

CASE STUDY MATERIALS ON PINELANDS GROWTH FACTORS

prepared for

PINELANDS COMMISSION
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prepared by

ALAN MALLACH ASSOCIATES
Trenton, N.J. & Philadelphia, Pa.

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INTRODUCTION

The attached materials present the results of interviews and background study into current and anticipated development and land use trends in five selected Pinelands municipalities:

- Galloway Township in Atlantic County
- Hammonton Township in Atlantic County
- Manchester Township in Ocean County
- Tabernacle Township in Burlington County
- Waterford Township in Camden County

As the case studies make clear, each of these communities is in a different position in terms of both present characteristics and future development. Manchester Township has experienced explosive growth during recent years, perhaps more so than any other municipality in New Jersey, largely as a result of retirement community development. The character of the development, in turn, has led to many of the specific problems and concerns that the municipality faces today. Galloway Township, on the other hand, although it has not yet grown significantly, faces immediate and massive pressures from the residential demands generated by casino development in Atlantic City.

None of the other three municipalities have experienced, or expect, growth on a scale of a Manchester or a Galloway. Each one, however, has experienced a level of change during recent years that

has been more than enough to raise questions about the future of the community, and its ability to maintain its traditional character.

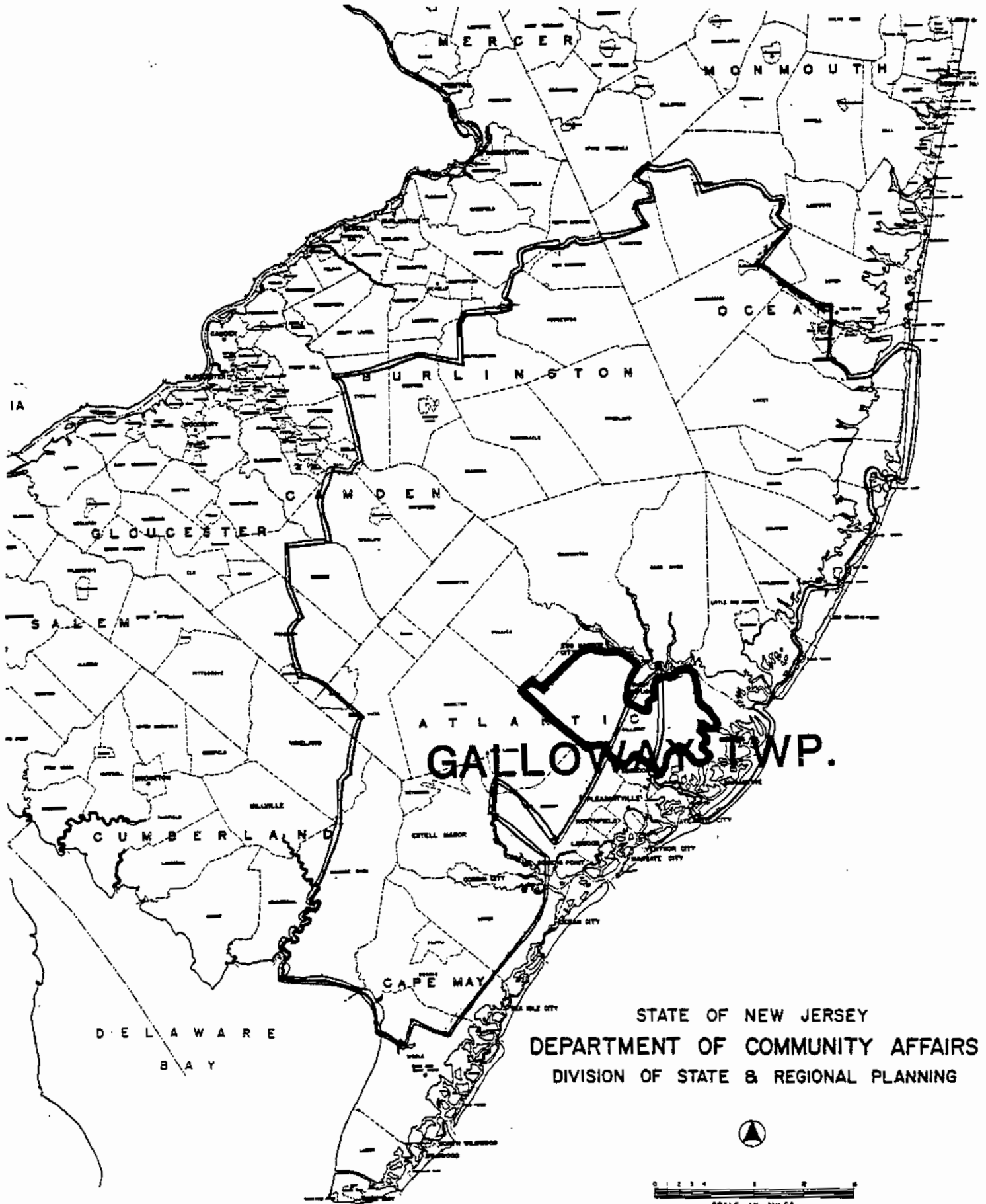
The materials presented here include a mixture of objective, factual, and subjective perspectives on the issues of growth and change in these five communities. They should be useful in adding insights and specificity to the broader statistical material on development presented in other reports to the Pinelands Commission.

GALLOWAY TOWNSHIP

Until recently Galloway was a rural township whose residents were either farmers or baymen. The baymen lived east of Route 9 in the towns of Smithville, Leeds Point, and Oceanville. The farmers, who were of German descent, inhabited the western section and the communities of Vienna, Cologne and Germania.

The declining productivity of the bay and the increasing difficulties of small scale farming resulted in strong local opposition to development. Development or suburbanization, it was believed, would bring new people who would not tolerate the poor school and lack of standard suburban amenities such as public trash pickup. This increased demand would increase taxes, and above all else, Galloway residents did not want to pay additional taxes. The opposition to any and all development was successful until Stockton State College came to the township ten years ago. The natives knew that the college would increase the demand for housing, but they also realized that the college would provide some desperately needed employment. (The total employment at Stockton is now about 630.)

As predicted, the college did bring new people to the area, provide employment for many natives, and cause a number of new houses to be built (Pamona Oaks and many of the new houses in the grid section just east of Pamona are examples of this), and it also had a great impact on local politics. Traditionally, the ideology of the township had been very conservative and very Republican. The



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newcomers were of a somewhat more liberal persuasion. They liked the country aura and they wanted better schools; therefore, they needed a voice in local politics.

The early battles between the natives and the newcomers were fierce. Although this has diminished, there is still some uneasiness--the last school board election was bitter. Much of the hostility seems to have lessened when a common enemy appeared. The enemy was the threat of massive development generated by Atlantic City and casino gambling. Developers and land speculators were quick to see that Galloway is close to Atlantic City, has reasonably good soils and parcels of land in convenient sizes. The threat of development was an ideal way to bring the community together; not only did it serve as a common enemy, but the factor (Atlantic City's renaissance) that generated it also lessened the economic gulf between the two groups. The Planning Board, led by a Stockton professor, seems to have become the coalition group, with planning the great mediating philosophy and homogenizing hope for the future. As has been the case with other unifying philosophies, it appears to have distorted the perceptions of its followers. The belief in planning is so fervent that both new and old residents assume that it will, in the future, preserve the character of the township, while vastly increasing the population density and amount of open space. This belief may also be responsible for preventing residents from seeing existing land use patterns.

Everyone in Galloway talks of development that will occur in the eastern part of the township (east of the Parkway); increased

population density in that area is seen as a trade-off that will keep the western region in agriculture.

Although this variation of the old throw-scraps-to-the-wolf routine seems logical, a windshield survey reveals that the western region has already succumbed to considerable developmental pressure. The moratorium may have allowed the pace, but there is evidence of recently-built housing. There are also a number of established commercial land uses, for example, a truck depot for Atlantic City Electric Company.

The future of Galloway Township cannot be-predicted with much hope of accuracy at this time. The residents seem to be greatly underestimating the amount of growth pressure being generated by Atlantic City and their belief in planning appears to border on religious fanaticism. However, it is certain that the population of Galloway will increase and that the character of the township will change. The amount of growth and change will be established, in large part, by the plan that is adapted by the Pinelands Commission. The capacity of the sewage treatment plant and the price of land will also be determinants. Even the planning board, with its less than realistic views, may play a significant role by convincing developers that it is easier to do business elsewhere.

INTERVIEW 1: ENVIRONMENTALIST

The first interview respondent is a professor at Stockton State College, an environmental activist, and an eight year resident of the Township. He noted that Galloway Township has two main sections. The western section, which accounts for two-thirds of the township, is largely agricultural. The eastern third is suburbanized.

The western section is controlled by German farmers. The dominant form of agriculture is row crops--potatoes, corn and tomatoes--with some blueberries. These farmers are conservative and Republican and they take an active interest in local politics; several serve on the township Council. There is an active 4-H club, a Grange, a volunteer fire company, and several local hunting clubs.

The towns within this section are not distinct--Pomona, Cologne and Germania tend to run into one another. The farm support service area is found along the White Horse Pike (this area services farms within an area larger than Galloway). These are the only services available in the western section. There was an attempt at one time to establish a shopping center in Pomona; this was unsuccessful. Residents shop at Egg Harbor or through Sears.

There is one suburbanized region in the part of the western section along the Garden State Parkway--this area includes Pomona Oaks and Pinehurst. Pomona Oaks is inhabited by Stockton people, while Pinehurst is the home of lower middle class Piney types who

practice traditional Piney occupations with some reliance on part-time construction and maintenance jobs. Pinehurst does have a civic association. This suburbanized region may be facing additional development pressure—a new high school is being built southeast of Stockton State College and a sewerage line is planned for Route 30. With the exception of this already somewhat suburbanized area, he sees little chance for development in the entire western section of Galloway Township. He sites the lack of services within the region and the unwillingness of residents to change their life style as the reasons for this view. Additionally, he sees the eastern part of the township as being much more attractive to developers.

The eastern third of the township has two distinct elements. One of these, Absecon Highlands, can be categorized as mixed suburban or suburbanizing. Some Pineys and Baymen as well as the usual suburban types live here. The area just north of Absecon (Pitney Road) is quickly suburbanizing. There is a small commercial center at the intersection of Leeds and Pitney Roads that has an active civic association which is pushing for additional commercial development. The currently empty area north of Leeds Road to Route 9 will be sewerred and will probably be developed quickly. Smithville, to the north, is already the scene of major development. Local residents feel that the high density development going on at Smithville will reduce development pressures in the other areas of the township. The other section of the eastern region of Galloway Township, places like Oceanville and Leeds Point along Route 9, is

likely to retain its character. This area has large lot housing and had traditionally been the home of Baymen.

During the past ten years, the changes in land use have been mostly limited to increased suburbanization in the eastern section. This trend is seen as continuing with residents trading off the eastern section for development in order to retain agriculture in the western section. The most drastic change in the area during the past decade has not been in land use, but in local politics. Newer residents, characterized as Stockton types, have begun to take control from the older conservative farmers. This new group is well organized (they have been successful in obtaining seats on the school board and were responsible for getting the bond issue for a new high school passed) and moderate. This group seems to be responsible for the eastern-section-to-developers-if-western-section-remains-in-agriculture trade-off strategy. The ability of Galloway Township to resist growth pressure from Atlantic City will be determined, at least in part, by the political alliances these two groups are able to forge. Although there seems to be general agreement on objectives, he noted that "there is a good deal of bitterness between the two groups at present." The conservative group seems to be "angry at losing control."

INTERVIEW 2: COMMUNITY ACTIVIST

The second respondent is a 30ish wife, mother of two daughters, and planning student, currently working as a planning intern in Cape May County. She was raised in Philadelphia and lived on Long Island before coming to Galloway. Her husband taught physics at Stockton State College until recently, when he left to become a partner in a new energy consulting firm. She likes Galloway and says that it is like "going ten years back in time." The variety of people within the community and its small size are the reasons she gives for describing the community as "wholesome." She especially likes the fact that the clerks in the Shop-Rite in Absecon know her by name.

When she moved to Galloway, the natives were vehemently opposed to new development, fearing that new residents would demand greater services from the municipality, thus raising taxes. However, the Atlantic City renaissance has had major impacts on the thinking in Galloway. The most important impact is more and higher paying jobs. It is not unusual for a carpenter or bricklayer, who used to worry about getting his family through the winter, to work 15 hour shifts in Atlantic City. The second most important impact is the increase in property values. She maintains that property values have increased approximately \$1,000 per month during the past several years. This observation is based on the experience she has had in the house she now occupies, a modest one-story three bedroom rancher, which they bought four years ago for \$27,000, and recently sold for \$55,000.

Another change in the township results from the professional people employed at Stockton. Although there was considerable hostility when professors and their family first moved into the area, the professors have now managed to assume positions in the local power structure. This is most evident in the composition of the school and planning boards. These impacts and changes have altered the older attitude toward development. The township now feels that development is desirable as long as it is "controlled" and "rational." There are two reasons for this new philosophy: the older residents no longer fear increased taxes and the new residents seem to have been successful in indoctrinating the natives to the glories of planning.

Although she is one of the disciples of planning, she seems to have no method for controlling development, nor a clear picture of the impacts that will result from increased density. Like the first interviewee, she feels that the development of the eastern section of the township (east of the Parkway) will remove the pressures from the western region. CAFRA, which has jurisdiction over the eastern section, is viewed as a powerful and effective ally. Yet she is aware that Matt Hudson is buying land west of the Parkway, as well as proposing development and wining and dining locals at the Smithville Inn, in order to gain their support. She also knows that several farmers in the western area are considering the sale of their land. It appears that a rather romantic notion of planning has clouded her ability to view the current situation in Galloway realistically or predict future conditions.

INTERVIEW 3: LONG-TIME COMMUNITY RESIDENT

The third respondent is a 50ish retired Navy man, a Councilman and member of the planning board of Galloway Township who takes an active interest in all that goes on in the area. Not only was he born and brought up in Galloway, his family has given their name to many local landmarks. Unlike the other people I interviewed, he is not associated with Stockton College, and when asked to talk about the township, he spoke exclusively of the eastern section, even though he now lives in Pomona. However, he is also an advocate of planning and controlled growth.

He describes the people of the township as being of "all types." During the past 40 years, many of the local residents have been forced out of their traditional occupation as bayman and have taken up a variety of trades and occupations. The establishment of the wildlife refuge is seen as the cause of bay pollution and the decline of shellfish. However, he maintains that "the refuge is a beautiful place and I love it." The war brought greater prosperity to the area and later NAFAC and Stockton State College brought a number of new people.

He estimated that, currently, 35% of Galloway's population is employed by the Federal or State government, 40% are privately employed and that the remainder of the population is retired. He also guessed that there are 3500 homes in the 95 square mile township, with 90% of the houses occupied by their owners and 15% are owned outright. Two years ago most homes sold for between \$30,000 and

\$40,000; now the average price is more than \$100,000. Leeds maintains that the price of land has increased even more dramatically, with as much as a threefold increase in one year's time. However, he feels that land speculation east of the Parkway is over, since land has become so expensive that it must be developed. The 3 square mile area that the 7,000 unit Smithville development is slated to occupy was acquired in the 1940's and 50's by a Mrs. Nojes; she sold it to ABC who, in turn, sold it to Cadillac-Fairview. Among other developments being planned for the area is the 100 unit, 350 acres known as Reeds Bay; Matt Hudson (Atlantic City Development Corp.) is considering a 14,000 unit development north of Smithville; and someone else is planning a 2000 unit, 500 acre development in the same general area.

He feels that these proposed developments will satisfy the need for housing in the area, and that more housing is not economically feasible. He points out that 80% of the people employed by the casinos in Atlantic City will not be able to afford a mortgage over \$40,000. He also cites the sewage treatment plant as a limiting factor. Although the plant will have a capacity of 40 million gallons, 28 million gallons of that is already utilized.

He enjoys his job as a local politician; he feels that the township's plan is an "outstanding document," which will save the township from the negative effect of "uncontrolled growth" because it is "flexible," "controlled" and will result in "good growth patterns" and "more open space." He feels that many builders underrate the expertise of the local planning board. Like the other respondents,

he feels that the future increase in population will not change the basic character of the area.

