T-COST HOUSING IN THE TWIN CITIES METROPOLITAN AREA

Report with Recommendations to the 1977 Minnesota State Legislature from the Modest-Cost Private Housing Advisory Committee

Metropolitan Council
OF THE TWIN CITIES AREA

300 Metro Square Building, 7th Street and Robert Street, Saint Paul, Minnesota 55101 Area 612, 227-9421

January 15, 1977

To: THE MEMBERS OF THE MINNESOTA LEGISLATURE

The Metropolitan Council was directed by the 1976 Metropolitan Land Planning Act to establish an advisory committee which would study and make recommendations on ways to reduce the cost of housing and to report on the committee's findings by January 15, 1977.

The Modest-Cost Private Housing Advisory Committee was appointed in May and met intensively for several months. Its final report was adopted by the committee in December. The Metropolitan Council has received the committee report and is submitting it to the Legislature on behalf of the committee in conformance with the law.

The report contains 22 recommendations for reducing the cost of single-family housing. The recommendations contain the standards for single-family housing requested in the legislation, but do not address questions relating to multi-family housing. As noted in the report, the committee lacked the time and resources necessary for adequate study of the multi-family housing issue. The committee has recommended that the Council be charged by the Legislature with continued study of modest-cost housing and that adequate financial support be provided for this study.

It is my hope that the report will be valuable as a starting point toward dealing with the extremely complex problems associated with housing costs. The Council stands ready to assist in advancing this effort.

Sincerely,

John Boland
Chairman

MODEST-COST HOUSING IN THE TWIN CITIES METROPOLITAN AREA

Report with Recommendations

to the

Minnesota State Legislature

from

The Modest-Cost Private Housing Advisory Committee

Mary Anderson
Len Bienias
Ron Dow
Bill Fignar
Gary Gallagher
Marlin Grant
Pat Lucas

L. Kenneth Mahal, Chair
Louis Meyers
Brent Nelson
Solveig Premack
Clyde Rehbein
Kenneth C. Sheehan
Bruce A. Thomson

December 1976

METROPOLITAN COUNCIL

Suite 300 Metro Square Building, Saint Paul, Minnesota 55101

Table of Contents

Appendices

List of Tables

strong public preference for such housing, the committee did not feel it was appropriate to simply dismiss single-family housing as unattainable for any but the most wealthy.

The recommendations in the report should be viewed as a beginning effort in finding ways to reduce the cost of housing. With the limited time available for the study and its limited scope, not all cost factors could be studied extensively. The recommendations are particularly lacking with regard to financing costs, which are a national-level problem difficult to impact or alter at the state level. Most of the recommendations deal with the cost factors related to the sales price of the home. Although the study was directed specifically to new single-family housing, many of the recommendations do apply to all types of residential construction.

The committee believes that this report with its recommendations represents a significant beginning toward finding ways to reduce housing costs. The committee recommends that work be continued on the housing cost problem, and that the state provide adequate time and financial resources to conduct the work. Finding new ways to ensure an adequate supply of housing at prices people can afford must be a top state priority.

WHAT IS THE PROBLEM?

The committee identified three major problem areas in the Metropolitan Area housing market. These are summarized below.

1. The lowest priced home being constructed on a fully developed lot in the Metropolitan Area today is affordable by substantially fewer people than five years ago.

This problem, found not only in this Metropolitan Area, but throughout the nation, is caused primarily by inflation. Not only have housing sales prices been increasing more rapidly in recent years than the disposable income of the average consumer, but inflation is the chief cause of higher interest rates on mortgages. Since the cost of financing is such a large portion of the total cost of housing, inflation has had a more adverse affect on the affordability of housing than any other major consumer product. Most housing economists believe that as long as inflation continues without sustained and substantial abatement, the trend of fewer and fewer people being able to afford housing will continue. Unfortunately, inflation and high interest rates are problems of national scope which we cannot do much about at the state level.

2. The price of the average used home being sold today in the Metropolitan Area is affordable by substantially fewer people than five years ago.

Most of the committee's efforts were directed at studying cost factors affecting new housing. New construction, however, makes only a miniscule addition each year to the total housing supply, and affects composition and supply very little. In a typical year, new construction adds only about two percent to the total housing supply.

It is thus imperative that existing housing be recognized as by far our major source of housing, and, in fact, the only source of large quantities of non-subsidized moderate cost housing. A large number of small single-family homes, still in excellent condition, are available in the existing housing supply and cannot be reproduced today for their present prices.

While new construction does not appreciably affect the total pool of housing, it has a tremendous impact on the price of existing housing. Even though new housing adds only two percent to the housing stock in a typical year, it represents about 30 percent of the housing-for-sale at any given time. Therefore, the cost factors which single out new housing for higher prices will quickly transfer that impact to existing home prices.

3. The average cost of housing in this Metropolitan Area is higher than the average cost of housing nationwide.

The committee could not attempt to identify the reasons for this difference because of the lack of time and funds. The committee feels

that further study should be undertaken to determine those cost factors, other than inflation and interest rates, which makes housing more expensive here. Possibly we can do something about these other factors at the State level.

While the special concern of the committee has been with new single-family modest-cost housing, the committee believes the best way to solve our housing problem will be through finding the means of holding down or reducing the cost of all housing – new and used, rental and for sale – in all price ranges.

SUMMARY OF THE FINDINGS

As directed by the legislature, the major cost areas analyzed by the committee were financing, taxes, industry practices, and government regulations. Below is a summary of the findings in each of these areas.

Financing

Even though the cost of financing is the largest cost factor for most home-buyers, the problem of high interest rates and other major provisions of mortgages are, for the most part, beyond the scope of state action.

Taxes

In the Metropolitan Area in 1976, property taxes accounted for approximately 20 percent of the average monthly housing costs. The State Legislature has recently made significant changes in property taxes with the homestead credit and the circuit breaker provisions. In addition, Minnesota is below the national average in the amount of property taxes paid per capita. Although taxes are obviously a significant cost factor in housing, the committee believes no major changes are needed except in making property taxes more equitable between owners of new and existing homes. The inequities between owners and renters in the amount of taxes paid were not analyzed thoroughly enough to make any recommendations.

Housing Industry Practices

The efficiency of the builder, the labor rate he pays, and the profit margin he makes all have a significant impact on the cost of housing. However, in order to show how industry practices affect housing prices, a cost study should be made comparing cost of housing in the Twin Cities to costs in other Metropolitan Areas where housing prices are lower. For example, a Dallas, Texas builder was offering in 1976 a rambler home of 1,230 square feet with three bedrooms, two bathrooms, single-car garage, central air conditioning, carpeting, and built-in range, oven, dishwasher and garbage disposal for $20,950. A local builder estimates that a house of similar square footage and comparable features built in the Twin Cities would sell for over $50,000. The committee believes a cost study which would make detailed comparisons of all cost elements between these two houses would be an excellent means of determining how all aspects of industry practices in this area affect housing prices. The committee did not have time or funds to conduct such a study.

Some local builders admit that they are probably not as efficient as builders in other parts of the country, such as in Texas. They believe, however, that the reason for their relative inefficiency is their inability to make the capital investment needed for volume production, due to the uncertainty and the potential for lengthy delays commonly found in the Minnesota approval process.

Government Regulations

The three major areas of government regulations examined were:

1. Municipal requirements for minimum house and lot sizes, and garage requirements.

2. Municipal requirements for the installation of public improvements.

3. Review and approval procedures for new housing developments.

MUNICIPAL REQUIREMENTS FOR MINIMUM HOUSE AND LOT SIZES, AND GARAGE REQUIREMENTS

One of the most obvious ways to reduce the price of new housing is to reduce the house size and lot size and to eliminate additions over and above the basic structure, such as garages. Nearly all municipalities in the Metropolitan Area have minimum-lot size requirements, and about half of them specify a minimum house size. Many developing municipalities require a garage. A common assumption is that if municipalities would reduce or eliminate these requirements, a great deal of moderate cost housing, similar to that built in the 1950's, would be built and thus our housing problems would be solved. The committee has found that this assumption is probably not true.

A survey conducted by the Association of Metropolitan Municipalities shows that substantially all of the housing built in the surveyed communities was built in excess of minimum zoning requirements. For example, in Brooklyn Park, where much housing development is currently taking place, the minimum lot size requirement in certain areas is 7,200 square feet. The minimum house size requirement is 768 square feet, and garages are not required. Of the 150 lots platted in the area permitting 7,200 square-foot lots, 130 were platted above the minimum size, not one house was built at the minimum house size requirement, and all had garages. Local builders claim the reason for building in excess of minimum requirements is that there is a very limited market that will accept smaller, less costly new housing similar to that which was so widely built during the severe housing shortage after World War II. The builders argue that this older basic housing, still in generally good condition, is being sold at prices which new housing cannot match.

Some committee members, however, believe that the market for new basic housing has not been adequately tested by builders because builders find it more profitable to build for the more affluent market, and are reluctant to explore new markets. The committee did agree that merely reducing or eliminating municipal requirements will not likely result in substantially more new lower-cost housing. The committee also agreed, however, that municipalities should not have ordinances that restrict lower-cost housing, in case there are builders and buyers to fill that market.

MUNICIPAL REQUIREMENTS FOR THE INSTALLATION OF PUBLIC IMPROVEMENTS

Most homebuyers are neither knowledgeable nor concerned about the design or specifications of public improvements. Improvements above recommended standards only add to the cost of the house without giving the buyer any perceived benefit. On the other hand, inadequately designed public improvements can be very costly to the homebuyer in the long run, through either higher maintenance costs or replacement costs. Builders and developers believe that municipalities place major emphasis on future maintenance costs rather than initial costs of public improvements. This is logical since the municipality is responsible for future maintenance only; the initial cost is borne by the developer.

Although the committee explored many areas where there could potentially be savings in the cost of installing public utilities, time did not permit a thorough analysis as to the effect of these changes on future maintenance costs or on other potential problems for municipalities.

REVIEW AND APPROVAL PROCEDURES FOR NEW HOUSING DEVELOPMENTS

The committee found that within the area of government regulations, review and approval procedures have been the largest contributor in recent years to increased housing costs. The multiplicity of governmental regulations – federal, state, regional and local – has resulted

in duplication, delay, decreased production and increased prices. While ten years ago the average time needed to obtain all governmental approvals for a housing development was about three months, today it is closer to two years. Environmental reviews appear to be particularly numerous and duplicative.

The complicated, lengthy and often confusing approval process adversely affects housing prices in two ways. First, the additional carrying costs incurred by the longer approval process are passed on to the homebuyer. A second factor, not as obvious as the first but a much larger contributor to higher housing prices, is the decrease in competition, decrease in innovation and decrease in efficiency created by the climate of uncertainty in the development process. Few builders or developers have the knowledge or capital necessary to attempt a large housing development, where potentially the cost savings could be greatest. In addition, builders and developers are not apt to be innovative in an environment filled with uncertainty.

The committee believes that streamlining and shortening the approval process is within the power of the state. This objective, if accomplished, will do more to decrease housing costs than any other action the state might take. The committee has addressed recommendations to this problem. More work is needed to develop additional recommendations for accomplishing this objective.

SUMMARY OF THE RECOMMENDATIONS

The following recommendations are stated and discussed in detail in separate sections dealing with Recommendations on Finance, Taxes, Housing Sales Price and Future Study. As shown in the Table of Contents, these sections will follow a presentation of findings with regard to Monthly Housing Costs and Housing Sales Price.

Finance

1. Public financing should be available to finance public improvements regardless of whether the municipality or the developer installs the improvements. The legislature should instruct the Attorney General's office to determine if it is feasible to change the current state law to accomplish this objective.

2. The state should amend the Conventional Home Loan Assistance and Protection Act (usury law) to ensure that the maximum interest rate allowable competes with the national market rate. The law should be amended so the definition of a conventional loan is simplified to make all types of homes readily eligible for such loans.

Taxes

3. The state should abolish limited valuation of homes for property tax purposes. Although values are working toward market value under current state law, we feel that this is an area producing substantial inequity that deserves more immediate action.

4. The legislature should charge the Metropolitan Council to study and recommend changes to the Green Acres Law as it applies in the Seven-County Twin Cities Area. The Council should recommend those changes necessary to make the consequences of the Green Acres Law consistent with the objectives of the Development Framework.

5. The state should investigate ways to exempt all building materials used for residential development from the state sales tax. The state should, if possible, exempt from the sales tax any other materials included in development costs.

Housing Sales Price

6. In response to the legislative charge, the committee is recommending standards for single-family lot and house size, and garage requirements. These standards, listed below, are advisory to local units of government. The committee urges local units of government to adopt these standards. These standards are, in the committee's opinion, adequate to protect health and safety for most parcels of land without adding unnecessary housing costs. The standards are as follows:

Lot Size (in sewered areas) – 7,500 sq. ft., 60' frontage

In some cases, due to conditions of the soil or topography, a density standard may need to be considered.

House Size – In accordance with the recommended living areas set by the One-and-Two Family Dwelling Code, 2nd Edition, 1975.

Garages – Communities should not require garages.

The committee's recommendation on lot size and house size is supported by standards recommended by several nationally recognized authorities. A complete listing of these appear in the Appendix. The recommendation on house size is consistent with the standards set by the One-and-Two-Family Dwelling Code, 2nd Edition, 1975, as adequate for health and safety. Garages are not necessary for health and safety and should not be required. Not everyone needs or can afford a garage.

7. The state should direct and provide funding to the Metropolitan Council to evaluate with local municipalities these advisory standards and other zoning and subdivision standards which would enhance the opportunity for the construction of modest-cost-affordable housing. These standards should include, but not be limited to, lot size, house size, setback, front footage, off-street parking, requirements for installation of public improvements and design specifications (items for inclusion in evaluating public improvements and design specifications are included in the consultant report in the Appendix). Standards for multi-family housing also need to be established.

   – The Metropolitan Council should publish and distribute the recommended standards to all local units of government in the Metropolitan Area by June 1, 1978.

   – When reviewing the comprehensive plans of the local communities, the Council should evaluate and comment, using these suggested standards as criteria, on whether the housing element of the plan is adequate to provide opportunity for the construction of a "fair-share" amount of modest-cost-affordable housing.

8. The state should evaluate the formula for state aid to local government and should revise it, as necessary, to provide financial incentives to those communities which receive favorable comments from the Council on their comprehensive plan housing element and zoning ordinances.

9. The Metropolitan Council should use its existing authority to encourage local units of government to provide the opportunity for the construction of modest-cost-affordable housing and to provide assistance to developers of such housing.

   – The Metropolitan Council should use its housing review power to encourage the construction of modest-cost housing.

   – The Metropolitan Council should incorporate modest-cost housing criteria into its Housing Performance Policy and diligently enforce the policy to encourage communities to provide the opportunity for modest-cost housing needs.

   – The Metropolitan Council should monitor community efforts to provide the opportunity for modest-cost housing.

10. The Metropolitan Council must make adjustments in the Metropolitan Urban Service Area (MUSA) boundary as necessary to ensure that there is an ample supply of developable land within the MUSA for residential construction. The Metropolitan Council should monitor land prices near the Metropolitan Urban Service Area boundary and, if it finds prices increasing substantially due to lack of serviced land, should then adjust the boundary. The Metropolitan Council should encourage other governmental bodies to facilitate residential development within the MUSA.

The Metropolitan Council should require each community, when formulating its comprehensive plan, to make an analysis of available residential land and submit this information to the Metropolitan Council.

11. The state should adopt the One-and-Two-Family Dwelling Code, 2nd Edition, 1975 in lieu of the Uniform Building Code.

12. The Environmental Quality Council should modify its regulations for implementation of the state Environmental Permits Coordination Unit. The recommended modification would prevent unnecessary delay in the process.

13. The environmental review process for residentially-zoned land should be incorporated into the planning process via the local comprehensive plan.

    The current provision in the law for environmental review initiated by a petition signed by 500 persons should be eliminated. There should be adequate opportunity for citizen discussion of environmental concerns at the time of public hearings on the local comprehensive plan.

14. A streamlined procedure for the environmental review process should be implemented for use until a community has adopted its comprehensive plan.

15. The state should encourage a complete survey of the Metropolitan Area for sites of historical significance, as required by the Minnesota State Historic Preservation Agency. This information should become part of a community's comprehensive plan.

16. Governmental units (state, county, and local) should absorb the costs for public improvements required for a new residential development when the benefits are areawide and do not benefit solely that particular development. If these costs are assessed, they should be assessed over the entire area benefiting from those improvements.

17. An Irrevocable Letter of Credit from a bank should be acceptable to a municipality in lieu of a performance bond as a guarantee for public improvements installed.

18. A developer should have the option to contract for public improvements or to have the municipality contract for improvements.

19. Park dedication fees collected by municipalities should be based on the value of the land at the time of platting.

20. The service availability charge (SAC) collected by the Metropolitan Waste Control Commission should be used only for reserve-capacity debt payment.

21. The state should provide funding to the Metropolitan Council to coordinate a competition among Area builders and developers to design and build a cost-efficient model home or homes. The Metropolitan Council should cooperate with the Minnesota Housing Institute and the Minneapolis and St. Paul Builders Associations in formulating the program and establishing incentives to encourage builders to cooperate in the program.

Future Study

22. The legislature should direct a continued study of ways to reduce the cost of housing. The study should be expanded to include the areas identified in this report as necessary for further investigation. The study should be conducted by the Metropolitan Council and adequately funded according to the Council's request.

MONTHLY HOUSING COSTS

A discussion of housing costs is complex by virtue of the many costs involved and the many factors contributing to those costs. This report will consider housing costs in two major ways.

One way to view housing costs is to consider the consumer's monthly housing cost. The costs which make up the final purchase price of the home represent only about one-third of the average monthly cost of that home to the consumer, divided into approximately a ten percent share for the cost of the land with improvements, and about 23 percent for the cost of the structure itself. The remainder is consumed by mortgage financing (45 percent), property taxes (20 percent) and insurance (two percent).

A second way to consider housing costs is to consider the costs that contribute to the selling price of a home. These costs are many: there are the costs of the labor and material needed to construct the home, the cost of the land and improvements to the land, the cost of financing the construction, and the builder's costs for overhead, marketing and profit. Both kinds of cost are illustrated graphically in Figures 1 and 2. The discussion of Housing Sales Price follows this one describing Monthly Housing Costs.

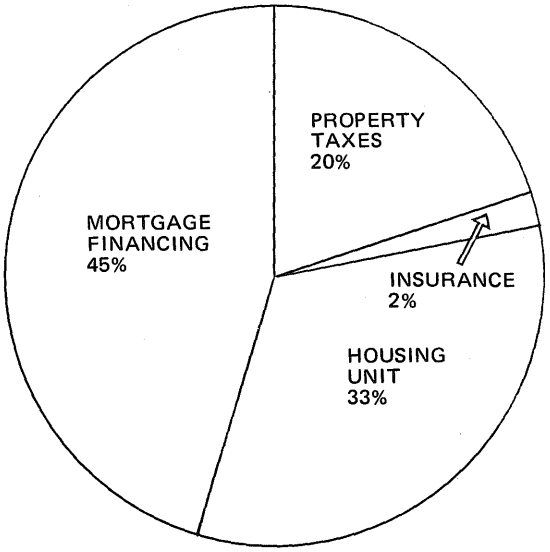


Figure 1. Average Consumer Monthly Housing Cost

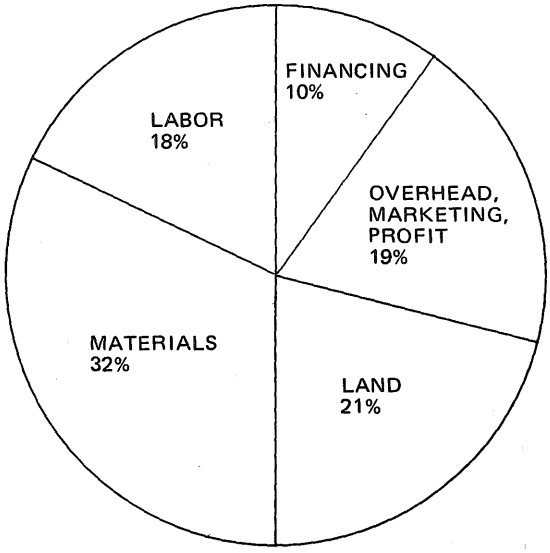


Figure 2. Components of the Selling Price of a House

Because the cost of the house is only a part of the cost to the consumer, the most appropriate way to view housing costs is to consider the cost per month for the consumer to purchase and remain in a home. The major monthly expenses will be considered in this section in their order of magnitude: financing costs, taxes and insurance and other costs.

Finance

High interest rates and scarcity of mortgage money have an enormous effect on the cost and quantity of housing. For example, when the federal government uses stringent monetary and fiscal policies to overcome inflationary trends, the cost of housing has risen dramatically. At such times, not only do interest rates on mortgages and construction money increase but also the lack of available credit sharply curtails new construction. A limited supply of housing in a time of heavy demand leads to further increases in the cost of the housing which is available.

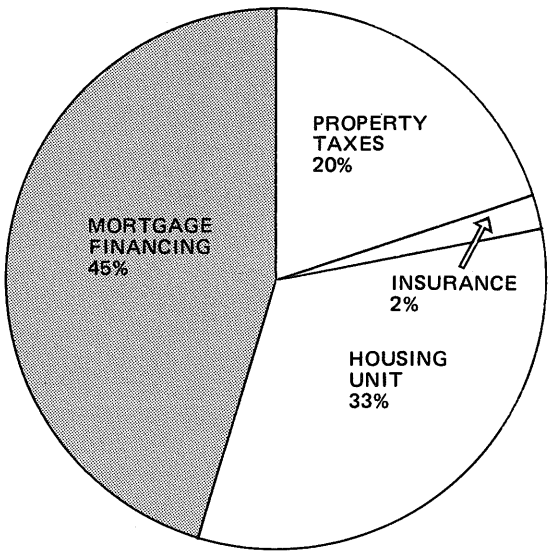


Figure 3. Mortgage Financing Component of Monthly Housing Cost

The cost of financing a home mortgage is by far the largest consumer housing cost, making up nearly half of the average monthly payment. A home, unlike any other consumer product, is almost universally financed with a long-term mortgage, resulting in very high financing charges. It is for this reason that the rampant inflation of recent years has had a particularly strong impact on the cost of housing. Not only has the housing sales price increased rapidly due to inflation, but inflation has caused higher interest rates on mortgages, resulting in the even higher financing costs reflected in the consumer's monthly house payment.

Inflation has had a more adverse effect on the cost of housing than on the overall cost of living. The homeownership component of the Consumer Price Index, which includes all expenses associated with owning a home, increased 63 percent from 1967 to 1974, while the cost of all items in the Consumer Price Index increased by 48 percent during the same time period.

THE IMPACT OF INTEREST RATES ON HOUSING COSTS

Interest rates began to climb rapidly in the early 1970's due to strong inflationary impact after many years of only gradual increases. To illustrate the effect of higher interest rates on the cost of housing, consider Table 1 which breaks down the components of a typical house payment in 1963 compared with 1976.

