

EVALUATION OF HOUSES TO DETERMINE SUITABILITY IN RELATION  
TO COST FOR FAMILIES WITH SMALL CHILDREN

by

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## ABSTRACT

The purposes of this study were to develop a checklist for evaluating how well a house plan meets the special needs of a family with small children, to utilize this checklist in scoring plans of three-bedroom houses in three different price ranges, and to relate these scores to the market value of the houses.

The features to be considered for evaluation and the checklist were submitted to a jury. Revisions were made in accordance with their comments and criticisms. The features evaluated by the use of the checklist were:

1. Sufficient bedrooms so each child would have a room of his own or share a room with only one other child the same sex and near the same age.
2. Indoor play space for the child to romp and play freely without need of excessive quiet or care of furnishings.
3. Room arrangement and entries planned to provide a traffic pattern throughout the house which avoids cross-room traffic as much as possible.
4. Convenient and adequate storage for toys, buggies, strollers, outdoor wraps, boots, clothing, books, games, hobbies, cleaning equipment, etc.
5. Adequate and conveniently located family dining space for at least six persons. Convenient guest dining space for 10 to 12 persons.
6. Bedrooms separated from the active areas by sound barriers and closely grouped near a bathroom for easy night care of children. Bedrooms at least minimum adequate size.
7. The mother's work areas convenient to indoor and outdoor play areas for easy and safe supervision and care of small children.

Sixty house plans of three-bedroom houses which had been submitted for building permits in Meridian Township were selected for rating.



The estimated market value of each house was obtained from the township assessor. Three price groups (\$10,000 - \$18,500, \$19,000 - \$21,500, and \$21,900 - \$30,000) with 20 houses per group were rated by the use of the checklist. The scores earned by the house plans were then related to their market value.

The house plans which were evaluated were found to range in score from 22 to 237 out of a possible 250 points. The range of scores for the three different price groups were; low priced group - 22 to 213; medium priced group - 117 to 215; high priced group - 162 to 237.

The average scores were; low priced group - 140.55; medium priced group - 176.3; high priced group - 202.8. The average scores in the three groups were found to be significantly different, indicating a direct relationship between the score of a house and its price.

More desirable features were found in a larger proportion of the houses in the high priced group than in the medium and low priced groups. However, 11 of the 45 features considered to be desirable were missing in over half of the 60 houses, indicating that many recently built homes are not well designed for families with small children. While there was a significant difference among the average scores of the three price groups, there was a wide range of scores within each price group. Many of the house plans evaluated scored higher than others which cost the same or more.

It appears that a house which includes all the features desirable for a family with small children is available only in the high price range. However, not all high priced houses are well designed for a family with children. Within all price groups and even at the

same market value houses vary greatly and careful evaluation will be essential in order to obtain a family home which will be convenient and pleasant. Even families with a limited budget for their house purchase may be able to obtain a desirable family home which meets their special needs, if they evaluate very carefully the house plans or completed houses which they can afford.

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## CHAPTER I

### INTRODUCTION

A large proportion of today's home buyers are families with small children. Information is available to serve as a guide in choosing certain aspects of housing, such as a desirable location, a well constructed house, etc. Only a small amount of scattered information, however, is available to help a family select a home which includes special features of importance to the busy mother of pre-school age children.

Every homemaker wants a convenient kitchen with sufficient counter and cupboard space. The mother of small children needs, in addition, an indoor play area near enough for her to supervise youngsters at play and to reassure them by her presence while she goes on with her work. A kitchen window should overlook their outdoor play yard and an exterior door should be close enough so that she can, for instance, easily get outside to help a stranded child down from the swing set. Small children with muddy boots and bulky snow suits make frequent trips to the bathroom, or into the house for a toy or a brief stay, and require a place to drip boots and hang up snow suits. The mother's help is needed to remove wraps. Thus, many steps can be saved if the children come in a door near the work area and have a storage space for their wraps near this door. Toy storage is needed in almost every room in the house. Some toys are very big and bulky and present special storage problems. A convenient storage place for a buggy, stroller, bicycle, wagon, and other outdoor toys is especially important to the family with small children.

A study of home buyers conducted by Better Homes & Gardens<sup>1</sup> in 1949-1950 indicated that 69 percent of the home buyers had children under 18 years of age living at home. The characteristics of the families, and therefore of the houses they required differed markedly as between "first" buyers and those who had owned a home previously. Buyers who were acquiring their first home were in younger age groups. Sixty-five percent were under 40 years of age. Only about one-fourth of these "first" buyers were childless. The remaining three-fourths were divided about evenly between families whose children were five years of age and under and those with children over five. Among first time buyers there were nearly twice as many with \$3000-\$5000 incomes as with incomes of \$5000 and over. The buyers who had been home owners before were divided about evenly between these two income ranges.

Thus, it appears that there is a large group of young couples with small children faced, for the first time, with selecting a new home, and at the same time, strictly limited by low incomes as to the price they can pay. They therefore need to do careful shopping and evaluating of available houses or building plans if they are to obtain a home which will meet their needs. Budget limitations may make it necessary to sacrifice some of the desirable features. Individual preferences will to some extent govern the relative value of these features to a family. It is the aim of this study to point out some important considerations in the selection of a home suitable for a family with small children.

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<sup>1</sup>Paxton, Edward T., What People Want When They Buy a House. Housing and Home Finance Agency, U.S. Government Printing Office, Washington, D.C., 1955. pp.6-8.



## PURPOSE OF THE STUDY

This study was undertaken to provide a guide for evaluating homes with regard to the special needs of a family with small children and also to evaluate selected groups of house plans to determine how well recently built homes meet the needs of families with small children.

The specific objectives were:

1. To develop a device for evaluating how well a house plan meets the special needs of a family with small children.
2. To utilize this device in rating three groups of three-bedroom houses which were in different price ranges.
3. To relate the score of a house plan to the market price of the house.

## CHAPTER II

## REVIEW OF LITERATURE

There are many sources of information concerning the selection of suitable housing. These usually cover the general features of importance to all home buyers. The University of Illinois, Small Homes Council Circular Series is an excellent source of help in home selection. One circular, "Selecting a Livable Neighborhood"<sup>2</sup> discusses the character and location of the building site, street layout, traffic, trees and screen planting, utilities, protecting ordinances and deeds, and community facilities. A circular entitled, "A Guide to Selecting the Home Site,"<sup>3</sup> gives detailed help in selecting an urban lot.

The Circular "Designing the Home"<sup>4</sup> discusses the selection of a house plan. This pamphlet points out that selecting the plan is one of the first and most important steps in obtaining a home. The value of the home will depend upon the merit of its plan. The four major considerations are living space, cost, site, and appearance. The most important of these is space for family living. The selection of the plan involves a list of the family's actual needs. A check list of the activities of the normal American family and the rooms or areas which

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<sup>2</sup>Small Homes Council Circular Series, Selecting a Livable Neighborhood. University of Illinois, Urbana, Illinois. Index No. B1.1. 1945.

<sup>3</sup>Small Homes Council Circular Series, A Guide to Selecting the Home Site. University of Illinois, Urbana, Illinois. Index No. B2.1. 1944.

<sup>4</sup>Small Homes Council Circular Series, Designing the Home. University of Illinois, Urbana, Illinois. Index No. C2.1. 1945.

may accommodate them is given in the circular. Examples of family needs are given including several of special interest to families with small children, such as a storage place for muddy shoes and boots. The section of this circular dealing with judging a plan stresses the importance of flexibility in the possible uses of space in the home. A living area planned for flexibility provides for expansion of dining facilities to serve many dinner guests if needed or the expansion of the living room seating facilities into the dining area if many guests are to be accommodated in the living room. Garages should be planned to provide storage space and perhaps space for a workshop in addition to car storage and the utility room can provide children's play space, counters and cabinets for sewing, and a hobby workshop, in addition to the laundry facilities, and space for the furnace and water heater. "Circulation," referring to the means of getting from one part of the house to another, is emphasized. Excessive hall space wastes space but one should not have to pass through many rooms to get from one part of the house to another. Stairs should be designed for safety and utility as well as for economy of space. This circular suggests that the paths of circulation be drawn in a house plan to aid in evaluating the plan. The number and location of doors is an important part of the circulation scheme. The swing of a door requires considerable space and doors frequently stand open. When evaluating a plan, each door placement should be noted to determine whether the swing of the door interferes with paths of circulation, other doors, or furniture placement, and whether the door is out of the way when it stands open. Placement of exits from interior to exterior are, of course, very important in determining the efficiency of circulation.

Adequate floor space and wall space free from low windows or doors to permit convenient furniture arrangements are important. Storage space which is large enough and designed for its particular use is a necessity. Economical and conveniently located utilities are an important consideration.

Another Small Homes Council circular entitled, "Household Storage Units,"<sup>5</sup> gives excellent suggestions and specifications for storage units in the modern home. These storage space requirements and the ones suggested in a study done by Helen McCullough, "Space Design for Household Storage,"<sup>6</sup> were used in this study as the criteria for minimum adequate storage in a home for a family with small children.

A great deal of material is readily available concerning kitchen planning. Again referring to the Small Homes Council Circular Series, one entitled, "Kitchen Planning Standards,"<sup>7</sup> discusses good kitchen design in detail and includes an excellent kitchen scoring sheet and directions on how to use the score in judging a kitchen to suit a family's special needs. The circular, "Cabinet Space for the Kitchen,"<sup>8</sup> goes on to discuss kitchen storage space in greater detail. In this study such an evaluation of the kitchen has not been included. Only those features

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<sup>5</sup>Small Homes Council Circular Series, Household Storage Units. University of Illinois, Urbana, Illinois. Index No. C5.1. 1953. 12 pp.

<sup>6</sup>McCullough, Helen E., Space Design for Household Storage. University of Illinois, Urbana, Illinois. Bulletin 557. 1952.

<sup>7</sup>Small Homes Council Circular Series, Kitchen Planning Standards. University of Illinois, Urbana, Illinois. Index No. C5.32. 1949.

<sup>8</sup>Small Homes Council Circular Series, Cabinet Space for the Kitchen. University of Illinois, Urbana, Illinois. Index No. 5.31. 1949.

directly related to the ease and convenience for child care are included, such as the relationship of the kitchen to indoor and outdoor play areas and to the family entry. Of course, many things which make homemaking simpler for a busy mother of pre-schoolers are also desirable features for other homemakers, so no sharp line of demarcation exists between special and general features.

To aid in deciding which special features of housing were especially important to families with small children and so should be used as a basis for evaluating the house plans in this study, many references discussing these special needs of children were studied.

Elizabeth Ogg<sup>9</sup> in a Public Affairs Pamphlet entitled, "Homes to Live In," states that in planning a home ... "the children should come first of all ... For childhood habits and conditions affect people throughout their whole lives." Depending on their age, children spend from 50 to 95 percent of their time in the house. The younger they are, the more they are inside. It is difficult, of course, to find out from a child what home arrangements he would like best. But certain needs are generally recognized as being of primary importance. First of all, a child needs to feel "at home" in his own house and that he has a right to go about his business there. He should not be made to feel that, just by being around, he is interfering and getting in other people's way. It is therefore essential that he be given a place of his own, where he can play alone or with other children - where he can

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<sup>9</sup>Ogg, Elizabeth and Sandbank, Harold, Homes to Live In. New York Public Affairs Committee, Inc., New York. Public Affairs Pamphlet No. 66. 1942. pp. 10-12.

romp and make a clutter without fear of being scolded. Of course, the ideal thing is for him to have a room of his own, or at least a room shared only with another child near his own age. In such a room he can go to sleep at the proper time, undisturbed by grown-ups, and keep all his possessions there. Failing that he may be given for his play, a corner of the living room, with child size furniture - a chair low enough so his feet won't dangle and a well-lighted small desk or table of the right height at which to write, draw, paint or study in comfort. If given boxes or low shelves where he can keep his toys, and a cabinet or closet with a hanging rod, hooks, and shelves low enough for him to reach and put away his own clothes, he will be able to practice at home the good habits he is learning in school. Home should also be a safe place for children. If windows are so low a child might fall out, guards should be put on them. All lamps and other electric fixtures a child might handle must be sturdy and free from danger of shock. Giving a child a place of his own where he learns to put away his things is in itself a safety measure, for it means that floors are not constantly littered with toys.

Glenn H. Beyer,<sup>10</sup> in his book "Housing: A Factual Analysis," states that children should have permission to use the house as adults use it. The child's play needs should be considered in terms of the house as a whole. Their play is extremely important in their growth and development. Requirements of small children are varied. Even more important is the fact that these requirements occur at a time when the

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<sup>10</sup>Beyer, Glen H., Housing: A Factual Analysis. Macmillan, New York. 1958. pp. 182-183.

mother is frequently engaged in some other task. Therefore, dressing and undressing, and even bathing, helping at the toilet, or supervising play activities is likely to be carried on simultaneously with cooking, setting the table, cleaning up or washing dishes. The mother also needs to help children with other tasks, some normally carried on in the bathroom (probably during the period of bathroom congestion in the morning) and other tasks almost anywhere in the house. Small children often require that their play equipment, including wagons and tricycles, be used where their performances can be observed. A family home needs to be planned so these needs of children can be met, while the work on meal preparation and laundry is also being done.

A research study by Wiegand and Gross<sup>11</sup> of the fatigue of homemakers with young children included findings which were helpful in determining important housing features. A factor in which there was a noticeable difference between the less tired and the more tired homemakers was the physical arrangement of the houses with regard to the adequacy of space for children's play, storage space for toys, and storage for children's wraps. The necessity for walking up and down stairs for toilet facilities and for washing and drying clothes and ironing also seemed to be related to the development of fatigue.

The document by Paxton<sup>12</sup> "What People Want When They Buy a House," prepared by the Housing and Home Finance Agency, contains a

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<sup>11</sup>Wiegand, Elizabeth and Gross, Irma H., Fatigue of Homemakers with Young Children. Michigan State University Agricultural Experiment Station, East Lansing, Michigan. Technical Bulletin 265. 1958.

<sup>12</sup>Paxton, Edward T., What People Want When They Buy a House. Housing and Home Finance Agency, U.S. Government Printing Office, Washington, D.C. 1955.

review of 41 surveys of housing likes and dislikes by the Small Homes Council, University of Illinois and a report on a survey conducted by the Survey Research Center Institute for Social Research, University of Michigan.

A summary of the findings from these surveys and inquiries points up the contrasts between homeseekers desires and the features available in new houses that were coming into the market in 1950.<sup>13</sup>

|  | <u>Percent<br/>Desired</u> | <u>Percent<br/>Provided</u> |
|--|----------------------------|-----------------------------|
| One story houses                               | 74                         | 86                          |
| Two story houses                               | 16                         | ) 14                        |
| Other  | 10                         |                             |
| Four rooms or less                             | 5                          | 47                          |
| Five rooms                                     | 30                         | 35                          |
| Six rooms                                      | 40                         | 17                          |
| Seven or more rooms                            | 20                         | 1                           |
| One bedroom                                    | 1                          | 1                           |
| Two bedrooms                                   | 30                         | 65                          |
| Three bedrooms                                 | 60                         | 33                          |
| Four bedrooms or more                          | 10                         | 1                           |
| One bedroom, 10' x 15'                         | 39                         |                             |
| One bedroom, 12' x 18'                         | 43                         |                             |
| One bedroom, larger than 12' x 18'             | 10                         |                             |
| Other bedrooms, 9' x 12'                       | 41                         |                             |
| Other bedrooms, 10' x 15'                      | 50                         |                             |
| Other bedrooms, larger than 10' x 15'          | 7                          |                             |
| Only one bathroom                              | 50-70                      | 96                          |
| Two bathrooms                                  | 27-47                      | 3                           |
| More than two bathrooms                        |                            | 1                           |
| An extra half-bath, powder room<br>or lavatory | 35-85                      | 4                           |

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<sup>13</sup>Ibid. pp. 114-115.



|   | <u>Percent<br/>Desired</u> | <u>Percent<br/>Provided</u> |
|---|----------------------------|-----------------------------|
| A separate living room  | 60-70                      |                             |
| A combined living-and-dining room   | 30-40                      |                             |
| A living room, 12' x 18'  | 40                         |                             |
| A living room, larger than 12' x 18'  | 50                         |                             |
| A separate dining room  | 50-65                      |                             |
| Additional eating facilities<br>in the kitchen  | 65                         |                             |
| A kitchen, 9' x 12'   | 45-65                      |                             |
| A kitchen, larger than 9' x 12'   | 30                         |                             |
| A basement  | 67                         | 40                          |
| No basement   | 18                         | 60                          |
| No preference   | 15                         |                             |
| A laundry-utility room  | 45-85                      |                             |
| --in basement where house has a<br>basement   |                            |                             |
| --otherwise on first floor  |                            |                             |
| (Only 33 percent of the available houses which had no basements<br>had utility rooms) |                            |                             |
| A porch   | 70-100                     | 43                          |
| A garage--  | 97                         | 47                          |
| attached  | 62                         | 61                          |
| in basement   | 5                          | 10                          |
| detached  | 33                         | 17                          |
| carports  | 0                          | 12                          |
| A one-car garage  | 45                         |                             |
| A two-car garage  | 54                         |                             |
| Garage, for car storage only  | 23                         |                             |
| Garage, for car and other storage   | 74                         |                             |
| A den or library  | 45                         |                             |
| A recreation room, "hobby room," or<br>workshop                                       | 40                         |                             |

It appears that the potential buyer wants at least a six-room three-bedroom house with two baths, a useable porch and an attached garage and the builder finds that at the current level of construction

costs and including all possible economies, without sacrificing quality, he can build no more than a five-room two-bedroom house with one bath, no porch, and no garage, at the price the homeseeker can afford to pay. An interesting possibility suggested in this document is a trade-in arrangement so that a family may, as it requires more space and can afford it, trade in its small house for a larger one. It also suggests that builders plan homes so that they are easily expansible thus enabling the family to add a bedroom, bath, porch and garage later on.

Ten discussion groups at the 1956 Womens' Congress on Housing<sup>14</sup> agreed upon the following common denominators relative to houses for families with children, in the middle-income bracket.

#### Basic Components

The combination of components favored for economy were:

- Kitchen-family room with space for table and six chairs.
- Separate laundry-utility on first floor.
- Rear entry into laundry-utility.
- Half-bath adjacent to rear entry.
- Parlor type living room--quiet.
- Enclosed front foyer.
- Guest coat closet.
- Parents' bedroom with two closets.
- Second bedroom with one closet.
- Third bedroom with one closet.
- Main bath with single lavatory.
- Linen closet--broom closet.
- One-car garage with storage in the North; single carport in the South.
- Basement--in the northern part of the country.

The combination of desirable components were:

- Kitchen-family room with space for table and six chairs.
- Separate laundry-utility room on first floor.
- Rear entry into laundry-utility room.
- Half-bath at rear entry.
- Basement.
- Separate dining room.

<sup>14</sup> Housing and Home Finance Agency, Women's Congress on Housing. U.S. Government Printing Office, Washington, D.C., 1956. pp. 33-36.



Parlor-type living room--quiet.  
 Enclosed front foyer.  
 Guest coat closet.  
 Den-study-guestroom with closet.  
 Parents' bedroom with two closets.  
 Second and third bedrooms with two closets each.  
 Main bath (strong preference for second bath).  
 Other storage:  
   Broom closet.  
   Hall linen closet.  
   Offseason clothes closet.  
   Bathroom counter.  
   Locked medicine cabinet.  
 Garage: Two-car in the North.  
 Carport: Two-car with storage cabinet in the South.

The major difference between the combination of components on an economy basis and the combination of desirable components were:

Separate dining room.  
 Den-study-guestroom with closet.  
 Second closet in two children's bedrooms.  
 Two-car garage in North, in lieu of one-car with storage.  
 Double carport with storage cabinet in lieu of single carport in the South.  
 Basement over wider areas of the country.  
 Second bath--there is apparently a sufficiently strong indication that a bath-and-a-half are considered minimum, and that a second bath is desired when a den-guest-study is added.  
 Fireplace--Groups 3, 6, and 8 expressed a desire for a fireplace as a desirable luxury. Groups 3, 7, and 10 want a fireplace included initially, if at all possible.

