

SOME NEW RESULTS OF THE RESEARCH ON THĂNG LONG IMPERIAL CITADEL SITE AT 18-HOÀNG DIỆU

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Thăng Long Imperial Citadel site at 18 Hoàng Diệu (Hà Nội) is located in a large area, in which the area having excavated and under excavated is 19,000m². The exposed architectural traces are distributed in the four sections A, B, C and D (according to the archaeological codes). To study and assess all these architectural traces, the first thing to do is to accurately identify their plan and the directions. To do so, it is necessary to determine standard landmarks and set up an internationally-standard altitude and coordinate system. We call it the altitude and coordinate system of Thăng Long Imperial Citadel. It should be mentioned here that the set - up of the national standard altitude and co-ordinate system for archaeological areas is quite new in Việt Nam, though it has popularly been applied in the world, especially Japan and Korea.

The set - up of the national standard altitude and coordinate system is aimed at the research, assessment and scientific file establishment of the architectural traces at Thăng Long Imperial Citadel site in accordance with the international standard of urban

archaeology. It has some following significances:

- Enabling the study of the large – scale architectural plan to be precise and scientific, creating probabilities for a fairly-accurate comparative study of the architectural relics of each stage at various locations or being excavated and studied at various times.

- Valorizing the scientific values of the site files with high reliability due to the accurate measurement statistics taken from the high-standard altitude and coordinate system.

Việt Nam Institute of Archaeology has cooperated with the Japanese experts to set up the internationally-standard altitude and co-ordinate system of Thăng Long Imperial Citadel since 2006 and the main work has completed now.

As a result, the standard altitude and coordinate of the central axis in the Đuàn Môn (South Gate) and Kính Thiên (Audience Hall) Palace areas is 5⁰ slanting to the North. The coordinate of Kính Thiên Palace is 21⁰0214.935 North

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Latitude and 105°50'18.566'' East Longitude. The co-ordinate of Thăng Long Imperial Citadel site at 18 Hoàng Diệu (The landmark HT20 – Section A) is 21°02'21.898'' North Latitude and 105°50'13.578'' East Longitude.

All the unearthed architectural traces have been put right on the drawings according to this altitude and coordinate system in order to serve the research on the plan later.

I. Awareness of the archaeological site plan

Since the excavation was temporarily stopped, Việt Nam Institute of Archaeology has concentrated on the completion of the drawings by matching them together, and at the same time carried out the research on the plan, composition, building technique, the relation of dates and characteristics of the architectural types exposed at the site.

There should be mentioned that the study of the plan, characteristics identity, size and structure has faced many difficulties due to many problems and unearthed traces. When the study is going on, it is not fully aware of the plan of all the exposed architectural traces. However, after the two-year study it is possible to present some following results of the Lý and Trần remained types:

1. Some typical architectural plans:

According to the old annals, the dynasties built a lot of palaces and towers round Càn Nguyên (also called Thiên An and Kính Thiên) palace. The old annals also include the restoration, reconstruction, and new construction times with some feature about the multi-storey construction with the magnificently-decorated roofs.

The archaeological evidence today is mainly the remains of the palace and tower foundations from the old Thăng Long Forbidden Citadel. However, if we manage to study them thoroughly, we will be able to understand the plan of every architectural unit as well as their general physiognomy in the area. The simple reason is that the palace architectures in the old Thăng Long Imperial Citadel and Forbidden Citadel as well as the old capital cities of other Asian countries shared the same context, which used to be the usage of supporting wooden frames with the pillars as the main supporters. Therefore, the pillars used to be focally supported by the two basic components: the pedestals and bases.

The exposed architectural traces in the area have fairly clearly identified through the type system of the pillar bases. They were arranged in lines, rows or interlaid in between, sometimes overlapped each other in round or square shapes and were made from many kinds of materials:

- Bricks
- Wood
- Broken stoneware
- Gravels
- Gravels mixed with pieces of stoneware and broken bricks.
- Broken big bricks mixed with earth and potsherds.

From the comparative research, the archaeologists could present their important awareness that the pillar bases are the only remains of the wooden architectures, with their basic features to realize their plans, sizes and structures.

Since each individual pillar base was a location of each individual wooden pillar, which enables us to realize the scale of individual architecture.

On the other hand, these bases obviously functioned as the supporters in order to prevent the subsidence of the whole architecture. The evidence for this judgment is the stone pedestals in situ as in A20 and B16. Under these stones are the pillar bases or, in the other words, on the pillar bases laid stone pedestals to support the fairly big pillars. They are terminologically called *móng trụ*.

