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To Study Vastu Shastra Planning of Commercial Building as per Traditional Indian System & Science of Architecture

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ABSTRACT:In architectural practice, most of the time, the client demands the planning of buildings as per Vastu shastra. Vastu Shastra is applicable for all types of buildings such as residential buildings, and commercial buildings, and also for monuments, mandirs, churches, auditorium halls, museums, etc. The presence of positive energy and negative energy in the environment affects human life. So it is necessary to predict the loss of positive energy from the environment. The study of Vastu shastra has been included so many years ago. The traditional system of Vastu Shastra is used in the old structures which are still available with all-natural resources. The traditional system of Vastu Shastra shows how they are managing the natural resources such as refraction of lights, wind direction, maintaining temperature according to climates, and use of particular types of material. The main aim of Vastu is to create positive energy within the usable space.

KEYWORDS: -Traditional systems, Science of the architecture, elements of Vastu, Commercial buildings.

I. INTRODUCTION

Vastu is an ancient Vedic science of layout planning of building that has stood the test of times, influencing peace and prosperity. Vastu is a science that deals with managing positive energy in building and structure. Vastu shastra is used vastly in architecture, engineering, and the interior. In architecture, it deals with internal comfort and beauty. Similarly, civil engineering deals with structural stability. Vastu provides knowledge to be adopted in building a house to make a place happy, comfortable, healthy, wealthy, and prosperous.

The energy created within the structure depends on several factors but as per the study, five elements are directly and indirectly interconnected for the development of positive and negative energy. The study of Vastu shastra indicates behind every Vastu shastra planning there is a scientific reason, so the science of architecture also provides the same platform for the planning of structure. Vastu shastra Planning creates harmonious energy inside the structure. Vastu shastra and the science of architecture, both are based on theoretical and experimental analysis. It is helpful for civil engineering as well as architecture, so the study of Vastu shastra helps while planning different types of structures. The energy created within the structure depends on several factors but as per the study 5 elements are directly or indirectly interconnected for the development of positive and negative energy such as Prithvi (Earth), Jal (water), Agni (fire), Vayu (Air) and Aakash (Space).

According to a planet study, the movement of the earth also affects the development of energy. The movement of the earth is always concerning its direction, so it is essential to study the 4 main directions of the earth and the 4 sun directions of the earth which include North, South, East, West, and North-East, North-West, South-East, South-West respectively.

II. RELATED WORK

According to traditional knowledge, 5 elements are interconnected for the development of positive and negative energy inside the structure. (Ref. Table No. 1)

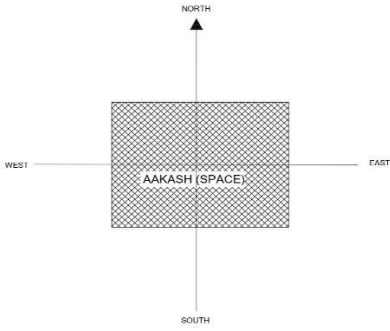
- A. Prithvi (Earth)
- B. Jal (Water)
- C. Agni (Fire)



- D. Vayu(Air)
- E. Aakash (Space)

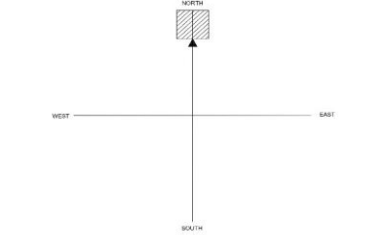
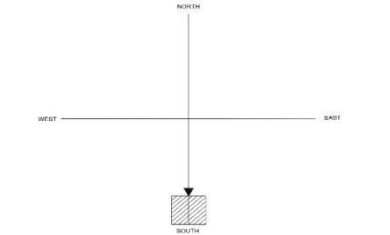
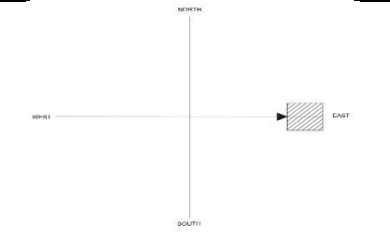
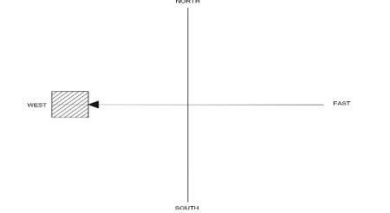
Table No.1 Elements of Vastu shastra

