Town of North Greenbush
Local Waterfront Revitalization Program

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Adopted:
Town of North Greenbush Town Board, June 14, 1990

Approved:
NYS Secretary of State Gail S. Shaffer, September 6, 1990

Concurred:
Office of Ocean and Coastal Resource Management, October 19, 1990

This Local Waterfront Revitalization Program has been adopted and approved in accordance with the provisions of the Waterfront Revitalization and Coastal Resources Act of 1981 (Executive Law, Article 42) and its implementing regulations (6 NYCRR 601). Federal concurrence on the incorporation of this Local Waterfront Revitalization Program into the New York State Coastal Management Program as a Routine Program Implementation has been obtained in accordance with the provisions of the U.S. Coastal Zone Management Act of 1972 (P.L. 92-583), as amended, and its implementing regulations (15 CFR 923).

The preparation of this program was financially aided by a federal grant from the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management, under the Coastal Zone Management Act of 1972, as amended. Federal Grant No. NA-82-AA-D-CZ068.

The New York State Coastal Management Program and the preparation of Local Waterfront Revitalization Programs are administered by the New York State Department of State, Division of Coastal Resources and Waterfront Revitalization, 162 Washington Avenue, New York 12231.

STATE OF NEW YORK
DEPARTMENT OF STATE
ALBANY, N.Y. 12231-0001

GAIL S. SHAFFER
SECRETARY OF STATE

September 6, 1990

Honorable Richard Fennelly
Supervisor
Town of North Greenbush
P.O. Box 38
Wynantskill, NY 12198

Dear Supervisor Fennelly:

It is with great pleasure that I inform you that, pursuant to the Waterfront Revitalization of Coastal Areas and Inland Waterways Act, I have approved the Town of North Greenbush's Local Waterfront Revitalization Program (LWRP). The Town is to be commended for its thoughtful and energetic response to opportunities presented along its waterfront.

I will notify State agencies shortly that I have approved the Town's LWRP and will provide them a list of their activities which must be undertaken in a manner consistent to the maximum extent practicable with the North Greenbush LWRP.

Again, I would like to commend the Town of North Greenbush on its efforts to develop the LWRP and look forward to working with you in the years to come as you endeavor to revitalize your waterfront.

Sincerely,

Gail S. Shaffer

GSS:gn

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Washington, D.C. 20235

OCT 19 [illegible]

Mr. George Stafford
Director
Division of Coastal Resources
and Waterfront Revitalization
Department of State
162 Washington Avenue
Albany, New York 12231

Dear ~~Mr. Stafford~~ George:

The Office of Ocean and Coastal Resource Management concurs with your request to incorporate the Town of North Greenbush Local Waterfront Revitalization Program (LWRP) into the New York State Coastal Management Program as a Routine Program Implementation (RPI) change. We received comments from three Federal agencies, none objecting to incorporating the LWRP as a RPI.

In accordance with the Coastal Zone Management Regulations, 15 CFR 923.84, Federal Consistency will apply to the Town of North Greenbush LWRP after you publish notice of our approval.

Sincerely,

Timothy R.E. Keeney
Director

Town of North Greenbush

Town Board

Richard Fennelly, Supervisor

James Flanigan
Francis Mack
William Maloney
Charlotte Dell

Richard Fennelly, Chairman
LWRP Committee

Rocco Fragomeni, Chairman
Planning Board

Patricia Noel, Town Clerk

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SECTION I

WATERFRONT REVITALIZATION AREA BOUNDARY

The Town of North Greenbush's Waterfront Revitalization Area (WRA) boundary is as follows:

A. Boundary Criteria

The boundary of the coastal area is intended to include all lands and features whose use may have a "direct and significant impact" on coastal waters because the shoreland area has one or more of the following characteristics:

1. The area includes uses which have direct contact with, depend on, or make use of coastal waters;

2. The area includes natural features which are affected by or have an affect upon the coastal waters;

3. The area has a direct functional, cultural or historic relationship with the waterfront; and

4. The area has a direct aesthetic relationship with the waterfront in that it is clearly visible from or contains direct viewpoints of the coastal waters.

B. Description of the WRA

1. Inland Boundary

Beginning at a point on the northern boundary of the Town of North Greenbush 2,000 feet east of the eastern shoreline of the Hudson River;

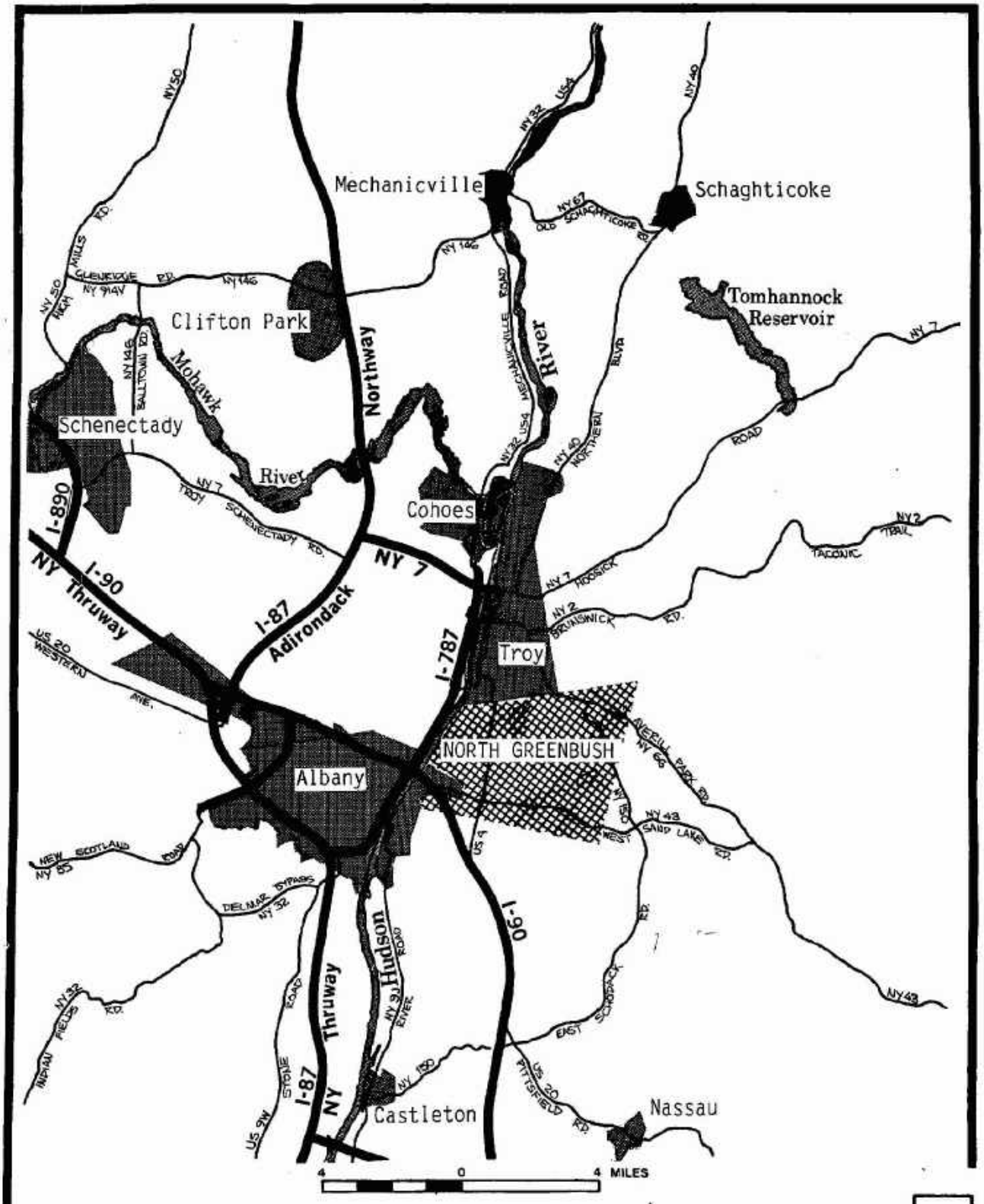
Thence, extending south along a line 2,000 feet east of and parallel to the eastern shoreline of the Hudson River to its intersection with the southern boundary of the Town of North Greenbush.

2. Waterside Boundary

Beginning at the intersection of the northern boundary of the Town of North Greenbush and the eastern boundary of Albany County;

Thence, extending along the eastern boundary of Albany County (the western boundary of the Town of North Greenbush) to its intersection with the southern boundary of the Town of North Greenbush.

See Maps 1 and 2 for the Town's regional setting, as well as for a graphic display of the WRA.



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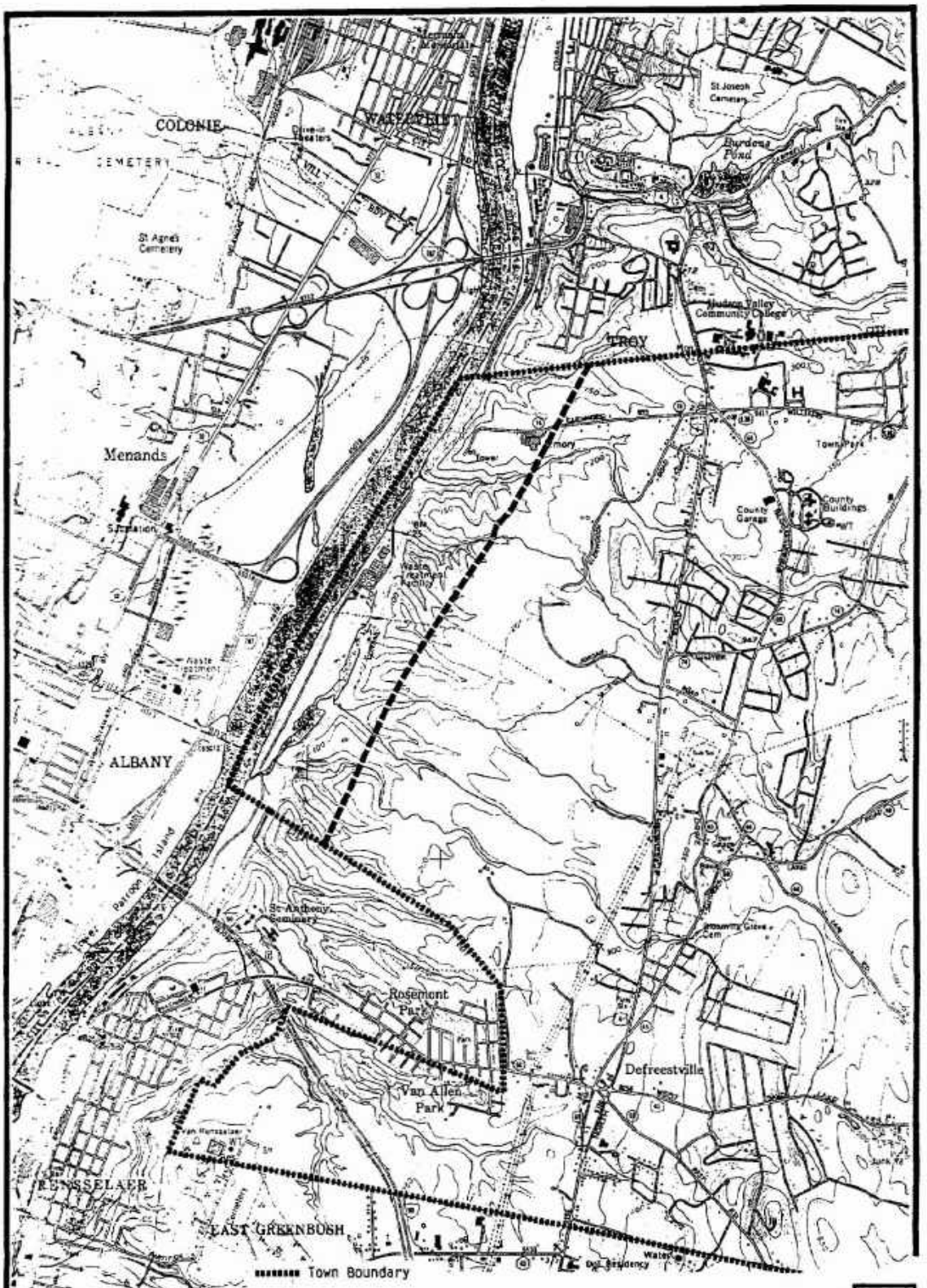
Regional Setting

LOCAL WATERFRONT REVITALIZATION PROGRAM

TOWN OF NORTH GREENBUSH

Shuster Associates — Planning Consultants



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Coastal Zone Boundary

LOCAL WATERFRONT REVITALIZATION PROGRAM

TOWN OF NORTH GREENBUSH

Shuster Associates — Planning Consultants

SECTION II

INVENTORY AND ANALYSIS

II. INVENTORY AND ANALYSIS

A. OVERVIEW

The Town of North Greenbush has 1.9 miles of frontage on the Hudson River, situated between the cities of Rensselaer and Troy, and across the river from the City of Albany and the Village of Menands. This area is largely undeveloped today except for the Rensselaer County Sewage Treatment facilities. This stands in contrast to the riverfronts in the adjacent communities, which in many places consist of older industrial and urban development. The Town's waterfront consists of a flat river flood plain bordered by a steep escarpment on the western edge of a plateau where development in the Town has occurred. At the base of the slopes is a rail line serving industries between Rensselaer to the south and Troy to the north.

Physical barriers such as the railroad and the slopes have worked in the past to prevent the development of this area. Not surprisingly, less than a dozen individuals or organizations own the property in the study area. This group includes, public utilities, the Town, and a major university in the region, Rensselaer Polytechnic Institute. Current policies of the various landowners further limit legal riverfront access. Yet in spite of this, the riverfront is utilized for unauthorized recreation and for undesirable activities, such as dumping and all-terrain-vehicle operation.

Section B. below describes the various natural and man-made features of the coastal area and their implication for waterfront policy making. Section C highlights some major issues and opportunities which this Local Waterfront Revitalization Program will address.

B. INVENTORY AND ANALYSIS

Field surveys, published data and reports and previous studies, including the initial draft LWRP document prepared in 1984 were all used to assemble an inventory of existing conditions and features in the coastal area. The results of this inventory and analysis process are presented below and illustrated on Maps 3 through 6.

1. Existing Land and Water Use (See Maps 4 and 5)

a. Land Use Patterns

Land use along the North Greenbush waterfront principally reflects the effect of local topography on access to the river. The river flat, although it has been disturbed by various activities, is essentially undeveloped outside of the sewage treatment plant. The wetlands coupled with narrow sections of the river flat limit the overall

developable area. The escarpments, because of their generally unstable nature, are not suited for development and have acted as a barrier to river access. Only on the plateau are there ample amounts of level and stable, gently sloping land that can support the development that has occurred there. The study area consists primarily of vacant land, transportation and utility corridors and a sewage treatment plant.

Five principal landowners are located within the waterfront study area. The first of these is the Rensselaer County Sewer District. The District owns just over 34 acres along the northern 5,400 feet of the Town's riverfront, where its sewage treatment plant is located. The plant consists of a screening facility, four primary settling tanks, an aeration facility, four secondary settling tanks, two chlorine contact facilities, a sludge processing facility, and sludge disposal land fill, four pumping stations, an administrative and control building and related handling and maintenance structures. The plant serves the entire District, which encompasses North Greenbush, Rensselaer, Troy and parts of Brunswick, Sand Lake, and Schaghticoke. The need for additional land area off site to accommodate either expansion of the existing treatment plant or for sludge disposal is not anticipated by the Sewer District officials in the foreseeable future.

Following along the base of the escarpment is the Troy-Greenbush rail line. The 27 acre parcel of land on which the railroad is located is owned by Conrail. This rail line supports infrequent rail service from the industrial areas of South Troy to the main Conrail lines in Rensselaer. On occasion the question of abandonment of the sole remaining rail connection into Troy is raised, although it appears that this event is unlikely to occur in the near future. Parallel to the railroad, but still on the property is an unpaved access road. Beneath the access road is a 36" force sewer main of the County Sewer District.

The lands of the Niagara Mohawk Power Corporation nearly bisect the waterfront in a linear corridor which crosses the escarpment, and the river flat at the southern edge of the sewage treatment plant. This 40 acre parcel, about a quarter of which is within the waterfront area, is the right-of-way for the two 115 kilovolt transmission lines connecting the Reynolds Road substation on the plateau to substations in Menands and Colonie. No change in this use is anticipated in the future.

On the river flat immediately south of the Niagara Mohawk property is an 8.9 acre parcel of Town land. This property was deeded to the Town by the Rensselaer Polytechnic Institute (RPI) for future park development, as part of the approval process for development of the Rensselaer Technology Park upslope. This land is currently undeveloped and includes part of a State-designated wetland.

Adjacent to all of these properties in the waterfront area are the lands of RPI's Technology Park. The area of this property, consisting of two adjacent parcels, is 1,082 acres, of which 90 acres are located on the river flat, and close to 300 acres are on the escarpment. The balance is outside the waterfront area. Adjacent property in Rensselaer on the river flat and escarpment is also held by RPI. Development of the Technology Park has been proceeding on the plateau since 1981 for research, development and related light manufacturing facilities, in addition to a wide variety of technologies service operations. The escarpment and river flat areas of this property are currently undeveloped. The RPI Technology Park has put forth a proposal to develop offices, a hotel and conference center on this section of the property. These uses would change the present character of the waterfront, and were taken into consideration during development of the LWRP.

Upland from the river but in the waterfront area is the nearly 13 acre parcel of the New York National Guard Armory located near the western terminus of Glenmore Road. There are also portions of several smaller, privately held parcels in the waterfront area which have access onto Glenmore and Glenwood Roads.

Prior to adoption of the LWRP, the waterfront area lay within two zoning districts. The AR (Agricultural and Residential) zone encompassed most of the waterfront area. This district permits single family residences, agricultural uses, parks and reforestation areas, recreation clubs, and planned unit residential development. A portion of the waterfront area, about 1,200 to 1,600 feet upslope from the railroad, is zoned IG (Industry), to permit development of the Rensselaer Technology Park. This district prohibits residential uses.

Land adjacent to the waterfront area to the north in the City of Troy is zoned for heavy industry, while adjacent land to the south in the City of Rensselaer, including some 97 acres owned by RPI, is zoned LC (Land Conservation). Permitted uses under the LC classification

include farming--agricultural and horticultural activities; parks, athletic fields and open space; and golf courses.

The established zoning classification of the Town's waterfront area was inappropriate when viewed from either an agricultural or residential perspective. The land is principally either man-made (i.e., dredge disposal) or protected marsh, in each instance neither suitable nor utilized for productive agricultural use. As a flood-prone area, the land is also unsuited to residential development, in that the first habitable floor of residential structures must, in accordance with the provisions of the National Flood Insurance Program, be located above the 100-year flood elevation. Rezoning consistent with coastal policies and the "Proposed Land and Water Uses Plan" which follows in Section IV has been adopted (See Section V).

b. Water-Dependent Uses

Water-dependent uses in North Greenbush are extremely limited. There are no industrial or commercial water-dependent uses in the Town, nor has there been in the past. The Hudson River is used for treated effluent discharge from the sewage treatment plant. A seawall along most of the Town's riverfront, built during the 1930's, serves as an erosion control and flood protection structure. Recreational activities, particularly pleasure boating and fishing, are accommodated on the river, although there is currently no access on the riverfront. There are no water-enhanced uses along the riverfront.

c. **Vacant and Underutilized Sites**

Much of the North Greenbush waterfront is underutilized due to natural and artificial factors which limit access. The sewage treatment property on the river flat, while developed in part, is underutilized near the Troy city boundary. The Niagara Mohawk property serves as a utility corridor, but its river frontage is likewise underutilized. The Town and RPI parcels are totally undeveloped, although not in virgin condition due to human activity over the years. The State-designated wetland, located on parts of the RPI, Town and Niagara Mohawk properties should not be considered underutilized in terms of having development potential as it serves important ecological functions of floodwater control, water purification and habitat maintenance. Along the Troy-Greenbush rail line, there is evidence of garbage and debris dumping. The infrequent use of this line and

its physical condition, which are discussed later, seem to invite this sort of activity.

d. Recreation and Public Access

As a result of the access barriers created by the railroad and the escarpment, recreational facilities in the Town of North Greenbush are located on the plateau, away from the river. Athletic activities are accommodated at the Bucky Egan Memorial Field on Williams Road with other recreational opportunities at the Town Park east of Winter Street. Other facilities include the Wynantskill Union Free Elementary School property on White View Road and the Hudson Valley Community College.

The escarpment creates the principal natural access barrier between the plateau section of the town and the riverfront. Exacerbating this situation are artificial barriers such as the railroad, a physical barrier, and the legal access barriers of the sewage treatment plant and the transmission line corridor. River Road, extending between Rensselaer and the sewage treatment plant, is a combined physical and legal barrier as it is a private road, and is in a condition that deters some amount of vehicular traffic. A roadway along side the railroad, on the right-of-way, is filled with numerous potholes and mudholes which makes travel difficult. The paved sewage treatment plant road is restricted to most traffic and the entrance gates to it in Troy are often closed on weekends and evenings. Finally, the seawall prevents access to the shoreline from the river because of its design. The closest boat access location is about one mile south of the Town-City boundary in the City of Rensselaer. This boat launch, at the foot of Tracy Street, is maintained by Rensselaer County, and consists of an unpaved graded access ramp that was cut out of the seawall. There is also a boat launch in Albany, a short distance further south in the City's Corning Preserve which is more fully developed and has extensive parking facilities.

In spite of the access barriers discussed above, the North Greenbush waterfront is utilized for recreation, albeit unofficially. Such activities include jogging, dog walking, hunting and target shooting (as evidenced by empty shotgun shells along the railroad) plus the use of off-road or all-terrain vehicles.

2. Geology

a. Topography (see Map No. 3)

North Greenbush is situated within the Hudson River lowland physiographic province, west of the Taconic Highlands. The lowland is characterized by rolling plateau with isolated hills, reflecting the underlying bedrock geology. The Hudson River has cut a trench over a mile wide in this province, separated from the plateau by a sharp escarpment zone of approximately one quarter to one half mile in width, where elevations drop from around 150 to 200 feet on the plateau to sea level at the river. Slopes along the escarpment often exceed 25%. The escarpment is penetrated by several deep fingerlike ravines extending into the plateau area to the east and draining an area of approximately 1,850 acres in the gently sloping and rolling plateau areas. The river floodplain or "flat" is essentially level and ranges from 200 to 1,200 feet in width in the waterfront area. Much of the river flat in the Town, has been built up by deposition of dredge materials by the Army Corps of Engineers in its efforts to improve navigation and flood control along this reach of the Hudson River.

The topography has strongly influenced development patterns in the western portion of the Town. The escarpment has been a barrier to access along the river, and development has been concentrated on the plateau.

b. Bedrock Geology

Underlying the Town's waterfront area are shales, siltstones and greywackes of the Ordovician age. Evidence for this is based upon field investigation conducted by Elam in 1960, from isolated exposures found in the ravine walls, as much of the bedrock is buried under a thick mantle of more recent surficial deposits (see Map No. 3). The westernmost part of the waterfront, encompassing the river flat and parts of the escarpment, is underlain by the Taconic Melange, a chaotic mixture of sandstone, siltstone and limestone slide blocks in a pelitic (shaley and silty) matrix. Immediately east of the Taconic Melange and south of the Niagara Mohawk transmission lines, is a small area of the Austin Glen formation. This unit consists of greywackes and grey shales, and is exposed along the lower reaches of the Skipper Killitje. Most of the easterly reaches of the escarpment and ravines is underlain by the gray shales, siltstones and mudstones of the Normanskill Shale. Exposures of this unit are along the lower ravine wall

of the Snoeken Kill and the stream to the south (Hudson River tributary No. 229).

Surficial Geology

The North Greenbush waterfront area is characterized by an extensive cover of surficial deposits, of two types: alluvium and lacustrine, or lake deposited, clays. The lacustrine clays were deposited towards the end of continental glaciation during the Wisconsonian Stage retreat, between 15,800 and 12,450 years ago. As the ice sheet retreated northward drainage flowing from the de-glaciated areas east of North Greenbush fed into the Hudson River trench and adjacent lowlands, which had existed in a similar form in pre-glacial times. Due to extensive deposits to the south, and the retreating ice front to the north, melt-waters in the Hudson Valley formed glacial Lake Albany. Extensive amounts of clay, silt and beach ridge sand and gravel were deposited in this low energy environment, from Hyde Park north to Whitehall.

The "Lake Albany clay" deposits consist of blue-gray chocolate colored rhythmically bedded clays and silts, with numerous interbedded pebble gravels. These deposits have been observed to exceed 100 feet in places (La Fleur, 1965). A thin layer of sand and pebble silts, less than four feet thick, overlays the clay on the escarpment near the WRPI radio tower.

These clay deposits can pose a significant landslide hazard in areas having slopes greater than 12°(27%) and vertical relief greater than 40 feet (Robak & Fickies, 1983) (see Map No. 6). These conditions are particularly pronounced in the ravines. The clays become soft and plastic with increasing wetness and depth. Engineering and siting considerations should be taken seriously regarding development along the escarpment and ravines, as well as the upland plateau areas immediately adjacent to these steeply sloping areas.

In terms of stability, the bedrock exposures in the ravines present less problems as their slopes are considered to be more stable (RPI University Park Master Plan, 1981). But these exposures are extremely limited in size and location, and do not lessen the overall stability problems associated with the escarpment.

Along the river flat are the most recent deposits of alluvium and dredge sediments, with organic deposits occurring in the vicinity of the wetland.

3. Soils

The soils in the North Greenbush waterfront area can be divided into two groups; those in the river flat areas, and those along the escarpment and ravines.

The soils along the river flat consist primarily of dredge and fill material and alluvium, classified as "sandy udorthents". Organic deposits occur adjacent to the wetland. Adjacent to the south and north ends of the wetlands, but east of the railroad, is the Limerick Silty Loam, gentle slope (3-10%) variant. All these soils are subject to frequent flooding and have wetness problems which can impose severe restrictions on development. The Limerick soils are also subject to frost action.

The soils on the escarpments and ravines are predominantly Hudson Silt Loam, steep, 25 to 40% slopes, Hudson Silt Loam hilly, 10 to 30% slope and Hudson Silt Loam, 8 to 15% slopes. The Elmridge Fine Sandy Loam occurs on the top of the escarpment near the armory on Glenmore Road and between the Snoecken Kill and stream 229.

At the base of the escarpment are more gently sloping variants of the Hudson Silt Loam. Much of the Hudson Silt Loam soils are derived from the Lake Albany clays and silts described above. As a result, these soils pose severe problems for development because of wetness, low strength, high plasticity and potential for frost action. Special engineering considerations would be necessary for any successful development on these soils. The Elmridge fine sandy loam, formed also from underlying clay deposits is also problematic with regard to wetness, low strength, slope and frost action. This places severe restrictions for construction of pipelines and roads but only moderate restriction on construction of buildings and recreational facilities.

Most of the Hudson River shoreline in North Greenbush has been altered, principally through dredge spoil deposition by the Army Corps of Engineers in efforts to improve river navigation and flood control. The various tributaries of the Hudson deposit sediment from the plateau and escarpment areas during periods of high flow, particularly in the spring, into the river. Because of this, the Works Progress Administration (WPA) constructed the seawall found along the length of the Town's river shoreline during the 1930's, to assist in channelizing the navigable river. This seawall or revetment wall is maintained by the Corps.

4. Wildlife Resources

a. Significant Habitats

No Coastal Fish and Wildlife Habitats of Statewide Significance have been designated within North Greenbush's waterfront area. Nevertheless, the wetland discussed below and the river adjacent to the Town constitute an important wildlife habitat. Waterfowl, such as redhead ducks, canvasbacks and mallards, are present in the wetland during spring and fall migration, feeding and resting. Other species of marsh birds may also be present. The river waters within the waterfront area provides a spawning and nursery area for various fish species such as herring, white perch, shad and striped bass.

b. Wetlands (see Map No. 6)

The State Legislature has declared that it is "the public policy of the State to preserve, protect and conserve freshwater wetlands and the benefits derived therefrom" (Section 24-0103, Environmental Conservation Law). Accordingly, the Department of Environmental Conservation (DEC) is identifying and mapping all freshwater wetlands larger than 12.4 acres (final maps for Rensselaer County have been filed). Protected streams are those streams which are navigable and/or classified by the Health Department as C(T) or above. Under Articles 15 and 24 of the Environmental Conservation Law, any development of protected wetlands requires a "wetlands" or "stream protection" permit from DEC. Based on their evaluation of the permit application, DEC may limit development, require mitigative measures or prevent development.

One wetland has been designated in the waterfront area: TS-105, located immediately south of the Rensselaer County Sewage Treatment Plant, is shown on Map 6.

The TS-105 wetland is rated by DEC as a Class II wetland. It is a fresh water tidal marsh of 40-50 acres that collects drainage from several tributaries of Hudson Tributary stream No. 228, which includes the Skipper Killitje (228-1). In turn, this wetland drains into the Hudson River at its southwestern corner, through a culverted inlet underneath River Road. Wetland TS-105 is reputed to be the furthest inland tidal basin along the United States coast.

This wetland is separated from the Hudson River by a bank of dredge spoils that has developed over the years from channel dredging by the Corps of Engineers. The spoil

bank had subsequently been mined for sand and gravel up to 15 years ago. This mining has resulted in a gradual extension of the wetland in a southerly and westerly direction.

Wetland vegetation includes shallow freshwater marsh species such as purple loosestrife (Lysthrum saliciaria) and cattail (Typha augustfolia) and seasonally-flooded deciduous trees and shrubs. There is extensive plant cover on the water's surface.

The streams in the escarpment, discussed below, have not been classified by DEC as "protected". Thus, no permit is required for either constructing stream crossings or for discharge of storm drainage.

c. Vegetation and Wildlife

The North Greenbush waterfront area is characterized by extensive vegetation on the river flat and the escarpment. Hardwood species are predominant. The river flat area is characterized by mature cottonwoods present along the river shoreline and wetlands, with an understory of shrubs and herbaceous plant species common to gravel soils and wet areas, such as willows and poplars.

