SURVEY AND ANALYSIS OF EXISTING CONDITIONS

GEOGRAPHIC LOCATION

The Town of Rochester is located in the southern portion of Ulster County on the eastern edge of the Catskill Mountains and on the western edge of the Shawangunk Mountains.

The Town is located equidistant from Albany to the North and New York City to the south. Rochester is also situated between the Village of Ellenville to the south and the City of Kingston to the north, however, the main portion of the Town is closer to the Village of Ellenville. The New York Thruway does not pass through the Town but an interchange is located in the Town of New Paltz to the east of Rochester.

The area of the Town is 88 square miles. The longest dimension is approximately 15.5 miles in an east-west direction. The north-south dimension is approximately 6 miles in the western portion of the Town and approximately 9.5 miles in the eastern portion of the Town.

The Town of Rochester is bounded by the Town of Wawarsing on the south, the Town of Gardiner and New Paltz on the east; the Towns of Marbletown and Olive on the north and the Town of Denning on the west.

VICINITY STUDIES

The Town of Rochester as previously noted is located between the Village of Ellenville and the City of Kingston. Route 209 from the Town leads south to the center of the Village of Ellenville and north to the City of Kingston. In terms of mileage the Town of Rochester is closer to the Village of Ellenville than the City of Kingston.

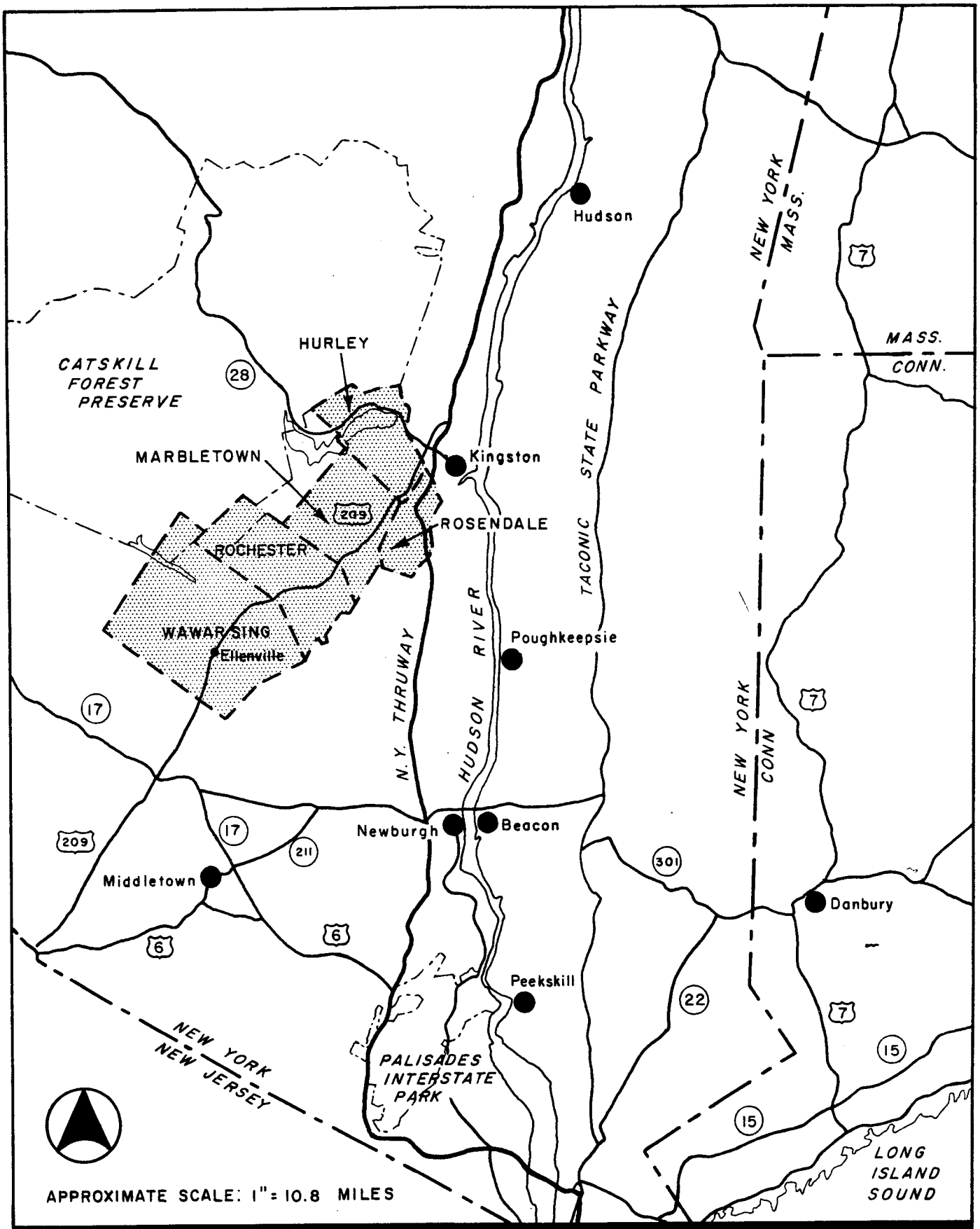
The Town of Rochester has strong linkages to the region in which it is situated. Undoubtedly residents of the Town of Rochester do their shopping outside of the Town and also many persons are employed outside of the Town. Residents of other municipalities and tourists pass through the Town on Route 209 and Route 44 and 55.