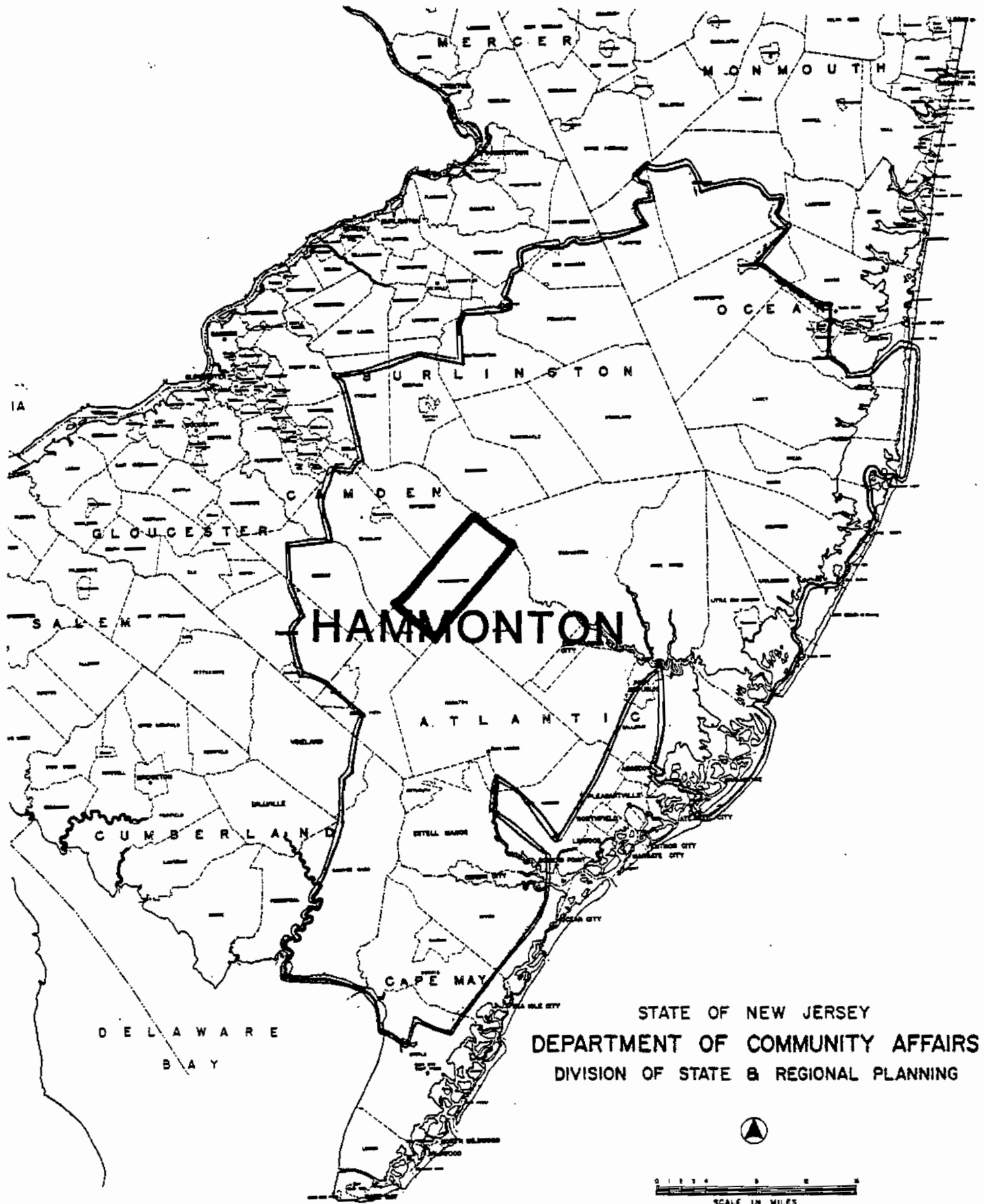
TOWN OF HAMMONTON

This report is a profile of the Town of Hammonton based on five case-study interviews and some supplementary data. Information gathered during the interviews is synthesized on Figure 5 and supplemented by Figures 1 through 4. The purpose of these interviews was to obtain a cross-section of local opinions and assessments concerning the community as they relate to the following topics over time:

1. land use
2. population
3. economic base
4. community character
5. development activities
6. land values and speculation
7. agriculture

These were informal interviews rather than structured, question and answer sessions, during which the interviewees were encouraged to present opinions and perceptions in addition to hard facts. The roles of the individuals, who were interviewed early in 1980 are as follows:

1. resident; planner
2. resident; teacher; member of the local environmental commission
3. resident; farmer
4. employed in town; lawyer; former town and country official
5. resident; local farm-related businessman; member of various



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local county and state farm and non-farm-related advisory groups.

Hammonton lies in the northwest corner of Atlantic County, bordered by Shamong and Washington Townships (Burlington County) to the north, Folsom Boro to the south, Mullica Township and a small portion of Hamilton Township to the east, and Waterford and Winslow Townships (Camden County) to the west (Figure 1). Hammonton is served by regional transportation connections. U.S. Route 30 and the Atlantic City Expressway are major arterial and limited access highways respectively, and provide east-west service. U.S. Route 206 and State Route 54 together provide north-south service. In addition, Hammonton contains a railroad station along the line which operates between Atlantic City and the easternmost terminus of the Lindenwold Line.

The Town of Hammonton is partially served by water and sewers as shown on Figure 2. The wastewater treatment plant is a secondary treatment plant and has a design capacity of 1.6 mgd of which approximately 1.0 mgd currently is utilized.

Hammonton had a zoning ordinance in 1945. A comprehensive plan was prepared in 1967-1968 and a new zoning ordinance adopted in 1969. Most recently, a new master plan was completed in 1978-1979 and a zoning ordinance adopted on 24 September 1979 (Fig. 3).

The following sections coincide with the previously listed seven topics. Although agriculture is part of both land use and economic base, it has been discussed separately, given its importance to the town.

1. Land Use

Both field observations and the case study interviews indicate that the Town of Hammonton primarily is a low-density residential and agricultural community with scattered light industry and two strip-commercial/business areas. In addition, roughly a third of the northern portion of the town lies within the Wharton State Forest (Figure 4). For discussion purposes, the town can be divided into five parts:

1. the more densely-settled town center;
2. a strip-commercial corridor, U.S. Route 30;
3. agricultural lands north of Route 30;
4. agricultural lands south of the town center, and
5. the Wharton State Forest

The town center, shown as the dark areas on Figures 4 and 5, is the oldest and most densely settled part of the town. It is a mixed-use area comprised primarily of one and two-family homes with a few garden apartments, a strip-commercial CBD running roughly N-S along Twelfth Street, and some scattered light industrial uses. Much of the recent residential development in Hammonton emanates from the town center (Figure 5).

The town's second significant commercial area lies within a corridor adjacent to both sides of Route 30 (Figures 4 & 5). This is a growing, strip-commercial area comprised primarily of highway-oriented businesses such as shopping centers, fast food outlets, automobile dealerships, etc. Growth can be characterized as an infilling of vacant buildable land fronting on Route 30.

The third division of the town is an agricultural area which lies between Route 30 and north to the boundaries of Wharton State Forest (Figure 5). Because agriculture will be discussed in more detail later in this report, it will suffice to say that this area is comprised of active orchard, vegetable and blueberry farms ranging in size from 200 to 500 acres.

Another major agricultural area lies between the town center and south to the municipal boundary (Fig. 5). Agriculture in this area is almost entirely vegetable farming. A significantly distinguishing characteristic between the agricultural area and the one north of Route 30 is the fact that scattered rural residential development exists along roads in the southern area while the northern area is almost entirely agricultural. The characteristics of this development will be discussed in the subsequent section on Development Activities.

Finally, nearly a third of the northern portion of the town lies within the Wharton State Forest which also coincides with the Pinelands Commission's "Preservation Area" boundary (Fig. 5). This area is undeveloped except for some blueberry farming and associated rural residential uses.

2. Population

According to the Census, Hammonton's 1970 population was 11,464 persons, an increase of 16.3% from 1960. The estimated 1977 population is 12,075 which is a 5.3% increase since 1970. The 1970 to 1977 average annual rate of growth is 0.8% or roughly one-half of the 1960 to 1970 rate of 1.6%.

finding. As indicated, there were a total of 22 industrial firms operating in Hammonton. Of these, nine fell within the 2-digit, SIC category of "Apparel and Other Finished Products". More significantly, total employment for the 22 firms was 2,820 employees. There were 1,803 employees working in the nine garment, industry firms which accounted for 64% of the total number of industrial employees. If the 400 employees working at Whitehall Labs is deducted from the total number of town employees, garment industry employment represented 75% of Hammonton's total industrial employment.

Only one of the interviewees believed that commutation west to jobs in the Philadelphia and Southern New Jersey area is a pattern for Hammonton residents. This same person also thought that the town is an attractive bedroom community for employees of Atlantic County Community College and Stockton State College. None of the interviewees indicated that they were aware of any new casino-operating employees locating in Hammonton although the town has supplied construction workers. However, all of the people believed that Hammonton would become a bedroom community for Atlantic City in the future.

There was a consensus among all of the agricultural-related interviewees that if farming remained healthy in Hammonton, casino jobs would not attract a significant number of farm operators or their offspring. However, one interviewee indicated that these jobs may attract key farm workers such as foremen.

4. Community Character

The case study interviewees were asked to describe the character of the community. "Community character" is a nebulous concept which, in this, instance, was used to identify any distinctive qualities that the interviewees perceived Hammonton to have. The interviewees' responses are listed below.

- All of the interviewees felt that Hammonton was a pleasant community in which to live and most have extensive long-term family ties to the community.
- Most of the interviewees characterized Hammonton as a small, close-knit community where residents know each other and outsiders find it difficult to be absorbed.
- None of the interviewees had any perception of increased crime over the last two decades.
- One person felt that the quality of life had deteriorated over the last 20 years as a result of the town's growth. This deterioration was characterized as being manifested in the pollution of Hammonton's Lake caused by urban runoff from recent development and in increased level and complexity of public services required, such as municipal trash collection, a full-time building inspector, and the construction of public recreation facilities.
- The town's predominately Italian-Catholic population was characterized by one interviewee as being conservative, family oriented, and anti-urban and which welcomes industry but not low income housing. Although there has been enough controlled expansion in public services so that they have not been strained as a result of past growth, the populace was described as not being prepared for any new, significant future growth. This latter comment was made in light of future growth pressures generated by Atlantic City casino development.
- Another interviewee indicated that although Hammonton has a strong agricultural base, the town is not a "grange-type" community with such characteristics as children being involved in either the Future Farmers of America organization or enrolled in agriculture vocational classes. Rather, the town was characterized as a community of businessmen whether they are farmers or not. The only exception is the agricultural area north of Route 30 which is comprised of more traditional farming families.

According to one interviewer, no official municipal population projections exist. However, the county municipal utilities authority projected that Hammonton would grow to 20,000 to 22,000 persons by the year 2000 and the county projected a population of 15,000 persons for the same year.

All of the interviewees attributed population increase primarily to net natural increase as immigration was not considered to be a factor. The only exception is a major immigration which occurred during the mid-1960's as a result of the opening of Whitehall Laboratories, a pharmaceutical preparations firm. The interviewers characterized the population of Hammonton as predominately Italian-Catholic. One interviewer indicated that a recent Presbyterian Church survey found that there has been a recent increase in the Hispanic population, but that there are few Blacks living in the town.

3. Economic Base

For purposes of the interviews, economic base was defined as the answers to questions concerning where resident's of Hammonton work and what employment opportunities exist within the town. A second question addressed the impacts of Atlantic City casino gambling on this economic base. All of the interviewers were in agreement that agriculture and local industry, particularly clothing manufacturing, are the two main economic activities indigenous to Hammonton. This is in addition to Whitehall Labs, and retail trade and other businesses common to many towns.

A review of a 1974 county industrial directory confirms this

- Finally, one interviewee indicated that until very recently, all new construction within the town has been proposed and/or built by locally-known builders and developers. There now are outside developers (e.g. Canadian) who are expressing interest in the community and this has made some residents feel "uneasy".

5. Development Activities

This section of the case study analysis describes the interviewees' perceptions of past, present, and future development activities within Hammonton. This topic addresses the town's growth--where and what kind over time.

There have been two types of residential growth in Hammonton since the 1950's and which continue today. First, new residential development, both small subdivisions and individual lot infilling has occurred in and emanates from the more densely settled town center. This growth generally runs in an east and west direction (Figure 5) as extensions and hookups are made to the municipal sewer and water systems (Figure 3). Except for a few garden apartment complexes built since the latter 1960's, all of this residential development has been single-family homes.

The second type of residential development is small builder-type construction of one to three houses on individually purchased lots that were previously subdivided. As shown on Figure 4, these homes are scattered along many of the roads outside of the town center. In addition, farming continues behind many of these residences.

One interviewee indicated that due to the conservative, no-growth attitude of the town, little change from this pattern is

anticipated. To date, developers with major subdivisions have been procedurally "delayed to death". This has resulted in a reluctance by developers to propose such projects in Hammonton. According to another interviewee, a second issue concerning future residential development is the question of wastewater management. Although the existing wastewater treatment plant currently has an excess capacity of 0.6 MGD and meets its NPOES permit discharge standard of secondary treatment as designed, the NJ DEP has proposed upgrading the receiving stream standard which would require advanced treatment at the Hammonton plant. To date, this issue has not been resolved.

New commercial development largely has occurred in the Route 30 corridor and is expected to continue. No new industrial development has occurred or is expected to occur until the wastewater management question is resolved. Neither the Planned Industrial nor the Planned Industrial-Planned Regional Commercial areas shown on the zoning map are served by municipal sewers.

6. Land Values and Speculation

Although all of the interviewees indicated that land values have appreciated during the last two decades and particularly since 1970, none were aware of any major land speculation by outsiders within the town. One interviewee did indicate however, that farmers recently have been purchasing land at prices which appear to be uneconomical for farming except possibly for the current high cash return on two crops--blueberries and peaches.

One interviewee indicated that 30 to 40 years ago, the price of land averaged \$10 per acre. By the late 1950's, this price increased to \$100. Another interviewee indicated that the price of land was \$500 per acre during the mid 1960's and which now ranges from \$2000 to \$3000 per acre. This significant appreciation was said to occur during the early 1970's as farmers became aware of growth pressures and increasing land values in peripheral areas such as Winslow Junction.

7. Agriculture

Because of the importance of agriculture for Hammonton, a separate section of this report is devoted to farming. There was a consensus of answers among the interviewees knowledgeable about farming and therefore the following is a composite narrative, which describes past, present, and the anticipated future of agriculture in the town.

Although the number of farms has declined during the last 20 years, the acreage under cultivation has remained about the same. A previous section on Land Use indicated that there are two main agricultural areas within Hammonton: first, the area roughly north of the town center between Route 30 and the Wharton State Forrest boundary; and second, the farmland south of the town center. Farming in the northern area is comprised of three principal types (i.e. blueberries, orchard fruit and vegetables) while vegetable farming predominates in the southern area. The importance of this distinction will become apparent in the following paragraphs.

Although there have been many crop cycles since World War II, vegetables and fruits have been the mainstay. Up until approximately 10 years ago, vegetable farming predominated. Since then, there has been a shift to tree fruit and blueberry farming as well as vegetables cultivated on larger farms. This shift is best characterized as the change from labor intensive farming practices to mechanization. Three factors accounted for this shift:

- a change in market demand and resulting profits;
- a change in the natural cycle which resulted in more frost and freezes, and disease affecting certain crops;
- a change in state regulations, which mandated a shift in payment from piece work to a minimum wage.

