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# Comparative review of ideal layouts in Han Buddhist and Catholic monasteries

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## ABSTRACT

In recent years, the comparison of spatial layouts has gradually become a central issue for scholars to focus on in their comparative reviews of Eastern and Western religious spaces. For the first time, two ideal plans, namely, Illustrated Scripture of Jetavana Vihara of Sravasti in Central India (667) and the Plan of St. Gall (816), are compared side by side in this article. This research integrates architectural history and architectural design theory to examine the characteristics of the two ideal plans. Establishing a comparison basis of the two plans through plan restoration and diagram analysis are fundamental to understanding the peculiarities and generation background of Han Buddhist and Catholic monasteries.

This study highlights that the onion structure adopted by both plans distinguish sacredness from secularness. The boundary between the sacred and the secular serves as a bridge that links the two worlds from material and spiritual aspects. Furthermore, the central worship route and independent internal routes guarantee that multiple functions can exist and be performed simultaneously in both monasteries. According to these observations from both plans, the pursuit of independent and self-sufficient life modes is the key to understanding such a layout.

This study not only establishes an in-depth understanding of the layout structure of the spatial prototypes in Eastern and Western monastic spaces, but also provides inspiration and guidance for the spatial structure of religious spaces for future development.

## ARTICLE HISTORY

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## KEYWORDS

Illustrated Scripture of Jetavana Vihara of Sravasti in Central India; Plan of St. Gall; ideal layout; spatial structure; boundary; route; life mode

## 1. Introduction

In recent years, the comparison of spatial layouts has gradually become a central issue for scholars to focus on in their comparative reviews of Eastern and Western religious spaces. (Wang 2021a) was the first to compare Han Buddhist monasteries in Southern China and Cistercians monasteries in Western Europe on the basis of the relationship between monks' lives and monastic spaces. Worship spaces were focused on, and two fundamental similarities between the Three Temples and the Church were highlighted (Wang 2021b). Another study revealed and analyzed the physical characteristics and cultural connotations of water to comprehensively understand the relationship between monastic lives and spaces (Wang and Feng). Spatial prototypes have to be examined to further analyze the background of the spatial layout in Eastern and Western monastic spaces. The ideal plan and the actual construction are the two basic issues in architecture. The author found that in Han Buddhist and Catholic world, there exist two similar ideal monastic plans almost generated in the same period. Both plans were established to restore religious life to order, and they depict the self-sufficient spiritual life in the Middle Ages. This research noted that in the field of Buddhist and Catholic monasteries, scholars have conducted comprehensive studies on the corresponding ideal

plan. Given the special structure of the article, a detailed research review will be presented later.

When Daoxuan (596–667) wrote down his imaginings of an ideal Buddhist monastery in the last year of his life in the year 667, he could not have predicted that almost one century and a half later, a Benedict monk would draw up the ideal monastic layout for the Benedictines at the Abbey of Reichenau around the year 820. The Illustrated Scripture of Jetavana Vihāra of Śrāvastī in Central India (中天竺舍卫国祇洹寺图经, hereinafter referred to as **The Illustrated Scripture**) and the Plan of St. Gall (hereinafter referred to as **The Plan**) serve parallelly as guidelines in their corresponding religions. Today, 1200 years later, they are presented for the first time on the same page. They differ considerably in appearance: a scripture with a detailed description and a drawing of a plan with a single line but with details in the layout. They stand for different religions. However, if we further explore why they were created and how they were presented, we will find that they are very similar in the sense that they both aim to set up ideal plans for monastic construction and posit that axis, cloister, and routes serve as layout strategies to highlight the sacred from the secular. To further examine their similarities and differences, we need to analyze their background and extract the characteristics of their layouts.

The purpose of the article is to establish a fully comprehensive review of the two ideal plans at the level of architectural space and layout organization. The contribution of the study is that it provides a starting point for further analysis of the two ideal layouts and a reference frame for future relevant research. The author believes that comparative research on the two ideal plans can fill the spatial analysis gap and provide viewpoints for improved comprehension of the two ideal plans' characteristics, similarities, and differences as well as the corresponding life modes and cultural connotations behind the two plans. Establishing a comparison basis between the two ideal plans is fundamental to form general review on the spatial structure of Eastern and Western monastic spaces. The study of spatial prototypes, which are the structural basis for the formation, development, and evolution of forms of spatial organization, is clearly essential, mainly at the following levels:

1) A comparative study of the two ideal plans, which correspond to the core organization of two different architectural groups, can help us understand the historical pattern formation, spatial organization strategies and evolutionary basis of Eastern and Western religious architecture.

2) An exploration of the organization and spatial structure principles of the spatial prototypes of Eastern and Western religious architecture can be a better reference for the spatial structure of current and future religious spatial layout strategies.

## 2. Materials and Methods

For this research, the first-hand materials are The Illustrated Scripture and The Plan, the key to organizing the research material is to collate the different graphic information and to create similar diagrams for objective comparison between the two as a basis for the structure of the article. Specifically, basic layout elements like organizing structure, boundary, axis and route and life mode are analyzed in detail of the two ideal plans with point-to-point comparison. Besides, a review of research based on former scholars can assist in the formation of this research perspective.

Field research can be used to obtain first-hand data for analysis and research. With regard to the two ideal plans, spatial analysis and comparative research are based on the contents of the text and graphics. In this regard, research methods that integrate architectural history and architectural perspectives are effective. Archival research, which restores a plan according to the text, and graphical analysis are crucial to the research method.

1) Archival research on both ideal plans is a basic method to investigate the background of the plans' generation. On the basis of the collection of historical materials and research of previous scholars from the

perspective of architectural history, the origin of both ideal plans and their influence on the future world are explored.

2) Restoring a plan in accordance with the text is the key to building a similar comparative basis. The premise of realizing comparative research is that the two sides of the comparison must have a similar structural basis. However, only the text version of The Illustrated Scripture remains. First, the text needs to be interpreted in depth, and the research of previous scholars must be combined to restore the text to a plan view and obtain a formal structure basis for a comparative analysis with The Plan. The specific restoration method is expanded in detail below.

3) Diagram analysis based on the perspective of architecture design is the starting point for the comparison of the characteristics of both plans. It is a fundamental tool for the comparative study of the two ideal plans in terms of function, spatial structure, boundary, axis, route, and other architectural aspects.

## 3. Illustrated scripture of Jetavana Vihara of Sravasti in central India (667)

### 3.1 Background

From 572 to 578, Emperor Wudi of the Northern Zhou Dynasty carried out the persecution of Buddhism by destroying Buddha statues, confiscating Buddhist monasteries' properties, and ordering monks to return to secular life. The national revival of Buddhist monasteries began after the reunification of China in the Sui Dynasty (581–618). North and south Buddhism became increasingly integrated in the Tang Dynasty (618–907). The re-establishment of national laws and institutions also meant that orthodoxy and perfection were pursued in the management of Buddhist monasteries. In the second year of Qianfeng of Emperor Gaozong in the Tang Dynasty (667), Daoxuan (596–667), a Chinese Vinaya master in Zhongnan Mountain, wrote The Illustrated Scripture and The Illustration for the Precept Altar Created in Guanzhong (关中创立戒坛图经, hereinafter referred to as **The Illustration for the Precept Altar**). The two illustrated scriptures describe the ideal monastic layout in the mind of Daoxuan. The former is based on the Jetavana Monastery vihara, and the latter is based on the ordination altar in this monastery. What has been preserved is a figure of a carving copy of The Illustration for the Precept Altar, which is said to have been made in the 12th year of Shaoxing of the Southern Song Dynasty (1152).

Daoxuan wrote the two illustrated scriptures to express his discontent and criticism of the disorderly religious environment at that time and hoped to establish an ideal monastic prototype based on the Jetavana

Monastery in Scorpio (Indian Sheriff City). However, why did it have to be based on the Jetavana Monastery, and what was his real source of creation?

As he mentioned in the preface of *The Illustrated Scripture*, “we can assume that the Lord of Jetavana (Sakyamuni Buddha) resided (at this monastery) for twenty-five years. It is in this park that the Great Events took place, his transformation of and preaching to eight assemblies at the seven sites within a single period. The teachings of the profound texts on the five sections (of vinayapitaka) and the four agamas were (preached) mostly in this monastery”(T45n1899)

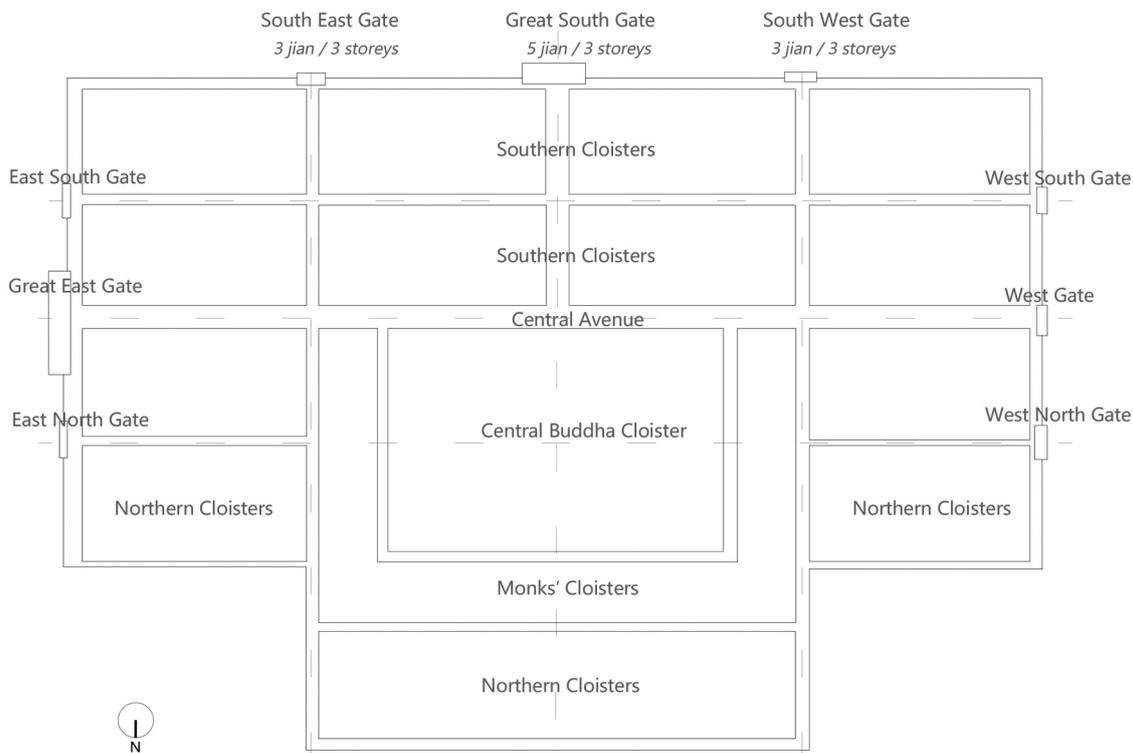
Therefore, naturally, its layout became the target that monasteries later imitated and Daoxuan referred to. However, Daoxuan had not been to the Jetavana Monastery. What he described was mostly based on the *Sigao* (寺诰) written by Lingyu (灵裕, 517-605), an eminent monk in the Northern Qi Dynasty. It explained in detail the specific construction method and planning drawings based on Jetavana Monastery. He might have also been influenced by *A Record of Buddhist Kingdoms* (Foguo Ji 佛国记), the travel notes of Faxian (法显, 334-420), a great Chinese Buddhist monk who was the first monk to set foot in India. However, according to his record, the Jetavana Monastery was in ruin (T51n2085) when he visited. This situation proves that *The Illustrated Sutra* was not a description based on facts but was more of Daoxuan’s imagination of an ideal monastic layout.

Moreover, Daoxuan’s rich life experience provided him a profound architectural knowledge background.

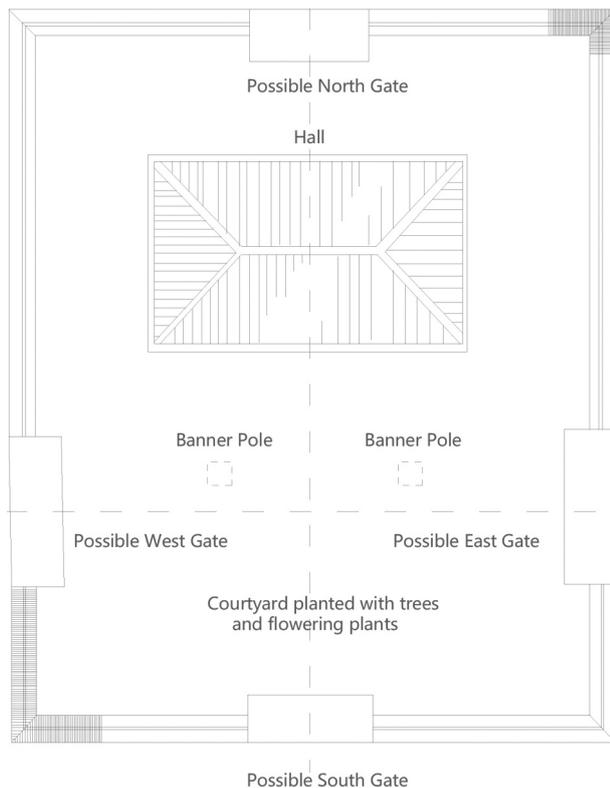
He had served as an abbot in six monasteries Yang (2019), and he had traveled extensively. His *Continued Biography of Monks* (续高僧传) involves about 790 monasteries. Notably, the monasteries Daoxuan had visited included Guoqing Si (T50n2060). According to the details of the time when Shi Zhixi (556-627) passed away, Dao Xuan might have visited Guoqing Si in 627, the first year of Tang Zhenguan. This claim is worthy of further exploration. How much influence did the monasteries, including Guoqing Si, that Daoxuan visited have in his vision of the monastery? How was such influence reflected in his imagination of the ideal plan? With limited historical data, resolving these questions would be difficult.

### 3.2 Plan restoration

Given that only the scriptures are left, the ideal plan described by the text needs to be restored. Scholars have explored such plan restoration in accordance with the scriptures. Ho (1995) took the lead in performing detailed restoration work on the plans of the Buddha cloister (Figure 1) and a typical cloister (Figure 2) by studying monastic and palace layouts in the Tang Dynasty. Tan (2002) combed the background and influence of the two illustrated scriptures and provided the first complete translation into a Western language. Gong (2006) provided an overview of the number of courtyards in Jetavana Monastery and analyzed the application of the layout mode of The



**Figure 1.** Schematic plan of Jetavana Monastery based on Daoxuan’s description. Reconstruction by Ho, Puaypeng. Image cited from “*The Ideal Monastery: Daoxuan’s Description of the Central Indian Jetavana Vihara.*” Redrawn by the author.



**Figure 2.** Schematic plan of a typical cloister in Jetavana Monastery. Reconstruction by Ho, Puaypeng. Image cited from “*The Ideal Monastery: Daoxuan’s Description of the Central Indian Jetavana Vihara.*” Redrawn by the author.

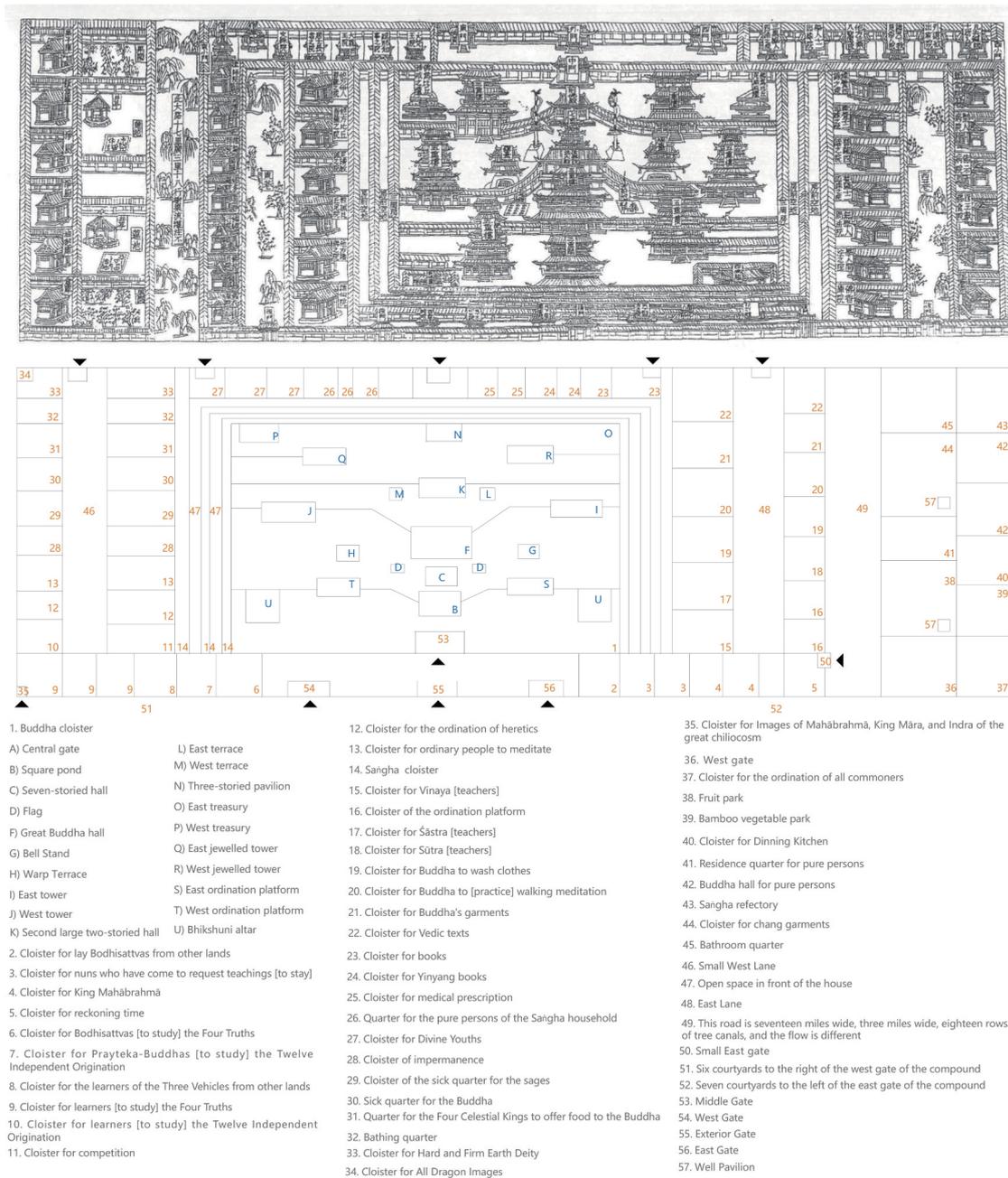
Illustration for the Precept Altar in real life. Su (2009) analyzed a carving copy of The Illustration for the Precept Altar (Figure 3) when discussing the hierarchy of monasteries in Sui and Tang Dynasties. Zhong (2015) compared and analyzed the similarities and differences between The Illustrated Scripture (Figure 4) and The Illustration for the Precept Altar (Figure 5). Layout diagrams of the illustrations of both scriptures were drawn based on the texts and inspired by the palace layout in the Tang Dynasty. This was the earliest general restoration of the Buddha cloister. However, the plan restoration was incorrect, leading to unconvincing research results. Later on, (Yang 2019) examined the scale relationship of the Illustrated Scripture and made a complete restoration of the whole monastery, including **the Buddha cloister and the monk cloister** (Figure 6), for the first time.

