

# Pleang (ແຜລັງ): Portraying Prince Naris' Cultural Hybridity in Architectural Forms

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Received 2022-10-14; Revised 2023-03-20; Accepted 2023-03-20

## ABSTRACT

His Royal Highness Prince Narisaranuvativongse (1863 –1947) was a court designer whose works transcended various fields of art, design, music, and architecture in Siam. Since his death, the prince's legacy has been fading from the public consciousness. This research comprises an architectural design proposal to resurrect recognition of his designs, and to create public connectivity in terms of physical spaces by focusing on Prince Naris' way of thinking, as expressed in a Thai word, pleang (ແຜລັງ), employed by Prince Naris himself. Pleang does not mean conventional, nor does it mean atypical. Pleang is a way of thinking that has limited relation to building typologies. We chose to study one architectural element that has an integral place in architectural theory and practice, namely, the window, which has often been considered as a "device" to create human comfort, and a "destination" of a room, with the qualities of being both "somewhere" and "nowhere." On-site observations and architectural surveys were used to document Prince Naris' placement of windows and fake windows in religious buildings along with his arrangement of the windows in his own private residence and studio known as Ban Plainern. The findings were later applied to an architectural design of existing shophouses that buffer a residential complex belonging to Prince Naris' descendants from Rama IV Road. We propose a renovation project, under the Prince Naris Learning Center program, to turn this building into an aperture to Ban Plainern putting it clearly into the public eye.

**Keywords:** cultural hybridity, window design, traditionalism, Siam, design methodology

## INTRODUCTION

His Royal Highness Prince Narisaranuvativongse (from now on Prince Naris) was a son of his Majesty King Mongkut, King Rama IV, and a half brother of His Majesty King Chualongkorn, King Rama V (reigned 1868-1910) and a prominent court designer whose works transcended various fields of art, architecture, and design. He was active in the creation of architectural designs from the reign of King Rama V until the reign of His Majesty King Prajadhipok, King Rama VII (reigned 1925-1935). In the late-nineteenth century, Siam went through a process of cultural exchange and trade that cut across the geographic boundaries of the nation state. King Rama V sent his sons abroad for their higher education. He also employed a number of Western European personnel in the service of Siamese Government with “the need to modernise his country, but [he] wanted to it with a high profile, creating structures that were not only useful but also impressive so as to renew the Kingdom of Siam’s prestige” (Piazzardi, 2010, p. 7). During this period of western colonisation, Prince Naris never visited Europe. He was an autodidact in the fields of art and architecture, yet he collaborated with Italian artists, architects, and engineers to unravel western and eastern architectural traditions. Generally, scholars who have studied Prince Naris’ architectural designs have tended to explain one of his unique ways of thinking through a Thai word, namely pleang (ແພັງ), often employed by King Rama V of Siam and by Prince Naris himself.

The objective of this research-design article is to begin to understand the meaning of pleang through literature review, particularly in terms of architectural design, and the ways in which Prince Naris applied the pleang concept to three religious buildings that represented cultural hybridity in architectural forms executed in three different reigns (King Rama V-VII): the ubosoths or the principal halls of -- in Prince Naris’ spelling -- Benchama Bophitr Temple (also known as the Marble Temple), the Wat Rajadhivas, and Wat Phrapathommachedi. It is certainly true that there are many aspects of Prince Naris’ works that portray cultural hybridity between Western and Eastern architectural traditions, material

selections, skills, and building construction techniques.

In order to scope down the analysis, we decided to focus upon a specific architectural element that is widely discussed in architectural discourse, namely the window. This particular architectural element is interesting because it exists in-between the space of functions, i.e., ventilation, illumination, filtration, and framing and the theories of space. A window is thought of as both “somewhere” and as “nowhere” since it has the ability to “affirm itself as a place, the key destination in a room, claiming a vast territory; it can also retreat into anonymity” (Koolhass, 2014, p. 20), and because a window “is an object, or a device providing a function, but it is also a location, a destination within architecture” (Koolhass, 2014, p. 24). This is our statement. A window is a device to create human comfort as much as a destination in a room. It can represent somewhere, such as the ornate gilded window of Benchama Bophitr Temple, and nowhere, such as the generic wooden window of Thai house. Why don’t we hybridise all of them for the contemporary time?

The proposed outcome of this research is to apply the findings to the Prince Naris Learning Center, a renovation project of an existing building, owned by Prince Naris’ descendants, located next to Rama IV Road and Klong Toey MRT (the Metropolitan Rapid Transit), in front of the prince’s private residence in Klong Toey District known as Ban Plainern. The site was selected because of its potential to become the “face” or facade of Ban Plainern without disturbing the privacy of residential buildings within the gated community of Prince Naris’ descendants; the entry to the site can be separated from Ban Plainern itself. Learning Center programs are generated from the interviews with Prince Naris’ descendants, and the building showcases a collection of windows based on this research.

## LITERATURE REVIEW

The literature review for this research-design article begin with two volumes of 959 pages, written in Thai, by Jiratasanakul (2013) entitled งานออกแบบสถาปัตยกรรมไทยฝีพระหัตถ์สมเด็จฯ

เจ้าฟ้ากรมพระยานวัตติวงศ์ [Thai Architecture Design Works of H.R.H. Prince Narisaranuvativongse], which focuses on the overall architectural design thinking and architectural drawings of Prince Naris. Jiratasanakul's analyses are detailed, and he compiles textual references of Prince Naris' correspondences with his colleagues, disciples, half-brothers, and patrons.

Jiratasanakul has, in his books, broadly documented Prince Naris' concept of pleang -- an idea that is worth exploring in design applications. As part of the review of this source, we translated and categorised the meanings of pleang into three categories, namely to unravel, to diversify, and to hybridise. Pleang is a complex organisation of thoughts. This is our first attempt to suggest to a wider audience that it is possible to borrow the idea and implement it to design.

## To unravel

Jiratasanakul underlines pleang as an expression of Prince Naris' architectural design approach. One meaning of pleang is "to unravel (คลี่คลาย)" oneself from the rigid rules of the tradition, that is, to be free from the confinement of norms. Jiratasanakul then offers that, as a consequence of the act of unravelling, one characteristic of Prince Naris' design is "the unusual (ไม่ปกติ)," or something that clearly differentiates itself from norms (Jiratasanakul, 2013, p. 244). To Jiratasanakul, Prince Naris' architectural designs represent the "complexity (ความซับซ้อน)" of thoughts and identify a "deeper (เชิงลึก)" meaning (Jiratasanakul, 2013, p. 244). He stresses that Prince Naris called his own works "งานนอกแบบ," which literally means a design that exists outside the realm of tradition (Jiratasanakul, 2013, p. 245).

In Jiratasanakul's interpretation, pleang can be read as an "act" to unravel as much as a "process" of unravelling something in order to create a design that exists outside the realm of the tradition. The act requires contemplation; it requires a deeper understanding of what the tradition is, what is essential, and what is extraneous that can be stripped away. Jiratasanakul offers his interpretation based on a textual reference, written on the occasion of the

centenary of Prince Naris' birthday anniversary, of Prince Naris' disciple and associate, and one of Thailand's most remarkable 20<sup>th</sup> century scholars on Thai culture named Yong Sathiankaset, also known by his noble title of Phraya Anumanratchadhon (born 1888; died 1969). Phraya Anumanratchadhon pointed out that Prince Naris was an intellectual who was knowledgeable of the arts, and added, "Art is an expression of the intangible, giving birth to the emergence of form

(ศิลปเป็นการแสดงออกของสิ่งที่ไม่มีตัวตนให้ปรากฏมีชื่น)" (Anumanratchadhon, 1963, p. 3). This is important. The function of art is to provoke an emotion in the viewers, and that emotion might be called delight. If Art has a life, it will be a life that is full of meanings, highly positive, for the better good of the society. Phraya Anumanratchadhon then classified the principles of Art as follows:

“1. [Art] comprises strange thinking that is different from norms (เป็นความคิดแปลกไม่เหมือนกับธรรมชาติมาก)"

2. [Art] comprises higher thinking derived from a flourishing heart (เป็นความคิดสูงซึ่งออกจากการคิดใจที่เจริญแล้ว).

3. [Art] comprises thinking that supports the betterment of the society (เป็นความคิดส่งเสริมคุณงามความดีกับสังคม)" (Anumanratchadhon, 1963, p. 3).

By "strange (แปลก)," Phraya

Anumanratchadhon did not mean strange to the point that the artwork would alienate the viewers or make the work incomprehensible; rather, he meant the originality of an idea that was different from the norm. Thinking is a key to understanding pleang. Phraya Anumanratchadhon wrote (in Thai): "When [Prince Naris] thought of creating art, he would study the works that already existed to gain a better understanding of the past, what it is, when and why it was made, and how it can be unraveled and developed. This is why, when Prince Naris looked at something, he would think primarily of its principles, avoiding thought of the non-essentials" (Anumanratchadhon, 1963, p. 4).

Pleang signifies a way of thinking that is neither conventional nor atypical; this is our interpretation. Pleang means to apply a minimal

change to create a maximum effect upon the viewers without losing the sense of familiarity. The prince knew that the degree of change should be one at which Thai society can still understand the art object with a minimal sense of alienation. He practiced this idea in various fields of art, including architecture. One of our favourite examples is the painting of "Indra on His Elephant Eravan," painted by Prince Naris as a personal gift to be presented to King Rama VI, His Majesty King Vajiravudh, on the King's 60th birthday, in 1924. The painting that Prince Naris made of the divine elephant diverged from the conventional mode of depiction, a three-head elephant. Prince Naris perceived this as unrealistic; he, instead, gave Eravan a single head with four tusks, as the representation of the ideal elephant, and painted its wrinkled skin under light and shadow, capturing the Elephant's three-dimensionality in a realistic sense. The eyes of Eravan are the focal point; they are rendered human-like and hold the viewer with a gentle but powerful gaze. We see the religious aspect of the subject matter being marginalised by Prince Naris' new treatment towards three-dimensionality. This anatomical study of animal figures was new to the Siamese painters of his time. Prince Naris' painting entitled "Indra on His Elephant Eravan" was, later, modified and adapted as the emblem of the Bangkok Metropolitan Administration. The emblem is still in use today and is present throughout modern-day Bangkok.

