CHAPTER - II

REVIEW OF LITERATURE

The ancient Indian Vastusastra has its own history from the very beginning of habitation of the human being. It evolved through centuries of observation and experimentation. The great Harappa and Mohanjadaro civilization placed in the frontline of the ancient world civilizations. The Harappa civilization existed here for about 3000 years before the Christ. The townships existed in that era, the bricks used to the constructions, the architectural skills used in the constructions and the patterns etc. are the basic examples for the scientific approach existed in those ages.

The Ancient Texts of Vāstuvidya can be classified into different groups based on the period it has its origin or in the different pattern it was written. Basically it has grouped as the Vedic Literature, Purāṇas, Ithihasas, Saṁhitās, Ágamas, Sūtras and Upaniṣhads. And also the basic original Vāstu texts based on the traditional works, compilations, translations, commentaries and modern works.
The review of the literature on Vastuvidya is described here under in different heads and sub heads.

2.1. **VEDIC LITERATURE**

It is needless to say that the details of the art of building were systematically embodied for the first time in the worldly architectural treatises\(^1\). They are necessarily missing in non-architectural literature especially those that composed before the growth of the Vastuvidya.

The first textual evidence is in *Rigveda*, where *Vāstupati* or the protector of the house is invoked\(^2\). Vastuvidya is considered as the upaveda of *Atharvaveda* which is known as *Stapatyaveda*. It expounds the principles involved in the areas of Vāstuśāstra (Traditional Architecture and Planning), Šilpaśāstra (Sculpture and Iconography) and *Cittrakala* (Painting). *Sthāpatyaveda* in compiled form is not available in as upaveda, but the descriptions, the concepts the scientific treatment and practices are seen in the available various ancient textual works.

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\(^1\) Sthapatya Ved-Vastu Sastra edited by Nijetan Anand Gaur, pp 1

\(^2\) Contempry use of Vastuvidya by Vibhuti Chakrabarthi, forward pp 1
The Vedic Literature reveals that the people of that era had lived in constructed houses and had learnt the art of building. Those buildings had components such as doors, windows, pillars, beams etc\(^3\).

The description about the houses with sufficient rooms and other facilities and also about the townships, villages and public houses, funeral places etc are seen in the 1\(^{st}\) suktha of the 8\(^{th}\) Satapathabrahmaṇa\(^4\).

2.2 ITIHÁSAS

The Epics furnish copious description of cities, storeyed buildings, balconies porticos, triumphal arches, enclosing walls, flights of stone, masonry steps for tanks and a variety of other structures, all indicate of a flourishing architecture in the country.

The description on Ayodya and Lankapuri are the basic examples for the Vāstuśāstra concepts prevailed in the age of the great Ithiḥāsa, Rāmāyana. The plan of the city of Ayodya is strikingly similar to the town-plan given in the Mānasāra and other

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\(^3\) Rigveda (III) 53.6; (IV)49.6 and (VIII) 10 Atharvaveda (VII) 83.115.4

\(^4\) Satapathabrahmanam13.8.1
architectural treatises\textsuperscript{5}. The temples in the city were as resplendent as the sky. Its assembly halls, gardens, and alms houses were most elegant; and everywhere arranged extensive building crowded with men and women. The houses were as mine gems and the abodes of the goddess of fortune.

Both in \textit{Rāmāyana, Mahābhāratha} and \textit{Ithihas} we can see such descriptions which underlined the' vastu ideology and skills of that era. We can see the realistic explanations about the houses, bungalows, villages townships and its characteristics many times both in \textit{Mahābhāratha} and \textit{Rāmāyana}. The \textit{Mahābhāratha} contains short but comprehensive accounts of the cities of \textit{Dvāraka}\textsuperscript{6}, \textit{Indraprasta}\textsuperscript{7}, a floating city\textsuperscript{8}, \textit{Mithila}\textsuperscript{9} and others which are the realistic examples of the Vastusastra skills of that period. We can see the technologies which are used in these constructions, especially in the town planning, are still almost same to the modern construction engineering and management. The seating arrangement for the King who attended the \textit{Rajasūya Yāga}, their

\textsuperscript{6} Mahābhāratha (III.15)
\textsuperscript{7} Ibid (1.207, 30 f)
\textsuperscript{8} Ibid (III.173,3)
\textsuperscript{9} Ibid (III.207,7)
guest houses and its construction pattern all are the evidence for the Vāstuśāstra ideologies and skills existed in that era. In the Sabhāparva there are interesting descriptions about assembly halls. Maya built an assembly hall for Pāṇḍavas. A description is given also of the assembly hall of Indra, of Yama, of Varuna, of Kubera and of Brahmiam.