From the drawings above, we can find that restoring the ideal plan of The Illustrated Scripture on the basis of the classical texts written by Daoxuan is difficult. The biggest challenge in the restoration work is the interpretation of the scale relationship and functional layout, which are expressed in the scriptures, but still remain ambiguous.

According to Dao Xuan, Jetavana Monastery occupied 80 hectares and had 120 courtyards. The distance from east to west was about 10 miles and walking from north to south required more than 700 steps. Yang (2019) used this description as a benchmark and made inferences regarding the scale of the monastery based on the study of Changan City in Tang Dynasty. The derivation process of scale data was detailed, but the author admitted that the result was only a speculation due to insufficient information (2019), even though she had conducted the most detailed and profound restoration work on the ideal plan among all researchers. With regard to the plan restored by Yang Shu, the most controversial issue is how to understand the distance between the Buddha cloister and the Monk cloister. “On the left of the main avenue at the east of the large cloister is the Cloister for Making Offerings to the Sahgha. The length or width of the road is three li. ... This main road is very clean, and there is no cart or horse passing by. On the south, north, left, and right of the road, each has a large stone deity (statue) constructed by the Hard and Firm Earth Deity” (T45n1899,45)<sup>1</sup>

In ancient Chinese, length and width can be expressed by the same word: “阔 (Kuo)”. The details of the main road given above imply that “阔(Kuo)” meant length. It referred to the main road that continued the central main road of the Buddha cloister to the east where pilgrims came from. Moreover, a cattle/horse square was located at the east entrance so that pilgrims could park their horses and walk toward the East Gate, the main entrance of the Buddha Cloister for pilgrims. If it is understood as a road with a width of three li between the Buddha cloister and monk cloister as what was believed by Yang Shu, then this distance between two cloisters is too large and unrealistic for communication between the two cloisters. Three li in the Tang Dynasty are almost equal to 1500 meters at present. Given that no additional archaeological materials and reliable historical documents have been discovered thus far, this article focuses on the ideal restoration of the ideal plan to express the functional relationship visually and further explore the layout principles and meaning. From the perspective of practicality, the Buddhist and monk cloisters should be closely connected to facilitate communication between various functions. Considering that orchards in monasteries generally occupy a large area, the scale of the monk cloister may not have been smaller than that of the Buddhist cloister, so when the restoration

<sup>1</sup> Notes: As a key and controversial element of the recovery of this plan, the original text and English translation are attached here. T45n1899. “The [stone deity] holds a lance in his hand, and his legs are treading over a demon. [The face] is so stern, fierce, and resolute that one does not [dare to] look up at him without reverence. All travelers passing by will lower his eyes and walk on with hasty steps.” Translated by Tan, Zhihui.



**Figure 3.** Figure of a carving copy of The Illustration for the Precept Altar. Image cited from “On the Hierarchy in Buddhist Temples of Tang Dynasty in Chang’an. 试论唐代长安佛教寺院的等级问题” Redrawn and described by Su Bai. Redrawn and translated in English by the author.

was made, the scale of the two cloisters was treated equally.

### 3.3 Plan characteristics

The restored plan (Figure 7) indicates several characteristics of the ideal plan.

(1) The monastery was composed of two main cloisters, namely, the Buddha cloister and the monk cloister, which consisted of around 120 sub-cloisters. An east–west avenue ran through the whole monastery. The north part of the Buddha cloister consisted of a pagoda, 3 main halls, 14 annexes, a Sangha cloister, and 19

cloisters for Buddhas’ daily life. The south part was composed of 29 cloisters, which were mainly used for Buddhas, monks, and certain pilgrims. Four guardian cloisters were in the four corners of the Buddha cloister. The north part of the monk cloister, including the kitchen, refectory, and bathroom, was mainly used to serve monks’ daily life. The south part of the monk cloister consisted of functions for live production, such as bamboo vegetable park and fruit park, and auxiliary function cloisters, such as a cloister for the ordination of all nobles and commoners, a place for changing garments, and a place for carts and horses.

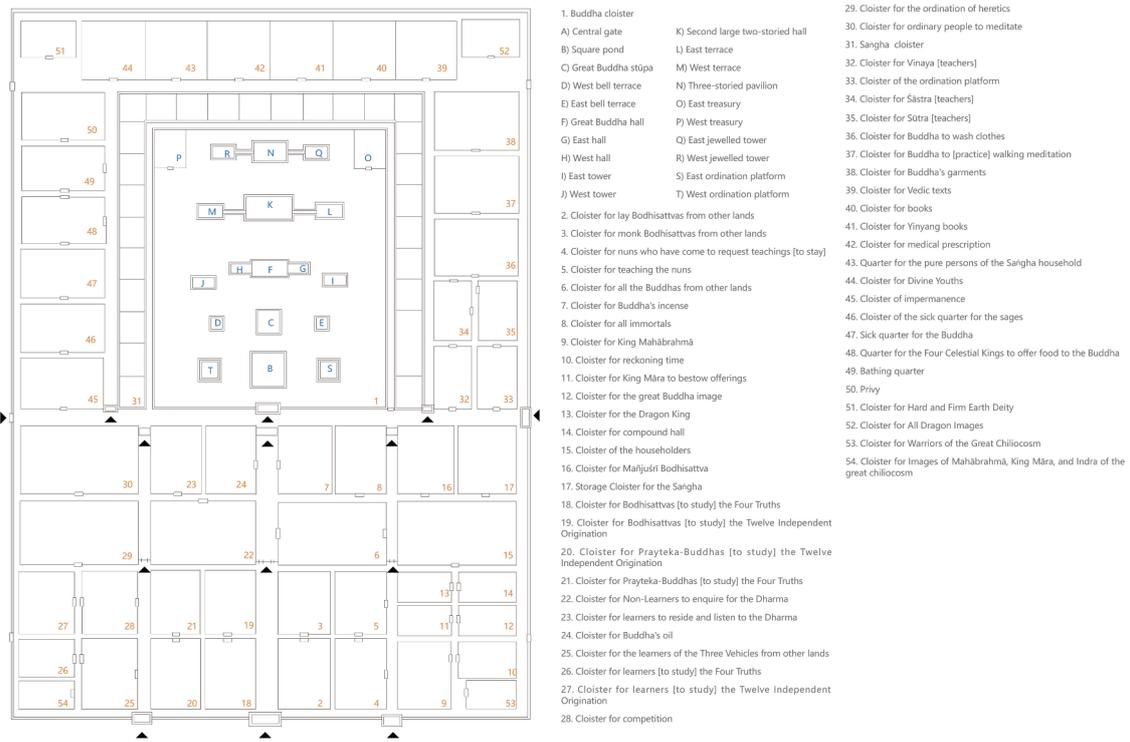
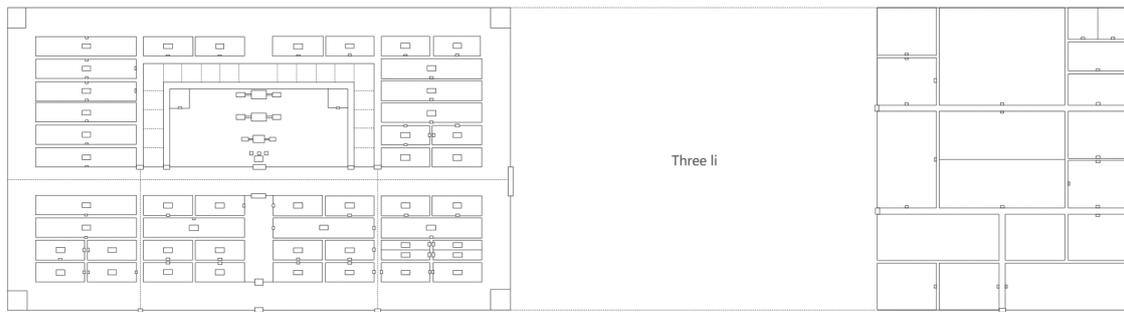


Figure 4. Layout diagram of The Illustrated Scripture. Reconstruction by Zhong Xiaoqing. Image cited from "Conception of the Layout of Buddhist Temples in the Buddhist Sutras of the Early Tang Dynasty." Redrawn and translated in English by the author.



Figure 5. Layout diagram of The Illustration for the Precept Altar. Reconstruction by Zhong Xiaoqing. Image cited from "Conception of the Layout of Buddhist Temples in the Buddhist Sutras of the Early Tang Dynasty." Redrawn and translated in English by the author.



**Figure 6.** Restoration of Buddha and Monk cloisters by Yang Shu. Image cited from *A study of monastic architecture and its possible images in the two sutras written by Daoxuan in the Tang Dynasty*. Redrawn and translated in English by the author.

(2) The functional configuration of the Buddha cloister was east–west symmetrical with a clear central axis.

(3) The monastic layout faced south, and the three gates in the south determined the way to visit and the deployment of the Buddha cloister. Monks and pilgrims usually accessed the Buddha cloister through the east gate, and Buddhas entered from the south gate and followed the north–south avenue to conduct Buddha adoration rituals.

(4) The Great Buddha Hall was situated at the center of the Buddha cloister.

### 3.4 Influence

The influence of *The Illustrated Scripture* and *The Illustration for the Precept Altar* on the architectural layout of the subsequent generations is mainly reflected in the fact that the north–south central axis remains, and important buildings are arranged on the central axis. The middle cloister is for Buddhas and surrounded by sub-cloisters, each of which has a sanctuary space. The logistics part is mostly on the periphery of the monastery, close to the entrance and exit, and the Buddha cloister is located inside the monastery. A notable change is that the east–west avenue depicted in the two illustrated sutras is diminished in the monasteries of the descendants, and the north–south division is gradually weakened, particularly because many typical vertical-axis layouts have been established since the Ming and Qing Dynasties.

According to the research of Yang (2019), although *The Illustrated Scripture* and *The Illustration for the Precept Altar* influenced the subsequent generations, their influence did not reach the desired degree because they were written in the year of Daoxuan's death, and they were better preserved after being spread to Japan (2019).

"The Jetavana Monastery of Shravasti (a city in ancient India) in middle Tianzhu takes Tushita Palace (heavenly realms of Kamadhatu in Buddhist tradition) as the scale. Ximing Monastery in Tang Dynasty takes the Jetavana Monastery as the scale. Daian-ji in our country takes Ximing Monastery as the scale. The

temple is located in Soekami-gun in Japan. Its towers and shrines, Buddhist temples and monks' rooms, bell towers of Buddhist texts, canteens, and bathrooms are rebuilt inside-out, and there is not enough time to record them all. All that from small to large are based on the Vihara by Prince Shōtoku 上宮太子熊凝精舍." (Ueda, K., and Seiichi, K. 1928, 88) The Daian-ji depicted here provides an important clue for us to analyze the source of the monastic layout described in *The Illustrated Scripture* and its influence on the architecture of the subsequent Buddhist monasteries that followed the order "Tushita Palace–Jetavana Monastery–Chang'an Ximing Monastery–Nara Daian-ji."

Tushita Palace was where the Buddha pronounced the Sutra of Maitreya Bodhisattva's attainment of Buddhahood (referred to as Sutra of Maitreya). When the Buddha and his disciples were still in Shravasti, Maitreya Bodhisattva was designated by the Buddha to be his successor, namely, the Future Buddha. One of the Arhats, Upāli, who was a monk and one of the 10 disciples of the Buddha, questioned the Buddha's judgment. He said that Maitreya had a mortal phase. Why did the Buddha think that he would become a Buddha even though he did not know where he would go after his death? To this end, the Buddha clearly stated to his disciples that Maitreya would go to Tushita after his death. Furthermore, the Buddha depicted beautiful scenes of the heavens to his disciples: Tushita was divided into inner and outer cloisters. The inner and outer cloisters were separated by seven walls. The inner cloister had treasure palaces, treasure trees, treasure flowers, treasure girls, walls, dragon kings, and so on (T14n0452). The outer cloister was the place where the heavenly people lived and where desire still existed, so it was a place of enjoyment. The inner cloister was the residence of Maitreya. When the heavenly people in the outer cloister wished to go to the inner cloister, they required further practice. This situation shows that the difference in space helped define the difference in the results of the practice.

The specificity of the Tushita described in Sutra of Maitreya can be found in the Dunhuang murals of the

early Tang Dynasty in Cave 329 of Mogao Grottoes (Figure 8). The mural can be divided into two parts. The upper part reflects the grandeur of Maitreya's sermon in Tushita Palace depicted in Sutra of Maitreya. The other part is the scene where Maitreya descends to the mortal world for a sermon for all beings, which is mainly the scene in the Three Dharma Assemblies of Longhua (龙华三会). In the

picture, green water surrounds the pavilions, and the buildings are connected by bridges.

From Tushita to Jetavana Monastery, there is no existing case to study. By contrast, The Illustrated Scripture and The Illustration for the Precept Altar are based on the imitation of Jetavana Monastery and aim to restore the ideal monastic layout. The commonality between the two is also reflected in the clear inner and outer divisions,

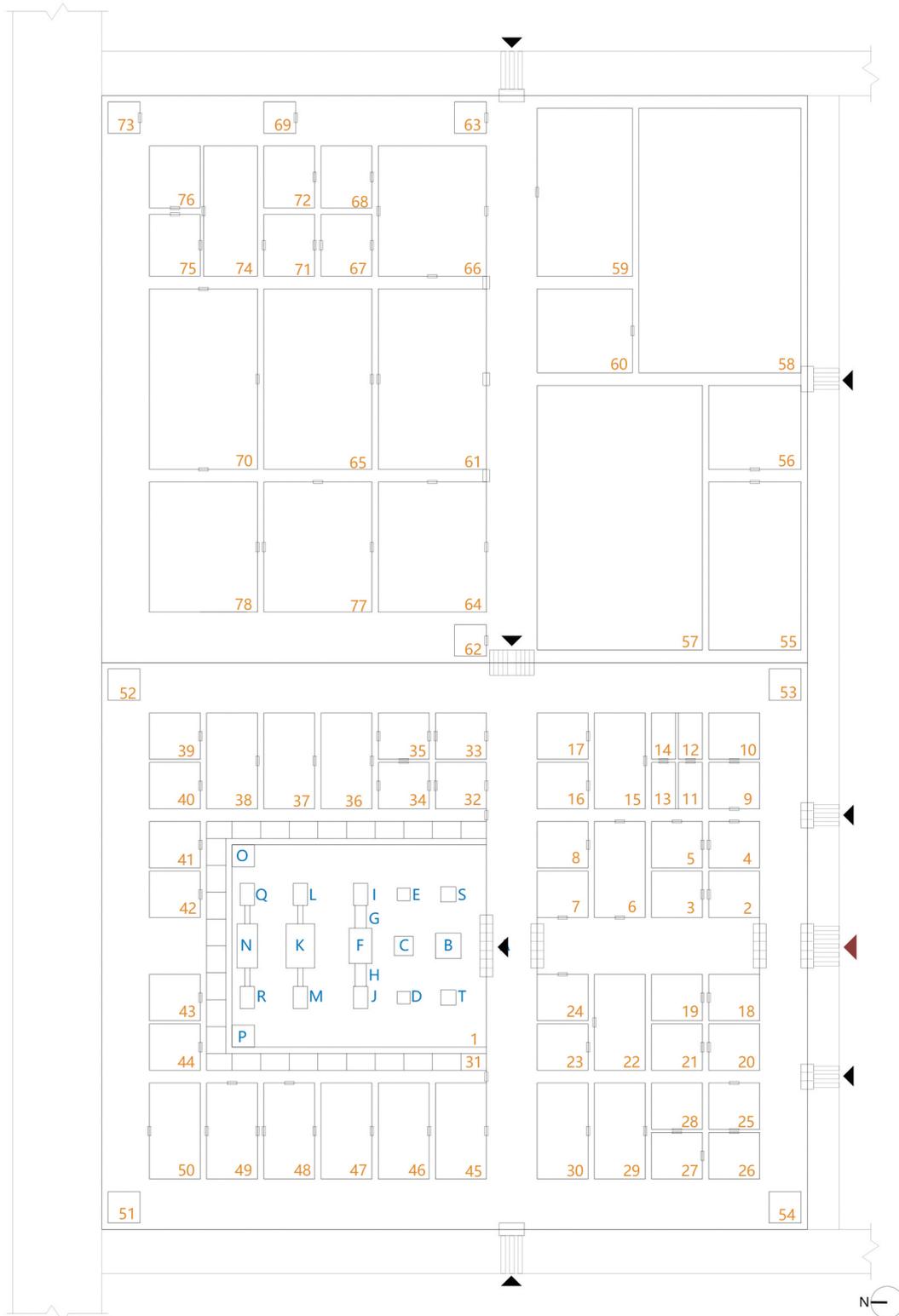


Figure 7. Plan of The Illustrated Scripture restored by the author.

