the city in term of the shifting of the city in new era and physical management in the inner city wall (in zone of cross road of Pakpasak, along the Setthathilad to Khouvieng road and along the Mekong river to Pakpasak).

The development in the old town zone destroyed not only the value of the buildings but also the cultural activities of the people due to the economic development which has changing the form of the city and disappearing of significant and unique architectures because of the residential needs and the economic development by this reason the inner city wall requires the improvement for long term.

The purpose of this thesis is the result of the new image creates for the old town zone. Hence the thesis is divided in to four main zones by using the criteria: the height, building area, open space and view; those are the main elements of the urban design that would manage the construction or renovation which relate to the environment in that zone.

Those problems above are because of lack of the strategic plan of the zone in the sense of management. The population does not care about following the rule hence the construction is not based on

the regulation guideline and the heritage building has destroyed. More importantly, new constructions are hiding the unique building particularly the temple.

The study shows that if lacking of detailed plan, construction management or urban management. Obviously, the problem would appear in term of changing the building type and function or the pack construction problem in the city zone.

**Keywords:** *Physical, Control and Management, Heritage Zone, Vientiane Capital*

## INTRODUCTION

Vientiane Capital has an ancient history, which began as the Lan Xang capital of the 16<sup>th</sup> century. Vientiane Capital is the capital of Lan Xang for almost 300 years.[1]

King Setthathirath was the first king, who built Vientiane as well as the palace, former temple (Haw Phra Kaew), many temples, hall of fame, That Luang temple and others 100temples.[2]

In 1893, It eventually passed to French rule, the French have decided to renovate Vientiane to be a large house and the center of the colonial city.[3] The French rebuilt the city and rebuilt or repaired Buddhist temples such as Pha that Luang, Haw Phra Kaew and left many colonial buildings behind. At the time, Vientiane Capital had a population of 1.500 people who lived in rural areas and came to eat with livestock farming.[4] Throughout the colonial period, Vientiane has grown expanded in each timeline:

After France granted independence to three Indochina (Laos, Vietnam, Cambodia) in 1954,[5] Vientiane was developed and expanded periodically, especially the population has risen rapidly, with many migrants from different provinces that fighting each other between the Lao National Patriotic Front and the Government of the Lao Kingdom.

From the history and evolution of the Vientiane city, we can see the importance of the old town center (ZPP - Ua)[6] as a religious conservation area, local architecture and colonies. Over the past years, tourism has grown, making it necessary to build new ones.

Thus, the study of the old city wall is special significance because it is a historic integrated area, and combination of economic, social and cultural history associated with economic management.