As shown in Table I, the principal and interest portion of an average monthly payment on a new home in 1963 was $97.00, at an interest rate of 5-1/4 percent. By 1976 the amount of the monthly payment going toward payment of principal and interest had risen to $339.00, at an interest rate of 8-1/2 percent. This represents an increase of 249 percent. During the same time period, as shown, the sales price of the home had risen by far less, 150 percent.

Table 2 also illustrates how the cost of borrowing money affects the homeowner's monthly payment.

In the example used in the table, the estimated monthly payment on a $40,000 home, at an interest rate of 7 percent, would be $337.00. At an interest rate of 9 percent the estimated monthly payment on a home selling for the same price would be $388.00, or 15 percent greater.

It should be noted that the monthly payment can vary depending on many factors, including the amount of down payment and the amount

TABLE 1
Increase In Housing Cost Components of a Typical New Home, 1963-1976

	1963	1976	Percent Increase 1963-1976
Sales price	$17,950	$44,950	150%
Down payment	750	3,150	320%
Mortgage amount	17,200	41,800	143%
Monthly payment:			
Principal and interest – FHA mortgages (1963 – 5-1/4%, 35 years; 1976 – 8-1/2%, 30 years)	$ 97	$ 339	249%
Taxes	17	87	412%
Insurance	5	12	140%
	$ 119	$ 438	268%

Source: Local Builder

TABLE 2
Estimated Monthly Cost of a $40,000 Home at Different Interest Rates (30 Year Mortgage; 10% Down Payment)[1]

Interest Rate	Estimated Monthly Payment (Including Taxes, Insurance)	Gross Annual Income Required
9%	$388	$20,900
8%	362	19,500
7%	337	18,200

of property taxes. The figures are intended only to illustrate the effect of different interest rates on the cost of housing.

Another way to consider financing costs is to look at the portion of the monthly payment that goes toward payment of interest charges during the first year of payments. According to an Urban Land article (June 1976), that portion twenty years ago was 67 cents of each dollar; by 1965 it was 79 cents, and in 1976 it is 92 cents.

Part of the increased cost is due, of course, to the increased amount borrowed to cover the increased purchase price. The larger amount borrowed, plus higher interest rates on the borrowed amount, produces a double impact on the cost of housing.

ANOTHER APPROACH TO THE PROBLEM

Although financing costs are difficult to change at the local or state level because the cost of money is tied to national monetary policies, there is another way to view the problem. Reducing the sales price of the home would lower the amount needed for a down payment and would reduce the mortgage amount needed to finance the home. This is illustrated in Table 3.

The table shows that if the sales price of a home were reduced from $40,000 to $32,000, the estimated monthly payment could be reduced from $388 to $313, using in both cases an interest rate of 9 percent. This represents a reduction of 24 percent.

TABLE 3
Estimated Monthly Cost of Various Price Homes Figured at 9% Interest Rate
(30 Year Mortgage; 10% Down Payment)

Price of Home	Monthly Payment (Including Taxes, Insurance)	Gross Annual Income Required
$40,000	$388	$20,900
37,000	360	19,400
35,000	342	18,400
32,000	313	16,900

THE PRACTICES OF FINANCIAL INSTITUTIONS

Although the major focus of the committee in its study of finance was on financing costs as part of the consumer's monthly housing cost, the committee also investigated the effect financial institutions might have on the kind of housing that is built.

It has been suggested that lending institutions require that the houses they finance contain costly amenities and certain design features that virtually prohibit the construction of affordable housing. The committee has found no evidence of practices such as these. The committee's investigations of this area of study have not been exhaustive, however. The practices of financial institutions should receive further study.

THE FORM OF THE MORTGAGE AND PROPOSALS FOR CHANGE

For the last forty years, the United States has relied almost exclusively on the long-term, fixed-rate, fully amortized mortgage with equal monthly payments as the sole instrument for financing single-family housing.

Critics say that although the current form of the mortgage worked well when interest rates were fairly stable and inflation was not a problem, the mortgage form as we know it has serious inadequacies in an inflationary economy. Most of the problems arise because the interest rate is fixed at the outset for the entire term of the mortgage, and because the loan is repaid through equal monthly payments.

The requirement for equal monthly payments works hardships on young first-time home buyers. Payments during the early years of the mortgage take a much larger share of a young family's income than they do in the later years. Consequently, young families may have to postpone homeownership until their income has risen to an amount which can cover the payments.

Several proposals for changes in the form of the mortgage have been made, and some of them are being tested in other states. Probably the best known of these at the present time is the variable-interest rate mortgage, which has been used successfully in California, and has been proposed in other states.

Variable-rate mortgages replace the standard fixed mortgage rate with one that fluctuates according to prevailing interest rates. One advantage is that home buyers and builders have a better chance of obtaining credit during periods of rising interest rates.

There are two types of variable-interest rate mortgages. One varies the term of the mortgage to reflect changes in interest rates, and the other varies the monthly payments. A disadvantage of the variable-payment form is that a rise in interest rates could work financial hardship on some borrowers. The variable-term form does not have this disadvantage. There are, of course, other aspects to consider in the use of this form and other forms of the mortgage. A complete discussion of these variations on the form of the mortgage will not be attempted here.

An alternative mortgage form which would be particularly helpful to young home buyers is one in which mortgage payments are related to

the borrower's income. This type of loan uses a fixed-interest rate with variable monthly payments based on a percentage of the borrower's income. The term to maturity is varied as the monthly payments vary. Presumably, the income of the borrower would increase; the payments would then increase as his ability to pay increases. There would, of course, need to be limits on the minimum payment acceptable.

Two recent proposals have been made in the U.S. Congress which represent changes in the form of the mortgage. Hearings by a Senate housing subcommittee were held in August on two bills. One bill, introduced by Senator Edward Brooke, would create a new FHA mortgage instrument designed to increase monthly payments over the life of the mortgage. This proposal is based on the assumption that the borrower's income and the value of his property will increase at a rate of one half the rate of inflation on an annual basis. Another bill, introduced by Senator William E. Brock, would provide mortgages of up to $35,000 at rates two percent below market level with a Government National Mortgage Association subsidy to lenders making up the remainder.

Alternative mortgage forms are also receiving the attention of the Federal Home Loan Bank Board, which set up an Alternative Mortgage Instruments Study Committee in August 1976.

There are other variations on the form of the mortgage which have been proposed and discussed. These alternatives to the standard form of the mortgage deserve further study since they provide an approach to easing the burden of the consumer's monthly housing cost.

CONCLUSIONS ON FINANCING COSTS

The committee recognizes that inflation and high interest rates have been major contributors to the decreased affordability of housing. These factors, however, are problems of national scope which we cannot do much about at the state level and which, therefore, are beyond the scope of this committee.

Taxes

Property taxes constitute a large part of the actual housing cost for both the homeowner and renter and they have been increasing at a rapid rate. In the Metropolitan Area in 1976, property taxes accounted for approximately 20 percent of average monthly housing costs.

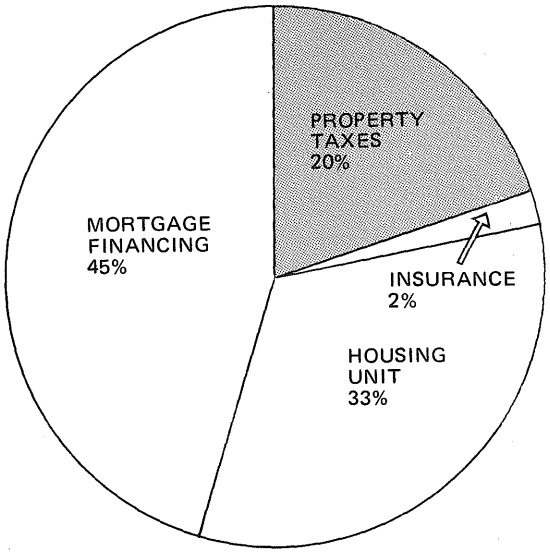


Figure 4. Tax Component of Monthly Housing Cost

THE SHIFT AWAY FROM THE PROPERTY TAX AS A SOURCE OF REVENUE

Increases in the property tax have been taking place despite the fact that there has been a large reduction in the amount of overall revenue received in Minnesota from the property tax. In 1971, 41 percent of all state revenue was obtained through the property tax, and by 1974 this share had been reduced to 32 percent, due to substitution of other sources of revenue. This shift away from the property tax in Minnesota has been greater than that in other states.

Minnesota is below the national average in the amount of property taxes paid per-capita. According to data gathered by the Minnesota Taxpayers Association, Minnesotans paid $216.90 in property taxes per-capita for fiscal year 1974, compared to the U.S. average by state of $225.90.

OTHER EFFORTS TO REDUCE THE PROPERTY TAX BURDEN

In addition to substituting other revenues for the property tax, Minnesota has made other efforts to ease the burden of the property tax.

A 1967 law gave a break to the homeowner in the form of homestead credit, which reduces taxes of residential property relative to other property. The homestead credit means, in effect, that the state pays part of a homeowner's taxes before he gets the bill. Under the homestead credit provision, a portion of the value of a home is taxed at 25 percent of market value, and the remainder at 40 percent. Until this year, the homestead portion – the portion taxed at 25 percent – was a fixed amount of $12,000. It is now adjusted each year to the cost of living, and can rise in $500.00 increments as determined by the Commissioner of Revenue. The homestead amount for this year has been set at $13,000, and will rise to $15,000 for valuations made in 1977.

Another property tax break, effective in 1976, is the circuit breaker, which benefits renters and homeowners alike. Previously, renters were allowed a rent credit, but at a lower credit level than for homeowners. The circuit breaker represents a major change in the law because it considers for the first time the income of the occupant. It also allows equal maximum credits for renters and homeowners, based on income.

The property tax has traditionally been a regressive form of taxation, unlike progressive forms such as the income tax. While all state and local taxes in Minnesota, including the property tax, are roughly proportional to incomes – that is, as incomes rise, the amount of tax rises – lower-income persons have traditionally paid a far greater share of their income for property tax. A Citizens League report[2] noted that property taxes were about 4.3 percent of income at the $5,000 taxable income level, and about 1.6 percent at the $100,000 taxable level, according to an unpublished Department of Revenue study. The circuit breaker is designed to relieve some of the inequity in the property tax system.

INEQUITIES IN THE PROPERTY TAX SYSTEM

Despite major positive changes in the property tax system, some major inequities remain. One of these areas of inequity, limited value versus market value, is addressed and discussed in the recommendations section on taxes.

Major property tax differences also occur because of inconsistent valuation practices. This is probably the most serious overall problem. Differences exist between localities in the relationship between a property's assessed value and its actual market value. The sales ratio, which measures the extent of variation from market value, shows marked differences among localities in the Metropolitan Area. Sales ratios range from a low of 67.2 to 96.2.

A 1975 law is designed to correct gradually for assessment practices. But the law limits an assessor in how he can raise values to parallel actual market conditions. Consequently, the differences in assessment practices as revealed by sales ratios could be less if assessors were allowed to reflect market conditions more accurately.

Citizens League estimates of taxes payable on a $30,000 home in 1976 varied widely.[3] While estimates for most communities are around $450.00 to $650.00, with an average tax of $534.00, there are also extremes. The extremes range from a high of $758.00 to $388.00. But it does not necessarily follow that a community with a higher than average property tax level has a higher than average level of services, due to the differences in assessemnt practices.

CONCLUSIONS ON PROPERTY TAXES

Despite high property taxes, the Minnesota homeowner is not overburdened by property taxes, in proportion to other taxes paid or in proportion to other states. The property tax is generally a fair or equitable tax, and, as noted, much has been done in Minnesota to ease the burden of the property tax. This has been done in two ways: first through direct relief to the homeowner and to renters; second, through a decrease in the proportion of state revenue that derives from the property tax. The major problem is not the level of the tax, but inequity within the property tax system. The property tax should be monitored to ensure that it does not place too large a burden on low- and middle-income homeowners.

Other Costs

Other monthly housing costs include insurance costs, utility and fuel costs, and maintenance and repair costs. All are rising, as discussed in the next section under the heading, "The Gap Between Housing Costs and Income." Insurance costs contribute about two percent to the average monthly housing cost, as is shown by Figure 5.

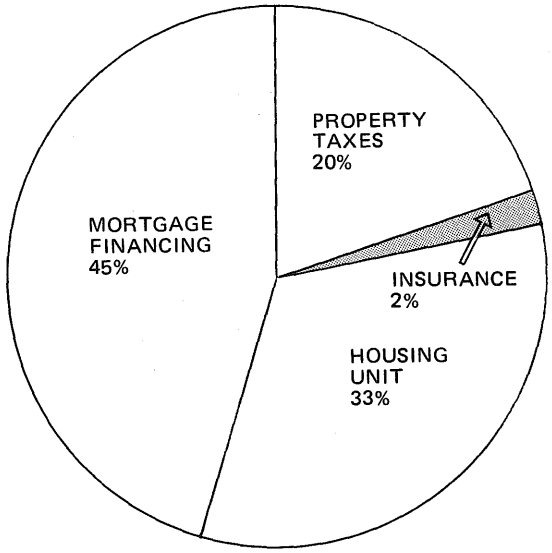


Figure 5. Insurance Component of Monthly Housing Cost

FOOTNOTES

1. In Tables 2 and 3, the real estate taxes are estimated to be 2.5% of the value of the house and the monthly insurance average used is $15. The gross annual income required is estimated as 4.5 times the monthly principal, taxes and interest.

2. Reducing Property Tax Inequities among Taxpayers and Cities. Citizens League, Minneapolis, Mn. March 1975.

3. Public Life, Vol. 1, No. 16. Citizens League. June 25, 1976.

HOUSING SALES PRICE

This section will first discuss the trends in the sales price of homes, then trends and projections for housing costs and housing needs. Also discussed will be the cost components of the sales price, both direct and indirect. The direct costs include the costs of land, labor, materials, and financing. The indirect costs can be attributed to builder practices, consumer preferences, real estate practices, and government regulations at local, regional and state levels.

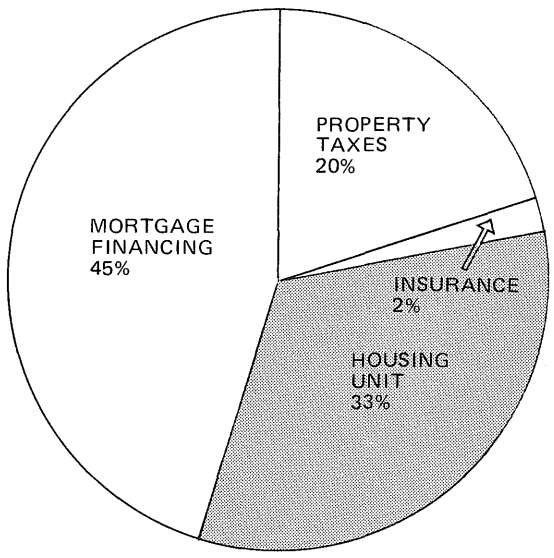


Figure 6. Housing Unit Component of Monthly Housing Cost

Trends in the Sales Price of Homes

Housing sales prices, both nationwide and in the Twin Cities Metropolitan Area, have been increasing at an alarming rate. Many feel that if measures are not taken to reduce the cost of housing, the new single-family home may become a thing of the past, at least for the vast majority of families.

The Commerce Department reports that the median price of new homes sold during September 1976 was $48,600. This represented a rise of $5,500 over the median sales price for September 1975.

The Bureau of the Census reports that the price of new single-family houses sold during the second quarter of this year was 90 percent higher than for those sold in 1967. This means that the house which sold in 1967 for $24,600 sold for $46,700 in the second quarter of this year. During the first quarter, the same house cost $45,300. This index is designed to measure changes in the sales price of homes sold which are the same with respect to eight major characteristics as the houses sold in the base year 1967.

Table 4 shows national trends in the sales price of single-family homes over the last ten-year period, and percentage increases for each period.

The table shows that the price of the median new home increased 106 percent in the last decade, from 1966-1976. Probably most significant is the rapid increase in the last five years.

TABLE 4
Median Price of New Homes Sold Nationally, 1966-1976

Year	Median Sales Price	Percent Change From Previous Year
1966	$21,400	–
1967	22,700	6.1%
1968	24,700	8.8%
1969	25,600	3.6%
1970	23,400	-8.6%
1971	25,200	7.7%
1972	27,600	9.5%
1973	32,500	17.8%
1974	35,900	10.5%
1975	39,300	9.5%
August 1976	44,100	12.2%

Source: Characteristics of New One-Family Homes Sold: 1974. U.S. Bureau of the Census, U.S. Dept. of Commerce. Construction Reports, Series C-25.

TABLE 5
Price Increase of a Single-Family Home in the Twin Cities Area, 1966-1976

Year	Price (Lowest Priced Model)	Percent Increase From Previous Period
1966	$17,500	
1976	43,000	146%

Source: Local Builder

From 1972 to 1976, the cost of the median-priced home increased 75 percent, compared to only an 18 percent increase for the first five years. From 1975 to 1976, new home prices increased nearly as much in a single year as for the entire five-year period from 1966 to 1971. The average yearly increase for the first half of the decade was 3.5 percent compared to an annual increase of nearly 12 percent for the second half.

Although the national trends are alarming, the problem here appears to be even more severe. Various national studies have suggested that the price of a new single-family home in the Twin Cities Area is as much as ten percent higher than the national average.

Locally, the sales price of the lowest-priced home built by two large builders in the Twin Cities Area, as shown in Table 5, increased from approximately $17,500 in 1966 to $43,000 in 1976, an increase of 146 percent. The homes built in 1976 were the same square footage and almost identical in features as those built in 1966.

The cost of existing housing has increased nearly as fast as the cost of new housing. According to Metropolitan Council estimates, the cost of an existing house averaged around $35,000 in the Twin Cities Area in 1975. This represents an increase in existing housing cost of 110 percent over the $16,700 average cost a decade ago. In some areas of Minneapolis and the older

suburbs, the average cost of existing housing sold has jumped $5,000 in one year.

Table 6 shows national data on existing-housing costs. As the table shows, the cost of an existing house rose from $24,810 in 1971 to $35,330 in 1975, a 42 percent increase. The average yearly increase for the period was nine percent.

The Gap Between Housing Costs and Income

To understand the true impact of the rapid rise in housing cost, it is necessary to contrast the increases in housing cost with what people can afford to pay. A number of recent national studies have attempted to identify changes in the numbers of people who can afford monthly payments on the median-priced new home.

First it is necessary to make a distinction between the sales price of the home and the monthly costs. Table 7 shows national figures indicating that the rise in the sales price of homes is proportionate to the rise in incomes. In fact, the ratio of median sales price for homes to annual family income has dropped slightly over the long term, from 3.0 in 1955 to 2.8 in 1975. Therefore the ratio has actually improved over the long term. Over the short term, however, the downward trend which continued to 1970, to 2.3, has climbed up again to 2.8. Over the short term, then, roughly the last five years, housing sales prices have been increasing faster than incomes.

Other data supports the short-term trend indicated by these figures. A 1976 study released by

TABLE 6
National Median Sales Price of Existing Homes, 1971-1975

Year	Median Sales Price	Percent Change From Previous Year
1971	$24,810	–
1972	26,710	7.66%
1973	28,920	8.27%
1974	32,040	10.79%
1975	35,330	10.27%

Source: Existing Home Sales Report. National Association of Realtors, and National Association of Homebuilders.

TABLE 7
Ratio of Median Sales Price to Annual Family Income, 1950-1975

Year	Median Sales Price	Annual Family Income	Ratio Median Income
1950	$ 9,446	$ 3,319	2.8
1955	13,386	4,418	3.0
1960	16,652	5,620	2.9
1965	20,000	6,957	2.8
1970	28,400	9,867	2.3
1975	39,300	13,991	2.8

Source: Available upon request; National Association of Homebuilders, Washington, D.C., Economics Department.

the Census Bureau and Department of Housing and Urban Development shows that the median value of owner-occupied single-family homes rose 41 percent – from $17,100 in April 1970 to $24,000 in October 1973. During the same period, according to the report, homeowners' median income rose only 19 percent from $9,700 to $11,500.

We can conclude from this data that housing sales costs have been fairly constant in relationship to increase in family income over the long term. This information does not dispute the fact that there is a housing problem, however. In addition to faster increases for housing costs than for incomes over the short term, as noted, costs associated with owning a home have been increasing at an even faster rate than the purchase price of homes.

Homeowner costs are interest rates, taxes, insurance, and maintenance and repair costs. Data reported in an article in Urban Land, June 1976, and obtained from reports by the U.S. Bureau of the Census and the economics department of the National Association of Homebuilders shows that while disposable income has kept pace with the increase in the price of homes from 1955 to 1975, it is the associated costs of owning a home which have been responsible for the decline in buying power. The article notes that the median sales price of new homes sold increased by 191 percent between 1955 and 1975, while disposable incomes for a family of four increased by 189 percent during the same period. By contrast, the article notes that real estate taxes are up 341 percent since 1955, hazard insurance costs are up 321 percent, and maintenance and repair costs are up 269 percent. These increases result in an aggregate increase of 305 percent.

Increases in other forms of taxes also contribute to declining buying power. The Urban Land article also notes that between 1955 and 1975, federal income taxes increased 365 percent, social security taxes 882 percent, and state taxes 1,233 percent. The article also notes that the interest portion of the monthly cost of owning a home has jumped 492 percent from 1955 to 1975. In addition, rising costs for other consumer items, notably food and transportation, leave a shrinking portion of disposable income for housing.

Several studies have attempted to assess the ability of families to afford monthly payments on the median-priced new home. These studies assume that a family can afford to spend 25% of its income on housing. The findings present a mixed picture; some of the studies present a much bleaker picture than others. This is due, in part, to the different data sources used for housing costs and income and to the different ways of determining housing expenses. On one point, however, the studies are in agreement – the gap between the price of owning the average new single-family home and what people can afford to pay is increasing. More and more people are being priced out of the new housing market as the gap widens between the cost of housing and income.

The findings of a 1975 national study are presented in Table 8. The study found that in 1974 only 15 percent of all families could afford the median-priced new home.

In a 1976 report, data assembled by the Department of Housing and Urban Development showed the results presented in Table 9. The findings are not as bleak as in the previous study; the study showed that 31 percent of all families in 1975 had the income necessary to purchase the median priced home of $39,300. However, it also showed that the number of families who can afford the median-priced home has declined dramatically in a five-year period; from 45 percent in 1970 to 31 percent in 1975.

A recent article appearing in Fortune magazine (April 1976) also addresses the question of the number of families who can afford the median-priced new home. Fortune's calculations showed that, in 1950, seven out of ten American families could afford the median-priced new house, and today only four out of ten families can afford the median-priced home of $39,200.

Although new housing adds only a small increase to the total housing stock each year, it is important to remember that rising costs of new homes push up the price of existing housing as increased pressure is placed on the existing housing market.

TABLE 8
The Cost of Ownership-New Housing, 1970-1974

Year	Median Price	Monthly Expense	Minimum Income	Percent of Families With Minimum Income
1970	$35,500	$373	$17,900	14.9%
1971	36,300	364	17,470	18.0%
1972	37,300	375	18,000	20.8%
1973	37,100	397	19,060	21.5%
1974	41,300	486	23,330	15.0%

Source: The New York Times, May 11, 1975, from a report of the Congressional Joint Economic Committee.