1. Buddha cloister
- A) Central gate
- B) Square pond
- C) Great Buddha stūpa
- D) West bell terrace
- E) East bell terrace
- F) Great Buddha hall
- G) East hall
- H) West hall
- I) East tower
- J) West tower
- K) Second large two-storied hall
- L) East terrace
- M) West terrace
- N) Three-storied pavilion
- O) East treasury
- P) West treasury
- Q) East jewelled tower
- R) West jewelled tower
- S) East ordination platform
- T) West ordination platform
2. Cloister for lay Bodhisattvas from other lands
3. Cloister for monk Bodhisattvas from other lands
4. Cloister for nuns who have come to request teachings [to stay]
5. Cloister for teaching the nuns
6. Cloister for all the Buddhas from other lands
7. Cloister for Buddha's incense
8. Cloister for all immortals
9. Cloister for King Mahābrahmā
10. Cloister for reckoning time
11. Cloister for King Māra to bestow offerings
12. Cloister for the great Buddha image
13. Cloister for the Dragon King
14. Cloister for compound hall
15. Cloister of the householders
16. Cloister for Mañjuśrī Bodhisattva
17. Storage Cloister for the Saṅgha
18. Cloister for Bodhisattvas [to study] the Four Truths
19. Cloister for Bodhisattvas [to study] the Twelve Independent Origination
20. Cloister for Prayteka-Buddhas [to study] the Twelve Independent Origination
21. Cloister for Prayteka-Buddhas [to study] the Four Truths
22. Cloister for Non-Learners to enquire for the Dharma
23. Cloister for learners to reside and listen to the Dharma
24. Cloister for Buddha's oil
25. Cloister for the learners of the Three Vehicles from other lands
26. Cloister for learners [to study] the Four Truths
27. Cloister for learners [to study] the Twelve Independent Origination
28. Cloister for competition
29. Cloister for the ordination of heretics
30. Cloister for ordinary people to meditate
31. Saṅgha cloister
32. Cloister for Vinaya [teachers]
33. Cloister of the ordination platform
34. Cloister for Śāstra [teachers]
35. Cloister for Sūtra [teachers]
36. Cloister for Buddha to wash clothes
37. Cloister for Buddha to [practice] walking meditation
38. Cloister for Buddha's garments
39. Cloister for Vedic texts
40. Cloister for books
41. Cloister for Yinyang books
42. Cloister for medical prescription
43. Quarter for the pure persons of the Saṅgha household
44. Cloister for Divine Youths
45. Cloister of impermanence
46. Cloister of the sick quarter for the sages
47. Sick quarter for the Buddha
48. Quarter for the Four Celestial Kings to offer food to the Buddha
49. Bathing quarter
50. Privy
51. Cloister for Hard and Firm Earth Deity
52. Cloister for All Dragon Images
53. Cloister for Warriors of the Great Chiliocosm
54. Cloister for Images of Mahābrahmā, King Māra, and Indra of the great chiliocosm
55. Cloister for the ordination of all sages, Kings, and Celestial Assemblies
56. Cloister for the ordination of all commoners
57. Fruit park
58. Bamboo vegetable park
59. Place for changing garments, [stall] carts, and [rest] horses
60. Cloister for the wives of all Kings to change their garments
61. Cloister for Dinning Kitchen
62. Cloister for registrar and guardian
63. Quarter for cows and horses
64. Residence quarter for pure persons
65. Buddha hall for pure persons
66. Cloister for Providing Foods
67. Food Preparation Kitchen
68. Storehouse for rice and flour
69. Cloister for controller
70. Saṅgha refectory
71. Pure persons refectory
72. Urinate place for monks, pure persons and people who often come to eat
73. Urinate place
74. Medicine storehouse
75. Quarter for sick monks
76. Privy for sick monks
77. Cloister for chang garments
78. Bathroom quarter

Figure 7. (continued).

namely, the divine space and the monastic space. It attempts to depict the perfect Buddha land, and the periphery is for the daily life and practice of monks.

Daoxuan was once the seat of honor in Ximing Monastery and participated in Xuanzang's translation field. According to the Great Tang Records on the Western Regions 大唐西域记, Master Xuanzang, in the third year of Zhenguan in the Tang Dynasty

(629), had gone to Jetavana Monastery when he went to Tianzhu (India) for Buddhist scriptures. However, it had been destroyed. Xuanzang returned to Chang'an in 645 and presided over the translation of Buddhist sutras. Daoxuan and Xuanzang could have had exchanges about Jetavana Monastery. Ximing Si was one of the most important royal monasteries in the Tang Dynasty and had Sutra



**Figure 8.** North wall of Cave 329 of Mogao Grottoes in early Tang Dynasty. Image cited from Digital Dunhuang, <https://www.e-dunhuang.com/cave/10.0001/0001.0001.0329>

Pitaka created by the royalty. Xuanzang, Yijing, Bukong, and others had translated many classics in this national translation place. Moreover, Daoxuan, Huaisu, Yuance, and Shanwuwei once lived here. It had a deep connection with Vinaya School in Zhongnan Mountain, Dongta Sect, Faxiang Sect, and Esoteric Sect. Many overseas monks, such as Japanese monks Yongzhong, Kūkai (805), Yuanzai, Yuanzhen (855), and Daoci, studied here. Ximing Si profoundly affected not only Japan in the east, but also areas in the west. For example, Yunkuang and Cheng'en, masters from Ximing Si, gave lectures and promoted Buddhism in Dunhuang.

Ximing Si was located in the southwest corner of Yankangfang 延康坊 (Figure 9) in Chang'an City of the Tang Dynasty. It accounted for a quarter of Yankangfang and had a total of 13 halls and 4000 districts of buildings and galleries. It was one of the most important royal monasteries in the Tang Dynasty. Ancient Japanese books have many records of the influence of Ximing Si in the Tang Dynasty on the construction of Daian-ji in the Heian Period of Japan. A drawing of the layout of Ximing Si (Figure 10) can be found in the book *Chronicle of Master Kūkai* (弘法大师年谱12卷 (Vol. 3)), which is said to have been thousands of years. Japanese monk Daoci (?-744) drew it during his visit to Chang'an in the Tang Dynasty. He waited for the opportunity to adopt it as a reference for

the construction of a monastery in Japan. It coincided with the construction of Daian-ji, and the plan of Ximing Si was used as a reference (Tokunin, 1833). The Ximing Si painted by Daoci has a clear north-south central axis. Along the axis is the Memorial Archway Gate (Paifang), the Pure Pool, the South Gate, the Lecture Hall, the Guanyin Temple, the entrance to the altar, the Lotus Pond, Treasure Terrace, and the Abbot. Among them, the South Gate, Guanyin Temple, and Treasure Terrace are separated by walls. Between Guanyin Temple and Treasure Terrace is the most important part of the middle courtyard. The courtyard has bamboo and lotus ponds, and monks' rooms are symmetrically distributed on both sides. The west side of the middle courtyard is the auxiliary space for monks: the bathroom, the kitchen, the library, and so on. Notably, the Ximing Si painted by Daoci is centered on the hall. The two towers are in front of the south gate and on both sides of the Pure Pool. In addition, local beliefs have already been integrated into the monastic layout. On the two sides of the Lecture Hall are life-time temples. A bell tower is painted on the east side, but no drum tower can be seen on the west side. The Ximing Si painted by Daoci is probably only a part of the central axis, and the monastery is not fully expressed. Although the archaeological excavation work of Ximing Si (Zhongguo she



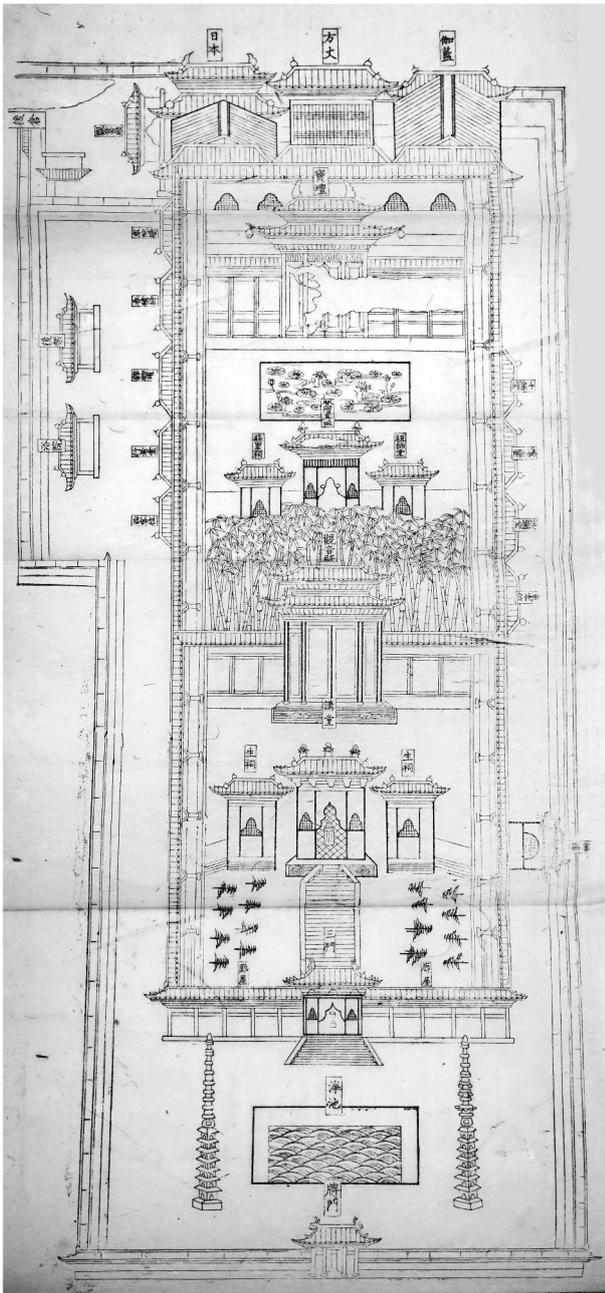
**Figure 9.** Ximing Si is located in the southwest corner of Yankangfang 延康坊 in Chang'an City of the Tang Dynasty. Image cited from *Qing long si yu Xi ming si*.

hui ke xue yuan. Kao gu yan jiu suo, 2015), which began in 1985, is not yet complete, roughly three courtyards can be used to help understand the distribution of the main buildings along the axis (Figure 11).

The plan of Ximing Si painted by Daoci and the plans depicted in *The Illustrated Scripture* and *The Illustration for the Precept Altar* share similarities in terms of function layout. They all emphasize the vertical axis. The monastic layout is composed of a central cloister and sub-cloisters. Ximing Si has no obvious north-south division. However, Daian-ji, which was built to imitate the layout of Ximing Si, has both a north-south vertical axis and an obvious north-south division. Daian-ji was built in the first year of Tenpyō (729). It was established by Emperor Shōmu following the imperial edict left by the anterior emperor (Ueda, K., and Seiichi, K. 1928, 89) and was located in Heijō-kyō (today's Nara) in Japan. The urban layout of Heijō-kyō adopted the layout of the Lifang unit system in Chang'an and Luoyang. Daian-ji was located in the southeast of Heijō-kyō and spanned two squares (Imajō, 1966)(Figure 12). The road between the two squares naturally became the east-west avenue that distinguished the north and south sections of Daian-ji, and the layout of the temple was consistent with the urban structure. The plan of Daian-ji (Nanto Kokusai Bukkyō Bunka Kenkyūjo, 1995) (Figure 13) indicates that Daian-ji was centered on the middle courtyard surrounded by sub-courtyards with different

functions. The south and north sections were distinguished by the east-west avenue. Before the middle courtyard were the East and West Towers. In the middle courtyard, the following structures were arranged from south to north: South Gate, Middle Gate, Sanctuary Hall, Bell Tower-Sutra library, Lecture Hall, ?, and Manjusri Hall. The east-west symmetry was arranged in the following order: Empress Suiko-Prince Shōtoku, East Room-West Room, dining hall-bathroom, and so on. Daian-ji was initially excavated in 1981, and part of the plan (Nanto Kokusai Bukkyō Bunka Kenkyūjo 1995, 314) (Figure 14) has been restored. The structure basically simulates to that of the plan of Daian-ji. The east and west sides of the south of the middle courtyard have double towers. The middle courtyard is the core of the temple, and the surroundings are sub-courtyards. From south to north in the middle courtyard are the South Gate, Sanctuary Hall, Lecture Hall, and canteen. The location of the canteen is different from that in the plan of Daian-ji.

Since the Tang Dynasty, the layout of the temple has become basically inseparable from certain keywords, such as middle courtyard, sub-courtyard, and north-south axis. The central position of the tower in the original has gradually been replaced by the hall. Monastery layouts that share the same construction as the buildings in Chang'an City and Luoyang City are becoming increasingly common. The structure of



**Figure 10.** Layout of Ximing Si drawn by the Japanese monk Daoci. Image cited from *Kōbō Daishi nenpu*: [12-kan].

courtyards and the connections of corridors are more complex and richer than before.

## 4. Plan of St. Gall (816)

### 4.1 Background

**The Plan** (Figure 15) is considered the ideal plan in the history of the Benedictines, who were pioneers in architecture. It was drawn and annotated on five separate pieces of parchment sewn together with a dimension of 112×77.5 cm. Around 40 structures, gardens, walls, fences, a road, and an orchard are drawn in red ink on the sheet, and lettered inscriptions in brown ink can be found in the back.

As the earliest surviving plan of a complete Benedictine monastery, The Plan has undoubtedly important values: “a memory map for scriptural truths,” “a visualization of the Rule itself,” “a political document employing gendered systems,” “a virtual pilgrimage map for Carolingian pilgrims,” and “a remarkable form of visual exegesis for monks”(Coon 2011,166-167) The Plan is the most distinguished witness of Carolingian culture, which spans many subjects, such as history of art and the church, liturgy, economics, social studies, horticulture, medicine, and paleography. Research on its history, has produced questions about its source and its purpose of creation, and the scale of the drawing has occupied a large part of early medieval research for over a hundred years (Jacobsen 1992, 11). However, these questions remain controversial (Zettler, 2015). Horn and Born (1979) believed that The Plan is a copy traced from a prototype issued by the court of Louis the Pious, who held the synods at Aachen in 816 and 817, with the purpose of establishing Benedictine monasteries throughout the Carolingian Empire. Meanwhile, other scholars, such as Lawrence (1986), argued that The Plan is an original drawing made at the Monastery of Reichenau for Gozbert, the abbot of Saint Gall who decided to build a new abbey church in the 820s. With a permission to examine The Plan in detail under sidelight and UV light in 1981, Jacobsen (1992) confirmed his assumption that The Plan is an original work because it has traces of creation (Jacobsen 1992, 9). Stachura (2004) obtained the same opinion as Jacobsen Werner by discerning the process of the draftsman’s thought (Stachura, 2004).

The Plan became accessible to modern scholars in 1844 because of Ferdinand Keller, who published the first monographic study of the Plan with a reduced-size image (Horn and Born 1979, 2). Since then, extensive research and restoration work on buildings, such as 2D and 3D renderings, have been performed. In 1876, Karl Lasius created a 2D rendering of the monastery (Figure 16) based on his understanding of the plan and its background.(J. Rudolf Rahn 1876, 87-98) Fiechter-Zollikofer (1936)(Figure 17) and Gruber (1937) (Figure 18) also created similar images. They imagined that the monastery is enclosed by great walls on the four sides, with the main entrance located in the west, that goes to the west entrance of the Church directly, and another entrance located in the south linked to the auxiliary buildings. The restoration of (Figure 19) is slightly different. He considered the segments to the west of the Church to be an independent building complex with an open courtyard in the center (Rice and Oates, 1965) Clark (1926) described in detail



Figure 11. Excavation plan of Ximing Si. Image cited from *Qing long si yu Xi ming si*.

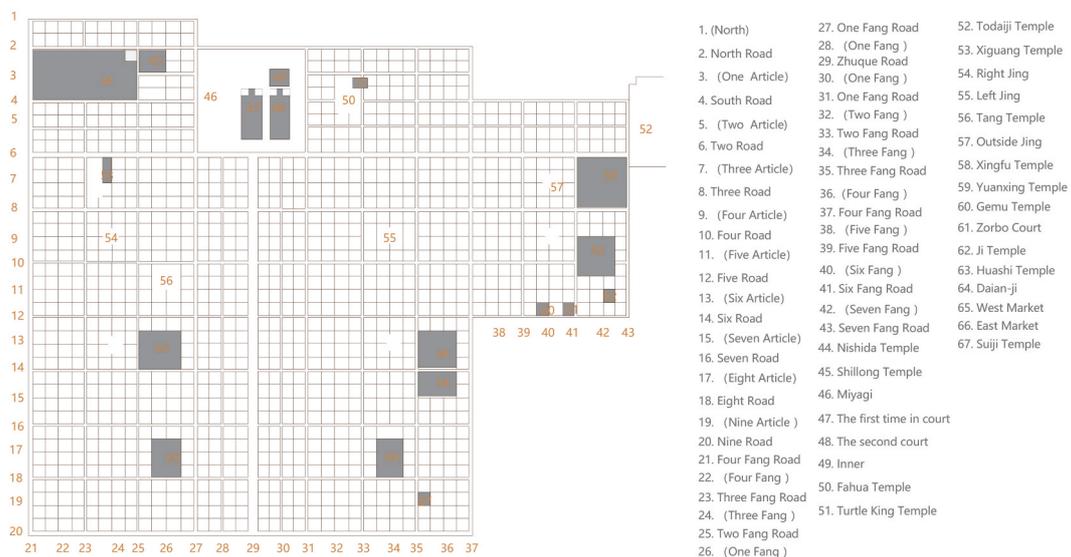
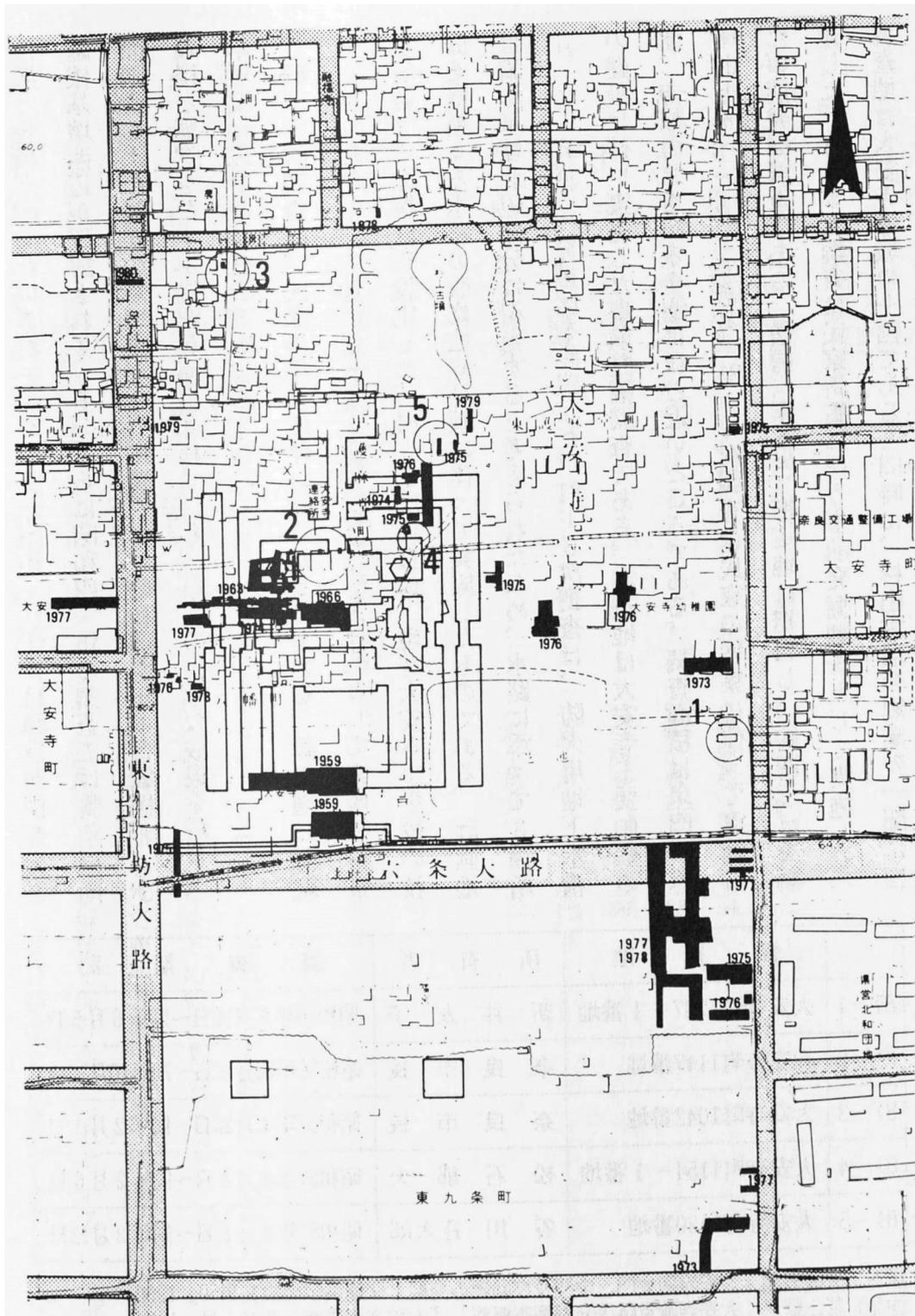


Figure 12. Daian-ji used to be located in the southeast of Heijō-kyō (today's Nara). Image cited from *Daianji*.

the function and organization of each space of The Plan. He suggested that the church with two apses dedicated to St. Peter and St. Paul was probably influenced by the Abbey of Fulda. Three volumes of the book *The Plan of St. Gall: A Study of the Architecture & Economy of & Life in a Paradigmatic*

*Carolingian Monastery* written by Horn and Born (1979) set a milestone in the research on The Plan. The authors carefully analyze every detail of The Plan, which is placed within the context of the Carolingian monasticism at that time, from the aspects of technology, architecture, and institutional organization.

