

PREFACE

This update of the Tinicum Township Comprehensive Plan is being financed by the Coastal Zone Management Program which is partially financed by the Federal Government through the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration under Section 306 the Coastal Zone Management Act of 1972 (P.L.92-583) as amended.

The purpose of the comprehensive plan update is to propose realistic zoning changes and appropriate land development consistent with the Coastal Zone Management Program and to initiate efforts to reduce coastal hazards within the Township and to provide for development of a comprehensive storm water management program.

TABLE OF CONTENTS

	Page
PREFACE	
<u>CHAPTER 1 INTRODUCTION</u>	1
Work Objectives	1
Goals of the Township	2
<u>CHAPTER 2 HISTORICAL DEVELOPMENT AND PROGRESSION OF THE TOWNSHIP</u>	4
Historical Development	4
Major Changes Since 1968	7
<u>CHAPTER 3 EXISTING LAND USE</u>	14
Existing Land Use	14
<u>CHAPTER 4 HISTORIC SITES AND STRUCTURES</u>	19
Historic Sites and Structures	19
<u>CHAPTER 5 PLANNING ELEMENTS</u>	25
Concept	25
Land Usage in Essington	25
Residential Development	25
Little Tinicum Island	26
Revitalization of Essington and Lester	26
Coastal Zone Management Plan	27
<u>CHAPTER 6 PROPOSED LAND USE</u>	29
Residential Land Use	29
Industrial Use	29
Shopping Center	30
Commercial Land Usage	30
Institutional Land Usage	31
Recreational Usage	32
Utility Availability	33
<u>CHAPTER 7 IMPLEMENTATION</u>	34
Supplemental Proposed Zoning Ordinance Additions and Revisions	1.1
<u>APPENDIX A</u>	
Historic Preservation Techniques	i-v

LIST OF TABLES

	Page
Table 1 Existing Land Use	14
Table 2 Tinicum Township Population & Employment	15

LIST OF MAPS

Map A Tinicum and Vicinity Showing the Early Grants and Patents	
Map B Tide Gate Locations and 100 Year Flood Plain	
Map C Present Land Use	
Map D Proposed Future Land Use	
Map E Historic Sites and Structures	
Map F Proposed Revisions to Zoning Map	
Map G Large Parcel Land Ownership	

CHAPTER I

INTRODUCTION

INTRODUCTION

Because society keeps changing on a daily basis goals of achievement and development for local environments must be modified and/or revised to accomodate these changing conditions. Since 1968 substantial conditions affecting portions of Tinicum Township, Delaware County, have changed as well as the ownership of various large tracts of land. These changing conditions in turn modify the direction by which a site is to be developed. Also because of recent concerns about environmental protection which relate to the changing times, it becomes necessary to reestablish objectives and goals consistent with these expected variations in community development. Therefore in an attempt to meet these concerns, the Comprehensive Plan for Tinicum Township, Delaware County, Pa. last prepared August 1968 is being revised in what is to be referred to as Comprehensive Plan Update 1981 for Tinicum Township, Delaware County, Pa.

In order to proceed with the establishment of recommendations and revisions to the Comprehensive Plan several items must be carefully analyzed in order to achieve a viable basis by which the existing Plan may be modified. Some of these items are of the following nature:

- a. present land use
- b. coastal zone management
- c. available transportation systems
- d. transportation network (eg. highway system)
- e. topographic conditions
- f. utility availability
- g. zoning, subdivision and land development ordinances
- h. environmental impact
- i. population present and future
- j. industry and commercial businesses
- k. floodplain management
- i. Tinicum National Environmental Center

WORK OBJECTIVES

1. Prepare a revised Comprehensive Plan Update for Tinicum Township, Delaware County, that specifically addresses the protection and development of coastal resources in a manner consistent with Pennsylvania's Coastal Zone Management Program.
2. Prepare recommendations concerning modifications to the Township Zoning Ordinance and Subdivision/Land Development Ordinances based on the Comprehensive Plan Update, and present findings to the local government decision making body for official action or adoption.
3. Coordinate the Comprehensive Plan Update with local, county, regional, and State Officials who are familiar with local planning and with Coastal Zone Management goals, objectives, and policies.

GOALS OF THE TOWNSHIP

In conjunction with the land use plan and consistent with the work objectives, the Township of Tinicum has adopted several goals to be attained in the future by proper direction and implementation of good sound planning, engineering, and economic management. The goals are as follows:

1. A primary goal of the Township is for proper implementation of sound engineering judgment to eliminate flooding in Lester.
2. Because of recent happenings within the Township concerning the possibility of losing some vital industries as a result of increasing inflationary cost in continuing operations within the Township, it will become necessary to evaluate all alternatives available in order to attract other industries and/or businesses by which the Township can maintain if not increase its current tax base.
3. To diminish the amount of flood related damage occurring along the Delaware River during storm conditions by the continuance of flood plain and coastal zone management and by revising zoning ordinances by appropriate modifications concerning the limitation of residential usage within flood prone areas.
4. To encourage a proper buffering and establishment of commercial and industrial integration separate and distinct from the existing residential areas.
5. To initiate a public transit system or network that would service the needs of the township where at present there is none, with minimal adverse effects on the surrounding environment.
6. To promote increased development of new and innovative recreational facilities where at present a limited amount of these facilities exists.
7. To provide an integrated continuity between residential areas (Essington & Lester) within the township, which at present are disjointed as a result of early industrial and residential settlement patterns. Their continuances as separate entities of a unified whole are due chiefly to their proximity to one another resulting from existing highway and railway networks within the Township.
8. To encourage developers, residential, commercial, and industrial to use innovation in their designs in order to safeguard the use of our natural resources as well as energy which is developed from these resources. Users of both future development and existing structures and land usage should be cognizant of these safeguards.

9. To limit amount of adverse affects I-95 and the International Airport have caused throughout the Township due to construction and expansion, respectively.
10. To provide for passive recreation areas and facilities at the head of streets along the Delaware River in Essington where feasible.

CHAPTER 2

HISTORICAL DEVELOPMENT AND PROGRESSION OF THE TOWNSHIP

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Tinicum Township is a Township of the first class Situated in the Southeastern portion of the Commonwealth of Pennsylvania also being located in the Southeastern portion of Delaware County along Darby Creek and the Delaware River (Fig.1). The Township of Tinicum as it presently exists is a result of fill and flood prevention measures and is comprised of former Hog Island, Long Hook Creek, Martin's Bar, Little Tinicum Island, the Fast Land of Tinicum itself and Flats, formerly covered by reeds and bushes. (See Map A).

Because of the extensive fill and development of the Township that has taken place during the transgression of time much of the historically significant monuments of the Township's heritage have become extinct.

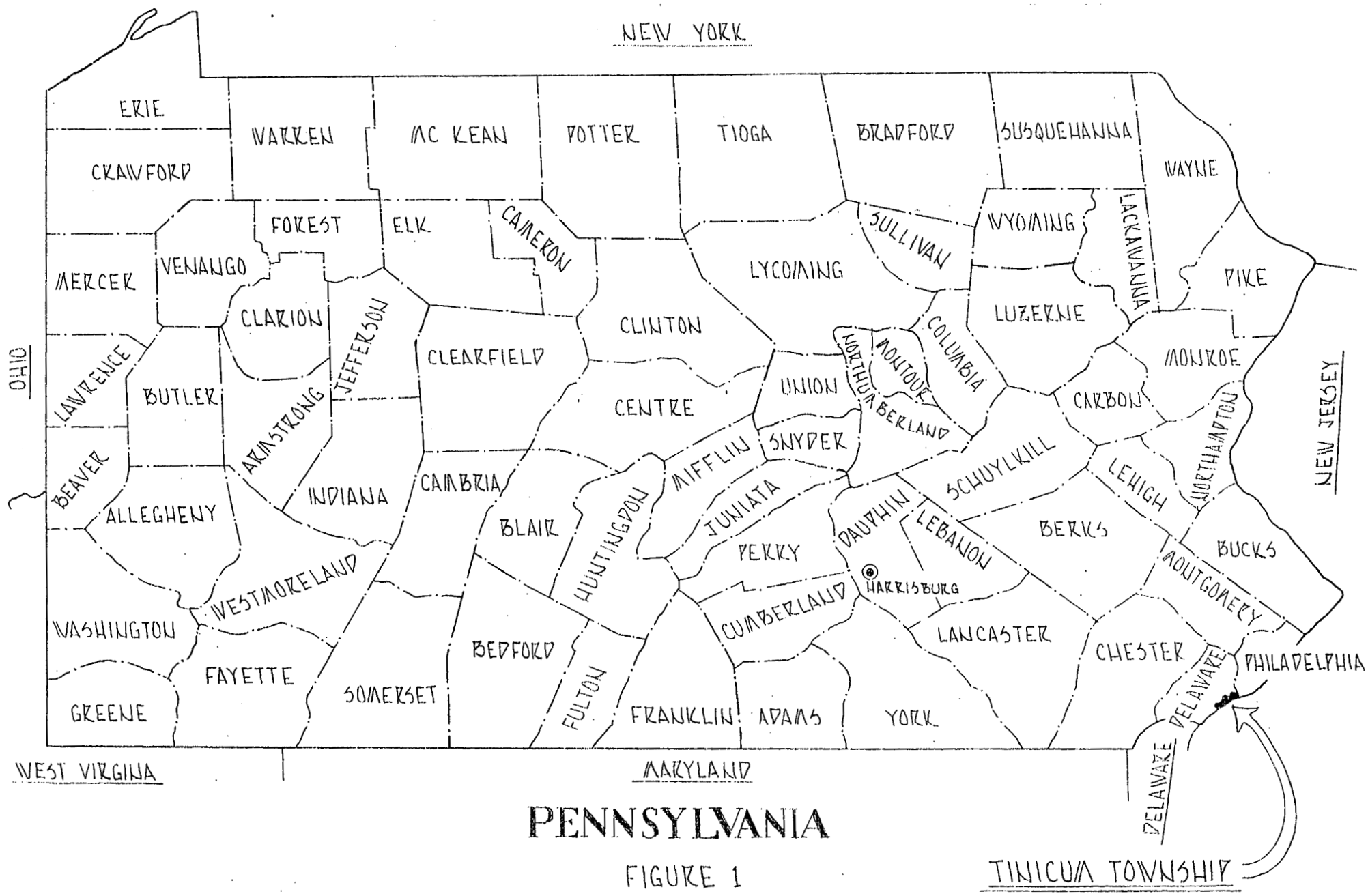
Tinicum was the site of the first government and permanent settlement by white men in what is now the Commonwealth of Pennsylvania. Tinicum was first settled by Johan Printz, a Swede, in 1643. " The reasons given for the Swedish settlement in Tinicum have been historically traced to its existence as a particular advantageous site for controlling the Delaware River above Wilmington, Delaware. Tinicum existed as an area of crucial importance in the 17th and 18th centuries. That area directly fronting on the Delaware River was controlled chiefly for its military potential. As more settlers moved into the Township, they realized that Tinicum had great possibilities for development."¹

Other reasons for early settlement as opposed to just being militarily advantageous were for trading and commercial ventures because of Tinicum's close proximity to the Delaware River. Also farming was conducted on a limited basis as was common of all settlements of colonial times for subsistence.

During the early beginnings of the township development a number of levees were constructed for improvements purposes but these levees were destroyed by the British in conjunction with the Revolutionary War. Today the Township is protected somewhat from inundation by a series of dikes and tide gates situated both along Darby Creek and the Delaware River. (See Map B).

As time progressed and our country was on the verge of the "Industrial Revolution" Tinicum was chosen as a prime site for industrial development because of its accessibility to the Delaware River.

1. " Tinicum Township Comprehensive Plan" prepared by Delaware County Planning Commission, Media, Pa. dated August 1968.



PENNSYLVANIA

FIGURE 1

The Delaware River was both a means of transportation and Water supply. Also the surrounding land could be acquired at a relatively low cost compared to adjacent communities. Most activity directly centered on or related to the Delaware River for its survival was therefore obviously located in the Town called Essington because of its location along the river. However, in the later part of the 19th century, industry started filtering to portions of the Township recessed from the immediacy of the river. Among these was the Lester Piano Co. which was located within an area of the Township which had been subdivided for development, the area was designated as Corbindale. Subsequently, as the area developed the name of the second Town in Tinicum Township became known as Lester. The Town of Lester which was originally subdivided under the name of Corbindale had been known as the Alburger Farm. The advertisement for sale of the lots indicated "Building Lots at Farm Rates, to SETTLE AN ESTATE, the property is divided into 1800 beautiful building lots, 25x100, 25x125 feet. Price, \$50 to \$140, on easy monthly payments of \$5.-----The ALBURGER property possesses business advantages that no other building lots do that are offered to the public. Having both river and railroad facilities, the two great factors that will make this place a business centre, and they are 25 feet above tidewater - as high as ground at 8th and Chestnut and 5 feet higher than 6th and Chestnut- assuring dry cellars, and it is the highest land on this railroad between Philadelphia and Chester."

The Lester Piano Company took "Advantage" of the business opportunity and built there plant on Fourth Avenue between Seminole Street and the Old Chester Branch of the Philadelphia, Wilmington and Baltimore Railroad in 1888.

In 1916 the Westinghouse Electric Corporation purchased a large portion of ground lying between Lester and Essington. This area was known as the Old Hill Farm consisting of 474 acres which extended from the Delaware River to Darby Creek. The main plant facilities were constructed between Second Street and Powhattan Street. The company eventually built what is known as Westinghouse Village which is located between the Industrial Highway and Delaware Avenue and consists of the homes located on Saude Ave. and the westerly side of Jansen Ave.. Westinghouse Electric Corporation also constructed the first treatment plant and the first children's wading pool in the Township. These facilities were donated to the Township for the benefit of all the residents.

Westinghouse Village was originally built as rental residences for Westinghouse employees but was eventually sold to the individual residents.

Although the original treatment plant and wading pool have been replaced, the land on which the Township Administration Building, Township Library, Intermediate Swimming Pool, Tennis Courts, and adjacent Ball Fields, Highway Garage and Treatment Plant are located on lands donated to the Township by Westinghouse Electric Corporation. Although most of their land holdings north of the Industrial Highway laid dormant for years they have sold off all of this land in recent years. These areas have either become part of the Tinicum Environmental Center, I-95 construction or have been developed for residential homes and Air Freight facilities and services.

Companies such as the Lester Piano Company, Westinghouse Corporation and Linde Air Products located in Tinicum Township because of their need for railroad facilities and/or the facilities available from the Delaware River. (See Map G)

The area along the Delaware River has not only been utilized by industry but has been developed for Yacht Clubs and a number of private Marinas.

MAJOR CHANGES SINCE 1968

Tinicum Township has experienced many changes since the development of the Comprehensive Plan which was prepared in 1968.

Many of the changes have had both a positive and negative impact upon the Township. The following is an outline of the major areas of development and changes that have affected the Township of Tinicum in recent years.

(1) DEVELOPMENT AND IMPLEMENTATION OF THE EXPANSION OF THE PHILADELPHIA INTERNATIONAL AIRPORT.

The expansion of the airport has been planned and developed in conjunction with the construction of the portions of I-95 which will be located just north of the airport facilities, and has required the relocation of portions of the Industrial Highway, Route 291.

The expansion of the main terminal and construction of docking facilities have been accomplished within the City of Philadelphia and have had no direct major impact upon the Township of Tinicum.

The development of the Air Cargo Area of the airport is all located in Tinicum Township and required the relocation of a portion of Tinicum Island Road. Tinicum Island Road was a State Highway prior to its relocation.

The relocation of this road was accomplished through compromise and agreements between the City of Philadelphia and Tinicum Township. The Pennsylvania Department of Transportation, the County of Delaware and the State Legislature all cooperated to make possible the development of the Air Cargo Area.

Through agreement Tinicum Island Road reverted to a Township Street after the Pennsylvania Department of Transportation reconstructed the unrelocated portion of the street. Prior to reconstruction the roadway was unpassable four to five times each year and for a period of one to five days each time because of flood waters which occurred during periods of heavy rains. This has eliminated a major inconvenience to the residents and businesses in the Township.

The construction of runway 9R-27L and appurtenant taxiways have undoubtedly improved the service of the airport operations.

Since this new runway was built 1400 feet south of runway 9L-27R it placed the approaches for the new runway partially over the river rather than directly over the residential areas of the Township. This has helped to reduce the excessive noise which the residents have experienced for years. A joint study made by the EPA and the FAA, dated October, 1980, attempts to address the problem of the effects of airport noise at the Philadelphia International Airport. No definitive action has been taken to eliminate or reduce the adverse impact of airport noise in Tinicum Township as of this date.

