

SUBDIVISION POLICIES
AND HOUSING AFFORDABILITY -
A CALIFORNIA CASE STUDY

by

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B.A. University of California At Santa Cruz
(1977)

Submitted to the Department of
Urban Studies and Planning
In Partial Fulfillment of the
Requirement of the
Degree of

MASTER IN CITY PLANNING

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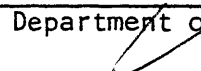
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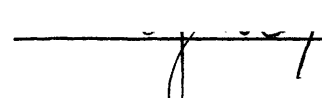
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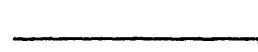
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in partial fulfillment of the requirements for the Degree of Master In
City Planning

ABSTRACT

Local subdivision policies (subdivision improvement standards, exactions, and development fees) have been criticized in recent years for increasing the cost of new housing. These policies allegedly increase the cost of new housing by requiring more costly subdivision improvements than are necessary for health and safety, and by shifting the cost of public services from the public to the new home buyer through the use of development fees and exactions. Critics have also complained that in many communities the policies place an unfairly large economic burden on new home buyers.

A case study of one community; Livermore, California, was used to examine the validity of criticisms and to test the potential impact of alternative policies.

Most subdivision improvement standards required by Livermore appear to be based primarily on health and safety considerations. Most development fees were used to defray capital improvement costs of new development, but some fees were used for expenses not directly related to growth. Subdivision policies were found to have a significant impact on construction costs. Livermore's development fees are nearly equal to 10% of the cost of a new home and less expensive subdivision improvement standards could have reduced construction costs by approximately 10%.

The annual cost of home ownership was estimated for three alternative subdivision policy changes using Livermore as a model. The three policy changes analyzed were: 1) use assessment districts instead of fees and exactions, 2) reduce subdivision standards, 3) eliminate fees and exactions, and pay for all services with property taxes. The use of assessment districts would have had little effect on the cost of home ownership in Livermore. Reducing subdivision standards would have had a moderate impact on ownership costs. The substitution of property taxes for fees and exactions, could make a substantial reduction in home ownership costs for purchasers of new homes while slightly increasing costs for owners of existing homes.

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BIOGRAPHICAL NOTE

Otis Ginoza's home is in Mountain View, California. He received a B.A. from the University of California at Santa Cruz in June of 1977 with a double major in Economics and Environmental Studies. Since leaving Santa Cruz he has worked as an environmental consultant in Honolulu and as a planning consultant in San Francisco. His work primarily involved the preparation of environmental impact statements. Mr. Ginoza entered the Department of Urban Studies and Planning at MIT in September, 1979. While pursuing studies at MIT he served as an intern with the Boston Redevelopment Authority and worked as an assistant editor for the Environmental Impact Assessment Review, a professional journal devoted to impact assessment methods. After receiving an M.C.P. from MIT, he will pursue a planning career in the City of Los Angeles.

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CHAPTER I INTRODUCTION

Why are home prices so high? In attempting to answer this question many academic researchers have looked past the obvious causes, high interest rates and rising labor and materials costs, into the heart and soul of the planning profession - land use regulation. These researchers, encouraged by a regulation weary building industry, have indicted a host of local regulatory vehicles - growth controls, environmental and aesthetic regulation, and subdivision policies. The last culprit, subdivision policies, is the subject of this study.

The broad term subdivision policies, as used here, includes subdivision improvement standards, subdivision exactions, and development fees imposed by local government. Studies of regulation and housing prices have identified a number of aspects of subdivision regulation which add to the cost of home ownership. The following criticisms of local government subdivision policies were culled from a review of the literature:

Excessive subdivision improvement standards increase the cost of home ownership. Many communities require that developers install subdivision features which are not needed (i.e., sidewalks, neighborhood parks, street trees, underground power and telephone lines) or require more of a feature than is needed (i.e., wide streets, oversized utility lines, closely spaced manholes or fire hydrants). The contention is that, where communities require expensive subdivision improvements that do not add substantially to safe-

ty or produce other public benefits, the cost of housing is unnecessarily increased.

The public service costs of new housing are being shifted from local government to the new home buyer. Developers are increasingly required to install or finance with development fees services which were once provided by local government. These costs are passed through to the homebuyer in the form of higher home prices. Homebuyer financing of services is more expensive than government financing of services, since mortgage interest rates are higher than interest rates paid on municipal bonds. Fees and exactions are also a more regressive way to finance services than are property taxes.

Developers are required to pay for services for the general public.

In addition to paying for the services that new development requires, developers, and through them new homebuyers, are required to pay for services used by the general public. This may take the form of a requirement that a developer build a bicycle path for use by the whole city, install a sewerline which is sized to serve offsite units as well as the developer's units, or pay a development fee which is used for some general public purpose.

The basis of these criticisms is the belief that new home prices are too high and local government should do what it can to lower prices. Critics of subdivision policy contend that many communities take the

above actions to keep home prices up, supporting an unspoken policy of excluding less affluent homebuyers or stopping growth altogether.

The following subdivision policy recommendations would seem to follow from the criticisms:

- Communities should allow the least expensive subdivision improvements commensurate with public health, safety, and welfare.
- All services should be financed with less expensive public debt and paid for with progressive taxes rather than providing some services with fees and exactions..
- If new development must pay for public services, it should pay for only the services it requires and not for services for the general public.

The criticisms and policy recommendations are based on the assumption that if changes in local subdivision policies lower the cost of constructing a home, the savings will be passed on to homebuyers. This assumption has not gone unchallenged, but will be accepted for the analysis in the following chapters. The assumption that savings will be passed forward to homebuyer will be re-examined in the concluding chapter.

The questions that this thesis seeks to answer are, how valid are these criticisms of subdivision policy? and how would the policy recommendations affect the price of new housing? Answering these questions requires a detailed examination of local subdivision policies. To answer these broad questions it was necessary to examine local subdivision

policies in some detail and have sufficient data to model the impact of policy changes on new home prices. It was decided that the case study approach would best yield the level of detail required. Because of the time constraints of the thesis writer, a case study of only one community was undertaken, but the hope is that the community will be representative of current trends in subdivision policy. Within the case study community, one development was selected for a detailed analysis of construction costs and to serve as the model upon which alternative subdivision policies were tested.

The Case Study Community

The community chosen for the case study was Livermore, California. Its location in the San Francisco Bay Area, a region noted for high home prices and extensive regulation of development; and Livermore's development fees, which have always been among the golden state's highest, made Livermore an appropriate choice. The case study community was identified by a past president of a Bay Area builders association as a community with "excessive" subdivision improvement standards.

Livermore is a city of 48,000 located on the eastern edge of the San Francisco - Oakland SMSA. It is considered to be an urban fringe community located a half hour commute from employment centers in Oakland and forty minutes from San Francisco. Thirty-eight percent of Livermore's residents commute beyond the Livermore area to work.

One of Livermore's chief attractions is its housing stock which is less expensive than other portions of the San Francisco Bay Area. The

community has long been a place where Bay Area residents could commute a few more miles and save money on mortgage payments. One might say that Livermore is where many families, without the financial resources to purchase a home in the region's core areas went to fulfill their dreams. Bill Owens' well known pictorial essay of the American lifestyle, Suburbia, was shot inside and outside of Livermore's ubiquitous three-bedroom two car garage, ranch style homes. Says Owens of Livermore home owners:

The people I met enjoy the lifestyle of the suburbs. They have realized the American Dream. They are proud to be homeowners and to have achieved material success.(1)

Livermore experienced rapid growth during the 1960's with its population more than doubling (from 16,000 to 38,000) between the 1960 and 1970 census. Rapid growth strained the city's services during the 1970's and a number of growth control measures were instituted. Air quality, school over crowding, sewer and water system problems spurred anti-growth sentiment, and in 1972 Livermore voters passed a local ballot initiative which placed a moratorium on new building permits until school, sewer, and water problems were solved. The initiative was challenged in court and finally upheld in 1976 by the California Supreme Court.(2)

Livermore voters also elected a no-growth city council which instituted a growth management plan that featured a 2% limit on housing unit construction. During the period 1975 to 1978, the council further

(1) Bill Owens, Suburbia (San Francisco: Straight Arrow Books, 1973).

(2) Bernard J. Frieden, The Environmental Protection Hustle, (Cambridge: MIT Press, 1979) pp. 26-27.

restricted growth to 50 units per year, though the 2% limit would have allowed 300 to 350 units per year.

In 1978, a city council less opposed to growth was elected. This council has authorized the maximum number of units (350) each year and also made a commitment to low income housing. Section 8 funds have been used to initiate the construction of low income housing and an inclusionary zoning ordinance was also passed. Despite the increase in dwelling unit authorizations since 1978, building activity has been slow and construction has lagged behind authorizations.

The Case Study Development

The housing development selected for detailed analysis consisted of 800 units built by the same developer from 1964 to 1972. The development will be referred to throughout as Suburban Homes, an alias used to preserve the anonymity of the homebuilder. All of the units in the case study development are quite similar. All have 3 to 4 bedrooms, two car garages, and most lots are 6,500 to 7,500 square feet. As with other portions of the Bay Area, prices have increased rapidly. The first units sold in 1965 carried price tags which averaged around \$20,000. Today many units sell for more than \$100,000.

The Study

Subdivision development standards are the subject of Chapter II. The rationale behind Livermore's standards is examined and an estimate of the cost of "excessive" standards and who benefited from them is made. In Chapter III we shall see why Livermore makes such extensive use of

development fees, how the fees have increased, and for what purposes fees are used. Chapter IV models the impact that alternative subdivision policies would have on the affordability of new housing in Livermore. In Chapter V, conclusions and recommendations are presented.

CHAPTER II SUBDIVISION DEVELOPMENT STANDARDS

HISTORY

The subdivision of land into separate plats begins on the land planner's table with the drawing of streets and property lines, but title to individual lots can only be transferred after the subdivision has been recorded by local authorities. Plat registration is considered a privilege and not a right. Local government may, as permitted by state legislatures, attach conditions to the extension of this privilege.

The first subdivision regulations appeared in the late 1800's and were enacted to facilitate plat recording and transfer of title. More extensive regulation was prompted by the real estate booms of the 1920's. In the speculative atmosphere which existed prior to the stockmarket crash, many communities witnessed excessive subdivision of land. Fly-by-night developers and poorly planned subdivisions created problems for municipalities. Too many subdivisions too soon deflated property values and created instability in real estate markets. Deflation of property values in many instances led to tax delinquency and abandoned or partially completed subdivisions.

At this time, most subdivision improvements (roads, sewers, waterlines, etc.) were installed at public expense. Public works required for new development were financed by municipal debt which was paid for through property taxes or assessments. A municipality which was left with a poorly planned or partially completed subdivision, had to repay

the debt without the tax receipts that a fully occupied subdivision provides.

By requiring a developer to either complete subdivision improvements or provide a bond, municipalities were able to increase the subdivider's financial stake in the success of a development and shift some of the risk from the public treasury. Minimum standards for construction and design were imposed on developers to prevent low-grade subdivisions which adversely affect neighboring property values and entail high future maintenance expenditures. Since World War II, municipalities have added parks, schools, bicycle lanes, and various offsite improvements to the list of conditions that must be met before the subdivision of land, in the form of a final subdivision map, can be recorded.

REGULATION COST STUDIES

From the very beginning it was recognized that subdivision standards would not only improve the quality of residential development, but also increase its cost. In 1934, Albert Farwell Bemis wrote:

Compliance with minimum standards with respect to street grading and installation of water mains and sanitary sewers often may increase the total home cost as much as 20 percent. (1)

More recently, rapidly rising home prices have sparked many investigations into the effects of local government regulation on home prices. Subdivision regulations along with zoning regulations, growth controls,

(1) Albert Farwell Bemis, The Evolving House, (Cambridge: The Technology Press 1934).

and time consuming permit procedures have been accused of contributing to the high cost of housing. A survey of the building industry by Seidel found that developers identified "excessive" subdivision regulations as a contributor to the high cost of housing:

Far and away the area of regulation cited as containing the most unnecessary costs was subdivision controls. Over 72 percent of the respondents estimated that unnecessary aspects of this area of regulation were responsible for more than 5 percent of the total price of the unit.(1)

Research into the impact of local government regulation on housing costs has taken two approaches, one which examines the impact of regulations on the cost of constructing a new home, the other which examines the impact of regulation on home sale prices.

The distinction between the cost of producing a unit and the sale price of a unit is an important one. While most developers claim that increasing construction costs and increasing sale prices are one and the same, many economists argue that in a competitive market some of the costs of regulation will be passed back to the developer or land owner (the incidence of costs imposed by regulation will be more fully explored in Chapter V).

Researchers focusing on sale prices have generally used statistical methods to look for association between high home prices and local regulations thought to contribute to high home prices. Due probably to the rapid growth in home prices and extensive government regulation which

(1) Stephen R. Seidel, Housing Costs and Government Regulations: Confronting the Regulatory Maze, (Camden: Center for Urban Policy Research, Rutgers University 1978) p. 37.

characterizes the region, the San Francisco Bay Area has been the subject of a number of such studies.

Katz and Rosen used regression analysis to study home prices in the San Francisco Bay Area and concluded that growth moratoria and growth controls have raised home prices between 18-28% in those communities where they were present. (1)

Gabriel and Wolch also employed regression analysis to analyze regulations impact on Bay Area home prices. Local attitudes toward growth, development fees and exactions, and large lot zoning were all found to affect sales prices. After controlling for traditional determinants of house prices, the three local government regulatory variables were found to account for approximately 14% of the price of a typical Bay Area home. (2)

Dowall used a similar method to measure the effect of land availability, permissible residential density and development fees on Bay Area home prices. He concluded that the direct cost effects of local regulations are "not as great as some critics of land use controls allege". He found that:

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- (1) Lawrence Katz, and Kenneth T. Rosen, "The Effects Of Land Use Controls On Housing Prices", Institute of Business and Economic Research Working Paper No. 80-13, (Berkeley: University of California at Berkeley, 1980).
 - (2) Stuart A. Gabriel, and Jennifer R. Wolch, "Local Land Use Regulation And Urban Housing Values," Institute of Business and Economic Research Working Paper Series, Working Paper No. 80-18, (Berkeley: University of California at Berkeley, 1980)

the combined effect of increasing development densities by one unit per acre, reducing development fees by 50 percent, and doubling supplies of vacant land.. would be to lower the sales price of a new home by \$6,000. This estimate amounts to roughly six percent of the average price of a new Bay Area home in 1979. (1)

Researchers who have focused on the impact of regulation on the cost of producing a new home rather than on sale prices, have generally utilized case studies and surveys of local land use regulation to determine its impact on the cost components of housing. Several of these studies have attempted to measure the cost of "excess" subdivision standards. Excess standards are usually defined as those which exceed health, safety, and welfare requirements.

The U.S. Government Accounting Office in a 1978 report to Congress descriptively titled Why Are New Home Prices So High, How Are They Influenced By Government Regulations, And Can Prices Be Reduced surveyed subdivision requirements in 87 communities and concluded that adoption of 17 less expensive requirements for streets, sidewalks, driveways, and water and sewer systems could result in an average savings of \$1,300 a unit. (2) Potential savings ranged from zero in two communities to \$2,655 in one community. The highest potential savings (\$2,655) equaled 6% of

(1) David E. Dowall, and John D. Landis, "Land Use Controls And Housing Costs: An Examination Of San Francisco Bay Area Communities", University of California (Unpublished paper) no date. p. 37.

(2) U.S. Government Accounting Office, Why Are New House Prices So High, How Are They Influenced By Government Regulations, And Can Prices Be Reduced, Division of Environmental Studies, University of California at Davis. Unpublished draft, no date.

the national, average sale price of a new single family home (\$44,000) during the time that the research was undertaken (1976).