Apart from different types of brick and wood pillar bases built with simple techniques, the other types were similar in building technique: each base was made by digging a rectangular or circular hole that was about 1.0m – 1.5m deep and 1.1m – 1.9m wide on average, which was then filled with rammed layers of gravels or broken tiles, bricks mixed with clay, like concreting technique in construction.

It should be notable that the technique of building the pillar bases is a great Vietnamese achievement in the traditional Vietnamese architectures. It was invented when Vietnamese builders needed to build grand and heavy buildings on the basin ground with a lot of lakes and rivers. In deed, the excavations show that the traditional Vietnamese wooden frames had to suffer extremely heavy weight of all the architectural and decorative materials made from wood or clay. To cope with this, they tried to strengthen pillar bases very meticulously and carefully. This technique had been found in some strong architectural works, mainly from the Lý and Trần periods, such as

Chuong Son Tower (Lý period, 1017) and Phở Minh Tower (Trần period, 1305 – 1310). When examining these bases to learn the building technique, it was possible to see gravels and pebbles used for preventing subsidence.

The usage of gravels and pebbles in building Chương Sơn or Phở Minh Towers proved, on the one hand, the popularity of this technique in the Lý and Trần periods and that the architectural works at 18 Hoàng Diệu (Hà Nội), on the other hand, were very great and heavy. This technique had actually been used in the Đinh and Lê period (the tenth century). At Thất Trụ pagoda, the archaeologists found strong pillar bases made of iron wood and stone. From the Lý and Trần periods the bases were made of gravels, broken bricks, tiles and stoneware the most perfectly, steadily and diversifiedly on the large scale in the history of Vietnamese architecture. This technique was still used until the Lê period at Lam Kinh site.

Due to the system of pillar bases and stone pedestals for supporting pillars, the architecture works on them were certainly the system of wooden frame with the number of pillar rows in accordance with the beam structure.

In 2005, based on the above study results, Việt Nam Institute of Archaeology initially identified traces of tens of great architectures from the Đại La, Lý, Trần and Lê periods in the Sections A, B, C and, five of which were identified as the five plans of the five Lý and Trần architectural units. In 2006, the group of Japanese experts with the Việt Nam Institute of Archaeology conducted a

thorough investigation at the Section A and B and also came to a similar conclusion of the five Lý and Trần relics made by the Việt Nam Institute of Archaeology.

a) The plan of multi-compartment architecture in the northern Section A (A1 + A11).

This structure was unearthed with 40 square gravel pillar bases and some other smaller tile bases; each square base was 1.30m x 1.30m and they were arranged in 11 rows (each includes 6 bases) in North – South direction.

The row with 6 bases was of the structure of a 17.65m-wide house, the distance between the main base and other ones was 6.0m, the width of each compartment of the structure was 5.80m – 6.0m. At present 9 compartments and 1 lean-to are exposed, possibly leaving about 1–3 more compartments. It is the only one architecture that has been found at this site.

b) The plan of architectural complex in the southern Section A (A20 + 5)

The traces of this architecture belong to the Trenches A20, A22, A16 and A5 (called A20 + 5 in short) in the excavated area of over 1,400m². In this area, 24 bases and 11 stone pedestals are exposed in situ, with the system of 2 brick yards whose strong and fairly intact verandahs had been bordered with rectangular.

Based on the distribution of the pillar bases and pedestals, especially the clear traces of the house foundation through the verandahs, it is possible to realize that the A20 + 5 architectural complex

was very great in the East – West direction, with the two systems of parallel units linked together by a yard. This yard is 4.95m wide and built with large square bricks (36.4m x 36.4m x 5m; 36,8m x 36.2m x 5m; 37.8m x 37.8m x 5m); it is slightly hollow in the center for water drainage.

The first plan in the north, also called the three-pillar-row architecture, has been clearly identified. It has been unearthed with 5 compartments, 6 pillar rows, 7 intact pedestals and 10 gravel pillar bases (including 6 exposed ones and 4 unexposed others). The plan was about 8.50m, with the two brick yards at both sides at various altitude levels, especially there was a strong and intact rectangular foundation bordered with bricks in the south. It was 0.87m – 0.88m wide and 0.36m – 0.37m higher than the brick yard, with 7 - 8 rows tightly-arranged with rectangular bricks of various thick or thin sizes, but most of them are 39m x 20m x 5m in dimension.

This architecture had a supporting wooden frame with three pillar rows that were unevenly arranged; the distance between the pillar in the south verandah and the central pillar was 5.0m; the distance between the pillar in the north verandah and the central pillar was 2.45m, so the internal house was 7.45m wide. The distance between the pillars was 5.75m – 5.77m. This architecture was as great as the multi-compartment one in the northern Section A.