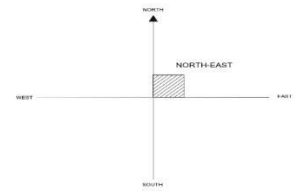
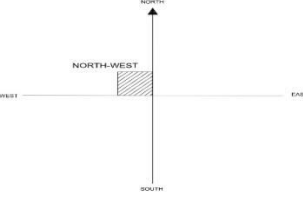
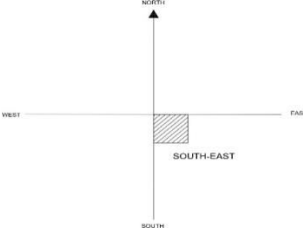
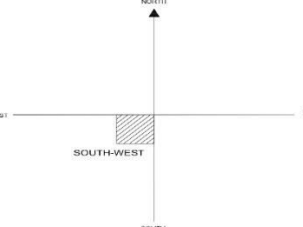
Sl. No.	Details of each Element	Location of building elements as per directions
A.	<p><i>Prithvi (Earth)</i>:-Prithvi means earth. The earth element is associated with the southwest direction. For the hospital, the best choice for locating the emergency room as it helps to patients recover fast and healthily.</p> <p>In-office building room or office owner is to be located in the southwest direction. This direction helps the owner to properly concentrate and maintain health.</p>	
B.	<p><i>Jal (water)</i>:-Jal means water. In structure, the North-East direction is where the energy waves of the water element are collected. Water bodies such as drinking water kept North-East direction.</p>	
C.	<p><i>Agni (fire)</i>:-Agni means fire. The fire element is in the South-East direction of our structure. In commercial buildings, electrical appliances should be located in this direction. Agni is demanded good absorption and transformation of positive and good moodiness.</p>	
D.	<p><i>Vayu (Air)</i>:-Vayu means air. The air element lives in North-west, so hospital nurses' quarters, ICU, and recovery rooms are placed in these zones. It gives people a big opening of fresh air and the circulation of cool air. It helps patients recover quirkily.</p> <p>In-office this place is suited for the conference room. It brings positive energy to the people.</p>	

E.	<p>Aakash (Space):-It means space. This element is directly linked to sound and silence. space is the expansiveness in the center of our building, the element of energy and dynamic space is called BRAHMASTAN in Vastu shastra. This place takes clearly and clean are versed space for life to flourish and do not place the heavy objects.</p>	
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According to traditional knowledge, there five there is five elements are important but same time directions of our structure are important there are four main directions North, South, East, and West, and four corners namely North-East, south-east, north-west, south-west. In architecture arrangements of rooms according to Vastu are done in the proper direction. according to the architectural view, some information is developed.(Ref. Table No. 2)

Table No.2 Directions of Earth

Sl. No.	Details of Directions of Earth	Location of Building Elements as per Directions of Earth
I	<p><i>North</i>:-Ideal direction for living room and open space. This direction is the rule from God of wealth and it denoted stability.</p>	
ii	<p><i>South</i>:- According to Vastu it is a place of Yama and mostly advised to us. This place is preferred to the sub-offices and other doctors' rooms like X-ray, sonography, etc. This direction offers, high sunlight intensity to keep the room moisture-proof and sunlight will directly until the afternoon so help for the office or rooms.</p>	
iii	<p><i>East</i>:- According to Vastu it is a place of Yama and mostly advised to us. This place is preferred to the child bedroom storeroom and office in the direction. This direction offers, high sunlight intensity which is good to keep the storeroom moisture-proof, and sunlight will directly until noon so helps for the office or childbed.</p>	
IV	<p><i>West</i>:- This direction is owned by the god of water. This direction is best to locate storeroom to keep heavy equipment and apparatus. Bathroom and toilets in this direction which are the most heated direction for less used areas</p>	