In a study of City of Davis, California's development regulations Johnston, Schwartz, and Hunt examined the impact of fees, dedications, delay and excessive development standards on the cost of producing a single family home. Nonessential regulation was estimated to contribute \$7,707 (13.8% of total cost) to the cost of building a \$56,000 house. Out of that total, \$3,827 (6.8% of home price) was attributed to excess development standards.(1)

Seidel, in a case study of a New Jersey community, estimated that out of the total cost of producing a new single family home, \$1,200 could be attributed to direct costs (permits, plan reviews, inspection bonds), \$400 to the cost of delay, and \$1,700 to the cost of unnecessary or excessive requirements (wide streets, sidewalks on both sides of the street, street trees, underground utilities etc.).(2) Government regulations were found to directly account for \$3,300 or 8.7% of the final selling price of a unit.

(1) Robert R. Johnston, Seymore I Schwartz, and William S. Hunt, "The Effect of Local Development Regulations on Single Family Housing Costs", Division of Environmental Studies, University of California at Davis. Unpublished draft.

(2) Stephen R. Seidel, Housing Costs and Government Regulations: Confronting the Regulatory Maze. p. 53.

THE LIVERMORE CASE STUDY

The Livermore case study, as did prior studies, will attempt to measure the impact of "excessive" subdivision standards on the cost of constructing a new home. However, in order to more fully address the fairness of these regulations we need to probe a little deeper, asking what was the rationale behind the standards (why were they adopted) and who benefited?

DEFINING EXCESSIVE STANDARDS

In order to calculate the cost of excessive subdivision regulation one must first define what is excessive. In an afterword to Seidel's study, Christina Ford used the following definition of over regulation:

...those forms or variations of governmentally imposed controls which exceed minimum health, safety, and welfare considerations in the provision of housing. (1)

The Davis study utilizes a definition of "nonessential" regulation as contained in a HUD publication Final Report of the Task Force On Housing Costs (1978) which recommended that:

The consumer of new housing should be required to bear no more than the cost of site improvements internal to the site which can be justified as necessary to protect the basic health, safety and property of future residents of the site, protect environmental quality of the community, and ensure that only normal maintenance will be required over the generally accepted economic life of streets or utilities to be dedicated to the government.

(1) Stephen R. Seidel, Housing Costs and Government Regulations: Confronting the Regulatory Maze, p. 317.

The community at large should bear the cost of:

- a) Government requirements which are of a standard higher than the minimums specified by HUD to protect health, safety, property, air and water quality, and assume reasonable maintenance costs;
- b) Extra-sized pipes or streets on the site, or off-site streets, sewage treatment capacity and interceptor lines needed to serve primarily existing and future residents living off the site, and;
- c) Schools, parks libraries, and fire stations. (1)

The studies cited above determined the portion of home construction cost which could be attributed to excessive subdivision improvement standards by calculating the cost savings which could have been achieved with less stringent standards. Those less stringent standards were based on the author's estimate of the reasonable minimum level of subdivision improvements needed to insure health, safety, and welfare requirements.

A slightly different approach was taken for the Livermore case study. Instead of comparing Livermore's subdivision improvement standards to a set of reasonable minimum standards, a market approach was taken. Livermore's standards were compared to those standards which consumers would impose through the housing market. The assumption behind this approach is that if a reasonable minimum standard is not accepted by consumers, developers will not take advantage of it. The GAO study lends support to this position:

(1) Task Force On Housing Costs, Final Report of the Task force On Housing Costs, (Washington D.C.: Department of Housing and Urban Development, 1978) pp. 26-27.

According to local officials whose communities had established minimum house sizes, most new houses generally exceed the local minimum by at least 300 square feet. In only three communities did new houses usually approximate the minimum requirement. Most officials said consumer demand was the main reason bigger houses were built.(1)

Using the market approach, the question is not how much do Livermore's subdivision improvement standards exceed reasonable minimums, but how much do they exceed the level of improvements which would have been provided by the developer in the absence of local subdivision regulations?

The question was put to the developer of Suburban Homes. The type of subdivision improvements that a developer would install is to a certain extent based on the type of home buyer being targeted.

The market strategy employed for Suburban Homes, was to produce a low cost home which would appeal to first time home buyers. During the late 1960's the housing market in Alameda County, the county in which Livermore is located, was very competitive and considered one of the most active submarkets in the San Francisco region.(2) The developer chose to build in Livermore because, though somewhat distant from employment centers land prices were lower than in communities located in the core areas of the Bay Area. In retrospect, the developer felt that they had been

(1) U.S. Government Accounting Office, Why Are New House Prices So High, How Are They Influenced By Government Regulations, And Can Prices Be Reduced, p. 12.

(2) U.S. Department of Housing and Urban Development, Analysis of the San Francisco-Oakland, California Housing Market, (Washington D.C.: HUD 1969).

successful in marketing their units because they had been offering homes at a low price and offered "more for the money" than lower priced units in the region.

Because of the price competition in the market during the late 1960's, the developer wanted to construct the units as inexpensively as possible and felt that home buyers would have been willing to tradeoff a number of City mandated features for a lower purchase price.

The developer of Suburban Homes felt that Livermore requirements for the following features were too high:

- Street Width. Livermore requires a 40ft curb-to-curb street width for secondary streets. The developer considered this too wide a street width, which detracted from the desirability of the units.

- Curbs. Rolled curbs are less expensive than city mandated monolithic curbs and would have been the preferred choice of the developer.

- Sidewalks. Consumers purchasing homes in the Suburban Homes development were looking for the best deal for their money and the developer felt that a lack of sidewalks would not have affected their purchase decision.

- Fire Hydrants. More fire hydrants were required than thought necessary.

- Street Trees. 15 gallon street trees were required, but 5 gallon trees were said to be less expensive and less likely to suffer from root shock.

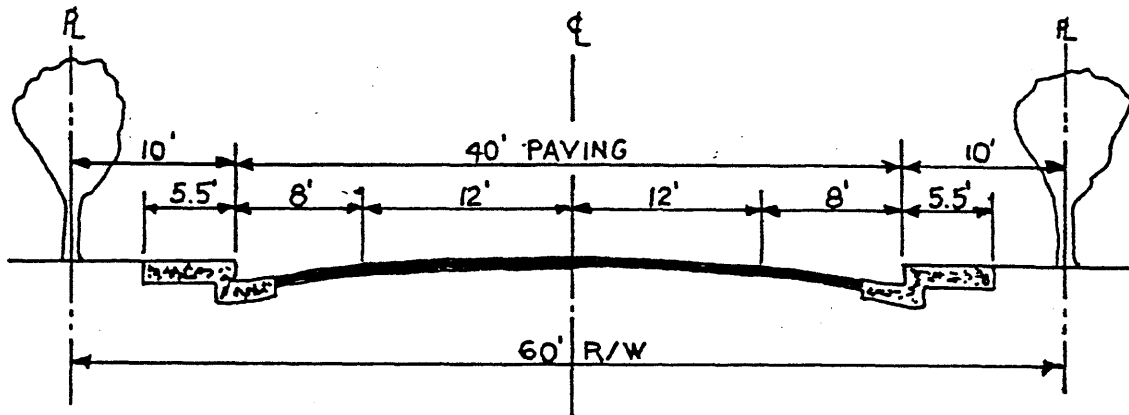
- Park Dedication. One acre per 100 units was the required park

dedication, it was felt that no park dedication was needed.

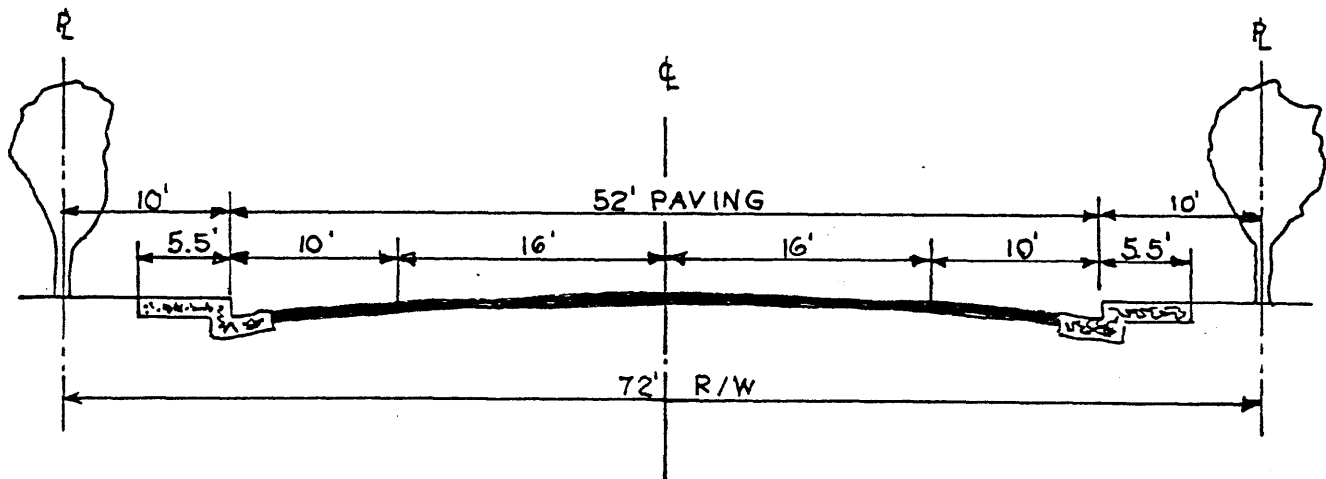
- Lot Dimensions. The units could have been built on smaller lots with less street frontage than allowed by Livermore.

Livermore's other development standards were either considered to be fair or lower than what the market would demand by the developer.

The Director of Public Works and the Director of City Planning for the City of Livermore were interviewed to determine the basis for subdivision standards targeted as excessive by the developer of Suburban Homes. Daniel J. Lee, the Director of Public Works emphasized that the public works requirements for street width, sidewalks, and curbs were based on health and safety considerations. In Livermore, secondary streets and cul-de-sacs must have a 60ft right of way, within which is 40ft of paved street surface (Figure 1), while collector streets have a 72ft right of way and 52ft of paving.



SECONDARY STREETS & CUL-DE-SACS



COLLECTOR STREETS

FIGURE 1 Livermore Road Sections

Pedestrian safety was given as the primary reason for the 40ft width which allows for 8ft parking lanes on either side of the street and two 12ft travel lanes. Narrower street standards were criticized as less safe:

Some jurisdictions have 32ft streets. Once you get cars parked on either side you're using up eight feet of each side. That leaves sixteen feet in the middle, or two eight ft travel lanes. An eight ft travel lane doesn't give you enough reaction time when children dart out from behind cars. We think that our pedestrian safety record is a lot better here.(1)

The safety of children and the convenience of motorists were justifications given for 5ft concrete sidewalks on either side of residential streets:

We require sidewalks on both sides of the street and adjacent to the curb because when people are stepping out of their automobiles they step onto sidewalk instead of grass. When children are playing along a residential street and there is a sidewalk on only one side they have to cross the street to get to the other side and that becomes a safety hazard. We think that the cost of the sidewalk is relatively small, and contributes a lot to safety.(2)

A monolithic curb was preferred over the rolled variety for maintenance reasons and the convenience of pedestrians. Mr. Lee observed that in communities with rolled curbs one finds automobiles with their tires up on the sidewalk. These improperly parked cars not only block pedestrian traffic, but damage the sidewalk, "sidewalks aren't designed to

(1) Interview with Daniel J. Lee, Director of Public Works for the City of Livermore. Livermore, California. January 21, 1982.

(2) Ibid.

carry vehicular loads and consequently you find your sidewalks being broken up".

The undergrounding of utilities has been required in Livermore since 1967, Mr. Lee noted that there hadn't been a big local push to underground utilities, but the requirement was adopted as a result of a statewide push to underground utilities initiated by the California Public Utilities Commission. The placement of fire hydrants in new developments is set by the Livermore Fire Department.

While public works requirements seem to have been constructed from some very explicit safety considerations; park dedication, lot coverage and side yard requirements were based on a rationale which appears to have been obscured by time. The park dedication standard was created by a study group in the early 1960's. Neither Mr. Lee nor Howard Nies, the Director of Planning were quite sure as to how the original standard of 1 acre per 100 units was chosen or why it was subsequently changed to 2 acres per 100 units.

Mr Nies observed that the side yard and lot width requirements were larger than those of most communities in which he'd worked and that they "probably cause new home buyers some problems." He added that he didn't think the sideyard requirements were "all that good", and that they had been adopted at the urging of "a strong group within the community."

From the interview with the developer of Suburban Homes a set of minimum standards, which will be referred to as the Substitute Standards,

were constructed. The purpose of creating the Substitute Standards was not to determine how subdivisions should be constructed, or to question Livermore's choice of standards, but to test the validity of the theory that "excess" subdivision standards increase the cost of producing a new home.

TABLE 1
LIVERMORE STANDARDS AND SUBSTITUTE STANDARDS

LIVERMORE STANDARDS	SUBSTITUTE STANDARDS
40ft paved width for secondary streets	26ft paved width for secondary streets
5ft sidewalks on both sides of the street	No sidewalks
Monolithic curb	Rolled curb
Street trees	No street trees
Fire hydrants every 400ft	Fire hydrants every 800ft
Park dedication	No park dedication
Minimum lot width 65ft and minimum lot size 6,500sf*	Reduce lot width to 55ft and lot size to 5,500sf

*Minimum standards for tract A which is in a RL-6-5 zone.

The Substitute Standards are based on the following criteria:

Streets. Though the developer did not indicate a preferred street width he indicated that he would have relied upon three documents authored by Christian P. Boddum, and the Urban Land Institute. (1) While both documents caution that proper street width depends on local conditions, both offer recommendations. The ULI study suggest a 26ft pavement width for typical residential streets and a 36ft width for collector and subcollector streets.

(1) Christian P. Boddum, "Residential Street Widths", unpublished. Commissioned by the Association of Home Builders of the Greater East Bay. Christian P. Boddum, Consulting Civil Engineer, Oakland, California. (undated).
Urban Land Institute, American Society of Civil Engineers, National Association of Homebuilders, Residential Street Widths, Jointly published by ULI, ASCE, and NAH. New York and Washington D.C., 1974.

The 26ft width provides for parking on both sides of the street and a single traffic lane.

The level of resident inconvenience occasioned by the lack of two moving lanes is remarkably low. In fact, no appreciable difference in driver convenience generally is noted between a 26-ft wide and a 36-foot wide pavement unless the neighborhood layout permits travel distances in excess of three blocks between dwelling and a collector street.(1)

Personal observation in the Suburban Homes development supports the previous statement. There were not large numbers of cars parked on the subdivisions streets and even during commute hours traffic on secondary streets was very light.

Boddum also recommends a 26ft width for cul-de-sacs and loop streets which serve 50 or fewer dwelling units. A 26ft width is recommended for a secondary street (serves 50 to 200 homes) and 40ft of paving for major collector. The Suburban Homes subdivision consists primarily of cul-de-sacs, loop streets, and a limited number of secondary streets (which usually serve less than 100 homes) connected to a single major collector. A street width of 40ft for the major collector and 26ft for all other streets was adopted as the Substitute Standard.

Parks. A developer can fulfill park requirements in Livermore through the dedication of 2 acres of land per 100 units or payment of an in-lieu fee. The developer of Suburban Homes indicated that he would not have provided any parks in the absence of a park dedication requirement. He felt that Livermore has ample recreation areas and that neighborhood

(1) Urban Land Institute, Residential Street Widths. p. 32.

parks were underutilized. Therefore, the Substitute Standard park dedication is zero. While elimination of the park standard would reduce the amount of recreation area available to residents it would not be as draconian as it sounds.

Land dedicated by home builders is used exclusively for neighborhood parks which consist of playground equipment, picnic benches, and five to six acres of lawn. However, Livermore is well endowed with parkland. In addition to 106 acres of neighborhood parks, Livermore's 48,000 residents enjoy the use of yards and recreation equipment at schools and 230 acres of community parks, Special Use Parks, and District Parks. In the vicinity of the suburban homes development there are, in addition to two neighborhood parks, three schools and a special use park.

