CITY OF MILWAUKIE
PLANNING COMMISSION MINUTES
TUESDAY, DECEMBER 9, 1997

COMMISSIONERS PRESENT
Michael Smith, Chair
Bryan Cosgrove
Pat Lent
Charles Stoudt

COMMISSIONERS ABSENT
Tim Havel
Terry LaRocque

STAFF PRESENT
Maggie Collins,
Com. Dev. Dir.
Dan Pava,
Senior Planner
Shirley Richardson
Hearings Reporter

1.0 CALL TO ORDER

The meeting was called to order at 6:42 p.m.

2.0 PROCEDURAL QUESTIONS -- None.

3.0 INFORMATION ITEMS
3.1 City Council Minutes -- November 18, 1997

4.0 PLANNING COMMISSION MINUTES -- November 25, 1997

Bryan Cosgrove moved to approve the minutes of November 25, 1997, as amended. **Pat Lent** seconded. MOTION CARRIED 3-0 with one abstention. Charles Stoudt was not at that meeting.

5.0 PUBLIC COMMENTS -- None.

6.0 PUBLIC HEARINGS

6.1

Applicant:	City of Milwaukie
Property Owner:	N/A
Location:	N/A
Proposal:	Proposed text and map amendments to Chapter 4 (Land Use) of the Milwaukie Comprehensive Plan; and proposed new text for a Mixed Use Overlay Zone; and Proposed Zone Map Amendments to certain properties in the Regional Center Study Area. (Continued from the 11/25/97 public hearing --Deliberation and decision only)
File Numbers:	CPA-97-03/ZA-97-03/ZC-97-03

Chair Smith re-opened the public hearing on File Numbers CPA-97-03/ZA-97-03/ZC-97-03, to allow for deliberation and recommendation to City Council on adoption of Comprehensive Plan Text and Map Amendments, Zoning Text Amendments to add a Mixed Use Overlay Zone, and Zoning Map Amendments to re-zone certain properties to R-O-C and to add the Mixed Use Overlay Zone to certain properties. The Application must be consistent with the City of Milwaukie Zoning Ordinance and Comprehensive Plan. The criteria to be addressed are found in Section 900 of the Zoning Ordinance and Chapter 2 of the Comprehensive Plan.

Chair Smith noted that public testimony was received at the last two meetings on this issue. The public testimony portion of this hearing is now closed. Tonight's hearing is only open to Commission deliberation.

Maggie Collins reported that Staff is requesting time to prepare an informational report on Mr. VanBergen's request to include his tax lots 5400 and 5500 in Subarea #1.

It was the consensus of the Commissioners that Staff prepare an informational report on Tax Lots #5400 and 5500.

Charles Stoudt moved to continue deliberations on CPA-97-03/ZA-97-03/ZC-97-03 to January 13, 1998; and further, request Staff to provide more information on ZC-97-03, referencing tax lots 5400 and 5500. **Pat Lent** seconded. MOTION CARRIED 3-0 with one abstention; Mike Smith did not vote.

7.0 WORKSESSIONS -- None.

8.0 DISCUSSION ITEMS -- None.

9.0 OLD BUSINESS
9.1 Light Rail Study Update -- No Report

10.0 OTHER BUSINESS
10.1 **Historic Resources Commission Report** -- No Report

10.2 **Clackamas Regional Center Area Plan Report**
Chair Smith reported that subcommittees are meeting. He is chairperson of the Transportation Subcommittee, which will meet several times in the next two months. He asked the Commissioners to give him a call if they had any questions or comments they want to be brought up at these upcoming meetings.

10.3 **Community Development Department Report**

Planning Commission Schedule for 1998. **Maggie Collins** asked that the Commissioners comment and give guidance on the Planning Commission schedule for 1998.

Charles Stoudt moved to adopted the Planning Commission Schedule for 1998 as presented. **Bryan Cosgrove** seconded. MOTION CARRIED 4-0.

10.4 **Historic Review Commission Representative.** **Chair Smith** reported that Pat Lent had submitted a letter to the Chair notifying the Commission that she will be absent from the first five Planning Commission meetings scheduled on Tuesdays from January 13, 1998, through March 10, 1998. Also in this letter, Pat Lent noted that she could serve as the Historic Review Commission Representative.

Charles Stoudt moved to recommend that Pat Lent be the Planning Commission representative on the Historic Review Commission to replace Bryan Cosgrove who is resigning from the Historic Review Commission. Michael Smith seconded. MOTION CARRIED 4-0.

11.0 Next Meeting -- January 13, 1997

Bryan Cosgrove moved to adjourn the meeting of December 9, 1997. **Pat Lent** seconded. MOTION PASSED UNANIMOUSLY. The meeting adjourned at 7:00 p.m.

