The Use of Transferable Development Rights (TDR's) as a Growth Management Tool in the State of Michigan

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by

Jay Warren Cravens

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THESIS

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INTRODUCTION

In the last twenty years the concept of transferring development rights to preserve community resources (e.g. historic landmarks, open space, scenic views, or a fragile ecological resource) has been written about extensively in numerous legal journals, law review articles, economics journals, as well as planning literature. While the amount of literature concerning this concept is quite extensive, the use of this technique has been very limited. A report published in 1987, by the American Planning Association[1], indicates that only 48 transferable development rights programs are proposed or in effect throughout the United States.

The basic technique behind transferable development rights programs is simple. First, such a program would recognize development rights as one of the numerous rights that a "fee simple" property holder owns as part of his "bundle of property rights". The concept would allow the development rights to be severable much in the same manner as air, mineral, or water rights can be severed and purchased in a free market. Once the development rights are severed

from the property of origin they can then be transferred to a "transfer" or "development" area of the community where additional residential density or commercial floor area is permitted through the use of a transferable development rights program or growth guidance program.

The transfer of development rights technique allows the property owner of a sending parcel to transfer a portion of his development capacity to a receiving parcel while retaining ownership and a reduced development capacity on the original sending parcel. The effect is to preserve the "status-quo" or community resource on the sending parcel for a specified public purpose by imposing a perpetual development restriction thereon in exchange for monetary compensation through the sale of the development rights.

In implications of a successful transferable development rights (TDR) program viewed from a land use planning prospective can be quite significant. Such a program could be used to encourage development at a higher density where the urban services (i.e. sewer, water, roads, private utilities, etc.) are in place, while at the same time, preventing the conversion of critical environmental land or community resources to a higher, more intense land use. If properly designed and implemented a TDR program can avoid the "taking" issue that some more traditional land use regulatory systems have struggled to avoid.

It is important from the beginning to distinguish the

TDR technique from its "cousins" in land use regulation, which use less-than-fee acquisition, density transfer or incentives to accomplish their desired ends. The TDR concept advocates the public acquisition of development rights for the express purpose of using the rights elsewhere. This approach is significantly different than purchase of scenic or conservation easements where the property owner sells his surface property rights and withholds it from further development. The TDR concept is also different than the practices of density zoning (e.g. Planned Unit Development regulations), and bonus zoning.

Density zoning waives the requirement that each parcel have no more than its proportionate share and encourages large landowners to concentrate all development permitted on their land into limited portions, thereby leaving the rest of the land as open space. The amount of overall development is not increased, only redistributed. The limitation of density zoning generally lies in the fact that unused density cannot be used on contiguous properties or must be used on properties under the same general ownership. In contrast, TDR can allow the transfer of density to noncontiguous property regardless of land ownership.

Bonus zoning enables property owners to increase density of their development in exchange for the provision of amenities such as plazas or theaters. This land use technique has encouraged the development of vest pocket parks and other

urban design improvements, but its potential for success in the metropolitan setting may be limited[2]. The holder of a small parcel is constrained by the size of his property to take advantage of this opportunity simply because he does not have sufficient space to establish a park or plaza.

By combining density and bonus zoning, it is possible to achieve results similar to those obtainable through a TDR program. This was the case in Chicago when the city, having defeated the TDR program proposed by John Costonis (called the Chicago Plan) expanded its Planned Unit Development ordinance to include landmark preservation as an amenity worthy of zoning bonuses[3]. Even with this combination however, development rights could only be transferred to land contiguous to the landmark. The unique feature of a TDR program is that it breaks the bond which has traditionally existed between the physical aspect of the property from its development potential, and allows this potential to be used at another and perhaps more appropriate site.

The TDR technique directly addresses the economic impact of land use regulation; this technique is a departure from the more traditional approaches which are concerned with physical and social goals. Proponents of the TDR technique believe that by establishing a market mechanism through which the development potential can be transferred, the TDR technique in consistent with the legal requirement of just compensation for governmental actions which diminish the

economic value of land. It can also avoid the "windfall / wipeouts" problem by redistributing existing development potential to the benefit of both the public and the individual property owner involved. Perhaps the most important aspect of the TDR technique is that it would permit the implementation of land use plan and policies which had previously thought to have been excessively restrictive.

I. OBJECTIVES

Although the basic concept and potential benefits of the TDR technique can be explained simply, the legal, economic, political, and administrative aspects of incorporating a TDR program in a growth management system are complex. Critics of the TDR technique question the necessity of introducing a new concept in light of the increasing power of more traditional regulatory methods. The question of equity is raised, in terms of creating the initial development rights structure and from the perspective of who actually pays for the TDR. The acceptance of TDR is also questionable considering the technique's departure from more traditional methods, and it's lack of wide spread acceptance nationwide. These issues, and others, have given to the debate over the merits of the TDR technique.

This paper will examine the various aspects of this debate, compare and contrast existing successful and unsuccessful TDR programs, and examine specific

implementation mechanisms which can lead to a successful and practical TDR program. A discussion regarding the legal, administrative, and economic feasibility of the TDR technique will also be researched.

Perhaps the most important inquiry will be the practicality of establishing TDR programs in Michigan. To most lawyers and land use planners in Michigan the TDR technique is generally associated with states that are undergoing tremendous growth and are using it as a growth guidance mechanism[4]. While others are using the technique to protect natural resources or community assets[5]. In 1988, the Michigan Planning and Zoning News reported that growth and growth management provided a significant impact on the election outcome in at least nine (9) communities in Michigan. Additionally, it was reported that in fourteen (14) other communities that growth management had been a significant issue in local politics for the past couple of years[6]. In subsequent articles appearing in the Michigan Planning and Zoning News[7] it was reported that citizen groups in Petoskey, Oakland County, and Monroe County had formed to study various approaches to growth management. In fact one group called the Intergovernmental Growth Management Consortium has been established in Oakland County. This group has been meeting off and on for the past several months in an effort to develop seven (7) pieces of growth management legislation. One of the proposed pieces of legislation is a bill that would allow local governments to adopt and

implement TDR ordinances. Part of this paper will be devoted to researching the legal problems or aspects in developing TDR legislation for Michigan. This paper will be guided by the following research questions:

1. How does the TDR technique differ from more traditional land use controls?
2. Is the TDR technique legally, economically and administratively feasible?
3. What conditions prompted the adoption of a TDR program as an alternative to other established land use regulations?
4. Are there any inherent constraints in adopting a TDR program in Michigan?
5. What considerations have to be realized to insure a successful TDR program?

II. CONTENT OF THIS PAPER

The remainder of this paper is organized along the following outline. Chapters 2 and 3 will cover the theoretical aspects of defining TDR as a concept and explaining the evolution of the technique, it's judicial basis and the basic guidelines and methods of structuring a TDR program. Chapter 4 will review the basic components of a TDR program and review guidelines for the success of such a program. Of particular interest will be an examination of the "second generation" TDR programs of Montgomery County,

Maryland and the Pinelands of New Jersey and how they have been implemented to achieve their desired goals of open space preservation and growth management. Chapter 5 will be dedicated toward the review of the proposed enabling legislation for Michigan. This chapter will also serve as the conclusion of this paper by providing comment about the feasibility of the TDR technique being used in Michigan.

Footnotes - Chapter 1

1. Richard J. Roddewig and Cheryl A. Inghram, Transferable Development Rights Programs (Chicago: American Planning Association, Planners Advisory Service Reports, 1987), p. 1.

2. Jerome G. Rose, ed., The Transfer of Development Rights: A New Technique of Land Use Regulation (New Brunswick, N.J.: Center for Urban Policy Research - Rutgers University, 1975), p. 8.

3. John J. Costonis, Space Adrift: Landmark Preservation and the Marketplace (Champaign, Ill.: University of Illinois Press, 1974), p. 39.

4. Kevin Lynch, "Controlling the Location and Timing of Development by the Distribution of marketable Development Rights," in Transferable of Development Rights: A New Technique of Land Use Regulation, ed. Jerome G. Rose (New Brunswick, N.J.: Center for Urban Policy Research - Rutgers University, 1975), pp 259-264.

5. David D. Levy, "TDR's in the Legal System", Florida Environmental and Urban Issues, July 1986, p. 12.

6. Mark A. Wyckoff, "Michigan Citizens Strike Back at the Impacts of Growth, "Michigan Planning and Zoning News, October 1988, p. 12.

7. Kristine M. Williams "Michigan's Growing Pains," Michigan Planning and Zoning News, February 1989, pp. 4-9.

CHAPTER - 2

TRANSFERABLE DEVELOPMENT RIGHTS - THE CONCEPT DEFINED

The concept of transferable development rights is based upon the legal principal of property law that the right to develop real estate is one of the "bundle of rights" included in fee ownership of land[1]. Fee simple ownership of real estate allows the owner to sell, lease, or trade any one or all of the "bundle of rights" to his property. Within the limitations and legislative powers of local government, the owner has the right to use, lease, sell, or abandon the property or any of its components of ownership not retained by the previous owner. Property rights such as: water, mineral, oil, gas, and air are the most common rights conferred to other parties.

A development right is an extension of the rights normally conveyed with property ownership. If legally permitted, a development right has separate value from the land itself. It can be subject to reasonable regulation by the local government under it's police powers and transferred by the owner through gift or purchase to another property or another owner. The property owner may sell the development rights and still retain ownership of the land and the right

to use the surface of the property at its current use. Or, he may sell the land and retain the future development rights to use at a later date on another eligible property.

TDR is a technique for redistributing the physical location of legal property rights, as defined and regulated by zoning laws, to serve a variety of purposes. TDR programs are generally devised to implement one the following land use planning objectives: 1) landmark preservation, 2) open space preservation, 3) economic development, and 4) general land management or growth management.

The first TDR programs proposed in the United States were generally associated with landmark preservation. Programs in the City of New York and one proposed for Chicago (the Chicago Plan) were written about extensively in the early literature concerning TDR's[2]. TDR programs were also being used in the environmental movement of the early 1970's in areas such as Collier County Florida. Programs to use TDR's as a device to encourage economic development have yet to be implemented. However, program was proposed in Washington D.C. to facilitate the restoration of the Georgetown waterfront, which had deteriorated into an industrial slum[3].

Perhaps the largest area of implementation for the TDR technique has been in the general land management or growth management area. The TDR program to preserve the Pinelands in

the State of New Jersey is perhaps the most notable of these growth control programs.

Transferable development rights programs allow a restricted property owner to sell some or all of their development rights as a means of compensation for the property restriction. Restricted properties are located in designated "sending" or "transfer" areas, where the rights can be transferred as determined by the local government. Development rights can then be transferred or sold to other property owners in designated "receiving" areas, which are scheduled for further growth as determined by the local government.

TDR's help protect threatened community resources by offering compensation to restricted property owners, while permitting the transfer of development rights where greater density will not be objectionable. John Costonis, an early proponent of the TDR technique, felt that TDR systems lie square upon a principle which has been implicit in American land use practice since Village of Euclid v. Ambler Realty Company[4]. Costonis argued that the development potential of privately held land is in part a community asset that government may allocate to enhance the general welfare of the community.

There are two (2) basic approaches in designing a TDR program. The first approach and perhaps the most common,

proposes development transfers between private parties. The second approach proposes a public market for development transfers.

Private market plans exist in two types. One enables the developer to purchase development rights from another property owner whose property has been subjected to land use restrictions. The second type requires that both the property to be preserved and that to be developed be under common ownership.

Private market TDR plans may be either mandatory or voluntary. Under a voluntary private market plan, owners of development rights could choose to transfer or sell when they wished, or they could hold onto their rights and develop their property as they wished. A mandatory plan would limit the property owner the opportunity to develop his property to its current status and allow the owner to sell or transfer the development rights to another eligible property under the TDR system's guidelines.

Public market TDR plans involve the government as a buyer and/or seller of development rights. If the government buys the development rights from the owner, it can choose to hold them in a "bank", which has the effect of reducing the allowable density in the area covered by the TDR program. Or, the government may act as a broker and resell the development rights in the eligible receiving areas.

Public market plans can also be mandatory or voluntary. If voluntary, the property owner may choose to sell his rights or to develop his property in accordance with local zoning laws. If mandatory, the local government uses its power of eminent domain to purchase the development rights.

Theoretically, the market which is established for the dispersal of development rights is used to compensate the property owners for the loss of their right to develop their property in the preservation district or area. The concept also assumes that the district or area to which the rights are transferred can absorb the additional development without resulting in increases congestion, increased strain on infrastructure, or a decrease in the "quality of life" in the transfer district or area.

I. AMERICAN LEGAL PRECEDENTS

The American experience with property rights severance and pooling dates back to the early 19th century. In a law review article written by Donald M. Carmichael,[5] four early American precedents are described in which the development potential of individual properties was transferred to other property owners in order to satisfy a "community need". The precedents involved use the right of eminent domain for private use in the assemblage of rights-of-way for early transportation systems, the broadening of the public purpose justification of police power regulations in the Milldam Acts, the pooling and reassignment of development rights for

the purpose of increasing resource efficiency in drainage and irrigation projects, and the expansion of the correlative rights doctrine in the oil and gas production regulations.

A. The Milldam Acts

During the colonial period, the Milldam Acts were established by various states to permit an individual on a stream to construct a dam to generate power for the purpose of operating a grist mill. The upstream property owners whose land was flooded by this action were compensated by the mill owner for their lost development potential. Many states allowed for the continuation of the energy production and milling operation with the requirement that grain be processed for all upstream property owners who request the service and paid a statutory share of the flour as a fee. It can be argued that The Milldam Acts conveyed the power of eminent domain to an individual in order to further a resource use. Yet public access to the resource was guaranteed by statute and compensation was paid for the unavoidable damages to the affected property owners.