## To diversify

Jiratassanakul identifies one characteristic of Prince Naris' works with a Thai term, สมบูรณ์แบบ which can be translated as "perfection of form" (Jiratassanakul, 2013, p. 219). By form, he does not mean the physical object of design, but rather the knowledge and science of the Arts, including fine and applied arts, music, literature, architecture and painting. Prince Naris could diversify the possibilities of thoughts prior to the selection process appropriate to the final design because he was not limited to a specific field of the Arts; he did not obey any specific sets of rules that governed the relationship between the master and the disciple in the traditional sense. He was, rather, a figure that might be called a Renaissance Man. He earned his freedom of

thought through the process of self-study, and the objects of his study ranged from the art of old masters to architectural drawings and more. Jirastassanakul emphasised Prince Naris' enthusiasm for studying innovative architectural design in Western Europe. One of these innovations was the "architectural blueprint," called กระดาษเขียว or "green paper" in Thai (Jiratassanakul, 2013, p. 214). These architectural construction drawings were highly systematised, yet freedom could be derived from the understanding of architectural design principles. Jirasstassanakul gave a textual reference to the correspondence between Prince Naris and one the daughters of his half-brother, Prince Damrong, named Mom Chao Pilai Diskul, that was published in book form in 1969 on the occasion of her 60th birthday. There are many sweet letters in this book. The first one was written in Thai by Prince Naris on 25 April 1930 three days before Prince Naris' birthday, saying that when Mom Chao Pilai came to ask Prince Naris what he would like to have as a gift from abroad, the prince had not been able to think of anything until the moment that he wrote this letter. Architectural drawings of monuments, he said, would be useful for him, allowing him to "see" the thinking behind the design of the structures. Prince Naris stressed that he was mainly focused upon newly designed monuments such as memorials for dead soldiers. Prince Naris hoped to understand where the world was heading, so he asked for any architectural drawings of monuments that Mom Chao Pilai could find. These could be photographs or "construction drawings, printed from architectural drawings, with plans and elevations". He added that, in addition to the newly designed monuments, he also wished to see architectural drawings of earlier times that were aesthetically pleasing to the eyes, such as "อนุสรณารีย์วิศวกรรม" (Narissaranuvadtivong & Diskul, 1969, p. 3), which might be the Victor Emmanuel II National Monument designed by the Italian architect Giuseppe Sacconi, constructed in Rome, Italy.

Both the recent and the distant past were equally important to Prince Naris if the study materials were useful; this is our interpretation of pleang with regard to Prince Naris' diversity of knowledge. The application of knowledge and expertise to create works of art did not mean

disregarding the past, and it was not limited by any geographic boundaries. The prince had the ability to identify the essence of the materials that he studied with. He embraced and respected the essence of things that he observed one by one.

## To hybridise

The last category of the meaning of pleang, “to hybridise (คุกคุก),” was based on King Rama V’s intention to build Benchama Bophitr Temple as a combination of “museum (มิวเซียม)” and “college (คอกเลจ)” (Jiratassanakul, 2013, p. 106). These choices of words are interesting because they represent the use of English words ‘borrowed’ into Thai – in effect, hybrids between Thai and English languages and, therefore, concepts. King Rama V chose the word “college” rather than “rongrien (โรงเรียน),” or school, which was a general program in Buddhist Temples. Benchama Bophitr Temple or “Temple of the Fifth Reign” could not be defined with either the concept of museum or college; it had to be both. Prince Naris created a design for a religious building that was different from the existing Buddhist Temples, including such aspects as the selection of materials, layout planning, and construction techniques.

The first example of pleang is found in the design of the floor pattern in the ubosoth of Benchama Bophitr Temple. Jiratassanakul points to the decision-making process of Prince Naris, saying that the prince drew the floor pattern of Benchama Bophitr Temple’s principle hall, but then he re-drew it because the initial drawing appeared “too foreign (ผีรั่ง)” (Jiratassanakul, 2013, p. 225). Some of the most interesting points of Jiratassanakul’s analyses are that pleang is thought of in term of balance between Thai and Western European influences on the proposed outcome. In the preliminary drawings, Prince Naris was able to see the possibilities for finding that balance of thoughts that were turned into something perceivable and tangible. When the characteristics of the drawing “appeared (กระแสเดียด)” to be “foreign (ผีรั่ง)” rather than Thai, he would reconsider, and he even decided to redraw the design. It is clear that Prince Naris was interested in innovation and techniques of construction, and to him, architecture, whether

big or small, was expensive. For example, the cut-Carrara-marble to build the floor pattern that he drew was imported from Italy together with Italian craftsmen. Prince Naris warned, “Be careful. [Architecture] is built for visual delights rather than the wish for demolition. Monetary payment cannot be reclaimed. The final result can be left standing as a monument of shame” (Anumanratchadhon, 1963, p.5).

The second example of pleang -- and this is even more interesting -- is given to the design of voids, basic architectural elements that involve brightness and darkness, sensation and imagination. Jiratassanakul compared the ways in which voids were designed and appreciated in the East and the West. The general characteristics of voids that Jiratassanakul proposed were “minimal, small and narrow (น้อย เล็กและแคบ)” for the East and “maximum, big, wide (ที่มาก ใหญ่และกว้าง)” for the West (Jiratassanakul, 2013, p. 266). Jirastassankul based his analysis on the published correspondence between Prince Naris and his half-brother Prince Damrong. They discussed the “darkness (มืดหนัก)” of architectural spaces in Java and Cambodia and concluded that, in the East, there was a wish to “hide sacred objects (ซ่อนลึกลับ)” so that they would not be clearly visible (เปิดให้เห็นได้บ้างตามเวลา ก็ให้เห็นแต่เมื่อว่า คลับคล้ายคลับคลา)” (Narissaranuvadtivong & Damrongrachanupab, 1961, p. 70-71). In other words, darkness increased the sensation of sacredness in the East; by contrast, in the West, sacred objects were treated with the appreciation of light and brightness. In both cases, Prince Naris noted, faith and delight could be created by architectural spatial design.

Pleang is a thinking process. The importance for Prince Naris was to know what to choose, to know what to abandon, and for what purpose. The nature of pleang is experimental and by that it is meant there is a risk of a failure to realise the built form. Prince Naris received a wonderful brief concerning void designs for Benchama Bophitr Temple from his patron, King Rama V, in which the king offered advice and encouragement: “Nobody else can choose it [design of the window panels] better than you ... I do not intend to use the craft of mother-of pearl-inlay on the window panels. Go for new and original ideas, such as stained glass windows, as you may wish

(เป็นอย่างแผลงฯ ไปตามที่ekoจะคิด) (Rama V, King of Siam, cited in Chitrabongs, 2017, p. 51). Prince Naris created the complete preliminary designs of the stain glassed windows, but none of them were executed in reality. What is important to this article is not the outcome, but the thinking process. That the windows were never fabricated or installed takes nothing away from the creative process of design that helps us understand plaeng more deeply.

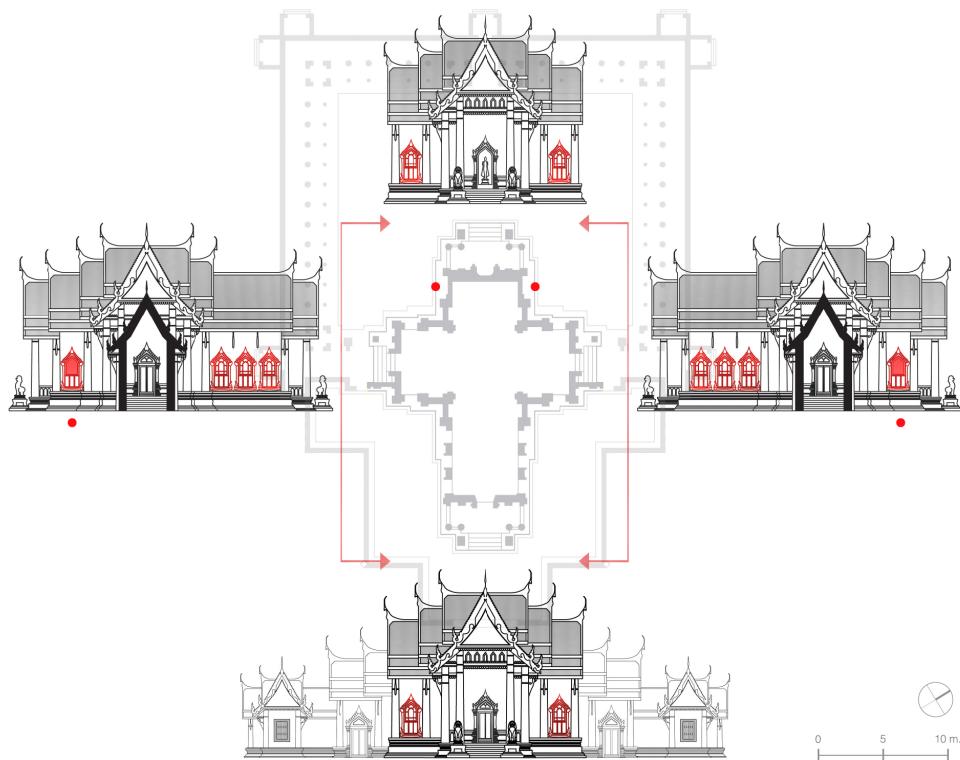
## ON-SITE OBSERVATIONS AND SURVEYS

The on-site observations and architectural surveys in this article are divided into two parts. The first part focuses on how Prince Naris applied the idea of pleang to the window design

of three religious buildings in their built forms, namely, the ubosoth of Benchama Bophitr Temple, the ubosoth of Rajadhipa Temple, and the ubosoth of Prapathomchedi Temple. Window design was chosen because the study of pleang suggests that a window has a unique place between the tangible and the intangible, between the physical form and the ever-changing figures of light and shadow, and appreciation of darkness and shadow. Windows are, therefore, selected as the key element used to convey Prince Naris' applications of pleang, classified into three features, namely "windows and fake windows," "visual harmony and form continuity," and "the bare-essentials and geometrical figures." These on-site observations and surveys were undertaken in an effort to visualise and establish the future execution of design enhancements for the Prince Naris Learning Centre, which is located in front of his private residence.

