Proposing Sky Exposure Plane Concept for Urban Open Public Spaces in Gulseren Street

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Abstract : In today's world, sustainability is a critical concern, particularly in the building industry, which is a significant contributor to energy consumption. Buildings must be considered in relation to their urban surroundings, highlighting the importance of collaboration between architecture and urban design. Natural light plays a vital role in enhancing a building's thermal and visual comfort and promoting the well-being of outdoor residents. Therefore, architects and urban designers are responsible for maximizing sunlight exposure in urban settings. Key factors such as building height and orientation are essential for optimizing natural light. Without proper attention, standalone projects can negatively affect their urban environment. Regulations like the Sky Exposure Plane- a virtual sloping plane that determines minimum building heights and spacing- serve as effective tools for guiding urban development. This study aims to define the Sky Exposure Plane in public open spaces, proposing an optimal angle for buildings on Gulseren Street in Famagusta, North Cyprus. Utilizing computer simulations, the research examines the role of sunlight in public streets and offers guidelines to improve natural lighting in urban planning.

Keywords: public open space, sky exposure plane, street natural lighting, sustainable urban design

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