The escarpments and ravines in particular are more densely wooded than the river flat. Field studies (RPI University Park Master Plan, 1981) identified plant communities in various successional stages growing towards an oak-hickory forest. This is the typical forest composition in the Hudson Valley. While white oak (Quercus alba) is the dominant species in this community, beech (Fagus gradifolia) and chestnut oak (Quercus prinus) are abundant on the escarpments, with the eastern hemlock (Tsuga canadesis), eastern white pine (Pinus strobis) and basswood (Tillia americana) common on the moister sides of the ravines, particularly along the shaded slopes. Shagbark hickory (Carya ovata), red oak (Quercus rubra, var. borealis) and sugar maple (acer saccharum) also occur on the slopes. Also found on the more stable slope area were several species of herbaceous plants listed by the state as "Protected", such as maidenhair fern (Adiatum pedatum) and Trillium (Trillium ceruum). "Protected" designation (NYCRR 193.3) indicates that while not necessarily rare, these plants, because of their attractiveness, require permission of the property owner prior to transplanting or picking. Because of the present vegetative associations and the lack of specific and/or isolated habitats, no rare or endangered species have been found in the study area.

Wildlife in the study area is generally limited to small birds and mammals coincidental with the plant communities discussed above. Many species are characteristic of the transition between suburban and rural land use, and are mobile in utilizing the forested escarpment and ravines in addition to the woods and open vacant fields of the plateau. Biting insects, such as deer flies and mosquitos, are common to the wetlands and ravines. Birds identified in this area include ruffed grouse, pheasant, goshawk, hairy and downy woodpeckers, bank swallows, chickadees, catbirds, northern orioles, scarlet tanagers, eastern goldfinches and song sparrows. Along the river flat several species of ducks such as redhead and canvas-back are present as noted above. Woodchucks, raccoons, rabbits, squirrels, chipmunks are common in the wooded escarpment.

5. Hydrology and Water Quality

a. Drainage

The North Greenbush waterfront area lies within the Hudson River drainage basin. The Hudson River has a mean elevation of near zero (sea level). Since the river is an "estuary" or tidal river, its actual elevation fluctuates daily. The mean monthly tidal range is 4.6 feet on the Town's waterfront, based on data by the National Ocean Survey (NOAA, 1977). Discharge measurements are taken at the United States Geological Survey (USGS) gauging station across the river from Troy at Green Island, about three miles north of the Troy-North Greenbush boundary. The daily flow ranges from a minimum of 822 cubic feet per second on September 2, 1968, to 152,000 cubic feet per second on March 14, 1977, with a maximum instantaneous flow of 181,000 cubic feet per second on December 31, 1948, and an average flow of 13,700 cubic feet per second.

Seven streams drain from the plateau in ravines through the escarpment towards the Hudson with a west-northwesterly orientation. For statistical and regulatory purposes, these Hudson River tributary streams have been numerically coded by DEC in progression starting at the mouth of the river at New York Bay. Several of the streams also have historic Dutch names (see Map No. 3).

The three southerly streams are part of a tributary system to Stream 228, which empty into wetland TS-105, and thence into the Hudson. Stream 228-2 is identified from the tax maps as the "Skipper Killitie" (Killitje). Stream 228-1 drains a portion of the Town, although it principally flows within the City of Rensselear. Likewise, Stream 232 lies within the City of Troy along part of its length.

This stream, along with Stream 230 (the Snoeken Kill) and Stream 229, have no major tributaries and drain directly into the Hudson River. In total, these streams drain close to 2,700 acres of plateau and escarpment area. The largest flows on these streams generally occur during spring runoff.

There are a number of waterfalls and cascades on these streams up to 40 feet high which are most pronounced at this time.

b. Flood Protection

The Federal Emergency Management Agency has developed a flood insurance study and maps for the Town of North Greenbush that indicate flood events which are expected to be equalled or exceeded once during a 100 or 500 year period. The maps also show base flood elevation lines which indicate the anticipated water-surface elevation during a 100-year flood. Local planning requires that development must either be built above the base flood elevations or contain flood protection devices to this height. The 100-year flood plain area is shown on Map No. 6.

The 100-year flood plain area is generally coterminous with the "river flat" area described above. The 100-year flood elevation ranges from 22 feet above mean sea level at the boundary of the City of Rensselaer, to 24 feet at the boundary of Troy. This means that during a 100-year flood, the entire river flat area, including the wetland, the sewage treatment plant and its access roads, would be under water. The seawall and an earthen levee along the Town's waterfront provide protection during minor floods and high tides.

The 100-year flood elevation at the Albany gauging station, approximately two miles south of the Town of North Greenbush/City of Rensselaer boundary is estimated to be 21.0 feet. By way of historic comparison, the following "floods of record" have occurred at the Albany gauging station since 1900:

Year	Flood Elevation	Estimated Return Period
February 1900	20.4 feet	80 years
March 1902	19.0 feet	50 years
March 1913	21.4 feet	100+ years
March 1936	17.9 feet	33 years
January 1949	17.5 feet	30 years

Depending upon specific locations along the North Greenbush waterfront, these historic flood elevations at the Albany gauging station were presumably exceeded here by approximately 1 to 3 feet due to the upstream River gradient which occurs.

Interestingly, the 1936 and 1949 floods occurred after the Hudson-Black Regulatory District's construction of the Sacandaga Reservoir (Conklingville) Dam in 1930 which, though primarily designed to augment low flows in the Hudson during periods of little precipitation, does have incidental flood control benefits.

c. Surface Water Quality

Surface waters in the Town of North Greenbush are monitored by the DEC. DEC monitors the Hudson River for both conventional pollutants and toxic pollutants at the Niagara Mohawk Albany power plant at Glenmont, about 5 1/2 miles south of North Greenbush, and the federal lock and dam at Troy, over 3 1/2 miles to the north. Parameters for conventional pollutants such as coliform, fecal coliform, pH and dissolved oxygen are tested at these sites once every four weeks throughout the year except during January and February. Monitoring for toxic compounds is done twice during the spring, summer and fall seasons.

The quality of the Hudson River water has dramatically improved over the past several years, principally due to the development of sewage treatment facilities in Albany County in 1974 and in Rensselaer County in 1976, and also due to the cessation of PCB discharges by General Electric in 1977 at their Fort Edward plant. The Hudson River at North Greenbush is rated as Class "C" (i.e., freshwater suitable for the propagation and taking of fish, but not for water supply or primary contact recreation). The seven tributary streams are rated as Class "D", which indicates suitability for secondary contact, but not for fish propagation due to low water or intermittent flow conditions. Stream 228 has been recently recommended for upgrading to Class C, although its tributaries have not.

Effluent from sewage treatment is discharged at the Rensselaer County sewage treatment plant, the Albany County sewage treatment plant across the river, and at the East Greenbush treatment plant to the south.

d. Sewage

The North Greenbush waterfront currently has no local sewage service, as it is mostly undeveloped, nor is it in a local sewage collection district. However, the Town's waterfront is the site of the treatment facilities and interceptor mains of the Rensselaer County Sewer District No. 1. This system serves both residential and industrial customers in the urbanized areas of the District, which include Brunswick, North Greenbush, Rensselaer, Sand Lake, Schaghticoke and Troy. Interceptor mains extend along the east bank of the Hudson River between the Port of Rensselaer and the Lansingburgh section of Troy, beneath the railroad right-of-way, collecting wastewater from upland mains to the treatment facility.

The plant, has a 24 million gallon per day (mgd) capacity of primary and secondary treatment. Prior to completion of this facility in 1976, raw sewage was discharged directly into the Hudson River.

Local sewage collection along the Town's waterfront would be possible through either creation of a new local collection district or extension of a special district formed in 1982 to service the Rensselaer Technology Park. Soil and hydrological conditions within the Town's waterfront area would preclude the use of septic systems for any development uses.

e. Toxic Waste

NYSDEC has no knowledge of any active or inactive hazardous waste disposal sites within the North Greenbush waterfront area.

f. Drinking Water and Groundwater

The Town of North Greenbush does not have a municipal water system. However, special assessment districts have been established at the Rensselaer Technology Park and the urbanized area east of North Greenbush Road (US 4). Along this road is a thirty-six inch main installed by the Rensselaer-East Greenbush Water District, which supplies this area. The waterfront area of the Town currently has no water service outside of a private system serving the county sewage plant. This system has very limited expansion potential.

The Rensselaer-East Greenbush Water District obtains water from the City of Troy. The City's principal source is the 11.7 billion gallon Tomhannock Reservoir located

in Pittstown, about 10 1/2 miles northeast of Troy. Estimated safe yield of the reservoir is 45.8 mgd. 7 mgd is provided to the water district by agreement with the City. Water is pumped from Burden Avenue in Troy along North Greenbush Road towards the reservoir on Partition Street Extension in the Town, adjacent to both Rensselaer and East Greenbush. Current water use for the entire district is about 3 mgd.

6. Air Quality and Climate

a. Air Quality

The New York State Department of Environmental Conservation follows the federal Environmental Protection Agency (EPA) quality standards for ambient air. Areas where the ambient concentration of a pollutant is greater than the standard for each major category of pollutant (total suspended particulates, carbon monoxide, sulphur dioxide, oxides of nitrogen and ozone) are considered to be in non-attainment for that pollutant, and areas where ambient concentrations are less than standard are considered in attainment.

The Town of North Greenbush and the adjacent surrounding area is currently classified as an attainment area for criteria pollutants. When considering the siting of a new facility or modification of an existing facility, the status of air quality at the facility and the magnitude of the projected annual emissions of criteria pollutants must be evaluated.

Of concern, however, are the intermittent odor impacts of both the Rensselaer County sewage treatment plant and the Albany County sewage treatment plant on the opposite shore of the river. These odors are reputedly under continuous monitoring by the respective plant operators and generally held to the minimum levels possible under in-place technology and the weather conditions experienced. Prevailing winds on the Hudson River somewhat mitigate the impact of these odors, providing for considerable air movement at the location.

b. Climate

The climate in the Town of North Greenbush is continental in character, subject to some modification from the maritime climate which prevails in the extreme south-eastern portion of New York State. In the summer, temperatures rise rapidly during the daytime to moderate levels, although week long periods of oppressive heat occur occasionally. Winters are cold and occasionally

can be fairly severe, with nighttime temperatures frequently dropping to 10°F or lower. Snowfall is variable, but ranges up to 75 inches per year at nearby higher elevations. The annual average precipitation is about 33 inches distributed evenly throughout the year. Wind velocities in the area are moderate, with southerly winds predominating most of the year except during winter and early spring when west-northwesterly winds predominate. Average wind velocity is approximately 8 miles per hour in this area. The nearest first-order weather station to North Greenbush is located 6.5 miles to the northwest at the Albany County Airport.

c. Noise

The noise of truck and other vehicular traffic on the I-787 arterial across the Hudson River is quite noticeable from most points along the Town's waterfront, with the prevailing winds serving to carry these sounds across the River. In addition, the intermittent noise of aircraft taking off and landing at the Albany County Airport, and the less frequent noise of the railroad trains passing either through the site or to the south across Livingston Avenue Bridge between the cities of Albany and Rensselaer is experienced. Neither the noise of aircraft nor the railroad is, however, particularly sustained or troublesome at this location.

7. Cultural and Archaeological Resources

a. Cultural Resources

Prior to settlement by the Dutch, the area encompassed by the Town of North Greenbush was inhabited by the Mohican and Schaghticoke tribes in scattered villages.

The manor of Rensselaer was established in 1629 by Kilean Van Rensselaer and encompassed the western and southern areas of present-day Rensselaer County. The manor flourished as an example of the European medieval feudal system, even after the Revolution, as migrants from New England settled as tenants on the manor. But relations between the tenants and patroons (manor lords) subsequently deteriorated throughout the region, and between 1839 and 1850, battles of the Anti-Rent War took place in this area.

After 1850 , land-owning farmers expanded agricultural activity, and the hamlets of Wynantskill, Defreestville and Snyders Lake grew. In 1885, the Town was incorporated. Much of the Town's growth has come about within the last fifty years, a result of suburbanization

trends in the Capital District. Many residents work outside the Town for various businesses or industries in Troy, Rensselaer, Albany, or Colonie, or for the State of New York, the region's biggest employer.

Much of the growth and development of North Greenbush has been on the plateau. The riverfront and escarpment have remained essentially undeveloped over the years. The banks of the Hudson have been altered by dredge deposition and construction of the seawall in the 1930's. The Troy-Greenbush Conrail spur was built around 1845 to serve the burgeoning industrial activity in Troy and Rensselaer. The most recent development along the waterfront has been the construction of the Renssalaer County sewage treatment plant in the 1970's.

All historic sites in North Greenbush are located on the plateau, outside of the waterfront area amd some distance from the escarpment. Two important structures are worth noting: The Defreest Homestead, a structure located on Defreest Drive in the Rensselaer Technology Park, which is listed on the National Register of Historic Places, and the John E. Van Alen house on the south side of Washington Avenue Extension. Both structures date from the late 18th century.

b. Archaeologic Resources

Although there have been no detailed studies within the waterfront area, a prehistoric site has been identified by the New York State Museum along the riverfront and historic maps show several house sites on the river (see Exhibit A).

8. Transportation

Transportation in the North Greenbush waterfront area is by private vehicles, railroad, boat, off-road vehicle, or foot. However, legal and physical barriers restrict access to the waterfront by the general public.

Two roads extend from the sewage treatment plant along the east bank of the river. Extending southerly from the plant is a 1.7 mile long unpaved one-lane road, identified as "River Road" from tax maps which is in poor to impassible condition. It originally terminated at Forbes Avenue in Rensselaer, but has been abandoned between this point and the Patroon Island Bridge (I-90). River Road was built to provide equipment access during the sewage plant construction and during spoil bank excavation. Northward from the plant is a two lane paved road which is gated at its north end at the base of Water Street in Troy, at the Chevron Asphalt plant near the Troy-

Menands Bridge. This road is used for employee and service access for the plant, but closed to the general public.

A third road follows the Conrail line from Forbes Avenue in Rensselear to the paved sewage plant access road at a point roughly 800 feet north of the plant facilities. This road utilizes the portion of the Conrail right-of-way which at one time was used for a second track. It is in fair to poor shape, but in spite of potholes and mud holes, can be driven on. It is 10 to 11 feet wide, with a gravel and pebble base, although at some sections crossing the tributaries, the road consists of large stones, indicating repairs made to the entire right-of-way because of erosion of the original fill. In spite of this road being on Conrail property, it is used by vehicles, perhaps en route to trash dumping. Leading from the road up the hillsides are numerous foot paths and off-road or all-terrain vehicle tracks. This road also provides access to River Road under the Patroon Island Bridge.

On the plateau, the public street system has been more extensively developed, however there is no direct access from these streets to the river within the Town. Access to the two roads discussed above is either through Rensselaer or Troy, via North Greenbush Road (US4). North Greenbush Road is a State-maintained urban principal arterial serving Defreestville and other portions of western North Greenbush along its 3 1/2 mile north-south traverse of the Town. It links up with the Troy-Menands Bridge (NY 378), and Morrison Avenue in Troy, Hudson Valley Community College, the Rensselaer Technology Park, Washington Avenue Extension and various county facilities in the Town, and with I-90 in East Greenbush. To the south, US 4 also collects traffic from various side roads such as Williams Street (NY 136), Winter Street, Bloomingrove Drive and West Sand Road (NY 43), which in turn provides access to Wynantskill, Snyders Lake, and other areas in the eastern part of the Town, as well as to neighboring towns. Washington Avenue is an urban minor arterial providing direct access from the southern part of the Town with I-90. It is a county road in North Greenbush, but is City- maintained in Rensselaer. I-787, the Riverfront Arterial, follows the western shore of the Hudson in Albany County, and connects directly with I-90 and Troy Menands Bridge.

Traffic congestion on North Greenbush Road/US 4 is quite pronounced during rush ("peak") hours, particularly due to Hudson Valley Community College, shopping centers in Troy, ongoing residential development in the Town, and more recently, the development of the RPI Technology Park. Continued residential growth and expansion of the Technology Park will add traffic to this artery, as well as Washington Avenue. As a response to this, studies have been conducted on handling what is seen to be primarily growth in automobile

traffic. A proposal has been made for a controlled access highway extending from I-90 in East Greenbush north through the RPI Technology Park, west of North Greenbush Road/US 4 and terminating on that road near the Glenmore Road/Williams Road intersection near Hudson Valley Community College. Studies have been conducted by the Capital District Transportation Committee (CDTC) and the New York State Department of Transportation (NYSDOT) recently, but funding for construction of this road is lacking at this time as most highway funds are currently earmarked for maintenance and rehabilitation of existing facilities. A cooperative effort by NYSDOT, the County, CDTC, and RPI would be necessary to provide funding, and such efforts could be problematic at this time. The only section of this proposed road that would be likely to be constructed in the near future would be a connector from I-90 to the Defreestville intersection of Washington Avenue, Best Road, West Sand Lake Road (NY 43) and US 4. This would alleviate a long-standing congestion problem on Washington Avenue. Nevertheless, right-of-way is being set aside in the RPI Technology Park for the northern section of the highway if it should be built at a later date.

Several roads traverse the plateau west of North Greenbush Road/US 4, including Jordan Road and Glenmore Road. Jordan Road serves as the principal interior access road of the Rensselaer Technology Park, and is the only road that connects the Technology Park with the outside street network at the present stage of development. Glenmore Road, sections of which are under county, Town and private jurisdiction, is the only road which extends towards the edge of the escarpment, terminating less than a quarter mile from the river. However, the steep escarpment creates an access barrier which is further compounded by the fact that this end of Glenmore Road is privately owned (by Rensselaer Polytechnic Institute) and closed to the public. Glenmore Road primarily serves the National Guard Armory and the WRPI radio tower facilities.

Bus service is available on the plateau by the Capital District Transportation Authority (CDTA). The No. 24 bus route serves North Greenbush along North Greenbush Road (US 4) on weekdays, connecting with Troy, Rensselaer, and other bus routes in the CDTA system at Albany. Regional and inter-state bus transportation is available at the Greyhound and Trailways bus stations in Albany.

Railroad service in the North Greenbush waterfront is restricted to freight operations along the single track Troy-Greenbush rail line, owned by Conrail but used jointly by Conrail and the Delaware and Hudson (D&H). There is generally one round trip per weekday by Conrail and one per month by the D & H. The physical conditions of the railbed and trackage ranges from marginal to highly deteriorated. This line serves

one customer in Rensselaer, the sewage treatment plant in the Town and several customers in the industrial area of Troy south of Adams Street, and connects with the Conrail main lines near the Amtrak station and facilities in Rensselaer. The Amtrak station provides the only passenger rail connections from Rensselaer County to Boston, Buffalo, and New York City. There was a proposal put forth recently by the Office of the Mayor of Albany to establish excursion passenger service between Albany and Troy, via Rensselaer. To do so would require a significant expenditure of funds to upgrade the line to Federal standards for passenger service, and this proposal seems unlikely to be realized.

The Hudson River serves the Capital District region as an important freight corridor. Much of the shipping activity terminates at the Port of Albany-Rensselaer facilities, about 3 1/2 miles south of the Town's waterfront. There is however, commercial barge and pleasure boat activity on this section of the river because of connections to the State's barge canal system at Troy and Cohoes. The Army Corps of Engineers maintains a 400 feet wide and 14 feet deep channel about 100 feet west of the seawall, although channel depths measured by the Corps in August and September 1983 along the Town's waterfront ranged from 15 1/2 to 16 1/2 feet. The presence of this channel so close to the seawall must be considered in the design of docking facilities for recreational boats on the Town's waterfront.

The nearest airline service is at the Albany County Airport in the Town of Colonie, roughly 6 1/2 miles northwest of the Town's waterfront area.

9. <u>Franchise and Other Community Services</u>

a. The western half of the Town, including the waterfront area, is served by the Niagara Mohawk Power Corporation. Two 115 kilovolt (kV) circuits traverse the waterfront upper plateau linking the Reynolds Road transmission substation on Bloomingrove Road with the Menands substation and the ALTech Specialty Company station in the Town of Colonie. The distribution system is absent along the waterfront, but exists on the plateau, following development. Primary distribution follows North Greenbush Road at 13.2 kV. in the north, serving Hudson Valley Community College and the RPI Technology Park from the Menands and Reynolds Road 115 kV stations and 4.8 kV in the vicinity of Defreestville from the Defreestville 34.5 kV station on Washington Avenue Extension. Currently, the only electric customer along the riverfront is the sewage treatment plant, which is supplied from the A.L. Tech-Reynolds Road 115 kV circuit. Further development of the waterfront and the RPI

Technology Park upslope would be served by additional substations on both 115 kV lines which Niagara Mohawk has deemed sufficient to meet primary electrical demands.

b. Gas

Natural gas services in the Town is also supplied by Niagara Mohawk. The Consolidated Gas Supply maintains a spur transmission line and metering (point-of-sales) station on Reynolds Road, south of the electric substation, from its principal transmission lines in Schodack. North of this point this 12 inch transmission line is owned by Niagara Mohawk and supplies gas to the Town, Troy and northern Albany County. A 12 inch branch line follows Glenmore Road and crosses under the Hudson to serve customers in Menands. Niagara Mohawk has adequate capacity for expansion and is presently accommodating new non-residential as well as residential users. Currently there are no natural gas customers on the Town's waterfront.

c. Telephone

Telephone service in the Town is from the New York Telephone Company, as part of the Troy exchange. Existing facilities are extendable and sufficient to meet anticipated demands. The sewage treatment plant is currently the only telephone customer in the waterfront. A submarine and underground cable parallels the north side of the Niagara Mohawk 115 kV transmission right-of-way.

d. Solid Waste

Currently, the Town of North Greenbush does not operate a municipal solid waste disposal service. Private haulers collect solid waste, much of which is disposed of in the Troy or East Greenbush sanitary landfills. The Town is eligible to utilize the Albany, New York Solid Waste Energy Recovery System (ANSWERS) at present time, but has not acted on this. There are no solid waste disposal sites located within the Town.

e. Fire, Police and Schools

The waterfront area is within the Defreestville Fire District, which is headquartered on North Greenbush Road. Additional support is provided from the Wynantskill Fire District and the Rensselaer and Troy Fire Departments. The Town has a full time police department headquartered on Snyders Lake Road. The waterfront area is in the Wynantskill Union Free School District.

10. Visual Resources

In spite of its location along the Hudson River, views from the plateau area of the Town to the river are non-existent. The generally level nature of the plateau in conjunction with the narrow river trench and the wooded, narrow escarpments combine to effectively obscure the river's visibility. What is visible is the escarpment on the western shore in Menands and Colonie. This area is quite urbanized, but with much green space. To the southwest are the high-rise buildings of downtown Albany.

The wooded escarpment and river flat are unto themselves a visual asset for observers on the Town's waterfront, in the river and from the western shore of the river. Aside from the sewage treatment plant, the power lines and the WRPI radio tower on Glenmore Road, the waterfront area is undeveloped. Its emerging vegetation provides visual relief to motorists on I-787 or boaters on the river, in contrast to the adjacent developed areas of Rensselaer and Troy. The river flat area aesthetics are enhanced by the backdrop of the wooded escarpment. Site color provided by the vegetation, particularly that on the river flat, is subdued during the warmer months, but is somewhat stark in the winter. A greater variety of hardwood tree species on the escarpment in conjunction with scattered evergreens, provides greater color variety, particularly during autumn. The ravines are visually worthy, as well, as they provide a visual complement to the steep slopes and associated forest cover.

Minor negative visual elements are the power lines, the sewage treatment plant facilities, and the radio tower. But these features are outweighed by the overall visual character of an undeveloped waterfront.

C. DEVELOPMENT ISSUES

The primary issue in the North Greenbush waterfront is to establish guidelines for access to and use of the riverfront in a way that protects the riverfront environment. More specifically, the following concerns must be addressed:

1. Encouraging More Active Use of the Waterfront in Light of the Difficulty of Access and the Sensitive Environment.

Despite having two miles of river frontage, the Town of North Greenbush and its residents receive no benefits from it. The riverfront north and south of the town is devoted to industrial uses. Although there are obstacles to be overcome, as described above, the opportunities that will result from use of the riverfront warrant the effort to do so, if carefully planned.

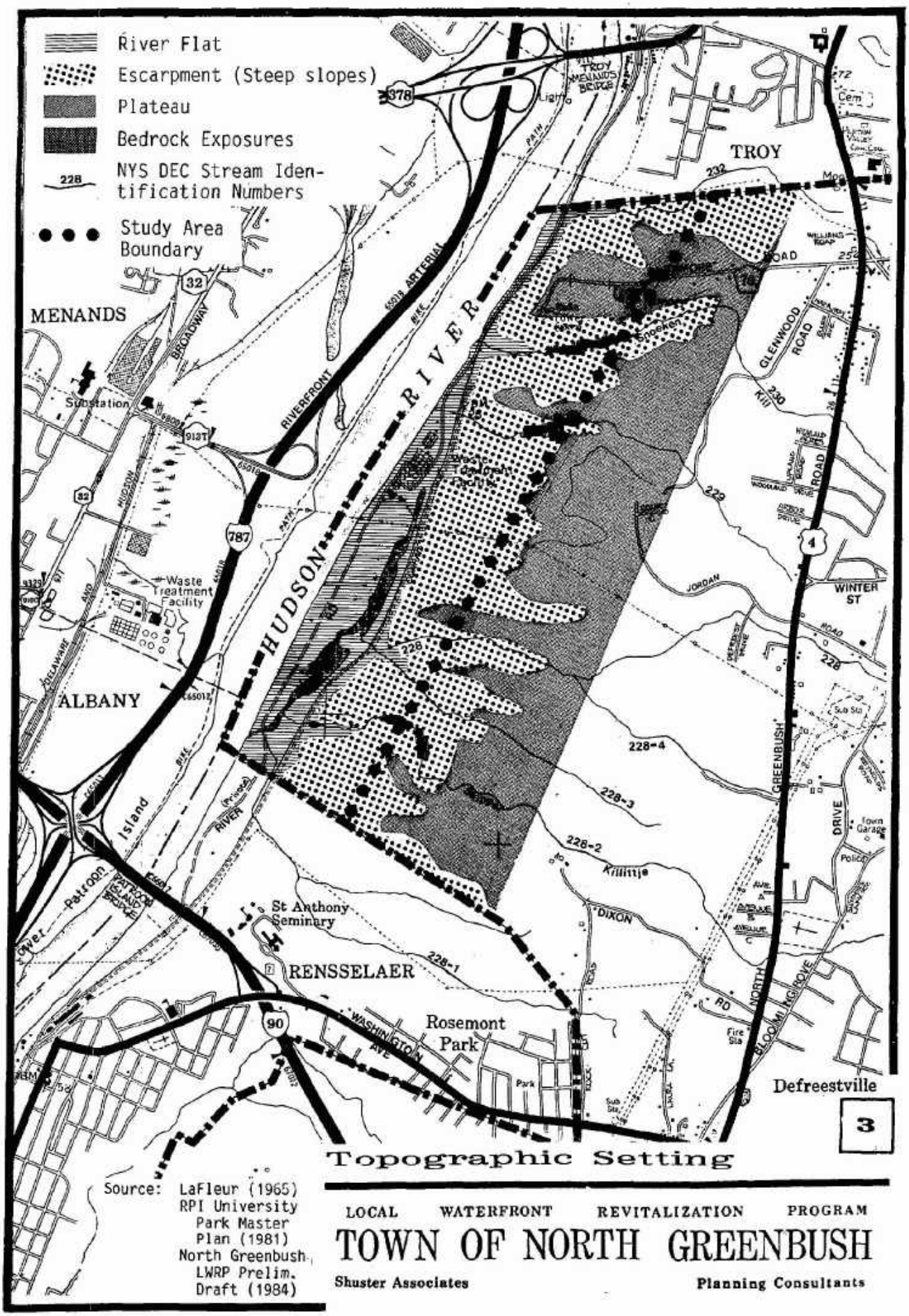
Although there are obstacles to be overcome, as described above, the opportunities that will result from use of the riverfront warrant the effort to do so, if carefully planned.

2. Appropriate Design of Riverfront Access

The fragile soils of the escarpment must be recognized in the design of an access road to the river. The location of such a road must consider the unstable conditions, steep grades and existing vegetation.

3. Guidelines for Land Use in the Waterfront Area

Because of the ownership pattern, access limitations, and environmental limitations, the type and intensity of use must be carefully controlled. The benefits of waterfront development providing access and recreation opportunities must be balanced against the potential damage to the environment.

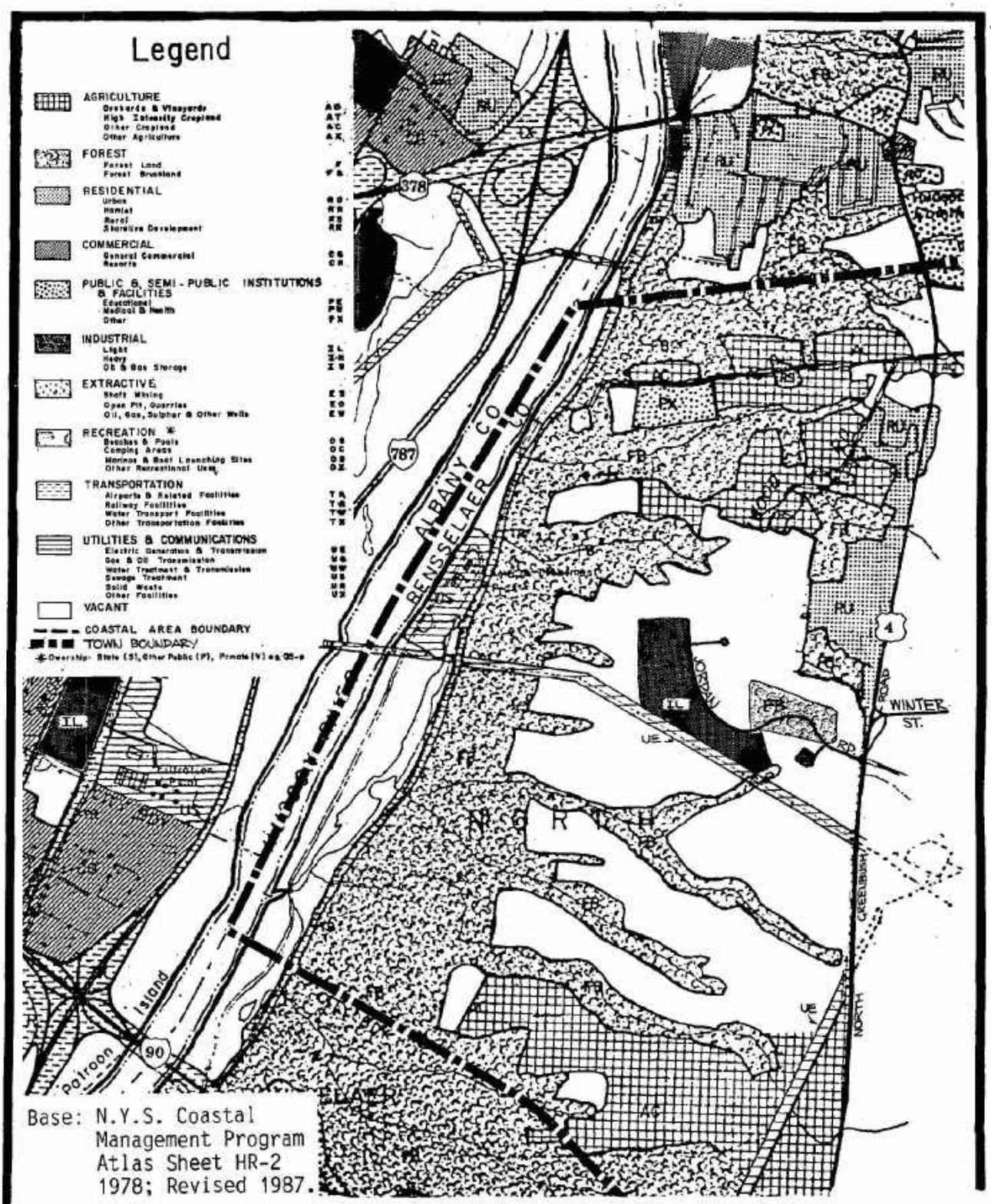


Source: LaFleur (1965)
RPI University Park Master Plan (1981)
North Greenbush LWRP Prelim. Draft (1984)

LOCAL WATERFRONT REVITALIZATION PROGRAM

TOWN OF NORTH GREENBUSH

Shuster Associates — Planning Consultants



Base: N.Y.S. Coastal Management Program Atlas Sheet HR-2 1978; Revised 1987.