**Figure 1**

*Analytical Drawing of Windows and Fake Windows of the Ubosoth of Benchama Bophitr Temple.*



*Note.* This figure provides illustrations of the analytical drawing of windows and fake windows of the ubosoth of Benchama Bophitr Temple. The fake windows are marked in red in plan and elevations.

## Figure 2

*Photographs of a Fake Window (left) and a Window (right) of the Ubosoth of Benchama Bophitr Temple.*



*Note.* This figure shows photographs of a fake window (left) and a window (right) of the ubosoth of Benchama Bophitr Temple. Each of them is framed by the Thai architectural ornament called “sum reun kaew (ซุ้มเรือนแก้ว)” sitting above the white Carrara marble pedestal called “than singha (ฐานสิงห์)”, representing a hybrid between Thai cultural contents, Italian building materials, and innovation in construction.

The second part of the on-site observations and surveys aims to document the application of pleang at Prince Naris’ Thai house and studio. A key to understanding the prince’s way of thinking is identifying and understanding how he recomposed various styles of wooden windows of old Thai house structures in a new way, rather than observing each window as an object per se. The building that is the focus of this case study has rarely been documented by scholars who have studied Prince Naris’ architectural designs simply because it was a private residence. As researchers, we are privileged to have been provided with access to Ban Plainern in order to survey and to document the reconfiguration of spatial composition of Prince Naris’ Thai house.

## Part I

### Windows and Fake Windows

The analytical drawings and photographs in Figures 1 and 2 show that there are twelve windows on the outer walls of the ubosoth of Benchama Bophitr Temple. Only ten of them are real, meaning that only ten windows actually allow natural light and moving air currents into the interior spaces. The other two windows are fake. They can only be viewed from the outside of the ubosoth, and are not visible from the inside. The real windows and fake windows are on display above the white Carrara marble pedestal like the art objects (see Figure 2), and the walls onto which the two fake windows are placed are solid; there is no void.

More interestingly, all twelve are framed by gilded Thai architectural ornamentation called “sum reun kaew (ซุ้มเรือนแก้ว),” casting shadows upon the

walls above the two-meter high white Carrara marble cladding pedestal, known in Thai as “than singha” (ฐานสิงห์).” Than singha and sum reun kaew are the dominant features of the facade of the ubosoth of Benchama Bophitr Temple. Both of these Thai words have cultural significance. In Tribhumikatha, Buddhist Cosmology: The Illustrated King Rama IX Edition (2012), singha is described as the “kingly lion,” and “the noblest beast in the Animal Kingdom” (The Committee on Documentation an Historical Records Under the National Commission on the Celebration on Auspicious Occasion of His Majesty the King’s 7th Cycle Birthday Anniversary 5th December, 2012, p. 401). The most excellent of four kinds of singha is called the Maned Lion: “His lips and the tips of his feet are as red as though painted with a mixture of the lac and vermillion … His mane is soft; it is so beautiful and is as if a precious cloth worth a hundred thousand pieces of gold were draped over the frame of this most excellent of Kingly Lions” (The Committee on Documentation an Historical Records Under the National Commission on the Celebration on Auspicious Occasion of His Majesty the King’s 7th Cycle Birthday Anniversary 5th December, 2012, p. 401). This imaginary lion, singha, is part of traditional Thai architectural ornamentation, like the Garuda and the Naga. The space within sum reun kaew (ห้องเรือนแก้ว) is also regarded as a gateway to another realm of gods and angels. In Thai Cosmology, it is believed that all existences are governed by three planes, known as the Incorporeal Plane, the Corporeal Plane, and the Eleven Domains in the Sensual Plane (The Committee on Documentation an Historical Records Under the National Commission on the Celebration on Auspicious Occasion of His Majesty the King’s 7th Cycle Birthday Anniversary 5th December, 2012, p. 68-69).

There are three points to be made here. First of all, the above observation is an example of pleang, a hybrid between Thai cultural contents (than singha and sum reun kaew), Italian building materials (white Carrara marble slabs imported from Italy), and innovation in construction (cladding system). Still, as can be seen from the photographs in Figure 2, the outcome appears to be Thai. Secondly, traditional Thai Buddhist Temples tended to use “darkness” to appeal to faith and delight of the viewers, whereas in Western European conception, “brightness” is

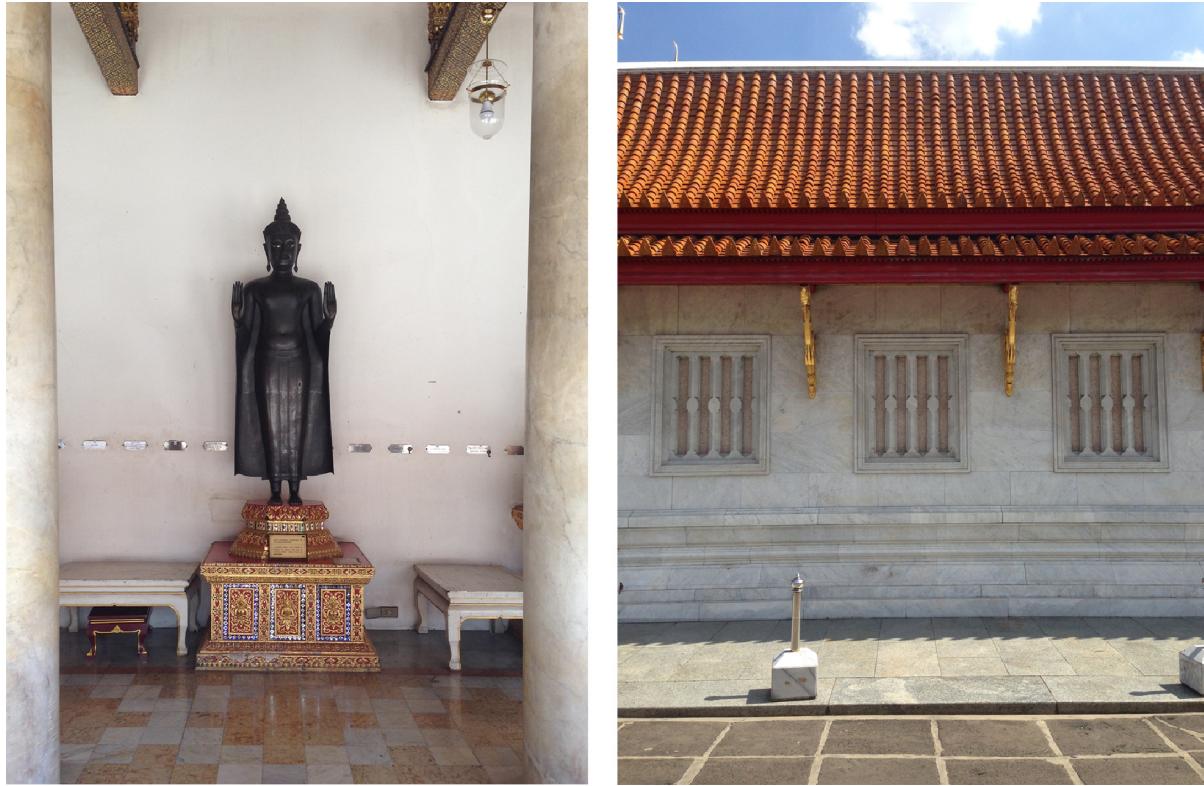
more likely to provoke such sensations. It seems that Prince Naris finally decided to hybridise these traditions. The inflow of natural light mainly shines through stained glass windows to the main spaces of the ubosoth, yet the darker space of the ubosoth created by the solid walls and fake windows, is in reality the space that houses the gilded Buddha statue. It is this ratio between darkness and brightness in real spaces that we perceive as pleang. Thirdly, and this point is important, the architecture of Benchama Bophitr Temple represents critical thinking in terms of blurring the boundaries between religious and secular activities. Viewers and believers can perceive a new type of aesthetic experience, akin to visiting a museum as well as a Buddhist temple. To emphasise this third point, fake windows, meaning the windows that frame no void, had the primary role of completing the overall balance of spatial composition in three-dimensionality. On the exterior surface of the cloister, or the “museum gallery” to use King Rama V’s term, 48 fake windows are arranged. The rectangular frames of these fake windows are made of white marble balustrades, known in Thai as “look ma huad (ลูกมะหาด),” which are placed within those fake windows. As an architectural effect of the interior spaces, the cloister walls are painted white to enhance and exhibit a collection of Buddha sculptures selected from different localities (see Figure 3).

## Visual Harmony and Form Continuity

The way in which pleang is applied to fake windows can also be observed at the ubosoth of Rajadhivas Temple, although the reason for their use is slightly different than in the case of Benchama Bophitr Temple. The ubosoth of Rajadhivas Temple was a renovation project. The fake windows, rendered in red on the plan and section (see Figure 4), are part of the solid walls designed to strengthen the structure in support of the existing walls. This is partly the result of construction constraints. It seems that the decision to create two fake windows on the exterior walls of the ubosoth of Rajadhivas Temple was made in order to complete the overall visual harmony and maintain form continuity.

**Figure 3**

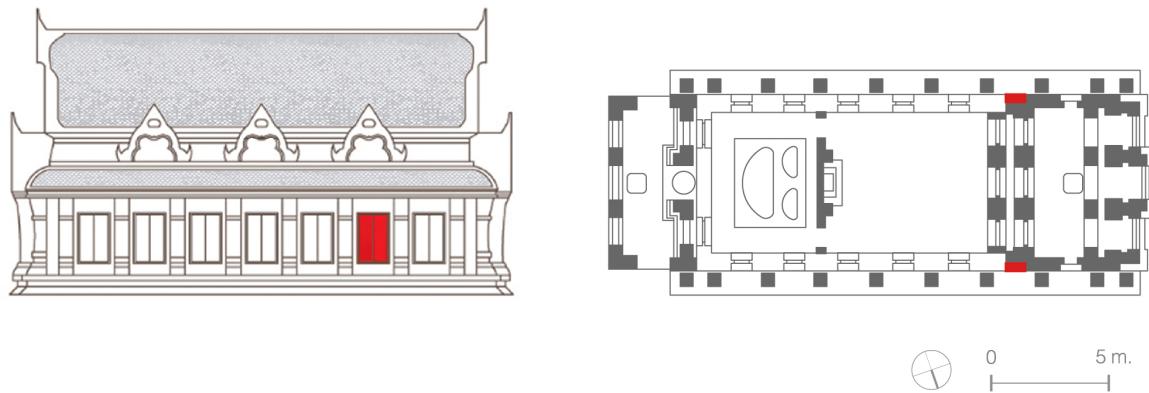
*Photographs of the Interior and the Exterior of Cloister or “Museum Gallery” of Benchama Bophitr Temple.*



*Note.* This figure displays photographs of the interior and the exterior of the cloister or “museum gallery” of Benchama Bophitr Temple. Fake windows are applied.