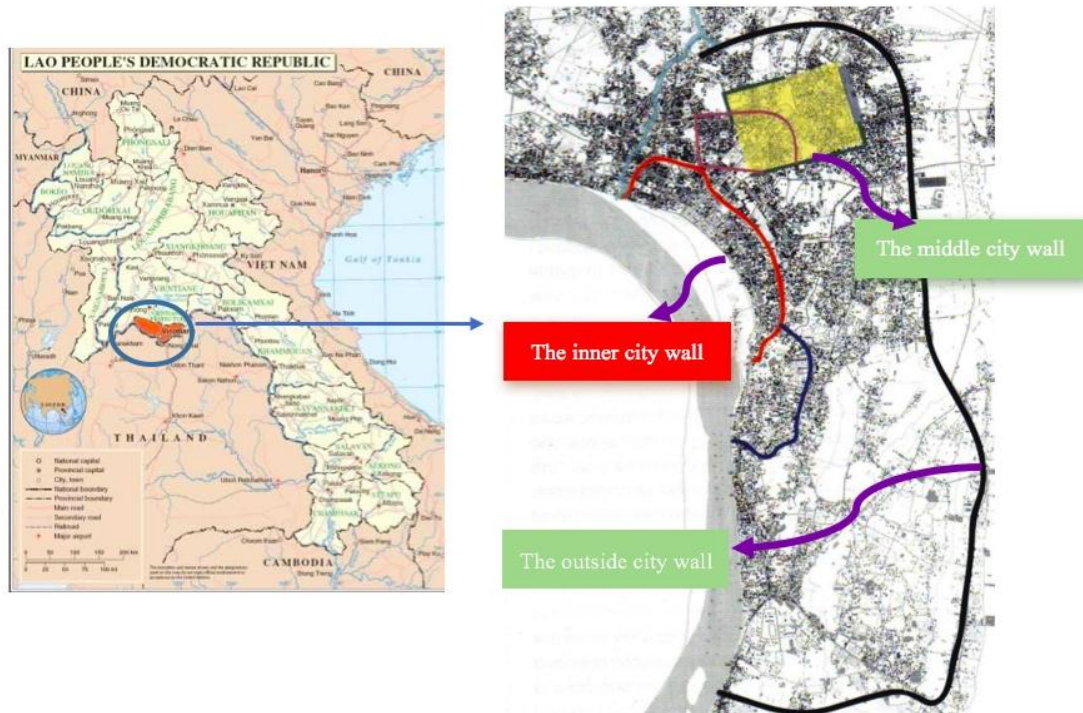


Figure 1: The map shows the expansion of the Vientiane three-city wall

### The Purpose of Research:

- ❖ Study on new trends in urban transformation, especially the growth and problem of physical change in Vientiane Capital.
- ❖ To study the regulation and management of the overall management plan that relates to the growth and changes in the physical activity associated with the activity. Economic, social and population.

### Scope of Research:

Study in the old town of the 150-hectare area which is an old city conservation area (ZPP - Ua): from Pakpasak crossing the road to Sedthathilath road, Samsaenthai road to intersection of North Khuoaluang, along Khounboulom road to Khouvieng road crossing to Morning market then up to Khouvieng circle, along the Phaxay road crossing intersection of Thatkhao village, the area of Thakhao village to Mekhong riverside of Fahhgoum road crossing Pakpasak.

### Scope of study:

- ❖ Northwest adjacent to Syhom village.
- ❖ West adjacent to Mekhong river.

- ❖ North adjacent to Saiylom area.
- ❖ East adjacent to Nongchan area along to Khouvieng road.
- ❖ South is adjacent to Buengkhayong village.



Figure 2: The study area map of the old town areas in Vientiane Capital

### Expected Results from Research:

- ❖ Land use within the inner wall area, the density of building materials, population density, infrastructure system.
- ❖ Law enforcement which is the main focus is master plan of Vientiane Capital.
- ❖ Impact of investment projects on old city preservation.
- ❖ The link between physical management guidelines consistent and appropriate to the old city conservation area.
- ❖ Directions developed further from the policies, principles, how to determine the proper way to manage development physical canal in the old city area.

**Review the Theory, Management Policies and Relevant Research:**

**Ideas for the city center development:**

There are four main principles for urban development:

1. Good governance
2. Public and private participation (PPP)
3. Sustainability
4. Stakeholder Involvement

**Architectural Physical Components and the city unique identity is divided into four categories:**

1. Important places (Landmark).
2. Important buildings.
3. Contributing buildings.
4. Non-contributing buildings.

**Policies, legislation, and management practices:**

1. Vientiane Urban Management Regulation, 1991.
2. Vientiane Urban Management Regulation, 2002 till now.
3. Construction collapse management.

Construction	Contents	Location of project	Approved by
Type 1	less than 200 square meters	In the master plan area	Public works and Transport of district (PWTD)
		Outside the master plan area	Department of Public works and Transport (DPWT)
Type 2	more than 200 square meters	In the master plan area	Vientiane Urban Development Administration (VUDA)
		Outside the master plan area	Department of Public works and Transport (DPWT)