The courts upheld the Milldam Acts on the grounds that they were a reasonable police power regulation. The courts examined the nature of the property right taken from the affected upstream property owners and determined that all property owners along the stream had correlative rights to use the stream. The first property owner to construct a dam

preempted the use of that right by all other property owners, who then had to accept the flooding of their property as a necessary consequence. The Milldam Acts were characterized not as a use of the power of eminent domain but as a legitimate police power regulation. They allowed for the adjustment of property rights held in common by all property owners along the stream. The correlative rights doctrine, as redefined in later rulings is one of the key components in validating the TDR technique.

B. Transportation System Development

The second precedent concerns the development and construction of transportation systems in the early 1800's (i.e. toll roads, canals, and railroads). It was not uncommon for the states to grant the power of eminent domain to private companies for the purpose of assembling the rights-of-way needed to construct toll roads. These companies were given the public mandate by the state to plan, design, construct, and perform maintenance on these toll roads. This mandate was granted on the premise that these companies would expand the transportation systems into the wilderness thereby increasing the economic development of a fledging nation. Without the power to condemn property, the private companies would have to pay exorbitant prices to resistant property owners. When the construction was completed, the corporation was permitted by right to charge a state regulated fee for the use of the right-of-way. The public was guaranteed the

right to unlimited use of the right-of-way subject to the payment of a toll. Private use of the government's power of eminent domain was justified through the assurance of the public's right to use the right-of-way.

This same power was later conveyed to private builders of canals and railroads. In the case of railroads, the public use requirement was limited by the railroads schedule and by the use of the corporation's vehicles in contrast to the free access and use of individual means of transport on roadways and canals. The overall benefits of railroad construction, with its attendant effect of opening new territories and expanding commerce, were favorably perceived by the courts and thus a broader concept of public use emerged. The public use requirement was satisfied by the public utility and the benefit which would result from the expansion of transportation systems. The significance of the transportation system precedent does not lie in its use of eminent domain for the acquisition of development rights but with the justification of rights assemblage for satisfaction of a public need.

C. Irrigation and Drainage Districts

The third precedent concerns the establishment of irrigation and drainage districts to provide water for an agricultural area. The purpose of the district was to create the greatest benefit for the district as a whole. Under this

mechanism the courts were authorized to oversee the administration of the drainage or irrigation district. A majority of the property owners in the district could vote to undertake a drainage or irrigation project and impose its costs upon the participating owners in accordance with the benefits received from the project. In some cases a property owner might be deprived of their right to develop or use their property so that the water resources could be channeled to achieve the greatest benefit for the district. Those who received the benefit from the waster resource would provide the funds to compensate those who were deprived property rights.

In approving the procedure for drainage and irrigation project implementation, the courts again had to redefine "public use". In the case of reclamation programs, the general public did not have the direct right of user access as in the previous cases concerning the Milldam Acts or the early transportation systems. The use of benefits derived from the reclamation projects was confined to the owners of the affected lands. The judicial response to this was that a public use need not create practical benefits for the entire public. The enabling statutes which created the authority for the drainage and irrigation districts contained legislative findings that these districts were contributed to the public interest of the state. The court in turn agreed with this finding.

The drainage and irrigation precedent is important because it deals with the assembly of large tracts of land similar to the TDR programs in existence. As in the case of the Milldam Acts, individual properties sharing a common interest in resource utilization are accumulated and individual rights are diminished in pursuit of resource development. As in the case of TDR programs, the ownership and use of land within the reclamation districts remained in the hands of the original property owners.

D. Oil and Gas Production Regulations

The fourth precedent described by Carmichael is the oil and gas production regulations that were designed to prevent each property owner over a gas reservoir or oil field from producing as fast as possible to get as much gas and oil from his property, thereby draining as much from his neighbor's property as he could. In the process natural gas, which aids in the primary recovery of oil by forcing it under pressure to the surface was wasted in large amounts. Wasteful extraction processes were encouraged by early court rulings which characterized oil and gas reserves as "fugitive resources", belonging to no one until captured[6].

An attempt to regulate these wasteful practices came before the U.S. Supreme Court which ruled in the case of Ohio Oil Company v. Indiana[7], that oil and gas fields were resources which because of their nature created common ownership among otherwise unrelated property owners. The

Court described oil and gas as a common fund that did not become a property owners until captured. The Court upheld this statute which regulated the availability of this common fund to the overlying property owners. This ruling expanded the correlative rights concept to include owners of oil and gas fields.

Twenty years later, the U.S. Supreme Court expanded this further, when it upheld a Wyoming statute in the case of Walls v. Midland Carbon Company[8]. This case forbade the use of natural gas for the manufacture of carbon black from fields within ten miles of incorporated town or industrial plant. The production of carbon black threatened to exhaust the supply of natural gas, which was also used as a community resource. The Court found that the statute was a valid use of the stat's police power to prevent waste and the disproportionate use of a resource by a single property owner. Therefore, the state was allowed to enact a regulation to preserve selected rights of a resource.

Carmichael suggests that this precedent supports the TDR concept in that the potential for development within a planning or zoning district is similar to a reservoir of oil or gas[9]. Current land use regulations, such as zoning, can produce wasteful use of land through inadequate control measures. The use of the TDR technique may be a more efficient means to control wasteful use of land resources. The waste prevention motives of these early oil and gas

statutes appear to provide sufficient precedent for the validity of the TDR technique.

II. CONCLUSION

The common concern of each area of precedent described is the advancement of a valued resource through the modification of property ownership rights. Pressing social values required that full rights of property ownership be subordinated to forms of limited common ownership. The courts approved various legislative schemes using the powers of eminent domain, taxation and police power regulation. The rationales for these government actions were " the proper and needful development of resources, the prevention of the waste of resources and the protection and furtherance of ownership rights in commonly enjoyed resources"[10]. Carmichael concludes that[11]:

> "Legal precedent exists in sufficient breath and strength to provide strong encouragement to those considering development rights systems as methods of widespread land use control. Judicial approval is not assured but can realistically be hoped for if the systems are well considered and well structured, if they are clearly responsive to the major short- and long-term wastes of land and other resources that occur under the present systems of land use controls, and if their impact on the rights of individual landowners is in clear furtherance both of demonstrable public interests and the correlative rights and entitlements of individual owners."

This chapter clearly establishes the notion that there is sufficient precedent to establish a TDR program. Despite these apparent precedents TDR programs will be adjudicated

under a contemporary setting. Chapter 3 of this paper addresses the concerns that could arise.

Footnotes - Chapter 2

1. David E. Levy, "Transferable Development Rights (TDR's)," Florida Environmental and Urban Issues, January 1986, p. 12.

2. John J. Costonis, Space Adrift: Landmark Preservation and the Marketplace (Champaign, Ill.: University of Illinois Press, 1974), pp. 28-64.

3. Charles M. Haar, Steven G. Horowitz and Daniel F. Katz, Transfer of Development Rights: A Primer (Boston: Lincoln Institute of Land Policy, 1980) p. 6.

4. 297 F. 307 (N.D. Ohio 1924).

5. Donald M. Carmichael, "Transferable Development Rights as a Basis for Land Use Controls," Florida State Law Review 35 (1974)

6. Ibid., p. 78.

7. 177 U.S. 190, 190-192 (1900).

8. 254 U.S. 300, 309-310 (1920).

9. Carmichael, "Transferable Development Rights as a Basis for Land Use Controls," p. 97.

10. Ibid., p. 104.

11. Ibid., p. 107.

CHAPTER - 3

CONTEMPORARY LEGAL BASIS

Although the need to establish a strong historical precedent is undeniable, the acceptance or rejection of the TDR technique will occur in a more contemporary setting. The viability of the TDR technique is heavily dependent upon judicial approval of an evolving social concept: that the development potential of privately owned land is in part a community asset which government may allocate for the public welfare. Recent legal decisions to some extent, suggest the courts may be receptive to this notion.

The TDR technique regulates density for the purpose of creating a market for development rights. The technique may be challenged as a use of the police power to raise funds for a public purpose: that is for the preservation of environmentally or aesthetically desirable land uses. Some may argue that this objective falls within the state's taxing authority rather than its police power authority. The technique's cost-shifting and residual density elements may also be challenged as unconstitutional takings. Exclusionary and discriminatory charges may also be anticipated. Others have also contended that state zoning enabling legislation

does not permit municipalities the right to pursue broad environmental and amenity goals. The purpose of this chapter is to review the legal basis for TDR's and significant court decisions relating to the implementation of TDR programs. Because of the nature of the subject matter this chapter will be divided into three parts. Part I will review the five objections that are likely to provide stumbling blocks for the implementation of a TDR program. In addition, a discussion about the relationship of TDR's and development exactions is also incorporated. Part II will review three (3) court decisions that are concerned with the validity of TDR programs. These cases are particularly interesting because they raise some of the objections that are discussed in Part I. Part III draws the two previous parts together and draws some conclusions about the legal stature of TDR's in the courts.

I. PREVAILING LEGAL OBJECTIONS

A. The Police Power - Taxation Argument

As an exercise of the police power, zoning has traditionally been thought of as a physical design technique rather than a fiscal tool. However, the police and taxation powers are not mutually exclusive. The courts have often validated police power measures which have significant and direct fiscal effects. Local governments desiring to implement a TDR system must be prepared to prove not only

that the state legislatures may authorize programs in which the police and taxation powers are intermeshed, but must also make sure that their legislature has done so[1]. Sound enabling legislation is necessary to convince the court that there is statutory precedent for the local ordinance.

Compliance of the enabling act and the local ordinance with the police power doctrine must also be established. The police power doctrine stipulates that the burdened class be the class whose actions created the problem which the legislation was enacted to remedy. It must also be shown that the benefits accruing from police power regulations are devoted exclusively to the public objectives which motivated the enactment of the regulations. This can be satisfied by writing limitations into the enabling act and the TDR ordinance restricting the use of the transfer technique to accomplish specific environmental objectives or growth management goals.

The courts must still be convinced that the TDR technique is a regulatory program and not a taxation measure. It can be shown that other forms of control with obvious fiscal implications such as cluster development, bonus density zoning, planned unit development ordinances, impact fees, and the imposition fees in lieu of land dedication as a condition of subdivision approval have received favorable judgements in the courts. These judgements provide important precedents for the TDR technique and are an indication of the

court's willingness to permit new regulatory programs rather than invalidate them on conceptual distinctions between taxation and police powers. They also signify the court's perception of the linkage between physical and economic planning.

B. Confiscation Objections

Because property owners who sell their development rights will be compensated for their loss in development potential, most confiscation objections are likely to take place in the receiving district, where the densities prescribed by right are lower than the densities allowed with TDR's. These so called "residual densities" will limit those property owners who choose not to purchase additional development rights to the underlying density permitted by their zoning. Zoning the transfer district to density levels which fall below the ceiling called for by market demand (downzoning) is necessary to assure the marketability of development rights. However property owners in the transfer district may challenge this action as a misuse of the zoning power resulting in a confiscation of their right to develop their land to its maximum density.

Unfortunately, this argument assumes that the local government must zone property to assure the greatest return on a person's property. In truth, the zoning doctrine may preclude a property owner from devoting his property to the most economically productive use. The restriction must

demonstrate that it advances the general welfare of the community and provides the property owner with a reasonable though less profitable use. The advancement of community welfare which results in the protection of a valued resource is difficult to overturn in the courts. The severity of zoning in the transfer districts must not constrain property owners to an unreasonably low density as of right. This must be assured through careful construction of the entire TDR program.

C. Cost - Shifting Objections

Another possible objection to a TDR program is the argument that the cost of resource protection programs may not be aimed solely at the land development process. The courts however have approved regulations establishing impact fees, development exaction ordinances and subdivision regulations in which costs to the developer whose project created the need essentially pay for that need. Although the TDR technique differs from the exaction techniques, these items provide some indication of a positive judicial response to TDR's.

Development exactions are commonly evaluated against either the special assessment or police power doctrines. The special assessment doctrine justifies the governments right to impose assessments for special benefits received from public improvements. It limits the application of the

assessment to specific types of public improvements, weighs the merits of the assessment on the basis of spacial proximity between the improvement and the assessed property and then considers the amount of the assessment in relation to the benefits accruing to the assessed property.

Should the courts compare the TDR technique to special assessments, TDR would probably be held invalid for the following three basic reasons. First, resource protection is not typically one of the categories of public improvements in which special improvements apply. Second, the resource whose preservation is financed through the transfer of development rights would in most circumstances be physically separated from the assessed parcels which are located in the transfer district. Furthermore, the benefits accrued from resource protection are not localized. Third, the amount of assessment which equals the cost of a development right is not tied to an increase in benefits as a result of resource protection, but related to the value of extra development density.

John Costonis[2] argues that courts are not likely to consider TDR's as a form of special assessment because,

> "unlike special assessment, development rights posits, first, that the externalities of land development warrant shifting to it the costs of resource protection, and second, the increases in private land values attributable to governmental initiatives and general community growth can be recouped. The former premise is irrelevant to special assessment doctrine, which does not key the impositions to the assessed parcels prospective uses. The latter imports a more comprehensive concept of

> "benefit" than special assessment. Furthermore, recent decisions have relied more heavily upon the roomier standards of the police power to evaluate the propriety of subdivision exactions. Judicial recourse to these standards to scrutinize development rights transfer can be anticipated because the transfer technique is considerably more congruent with the exaction device than with special assessment."