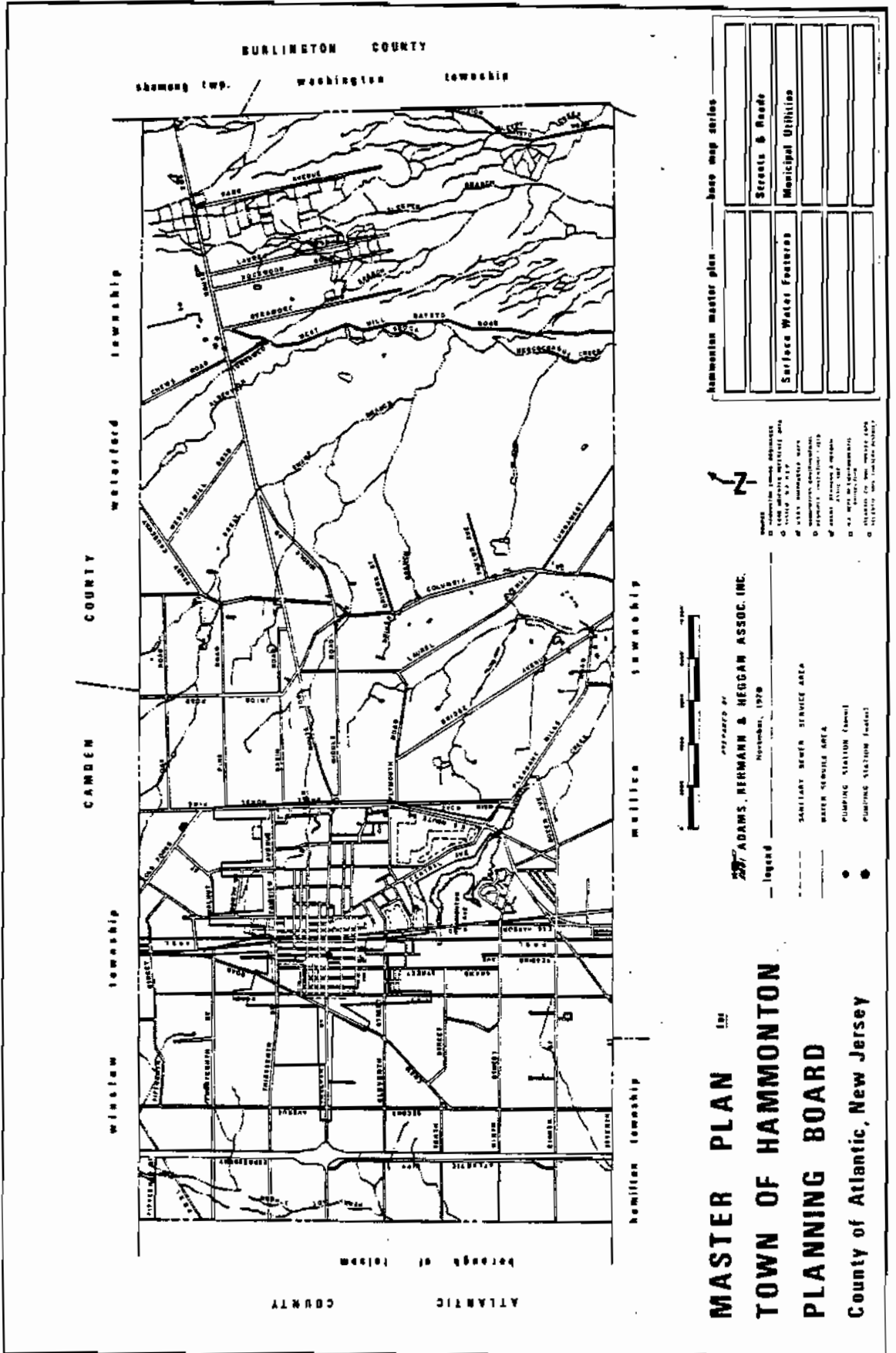
The resulting mechanization caused the need for greater acreage per farm in order to maintain economies of scale required by mechanization.

At present, farming in Hammonton is considered strong as many of the marginal farms were absorbed by the more successful one during the transition. In addition, the profitability of blueberries and tree fruits has been a sufficient incentive to keep farmers' offspring in agriculture. This in turn has reinforced the strength of farming in Hammonton.

The future of farming is anticipated at the present time as good. However, two factors are noted:

- agriculture as it is practiced today is more vulnerable to failure as a result of the increased specialization of crops; and
- new development threatens the as of yet unresolved issue of the "right to farm (i.e. conflicts between farmers and adjacent landowners over nuisances resulting from farming)".

As previously noted, scattered residential development has occurred along roads outside of the town center. This has occurred in the southern farm area to the extent that this area is now zoned for more intensive use. This is in contrast to the Rural Residential zoning classification assigned to the northern agricultural area (Figure 2). Given the predominance of weaker vegetable farming in this area, its future as farmland is questionable.



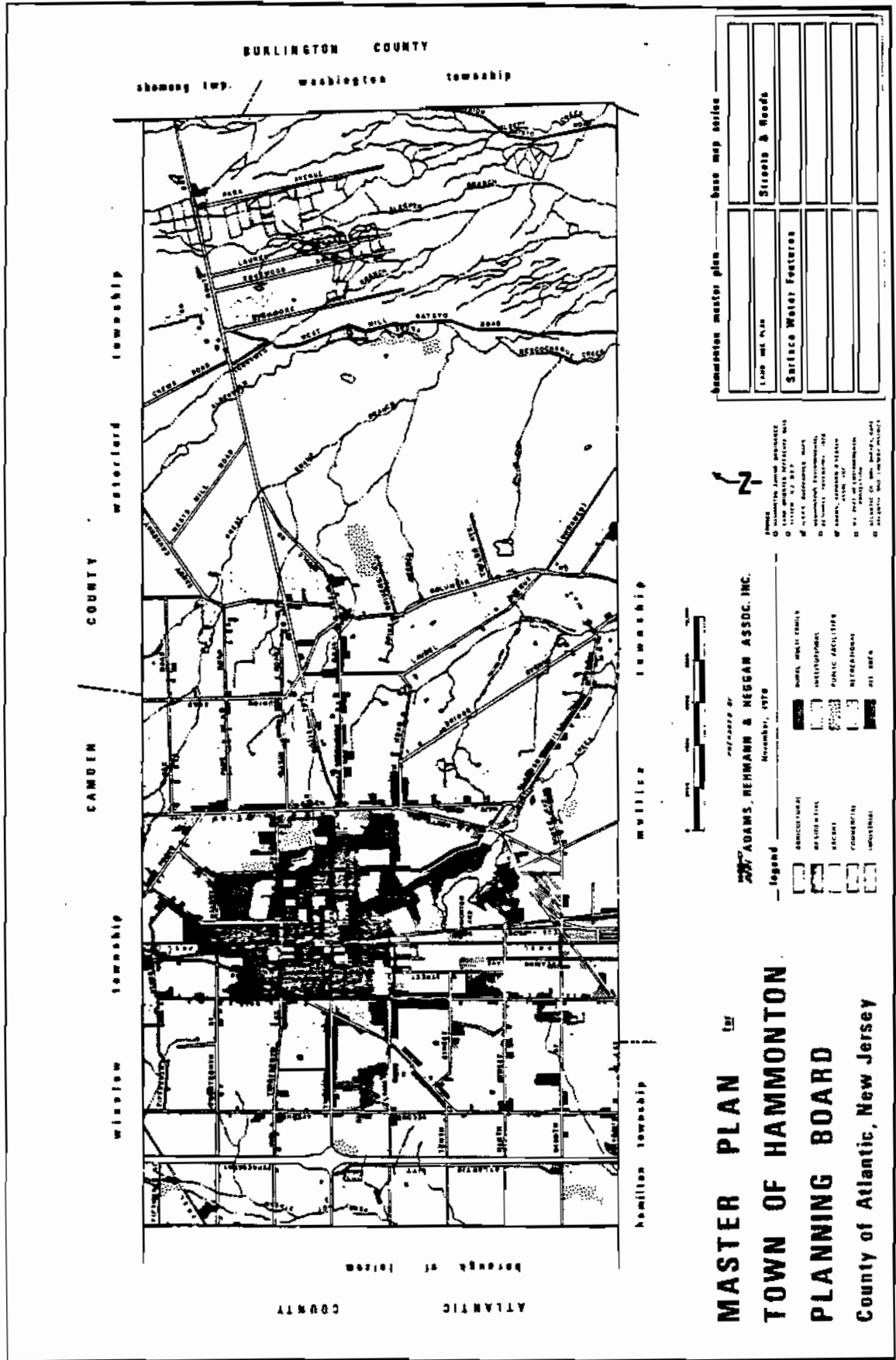


FIG. 4

Fig 5
Hammonden NJ Case Study
Composite Map

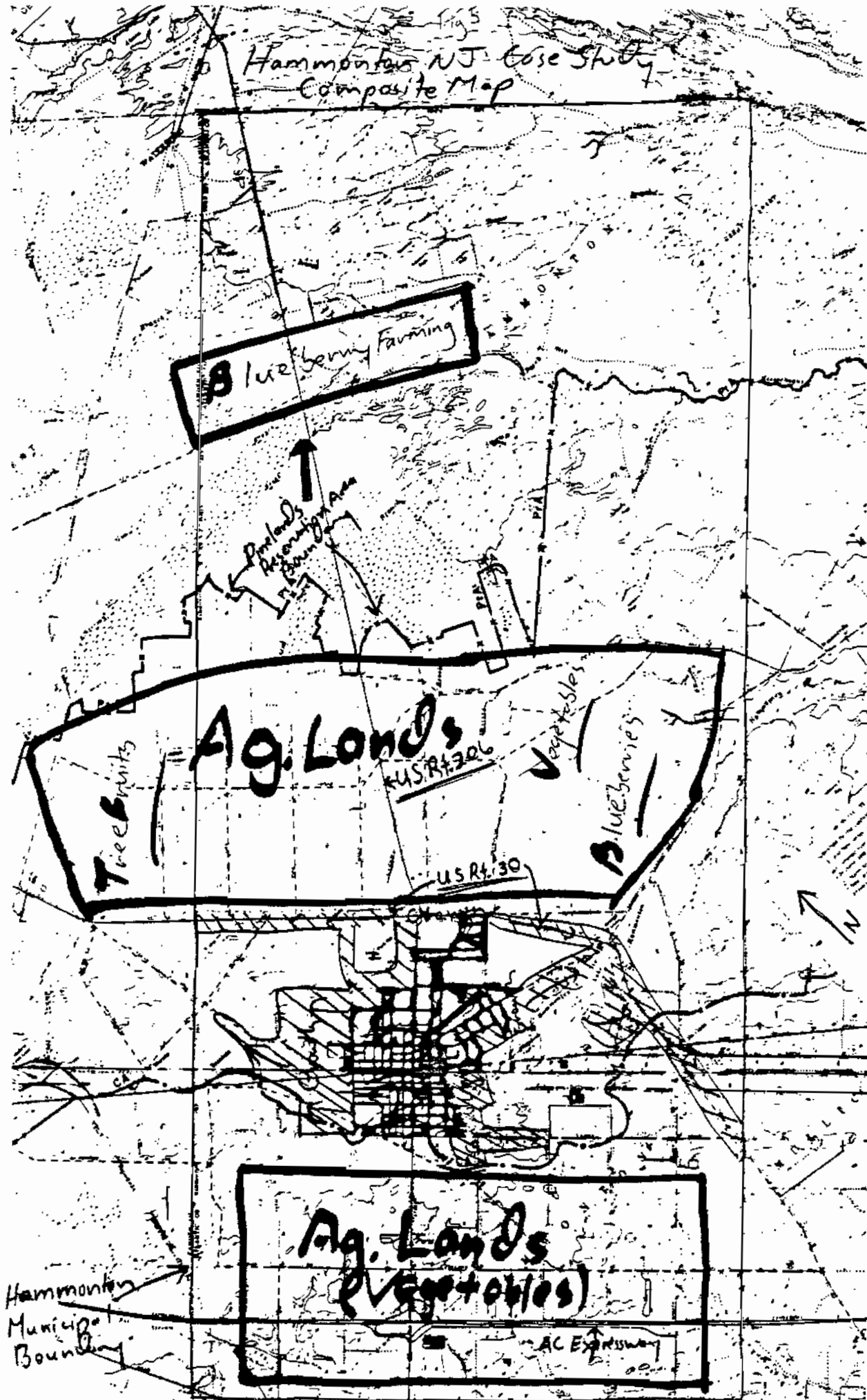


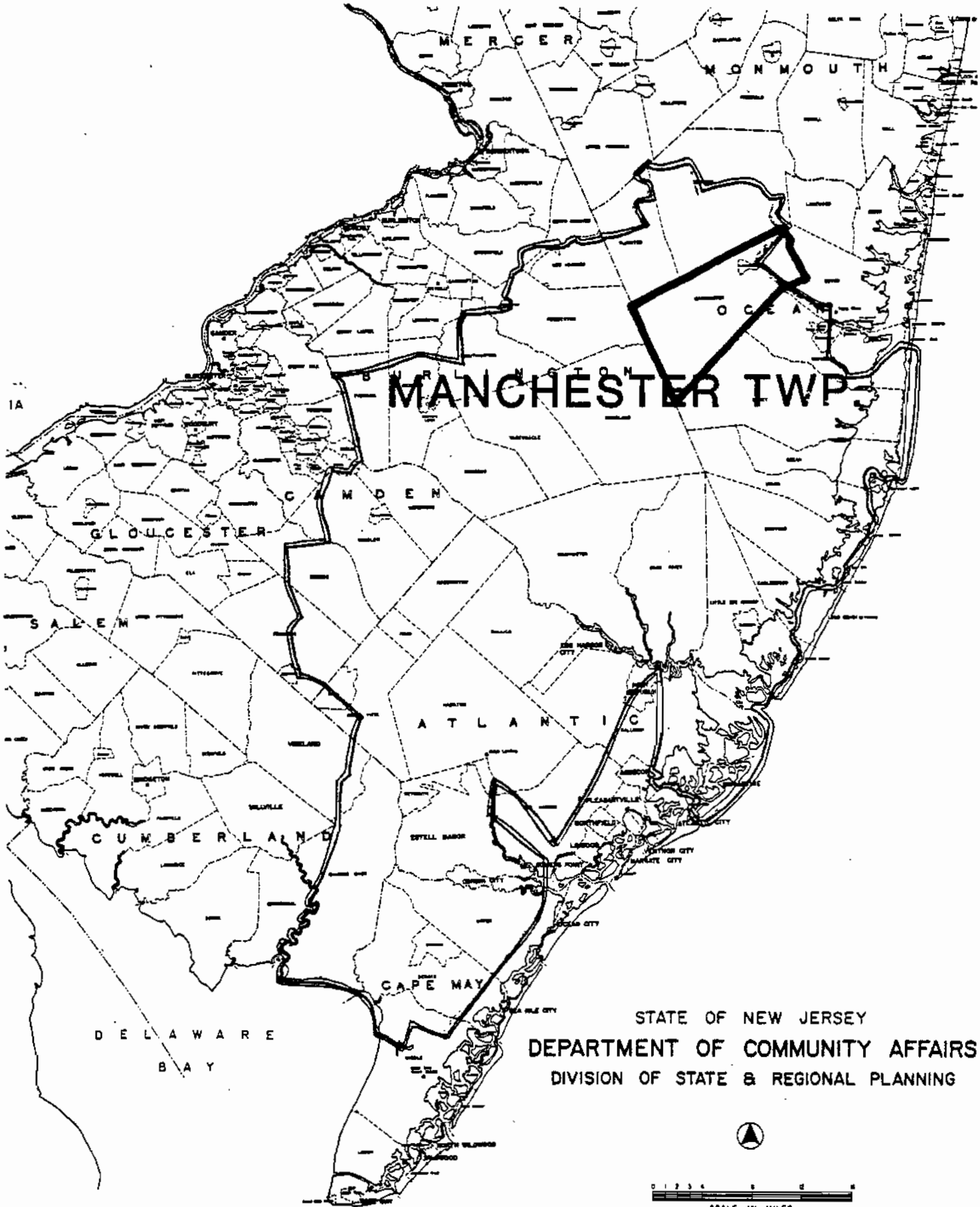
FIG. 5

MANCHESTER TOWNSHIP

Manchester Township is one of the most rapidly developing municipalities in the state. From 1960 to 1970, the population grew from 3779 to 7550; by 1977, the population was estimated at 20,706. Further, from 1970 to 1978, the Township issued 9730 building permits. Retirement Communities have by far dominated development in Manchester. For example, the 1970 population was 38.1% aged 65 and over. Moreover, of the 10,543 occupied year-round dwelling units in 1978, 8,578 were in the Township's Retirement Communities (R.C.).

As indicated above, the great majority of development in Manchester occurred in the past two decades. Prior to 1962, when Cedar Glen City, the first R.C., was constructed, the Township consisted of scattered detached single-family homes. This development was primarily centered in 2 areas of Manchester; the Whitings-Roosevelt City area in the Township's western section, and the Ridgeway-Pine Lake Park area in the Township's eastern section. The Town of Whiting dates back to the 19th Century; Pine Lake Park and Roosevelt City are old (pre 1930) paper subdivisions that have only begun to develop significantly in recent years. The older residents of the Township were described by one interviewee as generally working people, with some self-employed. The so-called old-timers have not historically been very well off economically.

In the early 1960's, the Township government established a policy of actively encouraging R.C. development, largely in order



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to keep the municipal tax rate down. Between 1962 and 1964, 2 relatively small R.C.'s were constructed, located in the south- and north-eastern sections of the Township. Between 1965 and the early 1970's, the large Crestwood Village and Leisure Technology R.C.'s were constructed. Following the Township's historic development pattern, Crestwood Village is located in the Whittings-Roosevelt City area and the Leisure Technology developments are located in the Pine Lake Park-Ridgeway vicinity. The locations of these R.C.'s followed the recommendations of the Township's Master Plans. Both the 1961 and 1967 Plans suggested that development should concentrate in these two areas. The third phase of R.C. development, beginning approximately in 1976, consists of the expansion of Crestwood Village and the Leisure Technology developments. As previously indicated, the R.C. development has been massive. Since 1962, over 8500 dwelling units have been built that house over 16,000 people.