The City of Kingston has had a long history as the principal retail, service and employment center for a large part of New York State west of the Hudson River. The future growth of the Kingston area will propably follow trends now in evidence, i.e., very minimal increases in the City proper and expansion in the surrounding areas. However, the expansion does not blanket the County in a uniform spread but rather is concentrated near the older center. The location of retail and wholesale activities and job opportunities has evidenced this trend. Residential development has followed the location of job opportunities which was then followed by retail activities. The Towns in close proximity to the City of Kingston, particularly the Town of Ulster and Town of Hurley, have experienced this trend. The Town of Rochester has not experienced this same type of growth due to its geographic location.

The City of Poughkeepsie also is a major business and employment center and medical and educational facilities of various kind are available.

The Village of Ellenville exerts a pull of residents of the Town of Rochester particularly to the central business district because of its relative proximity. In terms of size the City of Kingston business district has more than 3 times the number of retail businesses and these businesses do 3 times the amount of retail sales compared to the Village of Ellenville. However, between 1958 and 1963 the Village of Ellenville increased in number of retail business establishments by 8.7% while the City of Kingston declined by 11.8%. In terms of retail sales between 1958 and 1963 the Village of Ellenville increased by 31.7% while the City of Kingston declined by 7.6%. *

*Source: U.S. Census of Business



1 REGIONAL LOCATION

BROWN & ANTHONY
CITY PLANNERS, INC.

In terms of services the Village of Ellenville increased service receipts by 44.9% while the City of Kingston increased by 16.6%. However, many of the service establishments in the Village of Ellenville are resort oriented.

Another basic influence on the economy of the region is the resort activity. the "blue line" (the boundary within which it is the policy of the State to acquire property as part of the Catskill State Park) passes in a north-south direction through the western portion of the Town of Rochester. The State presently owns substantial land west of this "blue line" in the Town of Rochester.

