

ANTONIO

To:

Re.: Mexicali Self Help Housing (rough draft).

Date: April 20, 1976

Participants:

The project is a combined effort of the Department of Public Works, the Center of Environmental Structures, U.C. Berkeley, Universidad Autonoma Baja Calif, Mexico and "Isstacali, a government employees union.
Isstecali

Background:

An expansion of a "colonia" (district) is presently underway. This is one of the government's effort of accomodating the urbanization movement of the border towns in Mexico. The government opens up land and uses the "sites and services scheme". This scheme is opening land for settlements whereby the government lays out the land for schools, parks, residential, the transportation networks, sewage, water and power services. Low income families can then buy the land and build their own homes through a long term low interest special loan system.

The houses initially built are ususally made of cardboard and other salvaged materials. The houses grows according to the families individual economic and labor capacities. The more finished houses are xusually made of adobe, or red brick; some of concrete hollow blocks, with a xusually all of their roofs made of wooden frames.

We then tapped our efforts to work within this "site and service scheme" by introducing a new construction management, operation and design process system.

Objective:

Our objectives are to create stronger, cheaper, better structures as well as more beautiful, better designs according to the families needs and taste. It is currently more directed for the low-income population who cannot obtain their houses through conventional process. In other words, we aim to gain more in quality of housing than that they currently get for their spending. It is housing which is commercial feasible to the lending institutions and has a commercial value after being build*.

The Design Process:

The design process begins with teaching the families to design with the "Pattern Language". It is a tool of how to design, especially tailored for the use by common people to design for themselves ~~if-you-want-to-know-more-~~ (If you want to know more about the Pattern Language, there are some books or manuscripts in the CED library, UC Berkeley: check under C. Alexander).

With the help and guidance of the Mexicali students, the family then begins designing their own homes according to their own needs and taste as well as capacities. The design is limited by basically the cost and size of lots appropriated to them. To mention some figures, the permissible area of the house is about 60 square meters (600 square feet). The cost of the house ~~xx range~~ is around 40,000 pesos (US \$3200). Both the ranges of ~~land~~ building area and building cost depends on each individual family loan agreement with the bank.

The design method is basically designing on the site, using the process of designing through the Pattern Language and the help ^{and guidance} of the students. The families directly design through their senses, imagining, pretending and feeling as if the real spaces exist. When a decision is made, they use ~~xx~~ stakes, chalk, or stones to record it on the ground.

There are some drawings which is used for recording and calculating purposes such as planning the plumbing system, for example.

The individual houses are also designed in relation to the other houses; using the external spaces of individual houses, they create communal positive spaces for communal sitting, playing areas. This is possible since we were contracted on a package land deal where the conventional building regulation and codes are more lenient. And therefore we are able to omit the ugly, square and impersonal lots with fences. ~~There-are-five-families begining-new---So-there-is-a-cluster-ofxxxxxx~~

Construction Process:

The designing process keeps on continuing as construction continues. The ~~design~~ design is a continuous evolutionary process as the construction grows. Then every step of the construction makes the design clear.

The construction process is organized in stages, we call them "operations.". Operation 1, for example, is preparing the foundation, which is digging trenches and stabilizing the soil. There are 17 operation we have figured out so far. (see supplement: operations).

Construction System:

(see supplement: specification).

The construction system is radically tailored to be dependent on the Pattern Language method. To maximize use of local building material and to minimize scarce materials are one of its criterias. It is also based on the principle of natural development as the design and construction goes along. Therefore it is designed to be flexible and adaptive to growth.

At this stage the foundation construction system is basically a "floating slab foundation sytem" or in another term a "rigid raft in a sea of clay" system. It is designed to face the earth-quake problems of this area.

The walls are interlocking vertical and horizontal stabilized soil blocks system. The blocks have to meet the requirements of being easy to handle (to cut etc), structurally strong, water resistant, heat resistant. There is still ~~much~~ need further research on this wall blocks in which we are contnously working on.

The roof is a vault. It is a ligh weight concrete shell reinforced with chæcken wire. The preparation frame which becomes part of the finished ceilling are interlocking woven wood strips. It is supported by a tension ring perimeter baam made of board and jute billed with concrete and reinforced with ~~xx~~ steel bars.