**Figure 4**

*Analytical Drawing of the Ubosoth of Rajadhivas Temple, Regarding the Fake Windows.*



*Note.* This figure shows the analytical drawing of the ubosoth of Rajadhivas Temple; the fake windows are marked in red I on the elevation and plan.

## The Bare-Essentials and Geometrical Figures

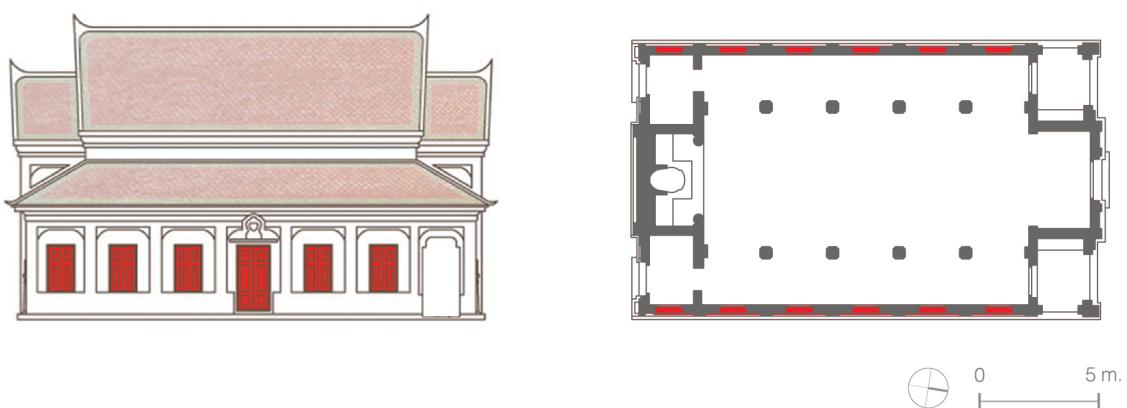
In another application of pleang, Prince Naris simplified the decoration of architectural components to sort out design objectives and constraints (see Figure 5). The ubosoth of Prapathomchedi Temple was built during the reign of King Rama VII. In this period, the economy of the Kingdom could not support the use of costly architectural design ornaments. Prince Naris reduced the architectural ornamentation while maintaining the design purposes, necessities, and sanctities of a religious building. The act of "adding" the pedestal to the ubosoth of Prapathomchedi Temple is different from the pedestal of the ubosoth of Benchama Bophit Temple. For the ubosoth of Benchama Bophit Temple, the elaborate "than singha" (ฐานสิงห์) was custom-made and transported from Carrara in Italy to Bangkok. The actual materials of the pedestal are brick and mortar which were cladded with white marble. In the case of the ubosoth of Prapathomchedi Temple, the traditional than singha has been changed to its minimal form

through the positioning of window frames and recessed walls. The act of "recessing" the walls creates a discontinuous line indicating the pedestal. This minimal action, to "recess," has an effect upon the aesthetic experience of the viewers. The windows and doors are painted in crimson, which intensifies the minimal form of "than singha" (ฐานสิงห์) together with the geometrical figures, the rectangles (see Figure 6).

The degree of pleang in Prince Naris' designs varied, depending upon the objectives and restrictions of the programming. Pleang can be read as a design process that was part of the collaborations between Prince Naris, Italian artists, architects and engineers who were employed to work in Siam under the service of the Siamese Government. Pleang can also be read as Prince Naris' desire to create the maximum architectural effect upon viewers with minimal interventions -- to reduce, to add, to recess something -- the specific methods varied. The prince was always careful not to alienate Thai viewers by taking a step too far in the sense that the design became too unfamiliar to Thai people.

**Figure 5**

*Analytical Drawings of Windows and Doors at the Ubosoth of Prapathomchedi Temple, Rendered in Red on the Plan and Section.*



*Note.* This figure shows analytical drawings of windows and doors at the ubosoth of Prapathomchedi Temple, rendered in red on the plan and section. In reality, these windows and doors are painted in crimson in order to highlight the building pedestal in a minimal form.

### Figure 6

*Photographs of a Window at the Ubosoth of Benchama Bophitr Temple in Comparison to a Window at the Ubosoth of Prapathomchedi Temple.*



*Note.* The left figure shows a window at the ubosoth of Benchama Bophitr Temple, which sits on a building pedestal, called “than singha (ฐานสิงห์),” a traditional Thai architectural ornamentation cladded with white Carrara Marble. The right figure shows a window at the ubosoth of Prapathomchedi Temple, which sits on a minimal building pedestal, a recessed brick wall painted in white. Prince Naris stripped away the decorative elements of than singha while maintaining Thai architectural expression.

## Part II

### Prince Naris’ private residence, the Thai wooden house and studio

The second part of the on-site observations and surveys focuses on Prince Naris’ Thai wooden house and studio at Ban Plainern. This analysis provides more evidence of Prince Naris’ applications of pleang in his own private residence in Klong Toey District, where he lived and worked from 1918 onward, during the reign of His Majesty King Vajiravudh, King Rama VI (reigned 1910-1925). In the early-twentieth-century, brick houses were increasingly gaining popular interest. Living in a brick house seemed to be more fashionable than living in a Thai wooden house. Prince Naris thought the

opposite. That is to say, Prince Naris was an architect who decided to build the house for himself and his family by reusing old Thai wooden houses that were out of fashion. He bought six old wooden Thai houses, reassembled and recomposed them in a linear organisation. This is different from the traditional composition of a Thai house whereby a raised platform surrounded by individual rooms or houses is a general aspect of space composition. The way in which Prince Naris recomposed them was novel in his time, and this study aims to exhibit how and why that was accomplished.

According to Ruethai Chaichongrak, a group of traditional Thai houses, or rooms, is generally arranged around a central platform. To get into a room, individuals must first pass through the central platform, the balcony in front of each room, to the room itself. The level of the balcony is normally composed based on the height of a

person in the sitting position. The layout of a traditional Thai house is not exactly oriented for all the rooms to receive cooling breezes and the northern sunshine; its layout is, rather, based upon beliefs. The Thai house has a mythological quality about it because it is traditional, and, to a certain extent, vernacular (see Figure 7).

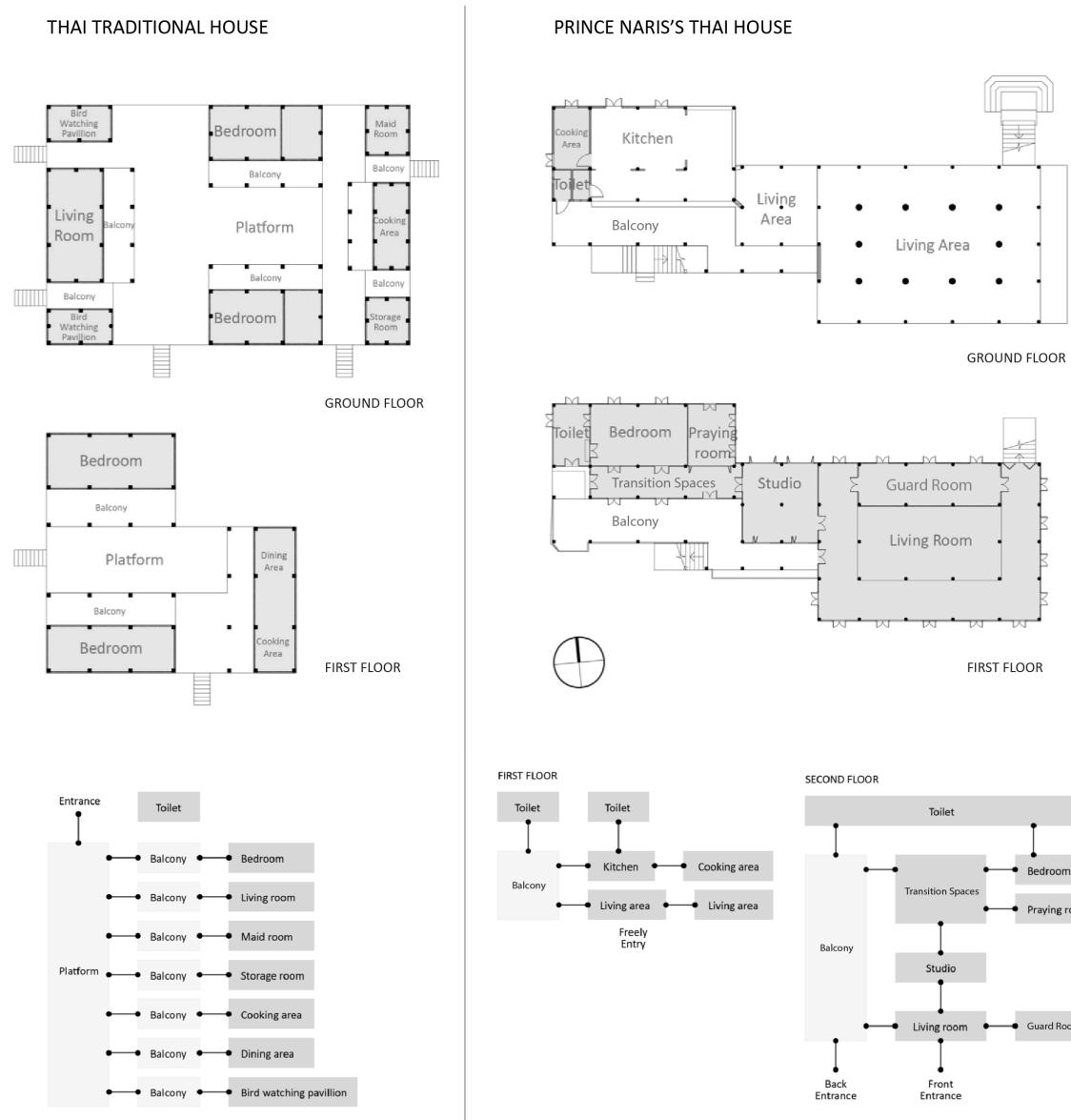
Prince Naris' arrangement of a continuous group of Thai house structures is different from the norm (see Figure 7). His composition of circulation spaces appears to be linear, orientated with awareness of the sun and the wind in Bangkok, with internal connections between rooms. Individuals must pass through the interior transition spaces before reaching the bedrooms. This allows for the possibility of reducing the number of supported columns and walls, saving space and materials, and providing greater flexibility in interior design. At Prince Naris' Thai house, there are adjustments at the platform level as well. The modifications define the boundary of each area of activity, alternating height adjustment of the platforms only by +0.15 or -0.15 meter at a time, more or less than in traditional Thai houses where the balcony height

is set to accommodate the sitting position as the platform functions like a chair. Prince Naris on the other hand had furniture like tables and chairs in his Thai house, which was not at all traditional for Thai homes (see Figure 8).