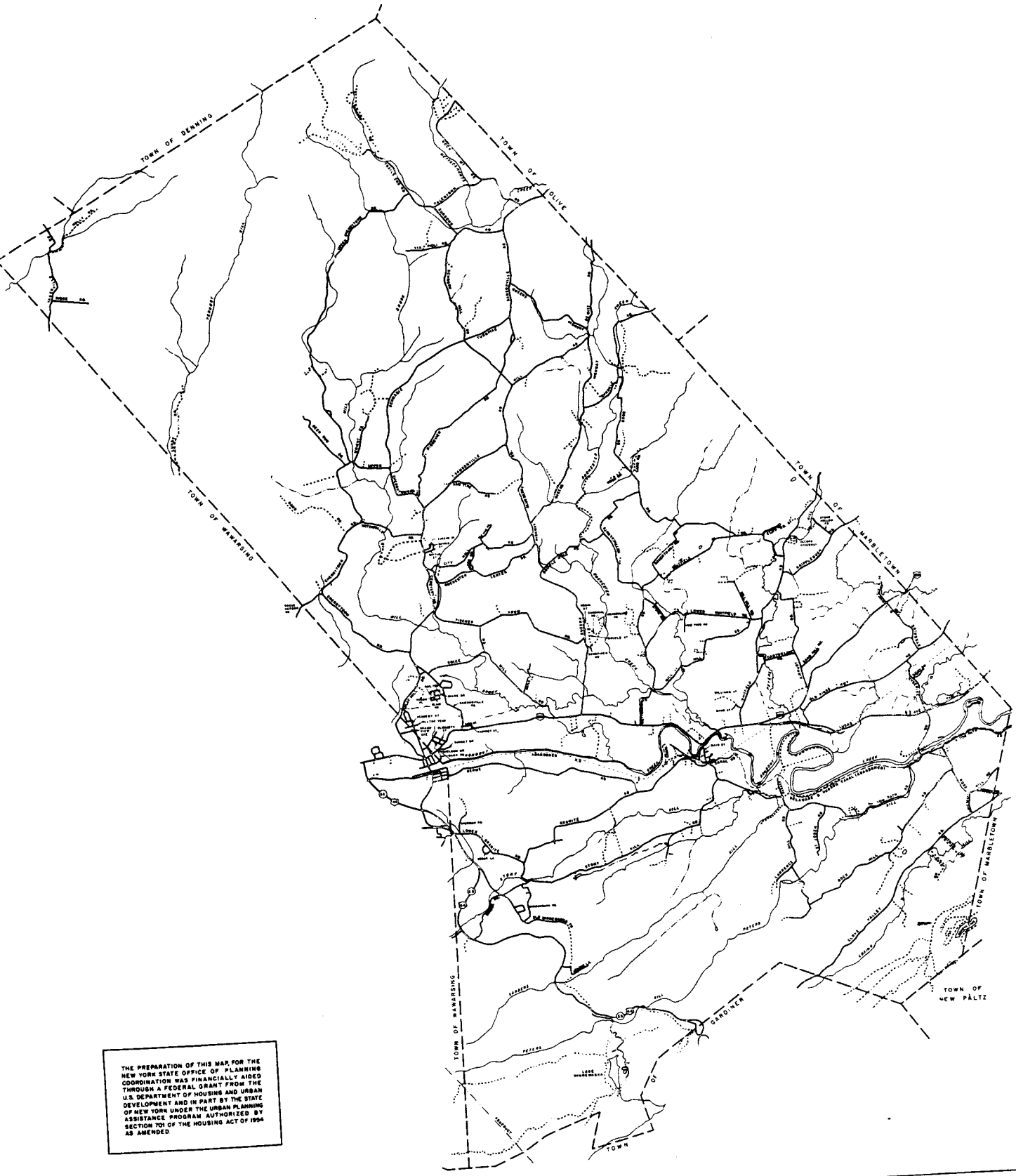
The Catskill State Park encompasses 580,000 acres with slightly more than 230,000 acres owned by the State. Much of this State owned land occupies relatively inaccessible mountain tops and steep slopes of the Catskill Mountains. *

The Catskill resort region as a whole, however, is growing and will become an important resort area.

The Town of Rochester has considerable resort activity particularly in the Shawangunk Mountain area. Lake Mohonk, Lake Minnewaska, Ski Minne, the Brookside and Granit Hotel are located in the Town. In addition to these resorts there exist many summer bungalows, motels and camps in the Town.

In the final analysis, a set of interactions exists between the Town of Rochester and nearby communities in the Mid-Hudson Region and persons in other metropolitan areas. There is a need for regional planning, if the region's scenic and historic assets are to be preserved and if a rational framework is to be laid for economic growth and development.

