

THIS BOOK IS PROPERTY OF
TOWN OF HORSEHEADS, NY
AND IS ON LOAN TO YOU AS A
MEMBER OF THE PLANNING BOARD

Arnett

THE GENERAL PLAN HORSEHEADS, NEW YORK

Abstract

TITLE: THE GENERAL PLAN
Horseheads, New York

AUTHOR: Egner & Niederkorn Associates, Inc.
Ithaca, New York

SUBJECT: Comprehensive 701 Land Use Plan

DATE: January, 1971

LOCAL PLAN-
NING AGENCY: Town of Horseheads Planning
Board

SOURCE OF
COPIES: Clearing House for Federal
Scientific and Technical
Information
Washington, D. C.

New York State Office of
Planning Coordination
488 Broadway
Albany, New York

HUD
PROJECT NO.: NYP-155

SERIES NO.: 1 of 1

NO. OF PAGES: 257

The General Plan for the Town of Horseheads presented several planning problems not generally found in the typical planning area. Parts of the town are extremely rural in character while other parts have and are undergoing rapid urbanization. In addition, the town contains two of the major villages in Chemung County - Horseheads and Elmira Heights - neither of which were included in the planning area. This presented the unusual problem of planning for the "doughnut" without a clear understanding of the future of the "hole".

Although two separate reports were prepared, one for the Town of Horseheads and one for the Town of Big Flats, municipal boundaries were disregarded as having a significant impact on the planning program and the two towns were treated, whenever practicable, as one planning area. Cooperation was elicited from both Planning Boards on future land use and zoning controls related to land on either side of the town boundary lines.

The basis of the Plan is the concept of Development Intensity, an approach which considers not only the physical but many of the social and political attributes of the communities involved. In addition to the Plan itself the report includes all basic studies related to population, economic base, natural features, etc., special studies of Chemung County Airport and a County Civic-Cultural Center, and implementation measures such as zoning and subdivision regulations which were published under separate cover.



EGNER & NIEDERKORN ASSOCIATES, INC.

310 West State Street · Ithaca, New York 14850 · 607-273-8280

January 1971

Mr. Frederick J. DeMuth
Chairman
Town of Horseheads Planning Board
Horseheads, New York 14845

Dear Mr. DeMuth:

Over the next twenty years many changes can be expected in the Horseheads-Big Flats Valley. As one of the fastest growing regions of the Southern Tier, the broad expanses of this area will, in time, take on the proportions of an urbanized complex.

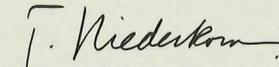
In the work that has led to this report we feel that your Planning Board has addressed itself to this situation and to the problems and opportunities that accompany sustained population growth and land subdivision. The General Plan for Horseheads represents the solid beginnings of a planning program which can provide strong environment-shaping guidelines as inevitable change occurs. The degree to which your plan will be effective depends, of course, on the degree to which it is used in the future. It is our hope that this plan will be accepted by the community as a reasonable expression of long range objectives and that it will become a working document which will be maintained and updated as necessary to respond to changing needs and increased financial capability.

Because Horseheads and Big Flats are, in fact, a physical unity, many aspects of this study disregarded the artificial political boundary between the two. While separate reports were written for each community those sections pertinent to the area as a whole have been included in each report.

We have enjoyed working with you and the Planning Board during the past two and a half years. Your efforts are invaluable to the citizens of Horseheads and, if the planning concept is valid, the efficacy of these efforts will become more and more apparent in the years to come.

Very truly yours,

EGNER & NIEDERKORN ASSOCIATES, INC.


Thomas Niederkorn

TN:ec

Planning Board Members

Frederick J. DeMuth,
Chairman
Chester D. Owens
Willard J. Bowers
C. J. Rosar
Vernon Swartz

Town Board Members

John H. Hazlett, Supervisor
Howard J. Griswold
Edward L. McCaslin
Frank Treat
William H. Wills
Rudolph W. Baer*

* Former member

The preparation of this plan for the New York State Office of Planning Coordination was financially aided through a federal grant from the U. S. Department of Housing and Urban Development and in part by the State of New York under the Urban Planning Assistance program authorized by Section "701" of the Housing Act of 1954, as amended.

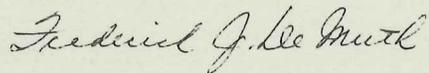
TO THE CITIZENS AND PUBLIC OFFICIALS OF THE TOWN OF HORSEHEADS

Many rapidly developing communities such as Horseheads have failed in the past to realize their relationship to larger urban areas and have suffered the consequences of uncoordinated growth. In order to avoid this situation and profit by the benefits of sound planning, the Town of Horseheads elected to participate in the "701" comprehensive planning program.

Over the past two years the Horseheads Planning Board has concerned itself with the establishment of a development policy for the town which would be compatible with the desires of the residents of the town and in accord with the public interest. The Plan which has emerged and is presented here represents the best thinking of the Planning Board as to what the future of Horseheads in the Elmira Urban Area ought to be. It is not a static document but a guide to change, growth and development.

The members of the Planning Board take great pleasure in presenting to you the Horseheads General Plan. We wish to thank the many people who assisted in its development.

Sincerely,



Frederick J. DeMuth, Chairman

TABLE OF CONTENTS

	<u>Page</u>
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF MAPS	x
HISTORICAL AND REGIONAL CONTEXT	1
Past and Future	3
NATURAL FEATURES	9
Natural Features	11
Topography	11
Soils	12
Drainage and Permeability	15
Major Watersheds	16
Climate	17
LAND USE	27
Existing Land Use	29
Development Patterns	29
HOUSING	39
Availability	41
Additions	41
Condition	41
POPULATION	51
Population	53
Early Trends - 1900-1950	54
Recent Trends - 1950-1965	55
Projections	55

TABLE OF CONTENTS (continued)

	<u>Page</u>
ECONOMY	59
Economy	61
Regional Orientation	62
Personal Income	62
The Labor Force	63
Commuting Patterns	64
Sectors of the Economy	65
 PUBLIC FACILITIES AND SERVICES	 75
Water Supply	77
Sewage Disposal	79
Storm Drainage	81
Refuse Disposal	83
Education	84
Recreation	88
Fire Protection	91
 CIRCULATION AND TRANSPORTATION	 103
Circulation and Transportation	105
Existing Roads	105
Traffic Volume	110
Area Problems	114
 SPECIAL STUDIES	 119
The Airport	121
Airport Growth	121
Effects on Adjacent Land	123
Development Controls	126
Future Land Use	128
Civic Center Study	133
Government Office Space	133
Cultural Activities	134
Convention Space	135
Conclusions	136

TABLE OF CONTENTS (continued)

	<u>Page</u>
THE GENERAL PLAN	139
The General Plan	141
The Concept of the Plan	141
Objectives, Policies and Proposals	146
Growth	146
Housing	147
Business	152
Industry	154
Circulation and Transportation	155
Recreation	158
Public Facilities	160
IMPLEMENTATION	167
Implementation	169
Zoning	169
Subdivision Regulation	171
Official Map	172
FISCAL ANALYSIS	175
Fiscal Analysis	177
APPENDIX	189
Population	191
Economy	221
Acknowledgements	257

LIST OF TABLES

		<u>Page</u>
TABLE 1	DRAINAGE AND PERMEABILITY CHARACTERISTICS OF MAJOR SOIL TYPES	19
TABLE 2	HORSEHEADS: LAND USE	33
TABLE 3	HORSEHEADS AND BIG FLATS: HOUSING CHARACTERISTICS, 1960	46
TABLE 4	HORSEHEADS CENTRAL SCHOOL DISTRICT STATISTICS - 1968-1969	94
TABLE 5	CHEMUNG COUNTY AIRPORT - PASSENGER AND FREIGHT TABULATIONS	130
TABLE 6	COMPARATIVE FINANCIAL PROFILE, HORSEHEADS AND BIG FLATS, 1960-1968	181
TABLE 7	COMPARATIVE ABILITY TO INCUR DEBT, MUNICIPALITIES IN CHEMUNG COUNTY, 1965 . .	182
TABLE 8	TOWN OF HORSEHEADS FINANCES, 1960 THROUGH 1968	183
TABLE 9	CAPITAL IMPROVEMENTS PROGRAM - TOWN OF HORSEHEADS	184
TABLE 10	CAPITAL IMPROVEMENTS SCHEDULE - TOWN OF HORSEHEADS	185

LIST OF FIGURES

	<u>Page</u>
FIGURE 1 NEW HOUSING UNITS: 1960-1968	47
FIGURE 2 HOUSING CONDITION: 1960-1968	49
FIGURE 3 AGE & SEX DISTRIBUTION: 1950-1960	57
FIGURE 4 FAMILY INCOME: 1960	71
FIGURE 5 OCCUPATIONAL DISTRIBUTION: 1960	73
FIGURE 6 ANNUAL REFUSE PRODUCTION IN POUNDS PER CAPITA	95
FIGURE 7 CUMULATIVE LANDFILL AREA REQUIREMENTS	97
FIGURE 8 RECREATION NEEDS: 1960-1990	99
FIGURE 9 FISCAL ANALYSIS: 1960-1968	187

LIST OF MAPS

		<u>Page</u>
MAP 1	REGIONAL LOCATION	7
MAP 2	EXCESSIVE SLOPE	21
MAP 3	SOILS - HOMESITE LIMITATIONS	23
MAP 4	SOILS - SEPTIC TANK LIMITATIONS	25
MAP 5	EXISTING LAND USE	35
MAP 6	EXISTING LAND USE - BUILT-UP AREAS	37
MAP 7	COMMUNITY FACILITIES	101
MAP 8	TRAFFIC AND CIRCULATION	117
MAP 9	AIRPORT	131
MAP 10	GENERAL PLAN	163
MAP 11	GENERAL PLAN - BUILT-UP AREAS	165

HISTORICAL AND REGIONAL CONTEXT

Past and Future

The Towns of Horseheads and Big Flats are situated in the geographical center of the region in a corridor extending from the City of Corning in the west to Elmira in the southeast. The topography of the area naturally channels urbanization through the Horseheads-Big Flats Valley where soil conditions and the availability of water are well-suited to the needs of all types of development.

The transportation network also favors development in the Valley. Route 17, the Southern Expressway, links the area to the major centers of the midwest and the Atlantic Seaboard while Routes 13 and 14 provide connections to the New York State Thruway and the urban centers of Rochester, Buffalo and Syracuse. Scheduled improvements to both of these major highways will further strengthen these connections.

Horseheads and Big Flats also play a strong role in the economic life of the region. Manufacturing and industrial expansions in the Chemung River Valley have totaled over 18 million dollars in the past four years and should eventually result in the creation of 2,500 new jobs, many of which will be in the Horseheads-Big Flats area.

As a recreation area Horseheads and Big Flats have not developed to their full potential but the Elmira area as the southern gateway to the Finger Lakes region is an important tourist route from Pennsylvania into Central New York. Specific tourist attractions in the Horseheads-Big Flats area include Harris Hill Park and soaring fields, the Mark Twain Study and Arnot Art Museum in Elmira and the Corning Glass Center in Corning.

The historical background of the area dates back to the early days of the Iroquois Confederacy when the Seneca Nation established several settlements throughout the Valley including a village called Runonvea in what is now Big Flats. In 1779, General Sullivan's expedition against the Iroquois encamped at Horseheads in order to destroy horses which were sick or disabled. When the expedition moved on, the Indians arranged the heads and bones of the horses along the army's route as a warning to white settlers. As a result, the Newtown Creek Valley began to be known as Horseheads. In 1854, this area was officially designated the Town of Horseheads with a population of 2,648 persons.

During the 1800's Horseheads served as a manufacturing center with mills, tanneries,

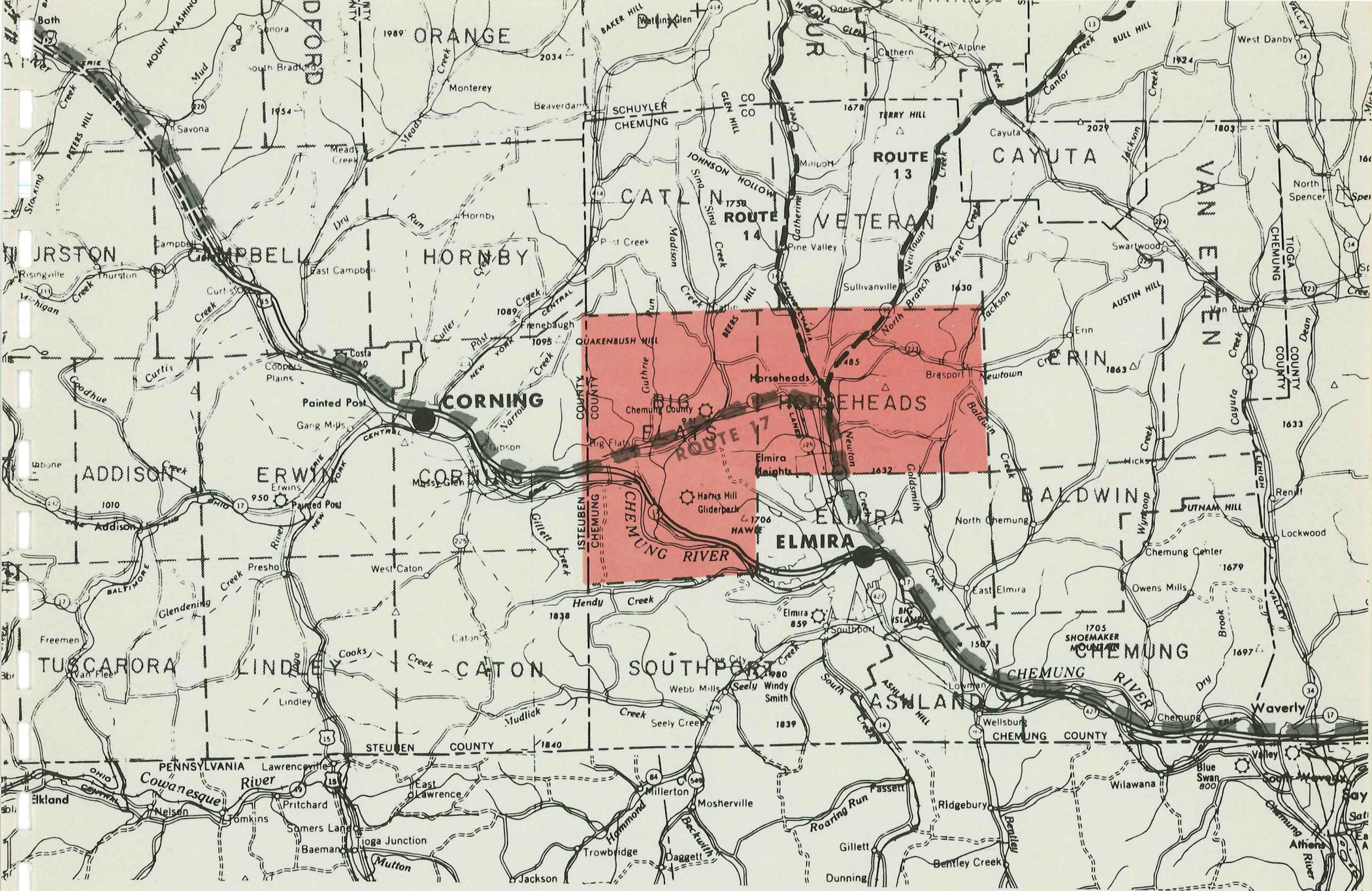
foundaries, steam saw mills and one of the largest brickyards in New York State located there. At the same time the settlement of Breesport was developing on the eastern edge of the town around the maintenance shops of the Utica, Ithaca and Elmira Railroad. By 1879, Breesport supported a population of 600 with two general stores, grocery and drugstores, meat markets, blacksmith and wagon shops as well as several mills, a brickyard and a tannery.

Although growth in Horseheads has vastly exceeded that of Big Flats, the earliest known homestead in the Valley was established by Christian Myneer in 1787 near the hamlet of Big Flats. The town itself was officially organized in 1822 from Elmira territory which was then a part of Tioga County. By 1875, with a population of 1,936, Big Flats was a thriving community. Three grocery

stores, blacksmith and carriage shops, two tobacco packing houses and a cigar manufacturer, plus a school, post office and town hall were operating in the town. The hamlet of Big Flats had, by this time, become a station on the Erie Railroad which further spurred growth.

communities.

Today Horseheads and Big Flats are important parts of the growing industrial complex between Elmira and Corning. With adequate planning and forward-looking governmental actions these two communities can become the most important urban centers in Chemung County. The physical environment is the primary concern of this report and the plan which has been developed to guide change in the years ahead is based on an assessment of potential and the ways by which this potential can be transformed into pleasant and efficient



1.

REGIONAL CONTEXT
THE CORNING - ELMIRA CORRIDOR

NATURAL FEATURES

Natural Features

A community's natural features -- its topography, soils, waterways and climatic conditions -- play a major part in determining the course of development. In areas such as Horseheads and Big Flats where topographic changes are sudden and severe and soil characteristics and drainage ways vary greatly these factors become even more important. The rugged terrain and poor soils which are common on the hillsides offer vastly different problems and potential for development when compared with the soils and topography of the valley. A thorough knowledge of the limitations imposed by natural features is a vital ingredient in the land use plan and of great value to the Planning Board when specific locational decisions must be made.

Topography

The Town of Horseheads is part of the Appalachian upland, the largest land-form region in New York State. The entire area is underlain with sedimentary rock, the result of millions of years of inundation prior to a massive upheaval 220 million years ago which raised the land above sea level. The landscape was then subjected to the scouring and scraping of several successive glaciers creating the broad valley running north and south through the town which intersects the Big Flats Valley in the Village of Horseheads. Another narrow valley runs in an east-west direction from the hamlet of Breesport along Route 223 to Old Ithaca Road.

Hill masses border the valley areas and are the predominant land form in the eastern portion of the town. Slopes of 35 to 50 percent are common as the hills rise from the

valley floor. Halderman Hill in the southwest corner of the town and the hilly areas east of Routes 13 and 17 have the most severe topographic changes. Map 2 shows the areas of excessive slope and indicates the degree to which topography limits development in many parts of the town.

The largest areas of undeveloped flat lands are located north and west of the Village of Horseheads. Slopes here do not generally exceed five percent becoming steeper in the rolling hills to the northwest. Additional flat land is available between Routes 17 and 13 and Lake Road but much of this area is subject to flooding from Newtown Creek. Approximately 135 acres of moderately flat land is located south of the hamlet of Breesport in the vicinity of the Chemung County Home but, because of county ownership, it is doubtful if this land can be considered available

at the present time.

Elevations in the town vary from a maximum of 1,650 feet above sea level at a high point south of Moss Hill Road to a minimum of 860 feet in the area east of Newtown Creek and south of Latta Brook. Most of the existing development is located between the 900 and 1,100 foot elevations.

Soils

Glacial action is responsible not only for the topographic configuration of the town but also for the various soils which can be found in Horseheads. As the glaciers moved over the sandstone, shale and limestone hills, various levels of rock, sand, silt, clay and gravel were mixed together and deposited over large areas of land. When the glaciers melted, deposits of silt and clay were laid down in the beds of ancient lakes; sand and gravel were deposited in

streambeds and a mixture of limestone, gravel, silt, shale and various other materials covered the hills and gently sloping areas. These glacial deposits plus organic material and recent alluvium formed the parent materials from which present day soils were derived.

Glacial till, found primarily on the hillsides, is responsible for the three major soil types present in the town -- Lordstown, Volusia and Mardin. The LVM association¹ is composed of medium-textured soils which are a mixture of ground-up and weathered sandstone, siltstone and shale with poor drainage and permeability due to a fragipan² which begins

¹ A soil association is defined as two or more different soils characteristically found side by side in a single field or farm.

² A layer in the subsoil, tightly packed and slowly permeable to water.

15 to 18 inches below the surface. The LVM association is generally found on slopes in excess of 15 percent and contains some very rocky soils. In addition, it is deficient in minerals, has a high water table and moderate to severe limitations for agriculture and urban development.

The other major soil types in the town -- Howard and Chenango -- originated with glacial outwash. The HC association is made up of gravelly soils which permit rapid permeability and good drainage. These soils are concentrated in the valleys north and west of the village and in the hamlet of Breesport. Stability and good bearing capacity as well as a moderately high mineral content make both agriculture and urbanization possible in areas where the Howard-Chenango association is found. Because the

parent material was deposited in valley areas the location of the HC association coincides with topography most suitable for development. Limitations for most types of land use are moderate to slight.

A third category of soils can be found scattered throughout the town, generally on the gently sloping hillsides in the vicinity of Hickory Grove and Sing Sing Roads. These soils, which include Collamer and the Hudson-Rhinebeck association, are silty soils that formed in the deposits of ancient glacial lakes. Drainage and permeability vary from moderate to poor depending on the compaction of underlying layers of silt and clay and limitations for development range from slight to severe. A major deposit of lake-laid material can be found west of the Village of Horseheads and north of Colonial Drive.

Along the major streams and tributaries in the town Tioga and Papakating soils formed from recent alluvium can be found. Tioga soils generally occupy the higher position on flood plains while Papakating soils occupy level or depressional slack-water areas. Drainage and permeability differ widely in these two soils; Tioga is deep and well-drained while Papakating is very slowly permeable and poorly drained. Development is generally limited on either type due to flooding potential, but Tioga soils located out of a floodplain have only slight limitations for all types of development.

A final type of soil of some importance in Horseheads is the Muck-Peat association. Formed from organic deposits of shell fragments and plant material, muck and peat soils occupy depressions, swamps and bogs which are frequently the head areas of streams. A major deposit of the MP association

occupies the thin strip between Watkins Road and the Penn-Central Railroad west of the Holding Point.

Drainage and Permeability

Topography combined with the surface characteristics of soil determine to a large extent the drainage pattern in any given location. Permeability, on the other hand, is a function of subsurface soil characteristics and refers to the capability of soil to absorb and carry water internally. Both features are important in determining the course of development and both place limitations on the type of development which may be possible in a particular location.

In the Town of Horseheads well-drained, rapidly permeable soils are generally found

in the valley areas and on the lower slopes formed by glacial outwash. These soils are generally found below the 1,100 foot contour level and are particularly prevalent in the eastern portion of the town stretching through the village and in the hamlet of Breesport. Scattered pockets of moderately well-drained soils can be found on the periphery of the valley and on some hillsides. Despite drainage conditions, hillside development is limited to a large extent by other factors such as topography and the moderate permeability of many of the soils found there.

Somewhat poorly drained and poorly drained soils are typically found in low, depressed areas or on hillsides mantled with the Lordstown-Volusia-Mardin association. Of these three soil types, the Volusia and Mardin exhibit

and a high of 92° in July. These figures represent extremes, however, as the mean temperature for January was 18° and 70° for July.

The average growing season in the county is approximately 150 days which corresponds to the number of frost free days which occur in the valley. Upland farms have a shorter growing period of 133 days with the growing season for both areas extending from May to October.

Prevailing winds are westerly and a significant factor in the climate as they cause an easterly movement of low pressure systems inducing a movement of moist air into the area. During certain periods of the year heavy fog is common in the valley. This condition is particularly evident in the early fall months and creates special problems for vehicular

traffic and for the operations of the Chemung County Airport.

TABLE 1: DRAINAGE AND PERMEABILITY CHARACTERISTICS OF MAJOR SOIL TYPES

Good	Drainage		Rapid	Permeability	
	Moderate	Poor		Moderate	Slow
Chenango	Collamer	Atherton	Chenango	Collamer	Atherton
Howard	Hudson	Madalin	Howard	Lansing	Hudson
Lansing	Mardin	Muck Peat	Valois	Lordstown	Madalin
Lordstown	Williamson	Papakating		Rhinebeck	Mardin
Tioga		Rhinebeck		Tioga	Muck Peat
Unadilla		Volusia		Unadilla	Papakating
Valois				Williamson	Volusia

Source: U. S. Soil Conservation Service.

TOWN OF HORSEHEADS NEW YORK

2. SLOPES

 PREDOMINANT SLOPE 15% OR MORE

SOURCE: U.S.G.S.

0 1000 2000 3000 4000



prepared by:
EGNER & NIEDERKORN ASSOC. INC.
PLANNING CONSULTANTS

THE PREPARATION OF THIS MAP FOR THE NEW YORK STATE OFFICE OF PLANNING COORDINATION WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AND IN PART BY THE STATE OF NEW YORK UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED.



TOWN OF HORSEHEADS NEW YORK

3. SOILS - HOMESITE LIMITATIONS

-  SLIGHT
-  MODERATE
-  SEVERE

SOURCE: FIELD STUDY-CHEMUNG SOIL & WATER CONSERVATION DISTRICT, 1968

0 1000 2000 3000 4000



prepared by:
EGNER & NIEDERKORN ASSOC. INC.
PLANNING CONSULTANTS

THE PREPARATION OF THIS MAP FOR THE NEW YORK STATE OFFICE OF PLANNING COORDINATION WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AND IN PART BY THE STATE OF NEW YORK UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION '70' OF THE HOUSING ACT OF 1954, AS AMENDED.



TOWN OF HORSEHEADS NEW YORK

4. SOILS - SEPTIC TANK LIMITATIONS

-  SLIGHT
-  MODERATE
-  SEVERE

SOURCE: FIELD STUDY-CHEMUNG SOIL & WATER CONSERVATION DISTRICT, 1968

0 1000 2000 3000 4000



prepared by:
EGNER & NIEDERKORN ASSOC. INC.
PLANNING CONSULTANTS

THE PREPARATION OF THIS MAP FOR THE NEW YORK STATE OFFICE OF PLANNING COORDINATION WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AND IN PART BY THE STATE OF NEW YORK UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED.



EXISTING LAND USE

Existing Land Use

The land use study is an effective way of identifying past development patterns and present trends in a community. It is useful as a planning tool in a number of ways in that it provides the basic data relative to the characteristics of land and the activities which occur within the planning area. It also helps to establish the framework and constraints within which a General Plan for the community may be developed.

In a rapidly growing town such as Horseheads the uses of land are in a constant state of change. For this reason it is important to the viability of the Plan to continually update and modify basic land use data so that changes which may result in modification of the Plan are reflected. May 5 shows existing land use patterns in the town as a whole and

Map 6 shows land use in the areas selected for more detailed study.

Development Patterns

The development pattern in any community is generally based on a number of factors related to the character of the land. Topography, soil characteristics and limitations, the availability of water and other public utilities, and the location of roads and major highways are among the factors which direct growth and channel particular types of uses to specific locations.

In the Town of Horseheads the effect of these factors is particularly evident. The 24,000 acres which make up the town include two vastly different types of land; the valley area with soils and topographic characteristics

favorable to urbanization and the hills which tend to discourage development. Beginning in the Village of Horseheads and extending down through Elmira Heights the character of the community is definitely urban. Within this area the major concentration of residential, commercial and industrial development has occurred.

As available land in the central valley has been used up development has spread north and west, once more to take advantage of favorable conditions. This second phase development has been primarily residential forming small suburbs of the village. Throughout the town residential development has taken place in almost every location which exhibits favorable characteristics. Creeping into sloping terraces at the base of the hills bordering Routes 13

and 17, along the narrow corridor to Breesport and even into the hills themselves, houses have gone wherever the land can accommodate them.

Commercial development on the other hand has tended to locate in the areas of population concentration between the two villages and to cluster around the intersections of Route 17. An additional small commercial area has developed in the hamlet of Breesport to serve the residential concentration in that area.

Industry in the town has located in response to the transportation network -- along Route 17 and in direct proximity to the railroads cutting through the valley between the two villages. Additional industrial development has occurred in the "Holding Point" within the boundaries of the Village of Horseheads where highway access is reasonably good and where

rail service is also available.

A particularly interesting change in the land use pattern is occurring along Old Ithaca Road between the Village of Horseheads and Level Acres Drive. Once predominantly residential, this area is changing rapidly to strip development of a mixed nature. A conglomeration of commercial, warehousing and industrial development ranging from a small beauty shop to heavy machinery sales and storage have located along the road which will most probably continue to attract similar types of uses unless strong land use controls are applied.

Although agriculture is not an important element in the economy of the town, over 4,000 acres of land are used for some type of farming. The 1964 Census of Agriculture reported a total of 28 active farms in Horseheads with an average

size of 148 acres but recent trends indicate that farming is declining in the town and will probably continue to do so as urban pressures increase.

As Table 2 shows, 2.2 percent of the land in Horseheads is devoted to streets, roads and highways. The 89 miles of road in the town account for 2,860 acres of land of which 12 miles is taken up by the major highways - Routes 13, 17 and 14.

The greatest amount of land in the town is vacant and, in many instances, forested. 14,729 acres fall into this category most of which is located on the steep hills to the east of Routes 13 and 17. A major portion of this land will undoubtedly remain as it is due to topography and soil conditions which make development difficult.

While the town has a strong industrial base, only 115 acres or .5 percent of the total land area is in industrial use. With the exception of the A&P plant, the majority of the industries in the town are relatively old and are located on small sites.

Public, semi-public and institutional uses account for 324 acres of land with the largest areas occupied by the County Home in Breesport, and the County Farm east of the Village of Horseheads. Park and recreation uses account for an additional 195 acres, less than one percent of the total land area, the two largest uses in this category being Mark Twain Golf Course and the Chemung County Fairgrounds.

In general, land use patterns in Horseheads suggest a rapidly growing suburban community with a need for strong controls over

future development. Without such controls the town will soon find that existing developable land has been depleted and the purpose of planning defeated.

TABLE 2: HORSEHEADS: LAND USE

Use	#	Acreage	%
Town		24,000	100.0
Village/Elmira Heights		445	1.8
Village/Horseheads		2,892	12.1
Residential	2,383	570 ¹	2.4
Commercial	32	16 ²	.06
Industrial	15	115 ³	.5
Public/Semi-Public/Institutional	21	324 ⁴	1.4
Parks/Recreation	5	195	.8
Streets/Roads	89 mi.	544 ⁵	2.2
Farming	28	4,170 ⁶	17.4
Forested/Vacant		14,729	61.4

¹ Assume $\frac{1}{4}$ acre/d.u.

² Assume $\frac{1}{2}$ acre/commercial establishment.

³ Assume 5 acres/industry + 45 acres A&P.

⁴ Assume 5 acres each + County Home and County Farm.

⁵ Assume average width of 50'.

⁶ Derived as follows: $\frac{4170}{148}$ average size farm in Elmira, Ashland, Horseheads area; 1964 Agricultural Census.

TOWN OF HORSEHEADS NEW YORK

5. EXISTING LAND USE

- RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- △ PUBLIC / SEMI-PUBLIC
- ◊ PARK & RECREATION
- ▨ WOODED
- UNIMPROVED ROADS

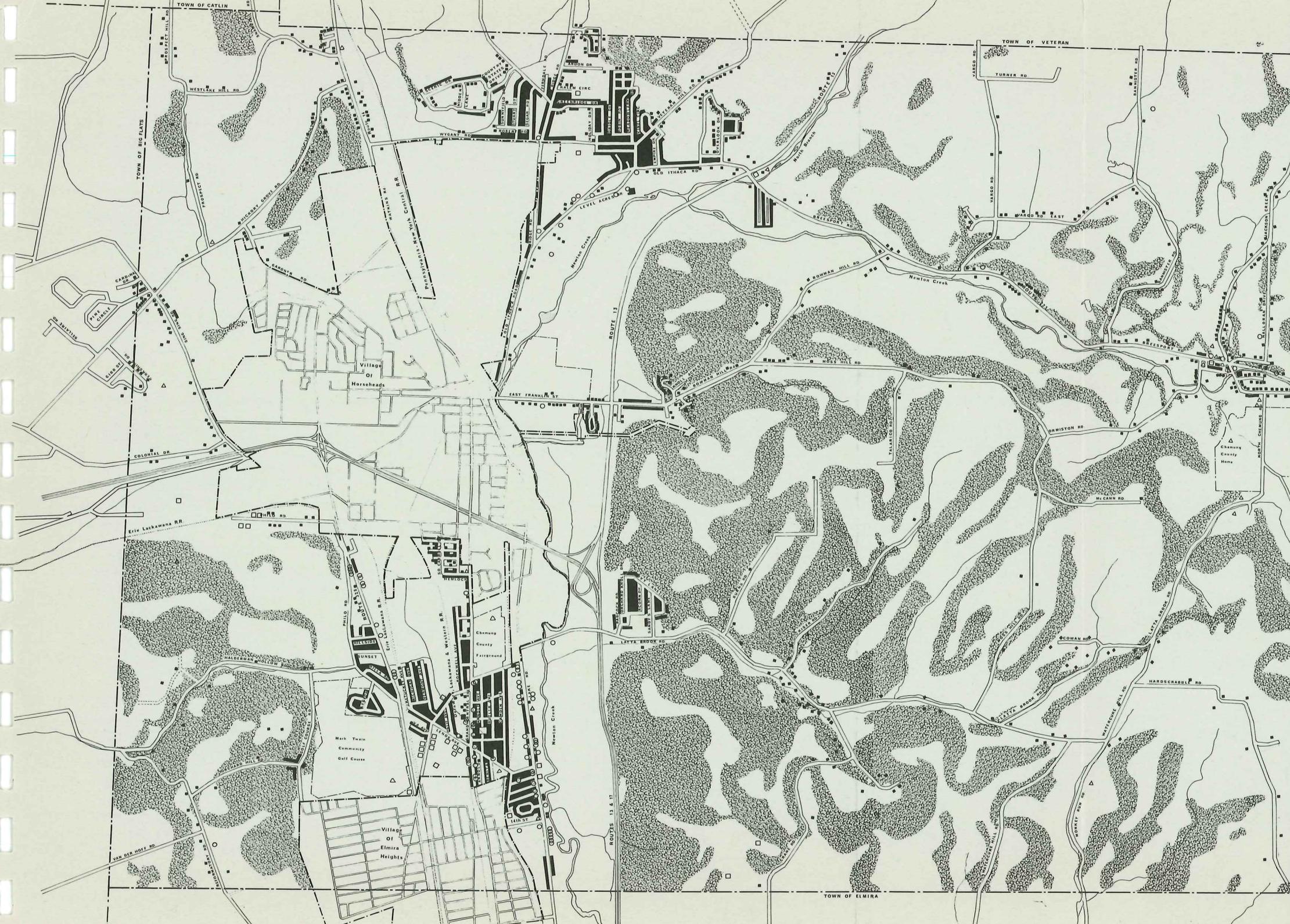
SOURCE: FIELD SURVEY - SUMMER 1967

0 1000 2000 3000 4000



prepared by:
EGNER & NIEDERKORN ASSOC. INC.
PLANNING CONSULTANTS

THE PREPARATION OF THIS MAP FOR THE NEW YORK STATE OFFICE OF PLANNING COORDINATION WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AND IN PART BY THE STATE OF NEW YORK UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 101 OF THE HOUSING ACT OF 1954, AS AMENDED.

