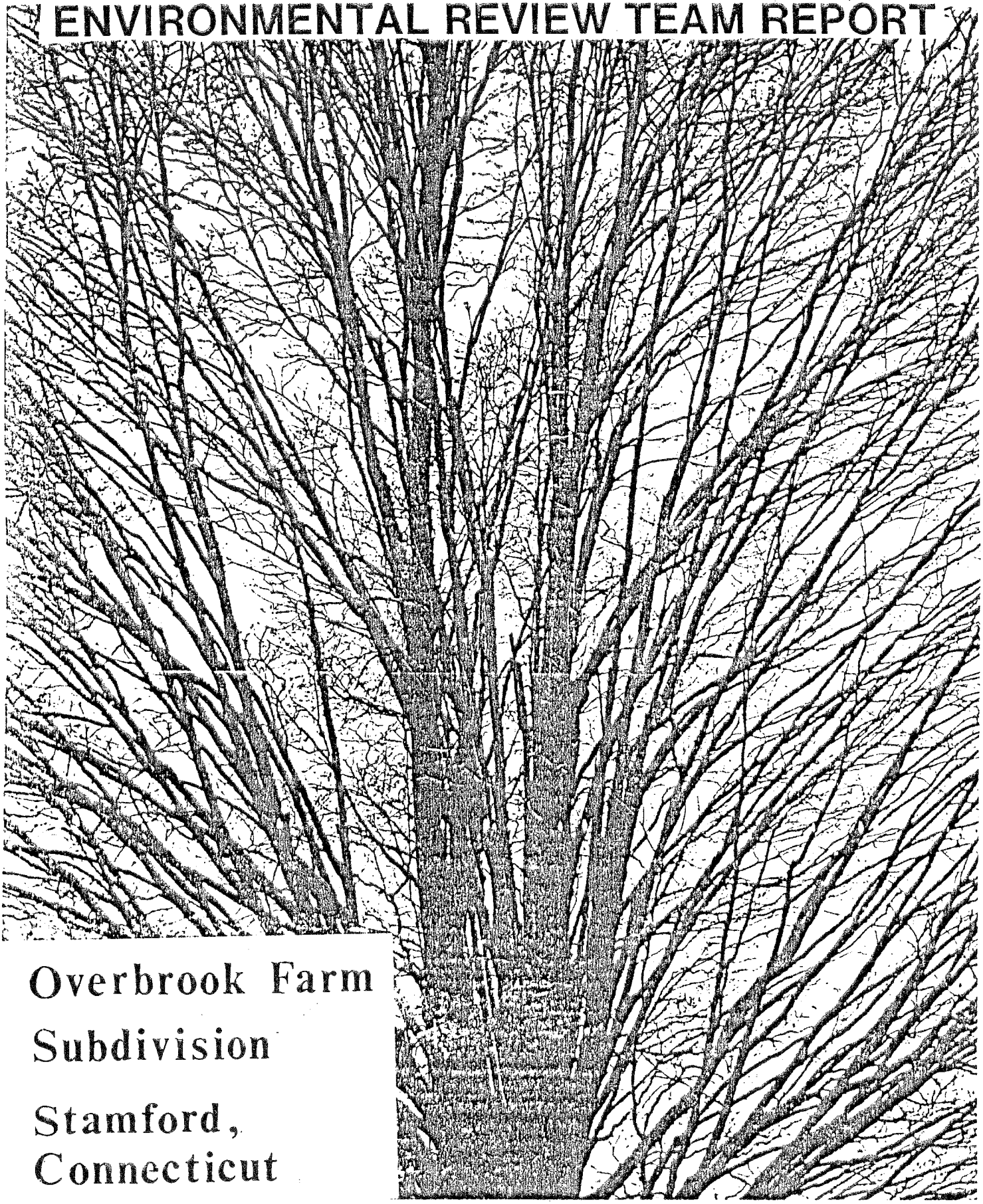
ENVIRONMENTAL REVIEW TEAM REPORT



Overbrook Farm Subdivision

Stamford, Connecticut

KING'S MARK RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

OVERBROOK FARM SUBDIVISION

STAMFORD, CONNECTICUT

Environmental Review Team Report

Prepared by the King's Mark Environmental Review Team
of the King's Mark Resource Conservation
and Development Area, Inc.

Wallingford, Connecticut

for the

Stamford Environmental Protection Board

This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. This report identifies the existing resource base and evaluates its signficance to the proposed development and also suggests considerations that should be of concern to the developer and the City of Stamford. The results of the Team action are oriented toward the development of a better environmental quality and long-term economics of the land use. The opinions contained herein are those of the individual Team members and do not necessarily represent the views of any regulatory agency with which they may be employed.

DECEMBER 1986

ACKNOWLEDGEMENTS

The King's Mark Environmental Review Team Coordinator, Keane Callahan, would like to thank and gratefully acknowledge the following Team members whose professionalism and expertise were invaluable to the completion of this study:

* William Warzecha, Geohydrologist
  Department of Environmental Protection - Natural Resources Center

* Paul Rothbart, Wildlife Biologist
  Department of Environmental Protection - Wildlife Bureau

* Kipen Kolesinskas, Soil Resource Specialist
  U.S. Department of Agriculture - Soil Conservation Service

* Don Smith, Forester
  Department Environmental Protection - Forestry Bureau

* Timothy Barry, Fishery Biologist
  Department of Environmental Protection - Fishery Bureau

* Richard Carpenter, Executive Director
  South Western Regional Planning Agency

* Ernest A. Wiegand, Archaeologist
  Norwalk Community College

* Kenneth Metzler, Biologist and Wetland Specialist
  Department of Environmental Protection - Natural Resources Center

I would also like to thank Laverne Mendela, Secretary, and Janet Jerolman, Cartographer of the King's Mark Environmental Review Team for assisting in the completion of this report.

Finally, special thanks to the following people for their cooperation and assistance during this environmental review: David Emerson and Judy Slayback of the City of Stamford, Environmental Protection Board, and John Tucker and Richard Redniss of Parsons, Bromfield and Redniss.

EXECUTIVE SUMMARY

The Chairperson of the Environmental Protection Board of the City of Stamford requested that an environmental review be conducted on a site proposed for subdivision development. The site is located in the Riverbank Section of Stamford off Riverbank Road (just north of the Merritt Parkway).

The review site is approximately 76 acres in size. The site contains a diversity of natural resources and is situated in close proximity to open space lands owned by the City of Stamford, the State of Connecticut, and the Connecticut Chapter of the Nature Conservancy. There are steep slopes, wetlands, woodlands, and extensive floodplains on the site. It is traversed by the Mianus River and the East Branch of the Mianus River and within a public water supply shed.

* *

The proposed development would encompass 14 house lots averaging 5.5 acres per lot on 76 acres. Of the proposed lots, two lots total seven acres apiece, eight lots are six acres apiece, two lots encompass four acres apiece, and the remaining two lots are three acres apiece. Each lot will be served by on-site drinking wells and subsurface sewage disposal systems. One major cul-de-sac is proposed to serve Lots 5, 6, 7, 8, 9, and 10. The remaining lots have direct access from Riverbank Road or June Road.

* *

The city was specifically concerned with the capacity of the site to adequately support the proposed development without severely impacting existing natural resources. Therefore, the city asked the ERT to: (1) Assess the hydrogeological characteristics of the site; (2) Determine the capabilities of the soils to support the proposed development; (3) Inventory and assess existing wetland, woodland, floodplain, and river flora and fauna; and (4) Assess site design compatibility.

Through the inventory and assessment process, specific resources, and areas of concern and opportunities were determined. They fall into four categories: (1) Physical Characteristics; (2) Biota; (3) Archaeological Resources; and (4) Planning Considerations.

* *

PHYSICAL CHARACTERISTICS

Geologic Development Concerns

The major geological limitations which may pose problems with respect to the proposed subdivision are: (1) Areas where bedrock is at or near the ground surface north of the Mianus River; (2) Till-based soils which may have a seasonally high groundwater condition and which may have slow percolation rates; (3) Rough and rugged terrain north of Mianus River which is characterized by moderate to steep slopes; and (4) The presence of regulated inland wetland soils and alluvial soils, both of which hold very little potential for development.

The geologic development limitations, especially the undulating and variable nature of the underlying bedrock surface, will weigh heaviest in the potential for installation of on-site subsurface sewage disposal systems, foundation placement, roads, and driveways.

Water Supply

Individual on-site wells will need to be developed on each lot of the proposed subdivision. Since no appreciable thick sand and gravel deposits appear to exist within the site, the underlying bedrock would be the most likely aquifer to be tapped for drinking water.

City officials noted on the ERT review day that nearby residences are concerned about the chances of mutual interferences between their wells and the proposed wells during pumping periods. Because of the relatively low development densities and large lot sizes, it does not seem likely that there will be interference between neighboring bedrock wells and new wells drilled to serve to the proposed development site. Also, based on the review of existing well completion reports for residences in the area, excessively low-yielding wells are uncommon.

The proposed lot sizes should be able to provide sufficient area to locate wells properly from on-site septic systems and other potential sources of contamination such as fuel oil tanks, storm drainage, etc. Wells should be located on a relatively high portion of each lot and in a direction opposite the expected direction of groundwater movement.

There is a chance that subsurface fuel oil or gasoline storage tanks may exist in the area of the outer buildings on Lot 6. These underground storage facilities are potential sources of groundwater contamination, particularly those installed many years ago. As a result, it might be wise to check for hydrocarbons in addition to the commonly tested parameters for water withdrawn from wells in the vicinity of the outer buildings on Lot 6.

Sewage Disposal

In terms of subsurface sewage disposal systems, properly engineered and installed septic systems may be able to surmount the above mentioned geologic limitations in some instances. Careful planning and detailed testing is imperative for each lot, so that potential septic system and/or shallow depths to bedrock are present, there is concern for having a sufficiently large, suitable area for on-site septic systems.

Based on the Connecticut Public Health Code, ledge rock would need to be at least four feet below the bottom area of any leaching system. Because depth to bedrock is highly variable throughout most of the site, it is likely that leaching systems will need to be kept shallow and spread out over a comparatively wide area. Based on soil mapping, it appears that the project engineer has located potential septic system sites on soils which are deeper except on one or two lots.

Lots which have soils with a seasonal high groundwater table will also need to be carefully planned. Leaching systems should also be kept elevated and spread out when seasonally high groundwater tables are encountered. In some

cases, it may be necessary to install a curtain drain and/or place proper fill material in the leaching system area in order to effectively overcome high groundwater table conditions.

In the opinion of Team's Geologist, it is advised that every effort be made to utilize gravity-fed leaching systems rather than pump systems. Because these particular lots are quite large it seems likely that a house location and a suitable gravity-fed leaching system could be located on each of the lots in question.

Hydrology

Surface runoff from the entire parcel ultimately drains into Mianus River. Lots 11 to 14 drain directly northeastward to Mianus River. Most of the site north of the Mianus River is drained by Salamander Creek. Finally, small areas of the site flow downslope to the East Branch of the Mianus River. Groundwater flow on the entire site generally parallels the surface flows on the property. Shallow to bedrock areas, which predominate the area north of the Mianus River strongly influences the direction of ground and surface water flow.

Development of the property is expected to affect the hydrology of the site watercourses at least to some extent; however, because of the proposed low density of the development and the site's close proximity to Mianus River, the small amount of runoff expected from the proposed subdivision should be adequately handled by Mianus River without causing any adverse impacts on upstream or downstream areas along the river corridor.

A stormwater management plan should be prepared and submitted to city officials for their review; since on-site floodplains and wetlands naturally detains increases in runoff generated by the new development, these areas should be left undisturbed.

Soil Resources

The wetland boundaries do not seem accurate on the western edge of Lot 7, the north western corner of Lot 3, and the eastern edge of Lot 6. Some of these differences may be because the plans reviewed (8/19/86) showed sketched wetland boundaries and not surveyed wetland boundaries.

Because of the highly variable nature of soil depth to bedrock on this parcel, careful site selection is necessary to locate deep soils for septic systems. Thus, additional deep test pits may be needed for a number of lots, especially Lots 9 and 10.

The sand and gravel glacial outwash soils on Lots 11, 12, 13, and 14 have fast perc rates and act as poor filters for on-site waste disposal. This may influence the separating distances between wells and septic systems, and the size and layout of systems.