2.3 PURANAS

The Puranas generally deal with the subject of the architecture in more detail. Vāstuśāstra introduced a scientific outlook only in the Purānas which were written as the continuation to the Ithihasas. Casual references frequently met with in all the nineteen Purāṇas. Some nine Puranas have materially contributed to the later Silpasastras themselves.\(^{10}\)

The Matsyapurāṇa has given the most important scientific interpretation to the Vastuśāstra. Matsyapurāṇa for instance has eight comprehensive chapters dealing in great detail with architecture and sculpture. In one of these chapters accounts are

\(^{10}\) Sthapatya Ved-Vastu Sastra edited by Niketan Anand Gaur pp 10
given of eighteen ancient architectures. It has described through eight chapters of the *Matsyapurāṇa*\(^\text{11}\).

The *Skandapurāṇa* which is another early Purāṇa, has devoted three chapters to the subject. One of these refers to the laying out of a large city. In another, mention is made of the construction of a supplied, and the names of the architects are added. The details of the construction of a special pavillion for the wedding of a royal princes are described in another chapter where references are made to the painting also\(^\text{12}\).

The *Garudapurāṇa* makes some valuable addition to the contribution of this class of literature to architecture. One of the four chapters devoted to this subject deals systematically with all the three classes of building namely residential, military and religious, as well as with the laying out of pleasure gardens and pavilions therein\(^\text{13}\). The following chapters treat exclusively for religious building. The remaining two chapters are devoted to sculpture, one dealing with rules regarding the construction of an image and other with the installation of images in temples.

\(^{11}\) Matsyapurana, arraged by Nagsaran Singh pp 1112-1158

\(^{12}\) Indian architecture, P.K.Acharya.

\(^{13}\) Shhapatya Ved-Vastu Sastra edited by Niketan Anand Gaur pp 11
The *Agni,* among all Puranas had dilated on the subject at
great length. There are 16 chapters of which one deals with town
planning, two with residential building and the remaining 13 with
sculpture.

The *Nāradapurāṇa* practically completes the Purāṇas
contributions to architecture. In a single chapter it describes the
construction of pools, wells, tanks as well as temples. The
*Lingapurāṇa* supplements the contributions by adding an account
of the construction of sacrificial pits together with a description of
temples and the installation of deities therein.

The *Vāyupurāṇa,* which is one of the very early purāṇas,
maintains its unique position by dealing with the construction of
various temples built upon mountain tops. For the
*Brahmāṇḍapurāṇa* there was very little left to add. In a single
chapter it describes the construction of temples and residential
buildings.

The *Bhaviṣya* apparently a late purāṇa, has also nothing new
to contribute. Three of its chapters are devoted to sculpture. The
most striking feature of this Purāṇa is that the number, name and
other architectural details of the buildings describe in it are identical with the twenty types found in the *Matsyapurāṇa* and the *Bṛhadāraṇyaka.*

### 2.4 THE ĀGAMAS

The Āgama tradition evolved particularly for the building of temples, and worshipping of deities in them. The Āgamas, like Purāṇas, identically deal with architectural subjects however their contributions to vastuvidya are extensive and valuable. In Āgama Literature the vastu literature descriptions are in related to the Pooja practices. The priority has been given to the construction concepts of temples.

Some of the Āgama deal with technical matters, which are not Purāṇas. Moreover some Āgamas to all intents and purposes are but architectural treatises. The *Kāmikāgāma,* for instances devotes sixty chapters out of the total seventy five to architecture and sculpture\(^{14}\). It begins systematically with the preliminary matters, such as the testing and preparation of soil, selection of sites, scheme of measurement and the finding out of cardinal points

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\(^{14}\) Vastusastra Vol 1p.N.Sukla pp 80
for the orientation of the building, and the ground plans. Buildings proper are described under twenty types, just as in the Matsyapurāṇa as well as in the Brhatsamhita. But unlike Purāṇas, there is in the Kāmikāgama a discussion of architectural matters under some very highly technical classification, such as the styles Nāgara, Drāvida and Vesara; shapes, masculine feminine and neuter Karaṇāgama, Suprabhedāgama are etc also give special emphasis to different aspects of Vāstuśāstra.

2.5 SŪTRA LITERATURE

Sutras are very precise version with very few words, conceptual and concise in the theory which has- universal application\(^{15}\). The construction science is interpreted in the Kalpasūtra of the sūtra sāhitya. The description of pillars and its types were given in the Sāngyāyanāgrhyasūtra. Sūtras indicate that the earliest house of Āryans with central pillars providing stability to the house. It also discussed about the selection of land, doors windows and trees planted in the premises etc. In Śulbasūtra we can see detailed description of the construction of Yāgaśāla etc. It

\(^{15}\) Kasyapiyam, Introduction by Sankarasasti
describes the geometry, geometrical proportion and modes of proportioning, foundation of correct and proportionate measurements of the architecture of sacrificial altars were established canons\textsuperscript{16}.

The śulbasūtras, which form a part of the sutra literature, are intended to lay down the rules of demarcation of the various sacrificial altars, pandals and places for sacred fire\textsuperscript{17}.