* 1966, Ulster County Data Book



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

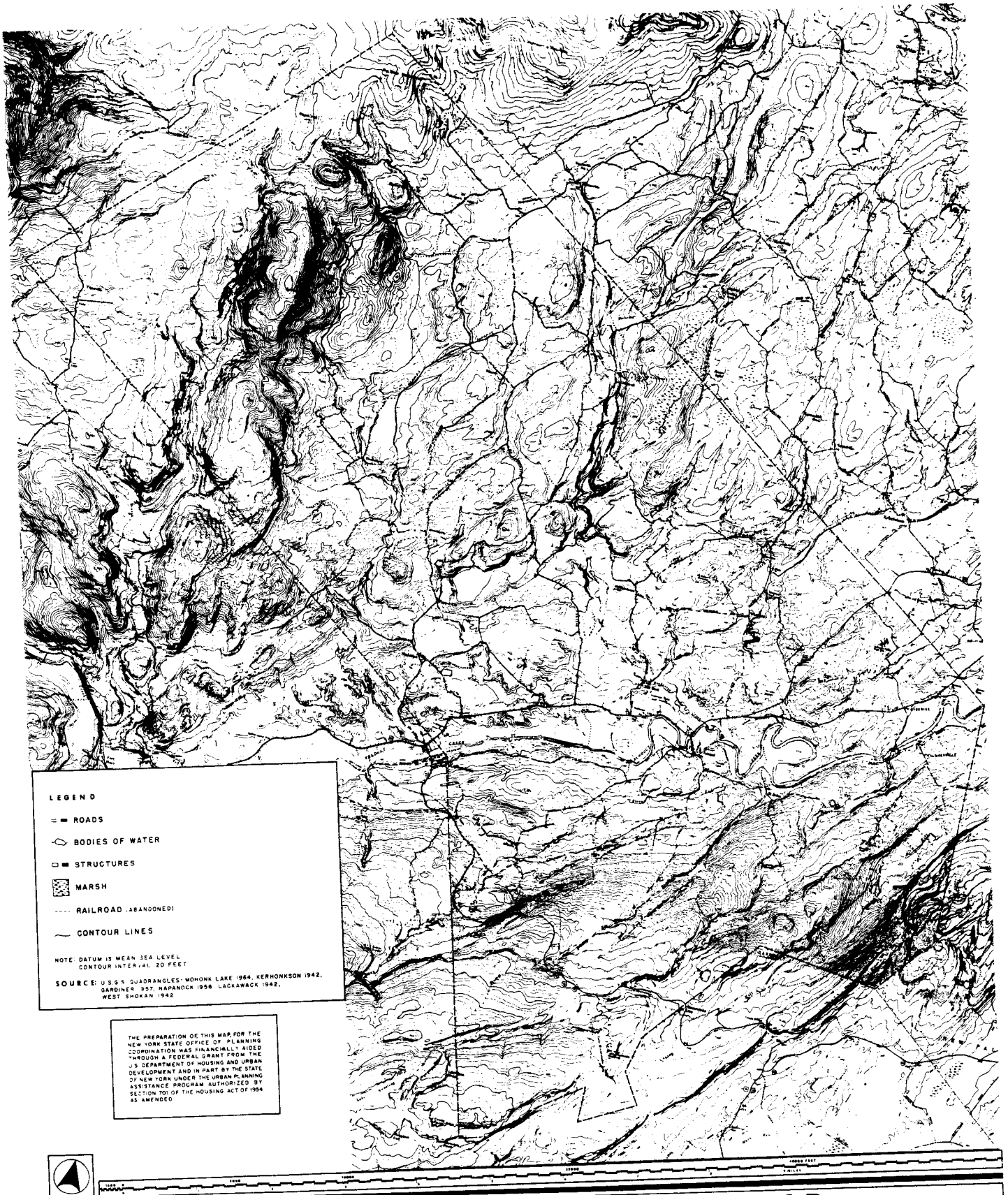
BASE MAP

2

TOWN OF ROCHESTER
TOWN PLANNING BOARD

JANUARY 1967

BRUNN & ANTHONY CITY PLANNERS, INC.



3

TOWN OF ROCHESTER
TOWN PLANNING BOARD

TOPOGRAPHIC MAP

BROWN & ANTHONY CITY PLANNERS, INC.

FEBRUARY 1967

PHYSICAL CONDITIONS

PHYSICAL CHARACTERISTICS

Topography & Streams

The natural terrain of the Town has influenced the location and extent of development since the days of original settlement. Even with modern construction equipment, future growth will have to respect existing physical characteristics such as areas of steep slopes and areas subject to flooding.

The Town of Rochester has very diverse topography. The land form varies from the rugged slopes of the Shawangunk Mountains in the eastern portion of the Town and the Catskill Mountains in the western portion of the Town to the flat lands along the Rondout Creek. Between these mountainous areas and the Rondout Creek is rolling land some of which has very steep slopes.

The Rondout Creek flows in a south to north direction through the Town. Generally paralleling the Rondout Creek on the west side is Route 209, the major route through the Town.