V	<p><i>North-East:-</i> In a study of structure, this location is supreme, this is the ideal location to have an open space. Water sources or relaxing space because in this area we have constant sunlight so it is good for health.</p>	
Vi	<p><i>North-west:-</i> This direction is ideal for having the equipment, toilet, storeroom, etc. here the sun is not visible in the evening so doing not important to work.</p>	
Vii	<p><i>South-East:-</i> It is the direction of the god of fire that is best for locating the consulting room.</p>	
viii	<p><i>South-West:-</i> This direction of the guardian or Pitru means head of the house it is useful for master bedroom, wardrobes, and libraries. It is used to absorb the heat in walls that are coming from the west and is useful for wardrobes.</p>	

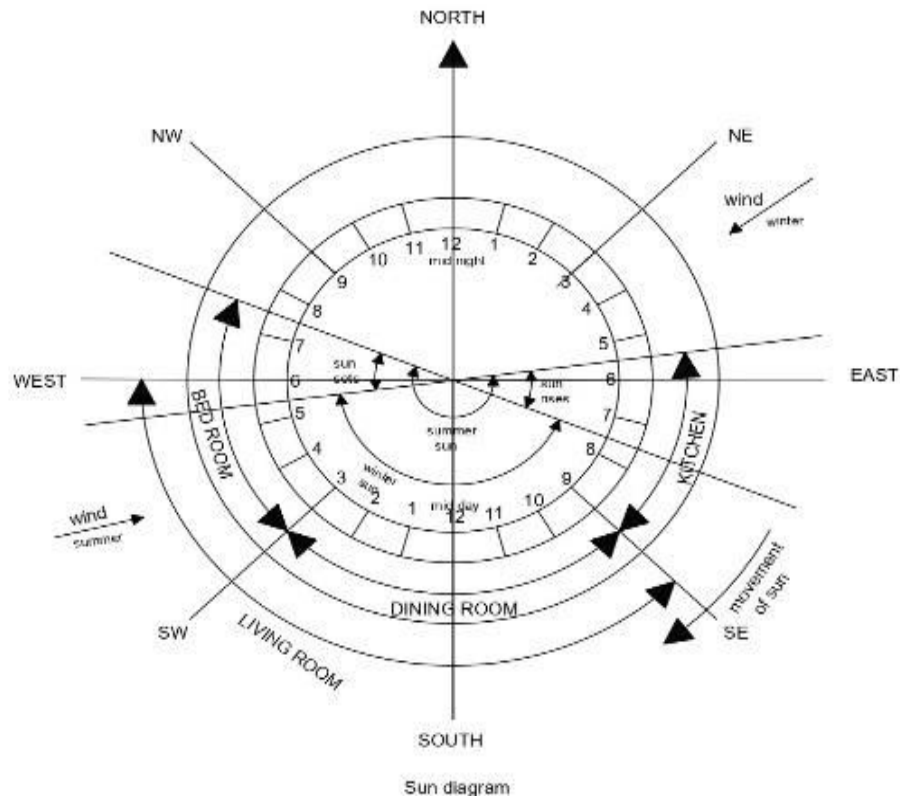
III. METHODOLOGY

Concept of planning related to Vastu shastra:-

For the architectural view, some principles are discussed for a structure. This principle ensures proper and economical utilization of space and other resources of principle are as follows:-

- * *Aspect:-* It is defined as the positioning of windows and doors in external walls to take maximum advantage of natural gifts such as sunlight and wind or breezes.
- * *Prospect:-* It means taking advantage of desirable views available from windows, doors, and balconies of such features outside the building such as gardens, lake, sea, river, hill, etc.
- * *Orientation:-* Orientation means the placement of different types of rooms in the northern direction. The same plan can be plotted in various ways to give different orientations.
According to civil engineering the plan can be oriented concerning the north in such a way that the kitchen lies towards east and north-east, the bedroom is towards south to southwest and maximum hall windows face north, north-east for public building north exposure is desirable.
These three principles viz. aspect, prospect, and orientation can be employed in planning by the use of a “sun diagram” (Ref. Fig. 1).
- * *Privacy:-* The two types of privacy are in consideration.
 - a. *External privacy:-* This means the privacy of the entire building from the surrounding building privacy which affects noise pollution overcrowding of the building etc.
 - b. *Internal privacy:-* This means the placement of internal or external openings which prevents direct view inside of any room from outer space.