Michael L. Smith
Mike Smith, Chair

Shirley Richardson
Shirley Richardson, Hearings Reporter

AGENDA
MILWAUKIE PLANNING COMMISSION
Milwaukie City Hall, 10722 SE Main
Tuesday, December 9, 1997
6:30 pm

		ACTION REQUIRED
1.0	**Call to Order**	
2.0	**Procedural Questions**	
3.0	**Information Itmes** City Council Minutes: November 18, 1997 (upon approval by Council)	**Information Only**
4.0	**Planning Commission Minutes:** November 25, 1997	**Motion Needed**
5.0	**Public Comment** This is an opportunity for the public to comment on any item not on the agenda	
6.0 6.1	**Public Hearings** Applicant: City of Milwaukie Owner: N/A Location: N/A Proposal: Proposed text amendments to Chapter 4 (Land Use) of the Milwaukie Comprehensive Plan; and proposed overlay district and mixed use zone to certain properties in the Regional Center Study Area. Continued from 10/28/97 public hearing. (Deliberation and decision only) File Numbers: CPA-97-03/ZA-97-03/ZC-97-03	**Discussion and Motion Needed**
7.0	**Worksession** - None	
8.0	**Discussion Items**	**Review and Decision**
9.0 9.1	**Old Business** Light Rail Study Update	**Information Only**
10.0 10.1 10.2 10.3	**Other Business/Updates** Historic Resources Commission Report Clackamas Regional Center Area Plan Report Community Development Report	**Information Only** **Information Only** **Review and Comment**
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11.0	**Next Meeting** - January 14, 1997	
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The Milwaukie Planning Commission welcomes your interest in these agenda items. Feel free to come and go as you please.

Milwaukie Planning Commission Statement

The Planning Commission serves as an advisory body to, and a resource for, the City Council in land use matters. In this capacity, the mission of the Planning Commission is to articulate the Community's values and commitment to socially and environmentally responsible uses of its resources as reflected in the Comprehensive Plan

Public Hearing Procedure

1. **STAFF REPORT.** EACH HEARING STARTS WITH A BRIEF REVIEW OF THE STAFF REPORT BY STAFF. THE REPORT LISTS THE CRITERIA FOR THE LAND USE ACTION BEING CONSIDERED, AS WELL AS A RECOMMENDED DECISION WITH REASONS FOR THAT RECOMMENDATION.

2. **CORRESPONDENCE.** THE STAFF REPORT IS FOLLOWED BY ANY VERBAL OR WRITTEN CORRESPONDENCE WHICH HAS BEEN RECEIVED SINCE THE COMMISSION WAS PRESENTED WITH ITS PACKETS.

3. **APPLICANT'S PRESENTATION.** WE WILL THEN HAVE THE APPLICANT MAKE A PRESENTATION, FOLLOWED BY:

4. **PUBLIC TESTIMONY IN SUPPORT.** TESTIMONY FROM THOSE IN FAVOR OF THE APPLICATION.

5. **COMMENTS OR QUESTIONS.** COMMENTS OR QUESTIONS FROM INTERESTED PERSONS WHO ARE NEITHER IN FAVOR NOR OPPOSED TO THE APPLICATION.

6. **PUBLIC TESTIMONY IN OPPOSITION.** WE WILL THEN TAKE TESTIMONY FROM THOSE IN OPPOSITION TO THE APPLICATION.

7. **QUESTIONS FROM COMMISSIONERS.** WHEN YOU TESTIFY, WE WILL ASK YOU TO COME TO THE FRONT PODIUM AND GIVE YOUR NAME AND ADDRESS FOR THE RECORDED MINUTES. PLEASE REMAIN AT THE PODIUM UNTIL THE CHAIR PERSON HAS ASKED IF THERE ARE ANY QUESTIONS FOR YOU FROM THE COMMISSIONERS.

8. **REBUTTAL TESTIMONY FROM APPLICANT.** AFTER ALL TESTIMONY, WE WILL TAKE REBUTTAL TESTIMONY FROM THE APPLICANT.

9. **CLOSING OF PUBLIC HEARING.** THE CHAIR PERSON WILL CLOSE THE PUBLIC PORTION OF THE HEARING. WE WILL THEN ENTER INTO DELIBERATION AMONG THE PLANNING COMMISSIONERS. FROM THIS POINT IN THE HEARING WE WILL NOT RECEIVE ANY ADDITIONAL TESTIMONY FROM THE AUDIENCE, BUT WE MAY ASK QUESTIONS OF ANYONE WHO HAS TESTIFIED.

10. **COMMISSION DISCUSSION/ACTION.** IT IS OUR INTENTION TO MAKE A DECISION THIS EVENING ON EACH ISSUE BEFORE US. DECISIONS OF THE PLANNING COMMISSION MAY BE APPEALED TO THE CITY COUNCIL. IF YOU DESIRE TO APPEAL A DECISION, PLEASE CONTACT THE COMMUNITY DEVELOPMENT DEPARTMENT DURING NORMAL OFFICE HOURS FOR INFORMATION ON THE PROCEDURES AND FEES INVOLVED.

The Planning Commission's decision on these matters may be subject to further review or may be appealed to the City Council. For further information, contact the Milwaukie Community Development Department office at 786-7650.

Milwaukie Planning Commission:

Michael Smith, Chair
Bryan Cosgrove
Tim Havel
Terry LaRocque
Pat Lent, Vice-Chair
Charles Stoudt

Community Development Department Staff:

Maggie Collins, Community Development Director
Dan Pava, Senior Planner
Susan Heiser, Senior Planner
Jeanne Garst, Office Assistant
Marcia Hamley, Office Assistant
Shirley Richardson, Hearings Reporter

CITY OF MILWAUKIE

COMMUNITY DEVELOPMENT DEPARTMENT

MEMORANDUM

Date: December 2, 1997
File Nos.:CPA-97-03;
ZA-97-03; &
ZC-97 03

Continuation of Public Hearing Date: December 9, 1995

Applicant: City of Milwaukie

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PROPOSAL

The Planning Commission is requested to prepare recommendations to the City Council regarding:

- Comprehensive Plan Text and Map Amendments to Chapter 4 (Land Use) to Implement the Milwaukie Regional Center Master Plan (CPA-97-03) *Legislative*; and

- Zoning Code Text Amendments to Section 100 (Definitions) and Adding Section 318 (Mixed Use Overlay) to Implement the Milwaukie Regional Center Master Plan (ZA-97-03) *Legislative;* and

- Zoning Map Amendments to Implement the Milwaukie Regional Center Master Plan (ZC-97-03) *Major Quasi-Judicial*

BACKGROUND

The Planning Commission has held two public hearings and taken public testimony on CPA-97-03, ZA-97-03 and ZC-97-03 on October 28, and November 25, 1997. These applications were continued until the December 9 public hearing for Commission discussion and deliberation, although the public testimony was completed at the November 25 meeting.