In conjunction with the construction of the new runway 9R-27L the Philadelphia Baltimore & Washington Railroad tracks were relocated and airport drainage from the runway was discharged into the Long Hook Creek drainage system which was extended to discharge into the river with a tide-gate located on the south side of the relocated runway. An additional pipe has also been placed under the abandoned railroad track.

The resulting impact is that during heavy rainstorms storm water from the runway area flows north under the abandoned railroad tracks and cause excessive flooding along Long Hook Creek in Lester. This will then take several days to recede.

On a positive note, expansion at the airport has resulted in new construction and development of new air related facilities within the Township.

(2) INTERSTATE I-95

Interstate Highway 95 has been under construction through Tinicum Township for many years. The construction of this highway has been both a blessing and a curse. Breaching the protective dike and breaking the tide gates at the Head of Jansen Avenue during one phase of the construction caused serious flooding and damage to a number homes in Lester and has cost the Township nearly \$100,000.00 for repairs of the tide gates to provide necessary protection from flooding of homes in this area.

The diversion of 100 acres of storm water runoff into Long Hook Creek has increased the flooding potential for Lester.

The highway has been completed from the south to a point just east of the built-up area of the Township and has a temporary connection to the Industrial Highway, Route 291. This temporary connection has created the "Tinicum Car Wash" which is the local name for the still water area which is located on the south side of Route 291 directly across the street from the temporary end of I-95. Since the

the opening of this section of I-95 there have been numerous accidents at its intersection with Route 291, 25 to 30 vehicles have ended in the "Tinicum Car Wash". Ninety One (91) accidents were recorded at this intersection from May 1978 to May 1979 in Tinicum. Although the installation of street lights in the area have helped to reduce the rate of accidents in this area since 1979, 41% of all recorded accidents in the Township have taken place between this intersection and the intersection of the new Bartram Avenue connection with Route 291.

Relief from the heavily congested traffic and associated traffic accidents and problems cannot be realized until the completion of I-95 between its present terminus in Tinicum Township and the Girard Point Bridge.

The benefits which have been derived from I-95 include the elimination of the horrendous traffic congestion and traffic problems that previously existed at the intersection of Wanamaker Avenue and the Industrial Highway and a major reduction of traffic on the Industrial Highway in the built-up area of the Township together with the reduction in traffic congestion on Wanamaker Ave. since that roadway was reconstructed to provide a four lane highway.

The roadway sections required to complete I-95 are all under contract. It is presently anticipated that I-95 will be completed and opened to traffic in the fall of 1985.

Lighting will be provided in connection with the interchanges presently under construction.

Although lighting was not incorporated in the design of the I-95 intersection with Wanamaker Ave. it has become evident that this lighting is required. When I-95 is completed the lighting of this intersection once not considered necessary will become critical to protecting the through traffic in this area by providing a safer lighted highway.

It is therefore essential that the Township revitalize its efforts to have the intersection illuminated.

(3) DEVELOPMENT AND IMPLEMENTATION OF A MASTER PLAN FOR THE TINICUM NATIONAL ENVIRONMENTAL CENTER

The Department of Interior Fish and Wildlife Service has provided a brief history of the Tinicum National Environmental Center in it's introduction to the summary of the Draft Master Plan which reveal the following:

(Tinicum Marsh occupies the lowland along the channel of Darby Creek in Delaware and Philadelphia Counties, southeastern Pennsylvania. The modern marsh, as defined for this report, extends from Interstate Highway I-95, approximately 0.5 mile above the junction of Darby Creek with the Delaware River, upstream approximately 4.7 channel miles (3.4 straight-line miles) to a point opposite 86th street, near the northern boundary of the lands presently included in the Tinicum National Environmental Center.

The project area is bounded on the north and northwest by natural high ground and artificially filled areas. On the south and southwest the boundary is formed by Interstate Highway I-95. The eastern boundary follows the embankment of a former interurban trolley line on the south, and then extends toward the north-northwest generally along the right-of-way of Lindbergh Boulevard.

The history of Tinicum Marsh, the largest remaining tidal wetland in the Commonwealth of Pennsylvania, goes back to the first settlements in the region in 1643 when the early Swedes, Dutch and English diked and drained parts of the marsh for grazing land. At that time the tidal marshes measured over 5700 acres, but with the advent of rapid urbanization since World War I this was reduced to approximately 200 acres located approximately one mile north of Philadelphia International Airport.

A diked, non-tidal area of 145 acres, adjacent to the eastern section of Tinicum Marsh, was acquired and administered by the City of Philadelphia in 1955. This was known as Tinicum Wildlife Preserve. The area of open water in conjunction with the adjacent heavily vegetated tidal wetlands form an ideal habitat for thousands of migratory waterfowl each year. Visitors to the preserve reached a peak of over 45,000 in 1966.

The remaining area had been threatened in 1969 by plans to route Interstate Highway I-95 through it and also by sanitary landfill on the tidal wetlands. These activities initiated a long series of injunctions, public hearings and extraordinary effort by private and public groups to secure rerouting of the highway and termination of landfill operations. Under legislation passed by the Congress of the United States during 1972 and signed into law by the President authorization was given to the Secretary of the Interior to acquire as much as 1200 acres of land in order to create a Tinicum National Environmental Center).

Federally controlled lands within the Tinicum National Environmental Center consisted of approximately 600 acres in 1978. A 19-acre parcel of ground located north of the Reading Railroad and south of the Industrial Highway is also included in the Environmental Center but is not included in the general description of outbounds for the center.

There are approximately 480 acres within the boundary limits of Tinicum Township which are included in the Tinicum National Environmental Center. In addition to the Lagoons constructed in conjunction with the construction of I-95 approximately 128 acres of the 480 acres were Federally owned lands or tidal waters owned by the Commonwealth of Pennsylvania.

The development of the Tinicum National Environmental Center together with the relocation of I-95 in the easterly end of the Township in the area adjacent to Darby Creek negates all of 1968 Comprehensive Plans for the areas north of I-95 as built and for planning area 7 which was adjacent to the Industrial Highway in the vicinity of the Railroad overpass.

The Master Plan for the Tinicum National Environmental Center indicates that the purpose of the project is to provide a site of adequate size and to preserve, develop and restore the Tinicum Marsh area and to provide a Wildlife Interpretive Center in order to provide environmental education and to provide the general public with the opportunity to observe and study wildlife in the natural habitats of an estuarian marsh.

Although the development of the Environmental Center will restrict future expansion and development of Tinicum Township there have been no immediate adverse impacts.

(4) DESTRUCTION OF THE LESTER PIANO INDUSTRIAL CENTER

The Industrial Center located in the facilities of the what had once been the Lester Piano Company was completely destroyed by fire in 1977. This was a major loss of jobs, productivity and tax revenue to Tinicum Township. The area has since been subdivided and is in the process of being developed. One air freight complex has been constructed, another is under construction and a third facility is expected to be under construction in the near future.

(5) GOVERNORS LANDING DEVELOPMENT

Many of the open lots in both Essington and Lester which existed in 1968 have been developed with residential homes on an individual basis.

The first major subdivision in Tinicum Township for development of permanent residential homes was presented and approved in May of 1979. This development, known as Governors Landing, is located between Second Street and the P.B. & W. Railroad at the westerly end of Essington. The development contemplates the construction of 172 dwelling units. The project is divided into three sections or phases of development. The first section consisting of 56 dwelling units has been completed and is occupied. The second section is presently under construction and some of the completed homes have been occupied. When completed this development will represent an increase of approximately 10% in the number of dwelling units in Tinicum Township.

(6) NATIONAL FLOOD PLAIN INSURANCE PROGRAM

Tinicum Township is a relatively flat low lying community with a maximum sea level elevation not exceeding 26.0 based upon U.S.G.S. Datum. Development in many areas of the Township took place only after considerable fill had been placed to raise the ground elevations above normal flooding conditions.

Many homes and businesses in the community are subject to periodic flooding . A grading, drainage and erosion control ordinance was passed in 1962 in order to control filling operations and to protect existing homes and facilities.

The introduction of the National Flood Insurance Program during the 1970's increased the local awareness of the flooding problems and what might take place.

Although the Township did not have a flood plain district ordinance in effect the Township implemented the Federal Flood Plain District regulations beginning in 1973 utilizing the 1962 grading, drainage and erosion control ordinance and the Tinicum Township Flood Plain District Ordinance approved by HUD, which was passed on November 20, 1978 (Ordinance No. 527). An updated and improved Drainage, Grading and Erosion Control Ordinance, complimenting the Flood Plain District Ordinance was passed November 20, 1978 (Ordinance No. 528). Realizing the need to control development throughout all of the Township as well as the areas within the known flood plain area of the Township, the Township passed a Subdivision and Land Development Ordinance on December 18, 1978 (Ordinance No. 529).

The proof Flood Insurance Study of the U.S. Department of Housing & Urban Development Federal Insurance Administration is dated November 1, 1979. This flood insurance study and the associated FIRM-Flood insurance rate map provides for elevation 10.00 U.S.G.S. for the 100 year flood plain level along the Delaware River in Tinicum Township which is the same elevation the Township has been using since 1973. (See Map B).

(7) MAJOR CONSTRUCTION AND DEVELOPMENT

In addition to the expansion of the Airport, establishment of T.N.E.C., construction of I-95 and the Governors Landing Development which have previously been discussed, there have been other changes within the Township which have influenced and affected the well being of the entire community.

Some of these changes are as follows:

- (A) Three new eating establishments:
MacDonald's, Gino's, and Denny's Restaurant.
- (B) A 300 plus unit Holiday Inn.
- (C) A 330 plus unit Ramada Inn.
- (D) Expansion of facilities for both the Lester and Essington Fire Companies.
- (E) An additional office building at Scott Plaza.
- (F) Removal of the Old Wanamaker Ave. School and preliminary development of a permanent park in Essington.
- (G) Numerous dwelling renovations under the HUD "rehab" program.

- (H) A 148 unit motel at Walbers on the Delaware.
- (I) Major repairs to the tide gates at the confluence of Long Hook Creek at Darby Creek. This has provided permanent protection from flooding in Lester for most storms and high water levels in Darby Creek.
- (J) Construction of Fifth Ave. extension to eliminate the dead end streets at the end of Manhattan Street and Iroquois Street.
- (K) Upgrading of the main treatment plant pumping station to provide for adequate pumping facilities and provide emergency power.

CHAPTER 3

EXISTING LAND USE

EXISTING LAND USE

The existing land use pattern of Tinicum Township is shown on Map C included as part of the Comprehensive Plan. Present day, Tinicum Township is comprised of approximately 3731 Acres of land, being 5.83 square miles, which includes the mainland as well as Little Tinicum Island. The existing land use can be seen in a tabulated form on Table 1 as follows:

TABLE 1

EXISTING LAND USE	AREA (Acres)	AREA (sq.mi.)	% of TOTAL LAND AVAILABLE
Aiport Usage	1609	2.514	43.12
Apartment	2.5	0.004	0.07
Commercial	78	0.122	2.09
Hotels & Motel	17.5	0.027	0.47
Industrial	401	0.627	10.75
Institutional	15.5	0.024	0.42
Municipal Usage	13.5	0.021	0.36
Office	48	0.075	1.29
Open Space	1032	1.612	27.66
Other (Post Office etc.)	2	0.003	0.05
Public Utility	9.5	0.015	0.25
Recreational *	41	0.064	1.10
Residential	177	0.277	4.74
Special Restrictive	51	0.080	1.37
Transportation	233.5	0.365	6.26
TOTALS	3731	5.83	100.00%

* 6.5 Acre Area is a Privately owned Swim Club

As shown on Map C and listed in Table 1, the Philadelphia International Airport consisting of runways, terminals, control towers, and other associated facilities, occupies approximately 43.12% of Tinicum Township. The existence of the airport during modern times including its recent expansion have been most influential in the commercial development of the surrounding area. Recent times have seen the construction of such businesses as the Dobb's House, located at the intersection of Second Street and Putcon Avenue, which prepares food for the airlines and Five Star Air Freight, located along North Governor Printz Boulevard adjacent

to the Tinicum Township Municipal Building, which as the name implies deals with the shipment of freight through the airways.

Also with the advent of the completion of Interstate 95 and the existence of the International Airport, which are in close proximity to each other, both a Holiday Inn and a Ramada Inn have been constructed in Tinicum Township to service what is felt to be a high demand for the services which they provide.

Present day Tinicum Township has an extremely limited amount of land devoted to residential usage which sets the community apart from any other community in Southeastern Pennsylvania. Population trends as listed in Table 2 support this concept. The Township is forced to contain its residential land use because of the large amount of land area, approx. 56.0% of the Township devoted to the International Airport and more recently the Tinicum National Environmental Center. These areas, although they serve a purpose which benefits the masses, severely cripples the tax base that is necessary in order to provide adequate municipal services to a larger number of residents than presently exists. It should be pointed out that although well over 50% of the Airport lies within the boundary limits of Tinicum Township, and generates some tax revenue, the majority of the area is taxiways and runways. The vast majority of the tax generating facilities associated with the airport, such as parking facilities, the main airport terminal (consisting of numerous commercial shops) and the Overseas Terminal have been strategically placed within the boundary limits of the City of Philadelphia. Although the township has lost tax revenue due to the strategic location of these tax generating facilities, the mere existence of the Airport within and adjacent to Tinicum Township has helped generate new business development within the Community.

TABLE 2
Tinicum Township Population & Employment

YEAR	1960	1970	1980	2000
POPULATION	4375	4823	4292*	4800**
EMPLOYMENT	N/A	10535**	10000***	12400**

* A preliminary count supplied to Tinicum Township by the 1980 Census Bureau. Final figures are scheduled to come out in January 1982.

** Based on population and Employment predictions noted in COWAMP/208 for Southeastern Pennsylvania as prepared by Chester-Betz Engineers.

*** Approximate value Based on Tinicum Township Occupation Tax

Continued Industrial development and land usage is considered a vital part of Tinicum Township's future. At present industry comprises a make up of approximately 10.75% of the total land usage within the Township. These industries are the mainstay of the community by providing both numerous employment opportunities.

and a large portion of the tax revenue. As can be seen in table 2, there are over twice as many employees in the Township than there are residents. This is one reason that the Township is able to continue to provide essential services to the Community. These industries such as Westinghouse Electric Corporation, Linde Air (Union Carbide), and Scott Paper Company provide much needed financial assistance through tax revenues in running the Township which tend to offset somewhat the loss of such viable tax bases as a result of the creation of the Tinicum National Environmental Center and "Sectionalized Usage" of the Philadelphia International Airport.

As the 1980's pass with the economic woes and the once unlimited and inexpensive use of energy becomes a thing of the past, the Township looms on the edge of darkness. Everyday the rising possibility of several industries existence being jeopardized as a result of increasing costs, in order to maintain their operations in the Township, are now being realized. Evidence of this point can be seen in the near future as Linde Air pulls out its major operations and moves them to Upper Montgomery County as a result of the Philadelphia Electric Company's spiraling electric rates. Westinghouse is gradually selling off the vast majority of holdings within the township, and also scaling down and curtailing some of their operations as a result of increasing operational costs.

The Township will now be forced to seek out other industries and/or commercial ventures and discover means to attract new businesses by which they can revitalize the community or at least keep the status quo. Hopefully, with the implementation of appropriate measures, employment figures as projected for the year 2000 can be realized.

Transportation networks as they presently exist in the township serve a two fold purpose.

- (1) They provide for vehicular movement within and access to most areas of the Township.
- (2) They help alienate the township into two (2) distinct entities, being Essington and Lester.

Because of the physical barriers surrounding the township such as Darby Creek and the Delaware River, and other barriers transversing the township such as Reading Rail Lines and Interstate 95, there are numerous local streets that are dead ended. This dead ending of streets does not make an ideal situation for vehicular movement and is another reason for the limitations on the expandability of the residential area. At present there are no viable financial justifications for any changes to the existing local roadway network.

In the future however, because there is no direct access from Tinicum Township's major developmental area to areas of the township where ARCO and Gulf Oil Corporation have their facilities along Aviation Road, as labelled on Map E, without entering from Philadelphia, a connection road may be constructed. This road could connect Aviation Road with the main Township roadway system at a point near the intersection of Second Street, Fourth Avenue and Tinicum Island Road. This could be accomplished by the construction of a roadway around the periphery of the Philadelphia International Airport along the P.B. & W. Railroad right-of-way and the Delaware River. Also future roadway plans might include the connection of roads in the Southern Portion of Lester, like Seminole Street, Manhattan Street, and Iroquois St. to Streets in Essington like Island Avenue, Fourth Street, and Third Street in the event that the Westinghouse Electric Corporation may choose to subdivide their land.

