TRANSPORTATION & REGIONAL GROWTH

a study of the relationship between transportation and regional growth

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Development Impact Fees for Minnesota?

A Review of Principles and National Practices

Report #3 in the Series:
Transportation and Regional Growth Study

Prepared by
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This report explores the social, economic, and legal bases for imposing development impact fees, a type of development exaction imposed by local governments in some states. It introduces the concept of charging for infrastructure and outlines the basic issues. It describes the history of financing public improvements, leading to the imposition of impact fees. Building on this background, the report then outlines the advantages and disadvantages of using impact fees as a financing mechanism to allow new growth to pay its own way. Methods of calculating impact fees are explained and examples of fee usage around the country are included, including cases from the Twin Cities of Minneapolis and St. Paul.

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TRANSPORTATION AND REGIONAL GROWTH

The Transportation and Regional Growth Study is a research and educational effort designed to aid the Twin Cities region in understanding the relationship of transportation and land use. Many regions of the country are experiencing rapid commercial and residential development, often accompanied by population growth and growth in the total area of land developed. This has caused a range of concerns, including the direct costs of the infrastructure needed to support development and the social and environmental side effects of development patterns.

This study is an effort to better understand the linkages between land use, community development, and transportation in the Twin Cities metropolitan area. It is designed to investigate how transportation-related alternatives might be used in the Twin Cities region to accommodate growth and the demand for travel while holding down the costs of transportation and maximizing the benefits. The costs of transportation are construed broadly and include the costs of public sector infrastructure, environmental costs, and those costs paid directly by individuals and firms. Benefits are also broadly construed. They include the gains consumers accrue from travel, the contribution of transportation and development to the economic vitality of the state, and the amenities associated with stable neighborhoods and communities.

The University of Minnesota's Center for Transportation Studies is coordinating the Transportation and Regional Growth Study at the request of the Minnesota Department of Transportation and the Metropolitan Council. The project has two components. The first is a research component designed to identify transportation system management and investment alternatives consistent with the region's growth plans. It has six parts:

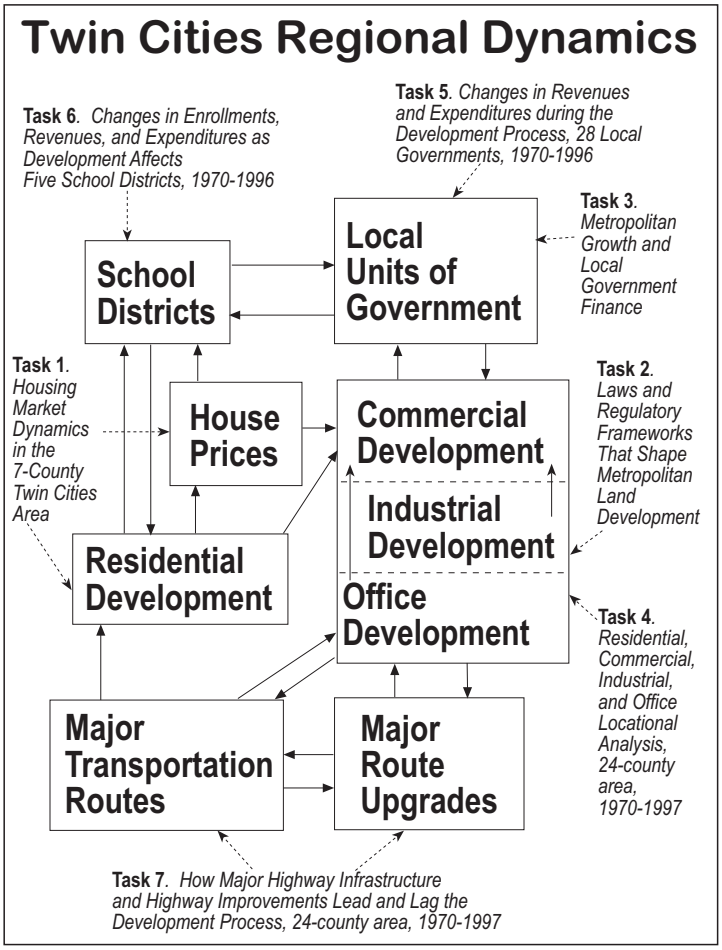
1. Twin Cities Regional Dynamics
2. Passenger and Freight Travel Demand Patterns
3. Full Transportation Costs and Cost Incidence
4. Transportation Financing Alternatives
5. Transportation and Urban Design
6. Institutional and Leadership Alternatives

The first three research areas are designed to gather facts about the transportation system and its relationship to land use in the Twin Cities metropolitan area. The other three research areas will use these facts to investigate alternatives in financing, design, and decision making that could have an impact on this relationship. Results of this research is and will be available in a series of reports published for the Transportation and Regional Growth Study.

The study's second component is a coordinated education and public involvement effort designed to promote opportunities to discuss the relationship between transportation and growth based on the research results. It is believed that this dialogue will help increase knowledge and raise the level of awareness about these issues among the study's many audiences, including decision makers who create policy, agency professionals who implement policy, stakeholder groups who try to influence policy, and members of the general public who experience the consequences of those policies.

TWIN CITIES REGIONAL DYNAMICS

Twin Cities Regional Dynamics, Part I of the Transportation and Regional Growth Study, synthesizes the complexity of interactions among transportation infrastructure and flows, housing market dynamics, economic development processes, local government finances, and regulation, and how these singly and jointly influence the shape and substance of metropolitan growth.



The findings of these reports raise additional questions and highlight the need not only for more detailed analyses, but for new ways of looking at metropolitan growth dynamics. The overriding questions in our examinations of Twin Cities regional dynamics and parallel dynamics in other major metropolitan areas are: What are the true costs and benefits of various metropolitan land use and transportation development options? Who pays and who benefits from different options? And what difference does it make?

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Executive Summary

Over the last two decades, local governments throughout the country have been looking for additional sources of revenue. Cuts in federal and state intergovernmental revenues, historically high interest rates, changes in tax-exempt bond markets, and voter resistance to increased taxes have forced governments to increase their reliance on fees and user charges.

Local governments face a dilemma of escalating demands without sufficient resources to meet them.

Local governments face a dilemma of escalating demands for public facilities and services caused by new development without having sufficient revenues to finance these demands. Existing residents are resistant to higher taxes and fees to fund the services and improvements required by new residents.

Impact fees are viewed as a way for growth to "pay its way."

In addition to problems of growth, many communities are struggling to finance backlog needs to bring aging or nonexistent systems of infrastructure up to modern standards. As a consequence of these problems, there is considerable interest in impact fees, which are charges to developers for off-site infrastructure improvements made necessary by the new development. Impact fees are viewed as a way for growth to "pay its way."

For growing jurisdictions, impact fees represent a vast store of potential revenue that can be tapped at less political cost than other sources.

In light of the economic pressures on local governments, it is clear why they have turned to impact fees. For growing jurisdictions, impact fees represent a vast store of potential revenue that can be tapped at less political cost than other sources. This practice does not mean, however, that impact fees are always the best solution or the wisest solution for infrastructure finance when taking account of social equity considerations and the need to maintain long-term community support for capital spending programs.

Impact fees pose several considerations simultaneously: legal, economic, technical, administrative, policy, and financing alternatives. When faced with a proposed future fee scheme, builders, business people, property owners, and future home buyers should study all sides of the issue at once, not just the legal or economic questions.

When faced with a proposed future fee scheme, we should study all sides of the issue at once, not just the legal or economic questions.

Impact fees raise fundamental social questions such as: Who really pays? How is the fee calculated? Where does the money go? How and where is the money spent? Who really benefits from the new or expanded public facilities? What is the impact of the fees on housing costs for new and for existing residents? How is business generation

Impact fees raise fundamental social questions:

Who really pays?

or expansion affected? How does an impact fee policy mesh with a community's and region's affordable housing policy? Is new development being required to pay its fair share, or something more? This report explores the social, economic, and legal basis for imposing impact fees. Chapter 2 gives an introduction to the concept of charging for infrastructure and outlines the basic issues. Chapter 3 describes the history of financing public improvements and how it led up to impact fees. The economic foundation of impact fees is explored in Chapter 4, with the legal foundation explained in Chapter 5. Based on this background, Chapter 6 outlines the advantages and disadvantages of impact fees as a financing mechanism. Chapter 7 explains how impact fees are calculated, and Chapter 8 gives examples of implementation from cities across the country, including the Twin Cities metropolitan area. Chapter 9 provides a summary and conclusion.

The main rationale for imposing development impact fees is to make new growth pay its way. Local case studies demonstrate that new development in a community often means that local government collects additional taxes and fees, but expenditures frequently rise even faster than revenues. Some studies show that imposing impact fees raises the cost of existing as well as new housing.

The main rationale for imposing development impact fees is to make new growth pay its way.

Advantages:
- ***heightened user equity***
- ***political advantage***
- ***developer support***
- ***reduced borrowing by local governments***
- ***a means to slow growth***
- ***the promotion of local land use, economic, and community planning***

There is no explicit statutory authority for municipalities in Minnesota to impose impact fees, although they are possessed of authority to impose certain types of development exactions. The advantages of impact fees include heightened user equity as beneficiaries pay something closer to a fair share of the infrastructure that they require; the political advantage arising from the fact that existing residents outnumber developers; developer support when it is feared that without the fees important infrastructure cannot be supplied in a timely fashion; reduced borrowing by local governments; a means to slow growth by raising its price to new households and businesses; and the promotion of local land use, economic, and community planning.

Disadvantages accompanying the imposition of development impact fees include an increase in new house prices, which can be especially significant for communities trying to expand their inventory of low- and moderate-priced units; and the equity argument, which says that because existing residents never had to pay impact fees, new residents and businesses should not be obligated to do so.

Disadvantages:
- ***an increase in new house prices, which can be especially significant for communities trying to expand their inventory of low- and moderate-priced units***
- ***the equity argument: existing residents never had to pay impact fees, so new residents and businesses should not be obligated to do so***

Chapter 1

INTRODUCTION

Over the last two decades, local governments throughout the country have been looking for additional sources of revenue. Cuts in federal and state intergovernmental revenues, historically high interest rates, changes in tax-exempt bond markets, and voter resistance to increased taxes have forced governments to increase their reliance on fees and user charges.

Local governments face a dilemma of escalating demands for public facilities and services caused by new development without having sufficient revenues to finance these demands. Existing residents are resistant to higher taxes and fees to fund the services and improvements required by new residents. In addition to problems of growth, many communities are struggling to finance backlog needs to bring aging or nonexistent systems of infrastructure up to modern standards. As a consequence of these problems, there is considerable interest in impact fees, which are charges to developers for off-site infrastructure improvements made necessary by the new development. Impact fees are viewed as a way for growth to "pay its way."

Historically, developers and builders have provided necessary on-site infrastructure, often financed in part by grants from federal and state government. The first types of charges or "exactions" on development were "hookup" fees for utility service and dedications of land or payment of "in-lieu-of fees" for schools, parks, and roads. The newest financing mechanism, the "development impact fee," ideally charges new development the marginal-increase cost for services/facilities that are precipitated by that new development [1].

The evolution of impact fees as a type of development exaction has occurred due to a variety of circumstances. These include changes in the methods of providing infrastructure, changes in the economic and political climate, current revenue limitations on local governments, and the need for alternative methods of capital financing. Among the important arguments for exactions and impact fees is the attempt to insure that existing residents will not be forced to bear the costs of new facilities necessitated by new development.

Recent changes in the economic and political climate have contributed to the increasing difficulty facing local governments in providing and financing infrastructure. Three factors have contributed to this difficulty. First, federal policy calling for a balanced budget and altered spending priorities has reduced the federal role in capital facilities financing at the local level. Since the mid-1960s, both federal and state governments have increasingly turned to mandates on local government to provide for increased levels of environmental protection, increased quality of public education, and the upgrading of jail facilities, to name a few examples. For local government officials, these mandates from higher levels of governments are particularly burdensome because they are often completely unfunded. Local officials must devote portions of their limited fiscal resources to satisfying requirements dictated by federal and state governments rather than meeting the existing needs of their constituents.

Second, local government revenues have been limited by voter resistance to increased property taxes, and in many cases to general obligation bond issues, which are repaid from property taxes. Traditionally, local governments have financed public services through general revenues by the issuance of general obligation bonds backed by local property tax collections, and sometimes by revenue bonds backed by revenues from customers using the services that the bond proceeds paid for, such as city water and sanitary sewers. Other financing sources for infrastructure include Tax Increment Financing bonds, user charges, special assessments (e.g., for sidewalk improvements), special districts (e.g., for historic preservation), and negotiated exactions. In the present economic climate, however, the competition among investment options has made the marketing of debt instruments difficult for a number of jurisdictions, even for those with sound credit ratings.

Third, the uncertainty over proposed tax law changes that would eliminate the tax-exempt status of municipal bonds has brought with it considerable confusion [2]. Another complication derives from state-mandated limitations on bonded indebtedness, which restrict the dollar volume of debt issued.

Many local governments have experienced some degree of fiscal stress resulting from rising service demands and from constraints on their ability to raise revenues. That is, as public service demands grow because of increasing population, inflation, rising real incomes, or other reasons, the local revenue base—taxes, grants, and user fees and charges—grows too slowly to meet rising demands. In order to maintain a constant level of public services, local public physical

and service infrastructure must expand to avoid congestion (assuming no excess capacity). The difference in the growth rates of service demands and revenues necessitates either increases in tax rates or decreases in the level of services, or some combination of the two.

Government has long imposed charges for a variety of on-site capital improvements, including sewer and water hookups, stormwater management facilities, and street and sidewalk construction. More recently, though, communities have levied impact fees on developers for a number of off-site improvements, such as the development of community-wide recreational facilities, the construction of highway segments, or the expansion of centralized wastewater treatment plants.

Generally, impact fees are charges levied against new development in order to generate revenue for funding the capital improvements necessitated by that development. Impact fees range from several hundred dollars to thousands of dollars per house, dwelling unit, or building. They should not be confused with subdivision exactions that require developers either to "dedicate" land for public use or contribute cash in lieu of land for the purchase of land and facilities perceived to be necessary by local governments. As a fundamental tool, impact fees are broader and more flexible than subdivision exactions. Impact fees can be levied on various types of development, including subdivision, condominium, commercial, and industrial projects. Unlike subdivision exactions, impact fees can be used to fund the construction of off-site facilities. Often the need for these services and facilities is only indirectly attributed to a specific subdivision or project, thereby giving rise to developer objections to funding such general improvements.

The proliferation of impact fees arises from several factors. The continuing suburbanization of the nation's population and the rapid rate of new household formation mean that local government is often pressed to extend services to new and larger areas. In high-growth areas in particular, government is hardly able to keep pace with the demand for new services while simultaneously maintaining and repairing existing public facilities. Developer exactions and impact fees have been popular in fast-growing areas in the West and in some Sunbelt states. In addition, compliance with stringent government-mandated standards often requires substantial public outlays and unpopular financing decisions.

In light of the economic pressures on local governments, it is clear why they have turned to impact fees. For growing jurisdictions, impact fees represent a vast store of potential revenue that can be tapped at less political cost than other sources. This practice does not mean, however, that impact fees are always the best solution or the wisest solution for infrastructure finance when taking account of social equity considerations and the need to maintain long-term community support for capital spending programs [3].

Impact fees pose several issues at once: legal, economic, technical, administrative, policy, and financing alternatives. When faced with a proposed future fee scheme, builders, business people, property owners, and future home buyers should study all sides of the issue at once, not just the legal or economic questions. Impact fees raise fundamental social questions such as: Who really pays [4]? How is the fee calculated [5]? Where does the money go? How and where is the money spent [6]? Who really benefits from the new or expanded public facilities? What is the impact of the fees on housing costs for new and for existing residents [7]? How is business generation or expansion affected? How does an impact fee policy mesh with a community's and region's affordable housing policy [8]? Is new development being required to pay its fair share, or something more [9]?

This report explores the social, economic, and legal basis for imposing impact fees. Chapter 2 gives an introduction to the concept of charging for infrastructure and outlines the basic issues. Chapter 3 describes the history of financing public improvements and how it led up to impact fees. The economic foundation of impact fees is explored in Chapter 4, with the legal foundation explained in Chapter 5. Based on this background, Chapter 6 outlines the advantages and disadvantages of impact fees as a financing mechanism. Chapter 7 explains how impact fees are calculated, and Chapter 8 gives examples of implementation from cities across the country, including the Twin Cities metropolitan area. Chapter 9 provides a summary and conclusion.

Chapter 1

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Chapter 2

CHARGING FOR INFRASTRUCTURE

Traditionally, developers have furnished the roads, sewers, and other types of capital facilities internal to the development site. By contrast, shared infrastructure costs, or exactions, are monetary assessments for off-site capital improvements necessitated by new growth.

Whether called development exactions, impact fees, or some other term, the generic charges or exactions imposed on new growth pay for a proportionate share of the infrastructure costs generated by that growth. New residents pay for that share of community capital improvements necessitated by new development, while existing residents pay for the balance. It is therefore not surprising that shared infrastructure costs are most commonly associated with geographic areas undergoing population expansion as opposed to more mature and settled locations.

SHARED INFRASTRUCTURE COSTS

A national study conducted by the University of Florida in 1990 indicated that shared infrastructure costs in the United States averaged approximately $5,700 per single-family detached unit and $1,000, $2,200, and $3,200 per 1,000 square feet of industrial, office, and retail space, respectively (Table 8.1). The survey further revealed a considerable range in exactions. Road charges ranged from $130 to $7,350 per residential unit and from $80 to $8,680 per 1,000 square feet of office space (Table 2.1).

Since colonial times, some local governments have required private developers to provide land for public areas such as parks and open space. By the 19th and early 20th centuries, governments required more expansive private land donations for streets, sewers, and other infrastructure constructed at public expense. During the 1940s and 1950s, local governments turned to a new type of shared infrastructure cost when they began to impose fees that allowed them to acquire sites for parks and schools.

Table 2.1. National Averages for Shared Infrastructure Costs by Type

Exaction	Single-Family Detached Housing (per unit)	General Office	General Industry	General Retail (per 1,000 square feet)
Roads				
Low	$130	$63	$ 79	$209
High	$7,348	$2,320	$8,680	$8,370
Average	$1,547	$800	$1,840	$2,881
Utilities (water and sewer)				
Low	$1,640	V	V	V
High	$4,340	V	V	V
Average	$2,728	V	V	V
Schools				
Low	$135	V	V	V
High	$2,096	V	V	V
Average	$559	V	V	V
Parks				
Low	$104	NF	NF	NF
High	$2,000	NF	NF	NF
Average	$526	NF	NF	NF
Public Facilities				
Low	$47	$7	$60	$61
High	$271	$102	$190	$190
Average	$95	$37	$87	$115
Police and Fire Protection				
Low	$25	$9	$18	$36
High	$788	$568	$1,653	$2,683
Average	$188	$131	$238	$325
Library				
Low	$21	NF	NF	NF
High	$190	NF	NF	NF
Average	$86	NF	NF	NF
Average	$5,729	$968	$2,165	$3,231

Notes: Utility costs are included in the single-family detached charge but not in the charges for the nonresidential land uses.
NF = No fee
V = Varies
Sources: J. C. Nicholas and K. Ruscher, "Impact Fees on the Rise," *Growth Management Studies Newsletter* (June 1990); and R. W. Burchell et al., *Development Impact Assessment Handbook* (Washington, D.C.: Urban Land Institute, 1994).

From the 1950s and 1960s onward, developers were commonly mandated to provide physical infrastructure improvements—streets, water and sewer lines, sidewalks, and similar improvements—located within or proximate to the residential subdivision or nonresidential site. During the 1970s and 1980s, communities began to charge for off-site improvements—roads, sewers, water, parks, schools, fire and police stations, and other public facilities—located outside the immediate perimeter of the development site yet nonetheless necessitated by growth [2]. In recent years, municipalities have had to rely more on their own revenue sources as state and federal governments have reduced their contributions, thus making this method of financing even more common.

SOURCES OF INFRASTRUCTURE FINANCING

A critical consideration with respect to shared infrastructure costs is whether a community should impose exactions. As shown in Table 2.2, a community can follow several strategies in funding capital improvements. Under the traditional approach, all taxpayers—both existing residents and the incoming population introduced by growth—bear the financial burden of infrastructure investment. The logic underlying the traditional approach holds that existing residents, as well as newcomers, benefit from the capital facilities—schools, roads, and utility lines—that were built and paid for by their predecessors. It is therefore only fair to ask existing residents to share in the burden to provide infrastructure as the community continues to grow.

The traditional approach has taken different forms. In some instances, communities have provided infrastructure on a "pay-as-you-go" basis, whereby the capital cost is paid as it is incurred by assessing all taxpayers during the period of construction (see Table 2.2). More common is community borrowing, typically through bonding, to finance capital facilities. The community repays the principal and interest over the term of the bond's indebtedness. The bonds, in turn, fall into several categories such as general obligation bonds or revenue bonds.