**Table 1:** Construction management in Vientiane Capital[7]

## Methods of Research and Measures to Control Physical Urban Area:

### Steps of research:

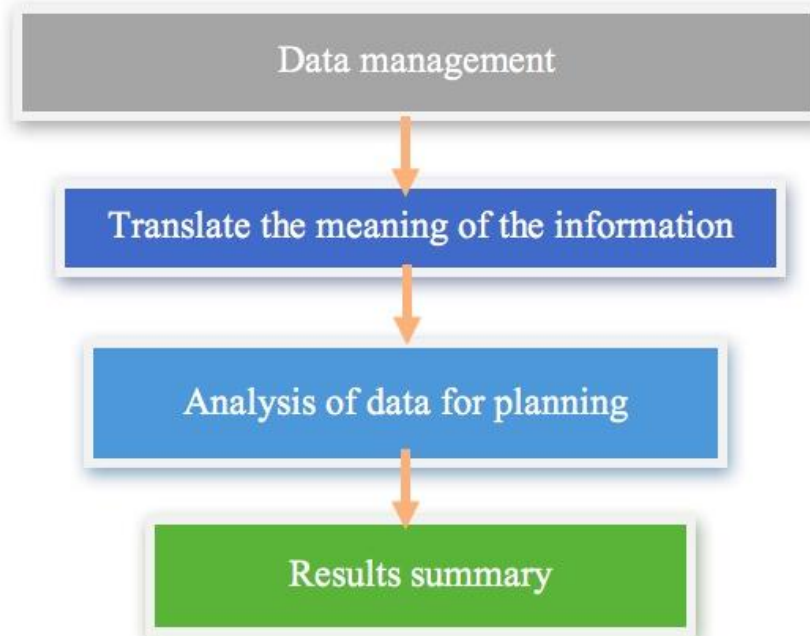


Chart 1 steps of research

### Methodology in research:

The education sector is divided into three sub-areas, for easy access to research and data analysis.

1. Area of Vat Chan

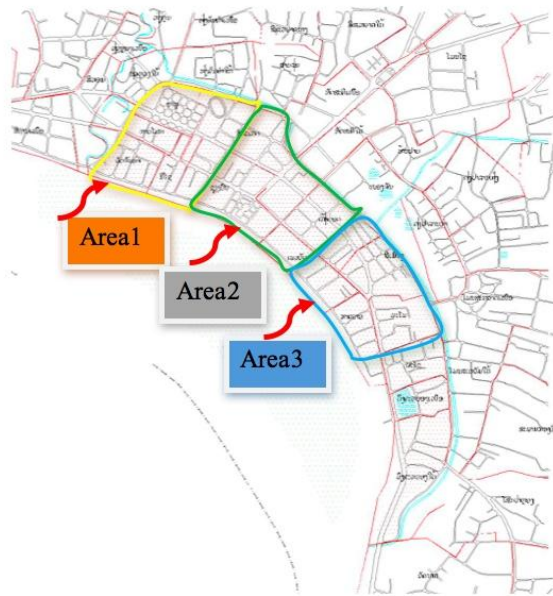
There are religious buildings, such as Chan temple, Meesai temple, Ong Tue temple, Haiysok temple, In Paeng temple. It covers about 50.8 hectares.

2. The Presidential Palace area

It is a community that has a large number of government buildings and religious buildings (temples). It covers about 50.3 hectares.

3. Area of Si Mueng temple

It is the area with a lot of residential buildings and religious buildings (temples), such as Si Mueng temple, Pha Pho temple, That Khao temple and the City hall. The area is 48.4 hectares.



**Figure 2:** The map shows the village boundaries in the old town

**Tools for research and data collection methods:**

**The data collection is divided into 3 sections:**

1. Sector 1: building conditions and maintenance of buildings, land use, urban vacations.
2. Sector 2: community living standards.
3. Sector 3: a management attitude to reflect an understanding of the importance of the city.

**Data analysis:**

1. Guideline 1: to evaluate economic - social, environmental, landscape aspects (Evaluation research) which changes in the city's physical appearance.
2. Guideline 2: to find ways to manage the physical environment:
  - ❖ Legal tools (control rules, regulatory problems, regulatory issues).
  - ❖ Economic tools (applying a stimulating policy such as: reduce tax, economic returns to support residents or entrepreneurs, follow development plans of the city geography).
  - ❖ Using social tools (let the people have participated in development management).

**Physical Development Conditions:**

Physical conditions control of building materials includes: buildings with height, building type. Using the recording, taking photos and listing the area details, based on that area, the economic zone and the

main road, to facilitate the exploration of the landscape conditions.[8]

**Area 1: Wat Chan area**

The actual survey of the area 1, based on economic development and residential needs is high. Areas with buildings height along on the Sam Saen Thai and Setthathilath route are between 3 to 5 floors. At the Wat Chan, Ong Tue, Mee Sai, Haiy Sok, In Paeng temples area, the building height is between 1 to 3 floors.