DISCUSSION

The Commission is considering four related but separate applications that are proposed to implement the Regional Center Master Plan. The proposed Comprehensive Plan text and map changes are legislative actions that should be considered first. The proposed new Section 318 Mixed Use District and Section 100 definitions are legislative actions that should be discussed next. Once these three applications have been discussed, it would be appropriate to discuss the proposed quasi-judicial zone map amendments that would result in changes to current zoning within Subarea 1, the Murphy, Proto-Tool, McFarland, and Pendleton Sites. Proposed Findings have been drafted and are included in the November 25 staff report.

RECOMMENDATIONS

That the Planning Commission recommend approval of CPA-97-03 (text and corresponding changes to Map 7, as contained in Exhibit 3 of the November 25, 1997 staff report, and Exhibit 1 Revision 1 displayed at the November 25 and December 9 public hearings), to the City Council. Alternatively, in accordance with Section 1011 of the Milwaukie Zoning Ordinance, the Commission may elect to recommend denial of the proposed text amendments to the City Council. The Commission may also deny the proposed map amendments, in which case, the decision of the Commission is final unless appealed to the City Council.

That the Planning Commission recommend approval of ZA-97-03, (text amendments to the Milwaukie Zoning Ordinance included as Exhibits 4 and 5 of the November 25, 1997 staff report), to the City Council. Alternatively, in accordance with Section 1011 of the Milwaukie Zoning Ordinance, the Commission may elect to recommend denial of the proposed text amendments to the City Council. Alternatively, in accordance with Section 1011.4 of the Milwaukie Zoning Ordinance, the Commission may deny the proposed map amendments, in which case, the decision of the Commission is final, unless appealed to the City Council.

That the Planning Commission recommend approval of ZC-97-03, (Zoning Map Amendments as depicted on Exhibit 1, Revision 1, dated November 25, 1997) to the City Council based upon the findings contained in this report. Alternatively, in accordance with Section 1011.4 of the Milwaukie Zoning Ordinance, the Commission may deny the proposed map amendments, in which case, the decision of the Commission is final, unless appealed to the City Council.

CITY OF MILWAUKIE

MEMORANDUM

TO: **MILWAUKIE PLANNING COMMISSION**

FROM: **JEANNE GARST, CD OFFICE ASSISTANT**

RE: **MATERIALS FROM COUNCIL PERSON KAPPA**

DATE: **DECEMBER 2, 1997**

Attached you will find some information on Financing Construction Through Development Fees. City Councilor Kappa asked that this information be distributed to you. If you have any questions you can contact Pat DuVal at 786-7502

COMMUNITY DEVELOPMENT • PUBLIC WORKS
6101 SE JOHNSON CREEK BLVD.
MILWAUKIE, OREGON 97206
PHONE: (503) 786-7600 • FAX: (503) 774-8236

FYI from
Rob Kappa

*Financing Residential Construction Through Development Fees: An Empirical Investigation**

Marla Dresch

and

Steven M. Sheffrin

Department of Economics
University of California, Davis

Address Correspondence to:

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Prepared for the 53rd Congress of the International Institute of Public Finance

*This research was supported by the Public Policy Institute of California.

I. *Introduction*

This paper analyzes the economic consequences of explicit and implicit fees imposed on new residential construction and presents the results of an econometric investigation of their effects on housing prices. Our work is based on a new and comprehensive data set that we compiled that takes into account all the fees and bond issues associated with new residential construction in a large county in Northern California over a five year period. This work allows to explore the economic incidence of these fees and highlight alternative perspectives.

Throughout the United States, there has been a growing realization that the property tax revenues generated through growth are not sufficient to finance the full cost of development. As Alan A. Altshuler and Jose A. Gomez-Ibanez (1993) have described, the conventional wisdom prior to 1970 was that normal increases in personal income would be associated with healthy fiscal climates, as rising incomes and a growing tax base would provide sufficient funds for infrastructure development. The new conventional wisdom, however, is that growth, in particular additional residential development, does not provide sufficient funds to finance infrastructure.

This change in perspective has been accompanied by an increase in the degree to which communities use exactions (mandates that developers expend resources for public facilities or services) or development fees to finance residential construction. This trend has been accelerated by the limitations that voters have placed on the revenues available from property taxation. With restrictions on property taxation, there are limited tools available to finance infrastructure for new development. Other than grants or subsidies from higher levels of government, the only alternatives available to communities to finance residential construction are assessment bonds or development fees. California communities have been particularly aggressive in using

these tools, in part, because of the strict limitations placed on the property tax by Proposition 13, the tax limitation measure passed in 1978. Despite the importance of development fees to finance residential construction, there has been relatively little empirical work on this topic and none that takes into account the full complexity of fees that are levied on a regular basis today.[1]

The conventional analysis of exactions or development fees is to portray them as taxes on development. As taxes on development, basic economic analysis tells us they will affect both the price and the quantity of housing. Specifically, exactions and development fees are claimed to raise housing prices and lower the amount of housing produced. While the conventional analysis of exactions and development fees as taxes on development is often taken as an article of faith, the conventional view is seriously incomplete along several dimensions.