State Highways running through Tinicum Township have always had a significant impact on the local environment, residents, business and industry, and the economic well being of the Township. The existing state highway system as it presently exists in the township is deemed adequate in serving the needs of the community. However, with the final completion of I-95 a few years away, the existing and continuous detouring of traffic onto Route 291 to Bartram Avenue has placed an extreme burden on the Township of Tinicum. The detouring of traffic during the construction phase of I-95 has brought with it numerous problems such as an increasing accident rate and extreme traffic congestion. The traffic congestion is due to a variety of problems such as increased accidents, traffic signals continuously malfunctioning, the design concept for traffic movement, in its entirety, and an increased volume of traffic.

The Railway system throughout the Township is continually being used on a regular basis to transport freight. One problem that has arose more recently with respect to the rail lines is that because of economic justification as well as others, the number of cars each train contains has significantly increased. One might say that this presents no real problem, but if one is familiar with Tinicum Township (see Map C) it should be noted that there are three (3) access roads connecting portions of Lester and Essington south of Route 291 to the northern portion of Tinicum Township. These longer freight trains have on numerous occasions blocked one, two, or all three of the grade crossings for extended periods of time.

~~This is not only an inconvenience~~
This is not only an inconvenience to the general traveling public but creates a major hazard to the health safety and welfare of the entire community.

The two fire companies and two ambulance companies (Lester & Essington) which service the Township are located south of the railroad. When the three crossings are blocked it requires emergency equipment to drive as much as six miles out of the way in order to take someone to the hospital in an emergency. This is a horrendous condition which has been an extreme concern to the Township for sometime.

CHAPTER 4

HISTORIC SITES AND STRUCTURES

HISTORIC SITES AND STRUCTURES

Recorded history of Tinicum Township dates back to 1643. As previously mention Johan Printz established the first permanent settlement and seat of government by white men in the Commonwealth of Pennsylvania in Essington.

The following is a list of Historical Sites and/or Structures contained in Tinicum Township which make-up a portion of the foundation for both Pennsylvania and United States History: (approximate locations are shown on Map E)

1. GOVERNOR PRINTZ PARK LANDING PLACE OF JOHAN PRINTZ



The town of Essington was the original landing place and site of the first permanent settlement in Pennsylvania. A park site dedicated to the Commonwealth by the Swedish Government on behalf of Governor Johan Printz stands as a memorial to this early settlement. The park is owned and maintained by the Commonwealth of Pennsylvania.

2. MONOLITH



On property presently owned by the Corinthian Yacht Club, a monument was erected in honor of Governor Johan Printz by the Swedish Colonial Society on June 14, 1923. The monument today still stands and remains testimony to the governor of this early settlement.

3. SWEDISH CHAPEL AND GRAVEYARD

On lands presently occupied by Governor Printz Park and the Corinthian Yacht Club along the banks of the Delaware River lies the site of burial place for the first settlement which was laid out by Governor Printz. The first burial took place in October 1646. At present the exact location of the Graveyard is not discernible and is believed to have been gradually eroded away with time. Adjacent to the Graveyard was constructed a Log Chapel which was torn down in approximately the year 1700.

4. FORT NEW GOTTENBURG

Fort New Gottenburg was in existence until the year 1655. The Site of the fort is believed to have been located approximately 200 yards west of the present Corinthian Yacht Club.

5. LOG HOUSE AND SPRINGHOUSE



The Log House was in existence from 1643-1893 and was situated along side of a Springhouse on property presently owned by the Corinthian Yacht Club. The original Springhouse is still standing although not in service.

6. LAZARETTO



The Lazaretto is of historical significance in the fact that it is one of the few historical buildings that has survived time and progress in Tinicum Township. The Lazaretto was built as a Quarantine hospital in 1770 and was used as such until 1893, when it was purchased by the Pennsylvania Athletic Club. It then became a site for recreational festivities with beautiful grounds. In 1916 it was purchased by Essington School of Aviation. The Lazaretto is still standing and has been acclaimed as a historical site. A museum has been established and is open to the public for visitation on Fridays and Saturdays.

7. LOG HOUSE

This log house was located for over 200 years on the west side of Poulsen Avenue approximately 300 feet North of Delaware River. It remained standing until 1918 when it was then demolished by the Westinghouse Electric Corporation. This log house was to have been one of the first if not the first house built in Essington.

8. U.S. CUSTOM HOUSE

The custom house was a brick building constructed in 1801. After being in use for over 100 years, the building was leased to Essington Shipyard Company in 1919. The building was located between Taylor and Wanamaker Ave. close to the River front.

9. "THE DUTCH HOUSE"

Elizabeth Griffits in 1843 established the first school in Essington in a building called the Dutch House. It was located approximately 200 feet Southeast of the intersection of Second Street and Wanamaker Avenue. The name Dutch House was given to this building because of its use as a quarantine station for the crew and passengers of Dutch Vessels.

10. RIVERSIDE HOTEL

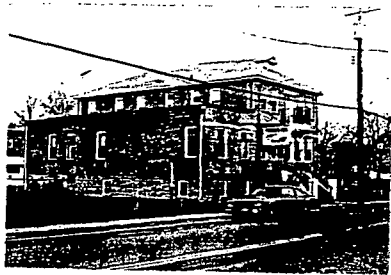


In 1864 the Riverside Hotel was built on the northeast corner of Taylor Ave. and the Delaware River. Charles Walber purchased the Hotel in 1907 from the original owner William Miller. Today the original Hotel comprises a portion of the Hotel and Restaurant Complex of Walbers on the Delaware.

11. PUBLIC SCHOOL

On the south side of Island Road, one block southeast of North Essington Station, a public school was erected in 1868. In 1916 the ground was sold to Westinghouse Electric Corporation and the building has since been removed.

12. HOTEL TINICUM



The Hotel Tinicum was built in 1884, located on the northwest corner of Carre Avenue and Second Street. In 1927 the Hotel Tinicum burned down and was rebuilt that same year. The Hotel was renamed Tinicum Inn at this time and remains as such today.

13. ROSEDALE INN

The Rosedale Inn was located at the southwest corner of Taylor Ave. and Second Street. The Inn was in the possession of the Griffin Family until 1927 at which time it was demolished.

14. EPISCOPAL CHURCH

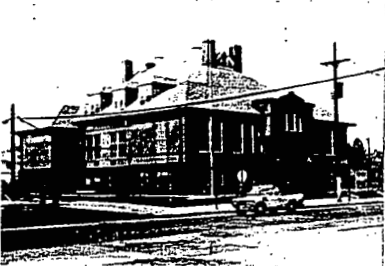


In 1892 Mrs. Box built a meeting hall at the northwest corner of Wanamaker Ave. and Third Street. This wooden structure was moved to the side of a stone building erected in 1929 now the existing church. The wooden structure although stuccoed over still stands.

15. SAINT JOHNS LUTHERAN CHURCH

At the northeast corner of Fourth Ave. and Troquois Street, there was built in 1904 a wooden structure which was at that time the first and only church in Lester..

16. LESTER PUBLIC SCHOOL



The Lester public school was built in 1918 on the northeast corner of Third and Powhattan Avenues. It was the only school in Lester until the late 1960's when Tinicum Elementary School was built and Lester public school was vacated.

17. SAINT MARGARET MARY ROMAN CATHOLIC CHURCH

Saint Margaret Mary Roman Catholic Church was built in 1921. It is located on the northwest corner of Route 291 and Wanamaker Ave.. Prior to its erection this was the site of the Hog Island Post Office which was completely removed in sections to a new location.

18. TINICUM MARSH

The Tinicum Marsh is historically significant because throughout the decades the marsh has supplied sanctuary to many forms of wildlife, preserving many birds and animals from possible extinction.

19. ESSINGTON POST OFFICE

The Philadelphia and Reading Railroad Station was the original site of the Essington Post Office. It was located in this station for approximately 25 years between 1885 to 1910 at which time it was re-located. The station was relocated to a site on the west side of Wanamaker Ave. on the south side of the railroad tracks.

20. TINICUM TIDE GATES

Tide Gates, dikes, and levees have early beginnings in Tinicum Township. Early development of Tinicum Township incorporated the use of levees for flood protection from the tidal waters of Darby Creek and the Delaware River. Today a system of Tide Gates and Dikes still provide flood protection to residents of the Community. (See Map B)

21. CORINTHIAN YACHT CLUB



Some of the buildings and structures contained within the property limits of the Corinthian Yacht Club were constructed in the 1600's and 1700's. Some of the historic structures previously mentioned are still standing on the Corinthian Yacht Club site.

The Corinthian Yacht Club provided protection to sea worthy vessels from winter storms and moving ice. Today the Corinthian Yacht Club is still in operation, however, large ships can no longer enter the back channel because of silt deposits which have built-up over the years.

The Yacht Club is in possession of a cannon ball supposed to have been fired by the Dutch, when they besieged and conquered New Gottenburg, and also a cream colored brick, probably one of those brought from Sweden to build the first church.

22. SWEDISH BURIAL SITE



In the rear yard of the property located at the southwest corner of Saude and Fourth Street in Essington is an old stone marker with the initials J.J. cut in the top. This is believed to be the burial site of two Swedish settlers.

23. CHESTER RANGE LIGHT



The Chester Range Light once situated at the end of Delaware Avenue in Essington was once the site of a lighthouse used during the 1800's and early 1900's for waterway navigational purposes. The foundation of this lighthouse still exists and can be seen in the accompanying photograph.

Many of the once historic structures located within the limits of Tinicum Township have disappeared as a result of residential, commercial, and industrial development. Preserving the remaining historically significant sites and structures within the Township is of the utmost concern. Several approaches to historic site and structure preservation are contained in appendix A and represent techniques as set forth by the Delaware County Planning Department.

An approach not listed in appendix A is that of maintaining the "Status Quo". A "Status Quo" approach is one where nothing would be done and letting the nature of development take its course. This "Status Quo" approach which is in present day use may result in historically significant sites and structures disappearing through attrition in the near future.

Although a "laissez faire" attitude might be a desirable approach to historic preservation in order to cut expenditures from an already financially overburdened municipal government, a compromise should be sought between the value of historic preservation versus the value of new development. It is suggested that both historic preservation and future land development go "hand in hand". The Township's awareness of historic sites and structures coupled with ordinances providing for limited preservation easements, and developer awareness of historic preservation should prove to be the most practical and effective measures available. These measures require the least amount of necessary expenditures in order to provide for adequate historic protection. Future developments should incorporate a strategic intertwining of both the new and historic (where they exist), such as the rehabilitation and reuse of historic structures.

CHAPTER 5

PLANNING ELEMENTS

PLANNING ELEMENTS

CONCEPT

The future development of Tinicum Township will be independent of the development in the adjacent communities in Delaware County. Tinicum has always had a individual identity from the adjacent municipalities because of its geographical location being separated from the adjacent communities to the north and east by Darby Creek and from New Jersey on the south by the Delaware River. The recent expansion of the airport, construction of I-95 and the establishment of the Tinicum National Environmental Center has further separated the area in the Township remaining for development from the adjacent communities.

The one area for consideration in the future development of the Township in which the existing adjacent communities could have an influence would be the planning of a shopping center. Larger chain stores once enjoyed in Tinicum have moved out. Tinicum itself could not support such a facility. The heavily congested and inadequate highway system which existed in Tinicum Township was never an enticement for outsiders to come to Tinicum to shop. With the advent of I-95 and the new highways constructed in conjunction with its development, vehicular access to Tinicum is now good and should become excellent when I-95 is completed. An appropriately located shopping center is considered a viable use considering the fact that the adjacent communities are generally developed and do not have the areas available for such a project.

The reestablishment of the Tinicum National Environmental Center has removed a major portion of the Township (358 acres) for future development and has eliminated this area from the present and future tax base of the community.

The close proximity of the airport and the ready access to Interstate Highway 95 together with the improved roadway systems are conducive to development of transportation and airport related facilities.

LAND USAGE IN ESSINGTON

The airport is here to stay. Although as previously pointed out, the construction of the new runway and the changes in flight patterns have diminished the impact of noise especially in portions of Lester, Essington is still seriously affected by the noise impact from airplanes.

It is therefore not considered appropriate to plan for additional residential areas below the Industrial Highway and that consideration should be given to reduction of residential use in this area.

RESIDENTIAL DEVELOPMENT

There are approximately 110 sites presently available in the residential zoning areas of the Township remaining to be developed.

Establishment of residential areas adjacent to the airport or in the vicinity of the flight paths of the airplanes is considered completely inappropriate. The construction of I-95 and the establishment of the Tinicum National Environmental Center have eliminated development in the northern portion of the Township. Much of the remaining areas available for development are not considered conducive to the development for residential homes within the Community. Therefore only two small areas of the Township are being considered for future expansion of the residential district.

Within the area north of Delaware Avenue and west of the homes facing on Jansen Avenue there are presently only two homes. This area is ideally suited for expansion of the residential district.

There is a 43 acre undeveloped parcel of ground located on the north side of the Industrial Highway just east of Long Hook Creek. This particular site was in the process of being filled by the Corps of Engineers prior to the construction of I-95. It is anticipated that a portion of this site could be appropriately developed as an office complex to meet the future needs for the area. The development of a planned apartment-townhouse complex on the westerly side of the site would provide a buffer zone for the existing residential area of Lester.

LITTLE TINICUM ISLAND

At present Little Tinicum Island is owned by the Tinicum Real Estate Holding Corporation and consists of approximately 104.5 Acres of firm ground shown as open space on Map C. The Commonwealth of Pennsylvania has expressed interest in and will probably acquire Little Tinicum Island in the near future. The Commonwealth proposes to let the island return to its nature state thus preserving the island as open space for the time being. Ultimate development of the island is surmised to be both recreationally and environmentally consistent with the possibility for its increased usage as a base for water related recreation.

REVITALIZATION OF ESSINGTON AND LESTER

Because of the fact that Tinicum Township is a low lying area virtually flat with little more than a 20 foot elevation differential throughout the Township and is surrounded by Darby Creek and the Delaware River, it is subject to periodic flooding. Even though existing dikes and tide gates provide some flood protection they prove ineffective in providing adequate flood protection during high intensity storms. Flood related damage is one major contributing factor to the deteriorated condition of some homes and other structures in both Essington and Lester. (See Map B)

Many of the areas in the Township including homes and structures once in dilapidated condition in the late 1960's have since been revitalized as a result of Township's continuing commitment to improving

storm drainage facilities including roadway construction and reconstruction by the use of HUD, Block Grant Development Funds. Two more recent examples of programs undertaken by the Township with the use of HUD funds are the replacement of tide gates and stabilization of dikes at the head of Jansen Avenue and Long Hook Creek, and the construction of Fifth Avenue including storm drainage between Manhattan Street and Iroquois Street in Lester.

Also many residents on an individual basis, have been able to take advantage of HUD, Block Grant Development Funds by which to rehabilitate their homes; while other persons have taken on their own to upgrade their homes and property.

Continuance in programs coordinating the use of HUD and Township funds will ultimately result in a completely revitalized community.

The 1982 rehabilitation program contains provisions for the reconstruction of a portion of Chippewa Street in Lester as well as continuing home rehabilitation.

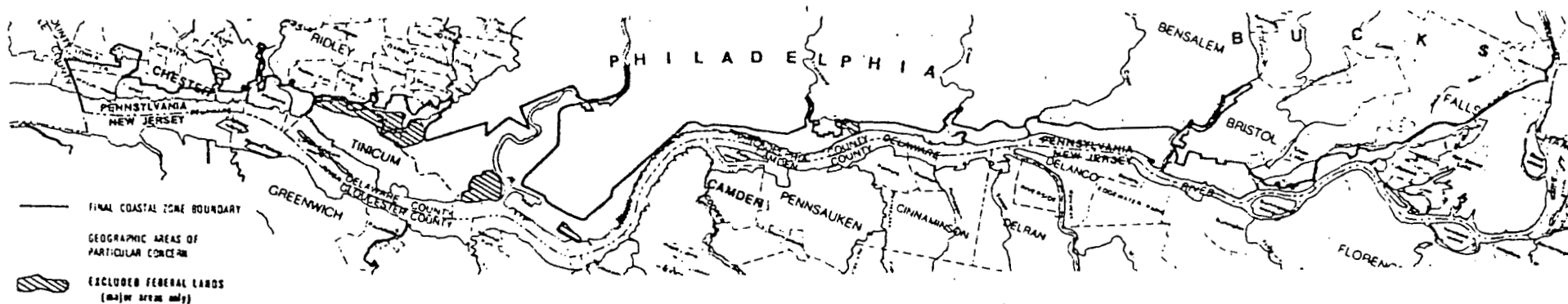
COASTAL ZONE MANAGEMENT PLAN

The Township of Tinicum is completely encompassed within the Delaware Estuary Coastal Zone as noted on Figure 1-3 with the exception of Federally Owned Lands incorporating the Tinicum National Environmental Center.