#### Location of Basic Components

The majority of the groups at the 1956 Women's Congress on Housing agreed upon the following:

Kitchen to be located at the rear of the house overlooking the rear yard. Preferred facing was in a southerly direction.

Family room should be adjacent to the kitchen, overlooking the rear yard. There should be access to an outdoor dining area or terrace.

Laundry-utility room should be adjacent to the kitchen or kitchen-family room, so located as to serve as the family entrance and convenient to the outdoor laundry drying area. It should contain a broom and cleaning supply closet.

Rear entry should be located for direct access to the basement stairs, if there is a basement. There should be space for removal and storage of wet and soiled play and work clothes.

Half-bath should be located near the rear entry.

If there is a dining room or dining-L, its location is determined primarily by convenience of service from the kitchen and access from the living room.

Living room should be located on the front of the house, out of traffic lanes from the kitchen to the front door and bedrooms. It should be isolated by location and insulated by sound barriers as much as possible from the kitchen-family area of the house. A north orientation is acceptable, perhaps preferred.

Front foyer should be located so as not to give direct views into the living, dining, and kitchen-family areas of the house. There should be a guest coat closet in, or adjacent to, the foyer. Bedrooms should be located as far from the group living areas of the house as is feasible, and be insulated against sound by barriers such as corridors, closets, etc., as much as possible. The location of the bedrooms is of lesser importance than that of the major group living areas. Preferably, the parents' bedroom should be at the rear corner of the house. It may be located near the living room to assure undisturbed sleep for the children. Children's bedrooms may be at the rear, side, or front of the house.

### Connections and Divisions Between Spaces

The majority of the groups at the Housing Conference agreed on the following:

Kitchen-family room: These areas should be separated by a counter, arranged so that a flexible closure, folding doors, movable partitions, etc., may be installed initially or at a future date.

Partitions with door: There should be a partition with door between the following spaces:

- Kitchen and laundry.
- Kitchen and dining room or L.
- Dining room and living room.
- Living room and access hall to front door.
- Front foyer and access hall to living room, kitchen, etc.
- Kitchen-family room and hall to bedrooms.

The document, "What People Want When They Buy a House,"<sup>15</sup> prepared by the Housing and Home Finance Agency, states that halls, especially entrance halls, are no longer necessary because roads and streets are paved and heating equipment is more efficient. However, the groups at the Women's Congress on Housing<sup>16</sup> agreed that hall circulation was desirable and questioned whether the loss of convenience and comfort afforded by hall circulation could be worth the money saved by omitting them, since some builders advise that space of this nature would probably cost only an additional \$190 to \$325.

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<sup>15</sup>Paxton, Edward T., op. cit., p. 53.

<sup>16</sup>Housing and Home Finance Agency, op. cit., p. 63.

### Planning Principles

The Housing Conference<sup>17</sup> recommended that the basic components of the house be grouped in meaningful combinations, which may be classified as follows:

#### Work Area

- Kitchen
- Laundry-utility
- Rear Entrance
- Half-bath

#### Social Area

- Dining area of kitchen
- Family room
- Dining room or L
- Living room

#### Retiring Area

- Parlor
- Study-den-guest room
- Bedrooms with baths and closets

#### Outdoor Living Area

- Dining terrace
- Children's play
- Laundry drying
- Flowers and vegetables

The work area forms the core of the plan. It is the most important area in the house. Its location and arrangement may mean the difference between hours of drudgery for the homemaker or a working order which allows some free time to devote to family, community, and self-development. The arrangement of the other areas of the house around the work area should be such as to achieve the desired organization of the house into active and quiet zones. In the active zone are located the work and social area; in the quiet zone the retiring area. Corridors

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<sup>17</sup>Ibid, pp. 64-65.

and closets provide sound buffers between the two zones. Closets between bedrooms are desirable for the same purpose. This organization of space permits the various members of the family to engage simultaneously in non-compatible activities without unnecessary restraint or excessive annoyance being imposed on any group or individual. The avoidance of traffic through the dining and living rooms from the kitchen to the front door and bedrooms, in addition to assuring privacy for individual family members, reduces house cleaning chores and wear on carpeting and flooring. Money saved on maintenance can be used toward higher monthly carrying charges on an initially more costly house. The half-bath at the kitchen entrance avoids what many of the women at the conference referred to as their greatest problem. The children, many times during the day, enter the kitchen from playing in muddy out-of-doors play areas, and pass through the dining area and living room to get to the bathroom. All groups at the Women's Congress agreed that to keep the house clean and presentable is practically impossible as long as the living and dining areas must carry traffic from both the front and rear doors.

The organization of the basic components should also be such that there is a public side and a family side. Freedom to relax from embarrassing surprise calls by visitors was deemed essential. The casual caller, salesman, etc., can be taken care of in the front foyer. The unexpected visit from the minister may be welcomed in the ever-in-order parlor-type living room. However, old family friends will be invited into the core of the house, disorderly or otherwise.



The Women's Congress on Housing<sup>18</sup> suggested a range of from 1100 to 1500 total square feet for homes of families in the middle-income bracket. The Bureau of Labor Statistics reports the average floor area of houses started in the first quarter of 1955 as 1170 square feet. Thus, the desired size is not unreasonable and careful planning should make it possible for families to obtain the type of house they need at a price they can afford to pay.

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<sup>18</sup>Ibid., p. 63.

## CHAPTER III

SELECTION OF IMPORTANT FEATURES AND  
DEVELOPMENT OF A CHECKLIST

One of the purposes of this study was to develop a device for evaluating how well a house plan meets the special needs of a family with small children. Literature in the field of house planning was studied to find references to these special needs. According to the emphasis that the literature placed on various features of housing, the following were selected as being especially important for the family with small children to consider when evaluating a house plan.

1. Adequate number of bedrooms.
2. Provision for indoor play space.
3. Paths of circulation avoiding cross-room traffic.
4. Adequate storage.
5. Provision for dining space.
6. Convenient location of bedrooms of adequate size.
7. Work areas conveniently located in relation to indoor and outdoor play space.

Number of bedrooms--

Probably the first feature observed when glancing at a house plan is the number of bedrooms. A house should have enough bedrooms so that each child has his own bedroom or shares a room with only one other child near his own age and of the same sex. Thus, with similar play and work activities, there would be little conflict in use of the room by the two children. They would also have similar nap periods and bedtimes so each would get adequate rest. A three bedroom house would be large enough for a family with two or three children near the same age or even possibly for a family with four children if it consisted of two girls and two boys near the same age. A house which does not

have enough bedrooms for the family should not receive further consideration, unless low income makes it impossible to obtain this large a home.

### Indoor Play Space--

Another feature of a house plan which is obvious at first glance, is whether there is a basement or not. If a house has a basement which is dry and well lighted and ventilated, it can supply needed space for active indoor play. It is true that "small children are notorious for requiring that their play equipment, even wagons and tricycles, be used where their performance can be observed,"<sup>19</sup> and a basement play area will be out of the mother's sight as she works in the kitchen. However, a stairway near the kitchen may allow her to observe from the top of the stairway and keep close supervision over the downstairs play area. Seldom will a ground level play room provide space for such active play as riding a tricycle or wagon, but the play area which is on the same floor as the kitchen will be near the mother as she carries on her work. She can supervise more easily and with fewer interruptions because the small child will be content to play alone for a longer period of time if she is in sight. A home which is so planned that there is a basement rumpus room or comparable ground-level room, and also a play area near the kitchen work area suitable for cutting, coloring, etc., and with some provision for toy storage, meets most of the needs for indoor play. Children's bedrooms are frequently used to double as play rooms. Children like the privacy of their rooms for a make-believe "tea party" for example, or to work on constructing an airplane model. If the bedrooms are about

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<sup>19</sup>Beyer, Glenn H., Op. cit., p. 182.

10' x 12' they can be very valuable play areas. A house without sufficient indoor play space probably would not be considered suitable by the family with small children.

#### Traffic Patterns from Entries and Between Rooms--

A very important feature and one which frequently is not considered and properly evaluated by the homeseeker is the traffic pattern throughout the house. The traffic pattern or path of circulation through the home is important for any home buyer and is especially important for the family with small children, both from the standpoint of cleaning and maintenance and to provide for pleasanter use of the home by all family members. The varied ages of the family members when young children are a part of the family means that the house will be used in very different ways. The father may wish to talk with a business associate in the living room. The mother may be busy preparing dinner but the child may "need" a toy from his bedroom for his outdoor play. If his trip in for the toy cuts through the mother's work area or diagonally through the conversation group in the living room it will be an unpleasant interruption. Children usually make a great many trips in from out-of-doors for a toy, to go to the bathroom or inside for a brief stay. They will track in dirt and cause a great deal of wear and tear on the floor coverings. The room arrangements and entries should provide a traffic pattern throughout the house which avoids cross room traffic as much as possible. The traffic patterns from entries to closets for the storage of wraps, boots and outdoor play equipment and to the bathroom and indoor play areas are

especially important for the family with small children. If traffic through a room is necessary, it is better if routed across the end or side of the room rather than cutting through it diagonally, where it interferes with conversation groups and work areas. Excessive hall space in a small home is, of course, expensive and wasteful of space. However, for a family with small children a certain amount of hall space can be very valuable. If the traffic pattern is primarily through halls the floor coverings in these hallways can be of a type which is easily cleaned and the floor covering could be replaced quite reasonably if badly damaged by hard use. When traffic crosses the living room, even though it is channeled across the side or the end of the room, constant use by small children will soil and wear out the floor covering in that one path quite rapidly. If a family is composed only of older family members, they will be more likely to clean their feet and remove boots and will make many fewer trips in and out of the house.

### Storage

Convenient and adequate storage is required by all types of families. The family with small children will have, in addition to all the ordinary items for storage, a large variety of children's equipment which is bulky and awkward to store and which will be used frequently. Storage space will be needed for a buggy, stroller, play pen, bicycle, tricycle, wagon, sled and many other toys. Storage for games, books, and hobbies is needed. A storage space convenient to the children's entry and to mother's work area where bulky snowsuits and muddy boots may be removed with mother's help and stored is very

helpful and very rarely included in a house plan. Storage space should be located near the point of use.<sup>20</sup> Many houses have insufficient provision for storage. A basement can provide much of the needed storage space though it is not near the point of use of many items.

As a bare minimum a family home should have a 2' x 3' guest closet near the main entry. There should be 5' of clothes closet space per person with at least three feet of the closet space located in the person's bedroom. Storage space about 3' x 10', convenient to the out-of-doors for storage of outdoor play equipment and tools is necessary. Indoor toy storage space totaling about 2' x 7' x 7' is needed.

Storage for cleaning equipment and supplies located near the point of use (about 2' x 2' x 8'), shelves for linen and towels (about 12" x 3' x 8'), and storage for blankets, pillows, etc., (about 2' x 2' x 8') are minimum requirements.

Since a family usually depends upon a basement for a great deal of the storage needs in a home, the placement of the basement stairs is very important. Bulky play equipment and tools, and such pieces of equipment as a freezer and a piano can be conveniently put in the basement only if the stairs are near the service entry and have no short turns so there will be clearance for very large items.

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<sup>20</sup>The standards for household storage were based on: Small Homes Council Circular Series, Household Storage Units. University of Illinois, Urbana, Illinois. Index No. C5.1. 1953. McCullough, Helen E., Space Design for Household Storage. University of Illinois Agricultural Experiment Station, Urbana, Illinois. Bulletin 557. 1952. 74 pp.

### Dining Space

Dining space should be carefully evaluated. A family with from four to six family members needs a dining space at least 7' x 8' in size. Where it should be located is a matter of individual preference. Some people prefer to have family dining space in the kitchen so that few steps are required to serve a meal. If located in the kitchen, it should not interfere with the path from the sink to the refrigerator and to the range, or, in other words, it should not interfere with the work area triangle in the kitchen. Some people prefer a nook at the side of the kitchen or a separate area for family dining.

When there are small children there will, of course, be many accidents. The floor covering should be a type which can be easily cleaned. Dining space which is a part of the living room is often carpeted. This may be too difficult to keep clean if it is the only place for a family with little children to dine. An easily cleaned dining area located near the kitchen can serve double duty as a play space for children. If there is room for children's furniture and toys, the dining area may provide excellent indoor play space. If it is too small to accommodate much extra equipment the dining table itself can be used for children's coloring, etc. Baby equipment such as a jumper chair could be placed in the dining area so baby can see mother as she works and still be safely out from under foot. Convenient dining space for the family and guests should be large enough to accommodate at least 10 or 12 persons. Many newly built homes do not have a very large area planned for dining. The dining area for family and guests should be about 9' or 10' wide and 11' or 12' long

in order to accommodate a large enough table, space for the chairs and room for serving. As this area is not as frequently used as the space for family dining, it would not be too inconvenient if it were located a bit further from the kitchen. Dining space in the living room, large enough for the family and guests, may be acceptable. It should not crowd the living room conversation group. Easily cleaned floor coverings would be desirable.

#### Size and Location of Bedrooms

Since small children in the family will take afternoon naps and have an earlier bedtime than the rest of the family, the children's bedrooms should be separated from the rest of the house by some form of sound barrier. Closets make excellent sound absorbers. Quiet rooms, such as a study, act as a buffer between the noisier work and conversation areas of the house. Youngsters frequently waken during the night and require care. Bedrooms and bath should be off a common hall and closely grouped for easy night care of children. In order for a three bedroom house to conveniently accommodate two adults and three children, the bedrooms should be sized so that one could accommodate one child and the other two bedrooms could accommodate two persons each. The smallest bedroom should be about 9' x 10', the next largest about 10' x 12' and the largest room about 12' x 13'6".<sup>21</sup>

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<sup>21</sup>Paxton, Edward T., op cit., p. 42.



### Relation of Indoor and Outdoor Play Areas to the Work Areas

Small children need almost constant supervision. Mother will have much work to accomplish while supervising the youngsters. It is a tremendous help if both indoor and outdoor play areas are in sight of her work areas and if she can easily reach the area by way of a convenient door to help the children if necessary.

A summary of important housing features for a family with small children is as follows:

1. A bedroom for each child or a bedroom shared with only one other child near his own age, in order to provide quiet for sleeping, play space, storage of clothing and toys, etc.

2. Indoor play space where the child can romp and play freely without need of excessive quiet or care of furnishings. A dry, well ventilated and well lighted basement can provide needed space. If there is no basement, an activities room or at least adequate bedroom space to double as play space is needed.

3. The room arrangement and entries should provide a traffic pattern throughout the house which avoids cross-room traffic as much as possible. This makes for pleasanter family living in the home and avoids excessive cleaning problems and expensive maintenance of floor coverings. The traffic pattern from entries to closets for storage of wraps, boots and outdoor equipment and to the bathroom and to indoor play areas is especially important for the family with small children. Preferably, traffic should be through halls. If it is through rooms, it should be channeled through the end or side of the room rather than cutting through the room diagonally, thus interfering with conversation groups and work areas.

4. Convenient and adequate storage for toys, buggies, strollers, outdoor wraps, boots, clothing, books, games, hobbies, cleaning equipment, etc., is needed. A basement may have to provide much of this needed storage. The basement stairs should be conveniently located so that very large items may be stored in the basement.

5. Adequate and conveniently located dining space for at least six people is essential. Convenient dining space for 10 to 12 people is desirable. The floor covering should be of a type which can be easily cleaned.

6. Bedrooms, especially the children's rooms, should be separated from living areas to insure quiet during nap time and early bed time. Bedrooms and bath should be off a common hall and closely grouped for easy night care of children. Bedrooms should meet minimum size requirements.

7. The mother's work area, especially the kitchen and laundry facilities, should be convenient to indoor and outdoor play areas for easy supervision and care of small children.

A tentative checklist to be used for evaluating how well a house plan met these special requirements of a family with small children was developed. The list of important special features and the tentative checklist were submitted to a "jury" for their comments and criticisms. The jury consisted of one representative from each of the fields of Child Development, Home Management, Related Arts, and Drawing and Design, and a homemaker with small children.

The list of important features presented in the preceding pages was unchanged by the jury. Many helpful suggestions were made by the

jury and the checklist was revised in the light of these suggestions.

It was decided that the first important feature, enough bedrooms so each child has his own room or shares a room with only one other child near his own age, would be omitted from the checklist. Only a house which met this requirement should be given further consideration by the family if this is at all possible within the limits of its budget. If so large a house cannot be afforded, the family should look for a plan with some possibilities for expansion. A bedroom could, perhaps, be finished in the attic or basement, or a ground-level wing added in the future.

After selecting house plans or houses with enough bedrooms for the family, the checklist can be used to serve as a guide in further evaluation of special features to help lighten the work of the busy mother of small children and to provide a safe, pleasant home for all family members. The checklist which was developed is as follows:

CHECKLIST FOR EVALUATING HOUSE PLANS

|   | <u>Points</u> |
|---|---------------|
| <u>Sufficient Number of Bedrooms</u>  |               |
| The house should, first of all, have enough bedrooms so each child would have his own room or share a room with only one other child the same sex and near the same age.  |               |
| <u>Indoor Play Space (40 points)</u>  |               |
| 1. Basement, dry, well ventilated and lighted . . . . .   | 20            |
| 2. Special first floor play room  |               |
| a. primarily for child's play room . . . . .  | 15            |
| b. multi-use room for all family members . . . . .  | 5-10          |
| 3. Bedrooms for play space  |               |
| a. two small bedrooms, 10' x 12' . . . . .  | 5             |
| b. one small bedroom at least 10' x 12' . . . . .   | 3             |
| <u>Traffic Pattern from Main Entry (20 points)</u>  |               |
| 4. Main entry   |               |
| a. into hall leading directly to living room<br>and other rooms . . . . .   | 5             |
| b. into vestibule leading to living room only. . . . .  | 3             |
| c. directly into the living room . . . . .  | 0             |
| 5. Traffic pattern from main entry to kitchen   |               |
| a. through halls only . . . . .   | 5             |
| b. through dining area only. . . . .  | 4             |
| c. through end or side of living room. . . . .  | 3             |
| d. through conversation group in living room . . . . .  | -5            |
| 6. Traffic pattern from main entry to bedrooms  |               |
| a. through halls only. . . . .  | 5             |
| b. through end or side of living room. . . . .  | 3             |
| c. through conversation group in living room . . . . .  | -3            |
| 7. Traffic pattern from main entry to bath  |               |
| a. through halls only. . . . .  | 5             |
| b. through end or side of living room. . . . .  | 3             |
| c. through conversation group in living room . . . . .  | -3            |
| <u>Traffic Pattern from Children's Entry (35 points)</u>  |               |
| 8. If most convenient entry from children's outdoor play area is same as main entry, enter score for items 4-7 above minus 10 points if conversation group in living room is cut by traffic from this entry . . . . . | 0-20          |

