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An Analysis of Development Impact Fees Prepared for the City of Warwick

Jonathan J. Reiner
University of Rhode Island

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**AN ANALYSIS OF DEVELOPMENT IMPACT FEES
PREPARED FOR THE CITY OF WARWICK**

**BY:
Jonathan J. Reiner**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF COMMUNITY PLANNING**

UNIVERSITY OF RHODE ISLAND

JULY 2004

Master of Community Planning
Research Project
of
Jonathan Reiner

Approved:

Major Professor

Robert Thompson

Acknowledged:

Director

Farhad Atash

Abstract

This research project was written to for the City of Warwick using methodology found in: A Practitioner's Guide to Development Impact Fees by James C. Nicholas, Arthur C. Nelson, and Julian C. Juergensmeyer; Development Impact Fees Edited by Arthur C. Nelson, The Calculation of Proportionate-Share Impact Fees by James C. Nicholas, Development Impact published by the Urban Land Institute, the North Kingstown and South Kingstown Development Impact Fee Reports and many other local and national sources as identified in the bibliography. This report is in conformance with the Rhode Island Development Fee Act (RI General Laws Chapter 45 §22.4).

This report was written to assist in the enactment of development impact fees for the City of Warwick, Rhode Island. On February 10, 1999, the Warwick City Council passed resolution #PCR-26-99 requesting the Planning Department to study the feasibility of the implementation of an impact fee in the City of Warwick. The Growth Management Coordinating Council (GMMC) was later directed to review the possible implementation of a growth management fee in the City.

On February 28, 2001, Warwick's Planning Director attended a GMMC meeting to review a draft report prepared y the Planning Department last dated 10-10-2000 (the Draft Report). At that meeting, the GMCC presented several preliminary comments in written form and asked many questions of the Planning Department. Due to the number of issues raised at that meeting, GMMC voted to form a Subcommittee to provide additional comments to the Draft Report. This report is the final document that was created for the GMMC.

Impact fees are being proposed for five capital facility programs: recreation land, open space, law enforcement, elementary schools, and fire protection. *(High school and junior high school impact fees were researched but were deemed inappropriate considering the excess capacity existing in the Warwick high and junior high school system at this time).* City standards were determined for recreation facilities, city owned preserved open space, elementary schools, fire, and law enforcement facilities. Fees were then developed that would allow the City standard to be maintained as the population increases.

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I would also like to thank Jared Rhodes for his early help in developing this project. Mark Caruollo for giving me the opportunity to continue working for the City of Warwick Planning Department and entrusting such an important research project solely on my shoulders. Dan Geagan for additional editorial and research assistance.

I would also like to thank my parents and family for continually supporting me through my ever continuing educational experience. Without their support and assistance I would have never made it this far, for which I thank them.

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Chapter One

Background

Introduction

The City of Warwick was founded January 12, 1642, when Samuel Gorton, and a dozen friends purchased more than 100 square miles of land from the Mahament Indians, a local branch of the great Nanhiganset Nation. These new settlers made their home in what today is referred to as Shawomet , or Old Warwick, at the head of the Old Warwick Cove. The City was reduced in land size by the loss of Coventry in 1741, and West Warwick in 1913. This left Warwick at half of its original size, or 50 square miles including water bodies. The settlement took its name "Warwick" in honor of the Earl of Warwick, who was instrumental in gaining an official charter in 1647.

Today, Warwick is the second largest city in Rhode Island. The city is situated at the center of the state's super-highway system. Theodore Francis Green State Airport is located there and is the state's largest commercial air terminal. Two of the state's three largest shopping malls are also located in Warwick. Warwick offers many educational, recreational, and cultural opportunities. The Knight Campus of Community College of Rhode Island, a state supported facility, is located in the western section of Warwick. Goddard Memorial State Park, one of the largest parks in Rhode Island is located in the Potowomut section of Warwick. The park offers picnic areas, accented with activities such as golfing and salt water bathing. Warwick's central location in Rhode Island as well as the easy access for air travel, has made the city a prime area for further industrial, commercial and population growth.

General Demographic Characteristics

The form of government for the City is a Mayor and a nine member City Council. The population count for The City of Warwick as of April 1, 2000, was 85,808. This represented a 0.45% increase (381 persons) from the 1990 population of 85,427. In 2000 Warwick ranks 2nd in population among Rhode Island's 39 cities and towns. In 2000 the median age of the population in Warwick was 40. In 2000, 78.1% or 67,028 persons residing in Warwick were 18 years of age or older. 64,478 were 21 and over, 16,664 were 62 and over, and 14,558 were 65 and over. The 2000 population density of Warwick is 2,417 persons per square mile of land area. Warwick contains 35.50 square miles of land area (91,940,953 square meters) (22,719.28 acres) and 14.12 square miles of water area (36,574,361 square meters) (9,036.76 acres).

The total number of housing units in the City of Warwick as of April 1, 2000, was 37,085. This represented an increase of 1,944 units from the 35,141 housing units in 1990. Of the 37,085 housing units 1,568 were vacant. 493 of the vacant units were for seasonal or recreational use. In 2000, there are 35,517 households in Warwick with an

average size of 2.39 persons. Of these, 22,971 were family households with an average family size of 2.99 persons.¹

On February 10, 1999, the Warwick City Council passed resolution #PCR-26-99 requesting the Planning Department to study the feasibility of the implementation of an impact fee in the City of Warwick. The Growth Management Coordinating Council (GMCC) was later directed to review the possible implementation of a growth management fee in the City. Impact fees for the City of Warwick were seen in the eyes of some politicians as an election platform, and a way to increase City revenue for the few remaining large undeveloped tracts of land in the City. The reason behind the issue of development impact fees becoming an election platform stemmed from the general understanding of impact fees as making "the new people have to pay". Impact fees are an easy political decision if looked at from the point of view that it does not cost existing residents (existing residents living and owning only their home in the municipality). The cost of impact fees is felt by large land owners who want to develop their land into subdivisions, or developers who in the eyes of most existing residents are not good for the better good of the municipality. It was questionable from the onset of this project of whether or not the City needed to enact an impact fee study and ordinance, and this led to some of the lack of determination on the part of the City to complete the project as the City Council did not allocate funds to have an independent consultant complete the project. Rather the project was placed in the hands of the Planning Department with very little support.

I was hired as an intern for the City of Warwick in November of 1999 to work on assorted Planning tasks throughout the Department. Prior to my hire, the City was trying to hire a consultant to perform the task of completing a needs assessment for development impact fees. The City Council denied the Department the funds necessary to hire a consultant to complete such an assessment, and ordered the Department to complete the needs assessment. Shortly after I was hired there was an administration change in the position of the Planning Director and the little momentum for the needs assessment in the Department was lost. A few months after working in the Department, the Planning Director gave the task to me to complete a development impact fee report. At that time, I had little understanding of development impact fees or how they were determined. I proceeded to research development impact fees and how they were applied nationally, regionally, and throughout the State of Rhode Island.

Over the next two years, I alone worked and completed the City of Warwick development impact fee report. The report would have taken less time if it was more of a priority project for the Department, but with little motivation from the City Council as a whole, and a staff that was always under pressure from other development projects in the City, the completion of the study did not receive a very high priority. The reasoning for this was that the development impact fee report was a priority of only one new member of the City Council, and the rest of the Council seemed to have other priorities at the time.

¹ http://www.riedc.com/riedc/ri_databank/31/272/

A development impact fee report was prepared for the City of Warwick using methodology found in: A Practitioner's Guide to Development Impact Fees by James C. Nicholas, Arthur C. Nelson, and Julian C. Juergensmeyer; Development Impact Fees Edited by Arthur C. Nelson, The Calculation of Proportionate-Share Impact Fees by James C. Nicholas, Development Impact published by the Urban Land Institute, the North Kingstown and South Kingstown Development Impact Fee Reports and many other local and national sources as identified in the references of this report. This report is in conformance with the Rhode Island Development Fee Act (RI General Laws Chapter 45 §22.4).

Impact fees were proposed for five capital facility programs: recreation land, open space, law enforcement, elementary schools, and fire protection. *(High school and junior high school impact fees were researched but were deemed inappropriate considering the excess capacity existing in the Warwick high and junior high school system at that time).* City standards were determined for recreation facilities, city owned preserved open space, elementary schools, fire, and law enforcement facilities. Fees were then developed that would allow the City standard to be maintained as the population increases.

After several drafts had been completed, on February 28, 2001, Warwick's Planning Director attended a GMCC meeting to review a draft report prepared by the Planning Department last dated 10-10-2000 (the Draft Report). At that meeting, the GMCC presented several preliminary comments in written form and asked many questions of the Planning Department. Due to the number of issues raised at that meeting, GMCC voted to form a Subcommittee to provide additional comments to the Draft Report.

This research project is compiled from information that was written in the final document that was created and submitted to the City of Warwick GMCC, completed solely by Jonathan Reiner.

Chapter Two

Review of Impact Fees

Problem Statement

As new homes are built in any municipality, there are associated impacts to the city or town from the development of these new homes. One way to offset these impacts is through the use of development impact fees. Impact fees are generally imposed as a condition for some approval to proceed with this development. The objective of impact fees is not merely to raise money; rather, the objective of impact fees is to ensure adequate capital facilities. Impact fees are established in order to provide a funding stream to ensure the development of adequate capital facilities by mitigating the costs of infrastructure and other impacts caused by development projects. Where capital facilities are not adequate, permitting development is contrary to the responsibility of a local government to protect public health, safety, and welfare. Therefore, a requirement that development proceed only when such adequacy is either attained or ensured is an act protecting the public from the harm that would occur in the absence of such facilities.

On July 22, 2000 the Rhode Island General Assembly passed Chapter 45-22.4, the Rhode Island Development Impact Fee Act. This act defined the parameters of how fees were to be assessed, established, collected, and what factors they were to be based upon. Many Rhode Island cities and towns have impact fees in place, are in the process of updating their fees, or are either researching them or thinking about what they could do for their municipality. These communities include Coventry, Cranston, East Greenwich, North Kingston, North Providence, Scituate, South Kingston, Richmond, and West Warwick. This paper will briefly define impact fees, trace their evolution in Rhode Island, and perform an in-depth study for the enactment of development impact fees for the City of Warwick, Rhode Island. This study will outline the process that a municipality could take to investigate the need for impact fees, what types of fees can/should be implemented, how these fees are determined, and what the next step are for the City of Warwick.

Objectives

The purpose of this paper is to give a thorough background understanding of development impact fees in the State of Rhode Island, and to complete a development impact fee study for the City of Warwick, Rhode Island. Issues that will be identified in this study will include the basis for the impact fees, the motivations, need, costs and the political will.

Methodology

The study for the City of Warwick will be completed according to the State Enabling legislation for Development Impact Fees (CHAPTER 45-22.4, the RHODE ISLAND DEVELOPMENT IMPACT FEE ACT) beginning with a needs analysis, examining the

existing infrastructure in place, what the cost of that infrastructure was, and possible options for City officials to take in determining the types of impact fees that they wish to implement.

