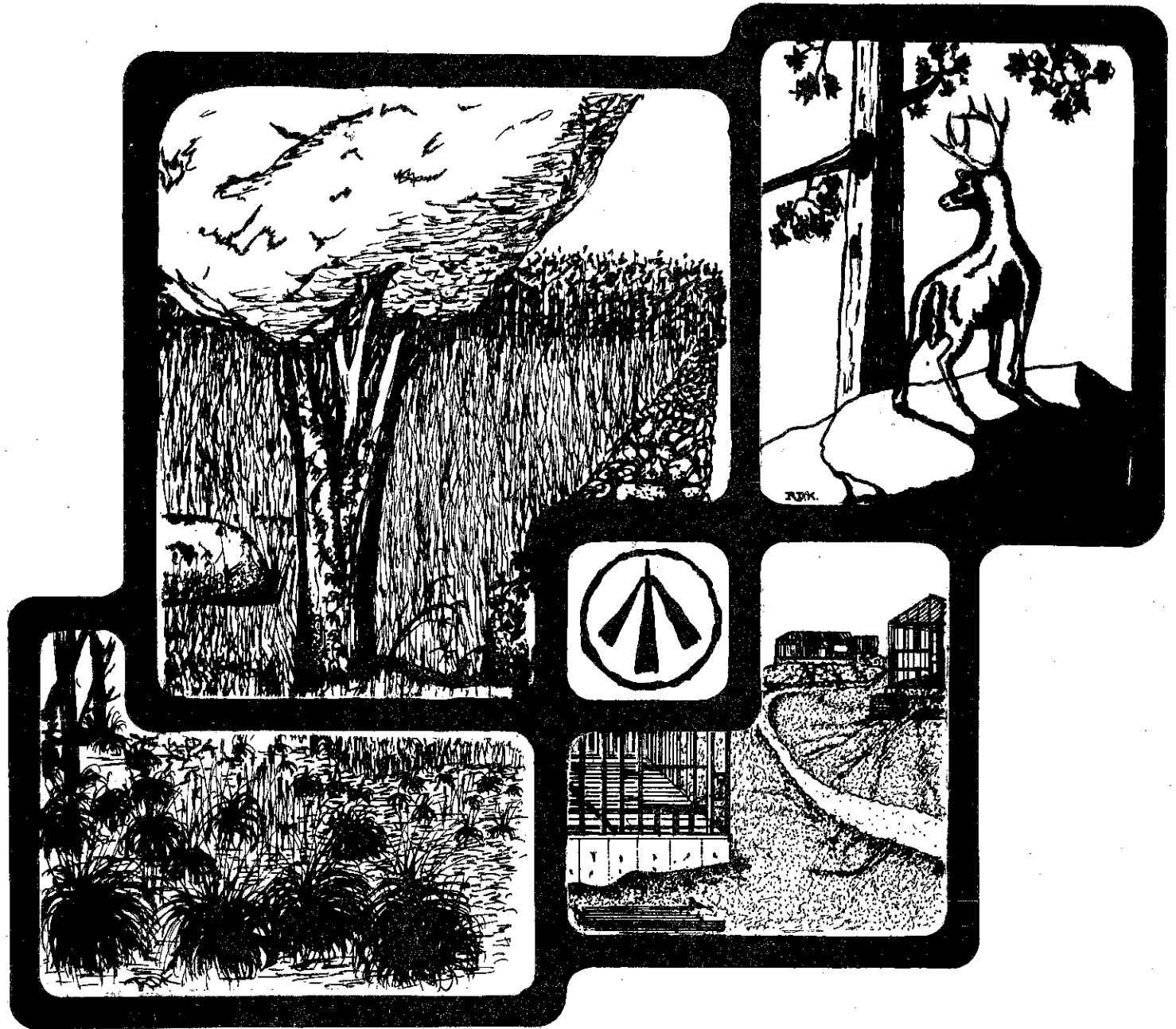


ENVIRONMENTAL REVIEW TEAM REPORT



GOLDEN HILLS TRIBE LAND ACQUISITION THOMASTON, CONNECTICUT

 KING'S MARK
RESOURCE CONSERVATION AND DEVELOPMENT AREA

KING'S MARK ENVIRONMENTAL REVIEW TEAM REPORT

On

GOLDEN HILLS TRIBE LAND ACQUISITION
THOMASTON, CONNECTICUT



DECEMBER 1978

Kings Mark Resource Conservation & Development Area

Environmental Review Team

P.O. Box 30

Warren, Connecticut 06754

ACKNOWLEDGMENTS

The King's Mark Environmental Review Team operates through the cooperative effort of a number of agencies and organizations including:

Federal Agencies

U.S.D.A. SOIL CONSERVATION SERVICE

State Agencies

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEPARTMENT OF HEALTH

DEPARTMENT OF TRANSPORTATION

UNIVERSITY OF CONNECTICUT COOPERATIVE EXTENSION SERVICE

Local Groups and Agencies

LITCHFIELD COUNTY SOIL AND WATER CONSERVATION DISTRICT

NEW HAVEN COUNTY SOIL AND WATER CONSERVATION DISTRICT

HARTFORD COUNTY SOIL AND WATER CONSERVATION DISTRICT

FAIRFIELD COUNTY SOIL AND WATER CONSERVATION DISTRICT

NORTHWESTERN CONNECTICUT REGIONAL PLANNING AGENCY

VALLEY REGIONAL PLANNING AGENCY

LITCHFIELD HILLS REGIONAL PLANNING AGENCY

CENTRAL NAUGATUCK VALLEY REGIONAL PLANNING AGENCY

HOUSATONIC VALLEY COUNCIL OF ELECTED OFFICIALS

AMERICAN INDIAN ARCHAEOLOGICAL INSTITUTE

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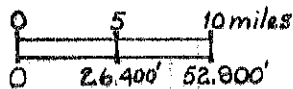
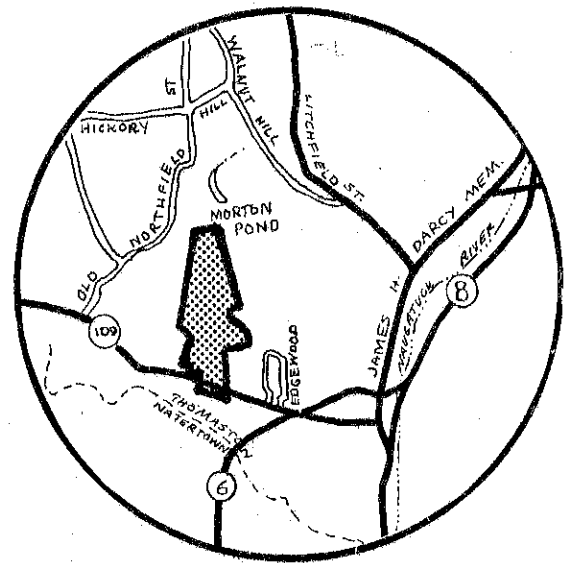
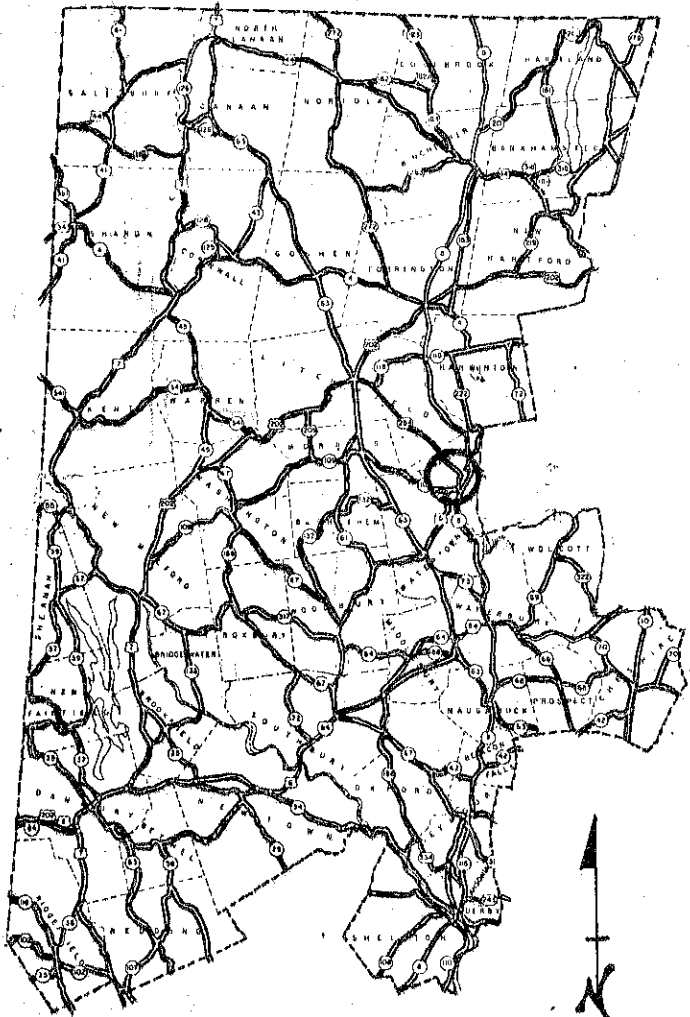
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LOCATION OF STUDY SITE