Costonis argues that TDR's are more likely to be viewed in a manner similar to development exactions. In this case, the court's understanding of the economic difficulties that large scale development can have on local government has resulted in a shift toward the evaluation of development exactions against the police power doctrine, thereby emphasizing community-wide benefits over the benefits accruing to an individual development. Improvement exactions under the police power need not be located within a particular development so long as the benefits are available to the residents of that development. Other community residents may benefit from the improvement, however, the development must be the primary contributing factor necessitating the construction of the improvement. Exactions are not confined to specific categories which govern the special assessment doctrine, although they should be tied to a community's capital improvements plan. It is important to note that there need not be an exact cost correlation between the improvement and the enhancement value it brings to the development. However court decisions have invalidated exactions where the exaction was substantially higher than the need generated by the particular development.

D. Equal Protection Objections

TDR programs like some development exaction regulations may be challenged on two equal protection issues raised in development exaction court cases. In the case of Associated Homebuilders v. City of Walnut Creek[3], a group of developers challenged a California statute and the community's subdivision ordinance which required land dedication or payment in lieu of dedication for the construction of recreational facilities within a three-quarter mile radius of the proposed subdivision. The developers argued that the enabling legislation violated the equal protection clause by requiring exactions only from those developers subject to the subdivision ordinance. In addition, they stated that the legislation would operate in an exclusionary manner by raising housing costs. TDR programs may be challenged by the property owners within the transfer district who may claim they are denied equal protection because the densities permitted outside of the transfer zone as of right will be more liberal than those within the zone. The property owners may argue that the price builders pay for the development rights will ultimately be passed on to the purchasers of their projects. Thus leading to arguments that the regulation may be exclusionary in nature. The results of such claims will depend upon the details of the individual TDR program, however the Associated case does provide some important

insight. In this case, the court rejected the first argument on the principle that legislative classification is valid from an equal protection standpoint if the distinction made is rational (the rational nexus test). The same principle would apply to a TDR program as long as economic and planning studies demonstrate persuasive reasoning for the selection of transfer districts.

The Associated court did not find the exclusionary argument compelling enough to act upon. It conceded that exaction programs can be manipulated to produce exclusionary results, but even when not so abused, they may tend to inflate the cost of the developer's product. The court, in turn evaluated the specific program against the land use problems of the community and the extent to which actual exclusionary consequences were produced. The Walnut Creek exaction program was found to be valid. A similar outcome can be anticipated for some TDR programs. It must be kept in mind that TDR programs should only be one element in the local community's land use plan and should be designed to compliment other elements to achieve sound planning goals.

E. TDR's, Exactions, and the Rational Nexus Test

The evaluation of exaction ordinances and TDR ordinances will generally be measured against the rational nexus test to insure their legality. The rational nexus test is generally credited to a law journal article written by Ira Michael

Heyman and Thomas K. Gilhool in the Yale Law Journal in 1964[4]. This article proposed a new way of evaluating the validity of exactions by the use of cost-accounting methods: "Given a proper cost-accounting approach" the authors postulated, "it is possible to determine the costs generated by new residents and thus avoid charging the newcomers more than their proportionate share." The fact that the general public would also benefit from the exaction is immaterial "so long as there is a rational nexus between the exaction and the costs generated by the creation of the subdivision[5]."

The first step in the rational nexus test requires that the development which is to be assessed creates a need for the service or facility for which it pays. In many cases, the court will find that the local government's statutory authority to levy the exaction is sufficient to show the need. Most courts will require more than that the development activity creates a need for new services or facilities. They will require that the exaction bears a reasonable relationship to the proportion of the need that can be attributed to the fee payer.

The second step in the rational nexus test requires that a reasonable relationship exist between the use of funds and the benefits accruing to the development. There must be a need for new facilities or services in order to justify the exaction.

The application of the rational nexus test to TDR's

appears quite simple. TDR's would be viewed as a "preservation" exaction where the community involved would have separate and distinct "sending" districts and "receiving" districts. Only a limited number of uses (i.e. farming, wildlife preserves, wood lots, open space, etc.) would be permitted in the "sending" district. In the "receiving" district the property owner could only develop to a certain density as of right. With the purchase of development rights, he can build beyond the permitted beyond the permitted underlying density.

In this case, the nexus between the new development and the goal of preserving the "sending" district seem tenuous. The willingness of a court to uphold this type of "exaction" will be dependent on the court's acceptance of an attenuated nexus. It is difficult to imagine what kinds of standards a court might use to ensure that the amount of the exaction bears some relationship to the developer's appropriate share of the cost of preserving the sending district. The local government may attempt to defend the TDR program by arguing that no exaction has occurred because the developer is receiving a benefit by being allowed to construct at a higher density over what would normally be allowed. This argument presumes that local government has the discretion to establish densities within the permissible range and may exercise it's discretion in favor of those who meet other goals of the community. But if this additional density can be

built for reasons having no valid planning relationship to the immediate local area, it will be difficult to justify the validity of the normal restriction.

F. TDR and the Enabling Legislation Objections

If a TDR program is initiated under state enabling legislation, similar to the Standard State Zoning Enabling Act, it may be argued that the program violates the "uniformity" and "purposes" requirements of the state act, if the requirements are strictly interpreted. The "uniformity" issue arises out of the provision in most zoning enabling acts that all zoning regulations "shall be uniform for each class of kind of buildings throughout each district."[6] The question is whether different treatment of lots within a transfer district violates this provision. Costonis[7] suggests that the uniformity requirement is not violated because the courts have begun to recognize that the individual lot is not the most appropriate unit of development control. When cluster zoning and planned unit development ordinances were challenged, the courts have held that these ordinances met the uniformity requirement if all owners within the district are entitled to develop their property in accordance with the flexible density or use provisions of the law. That is, if the same options are available to all developers within the district, there is no violation of the uniformity clause. It is generally believed that if the transfer of development rights to a developer within a transfer district does not

violate the uniformity provision, it will also not violate the equal protection clause.

With regards to the purposes section of the state enabling act, the question might be raised as to whether the Act addresses the broad environmental and aesthetic goals to which TDR responds. Most courts have viewed the purposes section as coextensive in scope with the police power. The enhancement of environmental quality has evoked a favorable response in some court cases[8].

There is some debate if a local community has the statutory authority to adopt a TDR program. Many zoning and land use authorities[9] argue that enabling legislation is not always required prior to the utilization of TDR's. They argue that planned unit development and cluster provisions, which are currently allowed in most state zoning enabling acts, share characteristics similar to TDR programs to allow the latter to be encompassed within the zoning ordinance. It is argued further that bonus density programs are compatible schemes in that both grant the developer the right to increase the project density above that permitted by the existing ordinance in return for some concession on the part of the developer (e.g. providing low and moderate income housing, additional recreation areas, or other amenities).

Presently, there are TDR programs which exist in states that do not have specific legislation to allow for a TDR program. A TDR program could be initiated in Michigan on the

pretext that the zoning enabling acts[10] have essentially the same uniformity clauses as contained in the Standard State Zoning Enabling Act. In fact, Section 1[11] of the Michigan Township Rural Zoning Act (Act 184 of 1943, as amended), states:

> "The township board of an organized township may use this act to provide by ordinance for the regulation of land development and the establishment of districts which apply only to land areas and activities which are involved in a special program to achieve specific land management objectives and avert or solve specific land management objectives or solve specific land use problems, . . ."

Taking a broad interpretation of this Act, with existing case law in zoning and land use decisions, which has granted a wide latitude to municipalities to zone for the public welfare, TDR's seem to be a legitimate use of the zoning power. This type of latitude may especially hold true in Michigan where each of the zoning enabling acts contains broad language in which to establish planned unit developments. This language could suggest an interpretation the TDR's could be incorporated as part of a community's planned unit development regulations. For example, Section 16 c (2) of the Township Rural Zoning Act[12], (see MCL 125.286 c) states that planned unit regulations must be designed to:

> "....permit flexibility in the regulation of land development; encourage innovation in land use and variety in design, layout, and type of structures constructed: achieve economy and

> efficiency in the use of land, natural resources, energy, and the provisions of public services and utilities; encourage useful open space; and provide better housing, employment, and shopping opportunities particularly suited to the needs of the residents of this state."

This language coupled with the previous section could provide sufficient language to allow TDR programs to be enacted in Michigan. However, considering the recent shift of the courts regarding the taking issue[13] it may be advisable that specific legislation be adopted to permit such programs. A separate freestanding enabling act or an amendment to each of Michigan's zoning enabling acts seem to be likely alternatives, as evidenced by recent activities by the Intergovernmental Growth Management Consortium in Oakland County Michigan.

II. IMPORTANT COURT DECISIONS

There are relatively few court decisions of any kind dealing with TDR's, mainly because the concept has not been readily implemented throughout the country. In order to sustain a TDR program it is important to understand the applicable standards for the exercise of the police power and eminent domain.

Courts are often called upon to determine whether particular governmental actions or regulations are legitimate exercises of the police power or whether such ends can only be accomplished by the use of eminent domain. Under the police power, property values may be impaired by governmental

regulations without the payment of compensation as long as the regulation is: 1) substantially related to a government purpose, (i.e. health, safety, or general welfare) ; 2) not arbitrary: and 3) not so burdensome that the owner is deprived of all "reasonable use" of his property. When it is determined that eminent domain rather than the police power must be employed, the courts usually apply a strict standard for compensation. The property owner must be paid for the value of his property under its highest and best use, subject to legally valid zoning restrictions which have been placed on the property. Although the government activity which necessitates the condemnation may greatly benefit other property owned by the plaintiff, the setoffs allowed to the government are quite limited. The police power gives the local government great latitude for regulation, while eminent domain fully protects the private citizen by requiring "just compensation" under the Fifth and Fourteenth amendments of the U.S. Constitution.

A. Fred F. French Investing Co., Inc v. City of New York

In 1972, the City of New York adopted an amendment to their zoning ordinance which was the subject a litigation between the City and Fred F. French Investing Co., Inc.[14] In this case, the city attempted to prevent the development of two private vest pocket parks from being replaced by a new luxury apartment development, called Tudor City. The city designated the two private parks as a "Special Park District"

thereby prohibiting high-rise residential development on the site and allowing only passive uses. The unused development potential of the two private parks was allowed to be transferred to any lot containing at least 30,000 square feet and zoned for high-density commercial development in the area of midtown Manhattan. The transfer was also subject to planning commission approval.

French challenged the "Special Park District" designation as a "taking" of private property without just compensation through an inverse condemnation action. The New York Court of Appeals upheld the property owner's claim in the case but was careful to distinguish the general legality of TDR from its specific application to this development proposal.

The court found that the zoning amendment was unreasonable and, therefore, unconstitutional because without due process of law, it deprived French of all his property rights. The ability to transfer the development rights did not enhance the loss of all beneficial use of the property because their severance from the parks was too uncertain to insure a reasonable return from their sale. The court seemed most concern with the contingent nature of the transfers due to the unsatisfactory receiving districts, and the fact that planning commission approval was also required. By requiring the owner to enter an unpredictable real estate market to find a suitable receiving lot for the rights the zoning

amendment rendered the program with uncertainty.

While the court invalidated the city's action, the case has significant value for two reasons. First, it recognized that development rights may be assigned to property through the municipality's police power regulations and that such rights may be severed from that property and located elsewhere. Second, even though the court nullified this particular TDR arrangement, the court provided a positive note toward TDR programs which are more protective of due process considerations. The court found the transfer rights as an acceptable form of compensation if the owner could gain a reasonable return on his property either through the sale of the rights alone or through the sale of the rights in addition to the existing value of the site.

B. Penn Central Transportation Co. v. City of New York

Perhaps the most significant court case involving the validity of TDR's and the issue of police power regulation versus eminent domain lies in the case of Penn Central Transportation Co. v. City of New York[15]. In this case, Penn Central sought to invalidate New York City's historic preservation law which had been used to designate Grand Central Terminal as a landmark. Penn Central had been negotiating a lease/sublease arrangement for the construction of a 56 - story office building on top of the Grand Central Terminal. Penn Central submitted three plans, one which

preserved the facade of the terminal. The request for construction was rejected by the New York Landmarks Preservation Commission, as the improvements were deemed inconsistent with the goals of the city's landmark preservation ordinance. Penn Central sought to invalidate this ordinance which designated the terminal as a landmark. Additionally, they argued that the landmark designation of the terminal constituted a "taking" for which they were entitled to compensation, even though the development rights had been made transferable through the use of a TDR program, to other property owned by Penn Central in the vicinity. The Landmarks Preservation Law, as it applied to the terminal, allowed the transfer of development rights to at least eight (8) Penn Central properties in the area. The decision of New York's Court of Appeals denied Penn Central's claims. Upon appeal, the U.S. Supreme Court concurred with the lower court.

The decision of the court can be interpreted as partially bridging the compensatory gap between the police and eminent domain powers. The landmark preservation ordinance alone precluded a sufficient economic or reasonable use of the property, but with the provision of TDR, the local government can provide for the potential for compensation, thereby raising the property's value up to the reasonable use standard required by the police power. The court's decision has been viewed by some legal authorities[16] as a significant step toward viewing TDR as standing midway between the police

and eminent domain powers.

Although most TDR programs envision that the property owner will be compensated for the difference between the preservation value of the property and its value under the unrestricted zoning regulation, full compensation will not actually be available unless the market value of the development rights equals the loss in the restricted property's value. However, Penn Central held that a TDR program could be constitutional even if it did not provide full compensation. Compensation could be based upon "reasonable use" rather than the "highest and best use" standard employed in eminent domain proceedings. As long as the TDR program offers the property owner some economic return, even though less than he would receive absent the regulation, the TDR program will be valid. The opinion of the U.S. Supreme Court in the Penn Central case supports this interpretation [17]:

> "The restrictions imposed are substantially related to the promotion of the general welfare and not only permit reasonable beneficial use of the landmark site but also afford appellants opportunities further to enhance not only the Terminal site but also other properties."