Value of the study

This study will give the City of Warwick a menu for selecting which types of fees could be established in the City of Warwick according to Rhode Island State law.

General Information

Impact fees are generally imposed as a condition for some approval to proceed with development. The objective of impact fees is not merely to raise money. Rather, the objective of impact fees is to ensure adequate capital facilities. Impact fees are established in order to provide a funding stream to ensure the development of adequate capital facilities by mitigating the costs of infrastructure and other impacts caused by development projects. Where capital facilities are not adequate, permitting development is contrary to the responsibility of a local government to protect public health, safety, and welfare. Therefore, a requirement that development proceed only when such adequacy is either attained or ensured is an act protecting the public from the harm that would occur in the absence of such facilities.

Impact fees can be developed for numerous capital City programs such as: parks and recreation, open space, schools, libraries, fire protection, potable water, solid waste, sewers, drainage, roads, public buildings, emergency medical service, law enforcement, and public cemeteries.

City standards need to be determined for those public facilities in which the city would like to enact development impact fees. Fees could then be developed that would allow the city standard to be maintained as the population increases.

How Impacts Fees Can Be Used

Impact fees collected can be used to pay: (a) The proportionate share of existing infrastructure that was constructed/developed with capacity beyond what is needed for the current population (if a pre-construction assessment was performed regarding future need); or (b) deposited in a receipt account to be used for future construction/development of infrastructure that will be available to the new population/development.

The fees deposited in such a restricted account can be used for planning, design, and construction of additions to existing facilities or proposed new public facilities in the designated category. They can also be used toward the purchase of capital equipment.

Rational Nexus

Impact fees may be used to pay for new facilities or the costs of existing public facilities. In both cases, a direct relationship must be shown between the collection of an impact fee and a benefit to the payer. This is known as the rational nexus. If the impact fees are used for paying off existing facilities, the fee must be directly proportionate to the cost of providing facility capacity or service for that residential unit. **Monies spent to enhance existing facilities or offset existing deficits are excluded from the impact fee calculation.** Excess capacity can be demonstrated by developing a “city standard” of service for each facility.

City Standards

City standards for the adequate proportion of development need to be developed for some public facilities, and reassessed for others. For example: if a city currently has a population of 100,000 and there are 100 acres of open space, this would create 1 acre of open space per every 1,000 residents. The city would then have to calculate how much an acre of open space land will cost them, and what percentage each new development should pay towards keeping that “city standard”. Also, the standard can be higher than the current rate, but the new development will only pay its proportional share of purchasing land that will bring the city to its desired standard.

Rhode Island Enabling Legislation for Impact Fees

Under pressure from the local building, real estate, smart growth and other land use interests, to have a unified system and standard for implementing and assessing development impact fees, the Rhode Island General Assembly passed CHAPTER 45-22.4, the RHODE ISLAND DEVELOPMENT IMPACT FEE ACT, in July of 2000. This Act defines the parameters of how fees were to be assessed, established, collected, and what factors they were to be based upon. The specific sections of the Act included: Legislative findings and intent, Definitions, Calculation of impact fees, Collection and expenditure of impact fees, Refund of impact fees, Compliance, Adoption of impact fees, and Severability. Each section clearly outlines the appropriate section of the Act, and what can and cannot be done by a municipality through the enactment of this Act.

Municipalities were given an eight year period for when impact fee dollars can be used, and up to twelve years if extenuating circumstances exist. The basis for the impact fees must be documented in the municipal comprehensive plan.

Time Frame for Using Fees

If no excess capacity exists, fees collected for future expansion of city facilities may be encumbered but Rhode Island law states that the fees must be used within eight (8) years of when collected. Where the expenditure or encumbrance of a fee is not feasible within eight (8) years, the City may retain impact fees for a longer period of time if there are compelling reasons for such longer period. In no case shall impact fees be retained

longer than twelve (12) years. For example, if fees are collected for additional school facilities, those fees may be used for planning, design, or construction of the school within seven years of when they are paid. If the monies are collected for design of engineering of a school but the city for whatever reason did not undertake construction of the building in a timely manner, a refund of the fees collected may be required. The City is obligated to utilize such funds specifically for the facilities so designated. There is no portability of funds.

Dedicated Accounts for Fees

The City must establish restricted receipt accounts for impact fees. Each account is established for a specific impact fee category, recreation/open space, fire, police, and schools. Accounts would need to be reviewed on an annual basis.

Credit for Future Taxes

The impact fees to be developed may include a credit for future taxes that the new property owner will pay towards those items assessed in the impact fee. Examples of this would be what new residents will pay towards the provision of a service that they are paying through a bond. In the case of the City of Warwick, residents are currently paying in their taxes the cost of existing bonds costs. There are bonds currently in effect for the school, and fire department, recreation bonds and open space bonds. The fees listed in this report reflect the discounted fees.

Proposed Fees

The City of Warwick is currently proposing impact fees for the following uses: fire and rescue, police, elementary schools, recreation, and open space.

Fee Summary

The City will have to conduct a study on housing and building types, and the estimated cost that these have on the city. For schooling costs, this will be based on current population and the ratio of school children in each type of residential dwelling. Table 1 is a summary of the impact fees proposed by housing type. Demographic studies indicate that two-family and multi-family structures contain fewer school children per unit than three and four bedroom single family structures. Therefore, the proposed school impact fees for two family and multi-family residential units is one half and one quarter respectively of the school impact fees for single family units.²

² North Kingstown Planning Department. Town of North Kingstown Impact Fee Report. August 11, 1997. Page 3.

Table 1
Proposed Development Impact Fees

Development Impact Fees			
	Single Family Residential	Two Family Residential	Multi-family Residential
Recreation	\$80.41	\$72.48	\$103.80
Open Space	\$116.94	\$110.21	\$136.80
Police Department	\$241.12	\$241.12	\$241.12
Fire Department	\$421.17	\$416.98	\$433.53
School Department	\$1,016.97	\$0.00	\$0.00
Total per household/unit	\$1,876.61	\$840.79	\$915.25

In the bond discount for the fees, the discount rate stays the same over a 20-year period. Therefore, a maximum amount of discount was added into the equation. The impact fee takes into account 20 years of bond payment at the same rate as what any other residents would pay. So every person who pays that impact fee has the rate of the bonds that also have impact fees on them have been subtracted from their impact fee. The fees were discounted to the maximum amount on all levels. The Planning Department felt that this would help the impact fee stand up legally if it was ever challenged.

The discount rate takes into account a constant rate for the percentage of property taxes paying off the bonds. Therefore, whereas a bond that was allocated in one time period has its rate drops over time, but for purposes of this impact fee, it was assumed that rate stays constant because the city will most likely bond for other items in that category. This discount rate is the reason why there is no school impact fee for two-family and multi-family houses.

Collection of Fees

The collection of impact fees must be reasonably related to the benefits accruing to the development paying the fees. All impact fees shall be assessed upon the **issuance of a building permit** or other appropriate permission to proceed with development and collected in full upon the issuance of a certificate of occupancy or other final action authorizing the intended use of a structure. This will allow the fee to be collected for all **existing lots, recently subdivided lots, and future subdivisions**. All fees apply Citywide and are non-negotiable unless other improvements are considered.

Link to Capital Improvement Program

The Capital Improvement Program (CIP) is the basis for any impact fee. Capital improvements proposed to be financed in full or in part with impact fees must be part of the City Capital Improvement Plan. Conversely, impact fees are incorporated among the revenue sources needed to finance the capital improvement plan. Impact fees may also become tools used to implement policies expressed in the City of Warwick's Comprehensive Plan.

Proportionate Share of Capital Costs

This approach to impact fee calculation is based on the premise that new development should not be permitted to impose a fiscal burden upon the community. Included within the premise is the proposition that a community cannot require new development to enrich it. Proportionality, given this premise, would mean that new development should pay amounts such that it did not impose any tax or fee increases upon the community. Again, it would follow that new development should be required to pay no more than this amount. Normally, new development will pay toward capital improvements in the form of general taxation, debt service payments, and user fees. The task is to calculate how much of capital costs are covered by these payments. Whatever is not paid for would then be paid through impact fees.

Seven factors should be considered in establishing a proportionate share of capital costs to be borne by new development. These factors are:

1. The cost of existing capital facilities;
2. The methods by which the existing capital improvements were financed;
3. The extent to which new developments have already contributed to the cost of the existing capital improvements;
4. The extent to which new developments will pay for existing capital improvements in the future through user fees, debt service payments, or other payments toward the cost of existing capital improvements;
5. The extent to which new developments are required to construct and/or dedicate capital improvements as conditions of development or construction approval;
6. Extraordinary costs, if any, in serving the new development; and
7. The time-price differentials inherent in fair comparisons of amounts paid at different times.

This is saying that due consideration must be given to what new development pays towards the costs of capital facilities that will be required³.

³ Nicholas, James C. et al. A Practitioners Guide to Development Impact Fees. Page 90-91

Offsets to Impact Fees

It is very common for developers to provide certain facility improvements or land dedications within the city. When such improvements are offsite and not for the exclusive use or benefit of the individual development, some consideration must be given to lowering the fees by the value of the improvements.

Recalculation of Fees on an Annual or Bi-Annual Basis

The impact fee program should be periodically updated as to assumptions, facility cost estimates, growth patterns and rates, demographic changes, and so on. It is recommended that during the preparation of the capital improvement program, the Planning Department annually review this report and recommend any adjustment in the fees, credits, projected costs of improvement, or projected growth patterns that are deemed necessary. This review could be done on a bi-annual basis but it is not recommended that the review be conducted any less frequently than every two years. Reviews any less frequent than this could potentially lead to the failure of this program standing up legally in court.

Estimating Annual Revenue

This will be based on the expected development impacts fees, and the rates of development that are expected in each fiscal year. In a typical year, approximately 127 single-family building permits are issued, multiply this by the amount of the impact fee (\$1,876.61), and it comes to \$238,329.47 each year. This is approximately what the City can expect to receive in impact fees each year for single family developments.

Adoption of Impact Fee Ordinances

The recommended procedure for implementation of the impact fee program is the creation of a need assessment determining the needed capital improvements, costs associated with these improvements, and the calculation of appropriate fees. Once this has been calculated it is necessary to adopt the plan and write an impact fee ordinance.

Simultaneously the Planning Board would need to amend the subdivision regulations to comply with the newly enacted ordinance. The municipal Comprehensive Plan will also have to be amended to reflect the need and basis for the development impact fees. The first steps would be for the City Council to approve this impact fee plan and forward the plan to the Planning Board to make changes to the Comprehensive Plan, draft an ordinance, and make changes to the Subdivision Regulations if necessary. The Comprehensive Plan changes are necessary to make the Plan consistent with the findings of this report. Once this has been completed, the Comprehensive Plan changes would be forwarded on to the City Council as well as the draft ordinance for adoption.

Any necessary adjustments to the fees would be adopted as part of the annual budget adoption process, and an annual review would need to be completed before the mayor submits a budget to the City Council.

