

Relaxing the Planning Standards of Housing Scheme: An Approach to Enhance Affordability of Poor

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Abstract-Affordable housing is growing as major concern in the world with incremental increase in urban population and substandard provision of housing for low income sector. We can diminish housing shortage by Improving bidding power of poor for housing. Household income and expenditures are directly influential towards housing cost, so there is a need of little compromised standards for low income housing scheme. Different low cost housing scheme projects which were initiated, previously, could not serve their foremost purpose. The research attempts to chalk down planning standards which can be compromised meaningfully, in order to lower down cost of land for housing schemes by reviewing the planning standards for private development schemes in Punjab. Findings of the research shows that an increased saleable area and less housing unit cost estimates are the effective ways, which can contribute significantly to achieve objectives of low income housing.

Keywords-Affordable Housing, Planning Standards, Low Income Housing Scheme, Compromised Standards for Housing Scheme, Saleable Area, Housing Unit Cost.

I. INTRODUCTION

Global housing crisis involving inaccessibility to affordable housing is experienced by most of the countries across the world. Almost 1.6 billion people are suffering by substandard housing, whereas around 100 million are homeless. Reference [i] shows that every week, there is an increment of one million in urbanized population of developing nations. The accounting factors for this gradual increase are fertility rate and migration. Urban slums carry 32% global urban population that means nearly 1 million people across the world do not have housing facilities that are enough for their basic household needs. United Nations forecasts that if the same scenario continues, the number of slum dwellers will be doubled in next 30 years worldwide [i]. The Human Development Index (HDI) estimates that “60.3% of Pakistan's population lives on under \$2 a day” [ii]. It clearly exhibits the

situation that economic reach of more than half of the population of Pakistan does not allow them to afford a house due to high land prices and construction rates.

Urban planning agencies have formulated standards and regulations for housing schemes [iii] but they are not conforming to affordable charges for proper housing to the citizens that includes appropriate sanitation, drainage, availability of green spaces and utilities. Several housing schemes are designed; especially in southern part of Lahore which unfortunately are not playing any significant part as low cost housing schemes. It can rightly observe that the focus of private developers are high income group of the population. Therefore, there is a need to pay focus on improving the bidding power of low income people. It is practicable by allowing flexible planning standards for low income schemes which results into lowering housing prices. There is urgent need to devise solution to this problem.

The population growth rate in cities exceeds the national growth of 1.8% to 3%. With this substantial escalation in population, it is estimated that by 2030, almost 2/3rd of population will reside in the urban centers. Considering this, the World Bank has attributed a housing backlog of 7.6 million in Pakistan out of which 2/3rd represents low income demand having a monthly earning of less than Rs.12000 [iv]. The Integrated Master Plan Lahore (IMPL) states that formal housing supply of the city is not more than 2500 plots annually. “The proportion of house construction to the total plots in some LDA's schemes is 16% to 20%” [v]. This percentage is changed in private cooperative housing schemes which is 10.2%. High land value, costly plot construction, land speculation, inadequate facilities in housing scheme, lack of transport services and ineffective building control are the summarized causes which infer this disproportion [vi].

It is evident from the above discussion that problem of poor housing; in terms of both quality and affordability; is spread across the world particularly in Pakistan. Although planning authorities are working, but no viable solution has been delivered yet to the

practical implementation. People are facing serious problems and their affordability level is continuously dwindling day by day. This paper gives an insight at this conundrum in the Lahore context and advocates ways in which poor people can be economically and spatially integrated into low income housing schemes. A feasible way to achieve this is the introduction of flexible building regulations according to needs of the living community. This relaxation and zoning for building regulations for low cost housing schemes can help to achieve a sustainable growth of society, as it would be perfectly complying with the financial needs of people.

The research aims on devising an elucidation to lower the cost of housing unit which eventually improves bidding power of poor segment of population. In order to provide sufficient facilities, it is compulsory to ascertain space demands in a dwelling unit. The financial aspects of housing standards are required to be analyzed. The comparison of space standards of housing schemes; to make it affordable; is also another objective of the research.

II. LITERATURE REVIEW

A. Affordable Housing and Planning Standards

“Affordable housing refers to housing units that are affordable by that section of society whose income is below the median household income” [vii]. Household means a family living under the same roof, interacting with each other and using one kitchen for their needs. Several countries define affordable housing in their own way as per their planning developments but the actual spirit of the idea remains same as it delivers the housing needs of middle income and/ or low income sector of society. Affordable housing is a crucial matter of subject in developing countries as majority of population in such countries resides below poverty line and cannot afford to buy a house at the market price.