Lots 4 and 8 have septic systems proposed on moderately well drained soils. Because of the size of the lots, it should be possible to locate the systems on well drained soils upslope.

The proposed septic system for Lot 2 will receive surface and subsurface runoff water from higher on the landscape. A "swale," curtain drain, or relocation should be considered.

No erosion and sediment control plan or measures have been shown. A plan should be developed, reviewed, carefully followed, and inspected. Soil distrubance should be kept to a minimum.

* *

BIOTA

Forest Resources

Within this 76-acre parcel, there are five distinct forest stands, totalling some 55 acres. They are: (1) Oak/Moxed Hardwoods; (2) Red Maple; (3) Old Field; (4) Oak Ridge; and (5) Streambelt.

Of primary concern should be the protection of the forest resource in areas of construction activity and the use of mitigating measures to minimize the effects of these activities on the vegetation. Considering the low density of the proposed development, no widespread impacts are anticipated.

The types of forest damage which can be expected from site development and preparation include: (1) Wounding of the stem by heavy machinery; (2) Breaking of branches by other falling trees; (3) Changes in the structure of soil gases and in soil moisture levels and patterns due to soil compaction by heavy machinery; (4) Damage to fine roots due to soil compaction; and (5) Damage to roots during excavation.

In order to minimize disturbance of the vegetation, careful pre-construction planning is advised. Each of the proposed lots should be examined to identify trees to be retained which will be near active construction areas. These trees should be prominently marked and their root zones staked out. Equipment operators should be clearly advised to avoid staked areas.

Wetland Characteristics

The wetlands on the site can be best described as diverse. Transversed by the Mianus River and it floodplain, the area provides suitable habitat for a number of plant and animal species as well as an aesthetic vista for the casual observer. Two drainageways cross the property and their associated red maple-spicebush forested wetlands and intermittent streams provide additional habitat and wildlife value.

Anticipated Impacts to On-site Wetlands

The proposed development appears to be well planned and situated to minimize environmental impact to the wetlands and watercourses. The only impacted area is the driveway crossing across Salamander Creek, allowing access to Lot 8. This in itself does not present a real problem, however, since the crossing is at a narrow point; and if an adequate sized culvert is used, stream flow will not be obstructed during periods of high water. Therefore, the hydrology of Salamander Creek needs to be investigated prior to approval of the crossing.

Wildlife Resources

As the demand for land increases and land is developed, there will be an immediate and lasting negative impact on wildlife. The primary impact is the direct loss of habitat due to buildings, roads, driveways, parking areas, or walkways. Another impact is the loss of habitat where cover is cleared for lawns and landscaping. A third impact is the increased human presence, vehicular traffic, and a number of free roaming dogs and cats. This will drive the less tolerant species from the site, even in areas where there has been no physical change.

The large house lots and the close proximity to existing open space does in itself also serve as a type of mitigation. Implementation of the suggested guidelines will help to minimize the adverse impacts of local wildlife populations. In addition the implementation of backyard wildlife habitat management practices should be encouraged. Such activities involve providing food, water, cover, and nesting areas.

Fishery Resources of Mianus River

The stretch of the Mianus River located within the proposed development area can be considered marginal trout habitat throughout. Fish species that would likely inhabit this area are white suckers, fallfish, common shiner, bluegill sunfish, and rockbass.

The Department of Environmental Protection has been stocking adult brown trout in the Mianus River in the area immediately adjacent to this parcel and a newly instituted Trout Management Area exists further downstream from the site. These resources are extremely valuable due to the scarcity of stream trout fishing sites in this area of the state.

In a slow moving and open area of the Mianus River, such as is found in the proposed site of the subdivision, warming of the water can occur and result in the destruction and/or reduction of the existing trout habitat downstream. Any significant cutting or removal of the overstory or further ponding of the river on the site would very likely have severe consequences downstream. Therefore, any development on the site should consider the fragile balance between the stream and streambank and take all precautions to keep the area intact.

* *

ARCHAEOLOGICAL RESOURCES

Recent Historical Resource Potential

Historic archaeological resources were sought during this ERT. Several stone foundations, wells, and enclosures are located near the project area, as is Revolutionary Rock and its associated burial ground. Other than farmers' stone walls and features related to the present estate, no historic cultural resources were noted on the surface.

Prehistoric Resource Sensitivity

Several areas were located that are felt to be potentially sensitive in respect to prehistoric occupation of the area. They are: (1) The small, relatively level areas on and between the rock outcrops and ledges would have provided ideal locations for hunting camps and stands and (2) The broad, gently sloping floodplain and glacial outwash deposits along the Mianus River.

On the basis of the surficial inspection of the project area, it is believed that its archaeological potential is high. Further work would be required to determine the presence of prehistoric sites in suspected areas.

* *

LAND USE AND PLANNING CONSIDERATIONS

Zoning and Subdivision Regulations

In June of 1985, the Stamford Zoning Board established a new single-family residential zoning district called RA-3, requiring a minimum lot area of three acres. At the same time it declined without prejudice to approve the establishment of provisions to encourage wetlands preservation in environmentally sensitive areas which cannot support dense development. It is intended instead that these regulations are more appropriately part of subdivision regulations. The ERT was advised during the field review by Stamford Planning staff that such an amendment to the subdivision reglations will be made soon.

Finally, the Stamford Zoning map was amended to change the area of Overbrook Farm from two-acre single-family to "RA-3" or three-acre single-family. The South Western Regional Planning Agency supported all three proposals.

Existing Road Network

The site is served primarily from Riverbank Road and June Road. Both roads are narrow and winding. Locations where the proposed road serving Lots 5 to 10 and the accessway serving Lots 2 to 4 were visually examined during the field review for site distances. It is suggested that the accessway for Lots 2 to 4 be shifted slightly to the east, to provide improved site distance from the west. The design of the new street intersection with Riverbank Road should insure that cars waiting to enter Riverbank Road and northbound cars on Riverbank Road wishing to turn left into new road be fully visible to approaching southbound traffic on Riverbank Road.

Other Planning Considerations

It is strongly advised that some form of riverbank conservation easement be investigated that might allow for a continuous walking trail along the Mianus River in connection with adjacent open space reservations. The general objective was included in both the 1953 and 1977 Stamford Master Plan. Naturally, such an easement should be carefully controlled to limit its use to hikers only and not allow any kind of wheeled vehicle.

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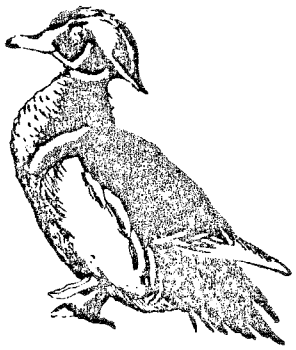


INTRODUCTION

The Chairperson of the Environmental Protection Board of the City of Stamford requested that an environmental review be conducted on a site proposed for subdivision development. The site is located in the Riverbank Section of Stamford off Riverbank Road (just north of the Merritt Parkway) (Figure 1).

The review site is approximately 76 acres in size. The site contains a diversity of natural resources and is situated in close proximity to open space lands owned by the City of Stamford, the State of Connecticut, and the Connecticut Chapter of the Nature Conservancy. There are steep slopes, wetlands, woodlands, and extensive floodplains on the site. It is traversed by the Mianus River and the East Branch of the Mianus River and within a public water supply shed. The Mianus River is a source of drinking water for the Town of Greenwich.

The proposed development would encompass 14 house lots averaging 5.5 acres per lot on 76 acres. Of the proposed 14 house lots, two lots total seven acres apiece, eight lots are six acres apiece, two lots encompass four acres apiece, and the remaining two lots are three acres apiece. Each lot will be served by on-site drinking wells and subsurface sewage disposal systems. One major cul-de-sac is proposed to serve Lots 5, 6, 7, 8, 9, and 10. The remaining lots have direct access from Riverbank Road (Figure 2).

GOALS OF ENVIRONMENTAL REVIEW TEAM

The city was specifically concerned with the capacity of the site to adequately support the proposed development without severely impacting existing natural resources. Therefore, the city asked the ERT to:

(1) Assess the hydrogeological characteristics of the site.

(2) Determine the capabilities of the soils to support the proposed development.

(3) Inventory and assess existing wetland, woodland, floodplain, and river flora and fauna.

(4) Assess site design compatibility.

THE ERT PROCESS

Through the efforts of the City of Stamford Environmental Protection Board, the developer, and the King's Mark Environmental Review Team, this environmental review and report was prepared for the city. This report primarily provides a description of on-site natural resources and presents planning and land use guidelines.

The review process consisted of four phases: (1) inventory of the site's natural resources (collection of data); (2) assessment of these resources (analysis of data); (3) identification of natural resource problem areas; and (4) presentation of planning and land use guidelines.

The data collection phase involved both literature and field research. The ERT field review took place on September 29, 1986. Field review and inspection of the proposed development site proved to be a most valuable component of this phase. The emphasis of the field review was on the exchange of ideas, concerns, or alternatives. Mapped data or technical reports were also perused and specific information concerning the site was collected. Being on site also allowed Team members to check and confirm mapped information and identify other resources.