The alternative to the traditional approach is to assess only the beneficiaries of infrastructure improvements by applying any one of a variety of financing mechanisms. For example, *tax increment financing* and *special districts* target charges to the specific areas in which the capital improvements are made. In another variation, a *use charge* is levied on the consumer of a capital improvement; an example is a park admission charge used to fund land acquisition (Table 2.2).

Table 2.2. Sources of Infrastructure Financing

Financing Source	Repayment by	Advantages	Disadvantages
Taxes (pay as you go)	All taxpayers immediately	Preserves borrowing capacity; saves interest cost	Funds may be insufficient; may not relate payment to benefits received
General Obligation (G.O.) Bonds - Limited or Unlimited Tax	All taxpayers over 10-30 years	Makes funds available immediately; ties payment to benefits received; potentially lowers interest costs	Increases taxes; competes with other local services for limited resources; separates payment from benefit
Revenue Bonds (or "rate-supported" bonds)	Rate payers over 10-30 years	Makes funds available immediately; ties payment to benefits received	Increases rates or fees; interest costs potentially higher than GO bonds
Tax Increment Financing Bonds	Taxpayers within subarea of jurisdiction	Ties payment to benefit received within subarea	Revenues dependent on growth in assessed value within subarea
User Charges	Rate payers immediately	Eliminates need for borrowing or reserves	Impractical for large projects; may make rates erratic from year to year
Special Assessments and Special Districts	Customers assessed at time of construction; if bonded, over 10-30 years	Makes funds available immediately; matches payment and benefit	Requires legislative approval; may seriously affect assessed customers
Negotiated Exactions or Impact Fees	Developers or customers immediately	Requires new customers to pay for impacts they place on system	Political problems (viewed as "anti-development"); ineffective where there is little or no growth; affects housing affordability

Sources: S. G. Robinson et al., *Building Together: Investing in Community Infrastructure* (Washington, D.C.: Government Finance Officers Association, 1990); and R. W. Burchell et al. (*Development Impact Assessment Handbook*, Washington, D.C.: Urban Land Institute, 1994).

A *shared infrastructure cost* charges residents of incoming development for the capital improvements necessitated by that development. Such charges on new residents have gained popularity in recent years. The decision to impose exactions is a policy choice that carries both advantages and disadvantages. The shared infrastructure cost, for example, is similar to the user charge in that only those who benefit from an improvement must pay in proportion to their level of service consumption. The disadvantages of shared infrastructure costs include legal issues, problems in calibrating an equitable charge, and sometimes deleterious effects on housing affordability and economic development. The decision to impose shared infrastructure costs

requires the careful weighing of these pros and cons relative to the other strategies available for providing capital facilities. If a community decides to adopt exactions, then it must consider a set of legal and substantive issues that often are intertwined [3].

Because the exactions currently in force vary in magnitude and, in some instances, can amount to thousands of dollars, developers and others have raised several policy and legal issues surrounding government's increasing reliance on infrastructure charges. These issues include the questions of whether such exactions are a tax or regulation, whether localities have the statutory authority to adopt such taxes or regulations, and, finally, whether shared infrastructure costs violate basic constitutional guarantees.

Shared infrastructure costs may be imposed under either the tax or "police power" of local government. Only a few states, most notably California, provide local governments with broadly defined powers of taxation. In most states, local powers of taxation are highly constricted and limited only to the *ad valorem* property tax. It is far more common for municipalities and counties to impose levies for infrastructure costs under the aegis of the police power, that is, local government's authority to regulate development in furtherance of the public health, safety, and general welfare. A shared infrastructure cost ordinance is on most secure legal ground as a proper police power-based regulation when the state legislature specifically authorizes local government to implement charges as part of the development approval process.

In addition to the question of enabling authority, fundamental questions apply to the constitutionality of exactions. The constitutional issues at stake include guarantees of due process and of equal protection. A shared infrastructure cost may be charged with due process violations if the exaction is believed to extend beyond the authority of the police power because it is arbitrary and capricious and lacks a rational basis. An exaction may violate the equal protection clauses of the U.S. Constitution if it leads to a discriminatory effect, that is, if one class of landowners or residents is treated differently from others. Underlying constitutionality issues is the question of whether a shared infrastructure cost is a "reasonable" charge on developers and, ultimately, on new property owners. Over time, the courts have developed several standards to test the "reasonableness" of shared infrastructure costs demanded of developers [4]. These will be explained in greater detail in Chapter 5.

IMPACT FEES AND URBAN DEVELOPMENT

The choice by a local government of a facility-financing method affects the location and timing of service provision, and the location and timing of a service affects the pattern of urban development. For example, residential density and distance from a water and sewer treatment plant influence the costs of sewer facilities and services [5]. The demand for facilities grows over time as a result of population increase and changing community preferences. Most capital facilities are added incrementally. It is not possible to construct one and one-half swimming pools or three and one-third fire stations. As a result, even if all capital improvements are made in a prudent and timely manner, the community usually will have either excess or deficient capacity of a particular facility at any point in time.

Certain services are more likely than others to be subject to this problem. For example, there may be only one library but 30 police officers. The relative impact of adding one new library is greater than adding one police officer. The library is more prone to excess or deficient capacity than the police department. Further, deficient capacity might be reflected in crowding or congestion of existing facilities.

Police service may require incremental additions to capital stock in the form of vehicles and equipment. New development needing one more officer than currently is serving may be assessed a fee to pay for the incremental capital cost. But what if the library is at capacity? Is the next new development assessed the full cost of building a new library? This situation is a problem of lumpy investments. Whereas some facilities can be expanded incrementally, approximating smoothly linear increases in size, other facilities are lumpy and can only be built once in a great while. Examples of capital facilities that may be expanded incrementally include local roads, neighborhood parks, police, fire, and emergency medical (except for construction of new precinct headquarters or fire stations). Examples of facilities with lumpy investment characteristics include water and sewer plants (but not mains), schools, libraries, major roads, and major parks.

Short-run marginal-cost pricing is inappropriate for the financing of facilities requiring lump sums [6]. The financing of facilities with lumpy investment characteristics is best done through long-run marginal-cost pricing. That is, the current cost of constructing facilities needed in the future is estimated, but the cost is spread among all future users and not just the first new development needing access to that facility. Impact fee systems designed in this fashion

generally reflect the long-run marginal-cost approach. The average per-unit cost remains constant over different population levels.

Because impact fees are collected over time as an area develops, the amount of excess capacity that the community must carry in the early years critically affects the cost burden. Economies of scale in water and sewer facilities have an important bearing on impact fees because many communities build larger facilities than they need, anticipating that eventually the need will grow. They justify the expenditure in terms of taking advantage of the presumed economies of scale, that is, the lower cost per unit of service output from large-scale systems when the systems are run at full capacity. However, when absorption of the excess capacity takes several years, not only must impact fees be higher, but political pressure builds to transfer the burden to future residents. Cities may be caught in a vicious circle wherein by raising impact fees, they slow the rate of growth, which necessitates still higher impact fees [7].

To summarize, new residential, commercial, office industrial development within a community brings with it the need for new infrastructure plus the means to pay for it. Traditionally, the responsibility for infrastructure installation and for payment has been shared among (1) developers, builders, and their customers, (2) existing residents of the community, and (3) future residents.

In recent years, for financial as well as political reasons, local governments have been trying to mandate that newcomers pay an increasing share of the incremental infrastructure made necessary by growth. There are seven main sources of funds to pay for new infrastructure:

- general obligation bonds
- revenue bonds
- taxes
- user charges
- special assessments
- mandated on-site exactions
- off-site impact fees

Shared infrastructure costs may be imposed by local units of government on new development only to the extent of the powers granted to it by their state government, and such powers and their constitutional basis vary from state to state. The choices a community makes on how to

finance new infrastructure will affect the pace and geographical patterns of development within a community. If a community requires existing residents to pay too large a share of development costs, then impact fees will be low, but local taxpayers will probably oppose new development. If the community attempts to pass on most or all of the incremental costs of development to future residents, then they are likely to welcome development, but the higher price tag will probably slow down development or displace it to other locales.

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Chapter 3

EVOLUTION OF FINANCING PUBLIC FACILITIES IMPROVEMENTS

It is a fundamental premise that, as municipalities grow, so does the continual need for new public improvements as well as for maintenance and expansion of existing infrastructure and public facilities. Local governments have traditionally been responsible for the provision of major infrastructure improvements. Financing of these improvements has come from general revenues, mostly the real property tax, and through issuance of general obligation bonds, which are repaid from local property tax revenues. Another primary source of infrastructure financing has been federal grant and subsidy programs. Because of the decreasing availability of federal, state, and local funds for public improvements, local jurisdictions have looked for new ways to finance these improvements.

One method for overcoming these fiscal obstacles has been to rely on developers to build and pay for essential improvements and infrastructure, or to require them to provide funds or land for improvements within the subdivision they create, or to compel them to contribute to the financing of off-site area-wide improvements at the time building permits are issued. This new way of financing infrastructure by developers rather than by using general revenues has evolved from subdivision exactions to impact and linkage fees.

SPECIAL ASSESSMENTS

Special assessments finance infrastructure that benefits a relatively small geographic area rather than an entire community. They are used primarily for financing local streets, streetlights, sidewalks, curbs, and sewers. The cost of the public facility is spread among those benefited by construction of the facility, in relation to the degree to which each is benefited. Benefits are understood to be the increased property values resulting from improvements.

The assessment must be levied in proportion to the benefit received by a landowner. Different methods may be used to calculate the proportionate share of benefit for a parcel; property is

usually assessed by front footage, acreage, or square footage. These assessments are authorized by state statutes or constitutions.

One advantage of the use of special assessments is that financing is confined to local users of benefits and can target the needs of different areas of the city. Thus, they often are more politically acceptable to taxpayers than general tax increases.

Another advantage of the special assessment is that it can be applied retroactively, unlike other financing mechanisms. The cost of improvements designed to eliminate capacity deficiencies in existing facilities can be passed on to those benefited by the improvement, rather than the public at large. Assessments are frequently one-time charges, although some are levied over time by means of an extra charge on property tax statements each year for a fixed number of years.

A unique example of the use of special assessment financing is the Embarcadero freeway removal in San Francisco, California. Following the earthquake of 1989, special assessments were used to finance the tearing down of the damaged Embarcadero freeway. The benefit in this case was removal of the freeway, and the subsequent improvement in nearby property values [1].

SUBDIVISION EXACTIONS

The land dedication requirement was the first device used by local governments to shift improvement costs to subdividers and new residents. From the dedication of land for on-site improvements, municipalities progressed to requiring the construction and dedication of on-site improvements. Subdivision regulations mandate that the subdivider must provide a number of public facilities as a condition of approval. Such required dedications were confined to improvements on site.

The next development stage in subdivision exactions required that developers provide land for on-site school and park purposes and, sometimes, for off-site improvements. Attention to off-site improvements was a response to concerns about the adequacy of public facilities beyond the limits of newly subdivided property [2]. So municipalities began to require developers to provide property or facilities outside of the subdivision.

The last form of subdivision exaction was the in-lieu fee. It was required when subdivisions were too small to be held wholly responsible for the need for new schools or to provide

dedications appropriately sized for school sites. These fees are also used to fund recreational and other types of off-site facilities. However, these off-site exactions have been directed to only minor public improvements.

IMPACT FEES

Definition of Impact Fees

Impact fees are designed to require that each development pay its proportionate share of the cost of providing the off-site public services and facilities required by new development [3]. Impact fees are a type of exaction that is:

- a method of regulating land use;
- in the form of predetermined money payments on development to recoup a proportion of public capital costs required to accommodate the development that will take place in a given area;
- generally imposed as a way to finance public facilities without resorting to traditional revenue-generating measures such as increased taxes or bond issues;
- assessed as a condition to the issuance of a building permit, an occupancy permit, or plat approval; and
- established by local ordinance or state enabling legislation and collected in a lump sum or incrementally at various stages during the development process.

Nelson (1988) claimed that requiring new development to pay for the facilities was not a new idea; however, what is new about impact fees is the idea that growth should pay for facilities located outside the development site. He defined impact fees as "single payments required to be made by builders or developers at the time of development approval and calculated to be the proportionate share of the capital cost of providing major facilities to that development" [4].

History of Impact Fees

The genesis of impact fees derived from two responsibilities of local government: land use regulation and provision of public facilities. According to Finkle, the development of fees associated with new development has coincided with the evolution of land use and land development regulations created in response to the post-war suburban boom [5]. By the early 1960s, communities in some states began imposing water and sewer connection fees that recouped the cost of connecting houses to the system as well as portions of the capital cost of total water and sewer operations.

By the late 1960s and early 1970s, brisk growth was causing higher taxes and utility charges to finance needed infrastructure for new development. Furthermore, higher construction costs, interest rates, economic decline, and constituent rejection of bond issues forced many cities to consider new ways to finance infrastructure. Some cities in high-growth states or with influential anti-growth constituencies were the first to implement off-site charges. In the late 1970s and early 1980s, as federal aid to local governments dwindled, the use of impact fees expanded to include both communities in prospering states, as well as growth "islands" in non-growth states.

In California in 1978, suspicion about growth had become widespread particularly through the environmental movement, and fiscal revolt fostered local government experimentation with alternatives to the property tax. These factors led to overwhelming public approval of Proposition 13 (the ballot initiative placing limits on property taxes), and stimulated many states to adopt impact fees. The demand that growth should pay its own way attracted public support. A corollary to this trend was the shift away from an emphasis on general taxation and toward user fees, including impact fees [6].

Uses of Impact Fees

Nicholas provided a philosophical basis for the genesis of impact fees. According to his analysis, the objective of impact fees is not to raise money, but to ensure adequate capital facilities that protect the public from harm that would occur in the absence of these facilities [7]. Thus, impact fees can be considered within the general system of land development regulation in contrast to revenue raising (taxation) programs.

According to Nelson, there are several political objectives in imposing impact fees [8]:

- to shift the capital financing burden to new development (Why should present residents pay for new facilities?);
- to synchronize new development with the installation of new facilities or to install new facilities simultaneously with new development;
- to impose economic discipline on land development decisions by requiring development to absorb the costs of providing new services and facilities, as a way to force the market to develop only when it is profitable to do so without subsidies;
- to enhance the quality of life within communities; and

- to mollify the anti-growth sentiments of local interest groups; in the long term they are useful in overcoming political obstacles, a feature favored by developers.

Although impact fees originally were levied on residential subdivisions to pay for water, sewer, and road improvements, they are now levied on all types of development. By far the most common fees charged are for water and sewer facilities. These fees are also known as "hook-up" or "connection" charges. After utilities, highways (roads) are the next most common charge. The range and frequency of adopting impact fees are increasing. Impact fees currently exist to pay for the following facilities and services:

- water and sewer treatment facilities / potable water lines / solid waste treatment / drainage
- new roads / road improvements
- recreational parks
- public schools / public libraries / public buildings / public cemeteries
- emergency medical services / police stations / fire protection / law enforcement

According to three national surveys of impact fees ([9], [10], [11]), the dollar amounts, the range of facilities imposing impact fees, and the number of communities adopting impact fees are increasing (though the latter has started to decline) [12]. First used in Colorado, impact fees now are allowed in at least 28 states. The surveys revealed that California had the largest number of adopting communities, followed by Florida, Washington, Oregon, Colorado, and Texas [13]. The number of communities in Florida, for example, shifted from fewer than 20 to almost 200 counties and cities between 1970 and 1986 [14]. Across all states, the peak period of adoption occurred during the 1970s. The cumulative number of counties and cities adopting impact fees shows constant increase until the late 1980s, but the rate of adoption is slowing. This slow growth rate is due partly to the diffusion of other types of innovation [15].

The amount of the bill also is increasing for both total amount and charge per unit, reflecting expansion of the application of impact fees. While the frequency of impact fee use is greater in small communities (because there are more small communities than large ones), the likelihood of impact fee adoption is greater in larger communities [16]. A survey of the San Francisco Bay area in 1981 illustrated the geographical variation in the amount of impact fees. Impact fees tended to rise moving outward from older, built-up core areas, to outer, more rapidly developing areas. The average development fees levied on single-family homes were $1,619, $3,532 and $6,194 respectively in the core, suburban, and exurban zones in the metropolitan area [17].

Distinguishing Impact Fees from Other Charges

Tax versus Fee. In a recent case before the Illinois Supreme Court, the distinction between fees and taxes was stated as follows:

> A fee is defined as a charge fixed by law for services of public officers, and is regarded as compensation for the services rendered. A tax is a charge having no relation to the services rendered, assessed to provide general revenue rather than compensation [18].

The fundamental difference between a tax and a fee lies in its purpose and authority. A tax is a "revenue-generating measure," while a fee is a "regulatory measure." Thus, tax revenues may be deposited into a general fund and are available for general purposes. In contrast, fees, particularly impact fees, should be used only for the purpose for which the fees were collected, and placed into a separate fund. The authority of a tax comes from the taxing power from the state legislature to the municipalities, while the authority of a fee stems from the state's police power to regulate in the interest of the public's health and safety.

Impact Fees versus Subdivision Exactions. "Subdivision exaction" is a traditional construction, dedication, or in-lieu fee payment for site-specific needs imposed at the time of subdivision. These improvements usually are categorized as being "minor" in scope and cost, and typically are provided on site [19]. "Mandatory land dedication" is one of the early forms of subdivision exaction. It is directed solely at the problem of providing land and makes no pretense at addressing the question of financing the construction of the facility upon the land. More important, like other exactions, it is restricted to the provision of land located within the development site.

"In-lieu fees" are similar to impact fees in terms of cash payment, yet different in other ways. The most significant difference is that impact fees charge the developer for only the proportionate impacts of new development, while in-lieu fees are a substitution for dedication only when the off-site dedication is impractical. Additionally, impact fees are used to fund area-wide projects. Impact fees are collected later in time than exaction in-lieu fees. Thus the funds generated by impact fees become available at a period closer to the time when the additional services will be demanded. Another difference is how they are calculated. Impact fees generally

are based on the square footage of buildings, or the number of bedrooms or living units in a development, while in-lieu fees are based on a percentage of acreage. Thus, impact fees can be applied to condominium, apartment, and commercial developments, which are inapplicable for exaction by in-lieu fees.

Impact Fees versus Special Assessments. In many states, special assessments serve as an alternative form of exaction. Special assessments are charges levied against real property to pay for local capital improvements that particularly and directly benefit or enhance the value of the property [20]. Special assessments became a major source of public works revenue during the mid-nineteenth century and remain an important source of local revenue; in fiscal year 1990, they were reported as accounting for 0.8 percent of local government revenue [21].

Special assessments, however, differ from exactions including impact fees. First, they are imposed for the direct benefit of those assessed rather than of future customers or the community at large. Second, they fall on all property owners in a defined benefit zone, not merely those undertaking new development. Finally, special assessments are usually imposed at the explicit request of property owners in the affected benefited zone [22]. The primary difference between special assessments and impact fees is that special assessments represent the *benefit* of public improvements to new or existing development, whereas impact fees typically measure only the *cost* of the new development [23].

Linkage Fees

Linkage fees, the emerging technique of off-site development impact exaction, are imposed at the certificate-of-occupancy stage upon large-scale mixed-use or nonresidential developments to promote social programs or policies such as low- and moderate-income housing and job training. The linkage fee is the latest innovation in the continuum of exactions and is considered an extension of the impact fee. It was first used in Boston and San Francisco, and has been proposed in Chicago and other cities. This technique seeks to obtain private sector assistance for the provision of low- and moderate-income housing and social programs. This concept is based on the assumption that large-scale nonresidential development would create the need for a large volume of new housing and social facilities to support its employees. The expanded demand reduces the supply of affordable housing for low- and moderate-income residents who traditionally live in the city. Thus, in order to mitigate the resulting theoretical housing shortage, developers are forced to add additional units to the city's housing inventory [24]. However, the

"link" between new office/retail development and housing shortages is confronting various legal challenges, and thus has not been adopted in a nationwide scope compared to impact fees.

An inverse variation of the linkage fee idea can work as a device to limit growth and its attendant costs to the community. In Hillsboro, Oregon, on the west side of the Portland metropolitan area, Washington County and Intel Corporation agreed in 1999 that the company would invest in new equipment and plant upgrades over the next 15 years, the county would grant $200 million in tax breaks, and the company would pay a growth impact fee of $1,000 per excess worker per year if it exceeded a ceiling of 1,000 new manufacturing jobs above the 4,000 it already provides in the area. County officials are eager to retain existing jobs but want to avoid expansions that would impose a strain on schools, roads, utilities, and other services in an area that is trying to maintain its character [25].