|  | <u>Points</u> |
|--|---------------|
| 9. Separate entry  |               |
| a. into hall or vestibule . . . . .                                    | 5             |
| b. into multi-use room, or basement . . . . .                          | 5             |
| c. into kitchen or kitchen dining area                                 |               |
| 1) if traffic by-passes work area. . . . .                             | 4             |
| 2) if traffic is routed through work area. . . . .                     | 0             |
| 3) if entry and open door interfere with work area . .                 | -5            |
| 10. Traffic pattern from children's entry to kitchen                   |               |
| a. directly or through halls or multi-use room only . . .              | 5             |
| b. through family dining area . . . . .                                | 4             |
| c. through end or side of living room or guest<br>dining area. . . . . | 1             |
| d. through conversation group in living room. . . . .                  | -5            |
| 11. To indoor play area  |               |
| a. directly or through halls or multi-use room only . . .              | 3             |
| b. through guest dining room. . . . .                                  | 1             |
| c. through end or side of living room . . . . .                        | 0             |
| d. through kitchen or kitchen dining area                              |               |
| 1) by-passing work area. . . . .                                       | 2             |
| 2) cutting through work area . . . . .                                 | -3            |
| e. through conversation group in living room. . . . .                  | -3            |
| 12. To bedrooms  |               |
| a. through halls or multi-use room only . . . . .                      | 2             |
| b. through guest dining room. . . . .                                  | 1             |
| c. through end or side of living room . . . . .                        | 0             |
| d. through kitchen or kitchen dining area                              |               |
| 1) by-passing work area. . . . .                                       | 2             |
| 2) cutting through work area . . . . .                                 | -2            |
| e. through conversation group in living room. . . . .                  | -2            |
| 13. To bath  |               |
| a. through halls or multi-use room only . . . . .                      | 5             |
| b. through guest dining room. . . . .                                  | 0             |
| c. through end or side of living room . . . . .                        | -3            |
| d. through kitchen or kitchen dining area                              |               |
| 1) by-passing work area. . . . .                                       | -4            |
| 2) cutting through work area . . . . .                                 | -5            |
| e. through conversation group in living room. . . . .                  | -5            |
| 14. Traffic pattern from kitchen to play area                          |               |
| a. directly or through halls only . . . . .                            | 5             |
| b. through multi-use room or family dining area . . . . .              | 4             |
| c. through guest dining area. . . . .                                  | 2             |
| d. through end or side of living room . . . . .                        | -3            |
| e. through conversation group in living room. . . . .                  | -5            |

|   | <u>Points</u> |
|---|---------------|
| 15. Traffic pattern from kitchen to bath                  |               |
| a. directly or through halls only . . . . .               | 3             |
| b. through multi-use room or family dining area . . . . . | 2             |
| c. through guest dining area. . . . .                     | 1             |
| d. through end or side of living room . . . . .           | -1            |
| e. through conversation group in living room. . . . .     | -3            |
| f. if stairs must be climbed. . . . .                     | -3            |
| 16. Traffic pattern from kitchen to bedrooms              |               |
| a. directly or through halls only . . . . .               | 3             |
| b. through multi-use room or family dining area . . . . . | 2             |
| c. through guest dining area. . . . .                     | 1             |
| d. through end or side of living room . . . . .           | -1            |
| e. through conversation group in living room. . . . .     | -3            |
| f. if stairs must be climbed. . . . .                     | -3            |
| 17. Traffic pattern from laundry to play area             |               |
| a. directly or through halls only . . . . .               | 2             |
| b. through multi-use room or family dining area . . . . . | 2             |
| c. through kitchen. . . . .                               | 2             |
| d. through guest dining area. . . . .                     | 1             |
| e. through end or side of living room . . . . .           | -1            |
| f. through conversation group in living room. . . . .     | -2            |
| 18. Traffic pattern from laundry to bedrooms              |               |
| a. directly or through halls only . . . . .               | 2             |
| b. through multi-use room or family dining area . . . . . | 2             |
| c. through kitchen. . . . .                               | 2             |
| d. through guest dining area. . . . .                     | 1             |
| e. through end or side of living room . . . . .           | -1            |
| f. through conversation group in living room. . . . .     | -2            |
| g. if stairs must be climbed. . . . .                     | -2            |
| <u>Storage* (40 points)</u>                               |               |
| 19. Guest closet - minimum size, 2' x 3'. . . . .         | 5             |
| 20. Guest closet located                                  |               |
| a. in main entry hall or vestibule. . . . .               | 5             |
| b. near entry, in living room . . . . .                   | 3             |
| c. across room from entry . . . . .                       | 0             |
| 21. Clothes closet space                                  |               |
| a. at least 2' x 25'. . . . .                             | 5             |
| b. at least 2' x 20'. . . . .                             | 3             |
| c. less than 20'. . . . .                                 | 0             |

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\*McCullough, Helen E., Space Design for Household Storage. University of Illinois, Urbana, Illinois. Bulletin 557. 1952.  
 Small Homes Council Circular Series, Household Storage Units. University of Illinois, Urbana, Illinois. Index No. C5.1. 1953.

Points

22. Closet or peg rack near children's entry  
 a. if large enough for snow suits, boots, etc. . . . . 5  
 b. if room for only a few coats or jackets . . . . . 2
23. Storage for bulky indoor toys  
 a. in basement . . . . . 5  
 b. no basement, space for toy cupboard, at least  
     2' x 7' x 7' . . . . . 0-5
24. Storage for outdoor play equipment and tools  
 a. separate area, outdoors . . . . . 5  
 b. inside garage, with easy entry to car . . . . . 4  
 c. inside garage, with crowded entry to car. . . . . 1  
 d. in basement only. . . . . 1  
 e. no basement and inadequate outside storage . . . . . -5
25. Storage for cleaning equipment and supplies,  
     near point of use, at least 2' x 2' x 8' . . . . . 5
26. Storage for towels and linens, at least 12" x 3' x 8' . . . 3
27. Storage for blankets, pillows, etc.,  
     at least 2' x 2' x 8' . . . . . 2
28. Placement of basement stairs  
 a. near service entry, with clearance for large items  
     such as a freezer . . . . . 5  
 b. across room from entry but with clearance for  
     large items . . . . . 4  
 c. with short turns which prohibit storage of large items. 0  
 d. with desirable storage space and space for  
     freezer, piano, etc., on first floor. . . . . 1-5

Dining Space (45 points)

29. Family dining  
 a. minimum size, at least 7' x 8' . . . . . 10  
 b. slightly below minimum size . . . . . 5
30. a. Separate area or area in kitchen which does not  
     interfere with work area. . . . . 10  
 b. dining "L" off living room. . . . . 5  
 c. dining area which interferes with work area  
     in kitchen. . . . . -1  
 d. family dining space only in living room . . . . . -10
31. Dining space for family and guests  
 a. minimum size 9' x 11' . . . . . 10  
 b. slightly below minimum size . . . . . 5

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Points

32. a. separate area convenient to kitchen . . . . . 15  
 b. dining "L" off living room. . . . . 15  
 c. living room only. . . . . 5

Bedrooms (35 points)

33. Children's bedrooms separated from active living  
 area by some form of sound barrier . . . . . 10
34. All bedrooms and bath off common hall and closely  
 grouped for easy night care of children . . . . . 10
35. Master bedroom  
 a. at least 12' x 13'6" . . . . . 5  
 b. slightly under minimum size . . . . . 3
36. One bedroom, 10' x 12' . . . . . 5
37. Other bedroom or bedrooms, at least 9' x 10' . . . . . 5

Relation of Kitchen and Laundry to Play Areas (35 points)

## Indoor play space in relation to kitchen

38. a. Space for playpen and jumper chair, play  
 table and chair, and toy storage. . . . . 10  
 b. space for smaller play equipment only, with  
 dining table conveniently located to double  
 as play table . . . . . 5
39. Play room for more active play, near kitchen  
 a. same floor. . . . . 5  
 b. another floor, stairs near. . . . . 2

## Indoor play space in relation to laundry

40. Play space near laundry  
 a. space for play pen and jumper chair, play table  
 and chair, and toy storage. . . . . 5  
 b. space for smaller play equipment only with  
 dining table convenient to double as play table . . . 3
41. Play room for more active play, near laundry  
 a. same floor. . . . . 2  
 b. another floor, stairs near. . . . . 1

## Outdoor play space in relation to kitchen

42. Easily seen from windows . . . . . 5
43. Easily reached via a convenient door . . . . . 3

## Outdoor play space in relation to laundry

44. Easily seen from windows . . . . . 3
45. Easily reached via a convenient door . . . . . 2

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In making an actual selection of a home, a family with small children must select a desirable neighborhood and building site, a well constructed house with pleasing architectural design, and other features of importance to any homeseeker such as, enough bedrooms for the family, a conveniently planned kitchen, etc. Available house plans or completed houses which are adequate in these respects should be further evaluated to determine how well the plan meets the special needs of the family. The checklist is designed to be of assistance in this latter analysis only.

The weighting assigned to the items on the checklist was based on the emphasis each received in the literature. This weighting was considered by the jury and revisions were made in the light of their suggestions. An individual family might wish to value some of the items differently in view of their personal preferences.

The order of items on the check list was selected, partially, on the basis of the probable order in which the various features would be noted by a person who was studying a plan. In addition, items on which, in the literature, there seemed to be more agreement as to importance and relative weighting were placed first followed by items which were more likely to be weighted differently according to personal preference.

The literature indicated wide agreement among homeseekers as to their preferences and needs with regard to indoor play space, traffic from entries and between rooms, and storage space. Requirements as to size and desirable location of the dining space, size and location of bedrooms, and relation of indoor and outdoor play areas to the work

areas appeared to differ more, according to personal preferences. The literature reviewed indicated that some people preferred family dining space in the kitchen, some preferred a separate dining area and some a combination living-dining room.

While the majority of the references which discussed the point recommended that all bedrooms and the bath be off a common hall and closely grouped for easy night care of children, in a study summarized in the booklet by Paxton, "What People Want When They Buy A House,"<sup>22</sup> some families indicated that they preferred to have the master bedroom located away from the children's bedrooms.

It was commonly agreed in the literature that the busy mother of small children should be able to supervise the children from her work areas as they play both indoors and outdoors. Individual families have different values and interests in the use of the house. If the family primarily values the needs of the children they may be quite willing to utilize the guest dining area for play space a great deal of the time even though it opens off the living room. If they frequently entertain adult friends and value a neat and orderly living area they would find a dining room off the living room very unsuitable as a play room.

The family which has an income high enough to enable them to afford a family home including all desirable features would probably not wish to consider a plan further if it failed to rate well on Items 1-28 which refer to indoor play space, traffic from entries and between rooms and storage space. The remaining items would be evaluated in a more subjective manner according to personal preference. The

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<sup>22</sup>Paxton, Edward T., op cit., p. 112.

recommendations of the 1956 Women's Congress on Housing were relied upon for the construction of this latter part of the checklist, but an individual family should give these points thoughtful consideration and try to weigh the items in view of their desired use of the house. For example, if they wish to do much formal entertaining, a separate dining room and play space isolated from the living room and dining room may be more important to them than to the average family.

## CHAPTER IV

## EVALUATION OF A GROUP OF PLANS FOR NEW HOMES

## BY THE USE OF THE CHECKLIST

House plans which had been submitted for building permits in Meridian Township were examined. Meridian Township is adjacent to the City of East Lansing. Several new subdivisions were being developed in the township. There were many new homes being constructed in this area. Building plans and data were made readily available by the township officials. The group of plans to be studied were selected in such a manner that they were representative of this local area but no attempt was made to make the sample representative of a larger segment of the building industry. From 204 house plans for three-bedroom houses which had been submitted for permits during the period of January 1, 1955 to December 31, 1957, every third plan was selected, giving a sample of 68 plans. Estimated market values of the houses exclusive of lot were obtained from the township assessor. The assessor used an evaluation score sheet as a basis for the estimate of the market value of each house. For a few of the houses, the current selling price was obtained from the builders. The selling price, minus an estimated value for the lot, was about the same as the assessor's estimate of market value. For the purposes of this study, the important factor was that the estimated market values of the houses were formulated in the same manner so that the values would be comparable. Therefore, these estimates of market value were used as a basis for sorting the house plans into three different price groups.

The eight most expensive houses were dropped from the sample as no "luxury" homes were to be included in the study. The remaining 60 plans were sorted as to cost. Three groups of 20 house plans in three different price ranges were thus selected for evaluation. The lowest priced group consisted of houses from \$10,000 to \$18,500. The medium priced group ranged from \$19,000 to \$21,500. The highest priced group selected for study ranged from \$21,900 to \$30,000.

The checklist was used to evaluate each of the 60 house plans and a total score found for each plan.

The total scores ranged from 22 to 237 out of a possible 250 points. Table I gives the total score received by each of the 60 house plans ranked in order from the highest to the lowest score:

TABLE I

Total Scores Received by 60 Houses Ranked  
From Highest to Lowest Score

| Rank | Score | Price<br>Group | Estimated<br>Market<br>Value | Rank | Score | Price<br>Group | Estimated<br>Market<br>Value |
|------|-------|----------------|------------------------------|------|-------|----------------|------------------------------|
| 1    | 237   | High           | \$27,000                     | 31   | 182   | High           | \$22,800                     |
| 2    | 233   | High           | 29,700                       | 32   | 174   | High           | 23,027                       |
| 3    | 232   | High           | 29,591                       | 33   | 173   | Med.           | 19,814                       |
| 4    | 229   | High           | 29,830                       | 34   | 170   | Med.           | 19,350                       |
| 5    | 228   | High           | 28,254                       | 35   | 168   | Med.           | 19,136                       |
| 6    | 222   | High           | 25,727                       | 36   | 167   | High           | 22,219                       |
| 7    | 215+  | Med.           | 20,744                       | 37   | 166   | High           | 24,696                       |
| 8    | 215   | Med.           | 19,005                       | 38   | 162   | High           | 21,962                       |
| 9    | 213   | Low            | 17,900                       | 39   | 160   | Low            | 14,830                       |
| 10   | 212   | High           | 25,982                       | 40   | 159   | Med.           | 20,462                       |
| 11   | 210   | Med.           | 20,498                       | 41   | 157   | Low            | 15,960                       |
| 12   | 209   | High           | 29,560                       | 42   | 155   | Low            | 15,053                       |
| 13   | 206+* | High           | 23,400                       | 43   | 154   | Low            | 14,953                       |
| 14   | 206   | Med.           | 20,593                       | 44   | 153+  | Low            | 14,900                       |
| 15   | 205+  | Med.           | 21,400                       | 45   | 153   | Low            | 17,800                       |
| 16   | 205   | High           | 26,903                       | 46   | 152   | Low            | 14,900                       |
| 17   | 202++ | High           | 28,000                       | 47   | 149+  | Low            | 14,790                       |
| 18   | 202+  | High           | 27,000                       | 48   | 149   | Low            | 16,400                       |
| 19   | 202   | Med.           | 20,890                       | 49   | 144   | Low            | 16,525                       |
| 20   | 201   | High           | 27,000                       | 50   | 143+  | Low            | 15,664                       |
| 21   | 200   | Med.           | 19,678                       | 51   | 143   | Med.           | 19,480                       |
| 22   | 197   | Med.           | 19,476                       | 52   | 139   | Med.           | 19,200                       |
| 23   | 196   | High           | 23,990                       | 53   | 131   | Med.           | 20,085                       |
| 24   | 192+  | High           | 24,400                       | 54   | 127   | Low            | 16,220                       |
| 25   | 192   | Low            | 17,830                       | 55   | 119   | Low            | 15,360                       |
| 26   | 188+  | Low            | 16,643                       | 56   | 117   | Med.           | 21,030                       |
| 27   | 188   | Low            | 17,580                       | 57   | 115   | Med.           | 21,500                       |
| 28   | 186+  | Med.           | 20,160                       | 58   | 55    | Low            | 18,259                       |
| 29   | 186   | Med.           | 21,000                       | 59   | 39    | Low            | 14,531                       |
| 30   | 182+  | Med.           | 21,063                       | 60   | 22    | Low            | 10,276                       |

\*If two houses received the same score, they were evaluated subjectively for fine points of difference. For instance, both might have bedrooms as large as the minimum and receive the same score but one of the two might have larger bedrooms than the minimum size.



## COMPARISON OF SCORES IN THE DIFFERENT PRICE GROUPS

The scores received by houses in the low priced group ranged from a low of 22 to a high of 213. The average score for this group was 140.55 points. The houses in the medium priced group rated significantly higher, with scores ranging from 115 to 215 and an average score of 176.3.<sup>23</sup> The high priced group of houses received scores ranging from a low of 162 to a high of 237. The average score for the high priced group was 202.8. This was found to be significantly higher than the average for the medium priced group, and was also significantly higher than the average for the low priced group.<sup>24</sup> Thus, the suitability of a home is related to its cost to some extent. The scores, rank, and estimated market value of the three groups are shown in Table II.

Many desirable features, such as hall circulation, a half-bath near the children's entry, and play space on the first floor near the kitchen often are not included in a small, low-cost house. The house which received the highest score was a house in the high priced group. This house received 237 points and rated 22 points higher than the highest scoring house in the medium priced group and 24 points higher than the highest scoring house in the low priced group. The estimated market value of the highest scoring house was \$27,000, \$6,256

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<sup>23</sup>The difference between the mean scores was found to be significant at the 2 percent level, based on the "t" test.

<sup>24</sup>The difference between the means in each case was found to be significant at the 1 percent level, based on the "t" test.



TABLE II

Score, Rank and Market Value for Three Different Price Groups,  
Arranged with Respect to Scores

| LOW                  |      |                              | MEDIUM              |      |                              | HIGH                |      |                              |
|----------------------|------|------------------------------|---------------------|------|------------------------------|---------------------|------|------------------------------|
| Score                | Rank | Estimated<br>Market<br>Value | Score               | Rank | Estimated<br>Market<br>Value | Score               | Rank | Estimated<br>Market<br>Value |
| 213                  | 9    | \$17,900                     | 215+                | 7    | \$20,744                     | 237                 | 1    | \$27,000                     |
| 192                  | 25   | 17,830                       | 215                 | 8    | 19,005                       | 233                 | 2    | 29,700                       |
| 188+                 | 26   | 16,643                       | 210                 | 11   | 20,498                       | 232                 | 3    | 29,592                       |
| 188                  | 27   | 17,580                       | 206                 | 14   | 20,593                       | 229                 | 4    | 29,830                       |
| 160                  | 39   | 14,830                       | 205                 | 15   | 21,400                       | 228                 | 5    | 28,254                       |
| 157                  | 41   | 15,960                       | 202                 | 19   | 20,890                       | 222                 | 6    | 25,127                       |
| 155                  | 42   | 15,053                       | 200                 | 21   | 19,678                       | 212                 | 10   | 25,982                       |
| 154                  | 43   | 14,953                       | 197                 | 22   | 19,476                       | 209                 | 12   | 19,560                       |
| 153+                 | 44   | 14,900                       | 186+                | 28   | 20,160                       | 206                 | 13   | 23,400                       |
| 153                  | 45   | 17,880                       | 186                 | 29   | 21,000                       | 205                 | 16   | 26,903                       |
| 152                  | 46   | 14,900                       | 182                 | 30   | 21,063                       | 202++               | 17   | 28,000                       |
| 149+                 | 47   | 14,790                       | 173                 | 33   | 19,814                       | 202+                | 18   | 27,000                       |
| 149                  | 48   | 16,400                       | 170                 | 34   | 19,350                       | 201                 | 20   | 27,000                       |
| 144                  | 49   | 16,525                       | 168                 | 35   | 19,136                       | 196                 | 23   | 23,990                       |
| 143                  | 50   | 15,664                       | 159                 | 40   | 20,462                       | 192                 | 24   | 24,400                       |
| 127                  | 54   | 16,220                       | 143                 | 51   | 19,480                       | 181                 | 31   | 22,800                       |
| 119                  | 55   | 15,360                       | 139                 | 52   | 19,200                       | 174                 | 32   | 23,027                       |
| 55                   | 58   | 18,259                       | 131                 | 53   | 20,085                       | 167                 | 36   | 22,219                       |
| 39                   | 59   | 14,531                       | 117                 | 56   | 21,030                       | 166                 | 37   | 24,696                       |
| <u>22</u>            | 60   | 10,276                       | <u>115</u>          | 57   | 21,500                       | <u>162</u>          | 38   | 21,962                       |
| Average Score=140.55 |      |                              | Average Score=176.3 |      |                              | Average Score=202.8 |      |                              |



more than the highest scoring house in the medium priced group and \$9,100 more than the highest scoring house in the low priced group.

Seven of the houses in the medium priced group received scores which were lower than the lowest score received by the houses in the high priced group. Three houses in the low priced group received scores which were lower than the lowest scoring house in the medium priced group.

The lowest scoring house in the groups was the house with the lowest estimated market value (See Table III). However, the highest priced house in this low priced group scored only 55 points and the third lowest priced house in the same group scored 149 points, 8.45 points higher than the average for the low priced group.

In the medium priced group, the lowest priced house scored highest for the group and the highest priced house scored lowest. In the high priced group the lowest scoring house was again the lowest priced house in the group. The house which received the best score had an estimated market value which was \$2,830 lower than the most expensive house evaluated. The most expensive house ranked fourth among the house plans evaluated with a score of 229 points, 8 points lower than the highest scoring house.