TABLE 9
Proportion of American Families Able to Afford a Median-Priced New House, 1949-1975

Year	Median Price	Annual Housing Expenses	Required Annual Income	Percent of All Families With Minimum Required Income
Decennial Census Prices				
1949	$ 8,800	$ 822	$ 3,290	50.7%
1959	15,200	1,412	5,650	46.9%
1969	24,700	2,730	10,920	39.9%
C-25 Series				
1963	18,000	1,704	6,820	44.3%
1964	18,900	1,812	7,250	44.0%
1965	20,000	1,908	7,630	40.4%
1966	21,400	2,124	8,500	42.4%
1967	22,700	2,280	9,120	41.2%
1968	24,700	2,580	10,320	37.6%
1969	25,600	2,796	11,180	38.3%
1970	23,400	2,652	10,610	45.2%
1971	25,200	2,808	11,230	44.0%
1972	27,600	3,109	12,430	42.8%
1973	32,500	3,684	14,740	36.8%
1974	35,900	4,332	17,330	33.2%
1975	39,300	4,812	19,250	31.2% (estimate)

Source: Housing and Development Reporter, June 14, 1976, p. 16. Bureau of National Affairs, Inc., Washington, D.C., from data assembled by the U.S. Dept. of Housing and Urban Development.

The cost of existing housing has been increasing nearly as fast as the cost of new housing. The gap between the cost of existing housing and ability to pay is likewise increasing, as illustrated in Table 10.

The table shows that the median price of existing housing increased from $31,200 in 1973 to $35,600 in 1974, an increase of 14 percent. According to the table, the number of households who could afford to own the median-priced existing home declined from nearly 30 percent in 1973 to 20 percent in 1974. According to Metropolitan Council estimates, about 30 percent of the families in this Metropolitan Area can afford to own the average-priced home of $35,000.

Housing Cost Projections and Future Housing Needs

There are no firm projections for future housing costs. However, if present trends continue, the gap between the cost of new housing and what people can afford to pay will certainly increase. In addition, there will be a much greater demand for housing units in the next ten years than there is at present. If the cost of single-family housing continued to increase at an average rate of 11 percent as in the last five years, the typical new home would cost about $67,000 by 1980 and require an annual income of $30,000 for purchase. By 1990, a new home would cost about $190,000 and require an income of $85,000 for purchase.

These prospects are grim and doubly so in light of the great need for housing which will be experienced in the next twenty years. By 1985, according to Metropolitan Council projections, 220,000 new housing units will be required in the Area to accommodate newly formed households, to replace houses demolished by public and private actions, to maintain a reasonable vacancy rate, and to replace existing substandard units that must be demolished. This will require an average annual production of 22,000 units a year. Over 50 percent of the housing units in the next ten years will be needed for middle income persons, costing in the $30,000 – $40,000 range. The breakdown of number of units needed by income level is shown in Table 11.

When determining future housing needs, it is important to consider the rate of household formation. The number of households is expected to grow even faster than the population. The children of the baby boom are now marrying and raising families. Over the next ten years, it is that group in the prime home-buying years, 25 through 34, that will increase at a faster rate

TABLE 10
The Cost of Owning Existing Housing, 1970-1974

Year	Median Price	Monthly Expense	Minimum Income	Percent of Families With Minimum Income
1970	$30,000	$319	$15,310	21.5%
1971	31,700	330	15,840	22.5%
1972	33,400	349	16,750	24.8%
1973	31,200	348	16,700	29.6%
1974	35,600	441	21,170	20.0%

Source: The New York Times, May 11, 1975, from a report of the Congressional Joint Economic Committee.

TABLE 11
Housing Units Required in the Metropolitan Area, 1975-1985

Income Level	Number of Units Required 1975-85	Percent of Units	Annual Rate
Low ($7,800)*	41,800	19.0	4,180
Moderate ($12,500)	41,360	18.8	4,136
Lower Middle ($16,400)	70,620	32.1	7,062
Upper Middle ($21,100)	38,940	17.7	3,894
High ($21,100+)	27,280	12.4	2,728
TOTAL	220,000	100.0	22,000

*Income levels are for a family of four in 1975 dollars.

Source: Housing Needs Assessment. Metropolitan Council, 1975.

TABLE 12
U.S. Households, in Millions, by Age of Head, 1975-1990

Age Group	1975 Households in Millions	% Increase 1975-1980	1980 Households in Millions	% Increase 1980-1990	1990 Households in Millions
Over 65	14	12%	16	23%	19.5
55-64	11	8.5%	12	-.2%	12
45-54	13	-4%	12.5	12.5%	14
35-44	12	13%	13.5	45%	20
25-34	15	22.5%	18	20.5%	22
Under 24	6	19%	7	-4%	6.5

Source: "Is the One-Family House Becoming a Fossil", Fortune. April 1976.

than any other group, providing a large new demand for housing.

Table 12 illustrates these national trends.

The table shows that over the next fifteen years, the number of households in the prime home-buying years, 25 through 34, will increase by almost 45 percent, providing a large demand for single-family homes. Until 1990, this group will increase faster than any other.

Similar to the national forecasts, Metropolitan Council projections also predict a percentage increase in this age group. These projections, listed in Table 13, show an increase in the 20-34 age group from 22.8 percent in 1970 to 28.7 percent in 1980, while the 35-49 and 50-64 age groups are expected to remain stable.

Estimates for the number of people who can afford housing are sometimes criticized as being misleading because such a large proportion of families already own homes. Both nationally and in this Metropolitan Area, about two-thirds of all families own a home. The demographic trends outlined above suggest, however, that the demand for new housing by first-time home-buyers will be stronger in the future than at any time in recent history.

The need for more households is further compounded by changing life styles. More people are remaining single till a later age, and there is a greater number of divorces. These trends add to the need for a greater number of separate households.

There is another demographic trend that has important implications for housing, and that is that couples today are having fewer children. The average household size in the Area was 3.2 in 1970, according to Metropolitan Council estimates, and is expected to drop to 2.9 by 1980. This may create a demand for different types of housing and for smaller units.

The implications of these trends are that this Area will have an unprecedented demand for new housing units in the future. The fact that there will be greater numbers of first-time home buyers in the future makes the provision of affordable housing all the more urgent.

Cost Components of the Sales Price of a Home

In order to understand the cost increases of new housing, it is necessary to examine the various components which make up the cost of a housing unit. The costs of constructing a house includes the cost of land, improvements to the land, labor, materials, construction financing, and the builder's costs such as marketing, overhead, and profit.

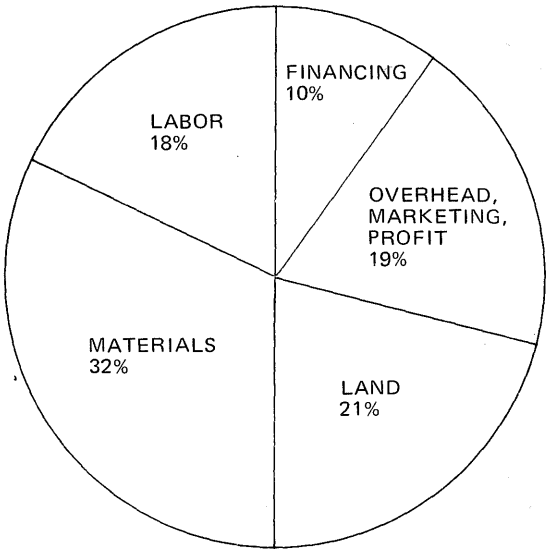


Figure 7. Cost Components of the Sales Price of a Home

TABLE 13
Projected Age Distribution of Twin Cities Population, 1970-1990

Age Group	1970	1980	1990
Under 5	9.4%	8.9%	8.6%
5 - 19	30.7	25.6	23.1
20 - 34	22.8	28.7	27.1
35 - 49	16.2	16.6	21.8
50 - 64	12.3	12.1	11.2
65 & Over	8.8	8.3	8.3

Source: Population Profile of the Twin Cities Metropolitan Area. Metropolitan Council, May 1974.

Table 14 breaks down cost estimates for 1950 and 1974 by a local builder. Also shown, for comparison, is the estimate of the same breakdown on a national basis for 1975 by the National Association of Homebuilders. Note that the two estimates are very similar.

While all of the costs have increased, of course, during the 25 year period, not all of the costs have increased at the same rate. The cost of the housing structure itself, which includes labor and materials components, has actually decreased as a percent of the total from 1950 to the present, from 70 percent to 50 percent. Land as a share of the total cost has doubled from 11 percent to 21 percent. The share needed to finance construction has also doubled, from five to ten percent. Overhead, marketing and profit has also increased, but at a lesser rate – from 14 percent to about 20 percent.

A more detailed cost breakdown is shown in Table 15. This example shows a home which sold for $17,950 in 1963 would cost $44,950, in 1976. The table shows the increases in cost components. These costs are not averages; they show actual increases using one example of a typically-priced home.

Land and Improvements to Land

Land cost is one of the fastest rising housing cost factors in new housing construction nationwide and also in this Area. As noted, land costs have doubled since 1950. The raw land cost per square foot of home sites for federally insured (FHA) homes has increased 131% from 1965 to 1974 – from 36 cents to 83 cents per square foot.[1]

In addition to raw land, the cost of land includes the cost of public improvements, (storm sewer, sanitary sewer, water, streets and curb and gutter), site improvements (earth-moving), miscellaneous planning costs (engineering, survey, etc.) and carrying charges (interest and real estate taxes). For example, in Table 15, the cost for raw land is $1,300 or 14 percent of the total land costs of $9,300. The remainder is the cost of the public improvements (56 percent), site improvements (9 percent), miscellaneous platting expenses (5 percent), and carrying charges (16 percent).

Since public utilities are now available in developing areas, the improved lot represents different standards today as compared with 15-20

TABLE 14
Housing Costs Summary

Item	Local Estimate 1950		Local Estimate 1974		National Assoc. of Home Builder Estimate 1975	
Structure	70%	$ 7,000	50%	$20,000	48.4%	$18,617
On site labor	33%		18%		15.5%	
Material	36%		32%		32.9%	
Land	11%	1,100	21%	8,400	21.5%	8,280
Overhead, Marketing & Profit	14%	1,400	19%	7,600	19.5%	7,522
Financing	5%	500	10%	4,000	10.6%	4,081
Selling Price		$10,000		$40,000	100%	$38,500
Size, sq. ft.	942		1150			
Cost per sq. ft.		7.43		17.39		
Cost per sq. ft. (selling price)		10.69		34.78		

TABLE 15
Metropolitan Area Cost Comparison, 1963 and 1976
(1,144 Square Foot Rambler 3 bedroom, 1 bathroom, single garage)
11,000 Square Foot Lot

	1963 Costs	1976 Costs	1976 Figures as a Percent of 1963 Figures
City building permit	$ 20	$ 158	790%
Excavate & backfill basement & finish grade lot – machine & labor	275	861	313
Concrete basement – labor & material	1,368	3,624	265
Basement windows – material only	34	62	182
Steel beam – material only	78	205	263
Lumber – material only	1,717	3,931	229
Carpenter – labor only	1,240	2,870	231
Aluminum siding installed – labor & material	432	1,240	287
Millwork – casement windows, oak trim – material only	933	2,227	239
Electrical installed – labor & material	521	1,316	253
Heating installed – labor & material	475	780	164
Plumbing installed – labor & material	1,045	2,240	214
Insulation installed – labor & material	133	425	320
Sheetrock – labor only	375	845	225
Flooring – oak installed – labor & material	380	1,265	333
Painting – labor & material	505	1,048	208
Cabinets & vanity – material only	391	726	186
Garage door installed – labor & material	85	160	188
Linoleum & formica installed – labor & material	250	441	176
Ceramic tile installed – labor & material	277	510	184
Built-in range – material only	162	216	133
Indirect labor – labor only	200	450	225
Concrete driveway – labor & material	95	324	241
Hood & venting installed – labor & material	30	74	247
Rough hardware – material only	70	200	286
Service & warranty work – labor & material	100	250	250
Field overhead – labor & material	300	800	267
Lot cost	3,300	9,300	282
Salesperson's commission	180	500	278
Finance – mortgage discount	475	1,200	253
Gross profit before marketing & office expenses	2,504	6,702	268
Sales price	$17,950	$44,950	250
Lots			
Land	$ 780	$ 1,300	167%
Storm sewer	241	752	312
Sanitary sewer & water	982	3,039	309
Streets, curb & gutters & driveway approaches	417	1,442	346
Earth moving	350	800	229%
Engineering & surveying – miscellaneous	230	467	203
Carrying charges – interest & real estate taxes	300	1,500	500
	$ 3,300	$ 9,300	282

Source: Local Builder.

years ago. The public improvements that must be provided by the developer include the basic needs of water, sanitary sewer, storm sewer, and streets as well as, in many communities, curb and gutter, street lights, boulevard trees, and park dedication.

Structure

The components of the construction cost of a house, including both labor and materials, are given in Table 16. The table represents a national estimate for construction costs of a typical 1,200 square foot home.

Labor

The labor portion of the construction cost of a house averages 15 percent to 18 percent of the price of a house. Construction wages are high, and have been rising faster than incomes in general. However, as noted, the share which labor contributes to the total cost of the home has decreased since 1950.

Wage rates paid to construction workers are typically higher than those to industrial workers for several reasons, partially because seasonal and cyclical employment often characterizes the construction industry. The Contractors Mutual Association reports that the wages and benefits of union building-trades workers increased 128 percent nationwide from January 1966 to January 1976. In contrast, average hourly compensation for all employees in the private non-farm economy increased 96 percent from 1965 to 1975. This was far greater than the 75 percent rise in the consumer price index over the same period of time.

In this Metropolitan Area, construction wage increases have been keeping pace more evenly with the rise in the consumer price index. From 1971-1976, the average increase in wages and

TABLE 16
Construction Cost of a Typical House, 1976
(1,200 sq. ft.)

Roofing, Gutters	$ 647.00
Lumber, Millwork	4,610.00
Wood Flooring	697.00
Carpentry Labor	1,933.00
Plaster – Tile Work	1,324.00
Floor Covering	703.00
Wiring; Lighting	929.00
Excavation Concrete	1,783.00
Masonry	1,259.00
Plumbing	1,665.00
Heating	993.00
Painting	798.00
Insulation	302.00
Hardware	315.00
Appliances	274.00
Incidentals	385.00
Total Cost	$18,617.00

Source: National Association of Home Builders, Washington, D.C. January 1976.

Note: All figures listed above are preliminary and are based on a six-month update of NAHB Component Cost Files.

supplements for building trades workers was 36 percent, according to the Contractors Mutual Association, compared with an increase in the consumer price index of 38 percent during the same period.

Wage scales for union workers in this area, by category, are shown in Table 17.

In this Area, union labor is used almost exclusively in housing construction. In many other areas of the country, non-union labor makes up a significant share of the labor force, but Minneapolis-St. Paul as well as some other cities such as Buffalo, Chicago, St. Louis, Los Angeles, New York, and San Francisco are highly unionized.

Although there is little information about total labor costs for constructing a house in this Area compared with other areas of the country, the fact that union labor is used almost exclusively in housing construction can be a significant factor contributing to higher costs. A survey by the Bureau of Labor Statistics of union versus non-union wage rates in 21 urbanized areas showed that union workers received considerable advantages over their non-union counterparts. Wage differentials were 35 to 50 percent higher for union carpenters and cement masons; 40 to 50 percent higher for union laborers; and 55 to 70 percent greater for union plumbers and electricians.

When union labor is used exclusively, it means that each worker on the job at varying levels of skill is paid at the same rate. For example, builders object to paying union wages for workers doing such tasks as clean-up and sweeping; these workers are paid at the same rate as workers doing highly skilled tasks.

The only alternative in this Area to the AFL-CIO labor union is the Christian Labor Union (CLU), a union with headquarters in Willmar, Minnesota. Wages for CLU workers are generally $1.00 per hour lower than for AFL-CIO union workers. However, builders in the Area who have attempted to use CLU labor have found opposition from the AFL-CIO because the AFL-CIO unions in this Area are strong. A strong union can have considerable leverage over a fragmented industry such as the building industry. The only case in which a builder might feasibly use CLU labor without opposition is if he builds on a very small scale, or is building on the outlying fringes of the Metropolitan Area.

With the limited amount of time available to the committee in which to gather information, it was difficult to be able to draw conclusions on the effect of labor practices on housing costs. A study of labor costs and practices in the Area compared with other areas of the country would have been valuable to the committee.

TABLE 17
Wages and Supplements for Selected Building Trades Workers in Minneapolis-St. Paul, January 1976

Trade	Rate
Bricklayers	$10.51
Carpenters	10.11
Electricians	10.48
Laborers	8.60
Painters	9.63
Plumbers	10.26

Source: CMA News, Contractors Mutual Association, Issue 21, February 1976, Washington, D.C.

Materials

The cost of the materials needed to construct the home contributes about 32 percent of the selling price of the home. This is slightly less than the 36 percent share in 1950.

The cost of materials has also been increasing dramatically. Recent cost increases for some materials, particularly lumber, have been especially great. The Wholesale Price Index for lumber rose 107 percent from 1967 to 1974 compared to an increase of 60 percent for all commodities during the same time period. Slower increases for most other materials have somewhat tempered the overall rise in materials costs. In addition, new labor-saving production techniques and methods that have come to be used commonly in the last ten years have somewhat compensated for the rise in materials costs.

Marketing, Overhead and Profit

In addition to the direct costs of buying the land and constructing the housing unit, there are the builders' costs of marketing, advertising, overhead, and profit. These amount to about 20 percent of the selling price of a home, compared to 14 percent in 1950.

The builder's net profit is estimated to be about five percent of the total cost of a house. Overhead, according to developers, has increased because of the greater amount of time needed to obtain final approval for a housing development. Ten years ago the time needed to gain final approval for a development was in many cases no longer than two months; today this process may take as long as one and one-half to two years.

Construction Financing

In order to finance the costs of construction, the builder must borrow money. Financing costs have doubled as a proportion of the selling price of a home since 1950, from five percent to ten percent.

Construction finance loans which are shorter in term than mortgages generally have fairly high rates of interest of about 12 percent. The National Association of Homebuilders estimates that construction financing costs increased 148 percent nationwide from 1970 to 1974.

SUMMARY OF HOUSING COSTS; IDENTIFICATION OF THOSE WHICH OFFER MOST POTENTIAL FOR IMPACT BY PUBLIC POLICY

As noted in the preceding discussion, not all cost components of housing contribute equally to the cost of the housing, nor have they increased at the same rate over time. To summarize, land and financing costs constitute the largest percent increase of the selling price over time. Overhead, marketing and profit have increased, but at a lesser rate, and the labor and materials costs have actually decreased as a percent of the total selling price of a house.

But, as we have noted, the monthly housing cost has increased even faster than the housing sales price, due primarily to the increase in financing costs, and also to large increases in property taxes, insurance and maintenance costs. To evaluate relevant public policies, it is necessary to consider separately the issues of what has contributed to increased costs and what can be done to reduce the costs.

It is clear that there is no simple or single solution to reducing the cost of housing. All avenues must be explored. It will take flexibility on the part of all involved if the problem is to be tackled.

It is important to consider which factors can most easily be affected by public policy. Some of the factors contributing to housing costs are extremely difficult to affect through public policies. For example, mortgage costs are not only the largest single consumer housing cost, they are also virtually impossible to affect by public policy at the local, regional, or even state level. The costs of financing are directly related to national monetary policies and the availability of mortgage funds. The cost components which can be changed within the state or Metropolitan Area must bear the most careful scrutiny. Those are the ones which are addressed in the recommendations of this report.

Increases in the Size and Amenities of New Homes

The basic components of housing cost have all increased. But costs have also been added to housing through the increase in the size of an average house and in the amenities included in a house. For example, while the price of raw land has increased, the size of the average lot has also increased, adding further to the cost of the house site. While the cost of labor and material has increased, the size of the house has also increased, adding further to the construction costs.

In addition, houses now have garages more often, and more bathrooms. Table 18 gives characteristics of federally insured (FHA) homes from 1950 to 1974. FHA-insured homes account for only about 25 percent of all new homes sold, but comparable data is not available for this time period for homes financed through all forms of mortgages.

As the table shows, the median FHA-financed new home in 1950 contained 838 square feet of floor area. By 1974, the median square footage had increased to 1,211 square feet, an increase of 45 percent. Likewise, the number of bedrooms in the median home had increased. In 1950, 54 percent of new FHA homes contained two bedrooms, and by 1974 only eight percent of new homes contained two bedrooms. At the same time, the number of homes containing three bedrooms has increased from 45 percent in 1950 to 68 percent in 1974, and those with four bedrooms or more from one percent to 24 percent during the same time period. While in 1960 nearly half of the homes constructed contained only one bathroom, 74 percent of the homes now have 1-1/2 or two bathrooms. In addition, six percent of the homes have more than two bathrooms. The same trend has occurred with garages. In 1950, 84 percent of the homes had one-car garages; by 1974, nearly 80 percent had two-car garages.

Homes financed through conventional mortgages usually cost more than those financed through FHA, and therefore the square footage figures in Table 18 are somewhat lower than they would be if conventionally-financed homes were included.

The Census Bureau, which collects data on a national sample of homes financed through all methods of financing, reports the median square footage of new homes sold in 1974 to be 1,560 square feet. The census data also reports the

TABLE 18
Characteristics of FHA-Insured Homes Nationwide, 1950-1974

	1950	1960	1965	1970	1974
Improved Floor Area (sq. ft.) Median	838	1,091	1,167	1,229	1,211
Bedrooms – 2 or less	54.2%	5.1%	4.2%	6.4%	7.9%
3-bedrooms	44.7%	87.8%	78.6%	70.6%	68.4%
4-bedrooms or more	1.1%	7.1%	17.2%	23.0%	23.7%
Bathrooms – 1	NA	47.5%	34.2%	22.7%	20.2%
1-1/2 or 2	NA	51.0%	60.3%	68.3%	74.0%
More than 2	NA	1.5%	5.5%	9.0%	5.8%
Garage – one-car	84.0%	NA	43.3%	24.6%	20.7%
two-car or more	16.0%	NA	56.7%	75.4%	79.3%

Source: Series Data Handbook, HUD Housing Production and Mortgage Credit-FHA Management Information Systems Div., Housing Characteristics Branch RR:251.

percentage distribution by square footage area, as shown in Table 19.

The table shows that, in 1974, 76 percent of all new homes sold contained 1,200 square feet or more of living area.

Along with the increase in the size of the average house, there has been an increase in the number and type of amenities included in the average house. Things which used to be considered options or luxuries are considered standard today. The typical new home today includes a full line of kitchen appliances, including dishwasher and garbage disposal. Table 20 illustrates these trends.