Fig. 1 Sun Diagram



- Sun diagram
- * *Circulation*:-It means a moment of a human being from one place to another place side the structure.
 - * *Grouping*:-In some conditions same or similar functions together are grouped and placed in the same direction for taking advantage of the economy.
 - * *Roominess*:-In human psychological feeling, the space provided inside the room is called roominess.
 - * *Furniture requirement*:-Furniture arrangements are made according to the types of furniture used for different rooms and their nominal sizes.
 - * *Sanitation*:-Sanitation is concerned with lighting and ventilation. It also includes proper planning for drainage arrangements for ventilation and light.
 - * *Elegance*:-It refers to the elevation of the building the front elevation of the building must aesthetically pleasing ugly features like drainage pipes, and radiators of the air conditioner should be avoided in the front view.
 - * *Economy*:-The planning of building should be economical, avoiding all types of wastage. The wastage of raw materials affect economic planning.
 - * *Access*:-The principle of access indicates ease in moving from room to room. according to his principle, it must be possible to go from one room to any other room, without crossing the third room.
 - * *Architectural composition*:-This principle deals with the aesthetic view or the beauty of a building.
 - a. *Unity*:-All the elements of a building must be unified to look a unique distraction in unity leads to an incomplete look.
 - b. *Contrast*:-Repetition of the same geometrical shape causes monotony in the appearance of the building. contrast means the use of different geometrical shapes to break the monotony.
 - c. *Scale*:-This refers to the total mass of the building, whether its planning is on a domestic, public, or monumental scale. According to the scale, the architectural planning of the building will change.
 - d. *Proportion*:-the elements of the building must have a proportion between them. A door too wide or too high will spoil the appearance of the building. The proportion of length, breadth, and height should be planned in such a way that a feeling of roominess is created.
 - e. *Mass composition*:-A mass means a three-dimensional shape or volume. The masses and their grouping in the formation of the building are called mass composition. This composition can be done in various ways to strike a balance so that aesthetics or beauty is achieved.



- f. *Form and Function*:-Depending upon the function of the building it is necessary to adopt a particular form of the building. The form is also closely related to scale. There are monumental form which must be followed while designing particular buildings.
- * *Climate and its effect*:-The openings are placed according to the sun diagram and wind direction to avoid the effect of climate.

Location of commercial Building elements as per Vastu:

- * *Main entrance*:-The main entrance of hospitals is very important because people have to easily access get patients’ rooms, emergency rooms, and doctor’s rooms. However, the hospital’s main entrance should be in the east, north, or northeast direction. the central part of the hospital should be kept open for natural light and fresh air to come inside.
- * *Operation theater*:- In the hospital, there are many rooms according to their purpose. Operation theater is often used for surgeries and it is considered one of the critical places in the hospital. Therefore, OT is on the west side of the hospital. The patient’s head ought to be south side while centering the OT.
- * *Consultation Room*:-In-hospital is a place where people are depressed and need positivity and healing energies. The consultation room is the place where patients meet the Doctor to discuss their problem and write a prescription the solution room should be in the northeast direction it brings prosperity to the head of the respective doctor.
- * *Emergency Room*:-In every hospital, there are two or more emergency rooms required for those patients who need immediate attention and they have to be easily accessible. The emergency room is South-West direction as it helps the patient recover fast and heal.
- * *Storeroom/ medical Equipment/ medical books rack*:- There is always have to storeroom to keep medical equipment and apparatus which are not in use or which are extra used in an emergency. The proper location of the storeroom is the South, west or South-West only. Also, make sure that the storeroom is always in a higher place than the higher place the flooring of the main hospital.
- * *Drinking water*: -The place of drinking water is very important for the relaxation of people. Therefore, the right place for the drinking water cooler is the northeast direction. natural sun rays come and kill the bacteria.
- * *Toilet*: -The appropriate place for the bathroom is on the west side of the floor. It ensures good health and is easily accessible.
- * The best location for changing rooms and bathrooms is south or west.
- * *Nurse quarters*: -For relaxing and resting the nurse and other staff rooms should be is southeast should be in southeast and northwest zones.
- * *ICU and Recovery Room*: -For the ICU and recovery room, the North zone is very useful as natural light comes and it helps to quick recovering of the patient.
- * Medicinal books can be set in the south or west direction. the southeast location room would be only well suited for the x-ray.

