

Use of Geometrical Relationship in the Ancient Vihara Housing Reclining Buddha Remains of Thailand's Kamphaeng Phet World Heritage Site

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Abstract : This research investigates the application of geometrical relationship to the ancient religious assembly hall (Vihara) housing a reclining Buddha statue of Thailand's Kamphaeng Phet Historical Park. The study utilizes the archaeological and wooden roof structure remains of the Vihara as the prima facie evidence, supplemented with evidence from other active archaeological sites with architectural kinship as well as Buddhist ideology. At present, the wooden roofs of the Vihara fell prey to the elements and there remain only the base, columns and enclosing walls. Unlike typical Viharas whose floor plan are of rectangular shape, the floor plan of the Vihara housing the reclining Buddha is of square configuration of 25x25m. Further observation has revealed the utilization of large laterite boulders as the principal construction material of the assembly hall (Vihara) columns. The laterite columns are of square shape (1x1m) and various heights (H), ranging from 3.50m to 5.50m. The erection of the Vihara required a total of 36 laterite columns. The pattern of columns arrangement is of two rows of inner columns, two rows of outer columns and two rows of verandah columns. The space between pairs of the verandah columns was stacked with laterite blocks of varying sizes to form the Vihara walls with small openings for ventilation. Upon applying the geometrical relationship-grid system to the Vihara, the results reveal that the placement of the columns was deliberately and masterfully undertaken such that the center of the square-shaped Vihara is conspicuously spacious so as to accommodate the sacred reclining Buddha statue. The elegance of the Vihara demonstrates the ingenious application of geometrical relationship to transforming a space into a structure (i.e. Vihara) of architectural and religious significance.

Keywords : geometrical relationship, the religious assembly hall, Vihara, Kamphaeng Phet School of Master Builder

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