Figure 1

LOCATION OF STUDY SITE

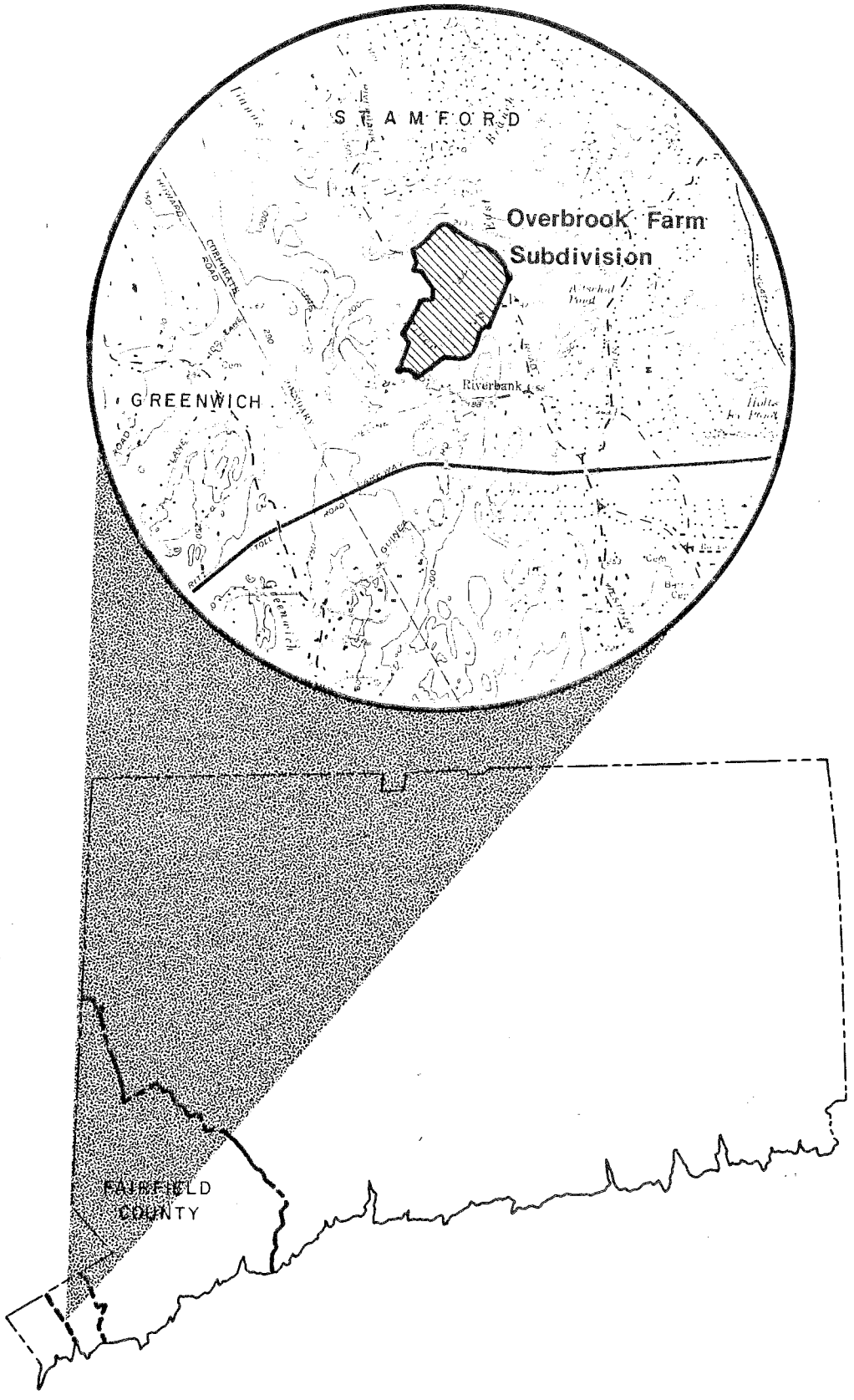
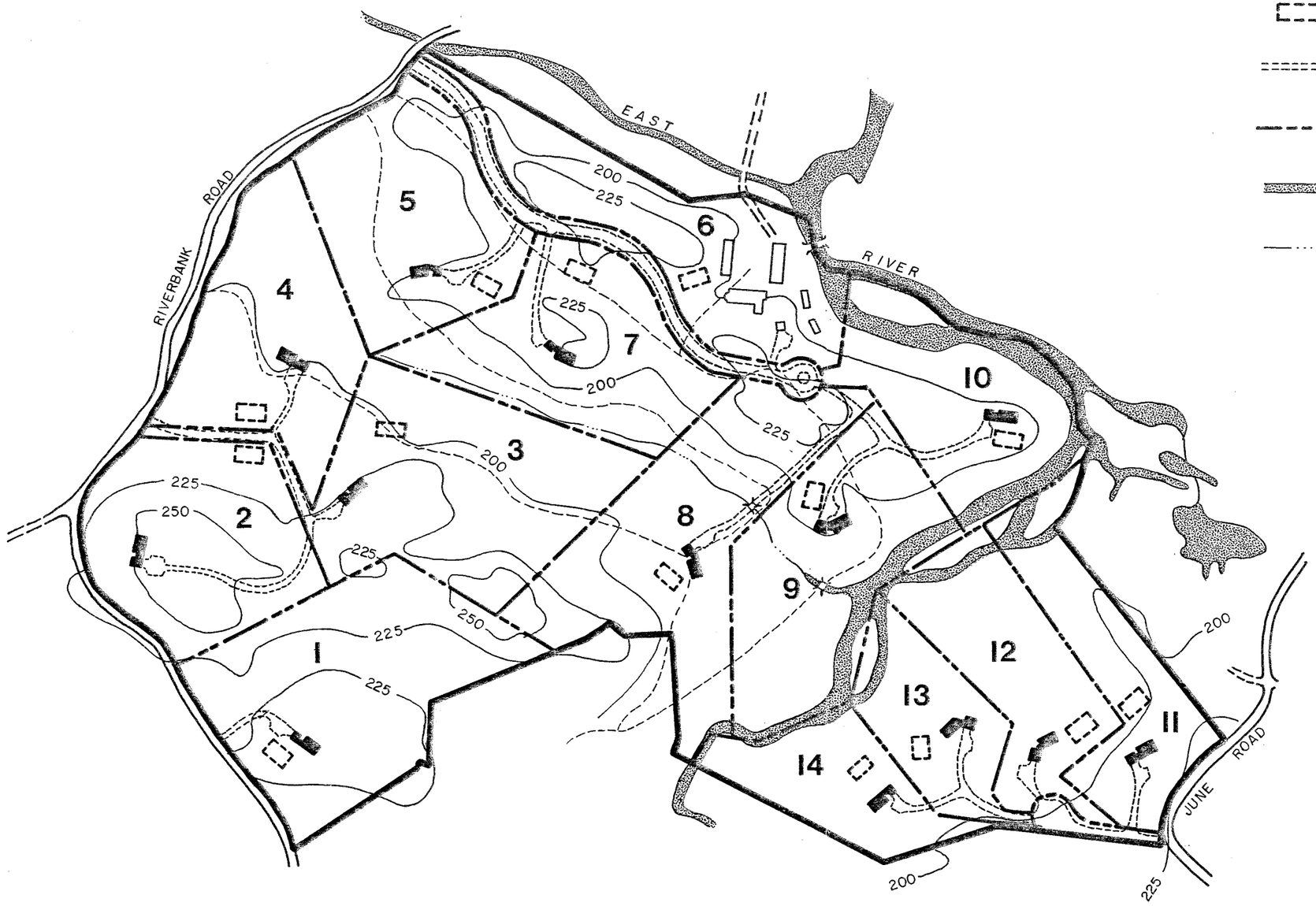


Figure 2



PROPOSED HOUSE

PROPOSED SEPTIC

PROPOSED ROAD OR DRIVEWAY

PROPOSED LOT LINES

RIVER

STREAM

OVERBROOK FARM SUBDIVISION

STAMFORD, CONNECTICUT

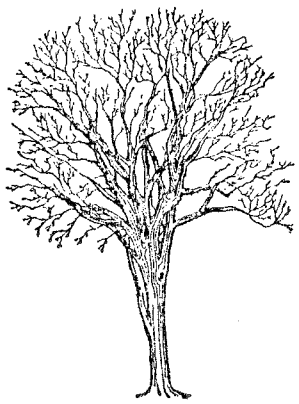
CONCEPTUAL SITE PLAN

King's Mark Environmental Review Team

0 300'

Once the Team members had assimilated an adequate data base, it was then necessary to analyze and interpret their findings. The results of this analyses enabled the Team members to arrive at an informed assessment of the site's natural resource development opportunities and limitations. Individual Team members then prepared and submitted their reports to the ERT Coordinator for compilation in the the final ERT report.

PHYSICAL CHARACTERISTICS

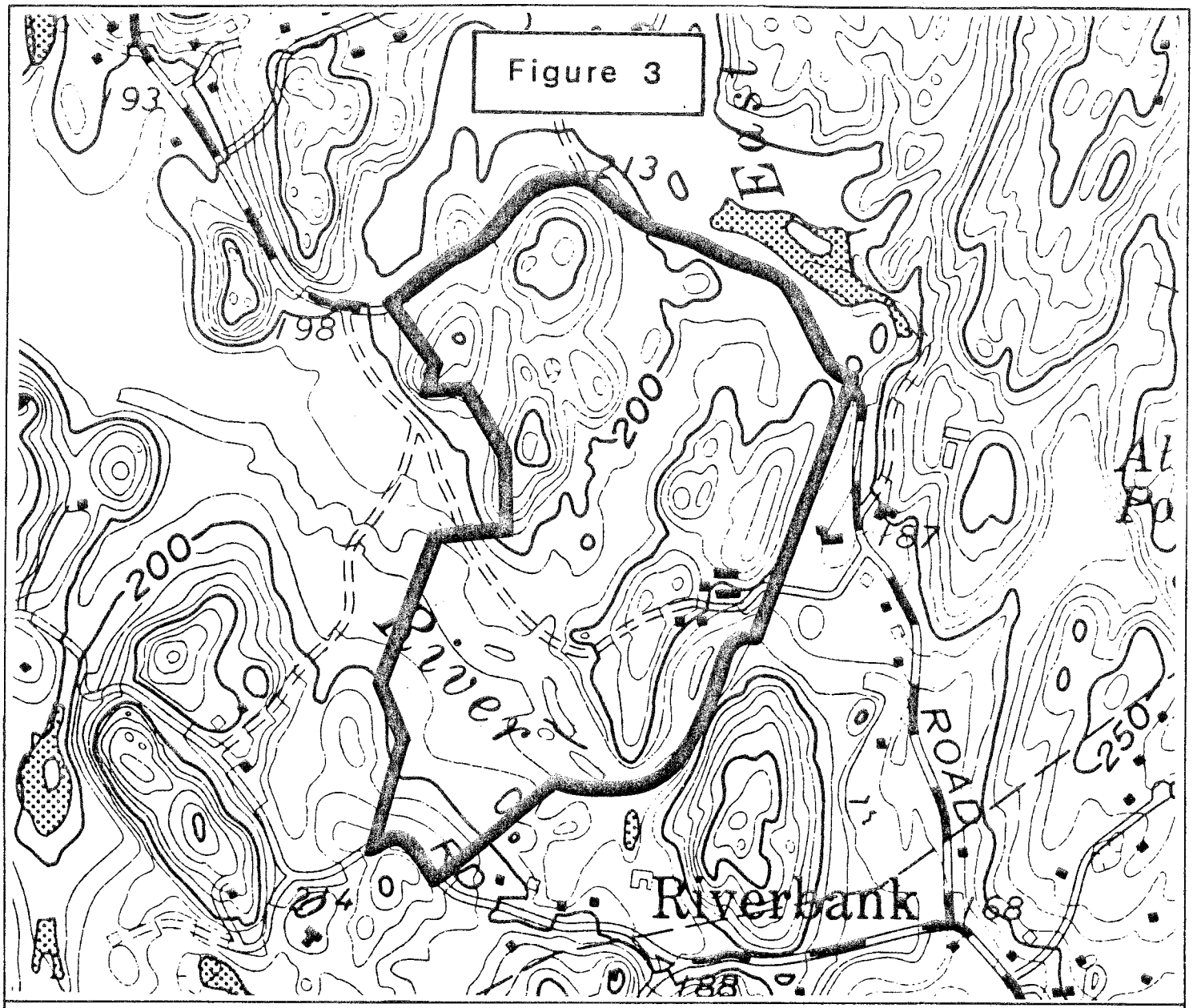


information is available for the Stamford quadrangle. This information consists of a PhD dissertation by C.O. Frank (1973) on the Relationships Between Coexisting Plagioclase and Hornblende in the Harrison Gneiss: Southeastern New York-Southwestern Connecticut. The Team's Geologist referenced John Rodgers' Bedrock Geological Map of Connecituct (1985) for the bedrock geology section. For the surficial geology section of the report, the Team's Geologist referenced the Soil Survey for Fairfield County, deep test hole information, and a revised soil map for the site supplied to Team members by the project planner.

Bedrock Geology

A report, entitled Geology of Overbrook Farm, Stamford, Connecticut prepared for Parsons, Bromfield and Redniss described the bedrock geology, surficial geology, and hydrogeology of the proposed subdivision site. The Team's Geologist generally concurs with most of the information supplied in the report.

As mentioned earlier, numerous bedrock outcrops or ledges are visible throughout the northern and central parts of the site. Rodgers (1985) has classified most of the rock underlying the site as Ordivician aged (i.e., 438 to 505 million years old) rocks called Harrison Gneiss (Figure 4). It consists of interlayered dark and light gray, medium-grained foliated gneiss. Gneiss refers to metamorphis or geologically altered rocks. In gneisses, thin bands of elongated or flaky minerals alternate with layers of granular minerals. This mineral arrangement often gives the rock a banded appearance. The "foliation" or general alignment of the flaky or elongated minerals in the rock dips moderately to the west.