The windows, doors, ~~and~~ electrical and plumbing system are pretty much conventional.

Timing:

Each operation has a certain time schedule, usually lasting one or two weeks. The pace of each of the families therefore is synchronized according to these operation. All the families therefore will more at the same pace. This is done for these reasons: one, is a basic psychological motivating mean of mutual help. Each operation is a complete act, the families can therefore enjoy a complete ~~xx~~ stage of accomplishment~~x~~. The second is that each operation needs a set of tools and machinery and work activity. It is more efficient if each operation is mobilized communally. The third reason is to synchorize the payment, management and control.

Mobilization of Participants:

Since the project is a combined effort, each participant~~x~~ has his own contribution. Each of them very important since it works as a unit.

The Department of Public Works provides electrical power, water, ~~w~~ewage service and some transportation for construction needs (one truck). They also provide their building block laboratory services for the projec's experimental and testing needs.

The students of the Universidad Autonoma Baja California, Mexico and U.C. Berkeley have their own individual experiences and knowledge which range from construction to book writting. ~~which contribute to the~~ The students provide ~~the experimental-housing-~~ manpower and thinking power to develop the experimental housing cluster which is used as~~x~~ a model for interested families who want to built their own homes. Some of the students are currently teaching, guiding the initial group of families.

The "Isstacali", a government emplyee credit u-ion, established the program of providing their members with homes. They are the ones that begin the financial system for the families.

Current Stage:

As by April 8, 1976, we are in the finishing stage of the model complex construction. The model cluster consists of a community multi-purpose room, a taqueria (a place to sell tacos), an office, a kitchen, a dinning room, a living room, two bathrooms and six living quarters surrounding two court yards.

There are five families building their houses and are in the third operation going to the forth.

It is planned that a school want to be built with this system of construction. The Department of Public Works is also preparing to build some model homes

Implication of the Project:

The present system of obtaining a house for the lower income population is difficult, and expensive. For example, to give a common picture of one who wants to build a house must inherently face the various hassles with the building permits and its fees, the building inspectors, the building code and regulations, the contractors, the architects, the bank, the unions and all that complicated legal contracts. For us, the "economical unfeasible people, the present process makes it practically impossible to obtain a house.

This project is an experimental project to show, ~~xxx~~ and to proof that another direct, easier and cheaper housing delivery can work. and economically feasible.

It is a beginning to reevaluate the present process of housing delivery for the poor. It calls for a reorganization of institutions, organizations, legal framework in which we were partly permitted in our "package deal".

Our project eliminates the working drawing stage and building permits and therefore minimize the bureaucratic red tapes, cost.

It eliminates the time consuming working drawings production as well as the obtaining legal permits to comply with the building code and regulation.

The ~~change~~ package deal permits us to omit the building codes and therefore able to create more communal physical spaces rather than the impersonal square lots-.

The conventional party arrangement ~~of~~ among the client, contractors and sub-contractors and the architect is changed to a direct two party arrangement of the "architect-builder" and the "user".

"The architect-builder" is a substitute of the conventional architect, contractor.

"The user" also becomes the architect and the contractor.

In brief, it eliminates access parties, the middleman and therefore reduces the number of "profit oriented" units. It provides the "user" a more active participation, control and an opportunity to act of his own creativity.

This method of housing delivery then can be produce in a personal basis. It is cheaper because it omits the various legal bureaucratic and time delay.

~~xxxx~~

It is cheaper because it ~~omits~~ reduces the number of profit oriented business.

By being self-help, it beats the expensive labour cost of carpenters, electricians, plumbers.

It eliminates the cost of working drawings.

Perhaps the most important, is the human benefits of the opportunity to be creative, to work and to be personal.

Conclusion:

The project, (my interpretation) is a generator, a beginning and a training activity for us to work with our own people. The result is for the Mexican students to continue similar activity in their own country and us, Chicanos, in our own communities.

This project is a jumping stone for us to do it ourselves. We are politically, economically oppressed and need certain side channels to gain our access.

Christopher Alexander (the project director) himself like to see the independence of the people to do it themselves, as it is one of his fights and efforts against a hidden "colonialism of the architects".

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