To summarize, methods of financing additions to local public facilities made necessary by local growth have evolved over the years. Traditional sources of local infrastructure finance have been general revenues (of which the local property tax has been the most important), general obligation bonds, and intergovernmental grants. Special assessments finance infrastructure improvements within specific geographic areas. Subdivision exactions require land dedications from large developments, and in-lieu fees from small development projects, so that on-site land is made available for public purposes such as schools and parks. Impact fees have been increasingly imposed on new developments as a way to pay for their proportionate share of off-site public services and facilities made necessary by new development.

A tax is a charge for the purpose of raising general revenue and differs from a fee (such as an impact fee), which is a charge regarded as payment for services rendered. The distinction is important because local units of government may exercise only those powers granted to them by the state, and the power to tax and the power to regulate using fees have different constitutional and statutory bases.

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Chapter 4

ECONOMIC FOUNDATIONS OF IMPACT FEES

The usual motivation for using impact fees is to make new growth "pay its way." This chapter will examine exactly what that means and if impact fees actually succeed in that goal.

GETTING GROWTH TO PAY ITS WAY

One of the common arguments against new development in a community or metropolitan area is that it does not pay for itself. That is, the income from property taxes and fees to a municipality is less than the expenditures that municipality must make on infrastructure and associated services for that new development. Opinions vary whether this is actually the case [1].

The traditional method of funding infrastructure needed by new development has been to use money from the general coffers, raised principally by property taxes. As Yinger has shown, increasing property taxes by $1 (if the corresponding services are kept constant) theoretically decreases house values by the capitalized value of that same amount [2]. This is what is known as the capitalization of taxes into the price of a house: a buyer will pay less for a house if they must pay more in property taxes.

Therefore, if property taxes have to be increased in order to finance a new road leading to a new subdivision, for example, current property owners actually will experience a drop in their property values. Now, if they are going to be using the road as much as the new residents, then the value of that road theoretically is added onto their property value (service capitalization–a buyer will pay more for a house if it comes with more services), and they break even. Unfortunately, this is not always the case. Property taxes raised in one part of a municipality, especially on the fringe of an urban area, may be paying for fire stations, water mains, or roads that the original taxpayers will never use. This mismatching of payments and services is what residents mean when they say that development should pay its own way.

The logical way to make development pay for itself is to charge it directly for the infrastructure that it needs by attaching additional fees to the building permits granted. This practice ensures that existing residents are not forced to pay for new facilities that they themselves do not need, and it guarantees that new residents avoid getting a free ride. This argument is the basis for an impact fee.

MARGINAL-COST PRICING

As explained in Chapter 2, impact fees work on the basis of the marginal-cost pricing principle. Economists argue that marginal-cost pricing induces maximum discipline and efficiency in the market for goods like public facilities and services. Marginal-cost pricing ensures that new residents will contribute towards long-term expansion and will pay a fee proportionate to the total number of new users the facility is expected to serve [3].

Communities use the marginal-cost pricing rationale to justify impact fees on the assumption that users should pay the marginal cost of providing urban services for new growth. Long-run marginal cost, the cost assigned to incremental growth, represents the sum of all immediate expenditures undertaken by a jurisdiction that otherwise would not have occurred. According to the marginal-cost pricing rationale, if a new subdivision requires $1 million of new sewer capacity for 1,000 homes, the incremental cost per home would be $1,000. If new residents are charged the marginal cost of urban services through impact fees, a $1,000 impact fee per home would be assessed. The difficulty with determining impact fees is that they are rarely so clear-cut. The $1,000 fee is appropriate only if all 1,000 homes are sold or pay the impact fee at day one or, alternatively, if carrying costs and inflation are zero.

One must assess the full economic cost associated with incremental growth. Full economic cost includes all capital and operating costs associated with a public facility over its lifetime. Impact fees normally are associated with the recovery of capital costs; operating costs usually are recovered from user fees or some form of tax.

The approach used in setting impact fees determines whether early or later arriving residents pay for infrastructure. Conceptually, the most equitable method for setting impact fees is one that spreads the burden among users based on the amount of benefits they receive. An equity-neutral impact is one for which all users pay the same fee for the same level of service, regardless of when they move into the community, adjusted for the length of time they use the service.

WHO REALLY PAYS?

Although the economic theory supporting the charging of impact fees is clear, the application of the theory is not simple or straightforward. First, there is the problem of capitalization. Owners of undeveloped land will be unable to sell their land for as high a price as they might have otherwise if it will cost a builder more to use that land. The impact fee becomes capitalized into the price of the undeveloped land in the form of a decrease in value. On the other hand, that land may become more valuable to a developer because the presence of impact fees promises that services will follow, without any additional cost to the developer [4]. Furthermore, "the owners of undeveloped land may be rich relative to new or existing homeowners, so shifting part of the development cost burden to landowners could improve the progressivity of the financing mechanism" [5].

Second, impact fees may do too good a job of shifting the financial burden from existing homeowners. If more fees are collected than needed, or if existing residents end up using the services that are paid for by new residents, then the existing residents will experience an unearned capital gain. Judicial tests, such as the "rational nexus" described below, are meant to ensure that this does not happen. Furthermore, impact fees may reduce property taxes, or at least prevent them from increasing. This decrease in costs to the existing homeowner becomes capitalized into the property value as explained above, only this time resulting in an increase.

At first glance, developers and builders pay the impact fees. This is true in that they write the checks to the unit of local government imposing the fee. But, like any other type of tax imposed on businesses, the ultimate burden of the impact fee will be, to varying degrees, shifted forward to purchasers of new houses in the form of higher prices or smaller houses on smaller lots and/or with fewer amenities, and shifted backward to suppliers of labor, materials, and services that are required for the production of new homes. Who really pays the fee depends on local housing market conditions, the policies of other local governments in the surrounding area, and the time frame. The consensus among professional economists is that in the long run almost all of any impact fee is passed along to new home buyers in the form of higher prices. However, in the short run, builders and developers, and possibly landowners, may bear a significant portion of that fee.

Developers and builders are unlikely to bear a major portion of the impact fees because they are able to change to a location where no fees or the lowest fees exist. Because new residential

housing is supplied under competitive conditions, profit margins in the long run would not be lowered, but total profits could be lower as a result of impact fees because fewer new units may be built and sold. Furthermore, because any unit of local government imposing impact fees constitutes only a small portion of the total market, and because builders and developers purchase only a small portion of the total market, and because builders and developers purchase labor and materials in regional and national markets, they will not be able to shift any portion of the burden of impact fees backward to these factors of production. Therefore, the only component in the production of housing that can possibly bear a portion of the burden is land. In the long run, when impact fees are recognized as a cost, builders and developers may bid lower amounts for undeveloped land if they expect lower future profits. However, owners of developable land would not bear a major portion of the impact fee because they can withhold their land from the market until they can sell it at their desired price. Developers pay the impact fees initially and therefore would treat them as any other development cost—they would try to pass them on to purchasers or renters [6].

Some empirical evidence has shown that impact fees increase the cost of both new and old housing, thus suggesting that impact fees are indeed shifting too much of the burden onto new residents [7]. However, the methodology of these studies has been questioned [8], and thus it is still an open question whether impact fees successfully shift only the appropriate amount of the burden of new infrastructure to new residents.

To summarize, the main rationale for imposing development impact fees is to make new growth pay its way. Local case studies demonstrate that new development in a community often means that local government collects additional taxes and fees, but expenditures frequently rise even faster than revenues.

If the marginal cost of newly required infrastructure is charged to developers and builders, questions arise whether these charges are shifted backward to original landowners in the form of higher prices received, to the developers and builders in the form of lower profits due to fewer units sold, to the suppliers of materials and services needed for the new development in the form of lower prices received by them, or to the new home buyers and new businesses who pay higher prices for what they get. Or, do the charges shift away from existing residents and business owners, who then pay lower taxes, and therefore see the value of their properties rise or decline less rapidly than they would were they obligated to assume a significant share of providing

infrastructure needed to accommodate new growth? Some studies show that imposing impact fees raises the cost of both existing and new housing.

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Chapter 5

LEGAL FOUNDATION OF IMPACT FEES

Because development impact fees are a relatively new way of financing capital facilities, they have given rise to legal debates, many of which have ended up in the courts. The courts have tended either to look upon such fees with suspicion as invalid taxation against new development, or to uphold them with consideration as necessary corollaries to local land use regulation. This chapter explores seven of the legal issues surrounding impact fees while providing an explanation for the legal basis of them. Examples are given from Minnesota and Wisconsin.

LEGAL ISSUES SURROUNDING IMPACT FEES

The first three issues discussed here have been often raised in the courts when impact fees were suspected of being illegal taxation disguised as fees. In those cases, it is important to prove that impact fees differ from taxes, and that a legal basis for issuing fees exits, stemming from state statute or home-rule authority. If the most frequent question has been whether or not impact fees are taxes, the most critical issue on which the courts have ruled differently is whether impact fees imposed in a certain area are taking private property without compensation. Constitutional challenges on this issue may arise in three ways: regulatory takings in the Fifth Amendment, the equal protection clause of the Fourteenth Amendment, and the right to due process guaranteed by the Fourteenth Amendment.

Statutory Authority

One of the biggest challenges to the use of impact fees by local governments is whether there is legislative authority to impose them. "Dillon's Rule" states that a municipal corporation "possesses and can exercise the following powers, and not others: First, those granted in express words; second, those necessarily or fairly implied in or incident to the powers expressly granted; third, those essential to the accomplishment of the declared objects and purposes of the corporation–not simply convenient, but indispensable" [1].

More than 20 states have expressly authorized development impact fees. Often, such enabling legislation is limited in scope to certain jurisdictions, or to specific public improvements. Texas enacted "Impact Fees for Capital Improvements or Facility Expansion" in 1987, the first comprehensive impact fee enabling statute in the United States [2]. This Texas model, which contains extensive substantive and procedural standards, has been followed in Illinois and other states, including Wisconsin (discussed later in this chapter). Such express legislation resolves many issues over the authority of local governments to impose impact fees.

Impact fees may also have a basis in the general language of zoning statutes, or by the valid exercise of a municipality's police power authority. Zoning or planning enabling statutes, or other statutes governing the planning and financing of public facilities and services, may "impliedly" grant local governments the authority to adopt impact fees. Impact fees may also be seen as a reasonable exercise of police power authority to protect public health, safety, and welfare by ensuring that adequate public facilities exist to serve new development.

Proportionality and Geographic Relationship

Proportionality refers to the amount of the fee in relation to the need for it and the use the developers will make of the property. The first issue here is whether the development will create a need for new capital facilities. The second and more critical issue recently is the extent to which the government requires the new development to pay its proportionate share for new facilities, but not more than its share. The third issue is the extent to which the fee benefits the development that pays it. Many courts require an earmarking of the geographic area within which the fees are to be exclusively spent. A few states, including Florida, established districts or zones within which fees are collected and spent, ensuring a geographic relationship between the fee payers and benefits. The courts have become increasingly more sophisticated in reviewing the proportionality of fees, employing a series of judicial tests (the following are all from state courts).

Specifically and Uniquely Attributable Test. This is the most restrictive standard, first adopted in a 1961 Illinois case, and applied only in Illinois and Rhode Island [3]. An exaction is permissible only if the burden on the subdivider is "specifically and uniquely attributable to his activity" [4].

Rational Nexus Test. This is a more moderate approach, and today is the standard test most often applied when reviewing the legality of an ordinance. This test consists of a dual nexus requirement: proportionality between the need for new facilities generated by the development and the amount of the fees, and a reasonable connection between the funds collected and the benefits accruing to the development [5] [6]. Florida has adopted this test. (See *Hollywood, Inc. v. Broward County* [7].) Rational nexus tests have been rather sophisticated especially in their way of assessing the fair share the new development must pay, and in the practical processing, such as earmarking time periods and geographical boundaries.

Reasonable Relationship Test. This liberal approach is the one adopted by the Minnesota Supreme Court [8], and often is confused with the rational nexus standard because of its similar approach. The "reasonable relationship" standard may consider many factors, including spatial factors, temporal factors, amount, need, benefit, and the earmarking of revenues for the specific purpose for which they were collected [9]. Some of these same factors may also be considered by the other types of court tests.

Need Nexus Test. Because of several problems not solved under the rational nexus test, and because of the need for more flexible standards to cope with sophisticated fee systems such as impact and linkage fees, the courts recently developed a slightly amended form of test called the need nexus test. The need nexus focuses explicitly on local governments' revenue situation to prove the need for impact fees, as well as to avoid double payment. Thus, it is considered attributable to economic, rather than legal, motivation.

The following questions might be considered by a court in applying the needs nexus analysis:

- What is the amount of the fee and its likely impact on the ultimate consumer when passed on by the developer?
- Is the municipality's tax rate low in comparison with similarly situated political jurisdictions?
- How healthy is the locality's assessable tax base?
- Has the municipality's current capital improvements program kept pace with previous programs?
- What is the local bond rating? Will it be jeopardized by increased taxes or borrowing to fund public improvements?

- Is the municipality eligible and capable of receiving available state and federal funding for infrastructure improvements that otherwise would be financed by the proposed use of impact fees or taxes?
- Is the locality's housing and office stock sufficiently diverse to accommodate a variety of income groups and types of business?
- Is the fee a double tax on the consumer? and
- Has the property charged with the fee already contributed to the cost of the existing facilities?

This unified test applies slightly different criteria. It consists of a three-step process. First, it examines whether the municipality is authorized to impose impact fees; in order to have authorization, the imposition must be based on the existence of state enabling legislation and a local enactment ordinance. The next two steps are the need and nexus prongs, which require inquiries into the source of the needs generated and the legitimacy and degree of governmental interest. The courts ask whether there is evidence that the proposed development would contribute to a regional or area-wide need. Because it is possible to assess impact fees proportionately, the proposed development may have to contribute to only that proportion. However, the burden of proof at this point would shift to the government to demonstrate that the need for impact fees cannot be satisfied by a less intrusive alternative such as property tax. To protect the political use of impact fees, the court also examines whether there are less intrusive options available under this need nexus test.

Takings

When a government enacts a regulation that goes too far, the regulation may constitute a taking. In 1987, the Supreme Court explicitly recognized that a government regulation that does not result in a physical occupation of land might still constitute a taking, thus giving rise to the term "regulatory taking." Court decisions in *Nollan v. California Coastal Commission* and *Dolan v. City of Tigard* provided guidance regarding the proper relationship between the amount of the exaction and the purpose for the exaction and established a pair of federal court tests.

Essential Nexus Test. In *Nollan v. California Coastal Commission* [10], the U.S. Supreme Court found that the contested permit condition did not substantially further a legitimate state interest, and therefore violated the Fifth Amendment of the U.S. Constitution. This case

established the focus of a court's inquiry into the validity of an exaction to be the nexus between the purpose and conditions of the exaction.

This 1987 case became the most famous case on exactions because it was the first exaction ruling by the U.S. Supreme Court, and it raised the question of whether a more targeted test was needed. The Nollans had applied to the state coastal commission for a permit to demolish and rebuild a beachfront house in a residential area along California's Pacific coast. The coastal commission conditioned the permit on the Nollans's dedication of an easement for public passage along their property between the edge of their seawall and the ocean. The court found this lateral access requirement to be an unconstitutional taking of property. The court focused on the relationship between the nature of and the purpose of the requirement [11].

The important impact of the Nollan decision is that it stimulated municipalities to adopt development fees instead of land dedication exaction. Rather than requiring the land dedication as a condition of a permit, local governments decided they would do better to require a fee. Unfortunately, this may not fulfill the reason for establishing the exaction in the first place, especially if that reason was to set aside land.

Rough Proportionality Test. The Court elaborated on this relationship in Dolan by holding that there must be a "rough proportionality" between the exaction and a developer's impact on the existing infrastructure. In *Dolan v. City of Tigard* [12], the Court determined that an essential nexus did exist between the permit condition and a legitimate state interest, but adopted a test of "rough proportionality" in evaluating the necessary degree of connection. Adoption of this test requires municipalities to determine that their proposed exaction is related both in nature and *extent* to the impact of the development.

As a result of these tests, it was decided that because the money generated by the imposition of impact fees is of a regulatory nature, it must be used to finance a public or state interest that is directly related to the development being assessed and may not exceed that development's fair share of the cost of the improvement. As a result of the Nollan and Dolan decisions, the taking clause analysis was not only clarified but also substantially changed. No longer would a mere "rational basis" for a state action be sufficient to uphold various types of exaction programs. The level of scrutiny in exaction cases has been raised and the burden of proof has been shifted to the government.

Due Process and Equal Protection

Under the Fourteenth Amendment, when the government has acted arbitrarily and irrationally, or has discriminated against a developer, the developer may be entitled to damages under federal statute or an injunction. Imposing impact fees may be challenged by two aspects of the Fourteenth Amendment: due process and equal protection.

Due process claims focus on whether the regulation in question is a reasonable exercise of the state's police power. The relevant legal practice by the municipality must include the "notice and hearing" requirement of procedural due process and the "arbitrary, irrational, and capricious" standard for substantive due process: if a municipality interferes with a developer's property rights arbitrarily, irrationally, and capriciously, the developer can raise a due process claim.

The equal protection clause of the Fourteenth Amendment also ensures all people equal protection under the law, meaning that states cannot unreasonably discriminate between persons who are similarly situated. The equal protection doctrine does not require that all persons be dealt with identically, but it does require that a distinction made have some relevance to the purpose for which the classification is made. To avoid an equal protection claim, the fees must not be applied arbitrarily and must not have been enacted for a discriminatory purpose. However, the plaintiff in these cases has the burden of showing the fees to be arbitrary, unreasonable, or irrational. In most cases, courts usually reject these constitutional arguments if the classification system is reasonable.

In Minnesota, the state constitution was adopted before ratification of the Fourteenth Amendment and does not contain an equal protection clause itself. However, the Minnesota Supreme Court has found an equal protection principle in the state constitution, although its interpretation has not been uniform [13].

Recoupment and Double-Charging

The last two issues, recoupment and double-charging, are still emerging questions. Recoupment occurs when a previously constructed capital facility has excess capacity that new development wishes to use. The design of a fee to reimburse or recoup a portion of the previously expended capital outlay has been termed a "recoupment problem." It is addressed through legislation that specifically prohibits the use of impact fees for alleviating existing infrastructure shortages.

The double-charging problem occurs when several revenue sources finance capital facilities, and the development paying the impact fee does not receive proper credit for other revenues it contributes toward building the same facility, such as user fees or property tax. Some state legislation on impact fees specifically addresses this problem, requiring that state and federal funds for capital projects be taken into account as well.

Judicial Review of Impact Fees

To be valid, impact fees must meet the tests as just discussed. The other critical issue in determining the validity of an impact fee is the characterization of the fee as a regulation or a tax. This distinction depends primarily on the stated purposes for adopting the ordinance. If the ordinance is imposed primarily to raise revenue, it is a tax; if the purpose is for regulation of some activity under the police power, then it is a fee (regulation). When an impact fee is deemed to be regulatory in nature (thus an exercise of police power), judicial deference to legislative action usually means the ordinance will be upheld. However, even if the fee is found to be primarily regulatory, it still needs to withstand the "reasonable relationship" test.

Therefore, it is critical for municipalities to state clearly the purposes for which the regulation is imposed, and to address the issues of earmarking, timing, calculation, and refund of the fee. Revenues collected should be placed in a separate fund to assure that they are used only for the facilities necessitated by new development, and not diverted to general use. There also must exist a sufficient nexus between the time the fee is assessed and the time when the facility is constructed. Fees must be expended within a reasonable time to ensure that development receives a benefit from the facilities it was charged for. Regardless of the method used in calculation of the fee, municipalities must relate the amount of the fee to the actual cost of the facilities necessitated by the new development. Finally, provision for refunds or credits should be made to avoid overpayment when a developer constructs improvements that would have been funded by impact fees [14].

IMPACT FEES IN MINNESOTA AND WISCONSIN

Minnesota's Definition of Impact Fees

The Minnesota Supreme Court has defined an impact fee as a type of development exaction that meets the following criteria:

- it is in the form of a predetermined money payment;

- it is assessed as a condition to the issuance of a building permit, occupancy permit, or plat approval;
- it is pursuant to local government powers to regulate new growth and development and to provide for adequate public facilities and services;
- it is levied to fund large-scale, off-site public facilities and services necessary to serve new development; and
- it is in an amount that is proportionate to the need for public facilities generated by the new development [15].

These criteria distinguish an impact fee from other types of development exactions, such as dedications, connection charges, and linkages. The importance of making the distinction between impact fees and other types of exactions or other revenue-raising measures lies in the constitutional limitations of different types of local authority [16].

Legality of Impact Fees in Minnesota

There is no explicit statutory authority for municipalities in Minnesota to impose development impact fees, although they do possess authority to impose some types of development exactions. Minnesota statute 462.358 authorizes municipalities to condition subdivision approval upon a number of requirements, and includes the allowance of cash payments in lieu of land dedication for parks. Municipalities are also authorized to charge developers the sewer availability charge (SAC) for the construction of off-site sewer interceptors made necessary by new development [17], and to impose connection charges to existing sewer and water mains [18].