The General aspects of the Coastal Zone Management Plan are in concurrence with Township development goals. Of particular interest to the Township is the incorporation in the Coastal Zone Management Plan for encouragement of economic development and additional public access for water-based and water enhanced recreational activities. Also as noted in the CZMP development is encouraged within the coastal zone as long as it is consistent with all existing wetlands and floodplain standards. It must be stressed however, that although economic development is encouraged as part of this comprehensive plan, this development can not preclude the importance of protection of the water quality standards and the natural resources. All economic development must take place in compliance with all applicable wetlands and floodplain development standards, as well as the Clean Air Act, Clean Stream Act, and Title 25, Chapter 105 Dam Safety and Waterway Management as developed by the Pennsylvania Department of Environmental Resources.

Perhaps the most significant aspect of the Coastal Zone Management Plan with respect to economic development as it pertains to Tinicum Township is the need for a Comprehensive Stormwater Management Program. Although recent construction has taken steps to correct some existing problems, the vast majority of the remaining portions of existing developed areas within the township are in dire need for such an undertaking as a Comprehensive Stormwater Management Program.

Figure 1-3
DELAWARE ESTUARY COASTAL ZONE *



* taken from figure 1-3
 "Commonwealth of Pennsylvania Coastal Zone Management Program
 and Draft Environmental Impact Statement" prepared by:
 Office of Coastal Zone Management
 National Oceanic and Atmospheric Administration
 3300 Whitehaven Street, N.W.
 Washington, D.C. 20235
 Dated: May 1980

CHAPTER 6

PROPOSED LAND USE

PROPOSED LAND USE

4/20/11 Because of the growing need to provide services to the residents of the Township as a result of increasing operational costs due to inflation and a slowly eroding tax base, it is recommended that the Township provide opportunity for increasing development within its jurisdiction, on a limited basis. It should be noted that although a blanket Special Use zoning as is in present use might have served its purpose several years ago, it is not consistent with the desirable development aspects in the community that are presently needed in order to entice new commercial and/or industrial ventures. Therefore it is recommended that the Special Use District for existing undeveloped areas be revised to meet the anticipated needs for future development of the Township which will not be inconsistent with the needs providing adequate storm and sanitary sewer systems and which will not adversely impact upon the Township.

RESIDENTIAL LAND USE

In Tinicum Township there is only one (1) residential zoning district and it provides for the erection of detached one-family residences, detached duplex residences, and semi-detached one-family residences. It should be pointed out that there are no provisions for attached one-family residences although they exist as non-conforming lots in the Township in the areas of Westinghouse Village and along Iroquois Street in Lester. Justifications for one (1) residential zoning district in the Township stems from the fact that Essington and Lester were subdivided into a series of 25'x100' and 25'x125' lots in the latter part of the 1800's. This subdivision of lots coupled with the Residential Zoning Requirements are responsible for the makeup of the residential areas in the Township being a complete mixture of single family detached residences with twin homes, and duplexes. Therefore it is recommended that the existing Residential Zoning Requirements should remain the same for areas that were affected by the subdivision of 25'x100' and 25'x125' lots in Essington and Lester. For larger tracts of land zoned for residential usage it is recommended that allowances be incorporated in the Residential Zoning Requirements providing for cluster development, eg. townhouses, with provisions for open space.

INDUSTRIAL USE

The river frontage south of the airport is presently partially developed with facilities, of the Gulf Oil Co. and Arco. The undeveloped portion of the area is considered suitable for the development for a similar use which require water front docking facilities.

The 127 acre parcel of undeveloped land located between Tinicum Island Road and the residential area of Lester is considered an ideal location for the development of an industrial park. The proper

development of an industrial park would provide sites required for the expanding airport oriented services with direct access to the airport and should not adversely impact upon the residential area of the Township.

Light industry presently exists along the south side of the Industrial Highway from Wanamaker Ave. to the west. The Old round house and train servicing area which is adjacent to the presently developed industry has been abandoned and has deteriorated extensively. Development of light industry in this area would eliminate the existing blighted conditions.

On the north side of the Industrial Highway the relatively narrow undeveloped area located between the Industrial Highway and I-95 is considered suitable for development for light industry not requiring a large area for their facilities.

SHOPPING CENTER

Tinicum Township and the surrounding communities do not have adequate shopping facilities available in the immediate area. The new and improved roadway systems which have been constructed in recent years now provide convenient access to the Township from the adjacent developed municipalities. The development of a shopping center with adequate parking and access to a variety of stores would be an asset to the area. The construction of such a facility at the northeast corner of the Industrial Highway and Wanamaker Ave. on a portion of the Manor site would place the facility in close proximity to the I-95 Interchange and the adjacent communities north of Darby Creek. This development of shopping facilities might prove to be the enticement necessary in the Township that would provide for public transportation for Township residents. At present there is no means of public mass transit within the community because of the limited amount of population which precludes economic feasibility for such an undertaking. However, if the shopping center concept becomes a reality a township transit system supported by the commercial ventures in the community could tie the Ramada Inn, Holiday Inn, local residents and the Tinicum National Environmental Center together. It should be noted that a rail line is proposed for visitors to the Tinicum National Environmental Center and that any system created for the community and commercial access could also provide access to this rail line.

The construction of a Community Shopping Center coupled with a public transit system, comprised of buses and/or vans, will ultimately help unify the community.

COMMERCIAL LAND USAGE

The majority of the existing area within the Township which are zoned Commercial are intermixed with commercial uses, single family residences and apartments. Future Commercial developmental districts should not incorporate provisions for residential usage. To prohibit such residential usage occurring under the present commercial zoning ordinance cannot be accomplished unless two commercial districts are established eg. C1 and C2.

Proposed Commercial Districts for future land development are shown on Map D. Two areas in particular that are being proposed for future commercial development are an 18 Acre + tract of land to the East of Lester, North of the Industrial Highway adjacent to a proposed Apartment and Townhouse developmental area and a 19 acre + tract of land being added to the existing commercial land usage at the site West of Wanamaker Avenue and North of the Industrial Highway adjacent to Denny's Restaurant and the Holiday Inn. Both proposed commercial areas are located on specific sites sufficiently isolated from the residential community to have minimal affects on the Township residents.

It is recommended that commercial and industrial land usage take precedence and ultimately replace all residential land usage South of Second Street to the water front in Essington. Again Commercial land usage in this area should specifically prohibit residential land usage. Reasoning behind this results from the fact that during high intensity storms many areas lying between Second Street and the Delaware River become inundated resulting in unnecessary damage to existing residential dwellings. Sound planning of Commercial and Industrial ventures in this vicinity will ultimately diminish adverse flood-related damage to these properties, thus revitalizing these portions of Essington.

INSTITUTIONAL LAND USAGE

Institutional land usage within the Township is very limited. Presently less than 0.5% of the total available land in Tinicum is used for institutional purposes. The institutional land usage is comprised of four churches of various denominations and two grade schools namely Tinicum Elementary School located along Seneca Street and St. Margaret Mary Grade School located on the Northwest Corner of Wanamaker Avenue and the Industrial Highway. Provisions for increasing the area for future institutional land usage have not been included in the comprehensive plan because of the fact that Tinicum Township public schools are under the jurisdiction of the Interboro School District, which has been more recently faced with declining enrollment and has therefore abandoned the Wanamaker Elementary School in Essington and the Lester Public School in Lester. Also Institutional Land Usage falls under the provisions of the Residential Zoning Ordinance.

RECREATIONAL USAGE

The township has approximately 34.5 Acres of land devoted to both active and passive recreation. Some of this 34.5 Acres of land although devoted to recreational facilities is not fully developed. Similarly, the majority of recreational land in the Township is located North of the Industrial Highway, T.R. 291, thus isolating the Southern portions of Essington and Lester from direct access to these facilities without first crossing the Industrial Highway. It should be noted however, by viewing the Present Land Use Map, Map C, that there is virtually no available open space in the Southern portions of Essington and Lester by which the Township might acquire additional land to use for park and recreation facilities. Essington north of the Industrial Highway on the other hand, has both available open space land, and sufficient existing park facilities such as, tennis courts, an intermediate swimming pool, various ballfields, and areas of passive recreation to service the community's needs.

At the present time there are no recreational facilities geared to children under eight years of age, however, proposed future park development has incorporated such facilities into their design by the use of tot lots. One such park area, yet to be fully developed, is that of the former site of the Wanamaker Elementary School located on Wanamaker Avenue between Second Street and Third Street.

In May of 1980 a park was designed called "Rosedale Park" which was to be situated on the former site of the Wanamaker Elementary School. The proposed park design entailed the inclusion of a softball field, side by side basketball courts and a tot lot all to be located on the 1.49 acre site. The proposed construction cost for this project was estimated to be \$103,065.00 in May 1980 which prove to be too much of a financial burden for the Township and therefore the project was never constructed. However, an area located on the site was paved as part of the 1980, Tinicum Township Resurfacing Program, to provide a surface for playing basketball.

In October of 1980 a Tot Lot was designed, for the Governors Landing Subdivision. This subdivision is presently under construction in Southwestern portion of Essington. Construction plans for this subdivision have incorporated recreational facilities such as tennis courts and a tot lot to be located within the limits of the subdivision. These recreation facilities which will be constructed in the near future will service the needs of the residents residing within the development by means of an association and are not to be used by the general public.

The demand for possible sites to accommodate water-enhanced recreation along the Delaware River is relatively small compared to necessity to provide a water-based access to the Delaware River for municipal usage. During emergency situations, at present, the township rescue teams are required to use private facilities by which they may enter the river in order to carry out rescue operations. Therefore it is strongly urged that serious consideration be given to the construction of a boat ramp at the head of Jansen Avenue to provide the Township with emergency access to the Delaware River.

This ramp would be used only during emergency conditions and would not be available for public use because of the lack of available areas for parking. A second site however, is more particularly suited for providing both adequate parking and access to the river. This area is located at the head of Poulsen Avenue and could ideally service the needs for the general public for recreational purposes and the Township for emergency rescue access. However, it should be pointed out that the second site would be much more costly to develop but should be included in future development possibilities for this immediate area.

Also it should be pointed out that usage of a proposed boat ramp facility located at either Jansen Avenue or Poulsen Avenue may be precluded by the increasing volume of silt that has been deposited in the back channel of the Delaware River during the past twenty years. Yacht Clubs such as the Corinthian Yacht Club and the Riverside Yacht Club have been virtually forced out of the Yachting Business as a result of the continuing deposition of silt. Therefore any enhancement in water based facilities in this vicinity should incorporate plans for dredging the back channel to relieve this siltation problem.

The demand, however for water-based and enhanced recreation along Darby Creek and the presently inundated areas North of Interstate-95 and West of Wanamaker Avenue is great. During spring and summer months numerous boats and water skiers use the area in the Northwestern portion of the Township to service their water recreation needs. This portion of the Township although ideally suited for such water related activities because of its accessibility to various marinas and also because it is recessed location from the main navigation route to the Port of Philadelphia, will be lost to such water based recreation as a result of the Tinicum National Environmental Center. The Tinicum National Environmental Center, however, will incorporate provisions for less active recreation in this vicinity such as fishing and canoeing.

UTILITY AVAILABILITY

In today's society future development is always affected by the availability of Utilities. In Tinicum Township water service is provided by the Philadelphia Suburban Water Company, electric and gas service is provided by the Philadelphia Electric Company, telephone service is provided by the Bell Telephone Company of Pennsylvania, and sanitary waste disposal for areas excepting Scott Paper Office, Philadelphia International Airport, Gulf Oil, and ARCO, is provided by the Tinicum Township, Delaware County, Sewage Authority. All utilities are readily available within the township and are deemed adequate to satisfy future developmental needs. Of course as is the case with most new construction, modifications and extensions to existing systems must be made prior to expansion of the developed areas.

CHAPTER 7

IMPLEMENTATION

IMPLEMENTATION

The implementation of the proposed Comprehensive Plan update requires the revision of the Township Zoning Ordinances and the Township Zoning Map.

The proposed revisions to the zoning map contemplated by the Comprehensive Plan Update are shown on Map F.

The recently adopted Flood Plain District Ordinance, Drainage Grading and Erosion Control Ordinance and Subdivision and Land Development Ordinance should be strictly enforced so that they will compliment the comprehensive plan and the goals of the Township.

Proposed zoning ordinance revisions are made part of the Comprehensive Plan in the form of supplements and attachments.

PROPOSED REGULATIONS FOR I LIGHT INDUSTRIAL DISTRICT

Applicability of regulations

In I Light Industrial Districts, the following regulations shall apply.

A Permitted uses.

A building may be erected, altered or used, and a lot or premises may be used; for any of the following purposes and for no other, provided that such building or use does not create any substantial amount of noise, vibration, smoke, dust, odors, heat, glare or other objectionable influences and provided further that, except for the uses specifically permitted the detailed development plans for each building or use, other than those specifically permitted, shall be subject to a review by the Board of Township Commissioners, whose approval shall first be required.

- (1) The manufacture, compounding, processing, canning, containing, packaging, treatment, sale and distribution of such products as bakery goods, candy, cosmetics, dairy products, drugs, perfume, pharmaceuticals, toiletries and food products; provided, however, that the following uses shall not be permitted: manufacture of sauerkraut, vinegar or yeast ; refining or rendering of fats, bones or oils; roasting of coffee, spices or soybeans; milling of flour; and drying, smoking, pickling, preserving or curing meats or fish.
- (2) The manufacture, compounding, assembly or treatment of articles or merchandise from the following previously prepared materials: sheet cellophane, canvas, cloth, rope, cord and twine, plastic, feathers, fiber, fur, glass, hair, horn, leather, paper, metals, precious or semi-precious stones, shells, tobacco, textiles, wood, excluding planing mills, and yarns.
- (3) The manufacture of ceramic products, using only previously pulverized clay and plaster.
- (4) Printing, publishing, engraving, lithographing, reproducing, binding and kindred arts.
- (5) Central heating plant, municipal dump and municipal incinerator.
- (6) Offices and office records storage.
- (7) Electric transforming substations or other necessary public service uses.

- (8) Public garage, gasoline sales and service station.
- (9) Manufacture and assembly of musical instruments, toys, novelties and metal stampings.
- (10) Cold storage plant, frozen food plant and lockers, beverage distribution plants, food commissaries and catering plants.
- (11) Storage buildings and warehouses.
- (12) Manufacture and assembly of electrical or electronic devices and home, commercial or industrial appliances and instruments, including the manufacture of accessory parts of assemblies.
- (13) Experimental manufacturing and research laboratories.
- (14) Manufacture of textiles or textile products, including spinning and weaving, and excluding wool pulling or scouring or jute or burlap processing or reconditioning, or dyeing of any sort.
- (15) Manufacture of paper or cardboard boxes, containers and novelties from previously prepared paper or cardboard.
- (16) Cinema, radio and television stations or studios.
- (17) Builders supply yard and machine, plumbing, heating, roofing, carpenter's, cabinet, upholstery, furniture, electrical, welding, buffing, finishing, plating, heat treating, annealing, prefabricating, craftsman's, tinsmith, pipe-fitting, paperhanger's, painter's and decorator's shops.
- (18) Underground storage in bulk of fuel oil for sale and distribution, excluding gasoline and other highly volatile or explosive fluids.
- (19) Laundry and dry cleaning, provided that no flammable fluids are used.
- (20) Fabrication of hardware, cutlery, tools, scientific instruments and apparatus.
- (21) Animal hospital
- (22) Commercial greenhouse, nursery and wholesale florist.
- (23) Assembly, sales, repair and service of business and office machines, equipment and devices.

- (24) Manufacture, preparation, containing, packaging, storage, sale and distribution of beverages.
- (25) Sales, service and repair of farm and garden machinery, equipment and supplies and feedstores.
- (26) Mail-order store, house or business.
- (27) Design, manufacture, distribution and sale of burial monuments and underground burial vaults.
- (28) Any use of the same general character as any of the uses hereinbefore specifically permitted when authorized as a special exception by the Zoning Hearing Board; provided, however, that before any application for a special exception shall be filed with the Zoning Hearing Board for any use alleged to be of the same general character as the uses hereinbefore specifically permitted, an application shall be first filed with the Board of Township Commissioners for approval. If the Township Commissioners shall determine that the use requested is of the same general character as the uses specifically permitted and is reasonably unlikely to create any substantial amount of noise, vibration, smoke, dust, odors, heat, glare and other objectionable influences, the Board shall approve the application and the applicant shall then file an application for special exception with the Zoning Hearing Board, attaching to such application a copy of the application filed with the Board of Township Commissioners and a statement of the action taken by the Board on such application. No special exception shall be permitted for any use for which the application has been refused by the Board of Commissioners.
- (29) No residential use shall be permitted in this district.

