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AN EVALUATION OF THE EXPERIENCES
ENCOUNTERED BY RURAL FAMILIES
IN ADDING A BATHROOM TO THE HOME

by

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A thesis submitted to
the Faculty of
The Consolidated University of North Carolina
in partial fulfillment
of the requirements for the degree
Master of Science in Home Economics

Greensboro

1958

Approved by

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Adviser

ACKNOWLEDGEMENTS

The writer wishes to express sincere appreciation to Dr. Josephine Kremer for her efforts in the direction of this study, to Mrs. Savannah Day for her guidance and help and to Miss Elizabeth Hathaway, Mrs. Bess N. Rosa, and Dr. Alice Schriver for their assistance as members of the thesis committee. Also the writer is grateful to the home demonstration agent and families in Guilford County for their splendid cooperation.

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CHAPTER I

INTRODUCTION

Remodeling the present house is, for many rural families, the answer to the need for better housing. To many families who have remodeled or are planning to remodel houses, better housing means the addition of at least one, and sometimes two, bathrooms.

Increased remodeling activities, in which the number of bathroom additions is becoming significant, have resulted in a demand by families for information and guidance in the various complexities of the problem. The writer, as an extension housing specialist working with rural families, was made aware of their need for instruction and counsel in planning, constructing, and evaluating remodeled houses. The families' frequent requests for help and dissatisfactions resulting from limited information and lack of careful planning led to this awareness. Often it was the expectation of the bathroom addition that prompted the families' need for information and recommendations.

Since many families are considering the addition of a bathroom to an existing house and because of the problems and the expenses involved in this improvement, the writer felt the need for a study evaluating the experiences encountered by rural families in adding a bathroom to the home. For this study, twenty-five white families living in

rural Guilford County were chosen, with the help of the home demonstration agent, to be interviewed. Each family had added a bathroom, within the past five years, to the house they owned and occupied.

The purposes of the study were:

1. To determine why the families chose a particular time to add a bathroom to the house they own and occupy.
2. To secure from the families their description of the planning, construction, and cost of the bathroom.
3. To obtain the families' description and evaluation of the bathroom.
4. To secure helpful suggestions from the families based on their experiences in adding the bathroom.

This information was obtained by a personal interview with the homemaker using a prepared schedule filled out by the writer. A pretest was made in one family using a sample questionnaire before the final schedule was completed. The schedule was revised after the pretest and can be found in the appendix.

CHAPTER II

REVIEW OF LITERATURE

There has been great improvement in the standards and quality of our farm houses since the war. Most houses have been electrified. Many have been remodeled. And many have added modern equipment.

Yet, in 1950 many farm houses lacked the conveniences generally accepted as a part of our urban standard of living. For example, 57 per cent still had no running water and 72 per cent were without a private flush toilet.¹

While Beyer's information concerns a random sample of farm housing for the country as a whole, it has been found that many Southern farm houses are without running water and indoor bathroom facilities. Of the 1,507 families interviewed in 1948 and 1949 in selected areas of the South, 33 per cent had running water and 18 per cent had a bathroom.²

The 1950 United States Department of Commerce Census of Housing gives a revealing picture of some urban and rural-farm housing characteristics for North Carolina and Guilford County. Of a total of 1,058,367 dwelling units in the state 34.5 per cent had running water with private toilet and bath. Only 11.1 per cent of the 313,112 rural-farm houses had the same facilities. This percentage for rural-farm dwellings is very low in comparison to 56 per cent for all urban dwelling units.³

1. Beyer, Glenn H., Housing: A Factual Analysis. New York: The MacMillan Company, 1958. p. 279.

2. Farm Housing In The South. Southern Regional Publication No. 14. 1951. p. ix.

3. U. S. Department of Commerce, Census of Housing: 1950. Washington: U. S. Government Printing Office, 1953. Vol. 1, Part 5, p. 3.

In Guilford County in 1950 there were 5,060 rural-farm dwelling units. About 20 per cent of these, or 1,070, had a complete bathroom⁴--private toilet and bath and hot running water.

Of the 51,547 dwelling units in the Greensboro-High Point standard metropolitan area of Guilford County, about 50 per cent had a private toilet and bath and hot running water in 1950.⁵

That rural farm housing standards for plumbing, bathing, and toilet facilities fall far below those of urban housing is evidenced by the above facts.

Inadequate bathroom facilities are not limited to old or dilapidated farm houses. Green's study of 266 randomly-selected North Carolina farm families who built houses between 1948 and 1950 indicates that some families do not necessarily consider a bathroom essential even in a new house. Of the 266 houses, 46 per cent had no bathroom.⁶

4. Ibid., p. 97.

5. Ibid., p. 21.

6. Green, James W., House Building By Farm Owners In North Carolina. North Carolina State College Agricultural Experimental Station Bulletin 391, 1954. p. 22.

Many factors have contributed to the unsatisfactory condition of rural housing. For example, in New Farm Homes For Old, a study of subsidized farm houses, Vance and Blackwell have this to say:

Except for the farmer of more than average means, farm housing has been difficult of improvement. The farm house is part of a productive enterprise, and its adequacy depends on the level of farm income.

The low income of the farming population is of major importance, but it is not the only difficulty. It is difficult and expensive to install modern conveniences in the open country so that until recently the lack of running water and flush toilets was accepted as a matter of course. There are no building regulations to which farm structures must conform. Little attention is paid to house plans, standards of construction are poor, and skill in building techniques is low, since farmers often depend on country carpenters.⁷

The limited number of rural electric lines before World War II was an important factor in the farm families' inability to make housing improvements. Electricity for pumps and water heaters became available only recently. "Extension of rural electric lines progressed rapidly, and the improvement of farm housing in general became evident immediately after the war."⁸

Beyer gives other reasons for inadequate farm housing standards.

7. Vance, Rupert B., and Blackwell, Gordon W., New Farm Homes For Old. Tuscaloosa: University of Alabama Press, 1946. pp. 5,6.

8. Carter, Deane G., and Hinchcliff, Keith H., Family Housing. New York: John Wiley and Sons, Inc., 1949. p. 16.

Of course, it should be remembered that the lack of plumbing in new and old houses...is partly due to an acceptance of customary local practices. Furthermore, in the scale of values of many farm families, other items as farm equipment or an automobile are ranked higher than improved housing.⁹

Farm families say they want and hope to have modern bathroom facilities despite the obstacles they sometimes face in attaining them. "If the testimony of our rehoused clients is to be accepted, there can be little doubt that farm families want and mean to secure the comforts and conveniences of modern life."¹⁰

In Farm Housing In The South, it is reported that 18 per cent of the 1,507 homemakers who were interviewed most frequently mentioned a bathroom when questioned about rooms they particularly wanted.¹¹

Even though a high percentage of farm families are still without indoor bath and toilet facilities, they want them because "There is a tendency to accept these facilities as minimum essentials to living..."¹² "The presence of a private bath has come to be one of the criteria for healthful housing."¹³

9. Beyer, Glenn H., op. cit., p. 272.

10. Vance and Blackwell, op. cit., p. 73.

11. Farm Housing In The South. op. cit., p. 60.

12. Agan, Tessie, The House Its Plan and Use.
New York: J. B. Lippincott Co., 1956. p. 455.

13. Ibid., p. 70.

In support of the tendency to consider the above-mentioned facilities as minimum housing essentials, The American Public Health Association says:

Neither household nor personal cleanliness is possible without hot water, and an adequate supply must be considered a minimum requirement for health, cleanliness and decency.

Where water under pressure can be provided, a separate bathroom for each family is a basic essential of adequate housing to insure responsibility for cleanliness as well as to promote privacy.¹⁴

In many rural homes it is still necessary to rely for water supply on a well or cistern with a hand pump, and in such cases the outdoor privy must be used as a substitute for the water closet. Such a condition must be considered substandard from the standpoint of convenience...¹⁵

That homemakers consider the bathroom and the half-bath essential to the health, comfort and convenience of families is evidenced by the fact that at The Women's Congress on Housing held in Washington in 1956, the 103 homemaker representatives discussing the modern home and how it can be improved to better serve the needs of families, said: "A complete bath, in addition to a half-bath at rear entry is considered minimum in a three-bedroom house." "Two full baths in addition to the half-bath at rear, of course, are considered desirable and should be provided if cost considerations permit."¹⁶

14. American Public Health Association, Committee On the Hygiene of Housing, Construction and Equipment of the Home. Chicago: Public Administration Service, 1951. p. 50.

15. Ibid., p. 52.

16. Women's Congress On Housing. Housing and Home Finance Agency. Washington: U. S. Government Printing Office, 1956. p. 81.

The fact that more rural families are recognizing indoor bathroom facilities as minimum housing essentials and are expressing the desire for those facilities can be explained. Broader education, research findings, higher incomes and higher standards in all aspects of living have led families to the realization that they need and must attain more adequate standards in housing.

Farm families who are aware of their housing inadequacies want to meet them as soon as possible and with as little expense as possible. While there are various ways of getting better houses, "Remodeling is the most common means of improving housing."¹⁷

For many farm families, the addition of at least one, and sometimes two, bathrooms is often a part of the remodeling project.