The dominant physical characteristics of the Town are the rugged slopes of the Shawangunk Mountains and the Catskill Mountains. The Shawangunk Mountains rise to a height of over 2,100 feet above mean sea level in the southeastern portion of the Town and the Catskill Mountains rise to a height of over 2,400 feet in the northwestern portion of the Town just north and west of Big Rosy Bone Knob. This latter height is the highest elevation in the Town. The lowest elevation is 200 feet located along the Rondout Creek near the Town of Rochester and Town of Marbletown boundary.

East of the Rondout Creek the land rises rapidly toward the Shawangunk Mountains. Very few level areas can be found in the portion of the Town east of the Rondout Creek. West of the Rondout Creek the land is more rolling until the Catskill Mountains are reached. Between the Catskill Mountains and the Rondout Creek are relatively level areas as well as areas of steep slopes. Topography and streams are shown on the Topographic Map.

Drainage Basins

In terms of drainage areas practically all of the Town is within the drainage area of the Rondout Creek (see Drainage Map), Only a very small

part of the eastern portion of the Town is within the drainage area of the Wallkill River. All of the area of the Town west of the Rondout Creek drains toward the Rondout Creek although the southwestern portion drains toward the Rondout Creek in the Town of Wawarsing.

The crest of hills between the streams flowing from the Catskill Mountains and the Shawangunk Mountains form minor drainage basins. The significance of a drainage basin is that a sewerage system serving a development which is within a drainage basin will operate on a gravity system. The advantage of a gravity system is that expensive pumping stations and force mains can generally be held to a minimum.

Lands Suitable for Development

Slopes

Areas with slopes of over 15% particularly where these comprise large areas can be regarded as unsuitable for close development. Within those areas having slopes of 10-15%, development is possible but such slopes can still present problems in terms of house location and road and lot grading.

A major portion of the Shawangunk Mountains in the east and the Catskill Mountains in the west have slopes of over 15%. Also many of the smaller hills between the Rondout Creek and the Catskill Mountains have slopes of over 15%.

Soils

Another physiographic influence on development has been and will continue to be the quality of subsoil, particularly the ability to absorb sewage effluent.

The areas of the Town with poor soil characteristics considering their ability to absorb sewage effluent from septic tanks from close developments have been classified as poor (see Land Suitable for Development Map). This does not mean that a home, for example, can not be built in those areas classified as poor but rather that close developments should be avoided because of the poor soil characteristics.

In those areas classified as poor soils the major problem is that the bare rock is exposed in many areas or the soil mantle covering bedrock is

very shallow. Other problems are the existence of clay in the subsurface soil and west and poorly drained lands. Clay will absorb septic tank effluent very slowly, particularly when wet.

Soils with slow rates of absorption require larger septic tank filters fields than soils with more rapid rates of absorption. Hence, the size of the building lot should be larger. Another reason for larger lots would be to require a lower density of population in those areas known to have physical problems.

All of those areas classified as poor are not, of course, of equal deficiency, and some sections could possibly be made acceptable with minimal improvements. Other areas would require prohibitive expenditures. A careful review and analysis of each specific site proposal for development is necessary by competent authorities--the County Health Department--to determine whether septic tanks are feasible and, if so, what the size of the leaching field and total lot should be.