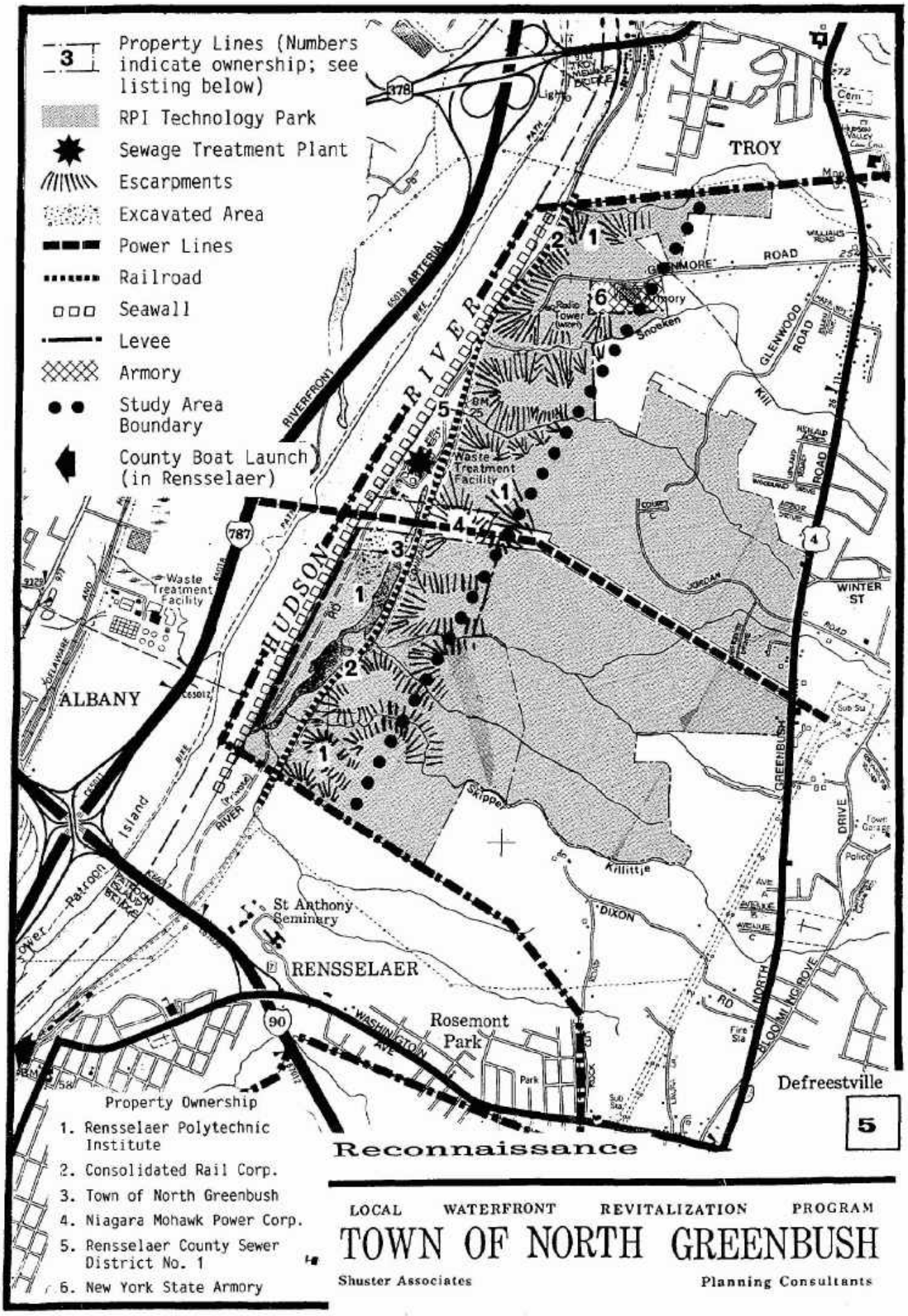
4

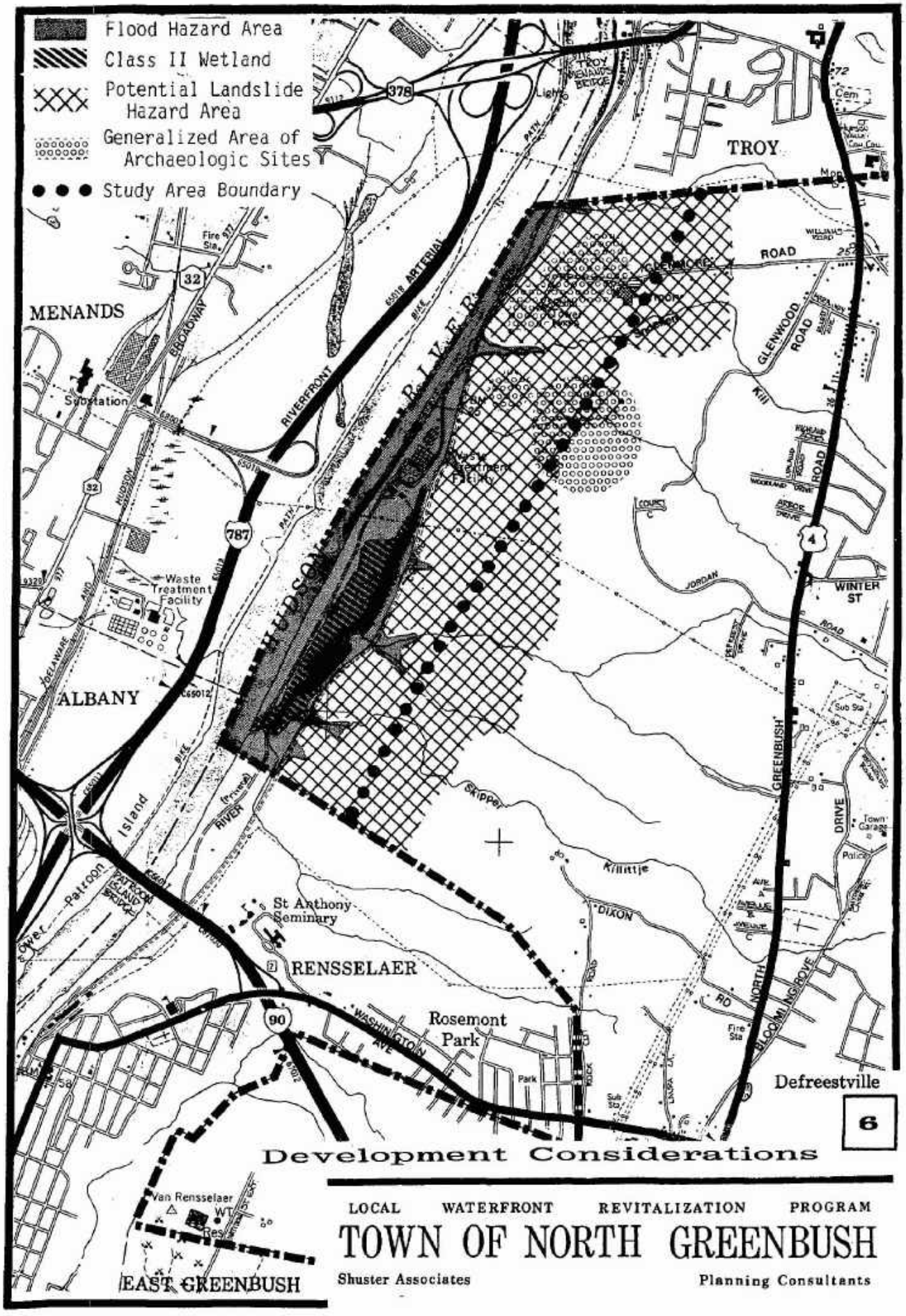
Existing Land and Water Use

LOCAL WATERFRONT REVITALIZATION PROGRAM

TOWN OF NORTH GREENBUSH

Shuster Associates — Planning Consultants


Property Lines (Numbers indicate ownership; see listing below)
RPI Technology Park
Sewage Treatment Plant
Escarpments
Excavated Area
Power Lines
Railroad
Seawall
Levee
Armory
Study Area Boundary
County Boat Launch (in Rensselaer)
Property Ownership
1. Rensselaer Polytechnic Institute
2. Consolidated Rail Corp.
3. Town of North Greenbush
4. Niagara Mohawk Power Corp.
5. Rensselaer County Sewer District No. 1
6. New York State Armory
TROY
ALBANY
RENSSELAER
Defreestville
HUDSON RIVER
Waste Treatment Facility
Waste Treatment Facility
St Anthony Seminary
Rosemont Park
Reconnaissance
5
LOCAL WATERFRONT REVITALIZATION PROGRAM
TOWN OF NORTH GREENBUSH
Shuster Associates
Planning Consultants



6

Development Considerations

LOCAL WATERFRONT REVITALIZATION PROGRAM

TOWN OF NORTH GREENBUSH

Shuster Associates

Planning Consultants

INVENTORY AND ANALYSIS EXHIBIT

WATERFRONT ARCHAEOLOGICAL RESOURCES

ARCHEOLOGICAL AND HISTORICAL SURVEY

OF RPI'S

NORTH GREENBUSH PROPERTY

Field Survey

Prepared by

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Troy, New York 12181

July 1980

ABSTRACT

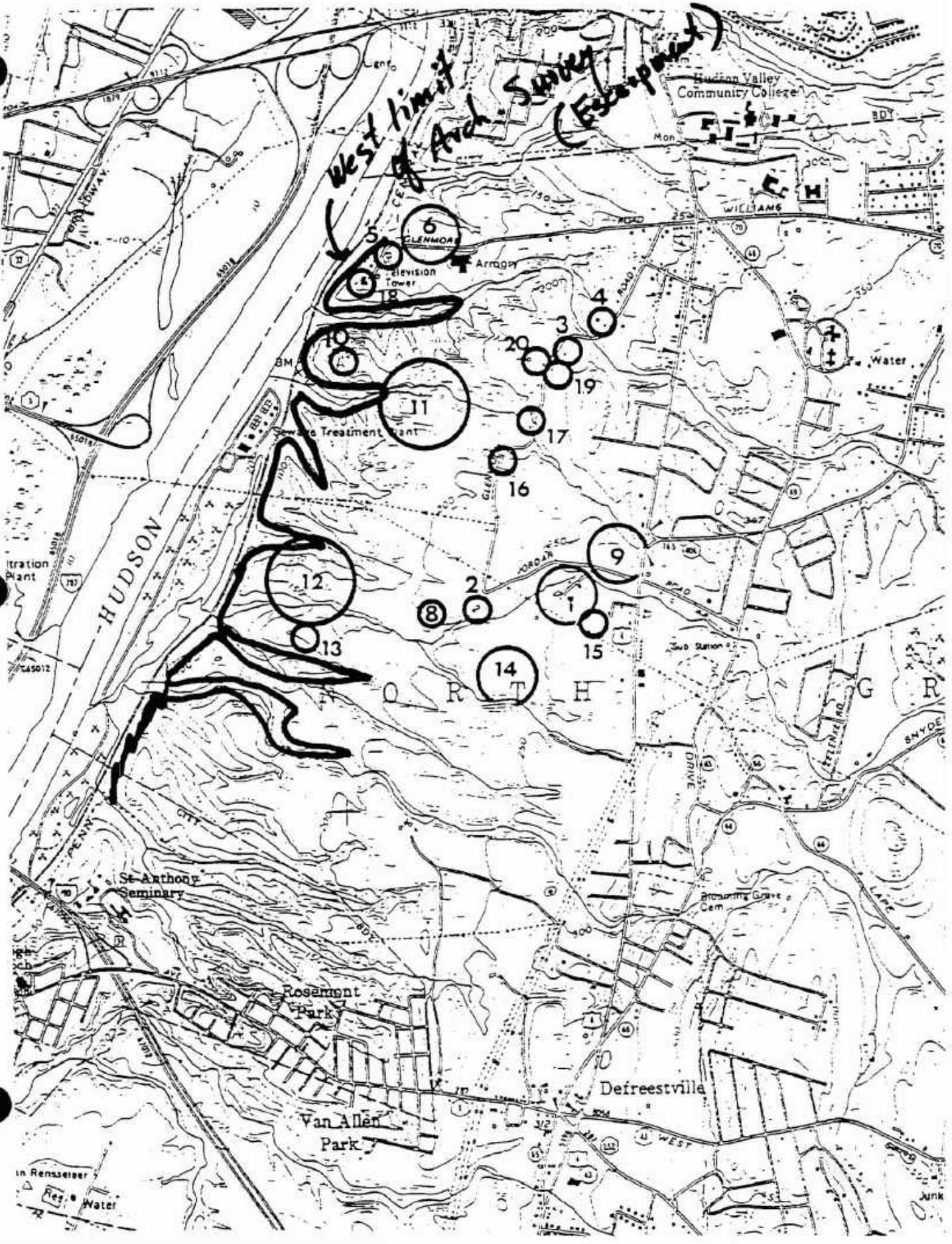
This report details the archeological field study of the proposed Technology/University Park in North Greenbush, Rensselaer County, New York. The literature review and background study has been previously submitted.

Twenty historic and prehistoric sites ranging from the Late Archaic period (c. 2000 B.C.), including early historic 18th century settlements and 19th century farms, to modern dwellings were located in this survey.

Nine sites (three historic and six prehistoric) are within areas of planned development. One of these (Site 1) is already listed on the National Register of Historic Places. Another three prehistoric and two historic sites may be preserved by avoidance, since they are in areas of secondary development.

If these sites are not avoided by the proposed development, additional archeological investigation is recommended in order to determine if these sites are eligible for inclusion in the National Register of Historic Places.

Map 2: Archeological and Historical Site Locations



Standing structures outside of the project, area, but near the boundaries (sites 3,4, 19, 20) were photographed and recorded on inventory forms of the New York State Department of Parks and Recreation, Division for Historic Preservation. Identification of these structures was primarily based upon correlations with historic maps and other references.

The field survey, directed at site location, did not involve large area excavations at any single location. Subsurface tests were excavated in the vicinity of previous tests that located early historic or prehistoric material. These tests attempted to delineate the size of the archeological site, as well as its depth and content. However, it should be noted that minimal excavation was conducted in high artifact density areas within these sites, since the objective was primarily to locate and delimit areas of archeological deposits. This method has resulted in generally low numbers of artifacts from these sites. This cannot be considered representative of the actual artifact content at these sites.

The following report will focus on those subsurface tests that yielded prehistoric or early historic items and have been considered archeological sites. The large number of tests which did not produce material evidence were recorded and located. The field records from these tests are on file in the archeology lab at R.P.I.

The sites located during this survey include:

1. The Defreest Homestead - National Register Historic Places District
2. J. Manville House Site (possibly 18th century Marte Defreest House Site)
3. Gardner House (M. Bloomingdale) (off R.P.I. property)
4. G.P. Bloomingdale House (off R.P.I. property)
5. Haydock House Foundation (19th century)
6. Radio Tower Area Prehistoric Site (vicinity of Tests 960, 975)
7. (Parker Site not located in field - see Literature Review)
8. Manville Field Prehistoric Site - west of Site 2 (vicinity of Tests 135, 160)
9. Alfalfa Field and Pasture Prehistoric Site (vicinity of Tests 736, 812, 815)
10. Prehistoric Site (vicinity of Test 998)

11. Prehistoric Site (vicinity of Test 1005)

12. Prehistoric Site (vicinity of Tests 1070 and 1072)

13. Prehistoric Site (vicinity of Test 1114)

14. Prehistoric Site, field south of P. Defreest House (Site 1)

15. Prehistoric Site, field west of Dudley Heights Road.

16. G. Manville House Site (Late 19th century)

17. Prehistoric Site and 18th century House Site

18. Church Property (20th century)

19. C. Slitter House (east side of Glenwood Road) (off R.P.I. property)

20. Slitter House (west side of Glenwood Road) (off R.P.I. property)

The locations of these sites are shown on Map 2.

SITE 1

The National Register of Historic Places lists the Philip Defreest House and surrounding grouds as part of the Historic Defreest Homestead District (Map 3). The previously submitted Literature Review included the National Register Nomination form and boundaries for this District.

The site, as shown on the project map (Map 4), consisted of a house (Photo 1), garages (Photo 2), two barns, (Photo 3), and several sheds.

Table 19

Age Estimates for Prehistoric Occupation

Site	Point Type	Period	Approximate Dates
1	"narrow-stemmed"	Late Archaic	2000 - 1900 B.C.
	Susquehanna Broad	Late Archaic	1500 - 1000 B.C.
6	"narrow-stemmed"	Late Archaic	2000 - 1500 B.C.
11	"narrow-stemmed"	Late Archaic	2000 - 1500 B.C.
14	Levanna	Late Middle to Late Woodland	850 - 1400 A.D.

SECTION III

WATERFRONT POLICIES

III. LOCAL POLICIES AND APPLICABLE STATE POLICIES

This section includes a listing of each State Coastal Policy and an indication of its applicability to the Town of North Greenbush. Also included are additional local policies and an explanation of how both State and local policies relate to the local waterfront area.

Development Policies

POLICY 1 **THE STATE COASTAL POLICY REGARDING THE RESTORATION AND REDEVELOPMENT OF DETERIORATED WATERFRONT AREAS IS NOT APPLICABLE TO THE TOWN OF NORTH GREENBUSH.**

POLICY 2 **FACILITATE THE SITING OF WATER-DEPENDENT USES AND FACILITIES ON OR ADJACENT TO COASTAL WATERS.**

POLICY 2A **FACILITATE THE SITING OF WATER-ENHANCED USES AND FACILITIES, SOUTH OF THE NIAGARA MOHAWK POWER LINES WEST OF THE RAIL ROAD, ADJACENT TO COASTAL WATERS, IN COORDINATION WITH DEVELOPMENT AND RETENTION OF WATER-DEPENDENT USES.**

Explanation of Policy:

The North Greenbush waterfront is relatively compact in size, is adjacent to a principal navigation channel, and has the potential to be served by public utilities. However, physical and legal constraints such as the escarpment, railroad and land ownership patterns create obstacles to siting water-dependent uses. Therefore, the intent of this policy is to ensure that water-dependent uses be given preference and, where possible, assistance in securing waterfront sites and that every effort be made to retain such uses. Where the demand for or feasibility of water-dependent uses is limited or non-existent, this policy will ensure that certain water-enhanced uses are permitted on waterfront sites, so as to restrict the development of uses which are neither water-dependent nor water-enhanced. Those uses which are considered water- dependent and subject to these policies include the following:

1. Certain uses which utilize the resources of the coastal waters, such as fishing;

2. Recreational activities which depend on access to coastal waters (for example: swimming, fishing, boating, wildlife viewing, scenic and nature walks);

3. Uses involved in the sea/land transfer of goods or people;

4. Aids to navigation;

5. Flood and erosion protection structures (for example: breakwaters, bulkheads, seawalls);

6. Facilities needed to store and service boats (for example: marinas, boat repair and construction yards, boat sales and service facilities);

7. Uses requiring proximity to bodies of water for end-product processing (for example: sewage treatment facilities);

8. Scientific/educational activities, which, by their nature, require access to coastal waters (for example: certain ecological and meteorological activities); and

9. Support facilities which are necessary for the successful function of permitted water- dependent use (for example: parking lots, snackbars, first aid stations, short term storage facilities). Though these uses must be near the given water-dependent use, they should, as much as possible be sited inland from the water-dependent rather than on shore.

Several of the above water-dependent uses already exist on the North Greenbush waterfront: the treatment plant, the seawall, the navigation light, as well as boating on the river. Future development of any additional water-dependent use will likely be on either the Rensselaer Technology Park property or the Town Park site. This development will be tied to the overall development of the plateau section of the Technology Park. The specific types of projects for the waterfront will be largely determined by the type of development on the plateau that can support those projects. Coordination of plateau and waterfront development is facilitated through the Technology Park as the largest land owning entity, whose actions will have the most influence on waterfront development.

This future development on the Technology Park lands will consist of a mix of water-dependent and water-enhanced uses in accordance with the Technology Park development plans. Future water-dependent uses tentatively identified include development of recreational uses, and of scientific and educational programs tied in part to the wetlands. On the Town Park site, development of new water-dependent recreation facilities is planned, including a marina and secondary contact recreation opportunities.

Examples of water-enhanced uses are those uses which offer waterfront views or access as part of the overall design environment, such as conference centers, offices, restaurants and supporting facilities, as well as some cultural, educational, scientific or recreational uses in addition to those uses, which through site design, supporting facilities or other means, utilize the particular advantages of a waterfront site. The water-enhanced uses which might be developed on the Technology Park site

would not include all of the uses currently allowed on the plateau section of the Park, and would strengthen the relationship between the Park and the river, and the relationship between the Town and the river, both of which are poorly developed at present.

Development of both water-dependent and water-enhanced uses should satisfy certain criteria, based upon the use being considered. The following guidelines should be considered when reviewing plans for such site:

1. Special Suitability: Sites which are particularly suited to a particular type of use should be used for such purposes if possible. For instance, few sites have the appropriate land and water characteristics for marinas or boat launches.

2. In-place Facilities and Services: Most water-dependent and water-enhanced uses, if they are to function effectively, require certain basic public facilities and services. In determining the adequacy of development plans for these uses, consideration should be given to the following factors (see also Policy 1):

   a. The capacity of public sewers, public water lines and power supply;

   b. The adequacy of vehicular access and any special access needs, such as for boat trailers for marinas or boat launches; and

   c. Access to public transportation, if a high number of person trips is to be generated.

3. Access to Navigational Channels: Commercial shipping, fishing and recreational boating sites should establish docking from which access to the navigation channel is assured.

4. Compatibility with Adjacent Uses and the Protection of Other Coastal Resources: Water-dependent uses should be located so that they enhance, or at least do not detract from, the surrounding community. Consideration should also be given to such factors as the protection of nearby residential areas from odors, noise and traffic. Water-dependent uses must also be sited so as to avoid adverse impacts on scenic areas and views.

5. Underutilized Sites and Expansion of Existing Uses: Sites which are underutilized and/or which will permit expansion of existing water-dependent uses should be designed to accommodate such uses, if at all possible.

In promoting both water-dependent and water-enhanced uses, the following kinds of actions will be considered:

1. Favored treatment to areas in which water-dependent and water-enhanced uses are proposed, with respect to capital budgeting, with particular priorities given to roads, public land and water transit, and railroad facilities.

2. Use of land use controls, specifically through the creation of a zoning district exclusively for water-dependent and appropriate water-enhanced uses, in addition to any restrictive covenants, to maintain existing uses, to provide space for expansion and further development of such uses, and to prevent conflict with non-water-enhanced uses. The following standards and procedures will be utilized in the approval process for development proposals in the waterfront:

   a. Preparation of a Generic Environmental Impact Statement for the entire Technology Park property on the riverfront when the first major development on this parcel is proposed.

   b. Site plan approval for all proposed uses.

   c. Maximum building heights and minimum setback from the river for most uses and structures.

   d. Maximum limits of coverage by impermeable surfaces.

   e. Inclusion of best management practices in controlling erosion and siltation in the plans and adherence to said practices during the development.

The development of any water-dependent or water-enhanced use will be consistent with Policies 5, 11, 19, 19A, 21, 21A, 22, 25, 37 and 44.

POLICY 3 **THE STATE COASTAL POLICY REGARDING THE DEVELOPMENT OF MAJOR PORTS IS NOT APPLICABLE TO THE TOWN OF NORTH GREENBUSH.**

POLICY 4 **THE STATE COASTAL POLICY REGARDING THE ENHANCEMENT OF SMALL HARBORS IS NOT APPLICABLE TO THE TOWN OF NORTH GREENBUSH.**

POLICY 5 **ENCOURAGE THE LOCATION OF DEVELOPMENT IN AREAS WHERE PUBLIC SERVICES AND FACILITIES ESSENTIAL TO SUCH DEVELOPMENT ARE ADEQUATE, EXCEPT WHEN SUCH DEVELOPMENT HAS SPECIAL FUNCTIONAL REQUIREMENTS OR OTHER CHARACTERISTICS WHICH NECESSITATE ITS LOCATION IN OTHER COASTAL AREAS.**

Explanation of Policy:

The purpose of this policy is to direct new development, particularly large-scale development, in the coastal area to locations within, contiguous to, or in close proximity to , existing areas of concentrated development where infrastructure and public services are adequate and where topography, geology and other environmental conditions are suitable for and able to accommodate development. Specifically, the policy is intended to:

1. Strengthen existing residential, industrial and commercial centers;

2. Foster an orderly pattern of growth where outward expansion is occurring;

3. Increase the productivity of existing public services and moderate the need to provide new public services in out-lying areas;

4. Preserve open space; and

5. Where desirable, foster energy conservation by encouraging proximity between home, work, and leisure activities.

The Town of North Greenbush is an area of concentrated development where infrastructure and public services are generally adequate to support future land uses and development, as specified in the proposed uses and proposed projects for the waterfront and outlined in Section IV.B.

Due to physical and legal barriers, the Town's waterfront is largely undeveloped. The lack of direct physical access between the riverfront, and the upland sections of the Town has hindered development of the Town's waterfront potential.

While the immediate area of the Town's waterfront does not have either a water distribution or sewage collection system in place, the waterfront is adjacent to existing service districts and encompasses existing regional facilities, such as collection mains and a treatment plant. The proximity of these facilities, and of franchise services, as well, presents opportunities for expansion. As the Town's waterfront is located in a metropolitan area, adjacent to three cities and to existing infrastructure, it is appropriate to plan for future development consistent with this LWRP.

The ownership of the land on the waterfront is an important factor in carrying out the purposes and goals of this policy. Virtually all the developable area in the waterfront, outside of the Town Park site, is owned by Rensselaer Polytechnic Institute, as part of the Technology Park. Development of these lands in accord with these policies is appropriate in close proximity to an [illegible] of

concentrated development where infrastructure and public services are adequate.

See also Policies 2, 14, 19, 19A, 23, 25, 32, and 37.

POLICY 6 EXPEDITE PERMIT PROCEDURES IN ORDER TO FACILITATE THE SITING OF DEVELOPMENT ACTIVITIES AT SUITABLE LOCATIONS

Explanation of Policy:

When administering existing regulations and prior to proposing new regulations, every effort should be made by all levels of government to determine the feasibility of coordinating administrative procedures and incorporating new regulations in existing legislation, if this can reduce the burden on a particular type of development without jeopardizing the integrity of the regulation's objectives.

FISH AND WILDLIFE POLICIES

POLICY 7 THE STATE COASTAL POLICY REGARDING THE PROTECTION OF SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS IS NOT APPLICABLE TO THE TOWN OF NORTH GREENBUSH

POLICY 8 PROTECT FISH AND WILDLIFE RESOURCES IN THE COASTAL AREA FROM THE INTRODUCTION OF HAZARDOUS WASTES AND OTHER POLLUTANTS WHICH BIOACCUMULATE IN THE FOOD CHAIN OR WHICH CAUSE SIGNIFICANT SUB-LETHAL OR LETHAL EFFECT ON THOSE RESOURCES.

Explanation of Policy:

Hazardous wastes are unwanted by-products of manufacturing processes and are generally characterized as being flammable, corrosive, reactive, or toxic. More specifically, hazardous waste is defined in Environmental Conservation Law [§27-0901.3] as "a waste or combination of wastes which because of its quantity, concentration, or physical, chemical or infectious characteristics may: (a) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed or otherwise managed. A list of hazardous wastes has been adopted by DEC (6 NYCRR Part 371).

The handling (storage, transport, treatment and disposal) of the materials included on this list is being strictly regulated in New York State to prevent their entry or introduction into the environment, particularly into the State's air, land and waters. Such controls should effectively minimize possible contamination of and bio-accumulation in the State's coastal fish and wildlife resources

at levels that cause mortality or create physiological and behavioral disorders.

Other pollutants are those conventional wastes, generated from point and non-point sources, and not identified as hazardous wastes, but controlled through other State laws.

Existing activities which would be regulated by this policy would include fuel and sewage residue handling at the sewage treatment plant. River dredging and riverbank excavation activities would have to insure against the possible re-introduction of hazardous wastes into the water through the disturbance of river bottom and dredge spoil sediments which may be contaminated with such wastes. Such actions are specifically discussed under Policy 35. Activities at a marina could also impact fish and wildlife resources. See Policy 21 for guidelines relating to marinas.