ZONING

B. Setback and parking regulations

This following setback and parking area regulations shall apply within the district:

- (1) Building setback lines. No building shall be erected, constructed, built or maintained closer than fifty (50) feet to any street line nor closer than twenty-five (25) feet to any other property line; nor shall any building be erected, constructed, built or maintained closer than one hundred (100) feet to the zoning boundary line of any residential district.

- (2) The owner and/or occupant shall provide off-street, on-site parking, loading and unloading spaces or facilities for all customers, business invitees, employees or personnel beyond and to the rear of the setback areas hereinbefore provided. All outdoor parking, loading and unloading spaces, access and other driveways shall be paved with an acceptable hard surface.

C. Maximum building area.

The building area covered by any industrial building or buildings shall not exceed thirty percent (30%) of the lot area.

D. Height Limitation.

No building shall exceed sixty (60) feet in height; provided, however, that such height regulation shall not include or apply to chimneys, stacks, one-story penthouses, tanks, tank towers, flagpoles, aerals and beacons.

E. Signs.

In I-Light Industrial Districts, signs may be erected and maintained only when in accordance with the following provisions of this section and any and all other ordinances of the Township of Tinicum relating to the erection, alteration or maintenance of signs and similar devices:

- (1) Any and all signs advertising the name of any person, firm, or corporation conducting a business or profession within the premises, or services dealt in by such person, firm or corporation shall have a square foot area not in excess of two hundred (200) square feet, or ten percent (10%) of the square foot area of the front wall of the premises used by such person, firm or corporation, whichever is the smaller, providing that only one (1) name be displayed at any one (1) time on the premises.
- (2) For purposes of the foregoing, the square foot area of any sign shall be computed to be the product produced by multiplying its greatest height by its greatest length. If a sign consists of a series of letters, marks or other designs, the square foot area of the entire sign shall be computed by multiplying the height of the total sign (measured at its highest point) by the width or length of the total sign (measured at its longest point). Supports, supporting structures, columns or standards upon which such sign is to be erected shall not be included in such computation unless such supporting structure is so designed as to constitute a part of the identification or as an identifying aid or medium.

- (3) Such sign shall not be erected on or extend beyond roof level of the building upon which it is attached, measured at the highest point of said roof.
- (4) Such sign shall be securely attached to the wall of the building and shall not extend beyond the building at any point whatsoever, more than eighteen (18) inches measured from the face of such wall. It shall be erected at a height of not less than eight (8) feet measured from the sidewalk or earth to the lowest point of such sign.
 - (a) Notwithstanding the aforementioned, it shall be permissible to erect and maintain one (1) four-by-six-foot double-face freestanding sign (twenty-four) (24) square feet on each side) listing all occupants of the building.
 - (b) There shall be a minimum front setback of eleven (11) feet from the curb to the sign, and a maximum height of twelve (12) feet overall.
 - (c) It shall also be permissible for each tenant of the building to erect and maintain one (1) flat or projecting sign at his entrance to the building. Such sign shall not exceed twenty-four by eighteen (24 x 18) inches and shall be erected for purposes of identification only.
- (5) If such sign is equipped with lights, or electrically lighted in any manner whatsoever, such lights shall not be permitted to flash or to go on and off intermittently at any time, nor shall said lights convey the effect of movement. Sign lighting shall have protective shields so placed to insure tenants and adjacent neighbors against disturbing glares. The installation of such lighting shall be acceptable to the zoning officer.
- (6) In addition to the other requirements of this Article, every sign referred to herein must be constructed of durable materials, kept in good condition and repair, and not allowed to become dilapidated. Each such sign shall be removed when the circumstances leading to its erection no longer apply. Unless specifically authorized by other ordinances or regulations of the Township of Tinicum, the construction or erection of any such signs within the street lines of public highways is hereby prohibited.
- (7) Any sign advertising the sale or rental of such premises shall be in strict compliance with the regulations applicable to similar signs permitted within residential districts.

- (8) Before erecting any of the signs, as aforesaid, the person, firm or corporation proposing to erect it, or tenant of the building upon which it is to be erected, shall instruct the sign contractor to apply to the Township Commissioners for a permit to erect it, and he shall supply the necessary and pertinent information with respect to the proposed sign, its location, size and type of construction and erection shall not start until such permit has been secured.

PROPOSED REGULATIONS FOR APARTMENT TOWNHOUSE DISTRICT

Applicability of regulations.

In A Apartment-Townhouse Districts, the following regulations shall apply.

Permitted uses.

A building may be erected or used, and a lot may be used or occupied, for the following purposes and no other:

- A. Apartment buildings, and Townhouses subject to the following standards and regulations:
- (1) Conformance with area and height standards in this article.
 - (2) Safe, convenient automobile access onto major or secondary highways and not on residential service streets.
 - (3) Disposal of sewage through the public sewer system.
 - (4) There are to be no outside storage of any kind, including but not limited to trash and garbage.
 - (5) Careful arrangement of pedestrian and automobile rights-of-way to protect pedestrians on public sidewalks and within the apartment grounds.
 - (6) Provision of the tenant laundry washing and drying facilities within the apartment building or screened by suitable walls or solid fences from the street and from adjoining properties.
 - (7) Construction of fire-resistant materials with provision of such fire prevention and fire-fighting equipment and facilities as may be required by the Board of Township Commissioners.
 - (8) A basement in an apartment house building shall not contain habitable rooms except for janitor's living quarters.

B Area, height and design regulations

The following regulations shall apply to lots used for apartment and townhouse buildings.

Lot area for Apartments

- (1) A minimum lot of one (1) acre shall be provided for each building or group of buildings.
- (2) There shall be no more than twelve (12) dwelling units per acre.

For Townhouses

- (1) Lot area shall be a minimum of 2700 square feet.
- (2) Lot width shall be a minimum of twenty (20) feet.
- (3) Lot depth shall be a minimum of one hundred and twenty (120) feet.
- (4) Side yards for ends of rows, shall be a minimum of twenty (20) feet.
- (5) The overall length of any row of townhouses, shall not exceed one hundred and sixty (160) feet.
- (6) Building area. Not more than twenty-five percent (25%) of the lot area may be occupied by buildings.

C. Setback and yard areas.

- (1) Front yard. There shall be a front yard on each street on which the lot abuts, the depth of which shall be at least twenty-five (25) feet.
- (2) Side yard. There shall be two (2) side yards which shall not be less than thirty (30) feet in aggregate width and neither of which shall be less than ten (10) feet in width.
- (3) Rear yard. There shall be a rear yard, the depth of which shall be at least thirty-five (35) feet.
- (4) In the event that any lot abuts a residential district located within or outside the boundary of the township, all buildings shall be at least forty (40) feet from the said residential district boundary line.

- D. If there is more than one (1) main building on a lot, the distance between any two (2) main buildings shall be at least (20) feet.

- E. Parking. Two (2) off-street parking spaces or garage spaces, or a combination thereof, shall be provided for each dwelling unit. Required yard or setback areas may be used for off-street parking. A " parking space," for the purposes of this Article, shall mean a space on a lot used for the storing or temporary parking of motor vehicles, the area of which is at least two hundred (200) square feet, and to which there is access from a street or alley.

F. Height. No building shall exceed fifty (50) feet in height; provided, however, if any building exceeds thirty-five (35) feet in height, minimum setbacks, yard areas and distance between main buildings shall be increased by one (1) foot for each one (1) foot of height above thirty-five (35) feet.

G. The only commercial facilities permitted in apartment buildings are those designed and intended to serve the tenants of the apartment building or group of buildings, and no such commercial facilities shall be visible from the outside of the building.

H. Special exceptions for existing nonconforming lots.

In the case of a lot held in single and separate ownership at the effective date of this ordinance, or any amendment thereto, which does not fulfill the requirements for minimum area, width or open spaces required for the district in which it is located, such lesser area, width or open space shall be deemed sufficient if and only if such lesser area, width or open space is authorized by the Zoning Hearing Board after hearing, provided that such special exception will not be contrary to the public interest and that owing to special conditions a literal enforcement of the provision of the ordinance will result in unnecessary hardship, and so that the spirit of this ordinance shall be observed and substantial justice done.

I. Application for permit to erect a Building or Townhouse

All applications for permits for the erection of any apartment building to be erected in any apartment-townhouse district shall first be submitted to the Board of Township Commissioners for approval, in order that compliance with this ordinance and all other applicable ordinances of the township can be assured.

PROPOSED SHOPPING CENTER DISTRICTS

Applicability of regulations

- (1) In Shopping Centers Districts, the following regulations shall apply.

Permitted uses.

A building may be erected, altered or used, and a lot or premises may be used, for any of the following purposes and for no other.

- A. Stores, offices, banks, financial institutions, telegraph offices, telephone exchange, studios and the following personal service shops dealing directly with customers; beauty parlor; barbershop; dressmaking, millinery of similar shop; clothes cleaning and pressing agency where pressing and cleaning services are performed elsewhere.
- B. Hospital, nursing home or use of the same general character as a hospital or nursing home when authorized as a special exception; hotel; restaurant; cafeteria; tearoom.
- C. Indoor theater or other indoor places of amusement.
- D. Motor vehicle sales agency, including incidental service and repairs within the building and excluding service, repairs or exhibit for sale outside the building.
- E. Bakery, confectionery or similar custom shop for the production and sale of products for retail sale only on the premises.
- F. Television, radio, refrigerator and similar electric and gas light appliance shops, including service and repair.
- G. Any use of the same general character as any of the uses hereinbefore specifically permitted when authorized as a special exception by the Zoning Hearing Board.
- H. Off-street parking shall be provided for all uses other than hospitals or nursing homes in conformity with Section 4 of this Article. Off-street parking in the case of a hospital or nursing home shall be provided in conformity with Section 5 of this Article.

- (2) Enclosure of business.

Business, service, repair or processing shall be conducted wholly within a completely enclosed building.

- (3) Restrictions as to operations, equipment and materials.

Operations and equipment employed and materials used, exhibited or sold shall be limited to those which are not objectionable by reason of odor, dust, smoke, noise, vibration or waterborne waste.

(4) Off-street parking.

There shall be provided on the same lot or in a contiguous lot, and constituting a part of the same shopping center and available to all employees and patrons of such shopping center, at the time of erection of any building or structure, off-street parking spaces for automobiles, to be paved and maintained with an accepted hard surface. Except upon special exception granted by the Zoning Hearing Board, the total area or areas of such parking spaces shall be in direct relation to the total square footage of interior floor space of the buildings in the shopping center, in accordance with the following ratios:

- A. If the total square footage of interior floor space does not exceed one hundred thousand (100,000) square feet, there shall be four (4) square feet for parking for each square foot of interior floor area devoted to selling space.
- B. If the total square footage of interior floor space is more than one hundred thousand (100,000) square feet but does not exceed two hundred thousand (200,000) square feet, there shall be three (3) square feet of parking for every one (1) square foot of interior floor area devoted to selling space, but not less than four hundred thousand (400,000) square feet of parking area.
- C. If the total square footage of interior floor space exceeds two hundred thousand (200,000) square feet, there shall be three (3) square feet of parking for every one (1) square foot of interior floor space on the ground floor of the buildings in the center, devoted to selling space, plus one (1) square foot of parking for every one (1) square foot of interior floor space, other than the ground floor, devoted to selling space, but not less than six hundred thousand (600,000) square feet of parking area.
- D. For purposes of these computations, "parking area" shall under Section C include all peripheral roads, lanes, pavements, turning areas and planting areas, but the paved parking areas shall not be less than the requirements of Section A & B above .

(5) Special physical requirements for hospitals and nursing homes.

All hospitals, nursing homes and uses of the same general character which may be permitted by special exception shall be subject to the following special development regulations. These regulations shall be independent and separate from the development regulations applicable to all other uses permitted in Shopping Center Districts, so that should any other permitted use exist in the same Shopping Center District, the development regulations applicable to such use shall apply

without regard to the special development regulations applicable to a hospital, nursing home or use of the same general character as a hospital or nursing home when permitted as a special exception in such Shopping Center District.

- A. Every lot on which a building or combination of buildings is erected or used shall have an area of not less than one hundred twenty-five thousand (125,000) square feet, and such lot shall not be less than two hundred fifty (250) feet in width at the building line.
- B. Not more than thirty percent (30%) of the area of each lot may be occupied by buildings. The lot area per bed unit shall be not less than two thousand (2,000) square feet.
- C. No building or permanent structure shall be located less than one hundred (100) feet from a street right-of-way line nor less than forty-five (45) feet from a side or rear property line, and no parking or service area shall be located less than forty-five (45) feet from a street right-of-way or other property line.
- D. The tract of land on which each permitted use is conducted shall, in its entirety, be owned and operated as a single or common management and maintenance unit, with common open spaces, parking, utility, maintenance and service facilities or services.
- E. The land surrounding any permitted use shall be landscaped except for paved areas such as walkways, accessways, play areas and necessary parking or service areas, and not less than ten (10) feet of the required open space along each side or rear property line which directly abuts a residential district shall be used only as a buffer planting strip. The area of the lot unpaved and devoted to landscaping shall in no case be less than thirty percent (30%).
- F. Any accessory building or structure which is industrial or nonresidential in appearance, such as a boiler room or maintenance shop, shall be suitably screened or shall be located so as to be least observable from a public street or property line.
- G. No truck or other burden vehicle and no materials or goods shall be stored out of doors where they can be seen from a public street or property line.

(6) Plan to accompany building permit application.

Each application for a permit to erect or construct any building within said district shall be accompanied, in addition to any applications, plans and surveys now or hereafter required by any other ordinance or resolution of the township, by a plan which shall show the layout of the total area to be included in the shopping center and which shall include, among other things, the information required below. If, however, portions of the project are to be completed in successive stages, a less detailed sketch or layout of the areas not included for immediate development will suffice initially, provided that, as further development occurs, a plan showing all of the required detail shall then be submitted prior to the construction of any further portion. Information required to be shown on the plan shall include:

- A. The location, dimensions and proposed use or uses of all buildings or structures.
- B. The location and dimensions of sidewalks and all other areas to be devoted to pedestrian use.
- C. The location, size, arrangement and capacity of all areas to be used for motor vehicle access, parking, loading and unloading.
- D. The location, dimensions and arrangements of areas to be devoted to planting, lawns, trees for any screening, decorative or other purpose.
- E. Sufficient data, in all instances, to enable the Board of Township Commissioners and the Planning Commission to judge or determine the effectiveness of the design and character of the entire shopping center area and its relationship to abutting or surrounding areas.

(7) Residential use prohibited; exceptions.

Except for hotels, hospitals or nursing homes, no residential use shall be made out of land or buildings within the district.

(8) Submission of shopping center plans for approval.

- A. All plans for the building, construction or development of all or any part of a shopping center shall be first submitted to the Board of Commissioners for approval before any application for a building permit shall be made.
- B. Such plans shall include sufficient information and data to provide uniform or harmonious design of buildings, sufficient planting to assure a site for a screen between the proposed shopping center and the abutting residential

areas and such other features as may be desirable to assure an integrated shopping area designed to reduce to the greatest possible degree all reasonable objections to abutting areas used for residential purposes.

C. Every such application, when approved by the Board of Commissioners either as submitted originally or as submitted or resubmitted in modified form, shall constitute an agreement by the applicant that such installation shall be made and completed as part of the project and further that the work thereon shall be begun within one (1) year from the date of such approval and completed within a reasonable time thereafter. If the work shall not be begun within a year from the date of approval, the approval shall become void and a new application shall be required.

.9. Application for special exception.

Before application shall be made to the Zoning Hearing Board for any special exception under this ordinance, the applicant shall first file an application with the Board of Commissioners who shall determine whether the proposed use is of the same general character as the permitted uses and whether the proposed use reasonably appears unlikely to violate this ordinance. When the Board of Commissioners shall approve the application, the applicant may then file with the Zoning Hearing Board the applicant's application for special exception, to which shall be annexed a copy of the application filed with the Board of Commissioners and a record of the action thereon of the Board of Commissioners. No use for which the application has been refused by the Board of Commissioners shall be permitted as a special exception by the Zoning Hearing Board.

