

# **Chapter II Land Use**

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## ***West Warwick Comprehensive Plan***



## CHAPTER II LAND USE

*"Designates the proposed general distribution and general location and inter-relationship of land use for residential, commercial, industry, open space, recreation facilities, and other categories of public and private uses of land. The land use element is based upon the other elements contained in the Plan and it will relate the proposed standards of population density and building intensity to the capacity of the land and available or planned facilities and services. A land use plan map, illustrating the future strategy and land use policy of the municipality as defined by the comprehensive plan, is required. The land use plan must contain an analysis of the inconsistency of existing zoning districts, if any, with the land use plan. The land use plan should specify the process by which the zoning ordinance and zoning map shall be amended to conform to the comprehensive plan." -- Rhode Island Comprehensive Planning and Land Use Regulation Act*

### II.1 Historic Development Patterns

West Warwick is located near the geographical center of Rhode Island, and is one of the most densely populated communities in Rhode Island. In the eighteenth century, the Town was home to a thinly scattered farming population, and the common unit of settlement was the family farm. Agriculture remained the principle economic activity in the Town throughout the century.

During the nineteenth century, West Warwick was transformed from a farming area into one of Rhode Island's most heavily industrialized towns. Textile mills were built along the Town's rivers and became the nuclei of small villages. The creation of these villages - Centerville, Crompton, Natick, Lippitt, Phenix, Riverpoint, Clyde, and Arctic - gave the Town its characteristic arrangement and flavor which it retains even now.

Later in the century, some of these villages, especially Phenix and Arctic, grew into genuine urban centers. As the scale of production increased in the Town's mills, the growth of the villages surrounding them kept pace. The mill villages, which began as small hamlets, acquired many of the institutions which would serve the needs of the community - schools, churches, post offices, stores, and banks - and became the focus of the area's economic and social life.

In 1913, West Warwick was incorporated as a separate town. Development in the preceding century had not focused on a single institution or commercial center; the Town was essentially a federation of mill villages. Although West Warwick remains a factory town, the decline of the textile industry after World War I affected great physical and social changes, almost as great as the change from agriculture to manufacturing a century earlier.

**Recent Development Patterns** - Since the end of World War II, most residential building has followed a suburban pattern, and large tracts of single-family houses have been built, such as those in the Cowesett Farm area in the southern part of town, at the Knight Farm in Westcott, and in the area off Wakefield Street. In recent years, some multi-family buildings have also been constructed, including elderly housing projects, apartments and condominiums. The open spaces which once separated the mill villages are now filling up with such developments.

Increasing use of the automobile and highway and commercial improvements have diminished the dominance of the mill villages. Changes in the Town's highway system have been both a reflection of and an encouragement to the new growth. State Route 2 and Washington Street in Arctic are the sites of many businesses which serve the automobile-oriented public, and the construction of Interstate 95 in the 1960's has provided a convenient link from West Warwick to other parts of the metropolitan region. Industrial development also has been influenced by automobile-oriented patterns. While some manufacturer's have continued to use the nine-



teenth-century mills, others have located in the industrial park established in the early 1970's in the southern part of town, near Interstate Route 95.

**Existing Land Use** - Table II-1 illustrates trends in existing land use in West Warwick for 1965 to the present. Information for 1965 is from the 1970 Comprehensive Plan, while 1990 data is from the land use inventory completed by Albert Veri & Associates in May, 1990.<sup>1</sup> There are some inconsistencies in the comparison with 1965, due to different interpretations of land use categories. However, for the major land use categories, this presents a generally accurate picture of land use trends over the past 25 years.

Currently, the Town of West Warwick is heavily developed, with over 70 percent of its total area in some form of development. Most of this development, 39.7 percent, is in residential use, including single family homes, two and three family homes, multifamily homes and condominiums. Over the past 25 years, 995 acres of land has been developed for residential uses in the Town. Seventy percent of the residential development in the Town is single family, followed by multifamily (defined as more than two families in a structure), at 16 percent, and two-family housing at 14 percent.

**Commercial** - Commercial land uses are primarily activities associated with the sale of products and services, as well as office activities. Commercial land uses, including mixed uses, comprise nearly 5 percent of the Town's total land area, or 200+/- acres. This is an increase of 40 acres of developed commercial property since 1965.

**Industrial** - Property classified as developed industrial land increased during the past 25 years. Approximately 380 acres of developed industrial land exists in West Warwick, including the scattered mill sites and the Town's industrial park.

**Public and Semi-public** - Public and semi-public uses, which include schools, recreational areas, public open space, churches and other institutional uses, comprise almost 13 percent of the Town's land area. The large increase shown since 1965 (see Table II-1) is likely due to the differences in defining public/semi-public uses.

**Vacant** - Undeveloped, or vacant land, are parcels which are classified as vacant in the tax roll. These may be developable or undevelopable parcels, such as wetlands or steep slope areas. There are 1,166 acres of undeveloped land remaining in West Warwick, about 22 percent of the Town's total land area. State-wide, undeveloped land comprises some 72 percent of the State's total land area, while 28 percent is developed or committed.

There has been a significant change in the amount of undeveloped land in West Warwick, due to development in all land use categories. Since 1965, over 1,500 acres of previously undeveloped land has been developed. Remaining vacant land is largely zoned for residential purposes (858 acres), while 309 acres of vacant land is zoned for industrial or commercial purposes.

Figure II-1 illustrates the changes in land use since 1965, and Figure II-2 shows 1990 land use. Table II-2 shows a detailed breakdown of existing land uses.

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<sup>1</sup> Existing land use is represented on a 1"=1,000' scale map of the Town, available through the Town Planner's office.