Why have the impact fees? Impact fees are a way to raise money to build the infrastructure needed by the creation of new development. Each house will pay its fair share of adding to the burden that is placed on the city's infrastructure and services every time a new residential home, condo or apartment is built. By having an impact fee system in place it will help to keep the tax rate lower. If each new development pays for its fair share of what it causes to be built, less will have to be paid for through general obligation bonds.

What is the justification for considering and/or implementing impact fees? Over time, impact fees will help to reduce taxes by reducing capital improvement costs. If new development pays for that newly needed infrastructure, new bonds will not have to be granted to pay for that development. This then leads to less future tax increases or even lower taxes and allows future residents to pay for their fair share of the infrastructure that they will cause the need for when they are moving to a municipality.

This then creates a problem, because all the infrastructure of facilities and open space for the City is paid for through bonds. The City has always bonded to pay for new facilities and land, and will probably always do this. One potential problem with the enactment of impact fees is that Warwick is very close to its build out. The last city build out projection in 1998 stated that the city was at approximately 96% build-out, and at the projected growth rates, not enough money will be available from the impact fees to be spent within the eight year time period allowed by the state law.

Some believe that the City of Warwick does not need impact fees because Warwick generally pays for all infrastructure improvements through bonds; in turn, taxpayers pay for the cost of all facilities through their taxes. Due to the fact that Warwick is almost at build-out, there will be such a small need for additional facilities, it will be difficult to raise enough money to build anything in the 8 year allowed time period from impact fees with the amount of new development expected.

This report states that all City standards would be held as they currently are, but in actuality, some of those standards are not up to what they should be. Monetarily, it is wise for the City to accept the current standards as they currently are for the standard that all impact fees would be based upon. This will allow the City to charge new developments the cost of keeping that same standard with little or no cost to the taxpayers.

Future Growth Potential in Warwick

As of 2002, there were approximately 1636 existing buildable house lots and 350 existing condos that could still be built in the city. Assuming 127 new single family homes are built per year it will take approximately 12.8 years for the city to reach build out. As listed in table 2, if it can be assumed that the city will receive \$238,329.47 per year in impact fees, the city will receive \$3,050,617.22 by the time the city reaches build out. This will be broken down into the following categories:

Table 2
Projected Revenue From Impact Fees

	Single Family Residential		build-out
	per lot	per year	
Recreation	\$80.41	\$10,212.07	\$130,714.50
Open Space	\$116.94	\$14,851.38	\$190,097.66
Police Department	\$241.12	\$30,622.24	\$391,964.67
Fire Department	\$421.17	\$53,488.59	\$684,653.95
School Department	\$1,016.97	\$129,155.19	\$1,653,186.43
Total per household/unit	\$1,876.61	\$238,329.47	\$3,050,617.22

Fees shall only be for newly created lots. Existing buildable lots will not be subject to the impact fees and will be "grandfathered" from the impact fees. This was based upon a political decision to not charge impact fees on existing single buildable lots. The rationale behind this decision was that these individual unbuilt house lots have been paying taxes for a number of years, and through those collected taxes have paid their fair share of any infrastructure burden that the construction of a new house will have on the City.

In addition, a political decision will have to be made on whether or not low and moderate income developments should be exempt from paying the impact fee. At this time, Warwick does not have the state required ten percent of low income housing, but Warwick does have a large number of affordable rental housing, which allows it to be exempt from the Comprehensive Permit process under the Low to Moderate Income Housing Act.

Summary

Impact fees fall within the general system of land development regulation. The objective of impact fees is not to raise money. Rather, the objective is to ensure adequate capital

facilities. Where capital facilities are not adequate, permitting development is contrary to the responsibility of a local government to protect the public health, safety, and welfare. Implementation of an impact fee program will allow for the collection of fees to offset the cost to the City of providing the necessary capital facilities.

Impact fees may be used to pay for new facilities or the costs of existing facilities. In both cases, a direct relationship must be shown between the collection of an impact fee and a benefit to the payer.

The capital improvement program is the basis for any impact fee. This approach to impact fee calculation is based on the premise that new development should not be permitted to impose a fiscal burden upon the community.

Chapter Three

The Role of Warwick

First Steps

In order for the City to collect money from new development, it first has to determine if the City has an excess capacity, meets the current needs, or is deficient in the areas that it would like to institute development impact fees. If there is no excess capacity, the development impact fees can pay for expansions *that those developments would necessitate*. New developments will not pay for a need that had already existed.

The Comprehensive Plan should identify planned growth of the community and the need for capital facilities to support that growth. Some standards are outlined in Warwick's Comprehensive Plan concerning the need of certain services per individual. Yet, before these fees could be put into place, it will have to be shown that those standards are set at the current needs, or the City will need to bring them up to date within a reasonable period of time. It is recommended that the City change all of its standards to its current levels.

Concerning each potential fee, the fee for elementary schools would probably be confined to housing development. The other potential fees for fire, police, recreation, and open space could be applied to all development including commercial, residential, and industrial. At this time impact fees are only being assessed for residential development.

A needs assessment would be performed for the type of public facility or public facilities for which impact fees are to be levied. The needs assessment shall identify the level of service standards, projected public facilities, capital improvement needs, and to distinguish existing needs and deficiencies from future needs.

All fees paid in lieu of land dedication made to the City at the time of subdivision approval shall be credited against the impact fees due on a pro rata basis. Land dedication made to the City at the time of subdivision approval for capital improvements such as school, open space, or parks/recreation facilities shall be credited against impact fees according to current land values as assessed for dedication in the Warwick Land Development and Subdivision Regulations.

In addition, a fee waiver may be granted for the construction of low-income housing. This will assist the City in reaching the desired state goal of 10% of all residential units constituting low-income housing.

To begin the process of assessing whether a municipality needs impact fees, and the process that they will need to follow, the following outline can be used as a guide:

Process for implementing impact fees

- I. Preliminary Topic Identification (fire, police, elementary schools, recreation/open space)
- II. Surplus and Deficit Analysis
 - A. Inventory current facilities
 - B. Current population estimate (use build-out analysis to estimate current population, or use 1990 census)
 - C. Standards/benchmarking (**fire** – sq. footage per unit and vehicles per unit, **police** – sq. ft. per unit, **school** – sq. ft. per unit, **recreation** - inventory current amount of recreational land, **open space** – inventory current amount of open space).
 - D. Surplus and deficit (based on standards which exist in each section, use current levels as standards to avoid deficits)
- III. Needs Assessment
 - A. Build-out analysis
 - B. Population projection
 - C. Future needs
- IV. Fee Determination
 - A. Cost estimate
 - B. Fee schedule
- V. Assessment Report
- VI. Implementation
Capital Improvement Plan
- VII. Ordinance

Chapter Four

Recreation Impact Fee

Impact fees are frequently used to pay for new facilities in the parks and recreation sector, whether they serve local neighborhoods or larger communities and regions. Demand for new parks and recreation areas are created by an influx of new people moving into the community. Thus, if a municipality is to maintain its current standard for parks and recreational facility use, impact fees provide one mechanism for the funding of these facilities.

In order to accomplish this, it is important to have established a standard for parks and recreational facilities in the community. This can be done in one of two generally accepted manners. First, the municipality can base its standard on those of the National Recreation and Park Association (NRPA). The NRPA has established standard guidelines for several different types of facilities that either service regional areas or individual neighborhoods. These standards include guidelines for the desirable size of the facility, as well as the number of acres of parkland serving each one thousand people in the service area. Second, a level of service type standard can be calculated for the City itself by calculating the existing acreage for each type of facility and dividing the units of 1,000 people to establish an existing standard for available parks and recreation land. Regardless of whether the standard is based upon the NRPA guidelines or an existing level of service within the City, the goal is to maintain such a standard even as population and potential facility users increase in the City.

A City standard rather than the NRPA standard has been used for this report. For the purposes of establishing a City standard, we have grouped all city recreational land into one category. The City of Warwick standard for recreational land is 0.016839255 acres per household. This can also be expressed as 6.6822 acres of recreational land per 1000 persons. Any system of recreation impact fees established should maintain the City Standard for recreational land as the City continues to develop.

Recreation Impact Fee Methodology & Calculation

Warwick will need to require **40.9834** additional acres of recreation land to accommodate the estimated full potential build-out of an additional **2202 residential units and 378 condominiums**. The 1990 census shows the population density in Warwick to be 2.52 persons per household. Using 2.52 persons per household on average, the construction of **2580 new residential units could result in a population increase of 6501.6 persons**. The existing City standard is 0.015885069 acres of recreation land per household.

According to the 2000 US Census, Warwick's population has increased by 381. This corresponds to a need of an additional 2.30 acres of recreation land per year to support this annual population increase and maintain the City standard for open space and recreational facilities.

The recreation impact fee has been developed by using the average cost from recent city open space land acquisitions as determined in Table 5, the average population per household as determined by the 1990 census, and the City standard for recreation land to calculate the per residential housing fee. The recreational land costs do not include any necessary infrastructure to develop the land into a park. These costs were not factored into the development fee.

Based upon the recent Warwick land acquisitions from 1993-1999 the average cost of open space and recreational land per acre was \$15,073.9882 (see Table 5) or \$0.34 per square foot. This was based upon the purchase of 130.6887 acres at a cost of \$1,970,000. There are approximately 573.39 acres of recreational land in the City. Multiply this by the average per acre cost of open land in the City over the past 8 years and it comes out to \$8,643,274.094. *Divide this by the number of estimated residential units (34050.8) (see Appendix A) and it comes to \$253.83 per household. This also comes out to approximately 0.016839 acres of recreation land per household.*

Table 3
Recreation Land Impact Fee

Total Acres of recreation land	573.39
SF of rec. land	24976868.4
Average Cost per acre	15,073.9882
Average Cost per SF	0.3461
Total cost of recreation land at present cost	8643274.094
Number of residents	85808
Acres of rec. land per HH	0.016839252
SF of rec. land per HH	733.5178146
Cost of rec. land per HH	253.83

Per the 1990 census, the median value of single-family homes in Warwick was \$131,723, \$137,748 for two-family homes, and \$113,960 for multifamily homes. The current tax rate is \$24.84 per \$1000 of the assessed value of a home. Therefore, the average single family household pays \$3,271.99 per year in property taxes, the average two-family household pays \$3,421.66 per year in property taxes, and the average multi-family household pays \$2,830.77 per year in property taxes.