2.6 JAINA - BUDDHA LITERATURE

Vāstuśāstra has given special emphasis on both the Jaina and Buddha Literature. We can see well defined descriptions about villages and urban settings, big walls, entries (kavadas) etc in the Jaina - Buddha literature. The texts named Cholluvasa and Mahavasa are the major books given emphasis to Vāstuśāstra. In Cholluvasa we can see description about Major entries, doors windows, beautifications etc and also about the bricks, cement, roofs etc., In Mahavasa we can see explanations about different methods of the construction of residential building, methods of constructing walls, its finishing works including painting.

\textsuperscript{16} Katayana Sulbasutra, Vaidika Samsodhana mandala, Pune 2003
\textsuperscript{17} Ibid Introduction
In Buddhist era the buildings are divided into five classes such as Vihāra, Ardhayoga, Prasada Harmya and Guha\(^8\). The details are not methodologically given in texts. Viharas are the well known monasteries or temples of the Buddhist, originally implying halls where the monks met. Ardhayogas seems to be a special kind of building partly residential. Prasadas are wholly storeyed residential buildings; Harmya’s area is larger and more pompous type of storeyed building. Guha seems to be less defined buildings, originally built underground of middle class people. The extensiveness of these buildings can be imagined from the length of time devoted to getting a house completely built. Thus, it is stated that with reference to the work of small vihara it may be given in charge of an overseer as a Navakama for a period of years, that on a large Vihara or Pradads for ten or twelve years\(^9\).

2.7 BRHATSAMHITA

The Bṛhatsamhita, usually classed under the astronomical and astrological treatise deals with heterogeneous subjects like Puranas. Bṛhatsamhita had been written by Acharya Varahamihira

\(^8\) Sthapatya Ved-Vastu Sastra edited by Niketan Anand Gaur pp 8

\(^9\) Ibid
born in Avidyadasa as the son of Advantidesa. He had been one of the navaratnas of the king Vikramaditya and stated to be the contemporary of Kalidasa.

The literature on vastuvidya has been dealt in systematic way through chapters 53 to 60. The chapters open with a definition of the science of architecture and goes to describe briefly, the suitable building sites, testing of soil, the general plan, comparative measures of the stores and doors and carvings there on and other important part of the buildings. Chapter 53 deals purely on vastuvidya. vastu purusha, various types of houses, elements of houses, various salas selection and tests of location in a comprehensive way. For example according to Brḥatsamhita a catussala having continuous verandah on all sides is defined as Sarvotobhadra. This will have four doors on four sides and is suitable for gods and kings. 54th chapter is basically about the construction of well and 55th is about the Vṛkṣhayurveda. Chapter 56 is devoted to prasadalakṣana, canons of various elements of temple and various types of temples. 57th chapter is about the

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20 M.Ramakrishna Bhat, Varahamihitra’s Briḥatsamhita
21 Ibid, Ch 53. 31-32
application of preservatives (vajralepana). 58th chapter is about the prathimalakshana. The detailed canons of the iconography are given in this chapter. Chapter 59 is about the use of trees and woods for construction work and 60th chapter is devoted to the rite to be performed for the pratista22. In conclusion Bṛhat Samhīta is a concise dictionary of almost all sciences, glimpses of knowledge and practices.

It also discussed about the temple architecture in details. There are twenty types of temples enumerated in the Bṛhat Samhīta as follows.

1. Meru
2. Mandāra
3. Kailasa
4. Vimanacchanda
5. Nandana
6. Samudga
7. Padna
8. Garuda

22 Brihat Samhita, Vyakhyatha Puliyoor Purushothaman Namboothiri
9. Nandhivardhana
10. Kunjara
11. Guharaja
12. Vrsa
13. Hamsa
14. Sarvatobhadra
15. Ghata
16. Simha
17. Vrita
18. Catuskona
19. Sodasari and
20. Astari

The temple named meru\textsuperscript{23} is hexangular and has twelve storeys and also has internal windows of various kinds. It has four doors or gates in the four directions and is 32 cubits in width. Its height is 64 cubits. The temple named mardara is also in the hexangular shape. The width comes in 30 cubits and has ten storeys and domes. Kailasa is also in hexangular type and only 8