It appears that a better home for a family with small children can be obtained if the family can afford an expensive house, but many expensive houses also are poorly planned to meet its special needs. The family with a limited budget for its house purchase may, by careful evaluation of the plan with respect to its special needs, be able to obtain a house which is quite well planned for a family home.

TABLE III

Market Value, Score and Rank for Three Different Price Groups,  
Arranged With Respect to Market Value

| LOW                          |       |      | MEDIUM                       |       |      | HIGH                         |       |      |
|------------------------------|-------|------|------------------------------|-------|------|------------------------------|-------|------|
| Estimated<br>Market<br>Value | Score | Rank | Estimated<br>Market<br>Value | Score | Rank | Estimated<br>Market<br>Value | Score | Rank |
| \$10,276                     | 22    | 60   | \$19,005                     | 215   | 8    | \$21,962                     | 162   | 38   |
| 14,531                       | 39    | 59   | 19,136                       | 168   | 35   | 22,219                       | 167   | 36   |
| 14,790                       | 149   | 48   | 19,200                       | 139   | 52   | 22,800                       | 181   | 31   |
| 14,830                       | 160   | 39   | 19,350                       | 170   | 34   | 23,027                       | 174   | 32   |
| 14,900                       | 153   | 44   | 19,476                       | 197   | 22   | 23,400                       | 206   | 13   |
| 14,900                       | 152   | 46   | 19,480                       | 143   | 51   | 23,990                       | 196   | 23   |
| 14,953                       | 154   | 43   | 19,678                       | 200   | 21   | 24,400                       | 192   | 24   |
| 15,053                       | 155   | 42   | 19,814                       | 173   | 33   | 24,696                       | 166   | 37   |
| 15,360                       | 127   | 55   | 20,085                       | 131   | 53   | 25,127                       | 222   | 6    |
| 15,664                       | 143   | 50   | 20,160                       | 186   | 28   | 25,982                       | 212   | 10   |
| 15,960                       | 157   | 41   | 20,462                       | 159   | 40   | 26,903                       | 205   | 16   |
| 16,220                       | 127   | 54   | 20,498                       | 210   | 11   | 27,000                       | 201   | 20   |
| 16,400                       | 149   | 48   | 20,593                       | 206   | 14   | 27,000                       | 202   | 18   |
| 16,525                       | 144   | 49   | 20,744                       | 215   | 7    | 27,000                       | 237   | 1    |
| 16,643                       | 188+  | 26   | 20,890                       | 202   | 19   | 28,000                       | 202   | 17   |
| 17,580                       | 188   | 27   | 21,000                       | 186   | 29   | 28,254                       | 228   | 5    |
| 17,830                       | 192   | 25   | 21,030                       | 117   | 56   | 29,560                       | 209   | 12   |
| 17,880                       | 153   | 45   | 21,063                       | 182   | 30   | 29,592                       | 232   | 3    |
| 17,900                       | 213   | 9    | 21,400                       | 205   | 15   | 29,700                       | 233   | 2    |
| 18,259                       | 55    | 58   | 21,500                       | 115   | 57   | 29,830                       | 229   | 4    |



To illustrate the variety of houses, with respect to suitability for families with small children, which are available at the different price levels, a discussion of the features found in the plans evaluated and a detailed description of the house plans which rated the highest and the lowest in each of the three price groups is presented.

#### FREQUENCY OF OCCURRENCE OF ITEMS ON THE CHECKLIST

The frequency of occurrence of the items on the checklist serves as an indication of how well today's homes are meeting the needs of families with small children. The differences in features found in the low priced, the medium priced, and the high priced groups are also pointed up by an examination of the frequency of occurrence of the items on the checklist in each of the groups.

##### Indoor Play Space

A basement suitable for use as indoor play space was found in 54 of the 60 homes (See Table IV). All of the high priced homes had basements. But, four of the low priced and two of the medium priced homes had no basements. Only one of these basementless houses had a family activities room. The remaining five had no provision for space for children's indoor play. Seven of the 60 houses had a ground level family room. In two of these, the activities room appeared to be designed primarily for a children's play area. In the other five, the family room seemed to be intended for multi-use by all family members, often even for family dining, and thus would not really be a room in which children were "free to romp and even make clutter without fear of being scolded."<sup>25</sup>

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<sup>25</sup>Ogg, Elizabeth and Sandbank, Harold, op. cit., p. 11.



TABLE IV

## Indoor Play Space

| Item from Checklist  | Number of Houses Receiving a Score<br>For the Item, by Price Groups |        |      |       |
|--|---|--------|------|-------|
|  | Low   | Medium | High | Total |
| Basement, dry, well-ventilated<br>and lighted                  | 16  | 18     | 20   | 54    |
| Special first floor playroom<br>primarily for child's playroom | 1   | 0      | 1    | 2     |
| multi-use room for all family<br>members                       | 0   | 1      | 4    | 5     |
| Bedrooms for play space  |   |        |      |       |
| two small bedrooms at least<br>10' x 12'                       | 3   | 6      | 17   | 26    |
| one small bedroom at least<br>10' x 12'                        | 7   | 5      | 0    | 12    |

The largest of the three bedrooms was assumed to be the master bedroom. A bedroom approximately 10' x 12' was considered as minimum size to allow space for play equipment and toy storage and space for play in addition to the ordinary bedroom furnishings. In 26 of the 60 houses there were two bedrooms in addition to the master bedroom which were approximately 10' x 12' in size. In an additional 12 houses only one of the two smaller bedrooms was as large as this. The remaining 22 houses had children's bedrooms which were too small to provide space for play.

There was quite a difference between the three price groups in the frequency of occurrence of children's bedrooms large enough for play space. Only three houses in the low priced group had two children's bedrooms which were 10' x 12' or over. An additional 7 houses had one children's bedroom which was this large. In the high priced group 17

of the houses had two children's bedrooms which were large enough to provide play space. Three of the houses in the high priced group had inadequately sized bedrooms, however, with neither of the two small bedrooms as large as 10' x 12'.

If the home does not have a basement for play space, the size of the bedrooms becomes an especially important factor because they are certain to be relied upon heavily for play space.

#### Main Entry - Location and Traffic Pattern

About half the houses had a main entry which entered a hall leading directly to the living room and also to other rooms in the house (See Table V). Only four of the low priced homes, but 17 of the high priced homes had a central hall entry. This type of entry is desirable from the standpoint of avoiding cross-room traffic and the tracking of dirt into the rooms of the home. A vestibule leading only into the living room can provide a space with an easily maintained floor covering which is not damaged by moisture. The plans of 13 houses included a vestibule entrance. The distribution of this feature among price groups was six in the low priced, six in the medium priced and one in the high priced group. Eliminating this hall space is, of course, usually an economy. Ten of the low priced homes had a main entry door opening directly into the living room while only two of the high priced homes lacked an entry either into a vestibule or a hall.

The traffic pattern or path of circulation from the main entry to the kitchen, bedrooms, and bathroom may not be as important to the

TABLE V

## Main Entry - Location and Traffic Pattern

| Item from Checklist  | Number of Houses Receiving a Score<br>for the Item, by Price Groups |        |      |       |
|--|---|--------|------|-------|
|  | Low   | Medium | High | Total |
| <b>Main entry:</b>   |   |        |      |       |
| into hall leading directly to<br>living room and other rooms | 4   | 10     | 17   | 31    |
| into vestibule leading to<br>living room only                | 6   | 6      | 1    | 13    |
| directly into the living room                                | 10  | 4      | 2    | 16    |
| <b>Traffic pattern from main entry<br/>to kitchen:</b>       |   |        |      |       |
| through halls only   | 2   | 6      | 14   | 22    |
| through dining area only                                     | 2   | 4      | 2    | 8     |
| through end or side of<br>living room                        | 9   | 8      | 2    | 19    |
| through conversation group<br>in living room                 | 7   | 2      | 2    | 11    |
| <b>Traffic pattern from main entry<br/>to bedrooms:</b>      |   |        |      |       |
| through halls only   | 2   | 10     | 15   | 27    |
| through end or side of<br>living room                        | 11  | 6      | 5    | 22    |
| through conversation group<br>in living room                 | 7   | 4      | 0    | 11    |
| <b>Traffic pattern from main<br/>entry to bath:</b>          |   |        |      |       |
| through halls only   | 3   | 9      | 15   | 27    |
| through end or side of<br>living room                        | 10  | 6      | 5    | 21    |
| through conversation group<br>in living room                 | 7   | 5      | 0    | 12    |

homemaker as the traffic pattern from the entry used by the children to enter the house from their outdoor play area. However, it will be used

to some extent by all family members including the homemaker each time she answers the door.

About one-third (22) of the houses routed traffic through a hall from the main entry to the kitchen. Frequently the house plan was arranged so that traffic was routed from the hall into the dining area, then on into the kitchen. In eight houses the only room which had to be crossed to reach the front or main entry door was the dining room. If this area has an easily cleaned floor, traffic from the kitchen to the main entry would disrupt its use very little. One-half of the house plans had one of these two types of circulation from the kitchen to the main door. Sixteen such plans were in the high priced group. Just four of the low priced homes had a traffic pattern from main entry to kitchen which used halls or passed only through the dining area. Four-fifths of the low priced homes routed traffic from the front entry to the kitchen through the living room. In seven of them, traffic would have to pass through the only convenient space for the placing of furniture to form a pleasant conversation group.

Traffic patterns from the main entry to bedrooms and bath were either through halls or through the living room in all of the plans evaluated. Almost half (27) of the houses had a hall to carry this traffic with about half of these (15) being in the high priced group. Seven of the low priced homes routed traffic to both bedrooms and bath through the conversation group.

#### Family or Children's Entry - Location and Traffic Pattern

In only five houses did the main entry appear to be the one most likely to be used by children as they entered the house from their outdoor play area (See Table VI). In the other 55 houses, a side or rear

TABLE VI

## Family or Children's Entry - Location and Traffic Pattern

| Item from Checklist                                  | Number of Houses Receiving a Score<br>for the Item, by Price Groups |        |      |       |
|--|---|--------|------|-------|
|  | Low   | Medium | High | Total |
| Same as main entry                                   | 1   | 1      | 3    | 5     |
| Separate entry                                       |   |        |      |       |
| enter hall or vestibule                              | 9   | 10     | 12   | 31    |
| enter multi-use room, or<br>basement                 | 2   | 2      | 4    | 8     |
| enter kitchen or kitchen dining<br>area              |   |        |      |       |
| if traffic by-passes work area                       | 4   | 5      | 1    | 10    |
| if traffic is routed through<br>work area            | 3   | 2      | 0    | 5     |
| if entry and open door inter-<br>fere with work area | 1   | 0      | 0    | 1     |
| Traffic pattern from children's<br>entry:            |   |        |      |       |
| To kitchen;  |   |        |      |       |
| directly or through halls or<br>multi-use room only  | 16  | 16     | 15   | 47    |
| through family dining area                           | 2   | 2      | 2    | 6     |
| through end or side of<br>living room                | 1   | 1      | 0    | 2     |
| To Indoor Play Area;                                 |   |        |      |       |
| directly or through halls or<br>multi-use room only  | 12  | 12     | 14   | 38    |
| through guest dining room                            | 2   | 3      | 2    | 7     |
| through end or side of<br>living room                | 1   | 0      | 0    | 1     |
| through kitchen or kitchen<br>dining area;           |   |        |      |       |
| by-passing work area                                 | 1   | 2      | 2    | 5     |
| cutting through work area                            | 2   | 1      | 0    | 3     |
| through conversation group<br>in living room         | 1   | 0      | 0    | 1     |
| To Bedrooms;   |   |        |      |       |
| through halls or multi-use<br>room only              | 5   | 4      | 5    | 14    |
| through guest dining room                            | 2   | 6      | 2    | 10    |
| through end or side of<br>living room                | 1   | 1      | 0    | 2     |

TABLE VI (Continued)

| Item from Checklist  | Number of Houses Receiving a Score<br>for the item, by Price Groups |        |      |       |
|--|---|--------|------|-------|
|  | Low   | Medium | High | Total |
| To Bedrooms (continued)  |   |        |      |       |
| through kitchen or kitchen<br>dining area;<br>by-passing work area | 1   | 3      | 1    | 5     |
| cutting through work area  | 7   | 4      | 8    | 19    |
| through conversation group<br>in living room                       | 3   | 1      | 1    | 5     |
| To Bath;   |   |        |      |       |
| through halls or multi-use<br>room only                            | 3   | 5      | 7    | 15    |
| through guest dining room  | 4   | 4      | 1    | 9     |
| through end or side of<br>living room                              | 3   | 2      | 1    | 6     |
| through kitchen or kitchen<br>dining area;<br>by-passing work area | 0   | 3      | 1    | 4     |
| cutting through work area  | 6   | 2      | 5    | 13    |
| through conversation group<br>in living room                       | 3   | 3      | 2    | 8     |

door provided a more convenient entry for the use of small children.

A very great deal of cleaning work and steps could be saved if this entry was well located. About half of the house plans had a family entry which entered a hall or vestibule. This hall or vestibule was frequently at the head of the basement stairs. Forty-seven of the plans had either direct access to the kitchen from the family entry or traffic passed only through a hall or a multi-purpose room. In an additional six houses, traffic from the family entry to the kitchen passed through the dining area. One house in the low priced and one in the medium priced group routed traffic from the family entry through the living room to the kitchen.

Basements and dining areas were most frequently utilized for indoor play space. Thus, fairly direct access to the play area was available in many of the houses. Thirty-eight house plans routed traffic only through halls or multi-use rooms, seven through the dining area and five through the kitchen, but in such a way that it did not interfere with the work area. In the remaining five houses, the children had to go through the living room or the mother's work area in the kitchen to get from the entry to the indoor play area.

Traffic routes from the family entry to the bedrooms and, even more important, to the bathroom were less frequently well planned. Only 14 of the houses had plans which permitted traffic to pass from the family entry to the bedrooms through halls or a multi-use room only. Seventeen plans had this desirable type of circulation from the family entry to a bathroom. Little difference among the price groups was evident in respect to the traffic patterns from the family entry to the other rooms in the house.

#### Traffic Pattern Between Rooms

About three-fourths of the homes in each price group had hall circulation between the kitchen and play areas (See Table VII). Plans of two of the low priced group routed traffic from the kitchen to the indoor play areas through the conversation group in the living room. None in the medium or high priced group were planned this way.

Forty-four of the homes had laundry areas in the basements. Thus, play space was convenient to the laundry area. However, basement laundry facilities necessitate stair climbing, especially if the family does not have a clothes dryer.





TABLE VII

## Traffic Pattern Between Rooms

| Item from Checklist                          | Number of Houses Receiving a Score for the Item, by Price Groups |        |      |       |
|--|--|--------|------|-------|
|  | Low  | Medium | High | Total |
| Traffic pattern from kitchen to play area:   |  |        |      |       |
| Directly or through halls only               | 15   | 14     | 15   | 44    |
| Through guest dining area                    | 3  | 3      | 3    | 9     |
| Through multi-use room or family dining area | 0  | 0      | 2    | 2     |
| Through end or side of living room           | 0  | 1      | 0    | 1     |
| Through conversation group in living room    | 2  | 0      | 0    | 2     |
| Traffic pattern from kitchen to bath:        |  |        |      |       |
| Directly or through halls only               | 6  | 8      | 12   | 26    |
| Through multi-use room or family dining area | 6  | 1      | 3    | 10    |
| Through guest dining area                    | 2  | 7      | 2    | 11    |
| Through end or side of living room           | 3  | 3      | 2    | 8     |
| Through conversation group in living room    | 3  | 1      | 0    | 4     |
| If stairs must be climbed                    | 1  | 0      | 0    | 1     |
| Traffic pattern from kitchen to bedrooms:    |  |        |      |       |
| Directly or through halls only               | 2  | 5      | 10   | 17    |
| Through multi-use room or family dining area | 5  | 1      | 2    | 8     |
| Through guest dining area                    | 2  | 7      | 4    | 13    |
| Through end or side of living room           | 4  | 6      | 3    | 13    |
| Through conversation group in living room    | 3  | 1      | 1    | 5     |
| If stairs must be climbed                    | 1  | 3      | 1    | 5     |
| Traffic pattern from laundry to play area:   |  |        |      |       |
| Directly or through halls only               | 16   | 18     | 19   | 53    |
| Through end or side of living room           | 0  | 0      | 1    | 1     |
| Through conversation group in living room    | 2  | 0      | 0    | 2     |
| No area especially designed for play area    | 4  | 0      | 0    | 4     |

TABLE VII (Continued)

| Item from Checklist                             | Number of Houses Receiving a Score<br>for the Item, by Price Groups |        |      |       |
|---|---|--------|------|-------|
|   | Low   | Medium | High | Total |
| Traffic pattern from laundry to<br>bedrooms:    |   |        |      |       |
| Directly or through halls only                  | 2   | 5      | 5    | 12    |
| Through multi-use room or family<br>dining area | 4   | 3      | 2    | 9     |
| Through kitchen                                 | 6   | 2      | 6    | 14    |
| Through guest dining area                       | 4   | 4      | 3    | 11    |
| Through end or side of living<br>room           | 2   | 0      | 2    | 4     |
| If stairs must be climbed                       | 13  | 13     | 18   | 44    |

Storage

Only two of the houses had guest closets less than 2' x 3'. These homes were in the low priced group (See Table VIII). Three of the guest closets, one in the low priced and two in the medium priced group, were poorly located, being across the room from the main entry. Twice as many houses (18) in the high priced as in the low priced group (9) had a guest closet which was located in the front entry hall or vestibule. Forty-one houses had closets in the main entry hall or vestibule and an additional 11 had the closet located in the living room near the main entry.

Clothes closet space should be sufficient to accommodate all seasonal clothing in every day use, as well as outdoor wraps and out-of-season clothing. Only 37 of the 60 houses had sufficient clothes closet space for a four-member family, and only 22 houses had sufficient storage space of this type for a five-member family. Fifteen of these 22 were in the high priced, five in the medium priced, and two in the low priced group.

TABLE VIII

## Household Storage

| Items from Checklist   | Number of Houses Receiving a Score<br>for the Item, by Price Groups |        |      |       |
|--|---|--------|------|-------|
|  | Low   | Medium | High | Total |
| Guest closet:  |   |        |      |       |
| Minimum size, 2' x 3'  | 18  | 20     | 20   | 58    |
| In main entry hall or vestibule  | 9   | 14     | 18   | 41    |
| Near entry, in living room   | 5   | 4      | 2    | 11    |
| Across room from entry   | 1   | 2      | 0    | 3     |
| Clothes closet space:  |   |        |      |       |
| At least 2' x 25'  | 2   | 5      | 15   | 22    |
| At least 2' x 20'  | 8   | 5      | 2    | 15    |
| Less than 20'  | 10  | 10     | 13   | 33    |
| Closet or peg rack near<br>children's entry:   |   |        |      |       |
| If large enough for snow<br>suits, boots, etc.   | 5   | 6      | 11   | 22    |
| If room for only a few coats<br>or jackets   | 3   | 4      | 0    | 7     |
| Storage for bulky indoor toys:   |   |        |      |       |
| In basement  | 16  | 18     | 20   | 54    |
| No basement, space for toy cup-<br>board, at least 2' x 7' x 7'                            | 0   | 2      | 1    | 3     |
| Storage for outdoor play equip-<br>ment and tools:   |   |        |      |       |
| Separate area, outdoors  | 2   | 3      | 2    | 7     |
| Inside garage, with easy entry<br>to car   | 4   | 8      | 13   | 25    |
| Inside garage, with crowded<br>entry to car  | 1   | 1      | 0    | 2     |
| In basement only   | 11  | 8      | 5    | 24    |
| No basement and inadequate<br>outside storage  | 2   | 0      | 0    | 2     |
| Storage for cleaning equipment<br>and supplies-near point of use,<br>at least 2' x 2' x 8' | 9   | 16     | 14   | 39    |
| Storage for towels and linens,<br>at least 12" x 3' x 8'                                   | 18  | 19     | 19   | 56    |

TABLE VIII (Continued)

| Items from Checklist  | Number of Houses Receiving a Score<br>for the Item, by Price Groups |        |      |       |
|---|---|--------|------|-------|
|   | Low   | Medium | High | Total |
| Storage for blankets, pillows,<br>etc., at least 2' x 2' x 8'                         | 6   | 13     | 14   | 33    |
| Placement of basement stairs:   |   |        |      |       |
| Near service entry-with clear-<br>ance for large items such as<br>freezer             | 11  | 7      | 8    | 26    |
| Across room from entry but with<br>clearance for large items                          | 3   | 2      | 6    | 11    |
| Short turns which prohibit<br>storage of large items                                  | 2   | 9      | 6    | 17    |
| With desirable storage space<br>and space for freezer,<br>piano, etc., on first floor | 1   | 1      | 0    | 2     |

A family with small children would find a closet well designed to hold the children's outdoor wraps and boots located near the family or children's entry a very great help in saving steps, clutter and cleaning effort. Very few houses had a closet near this entry. If the home had a broom closet which was of minimum adequate or larger size, this could be used to serve as storage for a few coats or jackets. With such double purpose storage spaces as this included, only 29 houses provided for any storage of this type and only 22 of these had really adequate space. Half of these 22 were in the high priced group of homes.