The average percentage of property taxes that pay towards the recreation bond is .265% (based upon 1998 and 1999 figures). If that is multiplied by 20 years (the average life of a bond) then it comes out to 5.3% of Warwick's property taxes are paying off the recreation bonds. The recreation impact fee will now be discounted by 5.3% of

\$3,271.99 for single family houses (\$173.42), \$3,421.66 for two-family houses (\$181.34), and \$2,830.77 for multi-family houses (\$150.03). The final recreation impact fee will then be **\$80.41 for single family houses, \$72.48 per unit for 2 family residential units and \$103.80 per unit in multi-family housing.**

**Table 4
Recreation Impact Fee Per HH Type**

	Median value of dwelling unit	Tax rate per \$1000	Annual tax revenue per unit	% of tax toward bond for 20 years	Discount rate	impact fee	Final impact fee
Single family houses	\$131,723	\$24.84	\$3,271.99	0.053	173.42	\$253.83	\$80.41
Two- family units	\$137,748	\$24.84	\$3,421.66	0.053	181.35	\$253.83	\$72.48
Multi- family units	\$113,960	\$24.84	\$2,830.77	0.053	150.03	\$253.83	\$103.80

**Table 5
City Of Warwick
Open Space Record
1993-1999**

Recent Open Space Acquisitions:

	Year	Total	Size
Chepiwanoxet Point	1994	\$485,000	10 acres
Confreda Farms	1996/97	\$847,000	47 acres
Dawley Farm	1998	\$435,000	63 acres
Hunt River Court	1994	\$163,000	10 acres
Veterans Memorial Park	1996	\$40,000	30,000sqft
Total:		\$1,970,000	~130.6887052 acres

Final cost of \$15,073.98 per acre.

Chapter Five

Open Space Impact Fee

Impact fees are frequently used to pay for new facilities in the open space sector, whether they serve local neighborhoods or larger communities and regions. Demand for new open space areas is created by an influx of new people moving into the community, changing trends in exercise, increased participation in recreational activities, changing demographics in a region, and the creation of more sports leagues for girls and women. Thus, if a municipality is to maintain its current standard for open space, impact fees provide one mechanism for the funding of this open space land.

In order to accomplish this, it is important to have established a standard for open space in the community. A level of service type standard can be calculated for the City itself by calculating the existing acreage for open space and dividing it by the existing households in the city. The goal is to maintain such a standard even as population and potential open space users increase in the City.

A City standard has been used for this report. The City of Warwick standard for open space land is 763.407 square feet of open space per household. Any system of open space impact fees established should maintain the City Standard for open space as the City continues to develop.

Open Space Impact Fee Methodology & Calculation

Warwick will need to require 42.6531 additional acres of open space land to accommodate the estimated full potential build-out of an additional 2202 residential units and 378 condominiums. The 1990 census shows the population density in Warwick to be 2.52 persons per household. Using 2.52 persons per household on average, the construction of 2580 new residential units could result in a population increase of 6501.6 persons. The existing City standard is 763.407 square feet of open space land per household.

The population in Warwick increased by 381 persons since 1990. This corresponds to a need of an additional 2.711 acres of open space land per ten years to support this annual population increase and maintain the City standard for open space.

The open space impact fee has been developed by using the average cost from recent city open space land acquisitions as determined in table 5, the average population per household as determined by the 1990 census, and the City standard for open space land to calculate the per residential housing fee.

Based upon the recent Warwick land acquisitions from 1993-1999 the average cost of open space land per acre was \$15,073.9882 (see Table 5) or \$0.34 per square foot. This was based upon the purchase of 130.6887 acres at a cost of \$1,970,000.

There are currently 596.75 acres or 25,994,640.6 square feet of open space land in Warwick. This equals 763.407 square feet per household, at a cost of \$0.34 per square foot. The open space impact fee then comes to \$264.18 per household.

Table 6
Open Space Impact Fee

Total Acres of open space land	596.755
SF of open space land	25994640.6
Average Cost per acre	15,073.9882
Average Cost per SF	0.3461
Total cost of open space land at present cost	8995475.337
Number of residents	85808
Acres of open space land per HH	0.006954536
SF of open space land per HH	302.939593
Cost of open space land per HH	264.18

Per the 1990 census, the median value of single-family homes in Warwick was \$131,723, \$137,748 for two-family homes, and \$113,960 for multifamily homes. The current tax rate is \$24.84 per \$1000 of the assessed value of a home. Therefore, the average single family household pays \$3,271.99 per year in property taxes, the average two-family household pays \$3,421.66 per year in property taxes, and the average multi-family household pays \$2,830.77 per year in property taxes.

The average percentage of property taxes that pay towards the open space bond is .225% (based upon 1998 and 1999 figures). If that is multiplied by 20 years (the average life of a bond) then it comes out to 4.5% of Warwick's property taxes are paying off the open space bonds. The open space impact fee will now be discounted by 4.5% of \$3,271.99 for single family houses (\$147.24), \$3,421.66 for two-family houses (\$153.97), and \$2,830.77 for multi-family houses (\$127.38). The final open space impact fee will then be **\$116.94 for single family houses, \$110.21 per unit for 2 family residential units and \$136.80 per unit in multi-family housing.**

Table 7
Open Space Impact Fee Per HH Type

	Median value of dwelling unit	Tax rate per \$1000	Annual tax revenue per unit	% of tax toward bond for 20 years	Discount rate	impact fee	Final impact fee
Single family houses	\$131,723	\$24.84	\$3,271.99	0.045	147.24	\$264.18	\$116.94
Two- family units	\$137,748	\$24.84	\$3,421.66	0.045	153.97	\$264.18	\$110.21
Multi- family units	\$113,960	\$24.84	\$2,830.77	0.045	127.38	\$264.18	\$136.80

Chapter Six

Police Department Impact Fee

Impact fees are often used to help raise revenue for new capital facilities for law enforcement due to the growing population of a municipality. As the population increases, the demand for more law enforcement officials increases, as does the capital facilities that those officers occupy. Impact fees are used to raise the necessary revenue proportionate to the need created by that new development. Thus if a municipality is to maintain its current law enforcement standards, impact fees provide one mechanism for the funding of these capital facilities needed due to the influx of new residents. In order to do this, standards have to be established for law enforcement capital facilities in the community. The current levels will be used as the standard that the impact fees will be based upon.

The current Police Headquarters is at capacity as far as spatial factors are concerned. The building has been upgraded in the past, but there is currently no more room to expand. It is in the opinion of the department that an extension or additional wing should be put on the existing facility to accommodate future development.

The facility built in 1977 is a two-story masonry building with 26,865 square feet of space. The cost of this facility was \$2,500,000 in 1975 dollars, adjusting for inflation, this comes to \$8,210,293.22 in 1999 dollars (see Appendix D). This equals a current cost of \$305.61 per square foot. The building appears to meet most of the requirements of the Department at present staffing levels. To accommodate for the additional officers and infrastructure that will be needed for future City growth, an addition will need to be put onto the building.

Services that will be rendered for the impact fees are the construction costs of new infrastructure to be built. Impact fees can only pay for infrastructure improvements. There will be no services paid for by the impact fee, only infrastructure, which does not include police cars.

Police Department Impact Fee Methodology & Calculation

To accommodate the estimated full potential build-out of an additional 2202 residential units and 378 condominiums, based on the City's build-out analysis, an additional 1919.52 square feet of police department facility will be needed. This was based on the City standard of 0.7889 square feet per household. The 1990 census shows the population density in Warwick to be 2.52 persons per household. **Using 2.52 persons per household on average, the construction of 2580 new residential units and condominiums could result in a population increase of 6501.6 persons.**

The existing police department building is 26,865 square feet in size. This comes out to 0.7889 square feet per household (26,865 divided by 34,096.16). The facility built in 1977 is a two-story masonry building with 26,865 square feet of space. The cost of this facility was \$2,500,000 in 1975 dollars, adjusting for inflation, this comes to \$8,210,293.22 in 1999 dollars (see Appendix E). This equals **\$305.61 per square foot.** The impact fee for each household is **\$241.12**.

Table 8
Police Department Impact Fee

Total square footage of Police Department Building	26865
Total cost of Police Department Building at past cost	2500000
Total cost of Police Department Building at present cost	8210293.22
Average Cost per SF	305.61
Estimated number of residential units	85808
SF of Police Department Building per HH	0.31308
Cost of Police Department Building per HH	241.12

Due to there not being any police bonds, the police impact fee will remain the same at **\$241.12 per household.**

Chapter Seven

Fire Department Impact Fee

Impact fees are often used to help raise revenue for new capital facilities for fire departments due to the growing population of a municipality. As the population increases, the demand for more fire and rescue officials increases, as does the capital facilities that those individuals occupy. Impact fees are used to raise the necessary revenue proportionate to the need created by that new development. Thus if a municipality is to maintain its current fire department standards, impact fees provide one mechanism for the funding of these capital facilities needed due to the influx of new residents. In order to do this, standards have to be established for fire department capital facilities in the community. The current levels will be used as the standard that the impact fees will be based upon.

The fire department is broken into 10 fire districts. Nine of these districts are located in Warwick proper, and the 10th district is located in the Potowomut area. Warwick and East Greenwich service this district. These districts are based upon the first response of an engine.

Fire Department Impact Fee Methodology & Calculation

To accommodate the estimated full potential build-out of an additional 2202 residential units and 378 condominiums an additional 3323.04 square feet of fire department facility will be needed. In addition, 2 fire vehicles will be needed because the current standard for fire vehicles is approximately 1 vehicle per 1000 households.

The 1990 census shows the population density in Warwick to be 2.52 persons per household. Using 2.52 persons per household on average, the construction of 2580 new residential units could result in a population increase of 6501.6 persons. This was based on the City standard of 1.365 square feet per household.

The City has 46,500 square feet of fire stations. The airport fire station (most recently built station) was built at a cost of 1.2 million dollars. This building was 6000 sq. feet. That comes out to \$200 per sq. foot. Therefore, the total cost of the fire building infrastructure is \$9,300,000.

The number of residents in the City of Warwick is 85,808 (US Census). Current fire dept standards are .54 sq. ft. per person or 541 sq. ft per 1000 persons. There are approximately 1.365 square feet per household (46,500 square feet divided by 34,050.18 estimated existing houses). This then comes to \$273.12 per household.

Table 9
Fire Department Impact Fee

Total square footage of Fire Department Building	46500
Total cost of Airport Fire Department Building	1200000
SF of Airport Fire Department Building	6000
Average Cost per SF	200.00
Total cost of Fire Department Buildings at present cost	9300000
Estimated number of residential units	85808
SF of Fire Department Building per HH	0.54191
Cost of Fire Department Building per HH	273.12

Then for vehicles, the total dollar amount was divided by the estimated number of houses (\$8,161,000 divided by 36,096.16). This came out to \$226.09 per household.

Table 10
Fire Vehicle Impact Fee

Fire Vehicle Impact Fee			
Vehicle Type	Estimated replacement cost of vehicle	Number of vehicles	Total replacement cost
Engines/Pumpers (includes 1 basket)	270000	13	3510000
Ladders	600000	5	3000000
Rescues	125000	6	750000
Special Hazards	300000	2	600000
Battalions	40000	3	120000
Boats	14000	3	42000
Marine	25000	1	25000
Marine	100000	1	100000
Dive	14000	1	14000
Brush	NA	1	NA
Totals		36	8161000
Cost per vehicle per household	\$239.67		
Cost of Fire Department Building per HH	\$273.12		
Total Fire Department Impact Fee	\$512.79		

The total cost of fire department impact fees should then be \$512.79 per household.