Recalling our discussion of Dillon's Rule and the authority of local governments, Minnesota municipalities may arguably possess authority to enact impact fees under police power authority (under the general welfare clause of statutes governing statutory cities, or the general welfare clause in most home rule charters), or under legislative grants of zoning or other authority for the imposition of development exactions. However, a road access charge in New Jersey, whose enabling legislation is similar to Minnesota's, was invalidated because the legislation did not explicitly authorize the fee [19]. Therefore, Minnesota courts may be unlikely to construe Minnesota legislation as authorizing impact fees. The most recent litigation over the issue of the legality of impact fees in Minnesota concerned the collection of road access charges by the city of Eagan.

The Case of Country Joe. In 1978, the city of Eagan adopted a road connection charge as a condition of issuance of all building permits. The stated purpose of this legislation was to provide "an equitable source of funding for major county and city street construction . . . in order to accommodate new development and traffic generated from future anticipated residential, commercial, and industrial construction" [20]. The road access charge was prompted by a study that projected a shortfall of $1.11 million in funds available for road construction in the city through the year 2000.

The road access charge was patterned along Minnesota Statute 444.075, which authorizes connection charges to water and storm sewer systems. However, the city deposited the road access charges into a Major Street Fund account along with other sources of revenue. There was no attempt by the city to earmark funds for any particular project, and in addition to major construction costs, other miscellaneous expenditures were made from the fund.

Except for annual increases due to inflation, the plan was not updated after an initial revision in 1979. The original charge of $75 per single-family residence had increased to $410 per residence by 1994, and this increase led in part to the challenge of the fee's legality by Country Joe, Inc. developers. During the period of litigation, the charge rose to $440 per single-family residence by 1997, and from an initial amount of $225 per acre of commercial and industrial development in 1978 to $1,320 per acre in 1997. In 1996, the fee generated $435,000 for the city [21].

The district court found that the City of Eagan was authorized to charge such a road access fee. However, the Minnesota Court of Appeals overturned this ruling in 1996. The Court of Appeals found the charge to be a tax, and held that the city did not have express or implied statutory authority to levy such a tax (as the legislature had expressed clearly its intent to restrict city taxing authority) [22].

In 1997, the case went to the Minnesota Supreme Court [23]. The city of Eagan argued that the imposition of a road access charge was a lawful exercise of its implied powers under three different sources, including the city's municipal planning authority under Minnesota Statute ch. 462, implied powers as recognized by numerous other states, and the city's power to collect regulatory fees under its general welfare powers (police power authority). The court rejected or declined to consider all three of these arguments.

On the first claim, that the charge is authorized impliedly by the Municipal Planning Act (Minn. Stat. ch. 462), the court found that the act expressly confers broad municipal planning powers, but did not intend to confer broad financing powers. The court found, in fact, that the legislature's actions in expressly providing for sewer and water charges, and not for road charges, indicated that they did not intend municipalities to have financing powers other than for sewer and water connections.

On the second argument, that other states had recognized implied power to impose impact fees, the court avoided the issue by finding that Eagan's road access charge as implemented constituted an invalid tax, not an impact fee. Because an impact fee by definition must be charged in an amount proportionate to the needs created by new development, and Eagan had not revised its charges since their original inception in 1978, the court found insufficient evidence that this road access charge was proportionate to the need created by the new development upon which burden of payment fell. Thus, the court reserved "the issue of whether impact fees are authorized under Minnesota law."

The court also avoided the city's final argument that the road access charge is not a tax, and that as a regulatory fee, is authorized under the city's police power. In determining that the charge was a tax, the court found it significant that Eagan did not earmark the revenues in any way. Thus, it deemed the road access charge a revenue measure (vs. a regulatory fee) that must draw its authorization from the city's powers of taxation. The court then found that Eagan's statutory power to tax did not include the power to tax through the road access charge [24].

To summarize, the court did not reach the issue of whether impact fees must be authorized by an enabling statute in order to be valid. The court simply reaffirmed its position that the general police power of a municipality does not extend to general revenue-raising measures. The standard of this case is that a municipality may charge only the actual cost of administering the service for which a fee is levied. If a municipality charges an amount greater than this, the charge is considered revenue-raising, and therefore is an exercise of the more restrictive powers of taxation. Cities in Minnesota have no inherent sovereign power of taxation, but only the power that has been granted by the state constitution or legislature. Their power to regulate, on the other hand, includes the power to both deny and condition development in accordance with public welfare.

Legality of Impact Fees in Wisconsin

Wisconsin State Statute 66.55, passed in 1993 and in effect as of May 1995, authorizes the imposition of impact fees via ordinance by a city, village, town, or county [25]. Fees may be charged only for the capital costs of building or expanding the following facilities: highways, traffic control devices, sewage treatment, recycling, fire and police, emergency medical facilities, and libraries. However, counties may not charge fees for transportation improvements. In response to one of the most common criticisms of impact fees, exemptions and fee reductions are allowed for affordable housing. The statute states that other forms of financing (such as special assessments or in-lieu fees) still are authorized as well.

The most notable omission from this list of authorized fees is schools. According to the head lawyer who drafted the legislation, "It does not allow impact fees for school district facilities because the relationship between new development and schools is more tenuous" [26].

Several contingencies are added by the legislation to the authorization of fees, taking into account nearly all of the concerns over impact fees that we have discussed so far:

- a public hearing must be held before enactment;
- a "public facilities needs assessment" must be carried out by the MCD or county in question, including an inventory of existing facilities; identifying necessary improvements or expansions "based on explicitly identified service areas and service standards;" and the capital costs of these improvements or expansions, along with the effects of the proposed fees on affordable housing;
- there must be a "rational relationship" between need and fees charged;
- the fee must be in proportion to the capital improvements required;
- the fee must be based on actual costs (or "reasonable estimates");
- the fee has to be reduced if other special assessments or fees, or state or federal dollars, pay for the same facility (no double-charging);
- the fee cannot be used to solve existing capacity shortages;
- the fee must be paid before a permit is issued;
- MCDs and counties must include an appeals procedure in their ordinances;
- the proceeds must be kept in a separate account to be used only for the purpose for which they were charged; and

- MCDs and counties must decide on a reasonable length of time after which unused fees are to be refunded.

Wisconsin does not limit impact fees to residential development; different fees can be imposed on different kinds of development. Also, different zones within the same MCD or county can have different fees imposed on them, though justification for this geographic differentiation must be included in the public facilities needs assessment. These fees are still different from a special assessment, though, since impact fees are limited to new development and future needs only. With regard to returning unused fees, although it is not specified in the statute, most ordinances assume that the value of the fee has been capitalized in the property and thus plan to return unused fees to current property owners.

According to the Madison Area Builders Association, both they and the Wisconsin Builders Association approved this statute, largely because it so clearly spells out what is and is not allowed. Nevertheless, both organizations are working actively to reduce both the amount of fees and the number of facilities for which they can be charged.

To summarize, legal debates over impact fees center on whether they are a valid form of taxation, or a necessary adjunct to land use regulation. Challenges to impact fees assert that they constitute an invalid taking as prohibited by the Fifth Amendment, or violate the equal protection clause of the Fourteenth Amendment, or that they violate the right to due process guarantees of the Fourteenth Amendment.

The U.S. Supreme Court's "Dillon Rule" clarified circumstances under which legislative action grants authority to a municipality to charge impact fees. Subsequent legislative and court action established rules on proportionality and the geographic relationship, or "rational nexus," linking the place where development occurs with the additional infrastructure needed to serve it. If a regulation goes too far, it may constitute a taking and a remedy may be required. As a consequence of Supreme Court cases on regulatory takings, the level of scrutiny in exaction cases has been heightened and the burden of proof has been shifted to the government.

The Minnesota Supreme Court specified criteria for defining an impact fee. There is no explicit statutory authority for municipalities in Minnesota to impose impact fees, although they are possessed of authority to impose certain types of development exactions. Wisconsin statutes

authorize the imposition of impact fees via ordinance by a city, village, town, or county, but only for the capital costs of specified facilities.

Chapter 5

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2. Ibid., 641.
3. R. H. Freilich, *Impact Fees and the Law* (St. Paul: Minnesota State Bar Association, Continuing Legal Education, 1990): 11.
4. *Pioneer Trust and Savings Bank v. Village of Mount Prospect,* 176 N.E.2d 799 (Ill. 1961).
5. More specifically, the requirements include:
   - New development must require that the present system of public facilities be expanded to benefit the new development.
   - The fees must be no more that what the local government unit would incur accommodating the new users of the system.
   - The fees must be earmarked for the purposes.
   - Local government should assess carefully the needs created by new development and what expansion of capital facilities should be provided.
   - The measurement of new development needs should be segregated carefully from those needs created by existing development.
   - The fees cannot exceed the costs of meeting those needs.
   - The fees should be reviewed and recalculated as often as necessary to reflect changing conditions.
   - A time limit should be set on the use of funds, to ensure that the funds are spent in a reasonable period of time or be subject to full repatriation back to the payers.
   - The court will look favorably upon any geographical relationships that can be established between the fee payers and the location in which the fee will be spent.
6. Freilich, 11.
7. *Hollywood, Inc. v. Broward County,* 431 So. 2d 606 (Fla. Dist. Ct. App. 1983).
8. *Collis v. City of Bloomington,* 310 Minn. 5, 246 N.W.2d 19 (1976).
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22. *Country Joe, Inc. v. City of Eagan*, 548 N.W.2d 281 (Minn. App. 1996).
23. *Country Joe, Inc. v. City of Eagan*, 560 N.W.2d 681 (Minn. 1997).
24. Malkerson and Duffy.
25. Before this legislation, "Wisconsin courts had interpreted statutes authorizing local governments to impose subdivision regulations and enact zoning ordinances to authorize the imposition of impact fees in at least some circumstances." J. Koeppl, "Development Impact Fees Authorized," *Wisconsin Environmental Compliance Update* 1, 6 (1994). See also: C. C. Mulcahy and M. J. Zimet, "Impact Fees for a Developing Wisconsin," *Marquette Law Review* 79 (1996): 759-817.
26. K. Garcia, "Areas Ponder Impact Fees," *Wisconsin State Journal*, 5 December 1994: 1A. A committee of citizens in the town of Franklin, Wis., however, found that one new home actually costs the school district $9,310. S. L. Smith and K. Schneider, "Development Impact Fees are One Way out of Trap," *Wisconsin State Journal*, 21 February 1993: 7A.
27. Madison Area Builders Association Housing Facts, http://www.maba. org/Government.html, 10 March 1999.

Chapter 6

ADVANTAGES AND DISADVANTAGES OF IMPACT FEES

ADVANTAGES

User Equity

Impact fees are considered user charges that follow market prices. If properly levied, the user charge causes individuals to weigh benefits for services against prices. Thus, scarce services are allocated to their best uses and waste of service is discouraged. In addition, user charges can insure the proper level of investment in facilities.

Under exactions, mostly large-scale developers have been required to pay for the full cost of their developments. However, under the new legislation that adopts impact fees, even small-scale builders will have to pay for their proportionate costs of growth. It is generally accepted as appropriate that all developers, regardless of their scale, should help bear the cost that their developments impose on the community.

Political Aspects

Developers who oppose impact fees may be relatively few in number compared with concerned taxpayers. Furthermore, it is politically unrealistic to increase property taxes to fund new public facilities that are only needed because of newcomers to the community.

Developer Support

Large-scale developers may be supportive of adopting reasonable impact fees because they fear that otherwise local governments will be less able to fund necessary capital improvements, and thus will demand even greater contributions from large scale developers, possibly provide no infrastructure, or take steps to prohibit development altogether. They also may feel more secure knowing that the rules for infrastructure payments are clearly spelled out and do not have to be negotiated on a development-by-development basis.

Reducing Borrowing

Impact fees provide funds in a timely fashion. They may help to reduce borrowing, debt, and the limitations and problems associated with debt financing because they are collected at the time the building permit is issued.

Controlling Growth

In communities that are experiencing rapid growth, impact fees can be a tool to slow that growth or direct it into areas with existing infrastructure, or both. Skidmore and Peddle (1998) showed that residential rates of development were slowed by up to 25 percent by the imposition of impact fees in DuPage County, Ill. [1]. Impact fees can also be used to promote one kind of development (i.e., commercial) over another to achieve a broader tax base or to encourage reinvestment in existing properties.

Promoting Planning

In order to implement impact fees, many communities are legally required to develop an assessment of existing facilities and predict the needs that will be created by new development. Especially in municipalities just beginning to experience growth, this type of long-range planning, although not something they may have engaged in previously, may have benefits beyond fulfilling legal obligations.

DISADVANTAGES

Impact on Affordable Housing

One of the most common arguments against impact fees is their effect on income equity and affordable housing. Impact fees will place greater burdens on developments that contain low- and moderate-income housing. A flat fee for a single-family residence with three bedrooms, for instance, will be a greater burden on a $50,000 house than a $150,000 house. Developers may be encouraged to build less low- and moderate-income housing and concentrate on more expensive development. Such moves may reduce the potential supplies of low- and moderate-income housing. Furthermore, the effect of impact fees on existing housing may be even more important. The prices of existing housing will increase as new housing becomes more expensive. Ultimately, the provision of low- and moderate-income housing will be reduced. Consideration should be given to the possible effect of impact fees on the housing needs of low-income people.

Besides the impact on affordable housing provisions, another prospective consequence of the imposition of impact fees is that some potential new residents are simply priced out of the housing market, thus perpetuating economic exclusion. This fact may result in encouraging the homogeneity of communities and discouraging socioeconomic diversification with a kind of "exclusionary zoning."

Other Equity Issues

It can be asked why new residents should bear special road or park fees when existing residents never had to do so. Traditionally, providing needed public facilities has been considered one of the major roles of local governments. Impact fees require capital payment at the beginning of a facility's useful life. Thus, they may create problems of "inter-generational equity" when current users are required to pay for facilities used for a long time into the future [2].

Even apart from the problems introduced by generational difference, equity issues can be raised among contemporary fee payers when the impact fees are to be used for facilities that cover a large area. Those facilities, such as safety services, are not always used exclusively by the fee payers. In this case, the fee payers may bear undue burdens compared with the benefits they receive.

Partial Coverage of Total Costs

Impact fees are not supposed to cover the whole cost of infrastructure for the new development. Rather, they pay for only part of the total cost. This requires financial planning by local governments to cover the remainder. However, impact fee ordinances do not address the role of government in providing the remainder of the money. Furthermore, in areas of rapid population growth, such as Florida and California, local governments may have a substantial backlog of capital needs. Thus, much of the existing development may not have "paid its own way." Impact fees, however, cannot and probably should not solve the problems of past growth because impact fees are based on the assumption that past growth should be paid up.

Difficulties in Establishment and Administration

Each impact ordinance should be designed individually to address all types of development and the level of service standards required by the capital improvement elements. In addition, the costs of the facilities must be fairly apportioned between new users and existing development. The local government should look to cost accounting techniques and fiscal impact analysis.

Earmarking fees collected, establishing special trust funds, and ensuring that funds are spent in a reasonable time are complicated matters. The level of service measurement, the rate of growth, and the revenue situation all differ depending on time and region. Thus, local governments need to be able to establish a proper impact fee system to meet their own needs rather than blindly following one another's practices.

Rate of Development

Impact fees are usually paid when building permits are issued, and so can be viewed as a one-time payment. Revenues will depend on the rate of growth of building permits and the establishment of new developments. In slow-growth areas, impact fees may not contribute much to revenues. On the other hand, if impact fees come to be relied upon as a source of revenue, this actually might encourage rapid growth.

Wrong Policy During a Recession

In a period of recession, impact fees stifle real estate development and thus will usually retard economic growth. Developers in a price-sensitive market sell their product and absorb the cost of impact fees. Builders discontinue further construction until they can realize a reasonable return on investment. If impact fees add five percent on top of construction costs there may be little or no return on investment during a recession, when prices already are relatively low [3].

Intergovernmental Cooperation

Different levels of government have their own impact fees to satisfy their own interests and requirements. Of less importance to them is the viability of projects or how they affect the market. The total sum of fees that might satisfy each authority often is unrealistic, and if implemented, would bring about a significant local real estate market decline [4]. For example, in New Jersey the total impact fees in a road improvement project can easily exceed eight percent of equalized assessed valuation following passage of a series of statutes such as "Transplan," which authorized the state, county, and municipal governments to jointly develop a transportation capital improvement plan for a specified locality [5].

To summarize, the advantages of impact fees include heightened user equity, as each beneficiary pays something closer to a fair share of the infrastructure that they require; the political advantage of existing residents outnumbering developers; developer support when it is feared that without the fees important infrastructure cannot be supplied in a timely fashion; reduced

borrowing by local government; a means to slow growth by raising its price to new households and businesses; and the promotion of local land use, economic, and community planning.

Disadvantages accompanying the imposition of development impact fees include the raising of new house prices, which can be especially significant for communities trying to expand their inventory of low- and moderately priced units; and the equity argument that existing residents never had to pay impact fees so new residents and businesses should not be obligated to do so.

Although the general theory justifying impact fees may be easily articulated and defended, the design and calculation of an appropriate impact fee and its fair administration are complicated business. Development impact fees are not designed to pay for the entire cost of new infrastructure because that infrastructure will be used by others outside the development area and by other households and businesses in the future.

The timing of fees is important, because although they can slow down land development during an economic boom, they can depress business during a recession. If different levels of government each charge development impact fees, the total of such fees can become so high that real estate development can be slowed or stopped, whether or not this outcome is desired.

Chapter 6

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Chapter 7

CALCULATING IMPACT FEES

The primary factors involved in attributing improvement costs to new development are selection of facility standards and determination of the proportionate share of the cost of constructing those facilities that should be included in the impact fee. Examples for the calculation of six different kinds of impact fees are provided in Appendix A.

FACILITY STANDARDS

Communities must demonstrate that the need for additional facilities results from new development, and not from existing deficiencies. To make that judgment, communities must determine appropriate facility standards in the general planning process and then formulate a capital improvement plan under which they will schedule improvements to correct existing deficiencies, upgrade service levels, and anticipate improvements that new development will make necessary. They then can apportion facility costs between current and new development.

Sound community planning begins with projections of future population, dwelling units, employment, and business activity. The projections lead to determinations of future developable land and supporting facility needs. They also lead to the development of standards to project the need for, and the size and quality of, community facilities. Local governments must set or use established planning standards to justify impact fees.

Can new development make up for an existing shortage? Not directly. The plan and its capital improvements component must first show how the community will eliminate the current deficiency without assessments on new development, perhaps through taxes that only current development will pay. Such taxation, which would affect new development as well, would equalize the burden of paying for existing deficiencies, as all current development would be assessed the same rates for the same purpose. Once the plan has established community facility standards and determined the existing deficiencies and future needs, the capital improvements plan can schedule necessary improvements.

However, impact fees can be, and are, charged for existing facilities when those facilities have been provided in anticipation of the needs of new development. The issue is not whether the facilities are needed to accommodate new development. One convention resulting from this situation has been to call impact fees for existing facilities "recoupment." Regardless of what they are called, they are still impact fees subject to the various tests of reasonableness.

PROPORTIONATE COSTS

The standard to which an impact fee will be held is that the fee not exceed a proportionate share of the costs that local government has incurred (recoupment) or will incur to accommodate new development. To this point, only total cost has been considered. It would be a mistake to equate total cost with proportionate share of capital costs. New development does pay something for the required capital facilities. New development will pay on bond issues. New development will pay motor fuel taxes. New development will pay user fees. Additionally, various grants and other government financial programs (e.g., state school construction grants) contribute toward meeting capital costs. Such payments should not be ignored. The problem is that these payments are usually insufficient to cover the total cost. Therefore, it is necessary to take the next step—to determine what proportion of the total cost new development must bear [1]. Estimating the proportionate share of costs to be included in an impact fee requires understanding the complexities of community financing and usually involves seven separate determinations [2].

Determining the Cost of Existing Facilities

Most impact fee schedules do not take inflation into consideration, nor should they, because no one knows what the rate of inflation—or the actual cost of building facilities—will be over a planning period. The cost per acre of improving parkland should be recalculated and updated every year or two. Such updating should incorporate changes in other costs. The same logic can apply to the preparation of impact fee schedules for roads, schools, fire and police, water, sewer and drainage, and other facilities.

Determining How Existing Facilities Were Financed

A principal requirement of impact fee programs is that they shelter existing residents from paying for new facilities required to serve new development. Conversely, new development should not have to pay for facilities built to serve occupants of existing development. For now,

we need only to determine how existing facilities were financed. For example, if property taxes have financed most existing facilities, then the land on which new development occurs already has paid for part of those parks. If payments for parks or other facilities came primarily from state sales and excise tax rebates, state and federal revenue sharing or block grants, and other user fees and charges, they probably cannot be attributed to vacant land prior to development.