PROPOSED REGULATIONS COMMERCIAL - C-2

In a Commercial C-2 District the following regulations shall apply:

- A. Use regulations. A building may be erected, altered or used and a lot or premises may be used only for the following purposes.
- (1) Hotels
 - (2) Store.
 - (3) Office, bank, financial institution, telephone exchange.
 - (4) Theater, ballroom, dance hall, skating rink, bowling alley or other place of amusement.
 - (5) Bakery, pastry, candy, confectionery or ice-cream plant where product is sold at retail, providing not more than ten (10) persons are employed at any one (1) time.
 - (6) Restaurant.
 - (7) Public or private garage, sales, service and repair shop and gas-filling and battery-service station, excluding junkyards, provided all repair work is carried on within an enclosed building.
 - (8) Railway freight station or motor transport station.
 - (9) Storage house; express, carting or hauling office or station when authorized as a special exception by the Zoning Hearing Board.
 - (10) Cabinetmaking, furniture or upholstery shop, electrician's shop; tinsmith, plumbing, gas, steam or hot-water fitting shop; paint store and paperhanging shop.
 - (11) Tailoring, dressmaking, shoemaking and repairing.
 - (12) Repair of jewelry, watches, clocks or optical goods.
 - (13) Signs.
 - (a) Advertising sign, providing it is located on the lot with the business it is advertising.
 - (b) Business sign, provided that the total size of any such sign placed on any one (1) premises shall not exceed a maximum of thirty (30) square feet. However, a sign of a larger size may be permitted when authorized as a special exception.

- (14) Newspaper or job printing.
- (15) Embalming and undertaking
- (16) Motels, when permitted as a special exception by the Zoning Board of Adjustment on the basis of conformance with standards set forth in Section D of this ordinance.
- (17) Accessory use.
 - (a) Accessory use on the same lot with and customarily incidental to any of the above-permitted uses and not seriously detrimental to the neighborhood; provided that the space devoted to uses, whether primary uses or accessory uses, other than parking for employees or customers, which are not within an enclosed building, shall not exceed three (3) times the space occupied on the premises by enclosed buildings. Special exceptions to this section may be granted by the Zoning Board of Adjustment, in the case of lots or tracts which are eight thousand (8,000) square feet or more, permitting the erection of buildings occupying at least two thousand (2,000) square feet of land area, upon proof that the proposed open-lot use is accessory to such buildings and not primary, and upon proof that there is no detriment to the neighborhood "Accessory use" for the purposes of this paragraph shall be deemed to include any accessory use of any kind, including, but not limited to, storage or display of merchandise, vehicles or any other item.
 - (b) No use, whether primary or accessory, which is not within an enclosed building, other than short-term shopping or parking by customers or other than business or directional signs, shall be permitted within fifteen (15) feet of the nearest paved portion of a street or highway. "Accessory use" for the purpose of this paragraph shall be deemed to include any accessory use of any kind, including but not limited to, storage or display of merchandise, vehicles or any other item. Special exceptions to this paragraph, permitting uses within the said fifteen-foot line but not within the right-of-way line, may be granted by the Zoning Board of Adjustment upon proof that there is no traffic hazard and no detriment to the neighborhood.

No building may be erected, altered or used and no lot or premises may be used for any trade, industry or business that is noxious or offensive by reason of odor, dust, smoke, gas or noise, or that is dangerous to public health or safety. No stationary internal-combustion engine larger than two and a half ($2\frac{1}{2}$) horsepower shall be used.

B. Area regulations.

- (1) For business use, there shall be a minimum lot size of five thousand (5,000) square feet; a front yard set-back, as measured from the property line, of at least twenty-five (25) feet, which includes provisions for a raised sidewalk; a rear yard setback, the depth of which shall be at least twenty-five (25) feet, and each side yard setback shall be at least seven (7) feet. Building area may not exceed thirty percent (30%) of the total lot area.
- (2) For business use, sufficient parking space shall be provided so as to eliminate on-street parking with a minimum of one (1) square foot of paved parking area for every one (1) square foot of interior floor area, exclusive of basements which are not used as sales space, and shall be designed with the driveway area to eliminate traffic hazards. When the rear or side property lines of the business district adjoin a residential district, screening shall be provided at these lines. Such screening shall be a properly maintained fence, wall or evergreen shrubbery. The height and character of the screening shall be such as to accomplish the intended purpose of protecting the residential properties.

C. Height regulations. No building shall exceed fifty (50) feet in height, measured above the curb level, provided that for each two (2) feet of aggregate side yard the height limit may be exceeded by one (1) foot, the maximum excession to be twenty (20) feet. Appurtenances to a building, such as towers, belfries, spires, etc., not used for human occupancy, may extend above the height limit subject to limitation by the airport height restrictions.

D. Motels. The following shall be the standards required for approval of motels as a special exception in Commercial Districts C-2 or Districts. Minimum site size of two (2) acres; maximum density of fifty (50) units per acre; maximum height of two (2) stories; parking facilities of not less than one (1) space per unit; parking facilities to be served by interior drive-ways; minimum distance between buildings of twenty (20) feet; accessory uses on the site, such as gift shops, barber shops or other shops related to personal services, may be permitted to the extent that they would normally be supported by patrons of the motel, provided that sufficient additional parking spaces shall be provided to service such accessory uses.

PROPOSED REGULATIONS FOR SPECIAL USE - AIRPORT DISTRICT

In the Special Use Airport District the following regulations shall apply:

- A. A plan or plans shall be submitted to the Commissioners and the Zoning Hearing Board. The Zoning Hearing Board shall review said plans and make recommendations to the Commissioners. However, approval of said plans shall be made by the Commissioners. The plans shall show the layout and development of the proposed improvements, including among other things, the following:
- (1) The scale shall be not less than one (1) inch equals one hundred (100) feet with five(5) feet contour intervals and topographical features.
 - (2) The location, use, plan, dimensions, elevation and height of each proposed and existing structure and the total gross floor area to be constructed.
 - (3) The location, dimensions and arrangement of all open spaces, yards, accessways, entrances, exits, off-street parking facilities, loading and unloading facilities, pedestrianways, location and width of roads, streets and sidewalks, lighting, waste storage and disposal.
 - (4) The capacity of all areas to be used for automobile access, parking, loading and unloading.
 - (5) Location, dimensions and arrangement of all areas devoted to planting, lawns, trees or similar purposes.
 - (6) The provisions made for and location of sewer and water lines, stormwater drainage and all other utilities.
 - (7) Sufficient data in all instances to enable the Commissioners to judge the effectiveness of the design and the character of the proposed use and to consider properly such things as its relationship to surrounding areas, anticipated traffic and the public health, safety and welfare.
- B. Use regulations. A building may be erected or used, and a lot may be used or occupied, for any of the following purposes and no other, provided such structure or use is in accordance with the above plan and are generally considered airport related facilities:
- (1) Administrative and operational facilities.
 - (2) Air Cargo facilities and hangers.
 - (3) Runways and taxiways.
 - (4) Airport terminal facilities may be erected, altered or used, and a lot or premises may be used, for any of the following purposes and for no other: retail stores, banks, financial institution, personal service shops and restaurant

any use of the same general character as any of the aforesaid uses when authorized as a special exception by the Zoning Hearing Board.

- (5) Motel or hotel.
- (6) Accessory use on the same lot with and customarily incidental to any of the above permitted uses.
- (7) Such other uses as shall be determined by the Board of Commissioners after hearing, upon given two (2) weeks public notice of the time and place of the hearing and of the proposed use.

C. Area Regulations

- (1) Every lot shall have a lot area of four (4) acres or more, which shall have at least two hundred (200) feet of road frontage.
- (2) Building area. Not more than thirty-three and one-third percent ($33 \frac{1}{3}\%$) of the area of each lot may be occupied by buildings, and a total of not more than sixty-six and two-thirds percent ($66 \frac{2}{3}\%$) by buildings, parking and parking access areas.
- (3) Setback. All buildings shall be set back at least one hundred (100) feet from all street rights-of-way on which property abuts, provided, however, that no side yard or rear yard shall be less than one hundred (100) feet abutting any adjacent zoning district provided, however, the Board of Commissioners at its discretion, may reduce to not less than fifty (50) feet.

D. Compliance. All uses and activities established after the effective date of this ordinance shall comply with the following standards:

(1) Noise.

(a) The sound level of any operation (other than the operation of motor vehicles or other transportation facilities, operations involved in the construction or demolition of structures, emergency alarm signals or time signals) shall not exceed the decibel levels in the designated octave bands as stated below. The sound-pressure level shall be measured with a Sound Level Meter and an Octave Band Analyzer that conform to specifications published by the American Standards Association (American Standard Sound Level Meters for Measurement of Noise and Other Sounds. Z 243-1944, American Standards Association, Inc., New York, New York, and the American Standard Specifications for an Octave-Band Filter Set for

the Analysis of Noise and Other Sounds, Z 24.10-1953, American Standards Association, Inc., New York, New York, shall be used).

(b) The maximum permissible sound-pressure levels for noise shall be as follows (all of the decibel levels stated below shall apply in each case):

Frequency Band (cycles per second)	Maximum Permitted Sound-Pressure Level in Decibels
0-50	67
150-300	59
300-600	52
600-1,200	46
1,200-2,400	40
2,400-4,800	34
Above 4,800	32

(c) The measurement of sound levels called for in this subsection shall be at the property line which abuts the nearest Residential District.

(2) Smoke. No smoke shall be emitted from any chimney or other source of visible gray opacity greater than No. 1 on the Ringelmann Smoke Chart as published by the United States Bureau of Mines, except that smoke of a shade not darker than No. 2 on the Ringelmann Chart may be emitted for not more than four (4) minutes in any thirty-minute period.

(3) Dust, fumes, vapors and gases.

(a) The emission of dust, dirt, fly ash, fumes, vapors or gases which can cause any damage to human health, to animals or vegetation or to other forms of property, or which can cause any soiling or staining of persons or property at any point beyond the lot line of the use creating the emission, is herewith prohibited.

(b) No emission of liquid or solid particles from any chimney or otherwise shall exceed three-tenths (0.3) grains per cubic foot of the covering gas at any point beyond the lot line of the use creating the emission. For measurement of the amount of particles in gases resulting from combustion, standard correction shall be applied to a stack temperature of five hundred degrees

Fahrenheit (500°F.) at fifty percent (50%) excess air in stack at full load.

- (4) Heat. No use shall produce heat perceptible beyond its lot lines.
- (5) Odor. No use shall emit odorous gases or other odorous matter in such quantities as to be offensive at any point on or beyond its lot lines. The guide for determining such quantities of offensive odors, shall be the most restrictive provisions of Table III (odor thresholds) in Chapter 5. "Air Pollution Abatement Manual," copyright 1951 by Manufacturing Chemists' Association, Inc. Washington, D.C., as revised.
- (6) Vibrations. No use shall cause earth vibrations or concussions detectible beyond its lot lines without the aid of instruments, with the exception of that vibration produced as a result of construction activity.

E. Buffer yards. Buffer yards are required in all Special Use Districts along the district boundaries between themselves and all Residential Districts. Buffer yards shall comply with the following standards.

- (1) The buffer yard shall be measured from the district boundary line or from the near street line where a street serves as the district boundary line.
- (2) The buffer yard may be part of the required front, side or rear yards, and in cases of conflict, the larger yard requirements shall apply.
- (3) In all buffer yards, the exterior fifty (50) feet width shall be planted with grass seed, sod or ground cover and shall be maintained and kept clean of all debris, rubbish, weeds and tall grass in conformance with existing regulations; provided, however, if such land is naturally wooded, it may continue in its natural state.
- (4) No structure, manufacturing or processing activity, or storage of materials shall be permitted in the buffer yard; however, parking of passenger automobiles shall be permitted in the portion of the buffer yard exclusive of the exterior fifty (50) feet width.
- (5) Suitable screen planting shall be shown on the plan and shall be installed by the developer and maintained by the owner.

- (6) Prior to the issuance of any building permit, complete plans showing the arrangement of all buffer yards and the placement, species and size of all plant materials and the placement, size, materials and type of fences to be placed in such buffer yard shall be reviewed by the Board of Commissioners, after which the Board of Commissioners shall certify to the Building Inspector that the plans are in conformance with the terms of this ordinance.

F. Storage and waste disposal.

- (1) No materials or wastes shall be deposited upon a lot in such form or manner that they may be transferred off the lot by natural causes or forces, nor shall any substance which can contaminate a stream or watercourse or otherwise render such stream or watercourse undesirable as a source of water supply or recreation, or which will destroy aquatic life, be allowed to enter any stream or watercourse.
- (2) All materials or wastes which might cause fumes or dust or which constitute a fire hazard or which may be edible or otherwise attractive to rodents or insects shall be stored outdoors only if enclosed in containers which are adequate to eliminate such hazards or any leach to substratum on adjoining ground.

G. Off-street parking space, minimum standards.

- (1) Off-street parking space, with proper access from a street, shall be provided.
- (2) An off-street parking facility existing at the effective date of this ordinance shall not subsequently be reduced to an amount less than that required by the Township Board of Commissioners.
- (3) Every parking space, outdoors or in a garage, shall consist of not less than two hundred (200) square feet of usable area for each motor vehicle. The required parking area shall be measured exclusive of interior driveways or maneuvering areas.

H. Off-street loading and unloading space. Off-street parking for the handling of all loading and unloading vehicles and vehicles picking up and discharging passengers shall be shown on the plan and installed in accordance with the provisions prior hereto.

- I. Special regulations relating to access and highway frontage. In order to minimize traffic congestion and hazard, control street access in the interest of public safety, and encourage the appropriate development of street or highway frontage.
- (1) No parking lot or area for off-street parking or for the storage or movement of motor vehicles shall abut directly a public street or highway unless separated from the street or highway by a raised curb, barrier planting strip, wall or other effective barrier against traffic, except for necessary accessways.
 - (2) Accessways
 - (a) All necessary accessways to a public street or highway shall be located not less than one hundred (100) feet from the intersection of any street lines.
 - (b) All streets and accessways shall be designed in a manner conducive to safe exit and entrance and shall conform to the highway specifications and subdivision requirements of the Township.
 - (3) All driveways, aisles, maneuvering spaces, vehicular service areas, or spaces between or about buildings shall be adequately illuminated.
 - (4) All outside lighting, including sign lighting, shall be directed in such a way as not to create a nuisance, and in every district all such lighting shall be arranged so as to protect the street or highway and adjoining property from direct glare or hazardous interference of any kind. Any light shall be equipped with some type of glare-shielding device approved by the Township. The height of any light must also be approved by the Township.
- J. Right of Board of Commissioners. The Board of Commissioners reserves the right to reduce or alter the area, frontage, setback, parking and access requirements in such cases where, by reason of the size of the area, peculiar or special topographical conditions, effects on the surrounding area or other unique conditions, such reductions or alterations may be determined by the Board to be in the best interests of the Township.
- K. If such property is sold by the applicant or by any affiliated member of a single corporate family of which applicant or its parent company is a member, after approval of the plan but before proposed construction is started, or if, within eighteen (18) months of the approval, construction is not undertaken by or for the applicant or any affiliated member of a single corporate family of which the applicant or its parent company is a member, said approved plan shall be null and void, unless an extension of time is granted by the Board of Commissioners.

APPENDIX A

APPENDIX A
AS PREPARED BY THE
DELAWARE COUNTY PLANNING DEPARTMENT

HISTORIC PRESERVATION TECHNIQUES

Techniques	Description	Typical Application	Degree of Protection	Comments
Municipal Inventory	Comprehensive listing of all sites of historic interest. Administrative procedures for addition of other buildings (particularly as the more recently constructed ones pass the minimum age criteria). Optional prioritization of those listed.	All sites of historic interest, including residential, commercial, industrial, institutional, and public properties and archeologically significant sites.	Limited to adding prestige value and community weight of opinion as incentive for preservation.	The responsibility for selecting an official local inventory should be shared by individual property owners, a local historical society, and the local government. The list should be updated periodically and adopted as component of the comprehensive plan.
Nomination to the State or National Registers of Historic Places	Sites meeting defined state and national criteria must be nominated by a local government, group or individual. Documentation of the significance of the property must be collected and forms filed at the appropriate level.	1) State - Virtually all historic sites of a distinctive character. 2) National - Sites associated with famous persons, groups, or events or unique examples of an architectural style.	1) Impact analysis if site is proposed to be affected by proposed State or federally funded project. 2) Tax incentives for preservation of a National Register property used as an investment.	State or national register status does not provide protection against demolition or alteration financed only by private (non-governmental) funds. Since 1980 owner consent is necessary for National Register status.