Per the 1990 census, the median value of single-family homes in Warwick was \$131,723, \$137,748 for two-family homes, and \$113,960 for multifamily homes. The current tax rate is \$24.84 per \$1000 of the assessed value of a home. Therefore, the average single family household pays \$3,271.99 per year in property taxes, the average two-family household pays \$3,421.66 per year in property taxes, and the average multi-family household pays \$2,830.77 per year in property taxes.

The average percentage of property taxes that pay towards the fire bond is .14% (based upon 1998 and 1999 figures). If that is multiplied by 20 years (the average life of a bond) then it comes out to 2.8% of Warwick's property taxes are paying off the fire bonds. The fire impact fee will now be discounted by 2.8% of \$3,271.99 for single family houses (\$91.62), \$3,421.66 for two-family houses (\$95.81), and \$2,830.77 for multi-family houses (\$79.26). The final fire department impact fee will then be **\$412.17 for single family houses, \$416.98 per unit for 2 family residential units and \$433.53 per unit in multi-family housing.**

Table 11
Fire Department Impact Fee Per HH Type

Fire Dept. Impact Fee Per HH Type							
	Median value of dwelling unit	Tax rate per \$1000	Annual tax revenue per unit	% of tax toward bond for 20 years	Discount rate	impact fee	Final impact fee
Single family houses	\$131,723	\$24.84	\$3,271.99	0.028	91.62	\$512.79	\$421.17
Two-family units	\$137,748	\$24.84	\$3,421.66	0.028	95.81	\$512.79	\$416.98
Multi-family units	\$113,960	\$24.84	\$2,830.77	0.028	79.26	\$512.79	\$433.53

Table 12
Fire Department Facilities

Station	Location	Engine #	Ladder #	Rescue #	Other	Square Footage
Station 1	140 Veterans Memorial Drive (Apponaug)	#1 Reserve#10 bucket truck	#1	#1, Reserve #7	Battalion #1, Boat #1, Dive #1	4000
Station 2	771 Post Road (Lakewood)	#2, #7	#2	Reserve #6	Marine #2	7500
Station 3	2373 West Shore Road (Oakland Beach)	#3	#3		Marine #3	5000
Station 4	1501 West Shore Road (Bayside)	#4 Reserve #11		#3 Reserve #4	Boat #4	6000
Station 5	450 Cowesett Road (Cowesett)	#5	Reserve #4		Brush #1	5000
Station 6	456 West Shore Road (Conimicut)	#6			Boat #6, Battalion #2 Reserve Battalion #3	5000
Station 8	1651 Post Road (Airport)	#8 Reserve #12		Reserve #5	Special Hazards #1 Reserve Special Hazards #2	6000
Station 9	314 Commonwealth Avenue (Tollgate)	#9	#1			5000
Fire Alarm	915 Sandy Lane					1500
Headquarters	140 Veterans Memorial Drive					1500

13 Engines/pumpers (includes 1 Bucket) x 270,000 = 3,510,000

5 Ladders x \$600,000 = 3,000,000

6 Rescues x \$125,000 = 750,000

2 Special Hazards x \$300,000 = 600,000

3 Battalions x 40,000 = 120,000

3 Boats x 14,000 = 42,000

1 Marine x 25,000 = 25,000

1 Marine x 100,000 = 100,000

1 Dive x 14,000 = 14,000

1 Brush

36 Total vehicles at a cost of \$8,161,000

Chapter Eight

Elementary School Impact Fee

The current elementary school capacity is 6,647 and the current enrollment is 6,624 (See Table 6), therefore the school facilities are slightly under capacity. *(High school and junior high school impact fees were researched but were deemed inappropriate considering the excess capacity existing in the Warwick high school system at this time).* The planning department examined the issue of student enrollment by reviewing building permit activity for new single family residential structures. In the period from January 1, 1990 to January 1, 2000, the City issued 1323 building permits for new residential housing units. Of these permits 1275 were for single family units and 48 were for multi-family units (of these 48 permits, there were 173 units built). This equates to a ten-year average of 127.5 new single family and 17.3 new multi-family residences per year. Based on an assumed 2.52 persons per household, these permits equate to a population increase of 364.89 persons per year.

Using the ten year average of 127.5 single family building permits per year and the 1990 census data which showed that there were approximately .37 school age children per household, the planning department determined that 58.82 additional elementary school children will be enrolled in the Warwick schools by the year 2005 as a result of new single family residential construction. Impact fees can be used to offset the capital cost to the City of the increase in student enrollment.

School Facilities Impact Fee Methodology & Calculation

To accommodate the estimated full potential build-out of an additional 2202 residential units and 378 condominiums an additional 116,012.53 square feet of schools will be needed. This could consist of either many additions onto the existing elementary schools or the construction of 2 to 3 new schools.

The calculation of impact fees is based on the amount of money it would cost to build an additional square foot of school building per the most recent bid for school construction. This was based on an all-purpose room.

The current city population is approximately 85808. Using data from the 1990 census, it was determined that there are approximately .37 school age children per household. This was ascertained by dividing 12,717 by 85,808. This came out to school age children comprising 14.8% of the total population. Current enrollment at the public schools is 6,624. Capacity of all the elementary schools is 6,647 students; therefore, the school department is under capacity. Total square footage of all the elementary schools is 807,870. The area of square footage per student is 807,870 divided by 6,647 (square footage/capacity) equals 121.53 square feet per student. There is approximately 44.96 square feet of elementary school per household. Cost can be based upon latest bid to the school department per square foot of new school. The average latest bid was \$127.66 per square foot of additions onto existing schools. These costs do not include minor cost

changes, which would occur during construction and would make the prices even higher. It should be noted that these costs will go up over time, as construction costs and material costs increase, therefore creating the need to update these fees periodically. When 44.96 is multiplied by \$127.66 it comes out to \$3,028.79 per household.

Table 13
Elementary School Department Impact Fee

Total square footage of Elementary School Department Building	796449
Average estimated cost of new school department building per SF	127.66
Total cost of School Department Buildings at present cost	101674679.3
Number of persons	85808
SF of Elementary School Building per person	9.282
Cost of Elementary School Department Building per HH	2985.97

Per the 1990 census, the median value of single-family homes in Warwick was \$131,723, \$137,748 for two-family homes, and \$113,960 for multifamily homes. The current tax rate is \$24.84 per \$1000 of the assessed value of a home. Therefore, the average single family household pays \$3,271.99 per year in property taxes, the average two-family household pays \$3,421.66 per year in property taxes, and the average multi-family household pays \$2,830.77 per year in property taxes.

The average percentage of property taxes that pay towards the school bond is 1.64% (based upon 1998 and 1999 figures). If that is multiplied by 20 years (the average life of a bond) then it comes out to 32.8 % of property taxes are paying off the school bond. The school impact fee will now be discounted by 32.8% of \$3,271.99 for single family houses (\$1,073.21), \$3,421.66 for two-family houses (\$1,122.30), and \$2,830.77 for multi-family houses (\$928.49). The school impact fee will then be \$441.18 for single family houses, \$0.00 per unit for 2 family residential units, and \$0.00 for multi-family housing.

This rate is then further reduced by 30 percent to account for state aid that is given to the city to help pay off the bond debt. From 1998 until 2002 the state aid comprised between approximately 23 and 28 percent of the bond payments. This rate was rounded up to 30 percent to further increase the discount rate. The final elementary school impact fees are listed in table 14.

Table 14
School Impact Fee

	Median value of dwelling unit	Tax rate per \$1000	Annual tax revenue per unit	% of tax toward bond for 20 years	Discount rate	impact fee	State aid discount rate	Final Fee after bond discount
Single family houses	\$131,723	\$24.84	\$3,271.99	0.328	1,073.21	\$2,985.97	895.79	\$1,016.97
Two- family units	\$137,748	\$24.84	\$3,421.66	0.328	1,122.30	\$1,492.99	447.90	\$0.00
Multi- family units	\$113,960	\$24.84	\$2,830.77	0.328	928.49	\$746.49	223.95	\$0.00

Table 15
Warwick School Department Facilities

Elementary Schools			
Facility	Student enrollment	Building Square footage	Estimated student capacity
Cedar Hill	444	38374	421
Drum Rock	299	32174	301
Francis	327	36615	310
Greene	312	30446	319
Greenwood	262	30814	255
Holden	314	35594	301
Holliman	360	50974	370
Hoxsie	391	36175	347
Lippit	332	50464	324
Norwood	328	35669	301
Oakland Beach	528	56674	508
Park	284	38674	301
Potowomut	195	26924	232
Rhodes	338	41338	347
Robertson	241	44864	301
Scott	293	33734	324
Sherman	431	40948	370
Warwick Neck	333	34174	301
Wickes	292	43574	347
Wyman	320	38874	367
Ad Building		19372	
TOTAL	6624	796449	6647

Chapter Nine

Implementation and Final Observations

In order to implement the development impact fees, the City Council should have reviewed the study, referred it to the Planning Board for review and recommendation. If the report received a favorable recommendation from the Planning Board, the Council could have approved it with any changes that the Council and/or the Mayor saws fit. Once the report itself had been approved, the City Council would have directed the Planning Department to draft a development impact fee ordinance for those particular fees in which they would like to see implemented. In addition, changes to the Comprehensive Plan and the Land Development and Subdivision Regulations would have had to have been drafted by the Planning Department. The changes to the Comprehensive Plan, the Subdivision Regulations and the review and recommendation of an ordinance to be sent to the City Council should all have been completed at the same time. The Planning Board would need to hold public hearings for the changes to the Comprehensive Plan and the Land Development and Subdivision Regulations. The ordinance should have then been reviewed by the Planning Board, and sent to the City Council with changes and a favorable or unfavorable recommendation. The City Council should have then held a public hearing in order to make an addition to the Zoning Ordinance, the development impact fee ordinance. The changes to the Comprehensive Plan should have also been forwarded on to the City Council for a public hearing and adoption. Once these two items would have passed through the City Council, and were favorably voted on, the process for enacting development impact fees would have been completed.

Two years later

The Development Impact Fee Plan for the City of Warwick is still in the process of reviewed by the City Council, but to date has not been implemented through the enactment of an ordinance. To date, the Warwick City Council is still in the process of reviewing ordinances which would put the place, or components of it into affect.

The main motivation behind the initial push to have an impact fee study completed for the City was all based on a political platform of slowing growth and reducing the burden on the City's schools and other municipal services. One City Council member ran on the premise of slowing down growth in the few still under developed sections of the City, and preserving open space. Once he was elected into office, the development of this Plan was mostly fueled by his questions of the Planning Department. In addition, during this same period, a small group of very vocal residents from the one major undeveloped section of the City pressured the City to purchase the majority of the existing unprotected open land in the City. The later purchase of these properties by the City would also be a very major factor of why this Plan never made it out of committee. It was the fear of the development of this land that spurred the desire to research development impact fees for the City.