Determining How Much New Development Already Has Paid

Owners of undeveloped land do not pay user charges, sales and excise taxes, or fuel taxes on that land. However, they do pay property taxes. If property taxes have financed facilities, even in part, local governments should determine the value of those payments.

Determining How Much New Development Will Pay in the Future

Issuing bonds is a common method of financing facilities. If bonds are outstanding when new development occurs, the development will help retire them, thus lowering debt service charges to all existing property by broadening the taxable base.

Determining Credits for Facilities Installed by New Development

In addition to impact fees, many local governments require developers to install both on-site and off-site facilities that the community at large or a specific service area may use. For example, occupants of current development near new development may use facilities—such as a traffic signal—that contributing development installs. The local government should grant credit against fees for any on-site facilities or other dedications that occupants of current development in the service area use. That credit would be the value of the facility not otherwise attributed to contributing development. Types of facilities that some communities consider in offsetting impact fees in that way include roads, rights-of-way, traffic signs and signals, and turn lanes. In practice, determining appropriate credits against impact fees is a complicated and controversial exercise.

Determining Extraordinary Costs

The most common way costs may change is through cost increases from inflation or other factors. Impact fee programs may accommodate inflation by providing for periodic review of fee schedules. When costs increase through other factors—for example, rising property values that increase the cost of purchasing parkland, irrespective of inflation—they may be passed on to new development as an extraordinary cost. Passing on those costs requires careful

documentation, perhaps through appraisals. One can attribute a second means by which costs may change to idiosyncrasies of individual developments. St. Lucie County, Florida, for example, assessed impact fees that are nine times higher for developments on a barrier island than those for developments on the mainland. The differential occurs because of the greater cost of building roads and bridges to the island.

Time-Price Differential

Perhaps the most difficult consideration is the time-value of money. Situations in which that is important occur when other payments not related to impact fees finance new facilities over time, and when developers have to pay impact fees, the benefits of which will not appear until future improvements are made. In the first situation, local governments often must install facilities to accommodate future development and must establish some equitable way to calculate the impact fee.

A second problem involves determining the benefit to fee payers when fees are to be spent on improvements in the future. A substantial amount of time may elapse before communities can productively spend the fees. Since they accrue in small amounts, it may take some time for the fees to accumulate enough to be useful. How long contributing development waits to receive the benefit affects the present value of the benefit it receives.

CALCULATIONS

The major and critical issues in establishing impact fees are [3]:

- establishing facility standards;
- identifying current deficiencies;
- apportioning costs to new development;
- determining appropriate credits;
- determining any extraordinary costs;
- incorporating time-price differentials; and
- ascribing benefit to fee payers.

Proportionality calculations begin with a determination of physical quantities of facilities that new development will require. The determination of physical quantities of needed capital facilities requires, in turn, a standard for each service of facility.

During the land use planning and capital improvements programming process, a set of facility service standards must be adopted. These standards are the first, and perhaps the most critical, element of establishing a defensible system of impact fees. Unless standards are adopted and applied in land use planning and facility programming, impact fees may fail judicial review. Facility standards will lead to determination of current and future facility needs.

The need for capital facilities may be expressed mathematically as [4]:

Needed Improvements = Service Standard x (Demand Unit)

This formula introduces the demand unit. A demand unit is that which is associated with a new development that will require improvements in public facilities. For a single-family home, the demand units could be the occupants for purposes of parks; school-age children for purposes of schools; vehicular trip ends per hour or day for purposes of roads; or gallons per day for purposes of potable water. All services can be expressed in terms of demand units and standards of service.

Several impact fees are set out as examples in Appendix A [5]. The fees are for roads (Martin County, Florida); schools (Anne Arundel County, Maryland); public buildings, libraries, parks, and fire/emergency service (Palm Beach County, Florida). The fees discussed are collected for and will be spent on capital improvements incurred or to be incurred in the provision of the respective service. For example, the park impact fee collects funds to be spent on new or expanded park acreage and facilities. No consideration was given to operational costs in the establishment of these fees and no fees collected will be spent on operations, because these are assumed to be taken care of by taxes, user fees, and other revenues.

These impact fees were based on the cost of providing existing facilities in 1991 dollars. In the future, the costs probably will be higher. Some impact fee schedules build inflation factors into their formulas. These inflation assumptions, however, are bound to be erroneous for any given year, and the longer the fee schedule remains unchanged the larger the error can become. Such impact fee formulas would run a risk of failing judicial review. A better way of dealing with changes in cost is with annual or biannual review of the data and standards that serve as the bases for the established fees. What is recommended is annual and biannual redetermination of the cost of providing new facilities financed by impact fees.

To summarize, the calculation of impact fees requires the prior determination of appropriate facility standards, plus the adoption of a capital long-range improvement plan to accompany the general city land use and development plan. The next step involves estimation of the proportionate share of infrastructure capital costs that should be assigned to new development. Estimating this share involves at least seven determinations:

- cost of existing facilities;
- how existing facilities were financed;
- how much new development already has paid;
- how much new development will pay in the future;
- how much credit should be allowed for facilities installed by the new development;
- extraordinary costs due to unusual site or situation; and
- time-price differential that arises when fees are paid well in advance of the availability of the infrastructure.

Chapter 7

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Chapter 8

IMPLEMENTING IMPACT FEES

The actual practice of implementing development impact fees is so varied that even adjacent regions under the same legislative authority may adopt different ways of imposing them. Thus, the amount of impact fees and the range of facilities on which the fees will be imposed are hard to generalize. Many municipalities have developed their own ways of assessing and imposing impact fees, reflecting their specific revenue situation, growth rate, sociopolitical climate, historical background, and so forth. For instance, between California and Florida, the two leading states in implementing impact fees, there are significant differences. Guidance of the impact fee system in California is characterized as general and liberal, while Florida's is considered rigid [1]. The following examples are highly selective, and do not illustrate the whole picture of the practice of impact fees in different municipalities, yet they can serve as a reference when considering the adoption of impact fees.

CALIFORNIA

California has led the nation in the innovative, complex, and flexible use of various impact assessments including impact fees, mitigation fees, and impact taxes. Yet, this flexibility has eroded, especially since the passage of Proposition 13 in 1978 and Proposition 62 in 1986, both of which prevented use of "special" taxes. Thus, impact fees became a more prevalent device than impact taxes for financing infrastructure improvements. The California court has given its municipalities great flexibility in imposing impact fees by requiring that impact fees need be only "reasonably related" to the development's impact on community facilities. By 1987, impact fees were about the only way communities could shift the burden of paying for new facilities to new development. Yet recent California legislation and the Nollan case indicate the need for a clearer, more persuasive rationale for assessing impact fees [2].

San Jose

San Jose has had a long experience with impact fees. Grown as a bedroom community for the Silicon Valley, it became the "fastest growing large city in America" by the 1980s; during the

1970s, its population grew by 37 percent, from 460,000 to 630,000. As population was growing rapidly, the needs for new development were soaring, and congestion of existing facilities became worse.

During the mid-1970s, San Jose residents voted for city-imposed school impact fees to finance new capital facilities at overcrowded schools. The school impact fees ranged from $250 to $2,500 and averaged $1,000. Also, during the 1970s, a "mitigation fee" was adopted to decrease traffic congestion. Proposition 13, which rolled property tax assessments back and reduced city revenues, forced the city to impose more user fees and to increase the charges; the sewer treatment plant connection fee was shifted from $23 to $780 per single family dwelling during the 1980s. The varieties of impact fees the city imposed until the late 1980s consisted of a construction tax, building and structures tax, conveyance tax, school impact fee, sewage treatment plant connection fee, sanitary sewer connection fee, and storm drain connection fee. The projected revenues from those fees between 1986 and 1987 were $34.54 million. Approximate cost of total impact fees per single dwelling unit was between $4,280 and $6,530.

Although individual developers complain about the high charges, the political climate in San Jose no longer tolerates a situation where the whole community bears the burden of paying for growth [3].

San Diego

In 1979, the City of San Diego adopted a "Progress Guide and General Plan" that divided the city into urbanized, planned urbanizing, and future urbanizing areas only. The city limited the use of its fully financed capital improvement program to the urbanized area only, which included the built-up area. To finance infrastructure in new communities, the city adopted the facilities benefit assessment (FBA) ordinance in 1980. The FBA ordinance allows city installation of streets, water, sewer, drainage, fire, school, police, traffic signaling, and other public improvements. The city does not pay for these facilities from general bonds but from lump sum payments collected from developments. Since many facilities are not scheduled for construction until ten or more years into the future, the city commingles funds and uses them to pay for earlier construction. Facilities built later are financed from funds collected for facilities that already have been built. While funds are not explicitly earmarked in separate accounts, the city does have a schedule of the projects for which it theoretically collects the funds and when specific facilities would have to be built.

The FBA approach has considerable political support, as the electorate supports politicians who shift the burden of paying for growth from existing to new development. In fact, the city sees the FBA approach as both a growth management and a financing strategy. The program also encourages greater in-fill of the urbanized area, because there are no impact fees on development inside the urbanized area.

COLORADO

Although Colorado is one of the nation's leading states in the use of impact fees, the state possesses no explicit statutory provision or statewide planning mandate that clearly enables their use, nor have the state's courts produced any clear guidance. In Colorado, the problem of financing new facilities to support growth was precipitated by the anticipation of the oil shale boom in the 1970s, when small Western Slope communities were experiencing rapid, though speculatively driven, growth. Most of those communities subscribe to the philosophy that growth should pay a large percentage, if not all, of its own way. Aspen is notable among Colorado communities because it assesses not only city and county park impact fees, but also employee housing fees. Developers have the option of paying the fees or buying existing units and converting them from free market to subsidized employee housing. Colorado courts and the Supreme Court also accept the validity of impact fees [4].

Loveland

The City of Loveland adopted a comprehensive impact fee system named the cost recovery system. The key concept of this system is "capital expansion fees (CEFs)," which are one-time charges assessed at the building permit stage. The CEF is based on "vintage pricing," defined as the current replacement cost of the facility being financed from fees plus "betterments." The CEF is based on the concept that those who receive services pay the true cost of providing them. This approach ensures that new residents will contribute toward long-term expansion and will pay a fee proportionate to the total number of new users the facility is expected to serve. For each facility, the CEF calculation process estimates five cost components following five steps:

- Future capital costs
  Less: replacement and betterments costs
- Capital expansion costs
  Plus/minus: under capacity/value of excess

- Expansion-related costs
  Less: external funding sources
- Net expansion-related costs
  Times: portion of sector benefits (residential, industrial, commercial, and institutional)
- Capital expansion fees by sector
  The five-part sum is then divided by capacity in units = CEF fee per unit

The key part of this system is calculating the proportionality by assessing existing facility costs. Distinguishing the different impacts on facility costs among different land uses is another advantage of this approach. Under the CEF system, Loveland imposes impact fees for parks and recreation, fire protection, law enforcement, library, museum, general governmental, and street facilities. Total cost in 1983 for residential land use per unit was $1,537 and for industrial per acre was $4,550. Loveland's cost recovery system won the APA's innovative planning program award for 1986 [5].

TEXAS

Keller

The small, rapidly growing city of Keller became the first city in Texas to adopt impact fees on sewer, water, and roadway system improvement with new standard procedures. The city's population jumped from 1,474 in 1970 to 4,156 in 1980 and then almost tripled [6]. Located just 13 miles west of the Dallas/Fort Worth international airport, Keller became the hot spot for development as a bedroom community for large employment centers. IBM and American Airlines moved their regional headquarters and main base to Keller. The major problems Keller's leaders faced in response to this rapid economic boom were reshaping deteriorated public facilities due to past growth and meeting escalated demands for facilities, especially by new residents.

After two failed bond elections to finance existing and new developments, Keller officials decided they needed a new revenue source. "Access fees" were instituted in 1986 based on a 20-year capital improvement plan for water and sewer system facilities. The new fees immediately generated more than $40,000 per month. A new Texas law gave further opportunities for strengthening Keller's fee structure by allowing road impact fees. The new act required adoption of land-use assumptions, designation of service areas, a long-term capital improvement plan, and

preparation of a fee calculation table prior to imposing impact fees. The formula for sewer and water impact fees was:

A / B = C, where:

A = cost of capital improvement planned over 10 years serving new growth, less credits for existing facilities;

B = projected increase in service units over 10-year period;

C = impact per service unit [7].

The new parts of the impact fee system were to delimit a 10-year capital improvement plan and to develop a service area. It was also necessary for the city to revise other fees to avoid double charges. Because of Keller's geographic location, the city was expected to grow primarily as a bedroom community with a limited non-residential tax base. Therefore, a growth strategy to guide the city's development was essential [8]. The citizens appreciated the fact that they were not responsible for funding improvements for future generations of newcomers.

MONTANA

Bozeman

The city of Bozeman voted to establish impact fees in 1996 to ensure that development was adequately provided with necessary water, wastewater treatment, street, and fire services. A basic principle for establishing impact fees is that development that uses up a measurable amount of capacity in public infrastructure systems should pay the cost of providing the necessary infrastructure to replace this consumed capacity. Bozeman bases its authority to enact its impact fee program on the city's general police power and its authority granted by the Montana State Constitution. Bozeman's impact fee program explicitly considers the "proportionality" and "rational nexus" tests established by the courts.

To address these issues, Bozeman contracted four studies that established final costs per Impact Fee Service Unit for each of the four impact fees. The city adjusts these fees annually to reflect changes in the Consumer Price Index, and reviews the fees every three years to ensure the continued validity of the fee. One unique feature of Bozeman's program is the one-time exemption from fire and street impact fees allowed for the expansion (30 percent or 2,000 square feet, whichever is less) of businesses existing prior to February 22, 1996.

Bozeman also provides for a detailed collection schedule (each fee is collected at a known and predictable time, relevant to the initial use of services), credits to developers who provide their own infrastructure, and an appeal and refund process. The Capital Improvements Program of the city sets five-year funding priorities for capital items and a list of projects to be funded with impact fees. So far, two water main installation projects have been completed, a sewer line expansion and a traffic signal are in the process of approval, and three other sewer or traffic signal projects are pending, all funded completely or partially by impact fees [9].

TWIN CITIES METROPOLITAN AREA

Minnesota

Impact fees are rarely used in Minnesota. No impact fee legislation has been enacted, although bills enabling the use of impact fees have been introduced to the Minnesota Legislature since 1988. After the *Country Joe* decision in 1997, Eagan stopped collecting its road access charge. The cities of Apple Valley, Prior Lake, and Savage had road connection charges similar to Eagan's, and all three have been sued as well. These cities also have stopped collecting their road charges.

However, there is no legislation that explicitly prohibits impact fees either. In a survey conducted by the Metropolitan Council of 25 municipalities in the Twin Cities area, cities surveyed cited questions about the legality of impact fees in Minnesota and judicial challenges in other states as reasons why they were not planning to implement impact fees in the near feature [10].

Even after the *Country Joe* litigation, questions remain as to whether the authority to impose impact fees can be implied from the Municipal Planning Act, be created by charter, or be found in the general welfare powers of statutory cities in Minnesota. The decision in *Country Joe* gives little reason for optimism that the Municipal Planning Act as written intended to confer broad financing powers (beyond the express conferral of broad planning powers) to municipalities. On the other hand, Minnesota statutes permit local units of government to adopt home rule charters (Eagan is a statutory city versus a home rule charter city) and to provide for the regulation of "all local municipal functions" [11].

Thus, an argument could be made that a home rule charter city could draft a charter amendment to permit impact fees within the constraints of *Country Joe* as long as the facilities being funded

by the fees were a matter of municipal concern [12]. Also, because the court in *Country Joe* found Eagan's road access charge to be a tax rather than a regulatory fee, the question of whether impact fees might be a valid exercise of a municipality's police power (for either statutory or home rule charter cities) was neither raised nor resolved [13]. The uncertainty over this issue, however, poses risks to any city that attempts to impose impact fees.

Considering the outcome of the *Country Joe* case, it appears that adoption of enabling legislation is the easiest and safest way to provide municipalities with the authority to charge impact fees. Such legislation should clarify the imposition of fees as an express delegation of regulatory police power authority, distinct from a revenue raising (or taxing) measure. Such legislation also should take into account the reasonableness of the fees, including the definition of service or benefit areas, the need for and benefits of new facilities, the earmarking or dedication of revenues for the purposes identified, and the amount of the fees [14].

Wisconsin

Wisconsin, one of the states that has struggled with a revenue shortfall for funding new development, adopted the Wisconsin Impact Fee Act in 1994 [15]. Many local governments in Wisconsin have developed various exactions as sources for financing public facilities such as special assessments, user fees and tolls, and connection fees, as well as general revenue such as sales taxes, property taxes, and real estate transfer fees. However, those traditional ways have failed to maintain the quality of existing facilities and to meet increasing demands for public services. Finding new revenue sources, including impact fees, is no longer an issue in only those fast-growing regions such as California and Florida. It has become a nationwide issue.

Most municipalities that have enacted impact fee ordinances are located in southeastern Wisconsin in the Milwaukee metropolitan area or near Madison in the south central part of the state. However, the city of Hudson, located just across the St. Croix River from Minnesota, enacted an impact fee ordinance in 1996 [16].

Much of Hudson's ordinance is extracted directly from the statutory requirements, including standards for applying the impact fee, keeping the revenue in a separate account, and provisions for appeal. Fees are assessed for parks, storm and sanitary sewer trunk lines (a separate sewer connection fee continues from before the ordinance), and water (both mains and treatment plants). Fees vary based on type of development and density (Table 8.1) The current fee

Table 8.1. Impact Fees for Hudson, Wisconsin

Facility Type	Single-Family	Medium-Density Residential	High-Density Residential	Commercial and Industrial	Park	Institutional
Storm sewer	$3,730	$4,476	$5,222	$5,222	$2,238	$3,370
Sanitary sewer	$1,645	$2,467	$4,935	$3,290	$411.25	$1,645
Water (main & treatment)	$1,795	$2,692	$4,308	$3,590	$224.38	$1,795

Source: City of Hudson, Wis., Ordinance No. 20-96, 1996.

schedule is updated every few years to account for inflation. Needs assessments for sewer and water must be carried out separately from parks. Payment of fees is the requirement for plat approval; if no subdivision is involved, fees become the requirement for a building permit. If fees are not used for sewer infrastructure within 10 years' time, they are to be returned to the property owner; water facilities have a 20-year time requirement.

There are some unusual features of Hudson's ordinance. For one, it assesses fees based on acreage, not by number of users. So while there are different fees for different densities, developers should be more likely to build in the high end of each density category (as seen in Table 8.2) in order to get in as many units as possible under a certain fee. Secondly, public and non-profit land owners have to pay impact fees, too. Next, impact fees are charged not only for brand-new development, but also if the renovation of existing housing creates more units.

The feature that is most interesting is the provision for an "impact special assessment". If a developer is granted a petition, he can turn the one-time fee into a special assessment payable over a three-year period (non-profit organizations may have ten years). This provision shifts the cost of the impact fee directly from the developer to the buyer, rather than having it capitalized into the value of the property.

To summarize, the actual practice of implementing development impact fees varies significantly from state to state as well as among jurisdictions within states. California rules are general and liberal, while Florida's are strict. Other examples from Colorado, Texas, Montana, and Wisconsin offer examples from which Minnesota may learn. Within the Minneapolis-St. Paul

Table 8.2. Residential Building Permits Issued for Hudson, Wisconsin, 1990-1998

Housing type	Units per year									
	'90	**'91**	**'92**	**'93**	**'94**	**'95**	**'96**	**'97**	**'98**	**Total**
One-family	16	12	16	11	11	24	53	53	56	252
Two-family	0	2	2	6	2	4	4	16	22	58
3-4 unit bldgs.	0	0	0	0	8	20	60	12	8	108
5-8 unit bldgs.	8	8	7	0	0	0	24	82	59	188
9-16 unit bldgs.	0	16	12	12	22	20	10	10	45	147
17-24 unit bldgs.	0	72	60	0	0	0	0	0	0	132
25-49 unit bldgs.	0	0	0	0	72	0	0	0	0	72
50+ unit bldgs.	0	0	0	0	0	65	0	0	0	65
Total	24	110	97	29	115	133	151	173	190	1,022

Source: City of Hudson Planning Office, January 1999.

metropolitan area, the city of Hudson, Wisconsin, enacted an impact fee ordinance in 1996 pursuant to state enabling legislation of 1994.

The Hudson ordinance charges impact fees for storm sewer, sanitary sewer, water mains and wastewater treatment. Fees vary by type of development and by density. A distinctive provision of the Hudson ordinance permits a developer to petition to turn a one-time impact fee into an "impact special assessment," thereby shifting the cost of the fee directly from the developer to the buyer rather than having it capitalized into the value of the property.