Regardless of whether the bathroom is a new room or installed in an existing room, its addition is vital to the health, convenience, comfort, and aesthetic values of the entire household.

If more families are to enjoy improved housing through the addition of adequate bathroom facilities, they will need information and guidance in the various complexities of the problem.

It is thought that an evaluation of the experiences encountered by families who have added a bathroom to the house is one means of securing information that would be useful to families who anticipate making the same improvement.

17. Carter and Hinchcliff, op. cit., p. 109.

CHAPTER III

FINDINGS

Data were obtained from twenty five families, living in rural Guilford County who had added, within the past five years, a bathroom to the house they owned and occupied, concerning the family, the house, and the family's description and evaluation of the planning, construction, cost and use of the bathroom.

The Families

About half of the families consisted of three, four, or five members. (Table I) In seven families there were two persons, some younger couples and some older couples. In four families there were six, seven or eight members. The sizes of the households at the time of completion of the bathroom were practically the same as at the time of the interviews.

At the time of the interview, all but eight of the families had pre-school, grade school or adolescent children. Most of the youngest children were pre-school and grade school age. Nearly all of the oldest were grade school and adolescent. Seven families had only one child--five of them adolescent or young adult.

TABLE I
DESCRIPTION OF FAMILIES

Family characteristics	Number of families		
Number in household			
Two		7	
Three		5 ^a	
Four		5	
Five		4	
Six		2	
Seven		1	
Eight		1	
Number in household when bath was completed			
Two		8	
Three		4	
Four		5	
Five		4	
Six		3	
Eight		1	
Age of children	<u>Only</u>	<u>Youngest</u>	<u>Oldest</u>
Infant		2	
Pre-school	1	3	
Grade school	1	4	5
Adolescent	3	1	4
Young adult	2		1

^aThe third person in one of these families was an older adult.

The Houses

The houses varied in age from less than 10 to more than 70 years (Table II). The median age of the houses was 35 years. Most of the houses had two or three bedrooms. A few had four or five bedrooms. In only three houses were there two bathrooms. In these three houses the second bathroom was the one studied. Two-thirds of the families had owned the house less than twenty years.

TABLE II
DESCRIPTION OF HOUSES

Characteristics of houses	Number of houses
Age of house (years)	
Less than 10	3
10 - 19	5
20 - 29	3
30 - 39	4
40 - 49	3
50 - 59	3
60 - 69	1
More than 70	3
Number of bedrooms in house	
Two	7
Three	11
Four	5
Five	2
Number of bathrooms in house	
One	22
Two	3
Number of years family had owned house	
Less than 10	8
10 - 19	8
20 - 29	4
30 - 39	2
40 - 49	2
50 - 59	1

The Bathrooms

Information obtained concerning the bathrooms included the families' decisions about the time to add the bathroom, and the planning, cost, and construction of the bathroom. The features of the bathroom as well as the water, plumbing, and waste disposal facilities were also studied. The families interviewed gave specific suggestions based on their experiences in adding a bathroom that would be helpful to other families planning the same improvement.

Decisions Concerning the Time to Add the Bathroom

Information about the families' decisions concerning the time to add the bathroom included the types of major improvements in the house other than the bathroom and whether they were made before, at the same time or after the bathroom addition. The families' reasons for choosing a particular time to add the bathroom were also obtained.

Major Improvements Other Than the Bathroom

Twenty-four families had made major improvements in the house other than the bathroom (Table III). These improvements consisted of adding or remodeling rooms and supplementary areas, exterior improvements, storage additions, electricity, heat, and running water. One house had been entirely remodeled.

Most of the major improvements were made before or at the time of the bathroom addition. More families remodeled the kitchen or social rooms before or at the time of the bathroom addition. However, they remodeled bedrooms at the same time or after. New rooms were generally added at the time the bathroom was added. All of the families except one had running water prior to the bathroom addition. Three families improved electricity at the time of the bathroom addition.

Reasons for Adding a Bathroom at the Particular Time

The most common reasons for choosing a particular time to add the bathroom were: the availability of money, changes in family size or composition, and health. (Table IV).

TABLE III

MAJOR IMPROVEMENTS OTHER THAN BATHROOM

(24 families who made major improvements in house other than bathroom)

Kind of improvement	Time in relation to bathroom addition		
	Before	At same time	After
Rooms and supplementary areas	(Number of families making given improvements)		
Remodeled	12	14	5
Kitchen	6	3	
Living room	2	3	
Den	1	2	
Family room		1	
Dining room	1	1	1
Two bedrooms		2	
Three bedrooms		1	1
Porch	2	1	2
Hall			1
Added	5	12	2
One bedroom	2	2	
Living room		2	1
Porch	1	2	
Den		2	
Two bedrooms	1	1	
Kitchen	1		
Kitchen-dining		1	
Utility room		1	
Dressing room		1	
Breezeway			1
Exterior	6	6	4
Storage	5	5	2
Electricity	5	3	
Heat	2	4	2
Running water	5	1	
Entire house	1		1
Totals	41	45	16

TABLE IV
 FAMILY'S REASONS FOR ADDING
 A BATHROOM AT THE PARTICULAR TIME

Reasons	No. of families who gave particular reason
<u>Financial</u>	
Had to save money	9
Had to save for it--couldn't afford.	
Unable financially before--four children in school took all our money.	
Financially unable before.	
Just the money.	
As soon as we could financially.	
Had to wait until we could stretch the money.	
Financial.	
Saved money hoping prices would come down but they didn't.	
Included it when we built the house but couldn't afford to complete it at the time.	
Would not go in debt	2
Had to save money--wouldn't borrow.	
Husband wouldn't go in debt.	
Depended on special sources for money	2
Soil Bank check, the time we had some money.	
Decided to sell small patch of timber for the money.	
<u>Change in family size or composition</u>	
We felt special need for it with small children.	7
Small children--crowded, especially in the mornings.	
Growing family--needed more room.	
Adolescent children.	
Husband got tired of children under foot--especially in the mornings.	
Husband had to help me with washing one whole summer--he found out what wash day is--and decided we needed a better and more convenient place to wash.	
Surprise for son coming from overseas.	

TABLE IV (continued)

Reasons	No. of families who gave particular reason
<u>Health</u>	4
Poor health of husband and wife. Sickness in family. Wife had major operation and felt special need for bathroom. Didn't have money put back but had to have bathroom anyway due to family health.	
<u>Added bathroom when remodeling other parts of house</u>	4
Decided to do major remodeling all at one time--bathroom needed. Inherited house--didn't want to live here without improvements. Had to remodel to get space for it--didn't have room before. Had to have bathroom to live in house.	
<u>Adequacy of water supply</u>	3
Had to wait for adequate water and well. Didn't have a deep well--had to wait for it--rocky land, hard to get a deep well. Got a better well and had a more adequate water supply.	
<u>Other improvement took precedence</u>	1
Had to choose earlier between bath and freezer--chose freezer then because I work.	

Planning

All the bathrooms were planned by the wife or the husband or the two together. (Table V). More wives participated in planning the bathroom than husbands. A few families were helped with planning by a builder, other family members, an extension agent, or a neighbor.

Only one family used printed information-- a U. S. Department of Agriculture bulletin--in planning the bathroom.

TABLE V

PERSONS WHO PARTICIPATED IN PLANNING THE BATHROOM

Persons who participated	No. of families	
	Planned	Helped Plan
Wife	11	4
Husband and wife	10	
Husband	4	4
Builder		4
Other family members		2
Extension agent		1
Neighbors		1

Cost

Half of the bathrooms cost between five and nine hundred dollars. One-third of the bathrooms cost from 900 to 999 dollars. Only one cost less than five hundred dollars. (Table VI).

TABLE VI
APPROXIMATE TOTAL COST OF THE BATHROOM

Approximate total cost	Number of families
Less than \$500	1
\$500 - \$599	3
\$600 - \$699	3
\$700 - \$799	3
\$800 - \$899	4
\$900 - \$999	8
Over \$1000	2
Don't know	1

Construction

Information concerning the construction of the bathroom included the location of the bathroom in the house, whether family members or paid help did the work, and the kind and source of building materials used in the bathroom.

Location of Bathroom Addition

All the bathrooms studied were located on the first floor of the house. (Table VII) More families installed the bathroom in an existing room than built a new room. The bathroom was built on a porch in almost as many families as built a new room.

Hired Help

Half of the bathrooms were built by family members and paid help. One family did all the building themselves. The others were built with paid help only.

TABLE VII
LOCATION OF BATHROOM ADDITION

Location of bathroom addition	Number of families
First floor	25
Existing room	11
Room planned for bath when house was built.	3
Bedroom	2
Breakfast room	2
Kitchen	2
Closet	1
Pantry	1
New room	7
Porch	6
Hall	1

Kind and Source of Building Materials

The basic floor materials in all of the bathrooms were concrete or wood. (Table VIII). Half of the families used wood or concrete they bought. Half had concrete on hand.