An alternative view, rooted in the modern theory of urban public finance, takes a somewhat different perspective. The alternative view is based on the assumptions of fully mobile households within an urban area, perfect competition in the building industry, and an inelastic supply of land for urban development. According to this view, prices of housing increase only if the exactions and development fees provide services that are valued by the residents in the new development. While increases in services may lead to higher prices for housing, the utility level of households remains unchanged in this framework.

Development fees and assessment bonds have different effects on housing prices. As a base case, suppose that exactions or development fees are used to finance infrastructure, the infrastructure investment is targeted completely to new residents, and that the new homeowners fully value the infrastructure investment. In that case, housing prices will rise reflecting the value of the infrastructure investment. However, as John Yinger (1996) has recently pointed out, since homeowners will pay property

taxes on the increased value of their homes, the price of homes will rise less than the value of the investment. Since, by assumption, the building industry is competitive, even in this case, the price of land will fall. However, if services are provided by assessments on individual properties, there will be no effect on housing prices as the benefits from the services will just equal the cost of the assessments.

Our data set consists of a comprehensive set of fees imposed on new housing, the prices and characteristics of residential homes which sold during our sample period, and full details on assessment bonds associated with properties. Our research has uncovered that fees and assessments are quite significant in magnitude. In one geographical area contained in our sample, fees and assessments averaged nearly twenty percent of the price of a new home. The econometric work in our study is based on hedonic regressions in a cross-section, time series framework. In addition to a set of variables that characterize quality differences in new housing, we also allow for location effects and time-varying prices for the hedonic fundamentals to take into account changes in market conditions over the period. We also control for the fact that some of the fees are related to the square-footage of properties while other fees are lump sum in character.

We first present results on the effects of fees on the prices of new housing. The data allow us to distinguish econometrically between the impacts of different types of fees and bonds on housing prices. Some fees and bonds may provide benefits which flow outside the direct area of new construction and thus may be differentially reflected in housing prices. Using a priori knowledge of the services provided by the different bonds and fees, we can explore the implications of the alternative theories of the incidence of development fees.

We also look at the effects of development fees imposed on new construction on the prices of existing housing. Fees levied on new homes can also, in principle, raise

prices for existing homes. If exactions are viewed as taxes that raise prices for new homes, there will be substitution into existing homes and an accompanying increase in price. Moreover, even under the alternative view, if development fees or exactions are used to provide services that benefit existing homes, prices will also increase to reflect the value of these services. We present empirical estimates of the extent to which fees on new construction spillover into the sales prices for existing homes.

The next section of our paper describes in more detail alternative models of exactions and their implications for housing prices. We then discuss our data on development fees in Section III. Finally, we present our econometric estimates of the effects of fees on prices of both new and existing housing.

II *Alternative Perspective on Development Fees*

Development fees were initially portrayed in the literature as simply taxes on new construction. Just like any other tax imposed in a market, conventional analysis suggests that they will affect both price and quantity. In this case, exactions and development fees were claimed to raise housing prices and lower the amount of housing, with the precise amounts depending upon the elasticities of supply and demand.

John Yinger (1996) has recently developed a more specific model of exactions in a metropolitan area that has a number of interesting implications. The starting point for his analysis is utility maximizing households who place bids for housing. The utility of households depends upon a composite consumption commodity, the stock of housing services, standard public goods (such as schools) and infrastructure services. Because there are multiple communities in the area which provide a wide range of housing opportunities, households are assumed to have a fixed level of utility. Their budget constraint states that their income must be split between consumption of the

composite commodity, the value of the housing services (the price of housing services times the stock of housing services), property taxes based on the value of housing services, and any assessments on property.

In his bidding framework, the household selects the highest bid per unit of housing services consistent with its budget constraint and level of utility. Specifically, the maximization problem facing the household is to choose the consumption of housing services and the composite commodity to maximize the price per unit of housing services subject to a utility constraint. The supply side of the model consists of developers or construction firms that build houses (provide housing services) using capital and labor. The firms maximize profits taking the price of capital as given and the price of housing services as determined by the bidding process by households. The price of undeveloped land will adjust in the model to insure zero profits for the construction firms. Exactions or development fees enter as a cost to the firm.

Within this framework, Yinger first considers the case in which exactions are used to provide infrastructure services. The "investment" in infrastructure is chosen so that it just meets an appropriate cost-benefit test as determined by consumers marginal valuations of the composite commodity and infrastructure investment. In this case, Yinger finds exactions still reduce the price of land. The key reason for this result is that the increase in the value of housing services is subject to property taxation. If there were no property taxation, the price of land would not fall.[2] In general, the effect on land prices depends on how consumers of new housing value the added infrastructure. Does it provide full value to them or do the benefits accrue to existing residents in the community?

Contrast this outcome with assessment districts, in which infrastructure is financed with bonds that are liabilities of homeowners. While new homeowners value the infrastructure investment, they also must pay directly for this investment through

their assessment district. Since, by assumption, the benefits of the investment just equal its costs, there will be no effect on housing prices nor on landowners. However, in California, assessors have the option of adding local assessment bonds to assessed valuations.[3] Consequently, the owner will pay taxes on the value of the infrastructure investment, just as in the case of developer fees and exactions. The result is that land will also bear part of the burden as it did with development fees.