The collection of windows of Prince Naris' Thai house is documented (see Figure 9), and this is interesting in two senses. First of all, the collection came from several old traditional Thai houses that the prince purchased, so his collection of windows provides a good case study for learning about various types of windows which were recomposed together in the same house. Secondly, Prince Naris introduced glass window panes to the windows of his studio to receive the northern sunlight (see 6.3 in Figure 9). The layout of Prince Naris' house might be described as a "reinterpretation" of the traditional Thai house. The kitchen is on the ground level, but everything else is on the main floor on the upper level, including his bathroom. This is not common to traditional Thai houses, where the toilet would be built further away from the house itself.

**Figure 7**

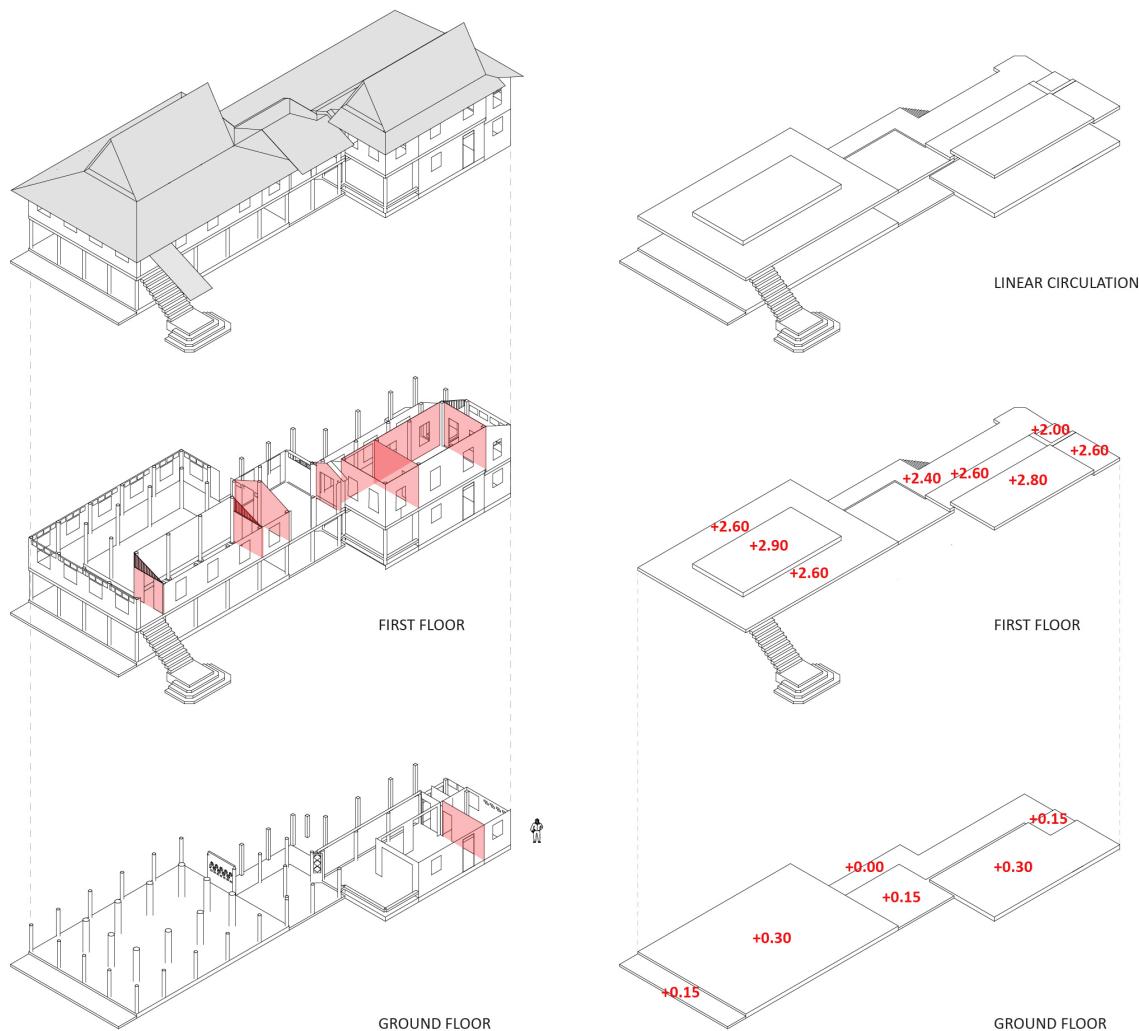
*Comparison of Circulation Spaces Between Traditional Thai House and Prince Naris' House.*



*Note.* The left figure is redrawn. Adapted from *Tamnān sathāpattayakam Thai nung rūan Thai dōem* [Legend of Thai Architecture 1 Thai Traditional Houses] (p. 96), by B. Rojanastien, 2005, Bangkok Publishing. Copyright 2005 by Boonchu Rojanastien. It demonstrates the traditional space organisation of a Thai house, with rooms surrounding a platform. The right figure demonstrates Prince Naris' linear organisation of the old Thai house structures. His design objectives were improved ventilation, illumination, and general human comfort.

**Figure 8**

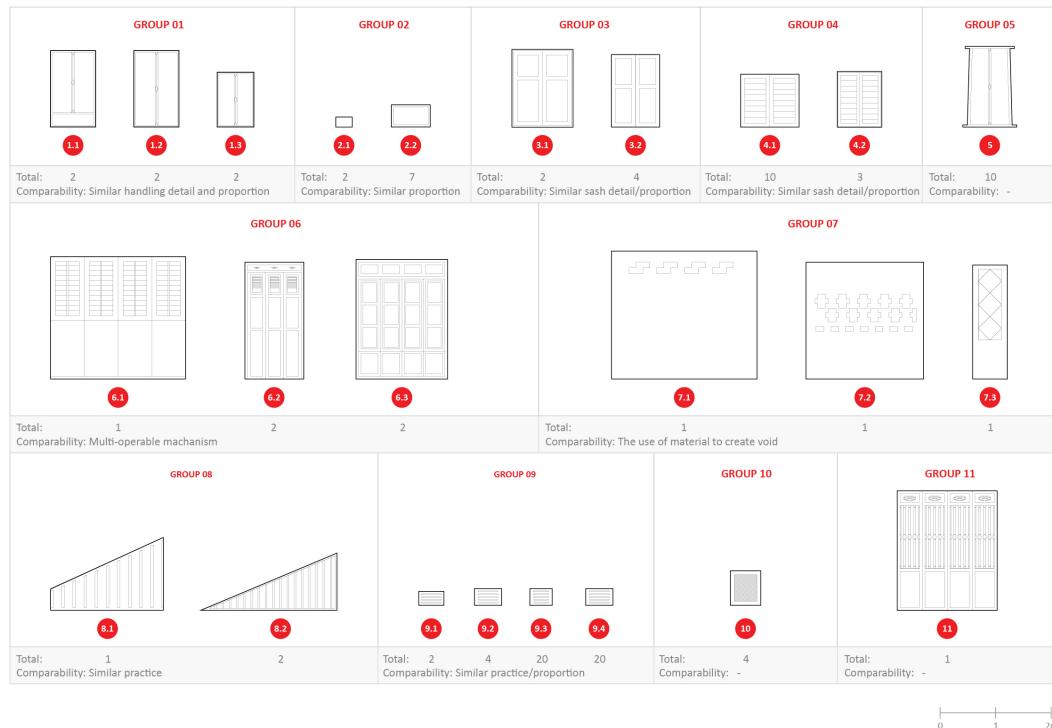
*Analytical Drawings of Prince Naris' House and Studio.*



*Note.* This figure displays analytical drawings of Prince Naris' house, which is based on linear circulation rather than the traditional composition of rooms surrounding a platform. The drawings also show how Prince Naris thought of the changes in floor level, the privacy of inhabitants, accessibility, and interconnection between rooms.

**Figure 9**

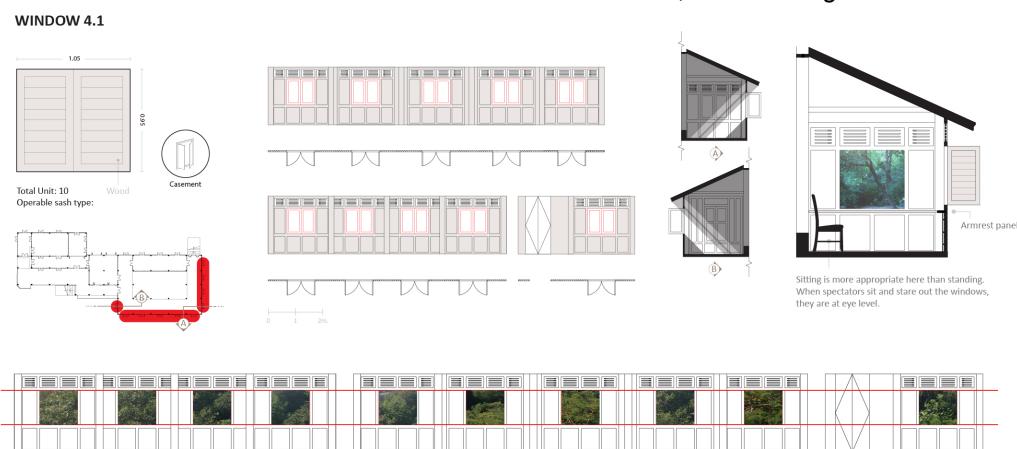
*A Collection of Windows Used at Prince Naris' House and Studio*



*Note.* This figure displays a collection of windows at Prince Naris' house. They are classified into 11 categories based on such criteria as 1). Multi-operable window mechanisms 2). Similarity in mechanism details and proportions 3). Similarity of functions, i.e., to allow ventilation while blocking vision 4). Objects that cannot be classified in another group.