Other development in the Township has followed the R.C.'s. Lured by the low tax rate (for example, the rate dropped from \$2.94 per \$100 in 1975 to \$1.53 in 1976) a variety of relatively small single-family developments were constructed in the 1970's, concentrated primarily in the Pine Lake Park and Roosevelt City subdivisions. Pine Lake Park, located east of Route 37, is a large subdivision of 25' by 100' lots. According to one interviewee, it was approximately 4% developed in 1970; today it is approximately 10% developed on 100' by 100' lots (4 of the original lots are required to build under existing zoning). Roosevelt City is a 4 to 5 sq. mile 1-acre

lot subdivision; up to 1976, there were perhaps 10 homes in the area. Since that time, approximately 200-250 single-family houses have been built. A number of other, smaller, single-family subdivisions have also been built in recent years in the Pine Lake Park-Ridgeway section of the Township.

Although there exists very little commercial development in Manchester, this, too, has followed the R.C. pattern. Some commercial facilities exist to service the Crestwood Village development; a small shopping center is also under construction west of Crestwood. Most of the commercial development has occurred along Route 57 south of Route 70, in the eastern portion of the Township. This development serves the single-family houses in the Pine Lake Park-Ridgeway area as well as the Leisure Technology developments.

Very little industrial development has occurred in Manchester Township. The American Smelting and Refining Company (ASARCO) is engaged in a surface mining operation in the central portion of the Township. This project, however, returns the land to its original state after the extraction of minerals; the ASARCO lands will, therefore, eventually be available for development. A magnesium mill is located in the north-central section of the Township, in addition to a number of small industrial concerns. Finally, a sand and gravel mining and landfill operation is located in the eastern-most portion of the Township.

Despite the development activity described above, most of the Township's lands are currently undeveloped. According to a 1975 land use analysis prepared by Eugene Cross Associates, Manchester's

Planning Consultant, the Township was 90% undeveloped at the time of the analysis. The analysis indicated that 53% of the Township was vacant privately-owned land and 37% was vacant state-and-federal land. The public lands are included in the Lebanon State Forest and Fort Dix Reservation in the Township's western portion (west of Roosevelt City), and the Lakehurst Naval Air Station in the northern section of the Township. The primary private land-owners are Crestwood Village, which owns land north and east of that R.C. under the Sunny Pine Contr. Corp.; Leisure Technology, which owns land north of Crestwood Village and southwest of the current Leisure Tech developments; and ASARCO, which owns a massive tract that includes the entire central portion of the Township. The ASARCO tract stretches from Crestwood's eastern border to Route 37 and from the Township's southern border to north of Route 70.

This development pattern has led to the following current land use scheme, described briefly and generally: West of the Roosevelt City subdivision and north of Route 70 is largely undeveloped, falling within Lebanon State Forest, Fort Dix, and the Lakehurst Naval Air Station. The Roosevelt City-Whiting area contains the Crestwood Village R.C. as well as a number of single-family dwellings and a few commercial establishments. The large central portion of the Township is essentially vacant and owned by ASARCO. ASARCO is currently mining a relatively small piece of land within this tract. The eastern portion of the Township (Ridgeway-Pine Lake Park) contains the majority of the Township's development. Located here are the Leisure Technology R.C.'s, Pine Lake Park, a number of smaller single-

family subdivisions, the new high school and municipal complex, and most of Manchester's commercial development. East of this area, along the Township's easternmost border, one finds the landfill and sand and gravel operations; north of this area is the location of the small industrial area that includes the magnesium mill.

The tremendous level of Retirement Community development has not occurred without problems for the Township, despite its obvious tax rate benefits. Two interviewees stressed that problems already existed between the R.C. residents and the younger families with children who have been purchasing the single-family dwellings. One of the prime concerns of the R.C. residents, who comprise over 70% of the population, is a low tax rate; indeed, the tax rate is one of the Township's R.C.'s main attractions. In contrast, the younger families desire a full range of municipal services, the provision of which would require considerable municipal expenditures. The Township recently constructed a new high school. A new middle school was, however, voted down twice in early 1980, largely as a result of senior citizen opposition. This conflict can be expected to continue in the future. As a corollary to this, the same two interviewees expressed concern over the possibilities for the development of a cohesive community among these diverse segments of Manchester's population.

Two interviewees also expressed concern over Manchester's "overdevelopment." In contrast, the Township Administrator stated that the Township will definitely continue with its present policy of large scale Retirement Community development. He felt that the

extent of the Township's ultimate development would include all of the lands within a line drawn along the western border of the Roosevelt City subdivision, Route 70, and the Township's eastern and southern boundaries. This would include all of the ABARCO lands, and would accommodate a population of 40-50,000. He stated that the Township would continue its present policy of 4 R.C. dwelling units to 1 single-family dwelling unit. The presence of large vacant tracts owned by the R.C. developers would support his prediction that the R.C. development would continue to dominate the Township's development.

In addition to the R.C.'s, a number of other developments have been proposed in Manchester. These are detailed in Interview 1, below. The important point to note is that development proposals in recent years have begun to push west and north either very close to or into the Commission's jurisdictional area. It seems that the Commission's presence has chilled this. We are unsure as to whether this is an over-reaction on the part of the market, or the response that the Commission can expect to continue. Further, in this connection, development activity in Roosevelt City has declined in the last year or two. One interviewee attributed this to uncertainty concerning the Commission's development policy. It is again difficult to judge the extent to which this development pressure will revive.

The detailed information on which this brief narrative is based is offered in the following write-ups of the three interviews conducted

in conjunction with this case study, relevant information extracted from Manchester Township's 1961, 1967, and 1980 Master Plans, statistical data on the Township, and large scale maps illustrating zoning, land ownership patterns, and land transaction activity.

INTERVIEW 1: TOWNSHIP ENVIRONMENTAL OFFICER

The first interview was with the Township Environmental Officer. He is 28 years old, and has been a resident of Manchester for 7 years, since his parents moved from Newark to Crestwood Village. As Township Environmental Officer, he reviews development and subdivision plans from an environmental perspective. He has worked for Manchester from the winter of '78 to the present time, and is the Township's representative on the Pinelands Commission Mayor's Council.

1. Types of People in Manchester

He identified 3 district social groups: 1) what he termed "old-timers", 2) senior citizens, and 3) younger middle-income families with children.

The old timers have lived in Manchester from before the Retirement Community boom. Many can trace their residence back to the 1880's or so. These are generally working people. Many work for the Township and County road departments, and some are self-employed. Historically, and this remains true today, this is not an economically well-off group of people. Up to the 1940's, the Railroad was the main economic factor in Manchester. Many residents worked for the railroad, and many others worked in occupations related to the RR's presence: woodmills and small factories that located in Manchester because of the railroad. There has never been any significant business activity in town. The majority of the

residents commute out to work. This is true of old-timers as well as the younger family heads.

The younger middle-income families are a more recent development--mostly lured by the low tax rate. The volume of these families is increasing, but is not gaining on the Seniors because of the Township's ratio of 4 Retirement Community dwelling units to 1 SF dwelling unit. Most of these people out-commute to a wide area, Trenton, New Brunswick, Newark and even New York. Based on his knowledge of the township welfare department's activities, he indicated that there exists very little unemployment in Manchester.

2. Trend in Retirement Community Development

He described the sequence of Retirement Community development. For ease in referring to the attached map, the names of each development have been circled in red.

The first phase of R.C. development consisted of 2 small communities. Cedar Glen City, located in the extreme southeastern corner of the municipality (quadrant D-15), was developed beginning around 1962 by Paul West. Cedar Glen West, located in the northeastern section of town (quadrant A-14) was begun around 1964 by the same developer and is approximately the same size as Cedar Glen City.

The second phase, which began around 1965, brought the large R.C.'s to Manchester. Crestwood Village began at a density of 4-5 du/acre, and with very well-constructed structures. Low density, adequate spacing between structures, and solid construction were

were the marketing strategies used by Crestwood. However, according to the interviewee, it has gotten progressively denser and more ticky-tacky, to the point where Whiting Village, the last section constructed, features 16 feet between structures. Crestwood is located just west of the Township's midpoint (see quadrant E-7 on the map). Leisure Village West, located in the eastern portion of town (map quadrant C-14), was begun after the development of Leisure City in Dover Township. In contrast to Crestwood, which is predominantly co-operative, Leisure West is a condominium development. Cedar Glen Lakes, located just west of Crestwood Village (map quadrant D-5 & 6) is the final aspect of this second phase.

The final phase consists of the expansion of Crestwood Village to the South east and west and the development of Leisure Knoll, located to the north of Leisure West (map quadrant C-13 & 14). This phase began around 1976.

His sense is that the R.C. market is on a downswing. This is indicated by the Township's action in January 1980 to lower the minimum age from 52 to 48. This is also evidence of the Township's continued commitment to R.C. development, for tax rate purposes, which he indicated was a very strong commitment.

3. Current Land Use

This discussion is keyed to the attached map, which the interviewee filled in in detail concerning current land use. The black, blue, and green markings were put on the map by him. Black lines refer to existing land use, blue lines connote proposed future

development (described in the next section), and the green line is the Pineland's preservation line. This section describes the map moving from west to east.

A. The western portion of the town is publically-owned open space--comprised of Lebanon State Forest and the Fort Dix Reservation. Within this area is an old section of town known as either Wheatland or Pasadena (see map quadrant G-2). This contains a few scattered single family homes that date back before the 1940's.

B. The Roosevelt City area (map quadrants F thru G and 5 through 7) is a 4-5 square mile 1-acre subdivision that was subdivided initially in 1907. This area has no sewers. Up to 1976, there were approximately 10 homes built here. The past 5 years have witnessed much greater development in this area, all single-family detached on 1-acre lots.

The southeastern section of Roosevelt City, called Fox Hollow, developed by Bob Scarborough and at 10 du's/block, includes approximately 150-160 homes. Winnewood at Whiting, located on the western edge of Roosevelt City, includes 25 homes. The developer began advertising in 1978, and was not able to move the homes, which are selling in the 50's. The developer is now getting out of Manchester. Timberview, just north of Winnewood at Whiting, is similar to Winnewood. The developer was active around the same time as Winnewood's, and had a very similar experience, including getting out of Manchester. The remainder of Roosevelt City consists of single lot owners constructing homes for personal use or small builders doing a small volume of construction for resale. This is occurring

sporadically throughout the area, depending largely on the availability of paved streets. (We note that the Township Tax Assessor advised us that the Township spent a great deal of State/Federal funds in the past few years on street paving in Roosevelt City. We drove the subdivision, and found a number of paved streets with very few homes on them.)

He indicated that the Pineland's Moratorium has really killed development interest in Roosevelt City, a situation that he believes will likely persist for 10 years or so. For the next 2-3 years, he sees sporadic single lot construction; what will happen after that is problematic. An upswing in building may occur, but he believes it will be an environmentally sensitive one, due to the Commission's presence and the proximity of the area to the interior core of the Pinelands. The Structural Management Corporation owns a great deal of land in Roosevelt City. Lacy Township is discouraging development of that part of Roosevelt City within its borders because of the absence of roads.

C. North of Roosevelt City and west of Crestwood Village is the Whiting area (see map quadrants E-6, D-5 through 8, and C-6). This area contains a small number of scattered single-family homes. The original Town of Whiting (quadrant D-6 & 7) dates back to the late 19th century. As the map indicates, there were a number of subdivisions in this area, subdivided in the 70's, that were never developed.

D. The area of the Township outlined in black (roughly including map quadrants D-7 & 8, E-6 to 8, and F-7 to 10) is Crestwood Village.

This includes the Pine Ridge Mobile Home Park, which is a part of the Crestwood project. West of Crestwood Village (quadrant D-5) is the Cedar Glen Lakes Retirement Community.

E. The area outlined in black in the north-central portion of the Township (quadrant B-8 & 9) is known as Beckerville. As the map indicates, this is an older section of Manchester, a place of residence of "old-timers". It contains approximately 10 scattered homes, small plot farms, and is a lower income area. (Note that we drove this area, and found the homes to be in poor condition and generally quite small.)

F. The large area in the central portion of the Township (from quadrant B-8 to C-11 to E-12 to E-10) is owned by ASARCO, the American Smelting and Refining Company. ASARCO is extracting a basic paint compound, and utilizes a process that restores the land to its natural state. According to him, ASARCO does a good job at restoration. Also, according to him, except for this land, the only remaining truly open space in Manchester (just in ecological system) is the land that falls within the Pinelands boundary.

G. Just east of the ASARCO lands is Route 37. This area contains some strip commercial development, the town hall and high school, and two small single-family subdivisions (Summit Park, subdivided in 1959 and Savannah Acres, subdivided in 1950). At the southern end of Route 37 is a small mobile home park.

H. North of the Route 37 area are the Leisure Tech. developments. According to him, Leisure plans to expand south to Route 37.

I. East of Route 37 is Pine Lake Park, subdivided beginning in 1910. The original lots are 25 x 100, and existing zoning requires 4 lots to build. This is a single-family subdivision. Ten years ago, it was approximately 45% developed; most of the existing development has occurred within the past 10 years. The entire tract is spot SF homes; he made no estimation of the number of dwelling units that exist at present. (Note that we drove through this area, and found a wide variety of structure types--ranging from bungalow-type to rancher to more recent split level and 2-story. The homes are truly scattered throughout the subdivision.)

J. To the east of Pine Lake Park runs Ridgeway Road, which contains a number of scattered single-family homes. Like Pine Lake Park, this is primarily a low-income area.

K. North of Ridgeway Road (see quadrant B-15) is the Ridgeway Area. This is a fully developed single-family area on $\frac{1}{2}$ acre lots.

L. South of Ridgeway is the location of a sand and gravel mining operation (see quadrant C-15). When the mining is completed, this area is intended to be used as a sanitary landfill. In fact, there are some landfill operations ongoing at the present time. There is a second sand and gravel operation in the Township's extreme north-eastern corner.

M. North of the Leisure Tech. developments (quadrant B-13) is an industrial area. This contains a number of small factories and a larger magnesium refining plant. The magnesium plant generates a substantial volume of noise, which is affecting the proposed westward expansion of Leisure Knoll. According to him, the Township has

made this expansion contingent on Leisure Tech's minimizing the noise impact of the magnesium plant.

N. The area in the north-central portion of the Township generally encircled by the Pineland's preservation line as far west as Beckerville (quadrant B-8) is a heavy noise impact area from the Lakehurst Naval Air Station. This is substantially limiting the development potential of this area.

O. The Fort Dix bombing fields also have a large noise impact on the area of the Township north of Cedar Glen Lakes to the Township's northern boundary. (map quadrants D through A-5 & 6). This also has had a limiting affect on development; for example, the Township denied the extension of Cedar Glen Lakes north of Route 70 because of the adverse impacts of this noise.

4. Proposed Developments

He named the proposed developments of which he was specifically aware. The ensuing list refers to the numbered areas circled in blue on the map.

1. Fas-Mac Corp. - 1979 - 8 homes proposed on 10 acres in a hi-impact noise area.
2. KOA - type Campground - 1979 - 50 acre tract.
3. Extension of Cedar Glen - 1978 - may be defunct due to noise impact.
4. SF homes on 1-acre lots - feasibility hurt because of noise impact.
5. Warwicke at Manchester Retirement Community, R.O.C. Corp. 1978 - 79.
6. Another KOA-type campground - 1977 - proposed by Crestwood

Village, Inc., extends into Woodland Twp; probably will not be pursued due to location in Pinelands; never presented before Planning Board.

7. Campground proposed on 24.6 acres - 1972 - fire lanes were constructed around the perimeter of site, a 1-acre pond was dug, and the project was not finished.
8. Village 6 - Crestwood Village
9. Leisure Knoll Extension - running into difficulty due to noise impacts.

5. Farming in Manchester

There has never been any significant farming due to the poor quality of the soils. He estimated that at its height, less than 1 square mile of land was actively farmed. Most of this occurred on small farms and farming plots in the Ridgeway and Beckerville areas. There are currently some small farms in the Ridgeway area that predate WWII. Farming is done by the landowners, and has not served as a stable source of income; the farmers subsisted at best.

6. Problems in Manchester

He was very hesitant to speak on this subject. The one problem that he did identify was that the Pinelands moratorium could possibly affect Retirement Community development. Slowing down this development, if single-family construction continued, would erode the ratio of senior units to single-family units, which would have repercussions on the municipal tax rate.

