The In-fill Experimental Housing Project

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**THE IN-FILL EXPERIMENTAL HOUSING PROJECT**
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The Institute of Urban Studies is an independent research arm of the University of Winnipeg. Since 1969, the IUS has been both an academic and an applied research centre, committed to examining urban development issues in a broad, non-partisan manner. The Institute examines inner city, environmental, Aboriginal and community development issues. In addition to its ongoing involvement in research, IUS brings in visiting scholars, hosts workshops, seminars and conferences, and acts in partnership with other organizations in the community to effect positive change.
The Involvement of the Institute of Urban Studies with this project began in February of 1971. At that time, the Winnipeg House Builder's Association contacted the Institute about the proposed Mark VII project aimed at building housing for ownership in the inner city area. The "Mark" series denotes an experimental housing project sanctioned and supported by the then National House Builder's Association, now called the Housing and Urban Development Association of Canada, or HUDAC. The intent of these projects had been, up to that time, to test the structural mechanical and material aspects of house construction.

The idea for this project began at a local house builder's meeting in June 1970, where a film of the Mark VI project in Kitchener, Ontario, was shown. This presentation sparked another meeting with Metro councillors and planning staff, who supported a pilot project in Winnipeg. They suggested urban development area two would be an appropriate district for the housing because some residents would be displaced by proposed construction of an overpass. A committee was struck to study the project's feasibility. It proposed a project of at least two buildings with a minimum of three units per building, aiming at a total of 12 housing units for sale. This was approved by the committee and application was made to the national association in February of 1971 for a "Mark" designation, which they then received. The concept approved called for eight to 12 housing units, preferably in two buildings, to be built in the core of Winnipeg for persons of an income less than $6,000 a year.
It was in February of 1971, after this approval, that the Winnipeg House Builder's Association contacted the Institute about the proposed Mark VIII Project. A meeting was held and an Institute staff member was invited to attend a meeting of the Mark VIII committee. This committee was made up of local house builders, contractors, material manufacturers representatives and government officials. The committee had several subcommittees, each responsible for a different phase of the project.

This initial meeting of the Mark VIII committee was to chart the course of the project and gain some understanding of the area. It was evident at this meeting that the members felt the experiment lay with structural and materials matters and that any other innovation was frivolous. At this time, the project was conceived as two or three buildings of a row-house type to be built on "cleared land". The Institute staff gave the committee a brief description of the area physically and socially. It was evident from this discussion that there was little understanding of the dynamics involved in dealing with an inner city renewal area.

The committee members knew little about the area's land availability and costs, its population characteristics, what citizens' groups there were in the public housing. They thought, as well, that everyone there lived in atrocious houses and had a penchant for wrecking what decent housing may have existed.

At this meeting, several sites were discussed, including the burned-out St. Andrew's Church site at Elgin and Ellen and the school site on the corner of Notre Dame and Sherbrook. The attitude of the committee, being that of large scale suburban builders, was to find a large site for all the units in an ideal location or produce a good-sized piece of land by tearing down existing houses. After weeks of discussion and site visits,
Institute staff convinced the committee to look for lots representative of the area. They are single or double vacant lots, with or without lane, shallow or deep, scattered throughout the area. Thus, through an assessment of the existing situation, the concept changed to developing housing units suited to small sites available between existing houses.

This change of concept did not come easily. It evolved from a number of meetings with house builders sceptical about this approach and the involvement of citizens.

The house builders felt there should be one large site for conventional row housing. They thought that it didn't make sense to build on small lots, putting up new housing right next to "shacks". And, they objected to consulting citizens almost on principle. We've always built for people before, they said, and no one ever complained. Besides, they asked, what can be built on a 26 by 132 foot lot?

Thus, the initial relationship with the house builders was one of educating them about the area. This role reversed in the later stages of the project as they educated Institute staff about the limitations in putting the package together.