VASTU SHATRA FOR COMMERCIAL BUILDING (HOSPITAL BUILDING)

	Aspect	Direction	Reasons
1.	Main Entrance	East, North, or North-East	Open for natural light and fresh air to come.
2.	Toilet	West	Ensure Good Health
3.	ICU & Recovery Room	North zone	Natural light is best for quick recovery
4.	Medical Equipment	South-East, west, Or Scheduling	As a dark place, the location for the heavy objects is suitable.
5.	Doctor Consulting Room	North-East	Distance is concussive for diagnosis
6.	Operation Theatre	South-West	The patient’s head ought to be in



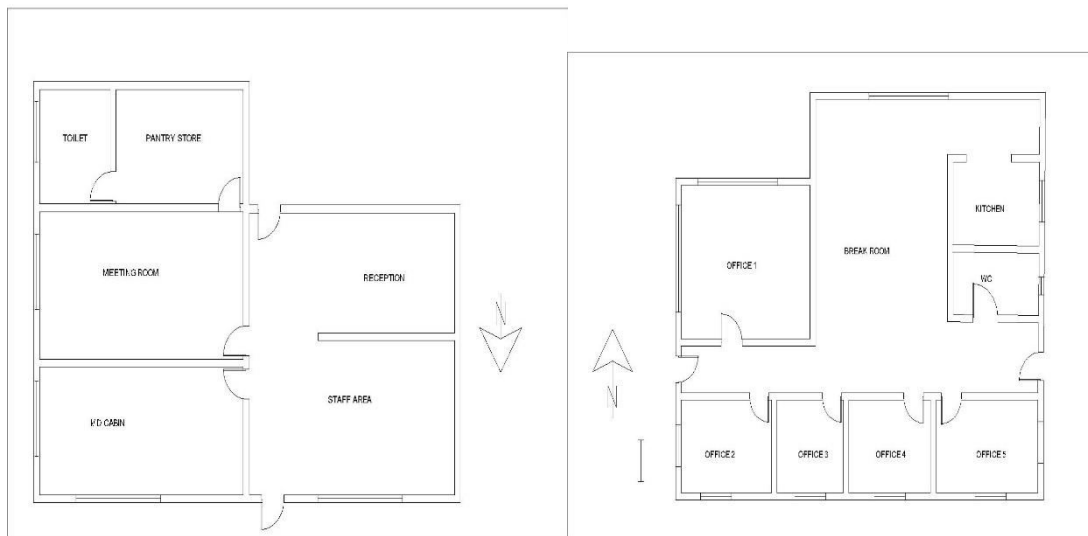
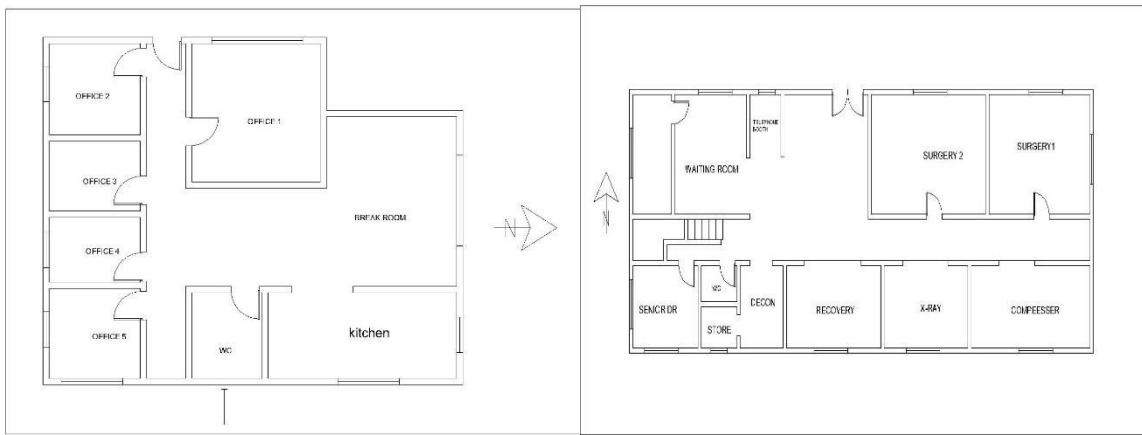
			the south direction.
7.	Labour Room	South-West	This direction is a sign of prosperity
8.	Patient Room	North-East	Proper ventilation and positive rays.
9.	Emergency Patient3 Room	South-West	For quick recovery and healing
10.	Drinking-Water	North-East	Thiswill attract prosperity to your life. As sun rays directly contact it is beneficial to health.
11.	Nurse Quarter	South-East, North-West	This direction is best for relaxing purposes.
12.	Medical Book rack or Shelves	South or West	This direction is a sign of prosperity