7. Manchester in the Future

All significant development in Manchester has occurred in the past 15 years. He expects these recent trends to continue. He spe

most of the short-term development occurring east of the Borough of Lakemurst (east of quad line 11).

His view is that the development of this area will be governed by existing zoning (see attached zoning map) and, further, that it will be fully developed. The emphasis will continue on Retirement Community development, particularly on large tracts. He expects that all lands zoned R-A will eventually become senior development. (Note that R.A. permits Retirement Communities as a conditional use.)

Within the next 10 years, he expects Manchester to lose its rural character, in the sense that there will no longer be a patch of woods every other parcel of land. He expects the Township to be characterized by almost exclusively improved land that is of relevance for tax purposes, the Township's prime developmental motive.

INTERVIEW 2: RETIREMENT COMMUNITY AND GENERAL COMMUNITY ACTIVIST

The interviewee has been actively involved in development issues in the Township for a number of years. Her involvements have included Retirement Community development, general community development and growth issues, and the activities of the Pinelands Commission. She is a resident of one of the Township's Retirement Communities, where she has resided for approximately 5 years.

Because I did not have adequate maps for the interview, we did not endeavor to depict anything graphically. Rather, our conversation was of a more general nature; she provided me with background about the Township and its development.

In describing the municipality, she identified three major categories of the population: long-time residents, residents of the Retirement Communities, and younger families with children. Ten or fifteen years ago, the Township was almost entirely populated with what she termed 'old-timers.' These families are long-time residents of Manchester, many of them are now older people, and they are primarily blue-collar, and County workers. Many are employees of Toms River Chemical, according to her. Her belief was that a few were self-employed within the community, but that most commuted to work outside Manchester but within Ocean County. This is a very stable group. They have lived in town for over 20 years, and some for much longer--2 or 3 generations.

The Senior Citizen community, which comprises 75% of the Township's population, has steadily and rapidly built up since the middle

of the 1960's. This portion of the Township's population moved in in conjunction with the development of the Township's large Retirement Communities. She thought that 75-80% of the Seniors are from North Jersey and New York City (Essex, Bergen, Union Counties and the Boroughs of Staten Island and Brooklyn), with the remaining 20-25% migrating from Southern NJ, and the Trenton and Philadelphia areas. This is also a stable community; when a family moves into a Retirement Community it rarely relocates. She estimated that an average of 100 units per year are resold in Crestwood Village, due to the mortality of residents.

She thinks that the current downswing in the Retirement Community market is a temporary occurrence, and does not indicate a decline in demand for senior citizen housing of this type. Her view is that many seniors are having difficulty selling their homes due to the tightness of the mortgage market; once this situation changes, she believes that the Retirement Community market will bounce back strongly and continue at a healthy level for many years.

The younger families with children is a fairly recent development, occurring in the past 5 years or so, and possibly less. Virtually all of this development is occurring at the western and eastern ends of the Township, in old paper subdivisions known as Roosevelt City and Pine Lake Park, respectively. Relative to the Senior Citizens, this is a small segment of the population, and has grown as developers have spot developed in these subdivisions. According to her, virtually none of these individuals are employed in Manchester. Her view is that most are middle income families with school age or

soon to be school age children. She had little notion of the kind of work they do or where they commute to work. They have been drawn to Manchester by the low tax rate made possible by the large Retirement Community ratables.

These three population groupings are fairly homogeneous, and interact very little in the Township, which has led to the situation of three largely separate groupings within the community.

She views the Township as beset with 2 major problems, both resulting from the Township's development over the past ten years. The first is her concern that Manchester is developing too rapidly for the Township to accommodate and service adequately. For example, she indicated that there is a clear shortage of health services in the area for the Senior Citizens, from ambulance services to hospital beds. She also feels that the roads are becoming increasingly congested, and that in some of the Retirement Communities drainage problems are significant. She also indicated that the Township is now experiencing inadequate school space for the children who have immigrated in recent years.

The second major problem is the conflicting interests between the Seniors and the more recent younger families. Generally, the younger families want the Township to provide a full range of municipal services, something that the Seniors are against because of the impact on the local tax rate. The Seniors do not feel they should have to finance these services, since the Retirement Communities are self-contained and provide all their own services. This conflict of interest has crystallized into a major polarization over

school construction. A new High School was constructed approximately 3 years ago, with the general support of the Senior Citizen community. (Indeed, no local referenda stands a chance of passage without their support.) However, a proposed new Middle School was already defeated once, and a second referendum is scheduled for 2-2-80. She believes that the school will probably be voted down a second time, as a result of the sentiments of the Senior Citizens. This is a major issue in the Township, and clearly illustrates the split in the community. She believes that the split is getting gradually worse, as more and more young families move into Manchester.

From the perspective of the residents of the Retirement Communities, this is a serious concern. A main reason they relocated to Manchester was the low tax rate. Additional provision of municipal services threatens to increase the rate. The Seniors are beginning to feel that they have been misled. They feel that they may have been lured to the Township to provide a reliable and solid tax base that could serve as the foundation for the Township's continued development--which could cause the tax rate to increase.

She was hesitant to speculate about the future of Manchester. She did, however, express serious concern about what she termed the suburbanization of Manchester. She fears that the Township will continue to allow development to take place to the extent that it will become overdeveloped. She is concerned with noise, congestion, pollution, a rising tax rate, and a general spoiling of the area. An example is the proposed Warwick at Manchester Retirement Community, which would be located in the Township's westernmost portion,

and would be the westernmost development in Manchester. She showed me a news clipping that included a quote from Joseph Portash to the effect that "We want that development." This was stated before the Planning Board had even reviewed the proposed plans.

She views the Pinlands Commission as the last hope to bring order and reason to Manchester's development. Although I discern in her views a bit of the attitude that she wants to close the doors now that she has finally moved out into the country and has escaped the congestion and expense of suburbia, her observations and judgements are accurate and sound and seem to be largely objective.

INTERVIEW 3: TOWNSHIP ADMINISTRATOR

The Township Administrator indicated that the Township will definitely continue with its present policy of large scale Retirement Community development. He feels that the Retirement Communities are crucial to what he termed a balanced growth plan in the Township. According to him, if the Retirement Community development was closed off, the Township would be forced into more intensive development of Pine Lake Park, which would likely occur as single family detached homes on 100 x 100 ft. lots. He stated that the Township would continue with its present policy of approximately 4 R.C. dwelling units for every single family unit constructed. In this connection I note that he related that last year's ratio of R.C.'s to SF's in building permits issued was between 9 & 10 to 1.

He indicated that his view of the Township's ultimate population, that represented by "full" development, would reach 40-50,000 people. He felt that the extent of the Township's ultimate development would include all of the lands within a line drawn along the western border of the Roosevelt City subdivision, Route 70, and the Township's eastern and southern boundaries. This is a tremendous amount of land, which represents the entire southeastern portion of the municipality. The lands west of Roosevelt City are included within the Pinelands jurisdiction and are mostly publicly owned, falling within Lebanon State Forest and the Fort Dix Reservation. The lands north of Route 70 are severely limited in development potential because of noise from the Lakehurst Naval Air Station.

The area of the Township that he sees as included in future development includes the large parcel of land currently zoned M-1 and owned by ASARCO, American Smelting and Refining Company. ASARCO is implementing a 30-year program which began in 1972, for extracting resources from the land that restores the land to its original state. In approximately 1982, 1000 acres will have been restored, with the balance of the parcel being available for development around the turn of the century. The availability of this land will make possible the eventual joining of the Retirement Communities in the eastern and western portions of the Township, Leisure Tech projects in the east and Crestwood Village in the west. Most of this land is within CAFRA's jurisdiction.

He stated that the Township has taken positions against the construction of the proposed Davenport Interceptor and in favor of the Ridgeway Branch Interceptor. Davenport would end near the Keswick Grove facility in the South Central portion of Manchester, and Ridgeway would terminate near the Lakehurst Naval Air Station. His reasoning is that Davenport is not needed for Manchester's future development; the Retirement Communities provide adequate package plants. Further, this Interceptor would open a great deal of open land in Berkeley Township to development. Ridgeway is needed to service the more intensive development in the Township's eastern portion, including Pine Lake Park, and to correct existing water quality problems in Pine Lake and related streams that result from Lakehurst Naval Air Station discharges and the septic tanks in the eastern portion of the Township.

Regarding the Pinelands Commission's activities, he stated that the Township would strongly resist aggressive public acquisition of land. His view is that the Township already contains enough public land--at least its share, so to speak.

He viewed Manchester's main problem as a social one--the blending of the different age groups within the municipality into a community. He also felt that the preponderance of senior citizens residing in Retirement Communities might cause problems in terms of providing adequate municipal services to the rest of the Township, although he failed to elaborate on this point.

Manchester Township Master Plan Information

The following represents the information contained in Manchester Township's 3 Master Plans (dated 1961, 1967, and 1980) and the Master Plan Updating Program Report prepared for the 1980 Plan (dated Apr 1974 to Apr 1976) that is relevant to the Manchester Township Case Study.

1961 Master Plan - prepared by Community Planning Associates, Inc.

The Plan recommends that "suburban development" should take place in the Ridgeway-Pine Lake Park and Whitings-Roosevelt City areas of the Township. Suburban development is defined as single-family detached development on 10,000-20,000 sq. ft. lots. The Plan further indicates that development should first occur in the Ridgeway-Pine Lake Park area.

Concerning development in the Township, generally, the Plan states:

There is a great need in Manchester Township to encourage development which will, at least, yield sufficient taxes to pay for the costs they incur. (p.4)

Concerning development in the Roosevelt City-Whitings area, the Plan includes the following statements:

...development should not be encouraged in the Whitings-Roosevelt City area until or unless industrial development begins to occur in this area at a scale sufficient to help pay for the costs of the local residential development. (p.1)

The future development of this...area of Manchester Twp. will be dependent upon industrial development...until such growth occurs, this area should be maintained in its present rural condition. (p.13)

The Plan also proposes an industrial park in the eastern section of the Township, located north of Route 70 and east of Route 37.

It should be noted that the document includes no land use data.

1967 Master Plan - prepared by Cross Associates

Current Land Use: The Plan contains the following current land use information (based on a 1965 survey):

State and Federal owned	18,705 ac.
Developable land	33,967 ac.
Total developed land(10% of developable)	3,400 ac. (approx)
Industrial developed land (22%)	748 ac. (approx)
Agricultural " " (52%)	1,768 ac. (approx)
Residential " " (16%)	544 ac. (approx)
Commercial " " (2%)	68 ac. (approx)

The Plan notes that included in the agricultural land category are several large cranberry bogs.

Development Pattern: The Plan contains the following description of Manchester's development pattern: Most development is located in the eastern 1/3 of the Township, primarily along Routes 571 and 37. Development consists of several major subdivisions and Pine Lake Park, which is modestly developed in a random pattern. Included in the eastern portion of the Township are several "trailer parks" and a Senior Citizen project, as well as 2 large mining operations adjacent to the Dover Township line.

The Whiting area is characterized as follows: Development primarily consists of individual homes or small groups of homes, and a new Senior Citizen project on Route 539 south of Whiting. Roosevelt City has not developed to any significant extent.

Land Use Plan: The Plan recommends that Manchester establish 2 suburban centers, located in the Ridgeway-Pine Lake Park area and the Whitings-Roosevelt City area. This is consistent with the 1961 Plan.

Concerning Retirement Community development, the Plan includes the following statement:

In order to encourage Senior Citizen development, but also keep it in balance with the entire growth pattern of the community, the three areas of current senior development have been moderately expanded on the Master Plan to allow for future growth. Since much of Manchester Township is still undeveloped, indiscriminate location of future Senior Citizen developments could interfere with the overall development plan and place this use in disproportionate perspective with the other four residential uses. It is also important that a normal population composition be maintained since a community such as Manchester with a tremendous growth potential, needs a major percentage of its population in the active labor force. (p.10)

Concerning industrial development, the Plan reflects the ASARCO land holdings and designates an industrial area in the western portion of the Township, which "...is related to the western suburban development concept and should provide the necessary economic base of this area." (p.17)

Master Plan Updating Program Report, April 1974 to April 1976 -
prepared by Cross Associates

Current Land Use:

1975 Land Use Analysis

	Developed	Developed	% of Total Area
Residential (SF)	990 ac.	19.3%	2.0%
Residential (Senior)	1198 ac.	23.4%	2.4%
Residential (trailers)	73 ac.	1.4%	0.1%
Residential (MF)	32 ac.	.6%	0.0%
Sub-total	2293 ac.	44.7%	4.5%
Commercial	59 ac.	1.1%	
Industrial			
-General Industrial	205 ac.	4.0%	0.4%
-Mining	1693 ac.	33.0%	3.3%
Sub-total	1898 ac.	37.0%	3.7%
Public			
-Quasi-public	333 ac.	6.5%	0.6%
-Township	548 ac.	10.7%	1.1%
Total developed area	5131 ac.	100.0%	10.0%
State & Federal	19,751 ac.		37 %
Vacant-private	27,790 ac.		53 %
Total vacant	47,541 ac.		90 %
Total land area	52,672 ac.		100 %

The following comparative land use data is presented, comparing the 1964 and 1975 land use surveys:

- Senior Citizen development: 1964 - 144 ac.; 1975 - 1200 ac.
- Single-family development: 1964 - 479 ac.; 1975 - 990 ac.
(most of this development occurred in the Pine Lake Park area and the area north of Steiner Road)
- Municipal property: 1964 - 119 ac.; 1975 - 548 ac.

The report indicates that "...the area south of 70 will become a Township Park..." (p.6) It also projects that the 1980 population will be 18,000 to 19,000 persons (p.18).

1980 Master Plan - prepared by Cross Associates

The Plan's second objective is:

-To continue the present development pattern occurring primarily in the greater Whiting area and the general area between Route 571 and the Township line. (p.11)

The Plan contains the same land use table that appeared in the Updating Program Report (p. 3, Infra).

In contrast to the Updating Program Report, the Plan indicates that in 1975, 1600 acres contained Senior Citizen development. The basis for this figure is not cited.

The Plan indicates that from 1965 to 1975, 2000 acres were developed. Discounting State and Federal holdings, the Plan indicates that 25,280 acres (48%) are vacant and developable.

Consistent with the 1967 Plan, the 1980 Plan indicates that "...the area south of 70 will become a Township park and recreational facility." (p.5)

The Plan contains the following population projections:

	Low	High
1980	26,000	28,000
1985	33,000	38,000
1990	35-45,000	48,000

The Development Trends section warrants complete inclusion here:

"The development trends for Manchester Township will most likely consist of a continuation of the present pattern. Additional senior citizen growth is for certain especially with completion of approved section and projects. There may also be new senior citizen projects depending on market condition and sales demand in years to come. CAFRA regulations and the new Pinelands controls such as the preservation area may also be factors that would limit the growth of senior citizen projects. \

As mentioned, the community has also witnessed single family residential growth and it is most likely that this will continue both as completion of approved sections and projects and new application. This will, however, depend very much on the continued growth of an industrial employment base in Ocean County and the immediate region. The impact of offshore oil is an unknown factor at this time, however, considering the moderate housing prices in Manchester any impact on Ocean County from oil discoveries would also affect the Manchester housing market.

One area that has seen little growth to the present time is the commercial sector. Since commercial growth usually follows a population influx, it is quite likely that commercial development will occur in the community over the next several years." (pp.7-8)

Manchester Township statistics

The following is a compilation of relevant statistical data on Manchester Township.

Manchester Township Population 1930-1977

1930	1940	1950	1960	1970	1976	1977
1009	918	1758	3779	7550	15,583	20,706

1970 aged 65 and over Population

2877 persons, 38.1 % of total municipal population
8.7 % of total County 65 and over population

1978 Occupied year-round dwelling units

10,543

1970 Total Families by Type of Income

Wage and Salary	Non-farm self-employed	Farm	Soc. Sec. or Retirement	Public Assistance	All Others
1260	136	0	1478	111	1530

Per Capita Income

1969 ^R	1974 ^R	1975 ^R
\$2857	\$4339	\$4788

Source: Ocean County Division of Planning, Ocean County Statistics

Building Permits, 1970-1978

	1970	1971	1972	1973	1974	1975	1976	1977	1978	Total
Total	630	662	1550	1621	539	674	1488	1279	1287	9730
SF	62	214	354	499	225	177	666	769	954	3920
2 Fam	376	304	882	740	206	234	574	328	333	3977
3-4	192	112	236	312	84	240	181	149	0	1506
5+	0	32	78	70	24	23	67	33	0	327

Source: New Jersey Department of Community Affairs, compiled by Alan Mallach Associates

Retirement Communities

Development	Units	Population
Cedar Glen Homes	564	900
Cedar Glen Lakes	1,234	2,300
Cedar Glen West	826	1,472
Crestwood Village	5,150	9,187
Leisure Knoll	100	180
Leisure Village West	800	1,450
Pine Ridge at Crestwood	700	1,050

Development	Remaining approved site plans	Occupied Units	Unoccupied Units
Cedar Glen Homes	0	564	0
Cedar Glen Lakes	0	1,238	0
Cedar Glen West	0	826	0
Crestwood Village	2,300	5,150	0
Leisure Knoll	250	100	0
Leisure Village West	100	800	0
Pine Ridge at Crestwood	350	700	0
Total /	2,900	8,578	

Source: Ocean County Division of Planning, Ocean County Statistics

Vacant or wooded land

According to the Ocean County 208 Water Quality Planning Project Land Use Inventory, Manchester Twp has 24,525 vacant or wooded acres.