In retrospect, there was little need for development impact fees for the City of Warwick. The City of Warwick is almost completely built out and impact fees are more commonly used in rural or developing municipalities that have little infrastructure or have large amounts of undeveloped land that if developed could greatly reduce the quality of the existing infrastructure and create a need for additional infrastructure over a relatively short period of time. The majority of the concern of residents in Warwick had to do with existing deficiencies in the infrastructure for the City, a cause that impact fees would not have made any difference in solving. There was little need for additional school space, fire stations, library, or police department improvements that could not be covered through the typically used bonding process for the City. Bonds would be more equitable in that all capital improvements are paid for through bonds, which everyone will assist in paying through their municipal real estate taxes.

Impact fees can be a very useful planning tool. They can work very well in rural and growing communities to help offset the costs of new development on the existing housing stock so that homeowners are not overburdened with tax increases. In my current employment for the Town of Richmond, Rhode Island, development impact fees have been in place since 1995 as part of an overall growth management program. The impact fees have been very successful at what they were designed to do, and other growing municipalities have been implementing or trying to implement impact fees due to their success.

Appendix A

Population Projection

Table 16
Warwick Population Projection

Persons per household	
<i>1990-2000 estimate</i>	
Permitted units 1990-2000	1342
(x) Construction ratio	0.98 (per U.S. census)
(=) Estimated units constructed 1990-2000	1315.16
(+) Units existing in 1990	35,141 (per 1990 census)
(=) Estimated units in 2000 (pre-demolition)	36456.16
(-) Estimated demolitions 1990-2000	360
(=) Total estimated units in 2000	36096.16
(x) Occupancy rate	95.2 (per 1990 census)
(=) Estimated occupied units in 2000	34363.544
(x) Persons per household	2.52 (1990 census)
(=) Estimated 2000 non group quarters population	86596.13
(+) Group quarters population (institutionalized + others)	1124 (1990 figures)
(=) Estimated 2000 population	87720.13

Table 17
Warwick Population Projection

Persons per household	
<i>2000-2010 estimate</i>	
Permitted units 2000-2010	1342
(x) Construction ratio	0.98 (per U.S. census)
(=) Estimated units constructed 2000-2010	1315.16
(+) Units existing in 2000	36096.16
(=) Estimated units in 2010 (pre-demolition)	37411.32
(-) Estimated demolitions 2000-2010	360
(=) Total estimated units in 2010	37051.32
(x) Occupancy rate	95.2 (per 1990 census)
(=) Estimated occupied units in 2010	35272.856
(x) Persons per household	2.52 (1990 census)
(=) Estimated 2010 non group quarters population	88887.597
(+) Group quarters population (institutionalized + others)	1124 (1990 figures)
(=) Estimated 2010 population	90011.597

Table 18
Warwick Population Projection

Persons per household	
<i>2010-2020 estimate</i>	
Permitted units 2010-2020	1342
(x) Construction ratio	0.98 (per U.S. census)
(=) Estimated units constructed 2010-2020	1315.16
(+) Units existing in 2010	37051.32
(=) Estimated units in 2020 (pre-demolition)	38366.48
(-) Estimated demolitions 2010-2020	360
(=) Total estimated units in 2020	38006.48
(x) Occupancy rate	95.2 (per 1990 census)
(=) Estimated occupied units in 2020	36182.168
(x) Persons per household	2.52 (1990 census)
(=) Estimated 2020 non group quarters population	91179.063
(+) Group quarters population (institutionalized + others)	1124 (1990 figures)
(=) Estimated 2020 population	92303.063

Appendix B
Building permits 1990-2000

Table 19
Building Permits 1990-2000

		Single Family	Duplexes	Condos	Apartments	Total
Residential building permits						
	1990	184	4			
	1991	126	3			
	1992	171				
	1993	97		1 (2 unit)		
	1994	112		1 (2 unit)	2	
	1995	140		1 2 (77 units)		
	1996	90	1 (24 units)			
	1997	122	7	2 (8 units)	5 (60 units)	
	1998	114	11			
	1999	119	9			
	2000	19				
	Total	1294	35	4	9	1342

Appendix C

Demolition permits

Table 20
Residential Demolition Permits

Residential Demolition Permits - City of Warwick			
	Year	Number of Demolitions	
	1999	36	
	2000	1	
	Total	37	

Appendix D
Bond discounted impact fees

Table 21
Bond Adjusted Impact Fees

School Impact fee								
	Median value of dwelling unit	Tax rate per \$1000	Annual tax revenue per unit	% of tax toward bond for 20 years	Discount rate	impact fee	State aid discount rate	Final Fee after bond discount
Single family houses	\$131,723	\$24.84	\$3,271.99	0.328	1,073.21	\$2,985.97	895.79	\$1,016.97
Two-family units	\$137,748	\$24.84	\$3,421.66	0.328	1,122.30	\$1,492.99	447.90	\$0.00
Multi-family units	\$113,960	\$24.84	\$2,830.77	0.328	928.49	\$746.49	223.95	\$0.00
Recreation Impact fee								
		Median value of dwelling unit	Tax rate per \$1000	Annual tax revenue per unit	% of tax toward bond for 20 years	Discount rate	impact fee	Final impact fee
Single family houses	\$131,723	\$24.84	\$3,271.99	0.053	173.42	\$253.83		\$80.41
Two-family units	\$137,748	\$24.84	\$3,421.66	0.053	181.35	\$253.83		\$72.48
Multi-family units	\$113,960	\$24.84	\$2,830.77	0.053	150.03	\$253.83		\$103.80
Open Space Impact Fee								
	Median value of dwelling unit	Tax rate per \$1000	Annual tax revenue per unit	% of tax toward bond for 20 years	Discount rate	impact fee		Final impact fee
Single family houses	\$131,723	\$24.84	\$3,271.99	0.045	147.24	\$264.18		\$116.94
Two-family units	\$137,748	\$24.84	\$3,421.66	0.045	153.97	\$264.18		\$110.21
Multi-family	\$113,960	\$24.84	\$2,830.77	0.045	127.38	\$264.18		\$136.80

units								
Fire Dept. Impact Fee								
	Median value of dwelling unit	Tax rate per \$1000	Annual tax revenue per unit	% of tax toward bond for 20 years	Discount rate	impact fee		Final impact fee
Single family houses	\$131,723	\$24.84	\$3,271.99	0.028	91.62	\$512.79		\$421.17
Two- family units	\$137,748	\$24.84	\$3,421.66	0.028	95.81	\$512.79		\$416.98
Multi- family units	\$113,960	\$24.84	\$2,830.77	0.028	79.26	\$512.79		\$433.53
Police Dept.	No Bonds							\$241.12

Appendix E

Protected Open Space

The following is an inventory of open space parcels that have been acquired by the City for conservation purposes. These areas were acquired and placed in the City's inventory of permanent open space because they are wetlands, protect known aquifers and/or support wildlife habitat. In 1988, the City's new zoning ordinance included a district designation for open space. Within this district, public lands that are set-aside for conservation and recreational purposes are zoned open space.

Table 22
Preserved Open Space

City of Warwick			
Preserved Open Space			
<i>Location</i>	<i>Square footage</i>	<i>Plat</i>	<i>Lot</i>
Sheryl Cir.	42399	210	156
Austin Rd	2500	212	15
Ebony Dr	44810	213	223
Green Bush Rd	7.844	217	1
Gilbert Stuart Dr	835	217	72
Heritage Dr	1861	217	74
Masthead Walk	51401	222	139
Brookline Dr	4862	223	150
Indian Hill Rd	33302	223	168
Joseph Ct.	266404	223	214
Green Bush Rd	4025	228	48
Green Bush Rd	8375	228	71
Major Potter Rd	6800	228	72
Verdant Ln.	44953.92	234	198
Highland Ave	3451	235	181
Cowesett Rd	760	236	2
Sturbridge Dr	24010	237	349
Sturbridge Dr	26049	237	357
Cowesett Rd	433857.6	238	56
Pleasant St	5960	245	168
Pleasant St	5770	245	169
33 Veterans Mem. Dr	14206	245	260
Post Rd	3336	245	287
Kettle St	84070.8	246	215
Weber Ave	11808	246	305
Genetian Ave	326700	246	321
Centerville Rd	31805	248	16
Baldwin Rd	649044	248	139
Baldwin Rd	24300	248	140
Country View Dr	211440.24	250	55
Creamer Ave	5225	251	73
Bald Hill Rd	290675.88	254	2
Bald Hill Rd	101364.12	254	14
Toll Gate Rd	2666	261	17
Toll Gate Rd	4495	261	23
Toll Gate Rd	417	261	27
Providence St	5000	262	104

Providence St	10797	262	108
Finance St	9150	262	154
Jambray Ave	20404	262	266
Jambray Ave	17510	262	284
Railroad ROW	396396	263	22
Post Rd	22651	267	208
Covington Dr	13882	270	359
Dodge St	224334	270	445
Knight St	109335.6	275	47
Knight St	9234.72	275	56
Eastgate Dr	182124.36	275	70
Ring Ave	12000	287	51
Ring Ave	12000	287	52
Ring Ave	14400	287	53
Ring Ave	12000	287	56
Ring Ave	12000	287	57
Ring Ave	12000	287	58
Ring Ave	12000	287	59
Ring Ave	14400	287	60
Wriston Ave	12000	287	61
Wriston Ave	12000	287	62
Wriston Ave	12000	287	63
Wriston Ave	12000	287	64
Wriston Ave	12000	287	65
Wriston Ave	14400	287	66
Wriston Ave	16400	287	67
Wriston Ave	14000	287	68
Wriston Ave	14000	287	69
Wriston Ave	14000	287	70
Wriston Ave	11200	287	71
Elmwood Ave	4000	287	86
Heath Ave	4000	287	94
Heath Ave	8000	287	95
Heath Ave	12000	287	96
Heath Ave	4000	287	97
Heath Ave	4000	287	105
Heath Ave	14000	287	106
Heath Ave	6000	287	107
Heath Ave	4000	287	108
Heath Ave	6000	287	109
First Ave	8000	287	110
Wingate Ave	10000	287	121
Wingate Ave	8000	287	122
First Ave	8000	287	123
Wingate Ave	10500	287	128
Wingate Ave	4000	287	130
First Ave	4000	287	131
Sumner Ave	10000	287	133
Sumner Ave	8000	287	134