**Figure 3:** The Land use plan that sees a point of change in the area1

color	Buildings type	Buildings number (buildings)		
		2015	2000	1970
<span style="color: green;">■</span>	Residential buildings	321	280	200
<span style="color: magenta;">■</span>	Business buildings	329	275	115
<span style="color: blue;">■</span>	Office-Education buildings	58	47	42
<span style="color: yellow;">■</span>	Religious buildings	6	6	6

**Table 2:** Buildings type in area 1



### Area 2: The Presidential Palace area

A survey of the real situation in the area 2 based on the state-owned area. The building height is on the Sam Saen Thai Road, along the Setthathilad Road, which is between 1 to 3 floors.



Figure 4: The Land use plan that sees a point of change in the area2





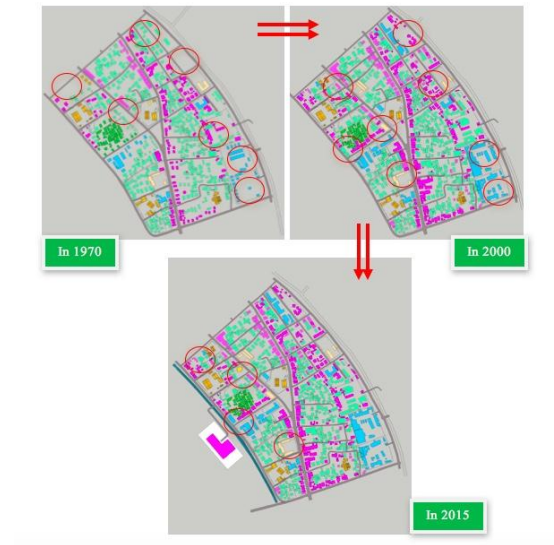
color	Buildings type	Buildings number (buildings)		
		2015	2000	1970
	Residential buildings	150	140	127
	Business buildings	105	275	115
	Office-Education buildings	267	225	84
	Religious buildings	2	2	2





Table 3: Buildings type in area 2

### Area 3: The Si Mueng temple area

A survey of the real situation in the area 3 was based on a large residential area and a crowded community in the Phia Vut village. The buildings height in this area is between 1 to 2 floors. Mostly, the area is a residential area and trading activities are minimal.



**Figure 5:** The Land use plan that sees a point of change in the area3

color	Buildings type	Buildings number (buildings)		
		2015	2000	1970
	Residential buildings	559	498	351
	Business buildings	105	275	115
	Office-Education buildings	154	130	60
	Religious buildings	5	5	5

**Table 4:** Buildings type in area 3

**The Problem of Changing the Area:**

**Factors on the buildings height in each area:**

Building height	Building type
1 – 2 floors (about 8m)	Single houses, apartments, religious buildings
3 – 4 floors (about 8 – 16m)	Dormitories, apartments, office buildings, education buildings
5 floors up (about 16m up)	Hotels, state and private office buildings.

**Table 5:** Summarize high-rise buildings in the Old Town area

## Problems changing buildings that violate regulations:

### 1. Project: Upgrade Arisa Hotel

Location Xiang Yuen village, Chanthabouly district, Setthathilad Route; Zone: ZPP – Ua, building height not exceeding 12 meters. The 7-storey building, with a height of 23.80 meters. The elevation height is 11.80 metres.

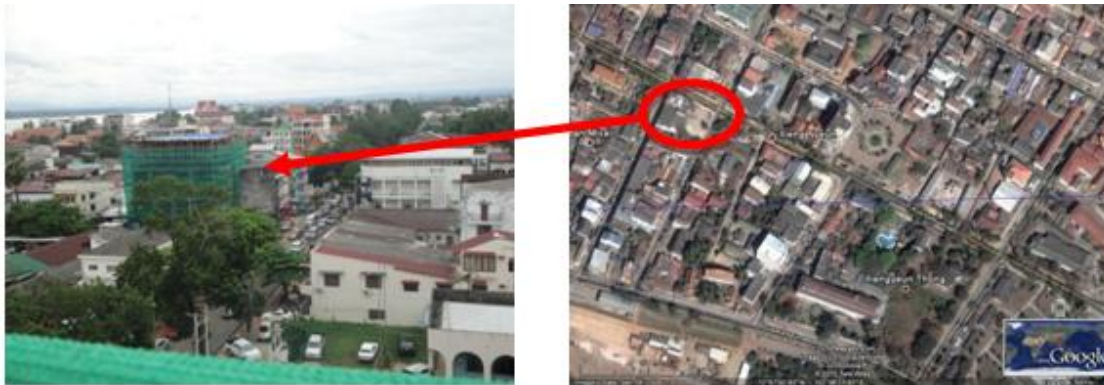


Figure 6: The location of Arisa hotel

## Development Direction, Height Control and Building Model:

### ❖ Point 1:

According to along the Fah Hgoum road to Setthathilad road area, the building height is not more than 12 meters. Based on today's average elevation, the area covers religious areas and colonial buildings.