More families had exterior walls of wood or asbestos siding than brick. About half of the families bought the materials for the exterior walls. Half had them on hand.

Half of the families bought sheet rock for interior walls and one-fourth of them used sheet rock they already had. A few families had or bought plaster or wood for interior walls.

All the families bought all fixtures and pipes except for one family that bought pipes and used some they already had.

TABLE VIII
SOURCE OF BATHROOM BUILDING MATERIALS

Building materials	No. of families	
	Had ¹	Bought ¹
Basic floor		
Concrete	13	2
Wood		11
Exterior wall		
Wood	10	5
Asbestos siding	3	6
Brick	1	1
Interior wall		
Sheet rock	6	13
Plaster	1	2
Wood	2	1
Pipes	1	25
Fixtures		25

¹The number of families who had and bought bathroom building materials totals more than 25 since families used materials on hand in addition to those they bought.

Features of the Bathrooms

Information obtained concerning the features of the bathrooms included the size of the bathroom and its location within the house. Doors, lighting, ventilation, and heat were studied, as well as floor and wall finishes. The families were also interviewed concerning bathroom fixtures, storage, and accessories. Special bathroom provisions for children were studied.

Size

The bathrooms varied in size from 29 to 85 square feet. The median size was 44 square feet. (Table IX).

All three of the bathrooms 72 square feet or larger were considered satisfactory. Eight families who had bathrooms ranging in size from 29 to 68 square feet considered the bathroom wholly satisfactory. Two families with bathrooms of 30 and 33 square feet specified that they were too small. Thirteen families who had bathrooms ranging in size from 34 to 68 square feet considered them only partially satisfactory. They wanted the bathroom larger in order to have more storage and dressing space.

TABLE IX

SIZE OF BATHROOM WITH FAMILY'S EVALUATION

Size of bathroom square feet	Family's Evaluation		
	Satisfactory	Partially Satisfactory	Unsatisfactory
85	Fine. Needed extra size for outside entrance.		
78	Want no smaller.		
72	Plenty large		
68		Larger if possible.	
68		Good size but could use more space for electric dryer.	
62	Like very much--large.		
60	Large enough.		
54		Would make larger	
53	Satisfied--no larger.		
48		Need another bathroom.	
44		Want much larger for dressing table and dressing space.	
44		Too small for storage.	
44		Would have larger if possible.	
42		Want larger but we manage all right.	
42	Plenty large.		
41		Fine--but want larger for a dressing table.	
38	Felt cramped at first but seems fine now. Had been used to larger bath in other house.		

TABLE IX (continued)

Size of bathroom square feet	Family's Evaluation		
	Satisfactory	Partially Satisfactory	Unsatisfactory
37		Would like larger for more storage and dressing area.	
36		No other size considering location; larger size more expensive; could use larger for more storage.	
34		Want two feet wider for more storage.	
34	Plenty large.		
33			Too small
32	Large enough.		
30			Too small
29	Fine--large enough.		

Location Within the House

Bathrooms easily accessible to the work, social, and sleeping areas of the house were found in 7 homes and were considered satisfactory by all of the families. (Table X). The families emphasized the convenience of this arrangement in their evaluations.

The five bathrooms easily accessible to the social-sleeping area or social area only were generally considered satisfactory.

Four families with bathrooms easily accessible to the work-social area, or work-sleeping area considered them either satisfactory for convenience and inexpensive installation, partially satisfactory because of distance from bedrooms or unsatisfactory because they were not centrally located.

Bathrooms opening directly off bedrooms only met with a wide range of reactions.

The families having the bathroom easily accessible to the work area only agreed that this arrangement was unsatisfactory because the bathroom was too far from the bedrooms.

TABLE

AREA OF HOUSE WHICH HAS DIRECT

Area of house	Number of families	Satisfactory
Work-social area	7	Most convenient location. Large central hall connecting all rooms.
Social--sleeping area	4	Convenient--oh yes!--to two bedrooms, living room and central hall. Very convenient location. Central hall. Convenient to first and second floor bedrooms. Best and only place.
Work-social area	2	Very convenient. Don't have to go through any room.
Work-sleeping area	2	Very convenient.
Social area	1	Very good here.
Sleeping area	5	Planned this way. Delighted with it. Has worked fine--wanted just for convenience off bedroom.
Work area	4	

X

ACCESS¹ TO BATHROOM WITH FAMILY'S EVALUATION

 Family's evaluation

Partially satisfactory

Unsatisfactory

Under circumstances it is convenient.
 Good near bedrooms especially.

First choice of location--best we could
 do. Would be better nearer bedrooms.
 Good near kitchen plumbing for
 installation.

Only location. Wanted
 more centrally
 located.

Satisfactory, except must go through
 one bedroom to get to bath from
 living room.
 Opens off bedroom. No other place
 for it without building new.

Best could do. Not
 most convenient--
 in center of house
 would be better.

Too far from bedrooms.
 Would have been better
 closer. About the
 best possible space,
 though.

Would have put nearer
 bedrooms but had no
 other space.

Too far from bedrooms.
 Only place to put bed-
 room without building
 new. Not ideal--too
 close to kitchen.
 Too far from bedrooms.

TABLE

X (contin

Area of house	Number of families	Satisfactory
Work-social-sleeping area (continued)		<p>Carefully considered location near bedroom and upstairs. Convenient to all rooms.</p> <p>Very satisfactory location. Best location for existing space.</p> <p>Convenient location--best place for it. Didn't necessarily want so close to kitchen but has been all right.</p> <p>Convenient. On porch was the only location and most logical place.</p> <p>Satisfactory--especially convenient to bedrooms.</p> <p>About the only space. Satisfactory.</p>

¹Access--opens into or is easily accessible through hall.

X (continued)

Family's evaluation

Partially satisfactory

Unsatisfactory

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Doors

Information was obtained concerning the number, size, and placement of doors in the bathrooms with the family's specific and general evaluations.

Number of doors.--All but four of the families had one door in the bathroom. (Table XI) Two of the three families who had two doors said they needed them for convenience when coming in from outdoor work. The one bathroom with three doors was considered satisfactory.

Size of doors.--The doors ranged in width from two to three feet and in height from six to seven feet. (Table XI) Most of the families were generally satisfied with the width of the doors. One family mentioned the importance of having a door wide enough to get a washing machine in the bathroom. Only one family said a door two feet wide was too narrow, but there was no room for a wider door. Another family said they would have made the 2'4" door wider except for the extra work and expense in tearing up a wall.

Placement of doors.--The families objected to having a door swing into the bathroom if space was limited. A few families mentioned the inconvenience and crowding caused by having a bathroom door swing back against the lavatory or door of a bathroom closet or cabinet. If an adjoining room, hall, or porch was large enough, some families preferred that the bathroom door swing into it. (Table XI)

One family definitely objected to a door swing that places the commode in direct view of the front door of the house.

Another family who needed two doors used one plastic folding door because there was no room for a door to swing into the bathroom or into the adjoining small hall.

TABLE

NUMBER, SIZE AND PLACEMENT OF

No. of doors	No. of families	Swing wide open		Size of door Feet & Inches	No. of families
		Yes	No		
One	21	9	12	3' x 7'	1
				2'10" x 7'	1
				2'8" x 7'	1
				2'8" x 6'10"	1
				2'6" x 7'	4
				2'6" x 6'6"	3
				2'4" x 7'	2
				2'4" x 6'8"	2
				2'3" x 7'	1
				2' x 7'	3
				2' x 6'6"	1
				2' x 6'	1
				Two	3
2'8" x 6'6" (2)	1				
2'2" x 7' (1)	1				
Three	1	3		3' x 6'7" (2)	1
				2'6" x 6'7" (1)	1

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XI

DOORS WITH FAMILY'S EVALUATION

Size of door	Family's evaluation Number and Place- ment of doors	General
Size is fine.	Directly in line with front door--bad.	
Wide.		
Wide enough.		
Wide enough. (3)	Door swings into back porch.	Fine.
Wide enough.		All right.
All right for bath. Couldn't make larger without tearing up wall.		Fine.
Keep washing machine in bath and had to have door big enough.		Satisfactory.
Wide enough.		
Would want wider but no room for it.	Door should swing into hall but hall isn't wide enough. Fine as long as closet door is shut.	Fine.
		Satisfactory.
	Two doors fine--like and need two.	Outside door is great conven- ience but don't think would use it in new home.
	No room for but one door. Had to use folding door for space. Needed door on back porch for hus- band coming in from outside work.	
		Only location for doors. Both open into other rooms. Didn't want one to open into den but has been all right.
	Doors open into other rooms and porch.	Entirely satisfac- tory.

Lighting

Information about the kind and amount of light in the bathrooms included the number of windows and number and location of light fixtures with the family's evaluation.

Number of windows.--Most of the families had one window in the bathroom. Two families had two windows and two families had no window in the bathroom. (Table XII).