Figure II-1  
Land Use Trends, 1965-1990  
West Warwick, Rhode Island

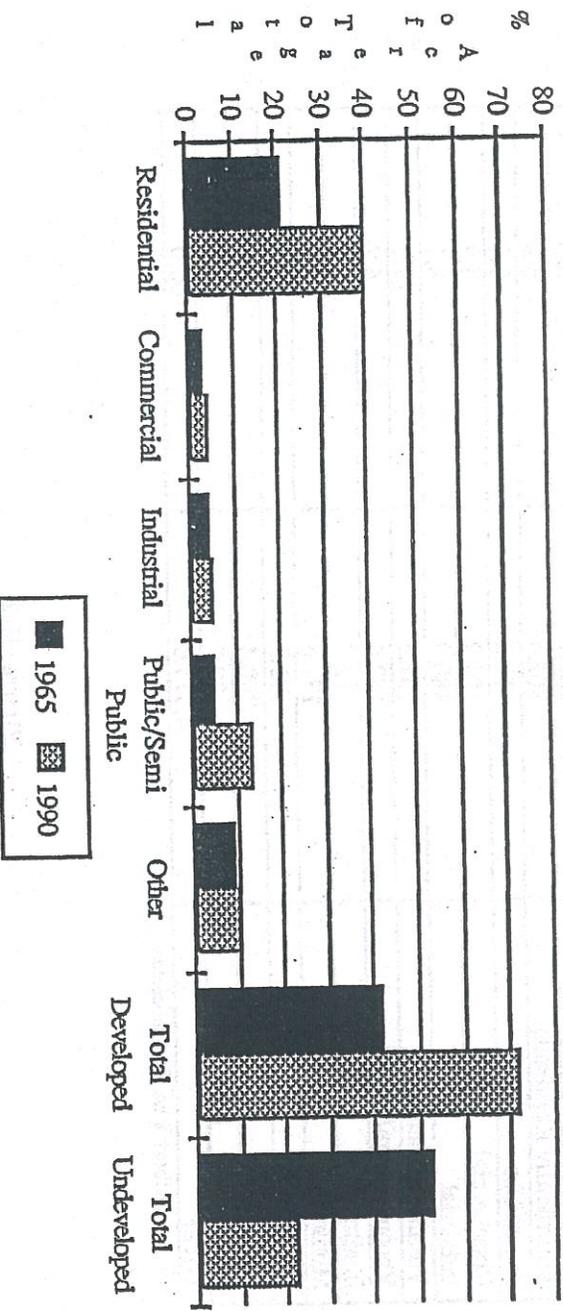


Table II-1  
Existing Land Use, 1965-1990

	1965	Percent of Total Area	1990	Percent of Total Area	% Change 1965-90
Residential	1,084	20.7	2,079	39.7	91.8
Commercial	160	3.1	200	3.8	25.0
Industrial	213	4.1	380	7.3	78.4
Public/Semi Public	234	4.5	553	10.6	136.3
Other	473	9.0	537	10.3	13.5
Total Developed	2,164	41.3	3,749	71.7	73.2
Total Undeveloped	2,751	52.6	1,166	22.3	-57.6
Total Land Area	4,915	93.9	4,915	94.0	NA
Total Water Area	320	6.1	320	6.0	NA
Total	5,235	100.0	5,235	100.0	NA

Source: Albert Vati & Associates, Rhode Island Department of Administration, Division of State Planning.

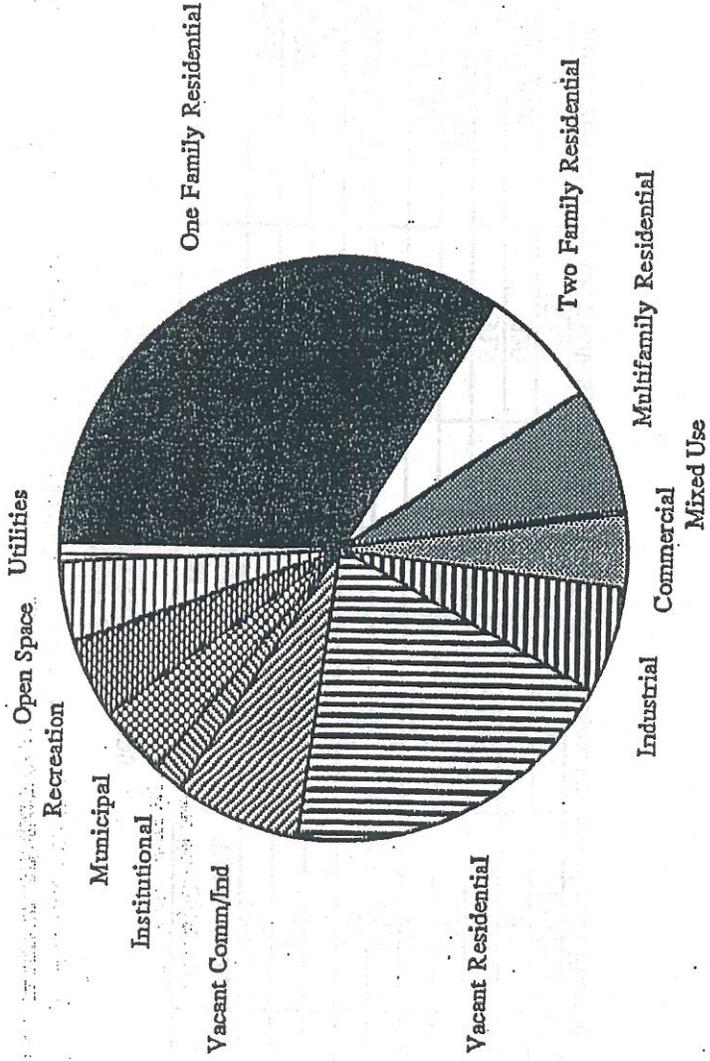


Table II-2  
Existing Land Use  
West Warwick, Rhode Island

Land Use	1990 Acres	Percent of Total
One Family Residential	1,492.4	34.1
Two Family Residential	283.7	6.5
Multifamily Residential	302.4	6.9
Mixed Use	13.8	0.3
Commercial	184.9	4.2
Industrial	380.0	8.7
Vacant Residential	857.5	19.6
Vacant Comm/Ind	182.4	4.2
Institutional	72.7	1.7
Municipal	172.6	3.9
Recreation	193.3	4.4
Open Space	200.4	4.6
Utilities	39.5	0.9
<b>Total</b>	<b>4,375.6</b>	<b>100.0</b>

Source: Albert Veri & Associates

Figure II-2  
Existing Land Use, 1990  
West Warwick, Rhode Island



Sources: West Warwick Tax Assessor, 1990  
Albert Veri & Associates, Inc., 1990



There have been numerous land use changes in West Warwick over the past 25 years, most notably during the last decade, when the Crompton area began to take on the character of a moderately dense residential neighborhood. The large amount of land redistributed from the undeveloped to developed category, and the remaining amount of undeveloped land, signals the need to look closely at what additional development the Town can support and what changes are needed relative to its tax base. It is also important to make early decisions on parcels for future municipal use, such as parks or schools, while the land remains available.

## II.2 Planning Districts

The following describes the general land use patterns of each census tract/planning district in the Town.<sup>2</sup>

**Census Tract 201.01 - Crompton** - Bordered by Cowesett Road to the north, and the Coventry, East Greenwich and Warwick boundaries to the west, south and east respectively, this planning district has experienced the most significant growth over the past 10 years. The area still retains a rural quality, particularly along the East Greenwich Avenue/Greenbush Road corridor.

Large single family residential subdivisions, accessed primarily from Cowesett Road, East Greenwich Avenue, Greenbush Road and New London Turnpike are the predominant land use. A number of large condominium developments, single family attached and multifamily apartment style, are located in the district.

Industrial development is limited to the southern part of the tract, in the West Warwick Industrial Park, both north and south of Interstate Route 95. Commercial development is located along Route 2 (Quaker Lane), and Cowesett Avenue, including both strip and plaza type developments. This area also contains sizable undeveloped tracts of land, much of which is marginal or unbuildable due to wetlands and other environmental constraints. However, this tract holds the largest potential for future development, largely in the residential and industrial land use categories.

The area is largely zoned for minimum residential lot sizes of 8,000 to 10,000 square feet, a large industrial zone covering the industrial park and a business zone along Route 2, extending west along Cowesett Avenue to the vicinity of Kulas Road.

**Census Tract 201.02 - Crompton/Centerville** - This tract is located north of tract 201.01, bounded generally by Centerville Road to the north, Cowesett Avenue to the south, the Warwick City line to the east, and the Pawtuxet River to the west. Similar to census tract 201.01, single family residential development prevails. This area has less undeveloped land, and higher housing density than Crompton. Small pockets of two family residential housing exist throughout the western portion of this tract, and large multifamily complexes are located in the northeast corner of the tract.

Commercial development is located along Cowesett Avenue and Quaker Lane, as well as a couple of small commercial pockets on New London Turnpike. Industrial uses are few in this tract, with a small area adjacent to the Pawtuxet River, west of New London Turnpike.