OVERBROOK FARM SUBDIVISION

STAMFORD, CONNECTICUT

TOPOGRAPHY

King's Mark Environmental Review Team

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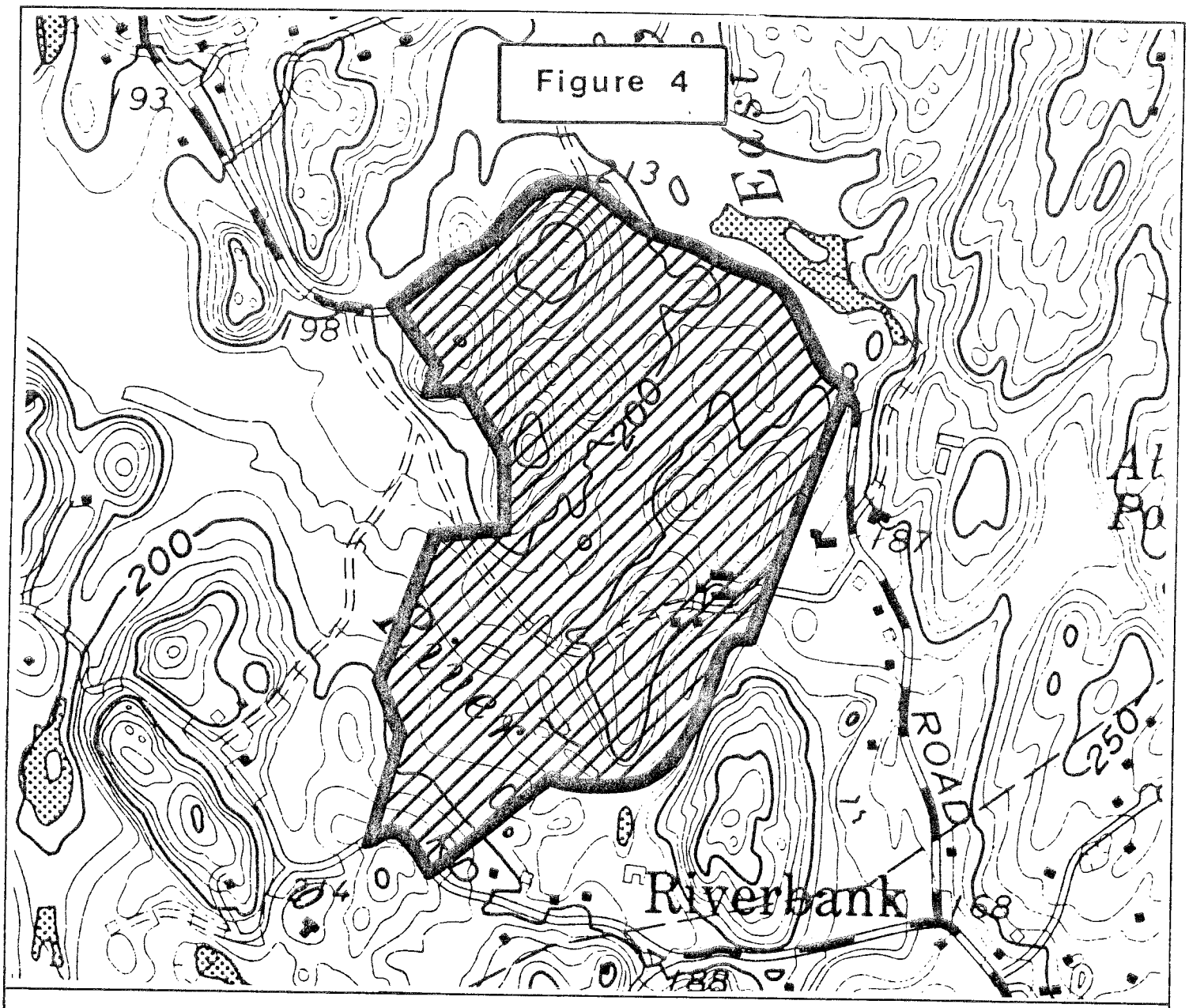


HARRISON GNEISS (Rogers, 1985 - see text for detail)

OVERBROOK FARM SUBDIVISION

STAMFORD, CONNECTICUT

BEDROCK GEOLOGY

King's Mark Environmental Review Team

0 660'

Depth to bedrock on the site ranges between zero in outcrop areas to probably not much more than 20 feet.

Since public water is not available to the site, the underlying gneissic rock will be the source of water to the drilled wells on each of the proposed lots (See Water Supply section of report).

Surficial Geology

Most of the surficial geologic material overlying bedrock on the site is till (Figure 5). Till consists of a generally non-sorted, structureless mixture of clay, silt, sand, gravel, and boulders that was deposited directly from glacier ice. The texture of till may vary from place to place. Soil mapping indicates that the till on the site is mostly sandy, stony, and friable. According to the log of numerous deep test pits, the looser till give way to a hard, compact, slightly finer grained till.

Another type of glacial sediment, called stratified drift, overlies bedrock and probably a thin veneer of till mainly in the southern parts. These stratified drift soils are delineated as Hk (Hinckley soils) and Af (Agawam soils) on the soils map distributed to Team members. Fine-grained stratified drift also covers a low-lying area of Lot 4 in the northern parts. They are delineated as Hc (Haven soils).

Stratified drift is composed of rock materials that were deposited by meltwater streams from a mass of stagnant glacier ice. Because the materials were transported and deposited by water, they commonly are well-sorted by grain size and are layered (i.e., stratified). The total thickness of the stratified drift deposits is probably not much more than 20 feet on the proposal development site.

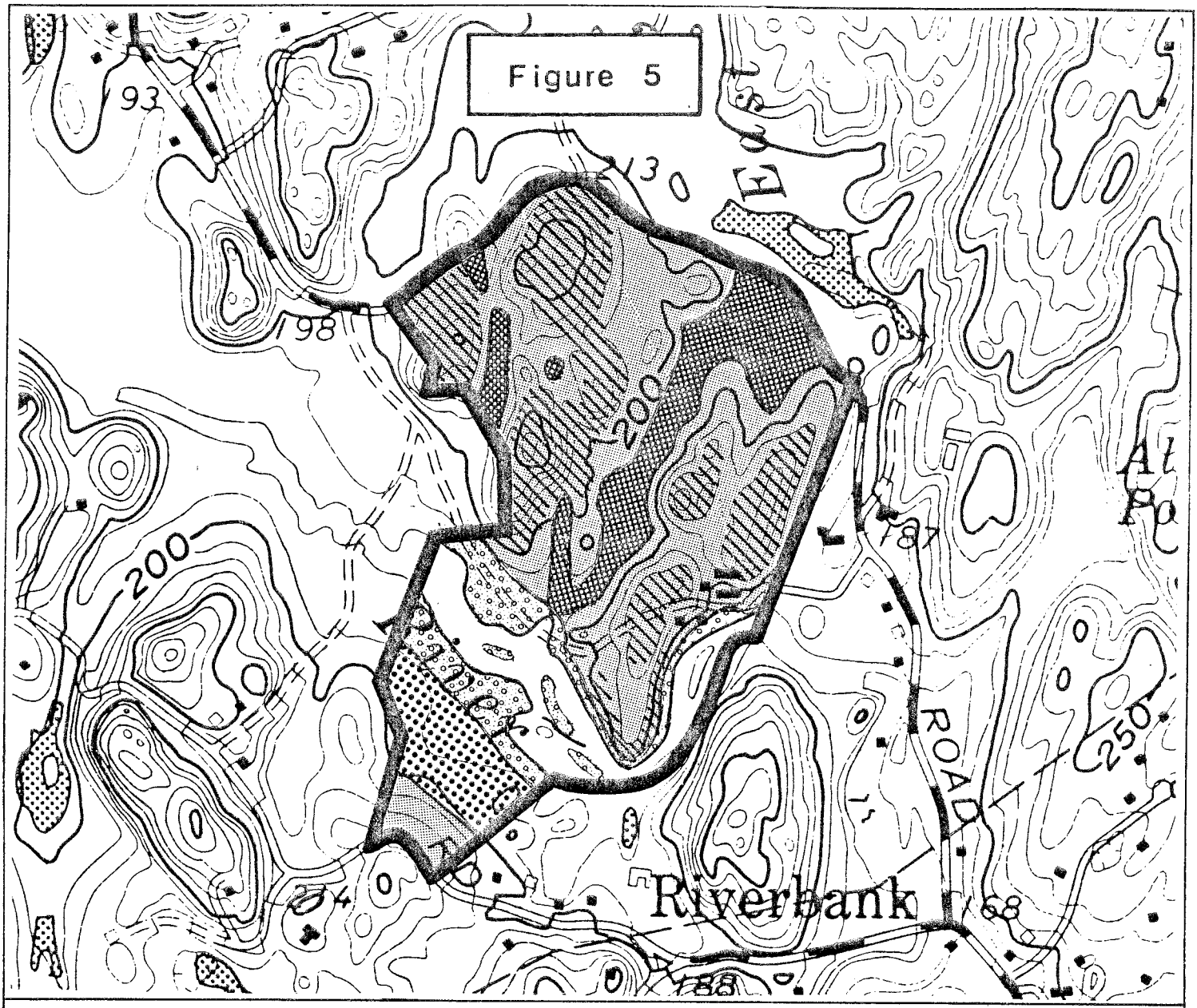
A post-glacially deposited surficial geologic material called alluvium parallels the Mianus River on the site. Alluvium generally consists of poorly- to well-sorted silt, sand, and gravel which has been recently deposited on floodplains of watercourses. These soils are identified as Ro (Rippowam soils) and Ps (Pootatuck soils). Because these floodplains are wet most of the year and important in storing floodwaters, they hold very little potential for development and should be left undisturbed.

Another post-glacially formed material on the site consists of poorly-drained and very pooly drained soils, which generally parallel drainageways and fill depressions on the site. These soils are identified as Rn (Ridgebury, Leicester and Whitman soils). These seasonally wet soils are regulated under Public Act 155. They also hold little potential for development purposes. Any modification, filling, or disturbing of alluvial or wetland soils will require a permit from the City of Stamford.

WATER SUPPLY

Since public water is not currently available in this outerlying part of Stamford, individual on-site wells will need to be developed on each lot of the proposed subdivision. Since no appreciable thick sand and gravel deposits appear to exist within the site, underlying bedrock would be the most likely aquifer to be tapped for drinking water. Depending on several hydrogeologic factors, sand and gravel deposits can generally yield water at a higher rate when compared to wells tapping crystalline metamorphic bedrock.

The exact yield of a bedrock well is a function of many hydrogeologic factors including the number and size of factures present in the bedrock. Because the fractures or openings are unevenly spaced throughout the underlying



TILL

WETLAND SOILS (approximate)

STRATIFIED DRIFT

ALLUVIUM

SHALLOW TO BEDROCK AREAS (approximate)

OVERBROOK FARM SUBDIVISION

STAMFORD, CONNECTICUT

SURFICIAL GEOLOGY

King's Mark Environmental Review Team

0 660'

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TABLE 1.

WELL YIELDS AT VARIOUS DEPTHS

Depth (feet)	Yield (gallons per minute)
320	12.0
375	2.25
225	20.0
190	5.0
145	7.5
420	7.0

wells along a line rather than in a circle or in a grid pattern. Because of the relatively low density of houses proposed under the present plan (especially if Lots 11 to 14 are purchaed by one owner), and because of large lot sizes (i.e., three acres or more) which will allow the developer to keep wells conservatively separated, it does not seem likely that there will be interference between neighboring bedrock wells and new wells drilled in the site. Also, based on the review of existing well completion reports for residences in the area, excessively low-yielding wells (two gpm or less) are uncommon.

The proposed lot sizes should be able to provide sufficient area to locate wells properly from on-site septic systems and other potential sources of contamination such as fuel oil tanks, storm drainage, etc. Wells should be located on a relatively high portion of each lot and in a direction opposite the expected direction of groundwater movement. In this regard, extra caution should be taken when locating wells on land which is down gradient from the proposed interior road or driveways, particularly where slopes are moderate to

steep. Road drainage laden with road salt during winter months may find its way into a particular well rendering the water unacceptable for domestic purposes.

The natural quality of the groundwater would be expected to be good. However, there is a chance that water produced from wells tapping the underlying bedrock may be mineralized with elevated levels of iron and manganese.

There is a chance that subsurface fuel oil or gasoline storage tanks may exist in the area of the outer buildings on Lot 6. These underground storage facilities are potential sources of groundwater contamination, particularly those installed many years ago. As a result, it might be wise to check for hydrocarbons in addition to the commonly tested parameters for water withdrawn from wells in the vicinity of the outer buildings on Lot 6.

GEOLOGIC DEVELOPMENT CONCERNS

Based on visual observations made during the field review, and bedrock and soil mapping, the major geological limitations which may pose problems with respect to the proposed 14-lot subdivision included:

(1) Areas where bedrock is at or near the ground surface north of the Mianus River.

(2) Till-based soils which may have a seasonally high groundwater condition and which may have slow percolation rates (Note: percolation tests have not been conducted on the site to date).

(3) Rough and rugged terrain north of Mianus River which is characterized by moderate to steep slopes.

(4) The presence of regulated inland wetland soils and alluvial soils, both of which hold very little potential for development.

It should be pointed out that the texture of the stratified soils in the southern parts (open fields; Lots 11 to 14) should be well suited for absorbing sewage effluent. However, because of the coarse nature of the soil, it would be expected to have rapid seepage. As a result, it would not afford ideal conditions for filtering and renovating the effluent to a stablized form. Therefore, it is suggested that sewage systems, in addition to meeting Public Health Code requirements, be located as far as possible away from watercourses and wells in the development.