The families who had one or two windows were generally satisfied with the amount of light they provided in the bathroom. Of the two families who had no window, one was entirely satisfied; the other felt a definite need for a window and the extra light it would provide.

Light fixtures.--Half of the families had two electric light fixtures in the bathroom. Six families had one and seven had three. (Table XIII).

Three light fixtures provided plenty of light for all the families who had them.

Most of the families considered two light fixtures plenty. One of these however, felt that two small fluorescent tubes was not enough light, and another said they had to use electric light in the daytime over the lavatory.

Half of the families who had one light fixture were satisfied with it while the other half needed more light and wanted fixtures on either side of the mirror or over the lavatory instead of in the center of the ceiling.

TABLE XII

NUMBER OF WINDOWS WITH FAMILY'S EVALUATION

No. of Windows	No. of families	Family's evaluation		
		No window	One window	Two windows
None	2	<p>Felt no need for daylight. Plenty of shaving and reading light.</p> <p>Want window badly. Need more light. Could save electricity with window. Planning to put in skylight.</p>		
One	21	<p>Plenty. (13)</p> <p>Plenty--some light also from bedroom. Satisfactory.</p> <p>Window high and small--all right for small area.</p> <p>Small window but plenty of light. (2)</p> <p>Adequate. (2)</p> <p>Must use light over lavatory in daytime.</p> <p>Small window.</p>		
Two	2	<p>Plenty. (5)</p> <p>Plenty of light--high window put in mainly for extra light.</p> <p>Two windows fine.</p>		

TABLE XIII

NUMBER OF LIGHT FIXTURES WITH FAMILY'S EVALUATION

No. of light fixtures	No. of families	Family's evaluation		
		One light fixture	Two light fixtures	Three light fixtures
One	6	Plenty. Light from bedroom helps, too. Plenty of light. Sufficient. Want light beside mirror for shaving and grooming. Could use light on each side of mirror. Need light over lava- tory instead of center ceiling.		
Two	12		Plenty. (5) Plenty of light for shaving and grooming. (2) Good fluorescent lights-- plenty. Quite adequate. Adequate. Small fluorescent tubes. Need more light. Need more light. Must use electric light over lavatory in daytime.	
Three	7			Plenty. (5) Satisfactory. Very adequate.

Ventilation

One family had and liked a furnace air-blower vent that they used when they needed more air circulation in the bathroom.

All of the families except three had bathrooms ventilated by windows and doors. (Table XIV) Most of the families considered this type of ventilation entirely satisfactory. However, two said they objected to the amount of steam in the bathroom when using the shower with the doors and windows closed.

The two families without a window in the bathroom had different opinions about the ventilation in the bathroom. For one it was satisfactory while the other mentioned the necessity of using an electric fan in the summer and having to leave the bathroom door open part of the time.

TABLE XIV
TYPE OF VENTILATION WITH FAMILY'S EVALUATION

Type of ventilation	Number of families	Family's evaluation	
		Satisfactory	Unsatisfactory
Window, door and vent	1	Satisfactory--use furnace for blowing air when need more circulation.	
Windows and doors	22	<p>Fine--can take high window completely out in summer for more air and still have privacy. Satisfactory.</p> <p>Shower not steamy.</p> <p>All right. (3)</p> <p>Fine.</p> <p>No need for more--good cross ventilation when house is open. (3)</p> <p>Plenty of air circulation. (6)</p>	<p>Some steam from shower. (3)</p> <p>Need more ventilation. (3)</p> <p>Very steamy with doors and windows closed.</p> <p>Window fan in bedroom helps in summer.</p>
Door only	2	Air circulation all right without a window.	
			Use electric fan in summer. Have to leave door open some of the time.

Heat

More of the families had heat within the bathroom than had the bathroom heated from adjoining rooms. (Table XV). However, most of the families having heat in the bathroom had it only part of the time and from a portable electric or portable oil heater.

The four families who had a central heating system and had the bathroom heated all of the time agreed that it was entirely satisfactory and provided plenty of heat at all times.

One family who had a built-in electric heater with a thermostat control in the bathroom liked it so well that they were thinking of putting it in every room in the house.

Three of the seven families who had portable electric heaters were satisfied with using them when they needed additional heat for bathing. Three others considered the portable electric heater inadequate for heating the bathroom; two preferred central heat. However, one family said it provided too much heat with the bathroom door shut for a long time.

Three families used a portable oil heater and only one found it completely satisfactory.

Of the ten families whose bathrooms were warmed by heat from adjoining rooms, seven considered it generally satisfactory. All of these said the heat from central systems or oil circulators in adjoining rooms or halls was

sufficient for the bathroom. The other three were only partially satisfied with that method of heating the bathroom and were planning to improve it later.

TABLE

LOCATION OF HEAT, PORTION OF TIME HEATED

Location of heat	Portion of time heated	No. of families	Type of heater	No. of families
Within room	All of the time	4	Central	4
	Part of time	11	Built-in electric	1
			Portable oil heater	3
			Portable electric heater	7
From adjoining room		10		

XV

AND TYPE OF HEATER WITH FAMILY'S EVALUATION

Family's evaluation		
Satisfactory	Partially satisfactory	Unsatisfactory

Fine.

Fine to have.

Satisfactory.

Plenty of heat all the time; have enjoyed central heat.

Thermostat controlled, some heat from living room, don't need electric heater except when bathing. Thinking of putting in every room.

Satisfactory, use for bathing in cold weather.

Plenty. Too hot sometimes. Fairly good except in real cold weather. Plan better heat soon--oil circulator.

Fine, can open nearby doors for central heat.

Plenty, too much with door shut long.

Not adequate; will put in central heat soon. Need more heat; porch not enclosed.

Use only when bathing; open door for extra heat when having a party.

Dislike having no direct heat; but electric heater is fine when use it. Prefer direct heat all of the time.

Heat from adjoining kitchen wood stove; use electric heater for bathing, plenty of heat.

Oil circulator gives plenty of heat. (4) Stays plenty warm with central bedroom heat.

Don't need any except in coldest weather. Heat from oil circulator in den. Leave door open much of the time.

Central heater in hall gives good heat. Thought of electric heater but afraid of it for safety of children.

Oil circulator for whole house. Warm in bathroom is too hot for rest of house. Plan to get portable electric heater soon for bathroom.

Heat only from bedroom. Outside wall insulated. Plenty warm, central heat from bedroom.

Some heat from nearby kitchen and den. Planning to have electric heater and central heat later.

Floor Finish

More families had used linoleum and rubber tile than used vinyl tile, ceramic tile or vinyl asbestos. (Table XVI). Most of them were pleased with the floor covering they had and felt that it was easy to clean and maintain. However, four expressed preference for rubber, vinyl or ceramic tile over linoleum and one found that the light colored vinyl tile showed dirt. Another family had had some breakage on ceramic tile.

TABLE XVI

TYPE OF FLOOR FINISH WITH FAMILY'S ATTITUDE

Floor Finish	Number of Families	Qualitative Attitude
Rubber tile	8	Elim-like very much--best requires a lot of dusting, do very well, is clean, easy to keep, very Very pleasant, with it looks good May be clean, but not too much, though, because floor is heavy. Some as they have their linoleum.
Vinyl asbestos	1	Clean, well-kept, clean again.
Vinyl tile	4	Like tile--it will be better than it--like to cover, just a little dirt, it looks very liked it. Some do like it--it may be, but clean, it is light in color, very easy to keep and clean, dirt, it would not be so. Marked, clean, so could clean when it is not so, but you like it.
Ceramic tile	3	
Linoleum	10	

TABLE XVI

TYPE OF FLOOR FINISH WITH FAMILY'S EVALUATION

Floor finish	Number of families	Family's evaluation	
		Satisfactory	Partially Satisfactory
Rubber tile	8	Fine--like very much--doesn't require a lot of cleaning (2). Very easy to clean--would choose again. (2) Very pleased with it. Looks good. Easy to clean. Not perfectly smooth, though, because sub-floor is uneven. Would rather have than linoleum.	
Vinyl asbestos	1	Cleans well--would choose again.	
Vinyl tile	4	Like fine--as well as rubber or better. Love it--plan to cover rest of house with it. Sure have liked it.	Light color--shows dirt.
Ceramic tile	2	Sure do like it--so easy to keep clean. All right to spatter water.	Don't drop any bottles!
Linoleum	10	Easy to keep and clean. Fine. (4) Would want it again. Wanted linoleum so could change soon if wanted to. Has worn very well.	Very pleased with it but prefer ceramic tile. Fine--but prefer vinyl plastic in new home. Printed linoleum--much prefer rubber tile or inlaid linoleum for upkeep and looks.

Wall Finish

Half of the families finished their bathroom walls with paint and plastic tile. (Table XVII) Most of these families would choose the same wall finish again and said it was easy to clean and maintain.

The two families who had paint and ceramic tile walls in the bathroom considered them satisfactory.

About a third of the families used and were entirely satisfied with paint and tileboard finish except that a few preferred ceramic tile if they could afford the extra cost.