The house builders then contacted the department of housing and urban renewal at the City of Winnipeg in an effort to obtain some of the vacant land held by the city in urban renewal two. This process extended over the summer and into early winter with the request finally being turned down. The city officials gave as their reasons:

The imminent but long deferred Sherbrook Street overpass; the imminent purchase of the Midland Railway property by the city; the vague need for north-south throughways in the area; and the fact that there was
no comprehensive plan for the area.

During these negotiations, the city suggested they would make land available in urban renewal area two north of the CPR yards, or in urban renewal area three (Point Douglas). Institute staff strongly recommended remaining in urban renewal area two because:

(a) Urban renewal area one was in a state of social chaos and had a 10% ownership figure. The best approach regarding this area was to build around it, eventually working into it. The cause of this chaos was the Lord Selkirk Park development;

(b) Point Douglas had a 80% ownership ratio, was a stable area and was the focus of MHRC and its programs;

(c) Urban renewal area two had a 30 to 40% ownership ratio, had been neglected and could use the assistance to turn the tide of transient residents;

(d) The Institute staff in the area had established a relationship with residents which could be tied into the project at a later stage.

The house builders accepted this advice and turned their attention again to urban renewal area two.

At this point, early in the summer of 1971, Institute staff did an initial survey of a few residents about new housing. The house builders expected, and were mistakenly promised, concrete information about residents' preferences in housing types and layout. The information gained was negligible. But the resident contacts formed the base of a new group to be formed. The Citizen Steering Committee was holding an information display in a local hall and Institute staff assisted by creating another display.
It was a lettered poster which explained the project, asking people to take the cards provided and send them in to the house builders, postage free, to show their interest. The house builders received no cards and the display had little impact.

Meetings were arranged between the house builders and the board of directors of the People's Committee Inc. They turned out to be little more than information meetings. The house builders had nothing concrete to offer and the People's Committee was re-structuring. Through the contacts made in the initial housing survey, Institute staff began to help form a group of residents who were interested in new housing in their own area. The intent of this group, later to be known as the Self-Help Housing Group, was to act as a resident advisory group to the house builders or any other developer in the area. This group moved quickly towards developing its own project separate from the house builders because:

- the house builders were reticent to deal with a citizen group;
- the house builders wanted to gain land before going any further;
- the group didn't trust the house builders and they questioned the quality of suburban housing, thinking they could build and design a better house themselves;
- the house builders had nothing to offer, so the group wanted to establish quickly if a project was found feasible.

Over these same summer months, Institute staff looked at the problem of developing housing on limited sites independently of the house builders, anticipating future development. This extensive programming and design work culminated in the preparation of a design study report in early September on the feasibility of infill housing in urban renewal area two.
From September to December of 1971, the house builders suspended general activity and concentrated on attempting to obtain lots owned by the city. At the same time, the Self-Help Housing Group worked with CMHC on developing its own proposal. The unicity elections, held in late September, suspended city involvement for months. Institute staff submitted the infill housing report to the house builders for perusal and assisted them in locating viable vacant property owned by the city. Specific lots were chosen and a request submitted. At this time, Institute staff pulled out of the house builders project as we felt we had no assurance of a continuing relationship or voice in any project.

In early December of 1971, after their request for city property had been turned down, the house builders decided to hire a private real estate firm to acquire private property in the area. It was decided that the Institute would prepare a written agreement with the house builders describing its role and services in any project. The Institute pledged to work with them in earnest. The Mark VIII committee reorganized and set up weekly luncheons to get the show on the road. At the initial meeting, a written agreement was submitted to the committee to be studied. And, it was agreed that one of the Institute staff would be sociological chairman and, therefore, a working member of and voice on the Mark VIII committee.

The first step was land acquisition. There was initial discussion about residents or Institute staff helping the private firm approach resident owner's of vacant property. The intent here was to inform the residents and community about the nature of the project and to avoid the rumor mill distorting facts. This was rejected in favor of the realtor approaching the resident or non-resident owner on behalf of the house builders, using a holding company as a front to prevent speculation. The Institute
staff would inform the community of the purchases after the land was optioned to avoid price escalation. Available land was documented and its owners put into two categories. The first group would be approached and if all the necessary land was procured, the second group would not. The intent was to minimize offers in the area to keep prices down and leave the way open for other groups that might want land.