The aforementioned geologic limitations will weigh heaviest in the potential for installation of on-site subsurface sewage disposal systems. These limitations may also pose constraints in terms of foundation placement, roads, and driveways. Because of the undulating and variable nature of the underlying bedrock surface, there is always a chance that it may be encountered whether during the placement of foundations, during road construction, or for the installation of septic systems and water lines. As a result, it may be necessary to blast. A series of borings and/or test pits may be valuable for determining a profile of the underlying bedrock surface. In areas where bedrock is at or near the ground surface, it may be necessary to blast in order to construct access roads, driveways, or place house foundations. Since the steepest slopes on the site are associated with these areas, it is encouraged that a detailed erosion and sediment control plan be formulated and followed very closely with implementation of the project.

SEWAGE DISPOSAL

In terms of subsurface sewage disposal systems, properly engineered and installed septic systems may be able to surmount the above mentioned

limitations in some instances. Careful planning and detailed testing is imperative on each lot, so that potential septic system and/or shallow depths to bedrock are present, there is concern for having a sufficiently large, suitable area for on-site septic systems. In order to accurately assess that such an area would be available, a sufficient number of test pits are needed on each lot to establish a bedrock profile. Based on the Connecticut Public Health Code, ledge rock would need to be at least four feet below the bottom area of any leaching system. Because depth to bedrock is highly variable throughout most of the site, it is likely that leaching systems will need to be kept shallow and spread out over a comparatively wide area. Based on soil mapping, it appears that the project engineer has located potential septic system sites on soils which are deeper except on one or two lots.

Lots which have soils with a seasonal high groundwater table will also need to be carefully planned. Leaching systems should also be kept elevated and spread out when seasonally high groundwater tables are encountered. In some cases, it may be necessary to install a curtain drain and/or place proper fill material in the leaching system area in order to effectively overcome high groundwater table conditions. For example, a properly designed and constructed curtain drain installed in a till-based soil which has a seasonally high groundwater table will afford protection to a leaching system so that the seasonal water table does not rise up into the system and interfere with the normal functioning of the system. Curtain drain installation requires an outlet for draining and needs to conform with the Public Health Code. For the flat to gently sloping areas of the site, curtain drain installation would probably not be a practical engineering measure for protecting leaching systems from seasonally high water table. It seems likely that proper fill material would be needed in these areas.

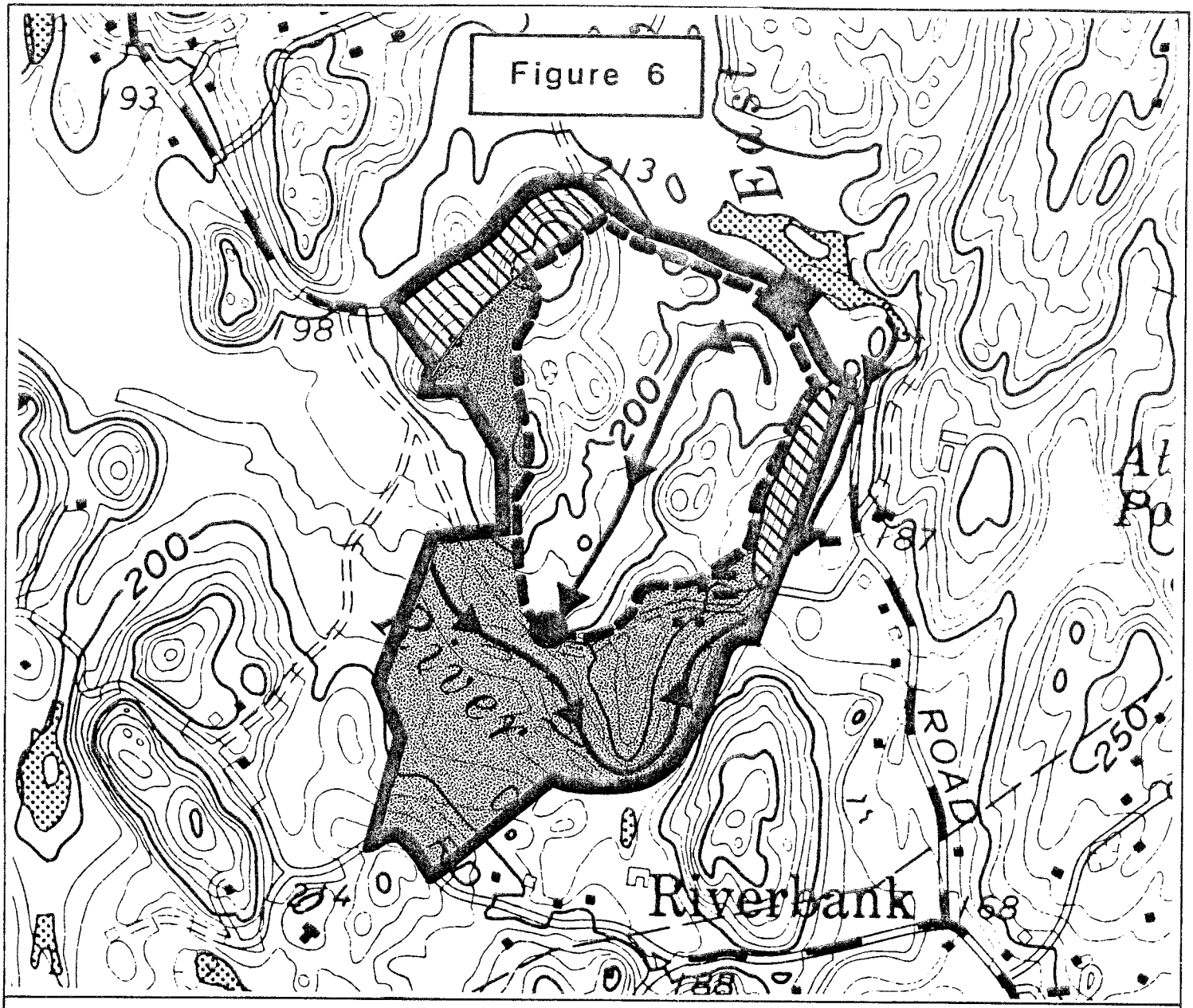
Preliminary site plans indicated that several homes in the subdivision will need to pump their sewage effluent to a high point on each of the respective lot. In the opinion of Team's Geologist, it is advised that every effort be made to utilize gravity-fed leaching systems rather than pump systems. Because these particular lots are quite large it seems likely that a house location and a suitable gravity-fed leaching system could be located on each of the lots in question, despite the presence some of the geologic limitations mentioned earlier.

HYDROLOGY

Surface runoff from the entire parcel ultimately drains into Mianus River which traveres the southcentral parts of the site. Lots 11 to 14 drain directly northeastward to Mianus River. Most of the site north of the Mianus River is drained by Salamander Creek, a small tributary to Mianus River which bisects the site. Finally, small areas of the site flow downslope to the East Branch of the Mianus River. Groundwater flow on the entire site generally parallels the surface flows on the property. Shallow to bedrock areas, which predominate the area north of the Mianus River strongly influences the direction of ground and surface water flow.

At the point where the Mianus River outlets into Cos Cob Harbor at Cos Cob (i.e, Town of Greenwich), it drains an area of 34.6 square miles or 22,144 acres. East Branch of the Mianus River drains an area of about 5.27 square miles or 3,372 acres at its point of outflow into the Mianus River at Riverbank. (Department of Environmental Protection, Bulletin No. 1) (Figure 6).

According to the DEP's Water Quality Classification for the Southwest Coast River Basin (adopted April 24, 1985), the surface waters for the Mianus River



Watershed boundary and point of outflow for unnamed tributary to Mianus River which bisects the northern and central parts of the site

Part of property which drains to East Branch Mianus River

Part of property which drains directly to Mianus River

Watercourses showing direction of flow

Approximate area of flooding problem where water flows over Riverbank Road into watershed described above (— —) from the East Branch Mianus River Watershed

OVERBROOK FARM SUBDIVISION

STAMFORD, CONNECTICUT

WATERSHED BOUNDARY

King's Mark Environmental Review Team

0 660'

N

During the field review, the Team's Geologist observed evidence of streambank erosion along Salamander Creek. Also, an old washed out stone bridge was observed on Lot 8. These conditions indicate that this watercourse is apparently subject to high, torrential waters during certain storm events. Based on discussions with the project planner, water from the small pond north if the site overtops on earthen berm and Riverbank Road during certain storm events and spills over into the watershed to Salamander Creek. As a result, this section of Riverbank Road floods during certain storm events. These high flows are probably a result of uncontrolled runoff originating from the heavy residential development which has taken place in the central and northern parts of the watershed.

It is proposed that this flooding problem will be corrected as part of the subdivision plan. Once plans for the upgrading of this drainage problem have been completed, they should be carefully reviewed by all city officials and commissions members.

Another concern associated with increased runoff from developed sites is the possibility for erosion and siltation problems. Because of the moderately steep slopes characterizing areas north of the Mianus River and because there may be a need to blast bedrock, it is important that an erosion and sediment control plan be devised and closely followed throughout all stages of the project.

SOIL RESOURCES OF OVERBROOK FARM SUBDIVISION

The Overbrook Farm Subdivision property consists dominantly of shallow (i.e., 20 inches) to deep (i.e., 40 inches), nearly level to very steep, bedrock controlled glacial till soils. The southern part and eastern edge of

the parcel are dominated by well-drained to very poorly drained alluvial soils formed on the floodplains of the Mianus River and the East Branch of the Mianus River. A small area of deep glacial outwash soils is along the western edge of the Mianus River floodplain.

The soil map included with this report has been vested from on-site investigations, the Soil Survey of Fairfield County (1981), and information provided by Soil Science Services. The intense soil survey of the parcel by the private consultant was mapped at a scale of 1" = 100' and should by used to help make decisions on a lot by lot basis. The map prepared at a scale of 1" = 300' (Figure 7) is for discussion purposes of this report. Because of the large number of map units involved, a chart of important soil features and interpretations has been prepared (Table 2). Below are listed some additional soils information and concerns.

(1) The soils map at 1" = 300' shown in Figure 7 should not be used in discussions about wetland values and acreage. The soil map prepared for the developer by a private soil scientist in general shows wetland areas and configurations that could not be shown at the scale of the enclosed map. The wetland boundaries do not seem accurate on the western edge of Lot 7, the north western corner of Lot 3, and the eastern edge of Lot 6. Some of these differences may be because the plans reviewed (8/19/86) showed sketched wetland boundaries and not surveyed wetland boundaries.

(2) Because of the highly variable nature of soil depth to bedrock on this parcel, careful site selection is necessary to locate deep soils for septic systems. Thus, additional deep test pits may be needed for a number of lots, especially Lots 9 and 10.