The families who used paint, tileboard, or linoleum as a wall finish considered them partially satisfactory. One family used baked enamel on stainless steel tile because they were given enough to cover the entire bathroom walls. Many of the tiles had popped off due to foundation work on the house.

Fixtures

Two-thirds of the families had a tub-shower combination in the bathroom (Table XVIII). Nearly one-fourth had a tub only. Two families had a shower and one family had a tub and shower.

One family said they had enjoyed having the tub and shower separate. They especially liked that arrangement because it eliminated some tub cleaning.

Most of the families who had the tub-shower combination were entirely satisfied. A few preferred the tub and shower separate but one would separate the tub and shower or leave the shower out altogether.

TABLE XVII

TYPE OF WALL FINISH WITH FAMILY'S EVALUATION

Wall finish	Number of families	Satisfactory	Partially satisfactory
Paint and plastic tile	12	<p>Fine. Plastic tile next best to ceramic tile. Fine.</p> <p>Very satisfactory. Put tile all the way up in shower to prevent steam damage on sheet rock. Satisfactory. Easy to keep. (2) Would choose again--easy to clean. (2) Did as cheaply as possible. Serves the purpose. Poor installation job--good otherwise. Easy to clean.</p>	<p>Would use again but prefer to cover entire walls with plastic tile.</p> <p>Some tiles popped off due to dampness. Would choose again though. Fairly satisfactory--prefer ceramic tile to the ceiling in the shower.</p>
Paint and ceramic tile	2	<p>Fine--would like tile higher in shower though. Very satisfactory--moisture collects on tile when bathing.</p>	

TABLE XVII (continued)

Wall finish	Number of families	Satisfactory	Partially satisfactory
Paint and tileboard	7	Satisfied--just love it.	Very pleased with it--but would choose ceramic tile next time.
		We like it--much cheaper than plastic tile, won't pop off like plastic--not as pretty though.	Has been satisfactory but prefer ceramic tile if could afford it.
		Would definitely choose again. (2)	
		Would choose again for inexpensive house. Enamel paint on tileboard cleans easily.	
Paint only	1		Has held up fairly well--but water spots it. Planning to add plastic tile.
Tileboard	1		Fine for this house but prefer ceramic tile.
Tileboard and linoleum	1		Prefer something different in new house.
Baked enamel on stainless steel tile	1		Used because it was given to us--enough to cover entire walls. Many have popped off due to foundation work.

TABLE XVIII

BATHROOM FIXTURES WITH FAMILY'S EVALUATION

Individual fixtures	No. of families	Family's evaluation		
		Satisfactory	Partially satisfactory	Unsatisfactory
Bathing facility				
Tub and shower	1	Both enjoy shower-- ease in cleaning-- eliminates some tub cleaning. Fine.		
Tub-shower combination	16	<p>Prefer tub and shower combination. Care for no others. Want no others. Separate shower would be good in basement or somewhere. Fine. (2)</p> <p>Family enjoys shower.</p> <p>Don't want tub and shower separate. (4)</p>	<p>May have had shower separate if more room but have been perfectly satisfied.</p> <p>Prefer tub and shower separate. (3)</p> <p>Use both shower and tub regularly. Separate would be nice for a larger family.</p>	<p>Don't like shower in tub. Would separate or leave shower out. Have a shower in basement.</p>

TABLE XVIII (continued)

Individual fixtures	No. of families	Family's evaluation		
		Satisfactory	Partially satisfactory	Unsatisfactory
Tub only	6	Satisfactory. Don't care for shower here. No shower. Too messy.	We wish for shower. Teenage boy especially prefers one. Couldn't afford extra expense at the time. Would like to have shower. Husband prefers shower. Would put shower in basement if possible.	Tub not a tight fit--poor installation job.
Shower only	2	All the family pleased with shower. Don't want tub.	Couldn't get in and out of tub after spinal operation--had to have shower but definitely prefer tub.	
Lavatory		Lavatory higher than standard--both of us tall.		
Counter-type			Prefer counter-lavatory. (2) Would like to have counter-type lavatory. (2)	
Placement				Lavatory too close to wall. (2)
Commode				Commode in a small space. Commode too close to wall.
Placement				
Mixer faucets		Mixer faucets are good.		

Half of the families who had tubs were satisfied with them but the others definitely wanted a shower in addition to the tub. One family said they felt they couldn't afford the extra expense of the shower when building the bathroom but now regretted leaving it off.

A shower was completely satisfactory for one family but for another it was a necessity because of the health of one family member.

One family placed the lavatory higher than the standard height because both family members were tall. A counter-lavatory was preferred by four families for convenience and more storage space. The lavatory placed too close to the wall was mentioned by two families as being undesirable. Two families said the commode was too close to the wall or in too small a space. Mixer faucets were considered desirable by the family who had them.

Storage

All but two of the nine families who had a built-in closet¹ said it was entirely adequate. (Table XIX) One of these families could put some storage overflow from a bedroom in the bathroom closet and one especially mentioned having carefully planned and drawn exact details of the closet for the builder. One family considered a closet adequate but mentioned the need for more shelves. For another family a closet was inadequate for bathroom storage.

1. A small room used for storage.

TABLE

TYPE AND ADEQUACY OF BATHROOM

Type of Storage	No. of families	Built-in	Not Built-in	Adequate
Cabinet	15	14	1	Plenty for articles needed in the bathroom. (2) No need for more. Never planned to have much storage in bathroom. Enough storage for towels and underwear. Large closet near bathroom helps. Two cabinets in bathroom. Adequate for linen and cleaning supplies
Closet	9	9		Good storage space-- plenty. (5) Plenty of storage for bathroom and some overflow from bedroom. Plenty for storage purposes in bathroom. Planned carefully and drew exact details for builder.
Open Shelves	6	5	1	Set of shelves and cabinet are plenty for our bathroom. Has been plenty so far. Plenty of storage for bathroom. Want doors on open shelves.
Drawers	1		1	
None	1			

XIX

STORAGE WITH FAMILY'S EVALUATION

Adequacy of bathroom storage

<u>Partially adequate</u>	<u>Inadequate</u>
Want more storage for towels. (2)	Want storage for linens and clothes very much. No space for it.
Want more storage for general purposes. (2)	Only thing we dislike about bathroom no space for storage. Need some, especially for cleaning supplies.
Adequate for small articles. Want full length closet, if room for it. Plan for more storage soon. (2)	
Plenty, except we need more shelves in closet for bath linens.	Not enough--need more in bath.
	Need more room for linen storage only. Definite need for more storage. Would like counter lavatory for more storage. Need more storage badly. Would like to have linen closet in bathroom but no room for it.
	Need more and would add more but space is too limited.
Excellent storage in adjacent dressing room but want small chest of drawers and shelves in bathroom.	

Nearly two-thirds of the families had built-in cabinet¹ storage in the bathroom and most of them considered the amount of storage space only partially adequate or inadequate. Some families said they wanted more storage for towels, linens, clothes, cleaning supplies, or general purposes. Some were planning for more storage space soon. Three families who considered a cabinet generally adequate for storage of articles needed in the bathroom, apparently limited the items to be stored there. One family considered two cabinets sufficient storage space for towels and underwear; they had a larger closet near the bathroom.

Of the six families who had open shelves, three considered them adequate. Three other families said they needed more storage and specifically mentioned wanting linen storage in the bathroom.

For one family, drawers were inadequate storage in the bathroom but space was too limited for more.

The family who had no storage space in the bathroom had excellent built-in storage in the adjoining dressing room but expressed a need for a small chest of drawers and shelves in the bathroom.

Accessories

Most of the families had either four, five, six or seven different bathroom accessories (Table XX). One family had as few as three; one as many as eight. Seven of the 24 families who had from four to eight different accessories said they felt no need for more.

1. A piece of furniture with shelves and drawers.

TABLE XX
NUMBER OF DIFFERENT BATHROOM ACCESSORIES

Number of Accessories	Number of families
Three	1
Four	4
Five	5
Six	8
Seven	6
Eight	1

The accessories considered most essential were towel rods and mirrors (Table XXI). Most of the families had towel rods. However, nearly a third of them said they needed more towel rods. All of the families had at least one mirror.

A toilet paper holder, waste basket, toothbrush holders, clothes hooks, and clothes hamper were the accessories considered the next most desirable.

A small percentage of the families had or wanted soapdishes or scales as accessories in the bathroom.

A few families had or wanted other accessories in the bathroom. Three families regularly kept a chair or bench in the bathroom and one family mentioned the need for a chair. A table in the bathroom was considered essential by one family and two other families were planning to include one. One family had a grab-bar at the tub and

TABLE XXI

TYPE OF BATHROOM ACCESSORY WITH FAMILY'S EVALUATION

Type of accessory	No. of families	Want
Towel rods or hooks	21	Need towel rods. (7)
one or two	16	
three or more	5	
Mirror	25 ^a	
Toilet paper holder	20	
Waste basket	17	Need waste basket.
Toothbrush holders	15	
four	11	
six	3	
eight	1	
Clothes hooks	12 ^b	Need clothes hooks. (3)
Clothes hamper	10	Want clothes hamper. (4)
Soap dishes	7	Need soap dishes. (2)
Scales	6	
Chair or bench	3	Plan to get a chair for bathroom.
Table	1	Table would be good. Planning to build in a dressing table.
Grab-bar at tub	1	Need grab-bar at tub for safety.
Drying rack for clothes	1	
Set of hooks for hanging cleaning brushes	1	

a. One family had two mirrors.

b. One family had two clothes hooks.

another family wanted one for safety at the tub. A folding drying rack for clothes was regularly kept in one bathroom and a set of hooks for hanging cleaning brushes was attached to the back of the door in another bathroom.