Areas Subject to Flooding

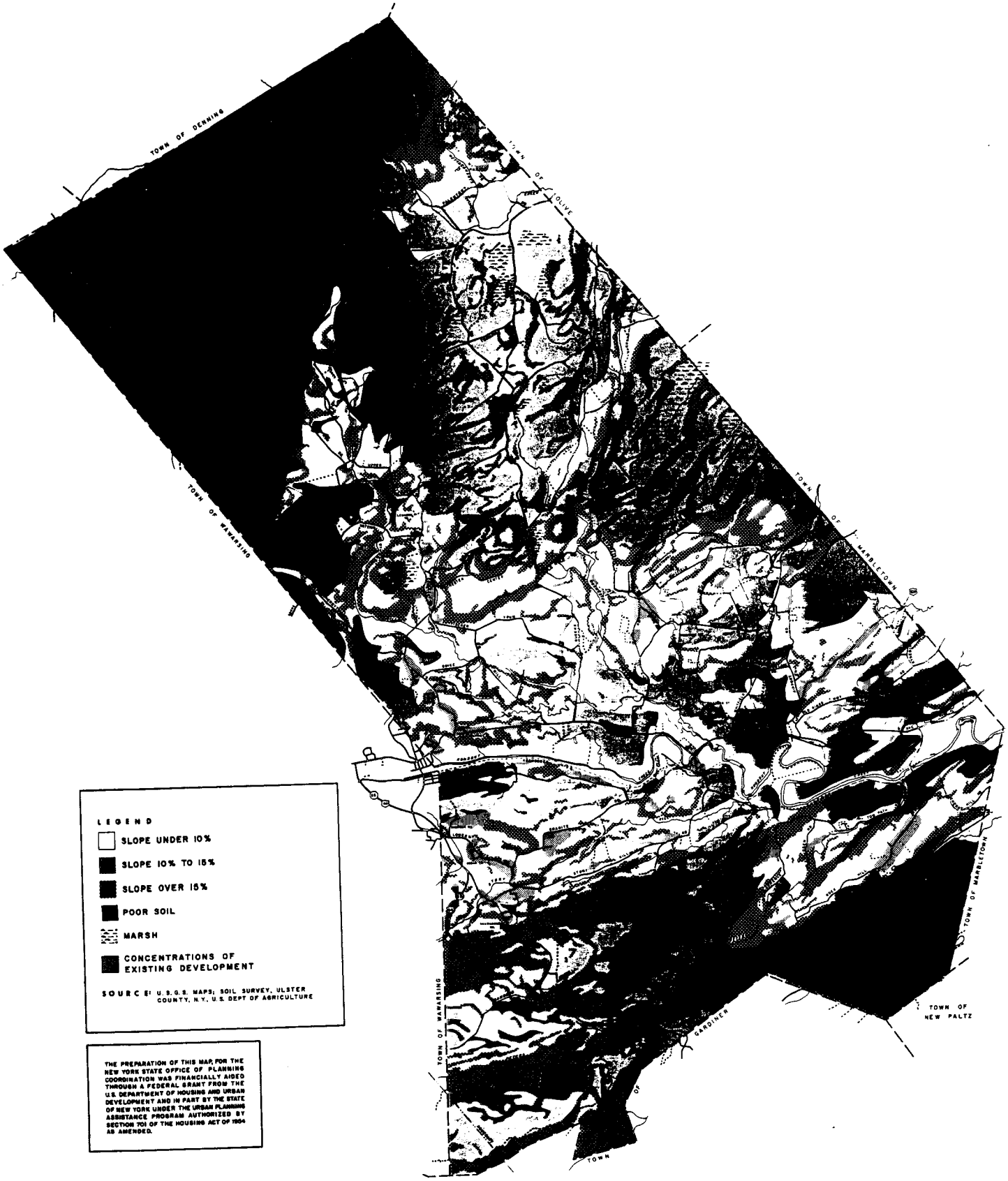
The Rondout Creek and several of the streams draining into the Rondout Creek in the Town are subject to periodic flooding. Flooding has occurred along almost the entire length of Rondout Creek and all its tributaries but limited urban development in the past has tended to minimize damages. Two of the greatest floods of record occurred in August and October, 1955.

The following is a description of flood damages of the August and October, 1955 floods and solutions considered along portions of Rondout Creek from a report entitled Survey Report of Flood Control, Rondout Creek and Wallkill River, New York and New Jersey, U. S. Army Corps of Engineers, September, 1960.

Damage

Napanoch to below Alligerville

"This reach suffered severe damage from flooding of the main stream and six small tributaries which discharge into it in the vicinity of Accord. There was a large amount of damage to all classes of property from both floods, but the August flood was considerably greater than the flood that followed 2 months later.