**Figure 10**

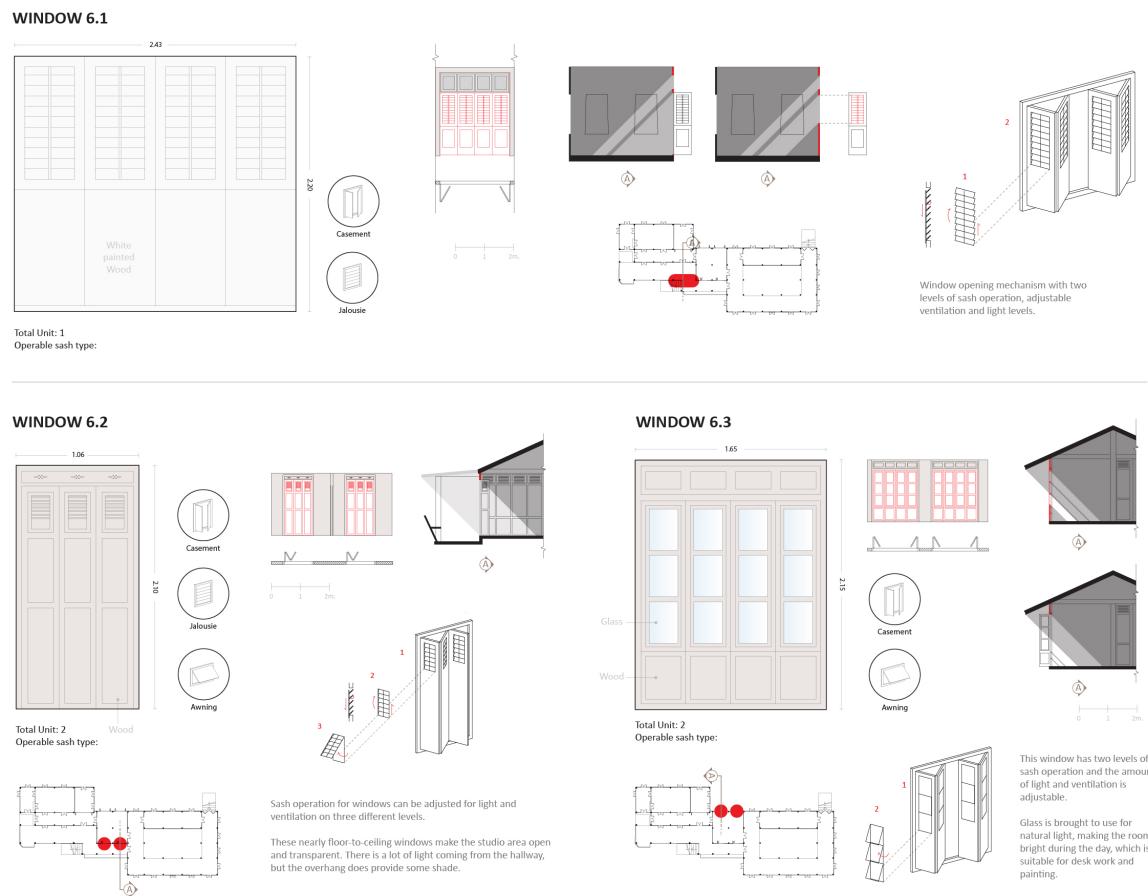
*A Collection of Windows at Prince Naris' House and Studio, at the Living Room on the First Floor.*



*Note.* This figure displays a collection of windows on the first floor of Prince Naris' house and studio, with an arrangement of windows in sequence in relation to lighting conditions and theatre-like views. These windows overlook the garden of Ban Plainern on the ground floor, which was acted as a stage for Thai classical performances, newly invented by Prince Naris -- a hybrid between opera and Thai classical dance. The seating behind these windows comprise box-seats similar to those found in a Western theatre.

**Figure 11**

*A collection of Windows at Prince Naris' Drawing Studio Which Display Flexibility of Multi-openable-sashed Windows in Relation to Lighting Conditions*



**Note.** This figure displays a collection of windows at Prince Naris' drawing studio, demonstrating the flexibility of multi-openable-sashed windows in relation to lighting conditions. Window 6.3, for example, contains glass panels, a new material in Thai house structure, representing an innovation by Prince Naris designed to receive the northern sunlight, while the detailed mechanism of multi-operable system is the same as other conventional window designs in tropical climates, such as window 6.2.

## DESIGN PROPOSAL: PRINCE NARIS LEARNING CENTER

The purpose of this design proposal is to integrate the understanding of pleang into the design process of the Prince Naris Learning Center. The program of Prince Naris Learning Center is a hybrid between an exhibition gallery, welcoming spaces including a cafe, a souvenir shop, and a portal to interconnect Ban Plainern in and of itself. The portal is meant to be a doorway

for user accessibility (both physical and visual) to Ban Plainern.

Our interpretation of pleang is meant to be understood in relation to the contexts of the site, that is, to "unravel" the existing conditions of the site, including the surveys of structures, circulation spaces and walls, before identifying what architectural elements to demolish and what to preserve (see Figure 12).

Four primary thoughts of the project are 1) To introduce new vertical circulation spaces and to demolish the existing staircase, which falls into a

category of “diversifying” the human experience of approaching the spaces and the hierarchy of spaces 2) To add new steel and reinforced concrete beams with respect to existing reinforced concrete columns. The effect will be to “hybridise” the existing structures with the new construction materials suited to the purposes of

strength and flexibility of spaces 3) To compose a series of doors, windows and fake windows based on the research that can be used in a new setting to capture light and shadow in spaces. This is an example of how we portray the overall meaning of pleang to physical forms.

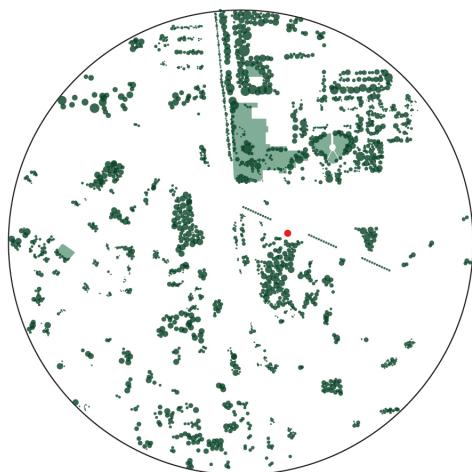
**Figure 12**

*Site Analysis of Prince Naris Learning Center*

SURROUNDINGS



GREENERY IN THE AREA



TRANSPORTATION USE IN THE AREA



*Note.* This figure provides details of the site analysis for the Prince Naris Learning Center, an existing commercial building in front of Ban Plainern, next to Rama IV Road and Klong Toey MRT, showing the existing plan, the current position of the dog-leg staircase, sections, elevations and viewpoints.

## New vertical circulation spaces

We are introducing new main vertical circulation spaces -- a straight flight staircase, passenger elevators, and a service elevator at the southern part or the rear of the building -- instead of the existing concealed dog-leg staircase which is placed at the corner of the existing structure (see Figure 13). The new straight flight stair is intended to transfer visitors from the ground floor to the upper floors with the intention of orienting commuters to each program of the Learning Center, namely, reception, cafe, and kitchen on the ground floor; library and outdoor deck on the first floor; gallery and office on the second floor; gallery for rent on the third floor; and, lastly, the rooftop cafe (see Figure 14). The new configuration of the lightweight metal staircase is enveloped on the southern side with louvered walls to provide a variety of visual traveling experiences for visitors, floor by floor, and step by step. The service spaces, such as lavatories and the kitchen, are hidden underneath this new circulation space. All of these new elements are inserted with respect to the existing reinforced concrete structure. Vistors may encounter a

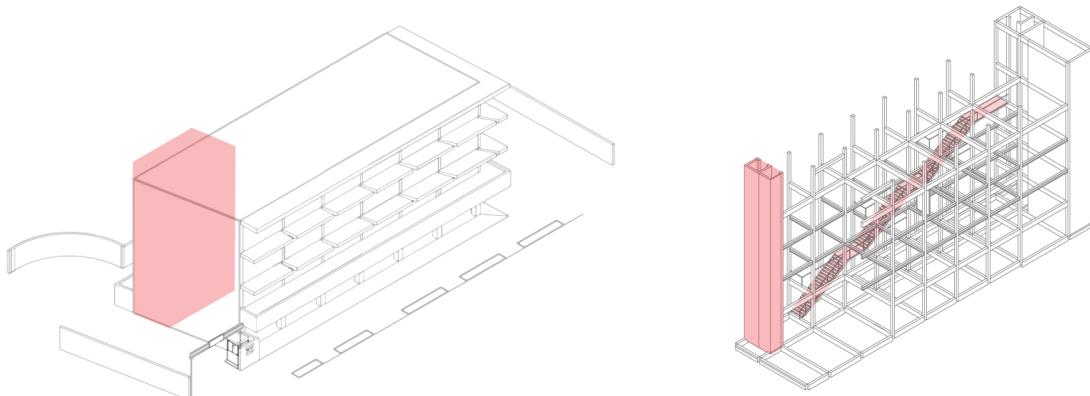
unique transition from the view toward Ban Plainern Garden at the back.