The remained pedestals of this architecture were all made of grey sandstones in square cube, on which were carved lotus petals in the Lý art

style as the ones at Long Đọi pagoda (Hà Nam province). The circles remained on these pedestals indicate that the pillars put on them had fairly large diameter (43cm – 48cm).

The northern yard of the above architect was higher than the southern yard, with the width of 4.10m and also built with square bricks. Next to it was a drainage ditch built strongly with bricks along the architecture from the east to the west.

The second plan was parallel to the northern 3-pillar-row architecture mentioned above.

Just part of the verandah and foundation of this architecture was exposed with the three stone pedestals in situ and 18 gravel bases. The pedestals on the verandah were the same in form, material and size as the above 3 - pillar-row architecture. It, was 1.16m wide and 0.37m higher than the brick yard and was also bordered with rectangular bricks and built with 8 brick rows similar to the 3 - pillar-row one.

Some remained bricks in the foundation show that the internal architecture was also built with square brick like the yard.

Remarkably, the gravel bases for the pedestals were very large in size, 1.90m x 1,90m on average, which indicate that the stone pedestals here were also very large and so were the wooden pillars on them. Though the architecture work has been totally unearthed (the foundation is continued to extend to the three directions (east, west and south so that it is impossible to learn the number of the compartments and the total area). However, based on the great size of the bases, the distance between them and the

verandah, the Japanese asserted that it was the greatest architecture in the present Sections A and B. The archaeologists also found there the materials for decorating the architectural roof from the Lý period (such as a large-sized Bodhi leaf inscribed with a phoenix image), which means that this architecture was very great and magnificent.

The similarity of the building materials (stone pedestals, bordering bricks, yard brick), especially the bordering bricks all had the same sign, shows that these two architectural works were built at the same time, or they were started built in the Lý period. It is notable that beside the Lý artifacts, the Trần artifacts were also found in the internal architecture, which possibly means that they were continued to be used and reconstructed in the Trần period.

On the other hand, in the yard and their vicinity were found a lot of ashes; the brick surface of the foundation and verandah were darkly burnt and the surface of the pedestals were broken by fire. This phenomenon was explained that these two architectures were once destroyed by fire. The scales of both have not been identified.

c) The great architectural plan in the northern Section B (B16)

This architecture is in the trench B16, in the northern Section B, 20m from the northern Section A, which is temporarily called the B16 architecture. Its scale has not been identified either.

At present, it is exposed in 250m² area, with 5 stone pedestals in situ and 11 square gravel bases in East – West

direction in four rows, equivalent to three compartments. It is being extended to both east and west sides so that the scale and the number of compartments have not yet been identified. The pedestals inside the architecture were all made of grey sandstones in square cube, on which were raised lotus petals in the Lý style like the ones in the trench A20. They were fairly large and similar in size: 78cm x 78cm and the circle trace on each of them was 52cm in diameter, larger than the pedestals in A20.

The gravel bases were also fairly large in size, from 1.30m x 1,30m to 1.60m x 1.60m on average. In 2003, two of them were dug to investigate, which showed that they were over 1m deep in square holes and were dug through the earth level containing artifacts such as bricks, tiles and ceramics from the Tang period.

The structure of the gravel bases and the stone pedestals demonstrates that the architecture with 4 rows of wooden pillars; the distance between the supporting pillar (from the south) and the main pillar was 3.45m; the distance between the two main pillars (within the architecture) was 7.55m, the distance between the supporting pillar (from the north) and the main pillar was 3.51m and the distances between the two compartment (between the two beams) were 5.17m – 5.30m.

The B16 architecture that was very large, even 7.55m wide, confirms the high-standard building technique of Việt Nam in building large-scale palaces in the Thăng Long Forbidden Citadel. The Japanese researchers also agreed on this viewpoint.

d) The plan of 13-compartment architecture in the centre of Section B (B3+11)

This architecture is located 100m south from the B16 architecture, in the centre of the Section B, within the area of B17, B111, B12, B2 and B3. It has been clearly identified as a fairly-perfect “long house” with enough 11 compartment and 2 lean-tos, with 14 rows of pillar bases.

In North – South direction, the architectural plan (from the pillar core) was over 450m² (7.4m wide x 61m long), with 3 pillar rows arranged equidistantly. The distance between the pillars is 3.70m; the distance inside the head compartment is smaller: the south is 2.25m wide, the north is 2.5m wide; the width between the beams is 4.7m – 4.9m on average.

With the above structure, the plan of this architecture might have been be up to 42 gravel pillar bases, equivalent to 42 wooden pillars, but just 38 pillar bases have been found now. They are all square, with the sizes from 1.20m x 1.20m to 1.35m x 1.35m on average.