Traditionally in the United States, property taxes on existing development were used to finance infrastructure for new development. In these situations, owners of land in existing residential areas would bear part of the burden of new development. Since housing prices would rise in new areas by approximately the amount of the infrastructure investment, land prices in new areas would also tend to increase because the demand for their land would increase and land owners would not have to pay all the costs necessary for development. Therefore, owners of newly developed residential land would experience a one-time capital gain. However, over time as growth continues, these new areas would become subject to property taxes for further development. They then would take their turn in paying for development. There would be rough parity over time as landowners in newly developed areas would eventually take their turn financing further development.[4]

Yinger's model highlights the key role that exactions and development fees can play in providing valued infrastructure services for new development and whether they accrue to new or existing residents. However, it also abstracts from certain considerations that may be important in practice. First, competition in the housing market (both on the consumer and producer side) may not be as perfect as the model assumes. There may be limited opportunities for new homes in an area. Moreover, developers may develop "relational capital" with growth-sensitive city officials who may subsequently limit entry. Both of these factors can influence the incidence of exactions.

Second, uncertainty can play a key role in setting. A developer typically purchases land and pays exactions well before commencing construction. Changes in demand in the housing market between initial construction and sale are then reflected in returns to developers (in their role as landowners) and not in land prices. These demand induced price changes can break the link between measured changes in housing prices and outlays for development fees and exactions. In many models of taxation there are continuing relations between parties (such as employers and employees) which lead to a distinction between the short-run and long-run incidence of a tax. In this case, however, there is simply a one-time transaction between the developer and the purchaser of a home. Thus, short term factors are likely to be quite important in the degree to which exactions are reflected in housing prices.

III. *Fees and Assessments in a Northern Californian County*

In our work, we studied the impact of development fees in Contra Costa County, a Bay Area county situated between the urban areas of San Francisco, Oakland and Berkeley to the west and the agriculturally based central valley to the east. It covers 733 square miles and is the ninth most populous county in California. Up until about 1950, the county was mainly agricultural. In the 1950s, the county's population soared due to increased hiring of local industrial plants. In the 1980s, the county experienced a twenty percent increase in population and a fifty two percent increase in employment. In 1990, in response to the phenomenal growth that occurred in the prior decade, the county approved rules which stipulated that 65 percent of the county must be preserved for agriculture, open space, wetlands, parks and other non-urban uses. Urban-limit lines were created defining boundaries for suburban style growth and development. Development outside the boundaries was limited to one house for every five acres.

There were two principal areas in the county in which development occurred in

the 1990s, the period for our study. We call these "East" and "West" County. East and West County are quite distinct. The communities in West County are upscale, have excellent schools, and are close to employment centers. Schools in East County are more typical of California, statewide averages and the commutes are long and fraught with traffic jams. As one would expect, homes are more affordable in East County and somewhat smaller than those in West County. Data for the mean sales for new housing for new housing for the communities in East and West County for the years 1992 through 1995 are contained in Table 1. Average housing values for West County values remained stable around $400,000, while average East County values declined quite steadily from $198,000 in 1992 to $184,000 in 1995 over the period. Because of the differences between the areas, we treated each area separately in our econometric work.

Since fees changed over time, it is important to specify precisely which fees apply to specific properties. The focus of this study is on the consequences of the fees and exactions actually imposed on new housing. We therefore attempted to measure the fees that the builders actually paid on each property, rather than the fees that may have been in place when a property was later sold.

We collected information on the following types of development fees: school, water and sewage, building permit and inspection, traffic, parks, fire, and community development. Most of these fees are charged at the time building permits are taken out and apply to each unit. We did not include fees such as grading, engineering, planning and drainage fees. These are typically collected prior to the building permit, apply to the entire subdivision as opposed to the new residence, and are difficult to estimate. We therefore underestimate some of the fees applied to new construction.[5]

We obtained fee information for all building permits for new single family development from 1987 to 1996 in the unincorporated areas of the county (and

Clayton) directly from Contra Costa County. The file included the parcel number, city, building permit number, date of permit, type of fee, status of the fee (paid or not), and the amount of the fee. While most fees are charged at the time the building permit is taken out, some fees are charged prior to this time and are based on the "vested date" of the subdivision. The vested date typically comes after the tentative map but before the final map is approved. Typically, traffic and park fees are determined at the time the subdivision is vested.

Fees for incorporated cities and other entities were collected from the cities and entities themselves. Most cities charged fees as of the day the building permit is taken out. Most cities only had readily accessible information going back to the early 1990's. Thus, the time frame of this study was limited by the availability of fee information from cities.

School fees were collected from the districts in which new sales occurred. School fees are based on the square footage of the residence at the time at which the building permit is taken out. Fees started at $1.52 per square foot for the years 1990 and 1991, rose to $1.65 for 1992 and 1993, and reached $1.72 for the years 1994 through 1995. They are currently at $1.84 per square foot. Most school districts levied the maximum allowable square footage charge and there were no additional school fees levied by the cities or the county.