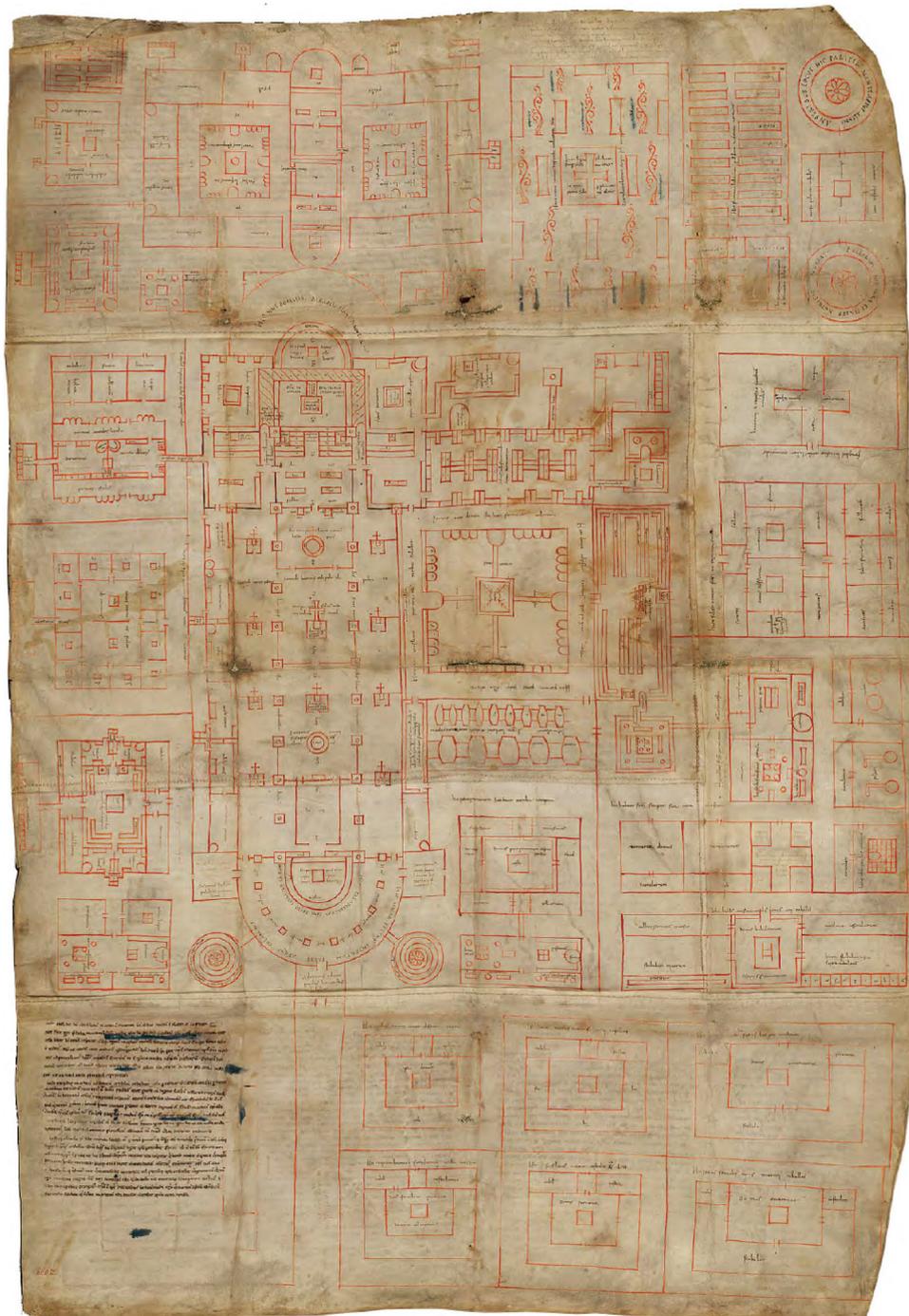




**Figure 14.** Excavation plan of Daian-ji.  
Image cited from *Nanto Daianji ronsō*.

and viewed it as passionate imagination that does not fully demonstrate objectiveness and science. Jacobsen considered the restoration of The Plan to be closely based on the construction situation of Carolingian architecture because he believed that the purpose of The Plan was to direct actual construction. Therefore, technically examining the drawing and annotations is the most direct and

effective method (Jacobsen 1992, 12). Unlike the great work by Walter Horn and Ernest Born, the website of Carolingian Culture at Reichenau and St. Gall, which was produced by the University of California between 2003 and 2009, is not only a successful practice of digital humanities but also a digital research tool that functions as a search engine in the research field of The Plan. It provides



**Figure 15.** Plan of St. Gall. Image cited from [www.stgallplan.org](http://www.stgallplan.org).

high-resolution imaging of the Plan in relation to bibliographies, manuscripts, *The Rule of Benedict*, bibliography of primary and secondary literature on Carolingian history and culture, and so on.

However, it is not a blueprint for construction directly. Therefore, the drawings by Horn and Born are considered one way of imagination (Geary, 2018). The Plan was a statement of policy drawn up at the highest levels of political and ecclesiastical administration and conceived within the framework of a monastic reform movement whose overriding preoccupation was to establish unity (*unitas*) where life had

been controlled by disparate traditions (*diversitas*) and to put a single rule (*una regula, una consuetudo*) in the place of the mixed tradition (*regula mixta*) (Horn and Born 1979, 52).

With regard to the study of space, Foot (2006) explored how the boundary is well set between the secular and the sacred while necessary elements can be integrated into the margin of the monastic world. Coon (2011) focused on the division of space and conducted research from the view of “a gendered analysis of space.”<sup>2</sup> Coon, L. L. *Dark Age Bodies* (The Middle Ages series). Philadelphia: University of Pennsylvania

<sup>2</sup>Notation of the Plan of St. Gall.

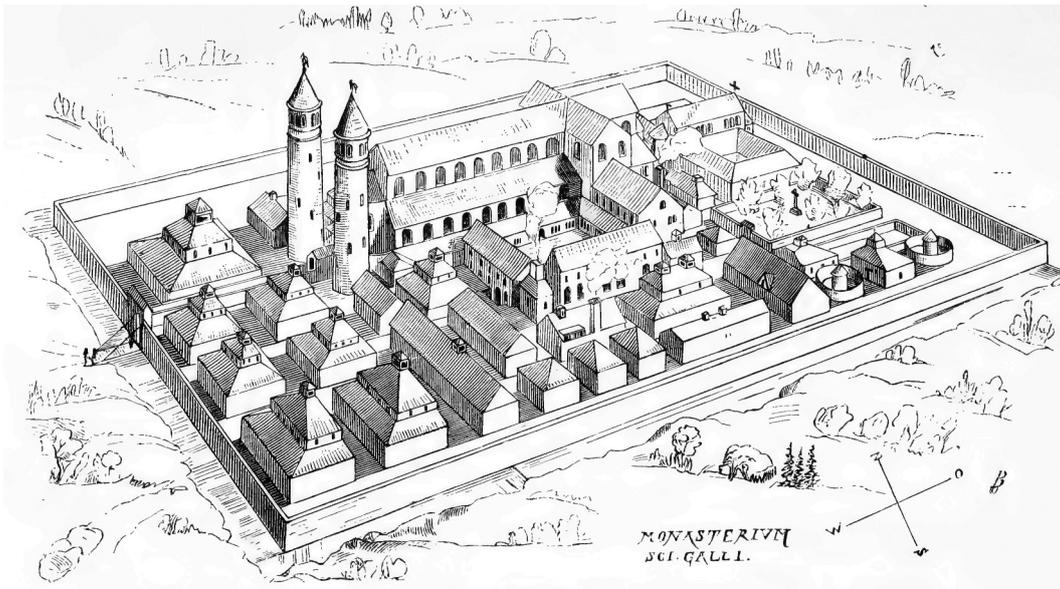


Figure 16. Rendering of the Plan of St. Gall by Karl Lasius in 1876. Image cited from *Geschichte der bildenden Künste in der Schweiz*.

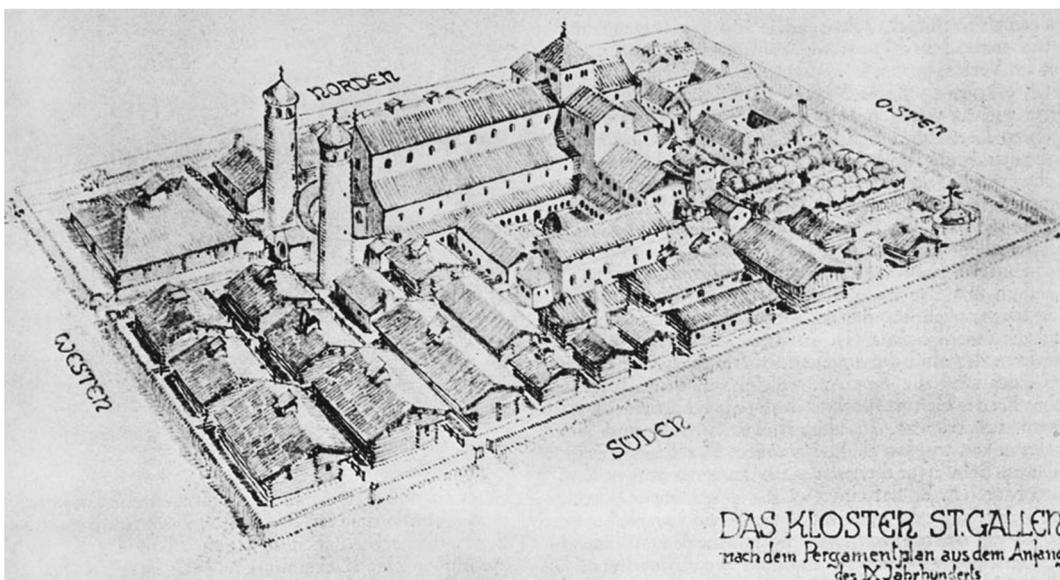


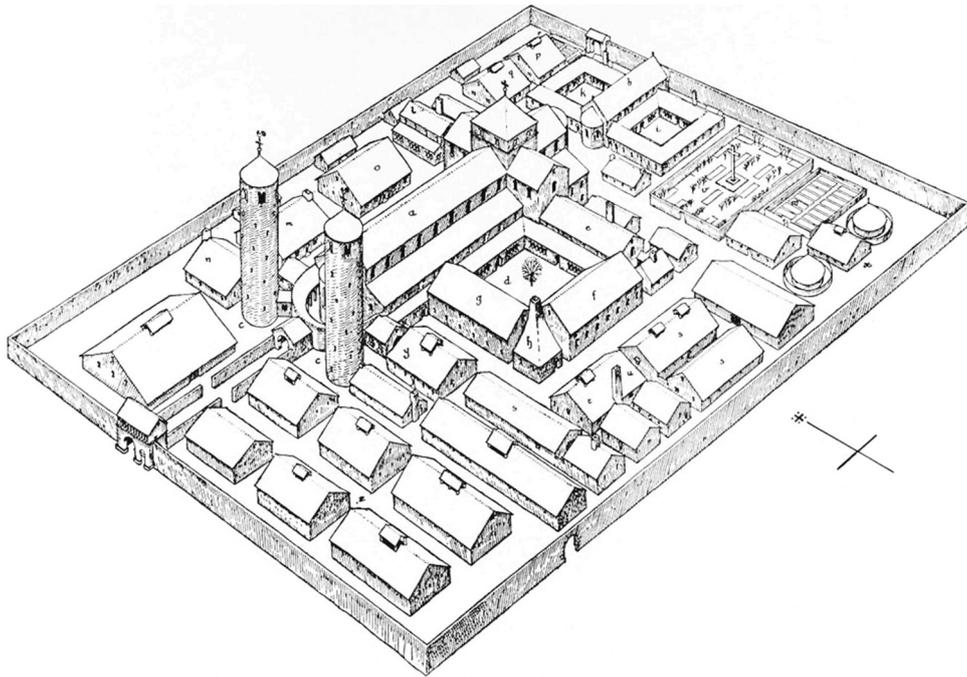
Figure 17. Rendering of the Plan of St. Gall by Ernst Fiechter-Zollikofer in 1936. Image cited from *Etwas vom St. Galler Klosterplan aus der Zeit um 820*.

Press.2011. P169. "This chapter's approach to the Plan of Saint Gall draws heavily on the work of previous generations of architectural historians, but adds a gendered analysis of space." Virtual users of the space can be divided into five groups: "invited and uninvited guests, wealthy and poor pilgrims, pristine and polluted mouths, consecrated and unconsecrated Christians, and masculine and feminine bodies." (Coon 2011, 169)

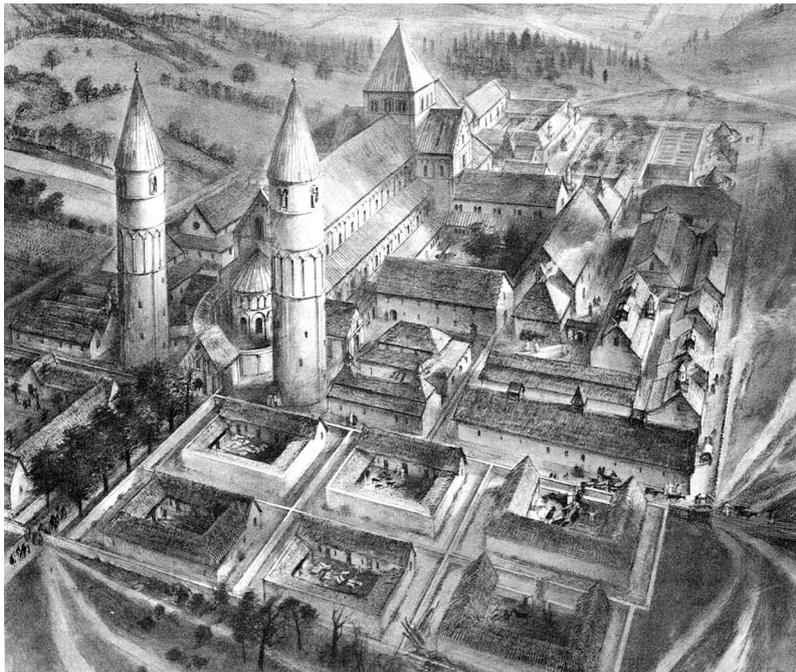
#### 4.2 Plan characteristics

Several characteristics of The Plan can be derived from the research of former scholars and observations on the plan (Figure 22).

(1) The monastery is mainly composed of two main parts: a closely connected building complex composed of the church and the monks' cloister and the surrounding separate and independent facilities. There are a total of 40 buildings, which can be divided into five groups according to their functions. The church and the monks' cloister occupy the central area of the monastery, which is composed of the abbot's house in the north of the church and the monks' cloister in the south. If we count from the east to the west, the monks' cloister has seven buildings: annex for the preparation of Holy Bread and Holy Oil, monks' dormitory above, warming room below, monks' privy, monks' laundry



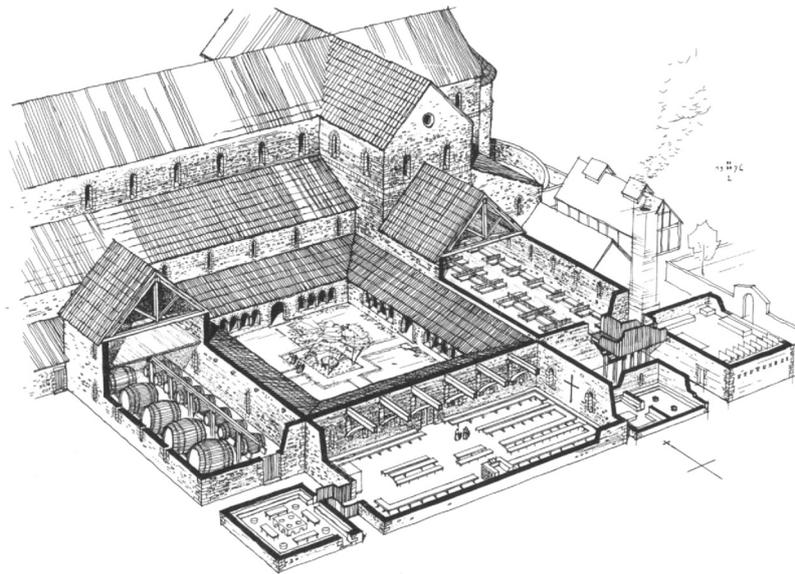
**Figure 18.** Gruber Rendering of the Plan of St. Gall by Karl Gruber in 1937. Image cited from *Die Gestalt der deutschen Stadt*.