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<sup>2</sup> West Warwick is comprised of six census tracts generally corresponding to the following neighborhoods/areas: 201 - Crompton; 202 - Arctic Hill/Centerville; 203 - Arctic/Riverpoint; 204 - Phenix/Lippitt/Clyde; and, 205 - Wakefield Hill/Natuck/Wescott.



There is little undeveloped land in this area, the few small pockets again limited in their development capacity by wetlands and other natural constraints. The area is zoned largely for minimum residential lot sizes of 6,000 to 8,000 square feet, with commercial zones along New London Turnpike, Quaker Lane, and Cowesett Avenue.

**Census Tract 202 - Arctic Hill/Centerville** - This tract is bounded to the east by the Pawtuxet River and New London Turnpike, to the north by the Providence Street and the Pawtuxet River, to the west by Providence Street, the railroad and the Coventry boundary and to the south by the Pawtuxet again.

The area contains a wide spectrum of land uses, dominated by high density residential development, including single, two-family and multifamily units. Interspersed throughout are commercial developments, particularly on new London Turnpike and Main Street. Large pockets of industrial development are located along the Pawtuxet River, most associated with older mill complexes. The Town's largest recreational area, Riverpoint Park, is located in the northern tip of the tract, and institutional uses, including the high school, civic center and churches are found throughout.

Undeveloped land is nearly non-existent in this tract, with the exception of parcels along the River and railroad, and west of Matteson's Pond. The Pawtuxet River and the sloping terrain are the dominant natural features of the area. The census tract is zoned for a variety of uses, including residential with minimum single family lot size requirements of 6,000 to 10,000 square feet; commercial and industrial uses.

**Census Tract 203 - Arctic/Riverpoint** - Arctic has long been the commercial center of West Warwick, although less so in recent years as Quaker Lane commercial development has grown to dominate the retail picture. The most densely developed part of Town, this tract is bounded to the west by the Coventry Town line, to the north by the Pawtuxet River, the east by Providence Street and the railroad, and to the south by the railroad.

Land uses include high density residential development, mostly single family detached and two-family units. The commercial center is located along Main and Washington Streets, as is the governmental and public safety core. Some industrial development exists in this area, associated with older mill complexes mostly along the River. Undeveloped land is lacking, with some small parcels available for infill development. The Pawtuxet River is the predominant natural feature of this district.

Zoning includes the highest to lowest density residential districts, a large commercial zone running the length of the eastern boundary of the census tract, and a small industrial zone in the northern portion of the tract.

**Census Tract 204 - Phenix/Lippitt/Clyde** - The northwestern corner of West Warwick, this tract is bounded by the Coventry Town line to the west, the Cranston City line to the north, Burlingame Road and Wakefield Street to the east and the Pawtuxet River to the south.

Similar to tract 203, this area is densely developed with primarily single, two-family and multi-family residential uses. Commercial uses, mostly of a local service and retail nature, are located along Main Street. Mill complexes form the industrial uses along the Pawtuxet River in the southern part of the tract. Undeveloped land is scarce, however, many small lots exist for infill development, and a large area in the northwest corner of the tract on the Cranston City line is vacant.



The area is zoned primarily for residential uses with minimum single family lot requirements of 8,000 square feet. Strips of commercial and industrial districts are located along Main Street and the Pawtuxet River.

**Census Tract 205 - Wakefield Hill/Natick/Westcott** - This tract is bounded by the Cranston City line to the north, the Warwick City line to the east, the Pawtuxet River to the south, and Burlingame Road and Wakefield Street to the west. It remains the least densely developed of any of the census tracts, due to the presence of large tracts of undeveloped land and private recreational land in the form of golf courses.

The character of this tract is widely varied. South of the Pawtuxet, in the Westcott area, is a densely developed residential area, with commercial uses along Providence Street. The northeastern corner of the district is similar in character, and includes large multifamily elderly housing complexes, the Town's wastewater treatment plant as well as dense single family, two-family and multifamily residential development. The remainder of the tract includes large expanses of open space, two golf courses, single family attached unit condominium developments, and low density residential development. Wakefield Street, which splits the tract in half, is a rural road, providing some excellent views of the urban areas to the south. The area's rolling character is its outstanding natural feature, in addition to the Pawtuxet River, although for the most part, the River is not visible to the casual passerby.

### **II.3 Land Capability**

Land capability analysis is a method of determining how much development is feasible in a given area based on combinations of zoning and environmental constraints. Based upon the Town's existing zoning scheme, and its unique environmental conditions, West Warwick holds a certain carrying capacity for development. Hypothetically, that capacity is reached when every buildable parcel of land is subdivided so that it satisfies the minimum zoning requirements. Once the land is subdivided, residences and businesses are assumed to be constructed on the buildable parcels according to the densities permitted under the zoning ordinance. It is *possible* for towns to reach this theoretical capacity, however, it is *unlikely* because some buildable land can be expected to remain in lower intensity uses, such as recreation, agricultural, open space etc.

Through the use of historical building records and a series of assumptions, it is possible to estimate when a town will reach its development capacity. For example, if it is determined that buildout will be reached with the addition of 3,000 housing units, and an average of 150 permits for new residences were issued per year in the last decade, it is estimated that it will take approximately 20 years to reach buildout (3,000 units/150 units per year = 20 years). Factors such as the economy, technology and environmental regulation will effect the development rate, and no amount of historical analysis will enable an accurate depiction of the rate at which development will occur in the future. In any given decade there are likely to be peaks and valleys in the economy which will effect the development rate. The 1980's are a good example of how swings in the economy effect the rate at which development occurs. The recession economy of the early 1980's saw sharp decline in residential development, by the mid-eighties, which was characterized as a boom economy, residential building rates had increased dramatically, and the early 1990's have brought the northeast back into a severe recessionary period.

The ability to predict the amount of development that can occur is vital for the long-range planning of services. Reliable information regarding the development potential of the town is essential for the various departments to plan for increases in service demand. The great expense associated with capital improvements make it necessary to start budgeting for them well in advance of the actual need. Understanding the potential future population based on the land



capability analysis will assist the Town in avoiding costly incremental decisions regarding capital improvements.

The land capability analysis considers existing land use, undeveloped land, developable land, number of single and multi-family residential units, and square feet of industrial and commercial space permitted by current zoning, other zoning ordinance requirements, and the natural capability of the land to support development. Based upon the amount of available land, the number of housing units or square feet of commercial or industrial space which could potentially develop in a specified area is estimated.

**Assumptions** - The following assumptions were employed in this analysis.

1. All land not currently actively developed was defined as undeveloped land. Prime agricultural land is included as undeveloped land because of its unprotected nature and generally good development conditions.
2. To determine development potential of the undeveloped land described in Assumption 1 above, various environmental conditions were considered, including steep slopes, soils with limited development capability, and flood zones. These areas were extrapolated from mapping prepared by the Rhode Island Geographic Information System (RIGIS) and provided by the Rhode Island Department of Administration, Division of Planning.
3. It was assumed that multifamily development would occur in Residence AA, A, B and C zoning districts. Types of multifamily unit were divided into 2, 3-4, 5-9, 10-49 and 50+ units per the 1980 Census distribution, and an approximation of the acreage devoted to each type of unit was made based on the following square footages: 10,000 sq.ft. - 2 unit, 17,500 sq.ft.- 3-4 units, 35,000 sq.ft. - 5-9-units, 97,500 sq. ft. - 10-49 units, 120,000 sq. ft. - 50+ units, multiplied by the average number of units in the grouping. Zoning regulations require 10,000 square feet of area for a two-family unit and an additional 5,000 square feet for every additional unit.
4. Current population is assumed to be 29,268 persons (per the 1990 Census of Population). There are approximately 12,500 existing housing units with 100 percent occupancy assumed.
5. Current household size is assumed to be 2.34 persons (29,268 persons / 12,488 housing units = 2.34 persons per household).
6. Current minimum lot sizes were assumed in determining the potential number of housing units and acreage of commercial and industrial space. These are as follows:

Zone District	Minimum Lot Area (Sq. Feet)
Residence AA	10,000
Residence A	8,000
Residence B	7,500
Residence C	6,000
Business D	None
Industrial E	None

Source: West Warwick Zoning Regulations, Reprint, 1989.