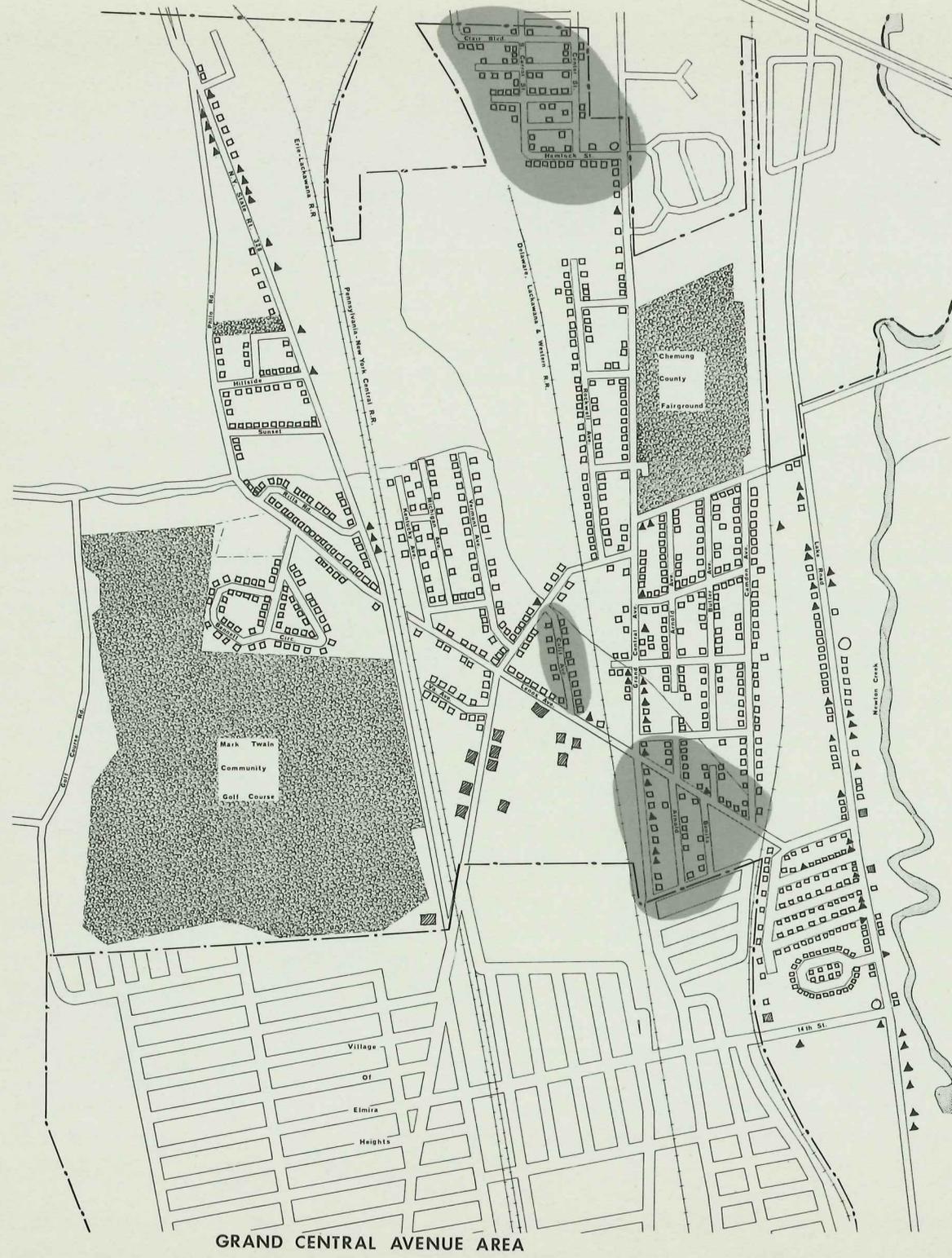


TOWN OF HORSEHEADS NEW YORK

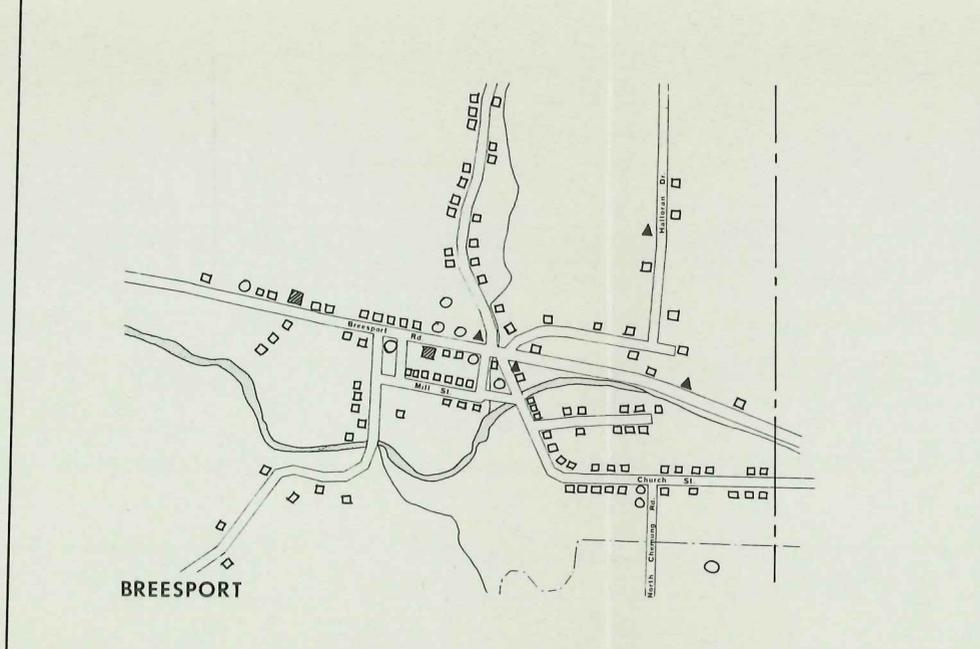
BUILT-UP AREAS

6. EXISTING LAND USE

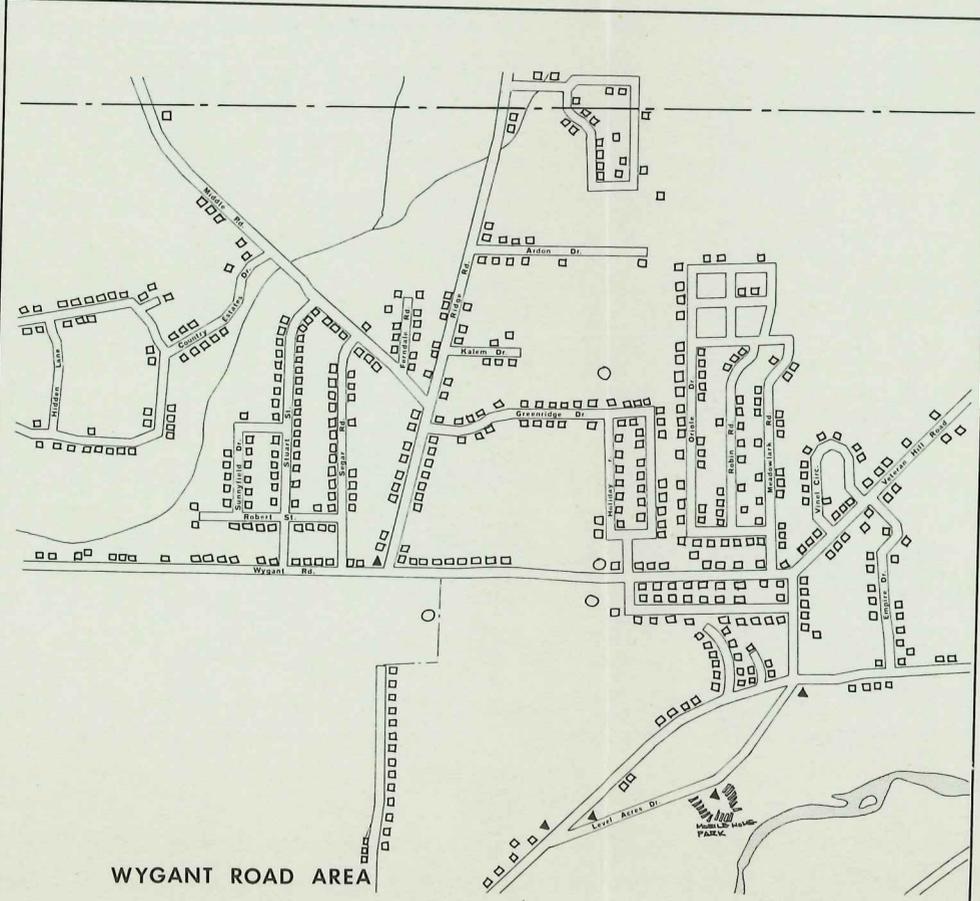
- RESIDENTIAL
- ▲ COMMERCIAL
- ▨ INDUSTRIAL
- PUBLIC OR SEMI-PUBLIC
- PARK OR RECREATION
- ◐ POOR HOUSING AREAS



GRAND CENTRAL AVENUE AREA



BREESPORT



WYGANT ROAD AREA

SOURCE: FIELD SURVEY, 1968.



PREPARED BY:
EGNER & NIEDERKORN ASSOC. INC.
PLANNING CONSULTANTS

THE PREPARATION OF THIS MAP FOR THE NEW YORK STATE OFFICE OF PLANNING COORDINATION WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AND IN PART BY THE STATE OF NEW YORK UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED.

HOUSING CHARACTERISTICS

Availability

According to the U. S. Census of Housing, in 1960 there were 1,955 housing units in the Town of Horseheads excluding the Village of Horseheads and that portion of the Village of Elmira Heights which is in the town. (See Table 3: Housing Characteristics). Of these, 77 units were vacant but only 38 or 1.9 percent were available for rent or sale. As a general rule, a vacancy rate of approximately 3 percent is considered normal in a growing community and one which should provide adequate housing choices for area residents. The figures indicate, however, that, even in 1960, Horseheads had a housing shortage. While the supply has increased substantially since that time the population has also increased and there is no reason to believe that a slackening in the market has occurred with a

resultant increase in available housing.

Additions

Of the 1,878 occupied units, 1,640 or 87 percent were owned and the remaining 13 percent, 238 units, were rented.

As Figure 1 shows, building activity has been high in the town and between 1960 and 1968 492 units were added most of which were single family homes. The majority of these units were in the \$20,000 to \$30,000 price range; rental units added during this time ranged from about \$100 for a one bedroom unit to \$160 for a three bedroom unit without utilities.

Condition

Housing conditions in the town appear to be generally good with the exception of several

blighted pockets in the urbanized area between the Villages of Horseheads and Elmira Heights. In some cases the major cause of blight is the condition of housing; in others, environmental deficiencies downgrade the entire neighborhood regardless of housing condition.

Two measurements were used to determine housing condition and quality in Horseheads. The first standards were derived from a combination of housing condition and plumbing facilities as recorded in the 1960 census. To measure condition units are classified in one of three categories: sound, deteriorating or dilapidated. Plumbing facilities that are combined with condition are water supply, toilet facilities and bathing facilities. Sound housing is defined as that which has no defects or only slight defects which normally are corrected

during the course of regular maintenance. Deteriorating housing is considered to be structures which need more repair than would be provided in the course of regular maintenance. Dilapidated housing does not provide safe and adequate shelter, either due to prolonged deterioration or inadequate original construction and, in its present condition, endangers the health, safety and well-being of its occupants. Figure 2 shows the relative condition of the housing supply according to census classification of units and a field survey.

For purposes of this report substandard housing includes all units which were classified in the census as dilapidated and all deteriorating units lacking hot water and/or other plumbing facilities. Measured in these terms in 1960 the Town of Horseheads had 95 units or

4.8 percent of the total housing supply in the substandard category. This was a substantially lower percentage than the Town of Big Flats which had an actual number of 131 units or 11.8 percent substandard.

The second measurement of housing condition and quality involved an exterior visual survey to determine the general location and extent of poor quality housing and environmental conditions in the town. Four categories were established to rank quality from 1 to 4. Evaluation was made on the basis of the appearance of the structure itself as well as the condition and appearance of yards, outbuildings and the general surroundings. Each structure was then assigned to one of the following four categories:

Category "1" Buildings which appeared to be new or built within this decade with yards that were well kept and uncluttered.

Category "2" Buildings which were not new but were in good condition with well kept and uncluttered yards.

("1" and "2" are similar except for age.)

Category "3" Buildings which appeared to be structurally adequate but on which maintenance had been disregarded or deferred; i.e., buildings which would require greater repair than would normally be required in the course of maintenance. "1"

and "2" buildings which were surrounded by litter or poorly kept yards were also assigned to this category.

Category "4" Buildings which were in need of major repairs or rebuilding to correct serious defects.

"3" buildings which were located on lots with deteriorating outbuildings or littered and poorly maintained yards were also assigned to this category.

This category constitutes the buildings and lots that are poorest in condition and appearance.

On the basis of this grading system three

areas were identified which have substantial percentages of "3" and "4" structures and environment. (See Map 6.)

Area 1 is in the Clair Boulevard-Carrol Street area south of the Village of Horseheads. Although some relatively good houses are scattered throughout, the majority of the structures in this area are in poor condition and well past the point of rehabilitation. In addition to the condition of housing, the location of this neighborhood east of the sanitary landfill and railroad tracks and its isolation from other developed areas in the community contribute to a generally poor residential environment.

Area 2 is located north of the Village of Elmira Heights in the Benita-Arnold Street area extending approximately one block north

on Camden Avenue. In this neighborhood housing conditions vary from good to poor but the major causes of blight appear to be more related to environmental deficiencies. Extremely small lots, poor street maintenance and drainage, a lack of park and recreation space and a general mixture of land uses all combine to give the area a deteriorated quality.

Area 3 is located along California Avenue north of the industrial district on Lenox and Oakwood Avenues. Although less than a dozen homes are involved in this area its location near neighborhoods which are in good condition could tend to foster the spread of deterioration.

In each of these areas actions need to be taken to eliminate the causes and deter further spread of blight in the town. A number

of different approaches might be taken such as Urban Renewal, the Neighborhood Development Program which provides renewal funds on a year-by-year basis, independent action by the town itself, the encouragement of private rehabilitation through tax incentives and other forms of motivation or a combination of any or all of these techniques. Whatever steps are taken, however, should insure that housing is not eliminated without replacement and that the wishes and desires of the residents of these neighborhoods are considered fully and incorporated into the final rehabilitation and development plan.

In general, while the condition of housing in the town seems to be very good, population projections and anticipated demand indicate that additional housing must be developed in

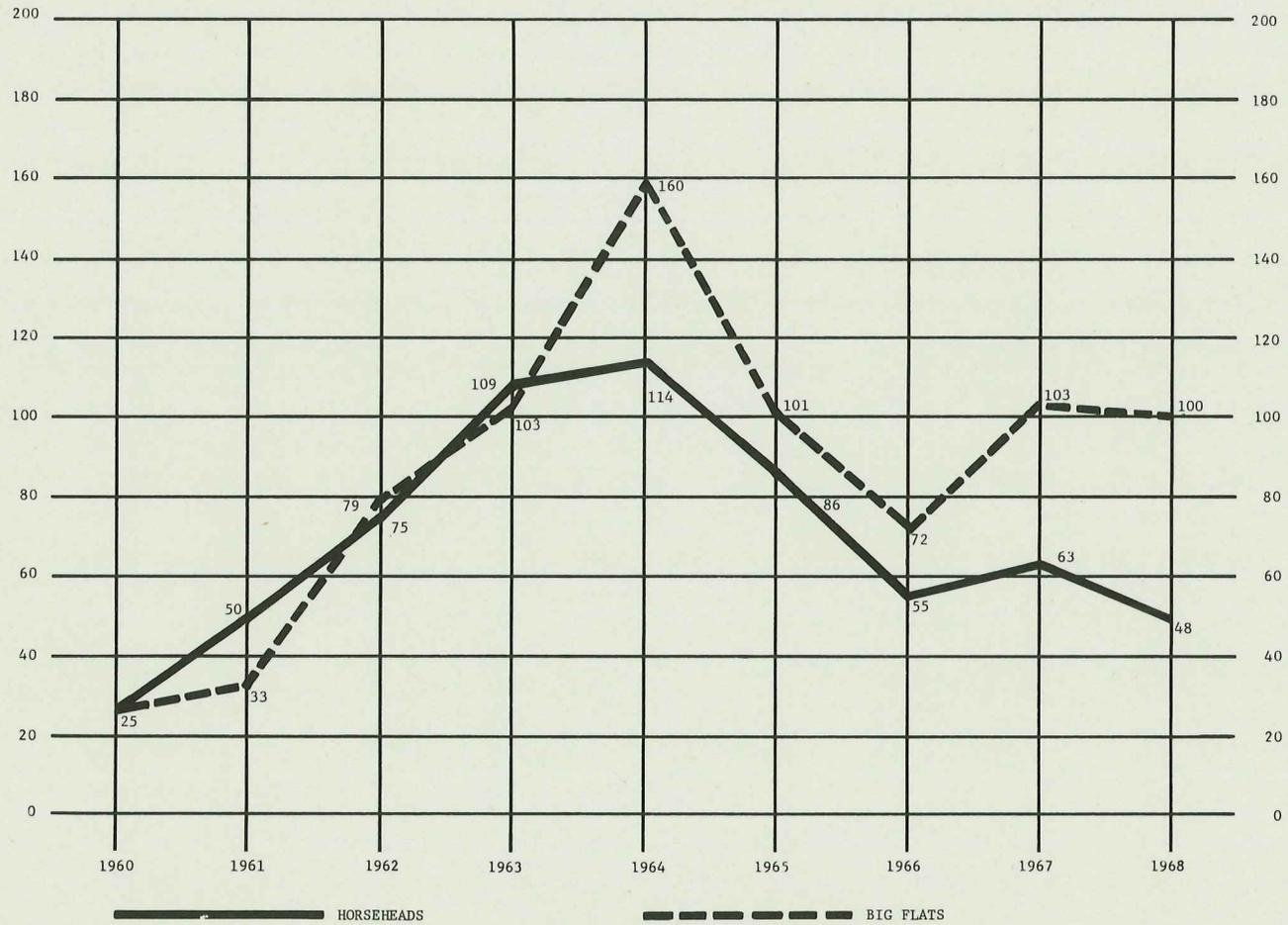
the town to serve a wide range of needs and income limits.

TABLE 3: HORSEHEADS AND BIG FLATS: HOUSING CHARACTERISTICS, 1960

Town Only	Total # of Units	Sound	Deteriorating			Dilap- idated	Sub- standard		# Occupied	Vacant		# Vacant and Avail.	% Vacant/ Avail.
			With All Plmbg.	Without Hot Water	Without Other Plmbg.		#	%		#	%		
Horseheads	1,955	1,745	115	5	21	69	95	4.8	1,878	77	3.9	38	1.9
Big Flats	1,101	862	108	10	37	84	131	11.8	1,006	95	8.6	36	3.2

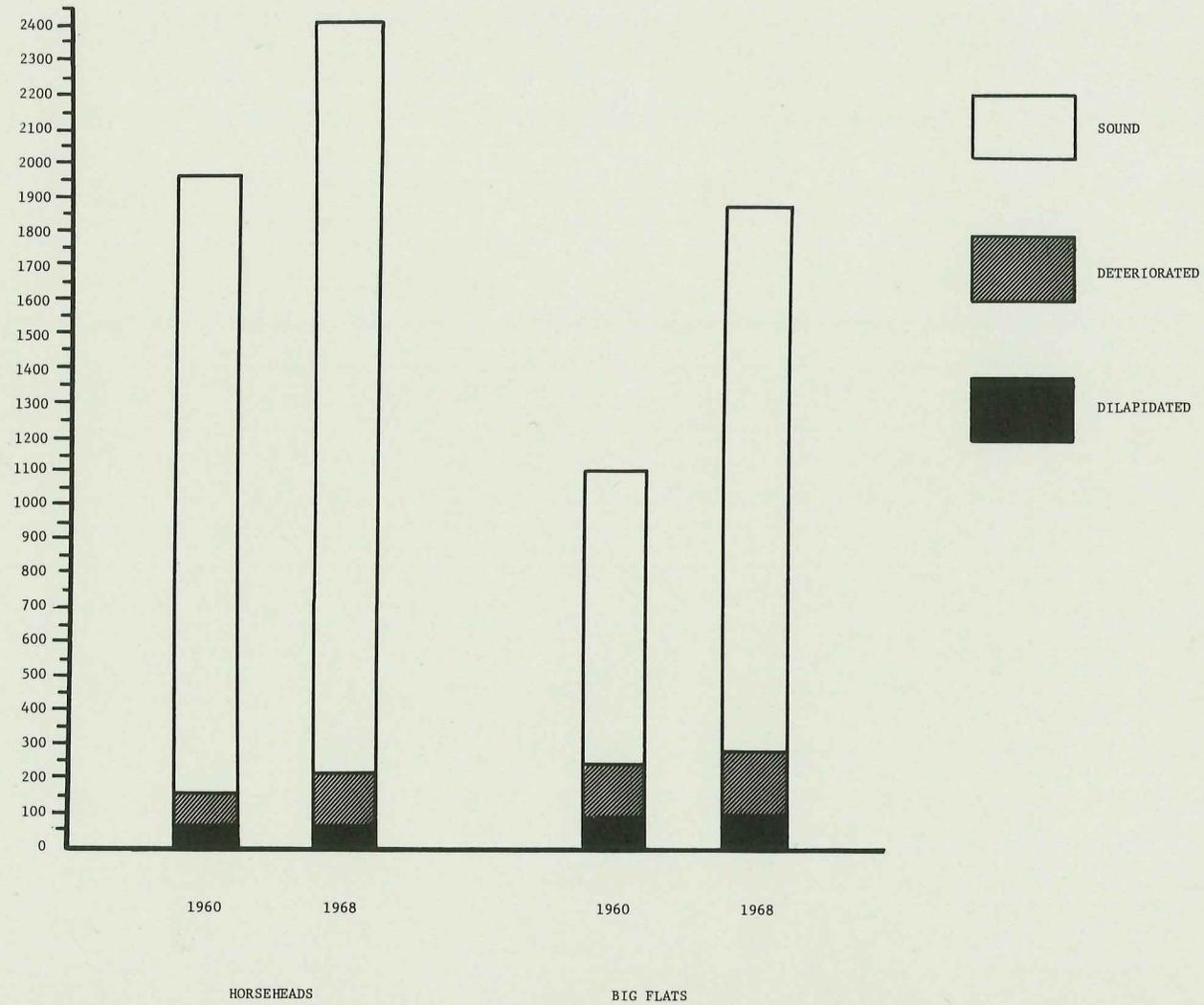
Source: U. S. Census of Housing, 1960.

FIGURE 1: NEW HOUSING UNITS: 1960 - 1968



SOURCE: BUILDING PERMITS

FIGURE 2: HOUSING CONDITION : 1960 & 1968



SOURCE: U.S. CENSUS OF HOUSING, 1960 AND FIELD SURVEY, 1968

POPULATION

Population

The study of population trends, past and future, is an important element in any planning study. How many people can be expected to live in the area? What will their demands be for community services? What will be the predominant age group? Elderly persons? School age children?

The adjacent towns of Horseheads and Big Flats promise to be two of the most rapidly growing communities in the Southern Tier. Recent population expansion in the Town of Big Flats has altered the character of the town from a primarily rural-agricultural community to a rapidly growing residential area of 4,900 persons with expanding industrial and commercial activity. The Town of Horseheads with 20,000 inhabitants is a more populous and developed community reflecting

the location of the two villages within its boundaries as well as a growing suburban area outside the urban centers.

The purpose of the population study is to chronicle and analyze past population development in the two towns. From these trends and other relevant current information, projections of population for the towns have been made. These projections have implications for needs of the community and, through knowledge of these implications, public officials can plan to accommodate the demands of the future.

The complete text of the Population Study, which was prepared by Economic Consultants Organization, Inc., may be found in the Appendix; the following paragraphs reflect only the highlights of the study.

Early Trends 1900-1950

At the beginning of the Twentieth Century, the Town of Big Flats was a sparsely populated agricultural community with 1,705 inhabitants while the Town of Horseheads was both an agricultural and industrial area with almost 70 percent of its 4,944 residents living in the Village of Horseheads and the Village of Elmira Heights. By 1930 those areas in Chemung County, including the Town of Horseheads, which had indigenous industry or were located adjacent to employment centers grew rapidly as a result of immigration from the rural areas. At the same time the Town of Big Flats evidenced heavy out-migration and recorded a decline in population from 1900 to 1920 but this trend reversed during the 20's as the number of inhabitants rose 15.5 percent to 1,679 persons by 1930.

Definite changes in the patterns of population growth appeared in the 1930's with one of the major influences being the Great Depression that was occurring throughout the nation. During this decade both towns experienced very slight population increases, less than half the level recorded in either of the prior two decades.

The economic uncertainties of the 1930's gave way to expansion in the 1940's as the needs of national defense and postwar demands on manufacturing facilities sent employment to record levels. The Town of Horseheads recorded a population growth of 26.3 percent during the 1940's as the number of people living in the town reached 11,100 by 1950. The impact of the suburban "push" of the late 1940's was evident in the Town of Big Flats which experienced a

34.3 percent increase from 1940 to 1950 exceeding its rate of growth in all previous periods.

Recent Trends 1950 - 1965

The trend toward suburbanization that emerged in the latter 1940's continued at an accelerated pace from 1950 to 1960. During this period the Town of Horseheads grew at a rate of 60.2 percent with in-migration of 3,810 persons accounting for over one-half of the total increase of 6,690. The Town of Big Flats grew faster in terms of population during the 1950's than it had during the 1940's with total in-migration amounting to 696 persons, again over one-half of the total increase of 1,205. As in the Town of Horseheads, in-migration was concentrated among adults in the 25-44 year age groups and their children aged

15 years and under. Figure 3 shows the age-sex distribution for both towns during this growth period.

In the early years of the 1960's the rate of population expansion slowed in the Town of Horseheads while increasing in the Town of Big Flats which, by 1965, had reached 4,900 persons. The more rapid population growth in Big Flats was, most probably, due in part to the availability of land at comparatively lower prices for residential development.

Projections

Many of the same factors that have influenced population growth in Horseheads and Big Flats in recent years are expected to continue to be influential in the coming decades.

In general, the diversified economic base within the two towns and in the Corning-Elmira Area is likely to continue to expand and provide new jobs for local residents as well as attract workers from outside the area. In terms of geography, access and potential growth of employment opportunities the two towns are likely to continue to attract new residents.

The population of the Town of Horseheads has been projected to reach 22,400 persons by 1970¹, 28,300 by 1980 and 35,700 by 1990².

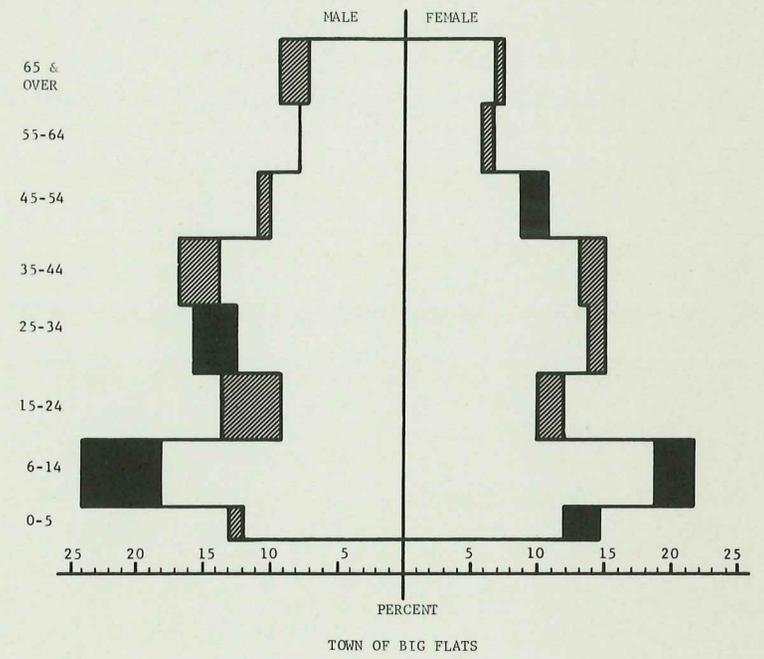
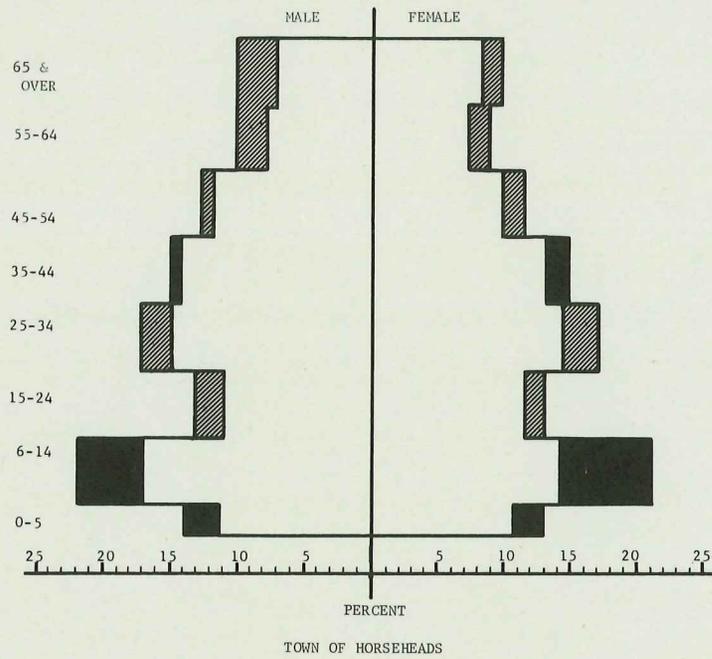
¹Preliminary 1970 Census reports show an increase of 1.2 percent between 1960-1970 from 17,808 persons to 20,006 in Horseheads and an increase of 79 percent from 3,665 to 6,564 persons in Big Flats.

²See Appendix A, Population Report - Town of Horseheads and Town of Big Flats for a description of the methodology used to make these projections.

Within the town, the vast majority of the population increase is expected to occur in the suburban areas outside the two villages. Population gains in the non-village areas of the town will probably be initially concentrated in single family residential development catering to upper middle income families.

Population levels in the Town of Big Flats are projected to grow over 60 percent per decade reaching approximately 17,500 persons by 1990. The type of residential development is likely to be almost exclusively single family units attracting primarily middle income families. Some apartment development is also likely in Big Flats although at a smaller scale than is anticipated in the Town of Horseheads.

FIGURE 3: AGE AND SEX DISTRIBUTION: 1950 & 1960

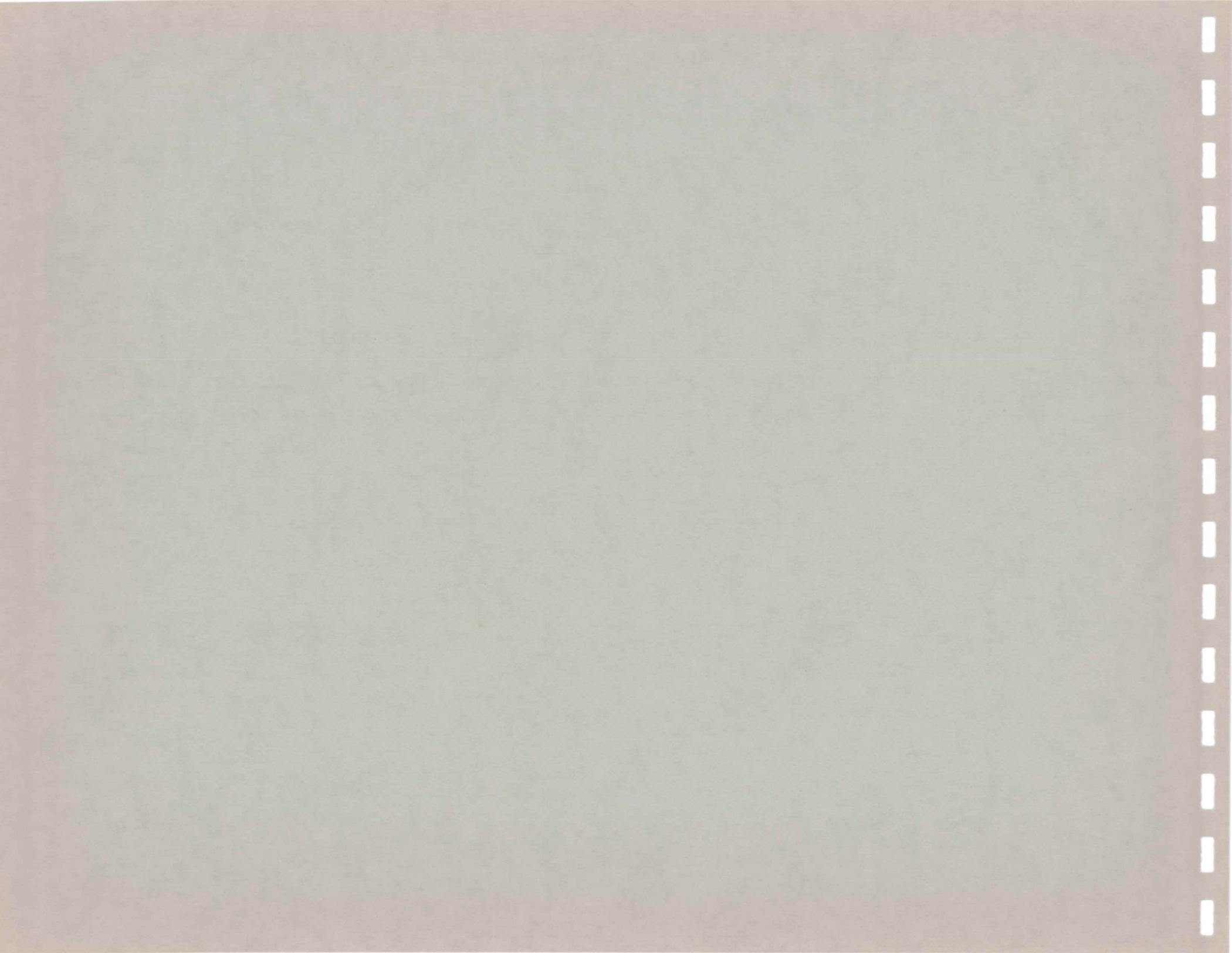


1950

1950-1960 INCREASE

1950-1960 DECREASE

ECONOMY



Economy

The economy of a community consists of all those activities which provide the employment and the income upon which the people of the community depend for their livelihood. The primary objective of a study of the economy of a given area is to develop information which will enable the members of the community to understand the sources of their material well-being, to recognize and evaluate those factors which are shaping the economic base at the present and will effect it in the future.

As part of an overall planning program, the economic study is related to changes in the size and characteristics of the population because income and jobs imply people. The economy is also closely allied to the local tax structure which deals with revenues

collected from homeowners and business firms and with expenditures for public services which benefit the community. Finally, there is a relationship between the use of land and the various kinds and amounts of economic activity which require land.

With the information provided in this economic base study, the planning boards, the officials of local government and the people of the Towns of Horseheads and Big Flats are in a better position to solve their problems, to make decisions about matters which will enlarge economic opportunities for local residents and, in this way, to raise the level of their economic welfare.

The complete text of the economic study prepared by Economic Consultants Organization, Inc. may be found in the Appendix; the following para-

graphs represent only the highlights of the study.

Regional Orientation

The Towns of Horseheads and Big Flats are part of what is defined by the New York State Department of Commerce as the Elmira Area, an economically diversified region which includes the five counties of Allegany, Chemung, Schuyler, Steuben and Tompkins. Manufacturing, agriculture and tourism are major components of the economic life of the Elmira Area as is higher education. Served by the Chemung County Airport, Routes 13, 14 and 17, truck transport service, bus lines and railroads, Chemung County is in an enviable position with respect to transportation facilities. With a wide variety of urban and rural amenities, Chemung County and the Towns of Horseheads and

Big Flats can expect continued growth and prosperity in the future.

Personal Income

Throughout the Elmira Area personal income has been improving over the past decade. Estimates prepared by the New York State Department of Commerce indicate that all counties in the Elmira Area have experienced an upward movement in personal income since 1957. In Chemung County this gain represented a 35 percent increase in per capita income from \$2,005 in 1957 to \$2,708 in 1966, one of the highest in the region. Although these estimates are not provided on a township basis, they can serve to identify the general trends in personal income in the area. As another evidence of economic welfare in the Elmira Area, average weekly

earnings of employees covered by unemployment insurance have risen from \$75.85 in 1955 to \$104.64 in 1965.

Family incomes in the Towns of Horseheads and Big Flats, as reported in the 1960 Census, showed that at that time families in the Town of Horseheads were, on the average, somewhat more prosperous than those in most of the nearby communities. Median income for the 4,604 families in the Town of Horseheads was \$6,170 as compared to \$5,679 in Big Flats, \$5,452 in the City of Elmira and \$5,758 in Chemung County as a whole. At the same time, only 17 percent of the families in the Town of Horseheads reported incomes below \$4,000 a year whereas 22 percent of the Big Flats families were in this category. Moreover Big Flats showed only 7.1 percent of families in the in-

come bracket of \$10,000 per year or more while in Horseheads this proportion was 10.5 percent. For both Big Flats and Horseheads, approximately 56 percent of all families reported an annual income of \$4,000 to \$10,000. Figure 4 shows the proportion of families in various income categories in both towns and in the comparison areas of Chemung County, the City of Elmira and the Village of Horseheads.

The Labor Force

In January 1969 the New York State Department of Labor reported a civilian labor force of 44,600 persons in the Elmira labor market area. Of this number about 1,700 or 3.7 percent of the total were unemployed. The bulk of the employed workers were in non-agricultural employment with approximately 16,500

in manufacturing and 22,400 in non-manufacturing industries. A minor number, 600, were working at a job related to agriculture.

The 1960 Census also provides some information concerning the labor force in Horseheads and Big Flats. The bulk of the gainfully employed persons in the two towns in 1960 were on the payrolls of private firms. For both towns, the principal source of income is manufacturing with 47 percent of the employed workers in Horseheads and 42 percent in Big Flats engaged in some sort of manufacturing activity. Other sources of income included services with 16 percent of all employment, retail trade with 12 percent and agriculture, utilities, construction activities and wholesale trade of limited significance as job-providers. Figure 5 shows the distribution of workers in various

employment categories in both towns and in the comparison areas of Chemung County, the City of Elmira and the Village of Horseheads.

Commuting Patterns

Chemung County has twice as many "in" commuters as "out" commuters. In 1960, about 4,600 persons entered the county each day to work while 2,350 residents of the county travelled to work in some other county.

Chemung draws workers from every direction but over half of the "in" commuters come from Pennsylvania. Residents of Chemung County, however, who commute to work in Steuben County--mainly to Corning Glass--are more than twice as numerous as residents of Steuben County who come to work in Chemung County.

While the 1960 Census does not supply

specific information on commuting patterns in the Towns of Horseheads and Big Flats a recent survey of local conditions describes the two communities as being criss-crossed by patterns of in-commuting and out-commuting. Residents of the towns work for various employers in Elmira, Elmira Heights and Corning and, at the same time, residents of Corning and Elmira enter Big Flats and Horseheads to work for the firms located there.

Sectors of the Economy

Agriculture

An extremely important trend in the agriculture of the Southern Tier is the decrease in land used for agricultural purposes. Between 1954 and 1964 the number of farms in Chemung County dropped from 1,090 to 602, a decrease

of 45 percent. At the same time, the farms which survived became larger. In 1964, the average farm in Chemung County consisted of 174 acres, as compared with 130 acres in 1954.

Dairying remains the predominant agricultural activity in Chemung County with net receipts of milk showing a continuous upward trend in recent years. Livestock production, vegetables and field crops are other important types of farming in the county; fruit production is insignificant.

While farming is not an important part of the economy of Horseheads and Big Flats, the farms which do continue to operate will most probably increase in size and investment in the future. Farmers in the area can also expect increased pressure to sell or convert farm lands for other types of uses as urban-

ization continues and land suitable for development becomes scarce.

Manufacturing

The economic base of the Towns of Horseheads and Big Flats is influenced strongly by the manufacturing complex existing in the Elmira-Corning Area. While the number of manufacturing establishments locally has changed little in recent years, there have been significant fluctuations in the value of manufacturing output and the level of employment. As an example, total manufacturing employment in Chemung County was 13,709 in 1963 as compared with 14,962 in 1958, a decrease of over 1,200 jobs during the five-year period. In Elmira and in the Village of Horseheads, however, total jobs in manufacturing were greater in 1963 than in 1958.

Manufacturing firms in the Horseheads-Big Flats area range from those with 2,000 or more employees to the smaller firms employing fewer than 25 people. The major employers, with approximately 500 or more persons on their payrolls include the Ann Page Division of the Atlantic & Pacific Tea Company, American Bridge, Bendix Corporation, Corning Glass Works, National Homes, Schweitzer Aircraft and the Westinghouse Electric Corporation. In the entire area there are presently 40 firms which fit into a manufacturing classification; of these, 13 are located in the Village of Horseheads, 12 are in the Village of Elmira Heights, 11 are in the Town of Big Flats and 4 are in the Town of Horseheads.

Retail Trade

Until recent years the bulk of retailing

activity in Chemung County has been concentrated in Downtown Elmira. New shopping areas are developing rapidly outside the city, however, and the focus of retailing is shifting to suburban plazas. This relative shift is also seen in total retail sales. While sales in Chemung County as a whole increased by 10 percent, going from \$123 million in 1958 to \$135 million in 1963, there was a 2 percent drop in retail sales in the City of Elmira. During the same period, the sales of retail stores in Horseheads increased by 60 percent from \$11 million to \$18 million.