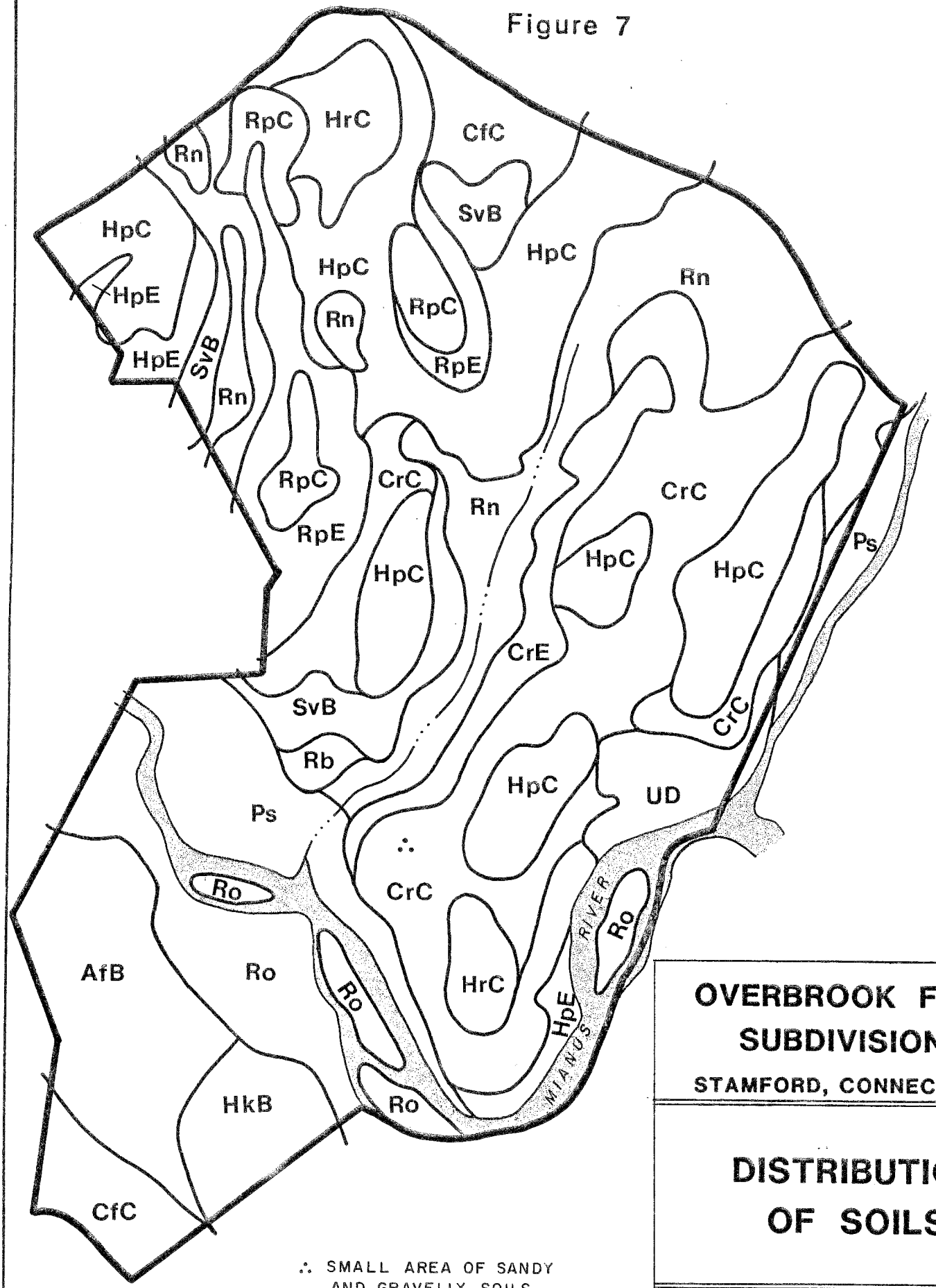
(3) The sand and gravel glacial outwash soils on Lots 11, 12, 13, and 14 have fast perc rates and act as poor filters for on-site waste disposal. This may influence the separating distances between wells and septic systems, and the size and layout of systems.

(4) Lots 4 and 8 have septic systems proposed on moderately well drained soils. Because of the size of the lots, it should be possible to locate the systems on well drained soils upslope.

(5) The proposed septic system for Lot 2 will receive surface and subsurface runoff water from higher on the landscape. A "swale," curtain drain, or relocation should be considered.

(6) No erosion and sediment control plan or measures have been shown. A plan should be developed, reviewed, carefully followed, and inspected. Soil distrubance should be kept to a minimum.

Figure 7



OVERBROOK FARM SUBDIVISION

STAMFORD, CONNECTICUT

DISTRIBUTION OF SOILS

King's Mark Environmental Review Team

0 300'

N

TABLE 2.

SOILS LIMITATION CHART

OVERBROOK FARM SUBDIVISION - STAMFORD, CONNECTICUT

MAP UNIT NAME	MAP SYMBOL	GENERAL SOIL PROPERTIES	DRAINAGE CLASS AND DEPTH TO SEASONAL HIGH WATER TABLE	MAJOR LIMITATIONS FOR THE DEVELOPMENT OF: HOMES WITH BASEMENTS	ONSITE SEPTIC SYSTEMS	ROADS AND STREETS
Agawam-Fine sandy loam, 3-8% slopes	AFB	Glacial outwash soils formed in loamy materials over sand and gravel	Excessively drained > 6ft.	None	Substratum may be poor filter	None
Hinkley-gravelly, sandy loam, 8-15% slopes	HkC	Glacial outwash soils formed in sand and gravel	Well drained > 4ft.	None	Substratum may be poor filter	None
Charlton - fine sandy loam, 3-8% slopes	CfB	Glacial till soils formed in loamy materials	Well drained > 4ft.	None	None	None
Charlton-very stony fine sandy loam 8-15% slopes	ChC	Glacial till soils formed in loamy materials	Well drained > 4ft.	Slope	Slope	Slope
Charlton-Hollis complex, fine sandy loam, very rocky 3-15% slopes	CrC	Complex of glacial till soils from deep to shallow over bedrock. Formed in loamy materials	Well drained to excessively drained > 6ft.	Variable depth to bedrock	Variable depth to bedrock	Variable depth to bedrock
Charlton-Hollis complex fine, very rocky 15-45% slopes	CrE	Complex of glacial till soils from deep to shallow over bedrock. Formed in loamy materials	Well drained to excessively drained > 6ft.	Variable depth to bedrock Slope	Variable depth to bedrock Slope	Variable depth to bedrock Slope

SOILS LIMITATION CHART

OVERBROOK FARM SUBDIVISION - STAMFORD, CONNECTICUT

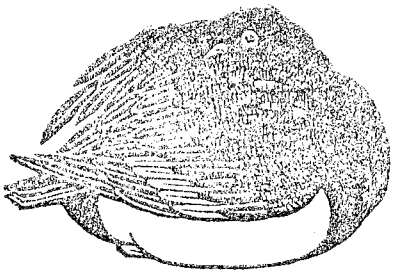
MAP UNIT NAME	MAP SYMBOL	GENERAL SOIL PROPERTIES	DRAINAGE CLASS AND DEPTH TO SEASONAL HIGH WATER TABLE	MAJOR LIMITATIONS FOR THE DEVELOPMENT OF: HOMES WITH BASEMENTS	ONSITE SEPTIC SYSTEMS	ROADS AND STREETS
Hollis Charlton - Rock Outcrop complex 3-15% slopes	HpC Hollis	Complex of glacial till soils and exposed bedrock. Soils are from shallow to deep over bedrock and formed in loamy materials.	Well drained to excessively drained > 6ft.	Depth to bedrock	Depth to bedrock	Depth to bedrock
Hollis Rock Outcrop Charlton complex, 15-45% slopes	HrE	Complex of glacial till soils and exposed bedrock. Soils are from shallow to moderately deep over bedrock. Formed in loamy materials.	Well drained to excessively drained > 6ft.	Depth to bedrock Slope	Depth to bedrock Slope	Depth to bedrock Slope
Pootatuck - fine, sandy loam, nearly level	Ps	Alluvial soils formed in loamy over sandy materials	Moderately well drained 1.5 - 2.5ft	Flooding seasonal wetness	Flooding seasonal wetness	Flooding seasonal wetness - Subject to frost action
Raypol - silt, loam, nearly level	Rb	Glacial outwash soils formed in loamy over sandy materials	Poorly drained 0 - 1.ft.	Wetness	Wetness	Wetness Subject to frost action
Ridgebury, Leicester, and Whitman - extremely stony, fine sandy loams	Rn Ridgebury	Glacial till soils formed in loamy materials	Poorly drained to very poorly drained +1 - 1.5ft	Wetness	Wetness	Wetness Subject to frost action

SOILS LIMITATION CHART

OVERBROOK FARM SUBDIVISION - STAMFORD, CONNECTICUT

MAP UNIT NAME	MAP SYMBOL	GENERAL SOIL PROPERTIES	DRAINAGE CLASS AND DEPTH TO SEASONAL HIGH WATER TABLE	MAJOR LIMITATIONS FOR THE DEVELOPMENT OF: HOMES WITH BASEMENTS	ONSITE SEPTIC SYSTEMS	ROADS AND STREETS
Rippowam - fine, sandy loam, nearly level	Ro	Alluvial soils formed in loamy over sandy materials	Poorly drained 0 - 1.5ft	Flooding Wetness	Flooding Wetness	Flooding Wetness Subject to frost action
Udorthents - smoothed, cut and fill areas	UD	Variable	Variable	Variable	Variable	Variable

BIOTA



DESCRIPTION OF FOREST RESOURCES

Within this 76-acre parcel, there are five distinct forest stands, totalling some 55 acres. These forest stands are described below and are located in Figure 8.

Description of Forest Stands

Oak/Mixed Hardwoods (Stand 1)

This 31 acre stand is well stocked with fair quality, large pole (i.e., 8 to 10 inches diameter) to small sawlog (i.e., 11 to 14 inches diameter) size red oak, white oak, hickory, black birch, and red maple. These dominant trees fall into the 40 to 60 year old age class.

It appears the area has developed, intact, from a wooded pasture which was abandoned in the 1920s. There are scattered "wolf" trees which exhibit the profuse branching and widespread crown characteristic of trees grown in a fairly open situation. These trees may still retain some degree of the wind-firmness they developed during their period of open growth.

Red Maple (Stand 2)

This 16-acre area is variably stocked with average quality pole (i.e., 6 to 10 inches) to small sawlog sized red maple, although some ash and black birch do occur in the drier margins. Understory species to be found include spicebush, sweet pepperbush, and viburnum. The ground cover encountered includes skunk cabbage, jewelweed, and grasses, but may be non-existent under a heavy understory cover. Soils here have a high water table which precludes the development of a deep root system capable of supporting vigorous growth while lending a degree of wind-firmness.

Old Field (Stand 3)

This two-acre area is occupied by a dense cover of pioneer species of sapling (2 to 6 inches) to small pole (6 to 8 inches) size. Species found here include red cedar, dogwood, grey birch, cherry, red oak, hickory, red maple, sassafras, and black birch. There appears to be no distinct understory and little ground cover, save poison ivy, Virginia creeper, and some grasses.

Oak Ridge (Stand 4)

Four oak ridge areas, totalling approximately two acres are present on this tract. They are understocked with poor quality pole to sawlog size chestnut oak, black oak, scarlet oak, black birch, and red maple. Hardwood tree seedlings, mountain laurel, witchhazel, highbush blueberry, and occasional sassafras are present in the understory. Ground cover consists of lowbush blueberry, huckleberry, grasses, Christmas fern, and club moss. Many of the trees in this area are stunted in growth and malformed due to environmental stress. Many of these trees have been damaged by adverse weather conditions. Windthrow is a potential hazard in these areas due to the shallow to bedrock soils which are present.

Streambelt

This four-acre area which borders the Mianus River is made up of fair quality, pole to sawlog size red maple, ash, hickory, and red oak, with occasional American elm and black birch. Stocking levels are extremely variable. A dense understory includes spicebush, sweet pepperbush, highbush blueberry, witchhazel, multiflora rose, elderberry, blue beech, and red osier dogwood. Forming the ground cover in this area are skunk cabbage, jewelweed, and barberry.