## New steel and reinforced concrete beams

In terms of the building structure, the original columns are kept. The floor levels are raised throughout the four-story structure from 3.00 meters to 3.50 meters. Two types of beams are proposed for this building: H-beams and reinforced concrete beams. The reinforced concrete beams will be used for the first floor and the fourth floor, while the H-beams are intended for use on the second and the third floor in order to emphasise the act of inserting different structural materials for spatial composition and appropriation. H-beams are proposed for the cantilevers to project the most significant window of this building. We propose three different types of walls: brick walls, and metal louvered walls with wider and narrower intervals, to be composed with voids (see Figures 15-16). The purpose is to create a complexity of spaces based on architectural elements, including walls and windows.

**Figure 13**

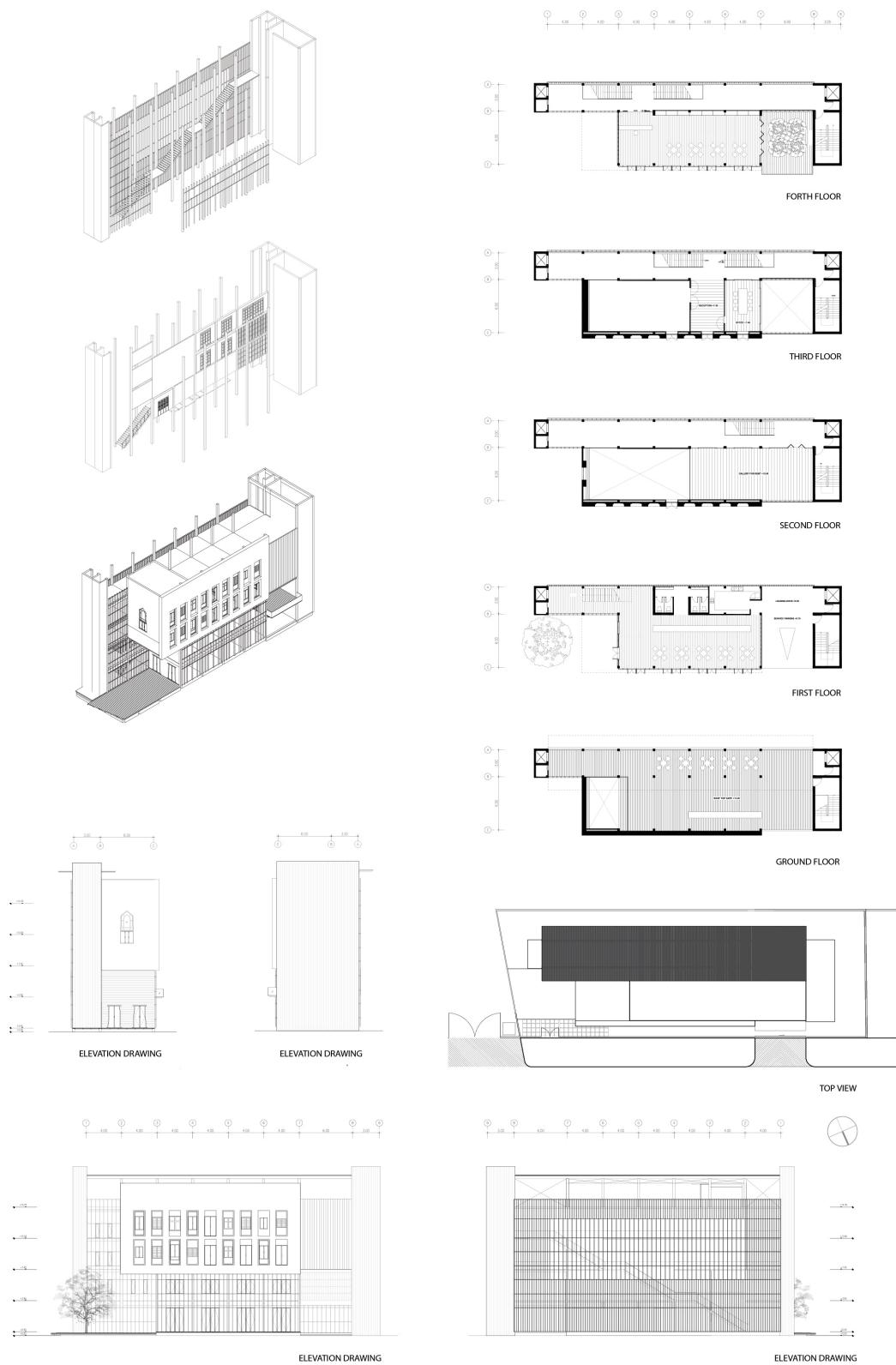
*The Introduction of Linear Circulation, a Straight Light Stair (right), at the Rear of the Building on the Southern Part, Replaces the Existing Dog-legged Staircase (left) at the southeastern Corner of the Building.*



*Note.* This figure demonstrates the change the circulation spaces and the added steel structure to reinforce the existing reinforced concrete structure. The position of the altered H-beam is indicated in grey on the right isometric drawing.

**Figure 14**

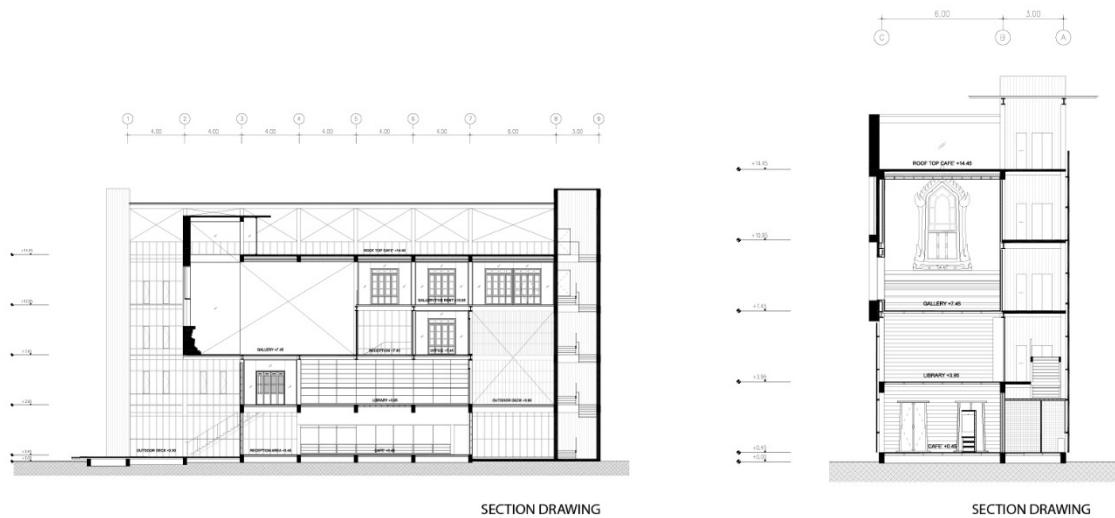
*Implementation and Application of Findings to Architectural Design: Isometric, Plans and Elevation Drawings*



*Note.* This figure displays isometric, plans, elevations, and isometric drawings of the Prince Naris Learning Centre, in front of Ban Plainern, a residential complex belonging to Prince Naris' descendants, next to Rama IV Road, Bangkok.

**Figure 15**

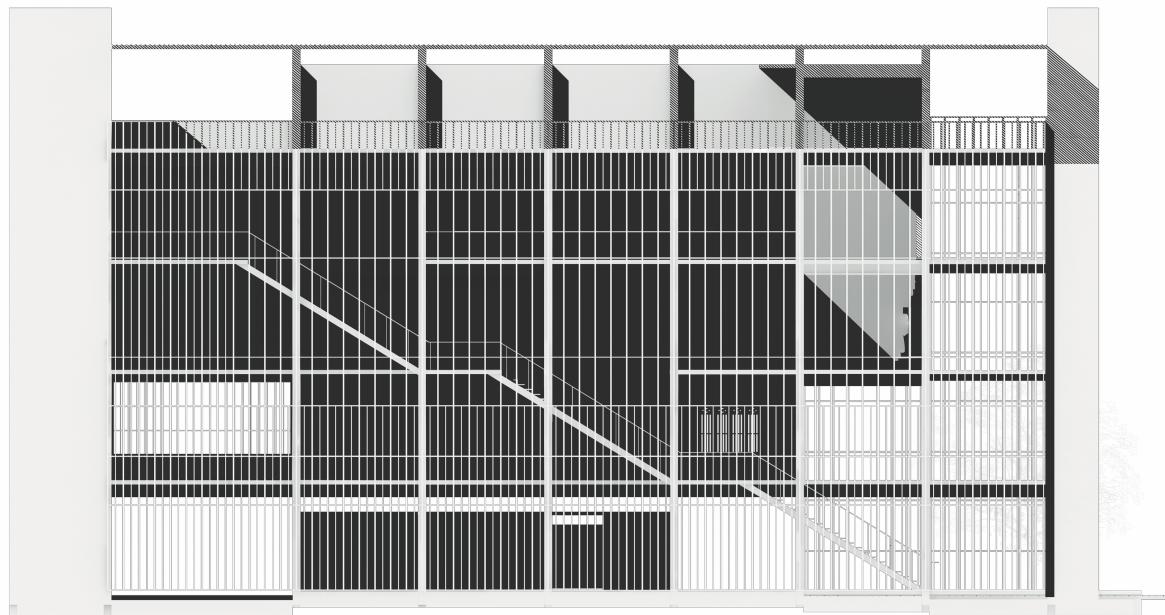
*Implementation and Application of Findings to Architectural Design: Section Drawings and Location of Windows*



*Note.* This figure shows section drawings and the organisation of windows of the Prince Naris Learning Center.

**Figure 16**

*Implementation and Application of Findings to Architectural Design: In Opaque Structures, Light Panels, Glass and Windows in Elevation Drawings*



*Note.* This figure displays elevation drawings of the Prince Naris Learning Center. Transparency is represented. It focuses on the idea of visual connection as well as continuity via transitional areas.