## Methodology

The land capability analysis involves the following steps:

1. *Mapping soils which are indicative of wetlands, steep slope or limiting to on-site septic systems* - Soil types as defined by the U.S. Department of Agriculture Soil Conservation Service (SCS) were mapped on computer by RIGIS, and then were digitally measured by Albert Veri & Associates to determine the areas of various soil constraint. Soils are considered limiting for individual sewage disposal systems (ISDS) due to high groundwater table, slow percolation rates, susceptibility to flooding, presence of rocks and boulders and excessive permeability. The areas defined by the SCS need to be verified on a site by site basis, but provide a good guideline as to areas which could pose potential environmental problems. In addition, soils with slope limitations (more than 15 percent) were included. The levels of constraint are as moderate, high and severe, defined as follows:

**Moderate** - Areas with moderate constraints are those which are generally suited to residential development. These soils are considered fully developable in this analysis, i.e., parcels located on these soils can be built to the maximum density allowed by zoning.

Some soils in this group have constraints to development and evaluations must be made on a case by case basis. The constraints consist of: 1) very rapidly permeable soils which have a higher potential for groundwater contamination; 2) slowly permeable soils which tend to have greater septic system failure rates and 3) extremely stony soils, which are expensive to excavate and grade for residential development. Also included are disturbed areas which are often suitable for residential development, but which need site specific evaluation. Examples include gravel pits, cut and fill areas, and paved areas.

Prime agricultural soils are defined as those best suited for producing food, feed, forage, fiber and oilseed crops, and also available for these uses. These soils are considered fully developable in this analysis.

**High** - Areas with high constraints to development are those which have a seasonal high water table (19 inches to 42 inches depth), bedrock (shallow soils, rock outcroppings), or slopes greater than 15 percent (15 feet of vertical rise over 100 feet of horizontal distance). Steep slopes increase the potential for soil erosion during construction, and make construction of on-site septic systems difficult. Shallow soils, and rock outcrops impair the construction of roads, buildings, buried utilities and on-site septic systems.

A percentage of these areas have been developed in the past and will continue to be developed in the future. For the purposes of this analysis 15 percent of these areas is considered developable. Many of these soils have additional constraints to development, such as slow permeability or, in a few instances, very rapid permeability.

**Severe** - Areas with severe constraints are hydric soils (wetlands) which have a high water table (0" - 18") year-round, or those soils which are excessively rocky or sandy. These areas not considered developable in the future.

3. *Mapping developed and undeveloped land* - A map showing developed and undeveloped areas was compiled using 1988 aerial photography.



4. *Mapping vacant developable land* - The next step involved creating a map which illustrates vacant, developable land. This involved overlaying the undeveloped land areas with the environmental constraint maps to indicate which areas had moderate, high or severe limits to development.
5. *Mapping zoning districts* - The Town's zoning map is superimposed upon the vacant developable land map, and forms the basis for calculating the potential number of dwelling units, commercial and industrial space and population that the Town can accommodate.
6. *Measurement of vacant developable land by zoning districts* - Each area of vacant developable land is measured. These areas are then tallied to give an indication of vacant developable land in each zoning district. Fifteen percent of the area considered by RIGIS to be highly constrained is added to the vacant developable category.
7. *Measurement of vacant developable land by zoning districts* - Each area of vacant developable land is measured. These areas are then tallied to give an indication of vacant developable land in each zoning district.
8. *Subtraction of a percentage for roads and infrastructure* - In order to estimate future development potential, a factor must be subtracted to account for land that would be used for roads, sidewalks, service easements and municipal uses, as well as nonconforming lots and thus would not be available for development. A factor of fifteen percent was used.
9. *Calculation of the number of dwelling units* - Once total developable land is calculated, the next step is to determine the number of dwelling units per residential zoning district. This is based upon the minimum lot requirements as specified by the zoning regulations.
10. *Calculation of square feet of commercial and industrial space* - This is determined in the same manner as residential land, taking into account minimum lot size.
11. *Calculation of potential buildout population* - The buildout population is calculated based on the total number of new dwelling units that can potentially be built. This number is multiplied by the Town's average household size to give the total saturation or buildout population. The additional number of dwellings and population is then added to the 1990 figures. This can be used to estimate the need for future facilities, services and infrastructure.

**Future Development** - The Town has approximately 3,889 acres of residentially zoned land, 377 acres of commercial-zoned land and 643 acres of industrial-zoned land (see Table II-3). Table II-4 summarizes the data.

**Residential Land** - Of the existing residential-zoned land, about 7.6 percent is zoned Residence C, 10.9 percent is zoned Residence B, 35.8 percent is zoned Residence A, and 45.7 percent is zoned Residence AA.

Over 3,279 acres (84 percent) of existing residential-zoned land is currently developed. Of the 616 undeveloped acres, 85 percent are developable (523 acres). This could potentially yield 3,530+/- new housing units (including multifamily units), based on the assumptions of this analysis. Table II-5 shows a detailed breakdown of housing units.



Most of the development is predicted to occur in the A and AA zones, the areas which permit the lowest density of the four residential zoning districts. Most future development is likely to occur in the Crompton and Wakefield Hill areas, where developable land still exists. Some new development can also occur in the B and C residential zones, through infill of vacant lots, conversion of units to multifamilies etc.

**Table II-3  
Land Capability Analysis  
Summary Table - Townwide Data**

Zoning District	Total Land Area by Zone (Acres)	Gross Developable Area (Acres)	15% Design Factor for Roads etc. (Acres)	Net Developable Area (Acres)	Potential Development (Housing Units)
	(1)	(2)	(3)	(4)	(5)
Residential					
C	295	11	2	9	117
B	425	47	7	40	443
A	1,395	172	26	146	1,032
AA	1,780	386	58	328	1,937
Subtotal	3,895	616	93	523	3,530
Business					
D	377	27	4	23	-
Industrial					
E	643	157	24	133	-
Total	4,915	800	121	679	-

**Notes:**

- (1) - Planimeted measurement from 1"=1,000' base map.
  - (2) - Planimeted measurement from 1"=1,000' land use map. 15% of the areas with high constraints are considered developable.
  - (3) - 15% design factor for roads, infrastructure, etc., applied to developable acres.
  - (4) - Column (2) minus column (3).
  - (5) - Potential housing units equals the area of developable land divided by minimum area of the zoning district. Multi-family units are included.
    - 15 % of areas with high constraints are considered developable.
    - Major water bodies, Routes 95 & 295 right-of-way not included in area of zoning districts.
- Source: Albert Veri & Associates, 1991

**Population Saturation** - Population saturation is defined as the number of people the Town could support if all its developable land were developed under existing zoning regulations. Based upon the number of new housing units predicted and the current average household size for West Warwick, the ultimate saturation population is estimated to be 37,540+/- people. A range of population from 35,000 to 40,000 is likely. This large number of potential new residents is due primarily to the amount of multifamily development throughout the Town.