The basement is rather far from the point of use of many toys but if there is a basement the problem of storage of bulky indoor toys is partially solved. Fifty-four houses had basement storage facilities. Three of the basementless houses had space where one could plan for a 2' x 7' x 7' toy cupboard.

Ideally, outdoor play equipment and tools should be stored in a well designed storage space which opens directly to the out-of-doors.

Seven of the houses had such a storage space, two in the low priced, three in the medium priced, and two in the high priced group. More of the houses in the high priced group (high, 13; medium, 8; low, 4) had garages which were large enough to supply needed storage space without crowding the garage so that access to the car was difficult.

Two of the houses, both in the low priced group, had no basement and also no other adequate storage space for outdoor toys. About two-thirds of the houses had storage space for cleaning equipment and supplies. Only nine of the low priced group had a "broom" closet, while 16 of the middle priced and 14 of the high priced group had such storage space.

Most of the houses had linen closets. All but four had a linen closet at least 12" x 3' x 8'. Thirty-three houses either had a separate closet for storing blankets or had a linen closet large enough to store both blankets and linens.

Since the basement often is the only storage space for both bulky indoor toys and outdoor play equipment and tools, the location of the basement stairs is very important. Less than half of the houses (26) had basement stairways which were near the service entry and placed so that there was clearance for very large items such as a piano or a home freezer chest. Another 11 were across a room from the entry but did allow clearance so that large items could be carried down the stairs. Seventeen of the houses had stairs located so that short turns at the head or foot of the stairs did not allow for sufficient clearance. The width of the stairs and turns in stairs or at the head or foot should be carefully checked in a house plan or in

a house one is considering buying to be sure that both the second floor and basement could be put to the desired uses.

### Dining Space

Forty-seven houses had family dining space which was at least 7' x 8' (See Table IX). No difference was apparent among price groups.

TABLE IX  
Dining Space

| Items from Checklist   | Number of Houses Receiving a Score for the Item, by Price Groups |        |      |       |
|--|--|--------|------|-------|
|  | Low  | Medium | High | Total |
| Family dining:   |  |        |      |       |
| Minimum size—at least 7' x 8'  | 15   | 17     | 15   | 47    |
| Slightly below minimum size  | 5  | 3      | 5    | 13    |
| Separate area or area in kitchen which does not interfere with work area | 11   | 12     | 18   | 41    |
| Dining area which interferes with work area in kitchen                   | 6  | 2      | 1    | 9     |
| Family dining space only in living room                                  | 1  | 1      | 0    | 2     |
| Dining space for family and guests:                                      |  |        |      |       |
| Minimum size 9' x 11'  | 13   | 19     | 19   | 51    |
| Slightly below minimum size  | 7  | 1      | 1    | 9     |
| Separate area convenient to kitchen                                      | 6  | 9      | 7    | 22    |
| Dining "L" off living room   | 2  | 4      | 7    | 13    |
| Living room only   | 12   | 14     | 6    | 32    |

The remaining houses had dining space which was nearly minimum size. However, this space was not well located in all of these plans. Only 41 of the houses had a separate area for family dining or a space in the kitchen which did not interfere with the work area. Nine of the houses, six in the low priced, two in the medium priced, and one in the

high priced group, had this area located so that it interfered with the kitchen work area. Two houses had no space for family dining other than in the living room. Most houses had sufficient dining space for family and guests, though nine of the houses had an area which was less than 9' wide. Only about one-third (22) of the houses had a separate dining area large enough for 10 to 12 persons. Eighteen house plans had a dining "L" off the living room. This has become popular recently and would probably suit most families. Over half of the houses could accommodate dinner guests only in the living room. Few living rooms were larger than about 13' x 20' so the dining space would tend to crowd the conversation group in most of these cases.

### Bedrooms

One floor houses are popular now. A disadvantage of such houses might be the transmission of noise from the active living and work areas to the bedroom area. Only about half the homes had some form of sound buffer such as a study to separate the children's bedrooms from household noise (See Table X). There was little difference in this respect among houses in the three price groups.

Most of the house plans had the three bedrooms and the bath closely grouped and off a common hall for easy night care of children. Four houses, three in the low priced and one in the medium priced group had the bedrooms separated farther than would be desirable for a family with small children.

The bedroom sizes varied greatly. A home having bedrooms with an area as large as the minimum suggested size, even though they were a bit narrower and longer received full score; if the rooms were near

TABLE X

## Bedrooms

| Items from Checklist  | Number of Houses Receiving a Score<br>for the Item, by Price Groups |        |      |       |
|---|---|--------|------|-------|
|   | Low   | Medium | High | Total |
| Children's bedrooms separated<br>from active living area by some<br>form of sound barrier       | 10  | 14     | 11   | 35    |
| All bedrooms and bath off common<br>hall and closely grouped for easy<br>night care of children | 17  | 19     | 20   | 56    |
| Minimum sizes:  |   |        |      |       |
| Master bedroom, at least<br>12' x 13'6"   | 1   | 9      | 14   | 24    |
| Slightly under minimum size   | 5   | 6      | 2    | 13    |
| One bedroom, at least 10' x 12'   | 10  | 11     | 17   | 38    |
| Other bedroom or bedrooms,<br>at least 9' x 10'   | 20  | 20     | 20   | 60    |

the suggested size, part score was given, but if they were several feet under size the house received no score for these items.

In all 60 house plans, the smallest bedroom was about 9' x 10'. Only 10 houses in the low priced, 11 in the medium priced, and 17 in the high priced group had the middle sized bedroom as large as 10' x 12'. In the remaining 22 houses, both of the two smaller bedrooms were about 9' x 10'. A "master" bedroom should be about 12' x 13'6" or 11' x 15' to be as large as desired by most homeseekers. Only one house in the low priced group had a bedroom this size. However, five of the low priced houses had a master bedroom which was just slightly under this minimum. The medium priced group included 9 houses with adequate sized master bedrooms and an additional six with a master bedroom



almost large enough. Even in the high priced homes only 14 houses had a 12' x 13'6" bedroom, with two others approaching this minimum. Of the entire group of 60, 37 houses had adequate or nearly adequate sized master bedrooms.

#### Relation of Indoor Play Space to Kitchen and Laundry Area

Small children need indoor play space near the mother's work area but not directly underfoot. A dining area usually is used for many family activities in addition to dining. The dining area can often be used to furnish needed play space if it is large enough to accommodate some play equipment in addition to the dining furniture. Twenty-six of the houses had a space which could conveniently be used for children's play near the kitchen. Twelve of these were in the high priced, 11 in the medium priced, and only three in the low priced group (See Table XI). All of the rest had some space near the kitchen for small play equipment such as baby's jumper chair. The dining table could be used for a play table at times.

Only 15 of the homes had room on the same floor as the kitchen for very active play. Of these, eight were in the high priced, four in the medium priced, and three in the low priced group. Thirty-nine had basement play space with the stairs near the kitchen.

Most of the houses had basement laundry facilities and hence had indoor play space near this work area. All the houses had at least space for small play equipment near the laundry area and all but six had space for more active play on the same floor as the laundry. Two of these six had the laundry located on the first floor with active play space in the basement.

TABLE XI

## Relation of Kitchen and Laundry Areas to Play Areas

| Items from Checklist  | Number of Houses Receiving a Score<br>for the Item, by Price Groups |        |      |       |
|---|---|--------|------|-------|
|   | Low   | Medium | High | Total |
| <b>Play space near kitchen:</b>   |   |        |      |       |
| Space for playpen and jumper chair, play table and chair, and toy storage                             | 3   | 11     | 12   | 26    |
| Space for smaller play equipment only, with dining table conveniently located to double as play table | 17  | 9      | 8    | 34    |
| Play room for more active play - same floor   | 3   | 4      | 8    | 15    |
| another floor, stairs near  | 13  | 14     | 12   | 39    |
| <b>Play space near laundry:</b>   |   |        |      |       |
| Space for play pen and jumper chair, play table and chair, and toy storage                            | 17  | 19     | 18   | 54    |
| Space for smaller play equipment only, and dining table convenient to double as play table            | 3   | 1      | 2    | 6     |
| Play room for more active play - same floor   | 17  | 19     | 18   | 54    |
| another floor, stairs near  | 0   | 0      | 2    | 2     |
| <b>Outdoor play space in relation to kitchen:</b>   |   |        |      |       |
| Easily seen from windows  | 17  | 16     | 19   | 52    |
| Easily reached via a convenient door  | 18  | 18     | 17   | 53    |
| <b>Outdoor play space in relation to laundry:</b>   |   |        |      |       |
| Easily seen from windows  | 3   | 1      | 2    | 6     |
| Easily reached via a convenient door  | 4   | 4      | 4    | 12    |

Outdoor play space could easily be seen from the kitchen windows in 52 of the houses and in 53, it could be reached by way of a convenient

door. Little difference was apparent among price groups in relation to ease of supervising outdoor play from the kitchen. The laundry area, however, was rarely located where the mother could easily watch over outdoor play. Only six of the houses had a window in the laundry area overlooking the outdoor play area. The exterior door was usually up a flight of stairs and some distance from the basement laundry facilities. Only 12 houses had the laundry area located so the outdoor play area could be easily reached. The mother of small children would have to do her ironing in the dining area or kitchen in order to work and watch over the children while doing this time-consuming portion of the laundry work.

The desirable features which were found in at least two times as many houses in the high priced group as in the low priced group are as follows:

1. A first floor multi-use room.
2. Two children's bedrooms large enough to double for play space.
3. Main entry into a hall leading to the living room and to other rooms.
4. Traffic pattern from the main entry to the kitchen, bedrooms and bath through halls.
5. Traffic pattern from the children's entry to the bath only through halls or a multi-use room.
6. Traffic from the kitchen to the bedrooms and the bath through halls.
7. Traffic pattern from the laundry to the bedrooms through halls.

8. A guest closet located in the entry hall or vestibule.
9. At least 2' x 25' of clothes closet space.
10. A closet near the children's entry large enough for snow suits and boots.
11. Storage for outdoor play equipment and tools inside the garage with easy entry to the car.
12. Storage for blankets, pillows, etc., about 2' x 2' x 8'.
13. Space for play pen and jumper chair, play table and chair, and toy storage near the kitchen but not in the work area.
14. Play room for more active play on the same floor as the kitchen.

The desirable features which were found in at least two times as many house plans in the high priced group as in both the medium priced group and the low priced group are as follows:

1. First floor multi-use room.
2. Two children's bedrooms large enough to double for play space.
3. Traffic pattern from the main entry to the kitchen through halls.
4. Traffic pattern from the kitchen to the bedrooms through halls.
5. At least 2' x 25' of clothes closet space.
6. Play room for active play on the same floor as the kitchen.

However, less than half of the 60 house plans included the following desirable features:

1. Two children's bedrooms large enough to double for play space.

2. Traffic patterns from the main entry to the kitchen, bedrooms and bath through halls.
3. Traffic pattern from the children's entry to the bedrooms and bath only through halls, a multi-use room, or the kitchen, by-passing the work area.
4. Traffic pattern from the kitchen to the bedrooms only through halls or a multi-use room.
5. At least 2' x 25' of clothes closet space.
6. Storage space near the children's entry for outdoor wraps and boots.
7. Separate outdoor area to provide storage for play equipment and tools. (However, 32 plans provided either this feature or storage inside the garage with easy entry to the car.)
8. Basement stairs located near the service entry with clearance for large items such as a freezer chest. (However, 37 had either this feature or a basement stairs with clearance for large items but located across a room from the service entry.)
9. Separate area convenient to kitchen for family and guest dining. (However, 35 had a separate area or a dining L off the living room.)
10. Children's bedrooms separated from the active living area by a sound barrier.
11. A master bedroom at least 12' x 13'6".

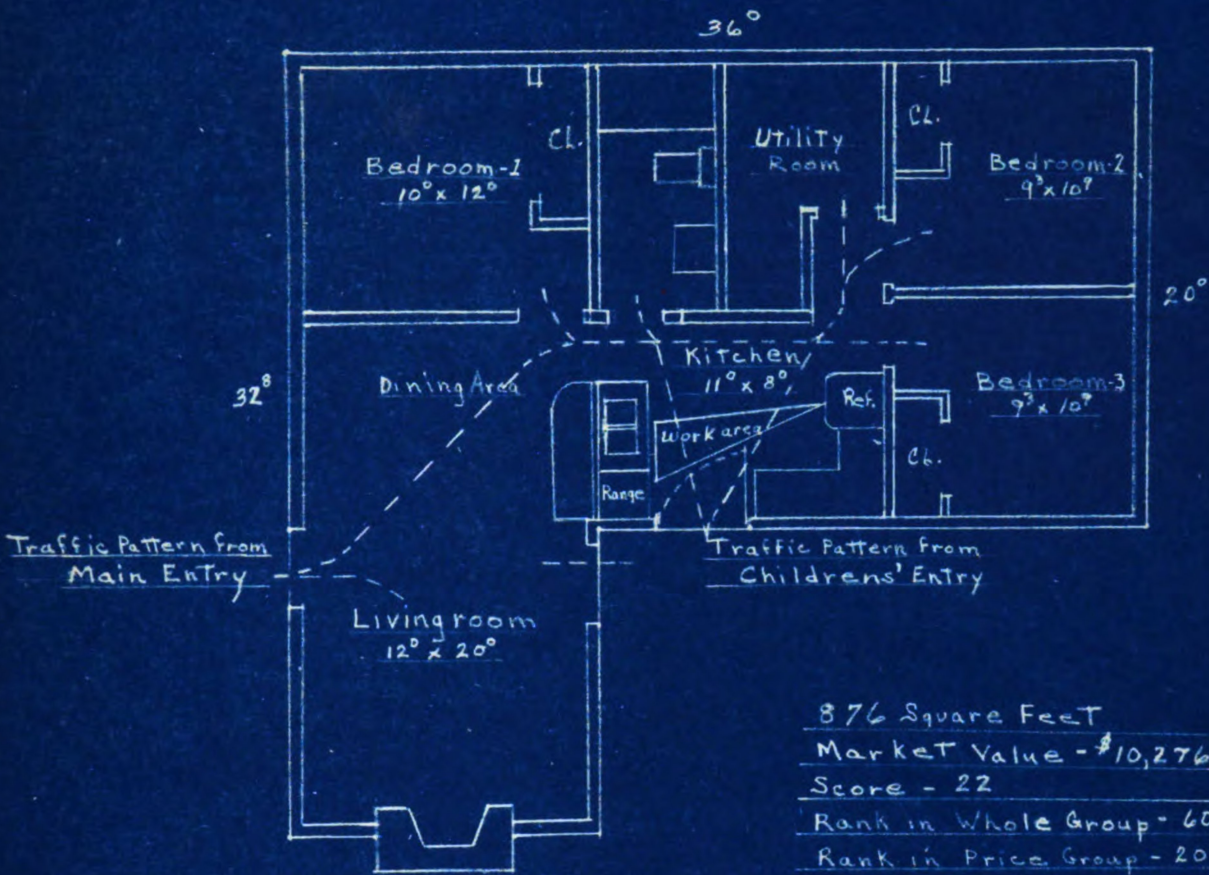
Since less than half the house plans included these features, it is obvious that many recently built homes are not well designed for families with small children. Therefore, careful evaluation of a house plan with regard to especially needed features is essential if the prospective buyer is to obtain a desirable family home.

HIGHEST SCORING AND LOWEST SCORING HOUSE  
IN EACH OF THE THREE PRICE GROUPS

The house which scored the lowest in the low priced group has many features which show poor planning for any family and which would be magnified by small children's use of the house (See Plate I). It contains no especially suitable indoor play space. Children will play indoors so the bedrooms and, of necessity, the living room would have to serve as play rooms.

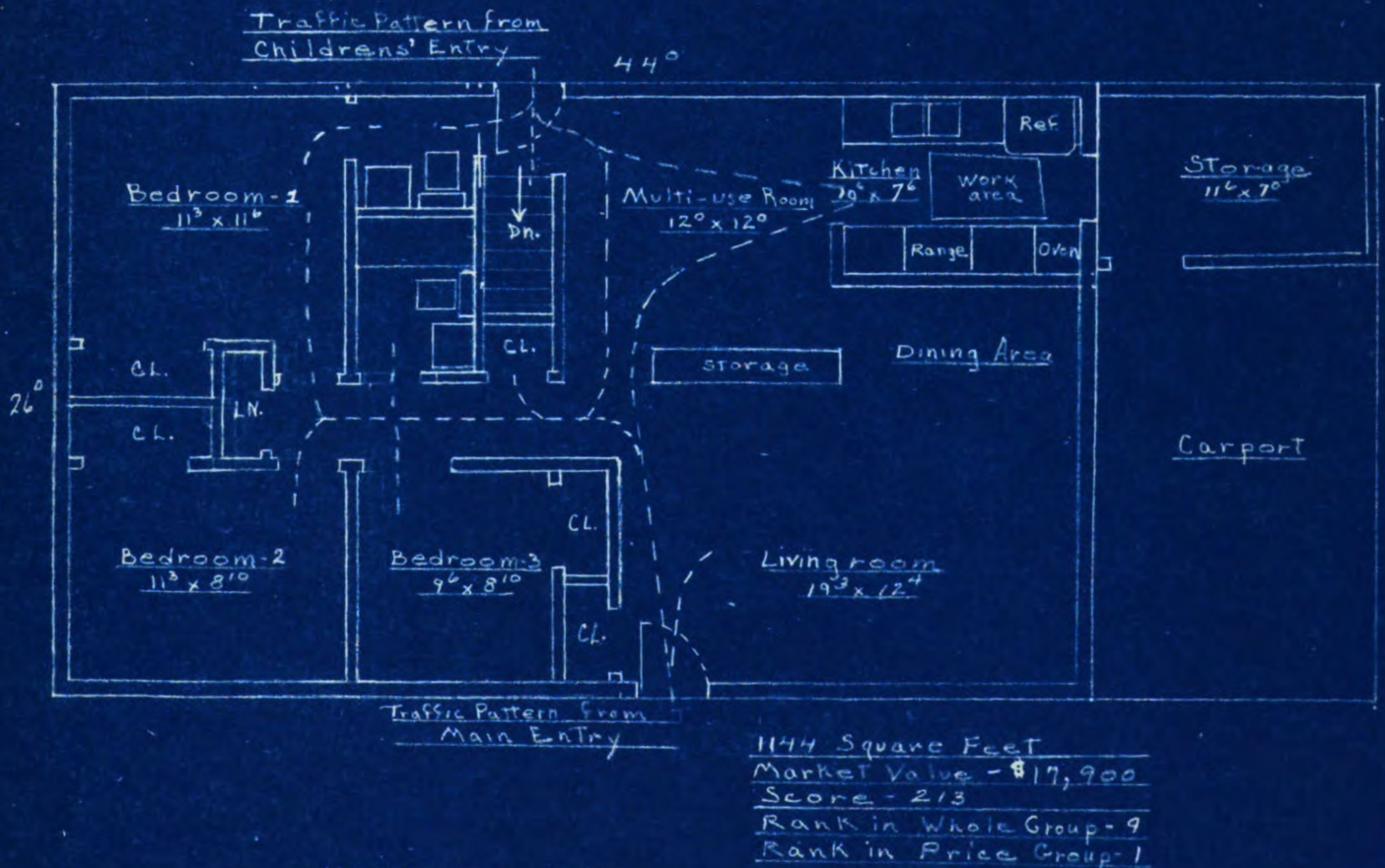
The main entry door is located in the center of the living room wall. Thus, all traffic from this entry must cross the center of the room in passing to the kitchen, bedrooms and bath. The house has two other entry doors. The door which appears to be the one most apt to be used by the children opens directly into the kitchen, with the swing of the door interfering with anyone working at the kitchen range. Traffic from this entry to the bedrooms and bath cuts through the path from the refrigerator to the sink and the range. There is no area in the house especially designed for play, so traffic patterns to the play area were not evaluated. The bath and two of the bedrooms open directly off the kitchen. Traffic to the third bedroom passes through the dining area in the living room. Traffic from the laundry





LOWEST SCORING HOUSE IN LOW PRICED GROUP

PLATE I.