Special Bathroom Provisions for Children

About three-fourths of the families made no special bathroom provisions for children. (Table XXII).

However, five families made special provisions for their pre-school children. These included: a low lavatory, low towel-rack, step-stool or commode seat. They considered these very helpful for small children. However, one family wished they had made a temporary provision for their small children instead of placing the lavatory lower than the standard height.

Two families made special provisions for infants-- a diaper hamper and a plastic clothes line. The clothes line was put up for an infant visitor but was left for the convenience of the entire family.

Water, Plumbing and Waste Disposal

A well was the source of water for most of the families. (Table XXIII). Three families used a spring; one used city water. Some of the families emphasized their satisfaction with new, drilled wells which were superior to shallow, dug wells they had formerly relied upon for water.

Most of the families had plenty of water at all times. A few said they sometimes ran low in dry weather or when they had company. One family complained of hard water. One family complained of low water pressure.

TABLE XXII

SPECIAL BATHROOM PROVISIONS FOR
CHILDREN WITH FAMILY'S EVALUATION

Type of provision for particular age	No. of families	Family's evaluation
Pre-school child		
Low step-stool	1	5* Helps child get in and out of tub and reach lava- tory.
Low towel rack and commode seat	1	Need these with small children.
Commode seat	2	Very helpful for small child. No permanent provisions necessary. Use when have children visitors.
Low lavatory	1	Good at the time but wish it were higher now.
Infant		
		2*
Hamper for dia- pers	1	Helpful.
Two plastic lines from top of door to top of window	1	Put in for infant visi- tor and have left for our convenience.
None	19	

* One family made provisions for both a pre-school child
and an infant.

TABLE XXIII

SOURCE AND AMOUNT OF WATER WITH FAMILY'S EVALUATION

Source of water	No. of families	Family's evaluation	
		Source	Amount
City water	1	Entirely satisfactory.	Completely adequate.
Spring	3	Waited for connection with spring, considerable distance and cost.	Plenty for house and farm. Very adequate supply. Low water pressure due to pump and pipe (1/2 inch) being too small.
Well	21	Have good new well. Nice, big new one. First one filled with quick sand. Had trouble with shallow well before--fine now. Built second well. Drilled well--very satisfactory. Only one well for farm and home. Fine. Water is so hard.	Plenty all the time. No trouble with water with new, large well. Very ample supply for house, garden, farm. 10-12 gallons per minute--ample. Never short. Adequate water even with 2,000 chickens in dry weather. Plenty in dry weather. Can't pump well dry. 90 feet of water. Reasonably adequate. Worry about real dry summer with two bathrooms. Satisfactory but plan to drill new well soon. Have to be careful in dry weather. Fine for family but short sometimes when have company and dry weather. Plenty for bathroom use--have run low for extra use.

All the families had plenty of hot water at all times and considered this a great convenience.

The pipes in all of the bathrooms were located inside the walls. However, in five bathrooms they were located in boxing within the walls.

The pipes were located in two different walls in three-fifths of the bathrooms. They were located in one wall in five bathrooms; three walls in four bathrooms. In one there were pipes in four different walls.

All the families had a septic tank for waste disposal and said it had been entirely satisfactory in every respect. Two-thirds of the septic tanks were prefabricated; the others were built where installed.

Regular Use of Any Area in Addition to
Bathroom for Wash-Up and Grooming

The three families who had two bathrooms said they regularly made full use of both.

In addition to the one bathroom, eight families made regular use of another area for wash-up and grooming. (Table XXIV). Those areas were either the kitchen sink and bedrooms, or the lavatory on the back porch or in the kitchen pantry. These families used these areas more than the bathroom and felt that they avoided some soiling of the bathroom.

TABLE XXIV

REGULAR USE OF ANY AREA IN ADDITION TO BATHROOM STUDIED
FOR WASH-UP AND GROOMING WITH FAMILY'S EVALUATION

(11 families who regularly used another area in addition to bathroom for wash-up and grooming)

Area in addition to bathroom	No. of families	Family's evaluation
Second bath	3	<p>Make full use of both bathrooms.</p> <p>Two small children make regular use of both bathrooms necessary.</p> <p>Need second bath when have company and family.</p>
Kitchen pantry with lavatory	1	Saves the bathroom.
Back porch lavatory and mirror	3	<p>Regular use saves messing up bathroom.</p> <p>Used more than bathroom.</p> <p>Also serves washing machine on back porch.</p>
Kitchen sink and bedrooms	4	Use more than we do (4) bathroom.

Suggestions for Other Families

The families interviewed made the following suggestions for other families:

Planning--

Make scale drawings of plans--very important. (4)

Plan carefully, especially for storage.

Plan for plenty of space.

Plan as large a space as possible. (11)

Plan largest possible space for tub and storage.

Allow plenty of space between fixtures and walls. (3)

Placement in relation to other rooms

Careful planning for best location is important. (3)

Don't place too far from kitchen. Put near kitchen for short pipes and avoid having to run water a long time to get hot water. (2)

Place near bedrooms if possible.

Placement of individual fixtures within the bathroom

Place commode out of sight of the door, if possible.

Don't put lavatory below a window.

Don't put tub under window.

Selection of fixtures

Choose a counter-lavatory. (3)

Be sure to study tub sizes in planning.

Have a separate shower.

Get quality fixtures.

Don't depend on builder's choice of fixtures.

Plan a half-bath in addition to bathroom, if possible.

Cost--

Do your own work to save money. (6)

Get a reliable carpenter. (3)

Get a reliable plumber.

Get a contractor.

Cost (continued)--

Buy wholesale. (3)

Buying fixtures

Shop and price carefully for fixtures.

Porcelain steel fixtures may rust but we thought they were the best buy. Small items such as automatic stoppers add to expense. Don't choose colored fixtures but have more money for other items.

Put in shower if you want it--not enough extra expense to leave off.

Washing machine causes greater expense in the bathroom.

Costs more than you think it will. (3)

Don't try to cut costs unless you have to. Worth every penny of investment. (2)

Remodel instead of building new, if possible, to save money.

Construction--

Get a contractor. (5)

Get or know a reliable carpenter. (4)

Foundation

Start with the foundation--not like we did at the top. Foundation work upset walls. Good foundation saves fuel costs.

Leveling existing floor may damage other rooms.

Ceiling

May have ceiling problems with old back porch. Drop ceiling to save heat.

Reinforce walls for fixtures--very necessary.

Lay plastic tile very carefully.

Choice of time--

Do as soon as you possibly can. (2)

Add bathroom before moving in, if possible. (2)

CHAPTER IV

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Since many families are considering the addition of a bathroom to an existing house and because of the problems and the expenses involved in this improvement, the writer felt the need for a study evaluating the experiences encountered by rural families in adding a bathroom to the home. The purposes of the study were to determine why the families chose a particular time to add a bathroom, to secure their description and evaluation of the bathroom and its planning, construction and cost, and to obtain helpful suggestions from the families based on their experiences in adding the bathroom. For this study twenty-five white families, living in rural Guilford County, who had added a bathroom within the past five years to the house they owned and occupied were chosen with the help of the home demonstration agent.

The information was obtained by a personal interview with the homemaker.

The families consisted of two to eight members. At the time of the interview most of the families had pre-school, grade school and/or adolescent children.

The houses varied from 10 to 70 years old. The median age of the houses was 35 years. Most of the houses

had two or three bedrooms and one bathroom. More than half of the families had owned the house less than 20 years.

Twenty-four families had made major improvements in the house other than the bathroom. About 40 percent of the major improvements were made before the bathroom addition; about 45 percent were made at the time of the bathroom addition.

Most of the families said their reasons for choosing a particular time to add the bathroom were the availability of money, changes in family size or composition, and health.

The wife, the husband, or the two together planned the bathroom. A few of them were helped with planning by a builder, an extension agent, or a neighbor.

Most of the bathrooms cost between five hundred and one thousand dollars.

All of the bathrooms were located on the first floor of the house and most of them were installed in an existing room.

Half of the bathrooms were built by family members and paid help. Only one was built entirely by the family. All the others were built by paid help only.

The families either bought or already had concrete or wood bathroom floor material. They had or bought exterior wall material of wood, asbestos siding, or brick and interior wall material of sheet rock, plaster, or wood. Fixtures and pipes were bought.