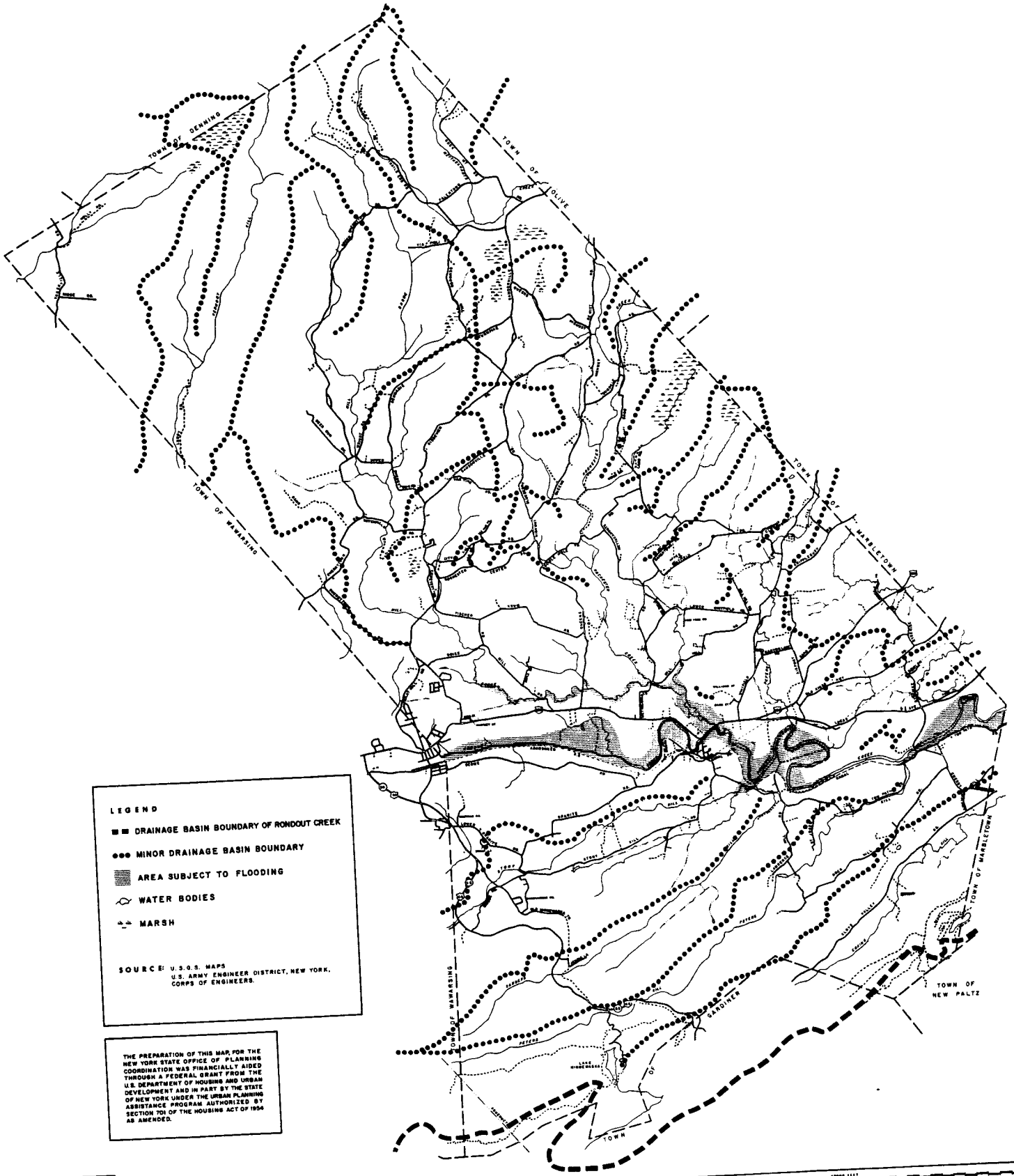
4

TOWN OF ROCHESTER
TOWN PLANNING BOARD

LAND SUITABLE FOR DEVELOPMENT MAP

BROWN & ANTHONY CITY PLANNERS, INC.

OCTOBER 1967



5

TOWN OF ROCHESTER
TOWN PLANNING BOARD

DRAINAGE MAP

BROWN & ANTHONY CITY PLANNERS, INC.

OCTOBER 1967

Several low lying areas along Route 209 were inundated during both floods in the vicinity of Kerhonkson and Accord. At Kerhonkson, about 100 used motor vehicles were damaged by the August flood when an automobile dealer was unable to recover them in time. There was less serious damage during the October flood... Numerous lodges were wahsed out by small tributaries during the August flood and the damage was repeated to a lesser extent in the October flood. All of the tributaries were choked with rocks and debris during both floods. In some cases repairs and stream clearing carried out by the Corps of Engineers and others after the August flood had to be repeated after the October flood. Within the communities of Kerhonkson, Accord and Alligerville there was considerable damage to residential, commercial and public property."