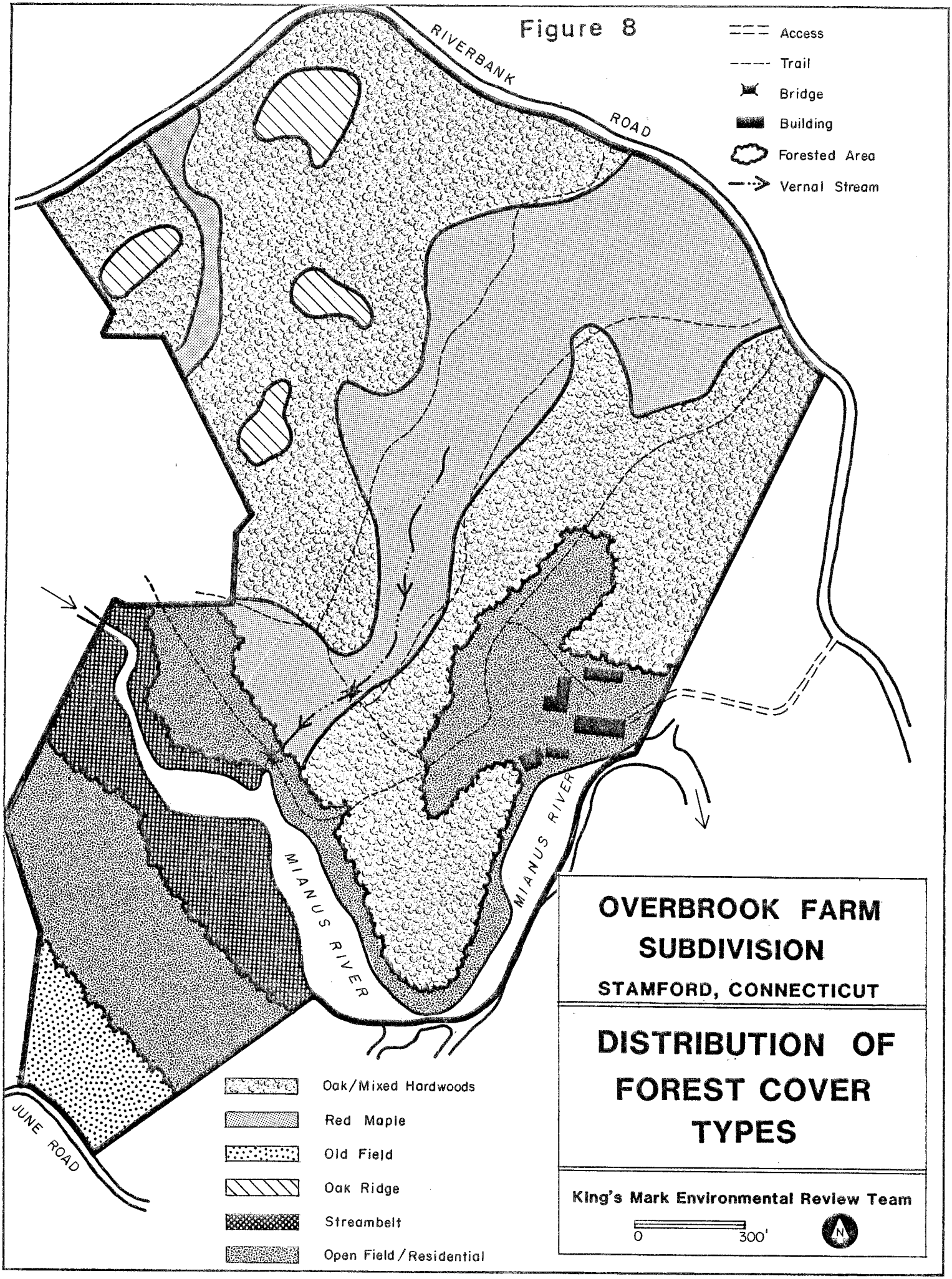


Figure 8
Access
Trail
Bridge
Building
Forested Area
Vernal Stream
RIVERBANK
ROAD
MIANUS RIVER
MIANUS RIVER
JUNE ROAD
Oak/Mixed Hardwoods
Red Maple
Old Field
Oak Ridge
Streambelt
Open Field/Residential
OVERBROOK FARM SUBDIVISION
STAMFORD, CONNECTICUT
DISTRIBUTION OF FOREST COVER TYPES
King's Mark Environmental Review Team
0
300'
N

Tree mortality due to these impacts may occur as long as 5 to 6 years from the time of injury. The actual injury may stress the tree and weaken it to the point where a secondary pest or disease is able to invade and kill the tree. Death may occur long after the memory of past construction practices has faded.

Mitigating Measures

In order to minimize disturbance of the vegetation, careful pre-construction planning is advised. Each of the proposed lots should be examined to identify trees to be retained which will be near active construction areas. These trees should be prominently marked and their root zones staked out. Equipment operators should be clearly advised to avoid staked areas.

When construction activity within the root zone of a tree cannot be avoided, insulating measures such as large diameter tree wells and tunneling, rather than trenching, through a root zone are appropriate. Should observable damage occur, an evaluation of the damage should be made to determine what restorative measures are feasible or if the damage is so severe so as to require removal of the tree.

A probable schedule of need for professional forestry advice in the project would be as follows:

(1) Forester and landscape architect identify trees or groups of trees to be retained.

CLEARING FOR ROADS, HOUSESITES, AND SEPTIC OCCURS

(2) Forester and landscape architect determine which trees will be in construction areas, stake out root zones, and determine appropriate protective measures.

(3) Forester, landscape architect, and engineer design insulating measures, where needed.

ROUGH GRADING AND EXCAVATION COMPLETED

BUILDING CONSTRUCTION BEGINS

(4) Forester identifies damaged tress, determines restorative measures, and marks severely damaged trees for removal.

(5) Forester and landscape architect mark vegetation for removal in order to maximize aesthetic values of house sites.

FINAL SITE GRADING AND LANDSCAPING COMPLETED

DESCRIPTION OF EXISTING INLAND WETLANDS

Wetland Characteristics

The wetlands of Overbrook Farm Subdivision site can be best described as diverse. Transversed by the Mianus River and it floodplain, the area provides suitable habitat for a number of plant and animal species as well as an aesthetic vista for the casual observer. Two drainageways cross the property and their associated red maple-spicebush forested wetlands and intermittent streams provide additional habitat and wildlife value. Although adequate descriptions of the wetlands were provided by the developer, additional comments are as follows.

Mianus River

A slow moving, partially inpounded body of water with seasonal fluctuations and overbank flow. The river has numerous aquatic plants; both submerged in the channel and emergent along the shallow banks.

Mianus River Floodplain

This area is primarily a mixture of shrubs and emergent plants, with scattered trees throughout. In some areas, the floodplain is maintained as mowed lawn. The dominant shrubs include silky dogwood (Cornus amomum), Elderberry (Sambucus canadensis), Alder (alnus rugosa), and Buttonbush (Cephalanthus occidentalis); the scattered trees include red maple (Acer rubrum) and green ash (Fraxinus pennsylvanica). Common herbaceous species are sensitive fern (Onoclea sensibilis), jewelweed (Impatiens capensis), false nettle (Boehmeria cylindrica), jumpseed (Tovara virginiana), Virginia bower (Clemetis Virginiana), poison ivy (Toxicodendron radicans), avens (Geum canadense), goldenrods (Solidago canadensis, Solidago spp.), fox grape (Vitis labrusca) among others. The floodplain provides excellent habitat for nesting songbirds and small mammals, and will probably revert to forest overtime.

Salamander Creek

This wetland is primarily forested, transversed by an intermittent stream and interrupted by small areas of herbaceous growth. The predominant trees are red maple (Acer rubrum), and yellow birch (Betula lutea) with scattered yellow poplar (Liriodendron tulipifera) and American elm (Ulmus americana). The shrub layer, dominated by spicebush (Lindera benzoin), reflects the hydrology of the site; seasonal flooding as a result of runoff and groundwater seepage through the wetland. Skunk cabbage (Symplocarpus foetidus) is the predominate ground cover especially in the spring, with additional plants such as jack-in-the-pulpit (Arisaema atrorubens), golden saxifrage (Chrysosplenium americanum), Sensitive fern, (Onoclea sensibilis), small-flowered crowfoot (Ranunculus abortivus), and mosses. Since the small drainage wetland to the west of Salamander Creek has similar soils, it is expected to have similar

vegetation and hydrology; although it was not visited during the field survey. The only different wetland conditions can be found on the north end of Salamander Creek where the water appears to be more stagnant, resulting in a change in the shrub vegetation from spicebush to sweet pepperbush (Clethra alnifolia) and ericaceous shrubs such as high bush blueberry (Vaccinium corymbosum).

Anticipated Impacts to On-site Wetlands

The proposed development appears to be well planned and situated to minimize environmental impact to the wetlands and watercourses. The only impacted area is the driveway crossing across Salamander Creek, allowing access to Lot 8. This in itself does not present a real problem, however, since the crossing is at a norrow point; and if an adequate sized culvert is used, stream flow will not be obstructed during periods of high water. Therefore, the hydrology of Salamander Creek needs to be investigated prior to approval of the crossing.

WILDLIFE RESOURCES

As the demand for land inreases and land is developed, there will be an immediate and lasting negative impact on wildlife. The primary impact is the direct loss of habitat due to buildings, roads, driveways, parking areas, or walkways. Another impact is the loss of habitat where cover is cleared for lawns and landscaping. A third impact is the increased human presence, vehicular traffic, and a number of free roaming dogs and cats. This will drive the less tolerant species from the site, even in areas where there has been no physical change.

Wildlife Mitigation

There are several steps that should be considered during the planning process in order to minimize adverse impacts on wildlife:

(1) Maintain a 100-foot wide buffer zone of natural vegetation around all wetland/riparian areas to help filter and trap silt and sediments.

(2) Utilize natural landscaping techniques (avoiding lawns and chemical applications) to lessen acreage of lossed habitat and possible wetland contamination.

(3) Stone walls, shrubs, and trees should be maintained along field borders.

(4) Early successional stage vegetation (i.e., field) is a limited habitat type and should be maintained if possible.

(5) During land clearing, care should be taken to maintain certain forest wildlife requirements:

   a. Encourange mast producing trees (i.e., oak, hickory, beech). A minimum of five oaks 14 inches dbh or greater should remain.

   b. Leave 5 to 7 snag/den trees per acre as they are used by many birds and mammals for nesting, roosting and feeding.

   c. Exceptionally tall trees, used by raptors as perching and nesting sites, should be encouraged.

   d. Trees with vines (i.e., fruit producers) should be encouraged.

   e. Brush debris from tree clearing should be piled to provide cover for small mammals, birds, and amphibians and reptiles.

The large house lots and the close proximity to existing open space does in itself also serve as a type of mitigation. Implementation of the suggested guidelines will help to minimize the adverse impacts of local wildlife populations. In addition the implementation of backyard wildlife habitat management practices should be encouraged. Such activities involve providing food, water, cover and nesting areas (Table 4).

TABLE 4.

SUITABLE PLANTING MATERIALS FOR FOOD AND COVER

Herbaceous Vines	Shrubs	Small Trees
panicgrass	sumac	dogwood
timothy	dogwood	crabapple
trumpet creeper	elderberry	hawthorn
grape	winterberry	cherry
birdsfoot trefoil	autumn olive	serviceberry
virginia creeper	blackberry	cedar
switchgrass	raspberry	
honeysucke	cranberrybush	

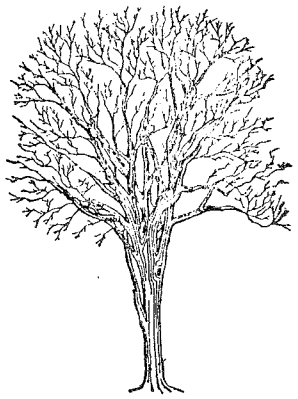
Nesting sites can be provided for a great variety of birds with placement of artificial nest boxes (Appendix B).

FISHERY RESOURCES OF MIANUS RIVER

The stretch of the Mianus River located within the proposed development area can be considered marginal trout habitat throughout. Fish species that would likely inhabit this area are white suckers, fallfish, common shiner, bluegill sunfish, and rockbass. The river in this area consists primarily of long, sandy-bottom pools interspersed with rocks and islands. The major source of cover providing habitat for fish is comprised of undercut banks and root systems and shoreline vegatation extending into the water. The existing overstory of shrubbery provides shade during times of year when solar heating could be detrimental to stream-dwelling fishes.

The Department of Environmental Protection has been stocking adult brown trout in the Mianus River in the area immediately adjacent to this parcel. Also, a newly instituted Trout Management Area exists further downstream from the site. These resources are extremely valuable due to the scarcity of stream trout fishing sites in this area of the state. In a slow moving and open area of the Mianus River, such as is found in the proposed site of the subdivision, warming of the water can occur and result in the destruction and/or reduction of the existing trout habitat downstream. Any significant cutting or removal of the overstory or further ponding of the river on the site would very likely have severe consequences downstream. Therefore, any development on the site should consider the fragile balance between the stream and streambank and take all precautions to keep the area intact.