Reference [viii] claims that there are three types of urban poor in his book *Housing in the Modern World*. The first group of urban poor developing cities consist of street-sleepers and homeless people. Slum dwellers and high housing rent payers or tenants are encompassed in second group. Last but not least, the third group consists of people living in shanty towns and squatters. “The term 'low-income housing' is used in the present account to cover all types of housing for the poor in Third World cities” [viii].

The prime factor affecting the housing affordability is the income of a household. Reference [ix] states that middle income households spend their one-quarter income on housing; whereas the expenditures increase up to half of the income in case of low income households. Such high proportions refer to the fact that housing sector and betterment of households is greatly influenced by change in rents and housing prices. Also, the affordability is largely

dependent upon distribution trends of household incomes in terms of expenditures. It explains the importance of this trend on inflating housing costs and rent burden over the poor households. [ix].

The overall policy prioritization and associated housing needs vary from place to place; the prompting factors could be history of particular area, housing market situation and political interference. In today's era, with high growth rate and shortage of housing supply, the first priority is to provide housing stock in market to overcome the growing backlog. But with minimal housing demand and high rate of vacant lots it is deduced that there is no need for new housing blocks; rather urban renewal with financial assistance is required to low paid households to support their housing expenditures. Different neighborhoods, municipalities, metropolitan areas and cities differ with their specific needs of their housing needs and scenarios. Thus, for harnessing better response from community and to have their input, it is necessary to have such strategies and policies devised which set well in the local needs and political conditions of that area [x].

Affordable housing can also be explained as that it provides housing varieties in terms of sizes according to the economic needs of society. Moreover, this housing has appropriate urban design, the finest quality of life and preservation and enactment of local heritage and culture. Another quality of affordable housing development is achievement of sustainability in terms of social, environment and economic character [xi].

Land use regulations are quite influencing over housing sector. Reference [xii] describes that land use rules and regulations serve as the best tool in shaping markets of housing. They also regulate certain housing type as per that by encouragement or prohibition through local byelaws. These regulations also indirectly manage land tenure system, rents and pricing in housing sector.

B. Housing Schemes Planning Standards Evaluation

The design and planning standards of housing schemes are needed to be amended in multiple views. The rules are extremely rigid and supposed to be same for different areas. Although different areas have different types of peculiar characteristics and hence same regulations are not applicable in all scenarios. Different people have different opinions in this regard. Most of the planners have viewpoint to change these building regulations.

The regulations for design and standards of housing schemes are formulated on the similar grounds by the Government Authorities. As a major concern, these authorities have no discrimination for standards for low income housing schemes. Sometimes developers fail to comply with the given standards in order to satisfy the housing needs of community. The reference [xiii] suggests that simple relaxations in

design standards of a housing scheme, 25% reduction in price of a serviced plot can be achieved. This alteration does not require any kind of modern low cost construction methods and techniques for price reduction as well.

A study has been conducted for accessing the comparative analysis of public and private housing for low income people in Lahore [xiv]. In the study they inquired from private developers about cutting the cost of developing of housing schemes and provision of plots for low income people as compare to housing schemes with bigger sized plots. The developers do not agree with idea that lowering of infrastructure standards would much reduce the development cost. "The provision of brick paved streets; open drains etc. would reduce the cost only about 20%, because it would involve more development charges for the increased length of services and wastes of land. They are of the view for above narrated reason of preference, the reduction of the much cost cannot entice the low income people to purchase plots in these schemes" [xiv].

C. Assessment of Low Income Housing Schemes In Lahore

Low income housing schemes in Lahore were prepared in order to provide better housing facilities to the poor households. The housing schemes prepared in this context include Lahore Township Scheme, Khuda Ki Basti and Ashiana Housing Project. All these schemes were housing projects initiated by government so the prescribed standards for housing schemes were strictly followed in scheme plan preparation. Somehow, no scheme was considered as a success milestone for provision of affordable and low income housing scheme. The assessment of reasons behind failure of these low income housing schemes is as following:

- The eligibility criteria for allotment in such projects were not completely fulfilled. In case of Ashiana House, it was fulfilled up to 85% rather than 100%
- Transparent system for allotment verification has not been ensured in low income housing schemes. Several people residing in the housing scheme belong to high income group that is contradiction of the policy of Govt. of Punjab [xiii].
- Car ownership rate of the Ashiana Housing Scheme is considerably high. The fact implies that many people that have been allotted plots do not belong to low income group of society. As people can afford to own a car so they are not really low income [xiii].
- The financial resources of the third world countries are not enough to meet the requirements of low income housing provisions. Therefore, whatever, resources are channeled into the present sites and services schemes, they are indirectly

transmitted to the higher income groups [xv].