Builder Practices

Builder practices contribute indirectly to the increases in the size and amenities of new

TABLE 19
Percent Distribution of Homes According to Square Footage of Floor Area, Nationwide, 1966-1974

Year	Under 1,000 Sq. Ft.	1,000 to 1,199 Sq. Ft.	1,200 to 1,599 Sq. Ft.	1,600 to 2,399 Sq. Ft.	2,400 Sq. Ft. and over
1966	12	17	31	31	9
1967	11	17	29	32	11
1968	12	15	29	32	12
1969	10	17	28	33	12
1970	13	23	28	26	10
1971	13	23	29	26	9
1972	10	22	30	29	9
1973	8	17	31	33	12
1974	7	17	29	34	13

Source: Characteristics of New One-Family Homes: 1974. U.S. Bureau of the Census, U.S. Dept. of Commerce. Construction Report Series C-25.

TABLE 20
Trends in Amenities Included in New Single-Family Homes, 1963-1974

	Percentage of Homes Including			
Year	Central Air Conditioning, Installed	Stove	Refrigerator	Dish Washer
1963	*	79%	6%	26%
1970	34%	85%	10%	42%
1974	48%	88%	13%	73%

*Figures not available; estimated to be 10% or less based on FHA figures.

Source: Characteristics of New One-Family Homes: 1974. Bureau of the Census, U.S. Dept. of Commerce. Construction Report Series C-25.

homes. The decisions a builder makes in deciding the type and size of housing to build, the kinds of materials to use, and the kinds of amenities he will include – all influence the total cost of the home.

KINDS OF MATERIALS USED

Alternative construction materials varying in cost are available to the builder in some cases, but not in others. For example, the Veterans Administration and the Federal Housing Administration specify roofing materials to be used. However, there are options for many items such as exterior siding materials, types of finishing materials and cabinetry, as outlined below. Some options represent substantial cost savings and others do not. The cost comparisons in Table 21 were developed by a local builder using the plans of a 780 square foot house. They estimate the actual costs for these materials used in constructing this house.

TABLE 21
Kinds of Building Components with Estimates of Their Cost if Used in a 780 Square Foot Rambler Home, 1976

Component	Cost	
Woodwork		
Mahogany Unfinished	$ 485.00	
Pine Vinyl Wrap	580.00	
Oak Unfinished	690.00	
Floorcovering		
Carpet – Vinyl Kitchen and Bath	$ 790.00	
Vinyl Tile Throughout	500.00	
Bathroom		
Cast Iron Tub and Ceramic Tile	$ 300.00	
Molded Fiberglass	200.00	
Windows		
Double Hung with Storms and Screens	$ 350.00	
Casement with Combinations	570.00	
Siding		
Aluminum	$ 790.00	
Masonite	580.00	(not painted)
Fir Plywood – with Strips of Wood (Unfinished)	700.00	
Foundation		
11 Course	$1,600.00	
10 Course	1,500.00	(Rough Estimate)
Wood Basement	1,750.00	
Poured Basement	1,750.00	
Soffit		
1′ No Gable Overhang	$ 160.00	Less $62 for roofing and plywood
2′ – 1′ Gable Overhang	275.00	

Source: Local Builder

INSTALLING AMENITIES

As previously noted, typical homes today include many internal amenities, such as carpeting, a complete line of appliances, and custom cabinets. The average appliance package included in new homes today can cost as much as $500, according to one local builder. This includes a garbage disposal, dishwasher, range and hood. However, including appliances in the sales price of the home may work to the consumer's advantage. Many consumers, especially first-time home buyers, would need to buy the appliances elsewhere and pay for them with short-term payments. The home builder can purchase appliances at a better price in quantity, than can a single consumer, and can pass on the savings to the consumer. The home buyer can then pay the cost as part of his monthly mortgage costs over the term of the mortgage.

In any case, it is important to note the fact that these appliance costs have been added to the cost of housing. Another example of added cost is carpeting. The addition of carpeting in a new home ten years ago was considered an option, while today it is considered standard.

CONSTRUCTION TECHNIQUES AND EFFICIENCY IN THE BUILDING INDUSTRY

Construction techniques and the degree of builder efficiency can have a substantial effect on the cost of housing. Is the building industry as efficient as it could be? Could changes be made to increase efficiency, thereby reducing the cost of housing? Have there been recent changes encouraging greater efficiency in the building industry?

The U.S. home building industry is one of the largest and most important segments of the domestic economy. Unlike other industries of comparable size, however, the home building industry is extremely fragmented. In our Metropolitan Area, there are few builders who build on a large scale.

It is partly because of this fragmentation that the home building industry has traditionally been viewed as a very conservative industry. There seems to be great reluctance on the part of builders and developers to experiment with new products and techniques, since innovations are perceived to be risky under housing market conditions. Therefore, changes in the housing production process, nationally as well as locally, have been gradual – there have been no radical shifts.

Innovations in the Building Industry

Although there have been no radical shifts in the housing industry, there have been some advancements in the last ten years. Chief of these is the use of prefabricated roof trusses and prehung doors, both widely used in this Area. Factory-made kitchen cabinets are also widely used.

A national survey of builder practices[2] for the National Association of Homebuilders showed that 67 percent of the 84,000 homes in the survey were constructed using roof trusses. The homes in the survey were built in 1973 by 1,600 builders selected at random.

Other changes in production techniques have speeded production time. For example, improved methods and tools used in installing sheetrock have reduced the time needed for installation, and thereby have reduced the labor costs for this phase of production. Because of this example and others, it can be said that while labor costs have risen, the production time or number of hours needed for production has been reduced – thereby offsetting to some extent the increase in labor costs. Builders say that they have been receptive to cost-saving innovations, especially in recent years, in order to offset cost rises in other components of housing cost.

Due to the tough market conditions of recent years, builders around the country have begun to take a hard look at other ways to reduce the cost of constructing housing. For example, the Fox and Jacobs firm of Dallas introduces economies by assembling exterior wall panels, interior partitions and interior cabinets in its own plant. However, Fox and Jacobs is a large company, and can take advantage of these and other methods that small-scale builders cannot. Another large corporate builder, U.S. Home,

holds down costs through large-volume centralized purchasing. This is another option not available to those building only a small number of homes per year. Because the building industry consists primarily of small firms, these kinds of changes by large-scale builders can affect only a small portion of the housing that is built.

This committee has not had adequate time or funding to undertake a study of building practices in this Area as compared with other areas of the country. A study was proposed which would have compared the costs of a house built in another city with the same house constructed here. Due to time constraints as well as lack of funding, that comparison could not be made.

BUILDER'S PROFIT

The building industry is a very competitive industry. Many builders express the feeling that, particularly in recent years, they cannot raise profit margins and remain competitive in the industry.

Little information is available on the profit a builder actually makes on a home. The only data that is collected on a national basis is for large corporate national builders. These surveys may or may not be representative of what the situation is for builders as a whole, most of whom operate on a very small scale.

Data is presented below on builders profits for 1969-72. Market conditions in recent years have not been favorable for builders; data for the last few years would probably not be representative of builders profit in a normal market.

The data in Table 22 from annual surveys by Professional Builder show that average profit or return on sales for 11 large home builders varied less than one percent from 1969 to 1972. However, since profit is figured on a percentage basis, it must be remembered that the greater the sales price of the home, the greater the profit.

One local builder has told us that the estimate for profit in his original bid is seven percent, and that actual profit varies from five percent to, in some cases, nine or ten percent. However, local builders have also said that when a developer has experienced lengthy delays and does not know how long it will be before construction of a new project can begin, he might be inclined to raise his profit margin to insulate himself against possible unforeseen losses.

BACK TO BASICS?

Builders in other parts of the country have begun to build a different kind of home for those people who cannot or do not wish to spend a great deal of money for housing. This trend is popularly known as the back-to-basics movement. Builders in some parts of the country have found that the market for smaller, more basic homes is flourishing. For example, an article in House and Home (February 1976) reported that a Florida builder found that by shifting his entire building effort toward the low-end market in 1975, his sales jumped 23 percent over 1974 single-family sales. His homes sell for $17,980 to $31,900.

This shift to the building of smaller homes does not seem to be taking place in this Area. Many Area builders insist that they are more than willing to build a smaller home without a garage and without many amenities if the buyer requests it, but they also insist that a large market for these smaller homes has not been found.

Builders around the country have used various methods for reducing housing costs. According to the House and Home article, one builder has found that fewer baths and unfinished rooms will still appeal to consumers. Another builder has found that buyers will forego extras like appliances, wallpaper and landscaping, but still require a spacious home. Another builder also finds that space is the most important requirement, and cuts costs by using less expensive paneling and cabinetry.

Further information is outlined in Table 23 on ways to reduce costs which make sense to prospective home buyers and builders. These responses give an idea of priorities among the various proposals to cut size and cost of homes.

TABLE 22
Average Financial Return of Selected Major Home Builders, 1969-1972

Year	Return on Sales
1972	5.6%
1971	5.7%
1970	5.3%
1969	4.8%

Source: Professional Builder. July issues, 1970-1973.

TABLE 23
Agreement on Ways to Cut Costs in Homes

"Which of the following specific ways of reducing costs makes sense to you?"

	% Active Buyers				% Builders
		Family Size			
	Total	2	3-4	5 plus	Total
Build with lower ceilings	32.5	35.1	25.8	44.0	17.9
Reduce the size of the living room	16.9	12.2	17.6	20.0	33.0
Reduce the size of dining rooms	17.9	12.2	18.9	21.3	14.8
Eliminate the dining room but provide eating space elsewhere	39.6	32.4	42.1	41.3	45.9
Reduce size of kitchen	7.5	5.4	8.8	6.7	9.0
Reduce size of family room	10.1	10.8	11.3	6.7	11.4
Eliminate the family room	14.3	20.3	13.2	10.7	17.9
Fewer bedrooms	45.1	56.8	47.8	28.0	53.9
Fewer bathrooms but of better design/features	52.6	50.0	57.9	44.0	51.2
Less storage area	1.9	4.1	1.9	—	2.9
Eliminate basement	25.3	24.3	27.7	21.3	30.6
Reduce size of entry hall, hallways	60.7	63.5	61.0	67.3	47.5
Combine kitchen and dining room	37.3	27.0	37.1	48.0	48.0
Combine kitchen and family rooms	27.9	28.4	25.8	32.0	40.9
Combine living room and family room	23.1	27.0	25.2	14.7	37.0
Smaller garages	30.5	16.2	34.0	37.3	26.5
Eliminate garage in favor of carport	17.9	20.3	17.6	16.0	19.4

Source: "Professional Builders National Consumer Builder Survey", Professional Builder. January 1976.

SIZE OF HOUSING BUILT COMPARED WITH LOCAL ZONING REQUIREMENTS

How does the size of housing built in the area compare with requirements set forth in local zoning ordinances?

In seeking to answer this question, The Association of Metropolitan Municipalities conducted a survey of communities in the Metropolitan Area. A survey form was sent to officials in eighty-one communities in the Metropolitan Area asking them to state, for each single-family zoning district, the house size and lot size requirements in that zone, and the number of homes built during 1973, 1974, and 1975 both in accordance with those requirements and in excess of those requirements. Communities were also asked to state if a garage is required, and the number of homes built with garages. Twenty-eight communities responded to the survey. A wide range of lot sizes was represented in the group of communities responding, and also a wide variety in the age of the community.

Required lot sizes in the 28 communities range from 7,500 square feet in Fridley, Crystal, St. Louis Park and Bayport to 18,500 square feet in Plymouth and 20,000 square feet in Maple Grove. The results of the survey appear in Table 24, showing the response from each community. The survey shows that 63 percent of the houses built were on lots larger than the required size; 37 percent were built in accordance with the minimum lot size required. Ninety-three percent of the houses were built in excess of the minimum house sizes stated in the zoning ordinance, and only seven percent were built at the minimum house size stated. Of the 28 communities responding to the survey, 18 do not require garages; 88 percent of the homes built in these 18 communities included a garage.

More specific information gathered from three communities shows the following. In White Bear Lake, 90 percent of the homes built during the last three years exceeded the minimum house size requirement by 20 percent or more. Of 172 units constructed, all but six were located in a zone requiring a house size of 800 square feet.

In Cottage Grove single-family zoning district R-4, where the minimum house size is 1056 square feet, the average size of the 555 homes built during 1973, 1974, and 1975 was 1503 square feet. Twenty of the 555 units (3.6 percent) were built at the 1056 square feet minimum. Fifty-two of the units (9.37 percent) were built at 1090 square feet which is 4 percent over the minimum. Eleven of the units (2 percent) were built at 1180 square feet, which is 11.74 percent over the minimum. The remaining units, which account for 85 percent of the total number of units, were built at 28 percent or more above the stated minimum.

These results are presented in Table 25.

In Brooklyn Park, minimum house size requirements are 768 square feet for a two bedroom house and 960 square feet for a three bedroom house. The average size of 394 homes built in Brooklyn Park is 1,165 square feet; this is 21 percent over the 960 square feet minimum, and 50 percent over the 768 square feet minimum.

There are strong indications from the survey that homes are generally built at house sizes larger than those required. For example, in the Cottage Grove example above, 82 percent of the homes constructed contained 1420 square feet or more of living area, while the minimum size is 1056 square feet.

It has been suggested that municipal zoning regulations create a major obstacle to the provision of lower-cost housing. The results of the survey seem to indicate that the lowering of lot size and house size requirements cannot, in itself, succeed in reducing the cost of housing. These survey findings strongly indicate that homes are, in fact, built larger than required by local zoning ordinances.

Consumer Preferences and Demands

Why are homes built larger than the minimum sizes required by communities in the Area? The answer appears to lie, to a very large degree, in developers' perceptions of consumer preferences and demands. Consumer preferences, in addition, also help to explain the increase in amenities included in housing.

TABLE 24
Number and Percent of Single-Family Housing Units in 28 Metropolitan Area Communities Built in Accordance With and Above Zoning Requirements, 1973-1975

City	Total Units Built In Zone	Lot Size Sq. Ft.	# Built Over Lot Size	% Built Over Lot Size Comm. Total	# Built To Lot Size	% Built To Lot Size Comm. Total	House Size Permitted (Sq. Ft.)	# Built Over House Size	% Built Over House Size Comm. Total	# Built To House Size	% Built To House Size Comm. Total	Garage Required	# Built With Garage	% Built With Garage
Bayport	9	7,500	6	67%	3	33%	960	5	56%	4	44%	No	6	67%
Brooklyn Center	62	9,500	50	81%	12	19%	NA	NA	NA	NA	NA	No	55	89%
Brooklyn Park	3	5 acres	0		3		768	3		0		No	3	
	109	13,500	48	31%	61	69%	768	109	100%	0	—	No	99	94%
	537	10,800	69		468		768	537		0		No	499	
	150	7,200	130		20		768	150		0		No	150	
Champlin	323	10,500	151	47%	172	53%	750	147	46%	176	54%	No	73	27%
Chaska	82	9,000	82	100%	0	—	None	NA	—	NA	—	No	82	100%
Circle Pines	27	12,000	24	67%	3	33%	1,200	19	70%	8	30%	No	27	80%
	19	10,000	7		12		1,000	13		6		No	10	
Columbia Heights	17	8,400	14		3		1,120	12		5		Yes	17	
	34	6,500	22	72%	12	28%	1,020	13	51%	21	49%	Yes	34	100%
	2	6,500	2		0		1,020	2		0		Yes	2	
Cottage Grove	20	3 acres	12		8		960	20		0		Yes	20	
	15	1-½ acres	15	44%	0	56%	1,200	15	91%	0	9%	Yes	15	100%
	15	15,000	15		0		1,200	15		0		Yes	15	
	500	10,000	200		300		1,056	450		50		Yes	500	
Crystal	67	7,500	67		0		900	67		0		No	58	
				100%		—	750-2-story		100%		—			85%
	1	12,500	1		0			1		0		No		
Eagan	439											No	251	57%
Edina	291	9,000	208	71%	83	29%	None Required	NA	—	NA	—	Yes	291	100%

City	Total Units Built In Zone	Lot Size Sq. Ft.	# Built Over Lot Size	% Built Over Lot Size Comm. Total	# Built To Lot Size	% Built To Lot Size Comm. Total	House Size Per-mitted (Sq. Ft.)	# Built Over House Size	% Built Over House Size Comm. Total	# Built To House Size	% Built To House Size Comm. Total	Garage Re-quired	# Built With Garage	% Built With Garage
Fridley	318	7,500, 9,000	291	92%	27	8%	1,020	261	82%	57	18%	9,000—yes 7,500—no	303	95%
Ham Lake	342		NA		NA		720	342	100%	0	—	No	NA	—
Hopkins	5	10,000	4	80%	1	20%	1,100	5	100%	0		No	5	70%
	5 Platted Lot		1		4		800	5		0		No	2	
Lakeville	5	43,560	5		0		720-2-story 960-2 Bd.	5		0		No	3	
	4	20,000	4	3%	0	97%	1,040 3-Bd.	4	72%	0	28%	No	0	69%
	288	11,000 Interior 12,000 Corner	0		288			205		83		No	201	
Lino Lakes	64	11,250	64	100%	0	—	960	64	100%	0	—	No	NA	—
Maple Grove	89	20,000	79		10		960	87		2		No	84	
	745	10,000	656	88%	89	12%	960	730	98%	15	2%	No	722	91%
	193	7,200	170		23		800	189		4		No	187	
Mounds View	335		NA		NA		728 or 1,140	335	100%	0	—	No	287	86%
New Hope	98	9,500	79	81%	19	19%	750 (Ground Floor)	97	99.8%	1	.02%	Yes	98	100%

City	Total Units Built In Zone	Lot Size Sq. Ft.	# Built Over Lot Size	% Built Over Lot Size Comm. Total	# Built To Lot Size	% Built To Lot Size Comm. Total	House Size Permitted (Sq. Ft.)	# Built Over House Size	% Built Over House Size Comm. Total	# Built To House Size	% Built To House Size Comm. Total	Garage Required	# Built With Garage	% Built With Garage
Orono	53	43,560	24		29		None	53		0		No	NA	
	19	21,780	13	46%	6	54%	Required	19	100%	0		No	NA	
	47	87,120	17		30		Other	47		0		No	NA	
	2	217,800	2		0		Than Bldg. Code	2		0		No	NA	
Plymouth	250	18,500	125	74%	125	26%	1,000	250	100%	0	–	No	250	100%
	1,003	11,000	803		200		1,000	1,003		0		No	1,003	
Roseville	307											No	305	99%
St. Anthony	20	9,000	18	90%	2	10%	900	19	95%	1	5%	Yes	20	100%
St. Louis Park	19	9,000	9	56%	10	44%	1,100	15	77%	4	23%	No	NA	–
	20	7,200	13		7		900	15		5		No	NA	–
Shoreview	57	10,400	40	37%	17	63%	865	57	100%	0	–	No	57	98%
	320	12,500	98		222		865	320		0		No	316	
So. St. Paul	85	4,500	85	100%	0	–	One room – 150 Other – 70	85	100%	0	–	No	64	75%
Stillwater	426	10,000	424	98%	2	2%	None	NA		NA		No	426	99.7%
	17	7,500	12		5		Required	NA		NA		No	16	
White Bear Lake	2	43,560	0		2		1,200	2		0		No	2	
	4	15,000	0	–	4	100%	1,200	4	100%	0	–	No	4	73%
	126	10,500	0		126		800	126		0		No	100	
	40	7,200	0		40		800	40		0		No	20	
For All Communities			4,159	63%	2,448	37%		5,964	93%	442	7%		5,367[1]	88%

Source: Survey data collected in 1976 by The Association of Metropolitan Municipalities

1. Total for those 18 communities which reported information on garages and have no garage requirement.

TABLE 25
Cottage Grove Housing Statistics

Single-family R-4 residential district, 1056 square feet minimum. Data extracted from Building Permits 1973-4-5, 1503.39 square feet average.

Sq. Ft. Per Unit	Sq. Ft. Over Minimum	% Over Minimum	Number Units Built	% of Total Units
1056	0	0	20	3.6
1090	46	4.36	52	9.37
1180	124	11.74	11	1.98
1350	294	27.84	17	3.06
1420	364	34.47	108	19.46
1465	409	38.73	186	33.51
1665	609	57.67	46	8.29
1850	794	75.19	73	13.15
1980	924	87.50	42	7.57
			555	100.00

Source: Cottage Grove

TABLE 26
Survey of Spending Preferences of Potential Homebuyers

Responses are shown below to the question: "Suppose inflation continues at its present level and your income (buying power) does not keep pace. In which areas would you delay purchase or reduce your spending?"

	% Potential Homebuyers						
	Young Marrieds (under 25)	Prime Age For First Home (25-34)	Growing Family (35-44)	Empty Nesters (45-60)	Retirees (Over 60)	Singles (29-40)	% Activity Home-buyers
Travel and Vacations	61.2	58.4	59.9	58.6	50.6	51.2	58.4
Entertainment	43.2	46.3	40.1	34.4	39.0	48.8	43.8
Automobiles	29.5	29.5	35.2	39.5	35.7	34.9	32.5
Home Furnishings	23.0	22.1	33.8	28.0	28.6	22.1	26.9
Recreation	25.2	24.8	14.8	22.3	23.4	16.3	23.7
Clothing	10.8	8.7	4.9	3.2	11.7	15.1	6.5
Housing	6.5	4.7	6.3	8.9	3.9	11.6	2.6
Food	—	2.7	3.5	2.5	—	—	.6

Source: "Professional Builders National Consumer Builder Survey", Professional Builder. January 1976.

Increased consumer expectations are reflected in every area of the marketplace including housing. Our standard of living is second to none. But this ever-increasing level of consumer expectations is obviously making its impact on housing. Garages, appliances and any number of other items including increased square footage are now included as a consumer requirement.

In general, builders seek to build the type of housing that will attract the largest market. They keep a close, though unscientific, watch on changing consumer preferences. For example, a national survey[3] of active home-buyers showed that buyers want homes with three and four bedrooms, and with a large selection of appliances and amenities. To be sure, there are a great many people who want these homes and can afford them, but, as we have seen, the number of people who can afford them is growing smaller.

The survey shows that, despite continuing inflation, few active home buyers would delay or reduce their spending on housing. Instead, most would either cut back on travel or vacations, entertainment or automobile purchases. In addition, home furnishings, recreation and clothing would likewise be cut by most consumers before they would trim their expenditure on housing. Incredibly, active home buyers are as likely to reduce their spending on food as to delay their home purchase.

In view of this survey, it seems reasonable to assume that, in the face of rising inflation, consumers are cutting back on other expenditures so that they can purchase the kind of home they have always wanted. For example, some mortgage lenders tell us that the underwriting standard used as the amount people can afford to spend on housing is increasing; some lenders use 30 percent as the amount of income people can afford to spend on housing, instead of the formerly used amount of 25 percent. In addition, 12 percent is allowed for other debt service (for car purchases or major appliances, etc.) which used to be included in the 25 percent. Therefore, it appears that, either by choice or by necessity, people are spending more for housing. But as prices continue to rise, more and more people simply do not have the extra discretionary income to be able to spend more on housing and still have enough income left for necessities.

It is difficult to draw conclusions about consumer preferences, and even more difficult to recommend policy changes in this area. A major conclusion the committee has been able to make, however, is that the market for lower-cost new housing has not been adequately tested in this Metropolitan Area.