Chapter 8

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Chapter 9

SUMMARY AND CONCLUSION

New residential, commercial, office, and industrial development within a community brings with it the need for new infrastructure plus the means to pay for it. Traditionally, the responsibility for infrastructure installation and for payment has been shared among (1) developers, builders, and their customers, (2) existing residents of the community, and (3) future residents.

In recent years, for financial as well as political reasons, local governments have been trying to mandate that newcomers pay an increasing share of the cost of incremental infrastructure made necessary by growth. There are seven main sources of funds to pay for new infrastructure, including general obligation bonds, revenue bonds, taxes, user charges, special assessments, mandated on-site exactions, and off-site impact fees.

Shared infrastructure costs may be imposed on new development by local units of government only to the extent of the powers granted to it by their state government, and such powers and their constitutional basis vary from state to state. The choices a community makes on how to finance new infrastructure will affect the pace and geographical patterns of development within a community. If a community requires existing residents to pay too large a share of development costs, then impact fees will be low, but local taxpayers probably will oppose new development. If the community attempts to pass on most or all of the incremental costs of development to future residents, then they are likely to welcome development, but the higher price tag probably will slow down development or displace it to other locales.

Methods of financing additions to local public facilities made necessary by local growth have evolved over the years. Traditional sources of local infrastructure finance have been general revenues (of which the local property tax has been the most important), general obligation bonds, and intergovernmental grants. Special assessments are used to finance infrastructure improvements within specific geographic areas. Subdivision exactions require land dedications from large developments and in-lieu fees for small development projects so that on-site land is

made available for public purposes such as schools and parks. Impact fees have been imposed increasingly on new developments as a way to pay for their proportionate share of off-site public services and the facilities that they necessitate.

A tax is a charge for the purpose of raising general revenue; it differs from a fee (such as an impact fee), which is a charge regarded as payment for services rendered. The distinction is important because local units of government may exercise only those powers granted to them by the state, and the power to tax and the power to regulate using fees have different constitutional and statutory bases.

The main rationale for imposing development impact fees is to make new growth pay its way. Local case studies demonstrate that new development in a community often means that local government collects additional taxes and fees, but expenditures frequently rise even faster than revenues.

If the marginal cost of newly required infrastructure is charged to developers and builders, questions arise whether these charges are shifted backward to original landowners in the form of higher prices received, to the developers and builders in the form of lower profits due to fewer units sold, to the suppliers of materials and services needed for the new development in the form of lower prices received by them, or to the new home buyers and new businesses who pay higher prices for what they get. Or, do the charges shift away from existing residents and businesses who then pay lower taxes, and therefore see the value of their properties rise or decline less rapidly than they would were they obligated to assume a significant share of providing infrastructure needed to accommodate new growth? Some studies show that imposing impact fees raises the cost of both existing and new housing.

Legal debates over impact fees center on whether they are a valid form of taxation or a necessary adjunct to land use regulation. Challenges to impact fees assert that they constitute an invalid taking as prohibited by the Fifth Amendment, or violate the equal protection clause of the Fourteenth Amendment, or that they violate the right to due process guarantees of the Fourteenth Amendment.

The U.S. Supreme Court's "Dillon Rule" clarified circumstances under which legislative action grants authority to a municipality to charge impact fees. Subsequent legislative and court action

established rules on proportionality and the geographic relationship, or "rational nexus," linking the place where development occurs with the additional infrastructure needed to serve it. If a regulation goes too far, it may constitute a taking and require a remedy. As a consequence of Supreme Court cases on regulatory takings, the level of scrutiny in exaction cases has been heightened and the burden of proof has been shifted to the government.

The Minnesota Supreme Court specified criteria for defining an impact fee. There is no explicit statutory authority for municipalities in Minnesota to impose impact fees, although they possess authority to impose certain types of development exactions. Wisconsin statutes authorize the imposition of impact fees via ordinance by a city, village, town, or county, but only for the capital costs of specified facilities.

The advantages of impact fees include heightened user equity as each beneficiary pays something closer to a fair share of the infrastructure that she or he requires; the political advantage arising from the fact that existing residents outnumber developers; developer support when it is feared that without the fees important infrastructure cannot be supplied in a timely fashion; reduced borrowing by local governments; a means to slow growth by raising its price for new households and businesses; and the promotion of local land use, economic, and community planning.

Disadvantages accompanying the imposition of development impact fees include a rise in new house prices, which can be especially significant for communities trying to expand their inventory of low- and moderate-priced units; and unfairness in terms of the equity argument: since existing residents never had to pay impact fees, new residents and businesses should not be obligated to do so.

Although the general theory justifying impact fees may easily be articulated and defended, the design and calculation of an appropriate impact fee and the fair administration of it are complicated business. Development impact fees are not designed to pay for the entire cost of new infrastructure because that infrastructure will be used by others outside the development area and by other households and businesses in the future.

The timing of fees is important, because although they can slow down land development during an economic boom, they probably will depress business during a recession. If different levels of

government each charge development impact fees, the total of such fees can become so high that real estate development can be slowed or stopped, whether or not this outcome is desired.

The calculation of impact fees requires the prior determination of appropriate facility standards plus the adoption of a capital long-range improvement plan to accompany the general city land use and development plan. The next step involves estimation of the proportionate share of infrastructure capital costs that should be assigned to new development. Estimating this share involves at least seven determinations:

- cost of existing facilities;
- how existing facilities were financed;
- how much new development already has paid;
- how much new development will pay in the future;
- how much credit should be allowed for facilities installed by the new development;
- extraordinary costs due to unusual site or situation; and
- time-price differential that arises when fees are paid well in advance of the availability of the infrastructure.

The actual practice of implementing development impact fees varies significantly from state to state as well as among jurisdictions within states. At one extreme are California's rules, which are general and liberal, while at the other extreme are Florida's, which are strict. Other cases from Colorado, Texas, Montana, and Wisconsin offer examples from which Minnesota may learn. Within the Minneapolis-St. Paul metropolitan area, the city of Hudson, Wisconsin, enacted an impact fee ordinance in 1996 pursuant to the state enabling legislation of 1994.

The Hudson ordinance charges impact fees for storm sewer, sanitary sewer, water mains, and wastewater treatment. Fees vary by type of development and by density. A distinctive provision of the Hudson ordinance permits a developer to petition to turn a one-time impact fee into an "impact special assessment," thereby shifting the cost of the fee directly from the developer to the buyer rather than having it capitalized into the value of the property.

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APPENDIX A

EXAMPLES OF IMPACT FEES

Appendix A

This appendix presents detailed examples for six different kinds of impact fees, those for: *roads* (Martin County, Florida); *schools* (Anne Arundel County, Maryland); and *public buildings, libraries, parks, and fire/emergency service* (Palm Beach County, Florida). We explain how to obtain cost information, service standards, demand units, and impact fee amounts for single-family residences in each case.

CALCULATING INFORMATION

Cost Information

The manner in which cost information may be obtained or expressed is an important factor in establishing standards because the objective is to first determine the capital improvements cost per unit of development and then to determine a proportionate share of those costs. It follows that standards, costs, and shares of costs must be in consistent units.

Cost data are needed for an acre of park, a lane-mile of road, a pupil unit, fire/rescue equipment and facilities per service call, and a square foot of library. If utility fees are being established, the cost per unit of capacity becomes the relevant item. The best sources of these data are actual local records. Recall that one of the judicial standards is that impact fees should not exceed a proportionate share of the costs that the local government will incur in accommodating the new development. Thus, the task is to establish a reasonable basis to project just what costs the community will incur. The actual expenditure history of the community would appear to be a viable basis from which to project such cost.

One commonly used method of establishing cost is to determine the replacement cost. This is done by inventorying the existing stock of capital facilities and attaching a reasonable replacement cost to each item. If this method is used, the cost shown should be replacement cost rather than depreciated value or initial acquisition cost.

Multiplying the service provision standards, per demand unit, by the capital cost per unit of service establishes the capital improvement cost per unit of development. This also may be expressed as a formula [1]:

Total Cost = Needed Improvements x (Cost per Unit)

The calculations for a single-family unit are shown in Table A.1 [2]. These calculations result in the capital improvements cost per unit of new development—in this case, a single-family unit. Reaching this result is a cumulative process beginning with facility standards, demand units, and costs.

Demand Units

Following are the demand units for a single-family unit and the service-level standards employed in our examples [3]. These standards were all subjected to public debate.

Roads. (Martin County, Florida): a trip rate of 10/2 = 5 adjusted trip ends per day with an average length of 3.8 or 3.0 miles, depending on the road district (making demand units 19 or 15 miles per day) and a level of service that translates to 8,750 or 8,840 vehicles per lane-mile per day, again depending on the district. It should be obvious that Martin County based its road impact fee system on average daily traffic and on the need for additional road capacity in terms of lane-miles. This approach is most relevant to the situation of Martin County. The alternatives would be to base the demand units on peak-hour traffic and to base the need for improvements upon peak-hour intersection capacity. This alternative would be relevant to a downtown-type environment where the need is not so much for additional lanes as it is for making better use of existing lanes. Either approach is valid for purposes of establishing road needs, costs, and fees.

Schools. (Anne Arundel County, Maryland): 0.6977 public school pupils per unit (demanding unit is 0.6977 students) requiring 129 square feet of building area and 1,836 square feet of land area per student. School costs were based on a combination of the prototype facility costs and the cost of construction programs.

Parks. (Palm Beach County, Florida): for unincorporated Palm Beach County, 2.526 persons per residential unit 1,400-1,999 square feet in size (demand units are 2.526 persons) at a standard

Table A.1. Demonstration Fee Calculations for a Single-Family Unit

Roads	
Demand Units	19.00 miles per day
Standard	8,750 vehicles per lane-mile
Needed Improvements	0.00217 lane-miles of roads
Construction Cost per Lane-Mile	$569,290
Right-of-Way Cost per Lane-Mile	$107,600
Total Cost per Single-Family Unit	$1,468
Public Schools	
Demand Units	.6977 student per unit
Standard	129.168 square feet per student
Needed Improvements	90.115 square feet
Cost per Square Foot	$98.84
Cost per Student	$12,767
Total Cost per Single-Family Unit	$8,907
District Parks	
Demand Units	2.526 persons per unit
Standard Total Acres	1.130 acres per 1,000
Standard Improved Acres	0.632 acre per 1,000
Needed Improvements	0.00285 acres of parks
Cost per Acre of Park	$42,500
Cost per Acre Improvements	$55,563
Per Capita Cost per Acre	$48.03
Per Capita Cost per Improved Acre	$35.12
Total Cost per Single-Family Unit	$210.04
Fire / Rescue	
Demand Units	0.21567 calls per unit
Standard	5-minute response time
Cost per Call	$475.11
Total Cost per Single-Family Unit	$102.47
Sewer	
Demand Units	1 resident unit
Standard	148 gallon average daily flow; design capacity 4 times average daily flow
Cost per Gallon of Capacity	$4.33
Total Cost per Single-Family Unit	$2.563

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

of 6.07 acres (2.986 acres improved) per 1,000 residents; the standard is adjusted on a municipal basis. Park capital improvements were based on the development costs of a typically developed park in Palm Beach County. Acquisition costs were based on the actual costs of acquiring. Costs were grouped into those for land acquisition and those for park development. The costs were then expressed as a cost per acre acquired or improved, and then translated into cost per capita. These two components were then added to obtain total park cost per capita. In this way, costs were consistent with the expression of the standard (6.07 total acres per one thousand residents).

Fire/Rescue. (Palm Beach County, Florida): Demand units are 0.21567 service calls per single-family unit; the standard is a five-minute response time resulting in a capacity to respond of 4,380 calls per station.

Per-Unit Costs

The per-unit costs for the fees demonstrated below, and the source of that cost data, are as follows [4]:

Roads. An examination of the road capital improvement construction bids, together with construction cost estimating guides, indicated a Martin County cost of $569,290 per lane-mile for the Eastern District and $515,740 per lane-mile for the Western District. An examination of rights-of-way acquisition, together with cost estimate guides, resulted in a right-of-way acquisition cost of $107,600 per lane-mile for the Eastern District and $29,700 for the Western District. Price adjustment will be necessary because these are not current costs. The expression of these costs amply demonstrates why Martin County instituted two separate fee districts.

Schools. The Anne Arundel County School Board uses a prototype school, which was the basis for cost. Costs for this prototype school were available. Additionally, these costs were consistent with a bid. Land acquisition and site development costs were estimated from the actual records of school construction projects over five years. Land acquisition and site improvements costs were calculated as a percentage of construction costs—price adjustment will be needed. The data used were $83 per square foot for buildings plus 4-5 percent for architectural and engineering costs (depending on school type) and 8 percent for equipment. The total building cost per square foot was $87.78. Land acquisition had been running $10,000 per

acre, and site improvements costs were 2.5 percent of construction. The grand total was $98.84 per square foot, or $12,767 per student at 129 square feet per student.

Parks. An examination of the Palm Beach County capital budget records showed per acre acquisition that varied substantially according to park type. Those costs ranged from $40,000 per acre for regional parks to $225,000 for beach parkland. Improvement costs varied from $17,445 to $57,119 per acre and were calculated on the basis of typically improved districts, beaches, or regional parks in Palm Beach County.

Fire/Rescue. Capital costs were obtained from property management insurance records, which provided total capital investment by fire/rescue district. The capital cost per call across the three fire/rescue districts ranged from $475.11 to $544.93. The cost per demand unit is based on the expected calls for service per unit per year.

Multiplying the service provision standards, per demand unit, by the capital cost per unit of service establishes the capital improvement cost per unit of development. This also may be expressed as a formula [5]:

Total Cost = Needed Improvements x (Cost per Unit)

The preceding impact fees were based on the cost of providing existing facilities in 1991 dollars. In the future, the costs will likely be higher. Some impact fee schedules build inflation factors into their formulas. These inflation assumptions, however, are bound to be erroneous for any given year, and the longer the fee schedule remains unchanged the larger the error will become. Such impact fee formulas would run a high risk of failing judicial review. A better way of dealing with changes in cost is with annual or biannual review of the data and parameters that serve as the basis for the established fees. What is recommended is annual and biannual redetermination of the cost of providing new facilities financed by impact fees.

EXAMPLES

Road Fees, Martin County, Florida

There are two separate fee schedules for Martin County, one for the Eastern District and one for the Western District. The formulas employed are the same for both districts. These formulas first calculate the travel impact that individual units of new development are expected to place on the Martin County road system and then the physical quantity of roads, in terms of lane-miles. The third step is to calculate the cost of acquiring the necessary rights-of-way to construct the needed additional road capacity, and the fourth is to calculate the cost of constructing the needed road improvements. Both these calculations use the average cost experienced in Martin County per lane-mile of road. The next step is to determine what new development will pay toward the cost of additional road capacity in motor fuel taxes. The net cost is the total cost minus the present value of future payments in the form of motor fuel taxes. The net cost is then discounted to arrive at the recommended impact fee.

The formula for calculating the road impact fee is shown in the following equations [6]:

Attributable New Travel in Vehicular Miles per Day = [(Trip Rate x Trip Length) /2)] x (% New Trips)

New Lane Miles = Attributable Travel / Capacity per Lane-Mile in Vehicles per Day

Construction Cost = New Lane-Miles x Construction Cost per Lane-Mile

Right-of-Way Cost = New Lane-Miles of Roads x Right-of-Way Cost per Lane-Mile

Total Cost = Construction Cost + Right-of-Way Cost

Credits = [(Attributable Travel x Days per Year / Miles per Gallon) x Capital Portion of Motor Fuels Tax] x Present Value Factor

Present Value Factor = Sum from 1 to 25 of (1 / (1.06n)), where n is the Year from 1 to 25

Net Cost = Total Cost – Credits

Impact Fee = Net Cost – Discount

These formulas and calculations are based upon averages and typical conditions. As such, it is possible that the impact of individual new developments could be over- or underestimated. Thus, it is recommended that provision be made for alternative calculations made on a case-by-case basis, to deal with individual and unique situations.

The data presented in Table A.2 are the parameters used in calculating impact on the road system, the cost of new roads, and the net impact of growth on the road capital finance system.

The relevant travel by land use type and unit is calculated by multiplying the average number of trips per day (ADT) by the average trip length by the percentage of new trips. The result is then reduced to one-half to adjust the number of trip ends to the number of travel trips (a travel trip, say from home to work, would have two ends, one leaving home and one arriving at work). This reduction is to correct for overcounting. Such overcounting is due to the fact that impact fees would be charged to both attractors and generators of traffic, or both ends of the travel trip.

The individual factors in the calculation of travel and their sources include:

(a) Daily Trip Rate. The Average Daily Travel (ADT) is taken from a study done by Kimley Horn and Associates within Martin County, and

(b) Percentage of New Trips.

Many land uses, while attracting traffic, generate little, if any, new traffic (other than attracting traffic to a particular location). There are several reasons for this situation. First, the multiple-purpose trip will tend to attract traffic to particular locations without generating new traffic. Second, the capturing of an existing trip, such as stopping for a quart of milk on the way home from work, will not result in additional travel. Third, diverting a trip that already existed, such as taking the long way home from work to shop, will place limited new travel on the road system. Take for example the convenience store and the service station. The typical visits to these establishments, especially during peak hours, are made by individuals who are going elsewhere, such as to home or to work. An example may help. Assume an individual drives from work to home (which would be two trip ends), a distance of five miles. Assume that this individual stops at the day-care center to pick up a child, a convenience store to get milk, and a service station for gasoline. How many trips have been made? The standard methodology of transportation engineering yields a total of eight trips.

Table A.2. Road Parameters for Martin County, Florida

Step 1 *Per Lane-Mile Road Costs:*	*Construction*	*Right of Way*	*Total*
Eastern District	$569,290	$107,600	$676,890
Western District	$515,740	$29,700	$545,440
Step 2 *Available Revenues:*	*$per Gallon*	*% Capital*	*Effective Rate*
Federal	0.09	46.0	0.041
State	0.057	32.0	0.018
City/County:			
5th & 6th	0.02	80.0	0.016
7th	0.01	0.0	0.000
8th	0.01	0.0	0.000
9th	0.00	0.0	0.000
Optional	0.06	50.0	0.030
Total	0.10		
Other	0.00	0.0	0.000
Total Capital	0.105		
Step 3 *Other Parameters:*	*Miles per Gallon*	*Present Value @ 6%, 25 Years*	*Lane Capacity:*
Eastern District	15.5916	12.7834	8,750 Vehicles per Day
Western District	15.5916	12.7834	8,840 Vehicles per Day

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

1. Leaving work.
2. Entering the day-care center.
3. Leaving the day-care center.
4. Entering the convenience store.
5. Leaving the convenience store.
6. Entering the service station.
7. Leaving the service station.
8. Arriving home.

If we were to apply the average trip length of five miles to these trips, the result would be 40 miles, a vast overstatement of actual travel. This overstatement is corrected in two ways. The first way is to deduct by a percentage reduction factor for trips to particular land uses that do not

place additional travel on the roads. The second is to adjust the trip lengths for nonresidential land uses that more accurately reflect the travel patterns of individuals visiting those sites. The first adjustment (percentage of new trips) is included in Tables A.3 and A.5. The second, variable trip lengths, also is included in Tables A.3 and A.5. The percentage of new trips is, ultimately, a professional judgement. Several articles concerning percentage of new trips have appeared in the *ITE (Institute of Transportation Engineers) Journal* and, specifically, in an article that appears in the May 1984 issue of *Public Works*. These articles can be used as guides for the establishment of percentage of new trips.

• ***Average Trip Lengths.*** The average lengths of vehicular trips within Martin County were supplied by Kimley Horn and Associates as part of their transportation study of Martin County.

• ***Required New Lane-Miles.*** This is calculated by dividing the attributable new miles of daily travel (total daily miles of travel divided by 2) by the capacity of a lane of roadway. The capacity utilized is 8,750 vehicles per day in the Eastern District and 8,840 vehicles per day in the Western District.

• ***Annual Capital Payments.*** The federal, Florida, and Martin County transportation finance systems receive a portion of the motor fuels tax to pay for new roads and other road improvements (see Available Revenues in Table A.2). These calculations credit new development for the motor fuel taxes that will be available to finance new road construction over the next 25 years. This credit is implemented by calculating the present value of the annual payments toward road capital projects for the next 25 years, discounted at a rate of 6 percent.

• ***Credit.*** The credit given to new development results from determining the present value of future annual payments toward road capital improvements. This is calculated by multiplying the annual capital payments by the present value factor (12.78).

• ***Total Road Cost.*** The quantity of lane-miles of new roads, as discussed above, is multiplied by the cost per lane-mile of road. The average cost for roads is $676,890 per lane-mile in the Eastern District and $545,440 in the Western District.