Recent trends in commercial development in Chemung County are having a significant impact on the Horseheads-Big Flats area. Two of the largest shopping plazas in the region are located here; Grand Central Plaza in the

Village of Horseheads and The Mall on Route 17 in the Town of Big Flats. Grand Central is a 17-store retail complex providing 1,500 parking spaces; The Mall has 34 tenants and provides space for 2,294 cars.

In the Town of Horseheads, strip commercial development has occurred along the Old Ithaca Road with 15 retail and service establishments located along the 2¼ mile strip from Hanover Square to the junction of Route 13. In the Town of Big Flats commercial development (excluding The Mall) is concentrated principally in the hamlet of Big Flats.

Selected Services

Although service activity in the Elmira Area has much less economic significance than manufacturing or retailing, it does provide employment and produce income. In 1963 ap-

proximately 1,200 persons in Chemung County were engaged in service activities, an increase of 44 percent since 1958. During the same period while service receipts in the county rose 26 percent from \$11 million to \$13.9 million, the number of service establishments in Horseheads more than doubled and receipts jumped from \$477,000 to \$1.3 million, an increase of 181 percent.

While available census information does not give service receipts by type of establishment in Horseheads it is likely that some of the recent improvement is due to the new motels along Route 17.

Wholesale Trade

In terms of sales and employment wholesale trade in Chemung County is considerably more important than selected services. In 1963

there were about 1,800 persons engaged in wholesaling in the county with total sales amounting to over \$123 million as compared to 1958 sales of \$108 million. The bulk of improvement in wholesaling took place in the City of Elmira where sales rose from \$73 million in 1958 to \$85 million in 1963. Next to Elmira, Horseheads is the most important distribution center in Chemung County although there was only a slight improvement in wholesaling in Horseheads between 1958 and 1963. In the latter year, 13 wholesale establishments in Horseheads employed 135 persons and reported total sales of \$17.3 million as compared to \$16.9 million in 1958.

Conclusions

1. While agricultural decline in the Elmira Area may slow down in the decade ahead, it is extremely unlikely that farming will gain in

relative economic importance.

2. Manufacturing will continue to be the mainstay of the local economy in terms of jobs and income.

3. Expansion by existing firms will be related principally to developments in the national economy rather than to regional changes.

4. The arrival of new firms to the area will depend upon improvements in the regional highway network, improvements in public services and an aggressive recruiting effort on the part of private and public agencies.

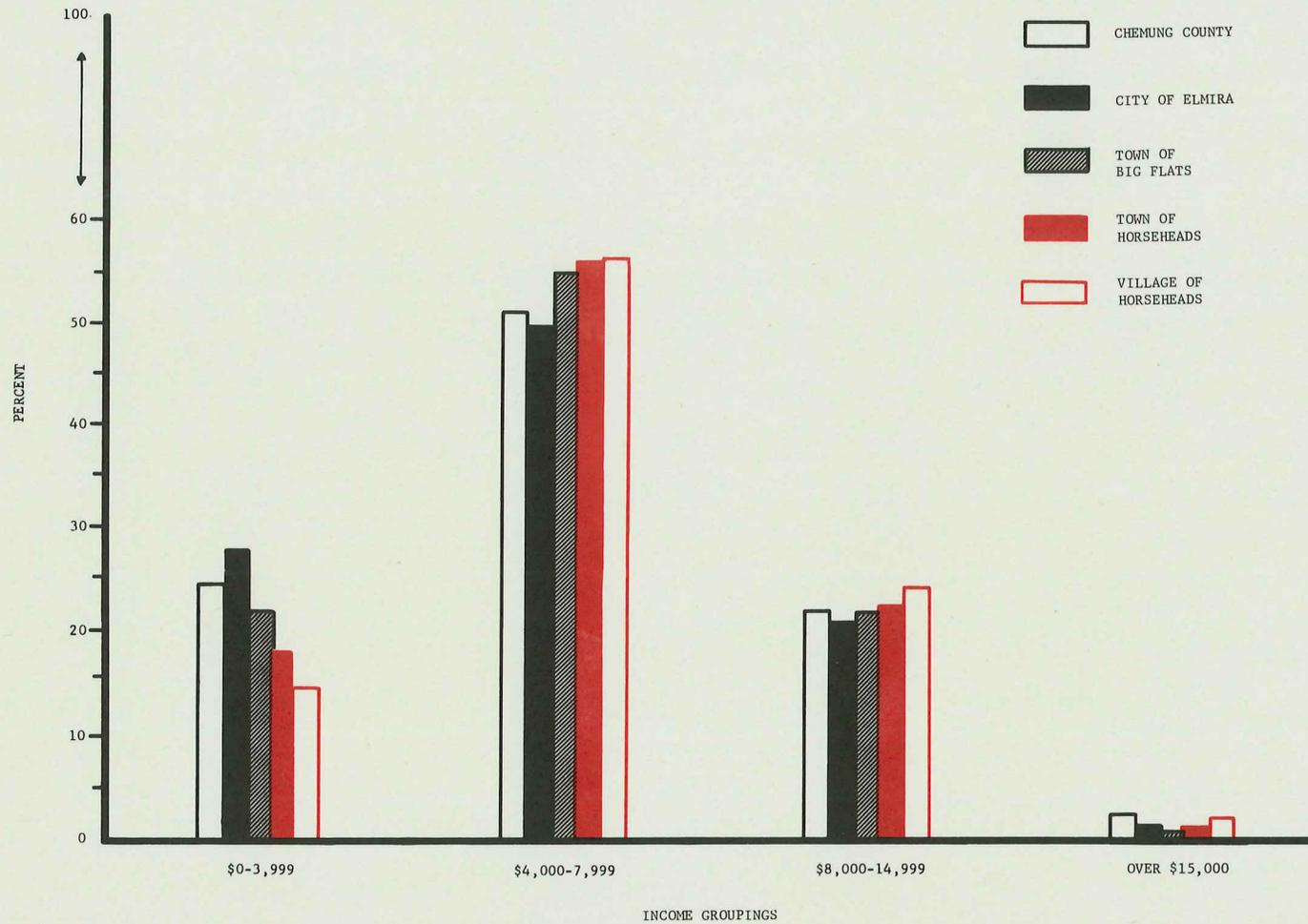
5. Recruitment efforts should be aimed at non-durable goods manufacturers in order to balance the strong concentration of durable goods firms in the area which are more subject to fluctuations in the national economy.

6. Further commercial expansion along

Route 17 is extremely likely and will most probably take the form of spot development unless strong land use controls are imposed.

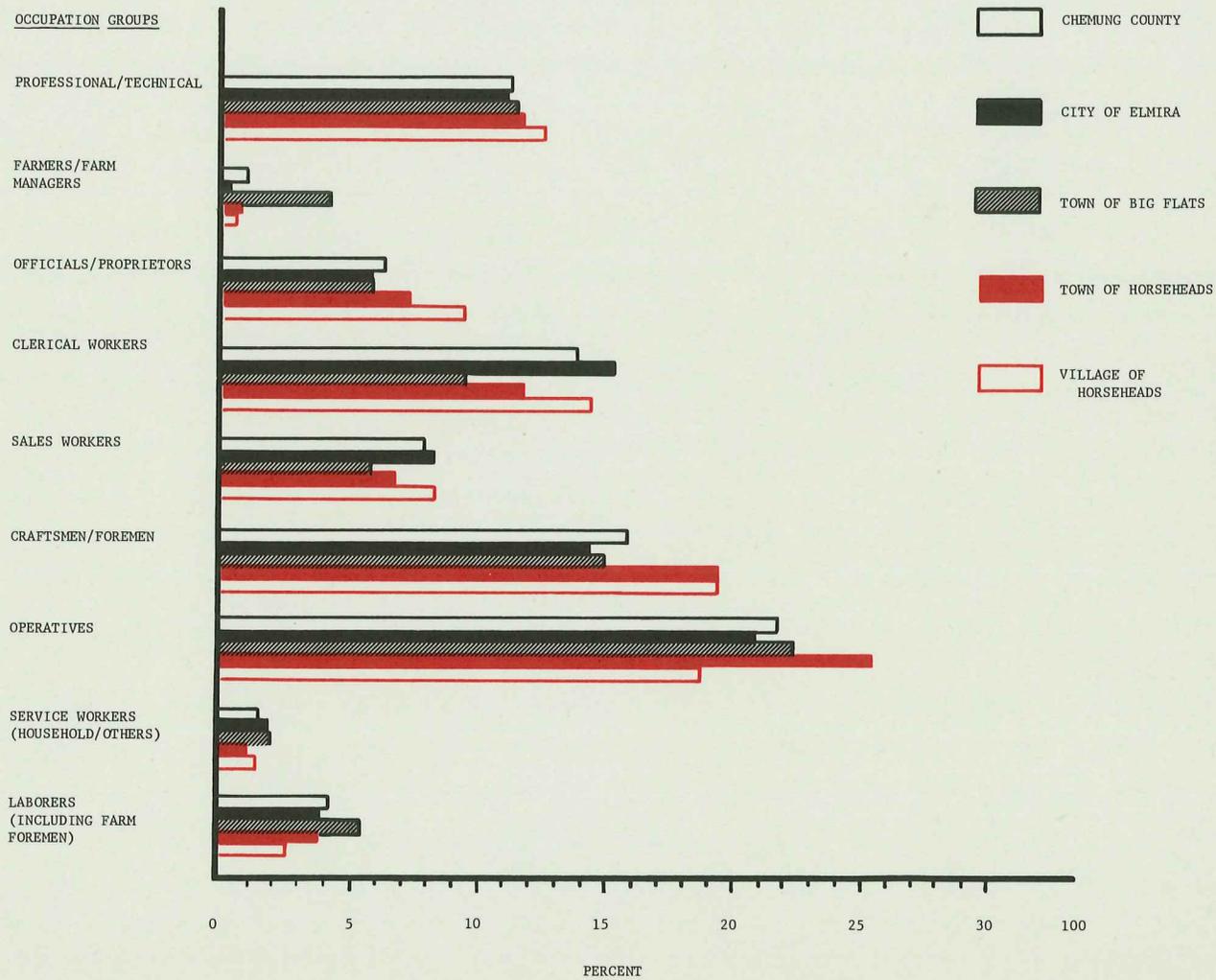
7. The expansion of existing industrial plants, the possible arrival of new firms, the construction of apartment buildings and housing subdivisions can well combine to create added demand for goods and services and an enlarged economic base in the Towns of Horseheads and Big Flats.

FIGURE 4: FAMILY INCOME: 1960



SOURCE: U.S. CENSUS OF POPULATION, 1960

FIGURE 5: OCCUPATIONAL DISTRIBUTION: 1960



SOURCE: U.S. CENSUS OF POPULATION, 1960

PUBLIC FACILITIES AND SERVICES

Water Supply

Water supply in the Town of Horseheads is obtained from three sources; the Village of Horseheads which has a public water system, the Elmira Water Board which serves the Victory Heights area, and individual wells. The village obtains its water from three drilled wells which produce a total of 3.5 million gallons per day. In addition to the wells there are three storage reservoirs at two locations; two concrete and masonry open reservoirs near Bowman Hill east of the village with a combined capacity of 509,000 gallons and a steel tank off the Watkins Road in the northern part of the village with a 2,000,000 gallon capacity. The Elmira Water Board system includes six reservoirs and three wells which feed into a filtration plant with a delivery capacity of about 12 million gallons per day.

The distribution system for the village water supply is primarily cast-iron with some asbestos-cement lines in the newer sections. With a few exceptions, sizes and conditions are adequate to meet present demand but larger mains would be required to carry fire flows to outlying areas, particularly those west of the village. All indications are that the Elmira Water Board distribution system is adequate to meet present demand. Map 7 shows the areas now served by these two public water systems.

Individual wells utilizing ground water sources serve the major portion of the town as the village system serves only a few outside customers along the supply mains from the wells north of the Holding Point. Ground water supplies are generally available and properly located wells can be expected to have a pumping

capacity of approximately 600 gallons per minute.

While the town does not have a public water supply system, attempts have been made to establish water districts outside the village as demands for service increased. This has not proved to be an economically feasible solution and it is doubtful that the village could supply significant quantities of water to the town without expansions and improvements to the system. The maximum possible service capacity of the present village system is 13,333 persons and, with a total town population projection of over 28,000 persons by 1980, it would be appropriate for the town to initiate steps to insure a supplementary water supply in the future.

A water supply study recently completed

for the Chemung County Planning Board recognized the growing need for public water systems and recommended a county-wide approach to the problem.¹ If the recommendations of this study were implemented, service could be provided to all developed areas of the town and to those areas which are expected to develop by the year 2020.

Specific recommendations of the county study which have important implications for Horseheads are the proposals to provide a public water supply in the Newtown Creek and Wygant Road areas and improved service to Victory Heights. Service to these areas is vital to the General Plan in terms of residential densities and the development of an industrial-recreational park facility.

¹Comprehensive Public Water Supply Study for Chemung County, New York. Hazen and Sawyer, April 1969.

ity south of the village. An additional consideration related to existing facilities is the location of the two village-owned wells north of the Holding Point. As the Transportation and Circulation section of this report notes, relocation of these wells will be necessary if the western alignment of the new Route 14 is selected.

In any event, a public water system throughout the valley areas of the town is a necessary prerequisite to development as outlined in the General Plan. Whether such a system is provided by a county agency, by the town itself or on a district basis, this vital utility must be supplied if the plan is to become a reality.

Sewage Disposal

The central valley area of the Town of Horseheads is served by the Chemung County Sewer District No. 1 which also includes parts of Elmira and the Villages of Elmira Heights and Horseheads. The sewage treatment plant provides secondary treatment by means of trickling filters and discharges effluent to Newtown Creek at Diven Creek.

In addition to the county sewer system there are two other pollution control facilities in the town, neither of which is public. Both, however, provide pre-treatment of food wastes which eventually feed into the county system. The Dairyman's League Co-Op Association in the Village of Horseheads provides activated sludge pre-treatment of milk wastes; the A & P plant has recently completed a pre-treatment facility

for the purpose of breaking down fresh food wastes before discharging into the county system. With the exception of these two plants, no special sewage treatment problems are apparent in the town.

The areas not included in the county sewer district are served by individual disposal systems primarily of the septic tank-tile field type. Although subsurface soil conditions in many parts of the town are not well-suited to this form of sewage disposal system, Health Department information indicates only scattered and occasional septic tank failures. Increased pressures for development, however, can aggravate these minor problems. In a recently completed comprehensive sewerage study for Chemung County the following statement was made:

"As development occurs, there is increasing danger of surface and ground waters in the county being contaminated by waste flows from both residential and industrial sources. This constitutes both a health menace, and a threat to the county's water resources, which in turn adversely affects recreational opportunities and hence the overall quality of life in the county. It is therefore important that sewerage systems be provided where the development in an area exceeds that which can be handled effectively by individual disposal systems."¹

On the basis of actual and anticipated growth this study recommended immediate extension of the existing Chemung County District No. 1 collection system into the Town of Horseheads and further extension into the Breesport area after 1990. Concomitant with these improvements the existing treatment plant with a capacity of 4.8 mgpd should be expanded in the near future to 7.5 mgpd then to

¹ Comprehensive Sewerage Study for Chemung County, New York. Hazen and Sawyer, March 1970.

12.5 mgpd after 1990.

Map 7 shows the areas of the town presently sewerred and indicates those areas where future service is proposed. Although the Holding Point and the residential neighborhood to the north are not included in the first phase of development (1970-1989) it seems reasonable to expect that demands for service here will force acceleration of this timetable.

There is a real need for a public sewage collection and treatment system in both Horseheads and Big Flats. The Chemung River, which receives almost all major discharges in Chemung County, supports a heavy algae growth and both Newtown and Sing Sing Creeks show many signs of pollution including oil films, sludge banks and suspended solids. Population projections for the county as a whole indicate

that most of the anticipated growth is expected to occur in the present population and industrial concentrations in the Elmira, Horseheads, Big Flats Valley. As pointed out previously in this report, public utilities are necessary if the objectives of the plan are to be realized. This is especially true in the case of sewers and, because of their importance, both towns should assign top priority to the development of a sanitary sewerage system.

Storm Drainage

In addition to the pressing need for expansion and improvements to the sanitary sewerage system, consideration should be given to the problems of storm drainage and the need for storm sewers in certain sections of the town. Under normal conditions rain water strikes the

surface of the land and is absorbed or filters into underground layers of soil and rock. When rainfall is exceptionally heavy or in areas where soil conditions are not conducive to good internal drainage the soil becomes saturated and the remaining water, called "surface run-off", stands on the surface in pools or is channeled into creeks and streams.

As urbanization occurs natural open land areas are replaced by streets, parking lots, roofs and sidewalks and are no longer available to receive and absorb storm waters. When this happens the hydrologic cycle is changed, much of the water previously absorbed becomes run-off and structures such as storm drains, retention basins and artificial drainage channels must be built to replace natural drainage courses.

In Horseheads the problem of surface run-

off is particularly critical in the area south of the village. Intensive development plus an almost total absence of grade results in surface ponding and minor flooding when heavy rains occur. In other sections of the town where less intensive development is taking place similar problems exist. Numerous pockets of slowly permeable soil, surface depressions and poor internal drainage capacity indicate a need for improved artificial drainageways.

The only existing drainage structures in the town are those installed by the state in conjunction with highway construction. In order to supplement these facilities, the town should undertake a program of drainage improvement in areas which are already built-up and insist upon the protection of natural drainageways and the provision of adequate artificial stormwater

drainage as additional development occurs. Whenever possible natural stream channels should be preserved and enhanced so that a functional as well as aesthetic solution to the drainage problem is developed. In areas where the use of natural channels is not possible storm sewer systems should be provided. As future subdivision of land occurs in those areas feeling intensive development pressures, subdivision review will provide an excellent opportunity to provide for adequate storm drainage. If drainage problems which are sure to accompany increased development are to be avoided this subdivision review opportunity should be used to the fullest.

Refuse Disposal

Refuse collection in the Town of Horseheads

is by contract with private operators with disposal at a site owned by the village and operated on a joint basis with the town. Compaction and covering with earth fill is done on a regular schedule as refuse arrives using the area cover landfill technique. The site appears to be reasonably well-operated, an observation noted in State Health Department reports and in a recently completed solid waste disposal study for Chemung County by O'Brien and Gere, but some unsightly conditions do exist and additional rodent control programs should be implemented.

Operated since 1946, the total area of the landfill is 20 acres, all of which is presently being used for disposal purposes. With deposits of over 15,000 tons of refuse each year the life expectancy of the site is less than two years. By 1972 the area will be filled and

cover material exhausted, a timetable which makes the identification of alternative methods of refuse disposal imperative.

The findings of the county refuse study demonstrate that the formation of a county-wide solid waste disposal district is the most efficient and feasible alternative. The proposed district would provide refuse disposal service for all municipalities at several centrally located disposal facilities which would permit the closing of existing dumps which contravene Health Department standards. While the Horseheads facility does not fall into this category, participation in the proposed district would eliminate the burden of purchase and operation of a new landfill site by the town.

As Figure 7 shows the cumulative demand for

landfill acreage is rapidly increasing throughout the study area. Both Horseheads and Big Flats as well as Chemung County as a whole must cope with this problem in the immediate future if the needs of the area are to be met.

Education

Primary and secondary education in the Towns of Horseheads and Big Flats is provided by the Horseheads Central School District. The district includes eleven schools, ten of which are located in the Town and Village of Horseheads with one central school facility located in the hamlet of Big Flats. Most of the students within the district attend one of these schools and most come from the village and the two towns. There are relatively few students in the system from the Towns of Catlin and Veteran. A few

students in both Horseheads and Big Flats go into the Elmira Heights system and a very few on the western border of Big Flats attend school in the Town of Corning. As Table 4 shows, during the 1968-69 school year, total enrollment in the Horseheads Central School District was 7,524 pupils. Of this number 904 attended the Big Flats school with the remaining 6,620 attending school in Horseheads.

In addition to the primary and secondary school facilities, the Board of Cooperative Education Services operates a program at the Vocational Technical School on Philo Road. The Horseheads district contributes 400 students to the BOCES program each day with the students spending one-half day at the BOCES school and one-half day at their home school. The BOCES program appears to be well coordinated with

the needs of local industry and for this reason attracts wide participation.

All of the eleven school buildings included within the district are in reasonably good condition and are relatively new with the exception of the Breesport school built in 1924 and the ninth grade building in the Village of Horseheads built in 1927. The remaining schools have been built since 1954 with the most recent additions being the Sing Sing Elementary and Sing Sing Junior High Schools constructed in 1969. Site sizes at all schools conform to State Education Department standards with the exception of the Broad Street School and the Breesport School, both of which have minor site deficiencies.

The curriculum offered by the school district is innovative and includes a number of

special programs such as a four tract system within grades, Head Start and remedial reading as well as special classes designed to accommodate the needs of slow learners and educable children. In addition to these programs the district also offers a wide range of guidance services aimed primarily at 7th and 12th grade students. The nine guidance counselors employed by the district concern themselves with scheduling, parental conferences, college entrance service and advice on an array of normal academic, social and emotional problems. One major thrust of the guidance program is aimed at an attempt to bridge the gap between the primary and secondary grades. As students enter the 7th grade level, independent study opportunities are introduced and the attempt is made to make this transition as smooth as

possible through the various guidance programs.

Students within the Horseheads School District also profit by the area's proximity to several two and four-year colleges including Cornell University, Ithaca College, Elmira College and Corning Community College. Approximately 55 percent of all graduating seniors go on to some form of higher education with 30 percent of the high school graduates attending four-year colleges and 25 percent entering two-year college programs.

A major deficiency noted in the school district is the degree of overcrowding in all school buildings with the exception of the Senior High School but the school district administrators have indicated that completion of the new elementary and junior high schools on Sing Sing Road may permit some restructuring of the educational

system to overcome this deficiency. Although there is no indication that a shortage of available teachers is a problem in the Horseheads-Big Flats area, pupil-teacher ratios in all schools within the district appear to be relatively high. Using a generally accepted standard of 20 pupils to each teacher, ratios in the Horseheads schools ranging from 19 to 1 to 26 to 1 indicate a need for additional staffing. The projected ratio in the new Sing Sing Elementary School is exceptionally high at 35 to 1.

Because of personnel shortages the Horseheads district has not been able to take full advantage of the many Federal assistance programs for education although several programs are presently being utilized. These include funding under Title I of the National Education

Act of the Head Start and Remedial Reading programs and funding under Title II for support of the library at the Breesport School. The district also participates in the lunch program and the surplus food program with free hot lunches provided by the Federal government through the New York State Education Department. In 1967 and 1968 the expenditure for the hot lunch program was \$1,444. Estimated expenditures for 1968 to 1969 were \$3,769. No other subsidy programs are being used by the district at the present time.

According to population projections prepared as a part of this report and with projections provided by the school district administration, it would appear that approximately 400 students will enter the Horseheads system over the next few years. If this anticipated

growth is to be accommodated the Horseheads Central School District will undoubtedly need to program an almost continuous plan for expansion of existing facilities, purchase of new sites and construction of new school facilities throughout the district. Because of dramatic changes in population growth indicated in early 1970 population reports, the school board should continue to regularly reevaluate its position and relate projections to the most currently available data. The Horseheads district can be expected to grow, however, and the purchase of new school sites should have a high priority for the Board of Education.

Recreation

Chemung County, particularly through the Horseheads-Big Flats Valley, offers spectacular

opportunities for the development of outdoor recreation facilities. Dramatic topography, streams and large areas of wooded land combine to make possible the development of an open space system ranging from small neighborhood parks and playgrounds to major facilities serving the entire region.

At the present time the Town of Horseheads has only one small neighborhood park -- a three acre plot on the north side of Pineview Drive near its intersection with Route 328. (See Map 7.) This facility is the only outdoor recreation area owned by the town and is too small to serve any but the immediate neighborhood. The town does sponsor recreation programs at the Breesport, Ridge Road and Lenox Avenue Elementary Schools which provide general crafts instruction and a variety of activities during the summer months.

Several private recreation facilities located in the town such as the YMCA camp and the Rod and Gun Club are available for special groups.

The Village of Horseheads owns and operates several recreation facilities including a 25 acre community park with playfields, tennis courts and a swimming pool and four small neighborhood parks totaling approximately six acres. The village also sponsors both summer and winter recreation programs which include swimming instruction, supervised dances and craft instruction as well as organized softball and basketball leagues.

State parks and forest areas near Horseheads include Newtown Battlefield with 330 acres developed for camping, picnicking and hiking, Catlin and Chemung Forests with 1,190 undeveloped acres and Catherine Creek which

provides 1.45 miles of public fishing access off Route 14 between Pine Valley and Millport.

County recreation facilities include Harris Hill Park with over 283 acres developed for picnicking, swimming, winter sports and playground activities. Harris Hill is also the major sail plane facility in the eastern United States and, as such, is a major tourist attraction as well as a recreation area for local residents. The county also owns and operates the 156 acre Fairgrounds south of the Village of Horseheads and three county forests totaling 210 acres in the Towns of Erin and Veteran and in the hamlet of Breesport. In addition to these county facilities the 18-hole Mark Twain Golf Course, owned and maintained by the City of Elmira, is located in the Town of Horseheads.

As this listing of recreation areas shows, large open space reservations and specialized recreation facilities are available in and near the Town of Horseheads. Facilities which are seriously lacking, however, are the small neighborhood-serving parks and playgrounds and larger community parks which can be used by all residents of the town on a regular basis. While there is no completely agreed upon standard for the provision of recreation land, several types of facility should be considered. Generally speaking, every large concentration of homes existing or expected in the town should be served by a small park and playfield of three to five acres for each 1,000 persons. In addition, community parks to serve the entire population should be considered at a rate of approximately 5-10 acres per 1,000 persons.

Land set aside for open space or conservation does not have any minimum standard for size since it is related to the intrinsic value of protecting a natural resource for future generations.

As Figure 8 shows, neighborhood and community park space is badly needed in Horseheads. In 1960 the need for neighborhood parks in the town alone was approximately 35 acres; by 1970 this need has increased to 50 acres with only three acres provided. When the village's needs are added to this the deficiency becomes even greater. The need for larger parks is also apparent from Figure 8. In 1960 approximately 68 acres of community park space was needed to serve town residents and an additional 110 acres required to accommodate village needs. The town has no community park and the 25 acre village park does

not begin to meet the need for this type of facility.

In a rapidly growing community such as Horseheads the preservation of open space for recreational purposes is critical. If suitable park sites are not identified and reserved the community runs the very real danger of total development of the valley without adequate recreation facilities.

Fire Protection

Fire protection in the Town of Horseheads is provided by two fire departments staffed primarily by volunteers and two independent volunteer companies. The two departments, Horseheads and Elmira Heights, provide service to the Village of Horseheads and to the urbanized area between the two villages. The volun-

teer companies, Town and Country and Breesport Fire District No. 1, provide service to all other areas of the town. Fire Protection District No. 5 in the eastern sector of the town contracts with District No. 1 for service. Each of these different organizational forms, whether department, district or protection district, is chartered by New York State law and has its own commissioners and administrative arrangement. The operational boundaries of each are shown on Map 7.

The Horseheads Fire Department and Town and Country Fire District work as one organization providing above average fire protection for a community almost entirely dependent on volunteer services. This coordinated effort plus a close working relationship with the Elmira Heights Fire Department has resulted in

minimum fire losses in the community.

In addition to the rather impressive degree of administrative capability shown by the various fire fighting organizations in Horseheads, the town also profits from an advanced communications system. Direct radio communication is available between all fire stations, police and rescue units as well as a radio alert system in each volunteer's home. With this inter-related communications system, volunteers can report directly to the location of a fire rather than to a fire station thereby saving valuable time.

The major deficiency in the Horseheads fire protection system is related to the water distribution system rather than to personnel or equipment. A report of the New York Fire Insurance Rating Organization in 1966 called

attention to this deficiency by noting that improvements in the fire department's capabilities were offset by a decline in the ability of the water distribution system to provide adequate fire flows.

In the eastern portion of the town Fire District No. 1 and Fire Protection District No. 5 have very little contact with Horseheads, Elmira Heights or Town and Country. Fire protection in this portion of the town poses very different problems and, except for participation in the county-wide mutual aid system, little interaction occurs between the two basic systems.

Vehicles and equipment of various types are owned by the fire departments and companies operating in the area including pumpers, tankers and an aerial ladder truck. Specialized equipment includes an exceptionally well-equipped

emergency vehicle and a high expansion foam truck. In addition to equipment purchase and maintenance, the companies build and own their own buildings which are paid for through fund raising activities and through contract payments from the town.

The adequacy of a fire protection system is dependent, however, not only on the manpower and equipment available but also on the density and type of development served, the land area serviced by a station, the type and condition of the road system, and local topography. In a town such as Horseheads several types of areas must be considered: the High Value District, represented by the heavily urbanized area between the two villages; the Residential District, represented by those areas of the town which are basically residential in char-

acter; and, the Scattered Development District, represented by the hill areas where little development has occurred. In general, fire companies should be located within 3/4 mile of any point in a High Value District, 1½ miles in a Residential District and 3 miles in a district where scattered development is the pattern.

In some areas of Horseheads these standards are not met, specifically in the high value district between the two villages and in the residential areas north and west of the village. If residential development continues to proliferate north of Wygant Road thought should be given to the location of another fire station to serve this section of the town. In any event, serious consideration should be given to improving fire protection services in the

Grand Central-Oakwood Avenue area.

TABLE 4: HORSEHEADS CENTRAL SCHOOL DISTRICT STATISTICS - 1968-1969

Name of School	Approx. Year Built	Cap.	Enrollment			# of Teachers	Total Prof. Staff	Site Size Acres	# of Grad. Seniors 1968	Per/ Pupil Oper. Costs
			Elem.	Jr. High	Sr. High					
Gardner Road	1966	800	827			36	42	15		
Broad Street	1958	800	844			35	39	12.5		
Center Street	1954	800	807			34	38	15		
Ridge Road	1954	800	829			35	39	16		
Big Flats	1954	800	904			35	41	15		
Breesport	1924	200	221			9	1	4.5		
9th Grade Building	1927	800	873			44	50		2	
Sing Sing Elementary ¹	1969	800				21	25	14	3	
Sing Sing Junior High ¹	1969	1000				38	47	14	3	
Horseheads Junior High	1963	1000		1132		59	67			
Horseheads Senior High	1956	1100			1087	54	63	33	381	
									\$778	

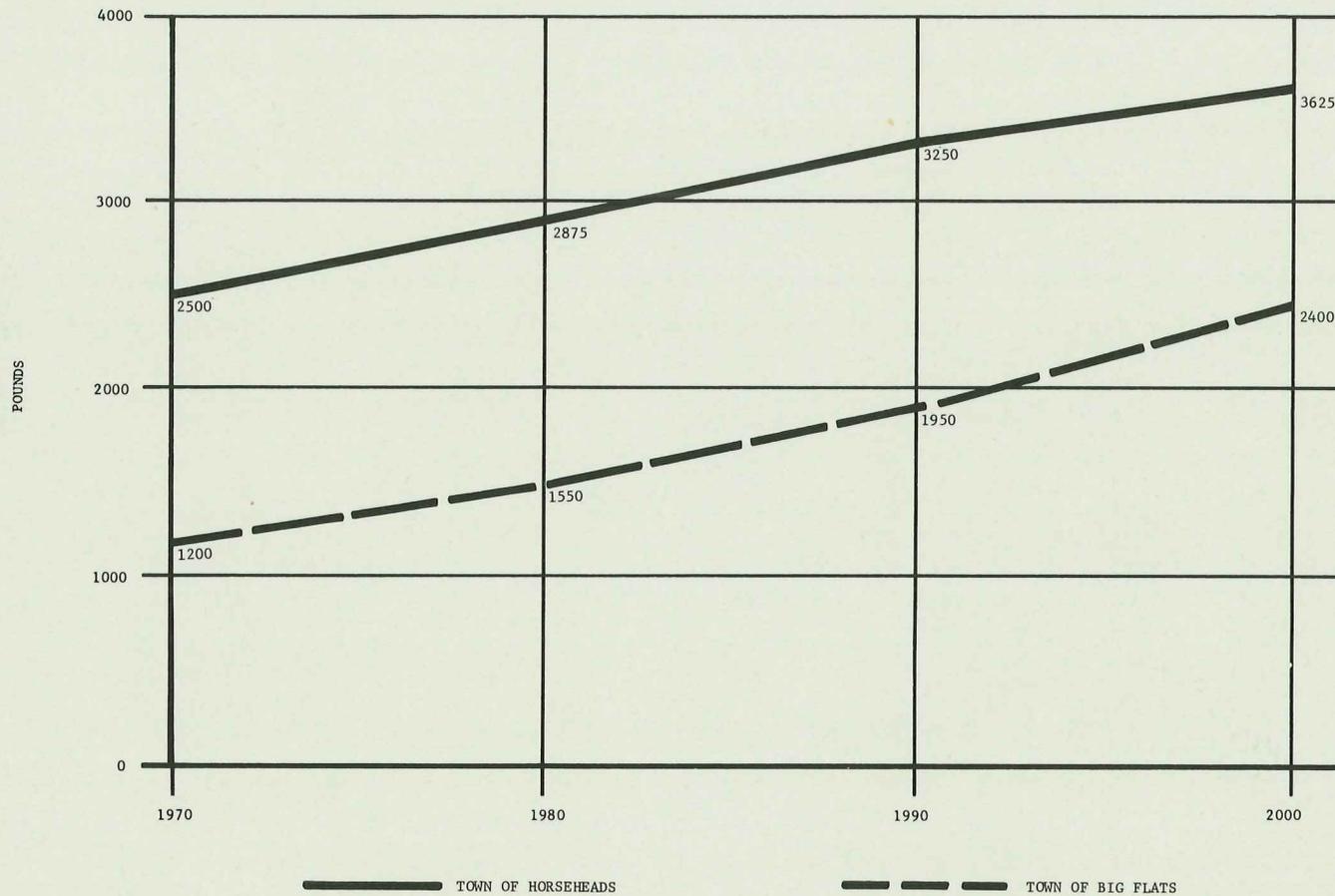
¹To be opened in 1970.

²Part of Jr.-Sr. High Complex - shares 33 acre site.

³Adjacent site is 150 acres.

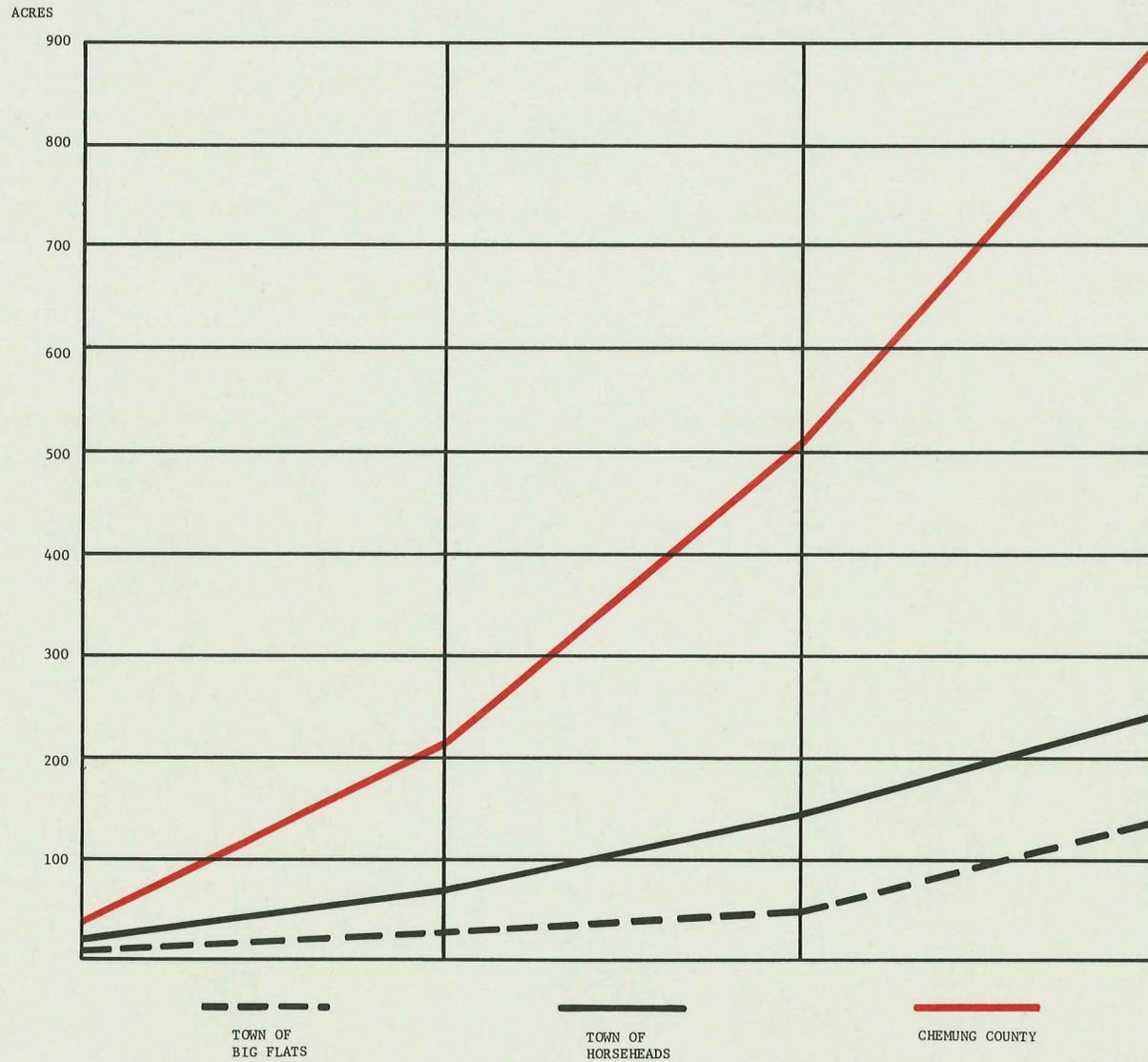
Source: Community Resources, The New York State Appalachian Region, Phase II; prepared by Egner & Niederkorn Associates, Inc., 1970, p. 234.