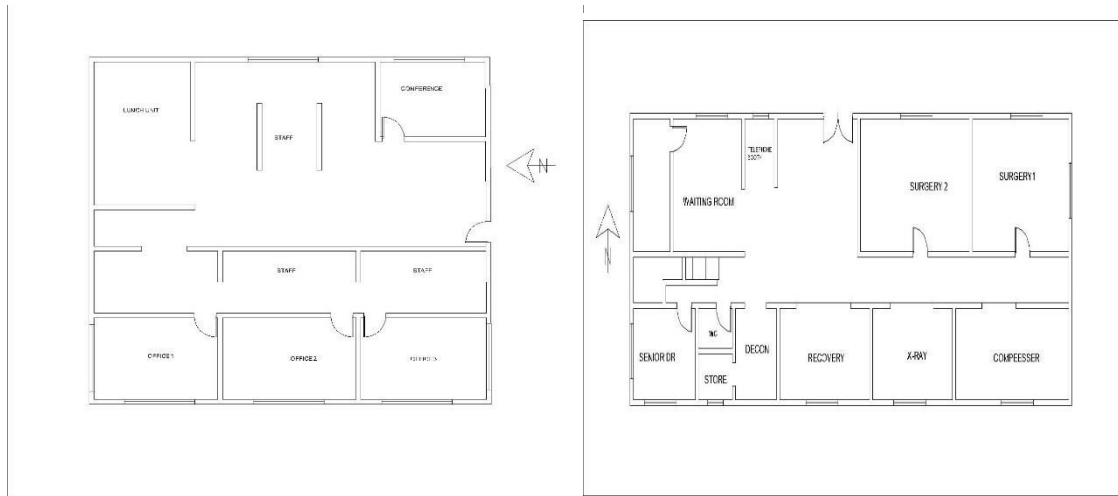
VASTU SHASTRA FOR COMMERCIAL BUILDING (OFFICE BUILDING)

	Aspect	Direction	Reasons
1.	The face of the office building	North, North-East, or North-West	It brings good lust and positive energy
2.	Main Entrance	East-North	It brings good luck and positive energy
3.	Room of office owner	South-West	To keep financial documents
4.	Account department	North-East	It is ruled by the god of wealth
5.	Desk and Workstation		Should be rectangular, or square. This is indicative of a person’s financial wealth
6.	Welcome Room	North-East corner	considered to be auspicious and bring positivity
8.	Staff	North Or East	positive energy
9.	Conference room	North-West	It brings positive Energy, Indicative of a person’s financial health.

IV. EXPERIMENTAL RESULTS

- Planning commercialbuildings with knowledge of Vastu& science of architecture.
- Same roadsideplot with different earth directions is designed as per Vastu shastra.





V. CONCLUSION

- This study shows that Vastu shastra is an important parameter in the construction industry.
- Study of the traditional Indian system and ancient science of architecture shows similar requirements in Vastu shastra planning.
- Detail Study of Vastu shastra provides the easiest Planning of the plot with the same location and different north direction.
- The main aim of writing this paper is to present a simple way of Vastu shastra planning so that every technical/non-technical person can understand it easily.
- Simple way for the planning of roadside facing commercial plot with knowledge of Vastu & science of architecture.
- Commercial roadside plot with different earth direction is designed as per Vastu shastra.

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