- The standards adopted in the present sites and services schemes are high and consequently they attract the higher income groups [xv].
- Due to social habits and economic conditions of low income people, they sell their plots (if they are the fortunate allottees) at high prices to the middle or high income people and revert to the slums and Katchi Abadis [xv].
- The building control regulations practiced in these projects don't give freedom to build according to the gradual affordability of low income households [xv].

These all clearly indicate that the present role of the state is oppressive rather than being supportive to the low income group. Therefore, the need of the day is that a more supportive role of state should be adopted for shelter provision.

III. MATERIALS AND METHODS

The research is carried out by formulating two scenarios to exhibit the difference between adoption of prescribed standards by the public authorities and relaxation in planning standards for housing schemes. In the first scenario, defined as Scenario-I, a housing scheme plan is prepared according to design and planning standards of Private Housing Schemes Rules (2014). Whereas, the second scenario, Scenario-II, is housing scheme plan that is prepared upon compromised standards.

The low income people do not have many savings and resources to have a house; they need low cost for shelter of their family. Several housing projects have been done in this regard but are not considered successful. Hence, the research examines the benefits for preparation of low income housing schemes by using compromised standards.

The comparative analysis of the prepared schemes have been done on the basis of space standards. Moreover, cost analysis with respect to saleable area is carried out to analyze the economic benefits from a scheme. The economic benefits include lesser housing unit cost for the poor households and increase in saleable area of housing scheme that is beneficial for the scheme developers.

Here the term saleable area refers to the area that can be sold by the developer in a housing scheme. The saleable area majorly includes residential and commercial area. Whereas, a developer is not allowed to sale out area for public buildings, green spaces, roads and graveyard.

IV. ANALYSIS AND DISCUSSIONS

In this research, two scenarios have been prepared which have the following characteristics:

Scenario-I: Planning of Housing Scheme According to Private Housing Schemes Rules, 2014

This scenario presents a low income housing scheme according to proposed standards of the Lahore Development Authority Private Housing Schemes Rules, 2014. According to these rules, the proposed standards for housing scheme is summarized as:

TABLE I
PROPOSED STANDARDS FOR HOUSING SCHEME BY PRIVATE HOUSING SCHEMES RULES (2014)

Sr. No.	Land-Use	Standard
1	Commercial	Max. 10%
2	Graveyard	Min. 2%
3	Public Buildings	4% to 10%
4	Open Spaces	7.0% or above
5	Roads	Approach Road: Min. 150' Internal Road: Min. 30'

In the light of the standards given in Table I, a Katcha Kana road as a location is selected for the planning of housing scheme. The identification of boundary of scheme is contemplated by Google map. The total area of the site was kept 1500 Kanal. The residential plots are assumed to be 3 Marla in the whole scheme for the rightful comparison with scenario II. There are exception of few corner plots which are slightly more or less than 3 Marla. The prepared scheme has roads of minimum 30 feet. Open spaces are kept as 7% of the total area of the scheme. These standards give residential area of 48.6% approx. (Fig. 1) The land-use breakup of Scenario-I is shown in Table II.

TABLE II
LAND-USE BREAKUP SCENARIO-I

Sr. No.	Land-Use	Area (Kanal)	Percentage
1	Residential	729	48.6%
2	Commercial	33	2.2%
3	Graveyard	30	2.0%
4	Public Buildings	40.5	2.7%
5	Open Spaces	106.5	7.0%
6	Roads	561	37.4%
TOTAL		1500	100%

Scenario-II: Planning of Housing Scheme by Compromising Standards

In Scenario-II, a housing scheme has been prepared by lowering the standards. This scheme is also drawn up at an area of 1500 Kanal and comprised of 3 Marla plots for residential purpose (Fig. 2). The standards are compromised in a technical manner which will be discussed in following paragraphs, so

that they can provide affordable housing to the people on relatively lower costs. This housing scheme aims to increase the saleable area to provide more number of housing units that eventually results in decreasing the development charges. This phenomenon also serves as an incentive to the developer to get more profit out of it. Following is the land-use breakup for the Scenario-II in Table III.