This is the only architecture that has been completely identified with 11 compartments, 2 lean-tos and 14 pillar rows, each of which consists of 3 gravel pillar bases. There are now 38 pillars remained (61m long and 7.40m wide).

e) The architectural plan in Section D (D4 – D6)

At the area of the three connected trenches D4 –D6 (in the total excavated area of over 2,000m²), the study result in 2006 led to the identification of the architectural plan through the system of the square gravel pillar bases, the same size and

technique as the architecture A1 + 11 in the Section A. 28 pillar bases in 7 rows have been exposed, each of which includes 4 pillar bases, equivalent to 6 compartments. Based on the row at the south end, this architecture might have had 9 parts (7 compartments and 2 lean-tos) and it lied in East – West direction. The distance between the verandah pillar and the main pillar is 2.70cm and each compartment is 5.72cm wide. This size is similar to that of A1.

Remarkably, in this area found a broken tile with Chinese characters ‘‘Huang Men Shu–Jie Jian Zao’’, another one with the inscription meaning ‘‘Kim Quang Palace’’ from the Trần and early Lê periods, and a golden flake with Lý-period dragon inscribed image. They help the researchers to know the name and function of the palaces in this area.

2. The architectural plan of ‘‘six-sided pavilion’’

These architectural traces have been identified by the groups of pillar bases. Each group includes one square base in the centre surrounded by 6 other bases. The distance between the groups is from 8m to 12m, and the diameter of each group is 3.40m.

These groups were arranged in rows in North – South direction.

The Vietnamese experts suppose that it is an architectural type of ‘‘six-sided pavilion’’ for entertainment. In *Việt sử lược* (Brief History of Việt Nam), there is a record of such architecture and it is called *trà đình* (pavilion for enjoying tea).

Based on its strong build of the bases, the Japanese archaeologists thought that this

architecture might have consisted of many levels of roofs, with marvelous form, which reflects the specially important characters of the relics from the Section A to the Section D.

II. Perception from the comparative study of other capital architectural plans

To identify and evaluate the scale, characteristics and dates of the architectural remains in Thăng Long Imperial Citadel site at 18 Hoàng Diệu and at the same time continue the study at the site, in 2005 – 2006, Việt Nam Institute of Archaeology sent some groups of researchers to other places in Việt Nam as well as some Asian countries to do some comparative research on the architectural palaces of the ancient capital cities in Asian region such as Tian An Capital (Tang period), Beijing Capital (Ming - Tin period) in China; Nara Capital in Japan, Sila Capital in Korea.

The results of these studies have contributed a lot of new data to clarification of the typical building technique, the characteristics, scale and original features of the decorative art on the roofs of the palaces in Thăng Long Imperial Citadel from the Lý, Trần and Lê periods. There are some initial comments:

1. Most of the exposed relics in the Sections A, B, C and D belonged to the Lý and Trần Dynasties (the eleventh – fourteenth centuries)

The architectural traces of the Lê and Nguyễn periods remain in small quantity because their plans lied on the Lý and Trần period architectures. They were destroyed at this time, when the Nguyễn Dynasty started building Hà Nội citadel

and they were further ruined in the French Domination period to build the present modern streets.

2. The Lý, Trần architectural ruins exposed in the sections (A, B, C, and D) are similar in the technique of building pillar bases and fairly large size. As compared to the various types of pillar bases of palaces in the ancient capital cities of China, Korea and Japan, Vietnamese building technique in Thăng Long Imperial Citadel was very high then. According to the Japanese experts, the strong build of the bases are closely related to the large-scale architectural constructions possibly with two roof storeys.

3. The site is located nearly 100m from Kính Thiên Palace. When applying the high-standard altitude and coordinate system to the site, it is very obvious to see the directions and distribution of the contemporary architecture in the western centre of the Forbidden Citadel, namely

the centre of Thăng Long Imperial Citadel from the Lý, Trần and Lê periods.

In conclusion, the traces exposed at 18 Hoàng Diệu initially makes it possible to identify the scale of some architectures. The future study results of Việt Nam Institute of Archaeology are likely to shed light on the scale of many other architectural works. And we thus will be more aware of the overall architectural plan of Thăng Long Imperial Citadel from the Lý, Trần and Lê periods at this site. However, based on the recent study results of 2005 – 2006, it is possible to consider the Lý - Trần architectural relics found at the site to be evidence reflecting fairly clearly the glorious physiognomy of the superb Forbidden Citadel and Thăng Long Imperial Citadel in the 1000-year history.

The study is being continued very thoroughly and scientifically. Therefore, some of the study results mentioned above will be more clarified and possibly modified in the near future.