FIGURE 6: ANNUAL REFUSE PRODUCTION IN POUNDS PER CAPITA



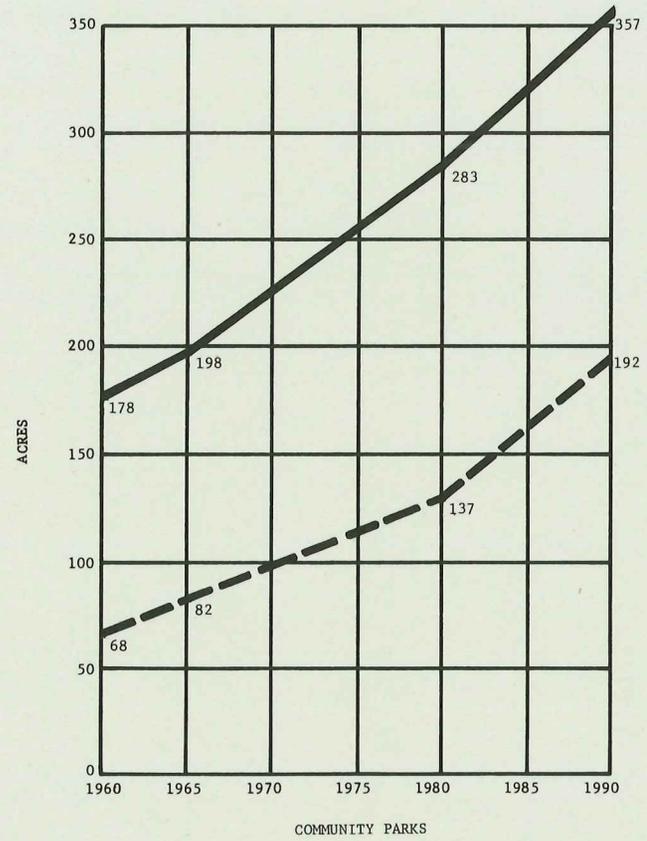
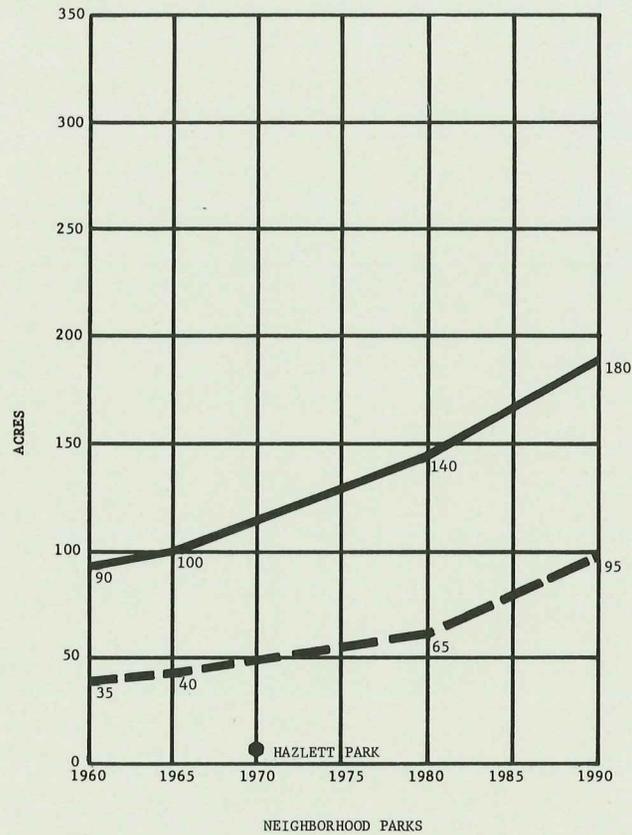
SOURCE: CHEMUNG COUNTY SOLID WASTE DISPOSAL STUDY, O'BRIAN & GERE, 1969

FIGURE 7: CUMULATIVE LANDFILL AREA REQUIREMENTS



SOURCE: CHEMUNG COUNTY SOLID WASTE DISPOSAL STUDY, O BRIAN & GERE, 1969

FIGURE 8: RECREATION NEEDS: 1960 - 1990



———— TOWN AND VILLAGE

- - - - TOWN ONLY

SOURCE: ESTIMATES BASED ON POPULATION PROJECTIONS AND RECREATION STANDARDS

TOWN OF HORSEHEADS NEW YORK

7. COMMUNITY FACILITIES

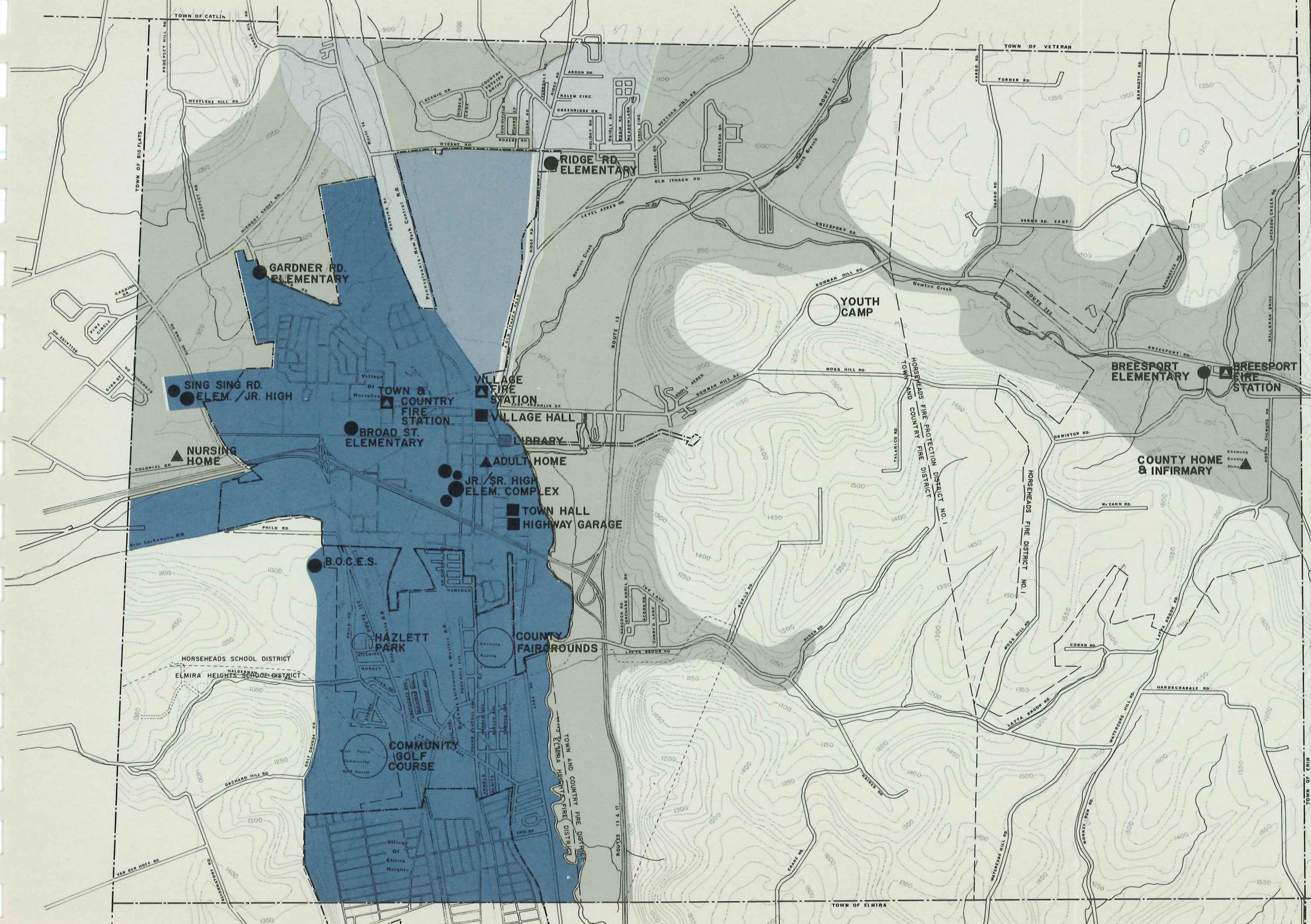
- PARK
- SCHOOL
- ▣ LIBRARY
- ▲ FIRE STATION
- PUBLIC BUILDING
- ▲ HEALTH FACILITY
- ▭ EXISTING SEWER SERVICE
- ▭ EXISTING WATER SERVICE
- ▭ EXISTING SEWER & WATER SERVICE
- ▭ PROPOSED SERVICE LIMITS:
SEWER & WATER

SOURCE: FIELD SURVEY, EGNER & NIEDERKORN ASSOC., INC. 1968
COMPREHENSIVE WATER & SEWERAGE STUDIES, HAZEN & SAWYER, FEB. 1969



prepared by:
EGNER & NIEDERKORN ASSOC., INC.
PLANNING CONSULTANTS

THE PREPARATION OF THIS MAP FOR THE NEW YORK STATE OFFICE OF PLANNING COORDINATION WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AND IN PART BY THE STATE OF NEW YORK UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION "D" OF THE HOUSING ACT OF 1954, AS AMENDED.



CIRCULATION AND TRANSPORTATION

Circulation and Transportation

Over the past fifty years there have been few, if any, technological advances that have affected the patterns of community change and development as much as the automobile. Increased mobility has been a major contributor to the suburbanization of America and has resulted in an elaborate and growing system of streets and highways that has had a profound effect on the shape and form of the landscape itself.

Horseheads and Big Flats, like all other prospering communities in the state, are faced with growing traffic problems, increased congestion and the prospects of many more cars and still more acres of land paved over to accommodate this highly prized, independent mode of transportation. As piecemeal development occurs over an extended period of time an orderly land use pattern can emerge only if

there is an overall plan to guide the layout and shape of the major elements of the circulation system. In the Horseheads-Big Flats Valley many pieces of an area-wide circulation system have already been put in place. This section of the planning study deals with an examination of factors which characterize this existing circulation and transportation network. Recommendations for additions to or modifications of this road system are based on an evaluation of its effectiveness today and its adequacy to meet the circulation needs of the future.

Existing Roads

The existing road net in the planning area is varied and in many places quite complex. Topography has had a considerable effect on road building in the past just as it does today

and the major valleys of the area have been used to provide relatively easy passage through the otherwise difficult terrain. Chief among these are the broad expanses of the Big Flats and Elmira-Horseheads Valleys. These two areas, flowing together around the north nose of Harris Hill, provide the setting for most of the existing and expected transportation network of Chemung County.

One of the major components of this network is the Route 17 arterial--a four-lane controlled access highway that will eventually tie the Southern Tier counties together and connect New York City with Erie, Pennsylvania. Route 17 bisects the Big Flats Valley and the Village of Horseheads and has been one of the main catalysts for rapid growth in both these communities. The New York State Department of

Circulation and Transportation is well advanced in its program for improvement of this route in Chemung County and has worked closely with local planning agencies in the development of final alternatives. New interchanges and realignment of portions of the arterial are proposed. State and local planners concur on the building of two Route 17 interchanges in Big Flats in addition to the one existing at Chambers Road. One of these interchanges will be just west of Kahler Road and will eventually provide a direct connection with the proposed County Circumferential. A second interchange will be built at Olcott Road just west of the hamlet of Big Flats. This distribution of contact points with the local road system is expected to provide excellent service for the Big Flats Valley and to make available maximum opportunity to use the arterial. The two new inter-

changes will be connected by service roads on each side of, and roughly parallel to, Route 17. In addition an overpass will be constructed at Hillview Road and possibly at Sing Sing Road so that these important traffic carriers will not be cut off. All other access with Route 17 will be eliminated.

Construction is now underway on the first stage of a realignment of Route 17 through the Village of Horseheads. This is necessary because grade crossings and uncontrolled access have produced sufficient congestion to make this four-lane highway ineffective as a carrier of high volume traffic. A new and complicated interchange is being constructed at Westinghouse Circle to handle heavy vehicle loads created at this point by A&P, Westinghouse and Route 328. A right-of-way south of the present Route 17

will be acquired so that a new controlled access highway can be built through the village. High acquisition and relocation costs in this area have complicated the selection of a final alignment. Even so, the entire Route 17 project is scheduled for completion in 1974 according to highway officials.

Other major state involvements in the planning area center on the reconstruction of Route 14 to the north and the provision of a north-south arterial through the heavily built-up portions of the Elmira-Horseheads Valley. Route 14 is to be rebuilt on a new right-of-way from Route 17 in Horseheads to Watkins Glen. The initial construction will be two lanes with grade crossings but the need for two additional lanes and grade separated interchanges is anticipated in the design.

Alternate locations of Route 14 in Horseheads lie on each side of the Holding Point. The strongest arguments can be made for a western location since this will minimize damage to the Holding Point as a quality industrial site and at the same time permit easy access at both ends of the Point. In addition there is limited disruption of the residential neighborhood emerging north of Wygant Road.

Some problems with a western location for Route 14 are caused by the existence of village water wells near Wygant Road and by the headwaters of Catherine Creek which have produced swampy conditions in this area. Studies have been made which indicate that a more advantageous location can be found for village wells and this problem is considered to be minimal. Destruction of a valuable ecological asset

often associated with swamps is a more serious problem, however, which should be treated with great concern. The highway should be moved out of the swamp as soon as possible after it crosses Wygant Road.

An acceptable location for the north-south arterial has been under discussion for about 10 years. Heavy traffic movement at peak hours in a north-south direction has seriously exceeded the capacity of major streets in the Elmira-Horseheads Valley. This is especially critical at the bridge crossings of the Chemung River in Elmira. The proposed north-south arterial is intended to relieve this situation by providing a relatively high-speed traffic carrier from Southport to an intersection with Route 17 in Horseheads. A road of this magnitude passing through a built-up area raises

a number of important questions: 1) If the right-of-way is to completely or partially coincide with existing streets, will access be controlled by purchase of adjacent properties? 2) If not, what effect will the highway and adjacent development have on each other? 3) If sufficient direct east-west routes are provided to make connections with Route 17 as it passes down the east edge of the valley, will the north-south arterial still be needed?

Answers to these questions have considerable bearing on the justification for this road.

State Route 13 also passes through the planning area and connects Route 17 with interstate Route 81 at Cortland. This road has been improved between Elmira and Ithaca and is being strongly suggested as the logical route of the proposed Appalachian highway. Federal

legislative approval to establish a corridor for the Appalachian highway still must be obtained for the New York section.

New construction on state highways in the planning area represents a substantial investment and a major element in the overall circulation network. The improvements contemplated should facilitate traffic movement in the area and stimulate additional land development in years to come.

County and town roads constitute most of the rest of the Horseheads-Big Flats circulation system. (See Map 8.) Horseheads has approximately 53 miles of town roads. About half of these roads have a dirt surface and the rest have stone and oil or a Koppers mix surface. The town has a regular program for improving and upgrading its road system.

Big Flats has approximately 67 miles of town roads. Some of these, especially in the hill areas, are very narrow with a dirt surface and high crown. The town highway department is also responsible for park maintenance and has suffered from insufficient manpower to accomplish the work program it would like to undertake.

Both communities have had a substantial increase in the amount of town roads to be maintained as a result of subdivision activity in recent years. In Horseheads this has been concentrated north of Wygant Road and on the little remaining vacant land suitable for development between Lake Street and the steeper slopes of Harris Hill. New subdivision activity in Big Flats has occurred largely in the valley on both sides of Route 17. This

has resulted in a random mixture of new local streets which will be difficult to organize into an efficient and identifiable street pattern as future development occurs. New streets in both towns have been constructed to the minimum standards required locally and there are no curbs, gutters, or sidewalks although Horseheads is now starting on a limited curbing program in some areas.

Traffic Volume

As might be expected traffic volumes are most heavy on the Route 17 arterial. Traffic counts were taken on many roads in the area by the New York State Department of Transportation as part of the 1965 Elmira-Corning Transportation Study. No other more recent counts were available from local or state

sources but the number and location of state counters in the 1965 study was sufficient to indicate relative volumes on major roads in the area.

Commuting is greatly simplified by the existence of Route 17 and daily movement between Chemung and Steuben Counties accounts for much of the traffic on this route. In addition, both through and local traffic use it as the easiest route through an otherwise congested area. According to the state transportation study there were just over 10,000 vehicles per day on Route 17, west of the Village of Horseheads,¹ and almost 18,000 vehicles used it within the village itself. (See Map 8.)

¹The Mall Shopping Center was not completed when traffic counts were made and has undoubtedly caused a substantial increase in traffic on this part of Route 17.

This volume of traffic makes it clear that completely controlled access and full interchanges are essential if present and future traffic demands are to be effectively met by this road.

Other major roads in the Town of Horseheads also carry considerable volumes of traffic and, as Map 8 shows, the predominant movement is in a north-south direction. When traffic counts were made, Route 14 north of the village carried about 7,800 vehicles daily; where 14 joins Route 328 at Westinghouse Circle the number of vehicles increased to just over 13,000 per day which is an unusually high burden for a road that has unlimited access and a high incidence of marginal friction.

Lake Street and Grand Central Avenue are also carriers of heavy volumes of traffic in

the Horseheads-Elmira Valley. These major traffic arteries pass through an area which is the oldest and most intensely developed in the Town of Horseheads. A situation is thereby created which often detracts from adjacent land use activities, affects the extent and type of roadside development which will occur and also seriously impedes the effective movement of traffic within and through the area.

Route 13 stretches to the northeast and was traveled by about 6,000 vehicles daily in some sections within the Town of Horseheads. Volumes dropped to about 4,000 cars per day north of the Breesport Road intersection. As stated before Route 13 is being considered as a likely location for that portion of the Appalachian highway which is planned to eventually connect Route 17 in Elmira with Inter-

state 81 at Cortland. When this happens Route 13 can be expected to carry significantly more traffic than at present.

The state transportation report indicated that other fairly heavy traffic carriers in Horseheads are Route 223 which is the road to Breesport, Wygant Road, Old Ithaca Road and Ridge Road which goes north to Odessa. Most of these roads are not built to carry heavy traffic volumes and will have to be upgraded in the future as increased development causes more traffic.

In addition to Route 17 several other important roads serve the Town of Big Flats. Route 352 (17E) was the major east-west highway in the area prior to construction of the arterial and still carries substantial traffic along the Chemung River Valley through Elmira's west door.

The Horseheads-Big Flats Road south of Route 17, and Sing Sing Road north of it, are the main east-west local routes through the Big Flats Valley. Neither fulfills this cross-town role adequately or directly at present, a condition which will have to be corrected when more extensive development occurs and the access points to Route 17 are reduced in number.

Despite a rather tortuous alignment, Harris Hill Road carries a substantial volume of daily traffic. Counts of up to 2,000 vehicles per day are recorded in the transportation study. The attraction of Harris Hill Park must account for most of this traffic and the strongest tie seems to be down the north slope to the Big Flats Valley.

A major focus of traffic generating activity is located in a concentrated area

spanning the boundary between Horseheads and Big Flats. The Mall, a regional shopping center which provides parking facilities for over 2,000 cars, the A&P food processing plant and the Westinghouse manufacturing plant, which have a combined employment in excess of 3,500, are located along Route 17 less than two miles from each other. In a relatively short time span the amount of vehicular movement in this area has increased tremendously because of these activities and major capital expenditures for roads by state, county and town have been necessary. Two interchanges with Route 17 have been constructed to accommodate the traffic produced by these activities and improvements have been made to Chambers Road, Arnot Road and Colonial Drive as well as a portion of the Horseheads-Big

Flats Road which provides access to the A&P and Westinghouse. Pressures for additional growth in the immediate area are very strong and it can be expected that this will become a center of intense residential, commercial and industrial development in the near future.

It is not likely that development of the magnitude of the Mall-A&P-Westinghouse complex will occur along all of the major arteries in the planning area. These land uses do rely heavily on convenient access to the major circulation net, however, and areas immediately accessible to important interchanges are subject to development pressures at any time. Because of available vacant land the potentials appear to be greater in Big Flats than Horseheads.

Area Problems

Apart from the general need for an overall plan which outlines a system of arterial, primary and second roads there are several more specific problems that should be considered in this section:

1. Route 17 and the Erie-Lackawanna Railroad, which parallels it, create a considerable barrier through the center of the Big Flats Valley. They have the effect of clearly dividing settlement in the valley into a northern and southern sector with the only connections being at intersections and underpasses of the arterial. This condition must be recognized in the planning process both in terms of providing for as much interconnection through the highway as possible and in locating community facilities so that both sides are adequately served.

2. Another barrier to effective traffic movement exists along Route 328 where the railroad again prevents needed cross-connections. From 14th Street in Elmira Heights to Route 17 in Horseheads there are no roads existing which enable a connection of any sort between Lake Avenue and Route 328.

3. Truck traffic is a serious problem in the residential areas between Elmira Heights and Horseheads. Concentrations of industry and trucking terminals in this older and diverse area create traffic which often must pass along residential streets in order to get to the major arteries serving the region. More direct access to these arteries is needed.

4. Similar truck traffic problems are developing along Philo Road in Horseheads. This coupled with a difficult intersection at

Philo Road and Route 328 create a hazard which might be improved somewhat by a redesign of the intersection.

5. Access to the Chemung County Airport from much of the planning area is difficult and indirect. County and local roads north of Route 17 in Big Flats, where much development is occurring, are generally of poor quality and indirect alignment. A good primary route to supplement Route 17 is needed to provide better access to the airport and Mall from the north and from West Elmira and Southport.

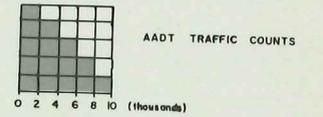
6. Subdivision development in both Horseheads and Big Flats has been mostly random and unrelated to any overall road network. To improve this situation in the future consideration should be given to establishing

some of the key local roads on an official map
or constructing them with public funds which
could later be collected on a pro-rata basis
as subdivision occurred.

TOWN OF HORSEHEADS NEW YORK

8. TRAFFIC & CIRCULATION

-  STATE ROADS
-  COUNTY ROADS
-  TOWN ROADS

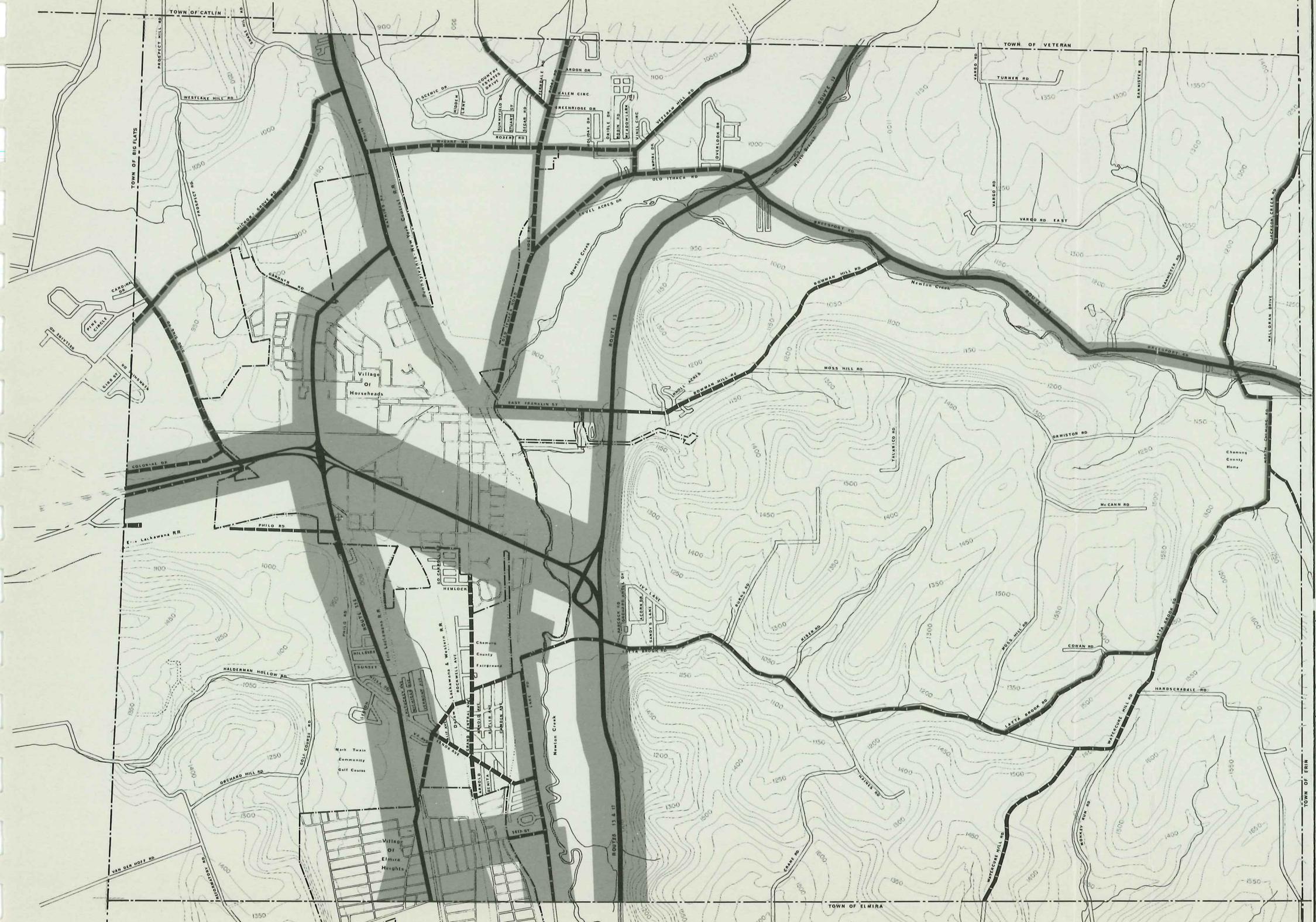


SOURCE: ELMIRA-CORNING TRANSPORTATION STUDY, MAR. 1960



prepared by:
EGNER & NIEDERKORN ASSOC. INC.
PLANNING CONSULTANTS

THE PREPARATION OF THIS MAP FOR THE NEW YORK STATE OFFICE OF PLANNING COORDINATION WAS FINANCIALLY AIDED THROUGH A HOUSING GRANT FROM THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AND IN PART BY THE STATE OF NEW YORK UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION '70' OF THE HOUSING ACT OF 1954, AS AMENDED.



SPECIAL STUDIES

The Airport

Chemung County Airport, located in the northeast quadrant of the Town of Big Flats, serves as the major transportation center for the Elmira-Corning area. The county's location near the New York-Pennsylvania border in the heart of the Southern Tier makes the airport important on both the local and regional level. In this fast growing area the demand for passenger and air freight service will undoubtedly continue to increase making protection of the airport and consideration of its future an important element of the General Plan.

The airport, administered through the aviation committee of the County Board of Supervisors, has three runways. The largest, the northeast-southwest runway, is 5,600 feet long with an instrument landing system capable

of handling the Mohawk BAC 111 jets. The north-south and east-west runways are both 4,000 feet long and are not instrumented. In addition to the public carriers private planes and local flying clubs also use the airport.

Airport Growth

As Table 5 indicates, air traffic in Chemung County grew steadily between 1962 and 1967 showing a total increase of 66 percent during this period. The number of passengers and the amount of cargo originating at the airport almost doubled during this period and airport management predicts sharp increases in the next few years. With a national growth of three percent per year in air traffic predicted by the Federal Aviation Agency, the problems of

airport growth assume a critical importance.

As planes become larger, the airport must extend its runways to accommodate them. This also means that the clear zones, hazard zones and noise envelope shown on Map 9 must be pushed farther out into surrounding territory. At the present time two extensions are planned for the airport facilities.

The main runway is to be extended 450 feet to the southwest and the east-west runway extended 1,000 feet to the east. Land has already been acquired for these expansions and consideration is being given to an FAA request for additional extensions 1,250 feet to the northeast and 1,000 feet to the west. In order to handle the larger jet passenger planes such as the 727, extensions to 7,300 and 6,200 feet respectively will be necessary.

Since the airport is hemmed in by residential development to the north and northeast, by commercial and industrial buildings to the east, and by Route 17 to the south, extension to these lengths is unlikely to occur.

The greatest problem confronting the airport in regard to possible expansion is the acquisition of land. A choice must be made between competing land uses; a choice between the continued operation of the airport in its present location or the continued encroachment of residential development upon land needed for airport expansion. The forces behind residential building weigh heavily, for the airport is located on prime developable land. Existing development has already limited any major expansion of airport facilities and has had the secondary effect of lessening the effectiveness of air space zones

as well as increasing the level of noise pollution and the danger of accidents.

Although some thought has been given to moving the airport to another site in order to solve some of the problems of operation and expansion the disadvantages of such a move appear to be substantial. In its present location, the Chemung County Airport is on the air route from New York to Buffalo. In this position, the airport controls its own traffic as well as that in Ithaca. Relocation could mean losing this place on the air route and a possible upset of control arrangements.

Another disadvantage of moving is that the relocation would most likely have to be on a hill site because of the heavy demand for land in the valley and the presence of existing development. Although the problem of

decreased visibility in the valley due to fog would be alleviated by a hill location, the airport would be forced to operate against lower cloud ceilings more of the time, thereby decreasing the scope of its operations. Its present elevation of 951 feet gives the Chemung County Airport a greater operability than that of Broome County with an elevation of 1,629 feet and, until adequately equipped planes, ground facilities, and trained personnel make completely instrumented landings possible, a low cloud ceiling will continue to pose a distinct disadvantage to the airport's functioning.

Effects on Adjacent Land

One of the principal concerns of the planning agency relative to air transportation is the planning and zoning of adjacent land uses

so as to maximize the potential of the land and to alleviate the detrimental aspects resulting from the presence of the airport. The effect on adjacent land development of an airport the size of Chemung County's is twofold. Nationwide growth in the use of air travel for both passengers and freight has been reflected in a modest way in an expanded use of the county airport and the lands surrounding it. In addition, as increased usage occurs additional land must be controlled for safety purposes and to allow for maneuvering aircraft under all conditions.

When the airport was built in 1944 it was located in a predominantly rural area. Noise, accidents and height restrictions were not problems. The current situation is diametrically opposite to this. With the Town of Big Flats

developing rapidly, the integrity of the airport and the land surrounding it is threatened. Not only does the airport itself take up a large amount of land, approximately 600 acres, but it also requires the use of air space at the ends of its runways. Land under the approach paths to the airport is subject both to loud repetitive noise and to the ever present hazard of aircraft accidents. It has been found that 50 percent of all aviation accidents occur within a half mile of the end of the runway and noise pollution, which poses both a mental and physical hazard, is also greatest in the vicinity of the airport.¹ The noise envelope, fanning out from each end of the runway, does not offer a particularly conducive environment for housing or for places of

¹"Planning the Airport Environment," February, 1968, ASPO Planning Advisory Service.

public assembly. For this reason it is undesirable to encourage the location of residential development especially of a moderate to high density level or places of public assembly such as schools, churches and hospitals in flight zones. By exercising land development control the possibility of a catastrophic accident involving a large number of persons or a lawsuit against the airport for causing disturbance and damage is lessened.

Recognizing the existence of noise pollution and threats to personal safety arising from possible air crashes, the Federal Aviation Agency requires the airport to purchase land at the ends of runways out to a specified distance. This area is known as the "clear zone." Nothing but aircraft directing devices can be built in the clear zone. The 5,600 foot northeast-

southwest runway has an instrument landing system so that the clear zones at each end are shaped like trapezoids 2,700 feet long with a 1,000 foot base at the runway end and a 1,750 foot base at the far end.¹ Each clear zone for this runway occupies 78.9 acres. The other two runways are only 4,000 feet long and are not instrumented. The clear zones they require are 2,200 feet in length with a 500 foot base at the runway end and a 900 foot base at the far end. These clear zones occupy 32.1 acres apiece. Beyond the clear zone, however, owners are not restricted in the use of private property as long as they do not build vertical obstacles to aircraft operation such as towers or pylons.

¹Airport Plan of the Chemung County Airport,
U. S. Department of Commerce.

Above and beyond the clear zone the F.A.A. has defined surfaces over which structures become obstacles to air navigation and are more than moderately affected by the noise of planes taking off and landing. This area, designated the "hazard zone," varies depending upon the type of runway. For a runway equipped with instrument landing devices, this surface inclines upward from the end of the runway at a ratio of 50:1 for a distance extending 10,000 feet from the end of the runway with a width of 4,000 feet.¹ For non-instrumental runways the surface ascends more steeply at a ratio of 40 to 1. Hazard zones are needed because an airplane must approach the runway at certain specific angles and the height of buildings,

¹ Federal Aviation Regulations, Part 77, Objects Affecting Navigable Airspace.

towers or trees, cannot pose restrictions on a plane's maneuverability.

Noise pollution is a particular problem for Chemung County Airport because of its proximity to residential neighborhoods. The flight paths for the major runway lie directly over the hamlet of Big Flats to the southwest and the subdivisions off Pine Circle and Bellaire Roads to the northeast. Several new subdivisions are planned within the controlled air space of the airport in both Horseheads and Big Flats. These homes will be subjected to periodic noise and, while the exact noise level in this area has not yet been determined, the airport is already receiving complaints from residents.

Development Controls

Care must be taken in enacting development

controls pertaining to the airport so that the action does not limit the use of land to such an extent that the controls amount to a taking of property without just compensation. If airport zoning is to be upheld in the courts then it must be a reasonable application of the police power in the interests of public welfare and safety.¹ Any zoning controls that are used should be part of a comprehensive zoning plan so as to help ensure their legality and effectiveness. Once instituted, a comprehensive zoning ordinance including provisions for land use around the airport can protect the integrity of the clear zones and help to deter development which is unsuitable in the hazard zone. The zoning ordinance should also act as

¹Principles and Practices of Urban Planning, p. 183.

a catalyst for the realization of the potential that is afforded to land surrounding the airport.

Despite suggested limitation for the location of dense residential development or public assembly, the land surrounding Chemung County Airport does hold good potential for certain types of development. The rapid growth of the Elmira-Corning area has resulted in new employment opportunities accompanied by a boom in housing development. The presence of quick air service to nearby cities and connections to major air routes coupled with the accessibility of Route 17 makes the airport a positive force in encouraging and patterning future land use in the Town of Big Flats.

Proximity to an airport has proved to be a significant factor in the location of many

industries due to the convenience of readily available passenger and air freight service. A light industry, capable of shipping its product by air, will find it competitively desirable and economically essential to locate close to efficient air terminals.¹ Use of air travel means markets can be reached quicker and a distribution range can be achieved.

Several light industries are already located around the airport. Many industries might also be attracted to an area such as the one characteristic of Chemung County Airport because of the environmental qualities of the location. A semi-rural location plus dependable surface and air transportation may more than offset the ad-

¹ Stanley Ball, "Effects on Land Use of Technological Change in the Air Cargo Industry," a Masters Thesis presented to Cornell University, 1966, p. 68.

vantages of a close-in urban location² and, with proper planning and design, industrial development around an airport can complement the natural features of its location. In a town such as Big Flats, an area of industrial development offers a better airport buffer strip than trees or open land and its occupants become active defenders of the airport's operation and improvement.³ Industrial development also offers protection against residential encroachment into the safety and transitional zones of the airport.

Future Land Use

The land immediately adjacent to the airport

² John Pogue, "The Big Air Push is Yet to Come," Air Transportation, XLIV, (April, 1964), pp. 21-24.

³ Leigh Fisher, "Airport Industry Starts to Boom," Airlift, XXVI, (September, 1962), p. 30.

is owned by Chemung County but, with a high demand for land for residential development, the county must go through extensive negotiations and pay high prices to acquire the land needed for clear zones. Privately owned land surrounds the county's holdings and several light industrial and commercial developments have occurred there.

To ensure the integrity of airport land and for safety purposes, high density residential development and places of public assembly should be excluded from the safety zones of the airport. Through the implementation of carefully formulated plans for additional industrial and commercial development both the airport and surrounding lands can be used to their fullest potential. The airport is a valuable asset to the area; careful thought

should be given to its future status.

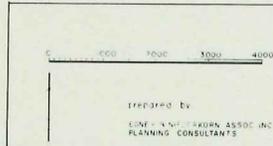
TABLE 5: CHEMUNG COUNTY AIRPORT - PASSENGER AND FREIGHT TABULATIONS

Calendar Year	Air Carrier	Gen. Aviation	Military	Total Operations	Tons of Freight
1962	12,988	48,619	406	62,013	153.14
1963	13,876	52,992	420	67,288	219.69
1964	15,537	61,542	269	77,348	267.92
1965	18,184	74,432	283	92,899	380.45
1966	18,938	72,638	267	91,843	409.99
1967	18,682	85,616	293	104,591	343.17

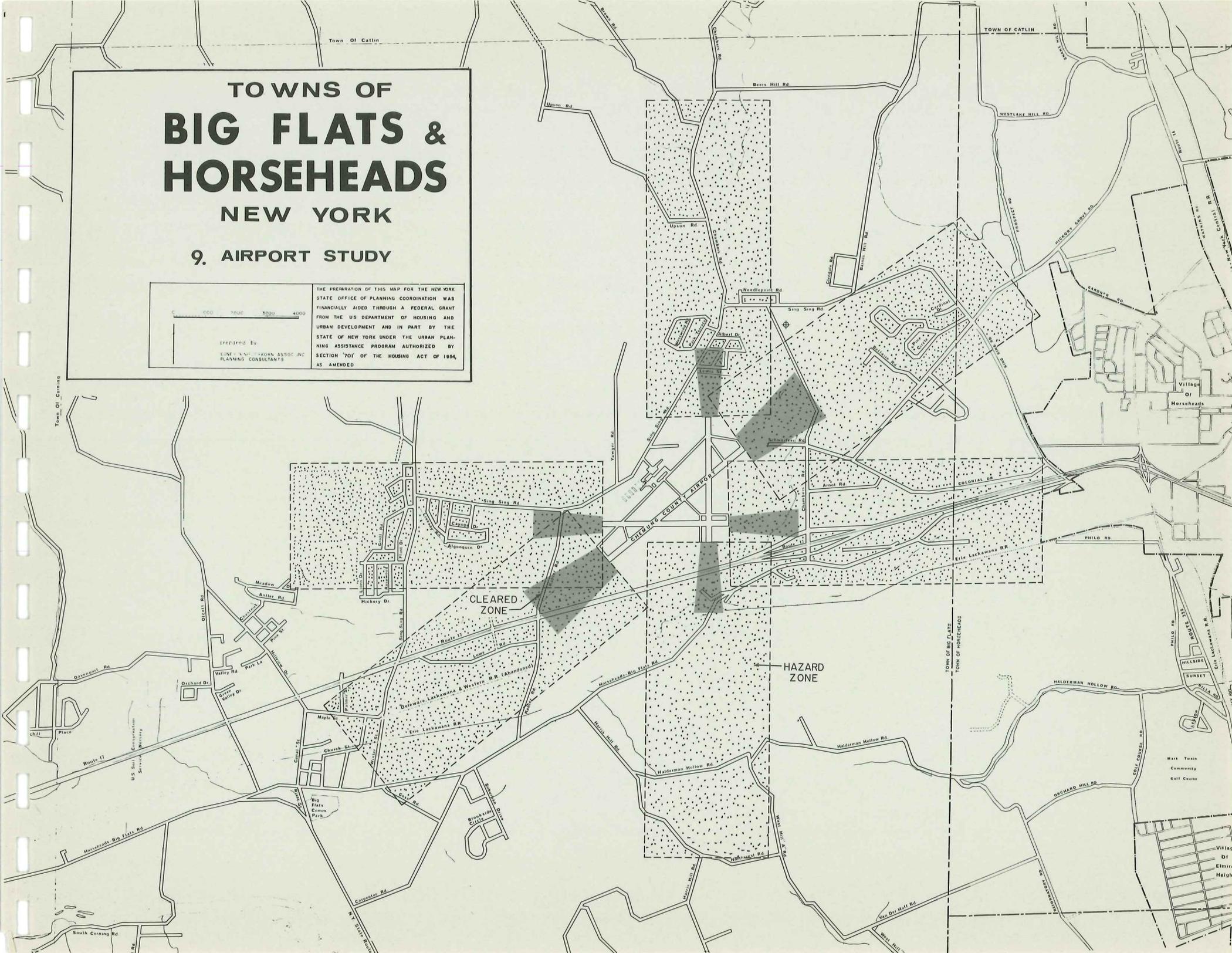
Source: F.A.A. Air Traffic Activity.