TABLE III
LAND-USE BREAKUP SCENARIO-II

Sr. No.	Land-Use	Area (Kanal)	Percentage
1	Residential	900	60.0%
2	Commercial	33	2.2%
3	Graveyard	25	1.7%
4	Public Buildings	52	3.5%
5	Open Spaces	92.7	6.2%
6	Roads	397.3	26.5%
TOTAL		1500	100%

A. Comparative Analysis Of Space Standards Of Housing Schemes

The scheme has been prepared by covering technical aspects of planning. In order to increase the saleable area, the local roads have given the maximum width of 20 feet. This road width although is considered less than as per given standards but it is sufficient for needs of low income people conferring to researchers' insight. According to National Reference Manual (NRM) standards, the local access roads should have almost 7.5 m (approx. 22 ft.) carriage way for 2 way traffic. The boulevards are kept 60 ft. wide in terms of right of way in scheme. It is also as per NRM standards that consider Local Distributor Roads as 15-20 meter (approx. 50 to 65 ft.) wide right of way [xvi]. These boulevards can also be used as bus routes as well.

The area of open spaces has also been decreased up to max 6.2%. On the other hand, the open spaces and parks are designed according to the factor of accessibility. The green spaces enhance the aesthetic character of the scheme efficiently. The area for utility services are assumed to be same according to standards. The increase in saleable area and housing units will ultimately increase the per unit density as well. This situation calls for sufficient provision of services to community, henceforth, the area for public buildings is increased in housing society.

The prime objective behind this scheme preparation is to provide clean and healthy environment to the low income community. In the shape of such housing scheme, as in Fig. 2, the poor can also relish the pleasures of a planned urban settlement in affordable charges. The poor people can get permanent shelter and raise their living standard as well by improving their socio-economic conditions. The

provision of housing to low income people will also tend to decrease the housing backlog. The promotion of

planned community offers greater benefits in terms of development as well.