Sumner Ave	14000	287	135
Sumner Ave	8000	287	136
Sumner Ave	4000	287	137
Sumner Ave	4000	287	138
First Ave	4000	287	139
Sumner Ave	8000	287	143
Sumner Ave	12000	287	144
Sumner Ave	8000	287	145
Sumner Ave	4000	287	146
Ring Ave	4000	287	151
Ring Ave	8000	287	152
First Ave	8000	287	153
Ring Ave	13000	287	156
Elmwood Ave	7000	287	158
First Ave	10000	287	159
First Ave	12950	287	160
First Ave	10000	287	161
Wingate Ave	12200	287	162
Wingate Ave	8000	287	163
Wingate Ave	7734	287	165
Wingate Ave	17000	287	167
First Ave	12000	287	168
Sumner Ave	16000	287	169
Sumner Ave	16000	287	170
Sumner Ave	6500	287	171
Sumner Ave	12000	287	172
Sumner Ave	6000	287	173
Sumner Ave	10000	287	174
Sumner Ave	4000	287	175
Sumner Ave	6000	287	176
Sumner Ave	10000	287	177
Sumner Ave	8000	287	178
Ring Ave	6000	287	180
Ring Ave	8000	287	181
Ring Ave	4000	287	182
Ring Ave	6000	287	184
Ring Ave	10000	287	186
Ring Ave	4000	287	188
Ring Ave	6000	287	189
Ring Ave	16000	287	190
Iona Ave	12000	287	191
Iona Ave	12000	287	193
Iona Ave	6000	287	194
Iona Ave	6000	287	195
Iona Ave	10000	287	196
Mill St	6000	287	197
Iona Ave	5650	287	198
Iona Ave	9240	287	199
Mill St	10000	287	200

Mill St	8820	287	202
Sumner Ave	13870	287	203
Ring Ave	14000	287	204
Ring Ave	43000	287	207
Ring Ave	8000	287	209
Ring Ave	4000	287	210
Ring Ave	12000	287	211
Marsh Dr	6610	287	213
Iona Ave	4000	287	214
Iona Ave	8000	287	216
Iona Ave	6000	287	217
Iona Ave	6000	287	218
Iona Ave	8844	287	219
Iona Ave	9600	287	220
Iona Ave	14400	287	222
Iona Ave	3870	287	223
Iona Ave	12000	287	224
Cup St	6400	287	225
Cup St	14400	287	226
Cup St	1600	287	227
Marsh Dr	4830	287	228
Cup St	4350	287	229
Mill St	10900	287	230
Cup St	3200	287	231
Cup St	8000	287	232
Cup St	6400	287	233
Cup St	16000	287	234
Marsh Dr	7520	287	235
Marsh Dr	1600	287	236
Iona Ave	4000	287	237
Wingate Ave	4000	287	239
Wingate Ave	7000	287	240
Wingate Ave	4000	287	241
Iona Ave	4000	287	242
First Ave	12000	287	243
Ring Ave	10000	287	244
Wingate Ave	5000	287	246
Sumner Ave	4000	287	247
Ring Ave	6000	287	248
Ring Ave	15610	287	249
Heath Ave	4000	287	253
Ring Ave	14000	287	259
Wingate Ave	6000	287	260
First Ave	11862	287	262
Marsh Dr	1690	287	263
Heath Ave	1000	287	270
Ring Ave	10000	287	273
George Circle	64357	287	284
George Circle	50141	287	285

Pasadena Ct.	201682.8	288	14
Wendell Rd	5673	289	29
Butler Ct	1018	292	230
Bay Lawn Ave	11400	292	235
Narragansett Pkwy	4129	292	351
East View St	4060	292	352
East View St	4060	292	354
East View St/2	26090	292	366
Narragansett Pkwy	130	292	372
East View St	6195	292	378
East View St	3335	292	380
East View St	3330	292	381
East View St	2706	292	382
East View St	1106	292	383
East View St	656	292	384
East View St	706	292	385
Service Rd/300	53578.8	292	386
Remington St	5216	292	571
Power Ave	4000	293	164
Arbutus Ave	4140	293	165
Power Ave	3169	293	166
Washington St	26154	293	644
Rosegarden St	48247	293	670
Tilden Ave	2656	293	763
Tilden Ave	2456	293	773
Madison St	3200	293	774
Post Rd	8276	293	922
Post Rd	171190.8	294	90
Negansett Ave	204732	294	235
Negansett Ave	4633	294	236
Ring Ave	2700	295	311
Wriston Ave	22400	295	313
Ring Ave	55000	295	314
Wriston Ave	38400	295	315
Wriston Ave	22400	295	318
Wriston Ave	22400	295	320
Post Rd	616461.12	295	391
Lyman Ave	3834	296	88
Lyman Ave	7875	296	107
Lyman Ave	6550	296	108
Lyman Ave	8351	296	109
Lyman Ave	10200	296	110
Lyman Ave	10000	296	111
Lyman Ave	9695	296	112
Lyman Ave	5000	296	113
Pride Ave	5000	296	114
Pride Ave	5000	296	115
Pride Ave	5000	296	116
Pride Ave	6170	296	117

Lyman Ave	4500	296	118
Pride Ave	9400	296	120
Pride Ave	5000	296	121
Pride Ave	6952	296	123
Frederick St	7500	296	124
Frederick St	147668.4	296	147
Manolla Ave	3200	296	353
Frederick St	3580	296	653
Sand Pond Rd	2178	298	1
Sand Pond Rd	8745	298	4
Sand Pond Rd	2145	298	5
Sand Pond Rd	4634	298	6
Post Rd	9615	298	11
Hollywood Ave	106722	298	59
Hollywood Ave	88862	298	60
Sandlewoos Ave	21494	298	84
Massasoit Dr	67518	298	214
Puritan Dr	52272	298	251
Pilgrim Dr	385506	298	289
Bigelow Cir		298	291
Massasoit Dr		298	292
Massasoit Dr	4300	298	300
Warwick Ave	23348	300	136
Warwick Ave	6154	300	137
Warwick Ave	6086	300	261
Columbia Ave	5846	301	293
North Country Club Dr	567586.8	301	375
Columbia Ave	968	301	416
Monroe St	1264	301	531
Monroe St	1278	301	532
Monroe St	1278	301	533
Edgeknoll Ave	7700	303	18
Pleasant View Rd	1298	303	450
Howie Ave	60112.8	303	567
Parkside Ave	1580	303	610
Algonquin Dr		306	419
Squantum Dr	54450	307	327
Michigan Ave	4000	310	8
Greenacre Ave	2300	311	141
Law St	3600	312	230
AppleTree Ln	4550	314	21
Kristen Ct	12516	314	69
Rock Ave	7500	317	161
Dudley Ave	3360	317	205
Dudley Ave	3913	317	206
Lake Shore Dr	202989.6	320	141
Edgehill Rd	4210	328	413
Edgehill Rd	2966	328	414
Edgehill Rd	8431	328	415

Duluth Ave	283575.6	329	345
Vernon St	319730.4	330	12
Vernon St	24393	330	55
Duluth Ave	28314	330	149
Duluth Ave	27007.2	330	193
Overbrook Ave	14170	331	71
Roanoke Ave	4398	331	153
Roanoke Ave	4532	331	154
Roanoke Ave	4848	331	155
Roanoke Ave	4346	331	156
Roanoke Ave	4453	331	157
Transit St	8250	331	336
Green River Ave	6696	332	23
Green River Ave	7315	332	24
Obadiah Ave	3600	332	52
Obadiah Ave	3895	332	53
Obadiah Ave	4032	332	54
Winter Ave	26613	332	244
Ardway Ave	4087	332	245
Ardway Ave	3269	332	263
Ardway Ave	3630	332	271
Ardway Ave	3633	332	272
Ardway Ave	3637	332	273
Ardway Ave	3573	332	274
Savoy St	3600	332	302
Ardway Ave	3200	332	304
Ardway Ave	3200	332	306
Savoy St	2720	332	313
Morris St	4622	332	315
Ardway Ave	4000	332	320
Ardway Ave	4000	332	321
Lyll Ave	4175	332	334
Loring Rd	2796	332	392
Loring Rd	2450	332	393
Loring Rd	2450	332	394
Loring Rd	2450	332	395
Loring Rd	1750	332	396
Loring Rd	7050	332	397
Ardway Ave	3825	332	399
Ardway Ave	3810	332	400
Mayette Ave	2750	332	402
Mayette Ave	3850	332	403
Winter Ave	16588	332	422
Winter Ave/122	230868	332	470
June Ave	22167	332	556
Damon Ave	3925	332	809
Damon Ave	2875	332	810
Damon Ave	2250	332	823
Point Ave	5000	333	40

Ivan Ave	4892	333	74
Symonds Ave	5000	333	77
Shawomet Ave	400	333	228
Point Ave	3946	334	71
Point Ave	3790	334	72
Coldwell St.	5000	334	368
Conimicut Point	620730	334	459
Tidewater Dr.	971	336	186
Miller Ave	3600	336	215
Sterling Ave	3600	336	220
Economy Ave	6152	336	224
Sterling Ave	3600	336	228
Sterling Ave	3600	336	229
Edgemere Ave	3600	336	236
Edgemere Ave	3600	336	237
Edgemere Ave	3600	336	238
Edgemere Ave	3600	336	239
Edgemere Ave	3600	336	244
Economy Ave	4250	336	279
Economy Ave	3950	336	280
Tidewater Dr.	2854	336	337
Howard Ave	2436	337	140
West Shore Rd	1361816.28	337	352
Sandy Lane	34279	337	438
Bend St/78	280395.72	337	439
Stillwater Dr.	850	340	621
Lazywood Lane	2160	340	622
Social Dr.	25264.8	340	624
Social Dr.	11125	340	651
Warwick Ave	152460	340	689
Marigold Dr.	42253.2	341	112
Cedar Swamp Rd	142005.6	341	149
Burgess Dr	15308	343	190
Adrian St	5000	343	380
Adrian St	5260	343	381
Sundance St.	50528	343	409
Greeley Ave/98	130680	345	304
West Shore Rd		346	303
Normandy Dr		346	356
Everglade Ave	3200	348	79
Inman Ave	2600	348	155
Inman Ave	2400	348	193
Inman Ave	5600	348	196
Sandy Lane/863	8712	349	2
Sandy Lane	5160	349	254
Kenneth Ave	3200	350	272
Sparrow Lane	56628	351	253
West Shore Rd	607226.4	354	33
Whipple Ave	5000	355	300

Cady Ave	10000	355	329
Cady Ave	5290	355	360
Cady Ave	1480	355	361
Cady Ave	6700	355	362
Pender Ave	4498	355	387
Pender Ave	6267	355	389
Pender Ave	4500	355	422
Pender Ave	4500	355	423
Pender Ave	4500	355	424
Van Zandt Ave	4500	355	435
Van Zandt Ave	4500	355	436
Van Zandt Ave	5940	355	437
Van Zandt Ave	5607	355	468
Van Zandt Ave	5696	355	469
Van Zandt Ave	5784	355	470
Van Zandt Ave	4000	355	471
Longmeadow Ave	6400	355	485
Longmeadow Ave	5920	355	486
Longmeadow Ave	6200	355	487
Longmeadow Ave	6660	355	491
Longmeadow Ave	18600	355	513
Riverside Ave	5000	355	517
Riverside Ave	5000	355	518
Riverside Ave	5000	355	520
Shore Ave	15478	355	536
Riverside Ave	4041	355	549
Payton Ave	5000	355	600
Payton Ave	5000	355	601
Payton Ave	5000	355	603
Payton Ave	4500	355	604
Riverside Ave	7600	355	605
Park Ave	5000	355	625
Park Ave	5000	355	626
Park Ave	5000	355	627
Samuel Gorton Ave	5000	355	629
Samuel Gorton Ave	6500	355	630
Samuel Gorton Ave	5400	355	670
Avis St.	7939	355	673
Cady Ave	10833	355	676
Dorr St.	375	355	679
Samuel Gorton Ave	5557	356	37
Samuel Gorton Ave	3898	356	38
Avon Ave	5676	356	41
Avon Ave	6637	356	42
Seashore Rd	6176	356	45
Seashore Rd	2700	356	46
Seashore Rd	8350	356	47
Seashore Rd	5600	356	48
Seashore Rd	6300	356	49