TOWNS OF BIG FLATS & HORSEHEADS NEW YORK

9. AIRPORT STUDY



THE PREPARATION OF THIS MAP FOR THE NEW YORK STATE OFFICE OF PLANNING COORDINATION WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AND IN PART BY THE STATE OF NEW YORK UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 707 OF THE HOUSING ACT OF 1954, AS AMENDED.



Civic Center Study

Chamber of Commerce sources estimate that one-quarter of the population of the United States and Canada lives within a 300 mile radius of Chemung County, the southern gateway to the Finger Lakes and the focal point of industry and business in the Twin Tiers region. With this locational advantage in mind, consideration has been given to the possibility of establishing a civic-cultural center in the Horseheads-Big Flats Valley; a facility which could meet the needs of local government and private groups concerned with artistic and theatrical activities as well as providing meeting and convention space for various businesses and organizations.

In evaluating the feasibility of such a center several questions must be answered. What is the demand for governmental office space and for space for cultural activities? How attractive

is the area as a potential convention center? Can such a facility be supported financially given alternative uses for county revenue and borrowing capacity? What are local attitudes relative to supporting the creation of such a center? Given these considerations the types of activities which might use such a center were identified and the need and demand for a civic-cultural complex evaluated.

Government Office Space

The major governmental functions in Chemung County are housed in several buildings, all located in the City of Elmira. City Hall, an old but architecturally significant and recently renovated building, contains most offices of city government with the exception of the Department of Public Works, the Parks

Department and the Urban Renewal Agency. Space and facilities are adequate for all operations except those of the Police Department. This agency is badly crowded and needs additional space which is not available in City Hall.

County offices are located in the County Office Building and in scattered locations throughout the city. A new health center under construction in the Urban Renewal project area will provide space for the County Health Department which is now housed in one of the scattered site office buildings. At the present time, the county has no plans to expand or improve its other facilities and no plans to relocate any of its offices.

The State and Federal General Services Offices are also located in the City of Elmira and neither agency plans to expand or move into

new quarters at this time.

With these considerations in mind it does not seem practical to assume that any major movement of governmental functions will occur in the foreseeable future. Even in the event such a shift did occur it is highly probable that the various levels of government would continue to locate in the City of Elmira rather than in an outlying area.

Cultural Activities

The Elmira-Corning area offers a variety of cultural activities throughout the year ranging from visual arts to theatrical and musical productions. Two art galleries, the Arnot and the Watson Gallery at Elmira College, have permanent homes and are not the types of facilities likely to locate outside the city.

The Elmira Little Theater, a voluntary organization which sponsors four plays each year and various other programs, is presently using the Elmira Theater to stage its productions. The Community Concert Association also uses the Elmira Theater for the four musical performances it brings to the area each year. This theater, however, is located in the proposed path of the North-South Arterial and at such time as this road is constructed the theater will be demolished. The elimination of this building will make theater space extremely scarce in the area and, if the Little Theater's activities are to continue, a new facility must be found.

Elmira College also has a need for theater space. A facility suited to the college's needs, however, would have to be located within

walking distance of the campus precluding consideration of a location outside the city.

Although a definite need exists for theater space it does not appear that a one purpose facility such as a theater building could sustain itself at the present time.

Convention Space

With the exception of the Holiday Inn in Horseheads, no large meeting rooms are available in the Elmira Urban Area. The Mark Twain Hotel in downtown Elmira, which was at one time used for meetings and conventions, no longer provides food service and cannot attract groups which might wish to come to the city.

The lack of meeting space is an obvious need that could be met by a large facility located in or near Elmira. The additional

problem of housing convention-goers is not so easily solved. Although several large motels exist in and around Elmira, these facilities cater to transient trade and have not been responsive to requests for the large blocks of rooms necessary to attract groups to the area. Average occupancy rates are high and, according to reports of the Chamber of Commerce, it is extremely difficult to arrange accommodations for special groups if more than 50-75 persons are involved.

The attractiveness of Elmira and the Horseheads-Big Flats Valley as a convention center is also open to question. Other than the theatrical productions mentioned above which are scheduled on a limited basis and with the exception of several outstanding restaurants, there is very little evening entertainment available in the area.

Harris Hill and the Newtown Battlefield Park would be attractive to some visitors but the use of these facilities would, in all probability, be confined to the daylight hours conflicting with meeting schedules and to the few months of good weather during the year.

With these considerations in mind it does not seem feasible to attempt to develop convention space until such time as accommodations and entertainment facilities can also be made available to prospective visitors.

Conclusions

Although a need exists for a multi-purpose center which could provide space for cultural activities as well as meeting rooms and convention space, this need is not well-defined and demand is not great enough to warrant the establishment of a

community center at the present time. If such a center were built it would almost certainly have to be developed in conjunction with motel and hotel accommodations as well as indoor and outdoor recreational opportunities. Without these ancillary facilities it is doubtful that a multi-purpose center could survive. Given these considerations and the lack of demand for governmental office space it would appear that there is no need to consider the development of a civic-cultural complex at the present time.

In the event demand for this type of facility increases in the future, thought might be given to a valley location in the vicinity of Route 17 and the Chemung County Airport. Such a location would simplify problems of access by air and automobile transportation and would be central to both Corning and Elmira. It

would also have close at hand the shopping, dining and entertainment nucleus already existing at The Mall which conceivably could be expanded in response to increased need. The location, design and layout of any future civic center should be closely related physically to The Mall since such an arrangement would be advantageous to both and would result in a strong center-valley focus for the development that is expected in the future.

THE GENERAL PLAN

The General Plan

The development of a General Plan for a community is one of the final steps in the planning process. It is the result of many months of work covering the collection and analysis of basic data, the establishment of goals and objectives which will guide community growth and the development of proposals and recommendations which will lead to the accomplishment of these goals. In addition to these specifics, the Plan includes a general concept of community development -- an overall picture of the patterns of growth which have occurred or are anticipated in the future.

The basic studies presented earlier in this report form the background of the Plan and identify the positive and negative forces which will guide future land use. Within this framework the development potential of the town has

been evaluated, various alternatives sifted and weighed and a plan for future physical growth developed.

The general concept of the Plan, the policies which reflect community objectives and the specific actions which the town must take to accomplish the Plan are discussed in the following pages. The General Plan Map, which graphically depicts future land use patterns, is also a part of this section.

The Concept of the Plan

The Town of Horseheads has a distinct pattern of development which reflects its position as a rapidly growing suburb of the Elmira Urban Area. In order to enhance and strengthen this pattern, which is viewed as a viable one, the concept of Development Intensity

has been used as the overall guide for the General Plan.

Development Intensity is based on the premise that the use of land is determined not only by future plans but by past events. Older sections of the community, which have passed through the first stages of urbanization, are likely to exhibit land use mixtures and residential densities of a more intensive nature than suburban neighborhoods where large lot residential development is the norm. In some instances, however, new neighborhoods can be developed under controlled circumstances which reflect the same intensive use characteristics as older areas. When this opportunity is present and when a multi-faceted neighborhood appears to be the appropriate development pattern every effort should be made

to channel growth in that direction.

Development Intensity also implies a range of community commitment ranging from the areas of intensive development where a broad spectrum of public services and facilities must be provided to areas which cannot demand or expect the same level of service. In simplest terms, Development Intensity conveys a framework of physical organization which will result in efficient functional relationships as well as superior environmental quality.

Development Intensity is related to five major factors which bear on the present and future use of land:

1. The density of development in terms of families per gross acre.
2. The variety of land use types which are present in a neighborhood.

3. The value of land and development in terms of public and private investment.

4. The availability of public water and sewage disposal systems.

5. Existing topographic and soil conditions.

On the basis of these factors three Development Intensities, Low, Medium and High, have been established for the Town of Horseheads.

Low Development Intensity

In these areas the density of residential development is limited to approximately one family per gross acre with single family homes being the predominant type of land use. Little, if any, commercial or industrial development will be found here and the overall value of the neighborhood represents a relatively low investment in terms of both public and private cap-

ital. Individual properties may represent a substantial investment to their owners but land values and use potential do not compare with the more intensively developed urbanized core. Soils and topography in low intensity areas may be varied but, in most cases, both will present some limitations for development. Public utilities may be available but they are not required to sustain the densities recommended for these neighborhoods. Low intensity areas in Horseheads are located east of Route 13 in the hills extending to the Erin town line, west of Golf Course Road and into Big Flats and in the northwest corner of the town along Prospect Hill Road. These are the areas of poor soils, steep slopes and little, if any, hope of receiving public utilities; the areas most appropriately developed for very

Objectives , Policies and Proposals

Growth

Objective: To encourage the growth of the town to its fullest potential and to provide an environmental setting which will be attractive to industrial, commercial and residential development.

Policy

The town recognizes its position in the region and intends to take those actions which will contribute to the orderly and efficient development of land and the best use of natural and human resources.

Proposals

The General Plan should be accepted by the local governing body and used as a guide for future growth and public investment. It is further proposed that the Plan be reviewed at frequent intervals and amended as necessary to reflect changing economic conditions and community attitudes.

Control over the use and development of land should be strengthened through the amendment of existing zoning and subdivision regulations. These implementation tools should also be reviewed periodically to ensure operating effectiveness and the maintenance of a close relationship with planning objectives.

Capital improvements which will help achieve the objectives of the Plan should be undertaken by the town and a regular program of capital improvements scheduling adopted.

Housing

Objective: To ensure an attractive and desirable residential environment which will provide a high standard of housing for all residents of the town and provide anticipated population increases with a choice of housing accommodations.

Policy

The town recognizes that available land is rapidly being used up by single home large lot subdivision. In order to accommodate new residents and provide for a variety of housing choices available land must be conserved and developed in ways which will lead to the accomplishment of these goals.

Proposals

Lot size requirements should be adjusted in appropriate areas to make the development of higher density housing and a variety of housing types possible.

In the hilly areas of the town where public water and sewer facilities cannot be provided economically, development should be restricted to single homes on large lots at a density of approximately one family per gross acre.

In the northern portion of the town between Routes 13 and 14, development should continue in the established pattern on relatively large lots. Density in this area should be maintained at approximately two to three families per gross acre.

On the lower slopes and in the valley areas which are now served or soon will be served by public sewer systems, development should be encouraged at densities of four to five families per gross acre.

In the urbanized area between the Villages of Horseheads and Elmira Heights, the established high density pattern should be maintained and strengthened by encouraging development at densities of six or more families per gross acre. In the undeveloped valley area bordering Newtown Creek between the Holding Point and Route 13 a high density pattern should be established for future development.

Residential development should not be restricted to single family dwellings in any but the lowest density areas in the hills. Multi-family structures should be encouraged in all other residential neighborhoods as long as overall density is complied with and design standards maintained.

In order to accommodate this segment of the housing market, mobile home parks should be permitted in Planned Development Districts in areas suitable for residential development.

Mobile home parks should conform to the requirements of the Horseheads Mobile Home Ordinance in addition to requirements established for the Planned Development District and should represent quality housing development.

The town recognizes that mobile home living is becoming an increasingly popular life style and intends to take actions which will result in the development of high quality mobile home parks in the town.

Because population and economic data indicate that an increasing number of residents and potential residents of the town are effectively priced-out of the housing market, the town intends to take steps which will encourage the development of subsidized housing as needed.

If density patterns are altered to permit more intensive housing development public water and sewer facilities must be provided. The town intends to support the development of proposed county-wide systems and, if these do not become a reality, to take the lead in developing its own systems.

The town should request the State Legislature to enact enabling legislation which will permit the creation of a local Housing Authority. Once this step is taken available Federal and state aids can be used to develop a supply of low-rent housing in the town.

The town should encourage the formation of a non-profit or limited profit housing company for the purpose of participating in the various Federal and state programs available for the development of moderately priced sales and rental housing.

A high priority should be assigned to the installation of public water and sewer facilities throughout the major valley areas and foothills of the town.

The proposed extension of Chemung County Sewer District #1 to cover a major portion of the valley is endorsed and supported as a major step toward the accomplishment of this goal.

In the event a county-wide water system is not developed in the near future the town should be prepared to develop its own system or to enter into cooperative efforts with the Village of Horseheads and the Town of Big Flats to identify additional sources and develop a distribution system with sufficient capacity to meet local needs and demands.

Three areas have been identified which bear signs of extensive blight and deterioration. In each of these areas various techniques and programs should be applied to reverse the deterioration process, provide for environmental improvement and prevent the spread of blight to adjoining neighborhoods.

In the Clair Boulevard-Carrol Street area extensive clearance and renewal should be undertaken in order to eliminate the substandard housing which exists there. This small neighborhood which will have good access to the proposed Grand Central-Route 17 interchange as well as direct access to the proposed industrial park south of the village should be redeveloped as high density housing designed to serve the needs of low and moderate income families. A redevelopment program of this type could be accomplished by a local housing authority or by a cooperative effort between a housing authority and a sponsor of moderate income housing. Various state and Federal programs are available for housing assistance but the necessary vehicles for development such as a housing authority or sponsor must be present in the community.

In the Benita Avenue-Arnold Street area a program of selective clearance and rehabilitation should be undertaken. While there are scattered substandard units in this area the major cause of deterioration is a lack of maintenance, not only of structures, but of the grounds surrounding them. A clearance and rehabilitation program could result in the creation of badly needed open space in this neighborhood as well as the removal of substandard housing and improvement of rehabilitable units. In order to implement a program of this type it will be necessary for the town to adopt and be prepared to enforce a housing code specifying minimum standard for existing housing and mak-

ing possible the identification of conditions which may be hazardous to the health and safety of its occupants.

No treatment is proposed for the California Avenue area other than an eventual change in zoning from residential to industrial use. Blight and deterioration is localized here in an area too small for a program approach and it is felt that the eventual best use of the land is for industrial purposes. For these reasons it is suggested that a zoning change at the appropriate time will accelerate natural market forces and result in the elimination of the substandard housing as industrial development expands.

Business

Objective: To protect existing commercial cores in the Village of Horseheads and at the intersections of Route 17 while providing sufficient space for local business to locate, grow and serve the needs of the community.

Policy

The town recognizes that the regional shopping corridor in the Horseheads-Big Flats Valley and the central business district in the Village of Horseheads are important commercial elements which should be protected by encouraging the concentration of future large-scale commercial development in these two areas.

Proposals

Regionally oriented commercial development should be contained in and around The Mall and Grand Central Plaza in order to strengthen these two major shopping centers and prevent strip development along the highways.

Neighborhood commercial developments should be encouraged in those areas of the town which are not now served by this type of facility and in areas where medium and high density housing is proposed. These are intended to provide convenience goods and services to the immediate neighborhood and, preferably, should be located so as to create groupings of commercial use rather than scattered or mixed land use.

Two neighborhood service centers are proposed north of the Village of Horseheads in areas not now served by this type of facility. One of these, located along Old Ithaca Road, already has the beginnings of a commercial area. In some respects the character of this strip is not entirely compatible with the concept of neighborhood service. Future development, however, should be channeled toward light commercial activities and every effort should be made to discourage the continued

expansion of more intensive commercial and industrial uses along this road. A second neighborhood service area is located north of Gardner Road and is proposed to service the growing residential development in this portion of the town. The third area, around the proposed intersection of Route 14 and East Franklin Street, is already partially developed but should be contained in order to reinforce the impact of redevelopment of the village center.

Four other commercial centers exist or are proposed along Lake Street and Grand Central Avenue, along Route 328, and in the hamlet of Breesport. These are located so as to capture the focus of existing commercial development and to capitalize on it. While the areas along Lake Street, Grand Central and Route 328 are not regional business facilities, they do represent a more intensive form of commercial development than that in Breesport which can be considered a neighborhood facility.

Industry

Objective: To encourage industrial expansion in the valley corridor and promote the continued growth of a strong industrial base.

Policy

The town recognizes its potential as an industrial center for the region and intends to capitalize on this potential in order to attract industry and develop additional job opportunities.

Proposals

Land suitable for industrial expansion such as the area south and west of Westinghouse Circle should be protected and reserved for future industrial development.

The industrial area which is now dispersed between the Villages of Elmira Heights and Horseheads should be permitted to expand into a strong industrial corridor tying the two villages together and providing work opportunities for persons living in this high density area.

Upon termination of the sanitary landfill operation, an industrial park should be developed on the landfill site extending south toward Lenox Avenue. When properly drained and graded this area will provide an appealing site for industry and, at the same time, recreation facilities which are badly needed in the town.

In addition to the Holding Point in the Village of Horseheads light industrial development should be encouraged in the area bordering Newtown Creek between Routes 13 and 17 and Lake Road. Upon completion of the Newtown Creek Flood Control project this 175 acre area will be ideally suited for research-oriented or light industrial development.

Circulation and Transportation

Objective: To maximize the beneficial effects of the major highways and increase the effectiveness of the local road system.

Policy

The town recognizes its importance as a link in the regional transportation network and intends to work cooperatively with other municipalities as well as the State Department of Transportation to develop highway plans which will be of general benefit to the region.

Proposals

In the Town of Horseheads proposed improvements to Route 17 should be supported in order to expand the carrying capacity of this important arterial. In addition to interchanges at Westinghouse Circle and Route 13 a connection should be made with Grand Central Avenue. A possible new alignment for Route 17 is shown on the General Plan Map but other routes might be equally desirable if the necessary connections with the primary road system can be accomplished.

A new primary road, the County Circumferential, is recommended to provide a connection between the Breesport Road and Route 17E with intermediate connections to Routes 13, 14, 17 and selected secondary streets. The purpose of this road is to expedite traffic movement through emerging residential areas and to improve access to The Mall and the airport from the east, north and south. By removing through traffic from residential streets neighborhood values are preserved; by providing a good secondary access to major traffic generators such as the airport and Mall some of the heavy burden is taken off Route 17 thereby improving its effectiveness. This circumferen-

tial road will require considerable right-of-way acquisition and should be built by the county or state. Even though construction may be in the future the right-of-way should be acquired immediately. The effectiveness of this road as a traffic carrier should be preserved by placing strict limits on access through zoning, subdivision and curb cut controls. Improved access roads to the airport and along Chambers Road to The Mall should be built as part of the circumferential construction program.

The proposed western alignment of Route 14 is recommended to preserve the Holding Point and at the same time provide easy access to both ends of this valuable industrial site. In addition, the western route minimizes disruption to the residential neighborhood emerging north of Wygant Road.

Improvement of the Philo Road-Route 328 intersection will be difficult but a greater separation between these two roads, with a connecting link, would clarify traffic movements.

Portions of a local road system have been suggested for the proposed Industrial Park area in Horseheads and for the proposed Newtown Creek development in Horseheads. The purpose of these recommendations is to illustrate how connections could be made to give form to existing street patterns and how new community facilities should relate to the circulation system. New local roads can occur through the subdivision process

A logical pattern of extension and improvement of local roads should be developed to provide continuity of travel from one neighborhood to another and to connect with the major transportation routes.

or by town initiative if it is considered desirable to open up new land or fix the location of certain key streets.

It is recommended that additional thought be given to the possibilities and limitations inherent in the proposed North-South Arterial. Unless access to this type of route is severely limited it will work no more effectively as a traffic carrier than Route 328. With access limited this road could effectively move much traffic through the presently congested corridor between Southport and Horseheads. Such a limited access route is proposed on Grand Central Avenue with a shift of alignment to the abandoned Lehigh Valley tracks in Elmira Heights. It is suggested that a connection between the North-South Arterial and Route 17 would be more effective at McCann's Boulevard than at 14th Street.

A ranking system should be established by the Planning Board which designates a number of different types of roads in the planning area depending upon the function each road is to perform. Primary roads, other than the limited access arterials, should have 60 foot rights-of-way and facilitate movement through built-up areas. Local roads should have 50 foot rights-of-way and be designed to discourage through traffic. Secondary roads should have 50 foot rights-of-way and be used to collect traffic from a number of local streets and direct it to the primary system.

Recreation

Objective: To ensure the reservation and development of recreational areas and open space within the town and to preserve and enhance natural features whenever possible.

Policy

The town recognizes a need for publicly-owned and maintained parks and open space which will provide recreation opportunities for present and future residents. In order to fulfill this need an overall recreation plan for the town should be implemented which will provide a variety of types of recreational facilities.

Proposals

A large community park is proposed for the Newtown Creek area between the Holding Point and Route 13. This site, which is proposed for intensive development, is now occupied by an extensive gravel excavating operation. Upon termination of this use the area should be substantially rehabilitated, acquired by the town and converted in part into a community park for potential residents of the immediate area and for the town as a whole. In developing this park space care must be taken to assure the privacy of residential areas proposed around it.

The development of an industrial park in the area south of the village and including the sanitary landfill site has been discussed previously. In addition to the area reserved for industry a large neighborhood park is also proposed. The park and industrial area should be integrated and developed as one complex in order to maximize the potential attractiveness to industry while serving as a neighborhood recreation facility. Within the park a small lake should be created in the swamp now being used as a water retention pond for surface run-off. The stream leading out of the pond should be preserved as a greenway extending through the heavily developed area

near Grand Central and Camden Avenues. The stream's capacity as a drainageway should be improved through the installation of large culverts at the south end of the site which will rapidly carry excessive storm water flows to Newtown Creek.

Five small neighborhood parks are proposed throughout the town to serve surrounding residential development, particularly the needs of school age children. These should be located near Veteran Hill and Ferndale Roads, Gardner and Sing Sing Roads and in Breesport along Newtown Creek. Within these areas three to five acre parcels of parkland should be acquired or optioned or, if extensive subdivision has not already occurred, future developers should be required to dedicate land for recreation purposes.

A sixth neighborhood park is proposed for the Camden Avenue area across from the elementary school playground located south of Lenox Avenue. This park space should be developed so as to serve the needs of both children and adults and to provide open space in a tightly congested neighborhood.

Public Facilities

Objective: To attain a high level of community services in the areas of refuse disposal, education, fire protection and health care.

Policy

The town is aware that the landfill site now being used for the disposal of refuse is rapidly being filled and has a limited life expectancy as well as some operational problems. A county-wide solution to solid waste disposal should be encouraged and supported.

Population projections by the Board of Education indicate an increase of over 6,700 school age children in the Horseheads Central School District by 1990, the majority of which will be in grades K-6. Improvement and expansion of school facilities should be undertaken by the district as the school population builds up and site purchase should precede growth. The town recognizes the problems facing the school system and intends to cooperate with the district in finding solutions to these problems.

Proposals

The recommendations of the Chemung County Refuse Disposal Study are endorsed and supported by this report. While it is hoped that these recommendations will be implemented in the near future if this does not happen the town should engage in a cooperative effort with adjacent towns to solve the problem of refuse disposal. If this alternative is not feasible the town should identify a suitable site within its boundaries, acquire it and operate its own landfill for the use of town and village residents.

In the Town of Horseheads the Wygant Road Elementary School should be expanded to accommodate an additional load of approximately 600 pupils as development in this portion of the town intensifies. An addition to this school would serve the population of the subdivisions north of Wygant Road and of the proposed high intensity Newtown Creek area.

The densely developed high value area between the Villages of Horseheads and Elmira Heights is outside the safe service radius of a fire station and additional fire protection should be made available in this area.

The Towns of Horseheads and Big Flats recognize the need for additional health facilities especially in the area of aged care. In this rapidly urbanizing area the development of adequate health facilities should be encouraged.

A new fire station should be constructed in the vicinity of Grand Central and Lenox Avenues in order to provide direct service to the industries and businesses located here as well as surrounding residential neighborhoods.

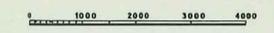
A health related facility should be constructed in the residential area northeast of The Mall to provide a range of health care services for residents of both towns and for the county as a whole. This location has the advantages of being adjacent to a major shopping center, proposed park and quiet residential neighborhood. In addition, Route 17 and several primary and secondary roads would provide easy access. Town or county expenditures would not be involved as the development of this type of facility is usually undertaken by private corporations. Consideration should be given to actively soliciting the interest of such a corporation in building a health care facility in the Horseheads-Big Flats Valley.

TOWN OF HORSEHEADS NEW YORK

10. GENERAL PLAN

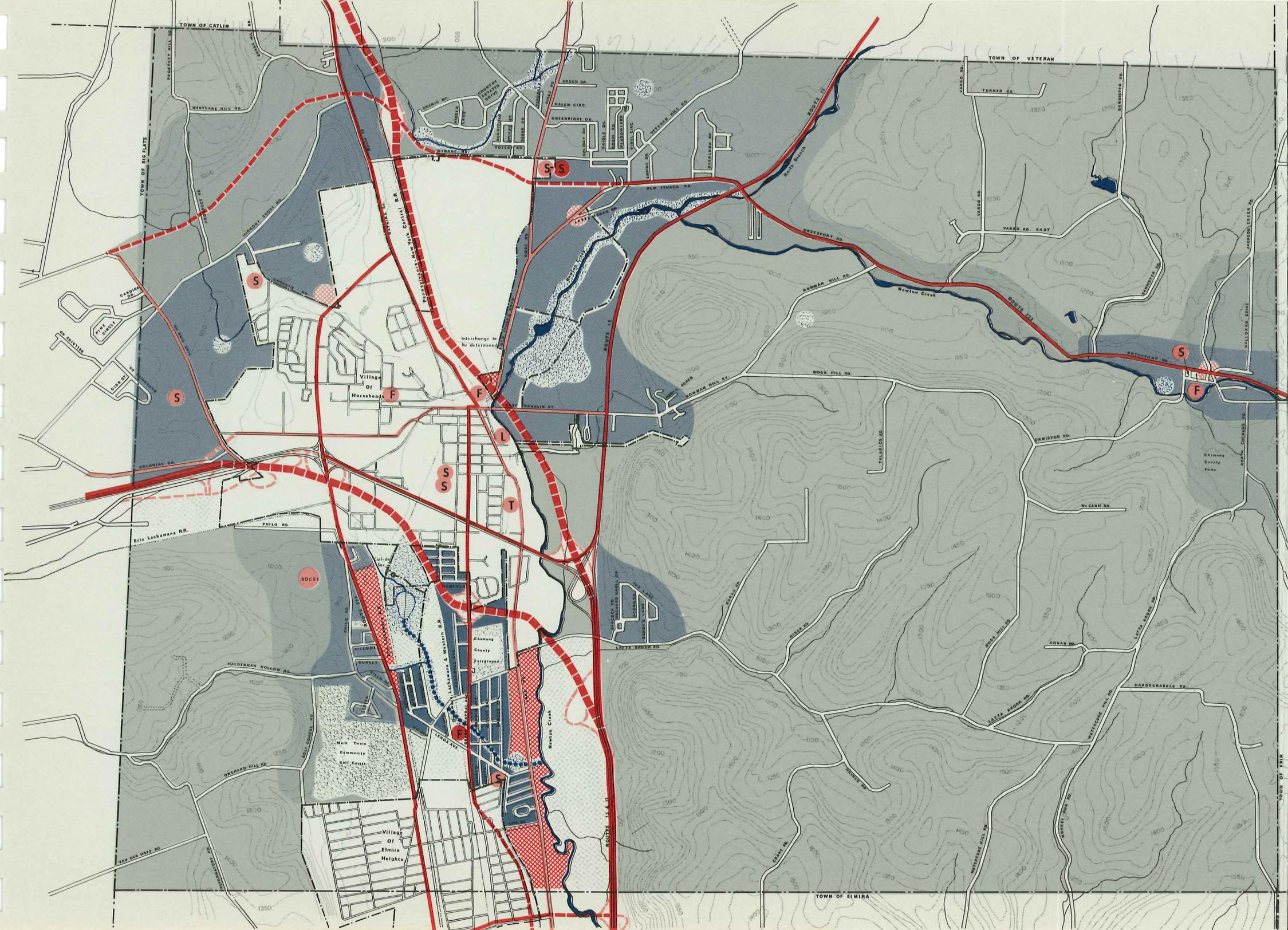
- | | |
|----------------------|----------------------|
| RESIDENTIAL AREAS | |
| | 1 fam./ gross acre |
| | 2-3 fam./ gross acre |
| | 4-5 fam./ gross acre |
| | 6+ fam./ gross acre |
| COMMERCIAL | |
| | Major |
| | Neighborhood |
| INDUSTRIAL | |
| ROADS | |
| | Arterial |
| | Primary |
| | Secondary |
| | Local |
| RECREATION | |
| | WATER BODIES |
| | DRAINAGEWAYS |
| COMMUNITY FACILITIES | |
| | School |
| | Fire Station |
| | Town Hall |
| | Library |

SOURCE: EGNER & NIEDERKORN ASSOC., INC.



prepared by:
EGNER & NIEDERKORN ASSOC. INC.
PLANNING CONSULTANTS

THE PREPARATION OF THIS MAP FOR THE NEW YORK STATE OFFICE OF PLANNING COORDINATION WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AND IN PART BY THE STATE OF NEW YORK UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION '701' OF THE HOUSING ACT OF 1954, AS AMENDED.



TOWN OF HORSEHEADS NEW YORK

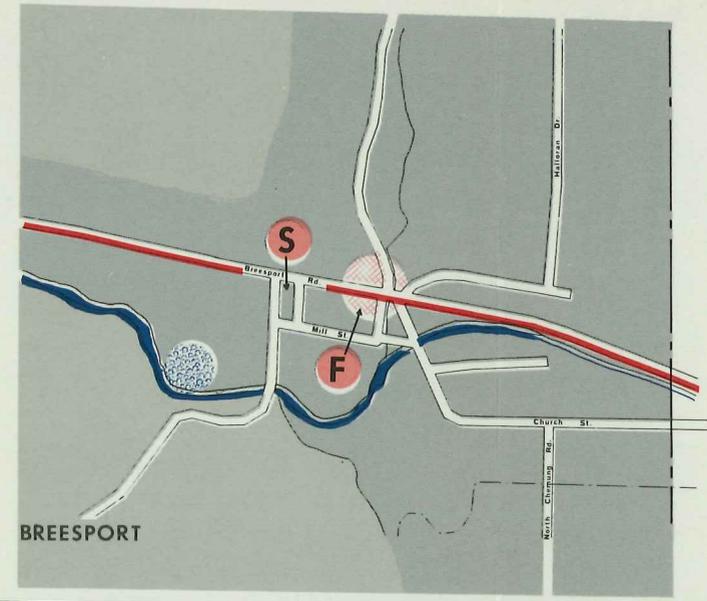
BUILT-UP AREAS

11. GENERAL PLAN

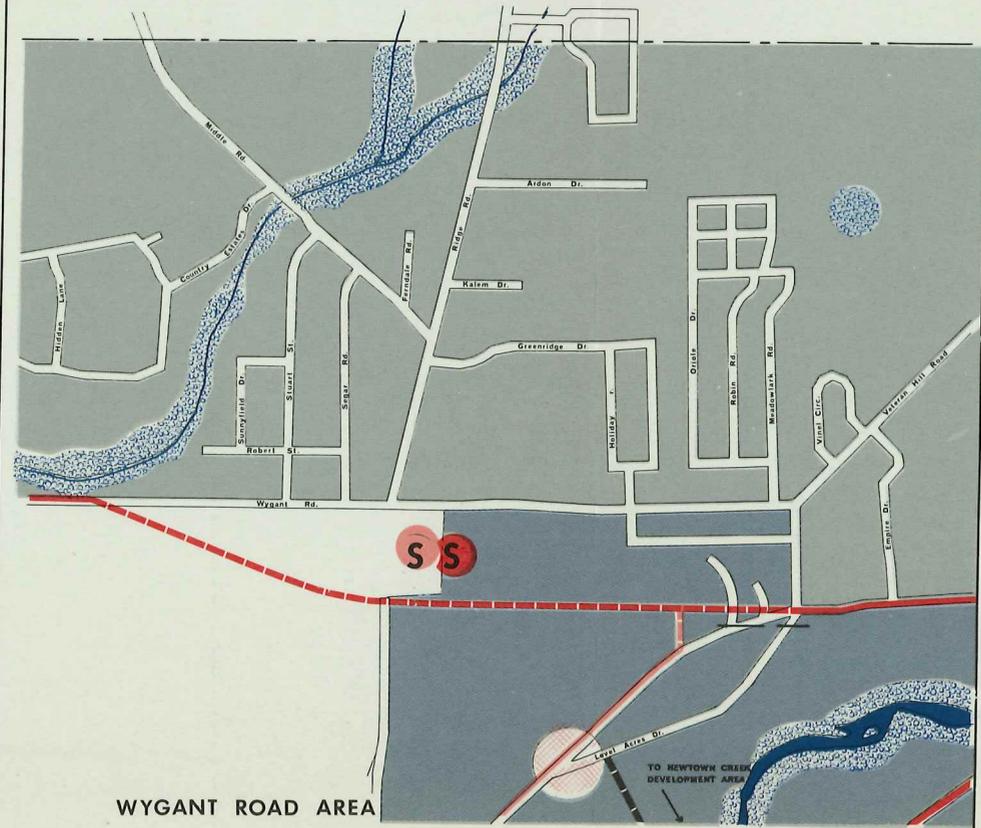
- | | | |
|-------|------|----------------------|
| EXTG. | PRO. | RESIDENTIAL AREAS |
| | | 1 fam./gross acre |
| | | 2-3 fam./gross acre |
| | | 4-5 fam./gross acre |
| | | 6+ fam./gross acre |
| | | COMMERCIAL |
| | | Major |
| | | Neighborhood |
| | | INDUSTRIAL |
| | | RECREATION |
| | | WATERBODIES |
| | | DRAINAGEWAYS |
| | | COMMUNITY FACILITIES |
| S | S | School |
| F | F | Fire Station |
| | | ROADS |
| | | Arterial |
| | | Primary |
| | | Secondary |
| | | Local |



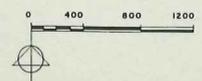
GRAND CENTRAL AVENUE AREA



BREESPORT



WYGANT ROAD AREA



THE PREPARATION OF THIS MAP FOR THE NEW YORK STATE OFFICE OF PLANNING COORDINATION WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AND IN PART BY THE STATE OF NEW YORK UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED.

PREPARED BY:
EGNER & NIEDERKORN ASSOC. INC.
PLANNING CONSULTANTS

IMPLEMENTATION

Implementation

Zoning

The most effective means of controlling the use of land for the general benefit of the community good is through prudent zoning. This involves the establishment of geographical areas within which limitations are placed on the use of land. Zoning is also used to limit the placement and size of buildings and, by limiting lot size and type of structure, the density of population.

The importance of sound zoning as a positive means of directing community growth cannot be over emphasized. If zoning is to be more than "just another regulation," however, it must be a reflection of a comprehensive community plan. The General Plan in itself is the rationale for zoning directives which might otherwise seem unreasonable or arbitrary.

Zoning is not retroactive and cannot be used to force removal of non-conforming uses that exist at the time of adoption of the zoning ordinance. Its main function is the control of new building and the direction of future development into desirable, predetermined patterns.

It should be clearly understood that although zoning can direct community growth it cannot generate it. The market forces of supply and demand will ultimately determine the extent of new growth and these forces must be recognized in the establishment of the various zone districts. Zoning a large area for industrial or commercial use will not automatically bring industry or business to the community. Such practices may, instead, lead to haphazard and random development.

There will be cases where minor exceptions to zoning regulations are just and appropriate. In these cases the Zoning Board of Appeals should grant a variance. The excessive granting of variances, however, can greatly reduce the effectiveness of zoning and this must be avoided. No appeal which is obviously in conflict with the policy and objectives of the General Plan should be approved. Like the General Plan, the Zoning Ordinance must be reviewed and amended periodically so as to always be in tune with changing conditions, new demands and improved techniques.

Zoning is, in short, the bridge between where we are now and where we want to be in the future. It is a means by which many of the objectives of the General Plan can be accomplished. The effectiveness with which it

is used depends to a large extent upon the administrators who enforce it in the interest of the public good.

As part of this project existing zoning ordinances for the Towns of Horseheads and Big Flats were reviewed and new ordinances prepared. These documents have been published as separate reports and are in the process of being reviewed and modified for adoption.

Subdivision Regulation

Just as positive control over the use of land is possible by means of zoning, control over the design and layout in land development is possible by means of subdivision regulations. These two instruments complement each other in the effectuation of the General Plan.