The Practices of the Real Estate Industry

The practices of the real estate industry and the fees realtors charge influence the final selling price of the home. Not all builders employ the services of a real estate broker. In large developments of new homes the selling is generally done by full-time personnel employed by the builder. Many smaller builders also employ their own sales personnel.

A builder who commits himself to a full-time salesperson or sales force generally pays a sales commission fee of one to two percent on a house. The builder, of course, takes the risk that he might incur substantial losses when sales are slow. Other costs such as advertising also accrue at the builder's risk.

A fee to a broker can vary a great deal depending on the terms of agreement with the contractor. For example, what type of advertising is expected and who will pay for it? Who will furnish the model home or homes? At what hours are the models to be open? How many units must be sold per week or per month? These factors, in turn, determine how large a sales force will be needed. Due to the variety of terms of agreement, as outlined, the fee to a broker can range from three to ten percent, with an average figure of five to seven percent.

Real estate practice is another area the committee did not investigate in depth, but the limited information we have gathered is included here because these costs do contribute to the final selling price of a home. No discussion of housing industry practices would be complete without mention of the real estate industry.

Government Regulations

Government regulation, in addition to builder practices, consumer preferences and real estate practices, is another area which indirectly contributes to the cost of housing. Government regulations of particular relevance to housing cost are zoning and land use regulations, building codes, permit and other fees, and review and approval procedures at local, regional and state levels. Federal government policies affect housing costs as well through monetary policies and regulations made by HUD and other federal agencies. Federal regulations are not discussed in any great detail in this report because it is so difficult to affect them. The committee believed its first priority was to examine regulations within the purview of the state, given its limited time for study.

A recent Colorado study[4] gives perspective on the cost impacts of government regulations as a whole. The study has assessed the impact of new state and local government regulations in Colorado. The study found that new regulations have added $1,500 to $2,000 between 1970 and 1975 to the cost of the typical house. The study finds that more than half the added cost is for site development, water and sewer fees, permit fees, dedication of land or payments in lieu of dedication for schools and parks, and increased construction requirements. The balance of the added costs reflect added requirements in the construction of the houses themselves: thicker insulation, smoke detectors, furnace air-intake ducts, and other requirements. Although no comparable information is available for Minnesota, Minnesota appears to have experienced similar trends.

ZONING REGULATIONS

Zoning and subdivision regulations are the chief regulatory tools local governments use to guide housing development. Such land-use controls are important for implementing comprehensive plans, providing orderly municipal growth, protecting the natural environment, protecting residences from negative environmental impacts, and providing for the health, safety and well-being of a community's citizens.

Local communities, through state enabling legislation, may regulate the location, height, bulk, number of stories, size, and specific uses of buildings. They may also regulate the minimum and maximum size of yards and setbacks.

All communities in the urbanized portion of the Metropolitan Area have some type of zoning ordinance. The zoning requirements for single-family lot size, house size, and garage and parking requirements are here discussed. The information was obtained by the Metropolitan Council from local communities in a 1976 survey. The eighty-one communities in the survey represent the communities in the Area having a population of 2,500 or over.

Lot Size Requirements

All communities surveyed have minimum lot sizes for single-family homes. Forty-six of the communities have a range of minimum lot sizes in different residential zones. Single-family lot requirements in sewered communities range from 5,000 to 22,000 square feet with a median lot size of 10,000 square feet.

Tables 27 and 28 illustrate the lot size requirements for the smallest zones and the largest zones.

It is important to note that often little vacant land remains in the zones with the smaller requirements, thus indicating that most new construction will take place on lots larger than the community's absolute minimum. Twenty-one percent of the communities require lots of 14,000 square feet or more in their largest-lot areas, while less than nine percent of them require this size in their smallest-lot districts. No data is available on the amount of vacant land in each district.

Lot sizes in a sample of 14 developed communities and 19 developing communities were compared. The developing communities have larger lot sizes than the overall median. Of the 19 developing communities, only two have minimum lot sizes below the overall 10,000 square foot median. Minimum lot sizes in the developing communities range from a low of 8,500 square feet in Brooklyn Park to a high of 15,000

TABLE 27
Minimum Lot Sizes for Single-Family Homes in the Smallest Zoning Classifications[5]

Lot Size	Number of Communities	Percent
4,000 – 5,999 sq. ft.	4	4.9
6,000 – 7,999 sq. ft.	17	21.0
8,000 – 9,999 sq. ft.	15	18.5
10,000 – 11,999 sq. ft.	28	34.6
12,000 – 13,999 sq. ft.	4	4.9
14,000 – 22,000 sq. ft.	7	8.7
No Sewered Land	6	7.4
	81	100.0

TABLE 28
Minimum Lot Sizes for Single-Family Homes in the Largest Zoning Classifications

Lot Size	Number of Communities	Percent
6,000 – 7,999 sq. ft.	4	4.9
8,000 – 9,999 sq. ft.	16	19.8
10,000 – 11,999 sq. ft.	28	34.6
12,000 – 13,999 sq. ft.	10	12.3
14,000 sq. ft. or more	17	21.0
No Sewered Land	6	7.4
	81	100.0

square feet in Minnetonka, with a median of approximately 10,800 square feet.

Table 29 illustrates the differences in lot size requirements between the developed and developing communities.

House Size Requirements

More than half of the communities surveyed have minimum house size requirements. The median requirement is 1,000 square feet.

The communities without minimum floor area requirements for single-family homes include many of the older, developed communities and a number of developing areas. Communities requiring the largest minimum house sizes (1,000 square feet and more) are scattered throughout the Area. There is little correlation between a community's minimum lot size and its minimum house size. More than half of the communities requiring the largest minimum lot sizes have no minimum floor-area requirements.

Minimum floor area requirements appear more frequently in the ordinances of the 19 developing communities than in the group of 14 developed communities. Fifty percent of the developed communities have such requirements, but 79 percent of the developing communities have them. Median floor area requirements are the same in both groups. The range for the developed communities is from a low of 820 square feet in St. Louis Park to a high of 1,020 square feet in Columbia Heights. In the developing communities the smallest house size permitted is 960 square feet in Brooklyn Park, Coon Rapids, Maple Grove and Roseville. The top of the range, 1,100 square feet, is required in Burnsville and Inver Grove Heights.

TABLE 29
Median Lot Size in Developed, Developing and All Surveyed Communities

	Single-Family Minimum Lot Size (Median)
Developed Communities	7,350 sq. ft.
Developing Communities	10,800 sq. ft.
81 Surveyed Communities	10,000 sq. ft.

TABLE 30
Minimum Floor Area Requirements for Single-Family Homes

Minimum Floor Area[6]	Number of Communities	Percent
1,200 sq. ft. or more	3	3.7
1,000 – 1,999 sq. ft.	26	32.1
800 – 999 sq. ft.	15	18.5
Less than 800	2	2.5
No requirement	35	43.2
	81	100.0

Garage and Parking Requirements

Of the 81 communities, thirteen require garages with single-family homes. Many of those thirteen communities are located in the developing areas, where most new construction is taking place. Also, the majority of the communities requiring garages require two-car garages.

Fifty-three communities require offstreet parking for single-family homes. This means a paved or graveled area set aside for parking one or two cars, either off the alley or at the end of the driveway.

Cost Impacts of Local Zoning Regulations

House size, lot size and garage requirements must be given careful attention. Many of the other costs of constructing housing are fixed so that zoning regulations can become critical variables in determining the cost of the housing built. For example, a large lot means first of all that the raw land costs are greater.

A study by the Minnesota Housing Institute[7] found that by reducing lot size from 15,000 square feet to 12,000 square feet, there could be a savings of $1,300. Reducing lot size from 15,000 to 8,000 square feet could result in a savings of $2,300. A large lot also adds increased utility and support service costs, since these costs are usually assessed on a per-linear-foot basis. While lot size has a direct impact on the acquisition cost of raw land, it also affects setbacks and frontages which, in turn, have a direct impact on land development costs such as utilities, curbs, gutters, streets and sidewalks.

The consultant's report in the Appendix compares the basic lot development costs in a sample subdivision for 11,000 square foot lots compared with 7,500 square foot lots. The report concludes that the greatest cost-saving impact is the reduction of the lot size.

Frontage is the width of the lot facing the street. Practically all communities establish minimum frontage requirements, and usually, the larger the lot, the larger the frontage. The frontage is a significant variable affecting cost because it determines the cost of utilities, streets, curbs, gutter, street lights, boulevard trees, etc. Streets and utility lines are generally assessed on the basis of the property frontage. For instance, water and sewer is estimated to cost from $20

to $30 per linear foot of lot frontage. Thus, a lot with 100 feet of frontage could be assessed from $2,000 to $3,000 for bringing water and sewer lines into the subdivision.[8] Streets, curbs, and sidewalks can cost as much as $25 per linear foot of frontage.

Since most builders feel that the cost of the house itself should bear a certain relationship to lot cost in order to be marketable, an increase in the lot size generally results in the construction of a larger, and therefore, more expensive house. The size of the house constructed has a direct effect on its cost. A larger house costs more to build. The Minnesota Housing Institute report cited above found that by reducing the square footage of a house from 1,200 to 960 square feet, the cost of a house could be reduced from $37,800 to $35,700, a savings of $2,100.

Garages are one of the most apparent cost variables. A two-car garage costs approximately $4,000 to build. In contrast, a paved driveway without a garage costs $300 to $400.

In order to assess the impact of the zoning regulations enumerated above, a 1974 Metropolitan Council study designed six alternative models to demonstrate the cost savings that could be obtained by adjusting the variables. The variables used in the models were lot size, house size, ground preparation, whether or not a garage is included, and setback and frontage.

The size of the structure was found to be the most significant cost item in all of the models. Land development cost was the second most important cost item. The third and fourth most important cost items were a two-car garage and driveway, and raw land costs, respectively. However, as noted above, these costs are interrelated.

Conclusions About Zoning Regulations

To place the issue of Area zoning ordinances in perspective, we can say that the Twin Cities Area is not generally characterized by highly exclusionary zoning requirements. However, some communities do have requirements which exceed the average requirements for the Area and do appear to go beyond what is necessary to protect health and safety. For example, while the median lot size requirement for the Area is 9,500 square feet, four communities (5 percent) require lot sizes of 12,000 to 13,999 square feet, and seven communities (9 percent) require lots of 14,000 to 22,000 square feet.

The real issue is to identify individual cases where requirements go beyond what is necessary for health and safety, and to correct them. There are very legitimate reasons for many of the requirements imposed by local units of government. Furthermore, as has been discussed in an earlier section, the reduction of zoning requirements would not, in itself, significantly reduce the cost of housing.

It is apparent that the cost of a house can be reduced by the construction of a smaller house on a smaller lot. Communities which require very large homes on very large lots do, in effect, place a cost limit on housing construction. The zoning regulations in some, but certainly not all municipalities, do rule out modest-cost housing. Some communities with large lot and house size requirements are requiring, in effect, that only high-cost housing will be constructed. As noted, the newer communities generally require the largest house and lot sizes and most new construction will take place in these communities. Although only thirteen communities require garages, many of these communities are developing communities.

BUILDING CODES

Building codes serve to assure that health and safety standards are met in building construction. They typically prescribe materials to be used and construction specifications to be met. In 1971, Minnesota established a uniform state building code, which is mandatory for all communities with a building code. The code is designed to eliminate the diversity between local codes, provide the means for regular code updating, and provide more refined testing and evaluation of new products and construction techniques. The adoption of this uniform state code was a significant step forward.

There are indications, however, that the Uniform Building Code may not be uniformly interpreted or enforced. According to the Minnesota Housing Institute report, many

municipalities through their interpretation of the Code have requirements that exceed those of the Code. Examples used in some municipalities are: requirements beyond engineering for soil tests or reinforced footings, requirements for siting and positioning of structure, and plan checking fees. In addition, it has been suggested that the code is not easily understood, needlessly complex, and therefore subject to varying interpretations by different inspectors.

Requests have been made to change the code to provide additional health and safety in dwellings such as smoke detectors. Strong lobbying efforts have been made for some of these health and safety requirements. There is no doubt that each proposal has merit. However, many added requirements can add significantly to the cost of housing. Not all changes requested have been made a part of the code; some were not adopted after public hearing because the need could not be demonstrated, or the safety when weighed against the costs could not be justified. All new additions should be considered at a public hearing and adopted only after all factors, including their cost, are considered.

PUBLIC IMPROVEMENTS AND DESIGN SPECIFICATIONS

The cost of installation of public improvements based on community design specifications represents a substantial portion of the selling price of a house. The cost of a typical single-family lot is approximately $8,000, or about 20 percent of the selling price of a house. The cost of installing public improvements is estimated to be about half of the cost of the lot, or 10 percent of the final cost of a house.

Public Improvements

The cost of public improvements today compared with 15 to 20 years ago represents not only price increases in material and labor, but a substantial difference in the nature of the improvements.

Fifteen to twenty years ago some areas of new housing had private wells, private septic tank systems, minimum storm sewer systems and temporary streets because public utilities were not available. The initial cost of public improvements at that time contributed very little to the cost of housing compared with today. But even though the initial lot cost was small, residents in developing areas ended up paying a large amount for land costs over a period of time, as well as suffering from the inconvenience created by the minimum improvements. For example, developers were then installing shallow wells for a cost of approximately $300-$400 per lot, septic tank systems for a cost of $600-$1,000 per lot, and temporary streets for a cost of $100-$200 per lot. Within a few years, the septic tank system began contaminating the shallow wells, making it necessary to, for health reasons, install public utilities. In most cases, public water and sanitary sewer were not available at the same time.

The installation of public utilities after initial development usually followed this sequence:

1. The sanitary sewer system became available first. The street was dug up, the sewer system installed, and a new street constructed.

2. When the public water system became available a few years later, the street was torn up again, the water system installed, and the street again reconstructed. If a temporary street were installed after water-main construction, in a few years the street would be upgraded to a more permanent type of street to cut down on maintenance costs.

With this chronology of events, the homeowner who had initially purchased a very inexpensive lot with a minimum of improvements ended up paying for an extra well, an extra septic tank system, and two to three temporary street- surfacing projects with all of the inconveniences and disruptions that go along with new construction. Throughout the entire process, the local public officials were criticized for not being farsighted enough to provide for the improvements initially so that the new residents did not have to be burdened with the reconstruction and add-on costs necessitated by the staged construction procedure. Some of the residents, however, may not have been able to afford a home if the costs of permanent improvements had been incurred at the outset.

Gradually, throughout the 1960's when public utilities were available, better quality streets and concrete curb and gutter were installed. In addition, streets became wider as traffic volumes and on-street parking demands increased with the advent of multi-car families. Today, most communities require installation of concrete curb and gutter and permanent streets in new subdivisions. Some communities have added other requirements not common 15 years ago: boulevard trees, street lights, and land for parks or cash in lieu of land. These additions amount to an approximate average of $300 to $400 per lot. The cost of all these items is reflected in the selling price of the home.

It is important to note that this is an area of substantial initial cost increase which has developed during the past 15 to 20 years. In general, many of the public improvement requirements for land development have grown with resident demand for necessities, amenities, and a desirable living environment. Even though the cost of public improvements represents approximately 10 to 11 percent of the selling price of the average home, the cost of installing the public utilities and permanent streets initially is less costly than having them installed on a staged construction basis. Savings that can be found in this area would not affect the size or quality of the housing unit but can affect the health, safety and general welfare of the occupant.

Design Specifications

Design specifications for public improvements vary from one community to another in the Metropolitan Area, primarily in the area of street construction and storm sewer design. Some communities impose requirements that appear to be above recommended minimum health and safety standards.

Some communities allow a maximum road grade of only four percent. This means that in some cases the developer must incur substantial expense for reducing natural slopes and removing trees in order to meet the grading requirements. This can also lessen the aesthetic qualities of the area.

Some communities have specifications for the design of storm sewers which appear to require more underground pipe, manholes, and catch basins than are necessary for conformity to minimum standards. Existing ponds and low areas, rather than extra design features in the sewer system, can be used to accommodate storm-water runoff. Where ponds are practical, they can be amenities.

Sewer pipe installed on curvilinear streets is required in the majority of communities to be straight, and manholes are required to be in the center of the street. This design demands manholes at frequent intervals on curvilinear streets to connect the sections of pipe. The rationale for the use of straight lengths of pipe states that they are necessary so that inspectors can easily check the pipe to make sure that it has been properly installed. However, today, there are improved methods of checking the installations by using laser beams and TV cameras. It seems, therefore, that there is no reason why curvilinear pipe cannot be used. There is only one community, to our knowledge, that does allow the use of curvilinear pipe. The use of curvilinear pipe would allow manholes to be placed at larger intervals. There are, however, problems in deciding what the minimum curvature should be. Maintenance is also a critical consideration.

When designing public improvements, municipal officials and city engineers place a high priority on maintenance considerations. Better quality improvements mean longer life and less maintenance. It is these considerations which guide officials in setting many of their requirements, as in those examples above. A couple of other examples are as follows. Although cul-de-sac streets make good sense in making a livable environment, in making good use of the land, and in reducing costs – maintenance departments don't like them because it is difficult for snow plows to turn around in them. Likewise, although rolled bituminous curbs make good sense because their cost is much lower than concrete curbs, maintenance departments don't like them because they say snow plows are likely to damage them. Maintenance considerations are important, but these considerations must be weighed against the burden on the initial cost of the housing.

The design specifications for sanitary sewer and water utility systems should be based on mini-

mum standard requirements of the Minnesota Health Department and the Minnesota Pollution Control Agency. These agencies require compliance with sanitary sewer design standards contained in the Committee Report of Great Lakes – Upper Mississippi River Board of State Sanitary Engineers. Their standards take into consideration long-term maintenance costs and are reviewed annually. Any recommendation for changing the existing standards must be well documented. The requirements are predicated on the basis of protecting the health, safety and general welfare of citizens of the State of Minnesota.

In the same context, private wells and septic tank systems must be installed in accordance with state regulations. Today private wells cost $1,300 to $1,600[9] per residential lot and septic tank systems cost an average of $1,500[10] per lot. This compares to the cost of installing public water and sanitary sewer at $1,050 and $1,200 per lot, respectively. This means the 1975-76 initial cost of public water and sanitary sewer is $550 to $850 per lot less than that for private water and sewer systems. In addition, there are considerable future savings in terms of maintenance of private systems and the add-on expense of paying for public utilities and street reconstruction at a later date.

Cost Impacts of Improvements and Design Specifications

It has been noted that some requirements imposed by some municipalities appear to be designed above minimum and adequate standards. The increased cost of land improvements has resulted from the common practice and philosophy that a complete range of high quality improvements is provided all-at-once when the house is constructed.

It is recognized that the basic public improvements of sanitary sewer, storm sewer, water and streets should be installed initially. But perhaps, under certain conditions, curb and gutter can be added at a later time, as was the practice 10 to 15 years ago.

The cost impact of the improvements included in the sales price of a home deserves further attention and study. The committee could not investigate and evaluate all of the variables to determine if less costly versions would be acceptable and adequate.

PERMIT AND OTHER FEES

The costs applied to housing in the form of permit fees, set by various levels of government, can be quite substantial. The fees for permits and other charges collected by one municipality in the Metropolitan Area are listed in Table 31.

Other costs the individual or contractor could incur would be the following:

1. Survey of the property – $100-$150.

2. Architectural plans. The cost for plans may vary greatly with the type of construction. Generally, the cost of these plans are a percentage of the value of the structure. Stock plans are available for approximately $50.00.

3. Charges for evaluating and figuring heat loss of a structure, to ensure compliance with new state energy legislation, average $100-$150.

4. Contractors may also incur a License Fee of $25.00, and bond and insurance costs in each municipality.

The Minnesota Housing Institute report cited earlier noted that the building permit fee in one municipality increased 300 percent in 4 years. The report also noted that preliminary information indicated that municipalities use varying methods to compute fees and charges, resulting in a wide variation of costs among municipalities. In the example shown in Table 15, the building permit fee in 1963 was $20.00, and by 1976 had increased to $158.00, an increase of 690 percent. In some cases, fees attached to housing have been transferred from other sources of revenue. This is the case with the Metropolitan Waste Control Commission Service Availability Charge (SAC). The SAC charge is assessed to each house for which a building permit is issued. The SAC charge is determined by dividing the amount of revenue needed for debt service of

TABLE 31
Permit Fees for a Single-Family Dwelling of 1200 Square Feet With an Attached Garage

		Set By
Building Permit	$ 148.00	Municipality
Plan Check	74.00	Municipality
State Sur Charge	18.30	Municipality
Metropolitan Sewer Availability Charge (SAC) (1976 rate is $350.00, '77 – $375.00, '78 – $400.00)	350.00	Metro
Sewer Connection Charge	200.00	
Water Connection Charge	200.00	
Park Fee (for property subdivided since 1960)	50.00	
Subtotal	$ 1,040.30	

The following permit fees are collected after the initial building permit is obtained: (these are average fees)

Plumbing fixtures	$ 36.50	State
Plumbing sewer and water (provided services are stubbed to property lines)	24.50	State
Heating	24.50	State
Electric	32.50	State
Water Meter	57.55	
Subtotal	$ 175.55	
Total	$ 1,215.85	

Source: White Bear Lake

reserve capacity by the number of housing starts (building permits) in the Metropolitan Area. The charge is currently $350.00, and will rise to $375.00 in 1977.

Approximately six million dollars a year must be raised by the Metropolitan Waste Control Commission to pay for the reserve capacity debt payment costs of the metropolitan sewer system, both for the treatment works and the interceptor system. Prior to 1969, the funds to pay for the reserve capacity were raised through assessments levied by local units of government.

One contributing factor to fee increases in general in recent years is the six percent limitation on levy increases imposed on municipalities. In 1971, the State Legislature passed legislation which limits the amount by which cities may increase their general tax levy to six percent per year. As a result of this action, cities have been forced to evaluate and examine each specific service or function provided and to make as many functions and services as possible self-supporting. Before this levy limitation law was in effect, all or large portions of many functions and services were funded from the general tax levy and only nominal fees were assessed directly against the user. The last few years have also seen inflation rates in double digits and this, coupled with the 6 percent levy limitation, has meant, in many cases, an increase in municipal user fees. Prominent among those user fees which have increased significantly are those associated with new construction, including housing construction (building permit, inspection fees, etc.).

MULTIPLICITY OF GOVERNMENT REGULATION

This section attempts to describe the problems surrounding the governmental review and approval processes that have grown so greatly in number and complexity in the past few years.

In recent years, growing out of a concern for protection of the environment, a proliferation of review procedures at local, regional, and state levels has occurred. In many cases, the review procedures are time-consuming and duplicative. Additional time means added carrying costs to the developer, and ultimately to the consumer.

Types of Government Regulation

At the local level, it is not unusual for a development to be subjected to several hearings before the local planning commission and before the local city council. There may be several months delay while local communities consider zoning ordinance changes. In addition, the local environmental or natural resource commission may review the project. At the regional level, the watershed district commission and the county may also review the project, and, at the state level, the Department of Natural Resources. The project may be subjected to several reviews by the U.S. Department of Housing and Urban Development or other financing agencies and the Metropolitan Council. In addition, if a petition is submitted by 500 persons who don't want the development, a hearing in many cases must be held before the State Environmental Quality Council. The Appendix contains a chart illustrating the steps in the development process, with an estimate of the time involved for each step.