C. Dufour v. Montgomery County

In 1980 Montgomery County, Maryland, adopted a farm preservation program utilizing TDR's. The program was designed to reduce the decrease in value resulting from the

downzoning of land in the Agricultural Reserve lands from one unit per five acres to one unit per 25 - acre parcel. Under the TDR program, property owners possess one development right for each five acres less the number of residences already on the property. Upon sale of all the available rights, the development potential is extinguished through the granting of a restrictive easement to the county.

Shortly after the adoption of the County's agricultural preservation program, five restricted property owners filed suit in circuit court stating a "taking" had occurred as a result of this downzoning of land. The County expressed the desire that the court test the validity of its downzoning action without reference to the compensation made available to the property owner in the form of TDR's.

The court found that the objectives of the preservation ordinance, which established the 25 - acre zone, to be reasonably related to the public welfare of the community and accomplished legitimate State interests. The court further stated that the County's action in applying the zone was properly undertaken. The court stated [18] :

> "...the evidence of record..does not demonstrate that any of the property owners have been denied all reasonable use of their property....Although the rezoning of these properties to the RDT zone has significantly limited the number houses which may be constructed in the given area, the Ordinance..... establishing the zone also establishes a number of other permitted and special exception uses. The defendant is correct in asserting that the plaintiff's have failed to demonstrate that their property cannot

reasonably be used for some of the permitted or special exception uses."

The TDR program was found to be supplemental but not integral to the court's decision. However, the court felt obliged to comment on the issue of marketability of TDR's as compensation in citing Maryland Capital Park and Planning Commission v. Chadwick[19]. The court did not consider the creation of transferable development rights might have in favor of property owners. It noted that the County, in applying the preservation program, had specifically stated that the TDR program was considered to be supplemental, but not integral to the zoning and subdivision regulations in the overall approach to agricultural preservation. The court stated that there was evidence that the development rights had some value.

The property owners also contended that the transfer of development rights amounted to conditional zoning, which had been held illegal in Maryland. The court disagreed.

It is interesting to learn that the validity of a downzoning action , when used in conjunction with a TDR program can provide opponents with a significant legal attack. Attacks can be expected under the due process clause against downzoning schemes. It can be argued that the residual zoning is more restrictive than necessary to protect the health, safety, morals and welfare of the community. Costonis[20] provides some insight into this problem:

"Of these ... [attacks] the first is less troublesome by far. It mistakenly assumes that government must zone so as to guarantee property owners the greatest economic return possible on their land, subject only to restraints absolutely compelled in the interests of public health and safety. Under this view, zoning law is essentially an appendage of the ancient law of nuisance, which permitted the community or adjacent landowners to enjoin only noxious or otherwise harmful uses of private property. Although not without appeal to some state courts in the early part of the century, the view was quickly and irrevocably snuffed out by the U.S. Supreme Court in Euclid v. Ambler Realty Company. Despite its extraordinarily conservative property philosophy, the Euclid court upheld as non-confiscatory a zoning measure that halved the value of the complainant's, causing it an estimated loss of $400,000.

Inherent in the court's opinion is a more flexible attitude toward the confiscation issue that has received virtually unanimous support in the half-century since Euclid: a zoning measure that reduces the value of private property is not confiscatory so long as the property can be devoted to some reasonable albeit less profitable use and the measure advances the community's general welfare....".

21
Costonis later observes that the courts have been amenable to the idea that the land use controls must adapt to changing societal needs.

" Post - Euclid development have fully borne out the court's expectation that the growing complexity of urban life would both necessitate and call forth innovative land use responses from the cities. As a result, zoning has come a long way from its humble origins as an offshoot of nuisance law, seeking merely to protect residential areas from the sulfurous fumes of brick factories and steel mills. It now bars eyesores, such as junkyards and billboards, and encourages open space. It safeguards our cities' unique theater, retail, and historic districts. It strengthens the fiscal position of the community by allocating appropriate amounts of its land base for desirable tax ratables such

> as clean industry. It encourages balanced growth, keeping the community's expansion in step with its existing or planned public services. And it secures numerous other public objectives, few of which can be bottomed on restrictive nuisance grounds.
>
> Zoning's techniques have proliferated alongside zoning's objectives. Many of the post - Euclid refinements in technique have already been seen in this study, including cluster zoning, overlay zoning, planned unit development, special development districting, zoning bonuses, and development rights transfers themselves. Others include holding zones, floating zones, timed or "phased development," and the special exception."

[22]

Costonis further observes that since historic preservation has been recognized by the courts as a valid justification for the exercise of the police power, the primary issue is whether the "districting techniques" incorporated into most TDR schemes will pass constitutional muster. He asserts that these techniques are no more radical than the various innovative approaches such as planned unit developments and density zoning, which have received judicial approval. Costonis therefore concludes that TDR districting will likewise be favorably received in the courts.[23] Others agree with Costonis in theory, but are less optimistic that the courts will accept the argument that such downzoning is substantially related to the general welfare.

The Dufour decision appears to agree with Costonis in two respects. First, the court upheld the right of the County to preserve agricultural and open space areas by downzoning and by establishing a TDR program. Second, it also determined

that the TDR program did not violate the uniformity requirement of zoning.

III. CONCLUSION

The five legal objections outlined in this Chapter convey that in theory, the TDR concept comports with the requirements of land use law and can sustain a variety of constitutional and statutory challenges. Judicial decisions however, will be based upon the elements of specific TDR proposals and reflect the perceptions against which these elements are weighed. The general impression, given the limited number of court decisions regarding TDR's, seems to convey that a well conceived and thoughtfully implemented TDR program will be held valid.

Chapter 4 discusses the components necessary to implement a a TDR program which is consistent with the findings presented in this Chapter.

Footnotes - Chapter 3

1. This assumes that local governments will implement a TDR program, however the system can be administered at any level of government.

2. John J. Costonis, "Development Rights Transfer: An Exploratory Essay," Yale Law Journal 85 (November 1973), pp. 111-112.

3. 4 Cal. 3d 633, 94 Cal. Rptr. 630, 484 P. 2d 606 (1971).

4. Ira M Heyman and Thomas K. Gilhool, "The Constitutionality of Imposing Increased Community Costs on New Subdivision Residents Through Subdivision Exactions," Yale Law Journal 73 (1963), pp. 1119-1122.

5. Ibid. p. 1121.

6. John J. Costonis, "Development Rights Transfer: An Exploratory Essay," p. 120.

7. Ibid., p. 120.

8. Ibid., p. 121.

9. Ibid., pp. 124-127.

10. City or Village Zoning Enabling Act, MCL 125.31 et. seq., County Rural Zoning Enabling Act, MCL 125.201 et. seq., Township Rural Zoning Act, MCL 125.271 et. seq.

11. Township Rural Zoning Act, MCL 125.271.

12. Ibid. at MCL 125.286c

13. First English Evangelical Lutheran Church v. County of Los Angeles, 107 S. Ct. 2378 (1987).

14. 39 N.Y. 2d 587, 385 N.Y.S. 2d 5, 350 N.E. 2d 281 (1976).

15. 98 S. Ct. 2646 (1978).

16. Linda J. Bozung, "Transfer Development Rights: Compensation for Owners of Restricted Property," Zoning and Planning Law Report June 1983, pp. 130-131.

17. Penn Central at 2646.

18. Dufour v Montgomery County, Circuit Court for Montgomery County January 25, 1983, pp. 1-21.

19. 286 Md. 1.

20. John J. Costonis, Space Adrift: Landmark Preservation and the Marketplace (Champaign, Ill.: University of Illinois Press, 1974), p. 162.

21. Ibid., pp. 162-163.

22. Ibid., pp. 167-181.

23. Curtis Berger, "The Accommodation Power in Land Use Controversies: A Reply to Professor Costonis," 76 Columbia Law Review 799 (1976) p. 811.

CHAPTER - 4

IMPLEMENTING A TDR PROGRAM

In the 1980's, the writings concerning transferable development rights began a gradual shift away from the legal and theoretical articles which predominated the writings of the previous decade. Articles and reports were beginning to appear discussing the implementation of the TDR concept and how it was working to achieve community goals. Tustian,[1] wrote about the experiences of Montgomery County Maryland and the successes their TDR program has on farmland preservation. Roddewig and Ingham,[2] wrote a report distributed by the American Planning Association in 1987, which discussed effective TDR programs taking place throughout the United States. This report also contained suggestions on how to effectively implement the TDR concept. Pizor,[3] Poole,[4] and Coughlin,[5] each wrote articles studying the implementation of the TDR concept and outlined conditions for which they felt lead to the successful operation of TDR programs.

The implementation of a TDR program depends upon numerous components or variables taking place to assure success. Earlier in this paper, it was cited that fewer than fifty (50) communities around the country have implemented a

TDR program.[6] Of these communities only a dozen have had an actual TDR transfer take place.

The focus of this Chapter is to review the basic TDR components that need to be implemented to assure program success. Examples from successful TDR programs will be cited where it appears appropriate to do so.

The writing and adoption of a TDR ordinance does not guarantee that the program will work. The program must be cognizant of the real estate marketplace and its operation. This Chapter will focus on these principles which appear to enhance the success of a TDR program.

I. THE PARTICIPANTS

The implementation of a TDR program depends upon numerous components or variables being in place to assure success. Successful implementation of a TDR program will depend, to a certain extent, on how much knowledge the writers of the program have with regards to real estate marketing and proper real estate analytical techniques. The planners will have to be aware of the considerations developers will have when considering development opportunities in the local market. There will be no TDR transfers without anxious developers willing to buy and use TDR's. The program must be able to "exploit" this desire, while staying consistent with its adopted land use goals.

The writers of a TDR program must also become

knowledgeable of how each participant in the TDR marketplace will react. Identifying the participants and their needs in the marketplace is perhaps the most difficult aspect of program development. Roddewig and Ingham identify four essential parties to any TDR transaction[7]: 1) the developer of land in the receiving district; 2) the owner of the protected property in the sending district; 3) the units of local government with planning, zoning and property taxation authority; and 4) the mortgage lenders on property - both in the receiving district and in the sending district. The motivations or desires of each of the parties may be as follows.

A. The Developer

Without the developer to buy and use development rights, there will be no transfers. The writers of the TDR program must understand the development characteristics of the designated receiving areas in the program and be able to "exploit" it in a sense, so that developers will use the rights.

TDR's will be utilized by developers who find it economically attractive to purchase them and undertake development at densities greater than would otherwise be permitted. Because the demand for TDR's is derived from the demand for housing, the analysis of demand for TDR's must focus on the behavior of developers and the housing market

conditions faced by them.

The behavior of a developer generally involves a two-step process. First, the developer determines for each type and density of housing the maximum amount that he could pay for land per housing unit. Faced with specific land prices, the developer would then subtract the cost of land per unit in order to determine the residual value of each housing type within the permitted density ranges. Second, in order to maximize his net income, the developer would choose the housing activity that provides the greatest residual value per housing unit. If developers attempt to maximize the residual value, the demand for TDR's can be analyzed in terms of the residual value per housing unit that exist for housing at different densities.

The first step in analyzing potential developer demand for TDR's requires the local unit of government to conduct a sales study of all the alternatives of housing and density permitted within the community by their TDR ordinance. The study should analyze each housing type at all logical or feasible densities permitted by the ordinance. Depending upon the size of the community and the amount of sales transpiring over the study period, the entire study or master sample may have to be reduced in size to achieve a statistically valid sub-sample.

The developmental value of property flows directly from the value of the units built with TDR's. Thus, the value of a TDR will be based upon the value of units built with TDR's.

In 1985, Lee County Florida, a county located in Southwest Florida along the Gulf of Mexico, contracted with Dr. James C. Nicholas to conduct a market study[8] to establish a basis to estimate TDR values for the community's proposed TDR Ordinance. As the primary author of the TDR Ordinance for Lee County, I valued the information developed by Dr. Nicholas because it was important to know what TDR's may be worth in designing a TDR Program, so that equity issues could be dealt with in allocating TDR's to restricted properties (preservation or sending areas).

The Nicholas Study covered 660 sales of residential property in western Lee County in 1984. Table 1 summarizes these sales.

Table 1

Residential Sales Lee County, Florida 1984[9]

Total Sales	660
Single Family	363
Multiple Family	297
Largest Lot	10 acres
Average Lot Size - Single Family	.373 acres
Smallest Lot Size - Single Family	. 08 acres
Greatest Density	31.33 d.u./acre
Average Density - Multiple Family	8.5 d.u./acre
Least Density - Multiple Family	3.4 d.u./acre
Largest Single Family House	4,058 sq. ft.
Average Single Family House	1,466 sq. ft.
Largest Multiple Family Unit	1,800 sq. ft.
Average Multiple Family Unit	1,136 sq. ft.
Highest Single Family Price	$465,000
Average Single Family Price	$87,209
Highest Multiple Family Price	$176,000
Average Multiple Family Price	$84,703
TOTAL SAMPLE:	
Average Price	$86,081
Average Size	1,317 sq. ft.
Average Density	3.9 d.u./acre

Source: REDI, Inc. and Property Appraiser Lee County Florida

Due to limitations on Dr. Nicholas' statistical analysis program this master sample of 660 sales were randomly sub-sampled for 150 sales. Statistical analysis of the sales data were undertaken, just, to assure that the data was sufficient for use and second, to draw conclusions from the data. (A technical discussion of Dr. Nicholas' statistical analysis may be found in Appendix A, at the end of this paper.)