The character and appeal of the community

is largely determined by the way in which its land is subdivided. Each time that open land is partitioned into lots and provided with streets another portion of the community is built. It is obvious that initial guidance over such activity is one of the most valuable opportunities that a community can be given. Land subdivision regulations provide this opportunity by requiring the review and approval of all subdivision projects by the local planning board. Subdivision projects should be reviewed not only in terms of internal layout and design but also with regard to their conformance with the overall plan for primary and secondary streets, parks, schools, shopping facilities and utilities.

Existing subdivision regulations must be carefully reviewed and revised where necessary

so as not to duplicate or conflict with regulations set forth in the zoning ordinance. The minimum standards for street widths and construction and for required improvements should be re-evaluated and adjusted in light of General Plan proposals and zoning requirements. Those sections which deal with the preservation and enhancement of existing amenities such as trees, watercourses and the natural beauty of the terrain should be strengthened and firmly enforced.

By expeditious use of subdivision regulations, the full benefits of the planning program will slowly become apparent and the efficiency, economy and visual quality of the community will improve in the process.

As a part of this project existing subdivision regulations were reviewed for both

towns and new regulations prepared. These regulations have also been published as a separate report and have been submitted to the Planning Board for consideration.

Official Map

The official map is a legal document, adopted by the Town Board after a public hearing, that specifies the location of future streets and other public facilities. In effect, the official map spells out in detail the intent of the municipality to acquire certain property in the future. When drawn in a logical and realistic manner the official map can serve as a positive guide for sound development by reserving sites for public improvements.

The official map should not be confused with other planning tools. It is not a General

Plan and is not compatible with the long term periods covered by such plans. It should, however, be well coordinated with the capital improvements program and should include those elements of the plan which fall within the time period covered by the program. This places an obligation on the community to acquire properties as development pressures build and avoids premature acquisition before specific locational decisions are made.

Preparation of the map requires engineering skill and accuracy. For this reason if the Planning Board is going to prepare the map the assistance of the town engineer or other municipal engineering official will be required. The official map need not be limited to the proposals of town government alone and other jurisdictions such as the school district should be

encouraged to submit proposals for possible inclusion on the map. Any new proposals or changes should, of course, be referred to the Planning Board for review.

For the planning period 1970 - 1975 the following General Plan proposals should be included on the official map:

1. The proposed location of Route 17 and interchanges with local roads should be shown when concurrence on alignment is reached with the New York State Department of Transportation.

2. The proposed location of Route 14 should also be shown, again, when concurrence is reached on alignment.

3. New streets and bridges proposed for the Newtown Creek area north of East Franklin Street and for the Landfill Industrial

Park should be shown as indicated on the General Plan Map. In addition, the park areas in each of these locations should be shown.

4. The proposed Camden Avenue Park should be shown as indicated on the General Plan Map. This area is almost entirely built up and useable recreation space may be totally lost if it is not designated and reserved for public acquisition and development.

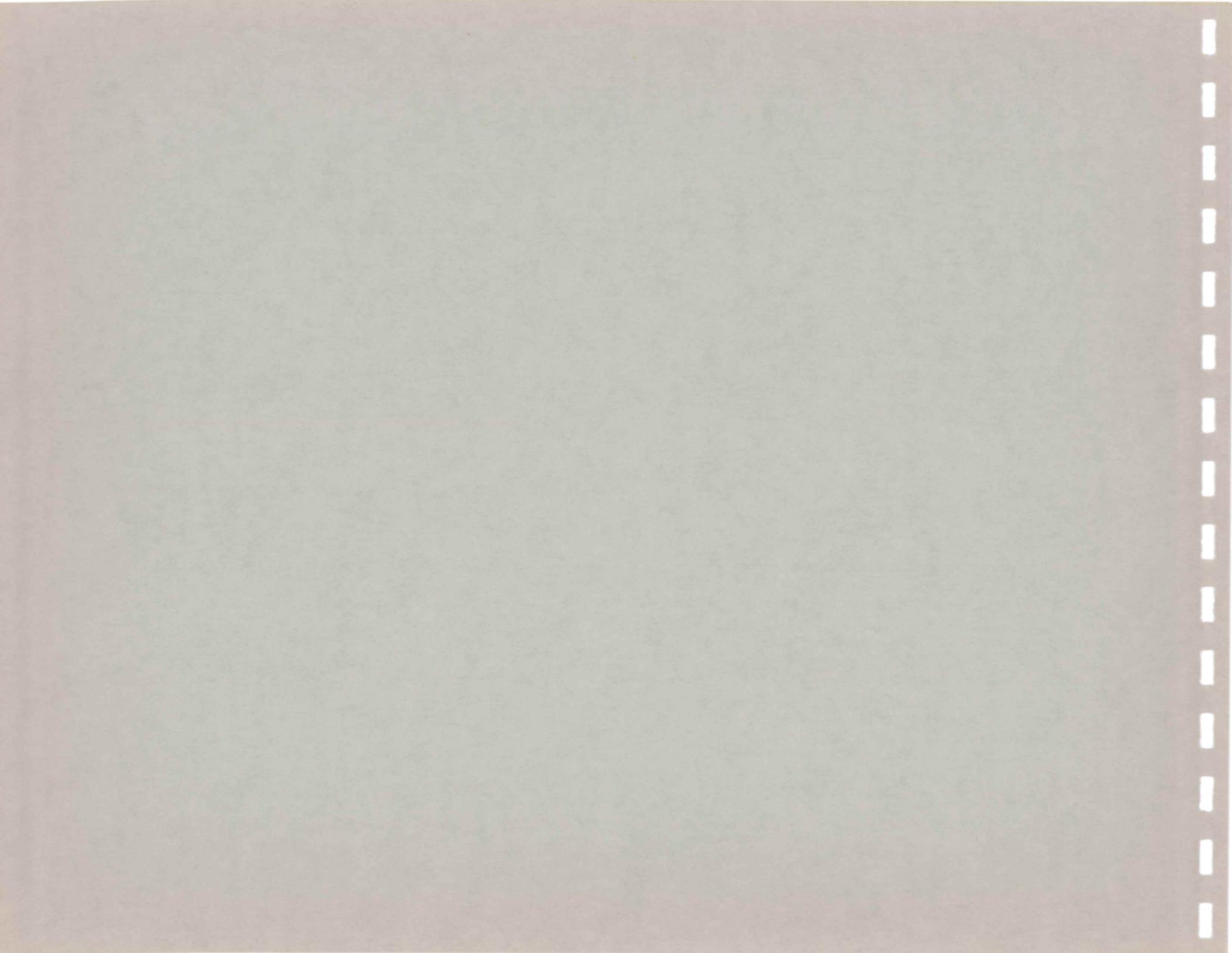
In addition to these specific proposals, which could be accomplished by 1975, negotiations and discussion should begin with the Town and Country Fire Department to determine a specific location and construction schedule for a new fire station in the Oakwood Avenue area. The same type of discussion should also

begin with the Horseheads Central School District in order to determine a construction schedule for the proposed addition to the Wygant Road School. At such time as these decisions are made locations for the fire station and school addition should be noted on the official map.

Other proposals such as Gardner Road and Sing Sing Road neighborhood parks can best be accomplished by means of subdivision approval. If it appears that these proposals will not come about through this technique, the town should include these recreation areas in the capital budget and designate specific locations on the official map.

After the official map is drawn up and adopted it should be kept up to date by the immediate recording of additions and abandonments.

FISCAL ANALYSIS



Fiscal Analysis

There are many ways in which a municipal government can influence the form and direction of community development. One of the most powerful and effective ways is through public investment in projects and improvements which can, in turn, stimulate private investment. In many cases, communities find that they cannot afford to satisfy basic needs either due to a declining tax base, an oppressive tax rate or previously accrued debt which limits capacity to borrow. In the Town of Horseheads, however, this is not the case. In this section of the report the financial resources of the town are analyzed and, on the basis of this analysis, it must be concluded that Horseheads is well able to support relatively heavy investments in community improvement if it chooses to do so.

Much of the information presented was obtained from a series of Special Reports on Municipal Affairs published by the New York State Comptroller. While this information is somewhat dated and does not always coincide with data available from the Proceedings of the Chemung County Board of Supervisors or, in some cases, from the community itself, it does provide the best available data for a consistent comparison of figures over time. In general, discrepancies are small and can be attributed to the way data are organized and to a further refinement of figures which are submitted annually to the State Comptroller and the County Board of Supervisors.

The basic objective of government finance is to strike a balance between revenues and expenditures. For each dollar spent for admin-

istration, provision of services and capital improvements a dollar must be received if the budget is to be balanced. Sources of revenues are basically property taxes, aid from other governmental bodies and such things as licenses, permits, fines, reimbursements and other miscellaneous items. Property taxes are not necessarily the major source of revenue for local governments although it is always the property tax which must be counted on to make up the difference between budgeted expenses and revenues obtained from other sources. As Figure 9 shows, although the actual dollar amount of property tax revenue almost doubled between 1960 and 1968 the percentage of total revenues provided through property taxes showed a slight decline during this period.

Table 6 presents basic information on the

financial structure of the Town of Horseheads. Assessed value of fully taxable real property rose from \$18 million in 1960 to over \$32.5 million in 1968, an increase of 78.5 percent. During the same period property tax revenues for town purposes averaged 22 percent of total revenues while state aid and other sources accounted for the remainder. By contrast 58 percent of total revenue in the Town of Big Flats came from property taxes.

Expenditures have followed a fairly steady pattern of increase with the exception of a jump of 26.8 percent in 1962 and 37 percent in 1967. Increases can be attributed, for the most part, to increases in current operating costs for both town and special district purposes. Capital expenditures generally have ranged from 25 to 30 percent of total costs.

The debt limit for the town is fixed by law at 7 percent of the average full valuation for the preceding five years. In 1968 the maximum debt limit in Horseheads was \$7,377,979 up from \$4,089,314 in 1960. As Table 7 shows, in 1965 Horseheads had the highest capacity for debt of any town in Chemung County and, in fact, could come close to matching the City of Elmira's ability to finance community improvements. In spite of this large amount of legal borrowing power, Horseheads has depended exclusively on a pay-as-you-go financing philosophy while most other towns in the county have chosen to utilize debt financing as a means of providing necessary public facilities.

As an example, the Town of Baldwin with a debt limit of \$104,419 had used over 23 percent of its borrowing capacity in 1965 and incurred

a debt of \$24,535. Debt service amounted to \$10,369 which alone required a tax rate of over \$23 per \$1,000. Property taxes for other town purposes required an additional \$18 per \$1,000 for a total tax rate of \$41.31. Even with this phenomenally high property tax only \$18,468 was raised due to the low assessed value of the town.

By contrast, during the same year Horseheads, with a comparable equalization rate, collected property taxes of \$1.51 per \$1,000 producing tax revenues of \$37,406, all of which was used for town highway purposes. With even a moderate tax rate of \$10.00 per \$1,000, Horseheads could have raised \$246,695 in property taxes, an amount which could support a substantial debt.

From a financial standpoint the Town of Horseheads enjoys a very favorable position

largely due to a rapidly expanding tax base. Town expenditures for special district purposes such as fire protection, lighting and refuse disposal increased by 331% from \$17,741 in 1960 to \$76,482 in 1968 and the Annual Report of the Supervisor shows an additional increase to \$85,395 for the year ending December 31, 1969. Expenditures in this category reflect a rapidly increasing demand for services from an urbanized population and suggest that the town should consider financing these services out of General Fund revenues. With a planned program of capital improvements updated from year to year Horseheads should be able to provide its residents with a comprehensive package of public services and facilities without a tremendous burden on the taxpayer. Tables 9 and 10 show a proposed program

and schedule of capital improvements which the town should undertake in order to work towards accomplishing the proposals presented in the General Plan.

TABLE 6: COMPARATIVE FINANCIAL PROFILE, HORSEHEADS AND BIG FLATS, 1960 - 1968

	Horseheads		Big Flats	
	1960	1968	1960	1968
Assessed Value	\$18,200,219	\$ 32,598,586	\$ 3,464,696	\$ 5,964,498
Full Value	70,000,811	120,735,501	12,373,904	28,402,315
Constitutional Debt Limit	4,089,314	7,377,979	694,399	1,715,378
Sources of Revenue				
Real Property Taxes	\$ 36,565	\$ 62,800	\$ 65,701	\$ 105,036
State Aid	73,131	132,939	16,705	64,516
Other	23,339	108,448	5,799	27,725
Special District Taxes	17,597	81,629	2,065	6,161
Other	0	4,734	0	25,726
Outstanding Debt (Subject to Limit)	0	0	\$ 14,534	\$ 18,000
Outstanding Debt (Not Subject)	0	0	0	267,000
Tax Rate/\$1,000	2.00	1.92	18.96	17.61
General/Highway Fund Expenditures				
Current Operating	\$ 89,817	\$ 162,916	\$ 69,955	\$ 148,221
Capital	26,756	70,610*	18,922	32,241
Debt Service	0	17,110	7,646	6,816
Special District Expenditures				
Current Operating	\$ 17,741	\$ 76,482	\$ 2,065	\$ 17,211
Capital	0	0	0	21,540
Debt Service	0	0	0	10,370

* Principal on capital note - no interest accrued.

Source: Special Report on Municipal Affairs, New York State Comptroller, 1960 and 1968.

TABLE 7: COMPARATIVE ABILITY TO INCUR DEBT, MUNICIPALITIES IN CHEMUNG COUNTY, 1965

	Constitutional Debt Limit	Outstanding Debt		
		Subject to Limit	% Used	Not Subject to Limit
Ashland	\$ 244,405	\$ 3,525	1.4	\$ 0
Baldwin	104,419	24,535	23.5	0
Big Flats	1,250,205	0	0.0	0
Catlin	290,926	27,450	9.4	600
Chemung	395,235	22,520	5.7	0
Elmira	3,470,945	428,380	12.3	0
Erin	162,623	7,383	4.5	0
Southport	2,945,193	0	0.0	0
Van Etten	268,477	6,190	2.3	0
Veteran	568,575	7,200	1.3	0
Horseheads	5,818,027	0	0.0	0
City of Elmira	11,114,980	4,197,450	37.7	0
Chemung County	26,541,375	0	0.0	8,790,000

Source: Special Report on Municipal Affairs, New York State Comptroller, Year ended December 31, 1965.

TABLE 8: TOWN OF HORSEHEADS FINANCES, 1960 THROUGH 1968 (FISCAL YEAR ENDING DECEMBER 31)

	1960	1961	1962	1963	1964	1965	1966	1967	1968
Assessed Value of Fully Taxable Real Property	\$18,200,219	\$18,893,053	\$19,678,930	\$22,457,759	\$23,308,088	\$24,669,547	\$ 28,606,554	\$ 31,110,109	\$ 32,598,586
Full Value	70,000,811	72,665,523	78,715,705	83,176,823	89,646,424	91,368,625	110,025,202	115,222,607	120,735,501
Wholly Tax Exempt	6,815,111	5,926,761	5,930,961	5,993,611	3,236,884	3,818,109	3,870,784	3,984,584	4,298,809
State Equalization Rate	26	26	25	27	26	27	26	27	27
Property Tax Rate/\$1,000	2.00	1.82	1.89	1.87	1.54	1.51	1.74	1.89	1.92
Debt Limit	\$ 4,089,314	\$ 4,388,360	\$ 4,735,913	\$ 5,099,200	\$ 5,518,877	\$ 5,818,027	\$ 6,341,062	\$ 6,852,159	\$ 7,377,979
Outstanding Debt									
Subject to Limit	0	0	0	0	0	0	0	0	0
Not Subject to Limit	0	0	0	0	0	0	0	0	0
Total Revenue									
Real Property Tax	\$ 36,565	\$ 34,425	\$ 37,329	\$ 42,012	\$ 36,106	\$ 37,406	\$ 49,900	\$ 59,000	\$ 62,800
% of Total	27%	20%	25%	26%	20%	18%	22%	20%	20%
State Aid	\$ 73,131	\$ 85,667	\$ 84,523	\$ 86,464	\$ 100,122	\$ 123,029	\$ 126,760	\$ 129,880	\$ 132,939
% of Total	54%	51%	57%	53%	57%	60%	57%	46%	43%
Other	\$ 23,339	\$ 45,552	\$ 25,702	\$ 32,609	\$ 37,425	\$ 42,596	\$ 44,147	\$ 93,317	\$ 108,448
% of Total	19%	29%	18%	21%	23%	22%	21%	34%	37%
Special District Revenues									
Assessments	\$ 17,597	\$ 20,114	\$ 27,123	\$ 30,974	\$ 44,459	\$ 47,816	\$ 53,337	\$ 65,422	\$ 81,629
Other	0	0	426	288	4,470	3,049	4,447	5,940	4,734
Town and Highway Expenditures									
Current Operating	\$ 89,817	\$ 94,511	\$ 123,830	\$ 123,284	\$ 112,685	\$ 127,221	\$ 135,883	\$ 182,564	\$ 162,916
Capital	26,756	23,764	27,075	25,377	33,290	39,266	59,309	72,902	70,610*
Debt Service	0	0	0	0	0	0	0	0	17,110
Special District Expenditures									
Current Operating	\$ 17,741	\$ 20,340	\$ 24,934	\$ 33,316	\$ 47,289	\$ 45,382	\$ 54,006	\$ 86,149	\$ 76,482
Capital	0	0	0	0	0	0	0	0	0
Debt Service	0	0	0	0	0	0	0	0	0

* Repayment of Capital Note.

Source: Special Report on Municipal Affairs, New York State Comptroller 1960 - 1968.

TABLE 9: CAPITAL IMPROVEMENTS PROGRAM - TOWN OF HORSEHEADS

Project	Priority	Estimated Cost	Sources of Funds					Source of Local Share
			Town	County	State	Federal	Other	
Oil and Stone Surfacing	continuing	\$ 5,000/year	100%					Highway Fund
Asphalt Surfacing	continuing	10,000/year	50%		50%			Highway Fund
Surface Stabilization	continuing	7,000/year	75%		25%			Highway Fund
Curb, Gutter & Storm Sewer	continuing	5,000/year	100%					Highway Fund
New Town Streets and Bridges	medium	400,000*	50%		50%			General Purpose Bond Issues
Newtown Creek Area								
Landfill Industrial Park Area								
Newtown Creek Park	medium	125,000	50%		50%	or	50%	May be dedicated
Breesport Park	low	9,000	100%					
Landfill Industrial Park	medium	150,000	50%		50%	or	50%	
Veteran Hill Park	medium	15,000	50%		50%	or	50%	
Ferndale Park	medium	15,000	50%		50%	or	50%	
Gardner Park	medium	15,000	25%		25%	or	25%	50% Park Acq. and Devel. Reserve
Sing Sing Park	medium	15,000	25%		25%	or	25%	50% Park Acq. and Devel. Reserve
Camden Ave. Park	high	9,000	50%		50%	or	50%	Park Acq. and Devel. Reserve
<u>Equipment</u>								
Road Broom	high	14,000	100%					Highway Fund
<u>Reserve Funds</u>								
Park Acq. and Devel.	continuing	5,000/year	100%					General Revenues
Equipment	continuing	10,000/year	100%					General Revenues & Highway Fund
Building	continuing	5,000/year	100%					General Revenues
Water System	continuing	10,000/year	100%					General Revenues
Street Tree Reserve	continuing	2,500/year	100%					General Revenues

\$ 59,500/year
 \$767,000 capital expenditures

* Does not include cost of land acquisition.

TABLE 10: CAPITAL IMPROVEMENTS SCHEDULE - TOWN OF HORSEHEADS

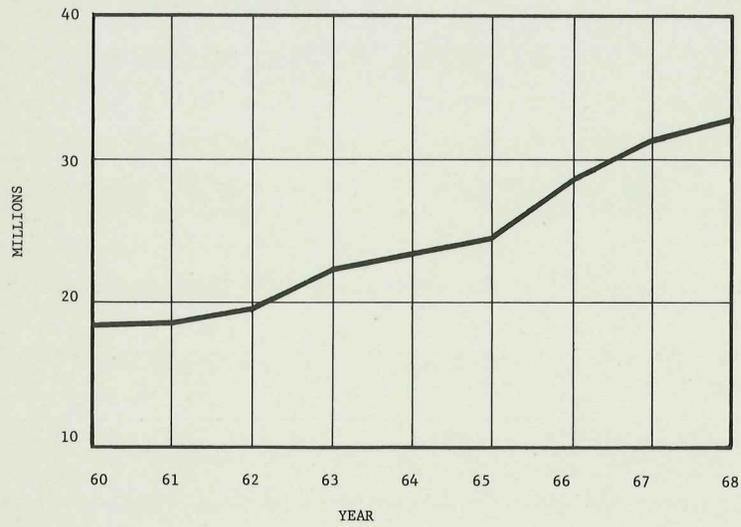
Project	Local Cost	1971	1972	1973	1974	1975	Effects on Local Operating Costs	Notes
Oil and Stone Surfacing	\$ 5,000/year	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	Improved surface on existing roads will reduce maintenance costs.	
Asphalt Surfacing	5,000/year	5,000	5,000	5,000	5,000	5,000		
Surface Stabilization	5,250/year	5,250	5,250	5,250	5,250	5,250		
Curb, Gutter & Storm Sewer	5,000/year	5,000	5,000	5,000	5,000	5,000		
New Town Streets and Bridges								
a. Newtown Creek Area	175,000					8,750	2.6 miles of additional road and 2 bridges to be maintained.	A.
b. Landfill Industrial Park Area	25,000				1,250	2,375		A.
Newtown Creek Park	62,500						Development of	C.
Breesport Park	9,000						park system	B.
Landfill Industrial Park	75,000						will require	D.
Veteran Hill Park	7,500						additional	E.
Ferndale Park	7,500						staff and	E.
Gardner Park	3,750						will involve	F.
Sing Sing Park	3,750						additional	F.
Camden Avenue Park	4,500		4,500				maintenance costs.	G.
<u>Equipment</u>								
Road Broom	14,000	14,000						
<u>Reserve Funds</u>								
Park Acq. & Development	5,000/year	5,000	5,000	5,000	5,000	5,000		
Equipment	10,000/year		10,000	10,000	10,000	10,000		H.
Building	5,000/year	5,000	5,000	5,000	5,000	5,000		I.
Water System	10,000/year	10,000	10,000	10,000	10,000	10,000		J.
Street Tree Reserve	2,500/year	2,500	2,500	2,500	2,500	2,500		
	\$387,500*	\$56,750	\$57,250	\$56,500	\$57,750	\$63,875		

* Capital Expenditures.

Notes: A. Based on ten year bonding period. Down payment of 5% to come from Highway Fund.
 B. To be constructed when needed as development increases; not anticipated before 1975.
 C. To be undertaken as land becomes available.
 D. To be undertaken when present landfill site is abandoned and ground has stabilized; not anticipated before 1975.

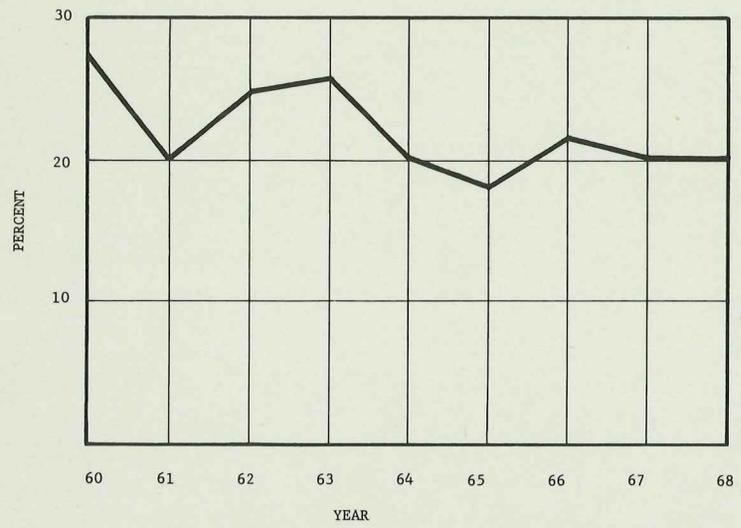
E. To be undertaken as soon as funds can be secured.
 F. Estimated time when development will warrant this expenditure.
 G. To be undertaken in conjunction with road improvements in the Benita Ave. area.
 H. Reserve fund to be established in 1972 after purchase of Road Broom.
 I. To be added to existing Building Reserve Fund.
 J. To be added to existing Water Reserve Fund; interest on existing fund will provide one-fifth of the amount to be reserved yearly.

FIGURE 9: FISCAL ANALYSIS: 1960-1968

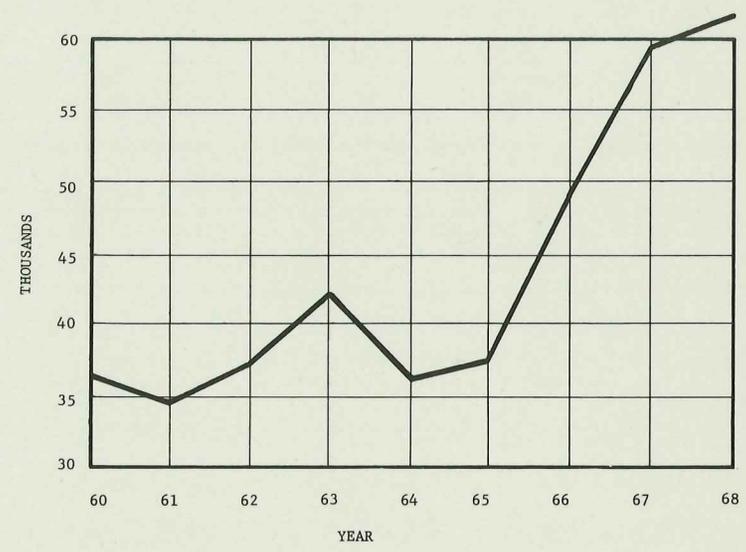


As Assessed Value increased

Real property tax revenues fluctuated widely but showed a large increase.



During the same period the percentage of total revenue provided by property taxes declined slightly.



APPENDIX

Population

INTRODUCTION

The adjacent Towns of Horseheads and Big Flats are located in the middle and extreme western sections of Chemung County. Westinghouse, Ann Page, the Corning Glass Works and the Eclipse Division of Bendix are major employers located within the two Towns. The areas also serve as bedroom communities for persons working in the Cities of Elmira and Corning. Grand Central Plaza in Horseheads and the Mall Shopping Center in Big Flats provide modern local shopping facilities and good rail, air and highway links permit easy access to the Towns.

Recent population expansion in the Town of Big Flats has altered the character of the town from a primarily rural-agricultural community to a rapidly growing residential area of 4,900 persons with expanding industrial and commercial activity. The Town of Horseheads with 20,000 inhabitants is a more populous and developed community reflecting the location of two villages within its boundaries (i.e. Horseheads and Elmira Heights) as well as a growing suburban area outside the urban centers.

The purpose of this report is to chronicle and analyze past population development in the two towns. From these trends and other relevant current information, projections of population for the towns will be made. These projections will have implications for needs of the community so that public officials can plan to accommodate the de-

mands of the future.

EARLY POPULATION TRENDS

At the beginning of the Twentieth Century, the Town of Big Flats was a sparsely populated agricultural community with 1,705 inhabitants (Table 1). The Town of Horseheads on the other hand was both an agricultural and an industrial area with almost 70 percent of its 4,944 residents living in the Villages of Horseheads and Elmira Heights. These latter communities had developed largely in the latter half of the 1800's under the impetus of the Chenango Canal and various railroad lines. The Village of Elmira Heights in particular was itself the result of a unique development scheme in which the Elmira Industrial Association, concerned about the economic future of the area, organized a land lottery to encourage settlement. To promote industrial expansion, this was coupled with the allotment of factory sites adjacent to the railroads. The success of this program is evident from the fact that by the turn of the Century, the Village of Elmira Heights (incorporated in 1896) consisted of 10 factories, 8 railroads (of various sizes) and 2,240 inhabitants.¹

¹The Elmira Heights Historical Journal, 1961.

The first two decades of the Twentieth Century was the era of industrialization throughout the Northeast and thousands of workers and their families migrated to the urban centers where employment opportunities were readily available. Communities which had indigenous industry or were located adjacent to employment centers generally grew rapidly during this 20 year period. The patterns of population growth in Chemung and neighboring Steuben Counties reflected this movement with the Cities of Elmira and Corning and the Towns of Horseheads, Elmira and Corning recording very rapid population expansion over the two decades. Much of the influx of population to these communities represented movements out of the more rural areas of these two counties. In Chemung, the Towns of Big Flats, Catlin, and Veteran all evidenced heavy net out-migration and recorded declines in population. The expansion that occurred in the Town of Horseheads during this period was due almost entirely to growth in the Village of Elmira Heights as the Village of Horseheads showed only a modest increase and the size of the population in the rural areas of the town fell sharply.

With some noteworthy exceptions these population patterns generally persisted through the following decade, that of the 1920's. While the employment centers continued to grow, they expanded at slower rates. The more rural areas still evidenced net out-

migration although the level was not as great as in the previous period. The Town of Horseheads continued to grow rapidly (although at a slightly reduced pace) during the 1920's and counted 8,420 inhabitants by 1930. Within the town, the Village of Elmira Heights continued to be the focal point of expansion, undoubtedly attracting many families from the outlying areas. The Village of Horseheads also expanded during this period recording a growth rate of 16.9 percent -- evidencing a small level of net in-migration (Table 2). The Town of Big Flats experienced its first population gain of the century during the 1920's as the number of inhabitants rose 15.5 percent to 1,679 persons by 1930. A much smaller increase occurred in the Town of Veteran (3.0 percent) and the level of population in Catlin continued to decline (-9.1 percent).

Definite changes in the patterns of population growth appeared in the 1930's with one of the major influences in these changes being the Great Depression that was occurring throughout the Nation. As employment levels fell in the industrial centers, their populations and those of their residential satellites generally stagnated or declined. The more predictable economic environment in the rural areas on the other hand became increasingly attractive and the heavy out-movement to the urban centers came practically to a halt. The Town of Horseheads grew by 4.6 percent during the 1930's, its slowest growth since 1900. This phenomena

was directly related to the radical decline in population that occurred in the Village of Elmira Heights which recorded its first net loss of population since the turn of the Century. The population gain in the Village of Horseheads (+140 persons) was less than half the level recorded in either of the prior two decades. In sharp contrast to earlier periods, the growth that occurred in Horseheads during the 1930's was due to expansion outside the Villages as the number of persons in the rest of the town increased by more than 800 percent (283 persons to 2,674 persons) a gain sufficient to more than offset the drop in Elmira Heights (Table 2). Population growth in the Town of Big Flats also slowed during the 1930's, but the rate that was achieved, 9.1 percent, exceeded for the first time that recorded in the Town of Horseheads.

The same general patterns were in evidence among the comparison areas as well during the 1930's. The rural Towns of Catlin and Veteran grew more rapidly than in any prior period. The City of Elmira showed a net loss of population and the Town of Elmira, the City of Corning, and the Town of Corning all grew by less than 5.0 percent.

The economic uncertainties of the 1930's gave way to expansion in the 1940's as the needs of national defense and the postwar demands on manufacturing facilities sent employment to record levels. The old pattern

of heavy migration to the cities and industrialized villages had disappeared; however, as a large segment of the population, spurred by long-term low interest home mortgages, preferred to live in a suburban environment. In spite of this exodus to the suburban areas, the pace of new construction was generally not adequate to meet the demand and cities and urban areas in many cases showed absolute population gains in the 1940's as their stock of housing represented an available resource to accommodate the heavy total demand. Reflecting this phenomena, the rate of population growth in the Villages of Horseheads¹ and Elmira Heights and the Cities of Elmira and Corning accelerated substantially in the 1940's compared with the 1930's. The trend in Elmira Heights and the City of Elmira in particular is worthy of note since both recorded population losses in the 30's.

The Town of Horseheads recorded a population growth of 26.3 percent during the 1940's as the number of persons living in the town reached 11,100 by 1950. In contrast to earlier periods, this increase was about evenly divided between expansion in the villages (1,222 persons) and growth in the suburban

¹Some of the growth in the Village of Horseheads was due to the annexation of unincorporated parts of the Town of Horseheads.

parts of the town (1,092 persons). This growth in the two villages also represented an unique occurrence compared with earlier patterns as the Village of Horseheads became the more dynamic of the two and added 1,036 persons compared with a growth of 186 persons in Elmira Heights. This substantial gain in the former village was directly related to two factors: (1) the creation of a military depot at Holding Point (now known as the Horseheads Industrial Center) in 1941 and (2) the annexation of parts of the Town of Horseheads.

The impact of the suburban "push" of the late 1940's was evident in the population growth experienced by the Town of Big Flats (34.3 percent) and the comparison Towns of Veteran (17.3 percent), Elmira (20.0 percent) and Corning (35.6 percent). This increase in Big Flats during the 1940's was significant in several respects as the Town not only exceeded its rate of growth in all previous periods but also continued to grow faster than neighboring Horseheads as well. It is probable that a significant share of the families that were then moving in increasing numbers to the Town of Big Flats were tied to the City of Elmira and the Town of Horseheads for employment although some undoubtedly worked in the Corning area.

RECENT TRENDS 1950-65

Levels of Population Change

The trend toward suburbanization that emerged in the latter 1940's continued at an accelerated pace during the 1950's. Industrial development in the Horseheads - Big Flats Area also gained momentum after the Horseheads Industrial Center had been turned over to private industry at the end of World War II. National Homes and Westinghouse opened facilities in the Town of Horseheads and the Corning Glass Works opened its plant in Big Flats. Growth in employment at these firms accounted for much of the rapid population expansion in the two towns during the 1950's.

The Town of Horseheads grew at a rate of 60.2 percent over the decade 1950 to 1960. Total net in-migration amounted to 3,810 persons. Heaviest in-migration occurred among adults in the 25 - 44 year age groups and their children aged 15 and under (Tables 3 and 4). The focal point of this growth in the town continued to be the Village of Horseheads where the population doubled. This increase of 3,601 inhabitants mirrored the positive impact of natural and migration change in the Village (2,289) as well as a gain due to the annexation (1,312 persons) by the Village of part of the Town of Horseheads (Table

5). The Village of Elmira Heights experienced a heavy out-migration of -475 persons during the 1950's but recorded a modest growth of total population (37 persons) as a result of the counter-weight of natural change (512 persons). The Town of Horseheads outside the villages continued to expand rapidly during the decade of the 1950's. The growth of the non-village population (+3,052 persons) accounted for almost 50 percent of the total increase in the Town over the period.

The Town of Big Flats grew faster in terms of population during the 1950's than it had during the decade of the 1940's. Net in-migration amounted to about 700 persons (Table 6 and 7). As in the Town of Horseheads, in-migration was concentrated among adults in the 25-44 year age groups and their children aged 15 years and under. Some out-migration also took place in the 15-24 year old age group which was generally made up of students going away to college or persons seeking employment outside the town (Table 7).

Although the population in both Chemung and Steuben Counties experienced slower rates of growth during the 1950's than they had during the 1940's, the population in the comparison towns

increased more rapidly. The Town of Catlin, for example, experienced a 3.5 percent loss of population between 1940 and 1950 while during the 1950's it grew at a rate of 165.4 percent. Increases in rates of growth in the Towns of Elmira, Veteran, and Corning ranged from 12 to 30 percentage points.

In the early years of the 1960's¹ the rate of population expansion slowed in the Town of Horseheads. Total population in 1965 amounted to 19,874 persons reflecting a natural change gain of 1,558 and a net in-migration of 508 persons since 1960 (Table 8). The Village of Elmira Heights again experienced net out-migration, showing a population gain of only one person in the 5 year period. The growth rate in the Village of Horseheads during the 5 year period dropped sharply as the level of net in-migration fell to an average of 10 persons per year during the 1960's compared with an average of over 100 persons per year during the 1950's.

From 1960 to 1965, the rate of population growth in Big Flats was 33.4 percent, a faster

¹Sex and age data for Special Censuses in the two towns for 1964 and 1965 are unavailable, therefore, migration by sex and age group cannot be analyzed.

rate than that of the Town of Horseheads.¹ By 1965, population in the Town of Big Flats had reached 4,900 persons. The more rapid population growth in Big Flats during the early 1960's was due in part to the availability of land at comparatively lower prices for residential development in Big Flats.

Components of Population Change

The changes that have occurred since 1950 in the level of population in the Towns of Horseheads and Big Flats were the result of natural change (differential between births and deaths) and migration change (net movement of population to or from a community). The impact of each type of change in the Towns of Horseheads and Big Flats and the other comparison areas is described as follows.

¹Special Censuses were conducted in 1965 in the Town of Horseheads and 1964 in the Town of Big Flats. For purposes of comparison, an estimate was made of the 1965 population in Big Flats based on the changes in 1960 to 1964.

Natural Change

In the vast majority of communities, the impact of natural change has been and continues to be positive with the number of births most often exceeding the number of deaths over a given period of time. The magnitude of these two factors in an area is generally expressed in terms of crude birth rates² and crude death rates.³ Generally, the level of these rates mirrors the demographic character of constituent population with comparatively high birth rates and low death rates found in suburban areas with a young population. Older urban areas, on the other hand, frequently have comparatively low birth rates and high death rates mirroring the greater average age of the population and the loss of the growing young and middle aged families to suburban communities. Only rarely, however, is the birth rate lower than the death rate in any community.

In 1950, the crude birth rate for Chemung County was 23.3 births per 1,000 population. The comparable figures for the Towns of Horseheads and Big Flats clustered near the County

²A crude birth rate is the number of births per 1,000 population.

³A crude death rate is the number of deaths per 1,000 population.

average at 23.8 and 22.3 respectively (Table 9). Birth rates for the comparison areas within Chemung County showed a greater divergence from the County norm and ranged from a low of 18.8 in the Town of Veteran to a high of 46.3 in the Town of Catlin. Generally, throughout the County in 1950, the Towns with the younger population had the higher birth rates. The Town of Catlin for example had the youngest population (average age 28.6 years) and the highest birth rate. A different pattern was evident in Steuben County with the birth rate in the Town of Corning (19.8) being substantially below the County figure (24.6) in spite of a comparatively young population in the Town.

Between 1950 and 1960, the crude birth rate rose slightly in Chemung County, and declined slightly in Steuben, with the former mirroring a similar movement at the State level. Slight upward shifts also occurred in the Towns of Horseheads and Veteran. The crude birth rate in the remaining comparison towns in both Counties, however, recorded declines.