POLICY 9 **EXPAND RECREATIONAL USE OF FISH AND WILDLIFE RESOURCES IN COASTAL AREAS BY INCREASING ACCESS TO EXISTING RESOURCES, SUPPLEMENTING EXISTING STOCKS AND DEVELOPING NEW RESOURCES. SUCH EFFORTS SHALL BE MADE IN A MANNER WHICH ENSURES THE PROTECTION OF RENEWABLE FISH AND WILDLIFE RESOURCES AND CONSIDERS OTHER ACTIVITIES DEPENDENT ON THEM.**

Explanation of Policy:

Recreational uses of coastal fish and wildlife resources include consumptive uses such as fishing and hunting, and non-consumptive uses such as wildlife photography, birdwatching and nature study. Opportunities for access to these resources in the North Greenbush waterfront area are extremely limited at present (see Section II.B.1.d.). Increased recreational use of these resources should be made in a manner which ensures the protection of fish and wildlife resources and which takes into consideration other activities dependent on these resources. Also, such efforts must be done in accordance with existing State law and in keeping with sound resource management considerations. Such considerations include biology of the species, carrying capacity of the resource, public demand, cost and available technology.

The following additional guidelines should be considered as agencies determine the consistency of their proposed actions with the above policy:

1. Consideration should be given as to whether an action will impede existing or future utilization of the State's recreational fish and wildlife resources.

2. Efforts to increase access to recreational fish and wildlife resources should not lead to overutilization of that resource or cause impairment of the habitat. Sometimes such impairment

can be more subtle than actual physical damage to the habitat. For example, increased human presence can deter animals from using the habitat area.

3. The impacts of increasing access to recreational fish and wildlife resources should be determined on a case-by-case basis, conferring with a trained fish and wildlife biologist.

See Policies 19, 19A, 20, 21 and 21A.

POLICY 10 **THE STATE COASTAL POLICY REGARDING COMMERCIAL FISHING IS NOT APPLICABLE TO THE TOWN OF NORTH GREENBUSH.**

FLOODING AND EROSION POLICIES

POLICY 11 **BUILDINGS AND OTHER STRUCTURES WILL BE SITED IN THE COASTAL AREA SO AS TO MINIMIZE DAMAGE TO PROPERTY AND THE ENDANGERING OF HUMAN LIVES CAUSED BY FLOODING AND EROSION.**

Explanation of Policy:

The erosion aspects of this policy are not applicable, since there are no identified Coastal Erosion Hazard Areas within the North Greenbush waterfront area.

The design and location of buildings proposed to be located in designated flood hazard areas is regulated by the Town of North Greenbush Flood Damage Prevention Law. The area in the flood hazard zone is the "river flat," located between the Hudson River and the railroad. There are no designated floodways in the waterfront area. Article V of this law prescribes both general and specific standards for flood hazard areas, as follows:

1. §70.16. General Standards

In all areas of special flood hazards, the following standards are required:

a. **Anchoring:** All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

b. **Construction materials and methods:**

(1) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

(2) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

c. Utilities

(1) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwater into the system.

(2) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwater into the systems and discharge from the systems into floodwater.

(3) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

d. Subdivision proposals

(1) All subdivision proposals shall be consistent with the need to minimize flood damage.

(2) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems, located and constructed to minimize flood damage.

(3) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.

(4) Base flood elevation data shall be provided for subdivision proposals and other proposed development which contain at least fifty (50) lots or five (5) acres, whichever is less.

2. §Section 70.17. Specific Standards

In all areas of special flood hazards where base flood elevation data have been provided the following standards are required:

a. Residential construction. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to on or above base flood elevation.

b. Nonresidential construction. New construction and substantial improvement of any commercial, industrial or

b. Nonresidential construction. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated to the level of the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood level the structure is watertight, with walls substantially impermeable to the passage of water, and have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy and be certified by a registered professional engineer or architect that the standards of this subsection are satisfied.

Also see Policies 14 and 17.

POLICY 12 THE STATE COASTAL POLICY REGARDING THE PRESERVATION OF EROSION NATURAL PROTECTIVE FEATURES IS NOT APPLICABLE TO THE TOWN OF NORTH GREENBUSH

POLICY 13 THE STATE COASTAL POLICY, REGARDING THE CONSTRUCTION OF EROSION PROTECTION STRUCTURES IS NOT APPLICABLE TO THE TOWN OF NORTH GREENBUSH

POLICY 13A REPAIR AND RESTORATION OF EXISTING BULKHEADS SHALL BE UNDERTAKEN IN A MANNER THAT WILL ADEQUATELY PROTECT ADJACENT PROPERTY, PARTICULARLY THAT USED FOR WATER-RELATED USES.

Explanation of Policy:

The bulkhead protects the river flat, an area of "made land" and natural deposits, which includes the Town Park site and other riverfront property. Repairs on the seawall will be made on a priority basis to the parts which protect the Town's property, and any future water-dependent uses which may develop on the waterfront.

Modifications of the bulkhead to create an inland harbor or slip for a proposed boat launch or marina, and any normal maintenance and repair of the seawall, shall be undertaken with the appropriate permits from the Army Corps of Engineers and NYSDEC. Such permits will be granted if it has been satisfactorily demonstrated that the anticipated adverse impacts of any of these actions have been reduced to levels which satisfy State dredging permit standards set forth in regulations developed pursuant to Environmental Conservation Law (Article 15). All actions will be consistent with Policies 8,9, 19, 20 and 35.

POLICY 14 ACTIVITIES AND DEVELOPMENT, INCLUDING THE CONSTRUCTION OR RECONSTRUCTION OF EROSION PROTECTION STRUCTURES, SHALL BE UNDERTAKEN SO THAT

THERE WILL BE NO MEASURABLE INCREASE IN EROSION OR FLOODING AT THE SITE OF SUCH ACTIVITIES OR DEVELOPMENT, OR AT OTHER LOCATIONS.

Explanation of Policy:

Erosion and flooding are processes which occur naturally. However, by his actions, man can increase the severity and adverse effects of those processes, causing damage to, or loss of, property and endangering human lives. Those actions include: the use of erosion protection structures such as groins, or the use of impermeable docks which block the littoral transport of sediment to adjacent shoreland, thus increasing their rate of recession; the failure to observe proper drainage practices, thereby causing the erosion and weakening of shorelands; and placing of structures in an identified floodway so that the base flood level is increased causing damage in otherwise hazard-free areas.

Areas where erosion due to construction practices are most likely to occur are the undeveloped areas of the river flat and along the escarpment. New development in these areas could increase erosion unless proper erosion protection measures are taken during construction and incorporated into final design. The development of a waterfront access road poses special considerations for controlling runoff. Such a road would entail the cutting and filling of sloping lands consisting of clays and clay derived soils, unless a route along the bottom of the ravine is followed, as recommended in Section IV.

All development activities in the Town's waterfront area will be required to include erosion control plans and adhere to the Best Management Practices as set forth in Policy 37.

Also see Policy 19A.

POLICY 15 **MINING, EXCAVATION OR DREDGING IN COASTAL WATERS SHALL NOT SIGNIFICANTLY INTERFERE WITH THE NATURAL COASTAL PROCESSES WHICH SUPPLY BEACH MATERIALS TO LAND ADJACENT TO SUCH WATERS AND SHALL BE UNDERTAKEN IN A MANNER WHICH WILL NOT CAUSE AN INCREASE IN EROSION OF SUCH LAND.**

Explanation of Policy:

There is little natural beach material in the North Greenbush waterfront area which is supplied to the adjacent land via natural coastal processes. Mining, excavation and dredging should be done so that both the natural and manmade shoreline are not undermined and so that natural water movement is not changed in a manner that will increase erosion potential.

At the present time there are no mining or excavating activities in the waters of North Greenbush's waterfront area. While no mining activities are anticipated in the waterfront area, dredging activities are. In addition, development of a marina or a boat launching site will require excavation. Any dredging, excavation, or mining activities proposed in the waterfront area will be accomplished in a manner that will not impact habitat and wetland areas. Such activities must receive the appropriate permits from the Army Corps of Engineers and the New York State Department of Environmental Conservation (NYSDEC), as per the regulations developed pursuant to Articles 15, 24, 25 and 34 of the Environmental Conservation Law, and are consistent with Policies 8, 31, 35 and 44.

POLICY 16 **PUBLIC FUNDS SHALL ONLY BE USED FOR EROSION PROTECTIVE STRUCTURES WHERE NECESSARY TO PROTECT HUMAN LIFE, AND NEW DEVELOPMENT WHICH REQUIRES A LOCATION WITHIN OR ADJACENT TO AN EROSION HAZARD AREA TO BE ABLE TO FUNCTION, OR EXISTING DEVELOPMENT; AND ONLY WHERE THE PUBLIC BENEFITS OUTWEIGH THE LONG TERM MONETARY AND OTHER COSTS INCLUDING THE POTENTIAL FOR INCREASING EROSION AND ADVERSE EFFECTS ON NATURAL PROTECTIVE FEATURES.**

Explanation of Policy:

This policy recognizes the public need for the protection of human life and existing investment in development or new development which requires a location in proximity to the coastal area or in adjacent waters to be able to function. However, it also recognizes the adverse impact from such activities and development on the rate of erosion and natural protective features and requires that careful analysis be made of such benefits and long-term costs prior to expending public funds for erosion protection measures.

POLICY 17 **WHENEVER POSSIBLE, USE NON-STRUCTURAL MEASURES TO MINIMIZE DAMAGE TO NATURAL RESOURCES AND PROPERTY FROM FLOODING AND EROSION. SUCH MEASURES SHALL INCLUDE: (1) THE SETBACK OF BUILDINGS AND STRUCTURES; (2) THE PLANTING OF VEGETATION AND THE INSTALLATION OF SAND FENCING AND DRAINAGE SYSTEMS; (3) THE RESHAPING OF BLUFFS; (4) THE FLOOD-PROOFING OF BUILDINGS OR THEIR ELEVATION ABOVE BASE FLOOD LEVEL.**

Explanation of Policy:

This policy recognizes both the potential adverse impacts of flooding and erosion upon development and upon natural protective features in the coastal area, as well as the costs of

protection against these hazards which structural measures entail. This policy shall apply to the planning, siting and design of proposed activities and development, including measures to protect existing activities and development. To ascertain consistency with the policy, it must be determined if any one, or a combination of, non-structural measures would afford the degree of protection appropriate both to the character and purpose of the activity or development, and to the hazard. If non-structural measures are determined to offer sufficient protection, then consistency with the policy would require the use of such measures, whenever possible. It must be recognized, however, that where non-structural measures are not feasible, due to natural conditions or use of the property, structural solutions will be required and will be consistent with Policies 11 and 14.

GENERAL POLICY

POLICY 18 **TO SAFEGUARD THE VITAL ECONOMIC, SOCIAL AND ENVIRONMENTAL INTERESTS OF THE STATE AND OF ITS CITIZENS, PROPOSED MAJOR ACTIONS IN THE COASTAL AREA MUST GIVE FULL CONSIDERATION TO THOSE INTERESTS, AND TO THE SAFEGUARDS WHICH THE STATE HAS ESTABLISHED TO PROTECT VALUABLE COASTAL RESOURCE AREAS.**

Explanation of Policy:

Proposed major actions may be undertaken in the coastal area if they will not significantly impair valuable coastal waters and resources, thus frustrating the achievement of the purposes of the safeguards which the State has established to protect those waters and resources. Proposed actions must take into account the social, economic and environmental interests of the State and its citizens in such matters that would effect natural resources, water levels and flows, shoreline damage, and recreation. Review under the SEQR process will allow a weighing of the cost and benefits of such actions.

PUBLIC ACCESS POLICIES

POLICY 19 **PROTECT, MAINTAIN, AND INCREASE THE LEVEL AND TYPES OF ACCESS TO PUBLIC WATER-RELATED RECREATION RESOURCES AND FACILITIES SO THAT THESE RESOURCES AND FACILITIES MAY BE FULLY UTILIZED BY THE PUBLIC IN ACCORDANCE WITH REASONABLY ANTICIPATED PUBLIC RECREATION NEEDS AND PROTECTION OF HISTORIC AND NATURAL RESOURCES. IN PROVIDING SUCH ACCESS PRIORITY SHALL BE GIVEN TO PUBLIC BEACHES, BOATING FACILITIES, FISHING AREAS AND WATERFRONT PARKS.**

Explanation of Policy:

There are two publicly-owned properties on the 1.9 mile long North Greenbush waterfront. Neither the Town Park property nor the sewage treatment facilities have been developed to provide river access, and access to these properties is restricted by legal and physical obstacles. Implementation of this policy requires careful balancing of several factors: the demand for specific recreation facilities; the adequacy and type of access to facilities; the capacity of the resource; and the protection of natural and historic resources. Actions to increase the access to new public water-related recreation facilities are to be strongly encouraged. Access via easements, such as at the Niagara Mohawk transmission line right-of-way, or across the sewage treatment plant lands, or from dedications of less than fee simple interest is preferred over public acquisition. Such easements can provide visual access by trails even when direct access is not possible. However, the primary emphasis on developing river access on the North Greenbush waterfront should be to the Town Park property.

Specific guidelines for development of access roads to and through the North Greenbush waterfront, including access through the escarpment, is addressed under Policy 19A.

POLICY 19A **DEVELOP FEASIBLE PUBLIC VEHICULAR AND PEDESTRIAN LAND ACCESS TO THE PUBLICLY OWNED FORESHORE AND THE PUBLICLY OWNED LANDS IMMEDIATELY ADJACENT TO THE FORESHORE, AND PURSUE PUBLIC OWNERSHIP OF EASEMENT OVER ADJOINING LANDS ON THE NORTH GREENBUSH WATERFRONT WHERE APPROPRIATE.**

Explanation of Policy:

Access to the foreshore from the land areas of North Greenbush is currently extremely limited because of physical and legal barriers. Access to the Town's waterfront can surmount these barriers through the following actions:

1. Intergovernmental agreements, private sector/ public sector agreements or other legal arrangements to use (and improve where necessary) any or all of the three existing roads in the waterfront (the sewage plant access road, River Road, and the access road parallel to the railroad) where travel by the general public is at present restricted, or public purchase of any or all of these roads;

2. Development of a new road to the waterfront from the RPI Technology Park on the plateau through the escarpment; and

3. Development of a nature trail system along the escarpment and riverfront. Development of the access road directly from the plateau to the river will provide a more direct route and a

link between related uses on the plateau; it is preferred in the long run. However, this road may be more easily supported if there is adequate development in place on the waterfront. Thus, feasibility studies should explore techniques for improvement of existing roads to the waterfront, in order to create the conditions under which development on the waterfront can proceed. It appears that the road entering the waterfront area from the north would be the best road to improve for access to the area.

To encourage pedestrian access to, and use of, the waterfront from the plateau, a nature trail system should be developed prior to construction of vehicular access across the escarpment.

Any vehicular access to be improved or constructed will be designed to accommodate the traffic characteristics and vehicle mix which can be reasonably foreseen to be generated as a result of new development planned in the waterfront area. This access will be designed to minimize adverse effects of certain road maintenance procedures, such as use of road salt or similar substance, to reduce ice.

Development of any public vehicular and pedestrian access to the foreshore, and adjacent public lands which would necessitate crossing of the railroad will fully consider the public benefits and costs of providing grade separated rail crossings in preference to guarded at-grade crossings. Guarded at-grade crossings will be acceptable where documentation and studies show the public costs far outweigh any benefits derived from creating a grade separated crossing. At-grade crossings on the Troy-Greenbush line may be acceptable because of the infrequent number of trips generated on this line, the slow running speeds of trains due to the conditions of the railbed, and the future potential of abandonment of this line.

The Troy-Greenbush rail line is used regularly and this level of use is expected to continue. However, in the event of an abandonment of the Troy-Greenbush rail line, this right-of-way should be acquired by the Town for development of roadway access along the waterfront to the north and south, if access arrangements cannot be secured along the existing roads, and for expansion of any existing north-south access, particularly in regard to public transit and alternate modes of transportation (such as bicycle lanes).

Development of vehicular and pedestrian access to the North Greenbush waterfront will be consistent with Policies 14, 19, 20, 25, 33 and 37.

POLICY 20 **ACCESS TO THE PUBLICLY-OWNED FORESHORE AND TO LANDS IMMEDIATELY ADJACENT TO THE FORESHORE OR THE WATER'S EDGE THAT ARE PUBLICLY OWNED SHALL BE PROVIDED, AND IT SHOULD BE PROVIDED IN A MANNER COMPATIBLE WITH ADJOINING USES. SUCH LANDS SHALL BE RETAINED IN PUBLIC OWNERSHIP.**

Explanation of Policy:

Access to the publicly-owned lands of the coast should be provided, where appropriate, for numerous activities and pursuits which require only minimal facilities for their enjoyment, such as walking along the waterfront or to a vantage point from which to view the water, bicycling, birdwatching, photography, nature study, beachcombing, fishing and hunting. Methods of providing access include the development of waterfront trails, the improvement of vehicular access to the waterfront and the promotion of mixed and multi-use development. However, sale of easements on underwater lands adjacent to onshore property owners may be granted if public use of the foreshore is not substantially limited. Public use of such publicly-owned underwater lands and land immediately adjacent to the shore shall be discouraged where such use would be inappropriate for reasons of public safety or the protection of fragile coastal resources.

The following guidelines will be used in determining the consistency of a proposed action with this policy:

1. Existing access from adjacent or proximate public lands or facilities to existing public coastal lands and/or waters shall not be reduced, nor shall the possibility of increasing access in the future from adjacent or nearby public lands or facilities to public coastal lands and/or waters be eliminated, unless such actions are demonstrated to be of overriding regional or statewide public benefit, or in the latter case, estimates of future use of these lands and water are too low to justify maintaining or providing increased access.

2. The existing level of public access within public coastal lands or waters shall not be reduced or eliminated.

3. Public access from the nearest public roadway to the shoreline and along the coast shall be provided by new land use or development except where (a) it is inconsistent with public safety, military security, or the protection of identified fragile coastal resources; (b) adequate access exists within one-half mile; or (c) agriculture would be adversely affected. Such access shall not be required to be open to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

4. Proposals for increased public access to coastal lands and waters shall be analyzed according to the following factors:

    a. The level of access to be provided should be in accord with estimated public use.

    b. The level of access to be provided shall not cause a degree of use which would exceed the physical capability of the resource. Also see Policies 19, 19A, 22, and 25.

RECREATIONAL POLICIES

POLICY 21 **WATER-DEPENDENT AND WATER-ENHANCED RECREATION SHALL BE ENCOURAGED AND FACILITATED AND SHALL BE GIVEN PRIORITY OVER NON-WATER-RELATED USES ALONG THE COAST, PROVIDED IT IS CONSISTENT WITH THE PRESERVATION AND ENHANCEMENT OF OTHER COASTAL RESOURCES AND TAKES INTO ACCOUNT DEMAND FOR SUCH FACILITIES. IN FACILITATING SUCH ACTIVITIES, PRIORITY SHALL BE GIVEN TO AREAS WHERE ACCESS TO THE RECREATION OPPORTUNITIES OF THE COAST CAN BE PROVIDED BY NEW OR EXISTING PUBLIC TRANSPORTATION SERVICES AND TO THOSE AREAS WHERE THE USE OF THE SHORE IS SEVERELY RESTRICTED BY EXISTING DEVELOPMENT.**

Explanation of Policy:

Water-related recreation includes such obviously water-dependent activities as boating, swimming, and fishing, as well as certain activities which are enhanced by a coastal location and increase the general public's access to the coast, such as pedestrian trails, picnic areas, scenic overlooks and passive recreation areas that take advantage of coastal scenery.

Provided the development of water-related recreation is consistent with the preservation and enhancement of such important coastal resources as fish and wildlife habitats, aesthetically significant areas, historic and cultural resources, agriculture and significant mineral and fossil deposits, and provided demand exists, water-related recreation development is to be increased and such uses shall have a higher priority than any non-coastal-dependent uses, including non-water-related recreation uses.

In addition, water-dependent recreation uses shall have a higher priority over water-enhanced recreation uses. Determining a priority among coastal-dependent uses will require a case-by-case analysis.

The siting or design of new public development should not create barriers to the recreational use of the waterfront and, if possible, should create opportunities for joint use and will be consistent with Policies 2, 19, 21A, 22 and 44.

The specific projects described in Section IV are all consistent with this policy and will be encouraged.

POLICY 21A **UNDERTAKE EFFORTS TO DEVELOP A MARINA, BOAT LAUNCH, DOCK AND RELATED RECREATIONAL FACILITIES ON THE TOWN PARK PROPERTY TO PROVIDE PUBLIC ACCESS FOR WATER-RELATED RECREATION ACTIVITIES INCLUDING FISHING AND BOATING.**

Explanation of Policy:

The Town of North Greenbush owns 8.9 acres of undeveloped park land with close to 400 feet of river frontage. Use of the property is

minimal because of barriers to land and water access. Efforts need to be made to provide access at this site for recreational boaters, collegiate rowing and crew teams, and ice boaters. These efforts will be coordinated with measures to improve land access to the park site. (Also see Policies 2,19, 19A, 20, and 21.)

Marina development should preferably utilize an excavated basin. There shall, however, be no filling or dredging of the adjacent wetland unless in accord with an accepted wetland restoration plan. The basin shall be designed to allow for adequate water circulation and thus there shall be either a wide continuous opening to the river or at least two openings in an otherwise closed frontage; the basin shall be shaped so that there are no "dead" areas where the water would stagnate; generally the basin shall be excavated to a depth no deeper than the adjacent river, to prevent the creation of "dead" underwater pockets; and a sloped, riprapped edge around the basin is preferable to a vertical, bulkhead edge.

POLICY 22 **DEVELOPMENT, WHEN LOCATED ADJACENT TO THE SHORE, SHALL PROVIDE FOR WATER-RELATED RECREATION, AS A MULTIPLE USE, WHENEVER SUCH RECREATIONAL USE IS APPROPRIATE IN LIGHT OF REASONABLY ANTICIPATED DEMAND FOR SUCH ACTIVITIES AND THE PRIMARY PURPOSE OF THE DEVELOPMENT.**

Explanation of Policy: Certain waterfront developments present practical opportunities for providing recreation facilities as an additional use of the site or facility. Therefore, whenever such developments are located adjacent to the shore they should, to the fullest extent permitted by existing law, provide for some form of water-related recreation use unless there are compelling reasons why any form of such recreation demand for public use cannot be foreseen.

Uses which are appropriate in the North Greenbush waterfront area and which can provide opportunities for water-related recreation as a multiple use include: existing utility transmission lines (Niagara-Mohawk R.O.W); water treatment facilities (County sewage Treatment Plant); and large-scale mixed-use projects south of the Town Park, where walkways can be incorporated in the development plan.

Whenever a proposed development would be consistent with coastal policies and the development could, through the provision of recreation and other multiple uses, significantly increase public uses of the shore, then such development should be encouraged to locate adjacent to the shore. See Policies 19A and 20.

HISTORIC AND SCENIC RESOURCES

POLICY 23 **PROTECT AND RESTORE STRUCTURES, DISTRICTS, AREAS OR SITES THAT ARE OF SIGNIFICANCE IN THE HISTORY, ARCHITECTURE, ARCHAEOLOGY OR CULTURE OF THE STATE, ITS COMMUNITIES OR THE NATION.**

Explanation of Policy:

Among the most valuable manmade resources are those structures or areas which are of historic, archeological, or cultural significance. The protection of these structures must involve a recognition of their importance by all agencies and the ability to identify and describe them. Protection must include concern not just with specific sites but with areas of significance and with the area around specific sites. The policy is not to be construed as just a passive mandate but also suggests effective efforts, when appropriate, to restore or revitalize resources through adaptive reuse. While the policy is concerned with the preservation of all such resources within the coastal boundary, the preservation of historic and cultural resources which have a coastal relationship is of particular significance.

The North Greenbush waterfront contains no sites listed, or eligible for listing, on the National Register of Historic Places. However, the Town's waterfront area is within an archaeologically sensitive area, based on site file information of both the New York State Museum and the Office of Parks, Recreation and Historic Preservation.

Much of the archaeologic investigations have focused on remains of post-Colonial residences and on artifacts from pre-Colonial inhabitants, on the plateaus and escarpments. These investigations have not been extensive. Less is known about the river flat area.

All practical means shall be taken to protect these resources, including consideration and adoption of such techniques, measures and controls necessary to prevent a significant adverse change to the resource. A significant adverse change includes, but is not limited to:

1. Alteration of, or addition to, one or more of the functional features of a site that is a recognized archeological resource, or component thereof. Such features are defined as encompassing any original or historically significant feature including structures, walks, steps, topographical features, or earthworks, located on the designated resource property.

2. Removal in full or part of a structure, or earthworks that is a recognized archeological resource, or component thereof, to include all those features described in (a) above plus any other appurtenant fixture associated with a structure or earthwork.

3. All proposed actions within 500 feet of the perimeter of the property boundary of the archaeological resource. Primary considerations to be used in making judgement about compatibility should focus on the locational relationship between the proposed action and the special character of the archeological resource. Compatibility between the general appearance of the resources should be reflected in the scale, setback, landscaping and related items of the proposed actions. This policy shall not be construed to prevent normal maintenance, actions necessary to remove a threat to the public welfare, health or safety, or rehabilitation or restoration in accord with standards and design which do not adversely impact the significant features. Given the possibility of archaeologically significant sites within the waterfront area, public agencies shall contact the New York State Historic Preservation Officer to determine appropriate protective measures to be incorporated into development decisions.

POLICY 24 THE STATE COASTAL POLICY REGARDING THE PROTECTION OF SCENIC RESOURCES OF STATEWIDE SIGNIFICANCE IS NOT APPLICABLE TO THE TOWN OF NORTH GREENBUSH.

POLICY 25 PROTECT, RESTORE AND ENHANCE NATURAL AND MANMADE RESOURCES WHICH ARE NOT IDENTIFIED AS BEING OF STATEWIDE SIGNIFICANCE, BUT WHICH CONTRIBUTE TO THE SCENIC QUALITY OF THE COASTAL AREA.

Explanation of Policy:

The North Greenbush waterfront area is characterized by undeveloped woodlands on steep slopes, wetlands, a wooded waterfront and occasional structures and facilities of an industrial nature. The most positive feature of the Town's waterfront is the extensive vegetation, when compared to adjoining waterfronts, which provides visual relief in an urbanized reach of waterfront. The most negative features are garbage and debris dumped indiscriminately along the waterfront, the unsightly ruts of off-road vehicle tracks, and overhead transmission lines.

When considering a proposed action, care shall be given to protect, restore or enhance the overall scenic quality of the waterfront area. Activities which could impair or further degrade scenic quality are the modification of natural landforms, removal of vegetation, or addition of structures which degrade the visual environment due to incompatible scale, form, materials or location.

The following siting and development guidelines will be used to achieve this policy, recognizing that each development situation is unique and that the guidelines will have to be applied accordingly considering both the scenic resources and the Town's development objectives and priorities.

1. Siting structures and other development such as power lines, and signs, back from the shoreline or in other inconspicuous locations to maintain the attractive quality of the shoreline and to retain views to and from the shore.

2. Clustering or orienting structures to retain views, save open space and provide visual organization to a development.

3. Maintaining or restoring the original land form, except when changes screen unattractive elements and/or add appropriate interest.

4. Maintaining or adding vegetation to provide interest, encourage the presence of wildlife, blend structures into the site, and obscure unattractive elements, except when selective clearing creates views of coastal waters.

5. Using appropriate materials, in addition to vegetation, to screen unattractive elements.

6. Using appropriate scales, forms and materials to ensure that buildings and other structures are compatible with and add interest to the landscape.

Actions to maintain and improve visual access to the water or to screen or otherwise mitigate the adverse impact of certain existing elements will be pursued. These actions will include methods of screening or otherwise improving the appearance of the sewage treatment plant and of utility corridors.

In addition, new development will comply with the following standards which relate to visual impact as part of a new waterfront development zoning district:

1. No structure shall exceed 40 feet in height except that structures up to 80 feet may be permitted if the Planning Board finds that fire fighting equipment is adequate and the visual quality of the waterfront is maintained.

2. All structures shall be set back at least 40 feet from the river's edge, except for those structures which must be located closer due to their use or function.

3. Total coverage by roads, roof tops, parking lots or other impermeable surfaces shall not exceed one-third of the gross site area.

4. The location, design, color and materials of buildings should be such as to minimize their visibility from the river and the opposite shore.

5. Existing vegetation should be preserved to the greatest extent feasible where it provides natural screening, contributes to wetland or wildlife resources or is a significant or unusual species. New plantings should be indigenous and blend with vegetation to remain and should be used to maintain the natural, informal aspect of the site.

6. Lighting should be spaced, shielded and directed to minimize glare and visibility from the river and the opposite shore.

7. Marina design should consider prevailing winds and navigation patterns, include boat launching facilities and utilize natural vegetation and existing waterways, as appropriate, to minimize disturbance along the river shore.

8. A public walkway shall be provided from the Town Park through the site to the City of Rensselaer line. Such walkway shall be within a 30 foot easement generally located between the developed portion of the site (buildings and parking lots) and the water's edge, shall be integrated with natural features such as mature vegetation and wetlands, and shall provide opportunities for views to the river and the wetlands. Walkways shall be screened from adjacent service areas, shall be suitably surfaced for pedestrian use and shall be provided with benches and observation points at appropriate locations.

Development on the Technology Park lands are also governed by restrictive covenants that address standards for setback, underground utilities, parking, outside storage, signs, parcel coverage, temporary structures, landscaping, and preservation of trees and wooded areas.

Because of the potential visual impact that development of a road through the escarpment would create, the following analysis will be undertaken in the evaluation of the project:

1. Identification of pertinent visual analysis factors, such as landscape characteristics; areas where a concentration of viewers is likely, such as parks, recreation areas and roads; prominent landforms which have inherent scenic qualities and/or could result in high visibility of the road if traversed; and routing factors, such as the use of vegetation and topography for screening and backdrop effects.

2. Analysis of the routing in terms of compatibility with existing features (form, scale); enhancement or degradation of the overall landscape quality; impact where there are likely to be high numbers of viewers; and visibility of the road in terms of degree, distance and place in the landscape (foreground, background). This analysis should take into consideration the visual compatibility of the proposed road to existing and proposed natural and artificial features along the waterfront.

Based on this analysis the routing with the least visual impact will be followed.

Also see Policies 2, 5 and 7.