**Figure 19.** Rendering of the Plan of St. Gall by Alan Sorell in 1965. Image cited from *The Plan of St. Gall: a Study of the Architecture & Economy of & Life in a Paradigmatic Carolingian Monastery*.

and bath house, monks' refectory below, vestiary above, monks' cellar below, larder above, and monks' kitchen. The northeast corner is devoted to the novitiate and infirmary, including chapels, cloisters, kitchens, baths, house for bloodletting, house of the physicians, and medicinal herb garden. The north and south segments adjacent to the west end of the church are dedicated to education and reception, such as outer school, house for distinguished

guests, hospice for pilgrims and paupers, and house for vassals and knights who travel in the Emperor's Following (identification not certain). The southeast corner is mainly for vegetables and poultry farming and includes monks' vegetable garden, house of the gardener, goose house, house of the fowl keepers, and henhouse. The rest of the buildings located in the south and southwest of the monks' cloister are dedicated to auxiliary functions and the breeding



**Figure 20.** Plan of St. Gall. Principal claustral structure & the monks' cloister. Cutaway Perspective interpreted by the authors of *The Plan of St. Gall: a Study of the Architecture & Economy of & Life in a Paradigmatic Carolingian Monastery*.



**Figure 21.** Model in the Lapidarium of the Abbey of St. Gall by Walter Horn and Ernest Born in 1979.

industry: granary, great collective workshop, annex of the great collective workshop, mill, mortar, drying kiln, house for coopers and wheelwrights, brewers' granary, house for horses and oxen and their keepers, house for sheep and shepherds, house for goats and goatherds, house for cows and cowherds, house for servants of outlying estates and servants traveling with the Emperor's Court (not certain; cf. No. 34), house for swine and swineherds, house for brood mares and foals and their keepers.

(2) The church is north–south symmetrical, with a clear central axis.

(3) The main cloister is set in the south of the church, which allows abundant sunshine to enter the surrounding buildings, including the dormitory in the east, refectory in the south, and the cellar in

the west. Through the east gate of the main cloister, monks can access the east end of the church directly, whereas pilgrims have to follow the central worship route starting from the west end of the church. The monks' parlor located in the west of the main cloister between the church and the cellar is the only entrance for monks and pilgrims to enter and exit the cloister.

(4) The Holy Cross is located in the center of the church and surrounded by the altars of disciples.

### 4.3 Influence

“The ideal character of this scheme is in full accord with the general spirit of this movement, which aimed at the establishment of a universally binding rule for the monks to replace the mixed rule that

prevailed in the preceding centuries. The arrangement of the buildings shown on the Plan of St. Gall aimed in the same manner at the establishment of guiding rules that could be followed in the physical layout of a monastic settlement.”(Horn and Born, 1979, 24)

The presumable date of The Plan is around 830 (Horn and Born 1979, 25), which is consistent with the monastic reform movement. Two key synods at Aachen in 816 and 817 set the cornerstone for

establishing a unified monastic rule (Horn and Born 1979 21). It is reasonable to assume that The Plan might have played an important role as a guideline in the reform movement. However, after it was made, at the end of the 12th century, a careless monk who was not aware of the value of The Plan wrote the text of A Life of St. Martin on the unused back portions of the skin and finished the task by adding the last 22 lines of his text on the lower left corner of the front side of The Plan. He then folded it into a book-sized document. In

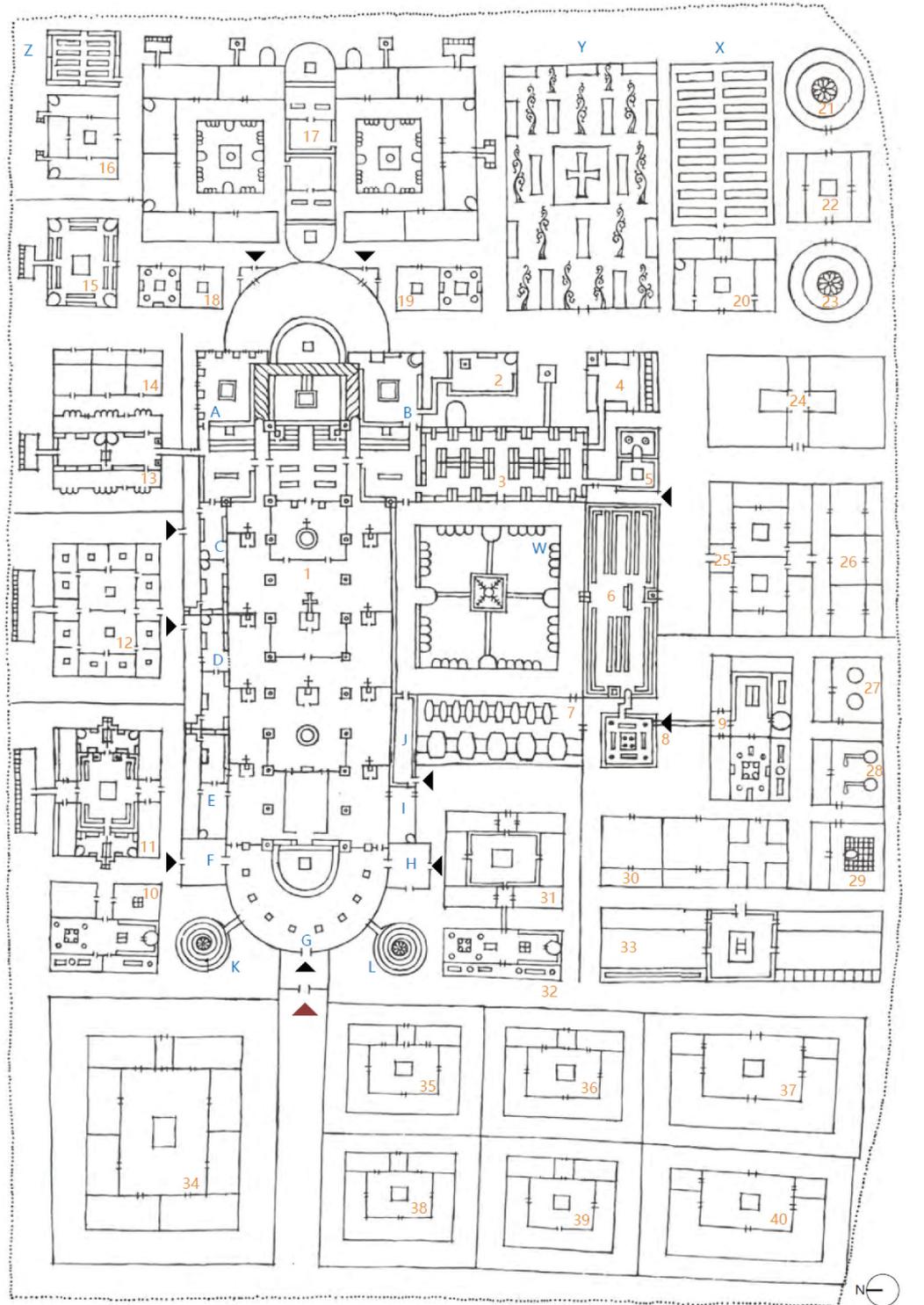


Figure 22. Plan of St. Gall.

1. Church
- A) Scriptorium below, Library above
- B) Sacristy below, Wardrobe above
- C) Lodging for Visiting Monks
- D) Lodging for Master of the Outer School
- E) Porter's Lodging
- F) Porch giving access to House for Distinguished Guests and to Outer School
- G) Porch for reception of all visitors
- H) Porch giving access to Hospice for Pilgrims and Paupers and to Servants' and herdsmen's quarters
- I) Lodging of Master of the Hospice for Pilgrims and Paupers
- J) Monks' Parlor
- K) Tower of St. Michael
- L) Tower of St. Gabriel
  
2. Annex for Preparation of Holy Bread and Holy Oil
3. Monks' Dormitory above, Warming Room below
4. Monks' Privy
5. Monks' Laundry and Bath House
6. Monks' Refectory below, Vestibule above
7. Monks' Cellar below, Larder above
8. Monks' Kitchen
9. Monks' Bake and Brew House
10. Kitchen, Bake, and Brew House for Distinguished Guests
11. House for Distinguished Guests
12. Outer School
13. Abbot's House
14. Abbot's Kitchen, Cellar, and Bath House
15. House for Bloodletting
16. House of the Physicians
17. Novitiate and Infirmary
18. Kitchen and bath for the Sick
19. Kitchen and bath for the Novices
20. House of the Gardener
21. Goosehouse
22. House of the Fowlkeepers
23. Henhouse
24. Granary
25. Great Collective Workshop
26. Annex of the Great Collective Workshop
27. Mill
28. Mortar
29. Drying Kiln
  
30. House for Coopers and Wheelwrights, and Brewers' Granary
31. Hospice for Pilgrims and Paupers
32. Kitchen, Bake, and Brew House for Pilgrims and Paupers
33. House for Horses and Oxen and Their Keepers
34. House for the Vassals and Knights who travel in the Emperor's Following (identification not certain)
35. House for Sheep and Shepherds
36. House for Goats and Goatherds
37. House for Cows and Cowherds
38. House for Servants of Outlying Estates and for Servants Travelling with the Emperor's Court (not certain; cf. No. 34)
39. House for Swine and Swineherds
40. House for Brood Mares and Foals and Their Keepers
- W. Monks' Cloister Yard
- X. Monks' Vegetable Garden
- Y. Monks' Cemetery and Orchard
- Z. Medicinal Herb Garden

Figure 22. (continued).

1461, it was cataloged as A Life of St. Martin "with a depiction of the houses of his monastery." (Horn and Born 1979, 1-2) The Plan re-entered history in 1604 when Henricus Canisius (1562–1610) published its inscriptions for literary interest (Price 1982, 1) almost 800 years after its birth.

Even though The Plan appeared to have been utilized elsewhere other than at St. Gall, it had become a general model because its main features could be recognized at Cluny, in the monasteries of the Hirsau congregation, and the Cistercian abbeys. (Clark 1926, 89) However, we do not know exactly to what extent

The Plan was carried out at St. Gall, (Clark<sup>1926</sup>, 85) not to mention its influence on the other monasteries.

## 5. Comparison

Although both plans elicit some serious historical research questions, including their drawing purpose and resource basis, we can still study them as schematic plans to explore the inner relationship of the monastic layout.

### 5.1 Onion structure for highlighting sacredness

The main cloister and the various sub-cloisters have complete functions, indicating a relatively independent relationship between them. Regarding the monastic layout, rigorous rules need to be considered. The purpose is to distinguish the importance (i.e., the levels of sacredness) of different spaces and determine the orderly itinerary. The location of the altar is a key consideration. In The Plan, the altar is set on the east side of the church facing Jerusalem. Meanwhile, the altar is set in the north of the Illustrated Scripture, facing the south. Except for the orientation, the space level is formed to further highlight the sacred area. Usually, the more sacred the center is, the more secular the edge is. Both ideal monastic layouts use similar spatial structures to construct sacredness, which can be defined as an onion structure composed of four main layers: divine space, sub-divine space, monastic space, and guardian space.

In The Plan of the Illustrated Scripture, to reach the Great Buddha Hall, one has to go through seven boundaries: bridge, great south gate, crow-head gate, Duan gate (Duanmen), central gate, square pond, and Great Buddha Stūpa. The complicated levels of entering ensure the safety of the Buddha cloister while revealing the highest level of sacredness, implying that this central cloister is (intended) exclusively for the Buddha to reside at and not to share with the monks (T45n1899). Furthermore, to demonstrate that the Buddha is enlightened, the interior scenes of the Great Buddha Hall are depicted as a wonderland full of grand and luxuriant trees, fragrant mountains, a large pond, big flowers, the Lotus Womb (like the Bright Hall), a lotus flower made of the seven precious materials, a standing statue of the great divine general Manibhadra, dragons, a garuda bird, and so on. Wonderful and even magical phenomena can be found upon stepping into the Great Buddha Hall. Some of them can only be seen on special days.

“When it is the Six Feast Days, all the flowers bloom; water flows to the ground and disappears; all trees on the mountain are able to preach Buddhist teachings; there are nine dragons constantly blowing fragrant

clouds down to the mountain, and the water (thus) emitted is fragrant and pure. When the sick drink it on the Six Feast Days, they are all healed immediately. The Tathagatha, together with the Buddhas of the ten directions, sometimes come and assemble to preach teachings. This causes ten billions of Buddhas, bodhisattvas, the eight classes of celestials, and nagas to come to the mountain. The ten great disciples from the Sravaka congregation are also able to follow and come. All the other (extraordinary) phenomena cannot be described completely (here).”(T45n1899)

The definition of the word “Buddha” is an enlightened person, which means Shakyamuni is one of the Buddhas in the Buddhist World. To demonstrate Shakyamuni’s sacredness, the main structure of the monastic layout is composed of four layers (Figure 23). The Great Buddha Hall where the Buddha preaches in is set in the center of the Buddha cloister, which is surrounded by temples resided by the Buddhas and bodhisattvas of the past and the future. The outer level is for disciples and monks. The last level is for the Guardians in the four corners to protect Buddhism. They are the Cloister for Hard and Firm Earth Deity, the Cloister for All Dragon Images, the Cloister for Warriors of the Great Chiliocosm, and the Cloister for Images of Mahābrahmā, King Māra, and Indra of the Great Chiliocosm. Therefore, a complete sacred onion structure is formed from inside to outside.

Similarly, to reach the Altar of the Holy Cross, one has to go through the porch, west paradise, petrus, choir, baptismal font, and holy innocents. The inside of the church is a “park-like space without a roof.” The sacred onion structure is composed of four layers (Figure 24), namely, Holy Cross, disciples, monks, and guardians. All of these make up a complete world of God. Here, guardians include Saint Michael and Saint Gabriel. Saint Michael is an archangel, a spiritual warrior in the battle of good versus evil. He is considered a champion of justice, a healer of the sick, and the guardian of the church. Gabriel is an archangel in Hebrew tradition, often appearing as a messenger of God. Alongside archangel Michael, Gabriel is described as the guardian angel of Israel, defending its people against the angels of the other nations. (Ginzberg, 1909)

To further distinguish the difference between the divine and monks, both monasteries also emphasize size and height. The Illustrated Scripture stipulates that the size scale of the Buddha cloister is larger than that of the sub-cloister. “The size difference of courtyards is because of the different positions of Buddha and monks.”(T45n1899) The depiction of the Church stresses its size to demonstrate that it is the largest building in the monastery. “From east to the west 200 feet . . . Measure twice six feet between the columns . . . The width of each aisle is 20 feet . . . The width of the nave of the church is 40 feet.”<sup>2</sup>

In addition to scale, Dao Xuan also used height to highlight the sanctity of the Buddha cloister. "There are two large cloisters. The cloister in the west is the place where the monks and the Buddha resided, named Sanctuary or Vajra Place. Its ground foundation is above the floor where the stairs were built. ... The interior cloister is higher than the external cloister by five feet to represent the Triple Gems, and the causation and fruition beyond the five realms."(T45n1899)

All of this is for the sake of showing the different levels of the status of Buddha and the monks. Even though the two plans do not regulate concrete locations, precise size, and construction materials, they follow basic principles (T45n1899).

### 5.2 Boundary between the sacred and the secular

Even though the two monasteries emphasize being away from the secular, they still need to deal with the secular society to achieve true independence. The first reason is to meet the daily needs of the monks themselves, and the second one is to receive people from the secular world. The purpose is not only to satisfy the will of the gods, but also to lay the foundation for the monastic economy. Therefore, how to arrange the necessary functional facilities around the monastery without affecting the lives of the monks (boundary) is worth exploring. Furthermore, we need to determine who or what functions can maintain this boundary and ensure the distinction between the sacred and the secular.

Although the monastery is divided into two parts, the west cloister is mainly for monks and the Buddha to reside in and is named Sanctuary or Vajra Place. (T45n1899) The east cloister is for making offerings to the Sangha. However, from the arrangement of roads, entrances, and guardian buildings, The Illustrated Scripture can be divided into two main zones: the north part for private usage, which is more sacred, and the south part for the public, which is more secular. Similarly, The Plan is composed of two parts: the east and the west. If such zoning proves to be meaningful, then what is worthy of attention is how their boundaries realize the distinction between the sacred and the secular and how the needs of all parties are met.

From east to west in The Illustrated Scripture (Figure 25), we can find the cloister for the controller, urination place, kitchen, refectory, place for changing garments and bathroom, cloister for the registrar and guardian, storage cloister for the Sangha, cloister for ordination and studying Tripitaka, cloister for Buddha's incense, central gate (toward the cloister of Buddhas), cloister for Buddha's oil, and cloister of impermanence. From

north to south in The Plan (Figure 26), we can find the abbot's house, school, Holy Cross, monks' parlor, cellar and larder, kitchen, refectory, bathroom, privy, and cemetery. Notably, the cloister for ordination and studying Tripitaka is similar to the School of The Plan. Meanwhile, the cloister of impermanence has a similar function as the cemetery, which is dedicated to leading people to face and understand death. A storage space is also available for Sangha (monks) and Buddha.

This frontier works effectively in setting the border between the sacred and the secular (the inside and the outside). It has 10 significant functions: (1) control of personnel entry and exit; (2) storage and goods exchange; (3) export of excrement, wastewater, and garbage; (4) food preparation; (5) eating; (6) education; (7) worship; (8) reception; (9) security; and (10) burial. The completion of the functions of the frontier ensures the integrity of the inner monastic space. It satisfies the needs of monks and accepts all kinds of people and fulfills their needs without sacrificing the inner peace of the monastery.

"The plan of St. Gall may indeed have offered a practical and workable solution to the problem of integrating necessary (inevitable) temporal elements into the margins of the monastic world without unduly compromising the integrity of the brothers' spiritual experience that lay at its heart, but this was by no means the first occasion on which western monks had sought to negotiate their interaction with the world." (Foot 2006, 44) From an architectural point of view, to achieve this effect, walls, doors, and roads become effective separation tools. At the same time, having many open functional buildings meets the needs of internal and external communication and realizes multi-functional use, which performs external reception and supervises the entry and exit of personnel and items. "A minster was both a physical space and a social institution. Walls or other symbolic barriers created physical boundaries around the sacred and domestic space, separating a minster's inhabitants from the secular world outside."(Foot 2006, 34)

### 5.3 Axis and route

After distinguishing the difference and the border between sacred and secular spaces, the connection routes between them, especially from the secular to the sacred, must be established. This is expressed in detail in both plans. They not only consider the overall route structure but also pay close attention to the internal circulation of each space group.