\textsuperscript{23} Brihatsamhita Chap 54
floors and 28 cubits width. The height comes to 56 cubits. The vimanacchanda is in the hexagonal shape and eight floors. The width comes to 21 cubits. The nandana is similar to vimanacchanda but has six storeys and 16 cupolas, The width comes to 32 cubits. The temple named Samudga is circular in shape. The width comes to 8 cubits, and only one storeyed and has one dome. The temple called padma is shaped like a lotus with eight petals. The width comes to 8 cubits, and only one storeyed and has one dome. The garuda is shaped like an eagle with wings and tail. The nandin is also like an eagle but not have wings and tail. Both are 24 cubits broad. They have seven storeys and are adorned with 20 cupolas. The temple named Kunjara has the form of the back side of a standing elephant. It measures 16 cubits all round from the bottom. It has only one storey. It has sloping roof with upper rooms. The Guharaja type is shaped like a cave as its name tells. It has 16 cubits wide and single - storeyed- It has sloping roof with three upper rooms. The temple named Vrsa has only one storey and dome. It measures 12 cubits in width and in a circular round shaped. The Hamsa is shaped like a swan with beak,
wings and tail. It has 12 cubits broad and only has one storey. The Ghata is shaped like a pot. It has only 8 cubits broad and single storeyed and has only one dome. The temple called sarvathobhadra is square in shape and has four doors in four cardinal direction with many beautiful dormer windows. It is five-storeyed in type and the breadth comes to 26 cubits. The Simha type which is adorred with images of lion. It has 12 angels and is 8 cubits broad. The last four viz, Vrta that is circular, Catuskona is quadrangular, Sodasaśri that is one with 16 angles and Astasri in octagonal has significant names and are dark inside. All these are single storeyed except the Cturasara which has five domes.

2.8. ARTHAŚĀTRA

Arthaśāstra by Koudilya is considered to be written in the 4th century before Christ. During this period few noted Vāstuśāstra books were also written, the influence of which were evident in Arthaśāstra24. In Ardhasastra eight chapters are exclusively for Vāstuśātra. Town planning, construction of Kottas and Dhurgas, Bungalows, homes etc. are discussed in this chapters. It is also

24 Arthasastra, Transalation by K.Vasudevan Musad, Introduction
explains about the management of construction process, basic laws for land sale and construction., Scientific definition of vastu, which includes houses, gardens, construction of bridges, and lakes are also given. The technical words like Vāstuvidya, Navabhāga, central plot of a plot size etc. different kinds of roads, construction professionals are included.

2.9. NĀTYAŚĀSTRA

Nātyaśāstra, the basic book on traditional dance written by Bharatha Muni explains vastu concepts in different occasions such as Koothambalam, dance stages, back stages etc. In Chapter 2 of Nātyaśāstra, Bharathamuni describes three types of theatres such as rectangular each of which can be large, medium and small in size. The theatre is made of the stage and auditorium. The stage is divided into three parts, the two doored room at the back, the elevated stage head and the front acting space. The maximum length is 108 hastas, medium 64 and minimum 32 hastas.\textsuperscript{25} We can see it by scientific observations on the construction of nātya

\footnote{\textsuperscript{25} Natya sastra (Bharatha Muni), translation by Prof. Narayana Pisharody, p. 30-32.}
mandalas. The descriptions including the *pillars of Koothambalam* are the example for that.

*Sūkranītisāram scientifically* explains the methods of constructing prathimas. It also gives emphasis to the construction of *kottas and Kotthals* which includes the town planning temple construction and also about the *bimbarachansatra*. It is a rare book available for vastu explanation on bimbasatra. It also gives various techniques about the reconstruction or joining of broken *bimbas*. It also describes about the *Thalamanam* (measurements) and its usage at different occasions.

### 2.10 MAYAMATA

In the extensive and widely disseminated range of works, the Mayamata occupies a fairly well defined place. It is a general treatise written in Sanskrit but originating in Dravidian India, most probably from Tamil area. It is considered that the text Mayamata was written by the greatest sage Mayan. It is said that the text was originally in Tamil and it was translated to Sanskrit. Mayan is considered to be the architect of *asuras*. 
The content of Mayamata is basically about the *Vastusastra* and *Prithimanirmāṇaśāstra*. Through the 45 chapters *Mayamata* explained the vastu concepts including all the aspects. It also described about the construction of multistoreyed buildings, Gopura constructions, Bimba construction etc. It also discussed and gave specific directions to the construction of residential buildings.


Lists of thirty six chapters of Mayamata with their contents are briefly shown here:-

1. *Samgrāhadhyāya* - Table of contents
2. *Vāstuprakāra* - Classification of architectural subjects
3. *Bhūparikṣa* - Testing of soil
4. *Mānopakarana* - System of measurement
5. *Dikpariccheda* - Chapter on finding out cardinal points
6. *Padadevatāvinyasa* - Ground plan
7. *Balikarmavidhāna* - Offering to gods
8. *Gramavinyāsa* - Villages
9. *Nagaravidhāna* - Town planning
10. *Bhulambavidhana* - Dimensions of stories
11. *Garbhanyāsavidhāna* - Foundations
12. *Upapithavidhāna* - Pedestals
13. *Adhisthariavidhāna* - Bases
14. *Padapramāna dravvasamgraha* - Columns
15. *Prastara prakarana* - Entablatures
16. *Sandhikarmavidhajia* - Wood joinery
17. *Sikharakaranbhavana*
   *Samaptividhāna* - Finishing the buildings
18. *Ekabhūmi Vidhāna* - One storeyed building
19. *Dvibhūmi vidhana* - Two storeyed buildings
20. *Tribhūmi vidhāna* - Three storeyed buildings
21. *Bahuohumi vidhāna* - Buildings of more than three storeys
22. Prākara parivāra - Courts and temples
   therein of the attendant
deities.
23. Gopura vidhāna - Gatehouses
24. Maṇḍapa vidhāna - Pavilions
25. Śāla vidhāna - Halls
26. Grha maṇḍhikaraṇa - Measurement of houses
27. Grha praves - House warming ceremony
28. Raja veśma vidhāna - Royal palaces
29. Dvāra vidhāna - Doors
30. Yānādhikaraṇa - Convevances
31. Yāna Śayanādhikaraṇa - Cars, chariots, couches and
   bedsteads
32. Linga lakṣaṇa - The phallus
33. Pitha lakṣaṇa - The pedestal of the phallus
34. Anukarma vidKana - Minor works on sculpture
35. Pratima lakṣaṇa - Images in general
Mayamata states five styles of catuśāla namely sarvatobhadra, vardhamānā, svastikā, nadvavartā and rucaka\textsuperscript{26}.