Fire Hydrants. Fire hydrants in the Suburban Homes development were an average of 430ft apart. Since the developer did not express a preference for a fire hydrant standard, it was arbitrarily decided to decrease the number of fire hydrants by one half increasing fire hydrant spacing to 830ft. (1)

Lot Width. The developer of Suburban Homes would have liked to have constructed units on smaller lots with smaller sideyards. In Tract A Livermore's RL-6.5 zoning requires 6,500 sf lots, sideyards totaling

(1) In the City of Jacksonville, prior to the adoption of standards requiring spacing of fire hydrants every 500ft, developers installed hydrants at 1000ft intervals. See Gruen Gruen and Associates, "Effects of Regulation On Housing Costs: Two Case Studies", ULI Research Reports, No. 27, (Washington D.C.: Urban Land Institute, 1977)

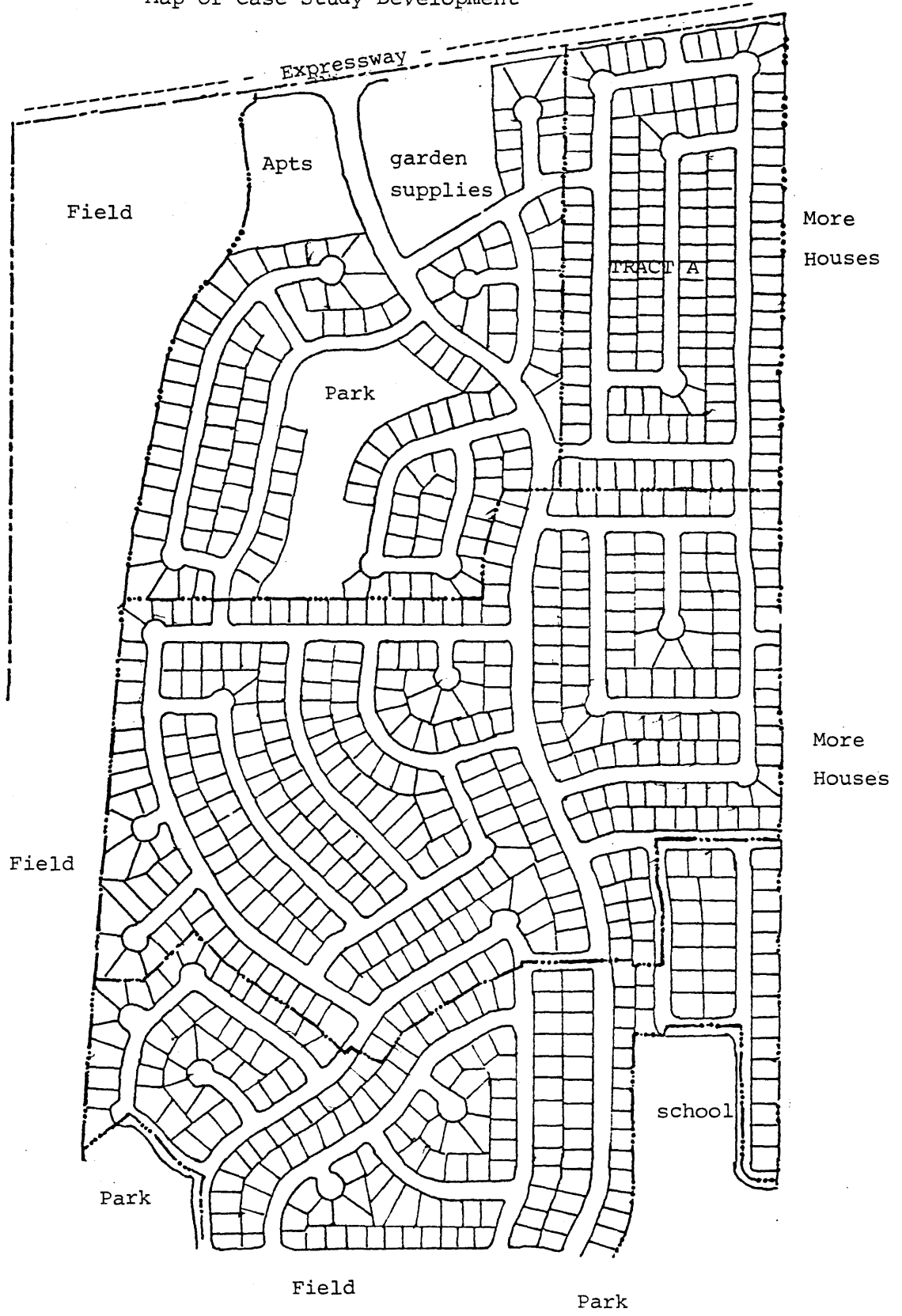
17ft, and a 65ft minimum lot width. For our Substitute Standard we assume that the minimum standards are a 55ft lot width and a 5,500 sf lot size which is a common size for Bay Area single family homes. In Livermore, lot dimensions are governed by zoning regulations. These zoning regulations are included in our analysis of subdivision regulation because in some communities lot dimensions are set by subdivision regulations.

Street Trees, Sidewalks, and Curbs. Rolled curbs are substituted for monolithic curbs. Sidewalks are not required since the developer would have omitted them. To simplify calculations the street tree requirement is eliminated for the Substitute Standards.

THE COST OF EXCESS STANDARDS

The cost of meeting the standards defined as excess by the developer of Suburban Homes was estimated through a close examination of one of the eight tracts which make up the development, referred to here as Tract A (see Figure 2). Tract A was zoned for 6,500 sf lots and constructed in 1964-1966. It has more than 100 units built at a density of 4.6 units per acre. The park requirement was satisfied through dedication of land and in-lieu fee payment.

FIGURE 2
Map Of Case Study Development



Excess subdivision requirements can increase the cost of producing housing in two ways. They can increase the amount of labor and materials required and also increase the amount of land area required for each unit. Increasing the amount of land required for each unit, reduces the density at which units are constructed. At lower densities, developers must spread land costs over a smaller number of units.

The total savings which could have been achieved in Tract A through the use of the Substitute Standards are presented in Table 2. The method used to calculate cost saving is presented in Appendix A. The use of the Substitute Standards instead of Livermore's subdivision improvement standards would have reduced the cost of developing units in Tract A by \$1286 per unit. Out of this total \$585 is savings due to construction cost reductions. Under Livermore standards the tract was developed to a density of 4.6 units per acre. With the Substitute Standards the tract could have been developed at a density of 6.1 units per acre. At the higher density, land costs per unit would have been reduced by \$683 per unit.

In Table 2, the potential cost savings are broken down by type of feature. The greatest cost savings can be achieved through reducing the required lot dimensions. Reducing lot dimensions not only allows higher residential densities, with less lot frontage fewer linear feet of roadway, curbing, and utility lines are required.

Table 2 also presents the potential savings with the Substitute Standards, using 1981 subdivision improvement prices. The 1981 findings,

though calculated for a subdivision with the same characteristics as Tract A, should be representative of 1981 units since homes being constructed today in Livermore have virtually the same features as they did in 1966.

TABLE 2
POTENTIAL COST SAVINGS WITH SUBSTITUTE STANDARDS
TRACT A

	1964	1981
Eliminate Street Trees	\$5	\$55
Rolled Curb Instead Of Monolithic Curb	\$43	\$164
Reduce Number of Fire Hydrants By One-Half	\$12	\$70
No Park Dedication	\$117	\$646
Eliminate Sidewalks	\$244	\$1413
Reduce Street Width From 40' to 26'	\$252	\$1497
Reduce Lot Width 10' And Lot Size 100sf	\$613	\$3834
Total	\$1286	\$7679

Excess Standards and Home Price

The units in Tract A ranged in size from 1140 sf to 1742 sf and sold in 1966 at prices ranging from \$18,950 to \$22,550. Since most of the lots in the tract were the same size, the lot costs were similar for all units.

The construction cost of houses in tract A was equal to 82.4% of the sales price. The remaining 17.6% of sales price was for add-ons such as profit, overhead, closing costs, advertising, sales commissions, and mortgage buy downs. As a percent of construction costs, add-ons are

TABLE 3
TOTAL COST OF EXCESS STANDARDS
AS A FRACTION OF HOME PRODUCTION COST AND SALES PRICE

Tract A 1966

Per Unit Cost Of Excess Standards	\$1286
Developer Add-On 21.4%	\$275
Total	\$1539
% of lowest priced unit (\$18,950)	8.2%
% of highest priced unit (\$22,550)	6.9%

1981 Conditions

Per Unit Cost Of Excess Standards	\$7679
Developer Add-On 21.4%	\$1643
Total	\$9322
% Of Median 1981 New Home Price (\$96,000)	9.7%

equal to 21.4%. If we make the assumption that the cost savings from the substitute standards would have been fully passed on to home buyers (a somewhat controversial assumption to be more fully discussed in Chapter V) then add-ons would also be reduced in proportion to lower construction costs. If the 21.4% markup is included in the construction cost of meeting excess standards then the purchase price of homes in Tract A could have been reduced by 6.9% to 8.2%.

Table 3 also compares the cost of excessive standards for a 1981 unit to the Livermore median sale price for a single family residence for that year. As a percentage of home price, the cost of excessive standards has increased somewhat between 1966 and 1981. This is to be expected since the two major components of the cost of excess standards, raw land price and subdivision improvement costs, have increased more

rapidly than other construction costs. Between 1964 and 1981 the cost of subdivision improvements and land in Livermore has increased five fold while the cost of house construction has only increased four fold.

Benefits

After examining the cost of subdivision improvements, the next pertinent question is, who benefited from these expenditures? Did the subdivision improvements that the developer installed only meet the service requirements of his new units or was he supplying services to the general public? In the case study subdivision it appears that improvements installed by the developer are primarily used by the development's residents.

Parks are a feature whose benefits one might expect to spill over beyond the boundaries of the development. However, in the case study development, that did not appear to be true. The developer of Suburban Homes dedicated two approximately 3 acre parcels which were later developed into neighborhood parks by the Livermore park district.

The staff of the Livermore Area Recreation and Park District informed me that developer dedications are used for neighborhood parks. These parks are only intended for the use of residents within walking distance (one-half to three-quarters of a mile) and are minimally developed with play ground equipment and some picnic tables. Athletic fields and other facilities which attract users on a city wide basis are placed in community parks or schools for which developer dedications are not used.

It was the feeling of the staff that the neighborhood parks are used almost entirely by nearby residents since there are many neighborhood parks (eighteen) and they are not highly developed. The only instances that they knew of where neighborhood parks were used by residents of other neighborhoods was for a youth soccer league.

Street trees, sidewalks, monolithic curbs, and wide streets would benefit a larger audience than the developments residents if outsiders frequently passed through. However, the street system of the Suburban Homes development is somewhat self contained, and even its major collector street is probably not often used by persons from outside of the tract.

Oversized utility lines were installed in several portions of the case study development. However, the City of Livermore compensates builders who are required to install sewage, water, or drainage pipes in excess of the requirements of their developments.

Offsite improvements were also required by the City of Livermore as a condition of approval for several of the tracts in the case study development. The offsite improvements were sidewalks and trees installed in front of a school bordering the tract and improvements to an expressway (sidewalks, fencing, planters, and some street widening) which also bounds the tract. The offsite improvements are used by the general public that sends their children to the school and walk or drive along the expressway. However, the per unit cost of these improvements was small when spread out over the entire development. The cost of offsite improvements was not included in the estimate of the cost of excessive

standards since it was not known how these costs were charged to units constructed over an 8 year period.

Apparently the benefits of excessive standards accrue to the developments residents. But how much do they benefit from excess standards. One measure of the value of these benefits to residents is their willingness to pay. If homebuyers place a high value on large lots or parks they will be willing to pay more for houses with these features. Regression analysis was employed to test the relationship between subdivision features and the sale price of homes. In order to minimize the number of variables which could influence sale prices of homes, the analysis was restricted to recent resales (1976-1981) in the Suburban Homes development. Since all tracts in Livermore were built to the same subdivision standards I could not easily compare homes with and without sidewalks or compare houses on 26ft streets to houses on 40ft streets. However, within the Suburban Homes development there was enough variation to test the impact of several subdivision standards.

Sale prices for all homes sold in the Suburban Homes development between 1976 and 1981 were obtained from the Southern Alameda County Board of Realtors. There were a total of 181 observations. Subdivision variables for each home were determined from the developers records, subdivision maps, and aerial photographs.

The results of the least-squares regression analysis are given in Table 1. The Sale Date variable was included to control for the rapid inflation in home prices which took place from 1976 to 1981. This vari-

TABLE 4
REGRESSION RESULTS

Independent Variable	Regression Coefficient	Standard Error	Significance
Sale Date	982.512	35.854	.000
House Size	20.919	2.864	.000
Lot Size	.117	.484	.810
Swimming Pool	9876.343	1437.334	.000
Distance From Park	-0.230	.930	.805
Street Width	-61.198	127.415	.632
Street Length	1.366	.677	.045
Adjacent To Park	-1140.782	3006.494	.705
Adjacent To Field	4006.683	2237.194	.075
Adjacent To Expressway	148.777	3267.244	.964
Corner Lot	3172.491	1445.438	.030
Constant	15438.897	5798.465	.009
Adjusted Rsquare	.858		

Sale Date is the date of sale for the observation, counted in month from the first observed sale (December, 1976).

House Size is the size of the house in square feet.

Lot Size is the size of the unit's lot in square feet.

Swimming Pool is the presence or absence of a swimming pool

Distance From Park is the distance of the unit from the nearest park in feet.

Street Width is the width of the street over 40ft.

Street Length is the length of the street on which unit is located, in feet.

Adjacent To Park, means a park adjoins one side of the lot.

Adjacent to Field, an open field adjoins on side of the lot.

Adjacent to Expressway, there is an expressway along the rear property line.

Corner Lot is a lot on a corner (streets on two sides).

Regression Coefficient tells you how much the price of a unit increases when a particular variable is increased by one unit.

Standard Error is a measure of how much the actual values varied from the predicted value.

Significance is the probability that the null hypothesis is true, or the probability that the results are due to chance.

able measured the number of months between the first sale in the sample and the observed sale. The analysis shows that from 1976 to 1981 Subur-

ban Homes units were increasing in price by \$982 a month, which closely approximates the average annual increase of \$933 for median sales prices for single family homes in Livermore (1977-1981). (1) Consumers appear to be willing to pay \$21 for each additional square foot of floor space and will pay an additional \$9,876 for a swimming pool. Corner lots appear to be worth an additional \$3,172. Lots adjacent to a field are worth an additional \$4006.

It appears that the variables which were used to represent the features required by excess standards have no effect on home prices. The lot size, distance from park, and street width variable all appear to have no effect on sales price. (2)

In the Suburban Homes subdivision there was considerable variation in lot size. Though most lots were either 6500, 7000, 7500 square feet, but some odd sized lots on cul-de-sacs were as large as 10,000 sf. However, the regression analysis indicates that lot size has little observable effect on sale price.

Since there are two schools and a community park close to the Suburban Homes development, the difference between having the park dedication requirement and not having any park dedication requirement is that units

(1) City of Livermore, Livermore Community General Plan 1976 to 1981, (Livermore, revised 1981) p. 54c.

(2) The three variables all have coefficients which are less than half as large as their standard error. The significance levels for the null hypothesis is also above 60% for each variable, indicating that they have almost no effect on sales price which can be observed through the use of regression analysis.

are closer to recreation facilities.(1) Are home buyers willing to pay more to be closer to parks? The distance to park variable is the distance between a unit and the nearest park or school. The distance ranged between 0 and 2700 feet. Since the distance from park variable appears to have no effect on sale price, we could conclude that home buyers are not willing to pay more for a Suburban Homes unit located close to a park than for a house located at a greater distance from a park. A tentative conclusion can be reached that the park standards do not produce economically measurable benefits. However, there are other explanations for this result that make the conclusion slightly suspect.(2)

Since there are no streets in Suburban homes with a 26ft width, the impact of excess street width requirements on resale prices had to be measured indirectly. Within the development are secondary streets with a 40ft width and a collector street with a 52ft width. For the street width variable 40ft streets were entered as zero while 52ft streets were entered as 12. This variable also had no statistically significant effect on resale price. Though we do not know whether consumers prefer a 26ft or a 40ft street width, the regression analysis indicates an indifference between a 40ft and 52ft street width.