AGRICULTURAL LANDS POLICY

POLICY 26 **THE STATE COASTAL POLICY REGARDING THE PROTECTION OF IMPORTANT AGRICULTURAL LANDS IS NOT APPLICABLE TO THE TOWN OF NORTH GREENBUSH.**

ENERGY AND ICE MANAGEMENT POLICIES

POLICY 27 **DECISIONS ON THE SITING AND CONSTRUCTION OF MAJOR ENERGY FACILITIES IN THE COASTAL AREA WILL BE BASED ON PUBLIC ENERGY NEEDS, COMPATIBILITY OF SUCH FACILITIES WITH THE ENVIRONMENT, AND THE FACILITY'S NEED FOR A SHOREFRONT LOCATION.**

Explanation of Policy:

Demand for energy in New York will increase, although at a rate slower than previously predicted. The State expects to meet these energy demands through a combination of conservation measures; traditional and alternative technologies; and use of various fuels, including coal, in greater proportion.

A determination of public need for energy is the first step in the process for siting any new facilities. The directives for determining this need are set forth in the New York State Energy Law.

The existing pattern of land ownership on the North Greenbush waterfront area precludes the siting of any major electric generating facility. However, the existing electric and gas transmission lines and corridors could possibly be upgraded or expanded in the future. With respect to transmission facilities, Article VII of the New York State Public Service Law requires additional forecasts and establishes the basis for determining compatibility of these facilities with the environment and the necessity for a shorefront location. With respect to electric generating facilities, environmental impacts associated with siting and construction will be considered by one or more State agencies or, if in existence, an energy siting board. The policies derived from these proceedings are entirely consistent with the general coastal zone policies derived from other laws, particularly the regulations promulgated pursuant to the Waterfront Revitalization of Coastal Areas and Inland Waterways Act. That Act is used for the purposes of ensuring consistency with the State Coastal Management Program and this LWRP.

In consultation with the Town, the Department of State will comment on State Energy Office policies and planning reports as may exist; present testimony for the record during relevant certification proceedings under State Law; and use the State energy facilities (other than transmission facilities and steam electric generating plants) which would impact the waterfront area are made consistent with the policies and purposes of the Local Waterfront Revtialization Program. In addition, any such facility shall be consistent with Policies 8, 19, 22, 23, 25, 30, 36, 39, 40, 41 and 44.

POLICY 28 **ICE MANAGEMENT PRACTICES SHALL NOT DAMAGE SIGNIFICANT FISH AND WILDLIFE AND THEIR HABITATS, INCREASE SHORELINE EROSION OR FLOODING, OR INTERFERE WITH THE PRODUCTION OF HYDROELECTRIC POWER.**

Explanation of Policy:

Prior to undertaking actions required for ice management, an assessment must be made of the potential effects of such actions upon fish and wildlife and their habitats, flood levels and damage, rates of shoreline erosion damage, and upon natural protective features. This policy shall apply where ice management practices presently are undertaken to maintain the Hudson River channel, as well as to the other coastal tributaries. Methods to mitigate potential adverse impacts should be identified and utilized whenever feasible.

POLICY 29 **THE STATE COASTAL POLICY REGARDING THE DEVELOPMENT OF OFF-SHORE ENERGY FACILITIES IS NOT APPLICABLE TO THE TOWN OF NORTH GREENBUSH.**

WATER AND AIR RESOURCES POLICIES

POLICY 30 **MUNICIPAL, INDUSTRIAL, COMMERCIAL AND RESIDENTIAL DISCHARGE OF POLLUTANTS, INCLUDING BUT NOT LIMITED TO, TOXIC AND HAZARDOUS SUBSTANCES, INTO COASTAL WATERS WILL CONFORM TO STATE AND NATIONAL WATER QUALITY STANDARDS.**

Explanation of Policy:

Municipal, industrial, commercial and residential discharges include not only "end-of-the-pipe" discharges into surface and groundwater but also plant site runoff, leaching, spillages, sludge and other waste disposal, and drainage from raw material storage sites. Also, the regulated industrial discharges are both those which directly empty into receiving coastal waters and those which pass through municipal treatment systems before reaching the State's waterways. State and federal laws adequately govern pollutant discharges into coastal waters. However, constant inspection and adequate monitoring of coastal waterways and vigorous regulatory and/or legal actions are necessary to insure

that violations are identified and the regulations are enforced. The Town will take all necessary steps, both at the local level and in cooperation with higher levels of government, to apply existing monitoring and enforcement machinery and, where appropriate, to strengthen it. This policy is particularly relevant to the County sewage treatment plant and to any industrial development in the waterfront area.

POLICY 31 **STATE COASTAL AREA POLICIES AND PURPOSES OF APPROVED LOCAL WATERFRONT REVITALIZATION PROGRAMS WILL BE CONSIDERED WHILE REVIEWING COASTAL WATER CLASSIFICATIONS AND WHILE MODIFYING WATER QUALITY STANDARDS: HOWEVER, THOSE WATERS ALREADY OVERBURDENED WITH CONTAMINANTS WILL BE RECOGNIZED AS BEING A DEVELOPMENT CONSTRAINT.**

Explanation of Policy:

Pursuant to the Federal Clean Water Act of 1977 (PL 95-217) the State has classified its coastal and other waters in accordance with considerations of best usage in the interest of the public and has adopted water quality standards for each class of waters. These classifications and standards are reviewable at least every three years for possible revisions or amendment.

The classification of the Hudson River as C, suitable for fishing but not primary contact recreation, and its tributaries as D, suitable for secondary contact, is compatible with the present use of these waters. Any action taken in the North Greenbush waterfront area which would lead to the reduction of such classification will be considered inconsistent with these coastal policies.

Actions to improve the quality of Stream 228, from a Class D stream to Class C, or to upgrade any of the other Hudson River tributaries in the waterfront area, or the River itself, from Class C to Class B will be in keeping with the objectives of developing recreational usage of these streams and shall be deemed consistent with these policies. In particular, upgrading of the Hudson River to Class B will allow development of opportunities for primary contact recreation at the Town Park site, such as swimming and water skiing. This would expand recreational opportunities and be consistent with Policies 19, 21, and 22.

POLICY 32 **THE STATE COASTAL POLICY REGARDING THE USE OF ALTERNATIVE SANITARY WASTE SYSTEMS IS NOT APPLICABLE TO THE TOWN.**

POLICY 33 **BEST MANAGEMENT PRACTICES WILL BE USED TO ENSURE THE CONTROL OF STORMWATER RUNOFF AND COMBINED SEWER OVERFLOWS DRAINING INTO COASTAL WATERS.**

Explanation of Policy:

Best management practices include both structural and non-structural methods of preventing or mitigating pollution caused by the discharge of stormwater runoff. In some instances, structural approaches to controlling stormwater runoff (e.g., construction of retention basins) are not economically feasible. Non-structural approaches (e.g., improved street cleaning, reduced use of road salt) will be encouraged in such cases. The standards set forth in Policy 37 will apply to all construction in the waterfront area to control stormwater runoff and erosion.

POLICY 34 DISCHARGE OF WASTE MATERIALS INTO COASTAL WATERS FROM VESSELS WILL BE LIMITED SO AS TO PROTECT SIGNIFICANT FISH AND WILDLIFE HABITATS, RECREATIONAL AREAS AND WATER SUPPLY AREAS.

Explanation of Policy:

The discharge of sewage, garbage, rubbish, and other solid and liquid materials from watercraft and marinas into the State's waters is regulated by State law. Priority should be given to the enforcement of this law in significant habitats and beaches which need protection from contamination by vessel wastes. Specific effluent standards for marine toilets have been promulgated by the Department of Environmental Conservation (6 NYCRR, Part 657) and shall be strictly enforced. Plans for development of marinas will be reviewed to determine if a requirement for on-shore pump-out facilities is appropriate and feasible. See Policy 21.

POLICY 35 DREDGING AND DREDGE SPOIL DISPOSAL IN COASTAL WATERS WILL BE UNDERTAKEN IN A MANNER THAT MEETS EXISTING STATE AND FEDERAL DREDGING PERMIT REQUIREMENTS, AND PROTECTS SIGNIFICANT FISH AND WILDLIFE HABITATS, SCENIC RESOURCES, NATURAL PROTECTIVE FEATURES, IMPORTANT AGRICULTURAL LANDS, AND WETLANDS.

Explanation of Policy:

Dredging often proves to be essential for waterfront revitalization and development, maintaining navigational channels at sufficient depths, pollutant removal and meeting other coastal management needs. Such dredging projects, however, may adversely affect water quality, fish and wildlife habitats, wetlands and other important coastal resources. Often, these adverse effects can be minimized through careful design and timing of the dredging operation and proper siting of the dredge spoil disposal site.

Periodic dredging of the Hudson River will occur to keep the channel navigable. Dredging, and excavation, will be necessary to develop and maintain adequate channels for boat launches and marinas on the Town Park and Technology Park properties. Precautions will be taken to assure that dredging and excavation

activities will not introduce or re-introduce toxic substances which may have accumulated in the river bottom or spoil bank sediments. Precautions will include pre-construction water quality and sediment chemical analysis, and water quality monitoring during and after dredging and excavation projects. Proposed dredge spoil sites will be reviewed to determine if they will contribute to the objectives of the Local Waterfront Revitalization Program and are consistent with these policies. However, spoil disposal sites are not acceptable if they are located in a designated wetland, or will permanently disturb a significant wildlife habitat.

The Town of North Greenbush will refer all applicants for mining, dredging and/or excavation activities to the Army Corps of Engineers and NYSDEC for appropriate permits. Dredging permits will be granted if it has been satisfactorily demonstrated that anticipated adverse effects have been reduced to levels which satisfy State dredging permit standards set forth in regulations developed pursuant to Environmental Conservation Law (Articles 15, 24, 25 and 34), and are consistent with Policies 8, 15, 19, 21, 21A, 31 and 44.

POLICY 36 **ACTIVITIES RELATED TO THE SHIPMENT AND STORAGE OF PETROLEUM AND OTHER HAZARDOUS MATERIALS WILL BE CONDUCTED IN A MANNER THAT WILL PREVENT OR AT LEAST MINIMIZE SPILLS INTO COASTAL WATERS; ALL PRACTICABLE EFFORTS WILL BE UNDERTAKEN TO EXPEDITE THE CLEANUP OF SUCH DISCHARGES; AND RESTITUTION FOR DAMAGES WILL BE REQUIRED WHEN THESE SPILLS OCCUR.**

Explanation of Policy:

This policy shall apply not only to commercial storage and distribution facilities, but also to residential and other users of petroleur products and radioactive and other toxic or hazardous materials. Spills, seepage or other accidents on or adjacent to coastal waters or which, by virtue of natural or man-made drainage facilities, eventually reach coastal waters are included under this policy. Such materials are present in the waterfront at the sewage treatment plant (fuel and chemicals for sewage treatment), and is in the form of cargo being shipped along the railroad. Additional activities, such as development of a full-service marina, will result in more petroleum and/or other hazardous material handling. The marina shall provide for the proper handling of petroleum products and boat maintenance and repair wastes. The overall number of these anticipated additional activities however, is limited (also see Policy 39).

POLICY 37 **BEST MANAGEMENT PRACTICES WILL BE UTILIZED TO MINIMIZE THE NONPOINT DISCHARGE OF EXCESS NUTRIENTS, ORGANICS AND ERODED SOILS INTO COASTAL WATERS.**

Explanation of Policy:

Best management practices used to reduce these sources of pollution could include, but are not limited to, encouraging organic farming

and pest management principles, soil erosion control practices, and surface drainage control techniques. Development shall adhere to the following standards:

1. Natural ground contours should be followed as closely as possible.

2. Areas of steep slopes, where high cuts and fills may be required, should be avoided.

3. Extreme care should be exercised in areas adjacent to natural watercourses and in locating artificial drainage-ways so that their final gradient and resultant discharge velocity will not create additional erosion problems.

4. Natural protective vegetation should remain undisturbed if at all possible.

5. The amount of time that disturbed ground surfaces are exposed to the energy of rainfall and runoff water should be limited.

6. The velocity of the runoff water on all areas subject to erosion should be reduced below that necessary to erode the materials.

7. A ground cover should be applied sufficiently to restrain erosion on that portion of the disturbed area undergoing no further active disturbance.

8. Runoff from a site should be collected and detained in sediment basins to trap pollutants which would otherwise be transported from the site.

9. The angle for graded slopes and fills should be limited to an angle no greater than that which can be retained by vegetative cover. Other erosion control devices or structures should only be used where vegetation is not sufficient to control erosion.

10. The length, as well as the angle, of graded slopes should be minimized to reduce the erosive velocity of runoff water.

POLICY 38 THE QUALITY AND QUANTITY OF SURFACE WATER AND GROUNDWATER SUPPLIES WILL BE CONSERVED AND PROTECTED, PARTICULARLY WHERE SUCH WATERS CONSTITUTE THE PRIMARY OR SOLE SOURCE OF WATER SUPPLY.

Explanation of Policy:

Local groundwater supplies and surface water on the Hudson River must be protected. The impact of an action on the quality of Hudson River water will be a major factor in planning and decision making. Such impacts include those resulting from construction ac-

tivity, land use management, point and non-point pollution sources and direct actions in the waterways.

Groundwater in the North Greenbush waterfront area is not used for water supply purposes. The Hudson River is also not used for drinking water, nor are its tributaries in North Greenbush, due to quality of the water. Water quality upgrades on the Hudson would initially be for the benefit of recreation, but ultimately for development of emergency water supplies.

See Policy 31.

POLICY 39 **THE TRANSPORT, STORAGE, TREATMENT AND DISPOSAL OF SOLID WASTES, PARTICULARLY HAZARDOUS WASTES, WITHIN COASTAL AREAS WILL BE CONDUCTED IN SUCH A MANNER AS TO PROTECT GROUNDWATER AND SURFACE WATER SUPPLIES, SIGNIFICANT FISH AND WILDLIFE HABITATS, RECREATION AREAS, IMPORTANT AGRICULTURAL LANDS AND SCENIC RESOURCES.**

Explanation of Policy:

The definitions of terms "solid wastes" and "solid wastes management facilities" are taken from New York's Solid Waste Management Act (Environmental Conservation Law, Article 27). Solid wastes include sludges from air or water pollution control facilities, demolition and construction debris, and industrial and commercial wastes.

Hazardous wastes are unwanted by-products of manufacturing processes and are generally characterized as being flammable, corrosive , reactive, or toxic. More specifically, hazardous waste is defined in Environmental Conservation Law [§27-0901.3] as "a waste or combination of wastes which because of its quantity, concentration, or physical, chemical or infectious characteristics may: (a) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed or otherwise managed". 6 NYCRR Part 371 lists hazardous wastes. Examples of solid waste management facilities include resource recovery facilities, sanitary landfills and solid waste reduction facilities. Although a fundamental problem associated with the disposal and treatment of solid waste is the contamination of water resources, other related problems may include: filling of wetlands and littoral areas; atmosphere loading; and degradation of scenic resources.

POLICY 39A **THE UNAUTHORIZED DUMPING OF HOUSEHOLD AND COMMERCIAL SOLID WASTES ALONG THE CONRAIL TROY-GREENBUSH RAIL LINE AND RIGHT-OF-WAY, ADJACENT TO THE WETLAND, IN THE RAVINES OR ELSEWHERE WITHIN THE NORTH**

GREENBUSH WATERFRONT AREA, ESPECIALLY IN PROXIMITY TO EXISTING OR POTENTIAL RECREATION AREAS, IS PROHIBITED.

Explanation of Policy:

The undeveloped condition of the North Greenbush waterfront, in conjunction with land ownership and access patterns, seems to invite unauthorized dumping of household and commercial solid wastes, particularly along the rail line and especially near the wetland. This activity not only creates visual blight, but also increases the potential for physical and chemical degradation of the wetland. It is the intention of the Town of North Greenbush to pursue restoration of these illegal dumping areas and to prevent future dumping at any location in the waterfront area.

POLICY 40 **THE STATE COASTAL POLICY REGARDING EFFLUENT DISCHARGED FROM MAJOR STEAM ELECTRIC GENERATING AND INDUSTRIAL FACILITIES IS NOT APPLICABLE TO THE TOWN OF NORTH GREENBUSH.**

POLICY 41 **LAND USE OR DEVELOPMENT IN THE COASTAL AREA WILL NOT CAUSE NATIONAL OR STATE AIR QUALITY TO BE VIOLATED.**

Explanation of Policy:

New York's Coastal Management Program incorporates the air quality policies and programs developed for the State by the Department of Environmental Conservation pursuant to the Clean Air Act and State laws on air quality. The requirements of the Clean Air Act are the minimum air quality control requirements applicable within the waterfront area.

Expansion of the Town's existing industrial district is proposed within the waterfront area. Uses prohibited in the industrial district are specified by type, such as brewing, manufacture of certain food products, chemicals, petroleum, and metals, building material processing and commercial laundries. Such industries can degrade the environment through production of excessive air pollutants or noise, and can create a large risk of fire, explosion, radiation or other physical hazards.

The sewage treatment plant, located outside of the industrial zone, will not, by its operation, cause deterioration of the existing air quality ratings for the North Greenbush waterfront area.

However, intermittent odor problems occur at this plant and at the Albany County sewage treatment plant across the river. These odors could impair the use and enjoyment of the Town's waterfront. Therefore, the plants must be managed and monitored so as to mitigate odors to the maximum extent practicable. Actions which

cause further odors or deterioration in air quality are inconsistent with this policy.

POLICY 42 COASTAL MANAGEMENT POLICIES WILL BE CONSIDERED IF THE STATE RECLASSIFIES LAND AREAS PURSUANT TO THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS OF THE FEDERAL CLEAN AIR ACT.

Explanation of Policy:

The policies of the State and local coastal management programs concerning proposed land and water uses and the protection and preservation of special management areas will be taken into account prior to any action to change prevention of significant deterioration land classifications in coastal regions or adjacent areas. In addition, the Department of State will provide the Department of Environmental Conservation with recommendations for proposed prevention of significant deterioration land classification designations based upon State and local coastal management programs.

POLICY 43 LAND USE OR DEVELOPMENT IN THE COASTAL AREA MUST NOT CAUSE THE GENERATION OF SIGNIFICANT AMOUNTS OF THE ACID RAIN PRECURSORS: NITRATES AND SULFATES.

Explanation of Policy:

The New York Coastal Management Program incorporates the State's policies on acid rain. As such, the Coastal Management Program will assist in the State's efforts to control acid rain. These efforts to control acid rain will enhance the continued viability of coastal fisheries, wildlife, agricultural, scenic and water resources.

POLICY 44 PRESERVE AND PROTECT TIDAL AND FRESHWATER WETLANDS AND PRESERVE THE BENEFITS DERIVED FROM THESE AREAS.

Explanation of Policy

Freshwater wetlands include marshes, swamps, bogs, and flats supporting aquatic and semi-aquatic vegetation and other wetlands so defined in the NYS Freshwater Wetlands Act and the NYS Protection of Waters Act. One Class II freshwater wetland has been delineated in the Town, TS-105.

No tidal wetlands are delineated on the Hudson River north of the Tappan Zee Bridge.

The benefits from the preservation of wetlands include, but are not limited to:

a. Habitat for wildlife and fish and contribution to associated aquatic food chains;

b. Erosion, flood and storm control;

c. Natural pollution treatment;

d. Groundwater protection;

e. Recreational opportunities;

f. Educational and scientific opportunities; and

g. Aesthetic open space in developed areas.

Wetland restoration shall be undertaken in accordance with a plan which adheres to the objectives of the State Freshwater Wetlands Law and is reviewed by appropriate authorities at the State Department of Environmental Conservation or the Department of State. The plan should consider the following: (a) enhancement of water circulation and selective deepening of existing wetland areaS to favor indigenous plant species (e.g. cattails rather than purple loosestrife); (b) excavation of gravelly upland areas surrounding wetlands to create new, shallow open water areas which could serve as habitat for appropriate plant and animal species.

New roads and walkways which would traverse wetlands should be elevated wherever possible so that water circulation is not impeded. The maintenance or upgrading of existing roads and rail lines should not impinge in any way upon wetlands either by widening the existing right-of-way or releasing deleterious materials and substances.

Areas adjacent to wetlands shall be designed so as to:

a. Maximize pervious land surface and vegetative cover to minimize stormwater runoff and to prevent polluted waters from reaching adjacent waters and wetlands;

b. Direct runoff away from adjacent waters and wetlands, to the extent feasible, by site grading or other methods; and

c. Remove runoff from parking lots, maintenance, fueling and wash-down areas in a manner that will prevent oils, grease, and detergents from reaching adjacent waters and wetlands.

SECTION IV

PROPOSED LAND AND WATER USES

AND

PROPOSED PROJECTS

IV. PROPOSED LAND AND WATER USES AND PROPOSED PROJECTS

The waterfront area in the Town of North Greenbush is an isolated enclave in contrast to the urbanized waterfronts in communities to the north and south. The land use plan and supporting projects included in this LWRP are intended to expand use of, and access to, this area while protecting its unique characteristics.

A. LAND USE PLAN (SEE MAP NO. 7)

The Land Use Plan designates six categories of land use, as described below. These are based on a combination of existing use, physical constraints and development objectives. The categories were not directly comparable to zoning districts but, in several instances, required revisions in the text and/or map of the Town's zoning laws. These land use objectives are reflected in the applicable policies of Section III.

1. Escarpment Conservation

This classification applies to the steep, relatively unstable slopes which separate the river flats from the upland plateau. The only appropriate uses are preservation of natural features and non-intensive recreation uses such as hiking, nature walks, etc. Development of an access road from the plateau to the waterfront through this area is also appropriate, if developed in accord with the policies dealing with erosion control and preservation of natural features and subject to the use of design techniques based on the unique characteristics of this area. Further discussion of this road is included in item B. below.

2. Public Utility

This description applies to the area occupied by the Rensselaer County sewage treatment plant, the Conrail tracks and the Niagara Mohawk Power Corporation transmission lines. In addition to these principal uses, other uses such as hiking trails, boat launches and passive recreation facilities which are compatible with the principal uses are appropriate.

3. Planned Waterfront Development

All land between the railroad and the water's edge, south of the Town Park land, with approximately 4,000 feet of waterfront and a depth ranging between 600 and 1,000 feet, is included in this classification. Although this area has limitations in terms of both access and environmental features, it offers a unique opportunity

to develop access to the waterfront and to integrate upland and water-related uses.

A variety of water-dependent and water enhanced uses are permitted in this area, subject to development standards and a review process which ensures that environmental resources are protected, under a new zoning district established for only this area. Since this entire area is owned by one entity, the RPI Technical Park, it is intended that the development plan for the entire area include a mixture of the permitted uses (see below) to create a total integrated environment based on use of, and proximity to, the river.

Permitted uses will consist of a combination of the following:

a. Marinas, boat launches, docking and similar uses.

b. Conferences centers, offices, restaurants and supporting facilities.

c. Cultural, educational, or scientific uses which utilize the coastal resources.

d. Uses which require water transportation.

e. Residential uses which by site design, supporting facilities or other means utilize the particular advantages of a waterfront site.

Standards and procedures to be followed for development of the permitted uses will be included in the provisions of a new Planned Waterfront Development District (see Exhibit V-A).

4. <u>Light Industrial</u>

The lands at the end of Glenmore Road would receive this designation. This area, which includes the New York State Armory and WRPI radio tower, is the only substantial portion of the proposed waterfront area on the upland plateau. Light industrial, research and office uses are appropriate here. Such a designation would require a rezoning from "AR" Agricultural Residential to "G" Industry.

5. <u>Park/Recreation</u>

Although recreational uses are appropriate throughout the waterfront area, only the land dedicated to the Town of North Greenbush by RPI, just south of the Niagara Mohawk

transmission line, is specifically designated for such use. The site should be devoted to active and passive water- dependent and related uses and serve as the primary public access to the river. To the extent possible, the use of this area should be planned to complement uses in the adjacent Planned Waterfront Development District.

B. PROPOSED PUBLIC AND PRIVATE PROJECTS

The following projects are proposed to implement certain aspects of policies set forth in Section III. These projects do not include private development activities such as conference centers, offices, etc. which will be included in the land use plan and governed by the proposed zoning controls and the criteria established in the LWRP policies.

1. Riverfront Access Road

A road providing vehicular access to the riverfront is essential to the Town's policies and objectives for utilizing its waterfront resources. Such a road would allow development of water-dependent and enhanced uses by the RPI Tech Park, in accord with the Planned Waterfront Development District, and would provide access to the Town-owned waterfront lands.

Due to the sensitive nature of the steep hillside between the river flats and the escarpment above, as discussed in Section II, the location and design of an access road must recognize and mitigate potential impacts of its construction. In order to analyze the nature of the problem and identify a feasible location and necessary design criteria, a study was undertaken by a soils engineer familiar with the site. This study is attached as Appendix A.

The study evaluated the existing surface and sub-surface soils conditions, geology, and groundwater conditions. Three alternate alignments (see Map No. 8) for an access road were analyzed, based on these factors, to determine how each would impact the marginally stable side slopes.

The analysis revealed that an alignment along the bottom of the ravine just south of the power lines (Route B) would substantially reduce problems of stability as opposed to alignments traversing the sides of the ravine (A or C). By filling in the bottom of the ravine, a roadway of adequate width could be created with a relatively moderate grade of 6-7%. This alignment has the further advantages of providing erosion protection at the

bottom of the ravine and allowing more efficient use of the land on top of the plateau.

Design considerations are simplified by the alignment at the bottom of the ravine. Since there would be little need for cut, extensive areas of raw soil would not be exposed and subject to erosion. Areas of fill would not require retention, since they would be placed at the bottom of the existing ravine. Conventional methods of erosion sedimentation control can be used to prevent adverse impacts.

The feasibility study demonstrates that the proposed access road can be designed and constructed in a manner that will not adversely impact the fragile hillside.

2. Development of Town Park

The waterfront site dedicated to the Town by RPI should be developed as a multi-use riverfront park. Boating and fishing would be the principal active recreation emphasized here; opportunities for picnics, concerts and other forms of passive recreation would also abound. From this focal point, other areas of the waterfront, including hiking, biking, exercise and cross-country skiing trails, and nature study areas would be accessible.

3. Wetlands Enhancement/Greenway Trails/Nature Study Areas

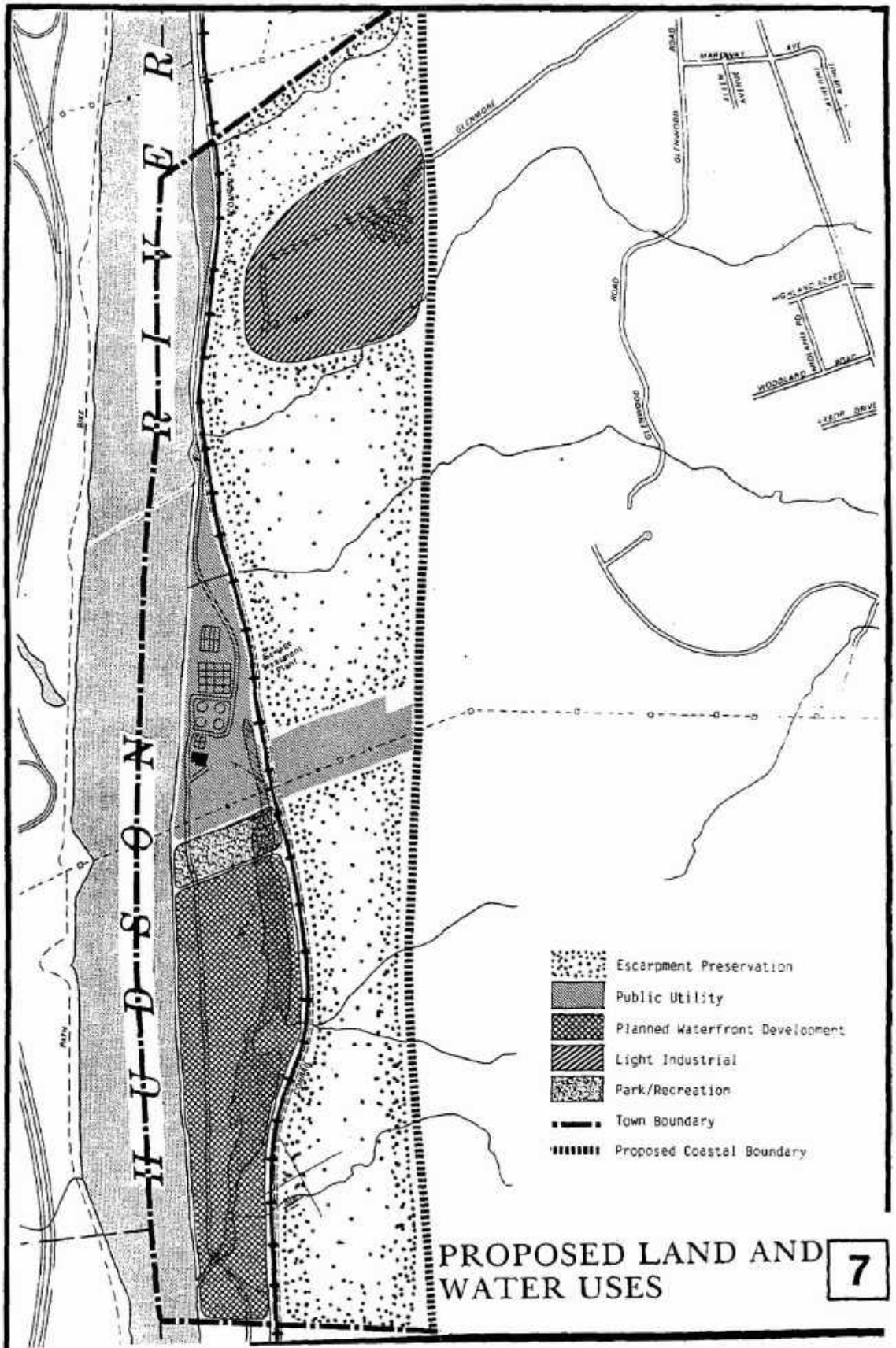
Restoration and enhancement of the wetland habitat for both wildlife and passive recreation is a unique opportunity which can be realized in the waterfront area. Opportunity exists to regrade barren gravel areas on both the Town Park land and RPI property to form shallow waterways and ponds, perhaps 3 to 4 feet in depth, for waterfowl habitat; and to seed and plant surrounding open areas with appropriate grasses, legumes, and shrubs that will provide additional forage and ground cover for small mammals and birds.