2.11. MĀNASARAM

The detail on the author of the text ‘Manasar’ was not mentioned in the book and we have no evidence yet to find out of the author. Yet the author is said to be the Muni Manasāra. The word mānam means measurement and Manasāra can be defined as the essence of measurement. Mānasar, the essence of measurement, is an authentic textural work on vāstuvidya. Through 70 chapters\textsuperscript{27} the Mānsara speaks out the details for the calculation of padavinyāsa, vastuprakara, village planning, urban planning, perimeter of the residential as well as other buildings, bungalows etc. It also gives measurements to the Vigraha Nirman and other divine related constructions.

The contents of chapters in Mānasara are given.

1. **Invocation of Brahma, sīva and Viṣṇu and other sages.**

2. **System of measurement**

3. **Examination of soil and examination**

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\textsuperscript{26} Mayamata ch 26-1

\textsuperscript{27} Indian architecture, P.K.Acharya pp 34-38
4. *Sanku sthāpana*-principles of ascertaining directions
5. *Padavinyāsa*
6. *Balikarma*- vidhāna
7. *Gramalakṣana*- vidhāna
8. *Nāgara*-vidhāna
9. *Bhūmilamba*-vidhāna
10. *The foundation*
11. *Upapitha*-vidhāna
12. *Adhisthana*-vidhāna
13. *Stamba*-lakṣana-vidhāna
14. *Prastara*-vidhāna
15. *Sandhikarma*-vidhāna
16. *Vimāna*-Vidhāna
17. *Ekabhūmi*-Vidhāna
18-28 *Building of two to twelve storeys*
29. *Prākāra*-Vidhāna
30. *Parivāra*-Vidhāna
31. *Gopura*-Vidhāna
32. *Maṇḍapa*-Vidhāna
33. Śāla-Vidhāna
34. Location and measurement of houses
35. Gṛhapravaśa-Vidhāna
36. Dvāra-Vidhāna
37. Measurements of doors
38. Rajagrha-Vidhāna
39. Construction of royal courts
40. Construction of royal courts
41. Rathalakṣana-Vidhāna
42. Sayana-Vidhāna
43. Simhasanalakṣaṇa-Vidhāna
44. Torana-Vidhāna
45. Madhyaranga-Vidhāna
46. Kalpaṇkṣa- Vidhāna
47. Abhiṣekalakṣaṇa-Vidhāna
48. Bhūsanalakṣaṇa- Vidhāna
49. Trīmurtiśaṇa-Vidhāna
50. Linga-Vidhāna
51. Pithalakṣaṇa- Vidhāna
52. *Saktilakṣaṇa*-Vidhāna
53. *Jainalakṣaṇa*-Vidhāna
54. *Baudhalakṣaṇa*-Vidhāna
55. *Munilakṣaṇa*-Vidhāna
56. *Yakṣa*-Vidyādhara-lakṣaṇa-Vidhāna
57. *Bhaktalakṣaṇa*-Vidhāna
58. *Vāhanalakṣaṇa*-Vidhāna
59. *Bhaktalakṣaṇa*-Vidhāna
60. *Vāhanalakṣaṇa*-Vidhāna
61. *Garudamāna*-Vidhāna
62. *Vṛshablakṣaṇa*-Vidhāna
63. *Simhalakṣaṇa*-Vidhāna
64. *Pratima*-Vidhāna
65. *Daśatāla*-Vidhāna
66. *Daśatāla*-Vidhāna
67. *Pralambalakṣaṇa*
68. *Casting of images*
69. *Angadusana*-Vidhāna
70. *Nayanonmilana*-Vidhāna
Manasar discusses the site of buildings, the methods of orientation, sacrificial inauguration, plans for the layout and building of towns, villages, roads, bridges, gardens, ponds, temples, cremation grounds etc. It describes the ceremonies of house warming the, first entry; the proportions of the image in relation to the building; the netting of precious stones in different parts of the image etc.