APPENDIX A (Continued)

HISTORIC PRESERVATION TECHNIQUES

Techniques	Description	Typical Application	Degree of Protection	Comments
Establishment of an Historic District	Technique specifically enabled by PA State Act 167 (1963). Allows for a defined historical district to be designated by local ordinance, which is then given final approval by the PA Historical and Museum Commission. Within the district, a municipally appointed Board of Review makes recommendations on demolition, renovation and new construction applications to the governing body, who can deny or approve, based on impact to district.	Districts vary in size from a small grouping of buildings to whole neighborhoods. Generally areas selected contain predominantly older buildings, but modern ones may also be included in the boundaries.	Governing body discretion in allowing physical changes which may harm the overall district.	Workable only when significant support is given by owners of property within the district.
Outright Acquisition	a) Purchase of endangered historic site by a local historical association or a municipal government.	Last resort preservation attempt, ending usually in a museum, a set of meeting rooms and/or a park.	Absolute but comparatively expensive.	Public bodies should only attempt to use acquisition when there is a defined public use for the property, appropriate to the location.

APPENDIX A (Continued)

HISTORIC PRESERVATION TECHNIQUES

Techniques	Description	Typical Application	Degree of Protection	Comments
Outright Acquisition	b) Revolving funds operated by a non-profit organization to purchase and then sell properties (sometimes rehabilitated) to owner committed to preservation.	Municipal or neighborhood group seeking to stem deterioration in their area.	Very strong; brings additional preservation advocates into the area.	Large chunk of seed money and good managerial and marketing skills key to needed initial success stories.
Landmarks Ordinance	A local ordinance which requires a moratorium period for the demolition or exterior alteration of a defined list of community landmarks. During moratorium the community has an opportunity to change owner's mind, find another buyer (at market price) or purchase for municipal purposes. Moratorium periods generally are limited to 3 to 12 months and do not require compensation.	The most historically or architecturally significant properties within the municipality.	Variable depending on the continuing interest of the community to seek alternatives to the destruction of historic sites.	Not specifically enabled by PA law but precedents throughout the Country. Grand Central decision by U.S. Supreme Court appear to sanction this type of ordinance (or stronger). Sometimes adopted together with a Transfer of Development Rights option, which permits owner to sell for profit unused "air rights" to be added to permitted space location in another area.

APPENDIX A (Continued)

HISTORIC PRESERVATION TECHNIQUES

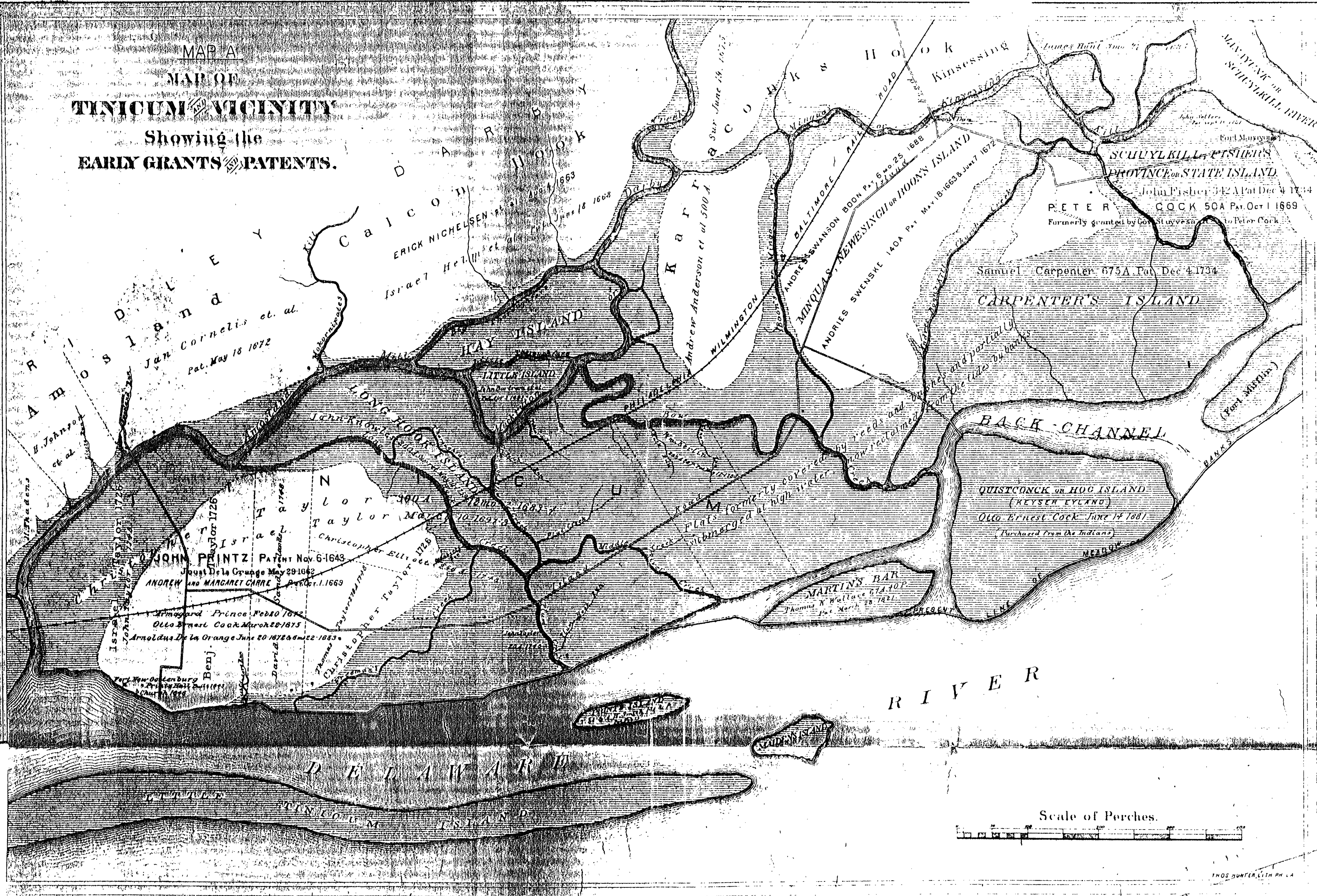
Techniques	Description	Typical Application	Degree of Protection	Comments
Amendment of Subdivision, Land Development and PRD Ordinances	Include provisions which indicate that historically or architecturally significant buildings should be preserved and adapted for modern use wherever possible.	Community-wide application, most effective for large estates or farms which are proposed for development.	Variable, depending on municipality's skill in negotiating with developers and willingness to make trade-offs to encourage preservation.	Such an approach is justifiable under the general language of Section 503(5) of the PA Municipalities Planning Code but cannot be unreasonably interpreted to prohibit development of historic properties.
Physical Relocation	Physical removal of structure off its foundation, from an endangered site to another location.	Environmental factors threaten a property (flooding, ground subsidence, etc.).	Usually prohibitively expensive; high probability of structural damage.	Loss of the context of the site make this a very poor choice unless no other option exists.
Preservation Easement	The acquisition by local government or historic group of the right to control the demolition or structural alteration of a property (without other ownership rights). The cost should be considerably lower than for fee simple acquisition.	Facade preservation of an important historic house to be used as a private residence.	Adequate but costly to apply to more than a small number of buildings. Requires periodic inspection to assure legal agreement is not violated.	Can qualify for charitable tax deduction. However, no provision for local tax assessment reduction.

APPENDIX A (Continued)

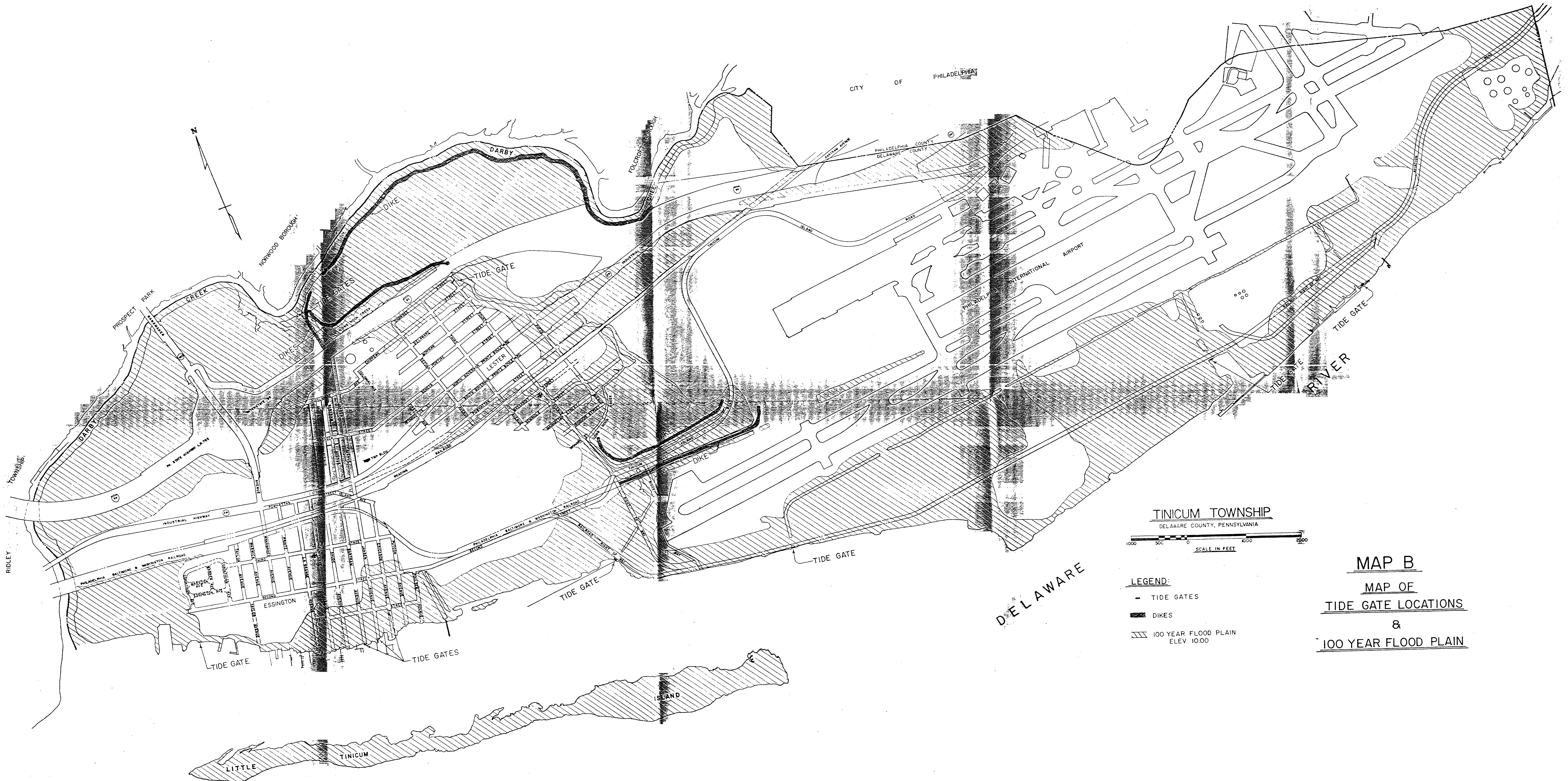
HISTORIC PRESERVATION TECHNIQUES

Techniques	Description	Typical Application	Degree of Protection	Comments
Covenant on Facade/Interior Preservation	The insertion of a stipulation into the deed for a property that would prohibit future owners from altering or demolishing a site. The covenant is most often a voluntary action of a concerned owner.	Historic property to be turned over for an institutional or museum use.	Adequate if watch-dog group sees that it is not violated.	Question whether covenants can be enforced after several changes of ownership.
Photographic Documentation	Recording of exterior and interior features of a site through photography, preferably by a stereoscopic camera.	All structures which have interesting architectural features.	None	Useful for historical research. Helpful in restoration of buildings of the same period.

MAP A
MAP OF
TINICUM VICINITY
Showing the
EARLY GRANTS & PATENTS.



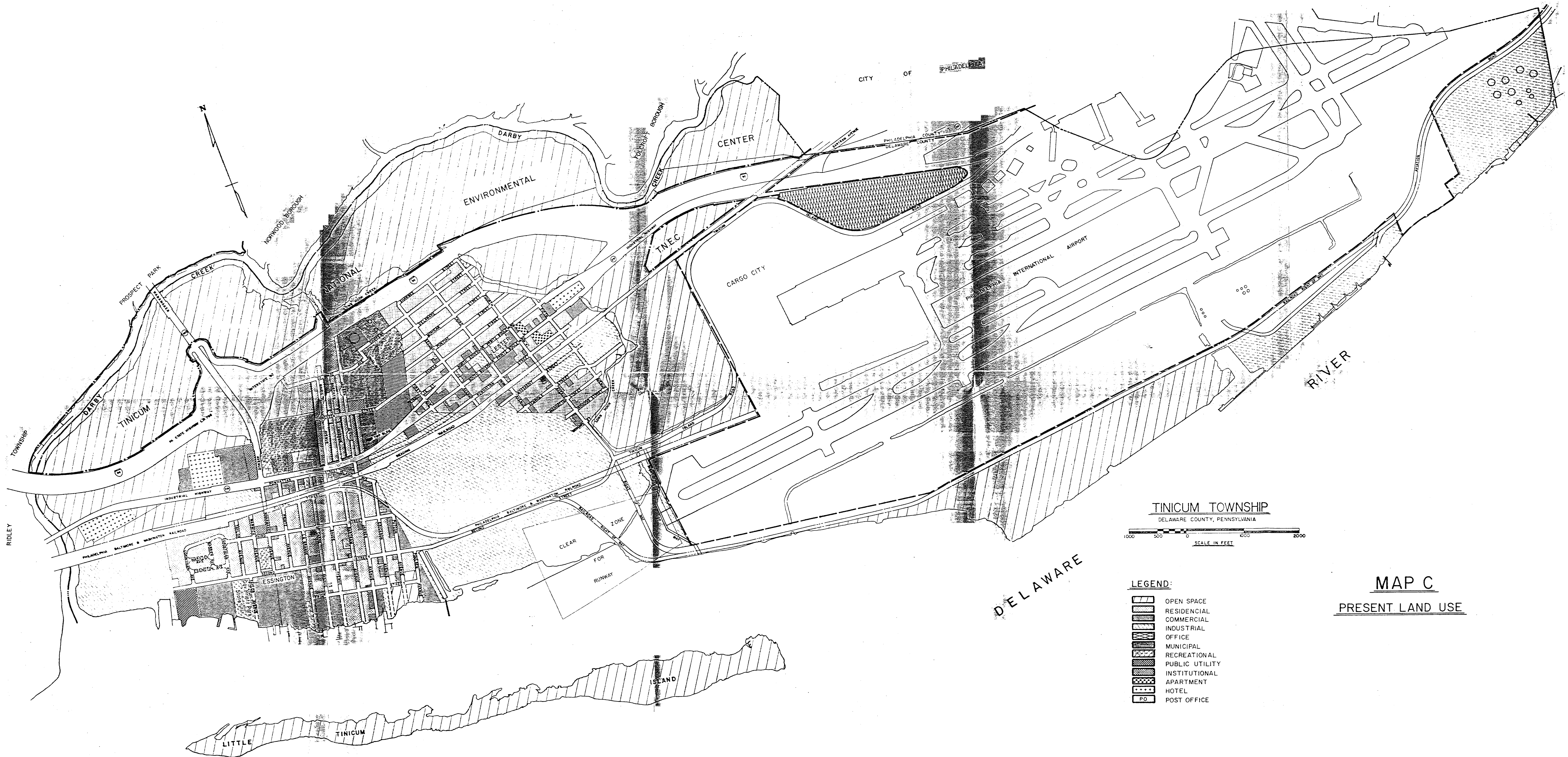
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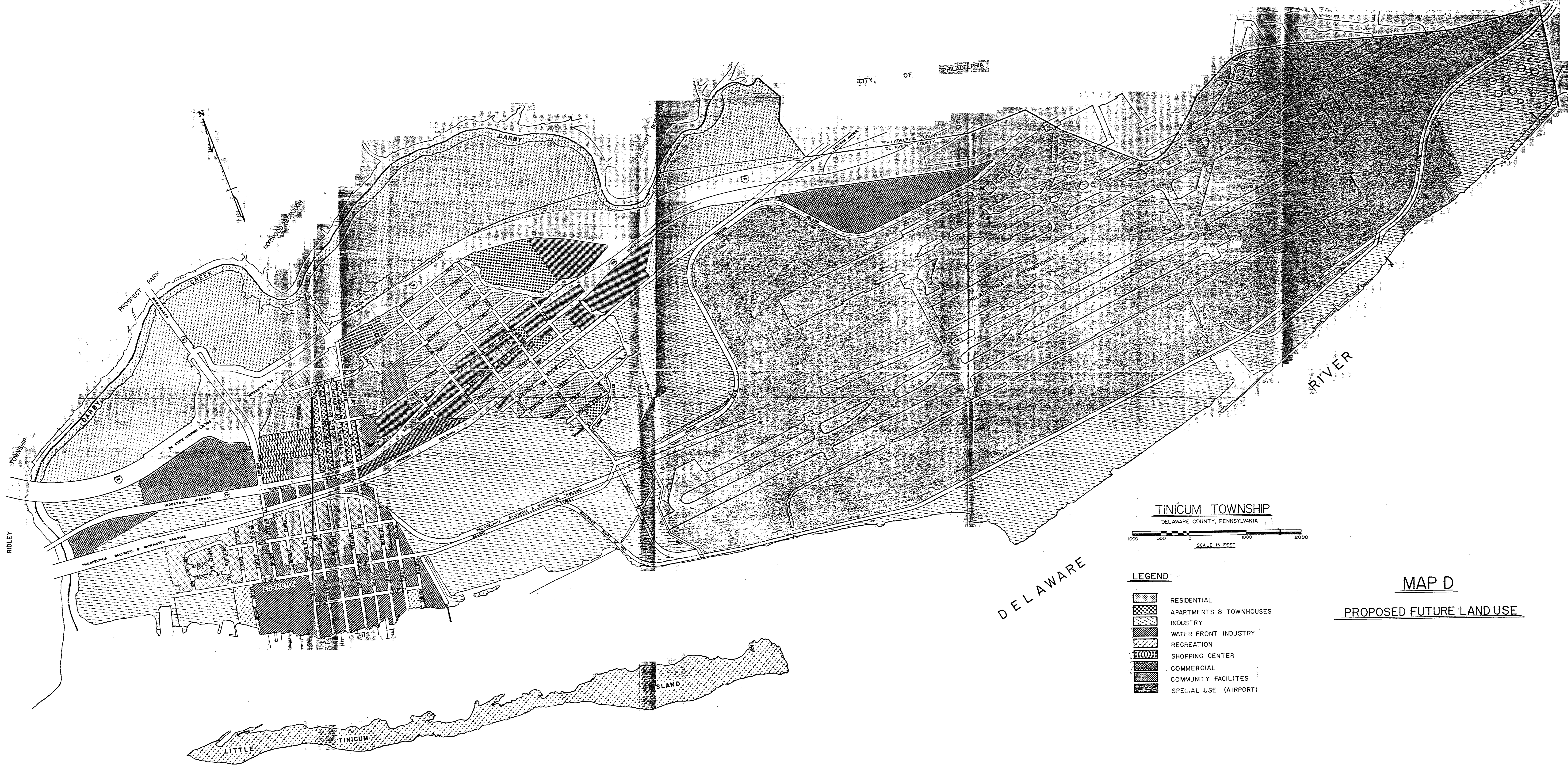