## Windows

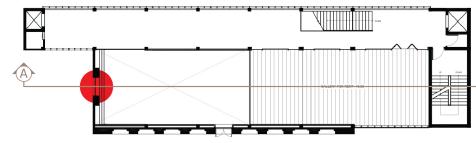
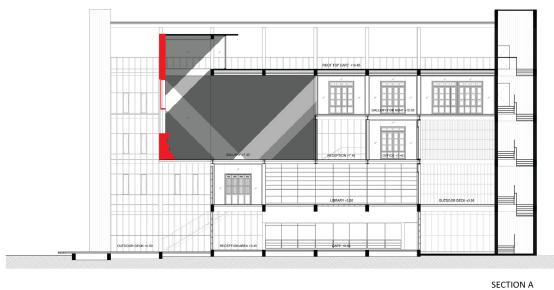
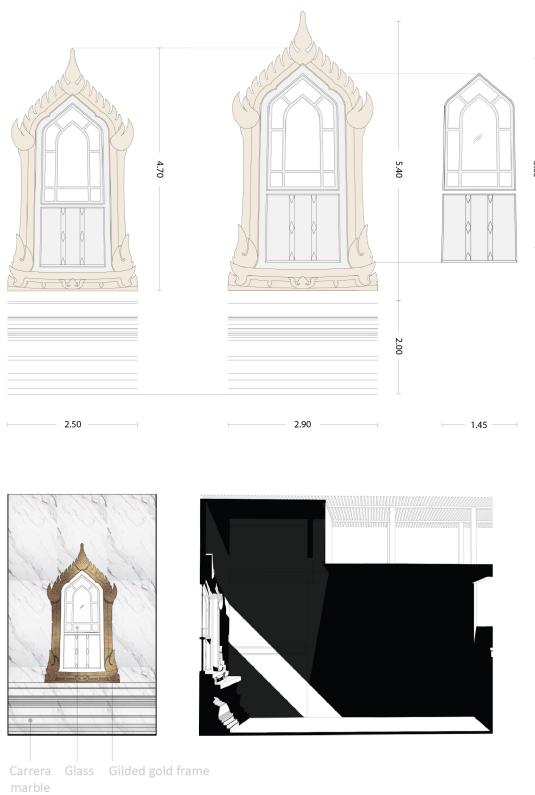
The design implementation is based on the notion of creating a contrast between the traditional and the modern by using the approach of window reconfiguration and space composition. We selected ten windows from Prince Naris' house and studio in Ban Plainern and will implement the replicas throughout the spaces of Prince Naris Learning Centre. The implementation is generated from, firstly, a change in window scale while maintaining proportion in order to accommodate the new usage such as the main entry door. Secondly, the design is also generated from a change in materials according to required functions and conditions of light and shadows. At the welcoming space on the ground floor, for example, we plan to paint the walls and the doors in crimson red, the same colour as the entrance and windows from the ubosoth

of Phrapathommachedi Temple. A window is applied as a door, and next to it is a fake door. The modern scheme is created from familiar objects and colours. This is thought of as an “accessible portal” to the realm of pleang (see Figure 17).

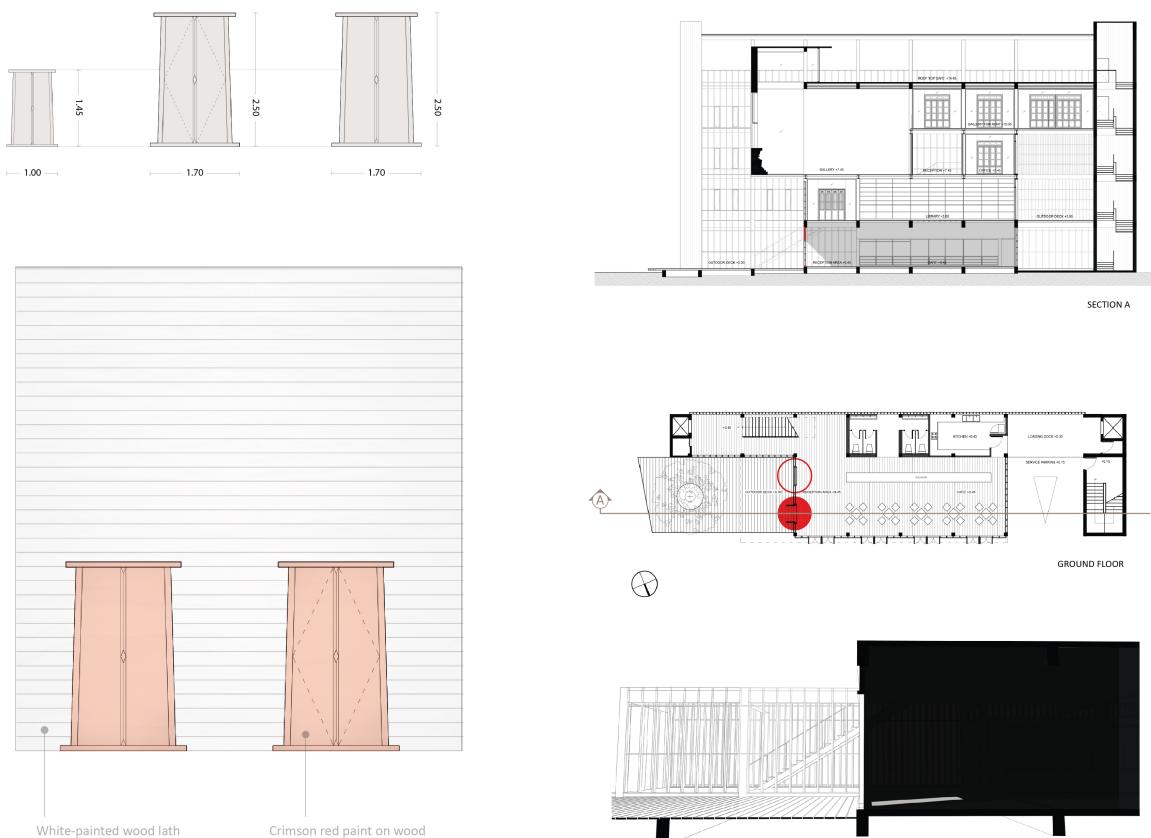
The highlight window of Prince Naris Learning Centre is a replica of a Benchama Bopitr window, including its gilded ruen kaew applied at the main gallery space. Again, we enlarge the scale while maintaining proportion. We propose to construct the stained glass window that was initially designed by Prince Naris but never executed in reality. This is a further topic that requires more research on the technology needed to produce detailed patterns of a stained glass window that could not be carried out near the turn of the 20th century. This replica of Benchama Bopitr window is flipped inside out, showing the more traditional aspect toward the inside and a more modern appearance towards the outside (see Figure 18).

**Figure 17**

## *Reconfiguration of Windows*



*Note.* This figure demonstrates the reconfiguration of windows, light and shadow in plan and section of the Prince Naris Learning Center.

**Figure 18***Window Reconfiguration*

*Note.* This figure demonstrates the reconfiguration of windows, light and shadow in plan, section and perspective of the Prince Naris Learning Center.

On the main facade, real and fake windows can be seen from the main street, Rama IV Road. The recessed brick walls of Prince Naris Learning Center provide spaces to exhibit the replicas of wooden windows based on Prince Naris' house. The recessed walls frame light and shadow, highlighting the windows as the art objects from

the outside. From the inside, four of the eighteen displayed windows can be opened from various spaces such as galleries, reception and offices. Aluminium frames and translucent glass are placed in contrast with the opaque walls (see Figure 19).

**Figure 19**  
*Reconfiguration of Windows*



*Note.* This figure demonstrates window reconfiguration in plans and the main facade of Prince Naris Learning Center.

**Figure 20***Possibility of Design Application*

*Note.* This figure demonstrates light and shadow cast upon the main walls of the Prince Naris Learning Centre.

## CONCLUSION

The importance of this research-design article is to underline the significance of Prince Naris' designs for non-western architectural studies. The first half of this article discusses the way in which Prince Naris unraveled Western and Eastern architectural traditions in order to create architectural forms that portray Thai architectural expressions. The second half focuses on the design challenge of using our understanding of Prince Naris' works to produce a contemporary architectural design. His way of thinking is called

pleang, a Thai word employed by Prince Naris himself. This word also signifies how King Rama V of Siam and Phraya Anuman Ratchdhon perceived Prince Naris' artistry.

The fact that pleang has no direct translation into English makes the word even more interesting, particularly in the Thai historical context. Around the turn of the twentieth century, a period of rapid urbanisation and westernisation of Bangkok, the Italians comprised the largest number of Western Europeans who came to work in Siam under the service of the Siamese government. In the Fifth Reign, there were more than 30 Italian architects,

engineers, sculptors, painters, and even plumbers, marble-cutters and carpenters employed in the Siamese governmental services (Piazzardi, 2010, p. 50-51). Among these were, for example, Carlo Allegri, the Engineer-in-Chief of the Public Works Department in Bangkok (Wright, 1994, p. 292), and Carlo Rigoli, a Tuscan painter who worked with Prince Naris on a number of projects such as frescos at the ubosoth of Rajadhiphat Temple, and drawing room and dome room at Boromphimarn Mansion in the Grand Palace of Bangkok. Prince Naris worked with the Italian painter to create architectural spaces that exhibited Western European forms of painting and frescoes, and depicted Thai cultural content within the spaces between the windows. Pleang, in a strange way, lends itself to a rupture of religious architectural traditions and opens up more space for art.

It is unfortunate that, today, Prince Naris' legacy is being eroded and fading away over time. A way to resolve this issue -- and this is our proposal -- is to encourage the idea that it is possible for architectural students who are interested in non-western architectural studies to propose a design project for Prince Naris' descendants with respect to the Prince Naris Learning Center located in front of Prince Naris' private residence on Rama IV Road, Bangkok. This is the first endeavour to put the idea of pleang into physical implementation (see Figure 20), proposed by one of Prince Naris' descendants and an architectural student who has studied Prince Naris' designs. This research-design article can be seen as a break from conventional scholarship into Prince Naris' designs, which tend to focus solely on analytical framework. It can also be read as a collaboration intended to encourage the application of research into designs that cut across boundaries of building typologies, western based architectural education, and Thai architecture educational programs. Ultimately, as the title of this article suggests, portraying Prince Naris' cultural hybridity in architectural forms depends upon the context in which it is used, with the intention of architects who wish to create "pleang" designs.

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