The statistical analyses from the Nicholas Study provides some insight onto a number of points which were important to the developer in Lee County. Some of the following points may appear obvious in any case, however, it is also important in that they were empirically demonstrated. The points were:

1. That larger lots were associated with higher priced units;
2. That larger building sizes were associated with higher land prices;
3. That larger buildings were associated with larger lots;
4. That an additional acre of land contributed an average of an additional $41,229 to the price of the dwelling;
5. That an additional square foot of building area contributed $62.35 to the value of the dwelling unit;

6. That increased density tends to reduce the price of the dwelling units and the tendency is for the sales price to decline with density at a rate of $869 per unit of density (unit per acre);
7. When density, lot size and unit size are jointly considered the size of the unit, rather than the lot size or density, is the better explanation of the price; and
8. Amenities, such as golf courses or access to the Gulf of Mexico, play a significant role in the pricing of multiple family units.

These points drawn from the data suggest a number of points of relevance to the developer and to a TDR program. First, there is little market inducement to increase lot size. While larger lots do result in higher prices, unit size and amenities play a more significant role in unit price. The market in Lee County called for larger units with more amenities. Smaller lots or higher density do not appear to be impediments as long as the first two are present. Second, the value of an additional square foot of building space (valued at approximately $62.35) would indicate that the larger unit is a good investment especially for single family units where the cost of a square foot of building space is in the neighborhood of $40 per square foot.

These market factors provided a sound basis in which to develop a TDR program for Lee County. The reason is that the

market must dictate a tendency toward greater density in receiving areas before a TDR program can have any chance of economic survival.

Extensive statistical analysis to model the workings of the Lee County residential real estate market with respect to the size of units, lot size and density of development was also undertaken by Dr. Nicholas. In the previous discussion each of these factors were discussed separately. However, the real estate market does not value these property characteristics separately. The market values these individual characteristics within the context of a total residential package. The earlier data suggests that increasing density by one unit per acre would reduce the price of a unit by $869. However, there are other factors which need to be considered. Smaller lots, which is a result of increased density, tend to be associated with smaller dwelling units. Therefore, the expectation could be that density increases from TDR's would bring about smaller lot sizes, smaller units and lower prices. Nevertheless, the increased density also means that the revenue (and profit) yield per acre will tend to increase. If revenues from higher density increase more than other development costs the result is that there is a value to TDR's. Conversely, if development costs increase more than revenues the TDR would be valueless.

The result of Dr. Nicholas's second stage of statistical analysis are shown in Table 2. This table demonstrates the

economic relationships of the residential market given increasing density of development. The information contained in Table 2 strongly suggests that TDRs would have their greatest residual value in the lower density ranges of both single and multiple family dwellings.

The analysis conducted by Dr. Nicholas concluded that a TDR would be worth approximately $7000 to the owner as a means to increase density. The averages in Table 2 show

TABLE 2

VALUE OF INCREASED DENSITY
LEE COUNTY, FLORIDA

DENSITY	SIZE	AMENITY	REVENUE PER UNIT	COST PER UNIT	LAND RESIDUAL PER ACRE	VALUE OF TDR
SINGLE FAMILY						
).20	2693	1	189051	136104	10589	
).40	2252	1	160546	112589	19183	8593
).60	2028	1	145909	100301	27364	8182
).80	1883	1	136340	92100	35392	8027
1.00	1778	1	129352	85979	43373	7981
1.20	1706	.9	120438	81592	46615	3242
1.40	1649	.8	112886	77983	48863	2248
1.60	1603	.7	106323	74922	50241	1378
1.80	1565	.6	100514	72264	50849	608
2.00	1532	.5	95301	69915	50773	-77
2.20	1504	.4	90573	67808	50084	-689
2.40	1479	.3	86248	65895	48847	-1237
2.60	1458	.2	82265	64143	47118	-1729
2.80	1439	.1	78575	62523	44948	-2170
3.00	1422	0	75142	61015	42383	-2565
3.20	1398	0	74007	59245	47239	4857
3.40	1376	0	72957	57575	52297	5058
3.60	1356	0	71980	55993	57553	5256
3.80	1338	0	71068	54489	63003	5450
4.00	1320	0	70214	53053	68644	5641
4.20	1303	0	69411	51679	74474	5830
4.40	1288	0	68654	50361	80490	6016
4.60	1273	0	67938	49092	86690	6199
4.80	1259	0	67260	47870	93070	6381
MULTI FAMILY						
5.00	1174	1	88505	48967	197688	
5.20	1162	1	87690	48245	205116	7428
5.40	1150	1	86913	47565	212478	7361

5.60	1140	1	86171	46927	219766	7288
5.80	1129	1	85461	46327	226976	7210
6.00	1120	1	84781	45764	234102	7126
6.20	1110	1	84128	45234	241138	7036
6.40	1101	1	83500	44738	248079	6941
6.60	1092	1	82897	44272	254920	6840
6.80	1084	1	82315	43837	261653	6734
7.00	1076	1	81755	43430	268275	6622
7.20	1068	1	81213	43050	274779	6504
7.40	1061	1	80690	42696	281160	6381
7.60	1053	1	80185	42367	287413	6253
7.80	1046	1	79695	42063	293531	6119
8.00	1040	1	79221	41782	299511	5979
8.20	1033	1	78761	41523	305345	5835
8.40	1027	1	78314	41287	311030	5685
8.60	1020	1	77881	41072	316559	5529
8.80	1014	1	77460	40877	321928	5369
9.00	1008	1	77051	40703	327131	5203
9.20	1003	1	76653	40548	332162	5032
9.40	997	1	76265	40412	337018	4855
9.60	992	1	75887	40294	341692	4674
9.80	986	1	75519	40195	346179	4487
10.00	981	1	75160	40113	350474	4295

AVERAGE SIMPLE	4901
AVERAGE POSITIVES	5803
RMS OF POSITIVES	6037
TENDENCY	5581

residual value ranges around $5,000 to $6,000. However, it is thought that TDR's would not be used in the lower density ranges, where a residual value does not exist.

Once the residential market study is completed, the writers of the TDR program will have a general indication if there is a potential market for the purchase of development rights and their potential worth (residual value). The estimation of value of TDR's is very important for the purposes of designing a TDR program. It provides the writers of the program two important pieces of information. First, it establishes value and purpose for the TDR. By learning

the underpinnings of the residential real estate market the writer begins to understand the motivation of the developer and the potential value of TDR. Second, the market study helps the writers understand the equity issues that have to be dealt with in allocating TDR's to restricted properties in the sending areas. The allocation of TDR's and the concerns of the property owner in the sending area are the subject of the forthcoming section of this paper.

B. The Restricted Property Owner

Perhaps the most important factor behind the success of a TDR program is the willingness of the restricted property owner to sell his development rights. When a TDR program is first proposed the restricted property owner will perhaps be the first to claim that the local unit of government has taken his property rights and thus diminished the property's value. The local unit of government must on the other hand assure the affected property owner that the value placed on his development rights generally reflects an accurate value of the restricted property. Additionally, the local unit of government must assure all parties involved in the TDR process that there is a solid commitment and political support in keeping the TDR program viable. The TDR program must provide the restricted property owner with enough incentives to induce him to sell and offset his beliefs that he may get a better price in the future, or that zoning will be relaxed.

After the development process for the receiving areas has been studied for marketing purposes, the economics of the sale of TDR's from the protected or sending areas must also be studied. The writers of the TDR program will first have to identify, then designate the resource which is to be protected.

When the resource has been adequately identified, an economic analysis should be undertaken to determine the incentive necessary to preserve the resource and entice the owner to sell that resource via TDR.[10] The objective of all TDR programs is to create an incentive that will protect the resource by compensating the owner for the difference between the value of that property as a resource and its speculative value for development.

Such an economic analysis of the sending area was also conducted prior to the establishment of the Lee County TDR program, again under the direction of Dr. James Nicholas. This analysis was particularly critical in Lee County as they had recently adopted a new comprehensive plan (the Lee Plan) which effectively "wiped out" the zoning for over one-third of the county.

In 1984, the Lee County Board of Commissioners adopted the Lee Plan. This comprehensive plan was the county's first attempt at developing a plan that was intended to be consistent with Florida's Comprehensive Growth Management Act.[12] The land use element of the Lee Plan played an important role in the demand for a TDR program. Under

Florida law all zoning issues are required to be consistent with community's comprehensive plan. If it is not consistent no development can take place.

The land use element of the Lee Plan chose to recognize the intrinsic value that saltwater and freshwater wetlands have on the economy and environmental well being of the county. It elected to preserve them, along with the transitional lands which adjoin them. Approximately 42,600 acres of land, which was largely zoned for agricultural purposes and permitted to develop at one dwelling unit per acre was restricted by this new land use element.

The land use element designated approximately 24,219 acres of land as "Resource Protection Area"[13], giving it a maximum density of one unit per 40 acres - without regard to the underlying zoning. A transitional area (called the Transitional Zone in the Lee Plan) which contained approximately 18,381 acres was also restricted, though less stringently. The Transitional Zone allowed a density of one unit per 20 acres.[14]

As a means of compensating for this "de-facto" downzoning the Lee Plan provided density bonus provisions which were accessible only through a TDR program and a housing bonus program for low and moderate income housing. Both concepts were not fully developed at the time of the adoption of the Lee Plan.

Despite all of this planning activity which established the basis for a TDR program, the value of a TDR or how they

were to be allocated was not known until the Nicholas study was completed. The second phase of the Nicholas study dealt with the aspect of allocating TDR's to the affected properties in the sending area, those properties designated as either Resource Protection Area or Transitional Zone.

The value of a TDR, for the purposes of allocation was established to be $7,000 per right (see Table 2). Based upon further review of county property assessment rolls and statistical random sampling. This second phase determined the average value of freshwater wetlands to have a mean value of $2,165 per acre and $1,469 for an acre for saltwater wetlands. Transitional wetlands were found to have a mean value of $1,119 per acre. Table 3 shows the assessed values and agricultural assessments by land use in Lee County.

Table 3
Assessed Values and Agricultural Assessments
By Land Use, Lee County

	Saltwater Wetlands	Freshwater Wetlands	Transitional Wetlands
Total Area (Acres)	6644	17575	18381
Value Per Acre:			
Total	1469	446	424
Agricultural	0	113	64
Non-Agricultural	1469	2165	1119
Under Agricultural Assessment			
Area	0	14721	12106
Percent of Total	0	83.76	65.86
Value	0	3019368	1482739
Percent of Total	0	21.21	9.91

Source: Lee County, Office of the Property Appraiser

The study also found that both freshwater and transitional wetlands had some agricultural potential, while saltwater wetlands did not appear to have this potential. It was determined that for the purposes of TDR allocation freshwater wetlands had an agricultural value of $500 per acre and transitional wetlands had an agricultural value of $250 per acre. Table 4 shows the changes in developmental value and market value. Given that agricultural values would be unaffected, the change in development value was determined to be as follows:

Table 4
Change in Development Value Per Acre

	Saltwater Wetlands	Freshwater Wetlands	Transition Wetlands
Total Area (Acres)	6644	17575	18381
Value Per Acre:			
Agricultural	0	500	250
Non-Agricultural	1958	2886	1492
Residual Value at 20% :	392	577	298
Change in Development Value:	1566	1809	943
Ratio to Greatest	87%	100%	52%

In order to establish a base in which to allocate TDR's, the change in development value appeared to be a rational choice. This resulted in an allocation of:

1 TDR per 5 acres of Saltwater Wetlands

1 TDR per 4 acres of Freshwater Wetlands

1 TDR per 8 acres of Transitional Wetlands

With the allocation established at a rate comparable to the value of the restricted property and considering the land use (density) restriction imposed on it there appeared to be sufficient incentive for the property owner to participate in a TDR program. This is an important element in a successful TDR program.

The success of a TDR program depends on an adequate market for the rights. The Nicholas Study for Lee County Florida provided local government officials with sufficient information on what the potential value of a TDR would be for a developer. Additionally, it provided information on the allocation of TDR's on the affected sending parcels. A sufficient market must exist for the rights in the receiving district to provide enough revenue to purchase the rights from property owners sending districts. Builders, developers, and property owners must be willing and able to pay for the opportunity to use property in the receiving district more intensively, or more productively, than they would otherwise. This aspect of the TDR transaction must be handled by the third participant in the TDR process, the local unit of government.

C. The Local Unit of Government

The role of the local unit of government is perhaps the

most difficult to balance in the TDR process. The local unit of government is placed in a role that it is generally not accustomed to. It must develop a marketplace for TDR's and it must promote the program whenever possible. This section of this paper will examine the activities local government must perform in order to assure success in a TDR program.

As mentioned throughout this paper the success of a TDR program will be measured on the amount of transfers taken in the marketplace. Insuring that there will be a substantial, or at least an adequate market for these rights, the local unit of government must be aware of these prerequisites.[15] First, the permissible densities without the purchase of TDR's must be less than the maximum which the prevailing market for new construction could absorb. The local unit of government through its zoning or comprehensive planning powers, must create an atmosphere where the permissible density in the receiving district is lower than the market demands. It must allow this additional density or bonus density to be purchased through the acquisition of TDR's.

To assure that developers will buy these rights for additional density there is a need for documentation (an economic or planning study) showing that the receiving districts will be the focus of future development activity. In particular, the study should center on past and projected land absorption rates, existing or proposed public improvements within the area and demographic patterns in determining whether the proposed receiving district is a

likely target for intensive future development.[16] For TDR's to be salable, the overall density allowed for the district must not outstrip the market demand.