HIGHEST SCORING HOUSE IN LOW PRICED GROUP

PLATE II.

passes through the kitchen. From one bedroom traffic must pass through the dining area. There is no guest closet. The total clothes closet space is about 16', sufficient only for three persons. There is no storage for children's wraps near their entry, no space for storage of bulky indoor toys, no storage space for outdoor play equipment and tools, no broom closet, linen closet, or storage space for blankets. The only space for dining is in the living room. The dining space is sufficiently large for both family and guests but would crowd the conversation group when guests were served. The children's bedroom doors open right off the kitchen so their rooms are not well insulated from the noise of the work area. The path of circulation from the master bedroom to the bath and the children's rooms passes through the living room and kitchen so the rooms are not conveniently arranged in a close grouping. The master bedroom is only 10' x 12', and both children's bedrooms are 9'3" x 10'9". Thus, only one bedroom meets the minimum suggested size requirements. The outdoor play area could be seen from the kitchen and easily reached by way of the kitchen door. This play area could not be seen from the laundry area, however, although it could easily be reached by way of the kitchen door.

The plan could have been greatly improved by a change in the location of the exterior doors. A door from outside into the utility room could have provided a children's entrance with some possibility of nearby storage space for their wraps. Furniture placement and traffic through the living room would be much more convenient if the front door were near the corner of the living room with the open door standing against the wall between living room and bedroom.



The house which rated highest in the low priced group is very conveniently planned and contains most of the important features for a family with small children.

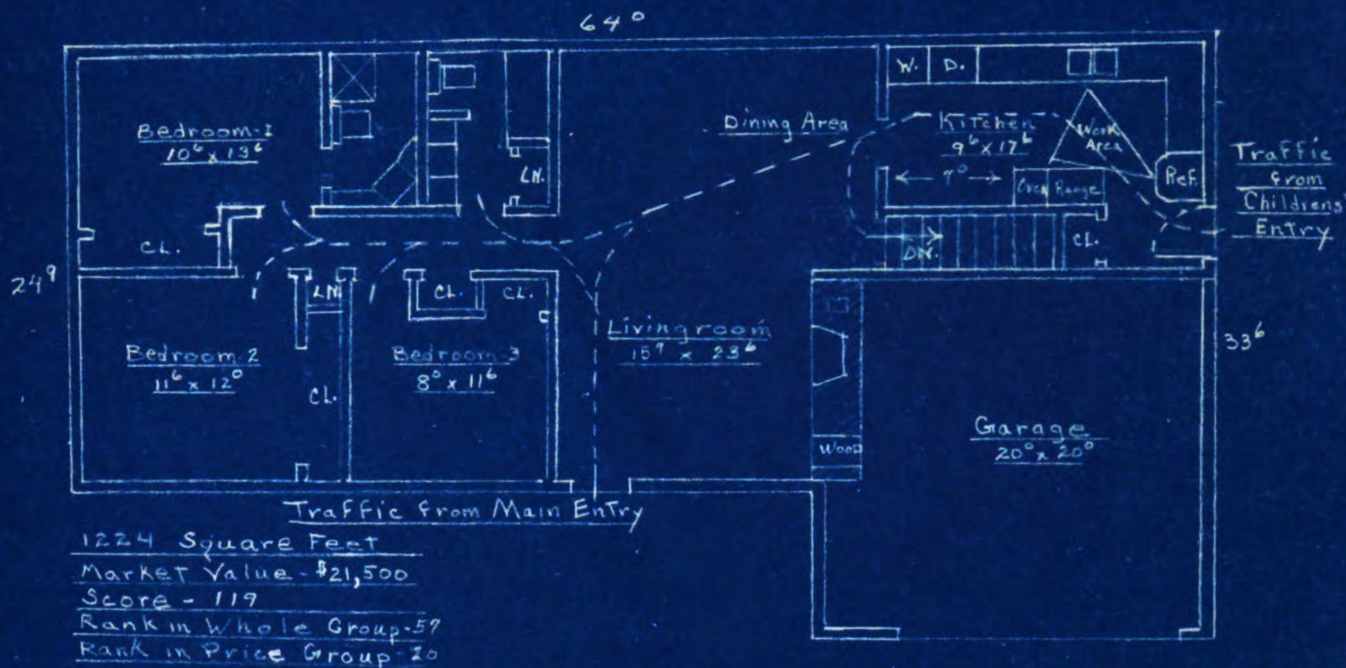
There is a basement and also a multi-purpose room on the first floor to provide indoor play space (See Plate II). The bedrooms are slightly too small to provide much space for play. One which is 8'10" x 11'3" would provide play space if only one child were using the room for a bedroom. The main entry enters directly into the living room but the door is in the corner of the room and traffic from the entry to the bedrooms and bath would cross only the end of the living room. Traffic to the kitchen would cross the end of the living room and the multi-purpose room. This, too, is quite convenient. The door which appears to be the most convenient one for children to use coming in from play is one located at the head of the basement stairs. The space at the head of the stairs forms a vestibule which would catch most of the mud just as children entered. Traffic from this entry to the kitchen would cross the multi-purpose room only. There is direct access from this entry to the basement, the multi-purpose room and the half-bath. Traffic to the bedrooms would cross the multi-purpose room. The path of circulation from the kitchen to the indoor play area, the bath, and the bedrooms crosses the multi-purpose room. The laundry is in the basement so play space is available nearby. Clothes must be carried upstairs. The master bedroom can be reached by going through the half-bath. Traffic from the laundry to the other bedroom can go on across the hall to the other bedrooms, or the multi-purpose room can be used for circulation from the laundry area to the bedrooms.

There is a 2' x 3' guest closet located in the living room near the front entry. There is about 22' of clothes closet space. The closet in the bedroom hall at the end of the stairway would serve as a fairly convenient storage space for children's snow suits and boots since only the multi-purpose room has to be crossed to reach this closet from the children's entry. There is a 7' x 11'6" storage space with direct access to the outdoors. The basement can provide storage space also. The closet opening off the bedroom hall can be used for both cleaning equipment and supplies and for children's wraps. The linen closet is larger than minimum size so can also provide storage for blankets and pillows. The basement stairs is directly in front of the rear entry so large items can easily be carried to the basement. The multi-purpose room would undoubtedly be used for family dining, providing adequate space adjacent to the kitchen. This space would also be quite pleasant for dining with guests. The small "L" off the living room, plus some additional living room space can be used for guest and family dining. The entry closet and the closet in the small bedroom serve as a sound buffer between the living area and the children's bedrooms. The bedrooms and bath are closely grouped off a common hall for easy night care of children. The master bedroom and the middle sized bedroom are under minimum size. The smallest bedroom meets the minimum size requirement adequately. The outdoor play area can be seen from the kitchen windows and is easily reached through the rear door. The laundry area, being in the basement, is not located so the outdoor play area can be easily supervised or reached.

Medium Priced Group

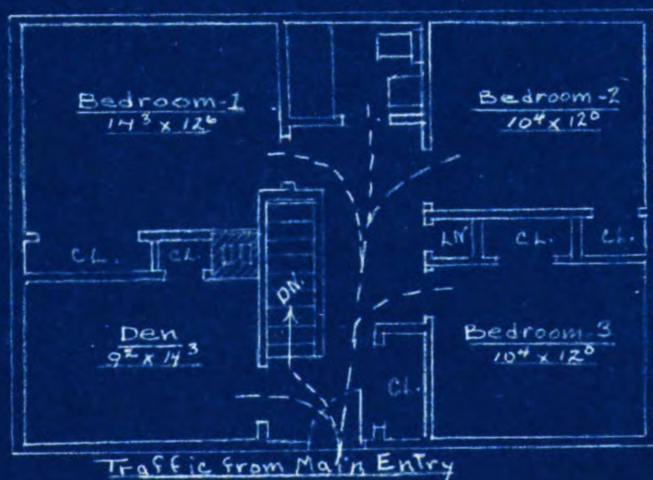
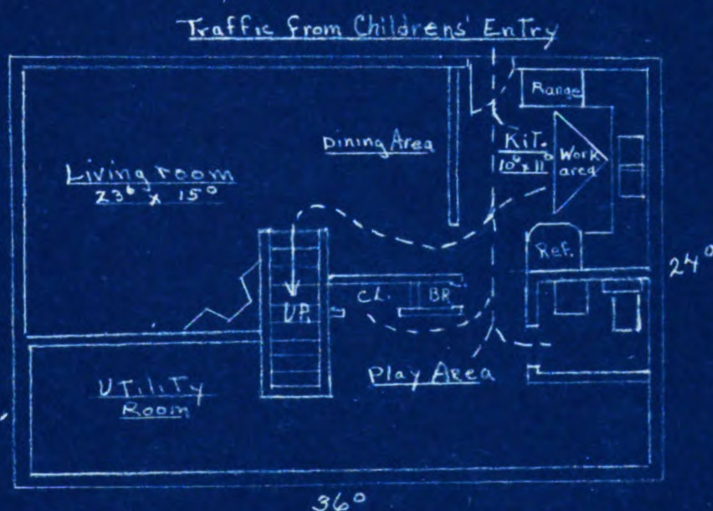
In the medium priced group, the low scoring house was valued at \$21,500. Two houses tied for high score, one costing \$20,744 and the other \$19,005.

The house receiving the lowest score in this group has a basement for indoor play space, and one of the two smaller bedrooms is large enough to provide additional play area (See Plate III). The main entry enters the living room. Traffic from this entry crosses the room diagonally to reach the kitchen but crosses only the side of the room to reach the bedrooms and bath. The kitchen door appears to be the most convenient one for the children to use coming in from their outdoor play area. By this entry there is a vestibule with a closet for the storage of wraps. Traffic from the entry must go through the kitchen cutting through the work area and the corner of the dining area in the living room to reach the basement stairs and, thus, the indoor play area. Traffic from this entry to the bedrooms and bath cuts through the kitchen work area and the center of the living room. The laundry is in the kitchen. The path of circulation from the kitchen-laundry to the indoor play area is through the corner of the dining area but to bedrooms and bath it cuts through the center of the living room. Since furniture could be placed at right angles to the fireplace to route traffic through the dining area, the plan was evaluated as having this traffic pattern. The usable space for a conversation grouping of furniture in front of the living room fireplace is about 9' x 11'. There is a 2' x 3' guest closet but it is located away from the front entry across the side of



LOWEST SCORING HOUSE IN MEDIUM PRICED GROUP

PLATE III.



1287 Square Feet.  
Market Value - \$19,005  
Score - 215  
Rank in Whole Group - 8  
Rank in Price Group - 1

HIGHEST SCORING HOUSE IN MEDIUM PRICED GROUP

PLATE IV.

the living room, and opens into the bedroom hall. There is about 27' of clothes closet space. A closet is located by the children's entry. The basement can store bulky indoor toys, and also provide storage for some outdoor tools and play equipment if necessary. The garage is large enough to provide storage space and still allow easy entry into the car. The closet near the family entry could provide storage for cleaning equipment and supplies. There is a large linen closet in the bathroom which could be used to store unused bedding though it is not an ideal location. The basement stairs is placed so there is clearance for large items but a large piece of equipment such as a freezer chest would have to be brought in the front door and across the living room to this stairway. There is a 7' x 7'6" dining space in the kitchen, nearly minimum size for family dining. There is adequate family and guest dining space but it is in the living room. One child's bedroom is separated from the living room only by a single partition so this room would be quite noisy. All bedrooms are off a common hall and closely grouped for easy night care of children. The master bedroom is narrower than the desired size. The next largest bedroom is of adequate size and the smallest one, though a bit longer and narrower than the minimum, has sufficient area to be considered adequate in size.

The small dining space in the kitchen could be pressed into service for some play space near the kitchen and laundry. The stairway to the basement play area is conveniently near. The outdoor play area can be seen from the windows in the kitchen-laundry and the exterior door is conveniently located to reach this outdoor play area.

Two houses tied for the highest score in the medium priced group. They are quite different types of houses. One was very much like the highest scoring house in the low priced group. The other, which will be described here, is a two-level house with a portion of the lower level below grade; that is, below ground like a standard basement and the other portion completely exposed like a "first floor." The two-level house does require some stair climbing but the rooms are unusually large and the plan quite convenient. This two-level house has basement play space which is about 10'6" x 18'. There is an additional 7' x 15' of space to accommodate the utilities and laundry area. The bedrooms are large enough to provide play space (See Plate IV). The main entry is into a hall. Traffic from this entry to the kitchen passes down the stairway and through the dining area to the kitchen. From the front entry to the bedrooms and bath, traffic goes only through the hall. The entry which appears most convenient for children to use from the outdoor play area is the kitchen door. This door does not interfere with the work area as traffic from this entry to the indoor play area and the half-bath by-passes the kitchen work area. The kitchen and corner of the dining area are crossed to go from this entry to the bedrooms. There is direct access from the kitchen and the laundry area to the indoor play area and the bathroom. There is a guest closet in the front hall. There are about 33' of clothes closet space. The closet in the basement play area would be quite convenient for storing children's outdoor wraps and boots. The basement play area is large enough to provide for storage of indoor toys. There is no storage area opening directly outdoors.



Play equipment and tools could be carried into the basement through the kitchen. There is storage for cleaning equipment and supplies off the basement play area. The linen closet is large enough to serve for storage of blankets also.

The only space for dining is in the "L" off the living room. It is large enough for both guest dining and the family. The children's bedrooms are on another floor from the work and living areas so are well sound insulated. All bedrooms and the bath are off a common hall and closely grouped. The indoor play space is near the kitchen. The outdoor play area can be seen from the kitchen window or the kitchen door and is easily reached by way of this door. The play area cannot be seen from the laundry area but the kitchen door is close so that the area can be reached easily.

#### High Priced Group

The house which scored the lowest of all those in the high priced group has a basement for indoor play. The children's bedrooms are nearly as large as the minimum size recommended to provide play space. The front entry enters directly into the living room. Traffic to the kitchen would pass through the end and also the side of the living room and through the dining room (See Plate VI). The traffic to bedrooms and bath from this entry would go across the end of the living room. The entry which appears to be the one children would enter from their outdoor play area is a door in the kitchen. A vestibule is formed by the space at the head of the basement stairs. Traffic goes directly to the kitchen and the basement play area. To reach the bedrooms and the bathroom, traffic from this entry crosses





the kitchen, by-passing the work area and then crosses the dining room and the corner of the living room. This is a long path for tracking in dirt from outdoor play and interrupts the use of the dining room and living room to some extent. There is a space about 10' x 16' in the living room which is free from traffic and would provide for a conversation group not crossed by traffic, but the path of circulation does sharply reduce the useful size of the room. Floor coverings would rapidly become worn in these paths of circulation. There is direct access to the indoor play area from the kitchen and laundry, but from the kitchen to bedrooms and bath, traffic again crosses the dining and the living room. From the laundry, the kitchen, dining and living rooms must be crossed, and stairs must be climbed to reach the bedrooms and bathroom. There is a guest closet in the living room near the entry. There is no storage for wraps near the childrens' entry, no storage for cleaning supplies and equipment, and no blanket storage space. There is a linen closet. The clothes closet space totals about 21' and is thus adequate for a four-member family. There is no outdoor storage space. The basement could be used for storage of outdoor play equipment and tools. The stairway is conveniently located.

The only space for dining is the "L" off the living room. This is adequate in size for both family and guests. One of the children's bedrooms is separated only by a single partition from the dining room so it is not well soundproofed from the active living area. The bedrooms are off a common hall and closely grouped for easy night care of children. The master bedroom is too narrow to meet minimum size requirements. The two children's bedrooms are of adequate size.

The dining area is large enough to provide space for some play equipment and toy storage. Since it is completely open to the living room, many families would not allow the child to romp or make clutter. The use of the dining area for a play room would make the living room less pleasant for use by the rest of the family. This dining room appears to provide enough space for play but probably its location would limit its use to small play equipment. Possibly the dining table could be used as a play table part of the time. The basement play area is fairly near the kitchen and is near the laundry area. The outdoor play area can be seen from the kitchen windows and is reached by way of the kitchen door. The laundry area in the basement is not placed so the outdoor play area can be easily supervised.

Several plans in the high priced group rated within a few points of one another, receiving almost full value for all points on the check list. Individual family preferences would make a great deal of difference in deciding among these several well planned homes.

The house which received the highest score has a basement and also a 7' x 11' special play room on the main floor next to the kitchen. One of the two smaller bedrooms is large enough to double as play space. There is a central entry hall. Traffic from the main entry to the kitchen passes through the play room. Traffic to bedrooms or bath is through halls only. The children's entry is at the head of the basement stairs and there is direct access to the half-bath, the first floor play room and the basement play space. Traffic from this entry to the bedrooms and kitchen and from the kitchen to bedrooms, bath, and basement play space crosses only the play room.

The laundry space is in the basement so there is direct access to the basement play space. Clean laundry must be carried upstairs but traffic to the bedrooms crosses only the play room. There is a guest closet located in the entry hall. Clothes closet space totals 33'. There is a 2' x 3' closet conveniently located for hanging children's snow suits and boots. There is a 2' x 4' storage closet in the bedroom hall which could provide some toy storage. The basement can provide toy storage space and the play room, while not large, could provide space for a toy chest or cupboard. The garage is large enough to provide needed outdoor storage space without crowding entry into the car. There are in the house a broom closet large enough for cleaning equipment and supplies, a linen closet, and a storage closet for storage of blankets, pillows, etc. The basement stairs is directly in front of the rear entry and has ample clearance for large items such as a freezer chest.

The only family dining space is the dining "L" off the living room, adjacent to the kitchen. It is large enough for both family and guests.

The children's bedrooms are separated from the living area by closets which serve as a sound barrier. The bedrooms and bath are off a common hall and closely grouped for easy night care of children. The master bedroom is 12' x 13'4", the suggested minimum size. The two bedrooms used by children are 10' x 15' and 10' x 10'6", larger than minimum size. The first floor play room is adjacent to the kitchen and is large enough to accommodate a play pen, jumper chair, play table and chair, and a toy storage cupboard or chest. The basement

provides for active play and the stairs are near the kitchen. There is space for play near the basement laundry. The outdoor play yard is easily seen from the kitchen windows and reached via the children's entry door nearby. The outdoor play space cannot easily be reached or seen from the laundry area.

While there was a significant difference among scores received by houses in the three price groups, a comparison of the highest scoring and lowest scoring house in each group shows quite a range in the desirability of homes even within the same price group.

The family who can afford to buy an expensive home can obtain one better suited to their needs than the family on a limited budget, but only if they make their selection carefully.

#### HOUSES COSTING THE SAME BUT SCORING DIFFERENTLY

An examination of the scores received by the houses and the market values shows that in several instances two homes costing almost the same, rated quite differently when evaluated for suitability as a family home. From each of the three price groups, the floor plans of two houses which had about the same estimated market value but received very different scores are presented for examination and detailed discussion.