Ocean County Leading Tax Ratables

Ratable	Municipality	1977 Assessed Value
1. Crestwood Village Coop's 1 to 5	Manchester	109,614,500
2. Toms River Chemical	Dover	32,072,800
3. Ocean County Mall	Dover	23,656,700
4. Cedar Glen Lakes	Manchester	21,227,600
5. Great Adventure	Jackson	20,730,600
6. Cedar Glen West	Manchester	14,129,000
7. JCP & L Oyster Creek	Lacey	12,073,720
8. Cedar Glen Homes	Manchester	8,037,000

Manchester Total (approx) - \$153,007,000

(Note that the only residential ratables are the Retirement Communities in Manchester Township, that Manchester has 4 of the 8 on this list, and that this list does not reflect the Leisure Technology developments, which have apparently not yet developed sufficiently)

Source: Ocean County Division of Planning, Ocean County Statistics

TAX RATE FOR MANCHESTER TOWNSHIP

1962	28.62	per \$100 (at 10% of value)
1963	2.08	per \$100
1964	2.25	per \$100
1965	2.70	"
1966	2.65	"
1967	2.96	"
1968	2.94	"
1969	2.93	"
1970	3.11	"
1971	3.11	"
1972	3.38	"
1973	3.29	"
1974	2.94	"
1975	2.94	"
1976	1.53	"
1977	1.76	"
1978	1.56	"
1979	1.96	"

Source: Manchester Township Administrator's Office

TABERNACLE TOWNSHIP

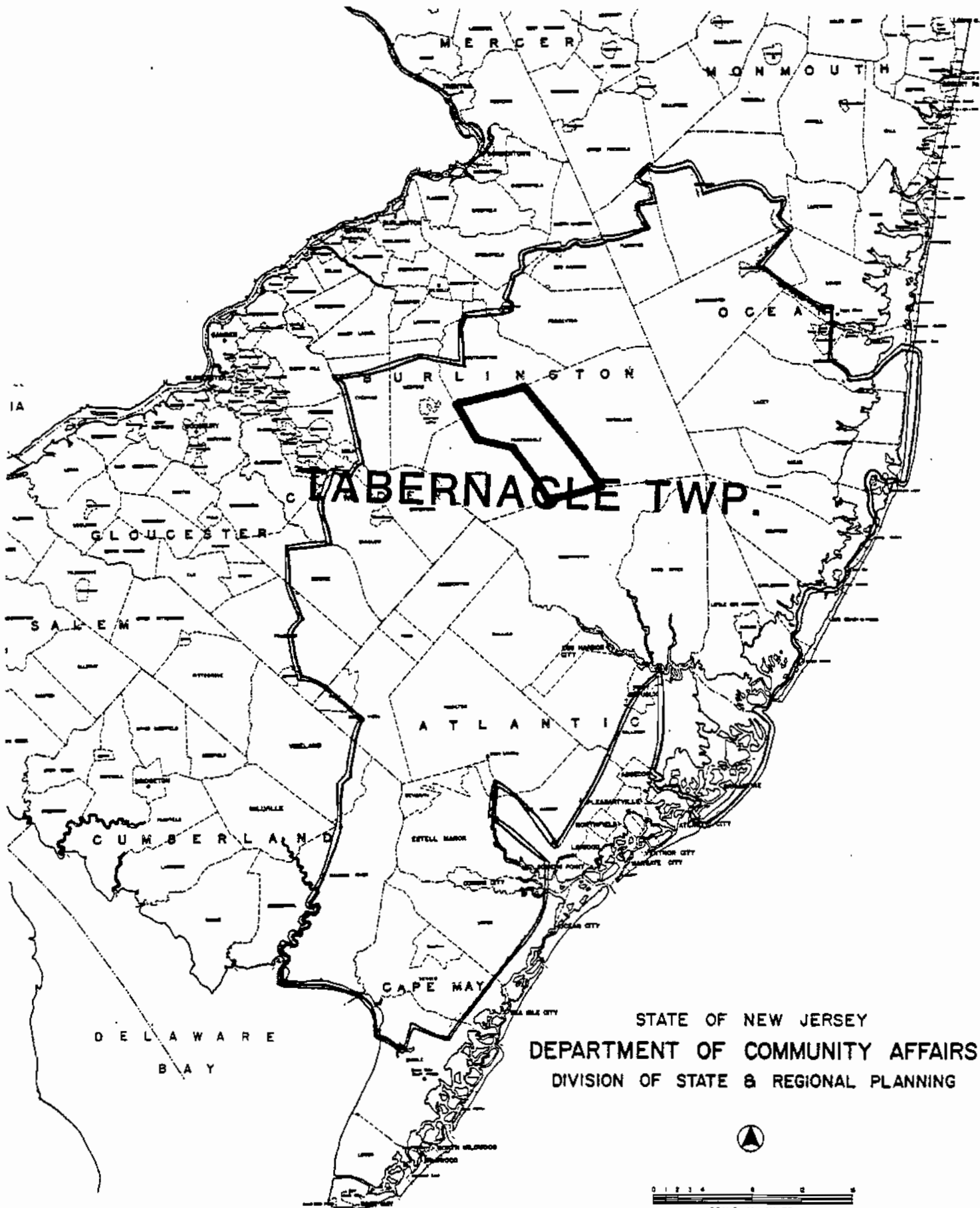
The case study of Tabernacle Township contains, initially, an overview and a summary of interviews held with knowledgeable individuals. Background material on land use, zoning, and related matters, is appended to the case study. As with the Manchester case study, a series of large scale maps illustrative of development activities and land use patterns in the Township accompanies this case study, and is available for review.

Tabernacle Township is primarily a rural municipality. The principle land uses are residential and residential agricultural. The agriculture of the municipality is what the interviewees called truck farms—produce and cranberry farms.

As far as types of people who reside in Tabernacle, there is a distinction between the native born and those who have migrated to the Township. The native born people, for the most part, have a lower income than the non-native residents. People who moved into the Township live in the new developments and are in the middle-income group. They were described as professional people who possibly work for corporations located elsewhere.

The native population of Tabernacle has been fairly stable. Those that were farmers have generally remained so. Outward mobility of native born residents is primarily restricted to the younger people who leave Tabernacle once they grow up.

There is very little employment in the Township. Most people who are employed in the Township work for either the Township, one



TABERNALE TWP.

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of the two local markets or the other small specialty shops located along Route 206. There are several banks in the Township. The other working residents work from as far away as Philadelphia and Moorestown. Some work at Fort Dix and a few in Trenton. There are many state workers and county road department workers. (This is based on the number of State cars leaving and entering the Township in the morning and evening, respectively.)

The character of the Township has remained rural in spite of all of the development that has occurred during the past decade. About 10 years ago, Tabernacle began to feel the push for residential development. As a result, the township received numerous applications for single family sub-divisions. Development continued up until approximately one year ago when the Pinelands restriction curtailed and virtually eliminated development. Most of the sub-divisions looked very much alike. The minimum lot size for each house is one acre. Most of the homes are two-story structures, a few of which have basements.

The other differences in Tabernacle from five or ten years ago and now is reflected in the types of people and the economic base. The people who moved to Tabernacle and purchased homes in the developments are generally more affluent than the native born people. According to the interviews, they are white collar, professional workers. In contrast, most of the native-born people were described as either farmers or blue collar workers.

Farming still occupies a prominent position in the life style and economy of the Township. At one time, cranberry farms, produce

farms and dairy farms were all thriving. The dairy farms have all ceased operation but the other farming industry is still thriving. All indications are that the farming business will continue. However, one interviewee did admit that he wouldn't be surprised if some of the farmers decided to sell their farms if they could get the price they wanted for them.

The Township offers no municipal services other than police protection. There is a volunteer fire company and a volunteer rescue squad. The entire Township is septic with no plans for a municipal sewage treatment plant. There is no garbage or trash pick up. All of the residents take their refuse to the one Township operated sanitary landfill.

Interestingly, none of the people interviewed wanted to see development resume at the pace it was going prior to enactment of the Pinelands restrictions. They all seemed to think that even without the Pinelands restrictions growth would not be as rapid because of the high price of gasoline and the unavailability of services and conveniences within the Township.

INTERVIEW 1: TOWNSHIP CLERK

The respondent has been the Clerk of Tabernacle Township for the last thirty years. He is a native of Tabernacle Township.

According to him, the land uses of the Township are residential and commercial. He did say that there is a retirement village in the Township. There is no industry in the Township.

As for the types of people that live in Tabernacle, he said that the native born residents have lower incomes than those who have moved to Tabernacle as a result of the new developments. They tend to be primarily middle income people. Most of the people living in the new developments moved to Tabernacle from Cherry Hill, Willingboro and Philadelphia.

There is only a very small number of jobs available within the township. Since Route 206 is the primary commercial zone in the township, those who work in Tabernacle are employed by one of the businesses along Route 206. Therefore, most of the people work outside of the township and commute as far away as Philadelphia and Moorestown. There are people who work at Fort Dix, a few in Trenton (state workers), several for the county road department. He didn't know in what other areas people worked.

Tabernacle is basically a rural township. There are several produce farms along Medford Lakes—Chatworth Road. During the summer, people go to the farms to pick fruit. Many of the farms used to be dairy farms as well as produce farms. However, there are no longer any dairy farms in operation. The construction of

the residential developments has not destroyed the rural atmosphere of the township. Those areas that are developed are surrounded by wooded areas so that the rural, out doorsy type of character is still present. He believes that the produce farms will continue as always but that the dairy farming is gone for good. The farms are owner-operated and will probably continue to be so.

He indicated that there aren't many plans for continued development in the Township because of the Pinelands restriction. He did say, however, that several of the existing residential developments have not been completed and that they will probably continue until the number of units originally planned are constructed.

Those in question are:

1. The McDowell property. It has two additional sections to be constructed. It was planned for construction in three stages.
2. The Scarsborough and Taylor property.
3. McCracken's property. He has an application before the Township to build on the fifty lots.
4. The Yates property still has a few vacant lots remaining.

The majority of the new developments were built during the last ten years. He was not certain of specific dates for any of the developments; he had only a general idea. He said that the pressure for new construction began around the late 1960's and resulted in construction during the early 1970's.

- Beales development of sixty homes, located on Patty Bowker Road was built about three years ago.
- Medford Farms started during the depression but was active during the past ten years. There are still approximately fifty undeveloped lots which have already been approved for development.

INTERVIEW 2: TABERNACLE TOWNSHIP PLANNING BOARD MEMBER

The interviewee described the municipality as predominately rural. The primary land uses in the Township are residential, agricultural and limited commercial. There is very little employment in the Township making it necessary for most of the people to work outside of Tabernacle. He did not know where people traveled to work. Those people that do work in Tabernacle are employed by one of the businesses located on Route 206 which is the primary commercial zone in the Township. There are a couple of banks, a grocery store, a gift shop, an auto body shop (owned and operated by Mayor Grunga), and a few more specialty type shops. He repeatedly described the character of the Township as real friendly and slow paced.

When asked to compare the Township now with five or ten years ago, he said he couldn't compare it to ten years ago because he wasn't living there then. As for five years ago, he said that much of the area that has been developed was wooded area five years ago. The development that is off of Oak Shade Road (Scarsborough) and on New Street was not there. There has been an influx of people as a result of the development. He indicated that the people who moved to Tabernacle as a result of the development must be in the middle income group to be able to afford the prices of the new homes. He said that the area of the Township where he lives has seen a large number of new development since he moved to Tabernacle.

The land uses are still pretty much the same. Residential and agricultural are still the primary land uses. Farming is still a very viable part of the Township although the dairy farms are not operating. Where they were located, the owners are now farming produce.

The farmland in the Township hasn't changed hands. He didn't know of any farmland that had been sold. The owners of the farms are the ones doing the farming. He didn't expect to see any changes in the status of the farming community either in terms of operation or ownership.

INTERVIEW 3: CRANBERRY FARMER

According to the respondent, Tabernacle was primarily a rural township up until 1965. There was a large amount of residential construction in the 1970's. He believes that there are plans for a considerable amount of additional residential construction.

There are practically no commercial or industrial properties in the Township. The shopping area for the township is Medford or Mount Holly. The primary land uses for the township are residential and agricultural.

He estimated that there are 5 truck crop farmers in the township. He said that the number of farmers is small relative to the amount of ground. In addition to the 5 truck crop farms mentioned, there are four or five lesser farms, also located in Tabernacle. The location for these truck farms is Carraza Road adjacent to Route 532.

The farm land in Tabernacle Township has not been sold for development. There is one farm which has about 100 acres under cultivation and wood lands which belong to a speculator. He thinks the Pinelands restrictions helped the farmers because some of them who had large scale expansion ideas, have had to postpone their plans.

Residential construction is fairly spread out in the township. Development areas--western side of the township, eastern side of township, some in the North east corner, south to a certain point near the Wharton Estate. All of it is single family homes on a

minimum of one acre lots.

New residents came from areas farther away than the surrounding municipalities. Some are from the northern shore, the New York area and the fringe around Camden and Philadelphia.

The low and moderate priced houses are located in the northeastern section of the township. The more expensive houses are located farther east. They are built on areas that were not broken up into lots early. The prices of the houses range from \$30,000 to \$100,000.

INTERVIEW 4: REALTOR

Over the last five or six years the people who have moved to Tabernacle Township have generally come from Philadelphia, Cherry Hill and other metropolitan areas. The people who migrated to Tabernacle tend to be middle-income.

Up until a year ago, for the past 5 to 10 years, builders were anxious to buy ground and sell it for residential construction. Medford Farms was constructed with between 200 to 300 houses on one acre lots. Since the Township is an approved area for Farmers Homes Administration mortgages it helped the influx of people into Tabernacle Township. There hasn't been any development in the last year because of the Pinelands restriction. However, because of the restrictions, there has been a pretty good resale market for existing houses. The new developments resulted in an upgrading in the quality of houses in the Township which has resulted in an improved school system.

The Township does not have a sewage treatment plant. All of the properties have septic systems. This has not been a major factor in terms of housing choice or a deterrent to prospective buyers because of the one acre zoning. This firm receives inquiries from people who are interested in purchasing four to five acre farms. Most of the people making the inquiries are interested in the land for the tax advantage as opposed to wanting to have an active farm.

The farms that have changed hands and become developments were

mostly wooded types. The tracts were subdivided. The selling price for houses on Tabernacle is \$40,000, \$80,000, \$100,000 with an average of about \$60,000.

Because of the Pinelands restrictions and the continued high price of gasoline, he doesn't foresee a re-emergence of development in Tabernacle Township. He thinks that people will be more inclined towards areas in the central portion of the County.

Background Information

Tabernacle Township occupies an area of 47.6 square miles in the central portion of Burlington County, New Jersey. The township is bordered to the west by Medford and Shamong Townships and to the east by Woodland Township. The northern border adjoins Southampton Township while the southern boundary is bordered by Washington Township. Tabernacle Township is located within 50 miles east-north-east of Philadelphia and approximately 100 miles south of New York City.

Tabernacle Township is predominately level, gently sloping toward the Atlantic Ocean. The highest point in Tabernacle is Apple Pie Hill with an elevation of 205 feet above sea level. The region surrounding the Roberts Branch of the Batsto River marks the lowest point with an elevation of approximately 50 feet above sea level. The greater part of Tabernacle has little to no slope with the exception of Apple Pie Hill and Cold Water Run, both with slopes exceeding 10 percent. (From Twp. Environmental Resource Inventory, 1979)

Master Plan, August 1975

In 1970, Tabernacle Township had 609 housing units. Of these, 578 or 94% were occupied. Thirty-one of the units were vacant, and none of the units were seasoned. The median number of persons per unit was 3.3 while the renter occupancy was 3.2 per unit. The 1970 census statistics also indicate that there were very few apartments in the Township. There were 82 rental units or 13.5% of the total.