The overall route structure can be summarized into four kinds: worship, main, branch, and cloister routes. The

partitioning of the different routes can avoid unnecessary interference. Both monastic layouts emphasize symmetry along the worship route to demonstrate the center of the sacred. The basic route of space organization is made up of one axis and several independent cloisters. The integrity of the single function of the courtyard satisfies the possibility of the independence of the courtyard itself. In the Illustrated Scripture (Figure 27), the north–south main axis is dedicated to worshipping, and the east–west axis serves as the main route. Along the main route are branch routes connected to each group of buildings, and like veins, small routes develop from the branch route to connect all single cloisters. Every single cloister is centered on the hall and forms a loop route around the hall.

To demonstrate the sacredness of the worship and main routes, the Illustrated Scripture depicts the feeling of walking in detail. According to the depiction of the Illustrated Scripture, the monastery is like a cut-off island surrounded by drains on four sides (T45n1899). The surroundings of the monastery are beautiful, with clear drains, flying bridges, flowers, trees, and huge gates. The scenery is fascinating. Upon entering the gate of the monastery, the road is characterized by solemnity, cleanliness, and holiness. Instead of being slouchy, people who pass humbly bow their head, filled with reverence. Upon entering the Buddhist cloister, the strict and orderly layout leads them to the itinerary of spiritual practice.

“The large cloister on the north of the (Central Avenue) runs through from the east to the west. The consecutive partitions on the big bridge have three archways. Two drains in the (Central) Avenue both flow toward the west. The rows of trees are bushy and bright, always luxuriant in the winter and summer. The soil is even and clean like glazed (stone). The ground (is moreover covered with) grass and leaves. Humans and celestial beings (walk) without hindrance. When the reverent approach and walk to this place, no one is not trembling. When those that come who are even slightly arrogant or decadent, the terrestrial beings will reprimand and revile, so that their evil minds will not arise.” (T45n1899)

All the depictions of architectural and landscape details express Buddhism. It takes time to practice. The aim is to express the level of time practice with the difference in space.

“This central cloister is (intended) exclusively for the Buddha to reside and not to be shared with the monks. There is a difference in distribution because the Buddha is enlightened. For the sake of his disciples, he always explained and enabled them to understand thoroughly (his teachings), and because he is enlightened, he is named the Buddha.” (T45n1899)

In addition, the layout of the building further restricts the route form of worshipping Buddha. Three avenues and the Sangha cloister are set surrounding the east, west, and north of the Buddha cloister. Therefore, monks and pilgrims can enter the east avenue through the south gate on the Central Avenue, following the clockwise itinerary to adore Buddha from east to west. (T45n1899)

“Here stretches a parklike space without a roof/ This is the road of access to the church in which all folk may worship and from which they may leave rejoicing. Entrance in the church for guests and pupils. At this point the guests will either go out or enter quietly under the roof of the church/ Likewise the noble youth who attend the academic school /”<sup>3</sup>

Similarly, in The Plan (Figure 28), the monastery uses the east–west main axis as the worship route. Around the church and monks’ cloister is the main loop route, which separates the internal and external while connecting to various groups via the branch routes. Different from the Illustrated Scripture, each cloister is mainly centered on the courtyard, surrounded by buildings. Several benefits can be drawn from such a kind of route structure. First, it fully guarantees the sacredness of the main axis of worship, which is direct and strong, thus avoiding possible interruption by other routes. Second, the core community of the monastery is well connected with the surrounding auxiliary cloisters, meeting the monks’ daily needs. Third, the inner circular route fully guarantees the independence of each cloister.

In addition to the macro-route structure design, the two plans fully consider the necessary separation and connection between different functional spaces. For example, in the Illustrated Scripture (Figure 29), the cloister for the registrar and guardian, which is resided by Karmadana (维那), is set close to the east gate and next to the residence quarter for pure persons. Karmadana is a Sanskrit word that means “to arrange events” or “to explain rules.” It refers to a master whose duty is to make certain that all affairs are done following Dharma and following the rules established by Sakyamuni Buddha.

The Sangha has many tasks, such as telling the time, taking ordination, entering and leaving the Sangha, and appearance of the Sangha. (T1804) These are all managed and supervised by Vinas. The purpose is to make the life of the Sangha proceeds in order. (T23n1435) Therefore, the cloister for Karmadana is closed to the bathroom quarter, cloister for changing garments, and residence for pure persons in the east.

<sup>3</sup>Notation of the Plan of St. Gall.

“Therefore, every day when it was time for meal, the old and sick (monks) would walk one behind the other from the east gate of the large cloister, and arrive at the north to the kitchen cloister. (They would enter) the west gate of the north street, and enter north into the Cloister for Changing Garments(解脱衣院). They take off their patch-robles and put them in this cloister. Again, they wear old clothes, go out from the east gate, enter the grove, and finish their meals. In the Bathroom Cloister (or known as Bathroom Quarter 浴室坊), they take off their old clothes and enter the bathroom. After

they have finished bathing, they would go into the cloister for clothing to put on (clothing) for religious ceremony. Going out from the south door, they would enter to the south of the great monastery from the west street. ”

For monks, eating, bathing (T08n0235), and changing garments are full of liturgy, and their importance cannot be ignored. The guidance of Karmadana is the guarantee of leading the monastic life in the right order, especially the guidance for the pure persons who are in charge of the kitchen.(T45n1899) Aside from supervising

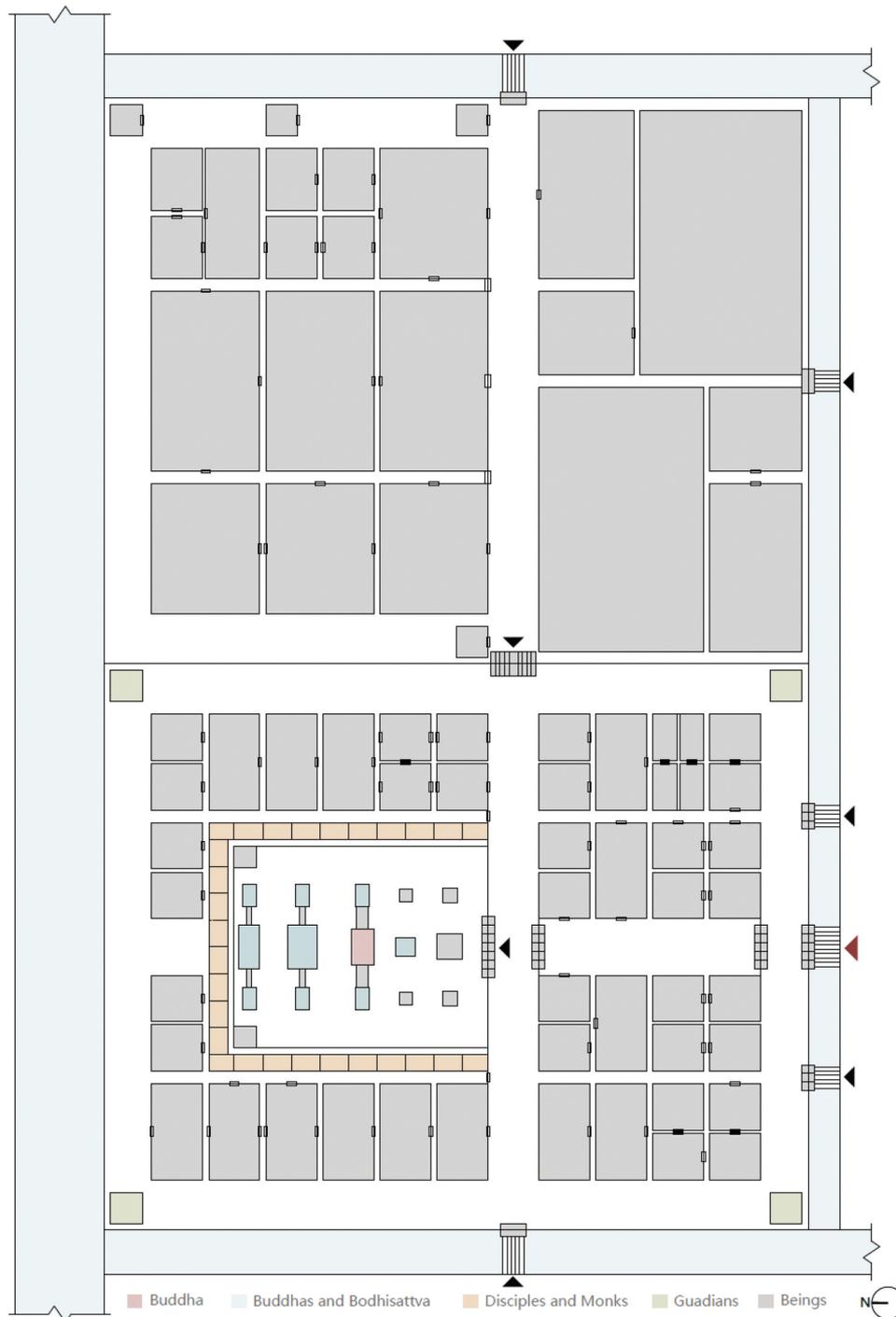


Figure 23. Onion structure for the sacredness of The Plan of Illustrated Scripture. Drawn by the author.

the monks' daily life, Karmadana plays an important role in the process of ordination. Therefore, we can find in the plan that the cloister of the ordination platform (T45n1899) is situated on the west of the Karmadana. To become a monk, receiving precepts is fundamental. On the precept platform, the Karmadana Master and the Teaching Transmitter Master sit to the immediate left and right of the Precept Transmitting Master, respectively. The remaining seven certifiers sit on either side. This is

the arrangement of the three masters and seven certifiers. They represent all the Buddhas of the 10 directions in speaking Dharma and transmitting precepts.<sup>4</sup>

In the southwest of the cloister for the registrar and guardian is the storage cloister for the Sangha where the properties, treasures, and (daily) necessities of the Sangha are stored. (T45n1899) Karmadana is also in charge of the duties of telling time, connecting to the cloister for reckoning

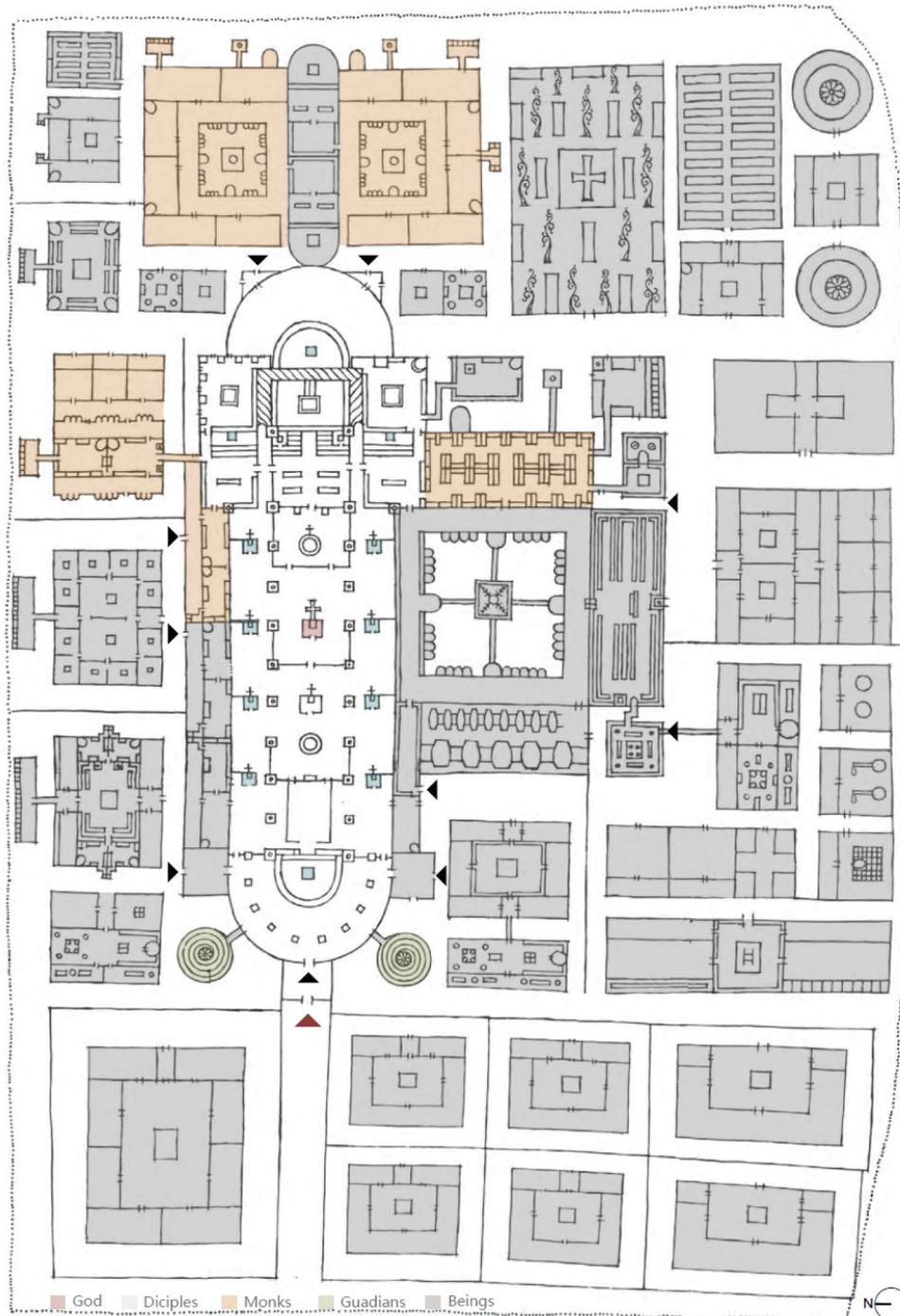
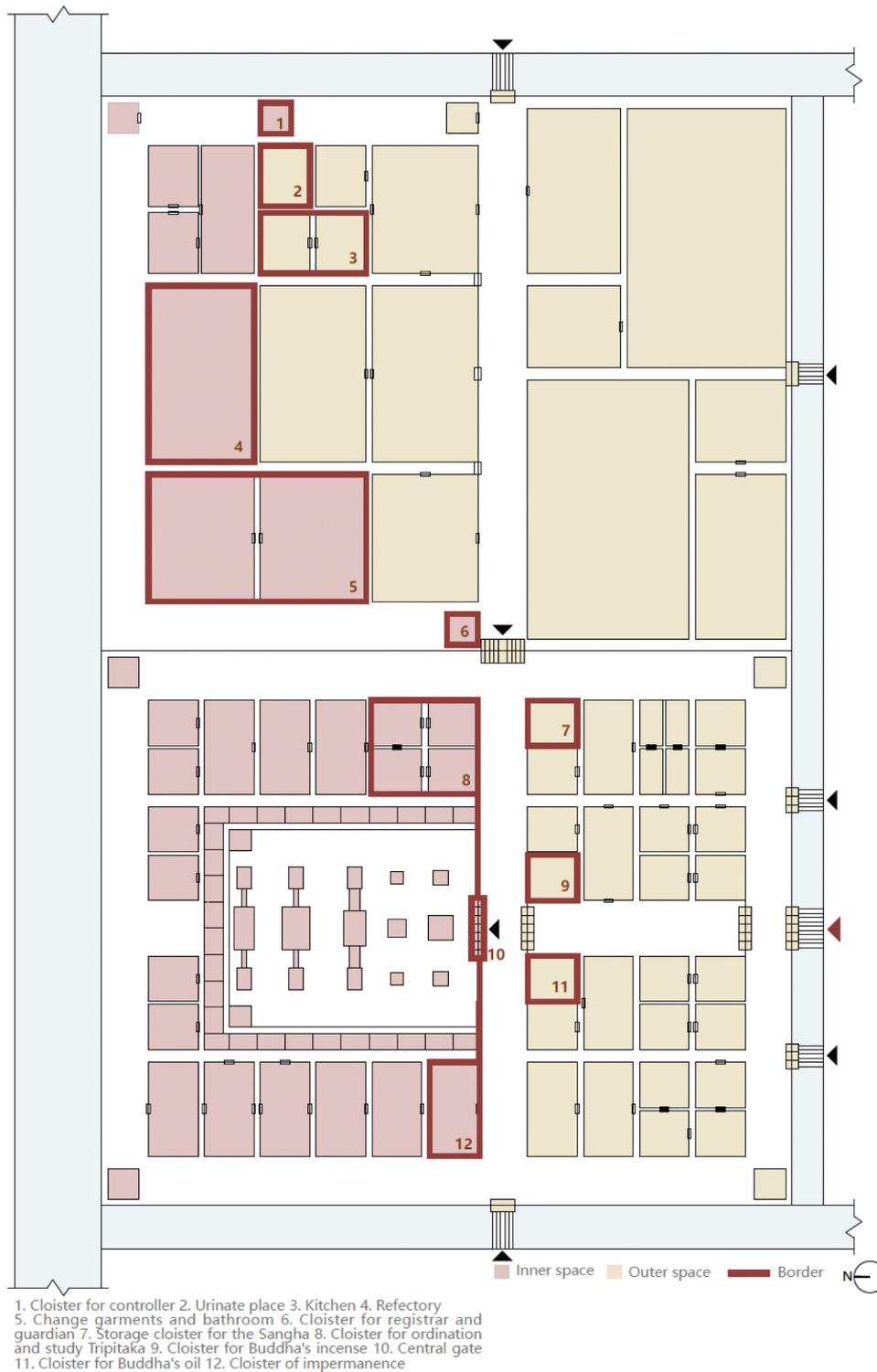


Figure 24. Onion structure for the sacredness of the Plan of St. Gall. Drawn by the author.

<sup>4</sup><http://www.drbachinese.org/vbs/publish/7/vbs7p001.htm> (accessed on 5 January 2023).



**Figure 25.** Boundary between the sacred and the secular in The Plan of Illustrated Scripture. Drawn by the author.

time(T45n1899), and striking the mallet upon hearing the sound made by the dragon in the cloister for monk Bodhisattvas from other lands. (T45n1899)

In addition to the multi-space linkage required for the management of the Sangha, the relationship between the kitchen spaces is also worthy of good design. In The Plan of Illustrated Scripture, the food preparation kitchen is closely connected to the Sangha refectory in the northwest, pure persons' refectory in

the north, storehouse for rice and flour in the east, and cloister for dining kitchen in the south, thus meeting the necessities for the process of making food.