##### Low Priced Group

From the low priced group two small houses, each about 960 square feet in size, and each with a basement, were selected. One cost \$14,830 and the other \$15,360. The more expensive one has a double garage while the other has none which would probably account for the \$530 difference

in price. The \$14,830 house scored 160 points while the other house scored 119.

The lower scoring house has indoor play space, as it has a basement and the two smaller bedrooms are large enough to be used for children's play (See Plate VII). The main entry opens into a vestibule leading directly into the living room. Traffic from this front entry to the kitchen, bedrooms, and bath crosses the living room diagonally, cutting through the conversation group. The kitchen door is the children's most convenient entry from the outdoor play yard. Traffic from this entry must travel across the kitchen in front of the refrigerator thus cutting through the work area. The entry is at the top of the basement stairs so there is direct access to the indoor play area. To reach the bedrooms and the bathroom, a child entering this kitchen door would cross the work area in the kitchen, the dining area, and the corner of the living room. There is direct access from the kitchen to the basement play area. Traffic from the kitchen to the bath and bedrooms passes through the dining area and the corner of the living room. The laundry area is in the basement so there is play space near, but stairs must be climbed with clean laundry. The path of circulation to the bedrooms is through the dining area and the side of the living room.

There is a guest closet in the front vestibule but the total clothes closet space is only 16' which would be considered sufficient for only a three member family. There is no storage for children's wraps near their entry. The basement would supply storage space and the garage is large enough to supply storage space without crowding

entry to the car. There is a small broom closet and also a small linen closet. The base cabinets in the kitchen would probably be too close to the top of the basement stairs to allow clearance for a large freezer chest or a piano to be carried down the stairs. There would be enough clearance for most other items.

There is a pleasant family dining nook off the kitchen. This space is not quite large enough for both family and guests and there is no separation between this dining area and the kitchen. It is very difficult to have an attractive looking kitchen when a company dinner is ready for serving. However, there is no other convenient space. The living room could be used but it does not provide a place which would not interfere with the conversation group.

There is only a single partition between the small bedroom and the living room and dining room so it would be noisy for afternoon nap periods and early bedtimes for a child. All bedrooms and the bath are off a common hall and closely grouped for easy night care of children. The master bedroom is only slightly under minimum size and the two other bedrooms meet minimum size requirements.

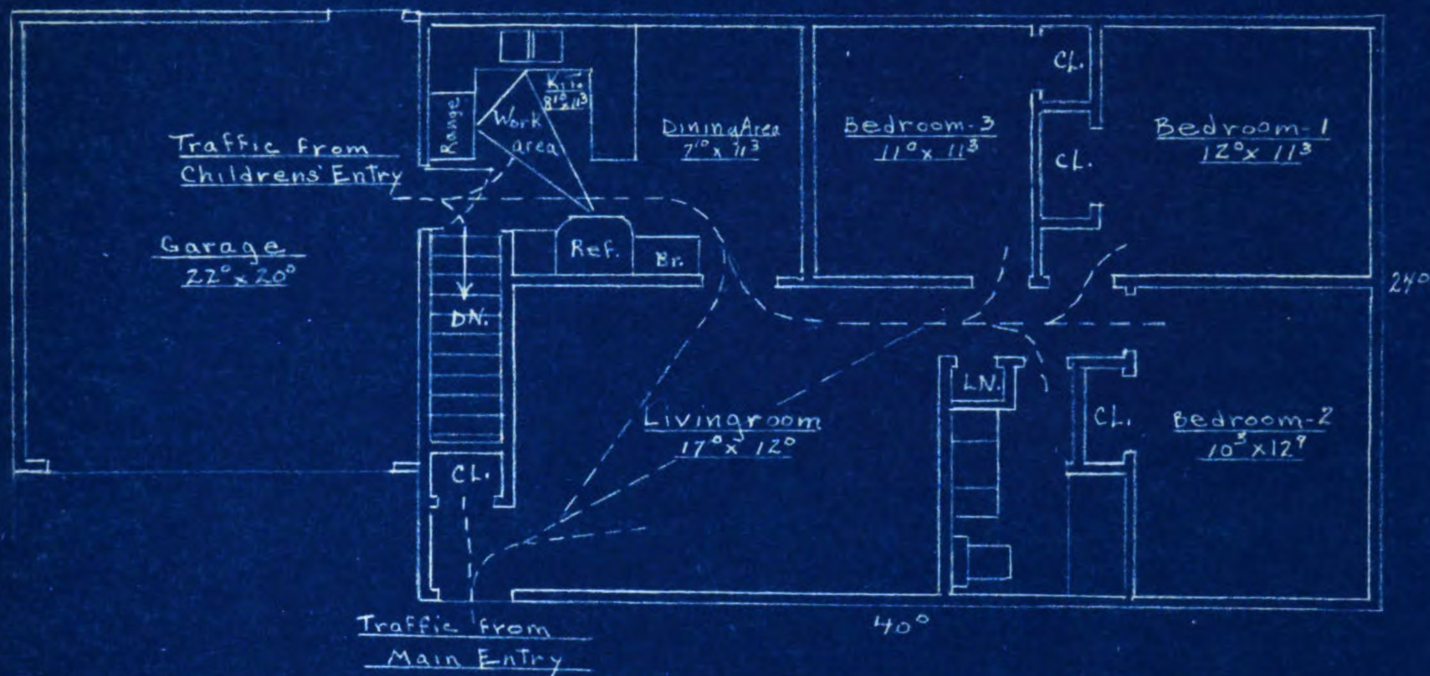
The dining area in the kitchen could provide space for small play equipment and the dining table could sometimes be used for a play table so that small children could play near their mother as she works in the kitchen and not be underfoot. The outdoor play yard could be seen from the kitchen windows and easily reached via the kitchen door. With a basement laundry space, the indoor play area is nearby but the outdoor play yard can neither be seen nor easily reached.

The house which cost about the same but scored 160 points has both basement and bedroom play space (See Plate VIII). The main entry opens into a vestibule leading to the living room. Traffic crosses the living room diagonally to reach the bedrooms and bath from this entry, but to reach the kitchen crosses only the "end" of the living room or crosses between the dining and the living area so this does not interfere with the conversation group.

The door which would be most convenient for children to use as they enter from play would be the rear door at the head of the basement stairs.

There is direct access from this entry to the kitchen and to the basement play area. A rather unusual feature, but one which was found in four of the low priced homes, is the second door into one of the bedrooms. In a small home where space is scarce and very little room is devoted to hallways, this may greatly improve the paths of circulation through the house. If bedroom No. 2 was a child's bedroom, use of this room to carry traffic from the children's entry to the bathroom, etc., would be quite convenient. This bedroom would become something of a multi-purpose room and, when the child was not sleeping, would provide a convenient traffic lane from kitchen, basement play area and laundry area, and children's entry to the bedrooms and bath. The clothes closet space totals 18', which is not quite as large as minimum requirements but nearly so. A closet in the basement for out-of-season clothing in both this and the lower rating house discussed previously would be an improvement. There is a guest closet located in the front vestibule. The closet in bedroom No. 2 could be

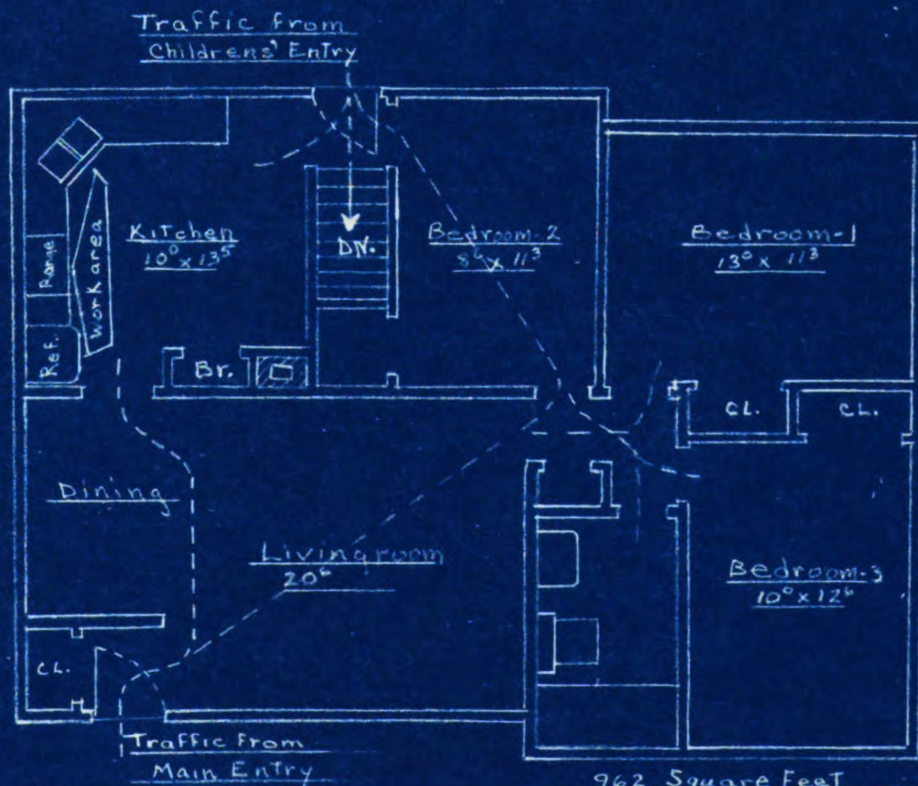




960. Square Feet  
 Market Value - \$15,360  
 Score - 119  
 Rank in Whole Group - 54  
 Rank in Price Group - 16

HOUSE COSTING \$15,360, SCORING - 119

PLATE VII.



962 Square Feet  
 Market Value - \$14,830  
 Score - 160  
 Rank in Whole Group - 39  
 Rank in Price Group - 5

HOUSE COSTING \$14,830, SCORING - 160

PLATE VIII.



used for storage of children's outdoor wraps. The basement would provide storage for bulky indoor toys, outdoor toys and tools, though it is quite far from the point of use. The stairway is conveniently located and would allow clearance for large items.

There is space for family dining in the kitchen which would not interfere with the work area. There is dining space for both family and guests in the dining area at the end of the living room. One child's bedroom is separated from the active area of the house by sound barriers but the other is not. All bedrooms and the bath are off a common hall and closely grouped for easy night care of children. The 11'3" x 13'0" master bedroom is nearly as large as the minimum size. The two smaller bedrooms are larger than minimum and would provide extra space for play and toy storage.

The dining area in the kitchen would provide enough space for small play equipment and the dining table could double as a play table. Bedroom No. 2 is located just across the rear entry hall and is large enough to provide convenient and easily supervised indoor play space near the kitchen. The kitchen windows overlook the play yard and the rear entry is adjacent to the kitchen. The basement laundry area has indoor play space nearby but the outdoor play yard cannot easily be supervised from the laundry area.

In the low priced group, four of the houses were basementless. Since a basement can provide valuable play and storage space especially needed by the family with small children, these basementless houses tend to rate quite low as a family home. Two of these basementless houses with estimated market values of \$14,531 and \$15,664 received

scores of 39 and 143 respectively. The higher scoring house, although not ideal for a family with small children, has many advantages not found in the other house. The low scoring house has no indoor play space. All traffic from the front entry passes through the conversation group in the living room and all traffic from the children's entry passes through the kitchen work area and the living room conversation group. The high scoring house has an activities room near the kitchen. The children's entry enters this activities room and the bath is accessible directly from this room. Traffic from the main entry crosses the end of the living room rather than cutting across the conversation group. A basementless house will be adequate for a family home only if there is a large ground-level play room and ample storage space. The majority of the homes (54 of the 60) had basements.

#### Medium Priced Group

Within the medium priced group there was a sharp contrast among houses which cost about the same but received very different scores when evaluated with respect to suitability for a family with small children. One of the two houses which tied for the highest score in the group (215) had an estimated market value of \$20,774. Another house in this medium priced group had an estimated market value of \$21,030 but received a score of only 117 points. The low scoring house has a basement which would provide indoor play space and one bedroom for a child which is large enough to provide some play space but the other bedroom is too small to provide room for much play equipment and toy storage in addition to the bedroom furnishings (See Plate IX). The front door enters a vestibule leading directly into the living room.

There is an ornamental fireplace in the end of the living room near the vestibule. A fireplace usually forms the focal point for arranging furniture to form a conversation group. Therefore, traffic from this entry must cut through the conversation group in a very awkward manner in order to reach the other parts of the house. Traffic to the kitchen must also pass through the dining room.

The kitchen door appears to be the convenient entry for children to use as they come in from outdoor play. Traffic through the kitchen from this entry and also from the basement must pass between the refrigerator and the sink and range thus cutting through the work area. Traffic from the children's entry, the kitchen, and the basement laundry areas to the bedrooms and the bath crosses the dining room, and passes through a corner of the living room.

There is direct access from the children's entry to the basement play space. The laundry area in the basement would have play space nearby. Clean clothes must be carried upstairs.

There is a guest closet in the vestibule. Total clothes closet space is 16', adequate only for a three person family. There is no storage space for wraps near the children's entry. The basement would supply storage space for toys and the garage is large enough to provide storage space without crowding entry into the car. There is no broom closet, no linen closet, and no provision for blanket storage.

The base cabinets in the kitchen are near the head of the basement stairs and the foot of the stairs are only three feet from the front basement wall so that short turns would not allow sufficient clearance for carrying large items to the basement. There is no space in the kitchen for a home freezer.

The nook in the kitchen is large enough for family dining but there is just 8' of space to the front of the refrigerator. Therefore, dining space would interfere with the swing of the refrigerator door. The dining room is open to the living room so one foot of living room space can be used to provide for circulation around the table for serving and thus expand the guest dining facilities to the needed 9' x 12' of space.

One of the children's bedrooms would be quiet for nap time and early bedtime but the other is separated only by a single partition from the living and dining rooms and so would be noisy.

The nook in the kitchen could provide some space for indoor play near the mother as she works. The dining room is large enough for more play space but being completely open to the living room would not be desirable because of the clutter from play equipment and toys. The basement stairs is near the kitchen so the basement play area could be supervised fairly easily. The kitchen windows overlook the play yard and the kitchen door provides a convenient access to this area. The laundry is in the basement, so indoor play area is nearby but the outdoor play area cannot be supervised easily from it.

The house, which scored 215 points but has an estimated market value slightly lower than the low scoring house just discussed, is very convenient for a family with small children. It has a basement for indoor play and both of the smaller bedrooms are large enough to provide additional play space (See Plate X).

A partial divider forms a hall entry by the main entry door. Traffic from this entry passes through the dining area to reach the

kitchen and through halls to reach the bedrooms and bathroom. The children would probably use the entry at the head of the basement stairs. The space at the head of these stairs forms a vestibule. Traffic from this entry to the kitchen and bedrooms crosses only the dining area. The half-bath and the indoor play area can be reached directly from this entry. Traffic from the kitchen to the play area, the bath, and the bedrooms crosses the dining area. The laundry is in the basement so play space is nearby, but stairs must be climbed with the laundered clothes. The master bedroom can be reached by going through the half-bath, and the other bedrooms reached by crossing the hall from the master bedroom or going through the dining area. As this dining area is only 7'3" x 9'9", the traffic through the room may conflict with its use as a dining room to some extent.

There is a guest closet located in the front hall. There is a total of about 29' of clothes closet space. The closet at the end of the stairway could provide storage both for children's outdoor wraps and cleaning equipment and supplies. There is basement storage and also an outdoor storage area for play equipment and tools. There is a linen closet but no space for blanket storage. The basement stairs is located so that large items can easily be carried into the basement. Family dining space is adequate and is convenient for serving. The dining area for family and guests is partly in an "L" off the living room and can extend into the living room. Children's bedrooms are separated from the living and work areas by closets, providing insulation from noise, and all bedrooms and the bath are off a hall and closely grouped for easy night care of children. The master

bedroom is slightly under the minimum suggested size. The two smaller bedrooms are adequate.

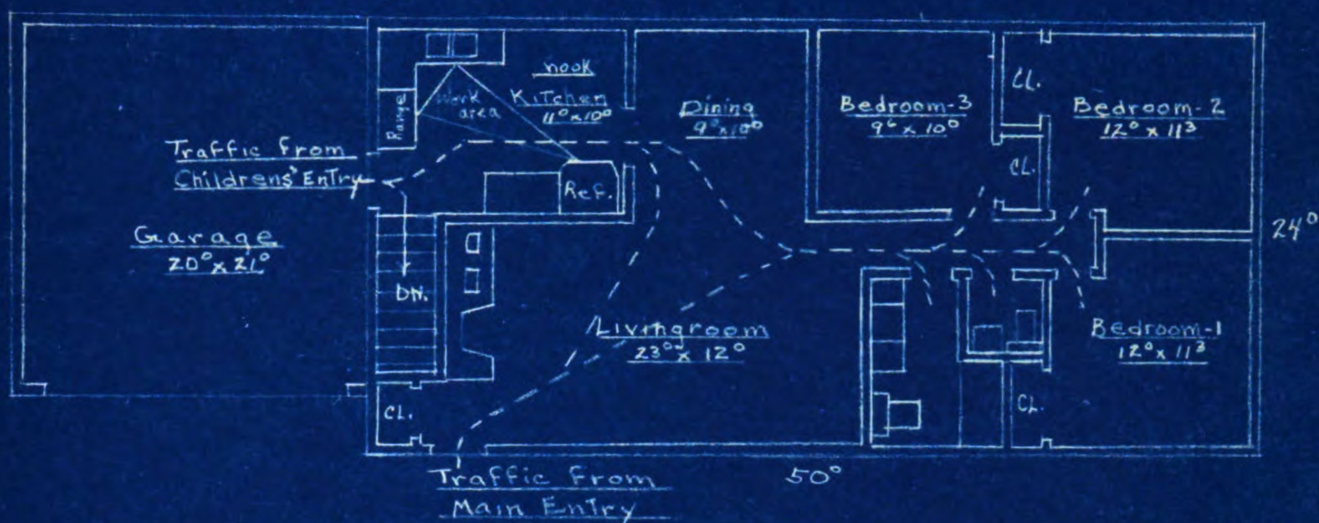
The family dining area would provide a fairly good space for children's play but there is little extra space for toy storage and play equipment. Careful planning and furniture arrangement could probably make it possible to put this area to fairly good use for moderately active play and certainly for cutting, coloring, etc. The end of the base cabinet between the sink and dining area might be given over to toy storage. A play table or desk could fit near the end of this counter against the rear wall of the dining area. The basement stairs is near the kitchen providing space for active play nearby. The laundry is in the basement. Indoor play space is near the laundry, but the outdoor play area cannot easily be seen or reached to help children. The kitchen overlooks the rear yard where children would probably play and the rear door is near the kitchen.

#### High Priced Group

In the high priced group two houses which scored quite differently but had similar estimated market values were homes which cost \$24,696 and \$25,127 and received scores of 166 and 222 respectively.