Table A.3. Road Needs by Land Use Type, Martin County, Florida, Eastern District

Land Use Type	Trip Rate	Average Trip Length	Percent New Trips	New Roads
Residential, per Dwelling Unit:				
Single-Family	10.00	3.80	100	0.00217
Multi-Family	5.60	3.80	100	0.00122
Mobile Home	4.60	3.80	100	0.00100
Other Residential	5.60	3.80	100	0.00122
Commercial per 1,000 sq ft:				
Convenience Retail	330.00	1.10	40	0.00830
Retail under 100,000 sq ft	85.80	1.70	50	0.00417
Retail 100,000+ sq ft	49.90	3.90	60	0.00667
Hotel/Motel w/o Meeting/Banquet Facilities, per Room	9.60	3.80	80	0.00167
Fast-Food Restaurant	553.00	2.10	40	0.02654
Industrial per 1,000 sq ft:				
Light Industrial	5.46	4.90	100	0.00153
Heavy Industrial	2.05	4.90	100	0.00057
Agricultural Support	4.01	4.90	100	0.00112
Office/Financial per 1,000 sq ft:				
General Office	17.70	4.20	75	0.00319
Medical Office	55.00	4.20	75	0.00990
General Recreation per Parking Space	3.00	4.00	100	0.00069
Other Land Uses:				
Churches per 1,000 sq ft	7.70	4.20	50	0.00092
Hospital/Nursing Homes, per Bed	11.40	4.20	80	0.00219
Gas Stations per Pump	133.00	2.00	45	0.00684

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

Table A.4. Net Road Costs by Land Use Type, Martin County, Florida, Eastern District

Land Use Type	Credit	Total Costs Const.	Right-of-Way	Net Cost	Fee
Residential, per Dwelling Unit:					
Single-Family	$597	$1,235	$233	$871	$827
Multi-Family	$334	$695	$131	$492	$467
Mobile Home	$275	$569	$108	$402	$382
Other Res.	$334	$695	$131	$492	$467
Commercial per 1,000 sq ft:					
Retail	$2,281	$4,725	$893	$3,337	$3,170
Retail under 100,000 sq ft	$1,146	$2,374	$449	$1,677	$1,593
Retail 100,000+ sq ft	$1,835	$3,797	$718	$2,680	$2,546
Hotel/Motel w/o Meeting/ Banquet Facilities per Room	$459	$951	$180	$672	$638
Fast Food Restaurant	$7,298	$15,109	$2,856	$10,667	$10,134
Industrial per 1,000 sq ft					
Light Industrial	$420	$871	$165	$616	$585
Heavy Industrial	$158	$324	$61	$227	$216
Agricultural Support	$309	$638	$121	$450	$428
Office/ Financial per 1,000 sq ft:					
General Office	$876	$1,816	$343	$1,283	$1,219
Medical Office	$2,722	$5,636	$1,065	$3,979	$3,780
General Recreation per Parking Space	$189	$393	$74	$278	$264
Other Land Uses					
Churches per 1,000 sq ft	$254	$524	$99	$369	$351
Hospital/ Nursing Homes, per Bed	$602	$1,247	$236	$881	$837
Gas Stations per Pump	$1,881	$3,894	$736	$2,749	$2,612

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

Table A.5. Road Needs by Land Use Type, Martin County, Florida, Western District

Land Use Type	Trip Rate	Average Trip Length	Percent New Trips	New Roads
Residential, per Dwelling Unit:				
Single-Family	10.00	3.0	100	0.00170
Multi-Family	5.60	3.0	100	0.00095
Mobile Home	4.60	3.0	100	0.00078
Other Residential	5.60	3.0	100	0.00095
Commercial, per 1,000 sq ft				
Convenience Retail	330.00	1.1	40	0.00821
Retail under 100,000 sq ft	85.80	1.7 50	0.00413	
Retail 100,000+ sq ft	49.90	3.3	60	0.00559
Hotel/Motel w/o Meeting/Banquet Facilities per Room	9.60	3.0	80	0.00130
Fast-Food Restaurant	553.00	2.1	40	0.02627
Industrial per 1,000 sq ft				
Light Industrial	5.46	4.6	100	0.00142
Heavy Industrial	2.05	4.6	100	0.00053
Agricultural Support	4.01	4.5	100	0.00102
Office/Financial per 1,000 sq ft				
General Office	17.70	3.6	75	0.00270
Medical Office	55.00	3.6	75	0.00840
General Recreation per Parking Space	3.00	3.4	100	0.00058
Other Land Uses				
Churches per 1,000 sq ft	7.70	3.6	50	0.00078
Hospital/Nursing Home per Bed	11.40	3.6	80	0.00186
Gas Stations per Pump	133.00	2.0	45	0.00677

Source: J. C. Nicholas et al. *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

• ***Net Cost.*** The net cost is simply the total cost minus any applicable credit.

• ***Impact Fee.*** The recommended impact fee, as shown in Tables A.4 and A.6, is discounted by 5 percent from the net cost. The interim fee was discounted by 15 percent. This change from 15 percent to 5 percent is made based on the findings of the Martin County Local Planning Agency.

A sample calculation for a multi-family unit in the Eastern District (Tables A.3 and A.4) is shown below [7]:

• Attributable New Travel in Vehicular Miles per Day = [(Trip Rate x Trip Length) / 2] x (% New Trips)
= [(5.60 trips x 3.80 miles) / 2] (100% new trips
= 10.64 miles

• New Lane Miles = Attributable Travel / Capacity per Lane-Mile in Vehicles per Day
= 10.64 miles / 8,750 vehicles per lane per day
= 0.00122 lane-miles

• Construction Cost = New Lane-Miles x (Construction Cost per Lane-Mile)
= 0.00122 lane-miles x ($569,290 per lane-mile)
= $695

• Right-of-Way Cost = New Lane-Miles of Roads x (Right-of-Way Cost per Lane-Mile)
= 0.00122 lane-miles x ($107,600 per lane-mile)
= $131

• Total Cost = Construction Cost + Right-of-Way Cost
= $695 construction cost + $131 right-of-way cost
= $826

• Credits = [(Attributable Travel x Days per Year / Miles per Gallon) x Capital Portion of Motor Fuels Tax] x Present Value Factor

Table A.6. Net Road Costs by Land Use Type, Martin County, Florida, Western District

Land Use Type	Credit	Total Costs Const.	Right-of-Way	Net Cost	Fee
Residential, per Dwelling Unit					
Single-Family	$471	$877	$50	$456	$433
Multi-Family	$264	$541	$102	$379	$360
Mobile Home	$217	$444	$84	$311	$295
Other Residential	$264	$541	$102	$379	$360
Commercial per 1,000 sq ft					
Convenience Retail	$2,281	$4,674	$883	$3,276	$3,112
Retail under 100,000 sq ft	$1,146	$2,351	$444	$1,649	$1,567
Retail 100,000+ sq ft	$1,552	$3,182	$601	$2,231	$2,119
Hotel/Motel w/o Meeting/Banquet Facilities per Room	$362	$740	$140	$518	$492
Fast Food Restaurant	$7,298	$14,955	$2,827	$10,484	$9,960
Industrial per 1,000 sq ft					
Light Industrial	$395	$808	$153	$566	$538
Heavy Industrial	$148	$302	$57	$211	$200
Agricultural Support	$284	$581	$110	$407	$387
Office/Financial per 1,000 sq ft:					
General Office	$751	$1,537	$291	$1,077	$1,023
Medical Office	$2,333	$4,782	$904	$3,353	$3,185
General Recreation per Parking Space	$160	$330	$62	$232	$220
Other Land Uses					
Churches per 1,000 sq ft	$218	$444	$84	$310	$295
Hospital/Nursing Home per Bed	$516	$1,059	$200	$743	$706
Gas Stations per Pump	$1,881	$3,854	$728	$2,701	$2,566

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

= [(10.64 trips x 365 days) / 15.5916 mpg] x 0.105 fuel tax]] x (12.7834 PVF)
= $334

• Present Value Factor = Sum from 1 to 25 of (1 / (1.06n), where n is the Year from 1 to 25
Net Cost = Total Cost – Credits
= $826 – $334
= $492

• Impact Fee = Net Cost – Discount
= $492 – (5% x $492)
= $492 – $25
= $467

School Impact Fees, Anne Arundel County, Maryland

The following is an explanation of the proposed Anne Arundel County school impact fee. The method of calculating school impact fees is similar to that for calculating roads in that the primary factor is the quantity of physical facilities required to accommodate new development. Table A.7 sets out the quantity and base cost parameters. The school board makes use of prototype schools. These prototypes allow for easy calculation of needed school space and the cost of that space for new students.

Table A.8 shows the total school costs and the state funding for those schools. On average, state grants cover 52.9 percent of new school construction costs. This means that the school board faces a deficit of 47.1 percent or an average of $6,010 for each additional student station required. The objective of the school impact fee is to charge this deficit amount to new residential development in proportion to its impact on the school system.

The formula for calculating the Anne Arundel school impact fees is as follows [8]:

- New Public School Enrollment per Unit = Children per Unit x Percent in Public Schools
- Cost per Student Station = (Square Feet of Building Area per Student x Cost per Square Foot) + (Square Feet of Land Area per Student x Cost per Square Foot)
- Total Cost = New Public School Enrollment per Unit x Cost per Student Station
- State Grant = 5 Year State Capital Allocations / Total 5 Year Public Educational Capital Costs

Table A.7. Prototype Facilities, Anne Arundel County, Maryland

	K-6	7-9	10-12
Building Area	**68,280**	**115,000**	**180,000**
Site (Acres)	22	40	55
Student Stations	610	800	1,200
Cost per sq ft	$83.00	$83.00	$83.00
Land Cost (Acre)	$10,000	$10,000	$10,000
Construction Cost	$5,667,240	$9,545,000	$14,940,000
A & E	5%	4%	4%
Equipment	8%	8%	8%
Total Construction	$6,403,981	$10,690,400	$16,732,800
Plus:			
Land	$220,000	$400,000	$550,000
Off-site Costs	$160,383	$270,124	$422,802
Total	$6,784,364	$11,360,524	$17,705,602
Construction Cost per Student:			
Total Construction	$10,498	$13,363	$13,944
Site & Site-Related	$623	$837	$810
Total	$11,121	$14,200	$14,754

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

- Net Cost = Total Cost x ((1 - State Grant*)
- Impact Fee = Net Cost x 0.50 (Locally Applied Fee Discount of 50%)
  (* Expressed as a percent)

Table A.9 takes the space needs and cost data from Table A.7, incorporates the state funding from Table A.8, and calculates gross, net, and impact costs in terms of the various types of residential development which occur in Anne Arundel County. The proposed fee in Table A.9 was reduced by 15 percent from the net (or local) cost. The fee adopted by the county council rejected the 15 percent discount and used a 50 percent discount from the local cost to arrive at the fee.

Table A.8. School Costs and Funding Sources, Anne Arundel County, Maryland

Project	Construction Cost ($1000s)	Off-Site Cost ($1000s)	State Funding ($1000s)	Local Funding ($1000s)
Arundel Senior	$8,830	$17	$4,675	$4,155
Percent of Total		0.2%	52.8%	47.0%
Coratran Junior	$7,283	$686	$5,145	$2,138
Percent of Total		8.6%	64.6%	26.8%
West Annapolis	$1,775	$0	$1,151	$624
Percent of Total		0.0%	64.8%	35.2%
Area III - Special Education	$4,076	$76	$2,737	$1,339
Percent of Total	1.8%	65.9%	32.2%	
Edgewater Elementary	$2,457	$265	$1,477	$980
Percent of Total		9.7%	54.2%	36.0%
Southern Elementary	$10,507	$0	$5,154	$5,353
Percent of Total		0.0%	49.1%	50.9%
Severn Elementary	$5,737	$140	$1,812	$3,925
Percent of Total		2.4%	30.8%	66.8%
Total	$40,664	$1,186	$22,150	$18,514
Percent of Total		2.83%	52.93%	44.24%

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

Public Buildings Impact Fees, Palm Beach County, Florida

Public buildings, such as courthouses, maintenance facilities, county administrative offices, etc., must be expanded to meet the needs of a growing population. Therefore, a public buildings impact fee has often been proposed to raise a portion of the funds that will be required to meet the need for countywide public buildings in the future.

Table A.9. School Capital Needs, Costs, and Impact Fees, Anne Arundel County, Maryland

Type of Development	1-Family	2-Family	3- & 4-Family	5-Family & more	Mobile Home
Public School Children per Unit:					
K-6	0.3534	0.3276	0.2252	0.1356	0.2030
7-9	0.1850	0.1730	0.1093	0.0850	0.1482
10-12	0.1593	0.1224	0.0822	0.0895	0.1951
Total	0.6977	0.6229	0.4167	0.3100	0.5463
Square Feet of Building Area per Student:					
K-6	112	112	112	112	112
7-9	144	144	144	144	144
10-12	150	150	150	150	150
Construction Cost per Student					
K-6	$10,498	$10,498	$10,498	$10,498	$10,498
7-9	$13,363	$13,363	$13,363	$13,363	$13,363
10-12	$13,944	$13,944	$13,944	$13,944	$13,944
Site Cost per Student:					
K-6	$623	$623	$623	$623	$623
7-9	$837	$837	$837	$837	$837
10-12	$810	$810	$810	$810	$810
Total Cost per Student:					
K-6	$11,121	$11,121	$11,121	$11,121	$11,121
7-9	$14,200	$14,200	$14,200	$14,200	$14,200
10-12	$14,754	$14,754	$14,754	$14,754	$14,754
Cost per Dwelling Unit:					
K-6	$3,390	$2,710	$2,645	$2,259	$2,721
7-9	$2,294	$1,830	$1,786	$1,525	$1,837
10-12	$2,320	$1,854	$1,810	$1,546	$1,861
Total	$8,004	$6,394	$6,241	$5,330	$6,419
State Contribution	$4,235	$3,383	$3,302	$2,280	$3,396
Local Cost	$3,769	$3,011	$2,939	$2,510	$3,023
Impact Fee	$3,204	$2,559	$2,498	$2,134	$2,570

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

Tables A.10 and A.11 set out the public buildings parameters utilized, and Table A.12 shows the needs and costs by land use type. Based upon existing outstanding debt, new development will pay toward Palm Beach County public buildings through debt service. Palm Beach County has $36 million in outstanding debt for public buildings. The county also has $85.8 million in non-ad valorem debt outstanding for public buildings. These calculations will credit new development for payments toward this debt. Table A.13 sets out these credits.

The formula for calculating the public buildings impact fee is as follows [9]:

- Cost per Unit = (Functional Population per Unit x Cost per Capita) – Credit for Past Payments
- Credits = (Non-Ad Valorem Future Payment per Capita x Functional Population per Unit) + Future G.O. Debt Payments per Unit
- Net Cost = Cost per Unit – Credits

Calculations for public buildings impact fees incorporate a concept of functional population. This is incorporated in order to equitably spread public facility capital costs between the residential and nonresidential sectors. Businesses place demands on public buildings in exactly the same manner as people do. It is equitable to spread these costs based on the number of people expected to be present per unit of land use. This is done differently for residential and nonresidential land uses. For residential uses the allocation is calculated using the residents per unit as determined by the census data. The individuals in residence are assigned 50 percent to the residence. This means that 50 percent of people's time is allocated to other land uses such as employment, shopping, entertainment, etc.

For nonresidential land uses the allocation is accomplished by using traffic generation rates. Trip rates will indicate how many people are present per day at the several land uses. The people present are then divided between employees and visitors. Employees are assigned to their place of work for eight hours per day, five days per week. Visitors are allocated to a particular land use for differing lengths of time and days per week depending on the land use. The total number of person-hours per week attributed to individual land uses is then divided by the total number of person-hours per week to arrive at a percentage allocation. For example, a 1,800 square foot residence with 2.526 persons at 50 percent would then have a functional population of 1.263 x

Table A.10. Public Buildings Parameters, Palm Beach County Florida

Total Public Building Sq Ft	1,450,473 (existing)
Public Buildings per Capita - Existing	1.4942 Sq Ft
Public Buildings per Capita - New	3.31 Sq Ft
Standard Applicable to New Development	1.4942 Sq Ft
Cost per Capita	$147.43

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

2.52 x .5. This same approach is used for nonresidential development, except that nonresidential developments do not have residents.

To calculate the functional population for nonresidential developments, trip generation is used as a measure of the number of people to be found at an individual nonresidential development. For example, a warehouse has five vehicle trips per day per 1,000 square feet. Dividing this in half provides a basis for estimating persons per day per 1,000 square feet. At 1.2 persons per vehicle, the total number of persons present per 1,000 square feet would be three. A ratio of 0.5 employees per 1,000 square feet is utilized, which means that 2.5 of these persons are visitors. It is taken that employees spend eight hours per day, five days per week, and visitors spend one hour per visit, five days per week. This means that there would be 32.5 person-hours per week spent at a warehouse, per 1,000 square feet. The three persons per 1,000 square feet would have a total of 504 person-hours per week; i.e., 3 x 7 days x 24 hours. The 32.5 person-hours spent at the warehouse would be 6.45 percent of total person-hours. This percentage is then multiplied by the number of persons present to arrive at functional population (3 x .0645 = 0.1935). It is this percentage that is incorporated into the functional population calculations in Table A.11. A sample calculation for a residential unit of 1,800 square feet, which derives from the figures in Table A.12, is shown below [10].

• Cost per Unit = (Functional Population per Unit (Cost per Capita) – Credit for Past Payments
= (1.2630 x $147.43) x (1 – 7.8%)
= $186.20 x 0.922
= $171.68

Table A.11. Functional Population, Palm Beach County, Florida

Residential Units By Size	Persons per Unit	Days per Week	Percent on Site	Functional Population
800 Feet and Under	1.646	7	50	0.823
801-1,399	2.007	7	50	1.0035
1,400-1,999	2.526	7	50	1.263
2,000-2,599	3.045	7	50	1.5225
2,600 and Over	3.845	7	50	1.9225
Hotel/Motel per Room	1.750	7	20	0.35

Nonresidential (1.20 Occupancy per Vehicle):	Trip Rate	No. of Employees	Visitors per Day	Hours per Visitor	Days Open per Week	Functional Population
Office 100,000 & Under	18.00	4	6.80	1	5	1.1548
100,001-125,000	16.60	4	5.96	1	5	1.1298
125,001-150,000	15.20	4	5.12	1	5	1.1048
150,000-175,000	13.80	4	4.28	1	5	1.0798
175,001-199,999	12.40	4	3.44	1	5	1.0548
200,000 & Over	11.00	4	2.60	1	5	1.0298
Medical Office	55.00	3.33	29.67	1	5	1.6759
Warehouse per 1,000 Ft^2	5.00	0.5	2.50	1	5	0.1935
Gen.Industrial per 1,000 Ft^2	6.00	0.6	3.00	1	5	0.2321
Retail per 1,000 ft^2: 80,000 ft^2 & Under	100.00	5	55.00	0.1	7	1.8958
80,001-99,999	91.77	5	50.06	0.2	7	2.0838
100,000-199,999	65.41	5	34.25	0.3	7	2.0948
200,000-499,999	42.83	5	20.70	0.4	7	2.0116
500,000-999,999	33.79	5	15.27	0.4	7	1.9212
1,000,000 & Over	31.82	5	14.09	0.4	7	1.9015

Note: The retail trip rates used herein are calculated from the formula used for road impact fees.
Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

Table A.12. Public Buildings Needs and Costs by Land Use Type, Palm Beach County, Florida

Land Use Type (Unit)	Functional Population	Cost per Unit	Credits	Net Cost (Impact Fee)*
Residential Units by Size				
800 Ft^2 & Under	0.8230	$111.87	$71.03	$40.84
801 - 1,399	1.0035	$136.41	$81.93	$54.48
1,400 - 1,999	1.2630	$171,68	$97.59	$74.09
2,000 - 2,599	1.5225	$206.96	$113.25	$93.71
2,600 & Over	1.9225	$261.33	$137.38	$123.95
Hotel/Motel per Room	0.3500	$47.58	$42.49	$5.09
Nonresidential:				
Office, by Size				
100,000 & Under	1.1548	$156.98	$86.74	$70.24
100,001 - 125,000	1.1298	$153.58	$85.23	$68.35
125,001 - 150,000	1.1048	$150.18	$83.72	$66.46
150,001 - 175,000	1.0798	$146.78	$82.21	$64.57
175,001 - 199,999	1.0548	$143.38	$80.71	$62.67
200,000 & Over	1.0298	$139.98	$79.20	$60.78
Medical Office	1.6759	$227.81	$118.19	$109.62
Warehouse per 1,000 Ft^2	0.1935	$26.30	$21.66	$4.64
Gen Industrial Per 1,000 Ft^2	0.2321	$31.55	$23.99	$7.56
Retail per 1,000 Ft^2				
80,000 Ft^2 & Under	1.8958	$257.70	$134.37	$123.33
80,001 - 99,999	2.0838	$283.26	$145.72	$137.54
100,000 - 199,999	2.0948	$284.75	$146.38	$138.37
200,000 - 499,999	2.0116	$273.44	$141.36	$132.08
500,000 - 999,999	1.9212	$261.15	$135.91	$125.24
1,000,000 & Over	1.9015	$258.48	$134.72	$123.76

* At the final public hearing the Board of County Commissioners discounted these fees by 5 percent.
Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

• Credits = (Non-Ad Valorem Future Payment per Capita x Functional Population per Unit) + Future G.O. Debt Payments per Unit

= ($60.35 x 1.2630) + $21.37

= $76.22 + $21.37

= $97.59

Table A.13. Public Buildings Bond Credits, Palm Beach County, Florida

Total Taxable Value	**$45,205 million**
Public Building General Obligation Debt	$36 million
Maturity	17.5 years
Years to Go	3.5 years
Interest Rate	7.8%
Average Annual Debt Service	$3.83 million
Debt Service Millage	$0.085 per $1,000
Residential:	
Average Taxable Value of New Home	$85,043
Annual Tax Payments	$7.20 per year
Credit for Future Payments	$21.37
Credit for Past Payments - % of Total Cost	7.8%
Office:	
Average Taxable Value of New Office	$67,867
Annual Tax Payments	$5.75 per year
Credit for Future Payments	$17.05
Credit for Past Payments - % of Total Cost	7.8%
Industrial:	
Average Taxable Value of New Industrial	$39,738
Annual Tax Payments	$3.37 per year
Credit for Future Payments	$9.98
Credit for Past Payments - % of Total Cost	7.8%
Retail:	
Average Taxable Value of New Retail	$79,475
Annual Tax Payments	$6.73 per year
Credit for Future Payments	$19.97
Credit for Past Payments - % of Total Cost	7.8%
Public Building Non-Ad Valorem Debt	$85.8 million
Maturity	20.0 years
Years to Go	11.0 years
Interest Rate	5.8%
Average Annual Debt Service	$7.3 million
Debt Service per Capita	$7.56 per year
Credit for Future Payments per Capita	$60.35

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

• Net Cost = Cost per Unit – Credits
= $171.68 – $97.59
= $74.09

Public Library Impact Fee. The standards of library provision are set out in Table A.14. These standards relate to the provision of library materials and library buildings. Table A.15 sets out the capital or acquisition cost experienced by the library. Both the standards and the costs exclude the cost of short-term items such as popular novels and news periodicals.