### ❖ Point 2:

According to the Sam Saen Thai road linking to the Anou village area to the Kam Phaeng Mueng road, the building height is not more than 15-20 meters.

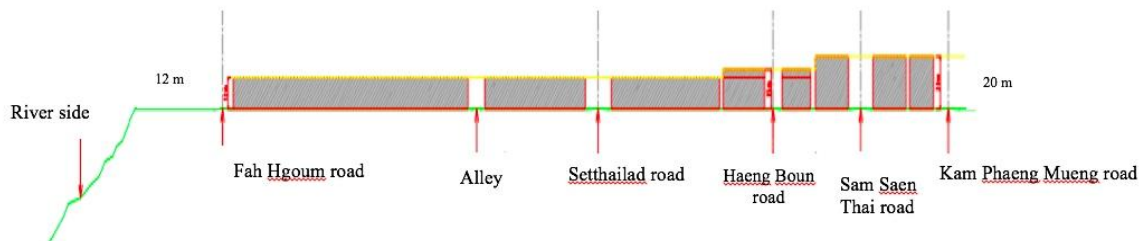
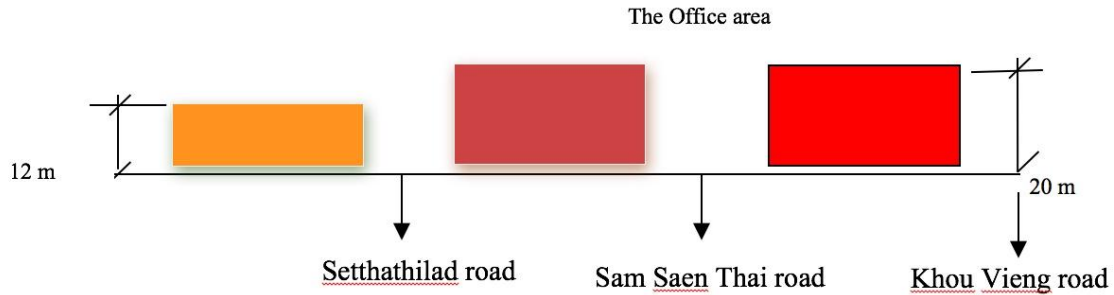


Figure 7: The building height control of point 1 and 2

❖ Administrative area (state office)

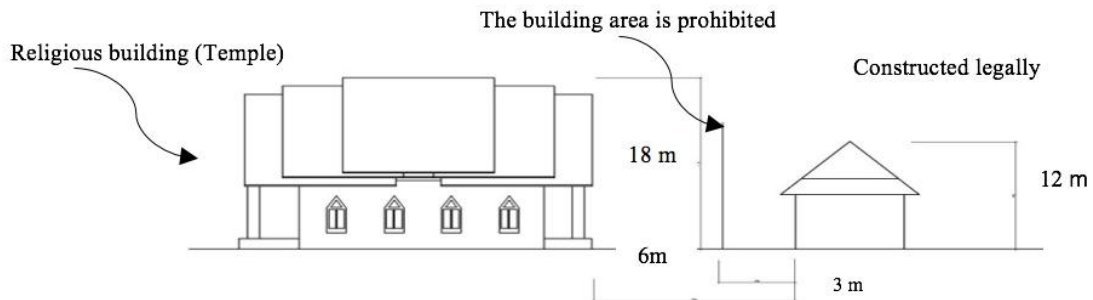
The building height in an administrative building or a public building shall not exceed 20 meters.



**Figure 8:** The building height control of administrative area

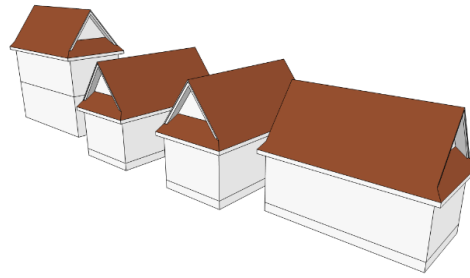
❖ Building area near the religious buildings (temples)

Distance from the fence to surrounding buildings is 3 - 6 meters and the surrounding buildings height is not exceeded beyond the buildings type set out in the regulatory regulation of 12 meters.