2.12 SAMARĀNGAṆA-SŪTRADHĀRA

Samarāṅgaṇasūtradhāra is one of the standard texts in the field of Vāstuvidya. It was written by the King Bhoja. In the first volume it deals with the main principle branches namely residential architecture, engineering palace architecture, temple architecture etc and the second volume is about silpa and citra. The Samarangana Sutradhara is divided in to 84 chapters. The first seven chapters deal with the introducing subjects. In the eighth chapter is the Stapati-lakṣaṇa. The system of measurements is discussed in the chapter nine and eleven. Bhūparikṣa is the topic in 10th chapter, The five fundamental canons of Indian architecture are discussed in chapter 12-16. In the subsequent 29 chapters (17-45)
deal with the civil and secular architecture. The next 20 chapters (45-65) deal with temple architecture. The last fourteen chapters (70-84) are treated iconography, both sculptural and paintings.

A list of chapters in Samarāṅgaṇa Sūtradhara is given;

1. *The advent of Earth*-Mahāsangamāna
2. *The dialogue between father and sons*
3. *The query* - Prasodvaya
4. *The creation*
5. *The geography* - Bhūvanakośa
7. *The division of society according to Varṇa and Ashrama*
8. *Stapati*-lakṣaṇa
9. *Aṣṭāṅga*-lakṣaṇa
10. *The selection of site*-Bhūparigraha
11. *The measurement*-Hastalakṣaṇa
12- 16. *The five fundamental canons of Indian architecture are discussed*
17. *Towns and their categories* - Nagaradisamjnya
18. *Purvanivesa*-Town planning
19. Ayadinirṇaya
20. Offerings - Balidāna
21. Vedi-lakṣaṇa- The Altar
22. Indradhvajaniśṭa -Indra’s flag
23. Śilānyāsa-The foundation laying ceremony
24. Kilaka-Sutrapata
25. Pitamāna-The measurements of the pedestal
26. Rajaniveśa- The planning of royal palace
27. Rajagṛha- The various types of palaces
28. Sabhā- The assembly hall
29. Gaṇaśalā- Stables of elephants
30. Asvaśalā- The stables of the horses
31. Ayatananiveśa- The shrines
32-36. Ekaśālas up to Daśaśāls
37. The miscellaneous verities of the houses
38. Dvārapithabhittimandadi- The measurements of doors etc.
39. Vanapraveśa- Entry into the forest
40. Grīhadravyapramāṇa - The proportions and the component parts of the house
41. *Dvāraguṇadosa*- The door and its merits and demerits
42. *Cayavidhi*- The masonry
43. *Apravojyaprayojya*- With what not to decorate and with what to decorate
44. *Dvaradhangaphala*- The effects of the door break
45. *Toranabhaṅga*- antika to the attended to, if Toraria is broken
46. *Grhadoṣa*- nirūpaṇa
47. *Santika*-vidhi
48. *Yantrādhyāya*- The machines
49. *Śayanāsana*- The couches and the cots
50. *Prāsādas*
51. *Prāsāda*- geneology of the prasadas
52. *Prāsāda*- dvaramanadi
53. *Jagḥanya*- vāstu - dvāra
54. *Prāsāda*-subhāsubha-lakṣaṇa
55. *Rucakādi prāsādas*
56-57. *Prasacla-stavana*- The dedication of the temples
58. *Meru and other sixteen types of prāsādas*
59.  *Temples of the Uttarna type*

60.  *Meru etc. twenty type prasadas*

61.  *Mervadi-vimsika-nāgara-prāsāda*

62.  *Srikutadisattrimsat-prāsādas*

63.  *Pithaparicaka*-The five fold terraces

64.  *Drāvidaprāsāda*-The south Indian temples

65.  *Dighadra*-prāsāda

66.  *Bhūmija*-prāsāda

67.  *Mandapalakṣana*- The pavilions

68.  *Saptavimatimaṇḍapa*

69-70.  *Jagatilakṣaṇa*- The Jagati temples

71.  *Liṅga*-pithapratimalakṣaṇa- Iconography of the phalli and
     their pedestals

72.  *The gods and goddesses and their forms and mudras*

73.  *Pratimā*- lakṣaṇa

74.  *Doshagurianirupana*-The demerits and merits of images

75.  *Pancapuruṣa strilakṣaṇa*- The standard models of:
     proportions of the five fold men and women

76-78.  *Mudras*
79. *Citroddeśa* - The paintings

80. *Bhumibandha* - The Vartika and the backgrounds

81. *Lepyakarmadikarn* - The paints and the plasters and brushes

82. *Andaka pramana* - The measurements of Andakas

83. *Manotpati* - The standard measurements

84. *Rasadristilakṣaṇa* - The rasas and Rasadristis

Among these the first 48 chapters treat the principal subjects such as the needs, origin, scope and subject matter of architecture and the qualifications of the architect. It deals with the house architecture in the subsequent chapters. Twenty chapters are devoted to temple architecture and the last chapters deal with iconography, both sculptural and pictorial.