"The cloister at the north of the street is named Cloister for Teaching the Nuns. This cloister has a hall with trees. A gate is placed toward the south, and another one in the east just like the previous cloister. On the two occasions every month,(the Buddha) on the request of the nuns arrives (at this cloister) to teach (the nuns)."(T45n1899) According to the

precepts of Buddhism(T23n1435), nuns have to request teaching from monks twice per month. They reside in the cloister for nuns, next to the side gate in the south, which facilitates their coming and leaving without any interruption to the monks' life. They usually have to request teachings (to stay) and wait

for calls to enter the cloister for teaching nuns in the north, where the monks enter from the east gate. Regarding the sick monks, to enhance the quality of their life, a basic auxiliary space is located next to their residence. The quarter for sick monks is situated in the northeast corner of the whole monastery, with the

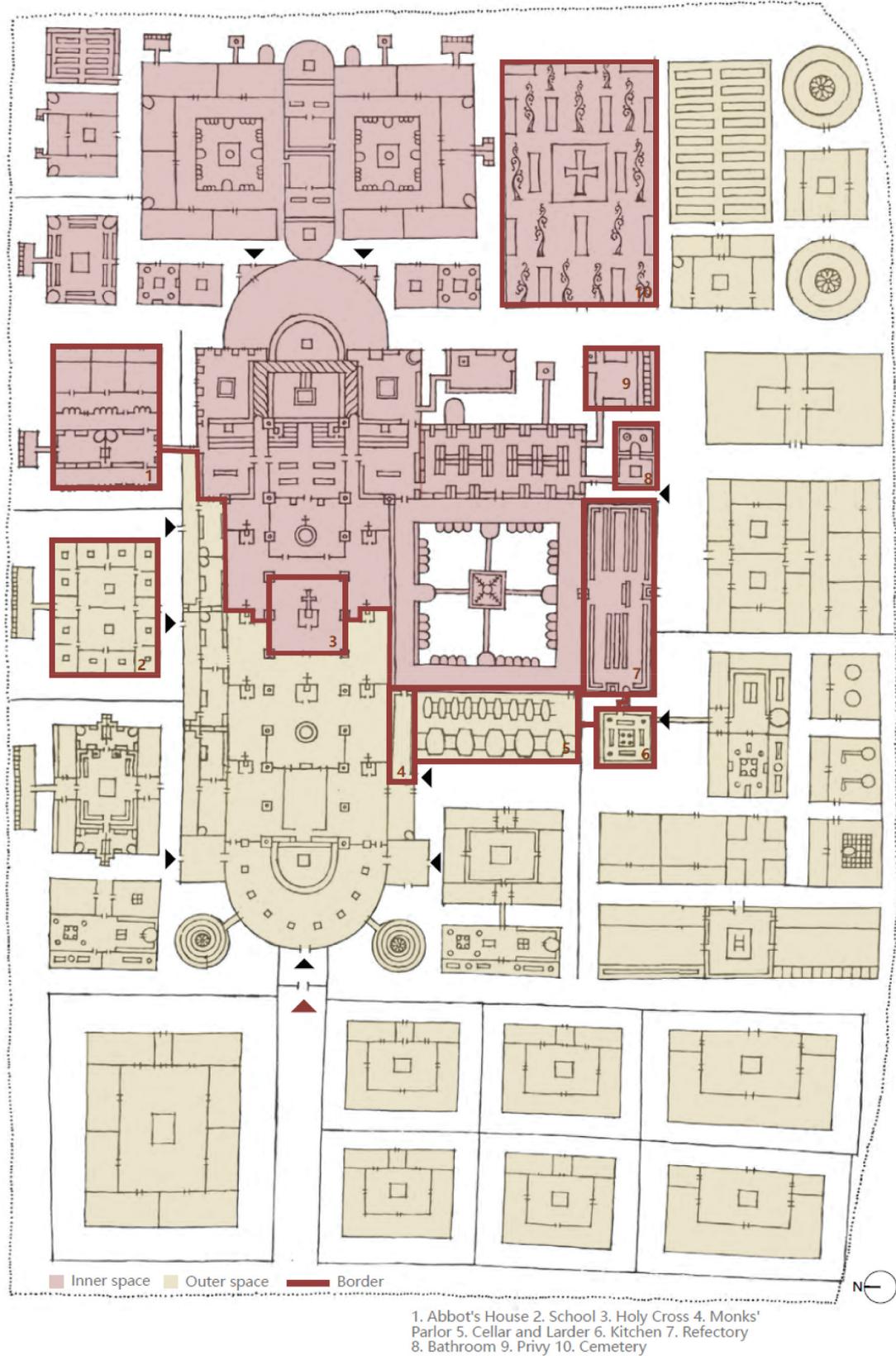


Figure 26. Boundary between the sacred and the secular in The Plan of St. Gall. Drawn by the author.

privy for sick monks to the east and the medicine storehouse to the south.

The Plan (Figure 30) shares similarities with the Illustrated Scripture, which is mainly demonstrated in the following building groups: the abbot's house, kitchen, vegetable garden, and the cloister of the sick. "All around the hall is thus enclosed by fences/a porch

brightened by arcades/a similar porch/entrance/the abbot's sitting room/corner fireplace/seats/cupboards for dishes/entrance into the church/bedroom/above, storeroom and solarium/corner fireplace/here beds/privy/quarters for the servants/kitchen/cellar/bath."<sup>5</sup>

The abbot's house is set to the north of the church, and it is considered the government frontier of the

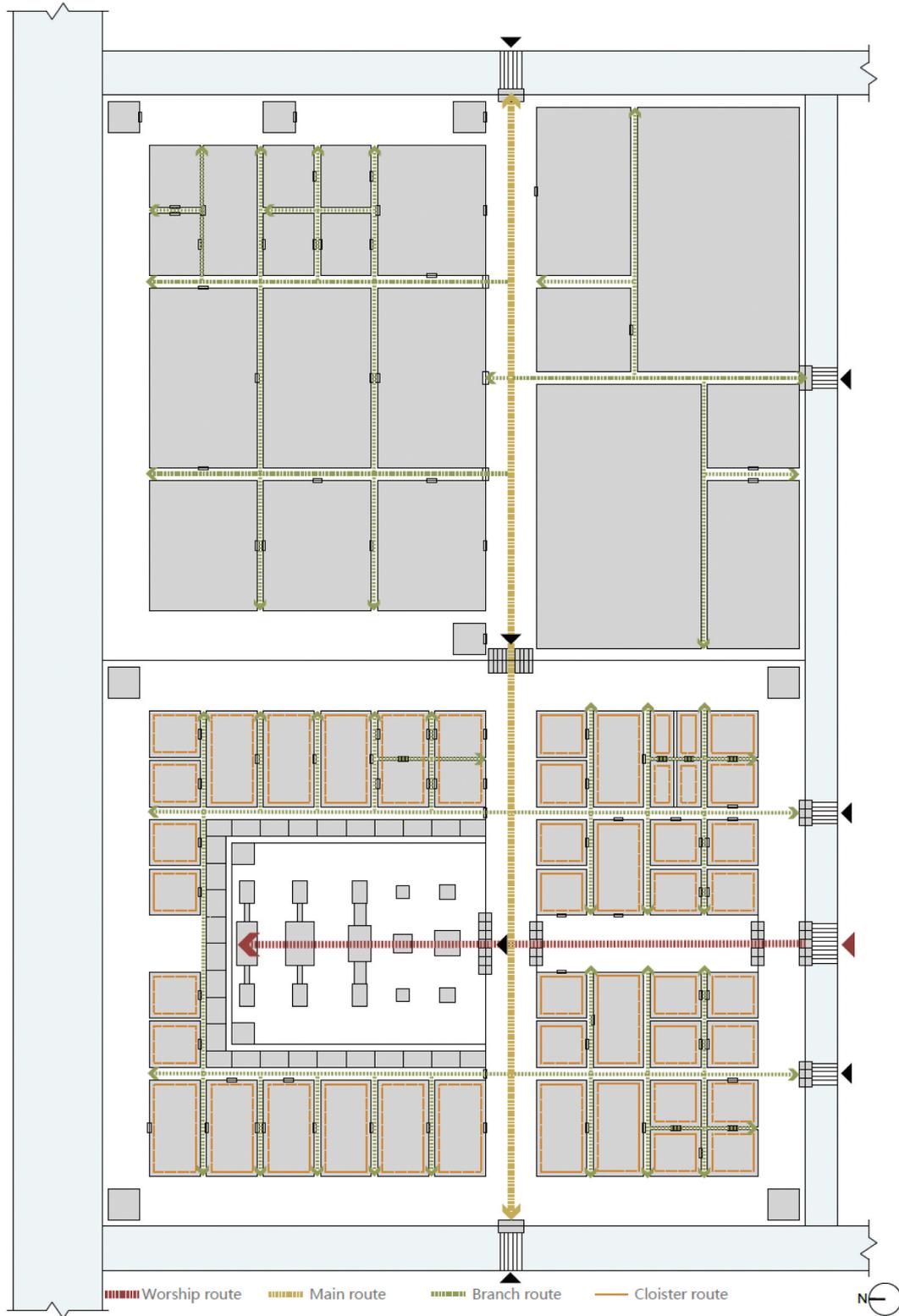
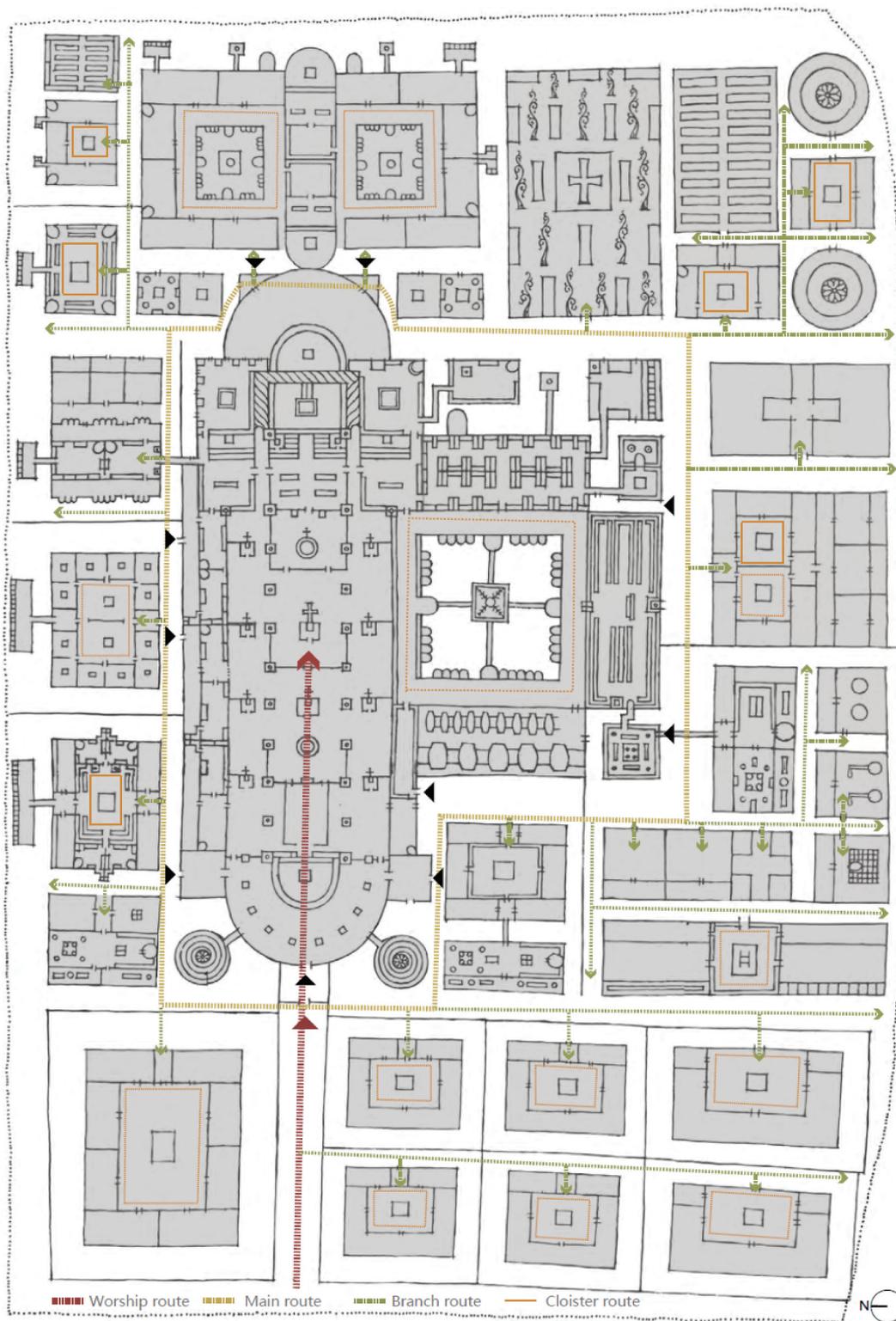


Figure 27. Route structure of The Plan of Illustrated Scripture. Drawn by the author.

<sup>5</sup>Notation of the Plan of St. Gall.



**Figure 28.** Route structure of The Plan of St. Gall. Drawn by the author.

whole monastery. It functions as a reception place for the house for guests to the west and visiting monks to the south. It is next to the school, which facilitates communication between the schoolmasters and the abbot. The daily office is connected to the east end of the church through a private entrance.

The kitchen, the energy source for the monks' daily life, is set to the south of the church. It

connects to the cellar and larder to the north where wines are stored. In the west of the kitchen are the cooper, turner, and granary, which offer utensils for cooking. The bakery and brewery in the south are linked to the kitchen through a special corridor. Prepared food is sent to the refectory to the east, connected by a private entrance. Here, the kitchen plays an important role in supplying

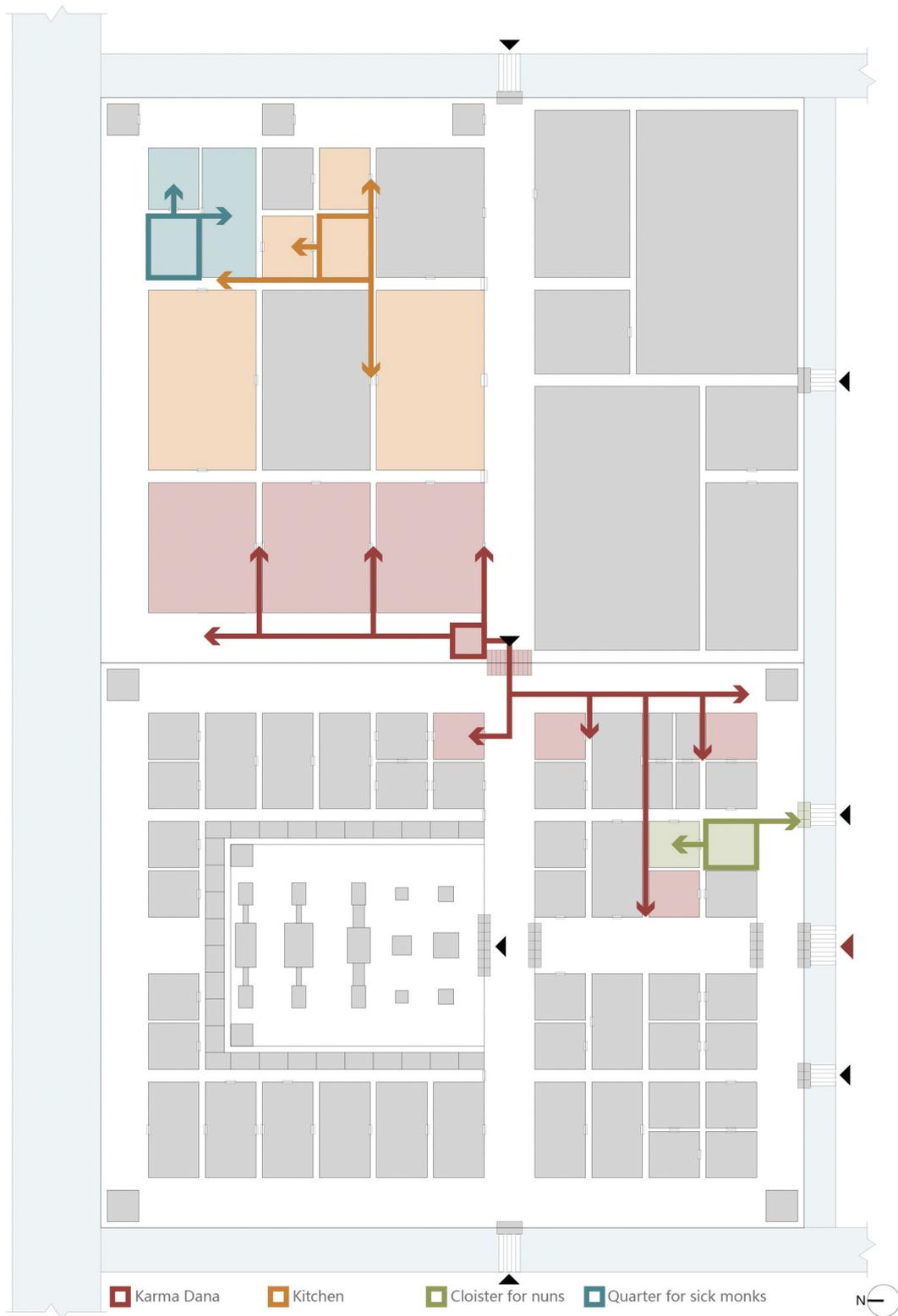


Figure 29. Inner route of different building groups of The Plan of Illustrated Scripture. Drawn by the author.

food for the internal cloister while communicating with the logistics space outside.

The vegetable garden<sup>6</sup> is located in the south-east of the monastery. It is closed to the goose yard and the poultry yard to the south, between which

the house for keepers of chickens and geese is located. Gardeners reside in the house to the west of the vegetable garden, and the privy of monks is on the not-far west side. Such a layout is well designed to ensure a possible organic circulation

<sup>6</sup>Notation of the Plan of St. Gall. "Here the planted vegetables flourish in beauty / GARDEN / onion / garlic / leek / shallots / celery / parsley / coriander / chervil / dill / lettuce / poppy/ pepperwort / radish / parsnip / poppy / cabbage / chard / fennel."

among different functions, which was well illustrated by Horn and Born (1979). "The position of the Monks' Vegetable Garden between the Orchard and the poultry runs as well as its proximity to the Monks' Latrine demonstrates the awareness for functional inter-relationships characterizing the intelligence of those who designed the Plan. Both Orchard and Garden come under the care of the Gardener. The Garden would have drawn the most effective fertilizer from the nitrogen-rich droppings of the nearby fowl yards; grain feed for chickens and geese (the Granary is in close proximity) could be augmented by trimmings from the vegetables. However, the most important source for fertilizer might have been the Monks' Privy, if the waste there was not swept away through water channels but (as seems more reasonable to assume) was gathered in settling tanks." (Horn and Born 1979, 205)

Like the Buddhist tradition, sick brothers are considered in the design of the monastery. A place for such persons is located in the northeast corner of the monastery, which functions as a self-sufficient and independent cloister. It has a private chapel in the south, and the church in the west can be easily accessed. Regarding the care of the monks' health, the medical herb garden, house for physicians, and house for bloodletting are situated in the north. Notably, the critically ill can live in the bedroom next to the chief physician. Such meticulous care guarantees the quality of life of the monks. "For the sick brethren, similarly this place should be established/arcaded cloister walks/storeroom/refectory/dwelling of their master/the place for those who suffer from acute illness/dormitory/warming room/Their entrance into the church."<sup>7</sup>

#### **5.4 Independent and self-sufficient life mode**

The purpose of ideal monastic layouts is to depict the independent and self-sufficient life mode that monks should pursue in their life. It is mainly reflected in the following aspects.