TINICUM TOWNSHIP
DELAWARE COUNTY, PENNSYLVANIA
SCALE IN FEET
1000 500 0 1000 2000

LEGEND:
- TIDE GATES
DIKES
100 YEAR FLOOD PLAIN
ELEV. 10.00

MAP B
MAP OF
TIDE GATE LOCATIONS
8
100 YEAR FLOOD PLAIN

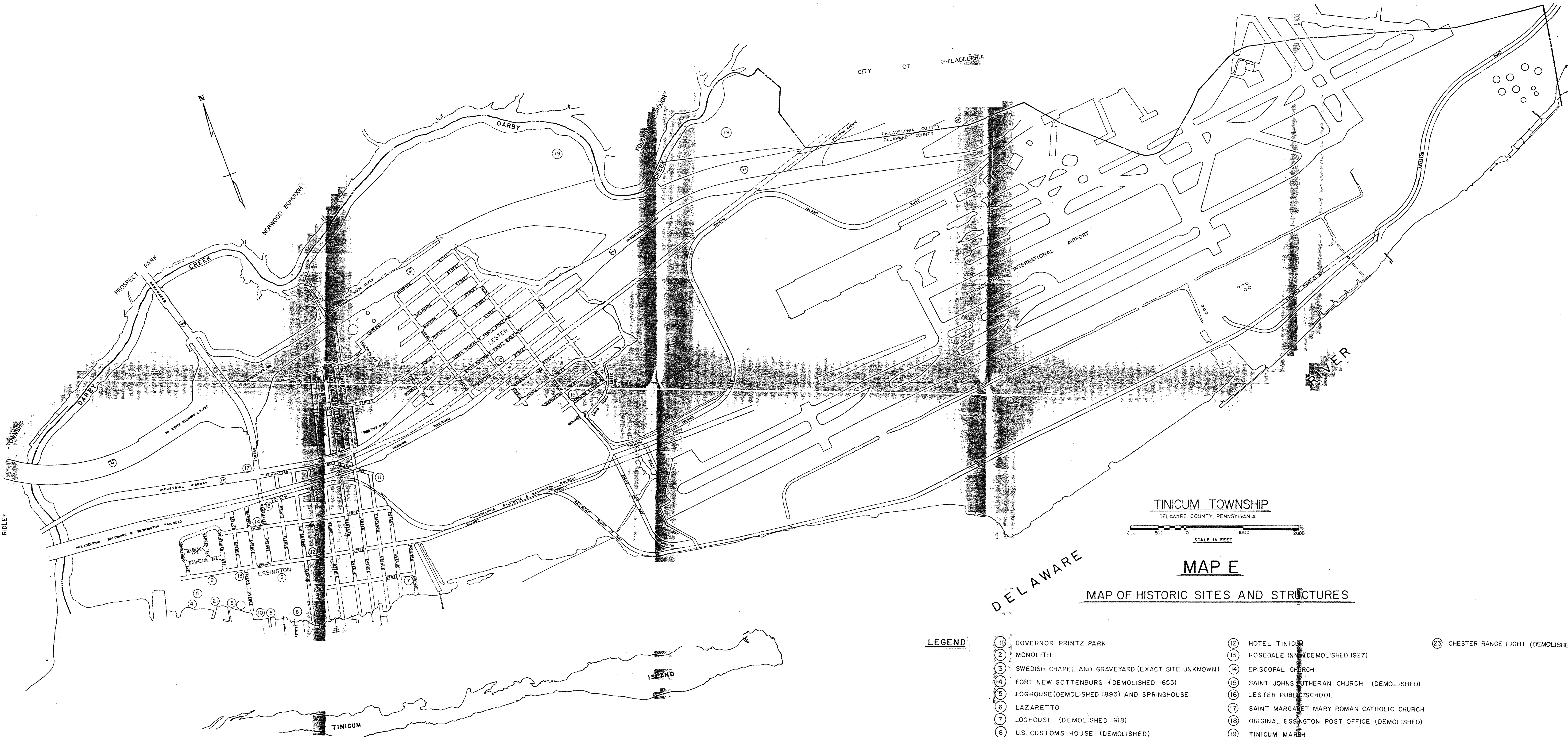




TINICUM TOWNSHIP
DELAWARE COUNTY, PENNSYLVANIA
SCALE IN FEET
1000 500 0 1000 2000

- LEGEND
- RESIDENTIAL
 - APARTMENTS & TOWNHOUSES
 - INDUSTRY
 - WATER FRONT INDUSTRY
 - RECREATION
 - SHOPPING CENTER
 - COMMERCIAL
 - COMMUNITY FACILITIES
 - SPECIAL USE (AIRPORT)

MAP D
PROPOSED FUTURE LAND USE



CITY OF PHILADELPHIA

PHILADELPHIA COUNTY
DELAWARE COUNTY

PHILADELPHIA INTERNATIONAL AIRPORT

DELaware RIVER

TINICUM TOWNSHIP
DELAWARE COUNTY, PENNSYLVANIA

SCALE IN FEET
0 500 1000 2000

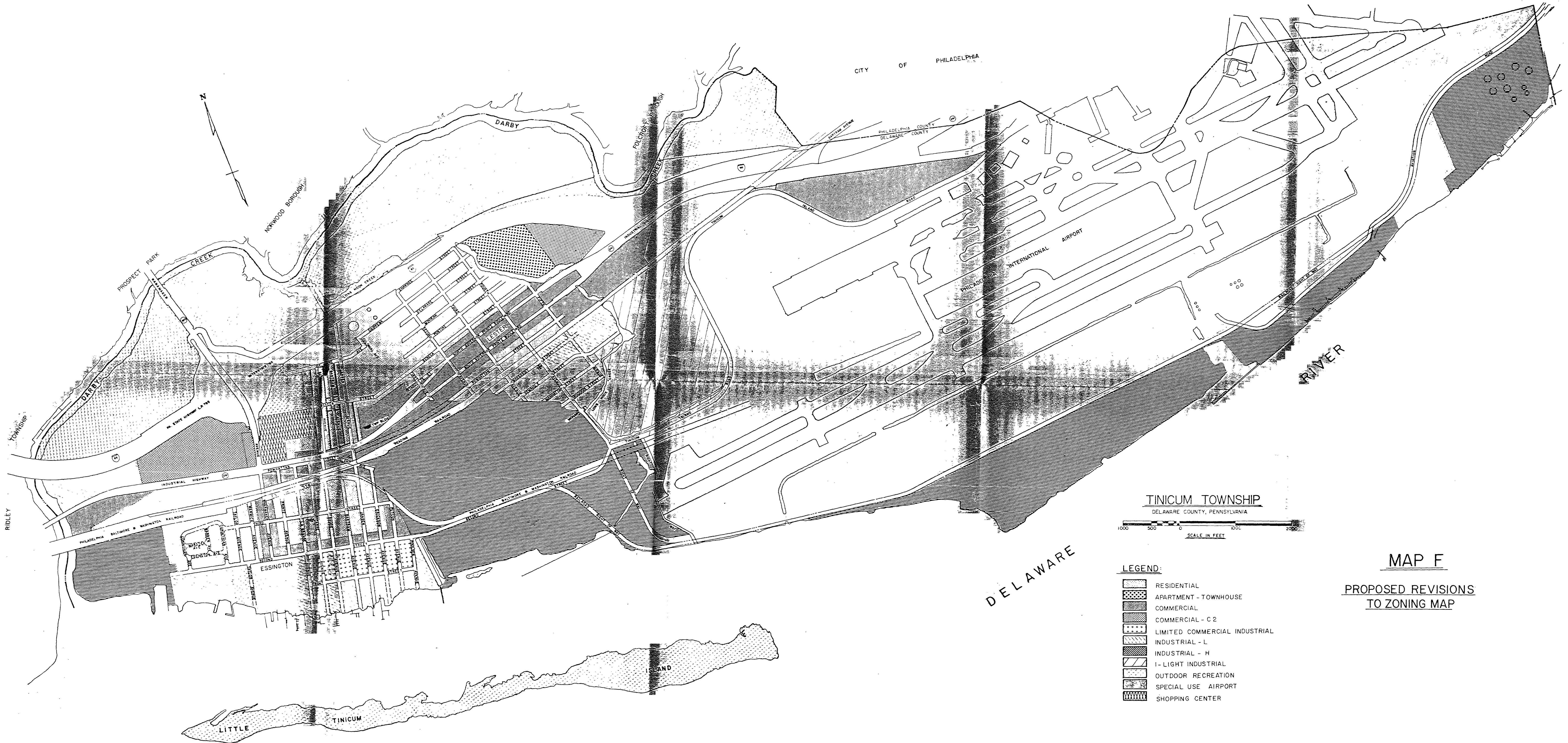
DELAWARE

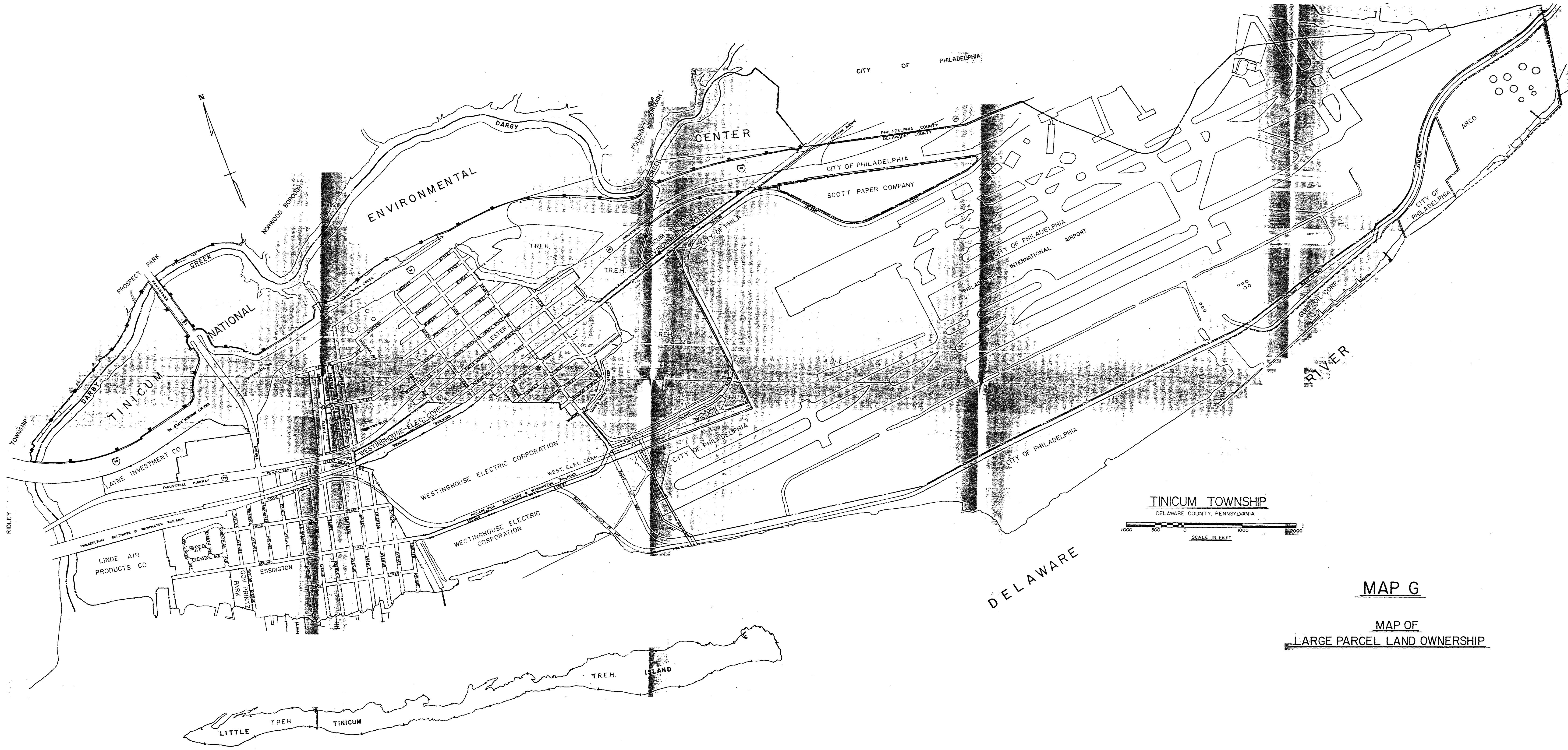
MAP E

MAP OF HISTORIC SITES AND STRUCTURES

LEGEND:

- | | | |
|--|---|--------------------------------------|
| 1. GOVERNOR PRINTZ PARK | 12. HOTEL TINICUM | 23. CHESTER RANGE LIGHT (DEMOLISHED) |
| 2. MONOLITH | 13. ROSEDALE INN (DEMOLISHED 1927) | |
| 3. SWEDISH CHAPEL AND GRAVEYARD (EXACT SITE UNKNOWN) | 14. EPISCOPAL CHURCH | |
| 4. FORT NEW GOTTENBURG (DEMOLISHED 1655) | 15. SAINT JOHNS LUTHERAN CHURCH (DEMOLISHED) | |
| 5. LOGHOUSE (DEMOLISHED 1893) AND SPRINGHOUSE | 16. LESTER PUBLIC SCHOOL | |
| 6. LAZARETTO | 17. SAINT MARGARET MARY ROMAN CATHOLIC CHURCH | |
| 7. LOGHOUSE (DEMOLISHED 1918) | 18. ORIGINAL ESSINGTON POST OFFICE (DEMOLISHED) | |
| 8. U.S. CUSTOMS HOUSE (DEMOLISHED) | 19. TINICUM MARSH | |
| 9. THE DUTCH HOUSE (DEMOLISHED) | 20. TINICUM TIDE GATES (SEE MAP B) | |
| 10. RIVERSIDE HOTEL | 21. CORINTHIAN YACHT CLUB | |
| 11. PUBLIC SCHOOL (DEMOLISHED) | 22. SWEDISH BURIAL SITE | |





MAP G

MAP OF
LARGE PARCEL LAND OWNERSHIP