An important issue in our work was the assignment of fees to individual housing units. For the unincorporated areas of the county, we merged the fee information with the sales of new properties by parcel number. Fees charged by other entities (schools, sewage and water) were based on the date that the building permit was taken out. In addition, traffic and park fees were added based on the vested date of the tract that contained the parcel. For the incorporated areas of the county, however, the date the building permit was issued was not available. To estimate the

date of the building permit date, we used data from the unincorporated areas to estimate the mean time between when the building permit was issued and the subsequent sale of the property.[6]

While some cities financed traffic, school and park improvements with development fees, others used local assessment bonds or Mello-Roos bonds, an assessment bond authorized by California law frequently used for new development.[7] We estimated the outstanding indebtedness for each property in our sample based on data from Muni Financial.[8]

Table 2 contains average fee data by type for East and West County for 1992-95. Fees for permit/inspection, schools, and community development are based on square-footage while other fees are fixed amounts for each property. We make use of this distinction in our econometric work. Table 3 presents data on total fees and bonds for 1994 for all the communities and also expresses them as a percent of sales price. In West County, total fees and bonds are approximately 7 percent of sales price while in East County, they ranged from 7 to 19 percent.

IV. *Econometric Analysis*

In our econometric work, we use hedonic regression to estimate the reduced form effect of fees on housing prices. Our methods can shed light only on the portion of the fees borne by consumers of housing on the one hand, and developers and landowners on the other We cannot partition the impacts between landowners and developers because of data limitations.

In measuring the impact of fees on housing prices, we immediately confront three difficulties. First, the houses that are constructed and sold in Contra Costa County will differ in quality and in the amenities they offer. This will be reflected in

differences in prices. Second, we will be examining prices for new housing over the period from 1992 to early 1996. During this period, there was a general decline in housing prices throughout the state and, in particular, in Contra Costa County. Finally, we will be examining prices for new housing in different locations within the county. These locations differ in their desirability, in particular, commuting time to Bay Area employment locations as well as the quality of their schools and other public services. Prices of housing will also reflect these differences.

Hedonic regressions can control, to some degree, for differences in quality of housing. However, since hedonic regressions are by nature approximations, they work best when the sample is relatively homogeneous. For that reason, we do separate analyses for East and West County. To control for changes in market conditions, our preferred approach was to allow the price per square foot in the hedonic regression to vary over time. Specifically, we interacted a dummy variable for every four month period in our sample with the square-footage variable. The four month period was chosen to reflect the seasonality in the real estate market and to reflect the rapid changes in prices that occurred during this period. Although more complex interactions are possible, the approach we have taken is straightforward and worked well for both East and West County and in sub-samples of our data.

To control for differing community characteristics, we ideally would like to measure explicitly as many characteristics of communities as we could and enter them as control variables in our basic regression. Unfortunately, the number and quality of control variables that we have are quite limited. We experimented with measures of commute time to the Bay Area, SAT scores for schools, and local crime rates but discovered that these were not sufficient to account for the other quality of life measures that are critical to housing price determination. These measures were just too crude to distinguish between communities and left out too many unmeasured factors that would affect housing prices.

We were thus led to introducing dummy variables for each community. This procedure required us to estimate our equations by pooling data across different years and communities in our sample. It is precisely by pooling the data across years and across communities that we are able to estimate these quality differences across locations and market conditions over time.

There is one final modeling issue that needs to be addressed. As we noted above, there are two distinct types of development fees: those that are flat charges and those that are based on square-footage. We needed to adopt different econometric procedures for these two types of fees.

The problem that we encountered was that it is practically impossible to disentangle the effects of square-footage based fees on housing prices from the effects of square-footage itself on housing prices. The hedonic regressions simply try to approximate the relationship between square-footage and price. However, for those fees based on square-footage, there will also be another relationship between square-footage and fees. Larger homes will pay larger fees. Larger homes are also more highly valued in the market. As a practical matter, it is not possible to separate out the effects of the square-footage related fees on prices from the effects of square-footage itself.

If we knew the exact relationship between price and square-footage, then we could circumvent this problem and measure the incremental effect of the fees. However, we do not know the precise relationship between price of homes and square-footage and must approximate it in our regressions. Because our relationship is inexact, we will generate spurious correlations if the fees based on square-footage are included in our regressions.

We dealt with this problem in two distinct ways. First, we simply ran regressions including only non-square-footage fees, thereby excluding fees based on square-footage. In interpreting the econometric results, the coefficients for the variable for square-footage will reflect both the direct link between price and square-footage as well as the effects of fees that are linked to square-footage. The difficulty with this approach is that omitting information about the square-footage based fees could potentially bias our estimates of the non-square-footage fees. As a second alternative, we include as a variable in the regression a measure of square-footage fees which equals the average square-footage fee for the community in the year in which the home was sold. This variable captures the typical square-footage fees in the community at that time. Fortunately, our regression results from both procedures are quite similar.

We included the following variables in all of our regressions:

Variable Symbol	Variable Definition
Intercept	Intercept in regression
Square Footage	square-footage
Dummy Square Footage	interactive dummy for large square-footage (see text)
Lot Square-Footage	lot square-footage
Dummy Lot Square Footage	interactive dummy variable for lot sizes >10,000 s.f. (West County only)
Bath	number of bathrooms
Bed	number of bedrooms
Pool	pool
View	lot with view
Fees, Non-Square-Footage	fees not based on square-footage
Mello-Roos	Mello-Roos bonds on house
Other Bonds	other bonds on house

In addition to these variables, as we discussed above, we included dummy variables for communities (using one community as the base) and allowed the square-footage variable to vary over four month periods.[9] We also ran supplemental regressions with a variable equal to the average square-footage fees for the community in the year the house was sold.