Time and Cost of Processing

Delays to a project are very often lengthly and add significantly to the cost of housing. Only a few years ago, the time necessary to gain approval for a development could be placed realistically at nine months. Today, a project may be delayed by as much as 1-1/2 to 2 years before construction can even begin.

Delays increase the developer's holding costs and ultimately the cost of the house. In addition, the process described introduces an element of uncertainty for the developer, when the stated purpose of many of the regulations was to reduce uncertainty. It is very difficult for a developer entering a project to know what permits are required, how long it will take to secure them, and what the costs will be – frustration is typical.

A recent study by Thomas Muller and Kathleen Christensen of the Urban Institute of Washington D.C. has assessed the cost and effectiveness of state-mandated development impact evaluations in California, Florida, Montana, and Wisconsin. The study found "the costs of impact evaluation preparation and review to both developers and the public sector to be minor. However, the costs of delay, particularly the holding costs of land, can be considerable for those projects which are delayed by six months or more. . .The cost of meeting stipulated conditions in both California and Florida varied substantially, from zero up to $300-$500 per dwelling unit. . . ."

It is important to note that it is not the environmental regulations themselves that add costs, but the time involved to process the agency reviews, as the above study stresses. Concern for the environment is a desirable and necessary thing, but it is also highly desirable to reduce the time involved to a minimum, so as not to add to the developer's carrying costs – and ultimately, to the cost of the house.

A good example of the delay that can occur in the housing development process is the case involving the Countryside West subdivision in Bloomington developed by Orrin E. Thompson Construction Corporation. The case exemplifies the delay that occurs both as a result of environmental issues and as a result of the involvement of multiple-level governmental agencies.

Land acquisition for the Countryside West project was made in late 1974, and, as of this writing, final plat approval has not been received and construction cannot begin. It is uncertain at this time how much longer the project may be delayed. Already substantial costs have been incurred. The developer of the subdivision estimated that by April of 1976 delays to the project had added $1,000 to the cost of each house to be constructed in the development. A case study of the Countryside West development is contained in the Appendix.

Study of Multiple Regulations

Many of the delays involved in the development process are the result of repeated presentations of the same issues to various government agencies at different levels. The area of multiple government regulation urgently needs investigation and analysis. The committee has spent an extensive amount of time studying this problem and has addressed recommendations to it, but there is still much additional study to be done and further refinement of the proposals in the recommendations.

FOOTNOTES

1. Series Data Handbook. HUD Housing Production and Mortgage Credit-FHA Management Information Systems Division, Housing Characteristics Branch. RR: 251.

2. Builder Practices: A National Survey of Characteristics and Construction Practices for All Types of One-Family Homes. For National Association of Homebuilders, by the NAHB Research Foundation, Inc. Rockville, Md. February 1974.

3. "Professional Builders National Consumer Builder Survey." Professional Builder. January 1976. pp. 99-115.

4. An Analysis of the Impact of State and Local Government Intervention in the Homebuilding Process in Colorado, 1970-1975. Prepared for Colorado Association for Housing and Building by James R. Lincoln, Jr., Dean C. Coddington, and John R. Penberthy. Bickert, Brown, Coddington and Associates, Inc. Denver, Colorado. April 1976.

5. All of the information in the tables and text on lot size, house size and garage requirements is taken from an unpublished 1976 Metropolitan Council Survey. Information is available upon request.

6. Where minimums vary according to the number of bedrooms, the minimum floor area for a three-bedroom home is used. Seven communities do allow lower square footage for homes having fewer than three bedrooms.

7. The Multiplicity of Factors That Contribute to the Cost of Housing (unpublished). Minnesota Housing Institute, Minneapolis, Mn. April 1974.

8. See Item 3 in the Appendix for further cost information.

9. Source: Tom Renner, E.H. Renner and Sons. Anoka, Mn.

10. Source: Ed Sullivan, Sullivan Septic Service, Inc. Wayzata, Mn.

RECOMMENDATIONS ON FINANCE

1. Public financing should be available to finance public improvements regardless of whether the municipality or the developer installs the improvements. The legislature should instruct the Attorney General's office to determine if it is feasible to change the current state law to accomplish this objective.

   When a developer obtains financing from private sources for the installation of public improvements, such as sewer, water, and streets, the interest rate he pays is normally substantially higher than that which the municipality could obtain to finance the same improvements. Under current state law, municipal financing can be used only if a municipality orders the improvements and takes bids according to a prescribed procedure. Many developers and contractors believe the lowest overall cost for installing public improvements in a new residential area would result if the developer himself contracted for services and installed improvements using municipal credit to finance these improvements.

   The cost of financing public improvements could be substantially lower if a municipality with bonding power rather than the developer could finance improvements. The interest rate a developer can obtain is 10 to 14 percent compared to the municipal rate of 6 to 8 percent. Because of the legal technicalities involved, this proposal needs further investigation.

2. The state should amend the Conventional Home Loan Assistance and Protection Act (usury law) to ensure that the maximum interest rate allowable competes with the national market rate.

   The 1976 legislature amended the state's usury law to allow the interest rate on certain conventional mortgages to exceed 8 percent. The interest rate established by the new bill is a floating rate which is determined each month by the Commissioner of Banking. The formula as authorized in the law for determining the rate has resulted in a maximum interest rate in Minnesota below the national market rate. This has resulted in excluding mortgage bankers who deal in the national market from making conventional loans in Minnesota. Only savings and loan institutions are now making conventional mortgages. To date, the demand for conventional loans has been heavy and most savings and loans have been very selective in placing mortgages and have been requiring substantial down payments. As a result, many first-home buyers with small down payments have been excluded from using conventional mortgages. These buyers are forced to use FHA mortgages if they are not veterans. The cost of an FHA mortgage to a buyer at today's interest rate is higher than the cost of a conventional mortgage at today's national market rate. A policy which would allow Minnesota's interest rate to equal the national market rate would now result in less cost to a buyer than an FHA mortgage.

The Act should be amended so the definition of a conventional loan is simplified to make all types of homes readily eligible for such loans.

Only conventional mortgages which are eligible to be purchased by the Federal National Mortgage Association or the Federal Home Loan Mortgage Corporation are covered under the law and can have an interest rate higher than eight percent. Guidelines these agencies have established for purchase eligibility are quite extensive, especially for townhouse and condominium projects.

RECOMMENDATIONS ON TAXES

3. The state should abolish limited valuation of homes for property tax purposes.

   Limited value is a rate lower than market value which is used as a basis for computing taxes on existing housing. However, a new home or a recently-sold existing home is taxed at a higher rate, the market value. This practice results in inequities between new homeowners and those who have owned their homes for some time; new homeowners are penalized. This is one of the primary inequities in the property tax system.

   Taxable values on homes in Minnesota were, for a time, held to a five percent per-year increase over the previous year's appraised value. A 1975 law allows increases in values up to ten percent or up to 25 percent of the difference between the appraised value and the value on the tax rolls, whichever is greater.

   For example, if a home is actually worth $30,000 and the assessed value is $20,000, the limited market value could, under the new law, rise to $22,500 ($2,500 is 25 percent of the difference between $20,000 and $30,000). Under the old five percent limit the limited value would have been $21,000.

   By the fourth year, under the new law, the limited value would rise to $30,000, the market value. This is assuming, however, that the actual market value had not increased during that time. If the market value had increased over a four-year period, as presumably it would, and the property had not been reappraised, the limited value would remain, after four years, at less than the actual market value.

   Therefore, values are working toward market value much faster than under the old five percent limit, but the value of a home would still not reach market value unless it were reappraised every year. Reappraisal is required only once every four years. Actual market-value increases for one year can be particularly great, as has happened in recent years. Under such a system, actual market conditions cannot be reflected. New home buyers must pay proportionately more for property taxes than used home buyers.

   Taxes on a new home should be equal to taxes on an older home of the same market value. Although under current state law values are working toward market value much faster than under the former law limiting valuation increases to five percent per year, the committee believes that this is an area producing substantial inequity that deserves more immediate action.

4. The legislature should charge the Metropolitan Council to study and recommend changes to the existing Green Acres Law as it applies in the Twin Cities seven county area. The Council should recommend those changes

necessary to make the consequences of the Green Acres Law consistent with the objectives of the Development Framework.

The Green Acres Law provides special tax relief to owners of agricultural property. Owners of property who qualify under the Green Acres Law can have a certain portion of their real estate taxes and all special asessments deferred until the property is sold for development.

If a property owner applies for coverage under the Green Acres Law, there is no restriction imposed on him as to when he can sell his land for development. This allows a property owner whose property might be served by all public utilities and services to hold his property off the market, without having to pay for the public utilities and services serving the property, until he feels he can get the best price.

If all property was required to pay its fair share of the costs of the public utilities serving it, more land suitable for development would be on the market at any one time and thus the price for the land would be lower.

Use of the Green Acres Law to be applicable inside the Metropolitan Urban Service Area (MUSA) does not seem consistent with some of the major objectives of the Development Framework Guide: encouraging development to occur inside the MUSA line; encouraging the full utilization of existing public utilities and services; encouraging agricultural use outside the MUSA line; and reducing the restraints which cause higher priced housing.

5. The state should investigate ways to exempt all building materials used for residential development from the state sales tax. The state should, if possible, exempt from the sales tax any other materials included in development costs.

The Minnesota sales tax applies to all building materials used in housing construction. Therefore a portion of the sales price of a new home goes toward the sales tax. There is no comparable cost reflected in the sales price of a previously occupied house. This is an area of inequity between buyers of new homes and buyers of used homes.

The amount collected in sales tax for the materials used in constructing a home can be substantial. For example, the amount collected in sales tax for the materials used in the structure portion of a $45,000 home adds $750 to the sales price of the home. This amount does not include the tax on other development costs, such as sewer and all other utilities, which are also subject to the sales tax.

Therefore, new home buyers pay a significant amount of the purchase price in the form of sales tax, while buyers of previously occupied housing do not. Since food and clothing are exempt from the sales tax, shelter should also be exempt from the sales tax.

RECOMMENDATIONS ON FACTORS RELATING TO THE HOUSING SALES PRICE

6. In response to the legislative charge, the committee is recommending standards for single-family lot and house size, and garage requirements. These standards, listed below, are advisory to local units of government. The committee urges local units of government to adopt these standards. These standards are, in the committee's opinion, adequate to protect health and safety for most parcels of land without adding unnecessary housing costs. The standards are as follows:

   Lot Size (in sewered areas) – 7,500 sq. ft.
   60' frontage

   In some cases, due to conditions of the soil or topography, a density standard may need to be considered.

   House Size – In accordance with the recommended living areas set by the One-and-Two Family Dwelling Code, 2nd Edition, 1975.

   Garages – Communities should not require garages.

   The committee's recommendation on lot size and house size is supported by standards recommended by several nationally recognized authorities. A complete listing of these appears in the Appendix. The recommendation on house size is consistent with the standards set by the One-and-Two Family Dwelling Code, 2nd Edition, 1975, as adequate for health and safety. These standards read as follows:

   > "Every dwelling unit shall have at least one habitable room which shall have not less than 150 square feet of floor area. Other habitable rooms shall have an area of not less than 70 square feet. Every kitchen shall have not less than 50 square feet of floor area.
   >
   > "Habitable rooms except kitchens shall be not less than 7 feet in any horizontal dimension."

   Floor plans for a two bedroom home and a three bedroom home are included in the Appendix. They illustrate the approximate total square footage a home would contain using the minimum room sizes established by the Code.

   Garages are not necessary for health and safety and should not be required. Not everyone needs or can afford a garage.

7. The state should direct and provide funding to the Metropolitan Council to evaluate, with local municipalities, these advisory standards and other zoning and subdivision standards which would enhance the opportunity for the construction of modest-cost-affordable housing. These standards should

include, but not be limited to, lot size, house size, setback, front footage, off-street parking, requirements for installation of public improvements and design specifications (items for inclusion in evaluating public improvements and design specifications are included in the consultant report in the Appendix). Standards for multifamily housing also need to be established.

The Metropolitan Council should publish and distribute the recommended standards to all local units of government in the Metropolitan Area by June 1, 1978.

When reviewing the comprehensive plans of the local communities, the Council should evaluate and comment, using these suggested standards as criteria, on whether the housing element of the plan is adequate to provide opportunity for the construction of a "fair-share" amount of modest-cost-affordable housing.

The committee has not had adequate time to completely investigate all of the housing cost factors affected by governmental regulations. There are significant factors in specific areas other than those in which standards have been recommended. The committee recommends, therefore, a continuing effort to establish advisory standards in a number of other areas such as public improvements and multifamily housing. The Metropolitan Council should be charged with this responsibility.

The Mandatory Planning Act requires that each municipality in the Metropolitan Area formulate a comprehensive plan before the end of 1981. The committee suggests that each community, when formulating its comprehensive plan, should analyze its codes and ordinances using the recommended zoning standards published and distributed by the Metropolitan Council. When reviewing the comprehensive plans, as required by law, the Council should then comment on whether the community has made adequate efforts toward the provision of affordable modest-cost housing.

By using the comprehensive plan to evaluate a community's performance, the Council can then take into consideration all factors unique to that particular municipality to determine whether modest-cost housing needs in the community have been met, and what further efforts that community should make in providing opportunities for modest-cost housing construction.

8. The state should evaluate the formula for state aid to local government and should revise it, as necessary, to provide financial incentives to those communities which receive favorable comments from the Council on their comprehensize plan housing element and zoning ordinances.

   Communities which adopt plans and ordinances which provide opportunity for the development of modest-cost housing should be financially rewarded through increased state aids. Specific proposals, such as ways to deal with those communities having little undeveloped land, should be defined as part of a continuing study of modest-cost housing.

9. The Metropolitan Council should use its existing authority to encourage local units of government to provide the opportunity for the construction of modest-cost housing and to provide assistance to developers of such housing.

   The Metropolitan Council should use its housing review power to encourage the construction of modest-cost housing.

   The Council is authorized by federal and state regulations to review single-family subdivision applications and multi-family housing proposals for FHA insured or state financing.

   The Council should recommend to federal and state agencies that proposals for modest-cost housing should receive high priority. The Council should develop procedures which will further facilitate the speedy processing of such applications.

The Metropolitan Council should incorporate modest-cost housing criteria into its Housing Performance Policy and diligently enforce the policy to encourage communities to provide the opportunity for modest-cost housing needs.

The Council's Housing Performance Policy gives priority to funding applications for communities which are providing low and moderate income housing. To date, the criteria have focused on subsidized housing. The committee recommends that new criteria for modest-cost housing should be developed and used in the ranking process.

The Metropolitan Council should monitor community efforts to provide the opportunity for modest-cost housing.

The above recommendations, implemented with the existing authority of the Metropolitan Council, constitute an incentives program to encourage communities to take the initiative in providing housing that is affordable to a larger number of families. The Council has used such an incentive approach successfully for the past few years to encourage the development of subsidized housing for low-income persons. The committee recommends that the Council use the same incentive approach to increase the supply of private-market modest-cost housing.

10. The Metropolitan Council must make adjustments in the Metropolitan Urban Service Area (MUSA) boundary as necessary to ensure that there is an ample supply of developable land within the MUSA for residential construction. The Metropolitan Council should monitor land prices near the Metropolitan Urban Service Area boundary and if it finds prices increasing substantially due to lack of serviced land, should then adjust the boundary. The Metropolitan Council should encourage other governmental bodies to facilitate residential development within the MUSA.

The Metropolitan Council should require each community, when formulating its comprehensive plan, to make an analysis of available residential land and submit this information to the Metropolitan Council.

Controlled growth policies such as the Development Framework deal with urban sprawl and reduce the cost for extension of public improvements such as sewer and water. However, the committee feels that controlled growth policies could adversely affect land costs.

Since the supply of sewered land available for residential construction is limited by the boundaries of the MUSA, the supply must be sufficient to accommodate growth that will occur in the Metropolitan Area and in sufficient supply to ensure that land prices are not inflated. MUSA land must be made available for development and properly zoned to permit the construction of modest-cost housing. When all comprehensive plans are completed in 1981 as required by the Metropolitan Land Planning Act, the Development Framework should be re-evaluated and revised as necessary to facilitate modest-cost residential development.

11. The state should adopt the One-and-Two Family Dwelling Code, 2nd Edition, 1975 in lieu of the Uniform Building Code.

The Uniform Building Code adopted by the state of Minnesota in 1972 is one document covering all types of construction. Plumbing and heating requirements, however, are excluded from the code. The Uniform Building Code has been criticized as needlessly complex and subject to variation in interpretation.

The recommended One-and-Two Family Dwelling Code contains specifications for one-and-two family dwellings only, and is easier to understand because it is presented in layman's language. It therefore lends itself to less variation in interpretation. Another advantage is that plumbing and hearing specifications are included. The Uniform Building Code is in part a performance code, but the one-and-two family dwelling code relies more on the performance nature. The

performance nature allows for greater flexibility in incorporating new cost-saving materials.

The State Building Code Division has reviewed the Code and proposes to adopt the Code. Public hearings will be held on the proposed adoption.

The following modifications to the One-and-Two Family Dwelling Code are, however, recommended:

The building official should be identified as the state building inspector.

This is consistent with the code presently in use, and the recommended code does not define building official.

Approval of alternative materials should be made by the state building inspector.

Approval of alternative materials by the state building inspector will ensure that the alternatives may be used within all local jurisdictions.

The Commissioner of Administration of the State of Minnesota may establish permit fees to be used in all local jurisdictions where fees are determined by the Commissioner to be excessive.

The Uniform Building Code presently in use does list suggested fees, while the recommended code does not. The committee feels that there should be recourse when fees charged in any municipality are felt to be excessive. This is to ensure that municipalities may not raise fees exhorbitantly and, in effect, create moratoriums on construction.

12. The Environmental Quality Council (EQC) should modify its regulations for implementation of the state Environmental Permits Coordination Unit. The recommended modification would prevent unnecessary delay in the process.

The committee supports the creation of the Environmental Permits Coordination Unit by the Legislature in 1976, and expects that a great deal of time will be saved in the housing development process through the use of this "one-stop" permit.

The legislation authorizes use of a master application for proposed projects which will affect natural resources and will require permits from multiple state agencies. Use of the master application is optional for project proposers. The intent of the procedure is to limit duplication of effort in the permit process utilized by state agencies within the scope of their regulatory functions.

Before using the master application procedure, local agency permits must have first been considered and the proposed project must conform to local permit regulations and requirements. The applicant must also obtain certification from local government agencies prior to using the procedure. Applications must be submitted to the coordination unit, which is required to notify each state agency having a possible interest in the application. Each agency must respond within 20 days on whether specific permit programs under its jurisdiction are pertinent to the project described in the application. The agency also must make a recommendation on the necessity of a public hearing on the project request.

The Act requires the Minnesota Environmental Quality Council (MEQC) to adopt rules and regulations to implement the Act, including master application, notice, public hearing procedures, and hearing costs. The MEQC is required to submit a report to the legislature by January 1, 1978, detailing activities under the Act and recommending improvements to the procedures. Provisions in the Act governing a master application and establishing hearing procedures are effective February 15, 1977. Other provisions are effective immediately.

The Act also specifies the need to establish permit information centers within the Metropolitan Area and outstate. This portion of the Act intends to provide a service which will enable interested persons to obtain state

and local permit information at an officially designated place.

The following modification to the regulations formulated by the MEQC for the implementation of the process could save further time in the development process by preventing unnecessary or intentional delays.

The MEQC regulations specify that the MEQC chairman may extend the decision date on permit applications for reasonable cause. "Reasonable cause" should be defined as "only by written agreement to the MEQC chairman that the delay is acceptable to both parties involved."

13. The environmental review process for residentially-zoned land should be incorporated into the planning process via the local comprehensive plan.

This concept should accomplish the following:

a. Most of the significant environmental issues should be resolved by the comprehensive plan. An additional EIS would not be required on a project if the project is consistent with the plan.

b. Environmental Impact Statements which would be required should be limited to localized, site-specific problems not addressed in the plan. They should not reconsider the broad issues resolved by the plan.

The Metropolitan Council should work with the Environmental Quality Council in formulating procedures to accomplish these objectives.

Recent attempts have been made to streamline the review and approvals process. For example, the state has established the Environmental Permits Coordination Unit, discussed previously. The Environmental Quality Council has recognized the need for efforts to facilitate review processing, and has recently completed a lengthly hearing process to revise its regulations toward this end. What is needed is a more comprehensive approach. The committee has concluded that the local comprehensive plan should be given a much stronger role in addressing environmental issues.

The comprehensive plan, which all communities in the seven county Metropolitan Area must, by state law, formulate by the end of 1981, is an excellent vehicle for such an approach. Using the planning process as the environmental review process can meet the real intent better than the present method. Environmental considerations should be incorporated throughout the evaluation of a project, not just in an after-the-fact statement. Such a comprehensive approach could alleviate much of the delay in the development process caused by the presentation and re-argument of the same issues to various government agencies at different levels.

The current provision in the law for environmental review initiated by a petition signed by 500 persons should be eliminated. There should be adequate opportunity for citizen discussion of environmental concerns at the time of public hearings on the local comprehensive plan.

In an attempt to reduce future adverse environmental effects and to provide a voice for private citizens, Minnesota state law permits a petition of 500 signatures to qualify as a request that an environmental assessment be made for a particular project. Ultimately, if deemed necessary by the Environmental Quality Council, an environmental impact statement would also be required.

The committee feels this procedure has been abused. In many cases, petitions are submitted under the pretense of real environmental issues, when, in fact, the petitioners simply do not want housing development to occur. There is no requirement for proof or any kind of substantiation of possible adverse environmental effects. In addition, there are no requirements whatsoever as to where the 500 signatures must come from. The petitioners are not required to be residents

of the immediate vicinity of the development, or even the same community.

Valid objections to new housing development in an area should be known well in advance of the time a new housing development is underway. In many cases, environmental objections are not raised until the development is well underway. A development may now be delayed at any stage by a petition. Citizens should have adequate opportunity for review of environmental concerns, but at an earlier stage in the process.

The committee proposes that citizens should have adequate opportunity to voice concerns relating to future residential development at the time public hearings are held on the comprehensive plan. This procedure could then replace the current provision in the law for review by petition.

14. A streamlined procedure for the environmental review process should be implemented for use until a community has adopted its comprehensive plan.

This procedure would replace the citizen-initiated review by petition and could save a substantial amount of time in the development process.

Because residential land uses are basically the responsibility of local government, the committee feels the first step in an environmental review process should be taken at the local level. The details of the process recommended are as follows:

a. Developer fills out environmental assessment worksheet at the time of application at city hall.

b. Minimum of 60 percent of the residents living within 300 feet could petition for local review.

c. Local government reviews the issue and renders decision whether issue is of local concern only, or not. If it decides issue is of local concern only, an Environmental Impact Statement would not be required.

d. If the issue is not of local concern only, the city could support its citizen request and prepare an Environmental Impact Statement.

