

## Proposed Design Principles for Low-Income Housing in South Africa

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**Abstract :** Despite the huge number of identical, tiny, boxy, freestanding houses built by the South African government after the advent of democracy in 1994, squatter camps continue to mushroom, and there is no evidence that the backlog is being reduced. Not only is the wasteful low-density detached-unit approach of the past being perpetuated, but the social, spatial, and economic marginalization is worse than before 1994. The situation is precarious since squatters are vulnerable to fires and flooding. At the same time, the occupants of the housing schemes are trapped far from employment opportunities or any public amenities. Despite these insecurities, the architectural, urban design, and city planning professions are puzzlingly quiet. Design projects address these issues only at the universities, albeit inevitably with somewhat Utopian notions. Geoffrey Payne, the renowned urban housing and urban development consultant and researcher focusing on issues in the Global South, once proclaimed that “we do not have a housing problem - we have a settlement problem.” This dictum was used as the guiding philosophy to conceptualize urban design and architectural principles that foreground the needs of low-income households and allow them to be fully integrated into the larger conurbation. Information was derived from intensive research over two decades, involving frequent visits to informal settlements, historic Black townships, and rural villages. Observations, measured site surveys, and interviews resulted in several scholarly articles from which a set of desirable urban and architectural criteria could be extracted. To formulate culturally appropriate design principles, existing vernacular and informal patterns were analyzed, reconciled with contemporary designs that align with the requirements for the envisaged settlement attributes, and reimagined as residential design principles. Five interrelated design principles are proposed, ranging in scale from (1) Integrating informal settlements into the city, (2) linear neighborhoods, (3) market streets as wards, (4) linear neighborhoods, and (5) typologies and densities for clustered and aggregated patios and courtyards. Each design principle is described, first in terms of its context and associated issues of concern, followed by a discussion of the patterns available to inform a possible solution, and finally, an explanation and graphic illustration of the proposed design. The approach is predominantly bottom-up since each of the five principles is unfolded from existing informal and vernacular practices studied in situ. They are, however, articulated and represented in terms of contemporary design language. Contrary to an idealized vision of housing for South Africa’s low-income urban households, this study proposes actual principles for critical assessment by peers in the tradition of architectural research in design.

**Keywords :** culturally appropriate design principles, informal settlements, South Africa’s housing backlog, squatter camps

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