The rate of construction was steady up until 1960. The increase after this period was dramatic until mid 1970. Over 64% of the Township's population has moved into their present home since 1960.

Public Facilities

Public schools

No public library

Town Hall

Landfill Operation

The Medford Farms Volunteer Fire Company and the Medford Farms Emergency Squad handles all the Township's emergency needs.

All other facilities are located outside of the Township.

No public water supply

Transportation

The primary mode of transportation is the private automobile. Route 206 is the only State road directly serving Tabernacle. It is the town's primary transportation link. Future plans for this route include dualization and realignment project.

Existing Land Use

Based on 1974 tax records and on site inspection, eleven various categories of land use were derived for the Township—The Allenwood Mobile Home development located on Route 541 was the only section in the Township classified as high density. Medium density residential was designated to single family homes which had property ranging up to 60,000 square feet. Single family homes with property

limits exceeding 60,000 square feet were classified as low density. The low density residential also had a peak level of five acres. Therefore, any ground surpassing five acres in a single residential use was classified as either vacant or agriculture.

The Wharton Tract accounts for 28.58 percent of the Township or 8,714.9 acres. Of the remaining 21,774.7 acres, 1.42 percent or 434.2 acres are in commercial use and .06 percent or 18.21 acres are in industrial use. There 1,511 acres or 4.96 percent of the Township in residential use. Commercial uses account for 1.42 percent or 434.2 acres, and industrial use comprises the smallest portion of the Township with only 18.21 acres or .06 percent. Institutional as well as private and municipal open space account for .91 percent or 276.77 acres.

There are 9,156.3 acres of ground in Tabernacle presently being farmed. The agricultural ground comprises the second largest portion of undeveloped ground in the Township. The vacant ground in the Township accounts for 10,378.22 acres or 34.04 percent of the Township. Discounting the acreage from the Wharton Tract as potential growth or development, the agricultural and vacant ground account for 89.71 percent of the ground remaining in the Township.

Proposed Land Use

A study of the watershed and drainage patterns within the Township shows that approximately 75 percent of the Township lies within or drains towards the Mullica Watershed. The other 25 percent lies within the Rancocas Watershed. Since the Department of

Environmental Protection (DEP) has placed severe restrictions on sewage systems which would drain into the Mullica River Watershed, most likely, any development which lies within this area will be developed with a septic system.

The area west of Medford Lakes-Chatsworth Road has been proposed as the Agricultural zone, and the area to the east of Medford Lakes-Chatsworth Road has been proposed as the Pineland zone.

Zoning Ordinance 1978-10

Zoning Districs

A-I Agricultural Residential I
A-II Agricultural Residential II
A-III Agricultural Residential III
P-I Pinelands Residential I
P-II Pinelands Residential II
MH Mobile Home
VC Village Commercial
C-I Commercial I
C-II Commercial II
SC Shopping Center Commercial
MI Manufacturing Industrial
AW-I Agricultural-Woodland I
AW-II Agricultural-Woodland II

Cluster Development

The generation of these areas is brought about by permitting a reduction in lot sizes without increasing the number of lots.

1. Cluster developments may be approved in accordance with the following standards:
 - a. All dwelling units shall be connected to approved and functioning public water and sanitary sewer systems.
 - b. The minimum size tract shall be 25 acres.
 - c. A minimum of 25 percent of the tract shall be set aside as open spaces, conservation areas, flood plains, school sites, recreation areas or parks.

- d. A tract is an area of land comprised of one or more lots adjacent to one another having sufficient dimensions and area to make one parcel of land meeting the requirements of this chapter for the use intended. The land area may be divided by one existing street and still be considered one tract provided at least 75 percent of the street frontage of the smaller portion (either in frontage or area) lies opposite the larger portion.

AI - Agricultural Residential I

The purpose of this district is to encourage farming uses and compatible single-family residential uses of medium density lots. (50,000 square feet) Permitted Principal Uses: Farms and farm buildings; SF homes; golf courses; municipal buildings; public parks and playgrounds; churches; elementary, intermediate and secondary schools; and firehouses.

AII - Agricultural Residential II

The purpose of this district is to encourage farming uses and compatible single-family uses. This district has fewer site limitations, and therefore, can handle increased density. (43,560 square foot lots). Permitted Principal Uses: Farms and farm buildings; single-family homes; golf courses; municipal buildings; public parks and playgrounds; churches; elementary, intermediate and secondary schools; and firehouses.

AIII - Agricultural Residential III

The purpose of this district is to encourage farming uses and compatible single-family use. Due to the present development found within this district and character of the district, it can handle

an increased density. (43,560 square foot lots).

PI - Pinelands Residential I

The purpose of this district is to protect the Mullica River watershed and the natural pinelands environment, encourage farming use and compatible single-family use of low density lots. (60,000 square feet). Permitted Principal Uses: Farms and farm buildings; single-family homes; golf courses; public parks and playgrounds; churches; firehouses; and schools.

PII - Pinelands Residential II

The purpose of this district is to protect the Mullica River watershed and the natural pinelands environment, encourage farming use and compatible single-family use. This district has fewer soil limitations and, therefore, can handle an increase density. (43,560 square foot lots). Permitted Principal Uses: Farms and farm buildings; single-family homes; golf courses; public parks and playgrounds; churches; firehouses and schools.

MH - Mobile Homes

The purpose of the Mobile Home District is to provide a centralized area within the Township wherein Mobile Home Parks can be situated. It is intended that future mobile home development will be planned and controlled to provide proper aesthetic and design considerations including optimum recreation and open space areas.

Permitted Principal Uses: Mobile Home Parks.

VC - Village Commercial

The purpose of the Village Commercial District is to allow for small areas throughout the Township where retail and service businesses may be located primarily for the convenience of the residents in the immediate neighborhood. Each designated zone is large enough to permit expansion of these convenience centers in anticipation of continued population growth and increased demand for the goods and services. It is intended that development in these areas be designated to enhance and improve the centers by insuring that an adequate traffic circulation plan evolves so that each building does not have its own access point(s) to the highways.

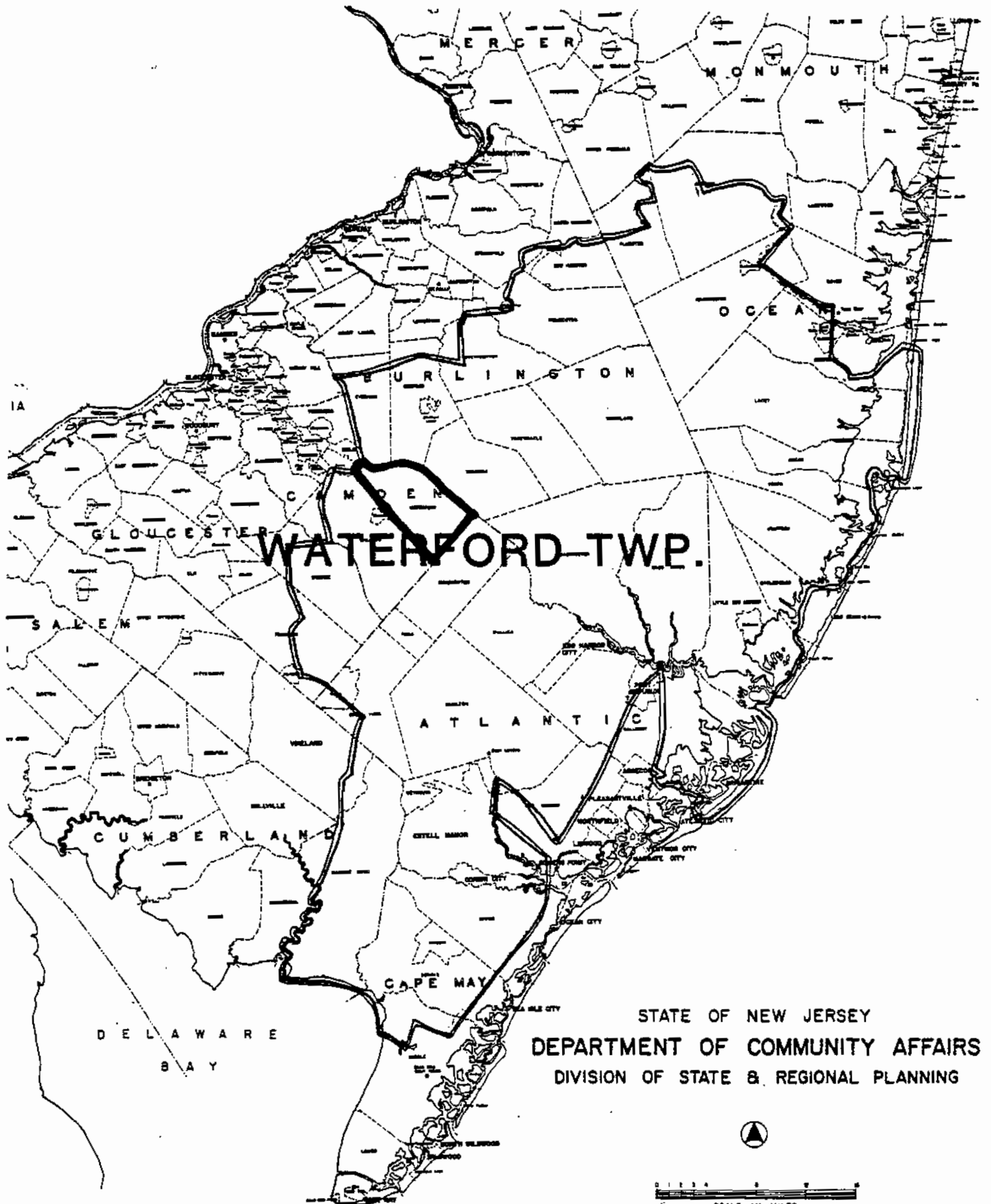
WATERFORD TOWNSHIP

This report is a profile of Waterford Township, based on six case-study interviews and some supplementary data. Four interviews were with one person only, one with two and the last interview with three persons. Information gathered during the interviews is synthesized on Figure 2 and supplemented by Figures 1, 3, 4, 5, and 6. The purpose of these interviews is to obtain a cross-section of local opinions and assessments concerning the community as they relate to the following topics over time:

1. land use
2. population
3. economic base
4. community character
5. development activities
6. land values and speculation
7. agriculture

These were informal interviews rather than structured, question and answer sessions, during which the interviewees were encouraged to present opinions and perceptions in addition to hard facts. The roles of the interviewees are as follows:

1. resident; local real estate broker; member of the planning commission; and
resident; local builder
2. resident; member of the local environmental commission
3. non-resident; part-time employee of the township
4. resident; township official



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5. resident and family; retired farmer
6. non-resident; lawyer; state official

Waterford Township lies in the northwest corner of Camden County. It is bordered on the north by Evesham, Medford and Shamong Townships (Burlington County); Winslow Township and Chesilhurst Borough to the south; the Town of Hammonton (Atlantic County) to the east; and Berlin Township and Borough on the west (Figure 1). One major arterial highway, U.S. Route 30, provides east-west service to the township. Although the Pennsylvania Reading Seashore train line runs through the township, there is no station at present. Regional, intermunicipal bus service is available along Route 30; however, it has been described by one interviewee as limited and unreliable.

Excluding the area within Wharton State Forest, Waterford can be divided into four unincorporated areas which correspond to volunteer fire company districts: Atco, Jackson, Loudon, and Dunbarton (Figure 2). These area designations form the context for the subsequent section on Land Use.

Drainage has been and remains a major problem in the township. Much of the development in Waterford has occurred either in the flood plain of the Mullica River and other township streams or on land with a high water table. As a result, there are many malfunctioning on-site sewer systems as well as general drainage problems. To date, individual wells have been the source of potable water in the township. In addition, Waterford has not had a municipal wastewater system; however, one recently has been constructed

and is nearly ready for operation. It is a land application system providing advanced wastewater treatment. The treatment plant has a design capacity of 750,000 gallons per day (gd).

Sewer service is anticipated to be provided in four sequential stages. First, 450,000 gd initially is allotted to the Atco area (Figure 2) primarily to alleviate the on-site problems. Three subsequent annual increments of 100,000 gd each are to be provided following N.J. DEP reviews in order to insure that the system is operating properly. Present demand in the Atco area is estimated at 300,000 to 320,000 gd. The utility authority has proposed to utilize the excess initial capacity by extending service into Loudon (Figure 2). However, this issue was not resolved at the time of the interviews. It should be noted that Loudon, when combined with Jackson, has experienced 90 to 95% of the township's residential growth since the early 1970's.

Zoning recently has been updated by the Planning Commission. Both the map and ordinance are one page each and are included in this report as Figures 3 and 4, respectively. A cursory examination of the zoning map indicates that it generally follows existing land use patterns. According to one interviewee, minimum lot size declined from one to one-half acre in 1975. There is current talk about restoring the one acre minimum. Finally, the township first adopted zoning in 1953. This ordinance classified the entire township as agriculture with the exception of Atco and the Route 30 and railroad corridors.

1. Land Use

According to a township factsheet, Waterford has a total land area of 22,848 acres, of which a little over 60% (13,770 acres) lies within Wharton State Forest. Except for 300 acres of municipally owned land, the remaining township acreage is approximately 25% developed.

Summarizing many of the interviewees' comments, residential development in the township has been exclusively single-family homes with on-site sewer systems. As previously mentioned, many of these systems are malfunctioning due to drainage problems. There are two commercial areas—a CBD along Atco Avenue in Atco and a corridor of strip-commercial running along Route 30. This commercial development is either scattered, individual establishments or small, neighborhood-type shopping areas. Larger community-type shopping areas are located in Hammonton to the east and the Berlins to the west. The township has only one industry—the national offices of PREDCO.

As mentioned, the township can be divided into four developed areas. The following is a description of land use in each based on the interviews and field observations:

1. Atco: This area comprises the western part of the township and is the oldest and most densely settled of the four. It is primarily residential with some farming as shown on Figure 4. In addition, the township's CBD and much of the Route 30 strip-commercial development

lies within Atco. Considerable undeveloped land is available within the Route 30 corridor.

2. Jackson: Jackson is located to the north of Atco, much of which lies in the flood plain of the Mullica River. Development in this area is mostly residential except for the PREDCO site and the Atco drag strip. A large blueberry farm lies in the flood plain.
3. Louden: This third area lies east-northeast of Atco. Nearly all development in Loudon is single-family residential, either as part of a major subdivision or small, builder-type infilling. As previously noted, this has been the township's high growth area and will be discussed in greater detail in the section on Development Activities.
4. Dunbarton: Dunbarton extends east from Atco and is the least developed area of the township. In addition to some scattered commercial establishments along major roads and a few small subdivisions, land use in this area primarily is a mixture of rural, residential, and agriculture.

2. Population

According to the Census, the population of Waterford grew from 2,997 persons in 1950 to 3,809 persons in 1960, or 27%. Population growth decreased in the following decade to only 7% and increased

significantly (44%) from 1970 (4,073 persons) to 1977 (5,843 persons). On the surface, it would appear that the township has had two significant growth periods--1950 to 1960 and 1970 to 1977. However, in the context of county growth, the 1970 to 1977 population change is key.

From 1950 to 1960, the overall county population grew from 300,743 persons to 392,035 persons for a growth rate of 30%, slightly higher than the township. The county's 1970 to 1977 rate was only 4% (456,291 to 474,000), while Waterford's population grew 44%. The interviewees confirmed this finding by indicating that the early 1970's marked a significant change in the township's growth patterns. The subsequent section on Development Activities characterizes this change in more detail.

According to one interviewee, Waterford's population prior to 1950 primarily was comprised of Jews, Italians, Lithuanians, and Ukrainians who, for the most part, were engaged in farming. Since then, the economic base gradually shifted from agriculture to jobs in Philadelphia and Southern New Jersey to the west. The population of the 1970's is characterized as families with husband and wife both working, two to three children, and who moved from Philadelphia and the adjacent, more densely settled parts of Southern New Jersey. One interviewee indicated that he perceived no change in this stereotype during the 1970's, while another believed that there is now a "better class of people" living in Waterford.

3. Economic Base

For the purpose of the interviews, economic base was defined as the answers to questions concerning where township residents work and what employment opportunities exist within Waterford. A second question addressed the effects of Atlantic City's casino gambling on these patterns.

All of the interviewees indicated that with the exception of local service jobs and the remaining agricultural activities, Waterford Township is a bedroom community for jobs in Philadelphia—a 40-minute drive, and Southern New Jersey. One interviewee also indicated that a few residents commute to New York City.