Each lot in a group was rated against a set of evaluation criteria. The intent of these criteria was to encourage the selection of a variety of sites in order to make the most of the experiment. These criteria were:

(a) lot type, with or without a lane;
(b) lot size;
(c) lot location, in a good or poor area;
(d) adjacent lot development, to allow for the possible creation of pockets of housing;
(e) future development plans, such as bridges or roads;
(f) development, in some cases of working relationships with resident owners of property.

Each group had lots exhibiting these criteria and they were arranged in order of priority, from highest to lowest. The agent would approach a resident owner, in order of priority, with an offer to option the property at a fixed price. The owner would be offered a $100 retainer in cash as payment for the option, which would be defaulted if the option was not acted upon. The options were made conditional upon receipt of a building permit and for a period of 60 to 90 days. Once initial offers were made and option time limitations established, a tentative timetable was drawn up for the preliminary design and zoning stage of the project.
It soon became apparent that it was not a question of getting lots to fit the criteria, but simply getting lots at all. The cost of a single vacant lot was about $3,000 and often the owner had an adjacent property with a house on it which he wished to sell as a package. Several of these properties were duplexes or triplexes, which made CMHC financing impossible under present rules. The attitude generally of the vendors was one of speculation, waiting with assurance until the city would buy their land.

As land acquisition progressed, the Institute staff, with occasional assistance by the design chairman, began refining many of the design ideas proposed in the preliminary report. The concepts of developing units over cars at the rear of a lot or of putting units over one another were discarded as being, at this time, too expensive and complicated. The committee was committed to housing built on the ground, with its attendant ownership, as opposed to a condominium or co-operative arrangement. The rationale behind this argument was that it had not really been tested in the Winnipeg market place and should be avoided until proved. As well, it required more mutual responsibility, which the committee questioned because of the low income and somewhat unstable population characteristics. The approach was to develop a simple unit which would adapt to the various lot types and sizes in a variety of ways, instead of using different unit types for each situation. The preliminary design was taken from an earlier idea, with a simple rectangular unit backed up against an identical unit, or separated at the opposite end of the lot. A dimension was added in that the basement was pulled half out of the ground and made usable as extra bedroom or living area. The problem with the unit was its inflexibility, as only small, two-bedroom units were possible on a narrow site. The much larger, three-bedroom unit required a wide site.
Because of these and other problems, further study was done and a simple, 2½-storey, L-shaped unit was developed. This was a basic, three-bedroom unit whose size was determined simply by extending the wings of the L. The unit had one short wing and one large wing. On a narrow, deep lot, the unit was placed with its short wing across the lot. On a wide, shallow lot, the long wing went across the lot. In this way, the one unit adapted to both lot types and any size variation. The privacy of the unit, relative to other units on the lot and adjacent houses on the street, was enhanced because windows could, if required, be limited to the two inside faces of the L. The shape of the unit embraced the yard area, making it more private and providing many alternative siting possibilities. Thus, when building these units on scattered sites in a community, they could be placed in a variety of ways, avoiding repetition and box appearance. The interior of the unit worked well, giving two window walls rather than one. The revised design was presented to the committee in early February and accepted as a more viable approach.

It was apparent at this time that the members of the Mark VIII committee were giving spare time to this project and that Institute staff was acting in nearly a full-time, co-ordinating role. Without this help, it was questionable how far the project would have progressed on the basis of weekly luncheons. There was also great inconsistency of commitment by members - some spending much time, others hardly any at all. A full-time, paid co-ordinator would have been a great help, as the project moved in spurts of activity and then slackened. It needed, essentially, continuity.