Since 1960, a more uniform pattern has emerged with sharp declines noted in the crude birth rates throughout the two counties by 1965.¹ This trend has been a nationwide

¹The only exception was the Town of Elmira where the crude birth rate rose by 2.0 points between 1960 and 1965.

phenomena with much speculation but few facts as to why it has occurred. In Big Flats the birth rate dropped from 20.4 births per thousand in 1960 to 18.6 in 1964; the rate in Horseheads fell from 25.1 to 18.3 by 1965.

Death rates have consistently been below the birth rates in all the comparison areas (Table 9). In 1950, the crude death rate was 10.9 per thousand in Chemung County and 11.8 in Steuben County. The similar figures for Horseheads and Big Flats were 8.9 and 5.2 respectively, substantially below the County norm with the differential between the towns reflecting mainly the influence of the older population of the Village of Horseheads. The death rates in all the comparison areas except the Town of Catlin (17.3) were below the respective County-wide rates in 1950.

The trend in death rates was varied between 1950 and 1960. The crude death rates in the Counties converged with a slight rise noted in Chemung and a slight decline in Steuben over the 10 year period. Higher death rates in 1960 were recorded in the Town of Big Flats and Elmira while the remaining towns showed declines. Nonetheless, the 1960 crude death rate in Big Flats (7.3) was still below that of neighboring Horseheads (8.1).

Since 1960, there has been a generally downward movement in the crude death rate among the Towns in Chemung County including

both Horseheads and Big Flats. The death rate in Steuben County turned upward in the 1960's and by 1965 was slightly below the rate in 1950.

In spite of the varying levels and directions of change in the birth and death rates, the net result has been a positive contribution to population growth as birth rates have consistently exceeded death rates in all the comparison areas since 1950. The relative magnitude of the gain resulting from natural change has varied with the towns having the highest birth rates, also experiencing the greatest growth due to natural change in both the 1950's and the 1960's.¹ This relationship is evident from Tables 5 and 8. The Towns of Catlin, Horseheads and Big Flats reported the highest birth rates and the highest rates of natural change in the decade of the 1950's and through the first half of the 1960's.

¹The close relationship between birth and natural change rates is due to the greater variation and volatility of the former compared with death rates, the more stable component of natural change.

Migration Change

Net migration, the other component of population change is traditionally the more volatile element as it reflects the relative "attraction" of an area in terms of employment opportunities, type and availability of housing, character of the neighborhoods, etc. As Table 5 illustrates, the most significant component of population growth in all the comparison towns during the 1950's was migration change as the number of persons moving into the areas far surpasses the population gains attributable to natural change. The Towns of Horseheads and Big Flats experienced a net influx of 3,810 and 696 persons respectively between 1950 and 1960 with the former experiencing the heaviest net in-movement (in absolute terms) of all the comparison areas. As noted previously, the largest groups migrating into both Horseheads and Big Flats were persons 25-44 years of age and their children (under 15 years old) (Tables 4 and 7).

The migration patterns and levels since 1960 reflect some changes compared with the 1950's. In general, the rate of net migration to the towns has slowed down and natural change has become the major component of population growth in the Towns of Horseheads, Catlin, and Elmira (Table 8). Outstanding and unique among the comparison areas is the continued heavy net movement into the Town of Big Flats which has in fact accelerated in the 1960's (in absolute terms).

POPULATION PROJECTIONS 1970 - 1990¹

Many of the same factors that have influenced population growth in Horseheads and Big Flats in recent years are expected to continue to be influential in the coming decades. In general, the diversified economic base both within the two towns and in the Corning - Elmira Area is likely to continue to expand and provide new jobs for local residents as well as attract workers from outside the area. In terms of geography, access, and potential indigenous growth of employment opportunities, the two towns are likely to continue to attract new residents.

Town of Horseheads

The population of the Town of Horseheads is projected to reach 22,400 persons by 1970, 28,300 by 1980 and 35,700 by 1990 (Tables 10-13).¹ Within the Town, the vast majority of the population increase is expected to occur in the suburban areas outside the two Villages. The population of that part of the Village of Elmira Heights in the Town is projected to decline by an estimated 100 persons per decade to a total of 3,500 persons in 1990. The Village of Horseheads, barring any further

¹See Appendix A for a description of the methodology used to make these projections.

annexations, is expected to grow modestly to 11,700 inhabitants by the end of the 1980's. Population gains in the non-village areas of the town will probably be initially concentrated in single family residential development catering to upper middle income families.² The desirable character of the Town coupled with rising land costs, however, may well encourage accelerated apartment construction in both the village and non-village areas.

The population projections presented here for the Town of Horseheads differ significantly from those made by the Chemung County Planning Board with the latter projecting a more modest and declining pace of growth in the Town in 1970's and 1980's (Table 18). The difference between the two series lies largely in the assumptions employed with the Chemung County Planning Board figures generally consistent with the "development capacity"³ of the Town for single family units. The consultant as-

²Future residential development will probably be similar to the County Estate, Francourt Farms and Rolling Greens where new single family houses are currently priced in excess of \$30,000.

³"Development Capacity" relates the amount of buildable land in an area to the number of homes (in this case single family) that can be built on that land.

sumed that the rate of in-migration established during the early Sixties will generally continue in the coming decades. In this respect, therefore, the estimates presented here reflect an anticipated potential "demand for" housing in the Town compared with the Chemung County Planning Board projections which are more related to the "capacity" of the Town to absorb population. Attainment of the population levels projected by the consultant, therefore, will depend largely upon the rate of high density construction (multi-unit) that is permitted as well as actions taken to provide the necessary infrastructure, particularly water and sewer facilities.

Town of Big Flats

Population levels in the Town of Big Flats are projected to grow over 60 percent per decade in the near future and reach approximately 17,500 persons by 1990 (Tables 14-17). The type of residential development is likely to be almost exclusively single family units with the flat land along Routes 17, 17E and in the Sing Sing Road Area likely to be developed first. The availability of water and the saturation capacity of the soil for sewage disposal however will probably affect the location of the development and perhaps its absolute level. If rent trends persist, the

type of new housing to be constructed will be in the \$20,000 to \$40,000 price range (1969 prices) thus attracting primarily middle income families. Some apartment development is also likely in Big Flats although at a smaller scale than is anticipated in the Town of Horseheads.

The population projections included in this report reflect a slower pace of growth in Big Flats than is anticipated by the Chemung County Planning Board (Table 18). The consultant considers the accelerating growth rate projected by the Chemung County Planning Board a possibility but has no evidence at the present time to indicate any radical future change in recent trends.

One major factor, however, which might result in a more rapid population growth for Big Flats than anticipated by the consultant would be a reduced level of expansion in the neighboring Town of Horseheads. Since each of the two towns share a common relationship to the housing market in the area, a reduced pace of growth in one would undoubtedly put additional pressure on the other.

Chemung County

While the consultant has made no projections for Chemung County, such estimates are

available from the Chemung County Planning Board and the New York State Office of Planning Coordination.¹ The population levels projected by these two agencies are similar for 1970 but diverge sharply thereafter with the Chemung County Planning Board estimates consistently higher than those of the New York State Office of Planning Coordination.

METHODOLOGY OF POPULATION PROJECTIONS

The basic method employed in projecting the population levels in the Towns of Horseheads and Big Flats was the Survival Cohort Technique. This technique essentially moves a given population by sex and age group over time and incorporates estimates of birth, death and net migration levels. These factors are estimated as follows:

Birth: The number of births occurring in the respective populations was estimated using

¹New York State Office of Planning Coordination projections were done by the Cornell Aeronautical Laboratory, Inc. of Buffalo. (OPC)

an age specific birth rate (number of births per 1,000 females 15 to 44 years of age). The rate for each town was derived for 1960 and adjusted through 1965 based on the actual births that occurred in that period. This 1965 adjusted rate was then held constant through 1990 based on preliminary evidence that the birth rate has begun to stabilize at least at the State level.

The distribution of estimated births by sex was based on the most recent data for Upstate New York with males accounting for 51.0 percent of all live births.

Deaths: The number of deaths was estimated by applying an age specific death rate to the median population size by sex and age group. This rate was also adjusted based on known 1960 data for the towns and held constant through 1990.

Net Migration: The level of net migration for each of the towns was estimated based on the known levels that occurred between 1960 and 1965. These levels were converted to net migration rates

and applied to the base population (by sex) for each projected period. The distribution of the migrants was derived using the 1960 through 1965 pattern with necessary increments related to the changes in the sizes of the specific age groups.

The projections presented here by the Consultant, therefore, rely heavily on recent trends and are adjusted based on presently available knowledge. If in the course of completing other major elements of the Master Plans, additional relevant information becomes available, the projections will be adjusted as appropriate.

TABLE 1

POPULATION CHANGES
TOWNS OF HORSEHEADS, BIG FLATS AND COMPARISON AREAS
1900 - 1967

	<u>1900</u>	<u>1910</u>	<u>1920</u>	<u>1930</u>	<u>1940</u>	<u>1950</u>	<u>1960</u>	<u>1965</u>
Town of Horseheads	4,944	5,376	6,809	8,420	8,804	11,118	17,808	19,874
Village of Elmira Heights ^{/1}	1,445	2,240	4,118	5,707	3,560	3,746	3,783	3,784
Village of Horseheads	1,901	1,788	2,078	2,430	2,570	3,606 ^{/2}	7,207 ^{/2}	7,854
Rest of Town	1,598	1,348	613	283	2,674	3,766	6,823	8,236 ^{/3}
Town of Big Flats	1,705	1,535	1,454	1,679	1,832	2,460	3,665	4,900 ^{/3}
Town of Catlin	1,109	870	737	670	715	690	1,831	2,130 ^{/3}
Town of Veteran	1,652	1,470	1,471	1,515	1,582	1,856	2,729	3,148
Town of Elmira	1,260	1,605	2,651	5,084	5,290	6,346	8,413	8,651
City of Elmira	35,672	37,176	45,393	47,397	45,106	49,716	46,517	NA
Chemung County	54,063	54,662	65,872	74,397	73,718	86,827	98,706	103,768 ^{/4}
Town of Corning	1,937	2,391	2,857	2,997	3,152	4,275	6,732	NA
City of Corning	11,061	13,730	15,820	15,777	16,212	17,684	17,085	NA
New York State	7,268,894	9,113,614	10,385,227	12,588,066	13,479,142	14,830,192	16,782,304	17,794,139 ^{/4}

^{/1} Includes that part of the Village in the Town of Horseheads.

^{/2} Parts of Horseheads Town annexed to Horseheads Village.

^{/3} Estimate based on 1964 Special Census. The 1964 totals were 4,658 for Big Flats and 2,072 for Catlin.

^{/4} Office of Planning Coordination Estimate.

Source: U. S. Bureau of the Census, U. S. Census of Population.

TABLE 2

**RATE OF POPULATION CHANGE
TOWNS OF HORSEHEADS, BIG FLATS AND COMPARISON AREAS
1900 - 1965**

	1900 to <u>1910</u>	1910 to <u>1920</u>	1920 to <u>1930</u>	1930 to <u>1940</u>	1940 to <u>1950</u>	1950 to <u>1960</u>	1960 to <u>1965</u>
Town of Horseheads	8.7	26.7	23.7	4.6	26.3	60.2	11.6
Village of Elmira Heights ^{/1}	55.0	83.8	38.6	-37.6	5.2	1.0	0.0
Village of Horseheads	-5.9	16.2	16.9	5.8	40.3	99.9	9.0
Rest of Town	-15.6	-54.5	-53.8	844.9	40.8	81.2	20.7
Town of Big Flats	-10.0	-5.3	15.5	9.1	34.3	49.0	33.7
Town of Catlin	-21.6	-15.3	-9.1	6.7	-3.5	165.4	16.3
Town of Veteran	-11.0	0.1	3.0	4.4	17.3	47.0	15.4
Town of Elmira	27.4	65.2	91.8	4.1	20.0	32.6	2.8
City of Elmira	4.2	22.1	4.4	-4.8	10.2	-6.4	NA
Chemung County	1.1	20.5	13.4	-1.3	17.8	13.7	5.1
Town of Corning	23.4	19.5	4.9	5.2	35.6	57.5	NA
City of Corning	24.1	15.2	-0.3	2.8	9.1	-3.4	NA
New York State	25.4	14.0	21.2	7.1	10.0	13.2	6.0

^{/1} Includes that part of the Village in the Town of Horseheads.

Source: Based on Table 1.

TABLE 3

**SEX AND AGE DISTRIBUTION
HORSEHEADS TOWN
1950 - 1960 - 1965**

	<u>1950</u>		<u>1960</u>		<u>1965</u> ^{/1}
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>
<u>Males</u>					
Under 5	624	11.3	1,195	13.7	
5 - 14	901	16.4	1,928	22.2	
15 - 24	663	12.0	883	10.1	
25 - 34	915	16.6	1,227	14.1	
35 - 44	742	13.5	1,290	14.8	
45 - 54	619	11.2	923	10.6	
55 - 64	522	9.5	656	7.5	
65 and over	522	9.5	609	7.0	
Total	5,508	100.0	8,711	100.0	9,707
<u>Females</u>					
Under 5	623	11.1	1,169	12.8	
5 - 14	822	14.7	1,881	20.7	
15 - 24	747	13.3	1,034	11.4	
25 - 34	960	17.1	1,317	14.5	
35 - 44	744	13.3	1,350	14.8	
45 - 54	647	11.5	887	9.7	
55 - 64	477	8.5	662	7.3	
65 and over	590	10.5	797	8.8	
Total	5,610	100.0	9,097	100.0	10,167
Total	11,118		17,808		19,874
Median Age	31.3		28.2		

/1 Sex and Age data for 1965 is not available.

Source: U. S. Census of Population, 1950 and 1960.

TABLE 4

NATURAL CHANGE AND MIGRATION CHANGE
TOWN OF HORSEHEADS
1950 - 1960

	<u>Natural Change</u>		<u>Migration Change</u>		<u>Total Change</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
<u>Males</u>						
Under 5	520	83.3	51	8.2	571	91.5
5 - 14	562	62.4	465	51.6	1,027	114.0
15 - 24	227	34.2	-7	-1.1	220	33.2
25 - 34	-258	-28.2	570	62.3	312	34.1
35 - 44	159	21.4	389	52.4	548	73.9
45 - 54	95	15.3	209	33.8	304	49.1
55 - 64	38	7.3	96	18.4	134	25.7
65 and over	61	11.7	26	5.0	87	16.7
Total	1,404	25.5	1,799	23.7	3,203	58.2
<u>Females</u>						
Under 5	483	77.5	63	10.1	546	87.6
5 - 14	615	74.8	444	54.0	1,059	128.8
15 - 24	71	9.5	216	28.9	287	38.4
25 - 34	-216	-22.5	573	59.7	357	37.2
35 - 44	207	27.8	399	53.6	606	81.5
45 - 54	77	11.9	163	25.2	240	37.1
55 - 64	139	29.1	46	9.6	185	38.8
65 and over	100	16.9	107	18.1	207	35.1
Total	1,476	26.3	2,011	35.8	3,487	62.2

Source: Based on Table 3.

TABLE 5

NATURAL CHANGE AND MIGRATION CHANGE
TOWNS OF HORSEHEADS AND BIG FLATS AND COMPARISON TOWNS
1950 - 1960

<u>Towns</u>	<u>1950 Population</u>	<u>Natural Change Number</u>	<u>Change Percent</u>	<u>Migration Change Number</u>	<u>Change Percent</u>	<u>Total Change Number</u>	<u>Change Percent</u>	<u>1960 Population</u>
Horseheads	11,118	2,880	25.9	3,810	34.3	6,690	60.2	17,808
Village of Horseheads ^{/1}	3,606	963	26.7	2,638	73.2	3,601	99.9	7,207
Village of Elmira Heights ^{/2}	3,746	512	13.7	-475	-12.7	37	1.0	3,783
Big Flats	2,460	509	20.7	696	28.3	1,205	49.0	3,665
Catlin	690	323	46.8	818	118.6	1,141	165.4	1,831
Elmira	6,346	980	15.4	1,087	17.1	2,067	32.6	8,413
Veteran	1,856	240	12.9	633	34.1	873	47.0	2,729
Corning	4,275	759	17.8	1,698	39.7	2,457	57.5	6,732

^{/1} The migration figure includes 1,312 persons who lived in the area of the Town annexed by the Village of Horseheads. Total change, however, includes these persons.

^{/2} Data includes all of the Village of Elmira Heights. No separate information is available for the part of the Village which is located in the Town of Horseheads.

Source: Based on Table 1 and Annual Reports of the New York State Department of Health.

TABLE 6

**SEX AND AGE DISTRIBUTION
TOWN OF BIG FLATS
1950 - 1960 - 1964**

	1950		1960		1964 ^{/1}
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>
<u>Males</u>					
Under 5	155	12.2	236	12.8	
5 - 14	231	18.2	442	24.0	
15 - 24	163	12.9	178	9.6	
25 - 34	159	12.5	283	15.4	
35 - 44	210	16.6	246	13.3	
45 - 54	134	10.6	187	10.1	
55 - 64	97	7.7	146	7.9	
65 and over	118	9.3	127	6.9	
Total	1,267	100.0	1,845	100.0	2,353
<u>Females</u>					
Under	150	12.6	265	14.6	
5 - 14	233	19.5	398	22.0	
15 - 24	152	12.7	199	10.9	
25 - 34	180	15.1	261	14.3	
35 - 44	184	15.4	235	12.9	
45 - 54	114	9.6	206	11.3	
55 - 64	82	6.9	115	6.3	
65 and over	98	8.2	141	7.7	
Total	1,193	100.0	1,820	100.0	2,305
Total	2,460		3,665		4,658
Median Age	29.3		27.1		

^{/1} Sex and age data for 1964 is not available.

Source: U. S. Census of Population, 1950 and 1960.

TABLE 7

NATURAL CHANGE AND MIGRATION CHANGE
TOWN OF BIG FLATS
1950 - 1960

	<u>Natural</u>	<u>Change</u>	<u>Migration</u>	<u>Change</u>	<u>Total</u>	<u>Change</u>
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
<u>Males</u>						
Under 5	53	34.2	28	18.1	81	52.3
5 - 14	77	33.3	134	58.0	211	91.3
15 - 24	65	39.9	-50	-30.7	15	9.2
25 - 34	2	1.3	122	76.7	124	78.0
35 - 44	-54	-25.7	90	42.9	36	17.1
45 - 54	70	52.2	-17	-12.6	53	39.5
55 - 64	25	25.7	24	24.7	49	50.5
65 and over	1	0.9	8	6.7	9	7.6
Total	239	18.8	339	26.7	578	45.6
<u>Females</u>						
Under 5	50	33.3	65	43.3	115	76.6
5 - 14	65	27.8	100	42.9	165	70.8
15 - 24	80	52.6	-33	-21.7	47	30.9
25 - 34	-29	-16.1	110	61.1	81	45.0
35 - 44	-6	-3.2	57	30.9	51	27.7
45 - 54	66	57.8	26	22.8	92	80.7
55 - 64	25	30.4	8	9.7	33	40.2
65 and over	19	19.3	24	24.4	43	43.8
Total	270	22.6	357	29.9	627	52.5

Source: Based on Table 6.

TABLE 8

NATURAL CHANGE AND MIGRATION CHANGE
TOWNS OF HORSEHEADS AND BIG FLATS AND COMPARISON TOWNS
1960 - 1964

<u>Towns</u>	1960 <u>Population</u>	<u>Natural Change</u>		<u>Migration Change</u>		<u>Total Change</u>		1964	1965 <u>Population</u>
		<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>		
Horseheads ^{/1}	17,808	1,558 ^{/4}	8.7	508	2.9	2,066	11.6		19,874
Village of Horseheads	7,207	596	8.3	51	0.7	647	9.0		7,854
Village of Elmira Heights	3,783	254 ^{/4}	6.7	-253	-6.7	1	0.0		3,784
Remainder of Town	6,818	708	10.4	710	10.4	1,418	20.8		8,236
Big Flats ^{/2}	3,665	203 ^{/3}	5.5	790	21.6	993	27.1	4,658	
Catlin ^{/2}	1,831	134 ^{/3}	7.3	107	5.8	241	13.2	2,072	
Elmira	8,413	216 ^{/4}	2.6	22	0.3	238	2.8		8,651
Veteran	2,729	179	6.6	240	8.8	419	15.4		3,148
Corning	6,732	397	5.9	NA	----	NA	----	NA	NA

NA - Data not available.

^{/1} Includes village populations.

^{/2} Special Censuses in Big Flats and Catlin were conducted in 1964.

^{/3} Data are for the four years 1960 - 1963 inclusive.

^{/4} Data includes all of the Village of Elmira Heights. No separate information is available for the part of the village which is located in the Town of Horseheads.

Source: Based on Table 1 and Annual Reports of the New York State Department of Health.

TABLE 9

**SELECTED POPULATION CHARACTERISTICS
TOWNS OF HORSEHEADS AND BIG FLATS AND COMPARISON AREAS
1950, 1960, 1965**

	<u>Town of Horseheads</u>	<u>Village of^{/1} Elmira Heights</u>	<u>Village of Horseheads</u>	<u>Town of Big Flats</u>	<u>Town of Catlin</u>	<u>Town of Elmira</u>	<u>Town of Veteran</u>	<u>Chemung County</u>	<u>Town of Corning</u>	<u>Steuben County</u>
<u>Crude Birth Rate</u>										
1950	23.4	19.2	23.8	22.3	46.3	20.4	18.8	23.3	19.8	24.6
1960	25.1	22.7	25.5	20.4	27.8	17.7	19.4	23.6	17.8	23.8
1965	18.3	19.0	16.9	18.6 ^{/2}	25.0 ^{/2}	19.7	17.1	19.6 ^{/3}	NA	19.7 ^{/3}
<u>Crude Death Rates</u>										
1950	8.9	9.4	9.2	5.2	17.3	8.5	9.6	10.9	7.4	11.8
1960	8.1	10.7	7.2	7.3	7.6	9.2	8.4	11.1	4.0	11.3
1965	8.0	9.8	7.9	6.4 ^{/2}	3.9 ^{/2}	6.9	7.6	10.2 ^{/3}	NA	11.7 ^{/3}
<u>Median Age of Population</u>										
1950	31.3	32.4	32.4	29.3	28.6	35.1	29.4	31.7	27.8	31.7
1960	28.2	32.8	27.5	27.1	23.4	35.1	26.3	30.0	27.4	30.5

^{/1} Data based on total population of the village.

^{/2} Figures are for 1964.

^{/3} Data based on 1965 Population Estimates of the Department of Health.

Source: Based on Table 1 and Annual Reports of the New York State Department of Health.

TABLE 10

PROJECTED SEX AND AGE DISTRIBUTION
TOWN OF HORSEHEADS
1970 - 1990

	1970		1980		1990	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
<u>Males</u>						
Under 5	1,187	10.8	1,551	11.2	2,032	11.6
5 - 14	2,441	22.3	2,747	19.9	3,520	20.1
15 - 24	1,902	17.4	2,397	17.3	2,697	15.5
25 - 34	1,146	10.5	2,194	15.9	2,755	15.8
35 - 44	1,336	12.2	1,291	9.4	2,350	13.5
45 - 54	1,277	11.6	1,349	9.8	1,332	7.6
55 - 64	895	8.2	1,242	9.0	1,338	7.7
65 and over	767	7.0	1,030	7.5	1,429	8.2
Total	10,951	100.0	13,801	100.0	17,453	100.0
<u>Females</u>						
Under 5	1,147	10.0	1,497	10.3	1,946	10.6
5 - 14	2,316	20.2	2,580	17.9	3,318	18.1
15 - 24	1,957	17.1	2,431	16.8	2,716	14.9
25 - 34	1,245	10.9	2,191	15.1	2,719	14.9
35 - 44	1,503	13.1	1,462	10.1	2,424	13.3
45 - 54	1,383	12.1	1,561	10.8	1,553	8.5
55 - 64	867	7.6	1,360	9.4	1,563	8.5
65 and over	1,055	9.2	1,393	9.6	2,049	11.2
Total	11,473	100.0	14,475	100.0	18,288	100.0
Total	22,424		28,276		35,741	
Village of:						
Elmira Hghts.	3,700		3,600		3,500	
Horseheads	8,450		10,000		11,700	
Planning Board						
Chemung County						
Projections	21,500		24,500		25,200	
Median Age	26.1		27.1		28.0	

Source: Estimates by Economic Consultants Organization, Inc.

TABLE 11

PROJECTED NATURAL CHANGE AND MIGRATION CHANGE
TOWN OF HORSEHEADS
1960 - 1970

	<u>Natural Change</u>		<u>Migration Change</u>		<u>Total Change</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
<u>Males</u>						
Under 5	-43	-3.6	35	2.9	-8	-0.7
5 - 14	161	8.4	352	18.3	513	26.6
15 - 24	1,029	116.5	-10	-1.1	1,019	115.4
25 - 34	-351	-28.6	270	22.0	-81	-6.6
35 - 44	-81	-6.3	127	9.8	46	3.6
45 - 54	329	35.6	25	2.7	354	38.4
55 - 64	196	29.9	43	6.6	239	36.4
65 and over	148	24.3	10	1.6	158	25.9
Total	1,388	15.9	852	9.8	2,240	25.7
<u>Females</u>						
Under 5	-54	-4.6	32	2.7	-22	-1.9
5 - 14	157	8.3	278	14.8	435	23.1
15 - 24	841	81.3	82	7.9	923	89.3
25 - 34	-286	-21.7	214	16.2	-72	-5.5
35 - 44	-44	-3.3	197	14.6	153	11.3
45 - 54	435	49.0	61	6.9	496	55.9
55 - 64	187	28.2	18	2.7	205	31.0
65 and over	218	27.4	40	5.0	258	32.4
Total	1,454	16.0	922	10.1	2,376	26.1

Source: Based on Tables 3 and 10.

TABLE 12

PROJECTED NATURAL AND MIGRATION CHANGE
TOWN OF HORSEHEADS
1970 - 1980

	<u>Natural Change</u>		<u>Migration Change</u>		<u>Total Change</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
<u>Males</u>						
Under 5	302	25.4	62	5.2	364	30.7
5 - 14	-113	-4.6	419	17.2	306	12.5
15 - 24	516	27.1	-21	-1.1	495	26.0
25 - 34	741	64.7	307	26.8	1,048	91.4
35 - 44	-206	-15.4	161	12.1	-45	-3.4
45 - 54	19	1.5	53	4.2	72	5.6
55 - 64	283	31.6	64	7.2	347	38.8
65 and over	237	30.9	26	3.4	263	34.3
Total	1,779	16.2	1,071	9.8	2,850	26.0
<u>Females</u>						
Under 5	295	25.7	55	4.8	350	30.5
5 - 14	-62	-2.7	326	14.1	264	11.4
15 - 24	351	17.9	123	6.3	474	24.2
25 - 34	706	56.7	240	19.3	946	76.0
35 - 44	-269	-17.9	228	15.2	-41	-2.7
45 - 54	89	6.4	89	6.4	178	12.9
55 - 64	457	52.7	36	4.2	493	56.9
65 and over	276	26.2	62	5.9	338	32.0
Total	1,843	16.1	1,159	10.1	3,002	26.2

Source: Based on Table 10.

TABLE 13

PROJECTED NATURAL AND MIGRATION CHANGE
TOWN OF HORSEHEADS
1980 - 1990

	<u>Natural Change</u>		<u>Migration Change</u>		<u>Total Change</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
<u>Males</u>						
Under 5	383	24.7	98	6.3	481	31.0
5 - 14	286	10.4	487	17.7	773	28.1
15 - 24	326	13.6	-26	-1.1	300	12.5
25 - 34	184	8.4	377	17.2	561	25.6
35 - 44	872	67.5	187	14.5	1,059	82.0
45 - 54	-97	-7.2	80	5.9	-17	-1.3
55 - 64	1	0.1	95	7.6	96	7.7
65 and over	347	33.7	52	5.0	399	38.7
Total	2,302	16.7	1,350	9.8	3,652	26.5
<u>Females</u>						
Under 5	361	24.1	88	5.9	449	30.0
5 - 14	365	14.1	373	14.5	738	28.6
15 - 24	113	4.6	172	7.1	285	11.7
25 - 34	232	10.6	296	13.5	528	24.1
35 - 44	710	48.6	252	17.2	962	65.8
45 - 54	-128	-8.2	120	7.7	-8	-0.5
55 - 64	135	9.9	68	5.0	203	14.9
65 and over	563	40.4	93	6.7	656	47.1
Total	2,351	16.2	1,462	10.1	3,813	26.3

Source: Based on Table 10.

TABLE 14

POPULATION PROJECTIONS
TOWN OF BIG FLATS
1970 - 1990

	1970		1980		1990	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
<u>Males</u>						
Under 5	426	13.2	674	12.5	1,089	12.1
5 - 14	775	24.2	1,233	22.8	1,940	21.6
15 - 24	342	10.6	599	11.1	1,047	11.6
25 - 34	431	13.4	710	13.1	1,142	12.7
35 - 44	482	15.0	783	14.5	1,250	13.9
45 - 54	296	9.2	603	11.2	1,083	12.0
55 - 64	259	8.0	435	8.0	824	9.1
65 and over	206	6.4	368	6.8	630	7.0
Total	3,217	100.0	5,405	100.0	9,005	100.0
<u>Females</u>						
Under 5	449	14.4	679	13.2	1,077	12.7
5 - 14	707	22.6	1,122	22.0	1,773	21.0
15 - 24	340	10.9	604	11.8	959	11.3
25 - 34	411	13.2	651	12.7	1,066	12.6
35 - 44	402	12.9	657	12.8	1,050	12.4
45 - 54	330	10.6	573	11.2	970	11.5
55 - 64	245	7.8	433	8.4	777	9.2
65 and over	237	7.6	405	7.9	788	9.3
Total	3,121	100.0	5,124	100.0	8,460	100.0
Total	6,338		10,529		17,465	
Chemung County Planning Board Projections	6,500		13,500		25,000	
Median Age	26.7		28.0		28.8	

Source: Estimates by Consultant.

TABLE 15

PROJECTED NATURAL AND MIGRATION CHANGE
TOWN OF BIG FLATS
1960 - 1970

	<u>Natural Change</u>		<u>Migration Change</u>		<u>Total Change</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
<u>Males</u>						
Under 5	61	25.8	129	54.6	190	80.5
5 - 14	-2	0.4	335	75.7	333	75.3
15 - 24	260	146.0	-96	-53.9	164	92.1
25 - 34	-106	-37.4	254	89.7	148	52.2
35 - 44	33	13.4	203	82.5	236	95.9
45 - 54	50	26.7	59	31.5	109	57.7
55 - 64	25	17.1	88	60.2	113	77.3
65 and over	17	13.3	62	48.8	79	62.2
Total	338	18.3	1,034	56.0	1,372	74.3
<u>Females</u>						
Under 5	20	7.5	164	61.8	184	69.4
5 - 14	61	15.3	248	62.3	309	77.6
15 - 24	197	98.9	-56	-28.1	141	70.8
25 - 34	-62	-23.8	212	81.2	150	57.5
35 - 44	23	9.8	144	61.3	167	71.1
45 - 54	22	10.7	102	49.5	124	60.2
55 - 64	81	70.4	49	42.6	130	113.0
65 and over	20	14.2	76	53.9	96	68.1
Total	362	19.9	939	51.6	1,301	71.5

Source: Based on Tables 6 and 14.

TABLE 16

PROJECTED NATURAL AND MIGRATION CHANGE
TOWN OF BIG FLATS
1970 - 1980

	<u>Natural Change</u>		<u>Migration Change</u>		<u>Total Change</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
<u>Males</u>						
Under 5	-11	-2.6	259	60.8	248	58.2
5 - 14	-106	-13.7	564	72.8	458	59.1
15 - 24	425	124.3	-168	-49.1	257	75.1
25 - 34	-91	-21.1	370	85.8	279	64.7
35 - 44	-58	-12.0	359	74.5	301	62.4
45 - 54	169	57.1	138	46.6	307	103.7
55 - 64	11	4.2	165	63.7	176	68.0
65 and over	44	21.4	118	57.3	162	78.6
Total	383	11.9	1,805	56.1	2,188	68.0
<u>Females</u>						
Under 5	-48	-10.7	278	61.9	230	51.2
5 - 14	-21	3.0	436	61.7	415	58.7
15 - 24	364	107.1	-100	-29.4	264	77.6
25 - 34	-71	-17.3	311	75.7	240	58.4
35 - 44	6	1.5	249	61.9	255	63.4
45 - 54	64	19.4	179	54.0	243	73.6
55 - 64	68	27.8	120	49.0	188	76.7
65 and over	32	13.6	136	57.4	168	70.9
Total	394	12.6	1,609	51.6	2,003	64.2

Source: Based on Table 14.

TABLE 17

PROJECTED NATURAL AND MIGRATION CHANGE
TOWN OF BIG FLATS
1980 - 1990

	<u>Natural Change</u>		<u>Migration Change</u>		<u>Total Change</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
<u>Males</u>						
Under 5	-3	-0.4	418	62.0	415	61.6
5 - 14	-154	-12.5	861	69.8	707	57.3
15 - 24	621	103.7	-173	-28.9	448	74.8
25 - 34	-116	-16.3	548	77.2	432	60.8
35 - 44	-85	-10.9	552	70.5	467	59.6
45 - 54	154	25.5	326	54.1	480	79.6
55 - 64	111	25.5	278	63.9	389	89.4
65 and over	41	11.1	221	60.1	262	71.2
Total	569	10.5	3,031	56.1	3,600	66.6
<u>Females</u>						
Under 5	-29	-4.3	427	62.9	398	58.6
5 - 14	-48	-4.3	699	62.3	651	58.0
15 - 24	514	85.1	-159	-26.3	355	58.8
25 - 34	-48	-7.4	463	71.1	415	63.7
35 - 44	-13	-2.0	406	61.8	393	59.8
45 - 54	68	11.9	329	57.4	397	69.3
55 - 64	110	25.4	234	54.0	344	79.4
65 and over	143	35.3	240	59.3	383	94.6
Total	697	13.6	2,639	51.5	3,336	65.1

Source: Based on Table 14.

TABLE 18

POPULATION PROJECTIONS
TOWNS OF HORSEHEADS AND BIG FLATS AND CHEMUNG COUNTY
1970 - 1990

	1960	1970	1980	1990
<u>Town of Horseheads</u>				
CCPB ^{/1}	17,808	21,500	24,500	25,200
Consultant	18,808	22,424	28,276	35,741
<u>Town of Big Flats</u>				
CCPB	3,665	6,500	13,500	25,000
Consultant	3,665	5,338	10,529	17,465
<u>Chemung County</u>				
CCPB ^{/2}	98,706	109,800	132,000	159,701
OPC ^{/2}	98,706	108,202	120,222	135,349
		(Percent Change Per Decade)		
		<u>1960-1970</u>	<u>1970-1980</u>	<u>1980-1990</u>
<u>Town of Horseheads</u>				
CCPB		20.7	14.0	2.9
Consultant		25.9	26.1	26.4
<u>Town of Big Flats</u>				
CCPB		77.3	107.7	85.1
Consultant		72.9	66.1	65.8
<u>Chemung County</u>				
CCPB		11.2	20.2	21.0
OPC		9.6	11.1	12.6

^{/1} Chemung County Planning Board.

^{/2} Office of Planning Coordination.

Source: Consultant, Chemung County Planning Board and Office of Planning Coordination.

Economy

INTRODUCTION

The economic base of a community consists of all those activities which provide the employment and the money income upon which the people of the community depend for their livelihood. Typical of such activities are: farming, manufacturing, retail trade, wholesale trade, and services.

The primary objective of a study of the economic base of a given area, such as the Town of Big Flats and Horseheads, is to develop information which will enable the members of the community to understand the sources of their material well-being, to recognize and evaluate those factors which are shaping the economic base at the present and will affect it in the future.

As part of an overall planning program, the economic base study is related to changes in the size and characteristics of the population, since income and jobs imply people. The economic base is also closely allied to the local tax structure, which deals with revenues collected from homeowners and business firms and with expenditures for public services which benefit the community. Finally, there is a relationship between the use of land and the various kinds and amounts of economic activity which require land.

With the information provided in this economic base study, the planning boards, the officials of local government, and the people of the Towns of Big Flats and Horseheads are

in a better position to solve their problems, to make decisions about matters which will enlarge economic opportunities for local residents, and thus to raise the level of their economic welfare. Out of this process can come a more intelligent approach to economic growth and to the question of the more efficient use of human and physical resources.

The data contained in this study of the economic base of the Towns of Big Flats and Horseheads were derived from various sources, principally the periodic Censuses of the federal government. These include the Censuses of Population, Business, Manufactures, and Agriculture. Material made available by the New York State Department of Labor, the New York State Commerce Department and the Chemung County Chamber of Commerce has also been used.

The official statistics have been supplemented by numerous interviews with businessmen, farm experts, government representatives, and other individuals familiar with economic conditions in Big Flats and Horseheads.

REGIONAL ORIENTATION

The Towns of Big Flats and Horseheads are part of what is defined by the New York State Department of Commerce as the Elmira Area. This includes the five counties of Allegany, Chemung, Schuyler, Steuben and Tompkins. The

economic life of this region is well-diversified, with a strong concentration in manufacturing, agriculture, and tourism.

The Elmira Area has long been famous for such products as fine glassware, wines, typewriters, fire engines, and electrical machinery. Research and development activities here are steadily growing. In 1967, over 1,300 professional and technical personnel staffed at least 30 industrial research laboratories in the area.

Agricultural activity resulted in sales of \$56 million worth of farm products in 1964. Growers in the area specialize in dairying, livestock, grapes, and potatoes.

Tourists are attracted to the Elmira Area by the scenic beauty of the Finger Lakes, the grottoes and waterfalls of Watkins Glen, the Corning Glass Center, and the glider events at Harris Hill. The area's six State parks draw large numbers of visitors annually.

There are eight institutions of higher education in the Elmira Area, including Cornell University at Ithaca. Five of these are state-supported institutions.

The Elmira Area is served by the Chemung County Airport, which is located along Route 17, in the Town of Big Flats. During 1968, a total of 116,892 passengers arrived at the airport, compared with arrivals of 98,657 in 1967.

In 1968, 97,005 passengers departed from the airport, as contrasted with 87,764 departures in 1967. Mohawk Airlines, the only commercial carrier presently using the airport, recorded 9,386 flights in 1968, up from 8,729 flights in 1967. At present, Mohawk is operating 21 flights out of the Chemung County Airport.