Once homes reach a certain threshold size, additional square-footage does not contribute in the same manner to the value of a home as does the basic square-footage. To capture this effect, we created a new variable (Dummy Square Footage) that allowed the square-footage above a certain threshold level to contribute to the price of a home in a differential manner. Because the average home size was larger in West County than East County, we chose the thresholds to be 3500 and 2500 square feet respectively. As an alternative, we also experimented with allowing the square-footage variable to enter the regressions with both a linear and quadratic term but our original approach proved to be more robust on sub-samples of the data. For regressions in West County and for regressions of sales of existing homes in East County, we also used an interactive dummy for lot sizes which exceeded 10,000 square feet. New houses in East County typically had smaller lots so we did not use this variable for regressions for new housing in East County.

Tables 4 and 5 contain our results for East and West County. These regressions omit the square footage variable and only include non-square-footage fees. The shaded portions of the tables are the effects of development fees and bonds. Concentrating on this part of the tables, the regressions for East and West County tell very different stories. In East County, an increase in non-square footage of $1 increases housing prices by $0.25 while in West County they increase by $1.88 (although the coefficient is not significantly different from 1). When the average square-footage fee variable is added, the values change slightly to $0.26 and $1.66 respectively.

We believe the difference in our results for fees are largely driven by market conditions. During the period of investigation, the real estate market in East County was depressed and it was truly a buyers market. Our regression results indicated that prices per square-foot kept falling throughout the period. Moreover, in Antioch, which accounts for a large percentage of the sales in East County, developers were forced to make payments on their Mello-Roos bonds whether or not sales had occurred and were under financial pressure to sell their properties. In these circumstances, buyers were apparently able to drive a more aggressive bargain with the result that a significant component of exactions and fees were borne by developers and landowners and not homeowners. In West County, our time-varying square-footage prices indicate an initial fall in prices but a subsequent recovery back to prior levels.

The results on Mello-Roos bonds, which were only used in East County, indicate that roughly one dollar worth of bonds on a home reduced the value of the home by $.89. This result seems to suggest that the services provided through the Mello-Roos district were not valued by the households required to pay the bonds. There appears to be direct evidence on this point. Most of the Mello-Roos activity occurred in Antioch. First, residents expressed discontent with the Mello-Roos district because services were not as forthcoming as promised by the developers. Second, many residents in Antioch who paid the Mello-Roos fees felt that the benefits provided served the entire City of Antioch and not their specific neighborhoods. In one case, for example, proceeds from Mello-Roos bonds were used to build a water-slide park that could be used by residents throughout the city. Later, protests led to discounts at the park for residents of the Mello-Roos district.

On the other hand, the coefficient on assessment bonds were not significant in either area. This is consistent with Yinger's analysis of the effect of assessment bonds

Table 6 explores the effects of fees on prices of existing homes. Fees levied on new homes can also, in principle, raise prices for existing homes. If exactions are viewed as taxes that raise the prices of new homes, there will be substitution into existing homes and an accompanying increase in price. In addition, if development fees or exactions are used to provide services that benefit existing homes, prices can will also increase to reflect the value of these services.

To explore these possibilities, we calculated the average total of non-square footage fees and assessments in each jurisdiction for each time period. We then included this variable (Average Fees and Assessments) in a regression explaining the sales of existing homes. The idea behind this regression is that the average fee and assessment burden provides a measure the potential spillover effects onto the prices of existing properties.[10] In our base case, we eliminated the square-footage based fees because the average square-footage of new housing could vary over time and we wanted to avoid spurious correlations. It is important to recognize that using a single value for all sales in a given area during a given time period can only approximate the actual spillover that may vary by type of property.

Our work looks exclusively at the value of homes that sell in a given year, rather than all homes. Proposition 13 in California limits increases in assessed value to a maximum of two percent a year and thereby can create a divergence between the assessed of a property (the data we have) and its true market value. When a property is sold, however, market and assessed value are again equal to each other. In addition to the variables we included in previous regressions, we also add the age and age-squared of the home to capture some differences in quality of homes that are age-related.

We ran regressions for both East and West County. In West County we never found any relationship between the average of fees and assessments in a jurisdiction and the sale price of existing homes. However, we did find a consistent relationship for East County. The key variable is the last, shaded row in Table 5.3. We estimate that prices for existing prices rise by approximately $.23 cents for every dollar of average fees and assessment in the community that are levied on new housing.

We explored several other specifications for East County. Using total fees and assessments (including square-foot related fees) produced similar qualitative results. We also tried breaking up the sample by age of the property. We did not find any significant effects for property that was between 1 and 5 years of age but did find significant effects of fees on property that was between 6-15 and 15-30 years of age. This result can perhaps be explained by the fact that houses between 1 and 5 years of age were subject to fees which are not captured in the regression.

As we noted, these increases in price could arise from substitution from more expensive new housing or because of a spillover of the services provided by the fees and exactions on new housing. Although we do not have any direct evidence on this point, the fact that we find effects on existing housing only in East County is suggestive that these may be the consequences of spillovers or externalities and are consistent with our prior evidence that suggests that assessments did not provide strictly local benefits in East County.

V. *Conclusion*

Our results are striking in that for a single county, we observed significant differences in the degree to which development fees are passed on to housing prices. It appears that underlying economic conditions in the housing market are important determinants of the extent to which exactions affect housing prices. Static, equilibrium

models ignore this important effect. Our results on Mello-Roos bonds, coupled with some a priori evidence, suggest that the extent to which fees and bonds provide services exclusively to new, as opposed to existing residents, is also important. An important extension of this work would be to explore the sensitivity of the key results to alternative econometric approaches to the underlying hedonic regression.[11] Alternative methods might permit a more unified treatment of square-footage and non-square-footage based fees in the econometric analysis.