(1) The assumption here is that recreation facilities at schools and Community parks are close substitutes for neighborhood parks.

(2) Perhaps homebuyers who place a high value on parks do not care about the distance to the nearest park but do care about the percent of land area in the neighborhood devoted to open space.

CONCLUSIONS

In Livermore, it would seem that those subdivision improvements required by the city, above and beyond what developers would include to meet market demand, make a significant contribution to the cost of constructing a new home. However, that contribution, as a percentage of home price has not increased a great deal between 1966 and 1981. This is probably due to the fact that, with the exception of the park dedication requirement (which doubled during that time period) the subdivision improvement requirements examined have not changed since the 1950's. One conclusion is that while excessive standards do add to the cost of building a home, they have not played much of a role in Livermore's home price inflation.

The benefits from improvements installed by the developer of Suburban Homes, appear to accrue to the residents of that development. The cost of the required offsite improvements were rather small when spread out over the entire development.

Though the residents of the Suburban Homes development were the primary beneficiaries of features labeled as "excessive" it does not appear that they place a high value on all of those features. It is interesting to note that the difference in construction cost between a 5500 sf lot and a 6500 sf lot was \$613 in 1966 (\$3834 in 1981), but lot size appeared to make little difference in resale price. If the extra lot size which zoning regulations add does not result in a product which is more highly valued by homebuyers, it is just a dead weight cost. A recent California

survey of prospective homebuyers found that the most important consideration in a new home purchase was the monthly payment and least important consideration was lot size. (1)

Why does Livermore have its chosen subdivision standards? Convenience, safety, and maintenance appear to be important considerations. With the exception of park and lot dimension requirements, subdivision standards do not appear to have an anti-growth or exclusionary intent. Street, sidewalk, curb, street tree, and fire hydrant requirements date back to the 1950's, well before the development of anti-growth sentiment. If the intent is exclusionary they have done a poor job. Some units in the Suburban Homes development were as small as 1100 sf. The next chapter examines Livermore's development fees and it is in this area of subdivision policy where political intent is more likely to be found.

(1) Lauren Tsujimoto, "House Shoppers Exhibit A New Profile", Boston Globe May 2, 1982.

CHAPTER III DEVELOPMENT FEES

Over the last 50 years, much of the burden of paying for public infrastructure has been transferred from municipal budgets to private developers and through higher sale prices to new homebuyers. In the 1920's, many communities transferred responsibility for subdivision improvements (streets, sidewalks, utility lines etc.) to developers. By the 1970's many communities, especially in rapidly growing California, were asking developers to provide land for parks and to pay development fees which were used to install offsite capital improvements such as storm drainage systems, sewage treatment plants, reservoirs, and school facilities.

Development fees became commonplace in fast growing communities which were having problems paying for the public works requirements which new growth brings. The rationale behind the use of development fees to pay for new services was that new growth should "pay its own way". It was assumed that new homes contribute less in property taxes than the cost of providing them with services. The deficit would then be borne by existing property owners through higher property taxes. Financing new services with fees was a politically easier course of action than asking existing property owners to approve new bond issue since existing property owners had no vested interest in seeing any new development.

The number of communities instituting development fees, and the size of fees has been rapidly increasing in California. One of the causes was the tax limitation initiative, Proposition 13. A survey of San Francisco

Bay Area communities by Gabriel, Katz, and Wolch found that three fourths of the cities in the survey increased their fees. in response to Proposition 13. Fees increased 70% between 1976 and 1980, rising from an average of \$1121 per unit to \$1907 per unit.(1)

Proposition 13 did three things which encouraged development fee increases:

- 1) Proposition 13 reduced property tax rates, which cut local government revenues;
- 2) Proposition 13 made it very difficult for California communities to finance capital expenditures through the issuance of bonds;
- 3) Proposition 13 made, in the eyes of many local officials, new development into a big fiscal loser.

In California's June primary of 1978, Proposition 13 was overwhelmingly approved by 65% of the states voters. Tax relief was what they wanted and tax relief was what they got. Property taxes were reduced from an average of 3% of a parcel's market value to 1% and assessment increases were limited to 2% per year. Increasing fees was one course of action available to public officials. Raising development fees (which are borne by new home buyers) has its political advantages as noted in a Gruen and Gruen study, Proposition 13 and The Future of Construction In California:

(1) Stuart Gabriel, Lawrence Katz, and Jennifer Wolch, "Local Land Use Regulation and Proposition 13: Some Findings From A Recent Survey", Program in Real Estate and Urban Economics, Working Paper Series, No. 80-4, (Berkeley: Institute of Business and Economic Research, University of California at Berkeley, 1980.)

by far the fastest and largest increases in fees and charges that have been levied since Proposition 13 are those imposed on new construction. Hard pressed supervisors, councilmembers, and district boards would be less than human if they did not recognize that it is easier to raise the charges on those not yet within their jurisdiction than it is to increase the fees of their present constituents.(1)

The tax limitation provisions of Proposition 13 have effectively eliminated general-obligation bonds as a method of capital facilities financing in California. The ability of a city to raise its property tax if additional revenues are needed to meet bond payments is the ultimate security behind general-obligation bonds, Proposition 13's 1% tax rate lid eliminated that security. Development fees are one way a city can immediately obtain the funds it needs to finance the services needed for new units.

Prior to Proposition 13 the net fiscal impact of new housing had been the subject of some debate, but many public officials became convinced that new housing was a net fiscal loser after the passage of the proposition. A report prepared by the State of California's Office of Planning and Research, New Housing: Paying Its Way! looked at 10 post-Prop 13 fiscal impact studies.(2) All of the studies concluded that new residential construction would cost municipalities more money for services than they would bring in property taxes. One fiscal impact statement for a residential project in Anaheim estimated that a project with 521 single family units

(1) Gruen Gruen + Associates, "Proposition 13 And the Future of Construction In California," photocopy, n.d.

(2) California Office of Planning and Research (OPR), New Housing Paying Its Way, (Sacramento: OPR, May 1979).

and 379 multi-family units would produce a net revenue loss of \$16-35 million dollars over 10 years.(1) The OPR study was heavily criticized by the construction industry, but many communities took notice. The dramatic increase in development fees could be interpreted as an effort by communities to make up part of a perceived revenue loss on new development.

That communities are imposing fees in order that new development should "pay its own way" is supported by an Association of Bay Area Governments (ABAG) study, Development Fees In The San Francisco Bay Area, which found that fast growing communities in the fringe areas of the San Francisco Bay Area levied much higher development fees than did slow growing core cities.(2)

The study divided the Bay Area into three zones (See Figure 3). Communities in Zone 1, the built up core area of the Bay Area where relatively little growth is taking place, impose relatively low development fees averaging \$1619 in 1981. Just outside of the built up core are the communities of Zone 2 in which infill growth is occurring. Zone 2 communities averaged \$3532 in development fees in 1981. Zone 3 jurisdictions, which include Livermore, are the fast growing communities located in the outlying portions of the Bay Area. These communities with their need for additional infrastructure to accommodate growth, average \$6,194 in development fees for 1981.

(1) California Office of Planning and Research, New Housing Paying Its Way, p 7.

(2) Association of Bay Area Governments, Development Fees In The San Francisco Bay Area, An Update, (Berkeley, January 1982).

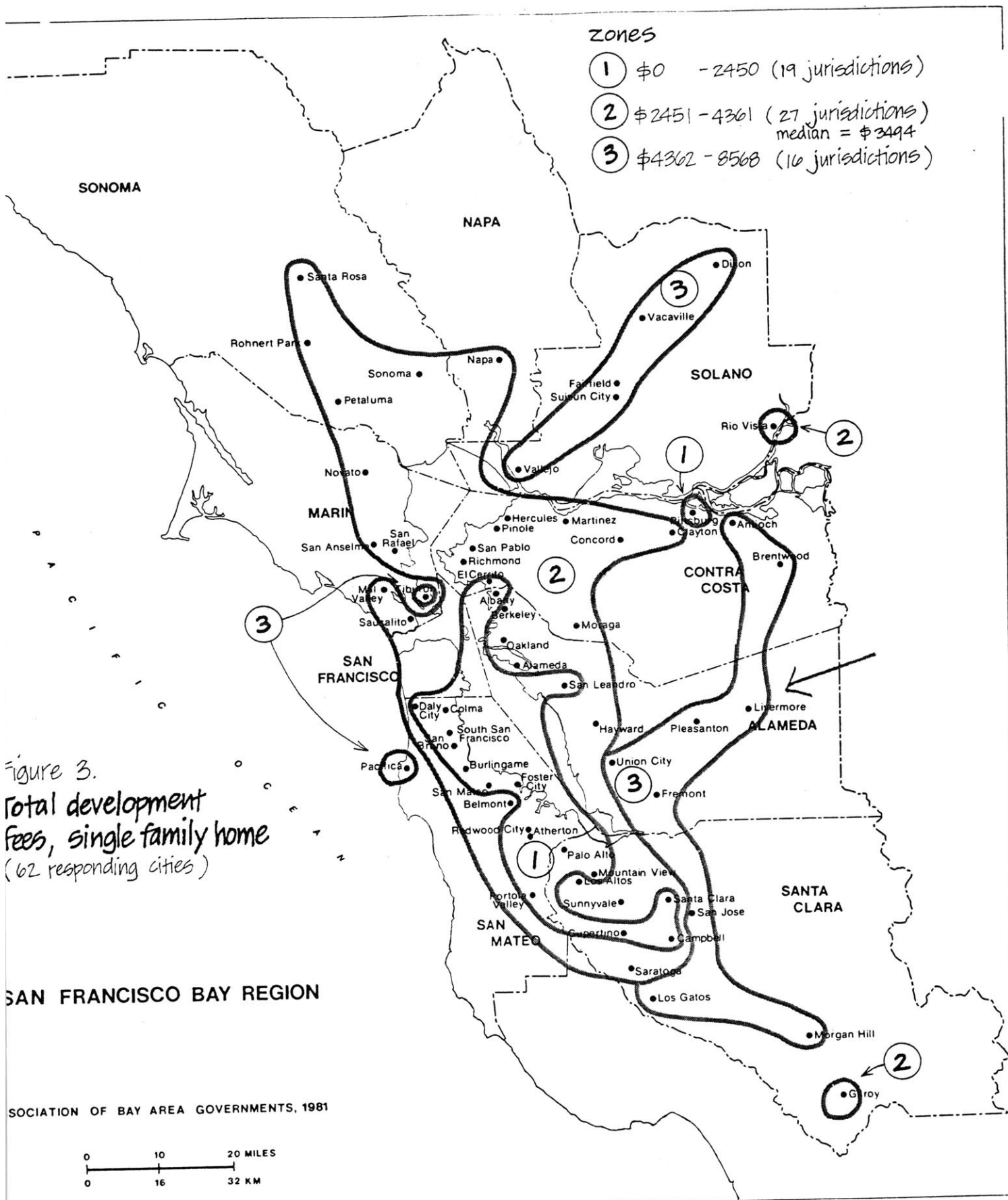


Figure 3.
Total development fees, single family home (62 responding cities)

Source: ABAG

Figure 4.

Average development fees, single-family home : ZONES ① ② and ③

(see map for zone areas)

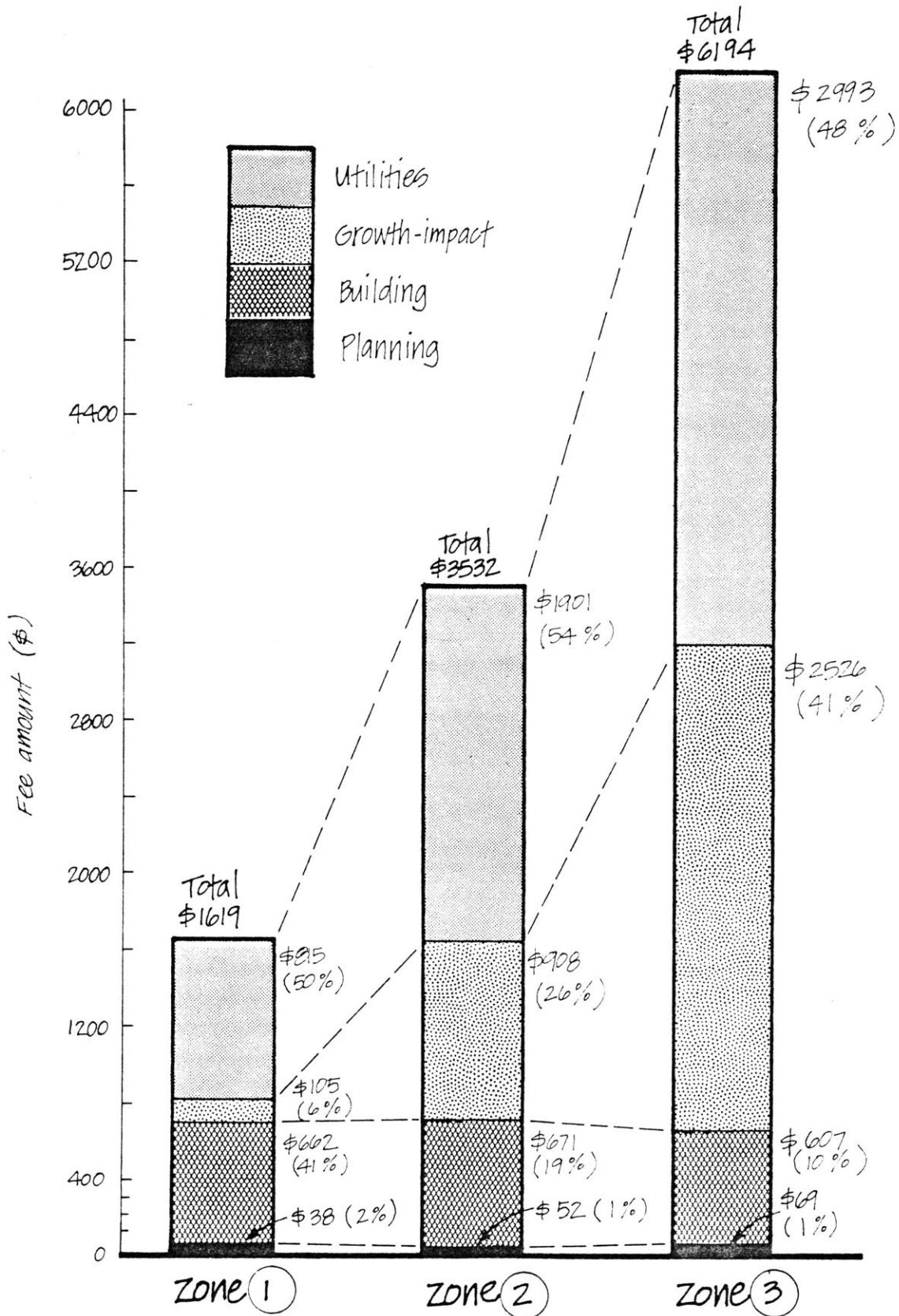


Figure 4, from the ABAG study, offers a breakdown of development fees for the three zones. Planning fees are those charged for regulatory actions such as zoning changes and establishment of PUDs. Building fees and those charged by building departments; utility fees and growth-impact fees are those designed to make growth pay its way. Most of the difference in fee totals was attributed to the higher utility and growth impact fees in the faster growing communities. Average building fees were very similar for all three zones. Utility fees accounted for approximately one-half of the fee charges in all three zones, though they were numerically higher in the faster growing communities, increasing three and one-half times between Zone 1 and Zone 3. There are dramatic differences between growth fees among the three zones, with fees rising from an average of \$105 a unit in Zone 1 to \$2526 a unit in Zone 3. ABAG concluded that the high development fees in outlying areas are being used to finance the infrastructure requirements of growth: parks, schools sewer systems, water facilities, etc.