As with the master permit procedure, state agency must first have the approval of local government before it can act.

15. The state should encourage a complete survey of the Metropolitan Area for sites of historical significance, as required by the Minnesota State Historic Preservation Agency. This information should become part of a community's comprehensive plan.

The state or federal government should purchase land that is deemed to have environmental or historical value, and therefore, undevelopable.

If a developer requests federal mortgage guarantees for a project, the project must be reviewed by the State Historic Preservation Agency to determine if sites of historical significance are located in the project area. If the project site has previously been surveyed by the agency, the agency can determine its decision immediately. If the area has not been surveyed, the potential exists for undue delay in the development process. Surveying, for example, can be held up while there is snow on the ground. The State Historic Preservation Agency wishes to cooperate in making this process as streamlined as possible. However, due to a lack of funding and staff, the agency has not been able to conduct a complete survey of all portions of the Metropolitan Area.

A developer may obtain information from the State Historic Preservation Agency on whether archeological sites exist on property he is considering purchasing. The committee suggests that this information should be included in each community's comprehensive plan. Information should be readily available locally for developers and property owners as to whether historical sites exist

on property they own or are considering purchasing.

Details of incorporation into a community's plan would need to be approved by the State Historic Preservation Agency. One suggestion is that the information could be located in the office of the community planner, available on request.

16. Governmental units (state, county and local) should absorb the costs for public improvements required for new residential development when the benefits are areawide and do not benefit solely that particular development. If these costs are assessed, they should be assessed over the entire area benefiting from those improvements.

    These improvements include, but are not limited to, expenses for road improvements, right-of-way improvements, or property purchases.

    When a developer is required to install or pay for improvements, he must pass the costs on to the consumer. The costs of these improvements, if their benefits extend beyond the area of the new development, should be paid for by all those who benefit, not solely the residents of a single development.

17. An Irrevocable Letter of Credit from a bank should be acceptable to a municipality in lieu of a performance bond as a guarantee for public improvements installed.

    Performance guarantees should not be required until a building permit or an occupancy permit is requested by the developer, and then only for that portion of the work yet to be completed.

    A performance bond is issued by an insurance company. A letter of credit is a letter issued by a bank guaranteeing payment of a specific amount of funds to the beneficiary in the event of non-performance as defined in the letter. When a developer is responsible for the installation or payment of improvements in connection with the development of raw land, most communities require a performance bond to assure completion of the project, prior to any improvements being made to the land.

    A letter of credit can be obtained for somewhat less cost than a performance bond. It has other more substantial advantages as well:

    a. A letter of credit can usually be obtained much faster than a performance bond because it is an extension of credit from the contractor's bank.

    b. Since a letter of credit provides sureties through a local institution, the municipality is in a better position to judge the financial credit-worthiness of the surety. Information is more accessible locally than it is from a bonding company in another part of the country.

    c. Insurance companies have made performance bonds difficult to secure in recent years. Letters of credit are easier to secure.

18. A developer should have the option to contract for public improvements or to have the municipality contract for improvements, as long as the improvements are installed according to city specifications and certified as such.

    If a developer wishes to have the municipality contract for improvements, he can then request this by petition.

    Some communities give the developer the option to contract for improvements. In other municipalities there is no option – the city always contracts for improvements.

    Many developers and contractors believe that advantages accrue to developers who contract for improvements.

    – Labor costs are generally higher under city contracts.

- A developer is in a position to "shop around" with numerous contractors, but a municipality is not in a position to do so.

- A developer can hire a contractor who works within his time schedule. A developer is in a better position than the city to bargain and negotiate with a contractor; the municipality is restricted by law in its negotiations.

- It has recently become very difficult for specialized small contractors to secure performance bonds, thereby limiting the number of contractors in a position to submit proposals to a municipality. If the developer, as general contractor, provides sureties, he can accept proposals from a larger pool of contractors and thereby may reduce his costs.

19. Park dedication fees collected by municipalities should be based on the value of the land at the time of platting.

    State law allows a municipality to request either land or cash from developers for park purposes at the time of plat approval. If cash is requested by the municipality in lieu of land, its amount is based on land value. However, the amount may be based either on the value of raw (unimproved) land or on the value of improved land with utilities. The committee has concluded that all municipalities should base the park dedication fee on the value of the land at the time of platting.

20. The service availability charge (SAC) collected by the Metropolitan Waste Control Commission should be used only for reserve capacity debt payment.

    The funds raised by the Metropolitan Waste Control Commission through the SAC charge are needed to pay for the reserve capacity bond debt for both treatment and the interceptor system. Presumably the reserve debt will be paid and the funds will no longer be needed at some time in the future. If more funds are raised by SAC than are needed for payment of debt in any one year, the surplus should remain in the bond payment fund and be used only for debt retirement. The SAC charge must not be used as a source of revenue for the construction of other projects not funded with bonds.

21. The state should provide funding to the Metropolitan Council to coordinate a competition among Area builders and developers to design and build a cost-efficient model home or homes. The Metropolitan Council should cooperate with the Minnesota Housing Institute and the Minneapolis and St. Paul Builders Associations in formulating the program and establishing incentives to encourage builders to cooperate in the program.

    A competition would provide an incentive to developers for innovation, would test new ideas about ways to reduce the cost of housing, and would increase public awareness of ways to provide lower-cost housing. The program will serve to stimulate a market for modest-cost housing, and will assist builders to reach that market.

    The program should be similar to the Parade of Homes and a publicity campaign would be an important part of the program. The Metropolitan Council should work out the details of the program with the other groups mentioned. Tasks would include defining "modest-cost housing," by price range or other criteria.

    The following factors could be considered in the program:

    a. design features

    b. alternative materials

    c. options available in pre-cut and pre-fab homes which may reduce costs, and provide opportunities for home-buyers to do some of the work themselves.

RECOMMENDATIONS FOR FUTURE STUDY

22. The legislature should direct a continued study of ways to reduce the cost of housing. The study should be expanded to include the areas identified in this report as necessary for futher investigation. The study should be conducted by the Metropolitan Council and adequately funded according to the Council's request.

    The study should include the following:

    a. The issues in the legislative charge relating to multifamily development which the committee did not have time to study: density requirements, square-foot floor areas, garage requirements, credits for garage inclusion and off-street parking requirements.

    b. The practices and methods of the building industry and the labor industry. Cost-saving innovations in construction methods used in other areas of the country should be investigated to assess whether they may be successfully applied in this Metropolitan Area.

    c. The cost effects of requirements for the installation of public improvements.

    d. Close examination of consumer preferences to determine which cost-saving options are most acceptable to consumers.

    e. Methods of streamlining the review and approval process for new housing developments.

    f. Further investigation of the practices of lending institutions.

    g. Further study to determine if the Metropolitan Council should be given additional authority to require modifications to a community's comprehensive plan if the plan does not provide adequate opportunity for the construction of modest-cost housing.

    h. A study of ways for better utilization of the existing housing stock as a source of modest-cost housing.

    i. Implementation of the recommendations included in this report, particularly the competition to encourage the construction of modest-cost housing.

APPENDIX

Item 1. Recommended Standards for Lot and House Size

In formulating its recommended standards for lot size and house size, as outlined in Recommendation No. 6, the committee reviewed an extensive number of existing studies which have attempted to set standards in these areas. The recommended standards and their sources are listed below.

RECOMMENDED STANDARDS FOR LOT SIZE

TABLE 32
Recommended Standards for Lot Size

Dwelling Type	Sq. Ft. Net Residential Area/Family
One-family detached	6,000
One-family semi-detached	4,000
Two-family detached	4,000
One-family attached	2,400
Two-family semi-detached	2,400
Multi-family	
2-story	1,465
3-story	985
6-story	570
9-story	515
13-story	450

Source: Planning the Neighborhood. American Public Health Association, Committee on the Hygiene of Housing (Public Administration Service. 1960.

TABLE 33
Subdivision Lot Dimensions and Areas

Type of Development	If Sewer and Water Available
Single-family	60' frontage 7,500 sq. ft.
Two-family	65' frontage 8,000 sq. ft.
Multi-family (4 families)	75' frontage 10,000 sq. ft.

Source: Philip P. Green, Jr. "Land Subdivision." Principles and Practice of Urban Planning edited by Wm. L. Goodman and Eric C. Freund (International City Managers' Association) 1968.

Dwelling Type	Units per Acre of Net Residential Area	
	Standard Desirable	Standard Maximum
One-family detached	5	7
One-family semi-detached	10	12
Two-family detached	10	12
One-family attached (row)	16	19
Two-family semi-detached	16	19
Multi-family		
2-story	25	30
3-story	40	45
6-story	65	75
9-story	75	85
13-story	85	95

Source: Planning the Neighborhood. American Public Health Association.

Suggested Housing Type	Gross Area per Family (Acre assumed to be 40,000 sq. ft.)
One-family detached	5,000 – 40,000 sq. ft.
One-family attached or Two-family detached	2,500 – 4,000 sq. ft.
Row house or garden apartment	1,000 – 2,000 sq. ft.
Low-rise multi-family apartments (6 stories max.)	500 – 800 sq. ft.
Medium-rise multi-family apartments (6-20 stories)	400 – 640 sq. ft.
High-rise multi-family apartments (over 20 stories)	720 – 1,600 sq. ft.

Source: Planning Design Criteria. Joseph DeChiara and Lee Koppelman. New York: Van Nostrand Reinhold Company. 1969. p. 331

Dwelling Type	Dwelling Density
Single-family	1 – 5
Two-family	6 – 10
Townhouse	6 – 14*
Garden Apartments (2 or 3 story)	15 – 20*
Multi-story apartments (to 8 stories)	25 – 35
High-rise apartments	40 – 85 approx.

* Ten townhouses or 18 garden apartment units per net acre represent optimum density for each of these housing types.

Source: The Community Builders Handbook. Urban Land Institute (Washington, D.C.: ULI) 1968. p. 107.

TABLE 34
Minimum Lot Sizes and Densities Recommended for Types of Residential Use

Dwelling Unit Type	Sq. Ft. of Net Residential Land/Unit
Single-family	6,000 – 8,000
Duplex	4,000 – 6,000
Townhouses or garden apartment	1,600 – 3,000
Multi-family, 3-6 stories	550 – 1,000
Multi-family, 6-9 stories	500 – 550
Multi-family, 9-13 stories	450 – 500

Dwelling Unit Type	Density per Net Acre
Single-family	5 – 7 units
Duplex	6 – 12
Townhouses or garden apartment	8 – 20
Multi-family, 3-6 stories	20 – 45
Multi-family, 6-9 stories	45 – 75
Multi-family, 9-13 stories	75 – 95

Source: Suburban Action Institute, New York, N.Y.

Dwelling Unit Type	Recommended Standard
Single-family, lot size	6,000 sq. ft.
Multi-family, maximum density	
Low-rise apartments	Up to 20 units/acre
High-rise apartments	Up to 95 units/acre

Source: Metropolitan Council Study, March 1974.

TABLE 35
Dwelling Unit Occupancy Requirements, Four National Model Housing Codes

Code	Required Floor Area (square feet)				
	1 person	2 persons	3 persons	4 persons	5 persons
APHA-PHS	150	250	350	450	550
BOCA	150	250	350	450	550
ICBO	*200	*200	290	330	380
Southern	150	250	350	450	525

*150 is not prohibited, but the higher standard is recommended.

Source: Model housing codes by organizations named: International Conference of Building Officials (ICBO); Building Officials and Code Administrators International, Inc. (BOCA); the Southern Building Code Congress (Southern); and the Commission on the Hygiene of Housing of the American Public Health Assoc. (APHA).

These figures assume that the occupants are over 21 years of age. Space does not include the bath, hall, foyer, etc.

TABLE 36
Standards – Minimum Total Floor Area and Sleeping Area Required for Decent Living Accommodations

# of Persons	# of Bedrooms	Minimum Sq. Ft. of Sleeping Area	Total Minimum of Sq. Ft. of Improved Floor Area
1	0	100	250
2	1	120	420
3	2	200	550
4	2	200	700
5	3	280	830
6	3	280	980
7	4	380	1,130
8	4	380	1,230
9	5	480	1,330

Source: A Regional Housing Plan for Southeastern Wisconsin. Southeastern Wisconsin Regional Planning Commission. Waukesha, Wis. 1975.

Minimum Floor Area Single-family and Multi-family	Recommended Standard, Sq. Ft.
1 person	250
2 people	420
3 people	550
4 people	700
5 people	830
6 people	1,000

Source: Metropolitan Council Study, March 1974.

	Recommended Living Areas, Square Feet		
Size of Household	Minimum Adequate	Adequate	Generous*
2 adults	475	558	592
2 adults + 1 child	650	715	775
2 adults, 2 children	785	805	885
2 adults, 3 children	940	1,040	1,105

Source: Developed from Model Planned Residential Development Code prepared for the Metropolitan Council by Bather, Ringose, Wolsfeld, Inc., Project Manager; Myers and Bennet Architects, Inc.; Ross, Hardies, O'Keffe, Babcock and Parsons. December 1973.

* Includes additional kitchen area, sleeping area, entertainment area, and second bath.

Item 2. Consultant's Report

October 6, 1976

MEMORANDUM

TO: Government Regulations Subcommittee Modest Cost Housing Advisory Committee Metropolitan Council

FROM: Graydon R. Boeck

SUBJECT: Residential Land Development, Platting, Utilities and Streets

I have reviewed the sample subdivision regarding lot platting, utility and street construction.

The plat subdivided into minimum 11,000 square foot lots is shown on Exhibit A. The plat subdivided into minimum 7,500 square foot lots is shown on Exhibit B.

The basic development items and their cost are shown on Exhibit C.

The following standards were revised from the original development to indicate potential areas of cost reduction.

ITEM	ORIGINAL	REVISED
Lot Area (Min. sq. ft.)	11,000	7,500
Lot Frontage (Min. ft.)	80	60
Lot Depth (Min. ft.)	137.5	125
Front Yard Set-Back (ft.)	30	25
Street Right-of-Way Width (ft.):		
Collector	80	60
Residential	60	60 - 50
Cul-de-Sac	60	50
Storm Sewer Utility:		
Alignment location	10' off center line	curb line
Overland flow to catch basin (on street)	500'	750'
Catch Basin Leads (pipe)	Individual	Continuous
Sanitary Sewer Utility:		
Standard Street Depth (ft.)	10'	8'

Water Utility
No changes in design
Maintained 8" pipe on collector street

ITEM	ORIGINAL	REVISED
Street:		
Surfacing Width		
Collector (ft.)	44	36
Residential (ft.)	36	30
Cul-de-sac (ft.)	36	26
	96'dia.	80' dia.
Depth Design — Ton Rating		
Collector	9	7
Residential	5	5
Cul-de-Sac	5	5
Concrete Curb and Gutter		
Collector	Yes	No
Residential & Cul-de-Sacs	Yes	No
Rolled Bituminous Curb		
All streets	No	Yes

Cost of collector street assessed to abutting benefitted lots at $10.20 per assessable front foot. Remaining cost of construction assumed to be paid by Municipal State Funds.

These revisions resulted in land development costs as shown on Exhibit D.

The following standards should be considered as requirements for subdivision platting.

SITE GRADING

Permit greater yard grades to utilize advantages of the existing topography — balance costs of retaining structures to excavation and embankment costs.

STORM SEWER UTILITY

Design lateral lines based on 2 year storm frequency with a minimum pipe diameter of 18".

Design sub-trunk lines based on 5 year storm frequency.

Both design criterias require consideration of:

a. Utilization of ponding areas as an amenity to platting.

b. Utilize open land, parking areas and streets as temporary retention areas to reduce impacts of high volume flows.

Purpose to reduce the size of pipe. Pipe costs are proportionately higher in the overall cost than in sanitary sewer and water installations.

SANITARY SEWER UTILITY

Pipe costs are not relatively high in the overall construction of sanitary sewers; therefore, savings obtained by lowering

minimum size from 8" to 6" will be insignificant. The capacity of a 6" pipe will prevent extensive use as a lateral.

Utilize plastic pipe materials for house services as a cost reduction of materials, handling and installation.

Manhole spacings to 400 (plus) is more realistic in areas where other than 330 foot street separations are used. Manhole spacing and curvilinear alignment in combination are conducive to the present platting of curvilinear streets.

Based on 350' manhole spacing, approximately $2.74 per foot, is added to sanitary costs. (M.H. @ $620 + 22% costs) Based on 450' manhole spacing, approximately $1.68 per foot is added to sanitary costs.

Uniform testing of sanitary sewer lines is mandatory. Most present tests using air, water or weirs are acceptable and vary little in cost. Sewage treatment costs demand that proficiency is used to prevent infiltration in the system.

Precast concrete bases and manhole sections should be permitted. Pouring the concrete base for manholes is time consuming and costly. This also applies to storm sewer work.

WATER UTILITY

Three-quarter inch (3/4") single family house services are permitted in most communities and appear to be sufficient.

Utilization of corporation stops (method of connecting copper service pipe to water main with a shut-off valve) require review as to the necessity of incorporating the valve when a curb stop and box is installed. Tapping mains under water pressure require the corporation valve.

Legal requirements for facilities to shut off water are satisfied with the curb stop and box.

STREET CURBING

Little, if any, evidence is available to indicate that added maintenance costs are associated with a rolled bituminous edge instead of concrete curb and gutter section on residential streets.

Rolled asphalt pavement edging (curb) of 3" to 6" should be permitted in lieu of concrete curb and gutter on residential streets where the street grade is 1% or more. Grades less than 1% are difficult to maintain without a concrete structure. Consideration given to tolerating minor street depressions if low cost development is to be obtained.

Concrete curb and gutter on collector and arterial streets provide the necessary street delineation.

Surmountable curb sections have become popular in most communities where concrete curb and gutter are required. It is impossible to install a vertical face curb in a subdivision prior to every house being constructed and the driveway located.

Consideration may be given to lowering the initial street surfacing, to some extent, to provide for future added surfacing if concrete curb and gutter are constructed at a later date.

STREET WIDTHS AND RIGHT-OF-WAY

Street surfacing width of 36' should be permitted on collector streets and 30 ft. width on residential streets. 26' wide surfacing on short (300' or less) cul-de-sacs should be permitted.

The cul-de-sac turn-around should have a minimum of 80' diameter surfaced area.

Collector street right-of-way should be sixty feet (60') wide.

Residential street right-of-way should be minimum of fifty feet (50') wide.

Cul-de-sac street right-of-ways should be fifty feet (50') wide with a minimum of one hundred foot (100') diameter turn-around.

Reduction of street right-of-ways provides:

a. Greater flexibility for lot configuration.

b. Decreased cost of water and sanitary sewer service lines.

c. Decreased length of catch basin leads (pipe).

Collector streets should be considered as municipal state aid streets and as such should be constructed with state aid funds. A typical residential street cost should be assessed to the abutting benefitted properties, because of the additional benefit attributed to other than the abutting property.

DRIVEWAYS

Asphalt or surfaced driveways to the house setback should be required at grades in excess of 10%.

Driveways under 10% grade should be surfaced to the property line.

Use of surmountable concrete curb and gutter permits the deletion of concrete aprons.

Driveway openings at the curb line should be at least 18' wide to permit proper turning movements.

STANDARDS USED FOR COST ANALYSIS SHOWN ON EXHIBIT D

	ORIGINAL	REVISED
Lot Size (sq. ft.)	11,000	7,500
Lot Frontage (ft.)	80	60
Front Yard Set-Back (ft.)	30	25
Street Right-of-Way		
Collector (ft.)	80	60
Residential (ft.)	60	50 - 60
Pavement Width		
Collector (ft.)	44	36
Residential (ft.)	36	26 - 30
Street Loading Design	5 Ton - 9 Ton	5 Ton - 9 Ton
Curb & Gutter		
Collector	Concrete	Concrete
Residential	Concrete	Rolled Bit.
Water Main	6" - 8"	6" - 8"
Water Services	3/4"	3/4"
Sanitary Sewer Line	8"	8"
Sanitary Sewer Service	4"	4"
Storm Sewer Alignment	10' off C-L	Curb Line
Overland Flow Distance	500'	750'

PROGRAM ASSESSMENT

Review of the program indicates that the greatest cost saving impact in developing single family residential lots is the result of decreasing the lot size.

This was also indicated in previous information submitted to the committee.

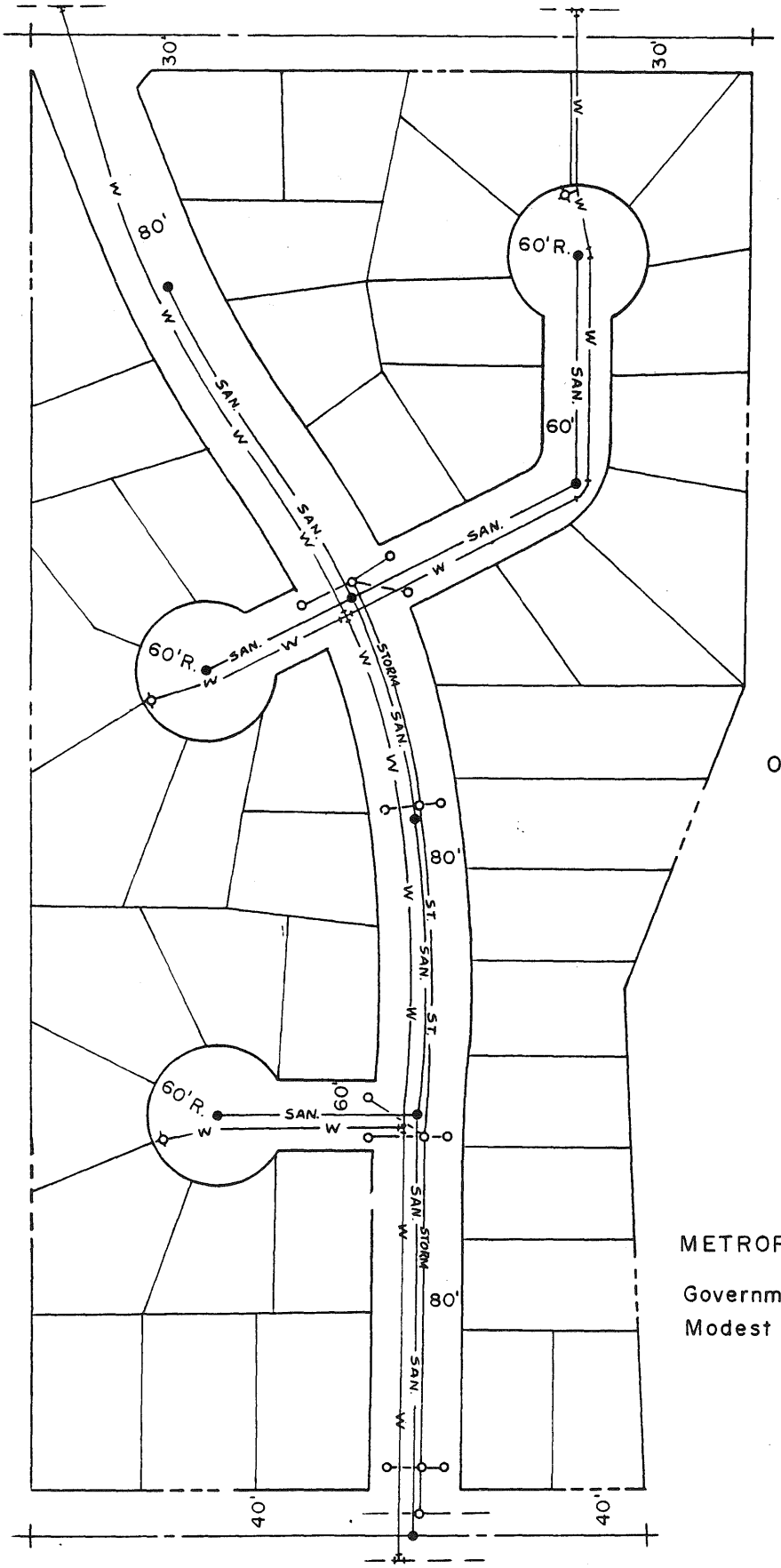
> Reducing lot sizes from 11,000 sq. Ft. minimum to 7,500 Sq. Ft. minimum (approximately 33%) decreased the basic lot costs by approximately 35%.