It was necessary to establish a relationship with a resident advisory group when the preliminary design stage had been reached. Because of the swiftness of the project's development from December to January 1972,
there hadn't been time to work with a resident group. There was also the pressure of option time limitations dependent on zoning, which meant the unit design and siting had to be resolved in order to submit for zoning variation. It was anticipated this process could take up to two or three months, if not more. If land hadn't been optioned, the time limitations wouldn't have been nearly as severe, and a group of residents could have formed, worked with slowly and brought through the programming and preliminary design stage. But, word of the pending development would have leaked out and vacant land prices would have risen all the more. Ideally, a developer should be committed well in advance of land acquisition to allow a period of research and resident programming.

From December to January of 1972, it became evident that the project, which the Self-Help Group had been awaiting approval of, was severely distorted and not likely of quick approval. For these reasons, Institute staff contacted the group suggesting it become the "client" for the house builder's project with a view to having first option on the new units. As a result of these meetings, they agreed to act in an advisory role with no commitment, but wished to continue to press the government for a decision as an alternative.

The group then made a short presentation to the Centennial Community Committee as information in mid-February. It was accepted as such with no discussion. In late February, prior to the application for zoning variation, a publicity and information meeting was held for councillors of the Centennial Community Committee and members of the city's environment committee. There was about 50% attendance and the reaction was generally favorable.
It was suggested at this time that possibly the simplest method of getting the project going would be to pass a by-law establishing that specific sites be developed in a specific manner just once, for experimental purposes. In this way, the numerous zoning and building by-law establishing that specific sites be developed in a specific manner just once, for experimental purposes. In this way, the numerous zoning and building by-law variations required could be avoided. As it turned out an experimental building by-law was passed by city council, but the zoning variations would have to be processed through regular channels.

This meant that a submission of detailed site plans, lot subdivisions, elevations and sections of the proposed unit would have to be made to the former Metro zoning department. Here the report on the variation would be prepared and submitted to the environment committee. Then, the environment committee would process the application for zoning variation and report to the Centennial Community Committee. The committee would table the application at a regular meeting and advertise variations and a public meeting to be held after two weeks. At the public meeting, any representation for or against the variations would be heard. The councillors would then vote on the issues, defeating or passing it. If passed, it would return to the environment committee and go from there to the city council for final reading and sanction. It would then be law.

This total process could take upwards of two to three months.

The siting finally submitted for zoning variations involved two properties: a single 33 by 78 foot lot with no lane on Pacific Avenue, just east of Sherbrook Street and a double 37 by 78 foot (74 by 78 foot) lot on Alexander Avenue, east of Isabel Street, again with no lane. The latter
property is considered to be in a poor area and the former in a fair area. After siting discussions were held with the Self-Help Housing Group, a different plan was devised for each lot. Each would be considered a single vacant property, rather than a single or double lot. The first preference was laid out on the fair site, as some members of the group could see living there. The second and third preferences were placed on the other sites because none of the group wanted to live in that part of the area. It was decided not to repeat a site and unit layout, but test a variety of types. The other lot type, with a lane, was not submitted because property without strings had not been found. In this case, three units on 132 foot deep sites would be developed or two units on 112 foot deep sites. There was an attempt to find a 132 foot deep lot with a standard house so that the new rear unit would be built before the existing house was wrecked. In this way, construction of new housing units could proceed in stages, with the resident of the old house conceivably moving into the new, minimizing upheaval.

In discussion with the resident self-help group, there seemed to be several areas for experimentation within the unit. The bedroom wing upstairs could be used as one room, or two private bed-nooks with a common area to two separate bedrooms. Each family had a different preference. Some thought the basement could be used for bedrooms, while other suggested it be used for storage area, or rentable bed-sitting areas.

From late January to mid-April, seven meetings were held with the Self-Help Housing Group to determine the unit design and a proposed agreement with the house builders. The group was presented with the first preliminary design and it was compared with the revised design. The group
preferred the revised design and continued, in subsequent meetings, to
discuss it in detail. Eric Bergman, president of the Winnipeg House Builder's
Association and chairman of the Mark VIII Project, was invited to a meeting
in late February to answer questions about the project. The majority of
the questions hinged on the cost of the unit, how it was bought, the down
payment and "sweat" equity. After this meeting, the group, with the help of
Institute staff, drew up a tentative working agreement with the house
builders. This was submitted and revised by the house builders and returned
for further discussion.