**Commercial Land** - There are approximately 377 acres of commercially-zoned land in the Town, of which 94 percent is developed (see Table II-3). Of the remaining 6 percent (23



acres), 3 acres are developable. Small tracts of developable business-zoned land are found throughout the Town.

**Industrial Land** - There are 643 acres of industrial-zoned land in West Warwick, of which 26 percent is undeveloped. Approximately 133 acres of developable industrial land exists (see Table II-3). The largest area of developable industrial land is in the industrial park adjacent to Interstate Route 95.

**Land Capability Analysis Summary** - Three factors will control the Town's residential development in the future: 1) the limited availability of residentially-zoned land; 2) the natural constraints which will limit the extent of development; and 3) the high densities permitted under current zoning.

The Town's historical development patterns, i.e., tightly constructed mill villages, largely comprised of two and three-family homes have changed over the last 20 years, as land became scarce, and development became more profitable in the outskirts of the community. The Crompton, Centerville, Natick and Wakefield Hill neighborhoods have all experienced increased residential development, and the secondary commercial development which it attracts. Most future residential development will likely occur in Crompton and Wakefield Hill,

**Table II-4  
Percentages of Developable Area by Zone**

Zoning District	Total Area by Zone (Acres)	% of Subtotal	% of Total	Net Developable Area (Acres)	% of Subtotal	% of Total	Potential Development (Housing Units)
<b>Residential</b>	(1)						(2)
C	295	7.6	6.0	9	1.8	1.4	117
B	425	10.9	8.6	40	7.6	5.9	443
A	1,395	35.8	35.8	146	27.9	21.5	1,032
AA	1,780	45.7	36.2	328	62.6	48.3	1,937
<b>Subtotal</b>	<b>3,895</b>	<b>100.0</b>	<b>79.2</b>	<b>524</b>	<b>99.9</b>	<b>77.0</b>	<b>3,530</b>
<b>Business</b>							
D	377	100.0	7.7	23	100.0	3.4	-
<b>Industrial</b>							
E	643	100.0	13.1	133	100.0	19.6	-
<b>TOTAL</b>	<b>4,915</b>			<b>680</b>			<b>NA</b>

**Notes:**

- (1) - Planimetered measurement from 1"= 1,000' base map.
- (2) - Potential housing units equals the area of developable land divided by minimum area of the zoning district. Multi-family units are included. 15 % of areas with high constraints are considered developable. Major water bodies, Routes 95 & 295 right-of-way not included in area of zoning districts.

Source: Albert Veri & Associates, 1991



Table II-5  
Detailed Housing Unit Distribution

ZONING DISTRICT	Net Buildable Area (1)	Area Devoted To Single Family (2)	Area Devoted To Multi-Family (2)	Area of Various Housing Densities (ACRES)					
				2 Units per Structure 31%	3-4 Units per Structure 24%	5-9 Units per Structure 15%	10 - 49 Units per Structure 21%	50+ Units per Structure 9%	TOTAL
C	11.0	1.1	9.9	3.1	2.4	1.5	2.1	0.9	
B	47.0	14.1	32.9	10.2	7.9	4.9	6.9	3.0	
A	172.0	154.8	17.2	5.3	4.1	2.6	3.6	1.5	
AA	386.0	347.4	38.6	12.0	9.3	5.8	8.1	3.5	
<b>TOTAL</b>	<b>616.0</b>	<b>517.4</b>	<b>98.6</b>	<b>30.6</b>	<b>23.7</b>	<b>14.8</b>	<b>20.7</b>	<b>8.9</b>	
				(UNITS)					
	1 Unit Per Structure (4)	2 Units per Structure 31% (5)	3-4 Units per Structure 24% (6)	5-9 Units per Structure 15% (7)	10 - 49 Units per Structure 21% (8)	50+ Units per Structure 9% (9)	TOTAL (10)		
C	8.0	26.7	20.7	12.9	27.4	21.0	116.8		
B	81.9	88.9	68.8	43.0	91.1	69.9	443.5		
A	842.9	46.5	36.0	22.5	47.6	36.5	1,031.9		
AA	1,513.3	104.2	80.7	50.4	106.8	82.0	1,937.5		
<b>TOTAL</b>	<b>2,446.0</b>	<b>266.3</b>	<b>206.2</b>	<b>128.9</b>	<b>272.9</b>	<b>209.4</b>	<b>3,529.6</b>		

- Notes:
- (1) - Net buildable area from Table 1.1
  - (2) - Based on historic trends a percentage of each zoning district's developable land was assigned to the single or multi-family category. The percentages of developable area devoted to multi-family units are as follows: Zone C 90%, Zone B 70%, Zone A 10% and Zone AA 10%.
  - (3) - A percentage of the total area devoted to multi-family units was separated into 5 categories. Categories and percentages are based on 1980 census figures.
  - (4) - Area in column (2) divided by 6,000 Zone-C, 7,500 Zone-B, 8,000 Zone-A, and 10,000 square feet Zone-AA.
  - (5), (6), (7), (8), (9) - Areas from the 5 categories under (3), divided by 10,000 sq.ft. -2 Unit., 17,500 sq.ft.-3-4 Unit., 35,000 sq.ft.-5-9-Units., 97,500 10-49 Units, 120,000 50+ Units, times the average number of units in the grouping. Zoning regulations require 10,000 square feet of area for a two-family unit and an additional 5,000 square feet for every additional unit. (See example below)
  - (10) - Total of all units; single and multi-family.

ZONING DISTRICT	AREA DEVOTED TO MULTI-FAMILY	5-9 Units per Structure 15%	
C	9.9 Acres x .15 = 1.5	Acres x 43,560 = 65,340 sq.ft. = 35,000 Ave.	1,866 Structures x 7 Units/Struct. = 13 Units
	5 - Units 25,000 sq.ft. required		
	9 - Units 45,000 sq.ft. required		
	Average 35,000 sq.ft.		
	Average 7 Units		



where some larger tracts of developable land exists for single family home and condominium development. This development will be, in large part, controlled by environmental regulations, as most available land is marginal in development quality, i.e., containing wetlands, steep slopes etc. The higher densities (from 6,000 to 10,000 square feet minimum lot size for a single family home) will allow the potential construction of 3,530 new homes. The following chart presents examples of how this increase in population could place additional demands on Town services:

Service	Current Condition	Future Condition
Fire	59 firefighters	79 firefighters
Police	51 officers	76 officers
Libraries		
Full time employees	7 employees	11 employees
Books & Materials	55,000	57,000
Schools		
K	252 students	327 students
1-6	1908 students	2480 students
7-9	973 students	1265 students
10-12	757 students	984 students
Parks and Playgrounds	318 acres	238-400 acres

The additional services which will be required by the new residents will require additional tax and other dollars. It is estimated, based on current expenditures per capita, that \$47.9 million could be required to support these services on an annual basis. This is a conservative estimate, and does not account for any significant new capital expenditures, such as new schools, fire stations etc. The projected land uses could potentially generate \$26.9 million in tax revenues based on current revenue distribution patterns, leaving \$21.1 million to be generated in other revenue sources, such as State or Federal aid, and/or sewer use fees.