In the case of Lee County, the Nicholas market study provided a glimpse of the potential demand for additional density.[17] The study showed a TDR had its highest value in the lower density ranges (refer to Table 2). The land use classifications delineated as, "Suburban", "Rural", and "Fringe Area" in the Lee Plan were determined to have the best market demand for TDR's. Unfortunately, the "Suburban" and "Rural" land use classifications were not permitted to have a bonus density. This prohibition was unfortunate since land within these land use classifications had been the most developmentally active in the mid-1980's. Only those land use classifications determined to be within the "Urban Service Area" of the county were permitted a bonus density. The TDR Ordinance allowed the three land use classifications to receive TDR's. However, the density of the proposed development could not exceed the permitted density range. Table 5 shows the land use classifications and their density ranges, according to the Lee Plan.

Table 5
Lee County Florida, Land Use Classifications

Land Use Classification	Permitted Density Range	Maximum Bonus Density
Intensive Area	8-14 d.u./acre	22 d.u./acre
Central Urban Area	5-10 d.u./acre	15 d.u./acre
Urban Community	.5-6 d.u./acre	10 d.u./acre
Suburban	.5-6 d.u./acre	No Bonus

Rural Areas	1 d.u./acre	No Bonus
Open Lands	1 d.u./1-5 acres	No Bonus
Fringe Area	.5-6 d.u./acre	10 d.u./acre
Transitional Zones	1 d.u./20 acres	No Bonus
Resource Protection Area	1 d.u./40 acres	No Bonus
Planned Development District	.5-6 d.u./acre	No Bonus
New Community	6 d.u./acre	No Bonus

Source: Lee Plan, page III-23

The Lee County TDR program was also stymied by other technical problems which have hampered its success. One significant hindrance was the prohibition of the use of TDR's on the county's barrier and coastal islands. The ability to use TDR's on Fort Myers Beach (Estero Island), Bonita Beach, Captiva Island and Gasparilla Island would have generated a modest exchange in TDR's without severely impacting the natural environment of these islands. The fact that there already was development above the permitted density ranges on these islands also gave credence to this possibility. This modest exchange would have allowed all parties involved in a TDR transaction the opportunity to work through the process, where there was a demonstrated market, and legitimize the program. Given the fact that TDR's could only be used in a planned unit development gave the county additional control to insure that any potential negative impacts would be minimized.

Another hindrance to the TDR Ordinance was the fact that the program had no constituency to promote its use. While the county administration supported the adoption of the program, there never appeared to be active support from the

Lee County Board of Commissioners. Additionally, the developers and builders association were not actively involved in the development of the program until a proposed ordinance was being considered. The development of a TDR program must not be to the benefit of the planners involved, but rather to the participants involved.

The Lee County TDR Ordinance allowed for the quick exchange of development rights in order to attract potential developer interest. Unfortunately it was not flexible enough to allow additional density where the market felt it was appropriate. Demand for development in Lee County was also not great enough to justify higher density. Therefore, this incentive (bonus density) proved irrelevant for developers.

The aspect of not meeting the market can have a devastating effect on a TDR program. The absence of TDR sales is the most obvious. Two well documented TDR programs provide some interesting insight on market demand. A brief look at the New Jersey Pinelands Development Credit Program and the Montgomery County, Maryland TDR program show the importance of knowing your development market, then meeting it.

1. New Jersey Pinelands

The New Jersey Pineland contains approximately one million acres between Philadelphia and Atlantic City in parts of seven counties and all or parts of 52 municipalities.

Below the surface of the forests and cedar swamps of this area lie enormous amounts of exceptionally pure groundwater. In the 1970's this area was being severely impacted by the construction of vacation and retirement homes, as well as the development of Atlantic City into a gambling center.

Responding to this growth, the federal government established the Pinelands National Reserve, authorizing the creation of a regional planning body to develop a comprehensive management plan for the affected area in 18 months. Following the direction given to it by the federal government, New Jersey created the Pinelands Planning Commission in 1979, with the initial authority for review and approval of development projects in the Pinelands during the planning phase. Later, the state legislature passed the Pinelands Protection Act, thereby endorsing the planning process and suggesting TDR's as a planning and growth control mechanism.

Following the formation of Pinelands Commission, a year long study of the planning and growth control problems of the area was conducted. This study culminated with the adoption of the Pinelands Comprehensive Management Plan, which was approved by Governor Byrne on August 8, 1980.

The plan called for the acquisition of critical lands, though its principal emphasis was to restrict residential development through tough land use controls. As part of the management plan requirements, all municipalities and counties within the Pinelands area were required to prepare local

plans and revise zoning ordinances to be consistent with the Pinelands Protection Act and the management plan.

The key element to the management plan is the Pinelands Development Credit (PDC) program. The PDC's are TDR's which are intended to redirect development from environmentally sensitive areas to areas that can accommodate residential growth. Credits are allocated to property owners in the preservation or sending areas based upon a formula that recognizes the property's current land use and its suitability for development. Credits are allocated on the basis of 39 acre increments. Uplands or woodlands received one PDC for each 39 acres, with some receiving two PDC's because of their ability to protect a nearby watershed. Wetlands received only .2 PDC's per 39 acres, as they were determined to have the least developmental value. A developer who buys a PDC is entitled to build an additional four residential units in the receiving areas.

In order to establish the number of credits that would be created in the preservation or receiving area, the capacity of the receiving area was evaluated by planners and economists. They established the maximum number of housing units that could be developed through a density bonus. The plan projected a capacity for as many as 70,000 bonus units in the receiving areas and estimated that as many as 8,315 PDC's could be generated, which in turn translated into 33,260 residential units. The planners and economists then looked at relative land values, the total supply of PDC's and

the preservation priorities established by the management plan to allocate the number of development credits. This process helped to develop the formula of "x" amount of PDC's per 39 acres.

Use of PDC's to achieve additional density in the receiving areas has experienced some difficulty. Some developers expressed reluctance to participate in the PDC program because they believed there already was an adequate supply of approved but unbuilt lots throughout the region.[18] The region was also experiencing fewer development pressures than anticipated. Developer's soon learned that the receiving districts were distant from anticipated growth areas. These areas were also hampered by the fact that it was virtually impossible to attain the PDC's bonus density because the lots were served only by septic systems, making urban densities impractical.[19] In addition, numerous communities which were designated as receiving areas by the management plan chose to "drag their feet" in adopting comprehensive plans or revised zoning ordinances which were consistent with the management plans goals. These communities were already experiencing growth pressures in a time where there were aggressive no-growth stances being brought to city hall. The thought of having bonus densities as of right through PDC's did not appeal to them as these communities felt they could achieve better planning goals through their planned unit development (PUD) processes.[20]

Because of this reluctance on the developer's part to use PDC's, there has been little incentive by property owners in the preservation or sending areas to participate. These owners have chosen to wait until such time as their PDC's are marketable. By the end of 1985, almost five years after the enactment of the PDC program, 95 percent of the credits remain in the hands of original property owner.[21]

Roddewig and Ingram cite four elements which they believe would make the Pinelands TDR program more effective. These elements are:[22]

1. The allocation of TDR's must be simplified. It is difficult to communicate to the public that each PDC is equal to four dwelling units and is based and awkward unit of measurement - 39 acres.
2. The program should have been launched after local zoning compliance with the management plan. There were unrealistic expectations of active trading of PDC's when the Pinelands Commission announced the program. In reality, the framework was not in place, and developer uncertainty delayed the use of the rights.
3. The Pinelands Commission should have initiated a public education effort to sell the program.
4. The program should have established a development credit bank at the outset of the program. This bank would have demonstrated government support, thereby giving credibility and confidence to the program.

2. Montgomery County, Maryland

In contrast to the New Jersey Pinelands PDC program, the Montgomery County Maryland TDR program is highly successful and is meeting its market demand. Montgomery County, Maryland is located just north of Washington D.C. and has faced rapid development and urbanization for the last thirty years. In an effort to slow down development the County passed a large lot size requirement for agricultural land to allow only five acre lots. This zoning requirement did not prove to be successful. By 1979 the Montgomery County Planning Commission elected to use a TDR system as a means of stemming this growth.

In 1980, Montgomery County adopted their "Plan for the Preservation of Agriculture and Rural Open Space", which designated more than a third of the county as an "agricultural reserve". The boundaries of this area were carefully drawn so as to protect a critical mass of farmland area.[23] No effort was made to distinguish between soil types, land ownership by operating farmers, or other factors which play an important role in determining actual farm production.

Within the agricultural reserve, the plan recommended a downzoning, from one dwelling unit per five acres to one dwelling unit per 25 acres. A study by the county's agricultural economist determined that, on the average, this was the minimum Montgomery County acreage that could support a farm family on a cash crop-direct market basis. For wholesale marketing larger land holdings would be necessary.

The purpose of this study was to support the idea that a lot below this size was uneconomic from an agricultural perspective.[24] Property owners within the agricultural reserve area were given the opportunity to sell one development right for every five acres of farmland owned.

With the purchase of TDR's, developers in the receiving districts can increase the base density of building sites by varying amounts, depending on their zoning classification. Even with the optional TDR density, the county made sure that densities would not exceed the carrying capacity of public facilities and infrastructure or overload the environmental carrying capacity of the site itself. Enough density was given to garner developer interest not to create a serious compatibility conflict with "non-TDR" densities planned for adjacent property. For example, where five units per acre was permitted by the underlying zoning classification, the TDR program allows an increase of two units per acre, for a total of seven units per acre.[25]

Before the TDR program was established in Montgomery County, the local farmers had only two possibilities in selling their property: they could sell all of it, or they could subdivide their property and sell only a few lots. These actions not only decreased the land base of the farm in exchange for some capital, but it also hampered the viability of farming in the area. After the TDR program was established, farmers soon realized that the development opportunity of their property was restricted, but also found

they gained other options through the TDR program. They could retain or sell the development rights, or they could purchase land in the receiving district and develop it using their own TDR's. They could keep their property regardless of whether they kept the development rights. By selling some or all of the development rights, farmers could obtain additional money from their land without weakening the land base of their farm operation.

Before the TDR program could be fully implemented many farmers became concerned if such a program would work. In exchange for their support, the county established a County Development Rights Fund to act as a buyer of last resort for the TDR's. The fund was also designed to provide loan guarantees for loans that used the value of development rights still attached to farmland as collateral. This fund was designed to bank TDR's, then sell them at auction to the highest bidder. Loan guarantees are available for up to 75 percent of the market value of the farm for a term not to exceed five years.[26] To date, this fund has not had to be activated for the purchase of TDR's,[27] as the private market has been strong enough to support the program.

Perhaps the most important factor which guaranteed the success of the Montgomery County TDR program, is the county's commitment to educate and sell the program to it's constituency. From the beginning of the program the planners have been involved in educating their citizens on the merits of the program. Brochures were published by the planning

staff,[28] which explained the TDR program in simple terms, using a question and answer format. Additionally, the staff was active in promoting the process by meeting with all interested groups and providing an interesting presentation on the program.[29] Meeting with the key actors in the TDR exchange process - the developers, real estate brokers, and the restricted property owner has also helped to keep the TDR program successful.

Roddewig and Inghram cite five conditions,[30] which helped the Montgomery County TDR program to succeed. They are as follows:

1. The program provided sufficient restrictions on the sending districts to induce TDR sales.
2. It designated receiving districts which had sufficient infrastructure capability and sufficient development demand to make additional density attractive to developers.
3. The program recognized the economic and financial conditions that support a TDR market and determine the value of TDR's to both sellers and buyers.
4. The program is simple and understandable and it does not require complex approvals.
5. There is an on-going commitment to an educational program which informs property owners, developers, real estate brokers and attorneys about the program.

3. Conditions for Success

The New Jersey Pinelands Development Credit Program and the Montgomery County, Maryland TDR Program share common threads which help to their success. These elements are important for the success of future TDR programs and should be incorporated into the fabric of any proposed TDR program regardless of its location in the United States. First, all receiving districts must be well defined and suited for development. This means that all necessary infrastructure must be in place to accommodate the anticipated density bonus. The receiving areas must also be in locations that are attractive for development from a market perspective.

Second, the regulatory and permitting process must be streamlined to encourage TDR transactions. The developer will not want to participate in a system which bogs him down into a lengthy bureaucratic and/or political process. If the developer pays for the transfer rights, they should be able to build at the bonus density.

Third, a successful TDR program will preserve lands only where there are sufficient development prohibitions that are comprehensive and mandatory. The density permitted in the preservation area must be low enough to produce the desired effect within its boundary.

Fourth, the successful program must have someone act as a facilitator and educator to promote the TDR exchange. This activity provided successful results in the Montgomery County program, as it reduced the possibility of some delays,

misinformation and uncertainty. The use of a facilitator is important because it infuses government support of the program before a cautious public. The facilitator can instill confidence into all concerned parties that the government is willing to back its program.

Finally, the program must incorporate the interests of all parties of the TDR process - the property owners, the developers, the mortgage lender and local units of government - in order to be useful. The program must be designed to fit the needs of those in the development chain, rather than the needs of the planner.[31]

With these key elements in mind, it is now appropriate to review the role of the last participant in the TDR transaction process - the mortgage lender. This participant is somewhat elusive in the process, as few readings clearly address the concerns of the mortgage lender.

D. The Mortgage Lender

The mortgage lender in the TDR process plays an important role in assuring the program is a success, however, compared to the other participants their understanding of the process is less critical. The mortgage lender who is involved with loaning capital to a developer is not necessarily concerned that his client will or will not be using TDR's to make his project viable. In most cases, he will condition his financial backing upon the developer

receiving local government approval at a density which meets community guidelines and demonstrates a return on their investment. If a developer chooses to use TDR's, it does not concern most mortgage lenders provided the developer can show ownership of these rights through a clear chain of title. The mortgage holder will most likely be interested in the total number of units which can be developed. They will not necessarily be interested in how that number is achieved.