ABAG also noted that fees were not only higher, but were growing at a higher rate in the fast growing communities. This was attributed to the effects of Proposition 13. With their need for new services to meet the needs of growth, the fast growing communities were hit harder by Proposition 13.

LIVERMORE CASE STUDY

The City of Livermore has relied upon development fees to meet the costs of growth since the early 1960's. Development fees are collected

from home builders at the time a building permit is issued. By collecting upfront fees the City of Livermore has been able to finance the public services required for new growth without the use of bonded debt.

Table 5 lists Livermore development fees paid for a home in Tract A of the Suburban Homes development in 1964 and for a typical single family home constructed in 1981. A description of each fee, how the rate is set, and what the fee is used for, is given in Appendix B. Fees are quite similar for different sized units since most fees are assessed on a per unit basis. Engineering fees are assessed to pay for checking of development proposals and finished subdivision improvements by the Public Works staff. Planning fees were not included since they vary considerably from project to project and are difficult to determine for past years. However, planning fees make up a very small fraction of Livermore's fees. (1)

Building fees are included to cover the cost of checking construction plans and site inspection of homes. Growth fees are used to pay for the public improvements necessitated by new home construction.

One of Livermore's growth fees was omitted from Table 5. The privately owned California Water Service Company provides water to 80% of Livermore's families. (2) The City of Livermore provides water to the remaining 20%. Developers building units within the city's water service

(1) ABAG estimated in its 1981 study of development fees that planning fees accounted for less than 15 of Livermore's total. ABAG, Development Fees In The San Francisco Bay Area, An Update.

(2) City of Livermore, Livermore Community General Plan 1976-2000, (Livermore, 1981) p 73.

TABLE 5
PER UNIT DEVELOPMENT FEES

FEES	1965	1981	Change
ENGINEERING	\$21	\$337	1505%
Map Fees	\$1	\$55	
Inspection For Public Works	\$20	\$282	
BUILDING			
Building Fees	\$160	\$854	434%
UTILITY	\$438	\$3199	630%
Storm Drainage Fee (City)	\$168	\$329	
Storm Drainage Fee (County)	\$120	\$120	
Sanitary Sewer Hookup Charge	\$150	\$1920	
County Water Connection Charge	*	\$830	
GROWTH IMPACT	\$182	\$3374	1754%
In-Lieu Park Fee	\$107	\$646	
Annexation Fee	\$75	*	
In-Lieu Low Income Housing Fee	*	\$442	
Tax On Residential Construction	*	\$1715	
TOTAL	\$801	\$7764	869%

* Fee does not exist at this time.

area paid a \$461 water storage fee in 1981. Since a majority of Livermore homes, including the Suburban Homes development, were not affected by the water storage fee, it was omitted from the analysis.

If the aforementioned fees seem well above average to the reader it is because they are among the highest in the nation. The previously mentioned Gabriel, Katz, and Wolch study of California development fees found that out of 64 communities surveyed, Livermore had the highest development fees in both 1976 and 1979. (1) The ABAG study confirmed Livermore as the San

(1) Stuart Gabriel, Lawrence Katz, and Jennifer Wolch, "Local Land Use Regulation and Proposition 13: Some Findings From A Recent Survey". p 7.

Francisco Bay Area development fee leader for 1979.(1) But the ABAG study also found that Livermore fell to second place, passed by a fee happy Tiburon in 1981.

The fees charged to each unit of Tract A in 1964 were \$811 or 4.2% of the sales price of the least expensive home in Tract A (Table 6). Since most of Livermore's fees were levied on a per unit basis they were the same for the large and small houses in Tract A. Fees made up 4.2% of the price of the most expensive unit in Tract A.

TABLE 6
DEVELOPMENT FEES AS A PERCENT OF HOME PRICE
LIVERMORE TRACT A

Most Expensive Home 1966		
Sale Price	\$22,550	100%
Total Fee Cost	\$972	4.3%
Fees	\$801	3.6%
Add-Ons (21.4%)	\$171	0.9%
Least Expensive Home 1965		
Sale Price	\$18,950	100%
Total Fee Cost	\$972	5.1%
Fees	\$801	4.2%
Ad-Ons	\$171	0.9%
Median Price Home 1981		
Sale Price	\$96,000	100%
Total Fee Cost	\$9,425	9.8%
Fees	\$7,764	8.1%
Ad-Ons (21.4%)	\$1,661	1.7%

Many developers use cost-plus pricing in which initial sales prices are determined by adding a profit and overhead rate to production costs.

(1) Association of Bay Area Governments, Development Fees In The San Francisco Bay Area, An Update, pp. 110-112.

The developer of Suburban Homes stated that he, and most other developers, treat fees as any other cost to which overhead, sales costs, and profit are added. These add-ons were equal to 21.3% of the construction cost of a unit in Suburban Homes. In Table 6, add-ons are summed with fees to indicate the total cost of fees to the consumer if we assume all costs are passed forward.

As we can see in Table 6, development fees have increased almost ten fold since 1966. Fees have risen faster than home prices, between 1966 and 1981 Livermore's development fees as a percent of home price has almost doubled. Total development fees have grown because of inflation in the cost of providing services, higher service levels, and the addition of new fees over time.

Livermore's first development fees were the storm drainage fees, the sewer connection fee, and the engineering fees which were instituted in 1958. Initially the fees were raised whenever the city council decided that higher fees were needed, but this procedure was always accompanied by howls of protest from the development community. It was later decided to tie fees to construction cost indexes and re-adjust them annually. The Public Works Director for Livermore finds the current method of raising fees superior as it places the city on a "much more businesslike basis as far as fees are concerned".(1) Over time new fees were added. The in-lieu park fee was added in the 1960's; the county water connection charge, the

(1) Interview with Daniel Lee, Public Works Director for the City of Livermore, January 21, 1982.

school fee, and the tax on residential construction were added in the early 1970's; and the in-lieu low income housing fee was added in 1980. In addition to new fees, 1981 new homebuyers are also paying for higher levels of service. Inflation and Federal requirements for higher levels of treatment have caused sewer connection fees to jump from \$150 in 1958 to \$2,045 in 1982. The in-lieu park fee, which is based on the cost of land and improvement costs, increased from \$107 in 1966 to \$726 in 1982 in part due to the doubling of the park dedication requirement from 1 to 2 acres per 100 units.

Paying for the costs of growth was a prime motivation behind Livermore's adoption of its present fee structure. The basic rationale behind all of Livermore's development fees is expressed in an explanation of the sewer connection fee, taken from a report by the Director of Public Works for Livermore:

The philosophy which prompted the original Livermore sewer connection fee was that "growth should pay its own way". Each new customer connecting to the sewerage system should pay his fair share of the cost of the existing and future sewerage system necessary to serve that customer. By doing so monies will be available as expansion of the system are needed. Also the general public will not be asked to approve, and pay for, recurring bond issues that are made necessary by others. The purpose of the one-time sewer connection fee is to pay for capital improvements to the sewerage system, unlike the sewer service charge which is a continuing monthly charge which is used principally to defray the cost of maintenance and operation of the completed system, but which can also be used for capital improvements (City Code Sec. 19.77). (1)

(1) Dan Lee, "Revenue Program For Sanitary Sewer Connection Fees And Service Charges", Livermore, California, December 27, 1976. (photocopy), p.4.

Apparently they have been quite successful in implementing this fee philosophy. Livermore's only bond issues in the last 25 years have been a 1958 sewer bond issue and a 1965 library bond issue, both of which were paid off in 1978.(1) Daniel Lee, the Public Works Director feels that the fees do not cover all of the costs of new development, but that they come close. The major capital expense related to new development which was not covered by a development fee is the cost of new roads.(2) Livermore's share of receipts from the gasoline tax are not considered adequate by Mr. Lee to finance the new road requirements of growth.(3) A new major road fee which would pay for new major streets and the widening of existing streets was considered in 1974, but has not yet been adopted.(4)

Through its utility fees Livermore is asking new residents to pay for the new services which they will require. The utility fees, by and large, are based on the cost of the new capital investments that are required to meet the needs of new residents. But in a few instances, new residents are also paying for benefits that existing

(1) City of Livermore, "Annual Budget 1981-1982". (Livermore, 1981) p. ix.

(2) Specifically, the cost of new roads of greater size than a collector are borne by the city. Developers are responsible for providing secondary roads and collectors within their tracts.

(3) In real terms the receipts from the California gasoline tax have been declining due to inflation. The gasoline tax is a flat charge per gallon rather than an ad velorum tax and has not been raised in some years.

(4) Daniel Lee, "Utility Undergrounding Costs, Major Street Fee", (City of Livermore Interoffice Memorandum: from: Public Works Director; to: City Manager, City Council; June 14, 1974).

residents receive. Recent drainage improvements in some older areas of town, built before the storm drainage fee was instituted, are paid for with storm drainage fees from new home owners. The rationale is that everyone benefits from an adequate storm drainage system. The fees from older homes paid for secondary sewage treatment facilities, new residents are paying fees for tertiary treatment now required in Livermore, but all residents use the higher level of treatment.

During the 1970's, Livermore asked new residents to take on new fee burdens, some of which were intended for the benefit of the general public. The in-lieu low income housing fee and the tax on residential construction are two fees which clearly are used to benefit the entire population of Livermore and appear to be unrelated to the infrastructure needs of new growth. The in-lieu low income housing fee is used for construction of low-income housing. Provision of low income housing benefits the entire community and is an expense which would be difficult to blame on new housing. Sixty percent of receipts from the tax on residential construction are applied to general revenues and the remaining forty percent are transferred to the park district. While this tax is justified as paying for the "other" growth expenses not covered by other fees, its benefits are spread out among all Livermore residents.

Conclusion

Livermore's development fees have increased rapidly over the years and now make up a substantial portion of the price of a new

home. The fees have increased at a much higher rate than general home prices and appear to be making a contribution to the rapid rate of home price inflation. Livermore has made more extensive use of fees than any other California community, but Proposition 13 is forcing other communities to follow their example. If development fees of the magnitude of Livermore's become widespread they could further erode the ability of American's to purchase their own homes.

Through its fees, Livermore is asking new residents to both pay for their services and pay for benefits which accrue to the general public. A number of new fees were adopted in the early 1970's, at a time when anti-growth sentiment in Livermore was high. The park dedication requirement was also doubled at this time. Perhaps the anti-growth Livermore City Council was using fees to discourage growth as well as to make growth "pay its own way."

CHAPTER IV SUBDIVISION POLICIES AND THE COST OF HOUSING

In the previous chapters Livermore's subdivision regulations were examined to verify or deny criticisms of subdivision policy. The important result of any policy critique is a recommendation for policy change. The basis of the criticisms was a concern over the ability of first time homebuyers to enter the housing market. The question addressed in this chapter is, how much could subdivision policy changes have affected the affordability of new housing in Livermore? The measure of affordability used here is the annual income needed to purchase a new home. The subdivision policy changes tested are elimination of excessive subdivision improvement standards, financing of services with municipal bonds, and paying for services with property taxes.

To test these policy changes, three scenarios were constructed. In each scenario changes in Livermore's subdivision policy were assumed and an estimate of the policy changes impact on the affordability of new housing was made. All scenarios assume that any potential savings are passed forward to consumers. The scenarios are as follows:

SCENARIO ONE. How much more affordable would housing in Livermore have been if subdivision standards were not as high? The annual income needed to purchase a home constructed under Livermore's subdivision standards is compared to the income needed to purchase a home constructed under the less expensive Substitute Standards from Chapter 11.

SCENARIO TWO. New homebuyers in Livermore finance subdivision improvements, and the development fees paid on their units, with home mortgages. Interest rates paid on home mortgages are higher than those paid on municipal bonds. How much less expensive would it have been to finance fees and improvements with municipal bonds? In this scenario it is assumed that Livermore does not charge development fees and the city installs subdivision improvements. Municipal bonds are issued in an amount equaling the fees which would have been collected and the cost of subdivision improvements. An assessment district for each subdivision is formed to pay for the bonds with each homeowner making equal payments. Through the use of an imaginary assessment district the cost of bond financing is compared to the cost of mortgage financing.

SCENARIO THREE. In this scenario the more traditional method of financing services with property taxes is compared with Livermore's more modern practice of financing new services with exactions and development fees. The scenario examines the redistributive effect of the property tax. It is assumed that Livermore has never charged development fees and that all subdivision improvements have been installed by the city. Again the cost of subdivision improvements and the expenditures financed by fees are paid for with municipal bonds. But in this scenario, property taxes levied on the entire Livermore tax base are used to make bond payments. The pertinent question is how much does the current trend of shifting service costs from the

public sector to the private sector increase the burden of new homebuyers and relieve the burden of existing homebuyers.

In the remainder of this chapter a discussion of the problem of housing affordability will be presented, to be followed by the results of the three scenarios and concluding statements.

THE PROBLEM OF HOUSING AFFORDABILITY

That home prices have risen much faster than family income over the last decade has been well documented in both the academic and popular press. That the problem is very extreme in California is also well known. An often cited statistic is that with high home prices in California and the current high interest rates, only 5% of that states families can afford to buy a new home. The lucky 5% are those with sufficient incomes to qualify for a mortgage, with the minimum down payment, on that much discussed dwelling unit, the median priced home.

However, the above statement assumes that all prospective home buyers only have sufficient capital for the minimum down payment. The number of Californians unable to purchase the median priced home is somewhat less than 95%. Millions of California residents who owned homes during the decade of home price inflation accumulated huge amounts of equity. For these Californians no tears need be shed. Their home equity will overcome most income barriers should they decide to trade up or move to a new location. It is the somewhat smaller subset of the population, the first time home buyer, that has been largely excluded from the market by inflation and interest rates. This author has not seen an estimate of how many

California families fit in either category, but a substantial portion of prospective homebuyers do not currently own homes. A recent survey of 1000 prospective buyers at 33 new-home developments in Southern California found that 52% were renting houses or apartments. The median income of these shoppers was \$40,490 for those shopping for detached homes and \$22,500 for those shopping for attached homes. (1)

In 1970 a family with an income of \$8600 a year and \$4700 for a down payment could purchase the median priced (\$23,400) Livermore home. In 1981, a family must have an income of \$55,906 to purchase the Livermore median priced home (\$96,000).

SCENARIO ONE

In Scenario One we find out how much difference a policy decision to reduce subdivision improvement standards would have had on the affordability of housing in Livermore. In Chapter II the potential construction cost savings which could have been achieved with less expensive standards was estimated to be \$1561 for a new unit sold in 1966 and \$9322 for a unit in 1981 (Table 3).

If construction cost savings were passed on to new home buyers; home prices, mortgage payments, and the income needed to purchase a home would be less. Table 7 compares the cost of home ownership for a unit built to Livermore's standards and the cost of a unit built to the Substitute Standards from Chapter II. Home mortgage interest rates and terms were

(1) Lauren Tsujimoto, "House Shoppers Exhibit A New Profile." Boston Globe, May 2, 1982

TABLE 7
SCENARIO ONE
REDUCE SUBDIVISION STANDARDS

	1966	1981
HOMEPRICE WITH LIVERMORE STANDARDS	\$18,950	\$96,000
Annual mortgage payment	\$1,091	\$12,765
Down payment	\$3,790	\$19,200
Income needed	\$6,448	\$55,906
HOME PRICE WITH SUBSTITUTE STANDARDS	\$17,383	\$86,678
Annual Mortgage Payment	\$1,001	\$11,525
Down payment	\$3,478	\$17,336
Income needed	\$6,088	\$50,944
DIFFERENCE		
Annual mortgage payment	\$90	\$1,240
Down payment	\$312	\$1,864
Income needed	\$360	\$4,962

Potential Cost Savings With Substitute Standards: 1966 (\$1,561),
1981 (\$9,322)

Mortgage Interest Rates: 1966 (6%), 1981 (16.5%)

Mortgage terms: 80% for 30 years.