GOLDEN HILLS TRIBE LAND ACQUISITION THOMASTON, CONNECTICUT



ENVIRONMENTAL REVIEW TEAM REPORT
ON
GOLDEN HILLS TRIBE LAND ACQUISITION
THOMASTON, CONNECTICUT

I. INTRODUCTION

The Golden Hills tribe of the Paugusset Indian Nation is searching for a suitable parcel of land to house up to 30 tribal families on single family lots. On the same tract of land the tribe would like to develop a multi-purpose service center (trading post, crafts coop, etc.), community gardens, stables, and an animal husbandry area. One potential site has been identified and the tribe requested the assistance of the King's Mark Environmental Review Team to help the tribe in analyzing the suitability of the site for the proposed purposes. Specifically the ERT was asked to identify the natural resources of the site and to highlight opportunities and limitations for the proposed land development. The site is + 76 acres in size and is located north of Route 109 in Thomaston near the Black Rock State Park. No site planning or design work for the parcel has yet been undertaken by the tribe.

The ERT met and field reviewed the site on November 22, 1978. Team members for this review consisted of the following:

Art Cross.....	District Conservationist..	U.S.D.A. Soil Conservation Service
Mike Zizka.....	Geohydrologist.....	Connecticut Department of Environmental Protection
Robert Rocks.....	Forester.....	Connecticut Department of Environmental Protection
Tom Furgalack.....	Sanitarian.....	Connecticut Department of Health
Peter Dorpalan....	Regional Planner.....	Central Naugatuck Valley Regional Planning Agency

Prior to the review day, each team member was provided with a summary of the proposed project, a soil survey map, a soils limitation chart, a topographic map of the area, and a checklist of concerns to address. Following the field review, individual reports were prepared by each team member and forwarded to the ERT Coordinator for compilation and editing into this final report.

This report presents the team's findings and recommendations. It is important to understand that the ERT is not in competition with private consultants and hence does not perform design work or provide detailed solutions to development problems. Nor does the Team recommend what ultimate action should be taken on a proposed project. The ERT concept provides

for the presentation of natural resources information and preliminary development considerations - all conclusions and final decisions rest with the Golden Hills tribe. It is hoped the information contained in this report will assist the tribe in reaching decisions regarding this particular parcel of land.

If any additional information is required, please contact Richard Lynn, (868-7342), Environmental Review Team Coordinator, King's Mark RC&D Area, P. O. Box 30, Warren, Connecticut.

* * * * *

II. SUMMARY

- . Most of the soils present on the property present severe limitations for on-site sewage disposal, building with basements, roads and driveways, and landscaping according to U.S.D.A. Soil Conservation Service criteria. These limitations do not necessarily preclude the use of the land for these purposes, but they do indicate that the use of the soil is seriously limited by hazards or restrictions that require extensive and costly measures to overcome.
- . The north central portion of the property (+ 22 acres) offers the most potential for residential land development providing access from the north is feasible. Access from the south via Route 109 (the only access to the property at present from a public road) would be extremely difficult because of steep slopes.
- . Development of the steep southern section of the property (+ 17-30% slopes) for residential use would undoubtedly increase the volume of stormwater runoff from the property, increase peak flood flows of the stream on the site, and likely lead to significant erosion and sedimentation problems.
- . Mixed hardwood forest covers most of the tract. Much of this woodland would respond well to a selective cordwood harvest or some other form of timber stand improvement. Access to the property from the north would be necessary to avoid steep slopes.
- . No suitable aquifer other than the schistose bedrock underlying most of the property is apparent for the prospective residential lots. Of the 68 schist-based wells surveyed in the lower Housatonic River Basin (Connecticut Water Resources Bulletin No. 19), approximately one third yielded less than 3 gallons per minute. A well yield of at least 3 gallons per minute is generally considered necessary to meet the needs of an average household.
- . The proposed development is generally in conformance with the Thomaston Zoning Regulations although special permits or a zone change would be required for construction of a community center and any commercial buildings.
- . Less than 50% of the property is recommended for development in the Regional Land Use Plan of the Central Naugatuck Valley Regional Planning Agency due to steep slopes and shallow to bedrock conditions on much of the site.