ENDNOTES

[1] Representative prior work includes: L.D. Singell and J.H. Lillydahl (1990), C.J. Delaney and M.T. Smith, (1989), and A. Skaburskis and M. Qadeer (1992). These studies analyzed fees in Florida and Canada.

[2] Since property values increase, it is possible that the fall in the property tax rate in a balanced budget incidence framework could prevent the land price from falling, but through examples, Yinger concludes this case is unlikely.

[3] In our study of Contra Costa County, there are two different types of bonds: local assessment bonds and Mello-Roos bonds which we describe below. Assessors do add local assessment bonds to property valuations. They do not add Mello-Roos bonds on the rationale that they provide services which are more external to the property.

[4] Despite this rough parity over time, land prices rise because the benefits come prior to the later taxes and some of the later property taxes will fall on structures as well as land.

[5] The fees charged at the subdivision level are approximately uniform across jurisdictions so that omission of these fees should not bias our results.

[6] Specifically, we examined the distribution between the issuance of building permits and subsequent sale for four seasons in the unincorporated area and used the mean of the distribution in each season to estimate the building permit date in the incorporated areas.

[7] Mello-Roos districts can be created by a majority vote of the initial landowners in a development and thus are easy to create when there are relatively few initial landowners.

[8] The data are described in more detail in Dresch and Sheffrin (1997).

[9] We interacted a dummy variable for each four month period with the square-footage variable.

[10] In principle the spill-over might vary with the type of fee or assessment. We experimented with separating the total assessment burden into fees, Mello-Roos bonds, and other bonds, but the results were not stable over sub-samples of the data.

[11] See Wallace (1996) for a recent review of hedonic methods.

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Table 2

DEVELOPMENT FEES BY TYPE
EAST AND WEST COUNTIES
1992-95

	EAST COUNTY		WEST COUNTY	
Fee Type	**Fee Amount**	**Percent of Total**	**Fee Amount**	**Percent of Total**
Permit/Inspection*	$1,305	8.1	$2,633	10.9
Water and Sewage	$7,246	44.9	$12,961	53.6
Traffic	$3,194	19.8	$1,997	8.3
Fire	$325	2.0		
Parks	$1,678	10.4	$1,814	7.5
Community Development*	$252	1.6	$430	1.8
School*	$3,492	21.6	$4,347	18.0
Exemption for Bond District**	($1,340)	-8.3		
Total	$16,153		$24,182	

*Fees based on square-footage
**Fee exemption for bond district in Brentwood

TABLE 3

[illegible]AGE TOTAL FEES AND BONDS
[illegible]ST AND WEST COUNTY, 1994

[illegible]opment	Mello-Roos Bonds (dollars)	Local Bonds	Total	
[illegible]	5,420	5170	26,744	
				Percent of Sales Price
[illegible]	11,338	8,621	34,638	19.4
[illegible]			11,993	6.9
[illegible]		6,218	23,890	12.0
[illegible]	4,891	216	22,217	7.7
[illegible]			18,967	12.1
[illegible]		5,405	29,479	
				Percent of Sales Price
[illegible]		11,478	33,325	7.3
[illegible]			25,975	6.8
[illegible]			29,932	7.5
[illegible]			22,893	6.7

Table 4

REGRESSION RESULTS FOR EAST COUNTY

Variable	*Coefficient*	*Std. Error*	*T-Statistic*
Intercept	39,285	2363	16.85
Square-Footage	74.11	1.07	69.20
Dummy Square-Footage	6.51	0.35	18.69
Lot Square-Footage	3.11	0.11	27.12
Bath	-4565	805	-5.67
Bed	-2860	431	-6.63
Pool	14,665	3739	3.92
View	26,101	2080	12.55
Fees, Non-Square-Footage	0.25	0.12	2.09
Mello-Roos	-0.89	0.10	-8.49
Other Bonds	-0.05	0.04	-1.19

Sample Size: 6236

Adjusted R^2: 0.90

Notes: Regression includes dummy variables for Clayton, Antioch, Bay Point, and Brentwood with Oakley as the base. It also includes time dummies interacted with Square-Footage for all four month periods from May 1992 (January through April of 1992 as the base) to the first four months of 1996.

Table 5

REGRESSION RESULTS FOR WEST COUNTY

Variable	*Coefficient*	*Std. Error*	*T-Statistic*
Intercept	6043	13,066	0.47
Square-Footage	105.76	3.12	33.89
Dummy Square-Footage	12.69	1.17	10.86
Lot Square-Footage	5.28	0.56	9.35
Dummy Lot Square-Footage	1.29	0.35	3.67
Bath	-325	2899	-0.11
Bed	-8,735	1,623	-5.38
Pool	28,024	16,790	1.67
View	9828	3808	2.58
Fees, Non-Square-Footage	1.88	0.65	2.86
Other Bonds	0.004	0.27	0.016

Sample Size: 2059

Adjusted R^2: 0.84

Notes: Regression includes dummy variables for San Ramon (unincorporated), San Ramon (incorporated), Danville (unincorporated), with Danville (incorporated) as the base. It also includes time dummies interacted with Square-Footage for all four month periods from May 1992 (January through April of 1992 as the base) to the first four months of 1996.