Reduction of the on-site street and utility improvement costs was obtained by revising some design requirements. The actual reduction obtained will vary from City to City according to their present requirements.

The most effective changes appear to be possible for street construction, curb and gutter, and driveways. These requirements probably vary more from City to City, in the metropolitan area, than any other item.

Sanitary sewer and water utility requirements are affected by various other governmental agencies and therefore are more standardized. However, there are requirements used that are above the minimum standards suggested by these various agencies.

In all cases the different situations and conditions encountered must be related to requirements which will protect the health and welfare of the community and provide economical maintenance practices.



ORIGINAL LOT DIVISION

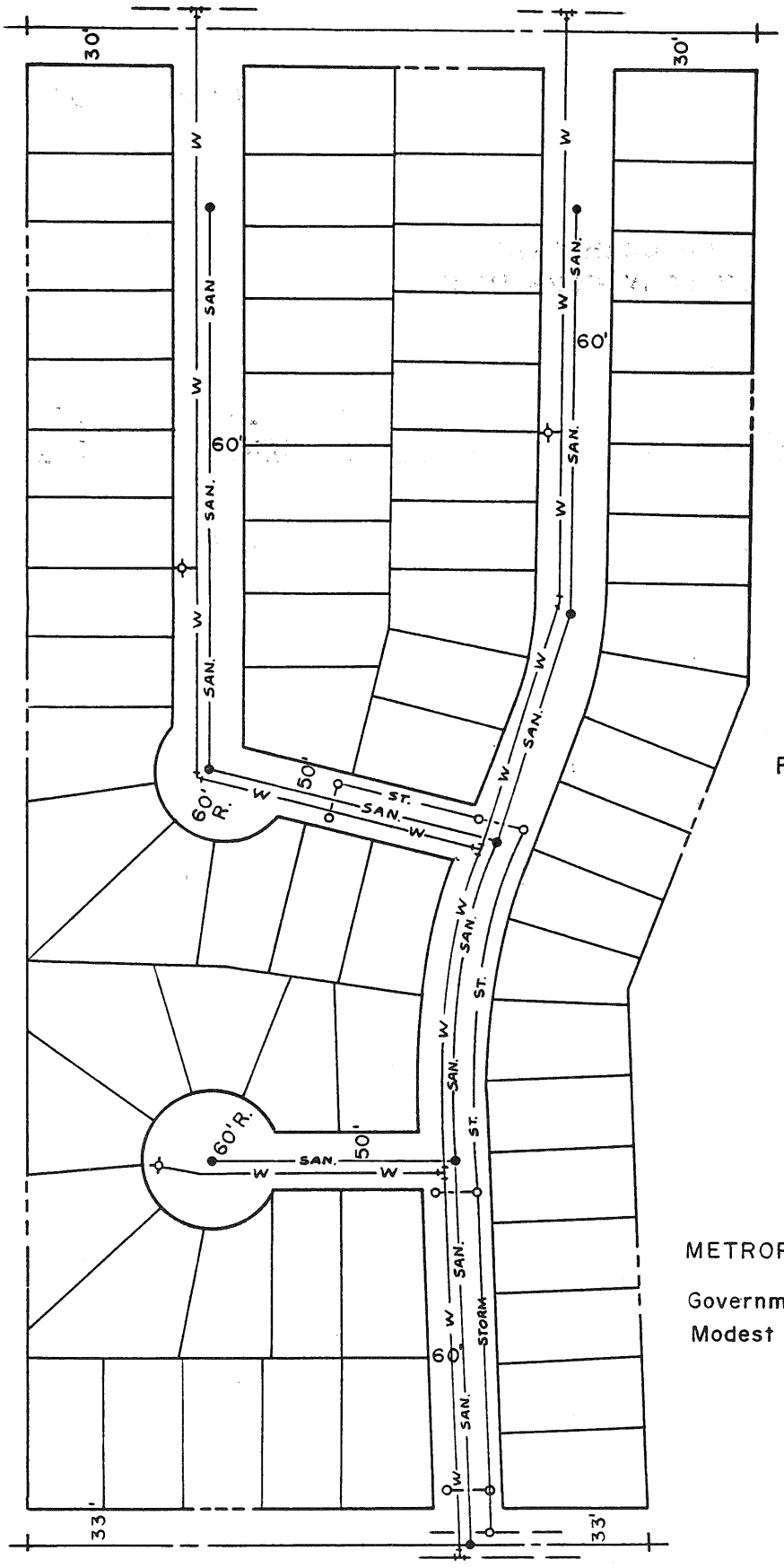
Total Acres	17.6
Number of Lots	44
Lots per Acre	2.5
Minimum Lot Area	11,000
Minimum Lot Frontage	80

METROPOLITAN COUNCIL

Government Regulations Subcommittee
Modest Cost Housing Advisory Committee

October 1976

EXHIBIT A



REVISED LOT DIVISION

Total Acres	17.6
Number of Lots	69
Lots per Acre	3.9
Minimum Lot Area	7500
Minimum Lot Frontage	60

METROPOLITAN COUNCIL

Government Regulations Subcommittee
Modest Cost Housing Advisory Committee

October 1976

EXHIBIT B

October 1976

METROPOLITAN COUNCIL
GOVERNMENT REGULATIONS SUBCOMMITTEE
MODEST COST HOUSING ADVISORY COMMITTEE

BASIC COST ITEMS	11,000 Sq.Ft. LOT SIZE	7,500 Sq.Ft. LOT SIZE
Lots per Acre	2.5	3.9
Raw Land Cost, 17.6 Ac. @ $8000	$140,800	$140,800
Storm Sewer Area Assessment	19,488	19,488
Sanitary Sewer Lateral Assessment(& Area)	22,314	22,314
Water Lateral Assessment	9,242	9,242
Street Assessment (Exist. Border St.)	12,015	12,015
Preliminary Plan	550	800
Planning and Council Meetings	220	220
Boundary Survey	550	550
Plat and Hard Shell	1,370	1,500
Grade Staking	1,050	1,500
Staking Lot Corners	1,575	2,252
Site Preparation	36,603	36,603
Connection Charges	8,000	8,000
Excavation Permit	400	400
Park Dedication	14,080	14,080
Street Signs	420	500
Trees	1,840	2,700
Street Lighting	2,291	2,291
Replace Lot Corners	2,905	4,357
Extra Maint.- Streets and Storm Sewers	2,673	2,673
TOTAL BASIC COSTS	$278,386	$282,285
COST PER LOT: 44 Lots	$6,327	
69 Lots		$4,091

EXHIBIT C

METROPOLITAN COUNCIL
GOVERNMENT REGULATIONS SUBCOMMITTEE
MODEST COST HOUSING ADVISORY COMMITTEE

Costs Based on Lot Subdivision as Shown on Exhibits A and B

	MINIMUM LOT SIZE 11,000 Sq.Ft.		MINIMUM LOT SIZE 7,500 Sq.Ft.		REDUCTION PER LOT
	TOTALS	PER LOT	TOTALS	PER LOT	
Number of Lots	44		69		
Average Lot Frontage		86		64.5	25.0%
Average Lot Area		12,749		8,522	33.2%
Basic Costs - Exhibit C (does not include street & utility costs within site or taxes & holding costs)	$278,386	$6,327	$282,285	$4,091	35.3%
Street and Utility Costs Within Site					
Present City Standards:					
Assessment Program*	$198,361	$4,508	$199,396	$2,890	35.9%
Developer Install	$182,492	$4,148	$183,444	$2,659	35.9%
Revised Standards:					
Assessment Program**	$172,798	$3,927	$196,954	$2,854	27.3%
Developer Install***	$163,372	$3,713	$181,968	$2,637	29.0%
TOTALS: BASIC COST PLUS STREET AND UTILITIES					
Present City Standards:					
Assessment Program	$476,747	$10,835	$481,681	$6,981	35.6%
Developer Install	$460,878	$10,475	$465,729	$6,750	35.6%
Revised Standards:					
Assessment Program	$451,184	$10,254	$479,239	$6,945	32.3%
Developer Install	$441,758	$10,040	$464,253	$6,728	33.0%

* City Average Unit Assessment Rates Used.
** Estimated Constructed Costs Plus 21.5%
*** Estimated Construction Costs Plus 16.75%

EXHIBIT D

EXHIBIT D

Item 3. Cost of Installing Public Improvements – 1965 and 1976

City Engineers Association of Minnesota Survey

Since the cost of installation of public improvements vary according to soil conditions, topography, and existing facilities, it is necessary to use average costs for making equitable cost comparisons for public improvements. Therefore, the City Engineers Association of Minnesota has conducted a survey of a number of metropolitan suburban municipalities for making comparisons of cost increases in public improvements.

In 1965, Mr. Darrell F. Schneider, P.E., for the Caswell Engineering Company of Osseo, Minnesota, prepared a report for the City of Coon Rapids titled "Metropolitan Suburban Utilities Comparative Cost Analysis Report."

The report gives a comparison of 1965 public improvements costs for twelve suburban communities with a breakdown of costs for 80-foot lots and 100-foot lots. Since the Modest-Cost Housing Advisory Committee is using the 80-foot lot size for cost comparison, information from the report relative to the 80-foot lot cost breakdown has been extracted. Table No. 1 shows the average costs for the public improvements of sanitary sewer, water, storm sewer, curb and gutter, and street totalling $1,954.56.

For comparison purposes, the twelve communities were resurveyed to determine the increase in costs from 1965 to 1975. Data was received from 9 of the 12 communities and is tabulated in Table No. 2. Table No. 2 shows the average total cost of public improvements in 1975 to be $4,140, 211% above the 1965 survey average cost.

Section 2 of Table No. 2 shows the breakdown of costs for five currently developing communities which were not surveyed in the 1965 Caswell report. The average development cost for those five communities is $3,829, 193% over the average public improvement costs in 1965.

The 1965 cost figures can be used for reasonable comparisons because the cost of construction in the Minneapolis area was relatively stable between 1963 and 1965. According to the Engineering News Record (E.N.R.) cost indexes for Minneapolis, the Construction Cost Index increased by 4.5% while the Materials Cost Component Index decreased by 9.7% during that period.

1975 costs are used rather than 1976 costs because very few communities have final costs developed for the 1976 construction season. The 1976 costs are not expected to change appreciably from the 1975 costs for the following reasons:

1. The cost of street paving has decreased because of lower asphalt and oil prices.

2. A decrease in the amount of street and utility construction in the Minneapolis metropolitan area has created a more competitive market for the contractors and thereby reduced bid prices for work performed.

3. The September 23, 1976 issue of the Engineering News Record states that "construction costs so far this year are climbing at a welcome annual rate of only 4%."

Table No. 1

Breakdown of Costs for 80-foot Lot
Constructed in 1965

	Sanitary Sewer	Water	Storm Sewer	Curb & Gutter	Street	Total
Bloomington	641.96	405.60	224.40	275.20	317.50	1864.75
Brooklyn Center	428.86	490.00*	366.04	240.00	260.00	1784.90
Brooklyn Park	751.96	587.56	227.70	220.64	266.66	2047.92
Burnsville	728.00	586.00	232.74**	240.00	350.40	2137.14
Coon Rapids	679.56	523.55	198.00	258.40	272.80	1932.31
Fridley	692.40	463.36	396.00	------640.00-----		2191.76
Hopkins	652.00	440.00	not assessed	300.00	440.00	1832.00
Moundsview	900.00	390.88	232.74**	259.75**	317.91**	2101.28
New Brighton	649.80	431.80	83.03	------645.60-----		1810.23
New Hope	---------1563.88----------			------720.00-----		2283.88
Roseville	706.36	470.82	200.00*	------396.80-----		1773.98
West St. Paul	675.54	320.00	132.00	184.00	317.91**	1628.91
Average	682.38	461.78	232.74	259.75	317.91	1954.56

Source: From Metropolitan Suburban Utilities Comparative Cost Analysis and Report with a Special Report on Thompson Park East, by Caswell Engineering Company, dated February 1966.

Notes:
* This is a fixed charge.
** Indicates information not available - average used to estimate total.
--00-- Two or more improvements (as indicated) included in one charge.

Table No. 2

Breakdown of Costs for 80-foot Lot
Constructed in 1975

I - Communities Surveyed in 1965 Caswell Report

	Sanitary Sewer	Water	Storm Sewer	Curb & Gutter	Street	Total
Bloomington	$1,314.40	916.80	440.00	451.20	816.00	$3,938.40
Brooklyn Center	930.00	1090.00	769.00	400.00Est	771.00	3,960.00
Brooklyn Park	1,969.00	1375.00	720.00	---(1205.00)---		5,269.00
Burnsville	1,230.00	930.00	320.00	----(880.00)---		3,360.00
Coon Rapids						3,800.00
Fridley	----- 3,131.00---		946.00	----(905.60)---		4,982.70
New Brighton	1,034.00	732.00	377.41	---(1840.00)---		3,983.00
New Hope	1,100.00	1188.00	499.40	----1542.40----		4,330.54
Roseville	821.40	955.00	295.00	---(2127.20)---		4,198.60
Average	$1,200.	1027.	546.	---(1367.00)---		4,140.
	-----(2,227)-----					

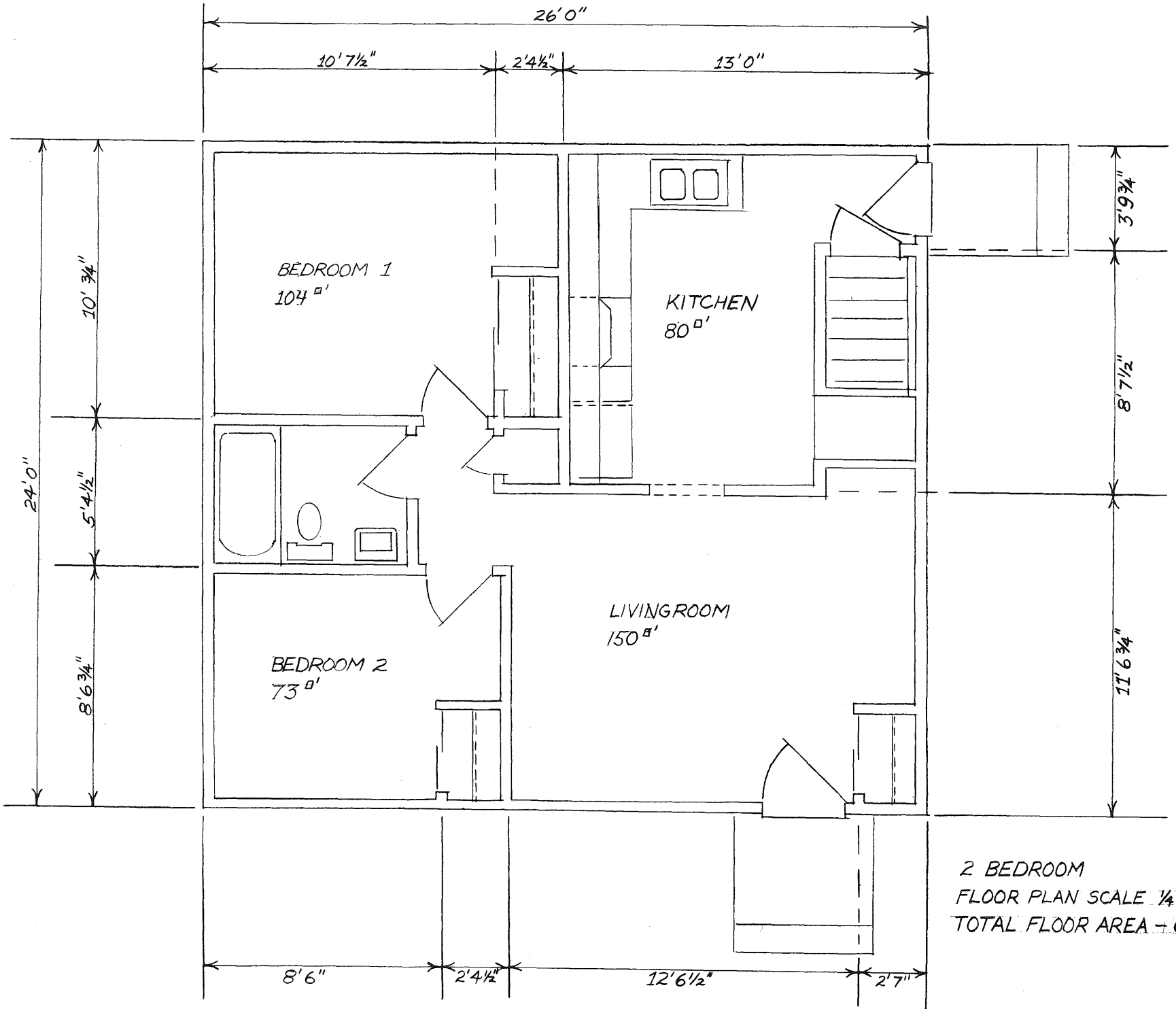
II-Current Developing Communities Not Surveyed in 1965 Caswell Report

Blaine	$1,283.00	1245.00	457.00	---(1230.00)---		4,215.00
Champlin	1,032.00	1219.00	457.00	---(1000.00)---		3,708.00
Woodbury	1,000.00	664.00	330.00	----(850.00)---		2,844.00
Maple Grove	1,203.00	1390.00	840.00	338.00	750.00	4,571.00
Maplewood	812.00	1040.00	275.00	---(1680.00)---		3,807.00
Average	$1,066.	1112.	472.	---(1180.00)---		3,830.
	-----(2,178)-----					

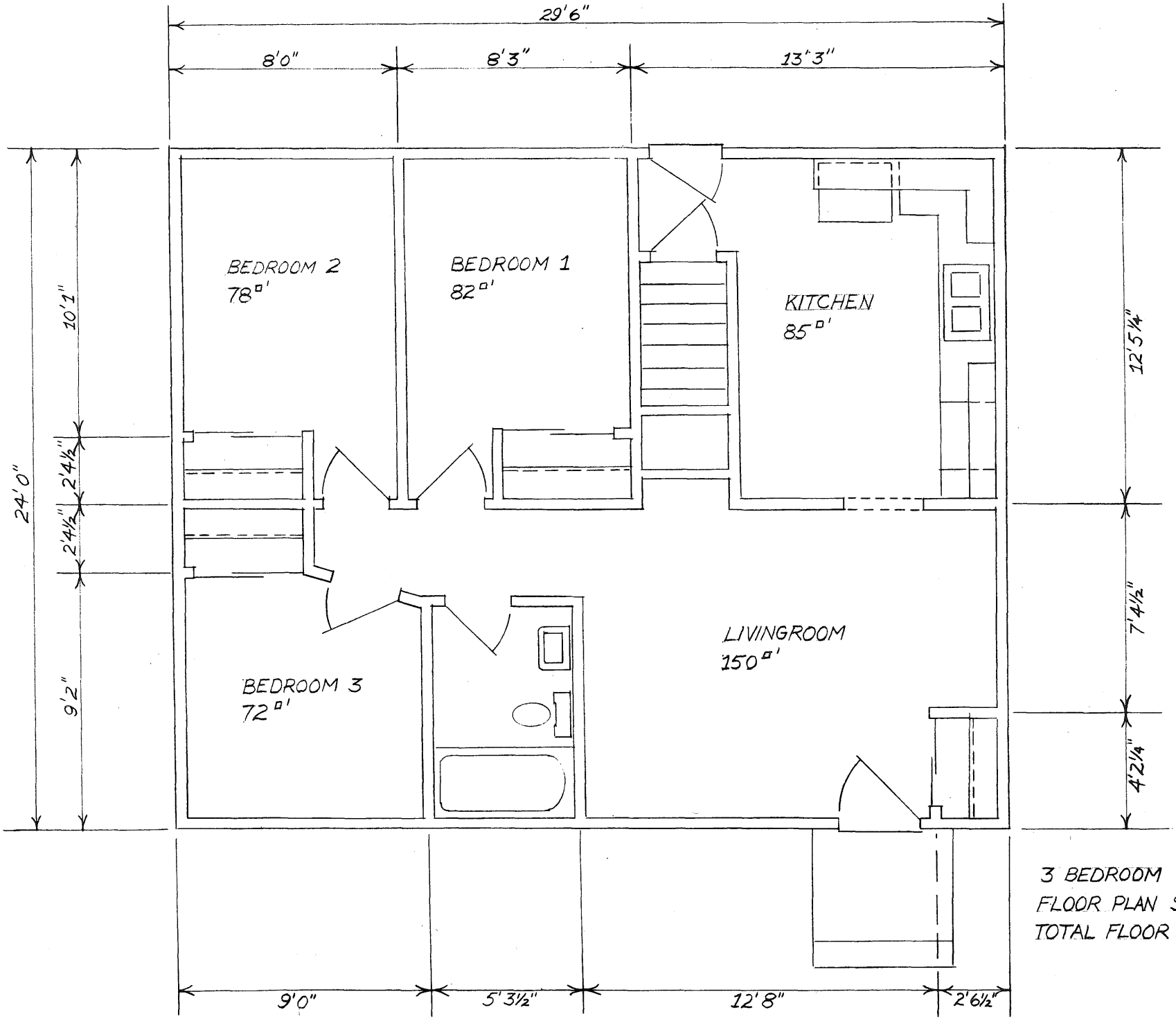
Item 4. Housing Development Process and Time Estimate

The chart which follows illustrates the steps involved in the housing development process and the estimated minimum and maximum times involved in the process.

The agencies listed include every possible agency which becomes involved in the housing development process. Therefore, the total time estimates given would be typical for a development which must be reviewed by every agency involved in the process. This involvement, of course, would not occur in every instance. The time involved varies widely, as indicated, among developments due to many factors such as the size and complexity of the development, whether it is located near a river or lakeshore, and other factors.



2 BEDROOM
FLOOR PLAN SCALE ¼" = 1'0"
TOTAL FLOOR AREA = 624 □'



3 BEDROOM
FLOOR PLAN SCALE ¼"=1'0"
TOTAL FLOOR AREA - 708□'

300 Metro Square Building
7th and Robert
St. Paul, Minnesota 55101