A perimeter trail around the wetlands to accommodate joggers, bikers, hikers and skiers to be connected to a trail system along the escarpment as part of a "greenway" system extending to the north and south is also possible. A small-scale interpretative nature study center/observation deck area is also possible. At appropriate points among the cottonwoods which surround the wetland area, as well as along the seawall overlooking the Hudson, clusters of picnic tables and benches could be placed.

4. Dredging and Excavation for Marina Development and Bulkhead Improvement

Dredging and excavation to create an inland marina with a navigable depth of 8 to 10 feet will provide a protected small boat harbor accessible from both the proposed Riverfront Park and the RPI lands. Spoil material generated will be utilized for initial development of the Town Park and nature study sites and as other-wise practical throughout the waterfront area to accommodate the uses intended. Where necessary for stabilization, riprapping of the marina embankment would occur, as well as repair of the bulkhead.

This work will require a permit under Article 15 of the Environ-mental Conservation Law and probably Article 24. An Army Corps of Engineers permit will also be required. This work which must be carefully planned and scheduled to avoid or mitigate adverse impacts on the adjacent wetlands and riverfront environment.



PROPOSED LAND AND WATER USES

7

LOCAL WATERFRONT REVITALIZATION PROGRAM

TOWN OF NORTH GREENBUSH

Shuster Associates

Planning Consultants

SECTION V

TECHNIQUES

FOR

LOCAL IMPLEMENTATION

OF

THE PROGRAM

V. TECHNIQUES FOR LOCAL IMPLEMENTATION OF THE PROGRAM

This section describes the local techniques--legal, administrative, managerial and financial--required to carry out the LWRP.

Part A describes local legislation which will help to implement the program. Part B sets forth specific implementing actions. Part C describes the management structure to coordinate the program. Part D indicates the financial resources needed and, where possible, available to carry out specific proposed actions.

A. LOCAL LAWS AND REGULATIONS

1. Existing Laws and Regulations

The following existing laws and regulations are used by the Town to regulate or review land use and development activity in the waterfront area:

Chapter 51. "Building Construction," adopted by the Town Board in August 1965, reaffirming the applicability of the NYS Building Construction Code in the Town and providing for a Building Official empowered to enforce the State Code and all other applicable laws, ordinances, rules and regulations relating to construction in the Town of North Greenbush.

Chapter 65. "Environmental Quality Review," Local Law No. 2-1977, adopted by the Town Board to locally implement Article 8 of the Environmental Conservation Law (State Environmental Quality Review Act) in accordance with the provisions of Part 617 of Title 6, NYCRR.

Chapter 70. "Flood Damage Prevention Law, Town of North Greenbush, New York," Local Law No. 2-1980, adopted by the Town Board in compliance with the requirements of the National Flood Insurance Program. As discussed in Section III, this local law provides uniform standards and review procedures for building construction, site improvements, and utility installations within special flood hazard areas. This law applies to virtually all of the area in the river flats.

Chapter 73. "Freshwater Wetlands Protection Law of the Town of North Greenbush, New York", Local Law No. 4-1976, adopted by the Town Board to exercise its authority pursuant to Article 24 of the New York State Environmental Conservation Law. As also discussed in Section III, all regulated activity within any freshwater wetland or adjacent area is subject under this Local Law to permit approval by the Town Planning Board, after review and recommendation by the "Environmental Council," as

established by the Town Board in August 1978 and provided for in Chapter 5 of the Town Code. This law applies to wetland area TS-105 on the final wetland maps filed for Rensselaer County.

Chapter 97A. "Site Plan Review and Approval Law," Local Law No. 3-1981, adopted by the Town Board, and requiring site plan review and approval by the Planning Board prior to "issuing of building permits for construction in the BN - Neighborhood Business, BG - General Business, or IG - Industrial Zoning Districts" or for "buildings to be occupied or used by governmental, institutional, fraternal and religious organiza-tions, no matter where located." This law now applies only to a small portion of the waterfront area where the 'IG' District extends within 2,000 feet of the river.

Chapter 116. "The Comprehensive Zoning Law of the Town of North Greenbush, New York," Local Law No. 1-1976, adopted by the Town Board as a comprehensive amendment to Local Law No. 2-1971, and from time to time amended since 1976. This Local Law divides the Town into zoning districts and provides uniform regulations regarding land use and development standards within each zoning district. Current zoning designations in the waterfront area are 'AR'- Agricultural and Residential and 'IG' Industry.

Chapter A120. "Land Subdivision Regulations, Town of North Greenbush, New York", adopted by the Planning Board and approved by the Town Board in May 1976 as a comprehensive amendment to land subdivision regulations in effect within the Town since 1964.

Chapter 63. "Dumps and Dumping", regulates dumping and waste disposal throughout the Town.

2. Additional Legislation Adopted

The following legislation is required either to provide the administrative framework for implementing the LWRP or to establish specific regulations to ensure that coastal policies are implemented.

a. Local Consistency Law

A local law was enacted by the Town to require that all local boards, agencies, commissions and departments act consistently with the policies established in the LWRP.

b. Zoning Amendments

(1) An amendment to the Zoning Law created a Planned Waterfront Development District to establish standards and criteria for the development of the land along the river owned by RPI. (See Appendix B and Maps 7 and 10).

(2) Rezoning the lands at the end of Glenmore Road for industrial use, as included in the Land and Water Use Plan. Action on this change will be deferred until alignment of the new Route 9 connector has been agreed upon.

c. Site Plan Review

The Site Plan Review Law was amended to include development in the Planned Waterfront District as requiring site plan approval and to include the standards of best management practices to control erosion and sedimentation.

B. OTHER ACTIONS

Development of the Waterfront Park and related recreational facilities in the waterfront area requires development of the proposed waterfront access road. Although this road is on RPI property and will primarily serve its future use of the area, cooperation between the Town and the owner is required in view of the joint uses proposed. Design, scheduling and agreement as to joint public-private participation and maintenance should be initiated as soon as possible.

C. MANAGEMENT STRUCTURE TO IMPLEMENT THE PROGRAM

A small Waterfront Advisory Task Force was formed to evaluate the problems, and possibilities facing the waterfront area. Upon adoption of the LWRP, however, its task was completed. The continued responsibility to monitor and coordinate implementation of the Local Waterfront Revitalization Program was assumed by the Town Board, through the Supervisor, as chief administrator. The Board will require the advice and assistance of the Planning Board and other involved agencies as appropriate to accomplish the following tasks:

1. Establish implementation priorities, work assignments, timetables, and budgetary requirements of the program.

2. Review applications for coastal development permits, zoning changes, subdivision and public works projects in the waterfront area and advise the appropriate agency.

3. Make application for funding from State, federal, or other sources to finance projects under the LWRP.

4. Maintain liaison with related Town bodies, including, but not limited to, the Planning and Zoning Boards, and with concerned non-governmental bodies, in order to further the implementation of the LWRP.

5. Evaluate in timely fashion proposed actions of State agencies within the coastal zone in order to assure consistency of such actions with policies of the LWRP, advise the Board of any conflicts, and participate in discussion to resolve such conflicts.

6. Review proposed federal actions referred to it by the Department of State and advise the DOS as to its opinion concerning the consistency of the action with local coastal policies.

7. Develop and maintain liaison with neighboring municipalities, and with county agencies.

8. Perform other functions regarding the coastal zone as may be appropriate from time to time.

The Town Board will be responsible for initiating and coordinating actions necessary to implement the LWRP and determining consistency of local, state and federal actions with the policies of the LWRP.

D. FINANCIAL RESOURCES TO IMPLEMENT THE LWRP

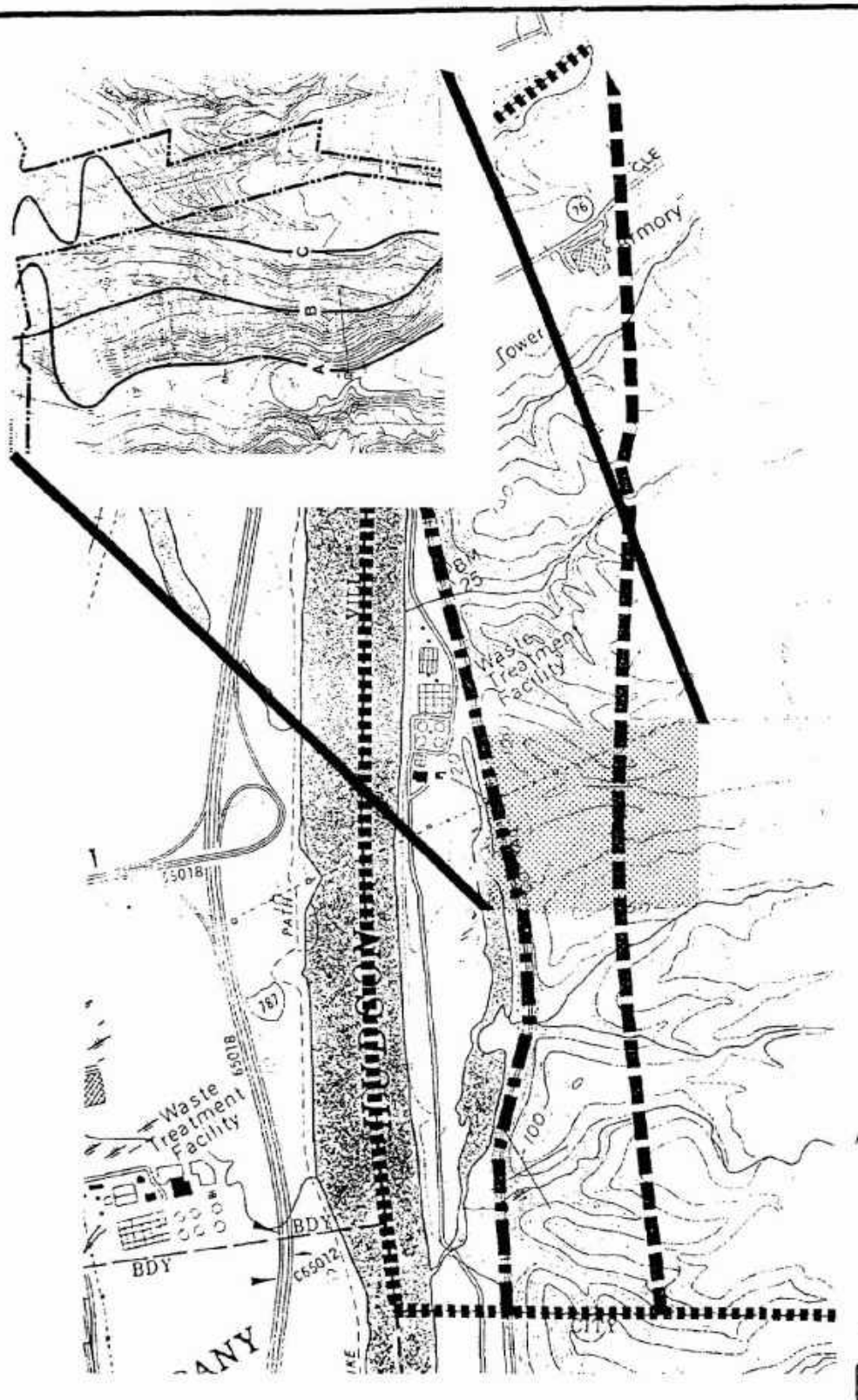
Financial resources in varying amounts are required to implement the three types of actions in the LWRP--legal, administrative and physical projects. Resources necessary for the first two categories are relatively small and can be included in normal annual budget allocations.

Although the list of physical projects has been intentionally limited to those of highest priority, several are beyond the normal financial capacity of the Town.

Section VI indicates various State and federal programs which may affect implementation of the LWRP, including some potential funding sources for specific physical projects. However, it is recognized that such funding is limited and competition for available funds is intense.

E. REVIEW OF PROPOSED STATE AND FEDERAL ACTIONS

The Town will review proposed State and Federal actions within the waterfront area in accordance with procedures established by the New York State Department of State. Such procedures are set forth in Appendix C.



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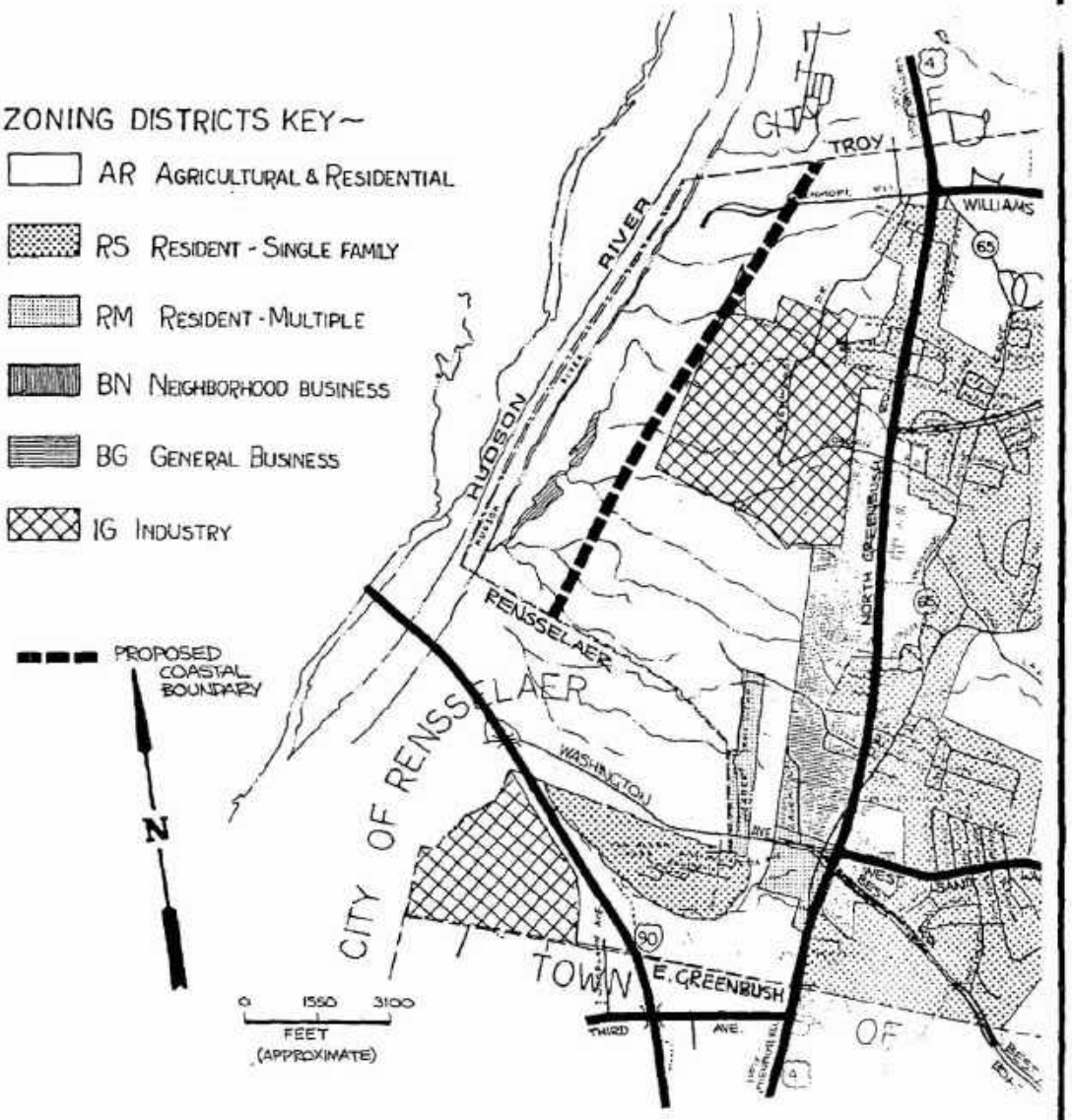
Proposed Waterfront Access Road

LOCAL WATERFRONT REVITALIZATION PROGRAM

TOWN OF NORTH GREENBUSH

Shuster Associates — Planning Consultants



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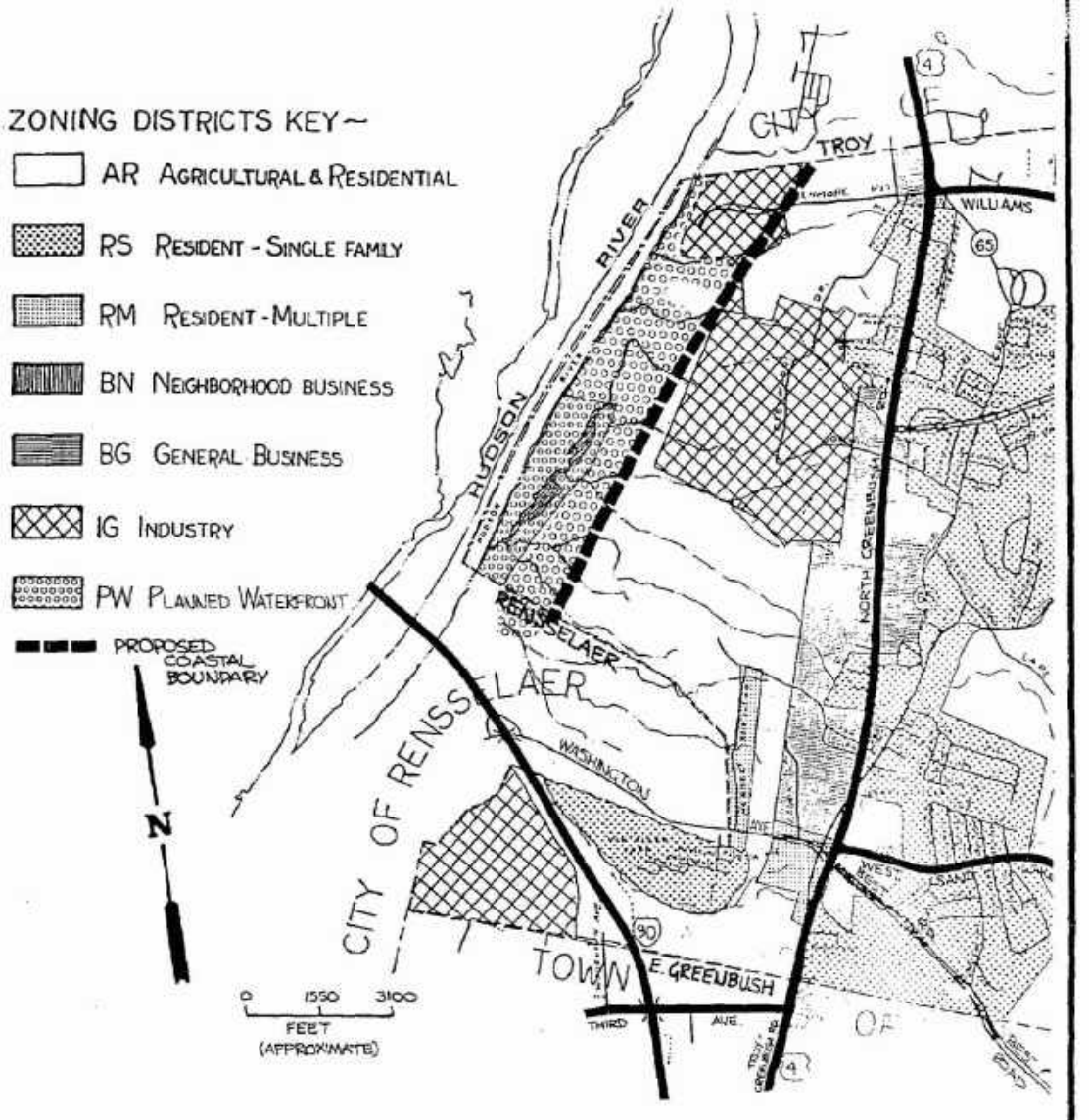
Existing Zoning

LOCAL WATERFRONT REVITALIZATION PROGRAM

TOWN OF NORTH GREENBUSH

Shuster Associates Planning Consultants



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Proposed Zoning

LOCAL WATERFRONT REVITALIZATION PROGRAM

TOWN OF NORTH GREENBUSH

Shuster Associates — Planning Consultants

SECTION VI

FEDERAL AND STATE PROGRAMS

LIKELY TO AFFECT IMPLEMENTATION

State and Federal actions will affect and be affected by implementation of the LWRP. Under State law and the U.S Coastal Zone Management Act, certain State and Federal actions within or affecting the local waterfront area must be "consistent" or "consistent to the maximum extent practicable" with the enforceable policies and purposes of the LWRP. This consistency requirement makes the LWRP a unique, intergovernmental mechanism for setting policy and making decisions and helps to prevent detrimental actions from occurring and future options from being needlessly foreclosed. At the same time, the active participation of State and Federal agencies is also likely to be necessary to implement specific provisions of the LWRP.

The first part of this section identifies the actions and programs of State and Federal agencies which should be undertaken in a manner consistent with the LWRP. This is a generic list of actions and programs, as identified by the NYS Department of State; therefore, some of the actions and programs listed may not be relevant to this LWRP. Pursuant to the State Waterfront Revitalization of Coastal Areas and Inland Waterways Act (Executive Law, Article 42), the Secretary of State individually and separately notifies affected State agencies of those agency actions and programs which are to be undertaken in a manner consistent with approved LWRPs. Similarly, Federal agency actions and programs subject to consistency requirements are identified in the manner prescribed by the U.S. Coastal Zone Management Act and its implementing regulations. The lists of State and Federal actions and programs included herein are informational only and do not represent or substitute for the required identification and notification procedures. The current official lists of actions subject to State and Federal consistency requirements may be obtained from the NYS Department of State.

The second part of this section is a more focused and descriptive list of State and Federal agency actions which are necessary to further implementation of the LWRP. It is recognized that a State or Federal agency's ability to undertake such actions is subject to a variety of factors and considerations; that the consistency provisions referred to above, may not apply; and that the consistency requirements can not be used to require a State or Federal agency to undertake an action it could not undertake pursuant to other provisions of law. Reference should be made to Section IV and Section V, which also discuss State and Federal assistance needed to implement the LWRP.

A. STATE AND FEDERAL ACTIONS AND PROGRAMS WHICH SHOULD BE UNDERTAKEN IN A MANNER CONSISTENT WITH THE LWRP

1. State Agencies

OFFICE FOR THE AGING

1.00 Funding and/or approval programs for the establishment of new or expanded facilities providing various services for the elderly.

DEPARTMENT OF AGRICULTURE AND MARKETS

1.00 Agricultural Districts Program.

2.00 Rural development programs.

3.00 Farm worker services programs.

4.00 Permit and approval programs:

- 4.01 Custom Slaughters/Processor Permit
- 4.02 Processing Plant License
- 4.03 Refrigerated Warehouse and/or Locker Plant License

DIVISION OF ALCOHOLIC BEVERAGE CONTROL/STATE LIQUOR AUTHORITY

1.00 Permit and approval programs:

- 1.01 Ball Park - Stadium License
- 1.02 Bottle Club License
- 1.03 Bottling Permits
- 1.04 Brewer's Licenses and Permits
- 1.05 Brewer's Retail Beer License
- 1.06 Catering Establishment Liquor License
- 1.07 Cider Producer's and Wholesaler's Licenses
- 1.08 Club Beer, Liquor, and Wine Licenses
- 1.09 Distiller's Licenses
- 1.10 Drug Store, Eating Place, and Grocery Store Beer Licenses
- 1.11 Farm Winery and Winery Licenses
- 1.12 Hotel Beer, Wine, and Liquor Licenses
- 1.13 Industrial Alcohol Manufacturer's Permits
- 1.14 Liquor Store License
- 1.15 On-Premises Liquor License
- 1.16 Plenary Permit (Miscellaneous-Annual)
- 1.17 Summer Beer and Liquor Licenses
- 1.18 Tavern/Restaurant and Restaurant Wine Licenses
- 1.19 Vessel Beer and Liquor Licenses
- 1.20 Warehouse Permit
- 1.21 Wine Store License
- 1.22 Winter Beer and Liquor Licenses
- 1.23 Wholesale Beer, Wine, and Liquor Licenses

DIVISION OF ALCOHOLISM AND ALCOHOL ABUSE

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

2.00 Permit and approval programs:

2.01 Letter Approval for Certificate of Need
2.02 Operating Certificate (Alcoholism Facility)
2.03 Operating Certificate - Community Residence
2.04 Operating Certificate (Outpatient Facility)
2.05 Operating Certificate (Sobering-Up Station)

COUNCIL ON THE ARTS

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

2.00 Architecture and environmental arts program.

DEPARTMENT OF BANKING

1.00 Permit and approval programs:

1.01 Authorization Certificate (Bank Branch)
1.02 Authorization Certificate (Bank Change of Location)
1.03 Authorization Certificate (Bank Charter)
1.04 Authorization Certificate (Credit Union Change of Location)
1.05 Authorization Certificate (Credit Union Charter)
1.06 Authorization Certificate (Credit Union Station)
1.07 Authorization Certificate (Foreign Banking Corporation Change of Location)
1.08 Authorization Certificate (Foreign Banking Corporation Public Accommodations Office
1.09 Authorization Crtificate (Investment Company Branch)
1.10 Authorization Certificate (Investment Company Change of Location)
1.11 Authorization Certificate (Investment Company Charter)
1.12 Authorization Certificate (Licensed Lender Change of Location)
1.13 Authorization Certificate (Mutual Trust Company Charter)
1.14 Authorization Certificate (Private Banker Charter)
1.15 Authorization Certificate (Public Accommodation Office - Banks)
1.16 Authorization Certificate (Safe Deposit Company Branch)
1.17 Authorization Certificate (Safe Deposit Company Change of Location)
1.18 Authorization Certificate (Safe Deposit Company Charter)
1.19 Authorization Certificate (Savings Bank Charter)
1.20 Authorization Certificate (Savings Bank De Novo Branch Office)

1.21 Authorization Certificate (Savings Bank Public Accommodations Office)
1.22 Authorization Certificate (Savings and Loan Association Branch)
1.23 Authorization Certificate (Savings and Loan Association Change of Location)
1.24 Authorization Certificate (Savings and Loan Association Charter)
1.25 Authorization Certificate (Subsidiary Trust Company Charter)
1.26 Authorization Certificate (Trust Company Branch)
1.27 Authorization Certificate (Trust Company-Change of Location)
1.28 Authorization Certificate (Trust Company Charter)
1.29 Authorization Certificate (Trust Company Public Accommodations Office)
1.30 Authorization to Establish a Life Insurance Agency
1.31 License as a Licensed Lender
1.32 License for a Foreign Banking Corporation Branch

CAPITAL DISTRICT TRANSPORTATION AUTHORITY [regional agency]

1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the Authority.

2.00 Facilities construction, rehabilitation, expansion, or demolition.

DEPARTMENT OF COMMERCE

1.00 Preparation or revision of statewide or specific plans to address State economic development needs.

2.00 Allocation of the state tax-free bonding reserve.

DEPARTMENT OF CORRECTIONAL SERVICES

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

DORMITORY AUTHORITY OF THE STATE OF NEW YORK

1.00 Financing of higher education and health care facilities.

2.00 Planning and design services assistance program.

EDUCATION DEPARTMENT

1.00 Facilities construction, rehabilitation, expansion, demolition or the funding of such activities.

2.00 Permit and approval programs:

2.01 Certificate of Incorporation (Regents Charter)
2.02 Private Business School Registration
2.03 Private School License
2.04 Registered Manufacturer of Drugs and/or Devices
2.05 Registered Pharmacy Certificate
2.06 Registered Wholesaler of Drugs and/or Devices
2.07 Registered Wholesaler-Repacker of Drugs and/or Devices
2.08 Storekeeper's Certificate

ENERGY PLANNING BOARD AND ENERGY OFFICE

1.00 Preparation and revision of the State Energy Master Plan.

NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY

1.00 Issuance of revenue bonds to finance pollution abatement modifications in power-generation facilities and various energy projects.

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of lands under the jurisdiction of the Department.

2.00 Classification of Waters Program; classification of land areas under the Clean Air Act.

3.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

4.00 Financial assistance/grant programs:

4.01 Capital projects for limiting air pollution
4.02 Cleanup of toxic waste dumps
4.03 Flood control, beach erosion and other water resource projects
4.04 Operating aid to municipal wastewater treatment facilities
4.05 Resource recovery and solid waste management capital projects
4.06 Wastewater treatment facilities

5.00 Funding assistance for issuance of permits and other regulatory activities (New York City only).

6.00 Implementation of the Environmental Quality Bond Act of 1972, including:

(a) Water Quality Improvement Projects

(b) Land Preservation and Improvement Projects including Wetland Preservation and Restoration Projects, Unique Area Preservation Projects, Metropolitan Parks Projects, Open Space Preservation Projects and Waterways Projects.