First, an ideal monastery as a whole is another parallel world. A monastery is a mini complete society, which performs as another world parallel to the secular. The two ideal plans do not depict the surrounding environment. On the one hand, they are created as ideal plans whose purposes is to adapt to different environments. On the other hand, they operate as a sacred island regardless of the kind of circumstances, and they should achieve independence. Achieving independence and self-sufficiency means that they have to assume multiple roles at the same time. "The

monastery as a school, mission center, agricultural concern, and administrative base should be a tightly disciplined unit" (Braunfels 1973, 38).

First, an ideal monastery as a whole is another parallel world. A monastery is a mini complete society, which performs as another world parallel to the secular. Both ideal plans do not depict the surrounding environment. On the one hand, they are created as ideal plans whose purposes are to adapt to different environments. On the other hand, they operate as a sacred island regardless of the kind of circumstances, and they should achieve their independence. Achieving independence and self-sufficiency means that they have to assume multiple roles at the same time. "The monastery as a school, mission center, agricultural concern, and administrative base should be a tightly disciplined unit." (Braunfels and Laing 1973, 38)

The functions of the two plans can be divided into six groups: divine space, monastic space, education, health and medicine, reception, and logistics. Specifically, in (Figure 31), divine space is for temples and dependencies, and monastic space is mainly used for Buddhas, arhats, monks, and the sick. Reception space is dedicated to Buddhas and bodhisattvas from other lands, the Dragon King, nuns, ordinary people, laypeople, heretics, nobles, and all beings who benefit from the Buddha. Logistics space includes the kitchen, storehouse, fruit park, bamboo vegetable park, residence quarter for pure persons, and quarter for cows and horses. In the case of (Figure 32), divine space refers to church and dependencies, and monastic space is mainly used for monks, novices, and the sick. Reception space is used by emperors, nobles, pilgrims, and the poor as well as visiting monks. Logistics space is mainly used for vegetables, poultry breeding, crafts, milling, baking, and animal husbandry. The basic principle of the monastic layout is that divine space is set in the center, surrounded by monastic space, reception space, education space, and logistics space. Health and medicine are regarded as basic equipment and are included in the monastery.

Second, independence is embodied in each cell unit of the monastery. Small as it is, the sparrow has all the vital organs. A monastery is a place where gods, monks, and pilgrims practice together. An appropriate spatial layout not only enables efficient internal operation, but also avoids potential conflicts between different groups. Therefore, independence is reflected not only in the overall planning, but also in the design of each sub-cloister. For example, in the depiction of The Plan of Illustrated Scriptures, the south of Central Avenue has 29 cloisters, and each has a big hall and forest with streams of dashing water (T45n1899). Their independence endows them the ability to accept Bodhisattvas, monks, nuns, learners, pilgrims, and

<sup>7</sup>Notation of the Plan of St. Gall.

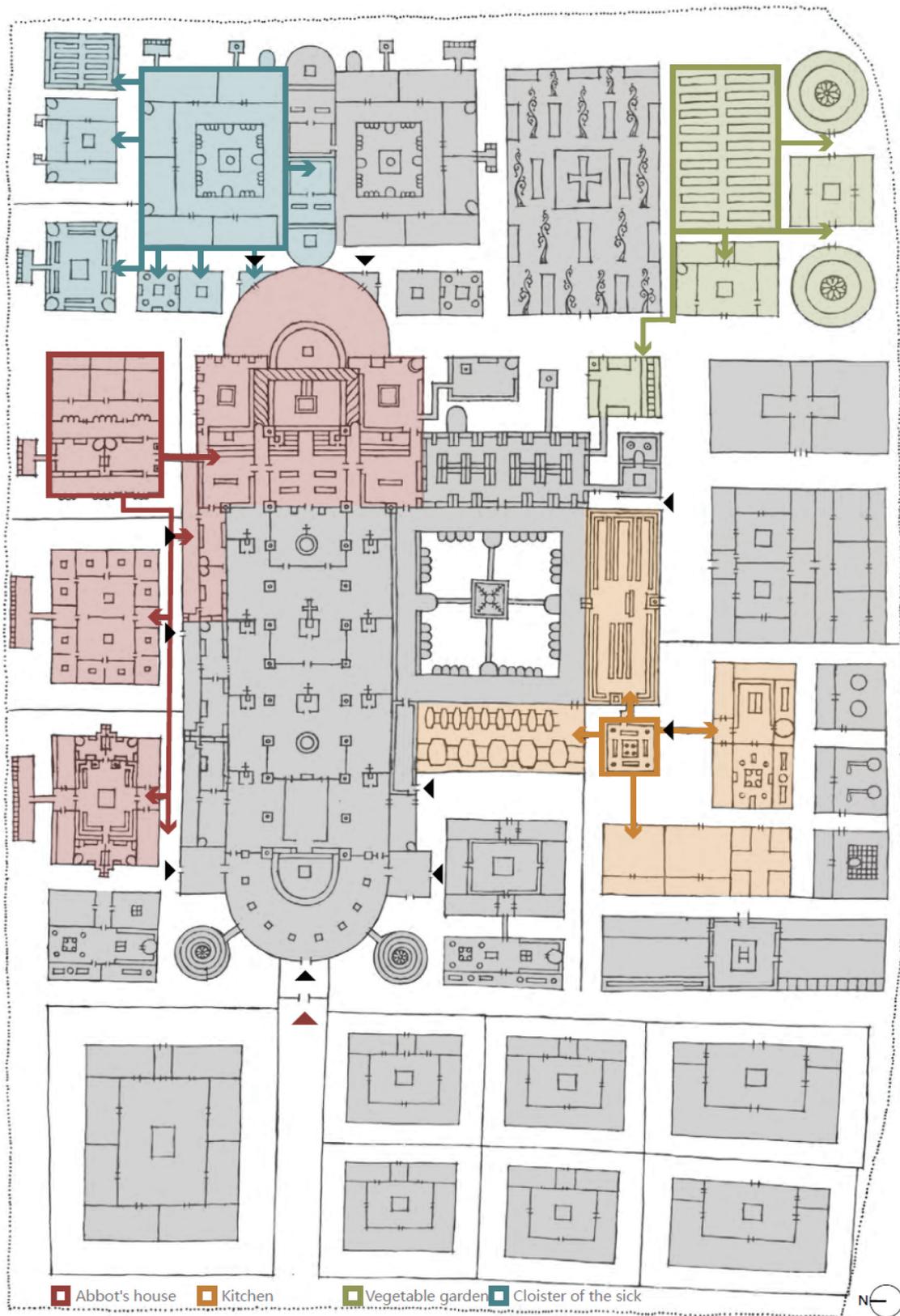


Figure 30. Inner route of different building groups in The Plan of St. Gall. Drawn by the author.

ordinary people and fulfill their different needs. In The Plan, the house for guests is closely connected to the kitchen, brewery, bakery, beer storage, and paste storage. Honored guests can reside in the cloister, which fully meets their needs. The same applies to the house

for pilgrims, cloister of the novitiate, cloister of the sick, and cloister of the monks. In The Plan of the Illustrated Scripture, the Buddha and monks' cloisters share such similarities. When the cell unit cannot achieve independence, several cell units may be set in the group to

share some basic facilities, such as the kitchen, refectory, and toilet. In the monks' cloister, the food preparation kitchen serves the Sangha refectory and the pure person<sup>8</sup> refectory. (T45n1899)

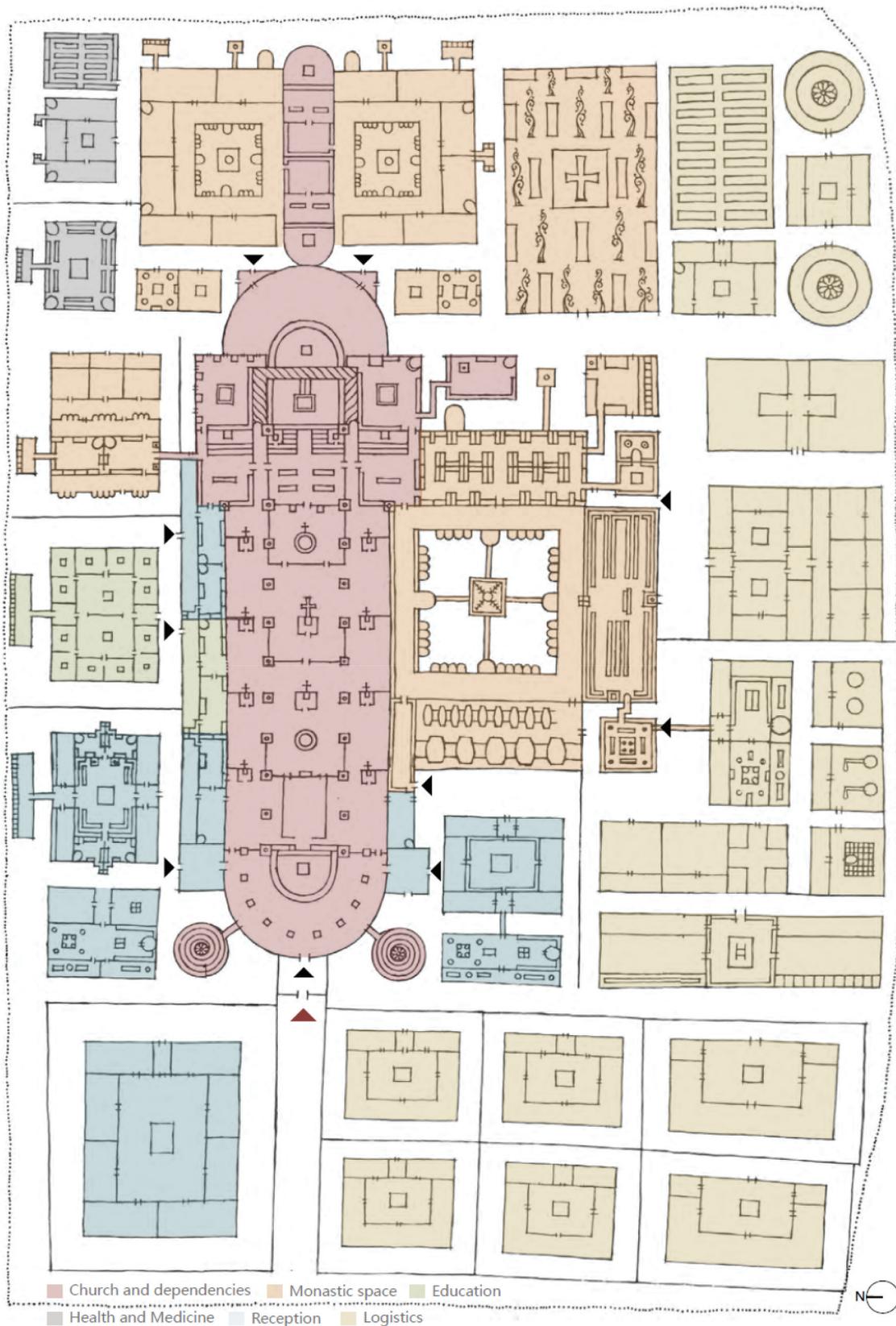
The setting of functional independence is still in use today. Its main purpose is to reduce unnecessary communication and mutual interference. By contrast, our

contemporary architecture at present often takes the promotion of communication as a design concept. Do we lack the opportunity to communicate, or do we lack effective dialogue? Is effective dialogue not accessible in a quiet environment? Both monastic groups are well aware that superficial language and behavior are unnecessary. Only by eliminating this superficial



**Figure 31.** Function division of The Plan of Illustrated Scripture. Image cited from “Comparative Review of Worship Spaces in Buddhist and Cistercian Monasteries: The Three Temples of Guoqing Si (China) and the Church of the Royal Abbey of Santa Maria de Poblet (Spain).”

<sup>8</sup>Notes: “pure person” 淨人 refers to a set of layworkers in the monastery.



**Figure 32.** Function division of The Plan of St. Gall. Image cited from “Comparative Review of Worship Spaces in Buddhist and Cistercian Monasteries: The Three Temples of Guoqing Si (China) and the Church of the Royal Abbey of Santa Maria de Poblet (Spain).”

communication, when people no longer worry about daily life-satisfying things, can people calm down and

listen to the voice of the Divine, thus achieving communication between man and the Divine.

Third, this independence is not only momentary but also eternal, or at least spans a lifetime. True independence is achieved only when time and space are highly consistent. People living with it are independent and free every day. This demonstrates the use of spatial integrity strategies to achieve time independence. Only when time is independent can people's thinking be free. The biggest problem in a person's life involves life and death, such as acquiring daily necessities, food, housing, and clothing and facing life, aging, sickness, and death. The completeness of the spatial function arrangement achieves the integrity of time experience. Examples include the monks' cemetery<sup>9</sup> in The Plan and the cloister of impermanence in The Illustrated Scripture. "When (a person) dies, (the corpse) will leave from the south gate, and [pass by] the west gate on the west huge wall. All (events of) impermanence<sup>10</sup> all pass through this path."<sup>T45n1899</sup>

## 6. Conclusions

In conclusion, monastic space is specially designed for monastic life. Monks' cognition of their bodies is based on their realities and transcends the material level. They follow in the footsteps of their corresponding Divinities and make their lives full of sacredness. Achieving this is difficult, especially when monks live in a group. What they face is not a simple personal food and clothing problem. Externally, they need to deal with the relationship between the monastery and the surrounding environment, such as nature or the city, and internally, they need to rationally arrange the sacred and the secular, the public and the private, and the outside and the inside. To address the problems that may arise in these aspects, both monastic groups set monastic rules to renunciate their daily desires to the minimum and purify their mind to the maximum. It is precisely because of the loyalty to religion and the guarantee of orthodoxy in practice that both two typical religions of Eastern and Western have drawn the ideal plans and aspire to regulate monastic space and life in this way. Since a monastery with complete functions can only meet the basic life needs of monks, the important thing is to establish a spatial order from the secular to the sacred.

Such order involves function divisions, layout structure, limit, and accessible routes. According to the above observations from both plans, the pursuit of independent and self-sufficient life modes is the key to understanding such a layout. Monks have strict and even harsh life rituals. In their worship, chanting, labor, reading, or daily behavior, they are close to a supreme state of mind by regulating their

behavior, which we call meditation. To maintain an independent monastic life for their spiritual practice, they have to set a boundary between the sacred and the secular. However, monks perform as a medium between Divinities and ordinary people. It is their task to deliver the divine gospel to the public. At the same time, they need specific functional areas to receive supply from the secular world. Therefore, for monks to live a self-sustained and self-sufficient lifestyle, the limit between the sacred and the secular should be independent yet integrated. Therefore, the onion structure adopted by both plans distinguishes sacredness from secularness while the boundary between the sacred and the secular serves as a bridge that links the two worlds from material and spiritual aspects. The prerequisite for achieving independence is the availability of self-sufficient living conditions, which is reflected in the integrity of monastic functions, which also means that the monastery itself is a complete mini society. It requires a rational planning of routes in addition to a rational layout of the sacred and secular space to have more functions in a limited space. Thus, we can find that in both monasteries, the central worship route and independent internal routes guarantee that multiple functions can exist and be performed simultaneously. The sacredness of space is gradually strengthened in the monastic layout similar to the process of monks' practice. The axis is set effectively to reveal such sacredness, naturally leading pilgrims from the society to the foot of the Divinities. Meanwhile, internal routes are set for communication inside the different functional building groups. Route interweaving is avoided to ensure the independence of each building group, to strengthen the inner communication between different buildings, and to improve the efficiency of cooperation. The life of monks transcends the material world; it has to do with essence, which is related to the spirit. Their practice shows that meditation is the wisest and strongest language. Similarly, time (rather than superficial decoration and structure) is the most powerful spirit that space can convey.

The article reveals how consistency between life and the monastic layout, namely, consistency between time and space, is achieved through the translation of monastic rules into ideal layouts. Monks are aware of the existence and importance of time, so they abandon the superficial prosperity of society and come to monasteries to seek true spiritual wealth. Their behavior, life, and living space convey this principle, that is,

<sup>9</sup>Notation of the Plan of St. Gall. Among the trees always the most sacred of the soil is the Cross / On which the fruits of eternal health are fragrant. / Around let lie the dead bodies of the brothers / And through its radiance they may attain the realm of heaven.

<sup>10</sup>Notes: This is a euphemistic reference to death and all related events.

maintaining the unity of the material and spirit and the consistency between time and space.

The significance of such research are as follows:

1) The disciplinary meaning of the article is that for the first time, two ideal plans, namely, The Illustrated Scripture and the Plan, are compared side by side regarding the architectural aspects in this article. This further facilitates our understanding of the most fundamental layout planning strategies of Eastern and Western religious spaces, and further clarifies the consensus between Eastern and Western religious cultures at the spatial level, contributing to the exchange and understanding of different cultures between the East and the West.

2) The practical value of the article is studying the past in order to better serve the future. Even for contemporary architects, we still follow the process of producing space from drawing to construction. The comparability of both plans is because we humans share similar exploration and pursuit of temporal patterns, and in both ancient times and today. The monks' spatial organization in terms of time management and the spatial layout to guide the evolution of time is a spatial temporal recycle that remains valid for us to consider the design, production, and organization of the spatial layout of contemporary architecture.

Given that both ideal plans were shaped more than a thousand years ago, the limited archaeological data and surviving information available means that the article can only produce limited findings, particularly with regard to the restoration of The Illustrated Scripture, which can only be imagined as an ideal restoration. In the future, with further excavation and refinement of archaeological data and the study of more historical materials, a clearer and deeper understanding of the context in which the two ideal plans were created and their impact on the actual spatial production of the monastery will emerge.

The prospect of the research lies in a series of comparative studies of monasteries and abbeys, based on a further, more in-depth analytical study of the spatial production patterns that are at the heart of the spatial production methods common to both Eastern and Western religions - the temporal patterns and the cultural factors behind them. Such comparative studies pave the way for the construction of deep cultural connotations in the process of contemporary architectural design.

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