The house which scored low has a basement and large bedrooms for play space (See Plate XI). The main entry enters a hall leading to the kitchen and to the living room, but traffic from this entry to the bedrooms and bath crosses the living room and the dining room. The most convenient children's entry would be the door from the garage into the kitchen. Traffic from this entry could pass directly into the kitchen and downstairs to the basement play area but to reach the

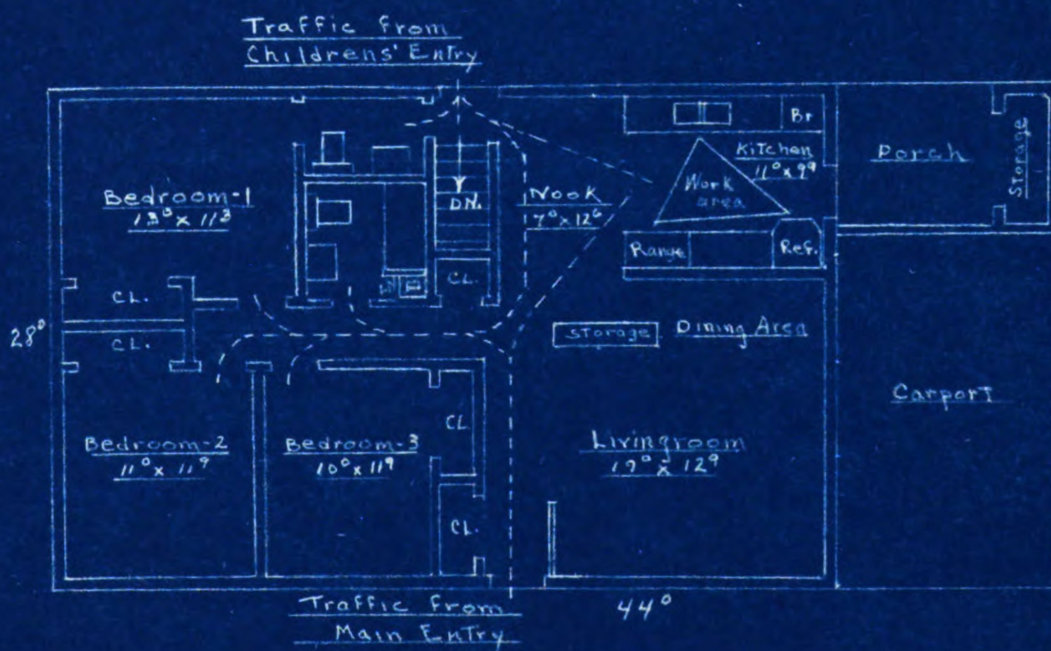




1200 Square Feet  
 Market Value - \$21,030  
 Score - 117  
 Rank in Whole Group - 55  
 Rank in Price Group - 19

HOUSE COSTING \$21,030, SCORING - 117

PLATE IX.



1232 Square Feet  
 Market Value - \$20,744  
 Score - 215  
 Rank in Whole Group - 7  
 Rank in Price Group - 1

HOUSE COSTING \$20,744, SCORING - 215

PLATE X.

bedrooms and bathroom must go either through the living room and dining room or go through the kitchen and dining room. Traffic through the kitchen would be routed around the family dining table and thus would interfere with the work area. Traffic from the kitchen to bedrooms and bath crosses the dining room. Traffic from the basement play area and laundry area follows the same route as that from the children's entry.

There is a 6' guest closet in the entry hall. The total clothes closet space is 20'. The closet in the front entry hall is also near the children's entry and provides convenient storage space for snow suits and boots. There is no broom closet nor any provision for blanket storage. There is a linen closet, however.

The basement and the garage would supply needed storage space for play equipment and tools and the stairway would allow for clearance of very large items.

The family dining space is in the kitchen. The total floor space remaining after the base cabinet space is subtracted is 11' x 7'8". If the kitchen work area and the dining serving area share the same three feet of space, the area remaining for the dining table and chairs is 8' x 4'8". Dining space for four persons as sketched in the plan would not crowd the work area too badly. A fifth chair at the end of the table would greatly interfere with the work area. The table placement makes the path from range to refrigerator longer.

The dining room provides very convenient dining space for family and guests. The bedrooms are separated from the active areas by sound barriers and are closely grouped, together with the bath,



for easy night care of children. The master bedroom is too narrow to meet minimum requirements but the two bedrooms for children are large.

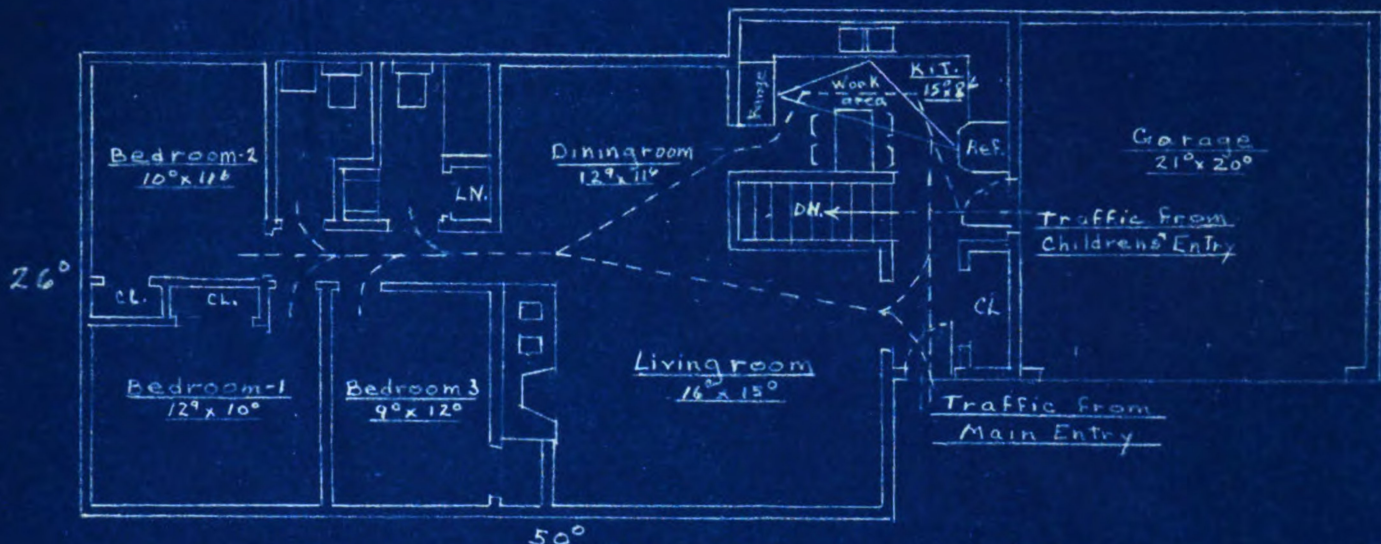
The family dining area does not provide play space which is safely out from under foot as the mother works in the kitchen. The dining room is completely open to the living room so that, while it provides adequate space, the clutter of play equipment would not be considered desirable. The basement stairway is near for supervision of the basement play space. The kitchen windows overlook the rear play yard and the kitchen provides convenient access to this area. The laundry is in the basement and hence is near the indoor but not the outdoor play space.

The higher scoring house in this price group cost only \$431 more, but scored 56 points higher when evaluated for special features important to the family with small children. There is indoor play space in the basement and the children's bedrooms are large enough to provide space for play. There is no special first floor play room.

The main entry is into a central hallway which leads to the living room, the kitchen, the bedrooms, and the bath (See Plate XII). The children's entry would be the door at the head of the basement stairs. Traffic from this entry to the kitchen and to the bedrooms crosses only the family dining area.

Children can go directly from this entry to the indoor play space and to the half-bath.

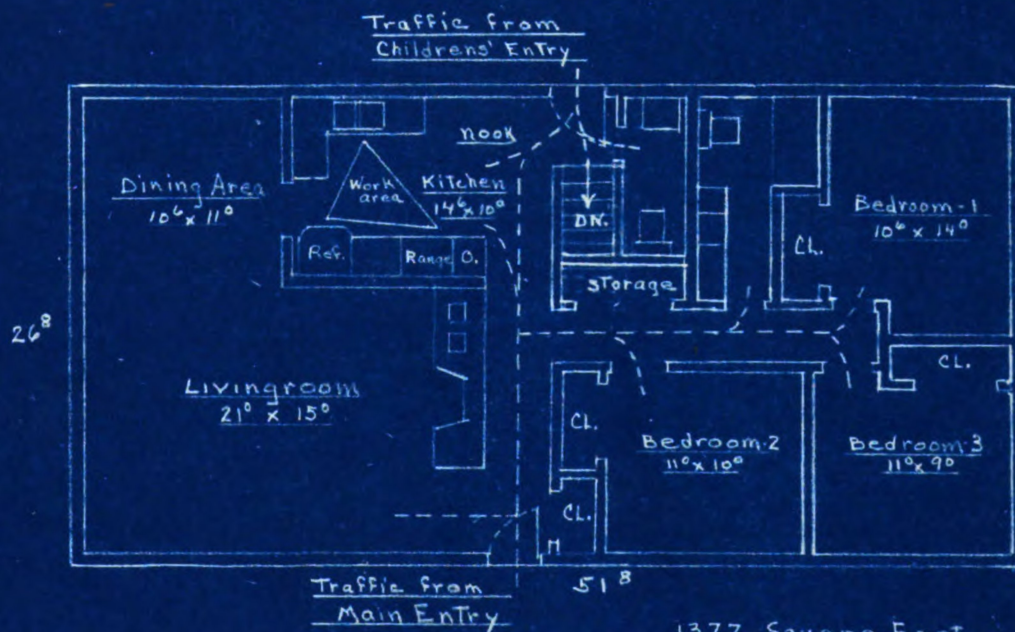
Traffic from the kitchen goes only through the family dining area to reach the bedrooms, bathrooms, and indoor play area. The laundry is in the basement and play space is available nearby. Traffic from the



1300 Square Feet  
 Market Value - \$24,696  
 Score - 166  
 Rank in Whole Group - 37  
 Rank in Price Group - 19

HOUSE COSTING \$24,696, SCORING-166

PLATE XI.



1377 Square Feet  
 Market Value - \$25,127  
 Score - 222  
 Rank in Whole Group - 6  
 Rank in Price Group - 6

HOUSE COSTING \$25,127, SCORING-222

PLATE XII.

laundry to the bedrooms crosses only the family dining space but stairs must be climbed when the mother is carrying the laundered clothes.

There is a five foot guest closet in the front entry hall. Total clothes closet space is 30', so is more than adequate. The closet between the stairway and bath would provide convenient storage for children's snow suits and boots. The only storage space for play equipment and tools is the basement. There is a broom closet and a linen closet. Blanket storage could be provided in the same closet with the childrens outdoor wraps as it is large enough to provide adequate storage for both types of articles. The basement stairway is directly ahead of the rear entry allowing clearance for large items. The family dining space is 6'6" x 8'. This area includes the work space in front of the built-in oven so there might be some crowding of the serving space when the oven door is opened but this conflicting use of space would not frequently be bothersome. The family dining space would probably seem adequate for most families. The dining room is large enough for family and guest dining and is conveniently located adjacent to the kitchen and opening off the living room.

The children's bedrooms are separated from the active areas of the house by the bath and the master bedroom. The master bedroom is slightly under minimum size, but the other two bedrooms meet minimum size requirements.

The family dining area would provide only a small amount of space for play equipment and toy storage. A jumper chair or other small item

of baby equipment could be placed there so baby could see his mother while she worked. The dining table could sometimes be used for a play table. The dining room would provide enough play space but again it opens fully to the living room and the clutter of toys would not be very desirable. The basement play space would be fairly easy to supervise from the stairs near the kitchen. The kitchen windows overlook the outdoor play yard and the rear door provides convenient access to this area. Since the laundry is in the basement, the outdoor area cannot easily be supervised from the laundry area.

## CHAPTER V

## SUMMARY AND CONCLUSIONS

A large proportion of today's home buyers are families with children five years old or younger. Many of these families are in low income brackets and have not previously owned a home. Thus, they are faced for the first time with selecting a home which will suit their needs at a price they can afford.

In a study of literature in the field of home planning, it was found that much information is available to serve as a guide in choosing certain aspects of housing, such as a desirable location and building site, a convenient kitchen with sufficient cupboard and counter space, etc. Only scattered information, however, was found to help a family select a home which included special housing features of importance to the busy mother of pre-schoolers, such as adequate and conveniently located storage space for outdoor wraps and play equipment. It was the aim of this thesis to provide a guide in the evaluation of a home with regard to these special features.

This study had as its purposes the development of a checklist for evaluating how well a house plan meets the special needs of a family with small children, the utilization of this checklist in scoring plans of three-bedroom houses in three different price ranges, and the relating of these scores to the market value of the homes.

A list of housing features important for families with small children was selected in accordance with the emphasis such features

received in the literature, and a tentative checklist to use in rating house plans relative to these features was developed and submitted to a jury. Revisions were then made in light of their comments and criticisms.

The selected list of housing features which save work and contribute to more pleasant family living for a family with small children are as follows:

1. A bedroom for each child or a bedroom shared with only one other child near his own age, in order to provide quiet for sleeping, play space, storage of clothing and toys, etc.

2. Indoor play space where the child can romp and play freely without need of excessive quiet or care of furnishings. A dry, well ventilated and well lighted basement can provide needed space. If there is no basement, an activities room or at least adequate bedroom space to double as play space is needed.

3. The room arrangement and entries should provide a traffic pattern throughout the house which avoids cross-room traffic as much as possible. This makes for pleasanter family living in the home and avoids excessive cleaning problems and expensive maintenance of floor coverings. The traffic pattern from entries to closets for storage of wraps, boots and outdoor equipment, to the bathroom, and to indoor play areas is especially important for the family with small children. Preferably, traffic should be through halls. If it is through rooms, it should be channeled through the end or side of the room rather than cutting across the room diagonally, where it interferes with conversation groups and work areas.

4. Convenient and adequate storage for toys, buggies, strollers, outdoor wraps, boots, clothing, books, games, hobbies, cleaning equipment, etc., is needed. A basement may have to provide much of this needed storage. If so, the basement stairs should be conveniently located and well designed to facilitate storage.

5. Adequate and conveniently located dining space for at least six persons is essential. Convenient dining space for 10 to 12 persons is desirable. The floor covering should be of a type which can be easily cleaned.

6. Bedrooms, especially the children's rooms, should be separated from living areas to insure quiet during nap and early bed time. Bedrooms and bath should be off a common hall and closely grouped for easy night care of children. Bedrooms should meet minimum size requirements.

7. The mother's work area, especially the kitchen and laundry facilities, should be convenient to indoor and outdoor play areas for easy supervision and care of small children.

Sixty house plans of three-bedroom houses which had been submitted for building permits in Meridian Township were selected for rating. The estimated market value of each house was obtained from the township assessor. Three price groups (\$10,000 - \$18,500, \$19,000 - \$21,500, and \$21,900 - \$30,000) with 20 houses per group were rated by the use of the checklist. The scores earned by the house plans were then related to their market value.

The house plans which were evaluated were found to range in score from 22 to 237 out of a possible 250 points. The range of scores

for the three different price groups were; low priced group - 22 to 213; medium priced group - 117 to 215; high priced group - 162 to 237.

The average scores were: Low priced group - 140.55; medium priced group - 176.3; high priced group - 202.8. The average scores in the three groups were found to be significantly different, indicating a direct relationship between the score of a house and its price.

The desirable features which were found in at least two times as many houses in the high priced group as in the low priced group are as follows:

1. A first floor multi-use room.
2. Two children's bedrooms large enough to double for play space.
3. Main entry into a hall leading to the living room and to other rooms.
4. Traffic pattern from the main entry to the kitchen, bedrooms and bath through halls.
5. Traffic pattern from the children's entry to the bath only through halls or a multi-use room.
6. Traffic from the kitchen to the bedrooms and the bath through halls.
7. Traffic pattern from the laundry to the bedrooms through halls.
8. A guest closet located in the entry hall or vestibule.
9. At least 2' x 25' of clothes closet space.
10. A closet near the children's entry large enough for snow suits and boots.
11. Storage for outdoor play equipment and tools inside the garage with easy entry to the car.



12. Storage for blankets, pillows, etc., at least 2' x 2' x 8'.
13. Space for play pen and jumper chair, play table and chair, and toy storage near the kitchen but not in the work area.
14. Play room for active play on the same floor as the kitchen.

The desirable features which were found in at least two times as many house plans in the high priced group as in both the medium priced and the low priced group are as follows:

1. First floor multi-use room.
2. Two children's bedrooms large enough to double for play space.
3. Traffic pattern from the main entry to the kitchen through halls.
4. Traffic pattern from the kitchen to the bedrooms through halls.
5. At least 2' x 25' of clothes closet space.
6. Play room for active play on the same floor as the kitchen.

However, less than half of the 60 house plans included the following desirable features:

1. Two children's bedrooms large enough to double for play space.
2. Traffic patterns from the main entry to the kitchen, bedrooms and bath through halls.
3. Traffic pattern from the children's entry to the bedrooms and bath only through halls, a multi-use room, or the kitchen, by-passing the work area.
4. Traffic pattern from the kitchen to the bedrooms only through halls or a multi-use room.
5. At least 2' x 25' of clothes closet space.
6. Storage space near the children's entry for outdoor wraps and boots.

7. Separate outdoor area to provide storage for play equipment and tools. (However, 32 plans provided this feature or storage inside the garage with easy entry to the car)
8. Basement stairs located near the service entry with clearance for large items such as a freezer chest. (However, 37 had either this feature or a basement stairs with clearance for large items but located across a room from the service entry)
9. Separate area convenient to kitchen for family and guest dining. (However, 35 had a separate dining room or dining L off the living room)
10. Children's bedrooms separated from the active living area by a sound barrier.
11. A master bedroom at least 12' x 13'6".

Since less than half of the house plans included these features, it is obvious that many recently built homes are not well designed for families with small children. Therefore, careful evaluation of a house plan with regard to especially needed features is essential if the prospective buyer is to obtain a desirable family home.

While there was a significant difference among the average scores of the three price groups, there was a wide range of scores within each group. Many of the house plans evaluated scored higher than others which cost the same or more. The six highest ranking house plans were in the high priced group, but the plans ranking seventh and eighth were in the medium priced group and the plan ranking ninth was in the low priced group.

The floor plan and a detailed discussion of four houses in each price group were presented to illustrate the use of the checklist, the variety of available homes in each price group and to point out the fact that, at the same market value, houses are available which vary



greatly with regard to suitability for families with small children.

The houses discussed were:

| <u>Price Group</u>             | <u>Estimated<br/>Market Value</u> | <u>Score</u> |
|--------------------------------|-----------------------------------|--------------|
| <u>Low</u>                     |                                   |              |
| Lowest scoring house           | \$10,276                          | 22           |
| Highest scoring house          | 17,900                            | 213          |
| Houses costing about the same: |                                   |              |
| Lower scoring house            | 14,830                            | 119          |
| Higher scoring house           | 15,360                            | 160          |
| <u>Medium</u>                  |                                   |              |
| Lowest scoring house           | 21,500                            | 115          |
| Highest scoring house          | 19,005                            | 215          |
| Houses costing about the same: |                                   |              |
| Lower scoring house            | 21,030                            | 117          |
| Higher scoring house           | 20,774                            | 215          |
| <u>High</u>                    |                                   |              |
| Lowest scoring house           | 21,962                            | 162          |
| Highest scoring house          | 27,000                            | 237          |
| Houses costing about the same: |                                   |              |
| Lower scoring house            | 24,696                            | 166          |
| Higher scoring house           | 25,127                            | 222          |

The selected list of special housing features and the checklist developed for use in evaluating house plans with regard to these features should be of value in the study of house planning and to prospective home buyers. In making an actual selection of a satisfactory home, a family with small children must select a desirable neighborhood and building site convenient to community facilities such as schools, church, shopping center and transportation, a well constructed house with pleasing architectural design, and other features of importance to all home

buyers such as a conveniently arranged kitchen. Available house plans or completed houses which are adequate in these respects should be further evaluated to determine whether the plans include the special housing features which will save work and contribute to more pleasant family living for the family which includes young children. The checklist developed in this study was designed to serve as a rating device in the evaluation of a house plan for such families.

Since none of the selected special features is undesirable for any type of family, and any house is likely to be resold at some time and might very well be considered for purchase by a family with small children, it seems that builders should consider including more of these features in all homes. The fact that, at the same market value, houses are available which vary greatly with regard to suitability for families with small children, indicates that many of the features do not add significantly to the cost but certainly add greatly to the desirability of a home for a family.

It appears that a house which includes all the features desirable for a family with small children is available only in the high price range. However, not all high priced houses are well designed for a family with children. Within all price ranges and even at the same market price, available houses vary greatly with regard to suitability as a family home. Careful evaluation of the plan will be essential in order to obtain a home which will be convenient and pleasant. Even families with a very limited budget for their house purchase may be able to obtain a desirable family home which meets their special needs, if they very carefully evaluate the house plans or completed homes they can afford.

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