7.00 Marine Finfish and Shellfish Programs.

8.00 New York Harbor Drift Removal Project.

9.00 Permit and approval programs:

9.01 Certificate of Approval for Air Pollution Episode Action Plan
9.02 Certificate of Compliance for Tax Relief - Air Pollution Control Facility
9.03 Certificate to Operate: Stationary Combustion Installation; Incinerator; Process, Exhaust or Ventilation System
9.04 Permit for Burial of Radioactive Material
9.05 Permit for Discharge of Radioactive Material to Sanitary Sewer
9.06 Permit for Restricted Burning
9.07 Permit to Construct: a Stationary Combustion Installation; Incinerator; Indirect Source of Air Contamination; Process, Exhaust or Ventilation System
9.08 Approval of Plans and Specifications for Wastewater Treatment Facilities.
9.09 Certificate to Possess and Sell Hatchery Trout in New York State
9.10 Commercial Inland Fisheries Licenses
9.11 Fishing Preserve License
9.12 Fur Breeder's License
9.13 Game Dealer's License
9.14 Licenses to Breed Domestic Game Animals
9.15 License to Possess and Sell Live Game
9.16 Permit to Import, Transport and/or Export under Section 184.1 (11-0511)
9.17 Permit to Raise and Sell Trout
9.18 Private Bass Hatchery Permit
9.19 Shooting Preserve Licenses
9.20 Taxidermy License
9.21 Certificate of Environmental Safety (Liquid Natural Gas and Liquid Petroleum Gas)
9.22 Floating Object Permit
9.23 Marine Regatta Permit
9.24 Mining Permit
9.25 Navigation Aid Permit
9.26 Permit to Plug and Abandon (a non-commercial oil, gas or solution mining well)
9.27 Permit to Use Chemicals for the Control or Elimination of Aquatic Insects

9.28 Permit to Use Chemicals for the Control or Elimination of Aquatic Vegetation
9.29 Permit to Use Chemicals for the Control or Extermination of Undesirable Fish
9.30 Underground Storage Permit (Gas)
9.31 Well Drilling Permit (Oil, Gas, and Solution Salt Mining)
9.32 Digger's Permit (Shellfish)
9.33 License of Menhaden Fishing Vessel
9.34 License for Non-Resident Food Fishing Vessel
9.35 Non-Resident Lobster Permit
9.36 Marine Hatchery and/or Off-Bottom Culture Shellfish Permits
9.37 Permits to Take Blue-Claw Crabs
9.38 Permit to Use Pond or Trap Net
9.39 Resident Commercial Lobster Permit
9.40 Shellfish Bed Permit
9.41 Shellfish Shipper's Permits
9.42 Special Permit to Take Surf Clams from Waters other than the Atlantic Ocean
9.43 Approval - Drainage Improvement District
9.44 Approval - Water (Diversions for) Power
9.45 Approval of Well System and Permit to Operate
9.46 Permit - Article 15, (Protection of Water) -Dam
9.47 Permit - Article 15, (Protection of Water) -Dock, Pier or Wharf - Repealed in 1983.
9.48 Permit - Article 15, (Protection of Water) -Dredge or Deposit Material in a Waterway
9.49 Permit - Article 15, (Protection of Water) -Stream Bed or Bank Disturbances
9.50 Permit - Article 15, Title 15 (Water Supply)
9.51 Permit - Article 24, (Freshwater Wetlands)
9.52 Permit - Article 25, (Tidal Wetlands)
9.53 River Improvement District approvals
9.54 River Regulatory District approvals
9.55 Well Drilling Certificate of Registration
9.56 Permit to Construct and/or Operate a Solid Waste Management Facility
9.57 Septic Tank Cleaner and Industrial Waste Collector Permit
9.58 Approval of Plans for Wastewater Disposal Systems
9.59 Certificate of Approval of Realty Subdivision Plans
9.60 Certificate of Compliance (Industrial Wastewater Treatment Facility)
9.61 Letters of Certification for Major Onshore Petroleum Facility Oil Spill Prevention and Control Plan
9.62 Permit - Article 36, (Construction in Flood Hazard Areas)
9.63 Permit for State Agency Activities for Development in Coastal Erosion Hazards Areas
9.64 Permit Granted (for Use of State Maintained Flood Control Land)
9.65 State Pollutant Discharge Elimination System (SPDES) Permit
9.66 401 Water Quality Certification

10.00 Preparation and revision of Air Pollution State Implementation Plan.

11.00 Preparation and revision of Continuous Executive Program Plan.

12.00 Preparation and revision of Statewide Environmental Plan.

13.00 Protection of Natural and Man-made Beauty Program.

14.00 Urban Fisheries Program.

15.00 Urban Forestry Program.

16.00 Urban Wildlife Program.

ENVIRONMENTAL FACILITIES CORPORATION

1.00 Financing program for pollution control facilities for industrial firms and small businesses.

FACILITIES DEVELOPMENT CORPORATION

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

OFFICE OF GENERAL SERVICES

1.00 Administration of the Public Lands Law for acquisition and disposition of lands, grants of land and grants or easement of land under water, issuance of licenses for removal of materials from lands under water, and oil and gas leases for exploration and development.

2.00 Administration of Article 4-B, Public Buildings Law, in regard to the protection and management of State historic and cultural properties and State uses of buildings of historic, architectural or cultural significance.

3.00 Facilities construction, rehabilitation, expansion, or demolition.

DEPARTMENT OF HEALTH

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

2.00 Permit and approval programs:

2.01 Approval of Completed Works for Public Water Supply Improvements
2.02 Approval of Plans for Public Water Supply Improvements.

2.03 Certificate of Need (Health Related Facility - except Hospitals)
2.04 Certificate of Need (Hospitals)
2.05 Operating Certificate (Diagnostic and Treatment Center)
2.06 Operating Certificate (Health Related Facility)
2.07 Operating Certificate (Hospice)
2.08 Operating Certificate (Hospital)
2.09 Operating Certificate (Nursing Home)
2.10 Permit to Operate a Children's Overnight or Day Camp
2.11 Permit to Operate a Migrant Labor Camp
2.12 Permit to Operate as a Retail Frozen Dessert Manufacturer
2.13 Permit to Operate a Service Food Establishment
2.14 Permit to Operate a Temporary Residence/Mass Gathering
2.15 Permit to Operate or Maintain a Swimming Pool or Public Bathing Beach
2.16 Permit to Operate Sanitary Facilities for Realty Subdivisions
2.17 Shared Health Facility Registration Certificate

DIVISION OF HOUSING AND COMMUNITY RENEWAL and its subsidiaries and affiliates

1.00 Facilities construction, rehabilitation, expansion, or demolition.

2.00 Financial assistance/grant programs:

2.01 Federal Housing Assistance Payments Programs (Section 8 Programs)
2.02 Housing Development Fund Programs
2.03 Neighborhood Preservation Companies Program
2.04 Public Housing Programs
2.05 Rural Area Revitalization Program
2.06 Rural Preservation Companies Program
2.07 Rural Rental Assistance Program
2.08 Urban Initiatives Grant Program
2.09 Low Income Housing Trust Fund

3.00 Preparation and implementation of plans to address housing and community renewal needs.

HOUSING FINANCE AGENCY

1.00 Funding programs for the construction, rehabilitation, or expansion of facilities.

2.00 Affordable Housing Corporation

JOB DEVELOPMENT AUTHORITY

1.00 Financing assistance programs for commercial and industrial facilities.

MEDICAL CARE FACILITIES FINANCING AGENCY

1.00 Financing of medical care facilities.

OFFICE OF MENTAL HEALTH

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

2.00 Permit and approval programs:

2.01 Operating Certificate (Community Residence)
2.02 Operating Certificate (Family Care Homes)
2.03 Operating Certificate (Inpatient Facility)
2.04 Operating Certificate (Outpatient Facility)

OFFICE OF MENTAL RETARDATION AND DEVELOPMENT DISABILITIES

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

2.00 Permit and approval programs:

2.01 Establishment and Construction Prior Approval
2.02 Operating Certificate Community Residence
2.03 Outpatient Facility Operating Certificate

DIVISION OF MILITARY AND NAVAL AFFAIRS

1.00 Preparation and implementation of the State Disaster Preparedness Plan.

NATURAL HERITAGE TRUST

1.00 Funding program for natural heritage institutions.

OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION (including Regional State Park Commissions)

1.00 Acquisition, disposition, lease, grant of easement or other activities related to the management of land under the jurisdiction of the Office.

2.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

3.00 Funding program for recreational boating, safety and enforcement.

4.00 Funding program for State and local historic preservation projects.

5.00 Land and Water Conservation Fund programs.

6.00 Nomination of properties to the Federal and/or State Register of Historic Places.

7.00 Permit and approval programs:

7.01 Floating Objects Permit
7.02 Marine Regatta Permit
7.03 Navigation Aide Permit
7.04 Posting of Signs Outside State Parks

8.00 Preparation and revision of the Statewide Comprehensive Outdoor Recreation Plan and the Statewide Comprehensive Historic Preservation Plan and other plans for public access, recreation, historic preservation or related purposes.

9.00 Recreation services programs.

10.00 Urban Cultural Parks Program.

POWER AUTHORITY OF THE STATE OF NEW YORK

1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the Authority.

2.00 Facilities construction, rehabilitation, expansion, or demolition.

NEW YORK STATE SCIENCE AND TECHNOLOGY FOUNDATION

1.00 Corporation for Innovation Development Program.

2.00 Center for Advanced Technology Program.

DEPARTMENT OF SOCIAL SERVICES

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

2.00 Homeless Housing and Assistance Program.

3.00 Permit and approval programs:

3.01 Certificate of Incorporation (Adult Residential Care Facilities)
3.02 Operating Certificate (Children's Services)
3.03 Operating Certificate (Enriched Housing Program)
3.04 Operating Certificate (Home for Adults)
3.05 Operating Certificate (Proprietary Home)
3.06 Operating Certificate (Public Home)

3.07 Operating Certificate (Special Care Home)
3.08 Permit to Operate a Day Care Center

DEPARTMENT OF STATE

1.00 Appalachian Regional Development Program.

2.00 Coastal Management Program.

3.00 Community Services Block Grant Program.

4.00 Permit and approval programs:

4.01 Billiard Room License
4.02 Cemetery Operator
4.03 Uniform Fire Prevention and Building Code

STATE UNIVERSITY CONSTRUCTION FUND

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

STATE UNIVERSITY OF NEW YORK

1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the University.

2.00 Facilities construction, rehabilitation, expansion, or demolition.

DIVISION OF SUBSTANCE ABUSE SERVICES

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

2.00 Permit and approval programs:
2.01 Certificate of Approval(Substances Abuse Services Program)

DEPARTMENT OF TRANSPORTATION

1.00 Acquistion, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the Department.

2.00 Construction, rehabilitation, expansion, or demolition of facilities, including but not limited to:

(a) Highways and parkways
(b) Bridges on the State highways system
(c) Highway and parkway maintenance facilities

(d) Barge Canal
(e) Rail facilities

3.00 Financial assistance/grant programs:

3.01 Funding programs for construction/reconstruction and reconditioning/preservation of municipal streets and highways (excluding routine maintenance and minor rehabilitation)
3.02 Funding programs for development of the ports of Albany, Buffalo, Oswego, Ogdensburg and New York
3.03 Funding programs for rehabilitation and replacement of municipal bridges
3.04 Subsidies program for marginal branchlines abandoned by Conrail
3.05 Subsidies program for passenger rail service

4.00 Permits and approval programs:

4.01 Approval of applications for airport improvements (construction projects)
4.02 Approval of municipal applications for Section 18 Rural and Small Urban Transit Assistance Grants(construction projects)
4.03 Approval of municipal or regional transportation authority applications for funds for design, construction and rehabilitation of omnibus maintenance and storage facilities
4.04 Approval of municipal or regional transportation authority applications for funds for design and construction of rapid transit facilities
4.05 Certificate of Convenience and Necessity to Operate a Railroad
4.06 Highway Work Permits
4.07 License to Operate Major Petroleum Facilities
4.08 Outdoor Advertising Permit (for off-premises advertising signs adjacent to interstate and primary highway)
4.09 Permits for Use and Occupancy of N.Y. State Canal Lands [except Regional Permits (Snow Dumping)]
4.10 Real Property Division Permit for Use of State-Owned Property

5.00 Preparation or revision of the Statewide Master Plan for Transportation and sub-area or special plans and studies related to the transportation needs of the State.

6.00 Water Operation and Maintenance Program--Activities related to the containment of petroleum spills and development of an emergency oil-spill control network.

URBAN DEVELOPMENT CORPORATION and its subsidiaries

1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the Corporation, if any.

2.00 Planning, development, financing, construction, major renovation or expansion of commercial, industrial and civic facilities and the provision of technical assistance or financing for such activities, including, but not limited to, actions under its discretionary economic development programs.

3.00 Administration of special projects.

4.00 Administration of State-funded capital grant programs.

DIVISION OF YOUTH

1.00 Facilities construction, rehabilitation, expansion, or demolition and the funding or approval of such activities.

2. Federal Agencies

DIRECT FEDERAL ACTIVITIES AND DEVELOPMENT PROJECTS

DEPARTMENT OF COMMERCE

National Marine Fisheries Services

1.00 Fisheries Management Plans

DEPARTMENT OF DEFENSE

Army Corps of Engineers

1.00 Proposed authorizations for dredging, channel improvements, breakwaters, other navigational works, or erosion control structures, beach replenishment, dams or flood control works, ice management practices and activities, and other projects with potential to impact coastal lands and waters.

2.00 Land acquisition for spoil disposal or other purposes.

3.00 Selection of open water disposal sites.

Army, Navy and Air Force

4.00 Location, design, and acquisition of new or expanded defense installations (active or reserve status, including associated housing, transprotation or other facilities).

5.00 Plans, procedures and facilities for landing or storage use zones.

6.00 Establishment of impact, compatability or restricted use zones.

DEPARTMENT OF ENERGY

1.00 Prohibition orders.

GENERAL SERVICES ADMINISTRATION

1.00 Acquisition, location and design of proposed Federal Government property or buildings, whether leased or owned by the Federal Government.

2.00 Disposition of Federal surplus lands and structures.

DEPARTMENT OF INTERIOR

Fish and Wildlife Service

1.00 Management of National Wildlife refuges and proposed acquisitions.

Mineral Management Service

2.00 OCS lease sale activities including tract selection, lease sale stipulations, etc.

National Park Service

3.00 National Park and Seashore management and proposed acquisitions.

DEPARTMENT OF TRANSPORTATION

Amtrak, Conrail

1.00 Expansions, curtailments, new construction, upgradings or abandonments of railroad facilities or services, in or affecting the State's coastal area.

Coast Guard

2.00 Location and design, construction or enlargement of Coast Guard stations, bases, and lighthouses.

3.00 Location, placement or removal of navigation devices which are not part of the routine operations under the Aids to Navigation Program (ATON).

4.00 Expansion, abandonment, designation or anchorages, lightering areas or shipping lanes and ice management practices and activities.

Federal Aviation Administration

5.00 Location and design, construction, maintenance, and demolition of Federal aids to air navigation.

Federal Highway Administration

6.00 Highway construction.

St. Lawrence Seaway Development Corporation

7.00 Acquisition, location, design, improvement and construction of new and existing facilities for the operation of the Seaway, incuding traffic safety, traffic control and length of navigation season.

FEDERAL LICENSES AND PERMITS

DEPARTMENT OF DEFENSE

Army Corps of Engineers

1.00 Construction of dams, dikes or ditches across navigable waters, or obstruction or alteration of navigable waters required under Sections 9 and 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401, 403).

2.00 Establishment of harbor lines pursuant to Section 11 of the Rivers and Harbors Act of 1899 (33 U.S.C. 404, 405).

3.00 Occupation of seawall, bulkhead, jetty, dike, levee, wharf, pier, or other work built by the U.S. pursuant to Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408).

4.00 Approval of plans for improvements made at private expense under USACE supervision pursuant to the Rivers and Harbors Act of 1902 (33 U.S.C. 565).

5.00 Disposal of dredged spoils into the waters of the U.S., pursuant to the Clean Water Act, Section 404, (33 U.S.C. 1344).

6.00 All actions for which permits are required pursuant to Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

7.00 Construction of artificial islands and fixed structures in Long Island Sound pursuant to Section 4(f) of the River and Harbors Act of 1912 (33 U.S.C.).

DEPARTMENT OF ENERGY

Economic Regulatory Commission

1.00 Regulation of gas pipelines, and licensing of import or export of natural gas pursuant to the Natural Gas Act (15 U.S.C. 717) and the Energy Reorganization Act of 1974.

2.00 Exemptions from prohibition orders.

Federal Energy Regulatory Commission

3.00 Licenses for non-Federal hydroelectric projects and primary transmission lines under Sections 3(11), 4(e) and 15 of the Federal Power Act (16 U.S.C. 796(11), 797(11) and 808).

4.00 Orders for interconnection of electric transmission facilities under Section 202(b) of the Federal Power Act (15 U.S.C. 824a(b)).

5.00 Certificates for the construction and operation of interstate natural gas pipeline facilities, including both pipelines and terminal facilities under Section 7(c) of the Natural Gas Act (15 U.S.C. 717f(c)).

6.00 Permission and approval for the abandonment of natural gas pipeline facilities under Section 7(b) of the Natural Gas Act (15 U.S.C. 717f(b)).

ENVIRONMENTAL PROTECTION AGENCY

1.00 NPDES permits and other permits for Federal installations, discharges in contiguous zones and ocean waters, sludge runoff and aquaculture permits pursuant to Section 401, 402, 403, 405, and 318 of the Federal Water Pollution Control Act of 1972 (33 U.S.C. 1341, 1342, 1343, and 1328).

2.00 Permits pursuant to the Resources Recovery and Conservation Act of 1976.

3.00 Permits pursuant to the underground injection control program under Section 1424 of the Safe Water Drinking Water Act (42 U.S.C. 300h-c).

4.00 Permits pursuant to the Clean Air Act of 1976 (42 U.S.C. 1857).

DEPARTMENT OF INTERIOR

Fish and Wildlife Services

1.00 Endangered species permits pursuant to the Endangered Species Act (16 U.S.C. 153(a)).

Mineral Management Service

2.00 Permits to drill, rights of use and easements for construction and maintenance of pipelines, gathering and flow lines and associated structures pursuant to 43 U.S.C. 1334, exploration and development plans, and any other permits or authorizations granted for activities described in detail in OCS exploration, development, and production plans.

3.00 Permits required for pipelines crossing federal lands, including OCS lands, and associated activities pursuant to the OCS Lands Act (43 U.S.C. 1334) and 43 U.S.C. 931 (c) and 20 U.S.C. 185.

INTERSTATE COMMERCE COMMISSION

1.00 Authority to abandon railway lines (to the extent that the abandonment involves removal of trackage and disposition of right-of-way); authority to construct railroads; authority to construct coal slurry pipelines.

NUCLEAR REGULATORY COMMISSION

1.00 Licensing and certification of the siting, construction and operation of nuclear power plans pursuant to Atomic Energy Act of 1954, Title II of the Energy Reorganization Act of 1974 and the National Environmental Policy Act of 1969.

DEPARTMENT OF TRANSPORTATION

Coast Guard

1.00 Construction or modification of bridges, causeways or pipelines over navigable waters pursuant to 49 U.S.C. 1455.

2.00 Permits for Deepwater Ports pursuant to the Deepwater Ports Act of 1974 (33 U.S.C. 1501).

Federal Aviation Administration

3.00 Permits and licenses for construction, operation or alteration of airports.

FEDERAL ASSISTANCE*

DEPARTMENT OF AGRICULTURE

10.068	Rural Clean Water Program
10.409	Irrigation, Drainage, and Other Soil and Water Conservation Loans
10.410	Low to Moderate Income Housing Loans
10.411	Rural Housing Site Loans
10.413	Recreation Facility Loans
10.414	Resource Conservation and Development Loans
10.415	Rural Rental Housing Loans
10.416	Soil and Water Loans
10.418	Water and Waste Disposal Systems for Rural Communities
10.419	Watershed Protection and Flood Prevention Loans
10.422	Business and Industrial Loans
10.423	Community Facilities Loans
10.424	Industrial Development Grants
10.426	Area Development Assistance Planning Grants
10.429	Above Moderate Income Housing Loans
10.430	Energy Impacted Area Development Assistance Program
10.901	Resource Conservation and Development
10.902	Soil and Water Conservation
10.904	Watershed Protection and Flood Prevention
10.906	River Basin Surveys and Investigations

DEPARTMENT OF COMMERCE

11.300	Economic Development - Grants and Loans for Public Works and Development Facilities
11.301	Economic Development - Business Development Assistance
11.302	Economic Development - Support for Planning Organizations
11.304	Economic Development - State and Local Economic Development Planning
11.305	Economic Development - State and Local Economic Development Planning
11.307	Special Economic Development and Adjustment Assistance Program - Long Term Economic Deterioration
11.308	Grants to States for Supplemental and Basic Funding of Titles I, II, III, IV, and V Activities
11.405	Anadromous and Great Lakes Fisheries Conservation
11.407	Commercial Fisheries Research and Development
11.417	Sea Grant Support
11.427	Fisheries Development and Utilization - Research and Demonstration Grants and Cooperative Agreements Program
11.501	Development and Promotion of Ports and Intermodal Transportation

11.509	Development and Promotion of Domestic Waterborne Transport Systems

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

14.112	Mortgage Insurance - Construction or Substantial Rehabilitation of Condominium Projects
14.115	Mortgage Insurance - Development of Sales Type Cooperative Projects
14.117	Mortgage Insurance - Homes
14.124	Mortgage Insurance - Investor Sponsored Cooperative Housing
14.125	Mortgage Insurance - Land Development and New Communities
14.126	Mortgage Insurance - Management Type Cooperative Projects
14.127	Mortgage Insurance - Mobile Home Parks
14.218	Community Development Block Grants/Entitlement Grants
14.219	Community Development Block Grants/Small Cities Program
14.221	Urban Development Action Grants
14.223	Indian Community Development Block Grant Program

DEPARTMENT OF INTERIOR

15.400	Outdoor Recreation - Acquisition, Development and Planning
15.402	Outdoor Recreation - Technical Assistance
15.403	Disposal of Federal Surplus Real Property for Parks, Recreation, and Historic Monuments
15.411	Historic Preservation Grants-In-Aid
15.417	Urban Park and Recreation Recovery Program
15.600	Anadromous Fish Conservation
15.605	Fish Restoration
15.611	Wildlife Restoration
15.613	Marine Mammal Grant Program
15.802	Minerals Discovery Loan Program
15.950	National Water Research and Development Program
15.951	Water Resources Research and Technology - Assistance to State Institutes
15.592	Water Research and Technology - Matching Funds to State Institutes

DEPARTMENT OF TRANSPORTATION

20.102	Airport Development Aid Program
20.103	Airport Planning Grant Program
20.205	Highway Research, Planning, and Construction
20.309	Railroad Rehabilitation and Improvement - Guarantee of Obligations

20.310	Railroad Rehabilitation and Improvement - Redeemable Preference Shares
20.506	Urban Mass Transportation Demonstration Grants
20.509	Public Transportation for Rural and Small Urban Areas

GENERAL SERVICES ADMINISTRATION

39.002	Disposal of Federal Surplus Real Property

COMMUNITY SERVICES ADMINISTRATION

49.002	Community Action
49.011	Community Economic Development
49.013	State Economic Opportunity Offices
49.017	Rural Development Loan Fund
49.018	Housing and Community Development (Rural Housing)

SMALL BUSINESS ADMINISTRATION

59.012	Small Business Loans
59.013	State and Local Development Company Loans
59.024	Water Pollution Control Loans
59.025	Air Pollution Control Loans
59.031	Small Business Pollution Control Financing Guarantee

ENVIRONMENTAL PROTECTION AGENCY

66.001	Air Pollution Control Program Grants
66.418	Construction Grants for Wastewater Treatment Works
66.426	Water Pollution Control - State and Areawide Water Quality Managment Planning Agency
66.451	Solid and Hazardous Waste Management Program Support Grants
66.452	Solid Waste Management Demonstration Grants
66.600	Environmental Protection Consolidated Grants Program Support Comprehensive Environmental Response, Compensation and Liability (Super Fund)

* Numbers refer to the Catalog of Federal Domestic Assistance Programs, 1980 and its two subsequent updates.

B. STATE AND FEDERAL PROGRAMS NECESSARY TO FURTHER THE LWRP

1. State Actions and Programs Necessary to Further the LWRP

a. Department of Environmental Conservation

(1) Permits for Transportation of Water by Vessel and Approval of Plans for Wastewater Treatment: If issued in conformance with LWRP policies will help preserve the quality of the Hudson River.

b. Office of Parks, Recreation and Historic Preservation

(1) Land and Water Conservation Funds: Can be used to develop or improve facilities at the Town Park.

c. Department of State

(1) Funds for LWRP Implementation: Can be used for pre-construction activities such as the design planning and development of the Town Park, a habitat enhancement study for the wetland and a detailed design study and development of a riverfront access road, and feasibility studies for system of hiking trails.

d. Office of General Services

Prior to any development occurring in the water or on the immediate waterfront, OGS should be consulted for determination of the State's interest in underwater or formerly underwater lands and for authorization to use and occupy lands.

2. Federal Actions and Programs

a. Department of Defense, Army Corps of Engineers

(1) Dredging Channel Improvements, etc: Funding and/or approval to maintain navigation in the Hudson River and to repair deteriorated bulkheads along the river and improve shoreline facilities.

b. Department of the Interior

(1) Outdoor Recreation--Acquisition, Development and Planning: Such assistance could be used to aid in the preparation of a master plan for the Town's riverfront park and for development of improvements in accord with the plan.

c. Department of Transportation

(1) Approval of joint use of Conrail right-of-way to permit construction of access road.

SECTION VII

CONSULTATION WITH OTHER AGENCIES

VII. CONSULTATION WITH OTHER AFFECTED FEDERAL, STATE, REGIONAL AND LOCAL AGENCIES.

A. LOCAL CONSULTATION

Consultation has consisted of maintaining liaison with Town agencies whose action or functions may be affected by the LWRP. Two members of the Town Board served on the Waterfront Advisory Committee. Several public informational meetings were held.

B. REGIONAL CONSULTATION

1. Capital District Transportation Committee:

   Contact was made to ascertain the present legal and programming status of proposed highway system improvements in North Greenbush.

2. Rensselaer County Health Department:

   Information was provided on public water supply and groundwater characteristics.

C. REVIEW OF DRAFT LWRP BY STATE, FEDERAL AND LOCAL AGENCIES

The Draft LWRP (with Draft EIS) was reviewed and approved by the Town Board and forwarded to the NYS Department of State (DOS). The DOS then initiated a 60-day review of the Draft LWRP/DEIS pursuant to the Waterfront Revitalization and Coastal Resources Act and State Environmental Quality Review Act. Copies of the Draft LWRP and DEIS were distributed by DOS to all potentially affected State and Federal agencies, Rensselaer County, adjacent waterfront municipalities, and the Capital District Regional Planning Board. Comments received on the Draft LWRP/DEIS were reviewed by DOS and the Town and resultant changes were made to the LWRP, which are detailed in the Final Environmental Impact Statement.

SECTION VIII

LOCAL COMMITMENT

VIII. LOCAL COMMITMENT

From the inception of the LWRP, it was recognized that involvement and commitment by both local officials and citizens was essential to the development of an effective program and to carrying out the various tasks to achieve its implementation. The program to achieve local commitment is described below:

A. WATERFRONT ADVISORY COMMITTEE

The first action taken following approval of the LWRP preparation grant was to invite interested citizens and members of local boards to participate in the program. The appointment of a Town Waterfront Advisory Committee was made from this group. The Committee included two members of the North Greenbush Town Board, a representative of the RPI Technical Park, and members of other local boards, business, civic, planning and environmental groups.

The Committee was assigned major responsibility for guiding and developing the program. During the initial planning period the Committee met at least once a month. Subcommittees were formed to discuss policy, consider alternative approaches and recommend specific actions.

B. PUBLIC MEETINGS

The general public has been informed of the planning process through periodic releases and through participation in two public meetings in the initial stages of the program. The first meeting was held soon after the start of the program to determine public concerns, to explain the purpose of the program and its potential benefits and to set forth the schedule and procedures to be followed. The second meeting was held at a point when the policies had been established and a program determined, but when modifications were still possible based on public response. A final public hearing was held prior to approval by the Town Board.

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APPENDIX A

GEOTECHNICAL REPORT -- RENSSELAER TECHNOLOGY PARK CONNECTOR ROADWAY

INTRODUCTION:

It is our understanding that the client proposes to construct a "Connector Roadway" from the upper plateau of the Technology Park to the proposed development area along the Hudson River south of the existing Treatment Plant. The elevations in the upper plateau are commonly 200 (M. S. L.) or higher and the elevations along the existing railroad track near the proposed lower level development are near 20 (M. S. L.) or lower.

The area being considered for the proposed Connector Roadway would be generally bounded on the north by the existing Niagara Mohawk Power Company right of way and on the south by the finger of upland bounding the southern edge of the major ravine or canyon which parallels the power company right of way just south of the power lines. We have indicated alternate general routes designated by the letters A, B, and C on the diagram (Figure 1). The routes marked A and C along the tops of the slopes were indicated to us as of primary interest, and the route B along the invert or bottom of the canyon was indicated as a possible route.

We have assumed for the purposes of this study that a 60-foot right of way would be adequate for the roadway contemplated.

We also understand that possible building development of the land surface just south of the proposed route A is of interest to the client.

The purpose of this report is to describe the preliminary investigation conducted and to present our preliminary recommendations for selection of the proposed route for the Connector Roadway.

INVESTIGATION PROCEDURES:

No boring or laboratory testing work was performed specifically for this project. The results of earlier investigations conducted throughout the Technology Park have been utilized in performing the preliminary analyses conducted.

Our primary field investigation procedure was to walk over the proposed routes. We examined the surface conditions including the condition of trees, vegetation, and the topography.

The balance of our investigation included the preliminary stability analysis of the slopes along the proposed routes and consideration of the drainage and grading aspects of the potential designs.

SUBSURFACE CONDITIONS AND GEOLOGY:

The important geology for the Technology Park as it bears on this study is glacial geology. The soils of greatest interest are the lucustrine clays and silts which are prevalent throughout the park. These glacial lake clays were deposited during the late glacial period in what is known as glacial Lake Albany. These soils cover the upper plateau area of the Technology Park. The erosion through centuries has dissected this clay plateau forming the canyons or ravines which drain westerly to the Hudson River. The continuing erosion of these canyons has resulted in continuing instability of the sides of the canyons.

The glacial lake clays and silts rest on relatively dense glacial till or hardpan formations and the glacial tills in turn rest on bedrocks which are primarily shales in this area. The glacial tills and shales can be observed in the bottoms of some of the canyons or ravines.

The clay and silt deposits are known to have effective friction angles varying between about 23 degrees and 28 degrees in the weaker layers. The long-term cohesion values are quite low and can be assumed to be in the 25 psf to 100 psf range for the purposes of this preliminary study.

The key factor in the relative stability of the slopes and the clays on the site are the prevailing high groundwater tables. When the groundwater tables rise to very shallow levels the stable slopes can approach one half the friction angle in surface gradient. When the slopes are well drained the stable slopes can approach the friction angle itself in surface gradient.

The slopes in most of the canyons or ravines in the subject study area are marginally stable and locally unstable. Dead trees and fallen trees along with numerous tension cracks and scarp faces can be seen throughout the sloping areas indicating continuing shallow slope failures. These have occurred over decades and centuries. There is reason to believe that the works of man since the 17th Century have accelerated the erosion and with it the slope instability.

The gently rolling lands (shaped like fingers in the plan view) lying between these generally parallel canyons or ravines are very stable except for the edges adjacent to the

slopes described above. Failures occur along the edges periodically. These failures tend to disturb narrow strips of ground surface 10 to 30 feet wide or even less. Deep failures which would affect larger amounts of ground surface at the tops of slopes are apparently unusual or rare. The typical failures are surface or shallow failures typical of frictional materials rather than the very deep failures which can occur in soft, highly cohesive soils.