CULTURAL RESOURCES

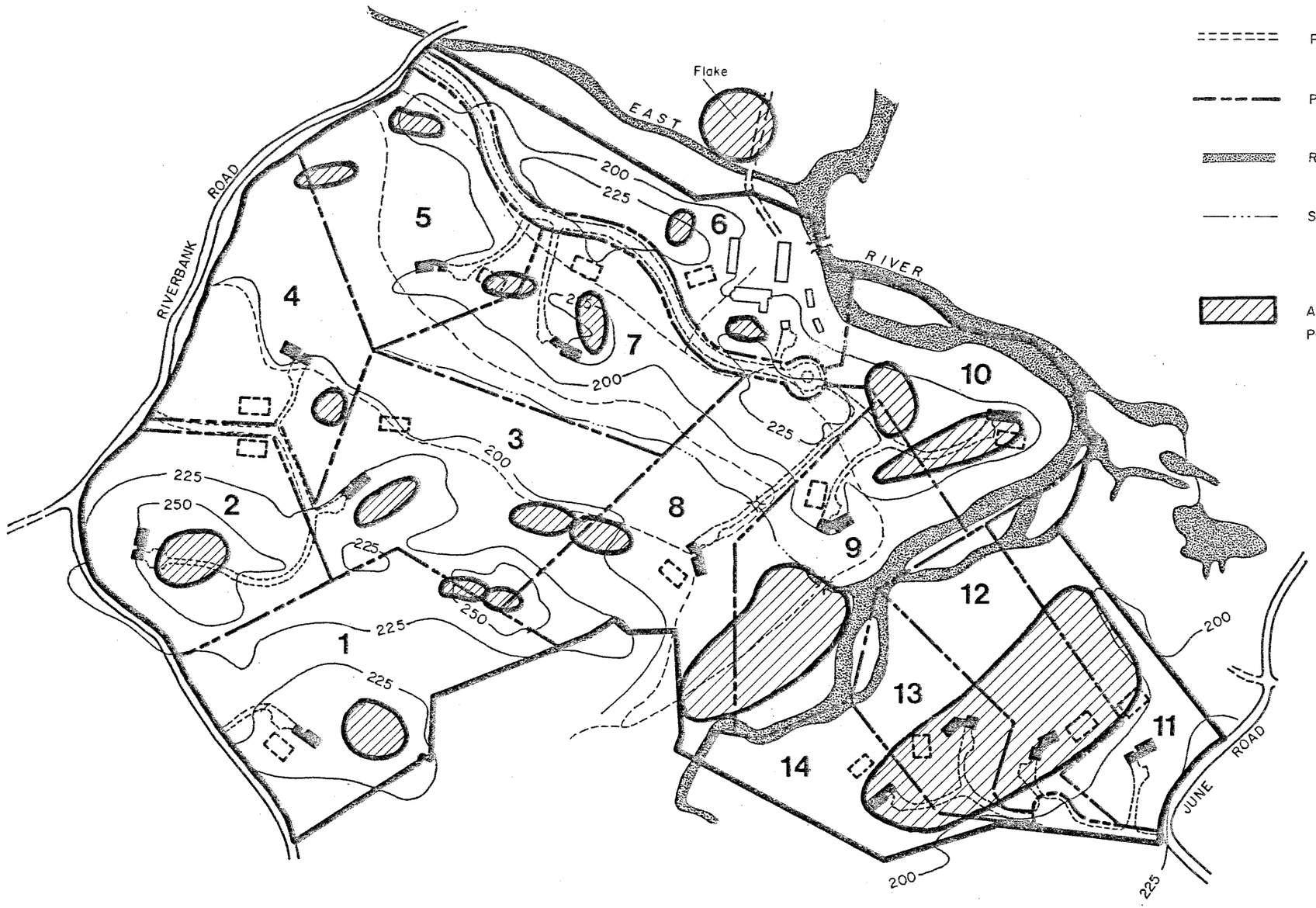


The broad, gently sloping floodplain and glacial outwash deposits along the Mianus River were also considered sensitive. The larger extent of these areas presents the possibility of larger prehistoric sites as well their potential for short-term use. A single flake of quartz was found in recently dug flower beds near the confluence of a small stream with the Mianus River. This object represents the by-product of stone tool manufacture and/or repair, and is indicative of a prehistoric occupation. Its discovery came as no surprise, as the archaeological potential of stream confluences has long been recognized by northeastern archaeologists.

Conclusions

On the basis of the surficial inspection of the project area, it is believed that its archaeological potential is high. Further work would be required to determine the presence of prehistoric sites in suspected areas. This could be accomplished through a program of subsurface investigations utilizing the excavation of test pits in these areas. Should the sites contain occupational evidence, additional test pits would need to be excavated to obtain an idea of the horizontal extent of the site. A determination of the significance of any discovered sites would be made and recommendations for their management submitted.

Figure 9



PROPOSED HOUSE

PROPOSED SEPTIC

PROPOSED ROAD OR DRIVEWAY

PROPOSED LOT LINES

RIVER

STREAM

AREAS OF SUSPECTED ARCHAEOLOGICAL POTENTIAL

OVERBROOK FARM SUBDIVISION

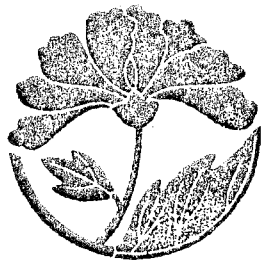
STAMFORD, CONNECTICUT

ARCHAEOLOGICAL RESOURCES

King's Mark Environmental Review Team

0 300'

LAND USE
AND
PLANNING CONSIDERATIONS



Existing Zoning and Subdivision Regulations

In June of 1985, the Stamford Zoning Board established a new single-family residential zoning district called RA-3, requiring a minimum lot area of three acres. At the same time it declined without prejudice to approve the establishment of provisions to encourage wetlands preservation in environmentally sensitive areas which cannot support dense development. It is intended instead that these regulations are more appropriately part of subdivision regulations. The ERT was advised during the field review by Stamford Planning staff that such an amendment to the subdivision reglations will be made soon.

Finally, the Stamford Zoning map was amended to change the area of Overbrook Farm from two-acre single-family to "RA-3" or three-acre single-family.

The Southewestern Regional Planning Agency supported all three proposals and copies of our opinions are attached for information in Appendix A.

Existing Road Network

The site is served primarily from Riverbank Road (Lots 1 to 10) and also from June Road (Lots 11 to 14). Both roads are narrow and winding.

Indeed, June Road makes a sharp turn left (in the northbound direction) adjacent to the accessway for Lots 12 to 14.

Locations where the proposed road serving Lots 5 to 10 and the accessway serving Lots 2 to 4 were visually examined during the field review for site distances. It is suggested that the accessway for Lots 2 to 4 be shifted slightly to the east, to provide improved site distance from the west. The design of the new street intersection with Riverbank Road should insure that cars waiting to enter Riverbank Road and northbound cars on Riverbank Road

wishing to turn left into new road be fully visible to approaching southbound traffic on Riverbank Road.

Conclusions

The general report of the proposed subdivision appears to conform to existing plans, if the land is not to be acquired or donated for public recreation.

It is strongly advised that some form of riverbank easement be investigated that might allow for a continuous walking trail along the Mianus River in connection with adjacent open space reservations. The general objective was included in both the 1953 and 1977 Stamford Master Plan.

Naturally, such an easement should be carefully controlled to limit its use to hikers only and not allow any kind of wheeled vehicle.

APPENDIX A

LETTERS OF CORRESPONDENCE

SOUTH WESTERN REGIONAL PLANNING AGENCY
DARIEN GREENWICH NEW CANAAN NORWALK STAMFORD WESTON WESTPORT WILTON
213 LIBERTY SQ., EAST NORWALK, CONNECTICUT 06855-1029 866-5543

April 3, 1985

Mr. Jon A. Smith
Planning & Zoning Director
City of Stamford
429 Atlantic Street
P. O. Box 10152
Stamford, Connecticut 06904-2152

RE: #85-16 STAMFORD
Zoning Board - Regulations Change
Wetlands protection (STAM. APPL. #85-012)

Dear Mr. Smith:

Please be advised that the Agency, at its regular meeting of April 1, 1985, decided to render the following advisory report on the referral described above.

"Generally, conforms to 1984 Regional Plan policy: Encourage large lot zoning or cluster development in environmentally sensitive areas which cannot support dense development.

- Also, significant wetlands are given special significance by being identified in the Regional Plan of Development Land Use Map."

A brief description of your proposal was sent to a mailing list of about 180 persons and groups, and no comments were received.

Verytruly yours,

Richard C. Carpenter
Executive Director

RCC:jm

SOUTH WESTERN REGIONAL PLANNING AGENCY
DARIEN GREENWICH NEW CANAAN NORWALK STAMFORD WESTON WESTPORT WILTON
213 LIBERTY SQ., EAST NORWALK, CONNECTICUT 06855-1029 866-5543

April 3, 1985

Mr. Jon A. Smith
Planning & Zoning Director
City of Stamford
429 Atlantic Street
P. O. Box 10152
Stamford, Connecticut 06904-2152

RE: #85-18 STAMFORD
Zoning Board - Comprehensive Rezoning - Westover/Mid-Ridge/
North Stamford Neighborhood.
(Stamford Appl. #85-001)

Dear Mr. Smith:

Please be advised that the Agency, at its regular meeting of April 1, 1985, decided to render the following advisory report on the referral described above.

"Generally, conforms to the 1983 Regional Plan Land Use Map."

A brief description of your proposal was sent to a mailing list of about 180 persons and groups, and no comments were received.

Very truly yours,

Richard C. Carpenter
Executive Director

RCC:jm

cc: Darien, Greenwich and New Canaan Town Planners

SOUTH WESTERN REGIONAL PLANNING AGENCY
DARIEN GREENWICH NEW CANAAN NORWALK STAMFORD WESTON WESTPORT WILTON
213 LIBERTY SQ., EAST NORWALK, CONNECTICUT 06855-1029 866-6543

April 3, 1985

Mr. Jon A. Smith
Planning & Zoning Director
City of Stamford
429 Atlantic Street
P. O. Box 10152
Stamford, Connecticut 06904-2152

RE: #85-15 STAMFORD
Zoning Board - New 3 Acre Single family Dist.
Stamford APPL. 85-011

Dear Mr. Smith:

Please be advised that the Agency, at its regular meeting of April 1, 1985, decided to render the following advisory report on the referral described above.

"The Agency first made a proposal for a lower residential density than 2 acres per family in the vicinity of the reservoirs in its 1974 Regional Plan. Though not specifically repeated in the 1983 Regional Plan, we suggest that this rezoning should be limited to areas where adverse soil conditions and the proven need to protect public water supply exist.

-Conforms to 1983 Regional Plan Policy: 'Encourage large lot zoning or cluster development in environmentally sensitive areas which cannot support dense development.'"

A brief description of your proposal was sent to a mailing list of about 180 persons and groups, and no comments were received.

Very truly yours,

Richard C. Carpenter
Executive Director

RCC:jm

cc: James Sandy, Town Planner, Greenwich
Dan Foley, Town Planner, New Canaan
Ray Nurme, Town Planner, Darien

ABOUT THE TEAM

The King's Mark Environmental Review Team (ERT) is a group of environmental professionals drawn together from a variety of federal, state, and regional agencies. Specialists on the Team include geologists, biologists, soil scientists, foresters, climatologists, landscape architects, recreational specialists, engineers, and planners. The ERT operates with state funding under the aegis of the King's Mark Resource Conservation and Development (RC & D) Area - a 83 town area serving western Connecticut.

As a public service activity, the Team is available to serve towns and/or developers within the King's Mark RC & D Area - free of charge.

PURPOSE OF THE ENVIRONMENTAL REVIEW TEAM

The Environmental Review Team is available to assist towns and/or developers in the review of sites proposed for major land use activities. For example, the ERT has been involved in the review of a wide range of significant land use activities including subdivisions, sanitary landfills, commercial and industrial developments, and recreational/open space projects.

Reviews are conducted in the interest of providing information and analysis that will assist towns and developers in environmentally sound decision-making. This is done through indentifying the natural resource base of the site, and highlighting opportunities and limitations for the proposed land use.

REQUESTING AN ENVIRONMENTAL REVIEW

Environmental Reviews may be requested by the chief elected official of a municipality, or the chairman of an administrative agency such as planning and zoning, conservation, or inland wetlands. Environmental Review Request Forms are available at your local Soil and Water Conservation District, and the King's Mark ERT Coordinator. This request form must include a summary of the proposed project, a location map of the project site, written permission from the landowner/developer allowing the Team to enter the property for purposes of review, and a statement identifying the specific areas of concern the Team should investigate. When this request is approved by the local Soil and Water Conservation District and King's Mark RC & D Executive Committee, the Team will undertake the review. At present, the ERT can undertake two (2) reviews per month.

For additional information regarding the Environmental Review Team, please contact your local Soil and Water Conservation District or Keane Callahan, ERT Coordinator, King's Mark Environmental Review Team, King's Mark Resource Conservation and Development Area, 322 North Main Street, Wallingford, Connecticut 06492. King's Mark ERT phone number is 265-6695.