The interests of the mortgage holder to property in the sending districts have not been researched to any significant degree. Proponents of TDR argue that mortgage holders would be in favor of such a program because it would reduce the "wipeout" or reduction in property value caused by the diminished use of the property. The property owner is compensated for his loss in property rights and in turn the mortgage holder is assured that his return on investment is reasonably intact.

Perhaps the two major concerns of the mortgage holder are: 1) Does the local unit of government have confidence in the program to the degree where they will guarantee the value of a TDR?; and 2) Is there an understandable process to assure that once a TDR is purchased that it can be used and extinguished through a comprehensible chain of title?

1. TDR Banks

One of the keys to TDR program success appears to be the establishment of a TDR bank to guarantee the purchase of the

rights. Both the Montgomery County, Maryland and the Pinelands TDR program have established such "institutions" to enhance their programs. In Montgomery County, the County Development Rights Fund was established to buy TDR's, then sell them to the highest bidder. However, the private market in TDR transactions has been active enough that the County Development Rights Fund has not been required to make a purchase.

In the case of the Pinelands, one of the counties within it's jurisdiction has established credit exchange. Burlington County established a Conservation Easement and Pinelands Development Credit Exchange which was initially funded with $1.5 million from a bond issue to purchase and resell development credits.

Advocates for TDR banks argue that a "bank" is an essential element to a program. They argue that such an arrangement would demonstrate to developers and property owners alike that TDR's are being purchased and resold to interested parties for future development in the receiving areas. They see such an institution as being a "market maker". The creation of a well funded bank would stabilize TDR purchase prices thereby giving all participants in the TDR exchange process confidence in the program.

2. Legal Documentation

Another item of concern to the mortgage holder of either the developer or restricted property owner will be the proper

recording and exchange of TDR's. Being able to document the entire TDR exchange process is extremely desirable for the mortgage holder, since he will be interested in how the development of a property has been enhanced or diminished. Montgomery County uses a three step process which insures that severed development rights are carefully documented to prevent the possibility of a TDR being used more than once.[32]

The first document required in the Montgomery County TDR program is a recorded easement which limits the use of the sending parcel to an agricultural use or as open space. The second legal instrument required in the process is the deed of transfer. The deed of transfer confirms that the development right has been purchased by a developer or investor and verifies to the purchaser the ability to transfer the development right to a receiving parcel - if he so chooses. This document is important for tax assessing purposes because it informs the local unit of government that the sending parcel has sold their development rights and provides information as to which party should be assessed for the taxes on the development right.

The last document is the extinguishment document. This instrument indicates that a TDR has passed through the TDR process and is recorded (numbered and filed) as to where it came from and where it is being used. This document completes the process in Montgomery County, with exception to the filing of the required subdivision plat.

Because of the success this documenting process had in

Montgomery County, a similar process was initiated for the TDR program in Lee County, Florida. However, the first document required in the Lee County TDR program was a conservation easement which had to be consistent in format with Florida Statutes (Section 704.06). The remaining documents for Lee County require similar information as the Montgomery County documents but were formulated to address the local TDR program.

II. CONCLUSION

The ability to implement a successful TDR program is not an easy task to accomplish as evidenced by the comments and information written on the preceding pages of this Chapter. The participants must be able to understand their role as well as the roles of the other participants. The TDR program must be designed so that it can respond effectively to changes in market conditions that may threaten its effectiveness. Successful implementation will depend in great measure upon factors that influence the real estate development business in general.

Program staff designing and implementing a TDR program must continually monitor the rate of TDR transactions and the amount in which they were purchased. They must constantly compare the prices paid to price levels necessary to compensate the restricted property owner, to make sure that there is a continuing incentive to participate in the program. The program must also make sure there is a

continuing incentive to participate in the TDR process. It must make sure that the price paid by developers in the receiving district is not so high that it becomes unprofitable for them to purchase TDR's. The program staff must also insure that the TDR will be marketable in the receiving district by allowing bonus densities that are attractive to the developer, while also allowing increased density acceptable to the existing residents in the receiving district. Whenever such problems in the TDR marketplace occur, the program officials may wish to consider one of the nine (9) techniques developed by Roddewig and Inghram[33] to balance the supply and demand in the TDR system. These techniques are:

1. Increasing or decreasing the supply of TDR's by increasing or decreasing the resource protected, or manipulating the ratio between development potential foregone at the restricted sending site and increased at the receiving site.
2. Increasing or decreasing the area of the receiving district.
3. Improving or accelerating the availability of infrastructure in undeveloped receiving districts.
4. Ensuring that other bonus density programs do not preempt the market for TDR's in the receiving zone.
5. Adding or substituting a different type or receiving district "product" to the list of developments that can benefit from a TDR transfer (i.e. adding

multiple family apartment development, townhouse development or retail development) in response to shifts in the demands of the market.

6. Creating or increasing the funding for a TDR bank.
7. Streamlining the TDR approval process.
8. Publicize the program.
9. Intervening in the TDR market if sellers are competing and lowering prices.

No TDR program will work if the community simply establishes a program without an effort to educate the community on its operation and assist in its implementation. Program staff must also be available to implement the program with the proper amount of financial resources. In larger TDR programs it might be desirable to have personnel assigned exclusively to the program to educate and sell the program. This appears to be the case in the Montgomery County program where planners in the Maryland-National Capital Park and Planning Commission provide extensive staff support to the TDR program.

It is also encouraged that program staff be in constant contact with owners of restricted property owners in the sending districts and with the developers in the receiving districts to continually explain the program, and listen to their concerns about the program. Program staff may also have to act as contact personnel to help willing sellers and willing buyers meet to facilitate a TDR transaction.

Finally, it is important that the impact of the TDR program on both the sending districts and receiving districts be monitored and regularly evaluated. If program changes are necessary, program staff should be able to implement the changes in an expeditious manner, so long as the goals of the TDR program are not twarted.

The implementation chapter of this paper showed the reader how complex a TDR program must be in order to obtain success. Earlier TDR programs were limited in success because they did not adequately address the implementation tools necessary to carry out the exchange process. It was not until the "second generation" TDR programs of the Montgomery County Maryland and the New Jersey Pinelands Commission that we began to see the successful execution of the TDR concept. Early programs failed to go beyond the legal mechanics of establishing a TDR ordinance or program.

Do TDR's have a future in other states such as Michigan? The final chapter of this paper addresses this question and other legal issues concerning program establishment.

Chapter 4 - Footnotes

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27. Interview with Melissa C. Banach, Coordinator The Maryland-National Capital Park and Planning Commission, Silver Spring, Maryland, May 15, 1990.

28. Pizor, "Making TDR Work: A Study of Program Implementation," p. 207.

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31. Pizor, "Making TDR Work: A Study of Program Implementation," p. 210.

32. Interview with Melissa C. Banach, Coordinator The Maryland-National Capital Park and Planning Commission, Silver Spring, Maryland, May 15, 1990.

33. Roddewig and Inghram, Transferable Development Rights Programs, pp. 27-28.

CHAPTER 5

CONCLUDING REMARKS

Over the last four chapters of this paper the concept of transferable development rights has been discussed from a conceptual, legal and program implementation framework. The final area to explore for the purposes of this paper is the applicability of the TDR process to planning and zoning in Michigan.

Since the mid-1980's various suburban communities in southeast Michigan, Kent and Ottawa counties and northwest lower Michigan have experienced a significant growth rate. Because of this growth rate, residents and locally elected officials have become more attuned to growth issues and some growth management tools that may help reduce the impacts of growth.

In 1988, five communities in Oakland County joined together to form the Intergovernmental Growth Management Consortium. This study committee met every month for a year and a half to discuss common problems and coordinate efforts to manage growth problems. The consortium felt that growth management was essential for them to be able to guide and coordinate growth rather than react to it. The initial

meetings of the consortium generally discussed growth management techniques used in other parts of the United States and how they might apply to Michigan. These initial meetings were then followed by other meetings and workshops to discuss which growth management techniques could be initiated under existing state statutes and which techniques would require new legislation. In May 1990, the consortium published a two phased report titled, "Existing Growth Management Techniques and Proposed Legislation for Michigan". The report discussed the need for legislation to permit TDR programs[1] and developed proposed legislation for such programs[2] for consideration for the Michigan Legislature.

The purpose of this final chapter is twofold. First, it will review Michigan's zoning enabling acts to determine if there is sufficient latitude to initiate a TDR program without new legislation. Second, a review of the proposed legislation will take place. Finally, the paper will conclude with some final remarks about the viability of the TDR technique in Michigan.

I. MICHIGAN'S ZONING ENABLING ACTS

In 1931, Michigan joined a large number of our nation's states by enacting enabling legislation to legally permit the establishment of zoning in its cities and villages.[3] Enabling legislation was later enacted in the 1940's to permit zoning in townships[4] and in counties.[5] For the most part, these enabling acts had been left intact until 1978, when major

amendments were added. These amendments allowed for the review of site plans and permitted the development of planned unit developments (PUDs).

Michigan's enabling acts, like many of the other states, were largely derived from the Standard State Zoning Enabling Act. This "Act" was developed in the early 1920's by an Advisory Committee on Zoning appointed by Herbert Hoover, then Secretary of Commerce, as a model enabling act for interested states to enact.[6] It was not until after zoning was declared constitutional in Village of Euclid v. Ambler Realty Company,[7] that many states began adopting the Act. Many of the states adopting the Standard Zoning Enabling Act did not modify its language significantly, therefore many states today still have zoning enabling acts which are largely identical to one another. This commonality is important since many states which have active TDR programs do not have specific language authorizing such programs as part of their zoning and planning activities. A look at the TDR programs in Maryland illustrates this point.

In 1980, the Maryland Attorney General was asked to opine on the legality of a proposed TDR program for the Olney Planning Area in Montgomery County.[8] The opinion stated that "the introduction of the TDR concept in the Olney Master Plan was within the statutory planning authority of the Maryland-National Capital Park and Planning Commission and the District Council for Montgomery County."[9] The opinion cited various sections of the Regional District Act which provided

for the ability to initiate, adopt, or amend plans for local planning areas. Further it recognized the County's ability to regulate through zoning: "1) the location, height, bulk and size of buildings; 2) the size of lots and other open spaces; 3) the density and distribution of population; and 4) the location and use of buildings and land."

The Attorney General's opinion felt that a court could reasonably find that the TDR program outlined in the Olney Master Plan would discourage property taking arguments as the Plan gave the owners of agricultural land the option of selling their development rights for use in a receiving district. This ability to transfer development rights provided sufficient compensation because owners within the sending districts would be permitted to sell development rights roughly corresponding to the number of dwelling units that the underlying existing zoning (before TDR) provided. The increased density of development in the receiving districts was viewed by the Attorney General as advancing the general public welfare provided the receiving districts were carefully planned and were located where adequate public facilities were available and where increased densities would be compatible with existing surrounding uses.

The opinion of the Maryland Attorney General seems to convey that a TDR program is legally valid and a legitimate exercise of the police power as long as considerations relating to the public welfare can be supported. The TDR program cited in the Attorney General's opinion was based

upon a comprehensive plan which outlined the need for the protection of valuable agricultural lands. The plan provided sufficient information and measures in which to protect this valuable resource, while at the same time providing the affected property owner with some form of relief. It would appear from this opinion that TDR programs based upon a well documented plan and implemented according to that plan would be upheld.

The Attorney General was also asked to respond as to whether the regulatory scheme contemplated by the Olney Master Plan was consistent with the planning and zoning enabling act (the Regional District Act). Having no specific implementing ordinance available, the Attorney General presumed that a TDR program would amount to a permissible regulation of land use, building locations, and the density and distribution of population by citing recent innovations such as cluster zoning, planned unit developments (PUD's) being accepted by Maryland's appellate courts.

Since Michigan has similar zoning and planning enabling legislation as Maryland, it is possible that the same conclusion could be reached. TDR's could be viewed in the same manner as PUD's which are readily accepted and provided for in the Michigan enabling acts.

With a positive Attorney General's opinion in hand the Olney Master Plan and the TDR program were implemented and later expanded to include all of Montgomery County. It was not until July 1986, that specific language was incorporated

into the Annotated Code of Maryland that the transfer of development rights were explicitly authorized.[10] This was nearly six years after the initiation of the Olney Master Plan.

New Jersey and Florida have also taken similar stances regarding the ability to implement TDR programs within their borders. New Jersey in so authorizing the Pinelands Protection Act and its comprehensive plan did not specifically authorize local TDR programs. (It enlisted TDR's as a key element for implementation of the comprehensive plan however.) Florida does not have any reference or specific enabling legislation which allows for TDR programs. In 1983, the Florida Court of Appeals validated a growth management and TDR plan in City of Hollywood v. Hollywood, Inc.,[12] for that coastal community. Seven (7) communities have enacted such programs citing their authority to do so under Florida's Comprehensive Growth Management Act. In 1985, enabling legislation was introduced by State Senator Hawkins, but did not get out of committee during that session. To date, there have been no further attempts to adopt TDR legislation in Florida.

The preceding examples seem to indicate that the need for specific enabling legislation for TDR programs is not that critical. In fact, many commentators "feel that the legal basis for planning, zoning and land use protection inherent in local government's police powers also extends to TDR programs. Further, it is felt that TDR's would likely be

upheld as a legitimate local land-use planning and regulation activity even in states where no specific enabling act exists.

Does Michigan need specific enabling legislation to allow for TDR programs? Earlier in this paper I expressed the opinion that such legislation was not necessary because there was sufficient language in each zoning enabling act to provide enough latitude to allow a TDR program. It was pointed out by Costonis[13] that as long as the TDR program did not violate the uniformity clause of the enabling act, the program would be considered a valid extension of the community's police powers. In fact, the thrust of American case law in the zoning and land-use area has been to give local units of government wide latitude to plan and zone innovatively for the public welfare.