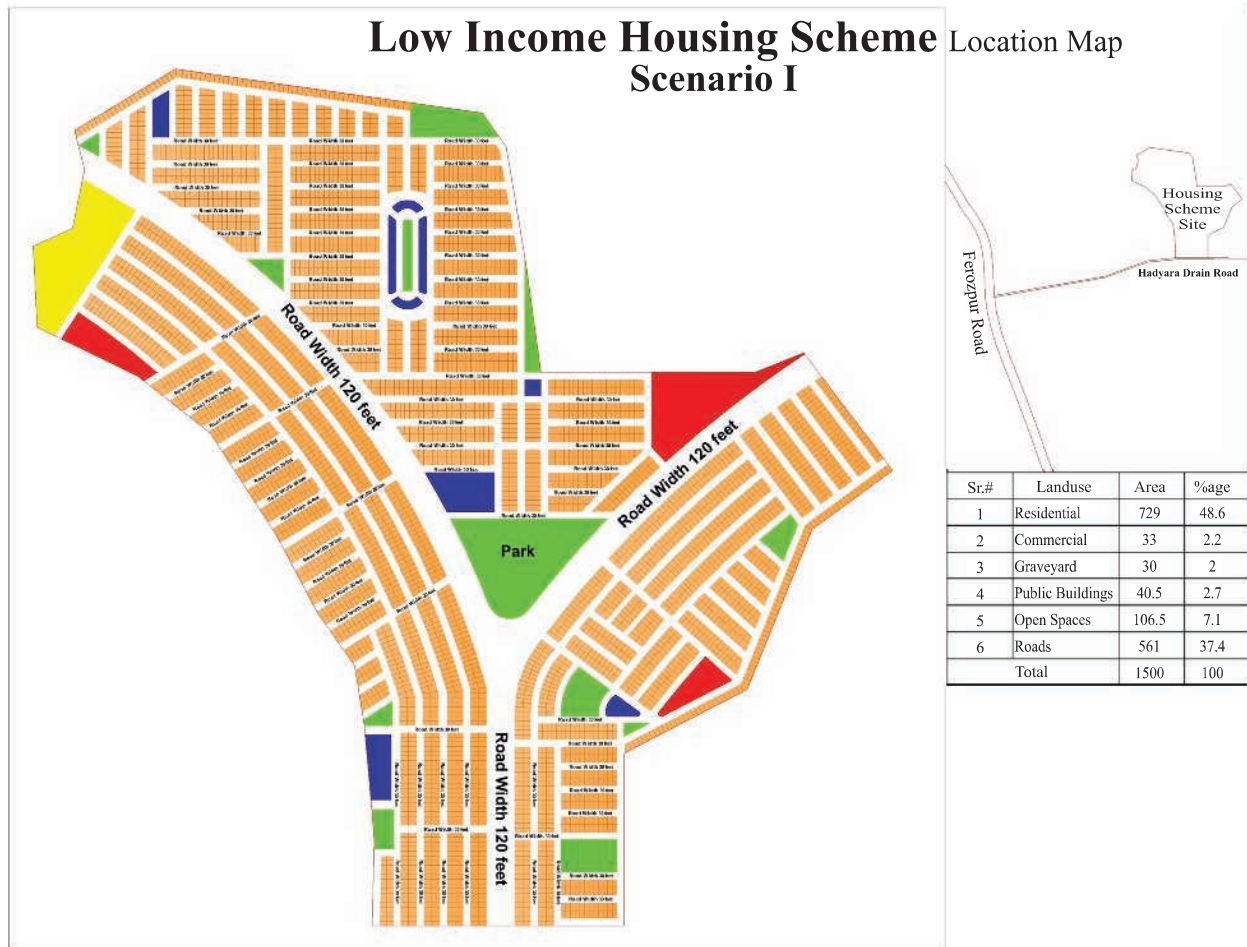


Fig. 1. Housing Scheme Based upon Scenario-I

B. Saleable Area Comparison and Cost Analysis of Scenario-I & Scenario-II

The comparison of increased saleable area with reference to its cost is the key to measure of success among both scenarios. As a matter of fact both housing schemes have same area of 1500 Kanal (187.5 Acre); with same price of 50, 00,000/- PKR per Acre or 125,000/- PKR per Marla. In scenario-I, as discussed

earlier, the saleable area is less than compared to Scenario-II based upon compromised standards. The Scenario-II has 22.36% more saleable area than Scenario-I. The costs are estimated by using standard costing methods referred by Urban Developers and Bahria Town. The comparison of both schemes in terms of saleable area and cost given in Table IV:

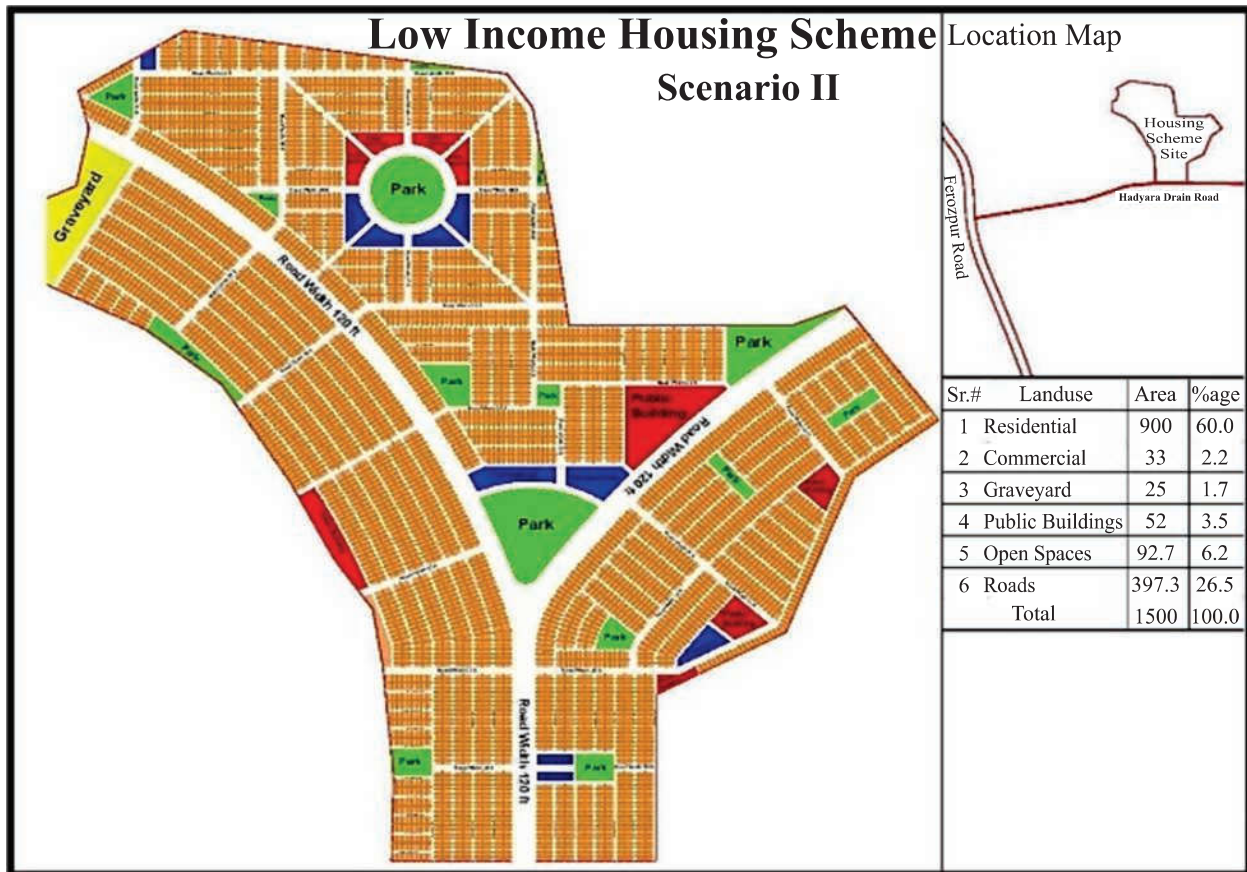


Fig. 2. Housing Scheme Based upon Scenario-II

TABLE IV
COST ANALYSIS SCENARIO-I AND SCENARIO-II

Aspect	Cost in Scenario-I Per Marla in PKR	Cost in Scenario-II Per Marla in PKR	Change in Cost in Scenario-II
Saleable Area	61,475/-	50,241/-	18.27% Less
Roads	33,167/-	12,941/-	60.98% Less
Parks	344/-	249/-	27.61% Less
Water Supply	6,885/-	5,627/-	18.27% Less
Sewerage	12,787/-	10,450/-	18.27% Less
Electrification	14,754/-	12,058/-	18.27% Less
Advertising & Marketing	984/-	804/-	18.29% Less
3 Marla Plot	405,944/-	289,169/-	28.76% Less
Constructed House (3 Marla)	865,047/-	748,272/-	13.49% Less

V. CONCLUSIONS AND RECOMMENDATIONS

The provision of low income housing is not appropriate in local scenario. Therefore, this research aims to find out economical ways for management of low income housing for poor. The available uniform standards for housing schemes are tested in two scenarios by making two plans of low income housing scheme in which one conforms to established standard and other is based upon compromised standards. It is found that the relaxation in housing scheme standards will bring economic benefits not only for the poor but also for the developer.

The research, principally, determined that the low income housing schemes, which were prepared with compromised standards, had 22.36% increased saleable area as compare to a low income housing scheme which was prepared according to the standards. Furthermore, a housing scheme which was prepared with compromised standards had less cost estimates in terms of land, roads, parks and other necessities along with advertisement & marketing. A constructed house on such scheme had 13.49% less cost than on a scheme prepared in accordance with standards as in Table IV.

extremely stringent, rigid and same for different areas, despite the fact that different areas have different peculiar characteristics; hence same regulations are not applicable in all scenarios.

Following are some recommendations on the basis of conclusions of the research:

- The Public Authorities should establish separate set of housing scheme standards for low income housing schemes. These standards should be implemented under the supervision of regulatory agencies of government.
- Developers must be given incentives to deliver low income housing as per low income house space requirements. These incentives could be provision of less value mortgage, shared management of public buildings, provision of ease in approval process and aid in marketing & advertisement.
- The development charges should be decreased in low income housing schemes to benefit the bidding power of the poor and increase the affordability level.
- The space standards and building regulations should be revised and prepared according to peculiar characteristics of each zone for maximum compliance. The amortization plans should be prepared according to the affordability and bidding capacity of low income people.

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