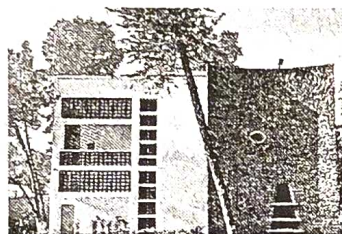


THE CITY

The climate responsive architectural vocabulary of the City Beautiful

VIJAY KUMAR

ON ONE hand, where Chandigarh's planning and layout engage with important tenets of climate responsiveness, on the other, Chandigarh owes its climate responsiveness also to its architectural character and individual building treatment. At the city level, Le Corbusier and his team worked on urban morphology parameters such as urban envelope, corridor width, building height, urban surface materials, sky view factor (SVF), placement of green belts and water bodies and vegetation typology, that helps to improve urban environment quality of the city. But while considering the architectural typology of the built mass, Chandigarh was challenged by the need to use time and cost effective materials and construction techniques. Therefore, keeping concrete and brick as the main material palette the team endeavored to



Chandigarh's architectural vocabulary is representative of modern architecture

retain the emphasis on climatic responsive principles. This was achieved by working on building orientation, plan-form, creation of unique envelop design elements, roof form, fenestration arrangement and landscaping to enhance the man made environment in terms of occupant comfort and well-being. Chandigarh's architectural vocabulary is representative of modern architecture that was created with due understanding of the vernacular architectural typology, climatic conditions and community's lifestyle. At a building level, the climate re-

sponsiveness is catered to in different ways depending on the scale and use of the building.

The Capitol Complex, designed by Le Corbusier, contains the High Court building, the Secretariat and the Assembly building. All three respond to climate through different experiments in architecture. A space from where the government has to function throughout year, omitting the annual summer sun through deep sun shading devices, enabling light and ventilation through strategically placed fenestrations and controlling monsoon rain water spills by providing massive horizontal devices, was laid focus on. The campus as a whole was designed as a great pedestrian plaza with motor traffic separated into sunken trenches leading to parking areas. But one of the critical low points remains the vast open plaza between the buildings with concrete hardscaping as it becomes a heat sink where the prevailing atmospheric temperature goes up and leads to urban heat island. A similar dilemma is faced in the Sector 17 City Centre Plaza. The plaza has been offering the

advantages of an urban public space but the footfall in the plaza reduces drastically in summers, especially during the day time. The major reason behind this is the massive expanse of concrete hard paved surfaces with comparatively low quantity of trees. The amount of heat and glare makes the daytime experience in harsh summers uncomfortable.

Architectural experiments in response to the climate in educational institutions were quite different from the large public spaces. It is observed that educational buildings in Chandigarh have been designed as per the sun path. A continuous shade veranda along classrooms and the tapping of north light are common features seen in most.

FULL REPORT ON
www.indianexpress.com

(Ar Vijay Kumar is Assistant Professor in Chandigarh College of Architecture. The article is a part of the series of fortnightly articles by students and faculty of CCA on the Making of Chandigarh for the LCPJ forum edited by Ar Saumya Sharma, Assistant Professor in CCA)