New enabling legislation for TDR programs in Michigan is not necessarily required or needed. Local units of government wishing to establish a TDR program should first develop a comprehensive growth management plan. The Plan should address the carry capacity of the community in areas such as: environmental/natural resource restraints, infrastructure constraints, fiscal impacts, population, land-use constraints, transportation and economic development. If the comprehensive growth management plan adequately addresses the needs of the community and is designed in such a manner as to protect and promote the health, safety, morals, comfort and general welfare of its residents it should be supported

by the courts as a valid exercise of the police powers. Likewise, if the TDR concept is used as an implementation device to carry out the goals, objectives and policies of the plan, it should also be entitled to a presumption of validity and be supported by the courts.

II. THE PROPOSED TDR LEGISLATION

In May 1990, the Intergovernmental Growth Management Consortium issued its draft of proposed legislation to "authorize and provide guidelines for the transfer of development rights,"[14] (a copy of this proposed legislation is contained in Appendix B). The proposed legislation is relatively straightforward. It requires the local unit of government to establish a procedure in which TDR's may be used and requires the transfer of rights to achieve a public purpose. The legislation also requires the local unit of government to study the area to be considered for the sending or transfer districts and those areas to be considered for the receiving districts. The studies must estimate the development potential of the prospective sending and receiving districts and estimate the existing and projected infrastructural needs of any proposed receiving districts. Finally, the study must analyze the impact and consistency the TDR program has with the community's comprehensive plan.

While the proposed legislation is thoroughly written, I believe its requirements are too extensive for most local units of government to undertake. Any new legislation should

just simply authorize the establishment of transfer of development rights programs with a requirement that the local unit of government have an updated comprehensive plan and a capital improvements plan in effect. The successful TDR programs in Montgomery County and the Pinelands were derived from well-documented comprehensive plans and capital improvement plans which were designed to direct growth into specific areas. In both cases the transfer of development rights concept provided the right implementation device to direct this growth.

By requiring extensive reports in order to establish a TDR program, the proposed legislation will exclude most local units of government from establishing such a program. Many communities experiencing growth in Michigan, particularly the suburban townships, often lack sufficient professional staffs to successfully implement the required studies of the proposed legislation. Even if they do have a professional staff it is unlikely that there would be sufficient time for staff or commitment by elected officials to undertake a TDR program.

The proposed legislation introduces the concept that a TDR program must be consistent with the local unit of government's comprehensive plan. This "consistency" requirement is desirable, but should also be extended to other police power actions such as rezonings, special uses and planned unit developments (PUD's). TDR programs should not be singled out for a consistency requirement.

Legislation for TDR's should be supported by all Michigan communities that have been experiencing growth impacts over the last decade. Even though the technique is not suitable for every community it should be supported to provide growth communities with a full array of growth guidance tools in which to evaluate or consider for adoption.

The probability that the proposed TDR legislation and the seven (7) other growth management bills have for adoption is marginal. Given the fact that only a half dozen counties have been experiencing a moderate population increase in the 1980's, it does not seem likely that these growth management techniques will receive widespread support across Michigan. Many communities have been struggling to keep their population intact and may view such growth management techniques as secondary programs to important issues like economic development.

III. CONCLUSION

Through the course of researching and writing about the TDR technique, I have become convinced that TDR's are a viable growth management tool for Michigan. The technique would be most beneficial in suburban townships that are experiencing "growth pains" and are looking for a mechanism which can direct growth to areas where urban services are readily available. The TDR technique can also be used at the same time to direct growth away for valued community resources such as farmlands or wood lots that add to a sense

of uniqueness and "place" to the area.

The implementation of the TDR technique in a Michigan community will only be possible if there is a desire by the community (government and its citizens) to have a strong and proactive planning program. The TDR technique requires participation by the community as demonstrated in Chapter 4. It requires a comprehensive plan and capital improvements plan that are being used and implemented. Finally, the program will require patience, from the politicans to allow the program to establish itself and a professional staff to implement the program or modify the program to meets its goals. All of these requirements are achievable. In time the TDR technique <u>will</u> be used in Michigan as a means of protecting valued community resources and as a technique for directing growth.

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3. City or Village Zoning Act, Michigan Statutes. MCL 125.581 et. seq.

4. Township Rural Zoning Act, Michigan Statutes. MCL 125.271 et. seq.

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Offices of the Attorney General of the State of Maryland, Opinion No. 80-069, Baltimore Md., October 1, 1980

Interviews

Banach, Melissa C. The Maryland-National Capital Park and Planning Commission, Silver Spring, Maryland. Interview May 15, 1990.

APPENDIX A

The analysis utilized in the body of this report is based upon regressions of sales prices against building square footage and lot size in acres. The sales prices, building sizes, lot sizes, density per acre and amenities were obtained from REDI, Inc., the Lee County Planning Department and the Lee County Property Appraisers office. This study utilized 671 usable sales during 1984. Usable sales are defined as those where there was a willing buyer and willing seller who exchanged the property for monetary (as distinct from non-monetary) consideration. All of the sales are shown within this appendix in Tables A-1 and A-2.

The first, and most critical factor, is the role of density per acre in unit pricing. Regressions of the (natural) logs of unit price, unit size and density per acre yielded:

$$\underset{(117.0)}{\text{LOG PRICE} = 11.419} \underset{(1.9)}{- .093 * \text{LOG DENSITY}}$$

$$\text{R-SQ} = .026$$

$$\underset{(6.78)}{\text{LOG PRICE} = 4.82} + \underset{(9.25)}{.876 * \text{LOG SIZE}} + \underset{(2.58)}{.113 * \text{LOG DENSITY}}$$

$$\text{R-SQ} = .411$$

$$\underset{(9.9)}{\text{LOG PRICE} = 5.887} + \underset{(9.0)}{.755 * \text{LOG SIZE}}$$

$$\text{R-SQ} = .381$$

$$\underset{(108)}{\text{LOG SIZE} = 7.527} \underset{(6.7)}{- .235 * \text{LOG DENSITY}}$$

$$\text{R-SQ} = .251$$

These equations confirm that price declines with density and increases with unit size. Moreover, larger units tend to be found with larger lots. Most importantly, unit size together with density have greater explanatory power than either alone.

The objective of the above is to move toward the analysis of unit price by using both lot and unit size. The hypothesis here is that unit price will be significantly explained by these two variables. Additionally, the combination of the two factors results in greater explanatory power that each individually. However an additional factor in the explanation of unit price is the amenities which the unit offers. For the purposes of this analysis amenities are defined as golf course, Gulf frontage, or other water amenity. Regression of the logs of price, unit size, density and amenities yields:

$$\underset{}{\text{LOG PRICE}} = \underset{(7.6)}{5.141} + \underset{(9.5)}{.848} * \text{LOG SIZE} - \underset{(0.4)}{.017} * \text{LOG DEN} + \underset{(4.4)}{.335}\ \text{AMEN}$$

$$\text{R-SQ} = .488$$

The hypotheses are confirmed. Both lot and unit size contribute to unit price and the existence of amenities also contributes. In fact, the inclusion of amenities reduces the effect of density to insignificance. This is an important point for the data indicate that buyers will overcome their resistance to density if amenities are offered. Moreover, this equation implies that higher density is resisted within the Lee County market without amenities. This equation is the basis for Table 2 in the text.

The final factor is the cost of producing a square foot of building

space. The cost, naturally, will vary by type of construction. A base cost of $37.50 per foot is utilized for single family construction. As density increases there will be a tendency for cost to fall due to the reduced size of the lot. This reduction is included at $2 per square foot per unit of density per acre. However, as density continues to increase, in the multifamily ranges, cost per foot will tend to increase. This increase is included at $0.125 per foot per unit of density squared. The squaring reflects the cost of height itself and the cost of elevators. The equation for cost utilized is:

COST PER FOOT = 37.50 - 2 * DEN + .125 * DEN ** 2

This formulation of cost is based upon experience rather than actual measurement. The equations utilized to arrive at the data shown in Table 2 have been modified to include selling costs (an 5% reduction from unit price), builder mark-up (a 25% increase in construction cost) and interest at 12% (for 9 months). It is clear that there tends to be an economic benefit from increasing density within Lee County, although this analysis assumes some form of amenity. This benefit, shown as a change in land residual resulting from the addition of one unit, varies depending upon the nature of individual sub-classifications of the market. Over the entire spectrum shown, it would appear reasonable to set a value of $7,000 for increasing density by one unit. Table 2 showed that not all density ranges will receive a benefit from increasing density. The lower density groupings, both single and multi, tend to result in the highest benefit. The presumption herein is that the higher value uses for TDRs will tend to more more significant in setting market value than lower value uses. The analysis would indicate that higher density areas would not benefit from TDRs due to low value of additional density. However,

a significant view amenity, such as the Gulf of Mexico, will provide such an inducement. This particular effect is not captured by the equations due to the aggregation of all amenities into a single category.

APPENDIX B

Draft

TRANSFER OF DEVELOPMENT RIGHTS

HOUSE BILL NO. ___/SENATE BILL NO. ___

A Bill to amend the Zoning Enabling Act for [townships/ cities and villages/counties] to authorize and provide guidelines for the transfer of development rights.

THE PEOPLE OF THE STATE OF MICHIGAN ENACT:

Sec. (1). Purpose and Application.

(1) It is recognized that preservation and maintenance of open space, distinctive areas and spaces of varied size natural resources and character, areas having significant agricultural, ecological, scenic, historical, aesthetic or other values would result in the achievement and preservation of important physical, social, aesthetic and/or economic assets which may otherwise be destroyed unless tools are provided which are financially realistic and equitable to all interests. Accordingly, this section is intended to provide for the transfer of development rights to protect the natural, scenic, agricultural and open land qualities, to enhance sites and areas of special character or special historical, cultural, aesthetic and/or economic interest or value, to preserve and protect natural resources and to enable and encourage flexibility of design and careful management of land and water in recognition of land and water as a basic and valuable natural resource.

(2) An ordinance adopted under this section is intended to apply in addition to other laws and ordinances adopted to achieve similar purposes. This section shall not be construed to mean that regulatory law and/or ordinances which do not contemplate consideration given in exchange for the achievement of the purposes authorized in this section are in any manner invalid, improper and/or inferior.

Sec. (2). Definitions.

As used in this Section, the following definitions shall apply:

(1) "Development rights" shall mean the development capacity of a given property as a distinct interest in the land and/or water, taking into consideration all applicable laws, ordinances and regulations.

(2) "Transfer of development rights" shall mean the transfer of development rights from one or more properties in a sending area or zone to one or more other properties in a receiving area or zone for the purpose of achieving a purpose authorized in this section.

Sec. (3). Authorization of Transfer of Development Rights.

A (community) may provide by ordinance adopted pursuant to this Act for the transfer of development rights as a means of achieving a public purpose or benefit as permitted in the exercise of authority under this Act.

Sec. (4). Establishment of Procedure for Transfer of Development Rights.

An ordinance adopted under this section shall specify the following relative to the transfer of development rights:

(1) The (community) objectives which may be sought to be achieved.

(2) The procedures by which a consideration of a transfer of development rights shall be initiated by the (community) or by a property owner.

(3) A specification of the nature or type of development rights which may be transferred.

(4) The standards to be used by the legislative body of the (community) in determining whether to grant a transfer of development rights.

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(5) The standards and procedure for evaluating and specifying.

(a) The development rights to be transferred.

(b) The use of development rights which will remain on the property from which the transfer is to be made.

(c) The approval of the particular property to which development rights may be transferred.

(d) The development rights to be permitted on the property to which the transfer is to be made.

(6) A specification whether development rights may be transferred to other local governmental jurisdictions, and, if such a transfer is to be permitted, the required inclusions in an intergovernmental agreement to be executed between the legislative bodies of the two governmental entities.

(7) A clear and detailed specification of the area or areas of the (community) from which development rights may be transferred, i.e., sending zones.

(8) A clear and detailed specification of the area or areas of the (community) to which development rights may be transferred, i.e., receiving zones.

(9) The procedure and documentation to be used for the conveyance of development rights from a sending zone to a receiving zone.

Sec. (5) Study to Establish Transfer Areas or Zones.

(1) The ordinance authorizing the transfer of development rights shall not take effect until the (community) prepares a report which includes the following:

(a) The precise location of the sending and receiving areas or zones, as proposed.

(b) An estimate of population and economic growth during the succeeding ten years in the:

(i) (community)

(ii) Receiving area or zone.

(c) An estimate of the development potential of the prospective sending and receiving zones.

(d) An estimate of the existing and proposed infrastructure of the proposed receiving zone.

(e) An analysis of the impact upon and consistency with the (community) master plan assuming potential development rights are transferred to the receiving zone.

(f) A statement of the limitations upon the amount of development rights which may be transferred to the receiving zone, or to each receiving zone if there is more than one receiving zone, taking into consideration the objectives of:

(i) Insuring consistency with the master plan.

(ii) Insuring adequate services and facilities consistent with the services and facilities plan for the area, both in terms of capacity and availability.

(iii) Avoiding undue burden upon the people and land within the receiving zone.

(iv) Insuring consistency with the objectives of this section and with this Act.

Sec. (6) Clarification of Development Rights on Property Following Transfer.

The ordinance adopted under this section shall require that, as part of the determination to transfer development rights, a specification shall be made identifying the development rights which will remain on the property from which the development rights had been transferred following the transfer and the means by which the limitation of use of the property shall be legally fixed and shall run with the land and be binding upon future owners.

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G. Fisher, Esq. 313/851-9500 & M. Wyckoff 517/886-0555