Seashore Rd	6300	356	50
Avon Ave	5000	356	91
Seashore Rd	7000	356	114
Seashore Rd	5085	356	206
Hazel St.	4080	357	297
State St	3200	357	298
Hazel St.	3200	357	299
State St	3200	357	300
Hazel St.	3200	357	301
State St	3200	357	302
Hazel St.	4080	357	333
Jane St.	4240	357	334
Jane St.	3200	357	335
Hazel St.	3200	357	336
Jane St.	3200	357	337
Hazel St.	3200	357	338
Jane St.	3200	357	339
Cross Road Dr.	3200	357	340
Cross Road Dr.	3200	357	341
Cross Road Dr.	3200	357	342
Cross Road Dr.	3200	357	343
Jane St.	4960	357	344
Circular St.	3900	357	345
Circular St.	3200	357	346
Circular St.	3200	357	347
Jane St.	3200	357	348
Circular St.	3200	357	349
Jane St.	3200	357	350
Circular St.	3200	357	351
Jane St.	3200	357	352
Circular St.	3200	357	353
Jane St.	3200	357	354
Circular St.	3200	357	355
Cross Road Dr.	3200	357	357
Cross Road Dr.	3200	357	359
Cross Road Dr.	3200	357	360
Circular St.	3880	357	371
Circular St.	3200	357	372
Circular St.	1500	357	373
Circular St.	3400	357	374
Circular St.	5400	357	375
Circular St.	4000	357	376
Circular St.	4000	357	377
Circular St.	3200	357	378
Cross Road Dr.	3080	357	379
Cross Road Dr.	2880	357	380
Circular St.	3200	357	381
Circular St.	3200	357	382
Circular St.	3200	357	383

Circular St.	2590	357	384
Circular St.	4000	357	385
Circular St.	4000	357	386
Cross Road Dr.	2720	357	387
Cross Road Dr.	2640	357	388
Bourne St.	36208	357	389
Cross Road Dr.	61250	357	410
Bourne St.	6300	357	411
Cross Road Dr.	3200	357	446
Cross Road Dr.	3200	357	466
Cross Road Dr.	3200	357	467
Jane St.	3200	357	469
Jane St.	3200	357	471
Jane St.	3200	357	473
Jane St.	3200	357	475
Jane St.	3200	357	477
Cross Road Dr.	3200	357	489
Cross Road Dr.	3200	357	490
Jane St.	3200	357	493
Jane St.	3200	357	495
Jane St.	3200	357	497
Jane St.	3200	357	499
Jane St.	3200	357	501
Jane St.	3200	357	503
Jane St.	3200	357	505
Jane St.	3200	357	507
Jane St.	3200	357	509
Jane St.	4080	357	511
Cross Road Dr.	261360	357	513
Meadow View Ave	21780	357	514
Meadow View Ave	16467	357	516
Palmer Ave	10512	357	518
Warren Ave	3200	358	140
Ernest Ave	3200	358	141
Warren Ave	3200	358	142
Ernest Ave	3200	358	143
Warren Ave	3200	358	144
Ernest Ave	3200	358	145
Ernest Ave	3200	358	147
Warren Ave	3200	358	148
Warwick Neck Ave	3522	358	267
Warwick Neck Ave	6500	358	279
Holden St.	3840	359	522
Canden St.	19000	359	566
Holden St.	8000	359	567
Wood St	3021	360	131
John St.	3352	360	132
Manning St.	3352	360	226
Oakland Beach Ave/340	385070.4	360	789

Salix St	80	360	851
Pinehurst Ave.	1600	360	856
Limestone Rd.	995	360	862
Irma Ave	6233	361	564
Irma Ave	3196	361	567
Irma Ave	3196	361	568
Hawksley Ave.	375	361	751
Haswill St	455	361	817
Custer St.	858	361	849
Cottage Grove Ave	6400	362	169
Cove Ave	388990.8	362	577
Kerri Lyn Rd.	54450	363	163
Macarthur Dr	3200	363	170
Inez Ave	8000	363	201
Boyle Ave	80586	363	523
Inez Ave	15456	363	830
Long St	165	363	847
Atkins St	964	363	853
Creekwood Dr	40510.8	364	414
Larson Dr	28522	364	484
Staples Ave	8080	365	69
Staples Ave	8150	365	71
Hallworth Dr	110206.8	365	279
Asylum Rd	1468407.6	371	4
Asylum Rd/40	7402586.4	372	1
Oakland Beach Ave	491792.4	375	549
Suburban Pkwy.	27000	376	371
Oakland Beach Ave.	688683.6	376	549
Camp St	2653	380	55
Brinton Ave	184694.4	380	69
Total	25,994,640.6		

Appendix F
Warwick Recreation Land

Table 23
Parks and Recreation Land for the City of Warwick

Name	Type of Lot	Location	Acreage	Ward	Census Tract	Plat	Lot
Winslow Soccer Complex	Park	Stevens Avenue	1.7	7		345	304
Pawtuxet Park	Park	Narragansett Blvd.	2.666	1	210	292	386
George Boyd Field	Field	Library at Sandy Lane	2.3	6	218	350	586
Whittaker Playfield	Playfield	N. Country Club Dr./Monroe St.	13.03	1	210	301	375
Adams St. Playground	Playground	Adams/Washington St.	1.376	1	212	293	670
Wells Avenue Playground	Playfield	Wells Ave. & Pembroke Ave.	0.9	3	214.01	321	4
Warwick Neck School Playground	Playground	Warwick Neck/Rocky Point Ave.	2.21	5	215.02	379	14
Gorton Pond	Beach	Post Rd/Veterans Memorial Pky.	3.95	7	221	245	
Arnolds Neck Waterfront Park	Playfield	Halworth Street	2.53	7	220	365	279
Apponaug Park	Park	Post Road 1	0.24	7	220	245	63
Kerri-Lyn Playground	Playground	Kerri-Lyn Road/Boule Ave.	1.605	6	219.03	363	163
Lippitt School Playground	Playground	Gulf Street/Alma Ave	3.31	3	219.02	348	431
Robertson School Field	Playfield	70 Nausauket Road	4.55	7	219.03	364	203
Sherman school Playfield	Playfield	Killey Ave./Hobbs Road	4.8	5	218	339	301
Gorton School Football Field (West)	Field	Draper Avenue	27.5	5	215.02	354	49
Gorton School Football Field (East)	Field	Draper Avenue	10.19	5	215.02	354	48
Mission Playground	Playground	Oakland Beach Ave/Burr Street	0.4	5	217	376	549
Sand Beach Pond	Beach	Massosoit Dr./Puritan Dr.	3.1	3	212	298	251
Wyman School Playfield	Playfield	Parkside Ave./Pleasant View Rd	8.86	1	210	303	412
Johnson Field	Field	West Shore Rd/Bend Street	6.437	4	215	337	439
Holden School Playfield	Playfield	Hoxsie St/Ansot Ct	1.69	4	214.01	320	243
Hoxsie School Playfield	Playfield	Glenwood/Woodcrest Sts.	14.3	4	214.02	319	499
Dodge Street Playfield	Playfield	Dodge Street/Chatworth Avenue	5.27	8	221	270	445
Father Tirocchi Playfield	Playfield	Railroad Row	9.1	8	223	263	22
Pilgrim School Playfield	Playfield	Fairfax Dr./Dedham	10.78	2	212	299	194
Arnold's Pond Beach	Beach	Warwick Avenue	0.677	2	212	300	261
John Brown Francis School	Playfield	Landsowne Road/Miantonomo Dr.	9.9	1	213	307	387
Rhodes School Playfield	Playfield	Underwood/Park View	9.97	2	210	288	424
Winslow Playfield	Playfield	Greeley Ave. 1 Hunt	3.1	7	219.01	345	304

		Ave.					
Rubery Playfield	Playfield	Frederick Street/Pride Avenue	6.8	3	211	296	147
Pontiac Playground	Playfield	Greenwich Avenue	1.78	8	223	273	438
Tollgate School Field	Playfield	Tollgate Road	5.94	8	222.02	255	2
Chepiwanoxet Park	Park	Alger Avenue	10.018	9	221	221	94
Conimicut Point Park	Park/Beach	Elgin/Conimicut Point Avenue	14.25	4	215	334	459
Palmer Avenue Playfield	Playfield	Palmer/Cliff Avenues	4.24	5	215.02	380	69
Carrie Peabody Champlain	Playfield	Oakland Beach/Barbara Avenue	6.54	5	217	360	789
Oakland Bch Park w/ O'Hara Field	Park/Field	Burr/Oakland Beach Aves.	25.9	5	217	376	549
City Park	Park	Asylim Road	196	6	219.03	372	1
Mickey Stevens Sports Complex	Complex	Sandy Lane	41.85	6	218	349	1
O'Brien Field Playfield	Playfield	Veterans Memorial Parkway	4.1	7	220	245	61
Sprague Playfield	Playfield	Post Road/Lakewood Avenue	4	2	210	294	90
Clegg Playfield	Playfield	Winter/Damon Avenues	6.8	4	215	332	470
Porter Field	Playfield	Vernon Street	7.34	4	214.02	330	12
Crocket St. Playground	Playground	Crockett/Strand Street	0.8	5	217	375	549
Spring Green School Playfield	Playfield	Shippen Ave./Willing Ave.	1.95	1	213	307	89
Wickes School Playfield	Playfield	50 Buttonwoods Avenue	4.8	6	219.01	347	476
Greenwood School Playfield	Playfield	93 Potters Avenue	1.11	7	221	267	99
Cedar Hill School Playfield	Playfield	Love Lane/Red Chimney Drive	5.41	9	221.01	234	160
Duchess Street Field	Playfield	End of Duchess Street	9.96	9	222.01	238	56
Scott School Field	Playfield	Baldwin Road	3.26	8	222.02	248	2
Potowomut School Playfield	Playfield	225 Potowomut Road	1.12	9	224	213	8
Stevens Avenue Park	Park	Stevens Avenue	1.36	7		345	304
Arnold's Neck Playground					220		
Salter Grove	Park	Narragansett Parkway	8.5	2	214.01		187
Oakland Beach Boat Ramp	Ramp		0.85	6			
Warwick Vets Field & Little Pond	Playfield	West Shore Rd/ Fletcher St	30.74	6	218	349	585
Lincoln Park	Park		1.53	3			
Total			573.39				

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