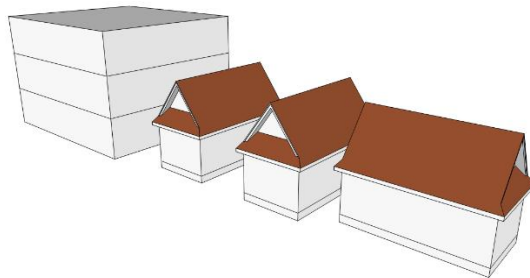


**Figure 9:** The building height control of religious buildings

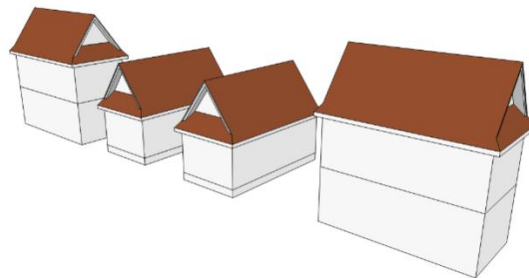
**Model to compare the scenes to preserve and avoid problems in the area:**



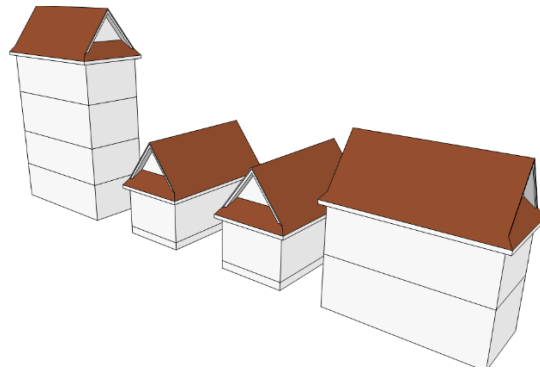
**Figure 10:** Keep the form, shape and size close to the same



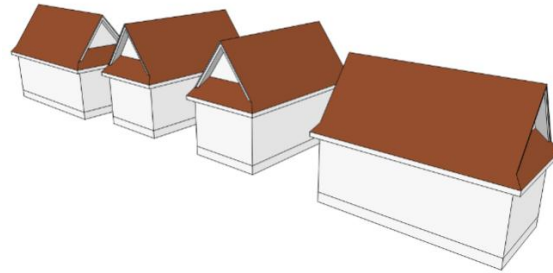
**Figure 11:** Avoid buildings with different forms, shapes and sizes



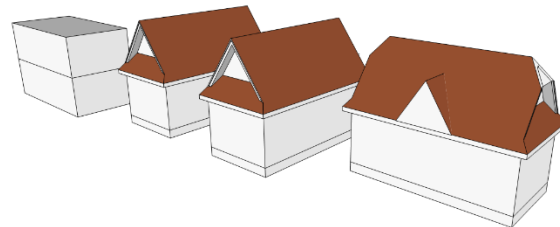
**Figure 12:** Keep the height closer to neighboring buildings



**Figure 13:** Avoid buildings that are high because of the obvious difference



**Figure 14:** Use rope shape 45-degree angle on the Lao original



**Figure 15:** Avoid any other style of rope shape

## CONCLUSION

From the physical environment in the Old town area of Vientiane; nowadays, full of different styles, modern style is much more than reflecting the unique localities that according to economic conditions. There is not conform or promote the Old Town Conservation Area, which shows the period of variation. This is the source of this study to find ways to control the physical condition of the conservation area in Vientiane Capital.

## Recommendations:

### Suggestions for regulatory management:

Some improvements should be made in accordance with the social and economic conditions, improving management rules should indicate that the implementation, management, and construction of a city plan are supported by the task of building a development village, providing district and village authorities with greater involvement.

### Recommendations on implementation, management system:

The city's construction management system is a combination of tasks, overlapping tasks between Vientiane Urban Development Administration, Public Works and Transport of district, Public Works and Transport of province and the Ministry of Public Works and Transport. In the introduction to the management system, the implementation of the management plan is recommended: There should be two levels of management board: policy provision level to decide on provincial issues and appoint a team to examine the collection and solving the problem at the basic level.

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