Property Tax: 1966 (\$521), 1981 (\$1211)

Income needed = 4 x (Property tax + Annual mortgage payment)

Home price: 1966 (lowest price unit in Tract A), 1981 (Livermore median home price)

obtained from the Bank of America in Livermore. (1) The Bank of America requires that mortgage borrowers have an income which is 4 times the annual cost of mortgage and property tax payments.

In Table 7, we see that with lower standards the purchase price of the lowest priced Suburban Homes unit (1966) could have been reduced to

(1) Telephone interview with Dan Bello of Bank of America, Livermore Branch. March 8, 1982.

\$17,383. However, when the \$1561 savings is spread out over 30 years of mortgage payments it becomes quite small. In 1966, a decision to reduce subdivision standards would have only reduced the annual mortgage payment by \$90.

In 1981 home price inflation increases the potential savings to \$9322, and the potential reduction in annual mortgage payments to \$1,240. A 1981 decision to lower standards would reduce the income needed to purchase the median priced Livermore home by \$4,962. How much is this cost difference an artifact of the high home mortgage rates of 1981 (16.5%). If we assume a home mortgage rate of 10% for 1981 a policy of reducing subdivision improvement standards could still lower annual mortgage payments by \$786. (1)

Though the 1981 impact of a reduction in standards is significant, lower subdivision standards would not dramatically change the class of persons who can afford to purchase a Livermore home. With lower subdivision standards, it would still take an income of \$48,884 to qualify for a mortgage on 1981 median priced Livermore home.

SCENARIO TWO

In Scenario Two the policy recommendation that all services for new developments be provided by local government and financed through the use of special assessments is tested. It is assumed that an assessment dis-

(1) A \$96,000 home purchased with an 80% 30 year mortgage at 10% interest requires annual mortgage payments of \$8,088. A \$86,678 home requires a \$7,302 annual mortgage payment.

trict is created for Suburban Homes and issues bonds equal to the amount of fees paid plus the cost of subdivision improvements.(1) The special assessment district could provide services at a lower cost, since they would be financed with municipal bonds which carry a lower interest rate than mortgages.

In Table 8 the cost of home ownership with an assessment district is compared to the cost of home ownership under the present situation in Livermore. It is apparent from Table 8 that the difference between municipal and mortgage interest does not have a great impact on affordability. For the 1981 median priced home, assessment district financing could potentially lower the sale price by \$5,553 and reduce annual mortgage payments another \$1600. But the payment to the assessment district would be \$1,266 annually, negating most of the savings. The impact of assessment district in 1966 is even smaller.

It is reasonable to conclude that taking advantage of the lower interest rates available to government borrowers to finance services would not greatly reduce the annual cost of home ownership. But it does appear to reduce the down payment requirement by a small, but significant amount. In Table 8, financing services with assessments reduces the down payment

(1) For the analysis is Scenario Two only growth impact fees and utility fees are considered, and engineering and building fees have been omitted from the analysis. Building and engineering fees were omitted in order that the analysis in Scenario Two can be compared with an analysis in Scenario Three for which engineering and building fee data were absent. These fees are only a small percent of development fee totals (see Chap III).

TABLE 8
SCENARIO TWO
FINANCING SERVICES WITH ASSESSMENTS

	1966	1981
Mortgage interest rate	6.0%	16.5%
Municipal bond rate	3.3%	10.1%
Utility and Growth Fees	\$620	\$6,573
Subdivision improvements	\$1,088	\$5,553
 FINANCING SERVICES WITH HOME MORTGAGE		
Home price	\$18,950	\$96,000
mortgage payment	\$1,091	\$12,765
Base tax payment	\$521	\$1,211
Total Annual Cost	\$1,612	\$13,976
Income required	\$6,448	\$55,904
Down payment	\$3,790	\$19,200
 FINANCING SERVICES WITH ASSESSMENTS		
Home price	\$17,242	\$83,874
Mortgage payment	\$992	\$11,153
Tax payment	\$606	\$2,477
Assessment*	\$85	\$1,266
Total annual cost	\$1,598	\$13,630
Income required	\$6,392	\$54,520
Down payment	\$3,448	\$16,775
 DIFFERENCE		
Home price	\$1,708	\$12,126
Mortgage payment	\$99	\$1,612
Tax payment	-\$85	-\$1,266
Total Annual Cost	\$14	\$346
Income required	\$56	\$1,384
Down payment	\$342	\$2,425

* Assessments calculated assuming a bond is used to finance fees and subdivision improvements. The bond payments are composed of interest payment at the prevailing rate when the bond was issued plus payments to a sinking fund to pay off the bond at maturity. The sinking fund is invested at the prevailing interest rate for long term Federal securities (1966 - 4.27%, 1981 - 12.9%).

required on a median priced home from \$19,200 to \$16,775, not a dramatic drop but still a contribution.

TABLE 9
SCENARIO TWO
DEVELOPER ADD-ONS

	1966	1981
Utility and Growth Fees	\$620	\$6,573
Subdivision Improvements *	\$1,088	\$5,553
 Add-Ons (21.4%)	 \$366	 \$2,595
Annual Mortgage Payments for Add-Ons	\$21	\$149
Down Payment for Add-Ons	\$73	\$519

When developers pay development fees and install subdivision improvements, they treat these as any other construction cost. Many developers initially price their units on a cost-plus basis, adding a percentage mark up to cover profit, overhead, sales costs, financing costs, and closing costs to their construction cost. In the Suburban Homes development, these add-ons amounted to 21.4% of construction costs. One criticism of local governments shifting service costs to the private sector is that if those services were provided by the municipal government through an assessment district, the developer add-ons would be eliminated. However it is not clear that cities can provide public improvements as cheaply as a developer. City government also has overhead costs and local government contracting procedures do not always allow the bargaining power that developers have in dealing with contractors. Table 9 presents the annual mortgage payments required to pay for developer add-ons for fees and subdivision improvements. The potential savings here are not large.

Overall it would appear that provision of services through assessment districts does not hold great potential for reducing home prices in Livermore.

SCENARIO THREE

In this scenario we pose the question, what if Livermore had never shifted any public service costs to developers and instead had financed all services through property taxes? In comparing fees and exactions to property taxes, the difference is not one of how much the services will cost, but who will pay for them. They are two different systems of taxation and are based on very different philosophies regarding who should pay for services. Fees and exactions are a one-time-only charge for building in a community. The amount of tax is based somewhat loosely on the concept that people should pay for what they use. Property taxes are a wealth tax and reflect a belief that people should pay according to their abilities, not their needs.

Property taxes are a progressive tax instrument which redistributes income in a number of ways. Though most homeowners probably make much the same use of sewers or sidewalks, owners of expensive homes pay much more property tax than do owners of modest homes. Residential property owners are also subsidized through the property system by commercial and industrial properties which pay much tax but use few services. (1)

(1) A good example of a community where residential properties are heavily subsidized by nonresidential property owners is the City of Palo Alto, California. Residential properties account for only 35% of the local school districts property tax revenues with the remainder supplied by commercial and industrial properties. See Bernard Frieden, "Allocating the public Service Costs of New Housing", Urban Land, Vol. 39 No. 1 (January, 1980), p.16.

The redistributive aspects of the property tax system are not present in Livermore's development fees. Most of Livermore's development fees are levied on a per unit basis with modest homes paying much the same fees as more expensive homes. Building fees and the tax on residential construction are based on the construction cost of a home, while engineering fees are based on the cost of subdivision improvements (which will be a function of lot front footage). But the storm drainage, sewer connection, water connection, park, school, and low income housing fees are the same for all size houses (see Appendix B).(1) The Livermore system is very much based on the "pay for what you use" philosophy. Most communities encourage business development so that taxes from business properties will take up some of the burden of providing services to residences. In, Livermore, new home owners are asked to contribute to low income housing and other services which they will not directly use, but commercial development is exempt from these fees. Commercial and industrial developments in Livermore pay utility fees based on use, but do not pay park fees, school fees, low income housing fees, or the tax on residential construction (See Appendix B for more details on fees). The pros and cons of using progressive taxation methods to provide public services, and to what extent nonresidential

(1) Apartments pay lower utility hook-up fees, but the same school, park, and low income housing fees as do single family homes.

properties should share in the cost of residential services will not be debated here. It is sufficient to say that as opposed to property taxes, the use of fees eliminates a number of subsidies.

Returning to the question at hand, what would have happened if Livermore had instead chosen to finance those expenditure for which fees are now used, and subdivision improvements, with bonds that were paid for with property tax revenues. The answers are on Table 10. See Appendix C for details on methods used to calculate results in Table 10.

TABLE 10
TAX IMPACT OF ELIMINATING RESIDENTIAL
FEES AND EXACTIONS IN LIVERMORE

Fees Collected 1959-1981*	\$14,700,000
Subdivision Improvement Bonds Posted 1950-1981	\$18,600,000
Annual Cost of Bonds For Fees	\$894,381
Annual Cost Of Bonds For Improvements	\$1,095,792
1981 Livermore Property Tax Base**	\$1,007,925,364
1981 Tax Rate**	1.3595%
Additional Tax For Fee Bonds	.0887%
Additional Tax For Improvement Bonds	.1087%
Total	.1974%

For method of calculation see Appendix C

* Growth-Impact and Utility Fees

** Source: Alameda County Assessors Office and Auditor/Controller

An estimated 14 million dollars in utility and growth-impact fees have been collected from developers of single family and multi-family housing developers since fees were imposed in 1958. (1) Developers of single family

(1) These fees were paid on approximately 12,000 units or 75% of Livermore's total housing stock (16,000 units). Only growth-impact and

houses have put up guarantee bonds for subdivision improvements totaling almost \$19,000,000 since 1950. (2) If municipal bonds had been issued each year to pay for those expenditures which were covered by fees and for subdivision improvements, by 1981 the annual cost of interest and sinking fund payments for those bonds would raise the property tax rate by about 15%.

In Table 11 we see how this tax increase would affect Livermore homeowners. The property tax increase resulting from Scenario Three is in the hundreds of dollars while potential mortgage payment reductions are in the thousands of dollars per year. The purchaser of a median priced new home in 1981 would save \$1612 on mortgage payments if the developer passed along all savings from elimination of fee and subdivision improvement

TABLE 11
IMPACT OF SCENARIO THREE
ON LIVERMORE TAX PAYERS

	Annual Mortgage Payment Reduction	Additional Property Tax
Purchaser Of \$96,000 Home In 1981	\$1612	\$176
Purchaser of \$200,000 Home In 1981	\$2,088	\$381
Purchaser of \$18,950 Home In 1966 now assessed at \$85,000	\$99	\$154

For method of calculation see Appendix C

costs, but only face \$176 in additional property taxes.

The numbers in Table 11 indicate that a substantial redistribution of

(1) These fees were paid on approximately 12,000 units or 75% of Livermore's total housing stock (16,000 units). Only growth-impact and utility fees were included since sufficient data on engineering and building fees for past years was not available.

costs could take place with Scenario Three. It is doubtful that residents are subsidized by nonresidential properties to a great extent in Livermore since residential property makes up 79% of Livermore's property tax base. (1) In relative terms purchasers of a \$200,000 homes do not make out as well as purchasers of \$96,000 homes, but in absolute terms they do better with Scenario Three. What happens under Scenario Three is that 1981 new home buyers make out like bandits, but some one who purchased a home in 1966 faces a property tax increase which is slightly higher than what he would save on payments for a 1966 mortgage. Under Scenario Three 1981 new home buyers face large reductions in the cost of home ownership, while long time residents face slightly higher home ownership costs.

How is it possible to have such a large gain for new home buyers with such a small loss for existing residents? The results of the analysis in Table 11 are artifacts of three forces: inflation, growth control, and rising fees. Because of growth control the number of new houses constructed in Livermore over the last 5 years is quite small compared to the existing stock (See Table 1C Appendix C). With Scenario Three the service costs of new units are spread out over a large tax base. When a home is new the cost of fees and subdivision improvements makes up a significant portion of its purchase price. But with rapid inflation the original cost of fees and improvements becomes an increasingly small portion of current home price. In the long run in an inflationary economy, a home buyer is probably better off financing services with an assessment district

(1) Telephone interview, Alameda County Assessors Office, April 15, 1982.

whose charges remain constant, than through property taxes which increase with inflation.

The conclusion that we can draw from Scenario Three is that where new growth is small and inflation is great, the costs of ownership for new home buyers can be reduced a great deal, at a small cost to existing residents by paying for most services with property taxes.

CONCLUSION

With the three scenarios, three subdivision policy recommendations have been tested using Livermore as the model. None of the policy recommendations would make Livermore's homes suddenly affordable to persons of moderate means. But a house is made of many bricks and subdivision policies are part of a large body of government actions which affect the price of housing.

Reducing subdivision standards has the potential for a significant level of savings while assessment districts do not. I might underscore that for 1981 there was an unusually large spread between mortgage and municipal bond rates (almost 6%, whereas in most years the interest rate spread is around 3%), but the interest rate differences possible with an assessment district did not seem to affect the affordability of housing much.

Shifting service costs back to the public sector and paying for them with property taxes is the least feasible, politically, of any of the policy recommendations. But the analysis did point out that in a

growth-control community like Livermore, raising fees can have a large effect on new home buyer while providing rather modest tax relief for existing home owners.

For example let us assume the two fees which charge new home buyers for what would seem to be general public expenses, the residential construction tax and the in-lieu low income housing fee. If the maximum number of units (300) were constructed in one year they would pay (assuming all are median priced homes at \$96,000) \$647,400 in low income and residential construction tax fees. Each new home buyer faces additional mortgage payment of \$24 a year and an additional down payment of \$431. Had these funds been financed with municipal bonds and paid with property taxes, Livermore home owners (of \$96,000 units) would each face an additional \$6.40 a year in property taxes. If fees are used to hold down property taxes in a city like Livermore, it really has to load costs onto new home buyers to have much of an effect on existing residents' tax rates.

CHAPTER V CONCLUSIONS

This and other studies of local government regulation and housing costs have focused on regulatory changes which reduce the costs of constructing a home. The studies were motivated out of a concern for potential home buyers who are being priced out of the market. The assumption is that developers pass all cost increases on to home buyers. However, the popular wisdom that sellers always pass on cost increases to buyers is not consistently embraced by economists. Many economists feel that regulations which increase the cost of home construction can in many cases result in lower prices being paid for land rather than higher home prices. Who pays the cost of subdivision standards and development fee increases is a question of vital importance for this study. If all costs are indeed passed back to land owners, then there is little point to this study since most planners, myself included, are not overly concerned with the capital gains of land owners.

Though the question of fee incidence is crucial in any discussion of the desirability of development fees, as noted by Dean Mischynski there is little consensus:

Since fees are rapidly becoming a highly important source of infrastructure financing, it would be nice to know something of their incidence. Unfortunately, reasoned dialogue on this question is largely nonexistent. Builders unanimously proclaim that they pass fees on to home buyers. Academic economists are inclined to believe that at least some of the fees will be "passed backwards" to landowners. Among public officials, the

builders view holds sway. A few empirical inquiries into fee incidence are beginning but the statistical difficulties are ponderous and the resources available very limited.(1)

The results of two empirical studies of home prices in the San Francisco Bay Area are mixed. Both studies used regression analysis to explain home prices and included development fees as one of the variables. One study by David Dowall of the University of California indicated that fees were being passed on to home buyers virtually intact:

Our results also support the contentions of suburban home builders who report that planning and development fees are added to the price of new housing on a one-to-one basis. In other words, for every one dollar increase in fees, the list price of a new home increases by one dollar.(2)

However, Lawrence Katz and Kenneth T. Rosen, also of the University of California, came to opposite conclusions. Their development fee variable was found to be "not statistically significant, indicating that in our sample development fees on new houses are not reflected in higher home prices in the community".(3)

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- (1) Dean J. Misczynski, "Landuse and Proposition 13: The California Experience", Tax Policy Roundtable Property Tax Papers, No. TPR-6, (Cambridge: Lincoln Institute of Land Policy, undated) p.3.
 - (2) David E. Dowall, and John D. Landis, "Land-Use Controls And Housing Costs: An Examination of San Francisco Bay Area Communities," Unpublished (photocopy). p. 37.
 - (3) Lawrence Katz, and Kenneth T. Rosen, "The Effects of Land Use Controls On Housing Prices", Center For Real Estate And Urban Economics Working Paper Series, Working Paper No. 80-13, (Berkeley: Institute of Business and Economic Research, University of California At Berkeley, 1980) p. 47.