III. SETTING, TOPOGRAPHY, LAND USE

The + 76 acre property, shown in Figure 1, is bounded on its south side by Rt. 109 and on its west side by State property. The only access at present from a public road is by walking off of Rt. 109. Starting near Rt. 109, the land slopes upward at the rate of + 20% for + 800 ft., + 30% for the next + 450 ft., and + 17% for the next + 800 ft. The land slopes then taper off to slopes of + 0 -5% (See Figure 1). Of the + 76 acres, it is estimated that approximately 30 acres are on slopes of 0-5% and 46 acres are on slopes of 17-30%.

Most of the property is woodland with an abandoned apple orchard located on the southern portion. A CL&P power line abuts the property on its western border. Along this power line, the CL&P maintains a swath of cleared land for right-of-way purposes. A number of stone walls and cellar foundations are present on the northern portion of the parcel which indicate the land has a history of agricultural use.

IV. SOILS

A detailed soil survey map and soils limitation chart of the tract is presented in the Appendix of this report. The soils map illustrates the geographic location of all soils identified on the property. The soils limitation chart identifies limiting factors for various land uses on individual soil types and also rates the severity of these limitations as determined by the U.S.D.A. Soil Conservation Service.

As shown in the Soils Limitation Chart, much of this property has severe limitations for on-site sewage disposal, buildings with basements, roads and driveways, and landscaping. These limitations do not necessarily preclude the use of the land for these purposes, but they do indicate that the use of the soil is seriously limited by hazards or restrictions that require extensive and costly measures to overcome.

ON-SITE SEWAGE DISPOSAL

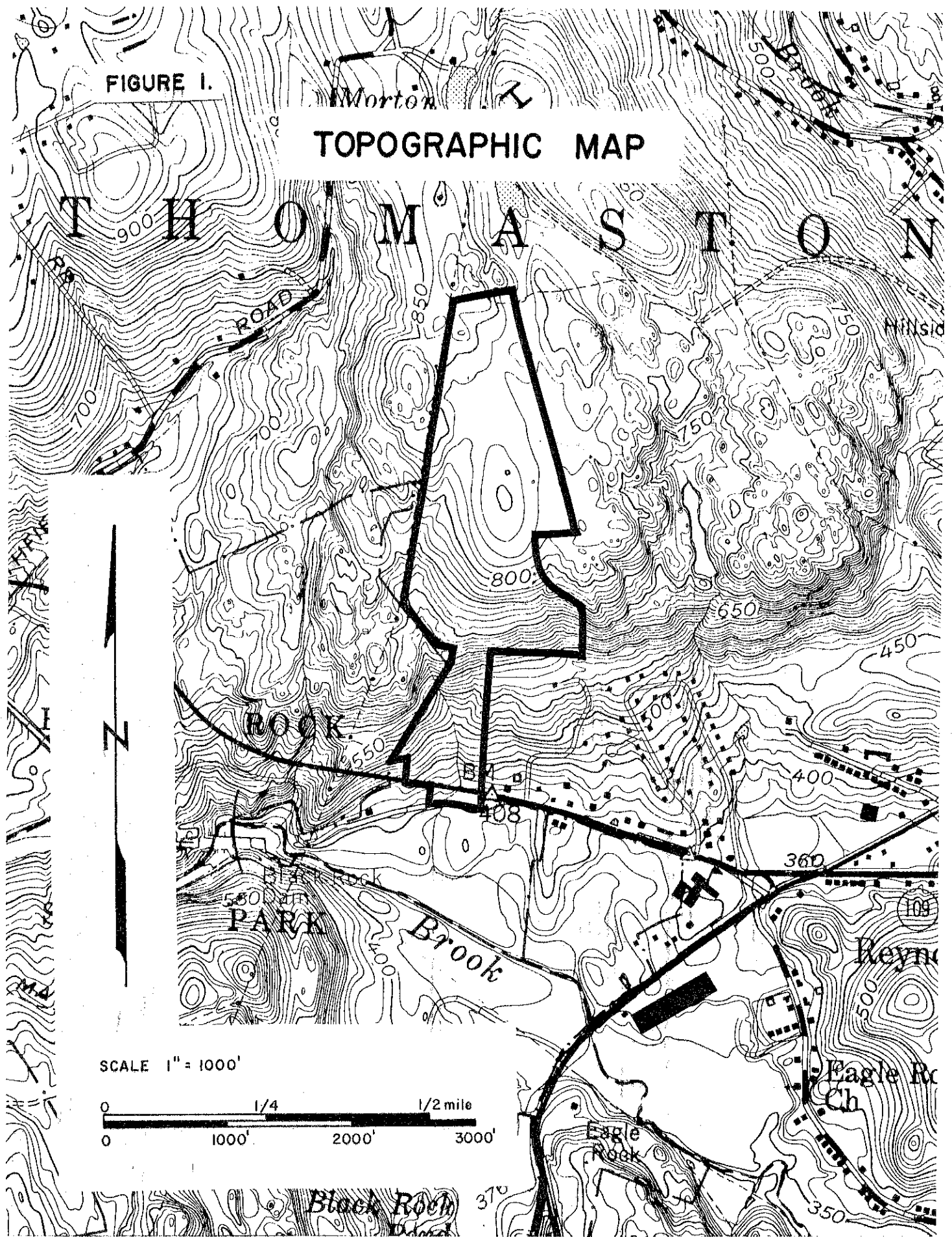
As detailed in table 1, major problems will be encountered in developing this land for on-site sewage disposal. All but two small soil areas (about 3 acres) are noted as having severe limitations for on-site sewage disposal.