Institute staff submitted a research design for the Mark VIII
project as the committee was preparing an application for research funds.
The design consisted of:
Assembling background information on the area and the basis for design
decisions made; recording the reaction of the resident group to the design
and alterations made; and, a user study of the new units when built and
reaction of the community to the project.

The basic point made was that the experiment must be continued
after construction to test hypotheses made earlier.

At this point, it would be valuable to mention the changing role
of Institute staff. It became one of almost a cartilage between the house
builders and the resident group, acting for both and being careful to avoid
involvement. Most of the concern of the staff was with the integrity and
rights of the resident group's involvement in the project. This liaison
role was possible because the project was beneficial to both sides. What
was required was clarification and information distribution. In this way,
the interests of both parties were retained and an understanding gained,
although they seldom met.
One small problem did develop with the house builders when they avoided signing the agreement with IUS until late March. This may have been a calculated move, in that, if trouble did develop, they would not be bound to any contract. Their concern seemed to be the degree of power we would have, whether this would take away from it being a house builder's project and the possibility that we might publish a report not wholly complimentary. These concerns were resolved and the agreement finally signed. What this points out is the questionable and nebulous position a research advisor is in when working on a real project. Unless there is a commitment by the developer to utilize this expertise the research advisor has limited leverage, the advice is usually accepted if convenient, but rejected if not. On this project, the power of the research staff lay in their knowledge of the area and relationship with residents, as well as architectural design expertise.

To finance the extraordinary cost of the project above and beyond construction, the Mark VIII committee submitted a research grant application to CMHC for the sum of $47,280. It was agreed that IUS would receive $4,500 to cover research costs and $4,000 to lower down payments required. The costs incurred up to this time for luncheons, some staff time and trips were borne by the local House Builder's Association. The financing of the unit construction would be 95% CMHC, under section 40, with the house builder's covering 5%. One of the requirements of this financing is an income of under $6,000 and the interest rate charged depends on income and the number of children. The mortgage would be held by CMHC. Any extraordinary land costs incurred by the house builders in purchasing non-vacant land would be covered by the research grant.
An interesting aspect of this project was the problem of how to give title of ownership to two or three parties living on the same lot with one unit at the front and one at the rear. The typical unit sitting has the units back-to-back, one facing the street, the other facing the rear of the lot. There are two parking spots at the front of the lot, where there is no lane, and a common access for both units along one side. The rear owner has title to the rear half of the lot and one parking spot. The front owner divides his ownership into two parcels, one parcel is that part of the lot occupied by his house, yard and car and the second portion is the common sidewalk. The front owner then gives the rear owner full easement and right of access over this strip. In this way, both occupants own all of the lot between them and the rear occupant is not land locked. This concept was approved in principle by the Land Titles Office.

An additional phase of the project is the innovative use of materials. Some of the ideas suggested include: a pre-cast basement, a wood basement, a chimneyless furnace, a furnace in the attic, steel studs of a minimum dimension, plastic plumbing, a 24-inch module construction system to minimize structural members and movable interior partitions.

The building component aspect of the experiment has not been stressed, but suggests same space savings and space modulation possible in a small, low-cost units.

An Institute staff member accompanied the co-chairman of the project to a meeting of the technical research committee of HUDAC in Toronto to present the design. It received encouragement and approval as a concept.

The Mark VIII project, then, offered insights into a variety of technical and procedural matters in dealing with new forms of urban development. Aside from the design aspects, the committee learned how to work
with government, resident advisory groups, private interests and citizens, individually and collectively, of an inner city area.

These disparate groups, in turn, learned about the legalities of housing, financing and the complexities of acquiring, or attempting to acquire, scattered parcels and lots of land. Most important, however, was the experience of reconciling new design techniques with the already complex, even tortuous, process of urban rehabilitation under existing regulations.

If nothing else, and hopefully there will be much more, it was determined that building innovation can function within present planning and legal structures. It wasn't simple, but it was possible and that, in itself, was a significant demonstration.