THE ECONOMIST'S VIEW

To the economist, the question of development fee incidence is best answered by examining consumer's price elasticity of demand for housing. If a community raises fees then it costs more for a developer to produce houses and he will attempt to maintain profits by increasing the sale price of a home. Should consumers have a price inelastic demand for housing, they will purchase the same number of units at the higher price and they will have borne the cost of the fee increase. However, if consumer's demand for housing is price elastic, they will purchase fewer homes at the higher price. If the developer wishes to sell the same number of homes it will be necessary to lower the price of the homes. Some of the fee increase will then be borne by the developer who will enjoy fewer profits.

However, in the long run developers will pass any fee costs they absorb backwards to owners of undeveloped land. Many economists believe that land prices are the residual in the development equation. Since developers will not build homes unless they can make a profit, the price they will offer owners of undeveloped land for their property is equal to the price at which they can sell houses less profit and the cost of building homes. Therefore, if costs rise, but the price at which they can sell homes does not, developers will offer less money for land.

Consumer demand is more price elastic when there are close substitutes for the products they buy. If one community raises fees while its neighbors do not, housing in neighboring communities will be substituted

for housing in the community that raised fees. Lower demand forces down prices to the level of neighboring communities. Therefore, we would expect that the larger the difference between a community's fees and its neighbors' fees, the less likely it is that fees will be passed forward to homebuyers. One might expect then, that since fees vary considerably in the Bay Area, the differences in fees between communities would be capitalized into land prices.

THE DEVELOPER'S VIEW

During the course of interviews with Livermore developers and Livermore public officials, there was unanimous agreement that developers pass fees and other cost increases on to home buyers. This opinion was qualified by the developer of Suburban Homes who felt that in the highly competitive home market of the early 1960's they had absorbed part of Livermore's fees in the form of lower profits. He was firm, though, in his belief that in growth control communities, and Livermore is one, developers are able to pass along any fees to the home buyer.

The developers with whom I spoke regarding the economist's view of fee incidence were of the opinion that land markets "aren't perfect markets" and that they "just don't work the way economist think they do". They were of the opinion that in California, where demand for housing is high (or was until the recent surge in interest rates) and development is restricted by extensive regulation, developers easily pass on all fee costs to home buyers.

IF THE DEVELOPERS ARE RIGHT

Assuming that the developers are right and the construction costs which result from subdivision policies are passed through to the new home buyer, a number of conclusions can be formed from the results of this study.

Excessive Subdivision Standards

The analysis indicated that the cost of new home ownership could be diminished if Livermore had less expensive subdivision improvement standards. New home buyers would benefit in two ways. Subdivision features which are not valued by consumers and do not significantly enhance their safety or reduce long term maintenance costs are dead weight. Their elimination would give home buyers a product which they value the same but which cost less.

Eliminating or, making less costly, features which do affect a home buyers perception of home value produces a different product, one which is less expensive but less valued by consumers. In this case consumers benefit by having a greater range of options.

One would normally assume that parks and large lots are features which make homes more valuable in the eyes of consumers. However, the regression analysis did not indicate a greater willingness to pay for those features. Perhaps much of the cost of marginally larger lots is a dead weight cost. A resulting policy recommendation is that cities should re-examine their subdivision standards and eliminate or reduce those features which are not really important to health and safety. The

market should be allowed to set lot sizes and install street trees. Many stringent subdivision standards were established to prevent the construction of inexpensive, soon to be blighted subdivisions. I think that inflation has greatly reduced the probability of that happening. Inexpensive is probably no longer a realistic adjective for any new housing.

This kind of reform is not likely to occur at the local level unless builders are very influential. Existing residents, once they have bought a new home and are no longer concerned about home price, have little incentive to go to the aid of less fortunate prospective residents.

Development Fees

The increasing use of fees to finance public services does represent a change in philosophy for local governments. There have long been communities which charged fees for sewer connections and established assessment districts for other services. But charging fees for school buildings, low income housing, or construction taxes for to be placed in the general fund are something new. The fees are more regressive than property taxes, they eliminate subsidies from expensive homes to modest homes and from commercial and business properties to public services. A new \$96,000 home in Livermore would pay \$6,573 in growth-impact and utility fees, while a home more than twice as expensive would pay fees only 25% higher (\$8323). It should also be remembered that commercial properties pay no growth-impact fees under Livermore's system. The fees

reduce the burden of existing home owners, but at great expense to new home buyers.

That fees reduce the burden on commercial property owners and existing home owners adds to similar problems created by Proposition 13. The tax limitation initiative freezes the growth in property assessments to 2% a year until resale when property is reassessed at 100% of market value. Since commercial property, does not change hands as frequently as does residential property, the commercial share of the property tax burden declines with time. In Livermore, purchasers of a median priced home pay taxes on a home assessed at \$96,000. A long term Livermore resident who purchased an identical home before 1976 would be paying taxes based on a \$52,000 assessment.(1) The shifting of tax burden to new home buyers in the form of high fees and exactions is not likely to be abated soon. Proposition 13 makes few other courses of action fiscally feasible and the hostility to new residents which spawned many growth control measures remains.

If fees are to be limited it would be first necessary to establish a consensus around what share of new service costs new home buyers should bear, and in doing so balance the interests of existing home owners against the needs of those now entering the home market. Any limitation on fees would have to be accompanied by some limits on the steps which communities can take to control growth. Fees have the effect of reducing home owner opposition to new growth. Where home owners feel that they

(1) The median home price in January 1977 was \$52,000.

are paying the bills for new development, growth controls can result and increase the cost of housing by restricting demand.

BUT WHAT IF THE ECONOMISTS ARE RIGHT

To the extent that the costs of subdivision policy can be passed backwards to developers or land owners, the potential aid that policy change affords the new home buyer is diminished. If the costs generated by subdivision policy are not all passed forward to consumers, then we can conclude that all of the savings generated by policy changes will not be passed on as well. Who would the true beneficiaries of subdivision policy reform be?

Excessive Subdivision Standards

If a reduction in subdivision standards results in units being constructed which are less expensive, but have less value to the home buyer, the benefits go to the consumer in the form of wider choice. But if a change in standards eliminates dead weight features which do not affect the desirability of a unit, the consumer should be willing to pay the same price for the house. The benefit may then go to the developer who has a larger profit margin or to the land owner who is able to demand a higher price for land. It is possible then, that if a community reduces lot size requirements by a marginal amount, and consumers are indifferent to the change, the savings will go to the land owner or developer. This would be the case if only one community within a larger market reduced its standards. However if standards were reduced for an

entire market (a state or a region) with higher profits developers would build more units, eventually bringing down the price of homes.

Fees

If a single community reduced its fees and if it is part of a larger market which sets the price of housing, developers and land owners would benefit to some extent from fee reductions. One way in which eliminating fees could lower home prices is if it resulted in higher property taxes. Higher taxes would be negatively capitalized into the price of a home. However, from Chapter IV it is apparent that eliminating fees would only have a marginal effect on overall property tax rates. One study of tax capitalization in California found that for every dollar the average property tax bill declines, the houses in that community increase in price by 7 dollars. (1)

In Scenario III a \$13,126 construction cost reduction was achieved through elimination of fees and city installation of improvements. But only a \$176 property tax increase resulted. If tax increases are capitalized to the degree found in the above study, the price of median priced home in Scenario Three would only decline by \$1232. The remaining \$12,894 would be pocketed by the developer or the land owner.

(1) Kenneth T. Rosen, "The Impact of Proposition 13 On House Prices In Northern California; A Test Of The Interjurisdictional Capitalization Hypothesis.", Center for Real Estate and Urban Economic Working Paper Series, Working Paper No. 80-11 Institute of Business and Economic Research. (University of California Berkeley) 1980.

If the economists are right, one would first want to establish the elasticity of demand for housing and for subdivision features, before embarking on policy changes. One would also want to affect changes on a large scale throughout entire markets, rather than attempting to influence the policies of individual communities.

In Summary

The economists and developer's view points are not totally incompatible with respect to possible policy recommendations. If developers are right, subdivision policy changes on the part of individual communities would lower home prices. But the probability that city councils will act to protect the interests of future residents is slight. Proposition 13 also makes any attempt to hold down the growth of fees difficult.

The economists would probably find subdivision policy changes enacted on a regional or state level more useful than any individual local actions.

From either view point it will probably take state action if housing prices are to be reduced through subdivision policies. Perhaps a California grass roots movement similar to the one started by overtaxed home owners, will be initiated by the populous baby boomers who have come knocking at the door to suburbia and found it locked.

AFTER WORD

This thesis was not just an exercise in academic discipline. The public policy conflicts which underly the problems addressed in this thesis are to some extent conflicts that the author finds within himself.

I grew up in California's Santa Clara Valley, now known to most of the world as Silicon Valley for its semi-conductor industry. When my family first moved to the valley twenty years ago, it was a land of new suburban subdivisions nestled among acres of fruit laden orchards. I can remember spring days driving up through the surrounding hills when we would stop and look down upon the valley floor which was colored with the soft pink and yellow pastels of the trees new blossoms.

As I grew older the orchards gave way to new subdivisions and the spring hues were replaced by smog. I really disliked and resented the bulldozers that tore up the mustard field in which I roamed, even though the new homes brought more playmates. During the late 1960's community voices were raised against the growth that changed our home, and mine was among them. "Limits to growth" and "carrying capacity" were the buzzwords of the day.

Today as I am completing my graduate studies at MIT my thoughts begin to turn toward more mature dreams involving career, houses, and stability. I too would like that small piece of the American dream that my parents found among the orchards of California. But the little houses that the World War II generation could afford on the GI Bill, are now the

\$120,000 impossible dreams of the 1980's. I want it all, I want the house and I want the trees. But then we all do, and I suppose that is the heart of the problem.

APPENDIX A
METHOD OF CALCULATING THE COST OF
EXCESSIVE SUBDIVISION IMPROVEMENT STANDARDS

Construction Costs. The installation of street trees, sidewalks, monolithic curbs, and excess requirements for street width and fire hydrants increased the cost of subdivision improvements for Tract A. A detailed breakdown of subdivision improvement costs can be found in the "Estimate of Quantity For Bond" which is on file with the Public Works Department in Livermore. These estimates of improvement costs are prepared by the developer for bonding purposes and rechecked by the Public Works staff. When compared to the cost of actually installing improvements the bond estimates proved to be quite accurate. The bond estimate for Tract A was prepared in 1964. In order to provide an idea of the current costs of excess subdivision standards, where applicable estimates are also given in 1981 prices. The 1981 unit prices for subdivision improvements were obtained from a Bank of America cost study of subdivision land development in the San Francisco Area and multiplied by the quantities in the 1964 bond estimate.(1)

The total construction cost of excess standards for Tract A was \$65,660 or \$476 per unit.

In Tract A 152 street trees were installed at a total cost of \$760, in 1981 installation of street trees for this tract would cost \$7,600.

(1) Bank of America, Cost Study, Subdivision Land Development, San Francisco Area, January 1981, (San Francisco: Bank of America 1981).

Twelve fire hydrants were installed in Tract A at a cost of \$3,300 (\$19,200 at 1981 prices). Reducing the number of fire hydrants by one-half would have saved \$1,650 (\$9,600 at 1981 prices).

A rolled curb and gutter is 30% less expensive than a monolithic curb and gutter. The total cost of installing monolithic curb and gutter in Tract A was \$19,747 (\$75,504 at 1981 prices). The installation of rolled curbs would have produced a cost savings of \$5924 (\$22,651 at 1981 prices).

The total cost of grading and paving a 5ft sidewalk on both sides of the street was \$22,321 (1981 cost \$112,824).

None of the roads in Tract A are considered collectors. The Tract consists of a number of loop streets which connect with a major collector just outside of the tract boundary. The cost of installing 40ft streets was \$53,882 for grading and paving (\$261,772 at 1981 prices). A street with a 26ft paved width has 35% less surface area than a 40ft street. If 26ft streets had been installed, a cost savings of \$18,858 would have resulted (\$91,620 at 1981 prices).

In the Suburban Homes subdivision, the park dedication requirement was not met on a tract by tract basis. Rather, of the eight tracts constructed from 1964-1972 two contained park dedications of approximately 3 acres each. The total of 6 acres of park meet the dedication requirement for 600 of the 800 units constructed. An in-lieu fee was paid for the remaining 200 units. Since the eight tracts were built

over a time period in which inflation of land and building costs occurred it would have been very difficult to determine how much of the cost of dedicating land or installing infrastructure for the two parks should be distributed among the different tracts. However, since the developer of Suburban Homes chose to meet the park requirement with some land dedication and some fee payment it will be assumed that the fee payment, which was \$117 a unit for Tract A is a good shadow price for park land dedication costs. The park fee is treated as a construction cost for the analysis to follow. The total cost of meeting the park standard was \$16,146 for 138 units.

TABLE 1A
CONSTRUCTION COST OF EXCESS SUBDIVISION STANDARDS
TRACT A

	1964		1981!	
	Tract	PerUnit	Tract	PerUnit
Street Trees	\$760	\$5.51	\$7,600	\$55.07
Sidewalks	\$22,321	\$161.75	\$112,824	\$817.57
Monolithic Curb Instead of Rolled Curb	\$1,650	\$11.96	\$9,600	\$169.57
Excess Street Width	\$18,859	\$136.66	\$91,620	\$663.91
Park Dedication*	\$16,146	\$117.00	\$89,148	\$646.00
Total	\$65,660	\$475.81	\$333,443	\$2,416

* One acre per 100 units 1964, two acres per 100 units 1981.

Land Costs. In addition to material and labor costs, subdivision standards which require sidewalks, wide streets, and minimum lot widths increase the cost of producing a home by reducing the density at which

housing can be constructed. Tract A was constructed at a density of 4.16 units per acre, but if constructed with no sidewalks, lots which were 10ft narrower, and with 26ft street widths instead of 40ft streets, Tract A could have been built to a density of 6.08 units per acre.

Tract A was zoned for 6,500 sf lots with a minimum average lot width of 65ft. If lot widths were reduced 10ft, savings in both land and infrastructure would result. Lot sizes would be 100 sf smaller (5,500 sf) and those improvements whose quantities are a function of lot frontage (streets, sidewalks, utilities, water and sewer lines) could be reduced by 10 linear feet per lot. With smaller lot widths, the 138 units in Tract A could have been constructed with less land and less infrastructure, or more units could have been constructed with the same amount of land and infrastructure. Twenty-five additional units, or a total of 163 units could have been accommodated on the street frontage in Tract A with 55ft lot widths.

138 units at 65 ft lot width = 8970 lf

163 units at 55 ft lot width = 8970 lf

In Tract A 5ft sidewalks on both sides of the street occupy 1.40 acres of land. The paved area of streets in Tract A is 5.60 acres. If street widths were reduced from 40 ft to 26 ft, roadways would occupy 3.64 acres, for a savings of 1.96 acres. Therefore, with no sidewalks and 26 ft streets, Tract A could have been constructed on 26.79 acres instead of 30.15 acres.

26.79 acres = 30.15 acres - 1.40 acres sidewalk - 1.96 acres streets

Putting the results of all of the above analyses together, with the Substitute Standards 163 units could have been constructed on 26.79 acres in Tract A at a density of 6.08 units per acre. However, 30.15 acres of land were available for development in Tract A. At a density of 6.08 units per acre 183 units could have been constructed. The additional 20 units would be carved out of the 3.36 acres formerly occupied by sidewalks and excess street width under Livermore standards.