New York Routes 13, 14, and 17 pass through Chemung County. About 35 motor carriers provide truck transport service. Four bus lines operate through the Elmira Area, and there are three railroads which connect the county with other parts of the nation.

PERSONAL INCOME

Throughout the Elmira Area, personal income has been improving over the past decade. Estimates prepared by the New York State Department of Commerce indicate that all counties in the Elmira Area have experienced an upward movement in personal income since 1957. Currently, Chemung and Tompkins Counties are leading the area in per capita personal income. (See Table 1)

In Chemung County, per capita personal income rose from an estimated \$2,005 in 1957 to \$2,708 in 1966, a gain of 35 percent. During the same period, per capita personal income in Tompkins County went up by 45 percent.

Although these estimates are not provided on a township basis, they can serve to identify the general trends in personal income throughout the Region to which Big Flats and Horseheads belong.

Personal income tax returns for 1965 showed that in Chemung County about 32,000 taxpayers reported approximately \$207 million of gross income. (See Table 2) This was the highest amount reported in the Elmira Area in that year.

As another evidence of economic welfare in the Elmira Area, average weekly earnings of employees covered by unemployment insurance, as recorded by the New York State Department of Labor, have shown substantial gains in recent years. Average weekly earnings in Chemung County rose from \$75.35 in 1955 to \$104.64 in 1965 and, of the 5 counties in the Elmira Area, only Steuben County reported higher average weekly earnings. (See Table 3)

Bank deposits of individuals, partnerships and corporations in Chemung County increased from a total of \$94.3 million in 1956 to \$145.3 million in 1966. This addition of approximately \$51 million in bank deposits represents a gain of 54 percent over a decade. During the same period, bank deposits in Steuben County improved about 84 percent. (See Table 4)

The distribution of family income in the Towns of Big Flats and Horseheads, as reported in the 1960 Census, showed that at that time families in the Town of Horseheads were on the average somewhat more prosperous than those in most of the nearby communities.

Median income for the 4,604 families in the Town of Horseheads in 1959 was \$6,170, as compared to \$5,679 in Big Flats, \$5,452 in the City of Elmira, and \$5,758 in Chemung County.

Moreover, only 17 percent of the families in the Town of Horseheads reported incomes below \$4,000 a year, whereas 22 percent of Big Flats families were in this category. The greatest amount of relative poverty in the City of Elmira is shown by the fact that about 28 percent of the families there had 1959 incomes below \$4,000.

At the other end of the income scale, all of the comparison areas, except Big Flats, show about 10 percent of the families in the income bracket of \$10,000 a year or more. In Big Flats, the proportion was 7 percent.

For both Big Flats and Horseheads, about 56 percent of all families reported an annual income between \$4,000 and \$8,000. In all of the comparison areas, including the Village of Horseheads, the bulk of the families received incomes between \$4,000 and \$10,000.

THE LABOR FORCE

Characteristics

Job opportunities and wage rates in the entire Elmira labor market area are determining factors for the economic base of Big Flats and Horseheads. While there are several major employers located in the two Towns providing substantial amounts of employment, the manufacturing and other firms in the City of Elmira and other parts of Chemung County are also very significant as sources of income for residents of the Towns.

According to preliminary figures of the New York State Department of Labor, in January, 1969, the Elmira labor market area had a total of 44,600 persons in the civilian labor force.¹ Of this number, about 1,700 or 3.7 percent of the total, were unemployed.

Only about 600 persons in the Elmira area are working at a job related to agriculture. The bulk of the employed workers --

¹Source: Selected Labor Market Indicators, Division of Employment, Elmira, New York, 1968-69. Note: Because of rounding, detail may not add to total.

about 43,000 -- are in non-agricultural employment. Of this number, 16,500 are in manufacturing and 22,400 are in non-manufacturing industries. Manufacturing employment is largely in the durable goods industries. The most important non-manufacturing types of employment in the Elmira Area are trade, services, and government.

The 1960 Census provided some information concerning the labor force in Big Flats and Horseheads. In general, the structure and composition of the labor force in these two Towns is similar to that found in the comparison areas. The labor force participation rate, standing at 58 percent in Big Flats and 57 percent in Horseheads was somewhat above the rate of 55 percent in the County. However, for females, the labor force participation rate of 30 percent in Big Flats and 31 percent in Horseheads was somewhat below the rate of 35 percent in the County, indicating that job opportunities for female workers in the two Towns may not be as plentiful as they are for male workers.

The bulk of the gainfully employed persons in the two Towns in 1960 were on the payrolls of private firms. However, the Town of Horseheads, like the Village, had a higher proportion of government workers than was true in Elmira or in the County. At the same time, self-employed workers constituted about 12 percent of the total in Big Flats, as contrasted with about seven percent in Elmira and in the

Town and Village of Horseheads. The larger proportion of self-employed persons in Big Flats could be a reflection of its relatively stronger agricultural component.

For both Towns, the principal source of income is manufacturing activity. This shows up in both the industrial and the occupational distribution of employment. In 1960, 47 percent of the employed workers in Horseheads were engaged in some type of manufacturing, mostly of the durable goods type. In Big Flats in the same year, manufacturing provided jobs for 42 percent of all workers. These percentages for the two Towns were higher than in Elmira or in Chemung County.

For both Towns, services provided about 16 percent of all employment, while retail trade accounted for 12 percent. Big Flats had a smaller share of its employees in professional services than was true in the comparison areas. However, agricultural employment, totaling six percent in Big Flats, was considerably higher than in the comparison areas. Public utilities and construction activity had comparatively limited significance as job-providers for residents of the two Towns, and wholesale trade was relatively insignificant.

In Big Flats in 1960, 38 percent of all employed residents were working as craftsmen, foremen or operatives. These are primarily

manufacturing occupations. In Horseheads, 34 percent of the workers were in these categories. These proportions were about the same as in Elmira and the County. The distribution of professional and technical workers in the two Towns was also similar to that found in Elmira and the County.

However, Big Flats had proportionally fewer clerical and sales workers than the comparison areas. Its share of officials and proprietors was the same as in Elmira, but below the other comparison areas. Service workers in Big Flats and Horseheads contributed, respectively, 10 percent and nine percent of the total, below the 14 percent figure for Elmira. Farmers made up about four percent of the gainfully employed persons in Big Flats, considerably above the comparison areas.

Commuting Patterns

As the following Table shows, Chemung County has twice as many "in" commuters as "out" commuters. In 1960, about 4,600 persons entered the County to work, while 2,350 residents of the County traveled to work in some other County. Chemung draws workers from every direction, but over half of the "in" commuters come from Pennsylvania. However, residents of Chemung who commute to work in Steuben County -- mainly, to Corning Glass -- are

COMMUTING PATTERNS

From Chemung County To	Tompkins	Schuyler	Steuben	Tioga	Broome	Penna	Other	Total
#	175	150	1250	150	70	450 ^{/1}	105	2350
To Chemung County From								
#	40	500	550	400	60	2800 ^{/2}	250	4600

^{/1} Includes 325 estimated.

^{/2} Includes 550 estimated.

Source: U. S. Census of Population, 1960.

more than twice as numerous as residents of Steuben who come to work in Chemung County.

While the 1960 Census does not supply specific information on commuting patterns in the Towns of Big Flats and Horseheads, qualified analysis of local conditions describe the two communities as being criss-

crossed by patterns of in-commuting and out-commuting. Residents of the Towns work for various employers in Elmira, Elmira Heights, and Corning. At the same time, residents of Corning and Elmira enter Big Flats and Horseheads to work for the firms located there.

A fairly good picture of local commuting patterns can be discerned in the following analysis of employment in the manufacturing firms located in Horseheads and Big Flats. About 85 percent of the workers who are employed by manufacturing firms located in the two Towns are covered in this analysis. Workers are classified by place of residence.

As can be seen from the following distribution of workers, a substantial proportion of the people employed in the plants located in Big Flats and Horseheads are currently residing in the City of Elmira. Commuting to the area from Pennsylvania is greater than from east of Elmira.

<u>PLACE OF RESIDENCE</u>	<u>NUMBER OF WORKERS</u>
Elmira South	735
Elmira North	507
Elmira West	226
Big Flats and West of Elmira	1,001
Elmira Heights	256
Horseheads and North of Elmira	1,300
East of Elmira	163
Pennsylvania	854
Other	87
Total	5,129

Source: Survey conducted by the Chemung County Chamber of Commerce.

SECTORS OF THE ECONOMY

Agriculture

In line with national trends, farms in Chemung County are becoming fewer in number and larger in size. Between 1954 and 1964, the number of farms in Chemung dropped from 1,090 to 602, a decrease of 45 percent. In the Towns of Big Flats and Southport combined, there was a drop of 57 percent in the number of farms, with 142 farm enterprises going out of existence over this decade.

At the same time, the farms which survived became larger. In 1964, the average farm in Chemung consisted of 174 acres, as compared with 130 acres in 1954. This expansion of 34 percent has come about because of the trend toward more mechanization and a larger scale of operation.

In Big Flats and Southport, farms on the average increased 58 percent in size, going from 128 acres in 1954 to 202 acres in 1964. Average size farms in these two towns are the largest in the County.

An extremely important trend in the agriculture of the Southern Tier is the decrease in land used for agricultural purposes. As an example, agricultural activ-

ities in the Town of Horseheads are no longer a significant enough sector of the economy to be included in the Census of Agriculture. In Chemung County as a whole, between 1954 and 1964, total land in farms decreased from about 142,000 acres to about 104,000 acres, a decline of 26 percent. The decline was even greater -- 32 percent -- in Big Flats and Southport, with a loss of about 10,000 acres from farm use between 1954 and 1964. However, this trend seems to have slowed in recent years. Between 1959 and 1964, only about 1,000 acres in Big Flats and Southport was taken out of agricultural use. The same slowing trend is observable in other parts of the County. Probably most of the marginal and sub-marginal farms disappeared during the 1950's.

Dairying remains the predominant agricultural activity in Chemung County. About 36 percent of all County farms in 1964 were classified as dairy farms. About 300 farms in Chemung County reported milk cows in 1964. In June, 1967, a total of 377 farmers in Chemung County were shipping milk. Net receipts of milk at dairy plants in the County have generally trended upward in recent years. One of the receiving plants is located in the Village of Horseheads, north of Route 17.

In Big Flats and Southport, there were 51 dairy farms in 1964, a decline of 37 percent from 1964. The number of milk cows on these farms dropped from 1,733 in 1959 to 1,473 in

1964, a reduction of 15 percent.

Livestock production, vegetables, and field crops are other important types of farming in Big Flats and Southport. Fruit production is insignificant.

Manufacturing

The economic base of the Towns of Big Flats and Horseheads is influenced strongly by the manufacturing complex existing in the entire Elmira-Corning Area. While the number of manufacturing establishments locally has changed little in recent years, there have been significant fluctuations in the value of manufacturing output and the level of employment.

According to the Census of Manufacturers, total manufacturing employment in Chemung County was 13,709 in 1963 as compared with 14,962 in 1958. This would indicate a decrease of about 1,200 jobs over the five-year period. However, in both Elmira and the Village of Horseheads total jobs in manufacturing were greater in 1963 than in 1958.

Data from another source (the New York State Department of Labor), and for a more recent period, indicate that in January, 1969 manufacturing employment in Chemung County totaled 16,500 as compared with 17,600 in Jan-

uary, 1967. The Department of Labor manufacturing figures include the added employment at the Ann Page Division of the Atlantic and Pacific Tea Company, which was not in operation on Route 17 at the time of the last federal Census.

Manufacturing firms in the Horseheads-Big Flats Area range from those with 2,000 or more employees to the smaller firms, employing fewer than 25 people. The major employers, with approximately 500 or more persons on their payrolls currently, include the Ann Page Division of the Atlantic & Pacific Tea Company, American Bridge, Bendix Corporation, Corning Glass Works, National Homes, Schweizer Aircraft, and the Westinghouse Electric Corporation.

Medium-sized firms, employing from about 100 to 500 persons, include the Hankins Container Company, Thatcher Research, and Ward LaFrance. Smaller firms represent a wide range of product line and industrial classification. Buckley-Nylok, Chemung Reprographic, Elmira Block, Hungerford Corporation, LRC Electronics, and Rimco Plastics are representative of this last category.

In the entire area, there are presently 40 firms which fit into a manufacturing classification. Of this number, 13 are located in the Village of Horseheads, 12 are in the Village of Elmira Heights, 11 are in the Town

of Big Flats, and 4 are in the Town of Horseheads.

A combination manufacturing and warehousing complex exists in the Oakwood Avenue Area, extending from the Village of Elmira Heights into the Town of Horseheads. Several wholesalers are located here, indicating that the site has the advantages of space and accessibility to retail outlets. These wholesale firms include Elmira Tobacco Company, Gierston Tool Company, and the S. M. Flickinger Company.

Although the Oakwood Avenue Area is at present fairly well built-up and already is the site of such large manufacturing plants as Bendix, American Bridge, and Hankins Container, some acreage remains for future industrial growth. Small or medium-sized firms in the light industry classification could be attracted to this site which offers good rail and highway access. Firms with payrolls of 500 or more employees would have difficulty securing sufficient acreage to provide the necessary parking space for workers, delivery trucks, etc. Firms which require extensive space for the storage would also find difficulty in locating here.

The nature of the manufacturing output coming from firms in the Horseheads-Big Flats Area can be discerned from the following partial list of products currently being turned

out; food items, fabricated structural steel, industrial printing inks, tools, development jigs, automotive accessories, self-locking fasteners, rubber corrugated dies, glassware, dairy products, concrete building blocks, corrugated boxes, machine tools, tool boxes, electronic parts, pre-fab homes, and aircraft parts.

Retail Trade

Until recent years, the bulk of retailing activity in Chemung County has been concentrated in Downtown Elmira. However, new shopping areas are developing rapidly outside the City, and the focus of retailing is shifting to suburban plazas.

In 1963, Chemung County had 959 retail establishments, as compared with 1,045 in 1958. However, the loss of 86 stores for the County as a whole tends to conceal the fact that in the City of Elmira a total of 115 stores went out of business during this period. An increase of 21 percent in the number of retail establishments in Horseheads helped to counteract the decline in Elmira.

This relative shift appears again in the figures for retail sales. While sales in Chemung County as a whole increased by 10 percent, going from about \$123 million in 1958 to \$135 million in 1963, there was a two percent

drop in Elmira's retail sales. Yet, over the same period, the sales of retail stores in Horseheads went up 60 percent, from \$11 million to \$18 million.

In 1963, the bulk of retail trade employees were working in stores in the City of Elmira. Out of a total of almost 4,800 paid employees in Chemung County's retail trade, about 3,300 were on the payrolls of Elmira Stores.

Recent trends in commercial development in Chemung County are having a significant impact on the Horseheads-Big Flats Area. The two largest shopping plazas in the County are located here. Grand Central Plaza, in the Village of Horseheads, is a 17-store retail complex on Route 17, providing 1,500 parking spaces. The newest plaza, The Mall, also on Route 17, in the Town of Big Flats, has 34 tenants and provides space for 2,294 cars. Nichol's, on Lake Avenue in Elmira Heights, has five stores and 500 parking spaces.

The Mall was opened for business on November 16, 1967 and covers an area of about 318,000 square feet. About 60 acres is reserved for future expansion to the east. The largest tenant at The Mall is the J. C. Penney Company, with about 126,000 square feet of floor space. Iszard's Department Store,

with 50,000 square feet, is the second largest store. Of the 34 tenants at the Mall, besides the department stores, 12 are retailers of apparel and accessories. There are two banks, a movie theater, three food stores, a McCrory's Variety Store, one restaurant, one jeweler, and one drug store.

A study conducted by The Mall Merchants Association in November, 1968 showed that the trading area of the plaza extends far beyond Elmira. Of a total of 14,604 shoppers surveyed, 4,987 were residents of Elmira; 3,478 were from Horseheads and Big Flats; and 2,236 came from Corning and Painted Post. The remaining 3,903 shoppers came from other parts of the Southern Tier, from places in Central New York, and from Pennsylvania.

In the Town of Horseheads, strip commercial development has occurred along the Ithaca Road. There are 15 retail and service establishments along Ithaca Road from Hanover Square in the Village to its junction with Route 13.

In the Town of Big Flats, commercial development (excluding The Mall) is principally concentrated in the Hamlet of Big Flats.

Selected Services

Although service activity in the Elmira Area has much less economic significance than manufacturing or retailing, it does provide employment and produces income. In 1963, about 1,200 persons in Chemung County were engaged in service activity, and received payment of \$3.3 million for their work. This total employment was only 44 greater than in 1958. However, in Horseheads service employment was greater by 43 in 1963 than in 1958.

In the County as a whole, service receipts rose from \$11.0 million in 1958 to \$13.9 million in 1963, a gain of 26 percent. This compares with a statewide increase of 34 percent in service receipts over the same period. However, it is noteworthy that during this 5-year period the number of service establishments in Horseheads more than doubled, and receipts jumped from \$477,000 to \$1.3 million, a remarkable rise of 181 percent.

The City of Elmira gained, over-all, only seven additional service establishments between 1958 and 1963, but its service receipts improved about 29 percent.

While the available Census information does not give service receipts by type of establishment in Horseheads, it is likely that some of the recent improvement is due to the motels along Route 17.

Wholesale Trade

In terms of sales and employment, wholesale trade in Chemung County is considerably more important than selected services. In 1963, there were about 1,800 persons engaged in wholesaling in the County and they received about \$9.6 million for their work. Total sales amounted to \$123,382,000, as compared to 1958 sales of \$108,079,000. This represented a gain of 14 percent, in contrast with a rise of 21 percent in wholesale sales throughout New York State between 1958 and 1963.

The bulk of the improvement in wholesaling took place in the City of Elmira, where sales rose from about \$73 million in 1958 to about \$85 million in 1963. Next to Elmira, Horseheads is the most important distribution center in Chemung County, however, there was only a slight improvement in wholesaling in Horseheads between 1958 and 1963. In the latter year, 13 wholesale establishments in Horseheads employed 135 persons and reported total sales of \$17,316,000.

Elmira's preeminence as a distribution center in the Southern Tier is reflected in its wholesale-retail ratio, which stood at 70 in 1963, as compared to 18 for Horseheads and 14 for Corning. This ratio is computed by dividing the total sales of merchant wholesalers by retail sales and multiplying the result by 100. A comparatively high ratio such as Elmira's is useful in identifying a wholesale center.

CONCLUSIONS AND FORECAST

The preceding analysis of the economic base of Big Flats and Horseheads has identified the major elements influencing employment and income in the two Towns. This analysis also indicates the general direction of future economic development.

While the pace of agricultural decline in the Elmira Area may slow down and perhaps even stabilize in the decade ahead, it is extremely unlikely that farming will gain in relative economic importance. Demands for land for residential, commercial, industrial, and recreational purposes will induce more farmers to sell all or part of their acreage and hence reduce the level of agricultural activity in the two Towns. As non-agricultural employment expands, there will be an increase in part-time farming,

as farm operators accept jobs in industry. Some farmers will be induced to combine their farming operations with some type of recreational enterprise, such as a fishing pond open to the public or a riding stable. Another possibility, although a remote one, is the development of estate farms, principally as an investment by professional or business people from metropolitan areas.

Manufacturing will continue to be the mainstay of the local economy in terms of jobs and income. Expansion by existing firms will be related principally to developments in the national economy, rather than to regional changes. The arrival of new firms will depend upon a number of interrelated factors -- programmed improvements in the regional highway network, improvements in public services, and an aggressive recruiting effort on the part of private and public agencies.

In attempting to attract new employers to the area, it should be remembered that there are now more than 1,400 private development corporations throughout the United States, as well as a number of municipal and state government agencies, all competing vigorously in industrial recruitment. An aggressive program of attracting new firms must stress not only the availability of a skilled labor force, adequate transportation, suitable sites, a favorable tax structure, etc., but also the various amenities which will create a good im-

pression on site location experts -- the quality of local schools, availability of housing, styles and prices in local clothing stores, local entertainment and recreational facilities, street lighting, and the general social environment.

In view of the present strong concentration in durable goods manufacturing in the Elmira Area, a recruitment campaign for new firms should logically be pitched at the non-durable goods type of firms such as drug manufacturing, plastics, publishing, food processing or fabricated textiles. The objective would be to lessen the potential danger of layoffs in the hard goods industries, brought about by depressed conditions in the national economy.

Further commercial expansion along Route 17 is almost inevitable, particularly if residential growth continues to take place in this area. Spot commercial development is more likely to occur than the construction of new shopping plazas, at least in the immediate future. Restaurants, gas stations, hamburger stands, and similar establishments are bound to be drawn to the Route 17 axis.

The expansion of existing industrial plants, the possible arrival of new firms, the construction of apartment buildings and housing sub-divisions can well combine to create added demand for services, including not only

personal services but also business and repair services. Hence, the service sector is likely to be looking for more workers. The Elmira Area should also be affected by the constant upward trend in government employment.

The signs, therefore, point to an enlarged economic base in the Towns of Big Flats and Horseheads. With appropriate and effective action by private and public groups in these two communities, an upward trend in the level of economic welfare for residents of the Towns can be expected.

TABLE 1

ESTIMATED PER CAPITA PERSONAL INCOME
ELMIRA AREA
1957 - 1966

	Counties					
	<u>Allegany</u>	<u>Chemung</u>	<u>Schuyler</u>	<u>Steuben</u>	<u>Tioga</u> ^{/2}	<u>Tompkins</u>
1957	\$1,676	\$2,005	\$1,694	\$1,898	\$1,450	\$1,935
1958	1,679	1,938	1,762	1,843	1,778	1,981
1959	1,712	2,000	1,745	1,930	1,810	2,180
1960	1,745	2,076	1,823	2,004	1,954	2,158
1961	1,757	2,112	1,925	2,007	1,978	2,184
1962	1,723	2,215	1,809	2,079	1,956	2,186
1963	1,802	2,289	1,887	2,180	1,989	2,309
1964	1,944	2,383	1,950	2,310	2,152	2,368
1965	2,189	2,449	2,136	2,417	2,331	2,573
1966 ^{/1}	2,400	2,708	2,313	2,589	2,507	2,812

^{/1} Preliminary

^{/2} After 1963, included in Binghamton Area.

Source: New York State Department of Commerce.

TABLE 4

BANK DEPOSITS OF INDIVIDUALS, PARTNERSHIPS AND CORPORATIONS
CHEMUNG AND STEUBEN COUNTIES
1956 - 1966
(\$000'S)

<u>Year</u>	<u>Chemung County</u>	<u>Steuben County</u>
1956	\$ 94,339	\$ 62,587
1958	98,994	69,846
1960	102,203	76,295
1962	113,177	87,668
1964	128,299	99,589
1966	145,354	115,182

Source: Federal Reserve System and Federal Deposit Insurance Corporation.

TABLE 5

FAMILY INCOME
TOWNS OF BIG FLATS, HORSEHEADS AND COMPARISON AREAS
1959

	<u>Chemung County</u>	<u>City of Elmira</u>	<u>Town of Big Flats</u>	<u>Town of Horseheads</u>	<u>Village of Horseheads</u>
Number of Families	24,620	11,057	879	4,604	1,887
<u>Income Groups</u>	<u>(Percentage of Total Families)</u>				
Under \$2,000	8.5	9.5	6.8	5.5	4.6
\$2,000 - \$3,999	15.9	18.4	15.3	11.5	9.6
\$4,000 - \$5,999	29.3	30.4	33.5	30.7	29.2
\$6,000 - \$7,999	21.9	20.5	22.8	26.1	27.6
\$8,000 - \$9,999	12.7	10.9	14.5	15.7	18.7
\$10,000 - \$14,999	8.5	7.7	6.7	7.9	7.5
\$15,000 - \$24,999	2.4	2.1	0.4	1.9	1.3
\$25,000 or more	0.7	0.5	0.0	0.7	1.5
Median Income: Families	\$5,758	\$5,452	\$5,679	\$6,170	\$6,500
Families and Unrelated Individuals	\$4,964	\$4,308	\$5,224	--	\$6,023

Source: U. S. Census of Population, 1960.

TABLE 6

LABOR MARKET
ELMIRA AREA^{/1}
1967, 1968 AND 1969
(\$000'S)

	<u>January 1969^{/2}</u>	<u>January 1968</u>	<u>January 1967</u>
Work Force (Civilian) - Total	44.6	45.1	44.7
Unemployment	1.7	1.6	1.4
Percent of Civilian Work Force	3.7	4.1	3.1
Employment	43.0	43.2	43.3
Non-agricultural Wage and Salary Workers	38.9	39.1	38.8
Non-manufacturing Industries	22.4	22.4	21.2
Contract Construction	1.2	1.6	1.6
Public Utilities and Related Services	1.6	1.5	1.6
Wholesale and Retail Trade	7.7	7.6	7.1
Finance, Insurance and Real Estate	.9	.9	.9
Services and Miscellaneous	5.6	5.5	5.3
Government	5.4	5.2	4.8
Manufacturing Industries	16.5	16.7	17.6
Durable Goods	12.6	12.6	13.3
Metals and Machinery	8.7	8.8	9.6
Other Durable Goods	3.9	3.8	3.7
Non-durable Goods	3.9	4.1	4.2
All Other Non-agricultural Employment	3.4	3.5	3.8
Agricultural Employment	.6	.7	.7

^{/1} The Elmira Area covers Chemung County.

^{/2} Preliminary.

TABLE 7

LABOR FORCE
TOWNS OF BIG FLATS AND HORSEHEADS AND COMPARISON AREAS
1960

	<u>Chemung County</u>	<u>City of Elmira</u>	<u>Town of Big Flats</u>	<u>Town of Horseheads</u>	<u>Village of Horseheads</u>
Population 14 Years Old and Over, Number	69,310	34,186	2,377	11,883	4,716
Percent in Labor Force	54.6	52.6	58.2	57.0	58.5
Civilian Labor Force, Total	37,832	17,977	1,383	6,775	2,755
Female: Number	13,087	6,966	415	2,130	870
Percent	34.6	38.7	30.0	31.4	31.6
Employed Workers, Total	35,483	16,772	1,292	6,366	2,652
Percentage of Total:					
Private Wage & Salary Workers	81.1	82.9	79.5	81.5	80.3
Government Workers	9.5	9.7	7.7	11.1	12.6
Self-employed Workers	8.9	7.0	11.8	6.8	7.0
Unpaid Family Workers	0.5	0.4	0.9	0.5	0.2

Source: U. S. Census of Population, 1960.

TABLE 8

INDUSTRIAL DISTRIBUTION OF EMPLOYED PERSONS
TOWNS OF BIG FLATS AND HORSEHEADS AND COMPARISON AREAS
1960

	<u>Chemung County</u>	<u>City of Elmira</u>	<u>Town of Big Flats</u>	<u>Town of Horseheads</u>	<u>Village of Horseheads</u>
Number Employed	35,483	16,772	1,292	6,366	2,652
<u>Industry Groups</u>	<u>(Percentage of Total Employed)</u>				
Manufacturing, Total	40.0	36.3	42.1	47.3	42.7
Durable Goods	33.2	29.7	36.3	39.0	36.3
Non-durable Goods	6.8	6.7	5.8	8.4	6.4
Wholesale Trade	3.4	3.4	2.5	3.2	2.8
Retail Trade	14.4	15.9	12.7	12.4	13.4
Agriculture	2.2	0.6	6.3	1.4	0.7
Mining	<u>/1</u>	0.0	0.0	0.1	0.0
Construction	4.2	3.1	4.4	5.2	4.6
Business Repair Services	1.7	1.9	0.9	1.3	1.8
Personal Services	5.4	6.7	5.8	3.8	4.4
Professional, Related Services	11.9	13.3	8.9	10.8	12.2
Entertainment and Recreation	0.6	0.6	NA	NA	0.3
Finance, Insurance, Real Estate	3.0	3.1	NA	NA	3.7
Transportation, Communication, Utilities	6.0	6.8	3.8	5.8	7.2
Public Administration	4.2	5.5	3.9	3.4	4.3
Industry Not Reported	3.0	2.7	8.7 ^{/2}	5.2 ^{/2}	5.8

^{/1} Less than 0.05 percent.

^{/2} Includes entertainment, recreation and finance, insurance, real estate.

Source: U. S. Census of Population, 1960.

TABLE 9

OCCUPATIONAL DISTRIBUTION OF EMPLOYED PERSONS
TOWNS OF HORSEHEADS AND BIG FLATS AND COMPARISON AREAS
1960

	<u>Chemung County</u>	<u>City of Elmira</u>	<u>Town of Big Flats</u>	<u>Town of Horseheads</u>	<u>Village of Horseheads</u>
Number Employed	35,483	16,772	1,292	6,366	2,652
<u>Occupation Groups</u>	<u>(Percentage of Total Employed)</u>				
Professional, Technical Workers	11.2	11.0	11.6	11.7	13.5
Farmers, Farm Managers	1.3	<u>/1</u>	3.8	0.6	0.2
Officials, Proprietors (excl. Farm)	7.6	6.6	6.6	8.2	9.8
Clerical Workers	13.9	16.4	9.6	12.7	14.5
Sales Workers	8.1	8.3	6.3	7.3	8.5
Craftsmen, Foremen	16.7	15.1	15.2	19.0	19.0
Operatives	22.2	21.0	23.2	25.1	18.9
Service Workers:					
Private Household	2.1	2.6	2.6	1.2	1.5
Other	9.0	11.4	7.9	8.0	9.3
Laborers (incl. Farm Foremen)	4.2	3.7	5.8	3.3	2.1

/1 Less than 0.05 percent.

Source: U. S. Census of Population, 1960.

TABLE 10

NUMBER OF FARMS
CHEMUNG COUNTY
1954, 1959, AND 1964

<u>Towns</u>	<u>1954</u>	<u>1959</u>	<u>1964</u>	<u>Percent Change</u> <u>1964 From</u>	
				<u>1954</u>	<u>1959</u>
Ashland, Elmira, including Elmira City and Horseheads	196	134	121	-38	-10
Baldwin, Chemung	NA	NA	135	NA	NA
Big Flats, Southport	249	146	107	-57	-27
Catlin, Veteran	243	172	141	-42	-18
Erin, Van Etten	NA	NA	98	NA	NA
County - Total	1,090	747	602	-45	-19

Note: For the 1959 and 1964 Censuses, a farm was any place of 10 acres or more under the control of one operator or partnership if estimated sales of agricultural products amounted to \$50 or more in the year. Also, places of less than 10 acres if estimated sales amounted to \$250 or more.

For the 1954 Census, a farm was any place of 3 or more acres if annual value of agricultural products for home use or for sale amounted to \$150 or more. Also, places of less than 3 acres if the annual value of sales of agricultural products amounted to \$150 or more.

Source: "Census of Agriculture, Chemung County, 1964," A. E. Ext. 475-7.
October, 1967, Department of Agricultural Economics, Cornell University.

TABLE 11

ACRES PER FARM, CHEMUNG COUNTY: 1954, 1959 AND 1964

	Acres per farm				
	<u>1954</u>	<u>1959</u>	<u>1964</u>	<u>Percent change 1964 from</u>	
				<u>1954</u>	<u>1959</u>
Ashland, Elmira, including Elmira City and Horseheads	129	147	148	+15	+1
Baldwin, Chemung	NA	NA	188	NA	NA
Big Flats, Southport	128	157	202	+58	+29
Catlin, Veteran	125	142	160	+28	+13
Erin, VanEtten	NA	NA	173	NA	NA
County Total	130	153	174	+34	+14

Source: "Census of Agriculture, Chemung County, 1964." A.E. Est. 474-7. October, 1967.
Department of Agricultural Economics, Cornell University.

TABLE 12

LAND IN FARMS, CHEMUNG COUNTY: 1954, 1959 AND 1964

<u>Towns</u>	<u>Total Land in Farms, Acres</u>				
	<u>1954</u>	<u>1959</u>	<u>1964</u>	<u>Percent change 1964 from</u>	
				<u>1954</u>	<u>1959</u>
Ashland, Elmira, including Elmira City and Horseheads	25,232	19,736	17,965	-29	-9
Baldwin, Chemung	NA	NA	25,343	NA	NA
Big Flats, Southport	31,969	22,927	21,624	-32	-6
Catlin, Veteran	30,481	24,461	22,609	-26	-8
Erin, Van Etten	NA	NA	16,933	NA	NA
 County Total	 141,976	 113,979	 104,474	 -26	 -8

Source: "Census of Agriculture, Chemung County, 1964." A.E. Ext. 475-7. October, 1967
Department of Agricultural Economics, Cornell University.

TABLE 13

STATISTICS RELATIVE TO THE DAIRY INDUSTRY, CHEMUNG COUNTY: 1963-1967

<u>YEAR</u>	<u>Number of farmers shipping milk in June</u>	<u>Net receipts of milk from farmers at dairy plants</u> (thousand pounds)
1963	433	117,824
1964	413	125,439
1965	395	133,752
1966	386	131,920
1967	377	128,348

Source: New York State Department of Agriculture and Markets.

TABLE 14

MANUFACTURES, CHEMUNG COUNTY: 1958 AND 1963

		<u>Chemung County</u>	<u>City of Elmira</u>	<u>Village of Horseheads</u>
Number of Establishments:	1963	106	52	16
	1958	103	54	--
Total Employment:	1963	13,709	5,963	1,945
	1958	14,962	5,716	1,574
Payroll, Total : (\$000)	1963	77,727	33,421	12,004
	1963	\$109.03	\$107.78	\$118.69
Weekly average per employee				
Value added by Manufacture: (\$000)	1963	144,875	62,878	22,775
	1958	135,065	53,778	11,959
New Capital Expenditures: (\$000)	1963	7,342	3,860	1,246
	1958	4,987	2,384	---

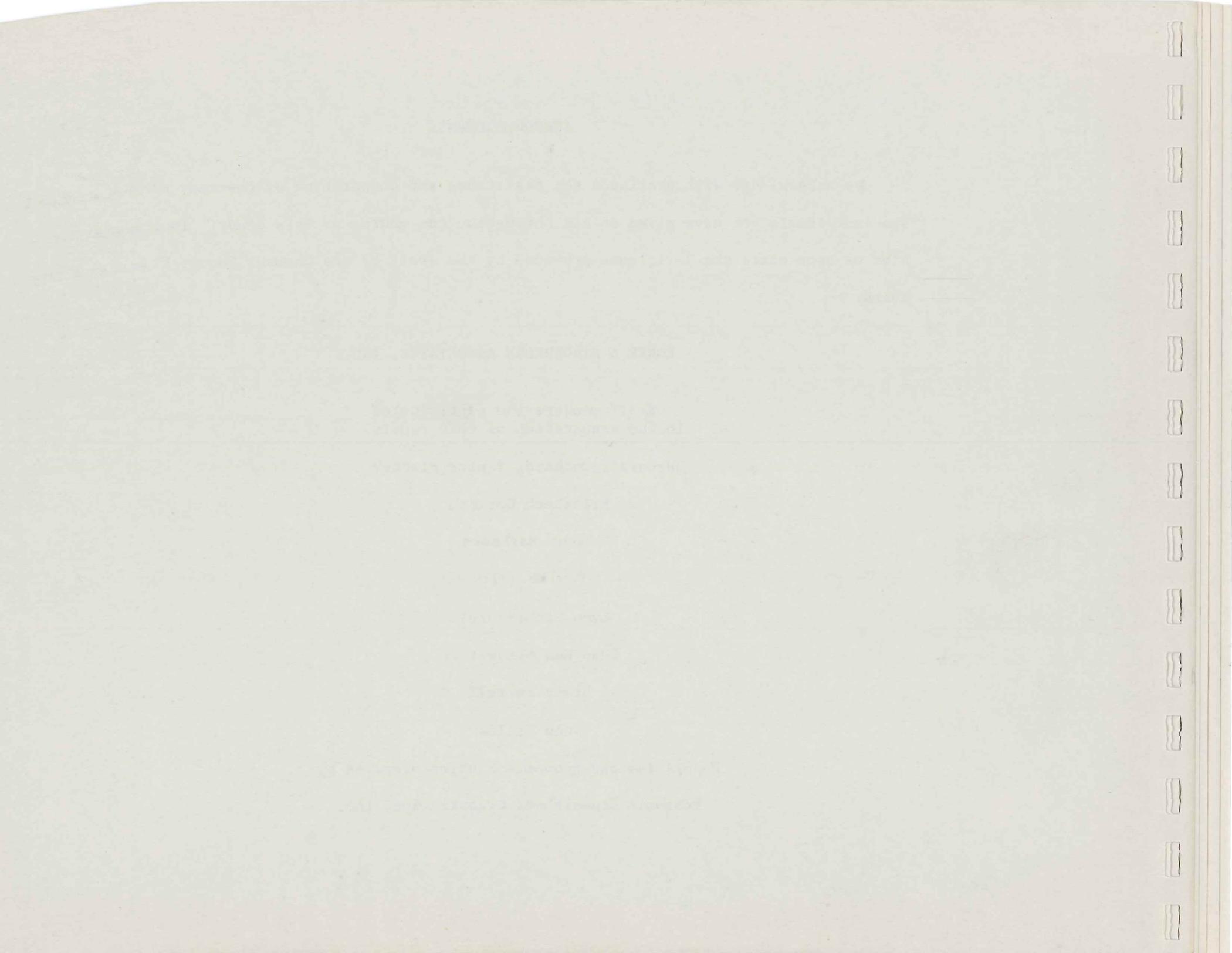
Source: U.S. Census of Manufactures, 1958 and 1963.

TABLE 15

RETAIL TRADE, CHEMUNG COUNTY: 1963

<u>County and Community</u>	<u>Sales Per Capita, 1963 (dollars)</u>	<u>Payroll, Entire Year 1963 (\$000)</u>	<u>Paid Employees, Workweek Ended Nearest Nov. 15 (number)</u>	<u>Active Proprietors of Unincorporated Businesses (number)</u>
Chemung County	1,344	15,502	4,777	878
Elmira	2,090	10,968	3,313	499
Elmira Heights	---	537	253	62
Horseheads	---	1,711	495	84

Source: "Retail Trade in New York State, 1963." Research Bulletin No. 13. September 1965.
New York State Department of Commerce.



prepared by:

EGNER and NIEDERKORN ASSOC., INC.
ITHACA, NEW YORK