Although there were varying estimates (i.e., 3 to 20), most of the interviewees indicated that a number of casino-operating families recently have located in Waterford. In addition, one interviewee also indicated that 15 to 20 of these families moved into the most expensive subdivision in the township—Old Town. Prices of homes in this subdivision were estimated to range from \$80,000 to \$90,000. Casino construction was said to be providing many jobs to the local construction labor force. This is expected to continue. Most of the interviewees anticipate that these employment patterns will continue for two reasons. First, they cited the notable lack of indigenous industry, and second, the high probability that the Lindenwold High Speed Line would be extended to Atlantic City with a station either in or close to the township.

4. Community Character

The case study interviewees were asked to describe the character of the community. "Community character" is a nebulous concept which, in this instance, was used to identify any distinctive qualities that the interviewees perceived Waterford to have.

One interviewee indicated that prior to 1970, Waterford Township was controlled by a few wealthy families with large land holdings. In addition, another interviewee said that the township generally was considered an economically depressed area.

Since the early 1970's, one interviewee mentioned that there is now an anti-growth sentiment, particularly among the older farmers. However, there is an apparent conflict between wanting to preserve open space and getting "top dollar" for their land.

During one interview, three persons commented at length regarding their perceptions of change in the character of Waterford Township. These comments can be summarized as negative feelings concerning the growth that has occurred. More specifically, they include the effects on their use of Wharton State Forest; a perceived increase in traffic, crime and vandalism; overloaded municipal services; and a growing impersonalness due to the decreased transience of the population.

5. Development Activities

As mentioned earlier, the 1970's have been perceived as the major growth period for the township. An explanation lies both in the absolute increase in numbers of people as well as the contracting

types of development which have occurred.

Although the 1950 to 1960 population grew at a seemingly high rate of 27%, this was an increase of only 812 persons. In addition, one interviewee indicated that the market demand prior to 1970 was for housing in the Atco area and which was accommodated by small builder-type, individual lot and minor subdivision infilling, and construction immediately adjacent to this settlement. During the 1970's, the absolute increase in people was more than double (1,770 persons) the 1950 to 1960 increase. More significantly, however, general market demand shifted to housing located in outlying areas and most new development occurred in major subdivisions averaging 20 to 30 units, particularly in the Jackson and Loudon areas of the township. Figure 5 is a township map on which is recorded the names and general locations of these subdivisions.

One interviewee attributed much of this growth pressure to displacement resulting from many of the sewer bans that were issued to the communities west of Waterford by the N.J. DEP during the early 1970's. Another interviewee also indicated that during the 1950's and 1960's, Waterford Township was considered to be too far from Philadelphia. This changed with the construction of the High Speed Line to Lindenwold.

Residential development to date has been exclusively single-family homes. An interviewee indicated that some apartment and mobile home developments were proposed in 1974 and 1975, but were "successfully kept out." Recently, two town house developments have been proposed in the areas zoned as "Commercial Manufacturing--

Multi-Family and Single Family" (Figure 4) and approved locally but rejected by the State.

Generally, there has been no significant commercial development in the township. This was attributed by one interviewee to the lack of sewers and the fact that developers consider the township's population too small to support community-type shopping centers (i.e. below 10,000 persons). Aside from PREDCO, there has been no interest in industrial development.

In addition to drainage, a second major problem for the township was raised during the interviews. This problem relates to the State moratorium and review of new sewer and water permit applications for new construction. According to two interviewees, the township's post-1970 growth has caused the need for additional municipal services. These services have been incrementally added and financed with each succeeding year's new tax rates. The moratorium and State review have reduced new tax revenues, resulting in a fiscal "crunch."

6. Land Values/Speculation

All of the interviewees indicated that land values have appreciated significantly, particularly during the 1970's. None mentioned that they were aware of any recent, major speculative activity in the township. One interviewee is aware of two or three instances in 1973 and 1974 where farms were purchased by speculators and then leased as farms for the tax advantages. However, this practice has not occurred since then.

One interviewee indicated that 15 years ago, the price of land averaged \$50 per acre. In 1972-1973, the price was \$5,000. Just before the Pinelands moratorium, land values rose to approximately \$14,000 to \$16,000 per acre for land that was readily subdividable to one-half acre building lots. These building lots averaged \$9,000 to \$10,000 in price. Other interviewees generally confirmed these values. Although the Pinelands moratorium is temporary, there was an inability among the interviewees to envision future land development after the moratorium is lifted. In addition, they indicated that most of the township residents do not think of the moratorium as temporary.

7. Agriculture

Until the building boom of the 1970's, agriculture was an economic mainstay and predominate land use in the township. One interviewee indicated that currently there are 2,340 acres of farmland classified under Farmland Assessment. Approximately 1,700 acres are cropland and the rest is woodland. After deducting the Wharton State Forest acreage, farmland comprises approximately 26% of the remaining township land area (9,078). Little absentee farming was said to exist.

Through the 1940's, agriculture consisted primarily of poultry farming (chickens and turkeys), truck farming (tomatoes, sweet potatoes, peas, and asparagus), and berry farming (blueberries, cranberries, and strawberries).

Today, the crops are corn, soybeans, orchard fruit, and blue-

berries--crops which are amenable to mechanized farming. This represents a shift from past labor-intensive farming and is attributed to the following:

- increased State regulation of farm labor housing and the mandated change in payment from piecework to a minimum wage;
- lack of interest in agriculture by farmers' offspring; and
- increased taxes due to rising land values.

It should be noted that none of the interviewees were very optimistic concerning the continuation of agriculture in Waterford Township.

NOTE - THIS MAP SUPERSEDES THE MAP APPROVED 12/21/43

I HEREBY CERTIFY THAT THIS MAP AND THE SURVEY HAS BEEN MADE UNDER THE ACTS AND WITH THE LAWS OF THE STATE OF NEW JERSEY

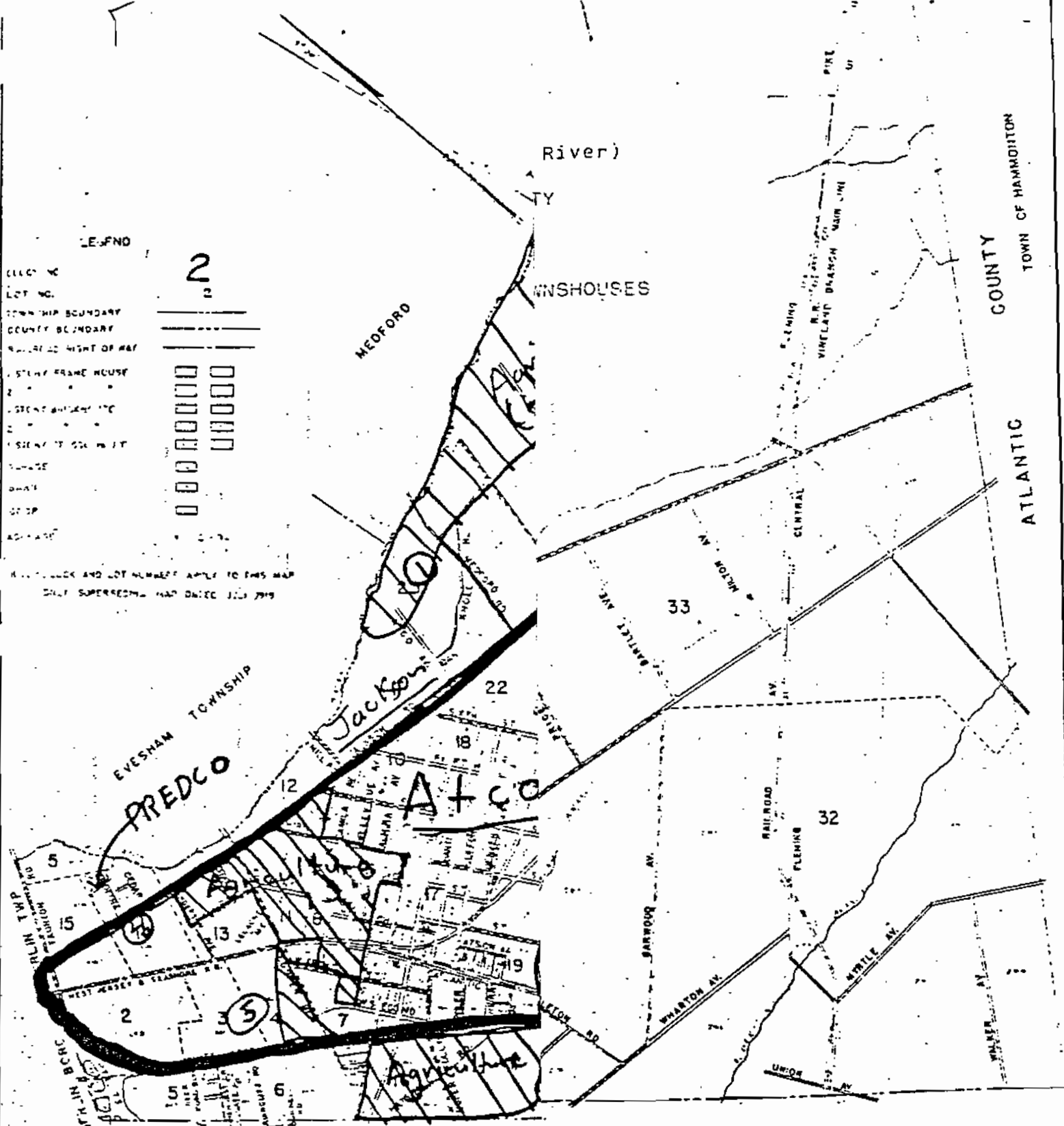


PLATE NO.	NAME	PLATE NO.	NAME	PLATE NO.	NAME
1	THURSTON AVE.	26	ALIVE ST.	31	CYPRESS ST.
2	SMITHFIELD AVE.	27	GAR AVE.	32	CECIL BLVD.
3	WINDMILL AVE.	28	CECIL AVE.	33	SPRING BLVD.
4	BRANTY AVE.	29	EDENWOOD AVE.	34	ELM BL.
5	...	30	ELM AVE.	35	MCARDY
6	...	31	MCARDY AVE.	36	BRIDGE AVE.
7	...	32	LAMBART AVE.	37	THOMAS BL.
8	...	33	SALE AVE.	38	BRIDGEMAN
9	...	34	WELCH AVE.	39	ROSELIA
10	...	35	CATALANIC AVE.	40	...

KEY MAP of TAX MAP
WATERFORD TOWNSHIP
 CAMDEN COUNTY, N.J.
 Scale 1"=1600' October, 1942
 L. J. MORRE
 ENGINEER & SURVEYOR
 ATCO N.J.

REVISED TO OCT 1964

NOTE - THIS MAP SUPERSEDES THE MAP APPROVED 12/17/42
 I HEREBY CERTIFY THAT THIS MAP AND THE SURVEY HAS BEEN MADE
 IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW JERSEY

- LEGEND
- ELECT. W. 2
- LOT NO. 2
- TOWNSHIP BOUNDARY
- COUNTY BOUNDARY
- R.R. ROAD RIGHT OF WAY
- 1 STORY FRAME HOUSE
- 2 " " " "
- 3 STORY BRICK W.C.
- 2 " " " "
- 1 STORY TRUSS W.C.
- GARAGE
- WASH.
- CRIP.
- ACREAGE

ALL BLOCK AND LOT NUMBERS APPLY TO THIS MAP
 ONLY SUPERSEDES MAP DATED 12/17/42

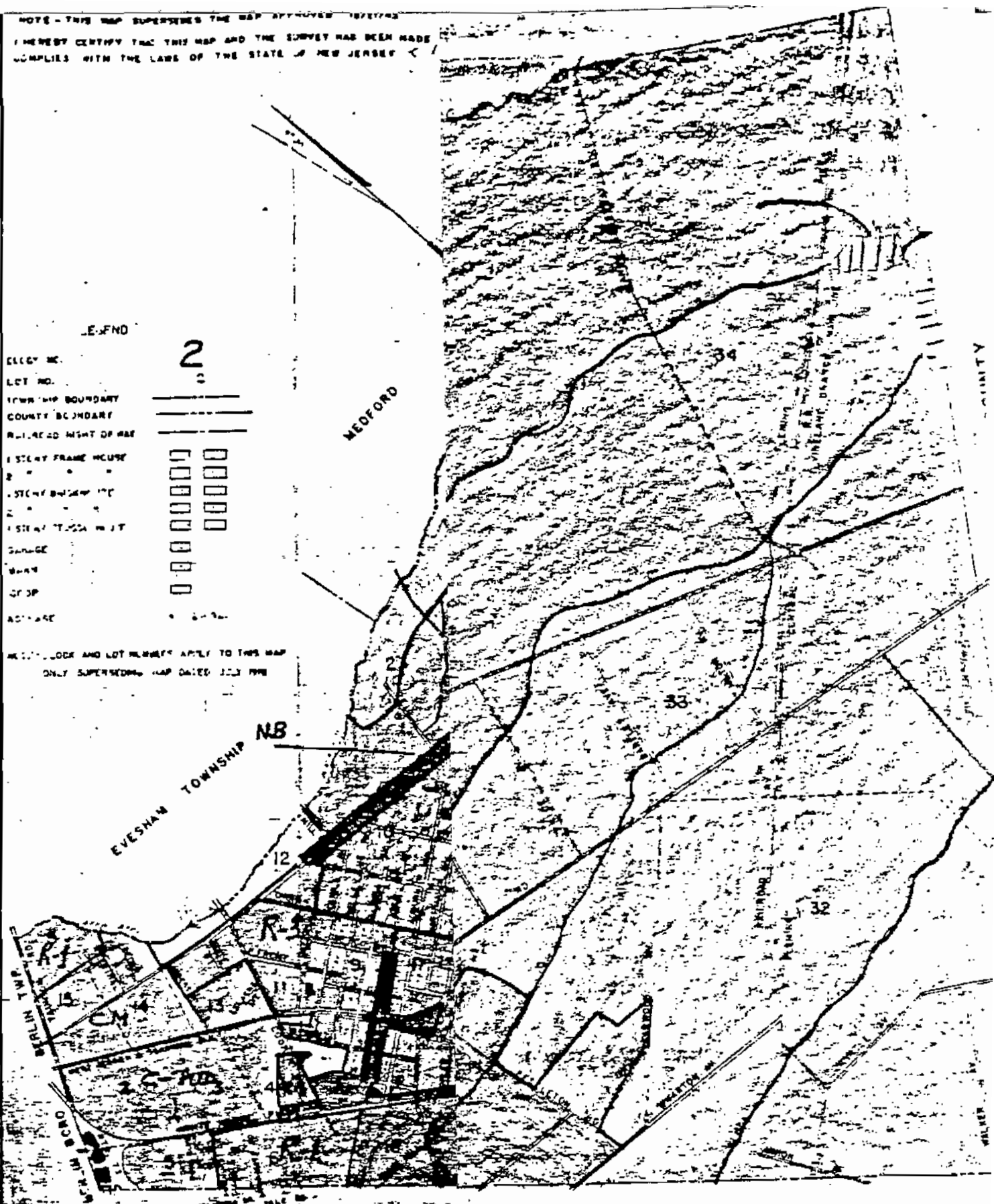


PLATE NO.	NO.	NAME	PLATE NO.	NO.	NAME	PLATE NO.	NO.	NAME
10	1	CHESTNUT AVE.	20	1	OLIVE ST.	30	1	MAPLE ST.
10	2	SMITHFIELD AVE.	20	2	OAK AVE.	30	2	
10	3	HARRISON AVE.	20	3	CEDAR AVE.	30	3	
10	4	ROBERT AVE.	20	4	LINDENWOOD AVE.	30	4	
10	5	" " AVE.	20	5	ELM AVE.	30	5	
10	6	" " AVE.	20	6	LAMBERT AVE.	30	6	
10	7	" " AVE.	20	7	DALE AVE.	30	7	
10	8	" " AVE.	20	8	MULFORD AVE.	30	8	
10	9	JERSEY AVE.	20	9	W. OTTAWA AVE.	30	9	
10	10	PHILADELPHIA AVE.	20	10	FRANKLIN AVE.	30	10	
10	11	WATERFORD AVE.	20	11		30	11	

TAX DEPARTMENT
 Camden County, N.J.
 October, 1942
 JAMES P. KELLY
 ENGINEER & SURVEYOR
 ATCC

KEY MAP of TAX MAP
WATERFORD TOWNSHIP
 CAMDEN COUNTY, N.J.
 Scale 1" = 1600' October, 1942
 JAMES P. KELLY
 ENGINEER & SURVEYOR
 ATCC
 REVISED TO OCT 1964
 TO SHOW CONDITIONS AS OF OCT 1964



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