It is important to understand the magnitude of potential future growth which can occur in West Warwick. Reliable information regarding development potential is essential for Town departments to plan for increases in service demand. The land capability analysis looks at the Town in a selected moment in time, and does not account for changing economic, social or governmental conditions. The priorities of the Town in terms of providing housing and economic development opportunities can change the outcome of the analysis. It is critical that the Town relate its development patterns to its ability to provide services to residents.

#### II.4 Issues Definition

A broad spectrum of issues relating to land use have been identified and discussed through the course of developing this Comprehensive Plan. As described more fully in Chapter X, issues were identified through the work of the Comprehensive Plan Advisory Committee, a telephone opinion poll of Town residents, meetings with local service providers, and public input through a series of workshop meetings. West Warwick is an established community, and its chief land use issues revolve around the suitable use and reuse of existing development and its few remaining open spaces. Land use issues identified include the following:

**Census Tract 201.01 - Crompton** - As the planning district experiencing the most development pressure over the past few years, Crompton residents are now feeling the effects of rapid growth. Streets are burdened by heavier traffic loads, in particular Cowesett Road, East Greenwich Avenue, New London Turnpike and Greenbush Road. The East Greenwich Avenue/Greenbush Road intersection and Cowesett Avenue were cited as two of the most dan-



gerous intersections/road segments in the community in the citizen survey. Crompton residents also identified water pressure for normal daily use as often being inadequate. The new Greenbush Elementary School is nearly at capacity, and does not have suitable recreational facilities to serve its currently student enrollment.

The likely development path for this planning district is continued single family residential subdivision construction on a smaller scale than recent years. The undeveloped land which remains is principally wetland, and is not developable under State environmental regulations. The area is lacking in recreational space, both for active and passive recreational activities. Recently it has become normal practice to informally request developers to donate parcels of land for recreational purposes, but it is not required under existing zoning/subdivision regulations. The Flat Top Pond area has significant potential for future recreational use.

Commercial development should not be permitted to encroach further along

East Greenwich Avenue. Some available space still exists in the industrial park, requiring a coordinated public/private marketing approach. Uses should be industrial in nature, rather than commercial to bring the greatest benefit to the Town tax base.

**Census Tract 201.02 - Crompton/Centerville** - Maintenance of neighborhood integrity is the key in this planning district. Since virtually no undeveloped land exists in this area, growth pressures are limited. Tapping the reuse potential of the mill complexes located along the Pawtuxet River in the western part of the district will be an important consideration in the next 20 years. Maintenance of greenbelts along the River where possible, as well as along the small streams which run through the eastern portion of the district will serve to preserve the integrity of these systems.

**Census Tract 202 - Arctic Hill/Centerville** - Maintaining the integrity of existing neighborhoods will be a challenge for the next 20 years in this area. Housing quality in many areas could be improved, and commercial development has infringed on residential areas. Traffic circulation continues to present a problem in this area, particularly along Centerville Road (Legris Avenue), Veteran's Square, and various points along New London Turnpike. Commercial business signage in some parts of this area is obtrusive and overall visual quality less than desirable. Maintenance of commercial areas within the current zones is preferable to continued expansion along Main Street and West Warwick Avenue. A number of older mill complexes exist in this planning district, providing future opportunities for continued industrial uses, mixed uses or other uses as appropriate. The Pawtuxet River, which forms the southeastern boundary of this tract, is a key natural feature of the Town, and efforts should be taken to preserve its shoreline for public use and river access.

**Census Tract 203 - Arctic/Riverpoint** - Throughout the 1950's, 1960's, and 1970's, the retail districts of many communities like West Warwick deteriorated as they lost their formerly dominant role in the metropolitan retail market to suburban shopping. Much of the deterioration in Arctic can be attributed to loss of customers and shops to the Warwick malls, and the more recent Route 2 strip development. Problems existing in downtown Arctic include a surrounding population which has limited purchasing power, suburban shopping malls accompanied by changing consumer behavior, traffic conflicts in the West Warwick area, incompatible land uses interspersed with commercial uses, unattractive building facades and signs coupled with the presence of overhead utility lines, lack of landscaped pedestrian walks or other amenities which might enhance aesthetics of the area. Undesirable land uses in downtown Arctic, such as bars and adult-only establishments are also seen as being somewhat of an impediment to the area's revitalization. Maintenance of Town government facilities in Arctic is important to its ultimate revival.



Area neighborhoods are the most dense in the Town, and conversion of single family units to apartments, or conversion of larger apartment units to smaller units has resulted in the degradation and overcrowding of the quality of some parts of the neighborhood. Parking for residents of this area is an ongoing problem, as more units are packed into a smaller area where sufficient on-street parking is unavailable. Recreational facilities for planning district residents are limited, and existing facilities are in poor condition due to various abuses. The Pawtuxet River, at the northern boundary of the census tract, is important as an outstanding natural feature of the area, and public access points should be preserved and identified.

**Census Tract 204 - Phenix/Lippitt/Clyde** - Similar to other planning districts, the Phenix area's primary land use issues revolve around neighborhood preservation, protection of the Pawtuxet River, and providing adequate levels of community services and facilities to serve area residents. As in other planning districts, paper streets abound and the absence of an official map continues to create unnecessary hardships on the Town and its residents. The area is land poor, with very limited developable property available.

**Census Tract 205 - Wakefield Hill/Natick/Westcott** - The most land rich of the planning districts, this area provides the Town's one real opportunity for maintaining some open green area. Use of the remaining undeveloped, particularly around the golf courses, was discussed at length during the planning process, with various options mentioned, including clustering residential sites or requiring larger minimum lot sizes. Maintaining the golf courses as an important recreational resource of the community was also considered important.

## **II.5 Goals, Policies and Implementation Actions**

Land use goals and policies are centered on five main goals, as follows:

- To promote a harmonious relationship between land development and natural resources and to consider the natural capacity of land to support development and population.
- To provide a land use pattern which is capable of meeting present and future community needs in an efficient, environmentally sound, economic, equitable and aesthetically pleasing manner.
- To relate the use of land to the level of public facilities and services available or planned to be available.
- To establish a balance between residential, commercial, industrial, recreational, public facility and conservation land uses that serve the needs of the community. Maintain and improve the distinctive character of the Town's neighborhoods and landscapes.
- Promote the preservation and enhancement of the positive and desirable characteristics of West Warwick's traditional New England mill town environment and land use patterns.

Policies and implementation actions designed to achieve these goals are presented on the following pages.



II. Land Use Goals	Policies	Implementation Actions
<p>1. To maintain high standards in land use and development policy and zoning law, as well as in the administration and enforcement of these regulations.</p>	<p>a. The Town supports the 1991 Zoning Enabling Act.</p> <p>b. Administer and enforce development regulations with consistency and fairness.</p>	<p>1. The Town will update and amend its existing Zoning Ordinance to comply with the guidelines and requirements of the Zoning Enabling Act as amended.</p> <p>1. Make Zoning Ordinance requirements explicit with regard to site planning and design as they relate to the natural features of the site, including mandatory review by the Planning Board.</p>
		<p>2. Ensure that adequate municipal planning, zoning and building inspection staff is available to implement and enforce the Town's development regulations.</p>
		<p>3. Members of the Planning Board, Zoning Board of Review, and other boards or commissions with development-related responsibilities will participate in annual training sessions provided by the State or other agencies. Members are required to attend one training session annually. A budget item will be established to fund any fees associated with such mandatory training sessions. Members are also encouraged to attend American Planning Association meetings and workshops to be informed on current planning issues.</p>
		<p>4. Develop an official zoning map for the community at plat map scale which is easily modified, and is updated annually.</p>
		<p>5. Support the computerization of the Town's plat maps, official road map and zoning maps.</p>
		<p>6. Strengthen special exception standards within the Zoning Ordinance to make requirements more explicit.</p>
		<p>7. Increase the Zoning Board of Review's accountability by requiring that they submit written decisions on special exceptions and variances.</p>



