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TITLE OF PROJECT: Design of Bamboo Structures for Urban Spaces

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ABSTRACT (150-300 words):

This paper delves into the imperative need for natural building systems as a sustainable alternative, focusing on the use of bamboo as a construction material particularly in urban spaces aiming to replace the upcoming and compliment existing steel structures. It examines their potential and evaluates economic, social, environmental, and structural aspects. The study encompasses literature review, ground research and the design considerations for bamboo structures in urban landscapes, employing SAP modelling to compare police posts constructed with bamboo and steel by designing and analysing a simple rectangular skeleton. Additionally, the paper addresses treatment, maintenance, costing, and the multifaceted benefits associated with bamboo structures, highlighting their potential impact on environmental conservation, socio-economic development, and the construction industry. The findings reveal insights into the potential of bamboo structures as a viable alternative to steel in urban construction. In conclusion, the paper recommends considering bamboo as a sustainable option in small and urban construction projects, providing a holistic set of recommendations for stakeholders in the construction sector. Overall, the research advocates for the integration of bamboo as a practical and eco-friendly solution in urban development.

KEYWORDS: Bamboo Construction; Economic; Structure; Cost; Maintenance; SAP2000; Sustainable

CATEGORY: Bamboo as a Construction Material