It is noted that Dr. D.N. Sukla did his doctoral research thesis based on *Samarāṅgaṇaśūtradhāra*\(^\text{28}\).

**2.13. MANUŚYALAYACHANDRIKA**

*Sri Thirumangalam Neelakandan Moosad* who wrote the classical work in vastuvidya named *Manuśyalayachandrika*. This is the only book which is specifically written for the construction

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\(^{28}\) Vastusastram, Vol 1, Dr. D N Sukla
of residences. The author referred to main textural works in the sastra such as Mayamata, Prayogamanjari, two Nibandhas, Bhaskariyam Mayamatha, Gurudevapadhadi, Markandeyam, Ratnavali. Kasyapamata, Kumaragama, Harisamhita and Vastuvidva. It has been mentioned in the book itself by the author. The other books written by the author named Mathangaleela and vedikkambavidhi are available today. Other one named Silpachandrika which is not available right now.

The book Manuṣyalayachandrika is a systematic arrangement of the concepts and ideologies of our ancestors in this area. Manuṣyalachandrika is a unique work dealing exclusively of residential building. Some poems are in the same words. Through 247 slokas in 7 chapters the author systematically explained the vastu methods for the construction of residential buildings. Acharyavaranam, stapathi and other master craftsmen find their requisite qualifications and duties, bhūlakṣana, vṛikshalakshana, soil tests, selection of sites etc are discussed in the first chapter,

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29 An engineering commentary on Manusyalachandrika, Dr.A.Achyudhyan, Dr.Balagopal, T.S. Prabhu pp xii
Chapter two deals with the dik-nirmaya, squaring, veethi kalpana, marma, vastu-purusha-mandala, etc.

The perimeters of a house, wall size and height, basement etc are specifically explained. Nine types of nalukettu, ekasala, dwisala, trisala etc. are also discussed well. This book is considered as the basic book for the construction of houses in Kerala Vastuśāstra Mandala.

Manuṣyaḷayachandrika, the specific book on residential building gives detailed and scientific descriptions to the construction of the residential building (manuṣyalayam).

According to Manuṣyalayachandrika\textsuperscript{30}, the ideal land should be slope downwards to east. This is probably to ensure that the rising sun is visible from the house. It is said that rectangular sites too are suitable for gods and for Bhramins. The shape of the site must be perfect and must rise towards the west to south.

The land with loose soil, filled up void ground, rocky surfaces and marshy or wet conditions will not produce good sound when treaded upon or tamped. Hence the prescription that the land

\textsuperscript{30} Manuṣyalacandrika pp.14
should give sound when one walks over it ensures good ground conditions.  

2.14. TANTRASAMUCHAYAM

The classical work of Tantrasamuchayam was written by Sri. Chennas Narayanan Namboothiri at Vennair desom in Ponnani Taluk of Malappuram District. The text contains 12 chapters and 2896 slokas. In this book the author describes the rules and regulations of Hindu temples. It also enlightens the techniques for making icons and mural paintings.

Tantrasamuchayam is in line with Āgamas, and has referred to various previous texts like Aparajitha Pracaram, Kasyapiyam, Mānasara. Samarāṅgaṇa Śūtradhāra, Mayamatha etc. Tantrasamuchayam by K. Neelakandan Asari written in Malayalam containing 142 slokas. It contains Bhūparigraha, Adhiṣṭānavidhi, Ekaśāla Dviśālāvidhi, Bimbalakṣaṇa, Linga lakshana Natyamaṇḍapa, Gopuravidhi, etc. throughout 12 chapters and 142 slokas (Tantrasamuchayam silpabhaga vyakhyata Kanippayyor Damodharan Namboothiripad). It is the widely

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31 Ibid pp.16
32 Tantrasamuccaya by Karuva Neelakandan Achari
accepted book in Malayalam for the tantra practices, iconography and temple planning.

_Tantra samuchayam_\textsuperscript{33} classified the temples into various types;

1. _Chandam_
2. _Vikalapam_
3. _Abasam_
4. _Circular_
5. _Rectangular_
6. _Gajapreshta_
7. _Eliptical_
8. _Hexogonal_
9. _Octogonal_

2.15. VĀSTUVIDYA

Even though we have no authentic information about the author of the book vāstuvidyā, it is considered as a basic text for the vāstuśāstra literature. The seven manuscripts published as a book in 1913 compiled by Ganapathi Sastri from the scattered

\textsuperscript{33}Tantrasamuchayam
materials from different sources helps us to get much about the text\textsuperscript{34}. (Vastuvidya compile and edited by T.G. Ganapathi Sastri)

Chapter 1 starts with the customary propitiating slokas. Then it gives details regarding the scale and measurements. Description of s lipins, their categorization, etc. are elaborated in this chapter.

Chapter 2 deals with site description and suitability of sites for construction purpose. The fixing cardinal direction is given in this chapter.