The summary of the families' evaluation of bathroom features can be found in Table XXV. The features with which most or all of the families were entirely satisfied were number and width of doors, floor finishes, accessories, plumbing, water supply, and waste disposal. Other features such as light, heat, storage, fixtures, size, location, ventilation, and wall finish were satisfactory in some respects and unsatisfactory in others.

Conclusions

It is concluded that most of the families simply "took what space we had" and built the bathroom with little or no analysis or study of the house and the best use of the available space.

However, with use of the bathrooms the families became keenly aware of the results of inadequate planning and in their suggestions to other families the importance of careful planning was mentioned more often than any other item. Some of the families advised the use of scale drawings in making preliminary plans. Despite the availability of assistance in home improvement projects, only two of the twenty-five families sought help from such sources as the extension service or a builder, indicating that the families either felt secure in their abilities or did not know that professional assistance was available.

Even though the families were quite enthusiastic in their evaluations of the bathrooms, the fact that 40 percent

SUMMARY OF EVALUATION

FEATURE	Wholly satisfactory to all families who had them
Size of bathroom	72 square feet or more (3)
Location	Off central hall (3), accessible to social-sleeping-work area (7), or social area only (1)
Doors	1, 2 or 3 doors (25) 2'6" or wider (15) Wide enough for washing machine if necessary
Light*	Two windows (2) Three light fixtures (7)
Heat	Central heat all of the time (4) Heat part of the time with built-in electric heater (1)
Ventilation	Window, door and vent (1)
Wall finish	Paint and ceramic tile (2)
Floor finish	Rubber tile (8) Vinyl tile, if medium or dark color that won't show dirt (4) Vinyl asbestos (1)
Plumbing	Pipes within walls or in boxing within walls (25)
Water supply	Deep drilled well (16) Spring (3) City water (1)
Hot water	Plenty at all times (25)

XXV

OF BATHROOM FEATURES

Satisfactory in some respects or satisfactory to some of the families who had them	Unsatisfactory to all families who mentioned them
29-68 square feet (22)	30 and 33 square feet
Accessible to sleeping area only (5), social-sleeping area (4), work-sleeping area (2), work- social area (2).	Accessible to work area only. (4)
Door swinging into other rooms, hall or porch. (3)	Directly in line with front door. (1) Door swinging into bathroom if space was limited.
One window (21) No window (2) One or two light fixtures (18)	
Heat part of the time with por- table oil heater (3), with portable electric heater (7) Heat from adjoining rooms only (10)	
Windows and doors (22) Door only (2)	
Paint and plastic tile (12) Paint and tileboard (7) Paint only (1) Tileboard only (1) Tileboard and linoleum (1) Baked enamel on stainless steel tile (1)	
Linoleum (10) Ceramic tile (2)	
Shallow well (5)	Hard water (1)

FEATURE	Wholly satisfactory to all families who had them
Waste disposal	Septic tank (25)
Fixtures	Commode, lavatory, but and shower (1) Washing machine (4) Mixer faucets (1)
Storage**	
Accessories	Four to eight different accessories (7) Mirror (25) One, two, three or more towel rods or hooks (21) Toilet paper holder (20) Waste basket (17) Four to eight toothbrush holders (15)
Special bathroom provi- sions for children	Commode seat (2) Low step-stool (1) Low towel rack and commode seat (1) Diaper hamper (1) Plastic clothes line (1)
Supplementary wash-up area	Lavatory in pantry or on porch (4) Kitchen sink and bedrooms (4) Second bath (3)

* Most of the families were not aware that they had inadequate

** The families were more concerned with an adequate amount of

XXV (continued)

Satisfactory in some respects
or satisfactory to some of the
families who had them

Unsatisfactory to all
families who mentioned
them

Commode, lavatory and tub-shower
combination (16)

Commode, lavatory and tub (6)

Commode, lavatory and shower (2)

Cabinet (15)

Drawers (1)

Closet (9)

Open shelves (6)

Excellent storage in adjacent dressing
room but want small chest of drawers
and shelves in bathroom (1)

Low-lavatory (1)

and poorly located electric light in the bathroom.
storage than with the kind of storage.

of the major improvements in the houses were made before the time of the bathroom addition indicates that some families consider such improvements as a remodeled kitchen or an additional bedroom more important to have than a bathroom.

That families are reluctant to go into debt for housing improvements is suggested by the fact that half of the families said they waited until they had the money before making the bathroom addition. However, since so many families said they wish they had added the bathroom sooner it seems that other families might consider the possibility of borrowing money in order to have a bathroom earlier than they would if they waited to save the needed amount of money.

The families' need to keep housing improvement costs to a minimum is indicated by the number of highly practical suggestions they made for ways to lower the cost of the bathroom addition.

That bathroom features require careful planning is indicated by the fact that most of the families were entirely satisfied with the standard features such as plumbing, water supply, waste disposal, and number and width of doors. However, those features more important to the needs of the individual families, such as size, location, storage, fixtures, light and heat were inadequate in some respects for most of the families.

The families' thorough and objective evaluations of the completed bathrooms were evidence of the fact that they had analyzed the room and its use and were aware of its desirable features as well as those that needed improvement. Sound thinking was shown in their very practical ideas for changes or additions in the bathroom that would more adequately meet the needs of all the family.

Recommendations to Families

(1) Analyze housing needs and problems and make tentative plans.

(2) Investigate sources of assistance for housing improvement, such as extension service agents and publications, home economics and agriculture teachers, U.S. Department of Agriculture publications, builders, dealers, and County Health Sanitarian. Consult professional workers for help in planning.

(3) Consider the possibility of borrowing money for housing improvement. Investigate local and federal sources of financial aid for housing, such as Farmers Home Administration.

(4) Make detailed plans before beginning work. The use of scale drawings is recommended for thorough planning of size, furnishings, arrangement and/or use of a room.

(5) Costs of housing improvement may be kept to a minimum by doing own work, shopping and pricing carefully,

and by foregoing desirable but unnecessary features such as colored fixtures and automatic stoppers. Weigh carefully the advantages of remodeling or building new.

(6) Two or three doors may add to the convenience of the bathroom depending on the size and location of the bathroom. 2'6" is recommended as a minimum width for doors.

(7) Floor finishes of rubber, vinyl or vinyl asbestos tile and wall finish of paint and ceramic tile are recommended for durability, ease of maintenance, and appearance.

(8) Towel rods, clothes hooks and toothbrush holders for each member of the family are recommended, as well as a waste basket and a mirror. A counter-lavatory or table may add to the convenience of the bathroom.

(9) Provide for a supply of hot and cold water that is adequate for regular and extra use even in dry weather.

(10) Locate bathroom so that it is easily accessible to all areas of the house, or convenient, at least, to the sleeping area.

(11) Let activities, number of people to use the room, and the most convenient arrangement of fixtures help determine the size of the bathroom. Convenient door swing and temporary adjustments for infants or small children are also largely dependent on adequate size. 5' x 7' is

recommended as minimum size. 5' x 8' or 7' x 8' allows for more storage space and more choice in arrangement of fixtures.

(12) Provide for an adequate amount of well located light. Use activities as one guide.

(13) List the articles to be stored in the bathroom in order to determine the kind and amount of storage needed. Plan storage space carefully for more complete and convenient use of the bathroom.

(14) Provide central heat, if possible, or have some means of getting adequate and regular heat in the bathroom, such as a built-in or portable heater.

(15) If the house is without an indoor bathroom, find ways to manage the addition of one as soon as possible.

Recommendations to Housing Advisers

(1) Make known ability to assist families with plans for remodeled housing.

(2) Encourage families to make needed improvements and help them to find ways to do it such as where and how to obtain financial assistance.

(3) Teach families to analyze the available space in a house in order to determine the best location and size of a proposed bathroom.

(4) Teach the use, arrangement and furnishing of bathrooms and help families to know how to evaluate their choices.

(5) Help families to make choice between remodeling or building new.

Recommendations for Further Study

This study suggests the need for additional information concerning the following:

(1) The process by which families plan the addition of a bathroom to a house and ways in which they can successfully plan the use, arrangement and furnishings of a bathroom.

(2) The effective analysis of existing houses to determine the best location of the bathroom.

(3) The kinds of articles families store in bathrooms and the type and amount of storage space needed for them.

(4) The location and amount of electric light needed in the bathroom for specific and general purposes.

(5) The kind and amount of heat needed in bathrooms added to existing houses.

(6) Analysis of activities to be carried on in the bathroom in relation to the size which will be adequate.

(7) The depth of well and size of hot water tank adequate for the family and their guests even during a dry period.

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- Housing Needs and Preferences of Farm Families. Howard, Mildred S., and Woolrich, Avis. Bureau of Human Nutrition in cooperation with State Agricultural Experiment Stations. United States Department of Agriculture AIB 96. Washington, 1952.
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AN EVALUATION OF THE EXPERIENCES ENCOUNTERED BY URBAN
FAMILIES IN ADDING A BATHROOM TO THE HOME

QUESTIONNAIRE

I. Family Information

Name _____
 Number in household now _____ Age of youngest child _____ Gender _____
 Number in household when bathroom was installed _____
 Age of house (years) _____ Number of bedrooms in house _____
 Number of years since addition of bathroom _____
 Number of years family has owned house _____

II. Decision Concerning The Time To

Add _____

APPENDIX

A. Have you made any major improvements to your home other
than the bathroom? Yes _____ No _____

If so, what were they? What did you add then?