3.36 acres = 1.40 acres sidewalk + 1.96 acres excess street width

20 units = 3.36 acres at 6.08 units per acre

The twenty units carved out of excess sidewalk and street land would have to be provided with infrastructure, though at a lower cost than was incurred under Livermore standards.

Total Cost Of Excess Standards

The total cost of excess subdivision standards in Tract A were estimated by comparing the cost of finished lots in Tract A developed under Livermore subdivision standards, to the cost of a finished lot under substitute standards. The cost of a finished lot under substitute standards was determined by the following method:

Lot cost with Sub Standards = TotRev-Excess+AdInf/Units

\$2714 = \$552,000 - \$65,660 + \$10,378 / 183 units

TotRev = The total revenue that the developer of Suburban Homes derived from finished lots in Tract A. The developer's books listed the value of finished lots at \$4,000.

138 lots at \$4,000 a finished lot = \$552,000

Excess = The construction cost of excess subdivision standards.

\$65,660 see Table 1A.

AdInf = The cost of additional infrastructure required for 20 units carved out of land committed to sidewalks and excess street width under Livermore standards. The unit cost of additional infrastructure equals the total cost of providing infrastructure (\$150,180) less the construction cost of excess subdivision standards (\$65,660) divided by the total number of units (163) which can be accommodated with the original infrastructure.

$(\$150,180 - \$65,600) / 163 \times 20 \text{ units} = \$10,378$

Units = Total number of units which can be constructed on Tract A with substitute standards.

The total cost of excess standards is:

\$1286 = Lot cost under Livermore standards (\$4,000) less lot cost with substitute standards (\$2714).

The method of calculating the total cost of excess subdivision standards assumes that the cost savings which result from higher densities and construction cost savings

are entirely passed on to home buyers in the form of lower finished lot cost.

1981 subdivision improvement costs were estimated by updating Tract A's 1964 bond estimate with current prices supplied by Bank of America. (1) A 1981 finished lot price of \$25,000 estimated by the City of Livermore and the 1981 median sales price of a new home in Livermore was used as the sales price. (2)

(1) Bank of America, Cost Study, Subdivision Land Development, San Francisco Area, January 1981.

(2) Barbara Hempel, "1970/1980 Comparison Costs of Building A Median Priced, Single Family Home", City of Livermore Interoffice Memorandum. From Barbara Hempel to Director of City Planning. August 10, 1981.

APPENDIX B
DETAILED DESCRIPTION OF DEVELOPMENT FEES

This section will describe each of the growth fees in some detail. As previously mentioned, engineering and building fees are intended to pay for staff time to check plans and make on site inspections. The engineering fees are set as a fraction of the cost of subdivision improvements, while building fees are roughly a percentage of assessed value of the home. These fees do not need further elaboration and will not be further discussed.

Park Fee. The park dedication requirement was originally set at one acre per hundred lots, but was subsequently changed to two acres per 100 lots. The in-lieu fee for park dedication has risen from \$107 in 1966 to \$726 in 1982. Half of the increase is due to the doubling of the dedication requirement, but the remainder of the cost increase can be attributed to the rising price of land and construction. The park fee is calculated by estimating the cost of purchasing land for a two acre park and constructing 590ft of street frontage improvements. The fee is adjusted annually by recomputing these costs with current prices for undeveloped land and with the Engineering News Record construction cost index.(1) Park fees are used to purchase land for neighborhood parks. At one time it was required that in-lieu park fees were to be spent in the same planning district where they were collected. The planning dis-

(1) Daniel Lee, "Park Fee Calculations", (City of Livermore Interoffice Memorandum; from: Public Works Director; to: City Manager; November 26, 1969).

strict concept was later abandoned in Livermore. Since then, there have been no geographic restrictions on where park fees are spent.

The Quimby Act is an act of the California Legislature which permits local governments to require park dedications as a condition for subdivision map approval. (1) California communities have taken advantage of the enabling legislation, 56% require park dedications or in-lieu fees. Livermore's requirement of two acres per hundred dwelling units puts it among the 6% of communities with the largest land dedication requirements. However, Livermore's in-lieu fee is close to the average for all communities, which is probably due to Livermore's low land costs in relation to other California communities. (2)

Annexation Fee. The annexation fee was charged to developers requesting annexation by the city. The fee was considered the newly annexed land owners way of buying into city facilities paid for by existing property owners. The fee was charged to the units in Suburban Homes, but has since been dropped by the city.

Storm Drainage. Storm drainage in Livermore is transported to the San Francisco Bay through a system of arroyos maintained by Alameda County. The county charges a storm drainage fee of \$120 per unit which has not changed in 20 years. The city is responsible for installing a drainage

(1) California Government Code, Section 6647.

(2) Construction Industry Research Board, "Quimby Act Survey Park and Recreation Dedications and Fees, California Cities and Counties", (Los Angeles, November 1981) p. 2.

system to carry water from properties to the arroyos. The city drainage system is developed partially by requiring builders to install drainage lines for their sites up to 18 inches in diameter and payment of a fee. If a developer is adjacent to a large drainage line and pipe in excess of 18 inches must be installed the developer is paid an over sizing credit.

Though runoff generated by parcels may vary considerably, the fees are the same for all users. Residential development is charged a standard fee per lot and commercial and industrial users are charged by square feet of impervious surface. The total cost of the system (the value of the existing system in current dollars plus the estimated cost of future improvements for undeveloped portions of the city) is divided by the total number of users (existing uses plus future uses to be accommodated on undeveloped land by 1990) to determine an average fee to be charged each user. The average cost method was used since it was felt that "storm drainage is a community problem for which all developing properties have a responsibility".(1) The city storm drainage fee is tied to a construction cost index and revised every year. Storm drainage fees are placed in a special fund out of which improvements to Livermore's drainage system, and over sizing credits to developers, are financed.

Sewer Connection Fee. The sewer connection fee is currently calculated by dividing total capital costs for treatment plants and trunk lines

(1) Daniel Lee, and R.W. Dondo, "Storm Drainage Fee Study", City of Livermore Department of Public Works, April 1977.

which will be needed through 1990 by the projected number of new connections for that time period. In this way capital costs are equally divided among all users. Maintenance and operating expenditures are met with service charges. Capital cost estimates are adjusted annually through the use of a construction cost index for sewers and treatment plants prepared by the Federal Water Pollution Control Administration.

The sewer connection fee is currently the largest single development fee and has shown the most rapid growth. The fee has increased from \$150 in 1956 to \$2,045 in 1982. The fee growth reflects a change in treatment quality from secondary to tertiary as well as inflation in construction costs.(1)

School Fee. In 1977 the California Legislature decreed that when overcrowding exists in local schools a city may as "an interim method of providing classroom facilities" require developers to dedicate land or pay an in-lieu fee.(2) A controversy erupted over the definition of interim facilities with developers claiming that interim meant temporary buildings, and cities interpreting it to mean permanent buildings. The meaning of interim was later clarified by Assembly Bill 8, passed in 1979, which defined interim facilities as being temporary classrooms.

(1) Daniel Lee, "Revenue Program For Sanitary Sewer Connection Fees and Service Charges".

(2) California Government Code, Section 65974. Sometimes referred to as SB210.

Livermore currently charges developers a school fee of \$570 per unit. The local high school is considered overcrowded and school fees are being used to purchase portable classrooms. The school fee is calculated by projecting the cost of portable classrooms which will be needed divided by the number of new units which will generate the need.(1)

Tax On Residential Construction. The tax on residential construction, some times referred to as a bedroom tax in other localities, is technically a business license tax. The tax amounts to 1.75% of the estimated construction cost of new units or \$650 per unit, whichever is greater. The residential construction tax was originally enacted to cover the "other" growth costs not addressed by existing fees. When first enacted, the receipts from this tax were divided between the local park district and the city. The city share was used for capital facilities. The tax was subsequently targeted entirely for capital facilities. As of 1982, the park district receives 40% of receipts from the tax on residential construction and the remaining 60% are placed in the city general fund for unrestricted use. In other jurisdictions, this tax has been justified as a "charge for buying into the physical infrastructure of the community".(2)

(1) Interview with Rudolph D'Ambra, Director Facilities management, Livermore Valley Unified School District, January 22, 1982.

(2) Dean Misczynski, Land Use and Proposition 13: The California Experience. (Cambridge: Lincoln Institute of Land Policy, undated). p. 2.

Alameda County Water Connection Charge. The Alameda County water connection charge was instituted in 1972 and was \$450 for a typical single family home. The 1982 fee level is \$830. The fee was instituted at a time when securing voter approval for new bond issues was difficult. The fee is used to pay for expansion of production and distribution facilities. The fee level is determined by averaging out the cost of expanding the system among new users. All new development in Livermore is liable for the fee since both the California Water Service Company and the City of Livermore purchase water from the county water agency.

In-Lieu Low Income Housing Fee. The City of Livermore has an inclusionary zoning statute which requires 10% of a developer's units to be sold at a price which can be afforded by low/moderate income persons. There are no resale controls on units falling under this program. If a developer wishes, the in-lieu low income housing fee can be paid instead of reserving 10% of the units for low/mod income. The in-lieu fee is \$443 for each unit built. The only restriction on the use of the fee by the city is that it must be an expense related to the construction of low income housing. The per unit fee was based on the land cost of low/moderate income units (which are assumed to be constructed at a high density). For every 10 units constructed \$4430 is contributed in in-lieu fees which is equivalent to the land cost of a single unit of low/moderate income housing.

APPENDIX C
METHOD OF CALCULATION FOR SCENARIOS

HOME MORTGAGE PAYMENTS

Bank of America mortgage terms and requirements are used to calculate home mortgage payments. The bank's maximum mortgage is 80% and an annual income of four times the sum of annual mortgage and tax payments is required. Mortgage interest rates for 1966 and 1981 were obtained from the Bank of America, Livermore.

PROPERTY TAX PAYMENTS

Property taxes for units in 1966 and 1981 were calculated with property tax rates for Livermore supplied by the Alameda County Assessors Office.

$$\text{Tax payment} = \text{Tax rate} \times (\text{home value} - \text{exemption})$$

There was no home owner exemption in 1966. Home owner exemption for 1981 was \$7,000. Tax rates (on 100% assessed valuation) were 2.7475% for 1966 and, 1.3595% for 1981.

ANNUAL COST OF MUNICIPAL BONDS

All municipal bonds are assumed to have a 30 year term (so they can be compared with mortgages with 30 year term) and to pay an interest rate equal to the prevailing AAA municipal bond rate for the year it was issued. The annual cost of bonds was calculated in the following manner:

$$\text{Annual Cost} = (\text{Face Value} \times \text{Interest}) + \text{payment to sinking fund}$$

The sinking fund is for the purpose of paying off the bond at maturity and is assumed to be invested at the prevailing interest rate for long term Federal securities.

ESTIMATE OF FEES COLLECTED 1959-1981

The total amount of growth-impact and utility fees collected was determined by multiplying an estimated average fee for each year by the number of units in all subdivisions accepted by the Livermore City Council for that year. Average fees were estimated using Fee Sheets (sheets supplied to developers by the city which list all fees) for past years. The number of units in subdivisions accepted by the Livermore City Council was determined from the Livermore Subdivision Record. See Table 1C. Subdivision fees paid for multiple unit residences were estimated by multiplying the number of units constructed by average fee levels (See Table 2C). Guarantee bonds posted by developers for each year were obtained from the Livermore Subdivision Record, which is a list of all subdivisions of record in Livermore.

SPECIAL NOTE ON TABLE 10

The annual mortgage payment reduction for the \$200,000 home was calculated on the following assumptions: Subdivision improvement costs are 33% higher than for the median priced (\$96,000) unit. Fees are also \$1750 higher than the median price home as a result of the 1.75% residential construction tax. Property taxes for all units in Table 10 are made by multiplying the additional tax rate from Table 9 by the value of the house less the home owners exemption of \$7,000. In reality long time home owners pay taxes at a lower effective rate than new home buyers since Proposition 13 places a lid on increases in assessed valuation until a unit changes hands, at which time it is reassessed at full market value.

TABLE 1C

LIVERMORE DEVELOPMENT FEES
AND SUBDIVISION IMPROVEMENTS FOR
SINGLE FAMILY HOMES 1950-1981

<u>Year</u>	<u>Units Constructed</u>	<u>Improvement Bonds</u>	<u>Per Unit Fees*</u>	<u>Total Fees</u>
1950-1958	1846	2,215,200	-0-	-0-
1959	605	730,038	513	310,365
1960	771	412,441	513	395,523
1961	233	284,651	513	119,529
1962	188	249,243	513	96,444
1963	418	522,335	513	214,434
1964	406	349,700	513	208,278
1965	1059	2,732,421	513	543,267
1966	1214	1,894,594	695	843,730
1967	682	836,076	695	473,990
1968	1359	2,323,318	720	978,480
1969	583	984,091	775	451,825
1970	106	201,750	1266	134,196
1971	563	1,305,819	1328	747,664
1972	763	1,984,221	1775	1,354,325
1973	385	160,215	3303	1,271,655
1974	210	840,563	3465	727,650
1975	381	512,985	3934	1,498,854
1976	154		4437	683,298
1977			4231	
1978	7	9,000	4535	31,745
1979	33	68,000	5182	171,006
1980			6132	
1981			6573	
Total	11,966	18,615,661		11,256,258

* Growth Impact and Utility Fees

Units and improvement bonds for each year from Livermore Subdivision Record. Per unit fees for each year estimated from Livermore Fee Sheets 1970-1981 and from various Department of Public Works Reports.

TABLE 2C

ESTIMATE OF FEES
FROM MULTI-FAMILY UNITS
1960-1981

<u>Time Period</u>	<u>Units</u>	<u>Average Fee Per Unit</u>	<u>Total Fees</u>	<u>Bond Payment*</u>
1960-1970	1,012	526	532,312	26,234
1970-1974	1,038	1,868	1,938,984	134,365
1974-1981	<u>234</u>	<u>4,141</u>	<u>968,994</u>	<u>63,382</u>
	2,284		3,440,290	223,981

Bond Interest Rates Used

<u>Time Period</u>	<u>Municipal Bond Rate</u>	<u>Government Securities</u>
1960-1970	3.27	4.28
1970-1974	5.70	6.16
1974-1981	5.56	7.42

TABLE 3C

ESTIMATE OF ANNUAL BOND PAYMENTS REQUIRED
FOR PUBLIC PROVISION OF SUBDIVISION IMPROVEMENTS
AND FEES

<u>Year</u>	<u>Municipal Bond Interest Rate</u>	<u>Government Securities Interest Rate</u>	<u>Bond Payments For Improvements</u>	<u>Bond Payments For Fees</u>
1950-1958	3.56	3.32	118,059	
1959	3.95	4.33	41,152	17,875
1960	3.73	4.12	22,592	21,665
1961	3.46	3.88	15,026	6,310
1962	3.18	3.95	12,406	14,801
1963	3.23	4.00	26,184	10,749
1964	3.22	4.19	17,300	10,303
1965	3.27	4.28	135,834	27,006
1966	3.82	4.92	104,605	45,105
1967	3.98	5.07	45,709	25,913
1968	4.51	5.65	136,028	57,289
1969	5.81	6.67	68,229	31,326
1970	6.51	7.37	15,138	10,070
1971	5.70	6.16	90,489	51,811
1972	5.27	6.21	128,967	87,881
1973	5.18	6.84	10,045	79,726
1974	6.09	7.56	62,594	57,106
1975	6.89	7.99	40,345	111,983
1976	6.49	7.61		
1977	5.56	7.42		
1978	5.90	8.41	606	2,133
1979	5.92	9.44	4,484	11,278
1980	7.85	11.46		
1981	10.10	13.12		
			\$ 1,095,792	\$ 670,400
Bond Payments For Apartment Fees (See Table 2C)				\$ 223,981
				\$ 894,381

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