Chapter 3 gives detailed description of plot size suitable for different classes of people. The padams padavinyasam, positioning of devatas with respect to the padams etc. are also given in this chapter.

Chapter 4 gives different locations of the entry gates and the positioning of other rooms and structures. The different types of padavinyasa and the derauls of vastupurusa and the positioning of gods etc. are detailed.

\textsuperscript{34} Vastuvidya compiled and edited by T.G. Ganapathi Sastri
Chapter 5 deals with the positioning of the building in site in more details. A detailed description of trees, which can be planted in the site, is also given in this chapter.

Chapter 6 describes the Nadis, Rajus and Marmas, in details and how to avoid interception of marmas and Sutrams on structure.

Chapter 7 mentions about a moving Vastupurusa and moving with the sun in an anti clockwise direction. The auspicious periods for starting the construction of different salas are given in this chapter.

Chapter 8 describes the Catusśāla. Āyādisadvarga proportions used, joiner), details of columns and beams iris etc. are also given in this chapter.

Chapter 9 describes the details of basement and foundation.

Chapter 10 deals with the construction details of the roof structure. Joinery details are also given.

Chapter 11 further explains the graphical method of finding the measurements of different rafters in detail.
Chapter 12 gives the details of Vamada and the rituals to be conducted before fixing the Vamada. Later slokas explain the fixing of Montayam and Kutam.

Chapter 13 describes the method of levelling the site. Details regarding foundation and basement and rituals before fixing the doors are given in this chapter.

Chapter 14 gives the construction details of doors. Details of upadwaras are also explained.

Chapter 15 deals with construction details and measurements of walls. Details of Uttaram are also given. The final rituals before the first entry is also given at the end of this chapter.

Chapter 16 describes the manufacturing process of tiles and bricks. The different types of tiles and their uses are also given.

The main contents of the text vastuvidya are: bhulakṣana-qualification of silpins as Sadhanakathanam in chapter 1. Chapter 2 deals with the slopes of the land, suitability of the land, trees and plants etc. Chapter 3 deals with vastupurusa and vastudevatas. Chapter 4 is devoted to vāstupuruṣa samastapanam. Like this vidivinyasa, marmas and sutras, yoni samkalpa, salavidhana,
roofing and elements, doors and gates, house warming etc. are discussed in other chapters. And the final chapter (Chapter 16) deals with the technology for the construction of buildings.

2.16 CARDINAL MANUSCRIPTS OF VASTU

Besides the works on Vastu mentioned earlier in the chapter, there are several manuscripts dealing with Vastu can be seen in the oriental libraries like the one in Mysore, Baroda, Trivandrum and Chennai. A list of manuscripts is given below.

1. Vāstu mandana
2. Graha vāstu- sāra
3. Nīrdoṣa-vāstu
4. Vāstu-cakra (Viksacarya)
5. Vāstu-śāstra (of Bhojadeva)
6. Vāstu-manjari
7. Vāstu - vandhikara
8. Vāstu - ratnavali
9. Vāstu - vidhi
10. Vāstu - padhadi

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35 Vastu Astrology and Architecture- Gayathri Devi Vasudev p.27
11. Vāstu-tilaka (of Kesavar)
12. Vāstu vidhapatī (of Vasudeva)
13. Vāstu-sankya (of Todarananda)
14. Āyadi-lakṣaṇa
15. Kumāra vāstu
16. Prāśāda nirṇaya
17. Viśvambara vāstu
18. Māna- vijnana

2.17 MODERN TEXTS IN VASTU

The people of modern age patronize Vastu by creating books of this sasthra and their works are mentioned lastly in the chapter of review of literature. Let me write their works and books. 1) An engineering commentary on Manusyalaya Chandrika by Dr. Achyuthan and Dr. Balagopal T.S Prabhu, 2) Tantrasamuchayam (Shilpanhagam) of Channas Naiayanan Naboothiripad, edited by Kanippayyoor Damodharan Namboothirippad 3) Transtra-samucayam (Devalayam) and Tantrasamuchayam (Manusyalayam) 4) Silparatnam edited by Karuva Nilakandasasary 5) Vastuvidya darsanam by Dr. Balagopal

unknown) 23) Vastu Science for 21st century by Prof. B.B. Puri
24) Muhoorthakutti (Vastusastram) by P. Vijayan
25) Vastusastra Indian Traditional Building Science by Pandit Alahar Vijay
26) Thatwachinthayum Arthasastravum by C.T. William
27) A textbook of Vastuvidya by Dr. Balagopal T.S. Prabhu and Dr. A. Achyuthan
28) Parppidam by Thannirmukkam Vasu Achari of Allepy District.
29) Koopasastram by N Koithitta
30) The metaphysics of Puranas by H.H Wilson36.

36 Reference from Central Library of Sree Sankaracharya University of Sanskrit, Kalady and the Department of Vastuvidya, Sree Sankaracharya University of Sanskrit, Kalady.