	Before	At same time	After
_____ New rooms (list)	_____	_____	_____
_____ Remodeled (list)	_____	_____	_____
_____ Electricity	_____	_____	_____
_____ Sewing machine	_____	_____	_____
_____ Furn.	_____	_____	_____
_____ Storage	_____	_____	_____
_____ Exterior	_____	_____	_____
_____ Other (list)	_____	_____	_____

B. What were your family's reasons for adding a bathroom at
the particular time?

1. _____
2. _____
3. _____
4. _____

AN EVALUATION OF THE EXPERIENCES ENCOUNTERED BY RURAL
FAMILIES IN ADDING A BATHROOM TO THE HOME

QUESTIONNAIRE

I. Family Information

Name _____
Number in household now ___ Age of youngest child ___ Oldest ___
Number in household when bathroom was completed _____
Age of house (years) _____ Number of bedrooms in house _____
Number of years since addition of bathroom _____
Number of years family has owned house _____

II. Decisions Concerning the Time to
Add the Bathroom

A. Have you made any major improvements in your home other
than the bathroom? _____ Yes _____ No.

If so, what were they? When did you make them?

	Before	At same time	After
_____ New rooms (List)	_____	_____	_____
_____ Remodeled (List)	_____	_____	_____
_____ Electricity	_____	_____	_____
_____ Running water	_____	_____	_____
_____ Heat	_____	_____	_____
_____ Storage	_____	_____	_____
_____ Exterior	_____	_____	_____
_____ Other (List)	_____	_____	_____

B. What were your family's reasons for adding a bathroom at
the particular time?

1. _____
2. _____
3. _____
4. _____

III. Planning

A. Who planned your bathroom? E. Who helped plan it?

	A	B
Husband	_____	_____
Wife	_____	_____
Other family members	_____	_____
Neighbors	_____	_____
Friends	_____	_____
Builder	_____	_____
Contractor	_____	_____
Dealer	_____	_____
Extension agent	_____	_____
Home economics teacher	_____	_____
Agriculture teacher	_____	_____
Architect	_____	_____
Other (List)	_____	_____

C. Did you use printed information in planning your bathroom?

Yes _____ No _____

Sources of information:

_____ Catalogs	_____ Builder's specifications
_____ Magazines	_____ Extension service bulletins
_____ Newspapers	_____ Manufacturers' publications
_____ Other (List)	_____ U. S. Dept. Agriculture bulletins

IV. Construction

A. Where did you add your bathroom?

_____ New room	_____ Porch
_____ Existing room (List)	_____ First floor
_____ Part of existing room (List)	_____ Second floor
_____ Hall	_____ Other (List)

B. Who did the work?

_____ Family _____ Hired help _____ Both

C. What kind of building materials did you use and where did you get them?

	Kind	Had	Bought
Basic floor material	_____	_____	_____
Exterior wall material	_____	_____	_____
Interior wall material	_____	_____	_____
Pipes		_____	_____
Fixtures		_____	_____

1/2" scale drawing of bathroom and surrounding area

V. Description and Evaluation of the Bathroom

A. Description	B. Evaluation
1. Size (Feet) _____ by _____	1.
2. Location: direct access* into _____ Bedrooms(No.) _____ Porch _____ Dining area _____ Other(List) _____ Kitchen _____ Living area	2.
3. Doors _____ Number Size (Feet) _____ by _____ _____ by _____ _____ by _____ Doors swing wide open _____ Yes(No.) _____ No(No.)	3.
4. Light _____ Number windows _____ Number light fixtures Location of light fixtures _____ Center of ceiling _____ Each side of mirror _____ Inside closet _____ Over lavatory _____ Over mirror _____ Over toilet _____ Over tub _____ Other(List)	4.
5. Heat a. Provision _____ All of the time _____ Part of the time _____ No heat	5. a.
b. Type _____ Built-in electric heater _____ Central heat _____ Portable electric heater _____ Stove(non-electric) _____ Other(List)	5. b.

* access--opens into or is easily accessible through hall

A. Description	B. Evaluation
<p>6. Ventilation</p> <p><input type="checkbox"/> Windows and doors</p> <p><input type="checkbox"/> Louvered doors</p> <p><input type="checkbox"/> Ceiling fan</p> <p><input type="checkbox"/> Window fan</p> <p><input type="checkbox"/> Vent</p> <p><input type="checkbox"/> No window</p> <p><input type="checkbox"/> Other (List)</p>	6.
<p>7. Wall Finish</p> <p><input type="checkbox"/> Paint</p> <p><input type="checkbox"/> Plastic coated fabric</p> <p><input type="checkbox"/> Ceramic tile</p> <p><input type="checkbox"/> Plastic tile</p> <p><input type="checkbox"/> Tile board</p> <p><input type="checkbox"/> Wall paper</p> <p><input type="checkbox"/> Unfinished</p> <p><input type="checkbox"/> Other (List)</p>	7.
<p>8. Floor Finish</p> <p><input type="checkbox"/> Paint</p> <p><input type="checkbox"/> Stain</p> <p><input type="checkbox"/> Linoleum</p> <p><input type="checkbox"/> Tile (List)</p> <p><input type="checkbox"/> Other (List)</p>	8.
<p>9. Plumbing</p> <p>Pipes on _____ (No.) walls</p> <p><input type="checkbox"/> Boxed</p> <p><input type="checkbox"/> In walls</p>	9.
<p>10. Water Supply</p> <p>a. Source (List)</p> <p>_____</p>	10. a.
<p>b. Adequate</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	10. b.
<p>11. Waste Disposal</p> <p><input type="checkbox"/> Septic tank</p> <p><input type="checkbox"/> Built _____ Prefab</p> <p><input type="checkbox"/> Public sewer</p> <p><input type="checkbox"/> Other (List)</p>	11.
<p>12. Provision for Hot Water</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	12.

A. Description	B. Evaluation
<p>13. Fixtures</p> <p>_____ Commode</p> <p>_____ Lavatory</p> <p>_____ Shower</p> <p>_____ Tub</p> <p>_____ Tub and shower</p> <p>_____ Dryer</p> <p>_____ Washing machine</p> <p>_____ Other (List)</p>	<p>13.</p>
<p>14. Storage</p> <p>_____ Cabinets</p> <p>_____ Closets</p> <p>_____ Drawers</p> <p>_____ Shelves</p> <p>_____ Built-in</p> <p>_____ Not built-in</p> <p>_____ Other (List)</p>	<p>14.</p>
<p>15. Accessories</p> <p>_____ Chair, bench</p> <p>_____ Clothes hamper</p> <p>_____ Clothes hooks (No.)</p> <p>_____ Mirrors (No.)</p> <p>_____ Table or work surface</p> <p>_____ Toilet paper holder</p> <p>_____ Toothbrush holders (No.)</p> <p>_____ Towel rods or hooks (No.)</p> <p>_____ Waste basket</p> <p>_____ Other (List)</p>	<p>15.</p>
<p>16. Bathroom provisions for special use. (List)</p> <p>Infants _____</p> <p>Pre-school children _____</p> <p>Grade school children _____</p> <p>Adolescents _____</p> <p>Aged people _____</p> <p>Invalids _____</p>	<p>16.</p>

A. Description	B. Evaluation
17. Regular use of any area in addition to bathroom for wash-up and grooming. _____ Yes _____ No	17.

VI. Suggestions for Other Families

Now that you have completed your bathroom and used it a while, what suggestions would you make for the benefit of other families doing the same thing?

Choice of time _____

Planning _____

Construction _____

Cost _____

VII. Cost

For the benefit of other families adding a bathroom, would you mind telling me the approximate cost of your bathroom?

Approximate Total Cost _____

SUGGESTED READING LIST

North Carolina Agricultural Extension Service
Agricultural Engineering Department
North Carolina State College, Raleigh, North Carolina

Cost Information On Farm Residences

Sears Roebuck and Company
Department 642
Chicago 7, Illinois

Modernization Booklets
Revitalize Your Home
Construction
Plumbing
Water Systems

Small Homes Council
University of Illinois
Urbana, Illinois

Plumbing
Septic Tanks
Basic Farmhouse Plan
Flooring Materials
Household Storage Units
Financing the Home

Southern Association of Agricultural
Engineering and Vocational Agriculture
Coordinators Office, Barrow Hall
Athens, Georgia

Planning Farm Water Systems

U. S. Department of Agriculture
Government Printing Office
Washington 25, D. C.

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No. 19
How to Plan Remodeling - Miscellaneous Publication
No. 619
Planning Your Farmstead Wiring and Lighting -
Rural Electrification Administration Publication
No. 597
Using Credit to Finance Farmhouse Improvements -
Miscellaneous Publication No. 701.