Below Alligerville to above Rosendale

"There was no reported damage along this reach."

Solutions Considered

Napanoch to below Alligerville

"In this reach all classes of property are subject to damage by flooding of the tributaries. Farmland in the valley are damaged by inundation and deposition of silt. Route 209 becomes impassable at a number of low points, and homes and commercial establishments suffer damage in Wawarsing, Kerhonkson, Accord and Alligerville. Protection for Kerhonkson would require a one-half mile long flood-wall with interior drainage facilities on the right bank and a 1,500 foot riprapped levee on the left bank. The bridge would have to be raised and the cost of the project would greatly exceed the benefits. At Accord a riprapped levee about 3,000 feet long with interior drainage facilities would be required on the right bank. The cost would greatly exceed the benefits. Other damages are so scattered as to make protection uneconomic."

Alligerville to above Rosendale

"Because of high banks and steep stream slopes there is usually no overbank flow in this reach"*.

* Survey Report of Flood Control, Rondout Creek and Wallkill River, New York and New Jersey, U. S. Army Corps of Engineers, September 1960

The City of New York has tapped the water resources of the Rondout Creek for its own uses, and has constructed the Merriman Dam at Lackawack N. Y. on the Rondout Creek. The resulting Rondout Reservoir has a capacity of about 49,000 million gallons, and a daily dependable yield of 127 million gallons. Although operated solely for water-supply purposes, incidental flood benefits are realized. Due to the considerable storage, even at spillway water level, flood peaks are reduced when passed through the reservoir.*

As pointed out in the previous quotes of the U. S. Army Corps of Engineers report the cost of construction of a levee would exceed the benefits derived and other damages are so scattered as to make protection uneconomic. The following is extracted from the previously quoted U. S. Army Corps of Engineers report on flood conditions along the Rondout Creek and Wallkill River.

> "At locations in the basin where flood control works have not been found economically feasible, and in fringe areas not fully protected by the recommended improvements, the flood problem may be reduced and minimized by the enactment and enforcement of zoning to control the use and occupancy of flood plains."*

A "flood plain" is a strip of relatively smooth land bordering a stream, built of sediment carried by the stream and dropped in the slack water beyond the influence of the swiftest current. It is also the lowland that borders a river, usually dry but subject to flooding. The recurrence interval of floods (for example, a fifty year flood frequency) may occur at any time regardless of the date of its last occurrence and regardless of the value of the recurrence interval.*

The frequency of the flood recurrence of the August 1955 flood can not be estimated because this portion of the Rondout Creek is ungaged. There are gaging stations at Lowes Corner, 46.4 miles above the mouth of the Rondout Creek and in the Village of Rosendale. At these gaging points ~~the~~ U. S. Army Corps of Engineers estimates that the August 1955 flood has a flood frequency of approximately 80 years at the Village of Rosendale and approximately a 4-4.5 year flood frequency at the Lowes Corner gaging station. The October 1955 flood at the Village of Rosendale is estimated to have a frequency of approximately 200 years and at the Lowes Corner gaging station approximately a 17 year frequency.

---

* Survey Report of Flood Control, Rondout Creek, New York and New Jersey, U. S. Army Corps of Engineers, September 1960

Specific information to establish the exact boundary of land subject to periodic flooding along the Rondout Creek in the Town of Rochester is not available. However, a generalized location has been plotted from the following information* and shown on the Drainage Map.

Flood Crest Data

Stream and Location	Miles above mouth	Date 1955	Elevation (feet)
Rondout Creek			
Kerhonkson, N. Y. 1,560 feet upstream from highway bridge, Kapp's Garage, left bank	26.6	Aug. 19 Oct. 15	253.1 253.8
Kerhonkson, N. Y. highway bridge, right abutment, downstream side	26.2	Oct. 16	251.5
Accord, N. Y., highway bridge, right upstream wingwall	21.8	Aug. 19 Oct. 16	241.9 243.1
Alligerville, N. Y., U. S. Highway 209 bridge, right abutment, downstream side	17.5	Aug. 19 Oct. 16	215.1 218.2
High Falls, N. Y., upstream from dam	13.0	Aug. 19	216.2

* Floods, August, October, 1955, U. S. Army Corps of Engineers.