There is no existing outstanding debt for public libraries, thus there is no need to consider credits for debt. However, a special library property tax ($.50 per $1,000) was approved for two years. The proceeds from this tax were devoted to library improvements. Additionally, the State of Florida maintains a grant program that partially absorbs the cost of library capital improvements. Table A.16 shows the history of library grants. The costs shown in Table A.17 are based upon the assumption that the state will continue to provide grants to Palm Beach County at the historic rate and that the library tax will not continue beyond the 1989 fiscal year.

The formula for calculating the public library impact fee is as follows [11]:

• Cost per Unit = (Population per Unit x Cost per Capita) – Credit for Past Payments

• Credits = (State Grant x Cost per Unit) + Special Library Property Tax

• Net Cost = Cost per Unit – Credits

A sample calculation for an 800-square-foot residential unit, which derives the figures in Table A.17, is shown below [12]:

Cost per Unit = (Population per Unit x Cost per Capita) – Credit for Past Payments
= (1.646 x $58.21) x (1 – 7.8%)
= $95.81 x 0.922
= $88.34

Table A.14. Standards for Library Service, Palm Beach County, Florida

	Total	Per Capita
Population Served	386,665	
Standard for Materials:		
Books	406,939	1.052
Records	8,460	0.022
Videos	2,982	0.008
Films	1,123	0.003
Total	419,504	1.085
Standards for Buildings:		
Total Space in Sq Ft	91,420	0.236

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

Table A. 15. Library Capital Costs, Palm Beach County, Florida

Item	Cost Per Item	Standard Per Capita	Cost Per Capita
Books	$25.21	1.052	$26.53
Records	$20.41	0.022	$0.45
Videos	$50.15	0.008	$0.39
Films	$444.05	0.003	$1.29
Buildings	$125.00	0.236	$29.55
Total			$58.21

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

Table A.16. Library Capital Credits, Palm Beach County, Florida

Total Library Capital Outlay	**$6.5 Million**
State Grants	$1.5 Million
Percent from Grants	23.3
Special Library Tax Credit for Units on the 1989 Tax Roll	
Average Taxable Value	$85,043 per unit
Tax Rate (per $1,000)	$0.50
Total Paid	$42.52
Special Library Tax Credit for Units After 1989	**$0**

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

Table A.17. Public Library Needs and Costs by Land Use Type, Palm Beach County, Florida

Land Use Type (Unit)	Residential Population	Cost per Unit	Credits	Net Cost (Impact Fee)*
Residential Units by Size				
800 Feet and Under	1.646	$88.34	$63.07	$25.27
801 - 1,399	2.007	$107.71	$67.58	$40.13
1,400 - 1,999	2.526	$135.57	$74.06	$61.51
2,000 - 2,599	3.045	$163.42	$80.54	$82.88
2,600 and Over	3.845	$206.36	$90.53	$115.83

* At the final public hearing, the Board of County Commissioners discounted these fees by 5 percent.
Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

Credits = (State Grant x Cost per Unit) + Special Library Property Tax
= (23.26% x $88.34) + $42.52
= $20.55 + $42.52
= $63.07
Net Cost = Cost per Unit – Credits
= $88.34 – $63.07
= $25.27

Park Impact Fees, Palm Beach County, Florida

A growing population requires additional park and recreation areas. Palm Beach County has authorized bonds for the acquisition of beaches, inland parks, and facility development. For the purposes of these calculations, the beaches acquired with these bonds are defined as recreational areas. Occasionally grants are available and general funds are also utilized. On occasion, the county has required developers to make donations for park and recreation purposes. These approaches will continue to be utilized in the future except that they will be augmented with impact fees. It is presumed that future developer public park donations will be a form of payment of park impact fees.

Table A.18 sets out the park parameters utilized and Tables A.19 through A.21 show the needs and costs by residential land use. The park and recreational areas addressed by this methodology

Table A.18. Parks and Recreational Parameters, Palm Beach County, Florida

Standards: current inventory of park acreage by type of park	District*	Beach*	Regional*
Total Area	1,096.5	628.6	4,166.0
Improved Area	613.5	176.3	2,108.0
Per 1,000 population			
Total Area	1.130	0.648	4.292
Improved Area	0.632	0.182	2.172

Standards: unincorporated area	District	Beach	Regional
Total Area	1.130	0.648	4.292
Improved Area	0.632	0.182	2.172

Capital Costs			
Item	**Provision per 1,000**	**Cost per Acre**	**Cost per Capita**
District			
Acres	1.130	$42,500	$48.03
Improvement	0.632	$55,563	$35.12
Beaches			
Acres	0.648	$225,000	$145.80
Improvement	0.182	$57,119	$10.40
Regional			
Acres	4.292	$40,000	$171.68
Improvement	2.172	$17,445	$37.89

Totals: coastal unincorporated area	District	Beach	Regional	Cost per Capita
Schedule A	100.0%	100.0%	100.0%	$448.92
Schedule B	75.0%	100.0%	100.0%	$428.13
Schedule C	50.0%	100.0%	100.0%	$407.35

* 50 percent of Patch Reef Park, South Beach Park, South County Regional Park and John Prince Parks included because these parks were paid for within bonds that are used to credit park impact fees.
Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

Table A.19. Parks and Recreation Needs and Costs by Land Use Type, Unincorporated Area and Schedule A Municipalities

Land Use Type (Unit)	Persons per Unit	Cost per Unit	Credits	Net Cost (Impact Fee)*
Residential Units by Size:				
800 feet and under	1.646	$554.93	$173.63	$381.30
801-1,399	2.007	$676.64	$185.45	$491.19
1,400-1,999	2.526	$851.61	$202.44	$649.17
2,000-2,599	3.045	$1,026.59	$219.42	$807.17
2,600 and over	3.845	$1,296.30	$245.61	$1,050.69
Hotel/Motel per Room	0.875	$295.00	$148.40	$146.60

Note: Hotel/motel occupancy at 50 percent of actual.
* At the final public hearing the Board of County Commissioners discounted these fees by 5 percent.
Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association).

Table A.20. Parks and Recreation Needs and Costs by Land Use Type, Schedule B Municipalities

Land Use Type (Unit)	Persons per Unit	Cost per Unit	Credits	Net Cost (Impact Fee)*
Residential Units by Size				
800 Feet and under	1.646	$529.23	$173.63	$355.60
801-1,399	2.007	$645.30	$185.45	$459.85
1,400-1,999	2.526	$812.17	$202.44	$609.73
2,000-2,599	3.045	$979.05	$219.42	$759.63
2,600 and over	3.845	$1,236.27	$245.61	$990.66
Hotel/Motel per Room	0.875	$281.33	$148.40	$132.93

* At the final public hearing the Board of County Commissioners discounted these fees by 5 percent.
Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

Table A.21. Parks and Recreation Needs and Costs by Land Use Type, Schedule C Municipalities

Land Use Type (Unit)	Persons per Unit	Cost per Unit	Credits	Net Cost (Impact Fee)*
Residential Units by Size				
800 feet and under	1.646	$503.54	$173.63	$329.91
801-1,399	2.007	$613.98	$185.45	$428.53
1,400-1,999	2.526	$772.75	$202.44	$570.31
2,000-2,599	3.045	$931.53	$219.42	$712.11
2,600 and over	3.845	$1,176.26	$245.61	$930.65
Hotel/Motel per Room	0.875	$267.68	$148.40	$119.28

* At the final public hearing the Board of County Commissioners discounted these fees by 5 percent.
Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

are those that are countywide in terms of population served, and thus the standards and any fees would apply to new development throughout the county. Therefore, neighborhood and community parks are excluded.

A number of the municipalities within Palm Beach County provide extensive park and recreational activities. The municipalities have argued that such municipal provision lessens the need for the county to provide for park and recreational needs in those areas. Each individual municipality would have to be classified on the basis of the scales used herein in order to determine just what park impact fee would be appropriate. There are no park impact fees proposed for the Western or Glades areas. The reason for this lack of fees is that the park and recreational needs of those parts of the county are unrelated to growth. In recognition of the fact that many of the hotels and motels in Palm Beach County are occupied by through-transients, the functional population for hotels and motels is reduced by 50 percent.

Based on existing outstanding debt, new development will pay toward Palm Beach County parks through debt service. Palm Beach County has $86 million in outstanding general obligation debt for parks. Additionally, $35.6 million in non-ad valorem parks debt is outstanding. These calculations credit new development for payments toward this debt. Table A.22 sets out these credits.

Table A.22. Park Bond Credits, Palm Beach County, Florida

Total Taxable Value	$45,205 million
Park General Obligation Debt	$86.0 million
Maturity	24.67 years
Years to Go	14 years
Interest Rate	6.4%
Average Annual Debt Service	7.01 million
Debt Service Millage	$0.155 per $1,000
Average Taxable Value of New Home	$85,043
Annual Tax Payments	$13.19 per year
Credit for Future Payments	$119.76
Credit for Past Payments – % of Total Cost	7.8%
Park Non-Ad Valorem Debt	$35.6 million
Maturity	15.5 years
Years to Go	13.0 years
Interest Rate	5.9%
Average Annual Debt Service	$3.6 million
Debt Service per Capita	$3.68 per year
Credit for Future Payments per Capita	$32.73
Credit for State Park Grants	17.1%

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

The formula for calculating the parks impact fee is as follows [13]:

• Cost per Unit = [Population per Unit x (Acquisition Cost per Capita + Improvement Cost per Capita)] – (Credit for Past Payment + Credit for State Park Grants)*

• Credits for Future Payments = (Non-Ad Valorem Tax Payments per Capita x Population per Unit) + G.O. Debt Payment per Unit

• Net Cost = Cost per Unit – Credits

(*Another way of algebraically saying " – (Credit for Past payment + Credit for State Park Grants)" is " [1 – (Credit for Past Payment + Credit for State Park Grants)]", or in this case, "[1 - (0.078 +0.171)]" or "(1 – 0.249)."

(Note: The state grant credit is incorporated with the general fund credit in calculating cost. The credit for future payments in the Glades area is reduced by 50 percent due to lower prevailing property values.)

A sample calculation for an 800-square-foot residential unit in unincorporated Palm Beach County, which derives from the figures in Table A.19, is shown below [14]:

• Cost per Unit = [Population per Unit x (Acquisition Cost per Capita + Improvement Cost per Capita)] – (Credit for Past Payment + Credit for State Park Grants)

• Population per Unit = 1.646

• Acquisition Cost per Capita = (1.130/1,000) x ($42,500) + (0.648/1,000) x ($225,000) + (4.292/1,000) x ($40,000)

• Improvement Cost per Capita = (0.632/1,000) x ($55,563) + (0.182/1,000) x ($57,119) + (2.172/1,000) x ($17,445)

• Credit for Past Payment = 7.8%

• Credit for State Park Grants = 17.1%

• Cost per Unit = [1.646 x [[(1.130/1,000) x ($42,500) + (0.648/1,000) x ($225,000) + (4.292/1,000) x ($40,000)] + [(0.632/1,000) x ($55,563) + (0.182/1,000) x ($57,119) + (2.172/1,000) x ($17,445)]]] x [1 – (0.078 + 0.171)]
= [1.646 x [($48.03 + $145.80 + $171.68) + ($35.12 + $10.40 + $37.89)]] x (1 – 0.249)
= [1.646 x ($365.51 + $83.41)] x 0.751
= $554.93

• Credits for Future Payments = (Non-Ad Valorem Tax Payments per Capita x Population per Unit) + G.O. Debt Payment per Unit
= ($32.73 x 1.646) + $119.76
= $173.63

• Net Cost = Cost per Unit – Credits
= $554.93 – $173.63
= $381.30

(*Note*: The state grant credit is incorporated with the general fund credit in calculating cost.)

Fire Protection and Rescue Impact Fees, Palm Beach County, Florida

The rapid growth of this county has resulted in equally rapid growth in the need for fire protection and emergency rescue service. Palm Beach County provides fire and rescue service through four municipal services taxing units (MSTU). These tax districts provide service to the unincorporated area and to those incorporated areas that have elected to receive these services. Areas not served by the county fire/rescue system receive such services from a municipal or some other system. Impact fees are only being considered for MSTUs 1, 2, and 3 because there are no foreseen growth-related improvements in MSTU 4 at this time.

Table A.23 sets out the fire/rescue parameters utilized and Table A.24 shows the needs and costs by land use type. Based on existing outstanding debt, new development will pay toward Palm Beach County fire/rescue through debt service. Palm Beach County has no outstanding general obligation debt for fire/rescue. However, $5.9 million in non-ad valorem debt is outstanding for fire/rescue. Payments toward this debt will be credited to new development. Table A.25 sets out these credits. In it we anticipated that there would be individual fees for each MSTU and that such fees would reflect the individual character of each.

The formula for calculating the fire/rescue impact fee is as follows [15]:

• Cost per Unit = (Calls for Service per Unit x Cost per Call) – Credit for Past Payment*

• Credits for Future Payment = Credit for Non-Ad Valorem Payments for Capita x Functional Population per Unit

Table A.23. Fire/Rescue Parameters, Palm Beach County, Florida

Response time	5 minutes
Fire/rescue capital investments:	
MSTU #1 = 3 Stations	$4,410,000
MSTU #2 = 13 Stations	$21,255,000
MSTU #3 = 6 Stations	$9,492,000
Capacity to respond to calls:	
Per station	4,380
Total = 22 Stations	$35,157,000
MSTU #1	13,140
MSTU #2	56,940
MSTU #3	26,280
All	96,360
Allocation of central services:	
MSTU #1	$1,833,000
MSTU #2	$9,774,000
MSTU #3	$4,469,000
Capital cost per call:	
Total	$16,075,000
MSTU #1	$475.11
MSTU #2	$544.93
MSTU #3	$531.23
All	$531.67
Total capital costs:	
MSTU #1	$6,243,000
MSTU #2	$31,028,000
MSTU #3	$13,961,000
Total	$51,232,000
Source of fire/rescue calls:	**Population Served:**
MSTU #1	43,188
MSTU #2	201,012
MSTU #3	127,575
Total	371,775
Land Use	**Calls Per Unit**
Single-family detached	0.21567
Single-family attached	0.21567
Multi-family	0.08452
Mobile home	0.08542
Hotel/motel per room	0.08542
Retail per 1,000 sq ft	0.23400
Office per 1,000 sq ft	0.15584
Storage per 1,000 sq ft	0.06450
Industry per 1,000 sq ft	0.43600
Total capital costs per capita:	
MSTU #1	$144.55
MSTU #2	$154.36
MSTU #3	$109.43
MSTU #4	$137.80

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

Table A.24. Fire Protection Needs and Costs by Land Use Type, Palm Beach County, Florida, MSTU #1

Land Use Type (unit)	Calls for Service	Cost Per Unit	Credits	Net Cost*
Residential Units by Type:				
Single-Family Detached	0.21567	$94.47	$18.32	$76.15
Single-Family Attached	0.21567	$94.47	$10.51	$83.96
Multi-Family	0.08452	$37.02	$12.87	$24.15
Mobile Home	0.08452	$37.02	$13.95	$23.07
Hotel/Motel per Room	0.08452	$37.02	$11.64	$25.38
Nonresidential:				
Office 100,000 sq ft & under	0.1558	$68.27	$15.37	$52.90
100,001 - 125,000 sq ft	0.1558	$68.27	$15.03	$53.24
125,001 - 150,000 sq ft	0.1558	$68.27	$14.70	$53.57
150,001 - 175,000 sq ft	0.1558	$68.27	$14.37	$53.90
175,001 - 199,999 sq ft	0.1558	$68.27	$14.04	$54.23
200,000 sq ft & over	0.1558	$68.27	$13.70	$54.57
Medical Office	0.1558	$68.27	$22.30	$45.97
Warehouse per 1,000 sq ft	0.0645	$28.25	$2.57	$25.68
Gen Industrial per 1,000 sq ft	0.4360	$190.99	$3.09	$187.90
Retail per 1,000 sq ft:				
80,000 sq ft & Under	0.2340	$102.50	$25.23	$77.27
80,001 - 99,999 sq ft	0.2340	$102.50	$27.23	$74.77
100,000 - 199,999 sq ft	0.2340	$102.50	$27.87	$74.63
200,000 - 499,999 sq ft	0.2340	$102.50	$26.77	$75.73
500,000 - 999,999 sq ft	0.2340	$102.50	$25.56	$76.94
1,000,000 sq ft & over	0.2340	$102.50	$25.30	$77.20

Note: Credits are calculated using a per capita method attributing 50 percent to residential and 50 percent to nonresidential locations

* At the final public hearing the Board of County Commissioners discounted these fees by 5 percent.

Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

• Net Cost = Cost per Unit – Credits

(* Another way of algebraically saying "– Credit for Past Payment" is "x (1 – Credit for Past Payment)" or, in this case, "x (1 – 0.078).")

In Table A.24, the cost of fire/rescue protection is determined based on the expected calls for service per unit per year. These call generation rates are based on a statistical review of fire/rescue calls and are set out in "Fire-Rescue Performance Standards for Moratorium Work Program" [16].

Table A.25. Fire/Rescue Bond Credits, Palm Beach County, Florida

Fire/rescue Non-Ad Valorem Debt	$5.9 million
Maturity	10.0 years
Years to Go	8.0 years
Interest Rate	5.8%
Average Annual Debt Service	$0.8 million
Debt Service per Capita	$2.12 per year
Credit for Future Payments per Capita	$13.31
Credit for Past Payments – % of Total Cost	7.8%

Note: While these bonds are authorized for 29 years, the Fire/Rescue portion of this debt is being retired over ten years.
Source: J. C. Nicholas et al., *A Practitioner's Guide to Development Impact Fees* (Washington, D.C.: Planners Press, American Planning Association, 1991).

A sample calculation for a single family detached unit in MSTU #1, which derives the figures in Table A.23, is shown below [17]:

• Cost per Unit = (Calls for Service per Unit x Cost per Call) – Credit for Past Payment
= 0.21567 Calls per Unit ($475.11 cost per call x (1 – .078)
= $94.47

• Credits for Future Payment = Credit for Non-Ad Valorem Payments per Capita x Functional Population per Unit*
= $13.31 x 2.753 x 50%
= $18.32

• Net Cost = Cost per Unit – Credits
= $94.47 – $18.32
= $76.15
(* 2.753 is the average occupancy of the average single-family detached unit. The note in Table A.23 above describes the attribution of per-capita occupancy: 50 percent to residential and 50 percent to nonresidential locations.)

Appendix A

REFERENCES

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