GROUNDWATER CONDITIONS:

Our observations and experience with the groundwater levels in this area indicate that the depth to the general groundwater table varies widely. Groundwater levels are generally closer to the surface and may be at the surface in the lower parts of the slopes and at the bottoms of the ravines. The groundwater tables near the western ends of the fingers of land tend to be lower and therefore the ground surface is more stable than in the eastern ends of these fingers of land where they join the mass of the upper plateau. The in-feed of groundwater into these clay deposits is largely horizontal from east to west. The horizontal permeability of the ground is much greater than the vertical permeability. The infiltration of surface water is relatively small on the sloping clay ground except for water which penetrates seasonal desiccation cracks that form in the upper 10 to 15 feet of the profile.

ANALYSIS:

General:

As indicated in the discussion above, the entire area of the side slopes of the canyon in the study area can be considered as marginally stable or unstable. This is also true of the strips of land along the tops of the slope.

The central portions of the wider finger or strip of land south of proposed Route "A" would be relatively stable due to the distance from the tops of the slopes flanking to the north and south.

The very bottom of the canyon along the proposed Route B would be relatively stable by its position at the lowest elevation or bottom of the slopes.

The existing unstable and marginally stable slopes can be stabilized, if necessary, by either flattening the slopes or improving the drainage. Flattening would typically be accomplished by adding material to the toe of the slope or removing material from the top of the slope or a

combination. Drainage would be accomplished by installing drains aligned up and down the slope or across contour at a depth great enough to lower or limit the rise of the groundwater.

In the project area the slopes are ranging up to 100 to 120 feet in height and up to 400 to 500 feet in horizontal distance from the top of slope to the bottom. Stabilizing such extensive slopes is a relatively expensive project. Therefore, the routes along the wider strips of land or at the inverts or bottoms of the canyons or ravines is favored in terms of cost.

The disadvantage of utilizing the wider strips of land such as that south of the Route "A" is that otherwise available building space would be used by the roadway. Also, the likely routes down at the west end of the finger are steep and will require extensive grading. A long stretch of relatively steep grade would be required.

Stability Analyses:

Stability analyses were performed at four representative cross sections or profiles along the south slope of the canyon or ravine between proposed Routes A and B. This slope can be assumed to be generally similar in behavior and characteristics to the other side of the same canyon between proposed Routes B and C. Further these analyses provide some indication of the effect of grading and drainage on the safety factors of other slopes in the Tech Park.

These profiles analyzed are shown in Figure 1 in the plan. Additionally analyses of altered sections were performed. These were the same profiles as cross sections with about 10 feet of cut removed at the top of the slope and about 15 feet added as fill at the toe of slope. In those altered cross sections the stability was re-examined using historically high water table information gained from analyzing the existing natural profiles. The effect on the safety factor and stability of the slope with material removed from the top; added to the bottom; or, with improved drainage near the toe of the slope has been determined for the assumed conditions.

The technique used was to assume an existing safety factor of 1.0 based on the apparent instability indicated by tree growth and surface topograhy. Using the known range of soil strength values the historically high water tables were established in the form of pore pressure ratios. Then the slopes were reanalyzed using the altered surface topography with the derived groundwater data. A further extension of

this procedure was to analyze the same cross sections with improved drainage near the toe of the slope where the water table is commonly observed to come close to the ground surface.

The soil cohesion was asumed to be 25 psf. This is conservative, but in the range of the very low values found to prevail for long term stability of similar local slopes. The friction angle of the soil was assumed to be 24 degrees. The total unit weight of the soil was assumed to be 120 pcf.

Results of Slope Stability Analysis:

1. The historically high pore pressures ratios determined using the assumed soil conditions are shown below for each of the four profiles analyzed. A value of ru=0.50 would be complete saturation of the failure mass.

Profile	
1.	0.48
2.	0.44
3.	0.34
4.	0.26 (Note much better drainage near west end of finger of upland compated to the easterly slope)

2. The required safe building setbacks from the existing top of slope for each of the first 3 profiles. (Minimum F.S. = 1.3).

Profile	
1.	60'
2.	60'
3.	80'

3. The required safe building setbacks measured from the same point (existing top of slope) after cuts and fills are made at top and bottom. (F.S. = 1.3)

Profile	
1.	0'
2.	30'
3.	30'

4. The same safe setback as in "3" with drains at the toe. (F.S. $\geq$ 1.3)

   Profile

   1. -30'
   2. -30'
   3. 10'

The relative gain in stable or buildable land in the strip along the top of the slope can be seen from these results. These results are preliminary, but will serve as a guide.

RECOMMENDATIONS:

Proposed Route A

Analysis of the stability of cross sections of the slope along and to the north of the proposed Route A indicate that without any grading or alteration of the terrain that the safe setback distance from the top of the slope for such a roadway would be between 60 and 80 feet. Using this setback, a 60-feet roadway, and a similar setback required along the south edge of the same strip of land, the remaining land for development would vary from 0 to 200 feet. This is a relatively narrow strip of land and limits the use of the area. Flattening the slope by removing material from the proposed alignment of Route A at the top of slope or by adding material at the bottom of the slope allows the construction of the road closer to the top of the slope. Improved drainage allows a further reduction in the required setback.

Proposed Route B

The problem of stability is substantially less with the proposed Route B along the bottom or invert of the canyon. The effect of filling at the bottom is stabilizing to both sides of the canyon. The remaining stability problem is the problem of any further sloughing of slope materials down to the roadway below. This is less difficult to deal with.

It appears that 10 to 15 feet of fill at the bottom of the ravine would result in a roadway width of 60 feet depending on the local topography. The available roadway building space can be widened by increasing the depth of the fill placed. Sufficient width would need to be provided for drainage swales along each side of the roadway as well as space for a conduit to handle the upstream drainage run off

which now passes through the canyon on the way to the Hudson River.

Material for filling the proposed Route B could be obtained from the proposed Route A area along the top of the slope which would provide flattening of the slope by cutting at the top as well as filling at the bottom. Alternatively, it could be gained from other upland areas. Taking material from a bench cut at the top of the slope may provide for a second service road at the top.

The existing average gradient of the proposed Route B is approximately 6 to 7% This is a relatively moderate grade compared to the grades which would be needed to descend efficiently from elevation 150, plus or minus, to the bottom levels along the proposed Route A as indicated above.

The use of Route B would accomplish erosion protection of the bottom of the ravine protecting the slopes on both sides.

Proposed Route C

It is our recommendation that the proposed Route C not be further considered at this time. The existing Jeep trail and alignment of the existing sewer occupy a relatively narrow ridge flanked on both sides by unstable slopes with continuing erosion of both canyon bottoms or stream bottoms at the foot of each slope. With the passing of time the instability of these slopes will tend to narrow the width of the bench at the top. A recent failure just east of the Niagara Mohawk tower can be seen where a strip along the north edge of the trail dropped several feet as a result of a slope failure toward the north.

Summary of Route Recommendations:

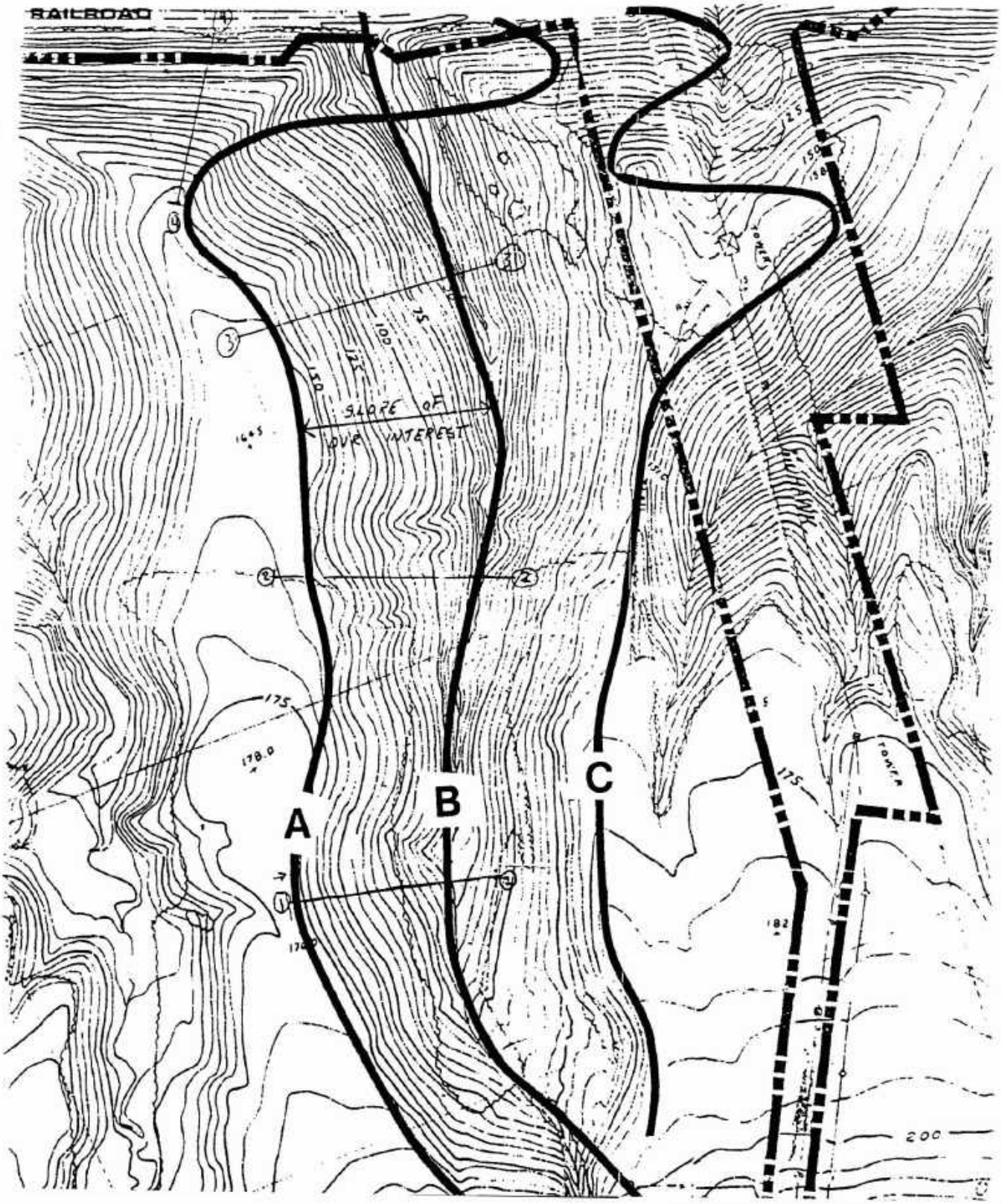
We recommend that the proposed Route B holds the most promise at this stage of our investigation. The ability to generate a relatively gentle gradient of 6 to 7% while not using available building land south of the proposed Route A makes this route more attractive than Route A itself. Development of the Route along A would require either the removal of some materials from the route itself or the placement of material along the Route B at the slope bottom or a combination. The only alternative would be to move Route A well out on the open land decreasing building space.

The proposed Route B seems to us more practical. Detailed cost studies and planning studies would be needed before a decision could be made.

The scope of this study does not include detailed recommendations for construction of the proposed roadway. Such detailed recommendations can be developed after a consideration of the contents of this report and a selection of routes for further study by the client. At that further stage of investigation a program of borings and soil testing along with additional stability analysis would be conducted. This work would be used to determine the extent of grading and drainage work required to construct the proposed Connector Road.

Additional Recommendations:

We would like to point out that the development of a roadway along the proposed Route B at the bottom of the canyon would provide an oppportunity to arrest the continuing erosion along the bottom of that water course. This continuing erosion could eventually cause serious instabilities along the existing sewer alignment as well as instabilities along the edge of the potentially developable land south of the proposed Route A. A sufficiently-sized stormwater conduit could be constructed along Route B so that major amounts of stormwater from future development at the upper level could be safely conducted to the river. This approach could control erosion of this ravine and other ravines should water be diverted from those other ravines. Increasing development will inevitably increase the amount of erosion in all of the parallel ravines draining the upper Tech Park. It may become necessary locally to stabilize the bottoms of some of these canyons to stabilize the slopes which rise from these drainage courses. The recent instability along Route C is a case in point.


RAILROAD
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182
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VERNON HOFFMAN PE
SOIL AND FOUNDATION
ENGINEERING
118 SOUTH FERRY STREET
SCHENECTADY NY 12305
518 382-0207

October 14, 1988

Rensselaer Technology Park
Att: Michael H. Wacholder, Dir.
100 Jordan Road
Troy, NY 12180

Gentlemen:

Re: The letter of August 29, 1988 from Michael Wacholder regarding additional recommendations desired by Daniel Schuster of Schuster Associates - File No. 3318

INTRODUCTION:

The information provided in this letter is to be regarded as supplementary to the recommendations included in our Report dated July 22, 1988.

I refer also to the letter dated August 4, 1988 from Schuster Associates which was enclosed with the letter from the Technology Park.

The items of additional information or recommendations desired were designated in the Schuster letter as follows:

Item 5 - Design criteria: Discussion of criteria and techniques regarding grading, slope stabilization, erosion and siltation control and landscaping to assure that adverse impacts will not result from construction and use of the road.

Item 6 - Typical design: Diagrams of typical roadway cross sections and profiles and any other typical details to illustrate application of the design criteria.

Recommendations:

Item 5 - Design Criteria:

RECEIVED
OCT 17 1988
RENSSELAER TECHNOLOGY PARK

At this stage of a preliminary design study, it should be adequate to address these matters of techniques for grading, slope stabilization, erosion and siltation control as well as landscaping in general terms as far as our geotechnical study is concerned. Detailed recommendations such as percentage of compaction; or the location and spacing of silt barriers; or the details of any proposed landscaping would best be done under a design study. It is common practice for the site designer to address these matters utilizing geotechnical recommendations. My earlier report addressed in some detail the matter of slope stability in itself.

It can be said that the soils on the site are typically varved silts and clays with surface topsoils and the subsoils derived through the weathering of the varved silt and clay deposit. Locally, there are outcroppings of rock and of the underlying glacial till. The typical silty and clayey soils on the site are probably average for the general area in their susceptibility to erosion. Clay soils are more resistant to erosion than silty or fine sandy soils found elsewhere in the area which do not have the plasticity and cohesion to resist wind and water erosion that clays do. The vegetative cover and the ability of the site soils to support vegetative growth is good.

Normal care during construction including the use of hay bales, silt fences, and possibly sedimentation basins at the bottoms of slopes or swales to clean runoff water of sediment would be adequate. The use of mulch, erosion fabric and rip rap in critical areas along with timely seeding of vegetative cover are recommended.

The recommended design approach of following the bottom of the existing ravine with the road alignment would tend to minimize the need to expose long slopes with the regrading of those slopes.

Cut-and-fill slopes should not exceed 2.0:1.0 (horizontal/ vertical) without special design attention regarding erosion. Normally, slopes on this site need to be flatter than this for stability reasons.

Roadway design and site layout design are not among my areas of specialization. However, I routinely make recommendations regarding pavement thickness designs and recommendations for stability of slopes and similar recommendations.

The cross section and profile of a proposed roadway aligned along the bottom of the ravines would not be unusual. They would be similar to any highway alignment descending/ascending in a cut section.

I have enclosed a conceptual cross section of a roadway which is similar to other roadways within the park. It is not intended for detailed design and does not necessarily include all the required features of a final design on the site.

If there are any questions with regard to this letter, or any other matter, please do not hesitate to contact me. If you feel that any additional roadway cross sections or profiles for the roadway need to be performed, I will contact a site designer to obtain a cost estimate for submitting such plans.

Yours truly,

Vernon C. Hoffman, Jr.

Vernon C. Hoffman, Jr.
N.Y.P.E. 44363

Enc.
cc: Percy Cotton, Percy B. Cotton Assoc.

APPENDIX B

PLANNED WATERFRONT DEVELOPMENT ZONING DISTRICT

Town of North Greenbush

Shuster Associates
October 12, 1989
Revised April 23, 1990
Revised May 11, 1990

DRAFT

ARTICLE XVI

PLANNED WATERFRONT DEVELOPMENT DISTRICT

A. Purpose

To encourage a mix of water dependent and enhanced uses which benefit from or take advantage of proximity to the river. Development of these uses will be subject to standards and a review process which provide that: (1) environmental features, including steep escarpments and ravines, wetlands, riverflats, and indigenous vegetation are protected and (2) opportunities for public access to the riverfront are retained and enhanced.

B. District Boundary

The district shall include all lands within the Town between the eastern shore of the Hudson River and the 150 foot contour line or a line 2,000 feet from the eastern shore, whichever is closest to the shoreline, as shown on the Zoning Map.

C. Uses

1. Uses Permitted by Right

The following uses are permitted by right upon approval of site plans in accord with the standards and procedures set forth below:

a. Marinas, boat launches, docks and similar public and private recreational uses.

b. Facilities for the transfer of passengers between water borne transportation and other means of transportation.

c. Hotels, conference centers, offices, restaurants and supporting facilities.

d. Cultural, educational and scientific uses.

e. Navigational aids and shoreline protection structures.

2. Uses Permitted Subject to a Special Permit

The following uses are permitted subject to issuance of a special permit by the Zoning Board of Appeals, subject to the criteria set forth in F. below:

a. Residential uses.

b. Uses not listed in 1. above which support or are deemed appropriate as part of the total site development master plan.

D. Development Standards

1. No structure shall exceed 40 feet in height except that structures up to 80 feet may be permitted if the distance from the river's edge is at least three times the height of the structure and the Town official responsible for fire prevention certifies that the Town has appropriate equipment to provide adequate fire fighting services for such structures.

2. All structures shall be set back at least 40 feet from the river's edge except for those structures which are associated with water dependent uses as defined in the Town of North Greenbush Local Waterfront Revitalization Program.

3. Total coverage by roads, roofs tops, parking lots or other impermeable surfaces shall not exceed one-third of the gross site area of all lands west of the railroad held in single ownership on the effective date of this local law. This ratio shall be maintained regardless of future subdivision of the site.

4. With the exception of one access road and related improvements no permanent structure shall be located in any area where the average grade for a distance of 50 feet exceeds 10%.

5. Parking shall be provided in accord with the following standards:

a. Marinas: two spaces for every three slips.

b. Hotels and Conferences Centers: 1.5 spaces per room.

c. Residential: 1.5 spaces per dwelling unit.

d. Uses not listed: based on analysis of the specific use and its traffic generating characteristics.

e. Joint Use of Spaces: In the case of two or more uses located on the same site, the sum of the space required for all uses individually may be reduced to an amount no less than 125 percent of the largest number of spaces required by any single use, upon a determination by the Planning Board that such a reduced amount of parking space will be adequate to serve all uses on the lot due to their different character and hours of operation.

6. No sign shall be visible from beyond the site with the exception of one, unlighted, sign not to exceed twenty square feet in area or ten feet in height.

E. Site Planning and Design Guidelines

Site plans for all uses shall be required in accord with the provisions of Chapter 97A, Site Plan Review and Approval, of the Town Code.

In its review of site plans, the Planning Board shall consider the following guidelines:

1. The location, design, color and materials of buildings should be such as to minimize their visibility from the river and the opposite shore.

2. Existing vegetation should be preserved to the greatest extent feasible where it provides natural screening, contributes to wetland or wildlife resources or is a significant or unusual species. New plantings should be indigenous and blend with vegetation to remain and should be used to maintain the natural, informal aspect of the site.

3. All utilities shall be placed underground to the maximum extent feasible.

4. Lighting should be spaced, shielded and directed to minimize glare and visibility from the river and the opposite shore.

5. Marina design should consider prevailing winds and navigation patterns, include at least one boat launching facility and utilize natural vegetation and existing waterways as appropriate to minimize disturbance along the river shore. Marinas shall be designed to maintain proper circulation and flushing and avoid creation of "dead" areas. Marine sanitation pumpout facilities shall be provided in any marina; rest rooms available to the public shall be provided in any marina open to the general public.

6. A public walkway shall be provided from the Town Park through the site to the City of Rensselaer line. Such walkway shall be within a 30 foot easement generally located between the developed portion of the site (buildings and parking lots) and the water's edge, shall be integrated with natural features such as mature vegetation and wetlands, and shall provide opportunities for views to the river and the wetlands. Walkways shall be screened from adjacent service areas, shall be suitably surfaced for pedestrian use and shall be provided with benches and observation points at appropriate locations.

F. Criteria for Special Permit Uses

In addition to the criteria set forth in §116-61, the following criteria shall apply to uses listed in paragraph C.2. above.

1. All uses permitted subject to a special permit shall comprise no more than 20% of the gross occupied floor area on the site at any time.

2. Any use not specifically listed as permitted by right shall only be allowed upon a finding that it is integrally related to other site uses, consistent with the purpose of this district and conforms to the schematic master plan for the site.

G. Environmental Review

No site plan shall be approved for any uses which will result in cumulative development in the district exceeding 5,000 square feet of floor area or 25 parking spaces until the following actions have been completed:

1. A schematic site master plan has been prepared for the entire site held in single ownership on the effective date of this local law indicating the approximate size, height and location of structures, systems of vehicular and pedestrian circulation and parking, the location and general character of open space and recreation facilities, and the general design and location of utility systems. The purpose of the schematic master plan is to provide a sufficient basis for evaluation of potential environmental effects as required in 2. below. It is not intended to be a detailed design but, rather, to establish the basic parameters within which future detailed design and development will take place.

2. A Generic Environmental Impact Statement (GEIS) shall have been prepared based on the schematic site master plan and including at least the following elements:

   a. An analysis of the impact on the wetlands and wildlife habitats, including plans to restore and/or enhance existing features, and measures to mitigate identified impacts.

b. Analysis of the visual impact of development as viewed from the Hudson River and the opposite shore.

c. Evaluation of the impacts of site disturbance, drainage patterns, erosion protection measures, and site maintenance and usage on water quality in the river.

d. Analysis of the impacts of road construction, drainage improvements and vegetation removal on the unstable soils of the steep slopes above the river and mitigation measures to prevent adverse impacts.

APPENDIX C

GUIDELINES FOR COORDINATING REVIEWS OF PROPOSED STATE AND FEDERAL ACTIONS

Procedural Guidelines for Coordinating NYS DOS & LWRP Consistency Review of Federal Agency Actions

DIRECT ACTIONS

1. After acknowledging the receipt of a consistency determination and supporting documentation from a federal agency, DOS will forward copies of the determination and other descriptive information on the proposed action to the program coordinator (of an approved LWRP) and other interested parties.

2. This notification will indicate the date by which all comments and recommendations must be submitted to DOS and will identify the Department's principal reviewer for the proposed action.

3. The review period will be about twenty-five (25) days. If comments and recommendations are not received by the date indicated in the notification, DOS will presume that the municipality has "no opinion" on the consistency of the proposed direct federal agency action with local coastal policies.

4. If DOS does not fully concur with and/or has any questions on the comments and recommendations submitted by the municipality, DOS will contact the municipality to discuss any differences of opinion or questions prior to agreeing or disagreeing with the federal agency's consistency determination on the proposed direct action.

5. A copy of DOS' "agreement" or "disagreement" letter to the federal agency will be forwarded to the local program coordinator.

PERMIT AND LICENSE ACTIONS

1. DOS will acknowledge the receipts of an applicant's consistency certification and application materials. At that time, DOS will forward a copy of the submitted documentation to the program coordinator and will identify the Department's principal reviewer for the proposed action.

2. Within thirty (30) days of receiving such information, the program coordinator will contact the principal reviewer for DOS to discuss: (a) the need to request additional information for review purposes; and (b) any possible problems pertaining to the consistency of a proposed action with local coastal policies.

3. When DOS and the program coordinator agree that additional information is necessary, DOT will request the applicant to provide the information. A copy of this information will be provided to the program coordinator upon receipt.

4. Within thirty (30) days of receiving the requested additional information or discussing possible problems of a proposed action with the principal reviewer for DOS, whichever is later, the

program coordinator will notify DOS of the reasons why a proposed action may be inconsistent or consistent with local coastal policies.

5. After that notification, the program coordinator will submit the municipality's written comments and recommendation on a proposed permit action to DOS before or at the conclusion of the official public comment period. If such comments and recommendations are not forwarded to DOS by the end of the public comment period, DOS will presume that the municipality has "no opinion" prior to issuing a letter of "concurrence" or "objection" letter to the applicant will be forwarded to the program coordinator.

6. If DOS does not fully concur with and/or has any questions on the comments and recommendations submitted by the municipality on a proposed permit action, DOS will contact the program coordinator to discuss any differences of opinion prior to issuing a letter of "concurrence" or "objection" letter to the applicant will be forwarded to the program coordinator.

7. A copy of DOS' "concurrence" or "objective" letter to the applicant will be forwarded to the program coordinator.

FINANCIAL ASSISTANCE ACTIONS

1. Upon receiving notification of a proposed federal financial assistance action, DOS will request information on the action from the applicant for consistency review purposes. As appropriate, DOS will also request the applicant to provide a copy of the application documentation to the program coordinator. A copy of this letter will be forwarded to the coordinator and will serve as notification that the proposed action may be subject to a review.

2. DOS will acknowledge the receipt of the requested information and provide a copy of this acknowledgement to the program coordinator. DOS may, at this time, request the applicant to submit additional information for review purposes.

3. The review period will conclude thirty (30) days after the date on DOS' letter of acknowledgement or the receipt of requested additional information, whichever is later. The review period may be extended for major financial assistance actions.

4. The program coordinator must submit the municipality's comments and recommendations on the proposed action to DOS within twenty days (or other time agreed to by DOS and the program coordinator) form the start of the review period received within this period, DOS will presume that the municipality has "no opinion" on the consistency of the proposed financial assistance action with local coastal policies.

5. If DOS does not fully concur with and/or has any questions on the comments and recommendations submitted by the municipality, DOS will contact the program coordinator to discuss any differences of opinion or questions prior to notifying the applicant of DOS' consistency decision.

6. A copy of DOS' consistency decision letter to the applicant will be forwarded to the program coordinator.

NEW YORK STATE DEPARTMENT OF STATE
COASTAL MANAGEMENT PROGRAM

Guidelines for Notification and Review of State Agency Actions
Where Local Waterfront Revitalization Programs are in Effect

I. PURPOSES OF GUIDELINES

A. The Waterfront Revitalization and Coastal Resources Act (Article 42 of the Executive Law) and the Department of State's regulations (19 NYCRR Part 600) require certain state agency actions identified by the Secretary of State to be consistent to the maximum extent practicable with the policies and purposes of approved Local Waterfront Revitalization Programs (LWRPs). These guidelines are intended to assist state agencies in meeting that statutory consistency obligation.

B. The Act also requires that state agencies provide timely notice to the situs local government whenever an identified action will occur within an area covered by an approved LWRP. These guidelines describe a process for complying with this notification requirement. They also provide procedures to assist local governments in carrying out their review responsibilities in a timely manner.

C. The Secretary of the State is required by the Act to confer with state agencies and local governments when notified by a local government that a proposed state agency action may conflict with the policies and purposes of its approved LWRP. These guidelines establish a procedure for resolving such conflicts.

II. DEFINITIONS

A. Action means:

1. A "Type 1" or "Unlisted" action as defined by the State Environmental Quality Review Act (SEQR);

2. Occurring within the boundaries of an approved LWRP; and

3. Being taken pursuant to a state agency program or activity which has been identified by the Secretary of State as likely to affect the policies and purposes of the LWRP.

B. Consistent to the maximum extent practicable means that an action will not substantially hinder the achievement of any of the policies and purposes of an approved LWRP and, whenever practicable, will advance one or more of such policies. If an action will substantially hinder any of the policies or purposes of an approved LWRP, then the action must be one:

1. For which no reasonable alternatives exist that would avoid or overcome any substantial hindrance;

purposes of its approved LWRP, it should inform the state agency in writing of its finding. Upon receipt of the local government's finding, the state agency may proceed with its consideration of the proposed action in accordance with 19 NYCRR Part 600.

C. If the situs local government does not notify the state agency in writing of its finding within the established review period, the state agency may then presume that the proposed action does not conflict with the policies and purposes of the municipality's approved LWRP.

D. If the situs local government notifies the state agency in writing that the proposed action does conflict with the policies and/or purposes of its approved LWRP, the state agency shall not proceed with its consideration of, or decision on, the proposed action as long as the Resolution of Conflicts procedure established in V below shall apply. The local government shall forward a copy of the identified conflicts to the Secretary of State at the time when the state agency is notified. In notifying the state agency, the local government shall identify the specific policies and purposes of the LWRP with which the proposed action conflicts.

V. RESOLUTION OF CONFLICTS

A. The following procedure applies whenever a local government has notified the Secretary of State and state agency that a proposed action conflicts with the policies and purposes of its approved LWRP.

1. Upon receipt of notification from a local government that a proposed action conflicts with its approved LWRP, the state agency should contact the local LWRP official to discuss the content of the identified conflicts and the means for resolving them. A meeting of state agency and local government representatives my be necessary to discuss and resolve the identified conflicts. This discussion should take place within 30 days of the receipt of a conflict notification from the local government.

2. If the discussion between the situs local government and the state agency results in the resolution of the identified conflicts, then, within seven days of the discussion, the situs local government shall notify the state agency in writing, with a copy forwarded to the Secretary of State, that all of the identified conflicts have been resolved. The state agency can then proceed with its consideration of the proposed action in accordance with 19 NYCRR Part 600.

3. If the consultation between the situs local government and the state agency does not lead to the resolution of the identified conflicts, either party may request, in writing,

the assistance of the Secretary of State to resolve any or all of the identified conflicts. This request must be received by the Secretary within 15 days following the discussion between the situs local government and the state agency. The party requesting the assistance of the Secretary of State shall forward a copy of their request to the other party.

4. Within 30 days following the receipt of a request for assistance, the Secretary or a Department of State official or employee designated by the Secretary, will discuss the identified conflicts and circumstances preventing their resolution with appropriate representatives from the state agency and situs local government.

5. If agreement among all parties cannot be reached during this discussion, the Secretary shall, within 15 days, notify both parties of his/her findings and recommendations.

6. The stage agency shall not proceed with its consideration of, or decision on, the proposed action as long as the foregoing Resolution of Conflicts procedures shall apply.