II. Land Use Goals	Policies	Implementation Actions
		<p>8. Lots which are unbuildable due to dimension, configuration, or not an accepted street will be defined by the Tax Assessor and a list of allowable uses developed by the Planning Board and Planning Department. Such uses could include combination of the lot with adjacent lots, provision of accepted street access, parking, gardens, etc.</p>
<p>2. To promote a harmonious relationship between land development and natural resources and to consider the natural capacity of land to support development and population.</p>	<p>a. Incorporate updated provisions into existing local development regulations, and implement methods to encourage more sensitive use of the land.</p>	<p>9. Prepare and circulate a developer's information packet(s), including information on subdivision regulations, utilities, zoning, erosion and sedimentation controls, groundwater aquifers regulations, Planning Board meeting schedule and time deadlines, and the Comprehensive Plan. A fee will be fixed for this service to cover copying charges.</p> <p>1. Research cluster zoning ordinances of other Rhode Island communities, and amend the Zoning Ordinance to include such a provision.</p>
		<p>2. Research and develop a Planned Unit Development section in the Zoning Ordinance which permits a parcel of land to be planned and developed as one unit, and contains a mix of residential and commercial uses and common open space. Developers may vary building location and density within a larger tract of land as defined in the Ordinance.</p>
		<p>3. Develop an Official Map for the Town, indicating accepted roads, public ways etc.</p>
	<p>b. Consider the Pawtuxet River as an outstanding natural and historical feature of the Town and provide opportunities to maintain and improve its water quality and general condition for public use and appreciation.</p>	<p>1. Maintain a green buffer of 200 feet or more along the banks of the Pawtuxet River, where possible.</p> <p>2. Support the efforts of the Pawtuxet River Authority in providing access points, riverwalks and other preservation activities on the Pawtuxet River.</p>



II. Land Use Goals	Policies	Implementation Actions
	c. Encourage a high quality of design in all nonresidential and large residential developments.	1. Formalize the site plan review process within the Zoning Ordinance, applicable to nonresidential and large residential projects as defined by the Planning Board. The Planning Board will establish a list of site plan requirements and guidelines, including, but not limited to parcel(s) bounds; existing zoning and use; existing and proposed location of principal and accessory buildings and structures on the site; neighboring properties within a 200 foot radius showing existing use, zoning and ownership; location of existing and proposed roads and sidewalks; location, dimensions and number of off-street parking and loading spaces; location, dimension and design of existing and proposed signs and exterior illumination of the site; location of existing and proposed recreation facilities, open space, easements and/or rights-of-way, and utilities, including water supply, sewage disposal, storm drainage and electrical or gas service, if applicable; soil types; if regrading is proposed, existing and proposed grade contours at 5 feet intervals; location and type of existing and proposed major tree and shrub areas; flood hazard areas; freshwater wetlands; location, dimensions and type of existing and proposed screening, fences or walls; proposed density, number of bedrooms per dwelling unit and percentage of lot coverage; and, general exterior architectural plans and elevations of all proposed structures indicating proposed style and materials. Graphics will be included to promote ease of use.
		2. Paving of a front yard from side lot line to side lot line shall not be permitted.
3. To provide a land use pattern which is capable of meeting present and future community needs in an efficient, economical, equitable and aesthetically pleasing manner.	a. Maintain the existing residential zoning district density scheme, while working to fine tune the Zoning Ordinance requirements such as site planning, design, historic preservation and natural resources, etc.	3. Underground utilities will be required in new developments.  1. Update and revise the existing Zoning Ordinance within 18 months of the acceptance of this Comprehensive Plan by the State. Review the recommendations of the Zoning Ordinance Study Committee and incorporate as appropriate.



II. Land Use Goals	Policies	Implementation Actions
		<p>2. Work toward eliminating nonconforming uses through enforcement of current zoning laws and making changes in the regulations where warranted. Such changes will relate to prohibiting expansion/extension of a nonconforming use, prohibiting enlargement of a nonconforming use, limiting the ability to change from one nonconforming use to another etc.</p>
		<p>3. Review other Rhode Island communities' zoning regulations with regard to their treatment of aesthetics and design issues. Establish a design overlay district for village business centers which will promote greater consistency in design and higher visual quality. This district may address elements such as building height, bulk, roof line; proportion between the height and width of a building; relationship of project to adjoining area; nature of open spaces around buildings - extent of setbacks, existence and size of side yards, and continuity of such spaces along the street; existence of trees and other landscaping; and extent of paving; nature of the openings in the facade, primarily doors and windows - locations, size and proportions; lighting; street hardware; maintenance; type of roof - flat, gabled, hip, gambrel etc.; details of ornamentation; and, signs, etc.</p>
		<p>4. Review and amend the Zoning Ordinance sign regulations as appropriate with the purpose of improving visual quality. Consider the number and type of sign, lighting, size, nonconforming signs, repair, maintenance, height, orientation, replacement and/or removal of damaged signs, and other factors as appropriate.</p>
<p>4. To establish a balance between residential, commercial, industrial, recreational, public facility and conservation land uses that serve the needs of the community. Maintain and improve the distinctive character of the Town's neighborhoods and landscapes.</p>	<p>a. Maintain the integrity of existing zoning districts.</p>	<p>1. Limit the intrusion of commercial and industrial uses, with the exception of home occupations, in residential zones.</p>



II. Land Use Goals	Policies	Implementation Actions
		<p>2. Require a vegetated buffer between different developments in different intensity zoning districts, eg., between adjacent parcels which fall in a commercial and a residential district.</p>
		<p>3. Confine commercial uses to existing business zoning districts and arterial roadways, and limit further strip development by encouraging shared parking lots and driveways and similar mechanisms.</p>
		<p>4. Require the consistent enforcement of Zoning Ordinance off-street parking and loading requirements, particularly when there is a change of use at a site requiring different numbers of parking and/or loading spaces.</p>
		<p>5. Consider dividing existing commercial zoning districts into two separate zoning districts; the first to address village-type businesses such as those present in Arctic and Phenix, and the second to address general business, such as those present along Quaker Lane and Route 3. The purpose of this division is to explicitly define commercial uses suitable to the different environments presented in these areas.</p>
		<p>6. Consider establishing a second industrial zone, to be applied to industrial zones which cover mill complexes, expanding their reuse potential.</p>
		<p>7. Maintain industrial zones for industrial uses, and limit intrusion by commercial or other uses. This is particularly important in the Industrial Park area.</p>
	<p>b. Strive to achieve equity between the costs and benefits of new development.</p>	<p>1. Review and update the Comprehensive Community Plan at five year intervals, to ensure that changing public needs are met.</p>
		<p>2. Study other Rhode Island communities impact fee systems, their structure, administration and impacts, and determine whether such a system would be appropriate for West Warwick.</p>



II. Land Use Goals	Policies	Implementation Actions
		<p>3. Require that a percentage of a residential subdivision be deeded to the Town for the purposes of providing open space and/or recreational facilities for the residents of that subdivision. The Planning Board shall approve the location of such land. Fees in lieu of land donation will also be an option, with such fees directed toward a fund specifically for the purpose of providing open space/recreational facilities for local residents.</p>
	<p>c. Relate industrial development to overall land use by promoting use of development controls and performance standards that mitigate conflicts with other land uses and activities.</p>	<p>1. Establish performance criteria in the Zoning Ordinance industrial development, including, but not limited to, noise, traffic generation, air pollution, sewer and solid waste, water quality impacts, odors, hazardous materials, stormwater management, erosion control, site design, landscaping and exterior lighting.</p>
<p>5. Promote the preservation and enhancement of the positive and desirable characteristics of West Warwick's traditional New England mill town environment and land use patterns.</p>	<p>a. Preserve historic buildings, districts and archaeological sites.</p>	<p>1. Further the identification and strict protection of state and national register historic properties and districts as an integral part of preserving West Warwick's cultural landscape.</p>
		<p>2. Working with a new local Historic District Commission, review historic district zoning regulations of other communities, designate those areas of the community which will be targeted for such preservation efforts and consider establishing historic district zoning.</p>
	<p>b. Preserve and enhance economic development opportunities within West Warwick business districts.</p>	<p>1. Continue and expand local participation in federal and state business district revitalization programs. The Town's Economic Development Coordinator will be responsible for applying for the grants and implementing the programs.</p>
		<p>2. Enhance and continue to support organizations of businesspeople in Town toward improving the overall business climate. Support includes activities such as technical assistance, data base information etc.</p>



II. Land Use Goals	Policies	Implementation Actions
		3. Stimulate the expansion of economic development activities, including cultural, recreational and educational, in the Arctic, Phenix and Naitick areas.
		4. Encourage investment by the public and private sectors that will stabilize and improve economic opportunities in downtown Arctic, Phenix and Naitick, including preservation and reuse of historic buildings.
		5. Locate schools, government facilities and other appropriate community facilities in or near village centers.
		6. Provide an adequate and safe system of pedestrian walkways and sidewalks in village centers.
		7. Ensure the regular maintenance and sweeping of pedestrian walkways, sidewalks and streets.
		8. Provide and maintain safe, easy-to-find, and well-lit public parking areas in the business centers.
		9. Tie historic preservation and revitalization efforts in with economic development and promotion of tourism in the Town.
	c. Recognize the importance of recreation, open space, public access to water bodies, and historic resources to the Town's economy, and in attracting and retaining business and industry, and endeavor to protect and enhance these resources in economic development siting and design activity.	1. Retain open space spaces large enough to serve as wildlife habitat, store flood waters, abate air and water pollution, provide a sense of openness, and serve as buffers and aesthetic amenities to existing development.
		2. Preserve, and where necessary restore, rivers, water bodies and their shorelands for recreational use, wildlife habitat, and open space corridors.

### Future Land Use Plan Map

The planned future land use of the Town of West Warwick is illustrated on Map No. 1 found on the following page ( and in the pocket at the end of this document). This map is a graphic representation of the Town's goals and policies relating to land use, natural and cultural resources, open space preservation and recreation, economic development, housing, and community services and facilities.



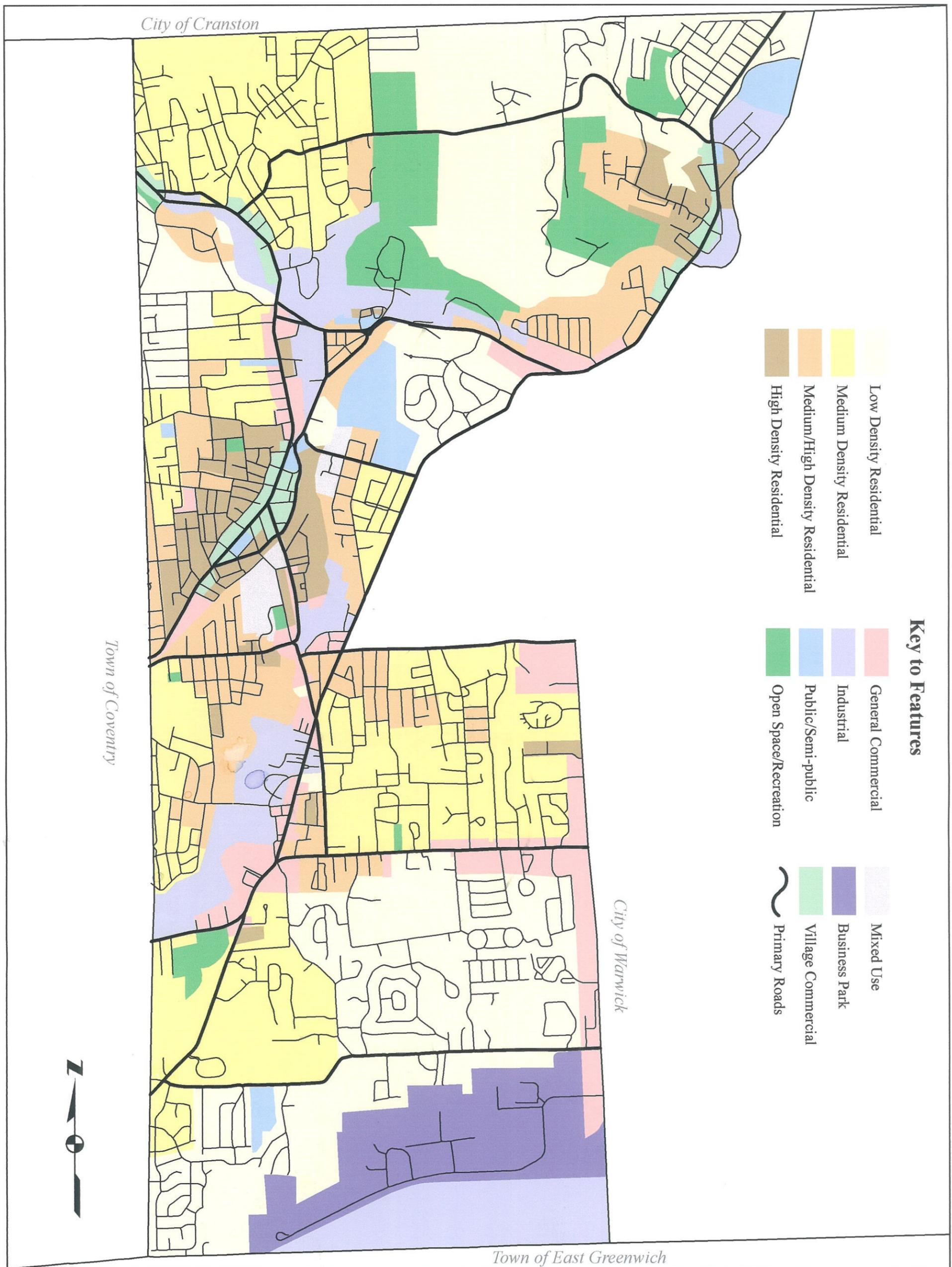


# Future Land Use Comprehensive Plan



Town Of West Warwick  
Geographic Information System  
KW March 2005

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## Key to Features

- |  |                                 |  |                       |  |                    |
|--|---------------------------------|--|-----------------------|--|--------------------|
|  | Low Density Residential         |  | General Commercial    |  | Mixed Use          |
|  | Medium Density Residential      |  | Industrial            |  | Business Park      |
|  | Medium/High Density Residential |  | Public/Semi-public    |  | Village Commercial |
|  | High Density Residential        |  | Open Space/Recreation |  | Primary Roads      |