Costly measures would be required to overcome the severe limitations imposed by the steep slopes, hardpan, seasonal high water table, and/or shallow to bedrock conditions portrayed in table 1.

In some places, increasing the size of the drainage field compensates for slow permeability in the soil. However, frequent inspections and cleaning of the septic tank are needed to prevent failure. Curtain drains are also recommended above leaching fields.

FIGURE I.

TOPOGRAPHIC MAP



SCALE 1" = 1000'

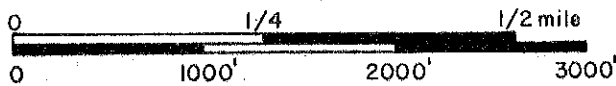


Table 1 Estimated Proportional Extent of Soils with Severe Limitations for On-site Sewage Disposal and Reason for limitation:

<u>+ Acres</u>	<u>Soil Name/Symbol</u>	<u>Primary reasons for severe limitations</u>
7	Charlton/ChD	15 - 25% slopes
23 ac	Hollis/HrC, HxE HrE	Bedrock mostly less than 20 inches from soil surface & slopes 8-35%
39 ac	Paxton/PbE, PdB, PbC, PbD PbE	Slowly permeable hardpan at 16-36 inches " " " " " + 8-35% slopes
6 ac	Woodbridge/WzC	" " " " " + Seasonal high water table
1 ac	Leicester/Le	High water table, within 6-8" of soil surface winter and early spring
<u>+ 76 ac.</u>		

ROADS OR DRIVEWAYS AND HOMES WITH BASEMENTS:

The most favorable location for roads or driveways and homes with basements is in the soil areas mapped Paxton on slopes of 3-15% (Soil symbols PdB, PbB and PbC; + 22 acres). Here the limitation is considered moderate to severe, depending upon the slopes and water movement encountered on top of the hardpan. For road and driveway subgrades, adequate drainage measures are needed to prevent frost heaving. Footing drains are needed to prevent seepage into basements of homes.

All other areas of + 54 acres have severe limitations for roads or drives and homesites primarily due to slopes of greater than 15%.

AGRICULTURAL USES: (Vegetable crops, pasture)

The most favorable location for agricultural uses is again, in the soil areas mapped Paxton on slopes of 3-15% (Soil Symbols PdB, PbB and PbC; + 22 ac.) now in woodland. Clearing of trees and removal of stumps and stones would be necessary along with liming and fertilizing according to soil tests and the planting of adaptable crops based upon needs.

Where slopes are 8-15%, erosion is a hazard and more intensive surface water control measures are needed such as contouring, stripcropping and diversions where clean-till crops would be grown.

All other areas have severe limitations for agricultural uses primarily due to either excessive slopes and/or shallowness to bedrock.

V. GEOLOGY

Bedrock underlying and cropping out on the site is of two principal types: mica-quartz schist, and coarse-grained granite, which is also known as pegmatite. The schist is a gray to silvery rock in which the grains of mica have aligned to form thin, wavy or crinkled layers. The relative abundance of quartz and mica in the layers varies, so that some layers are more compact and less easily crumbled or split apart than others. In addition to the minerals quartz and mica, the rock also commonly contains garnet, staurolite, and kyanite, and small amounts of apatite, pyrite, and zircon. Almost all outcrops and boulders found in the southern part of the property were composed of this schist. The pegmatite consists primarily of very large grains of quartz, feldspar, and muscovite (a grayish to colorless mica). Minor minerals include garnet and magnetite. A large outcrop of pegmatite was found along the electric-power line in the northwestern part of the site. Additional information on the bedrock geology of the area may be obtained from the Natural Resources Center of the Department of Environmental Protection in Hartford.

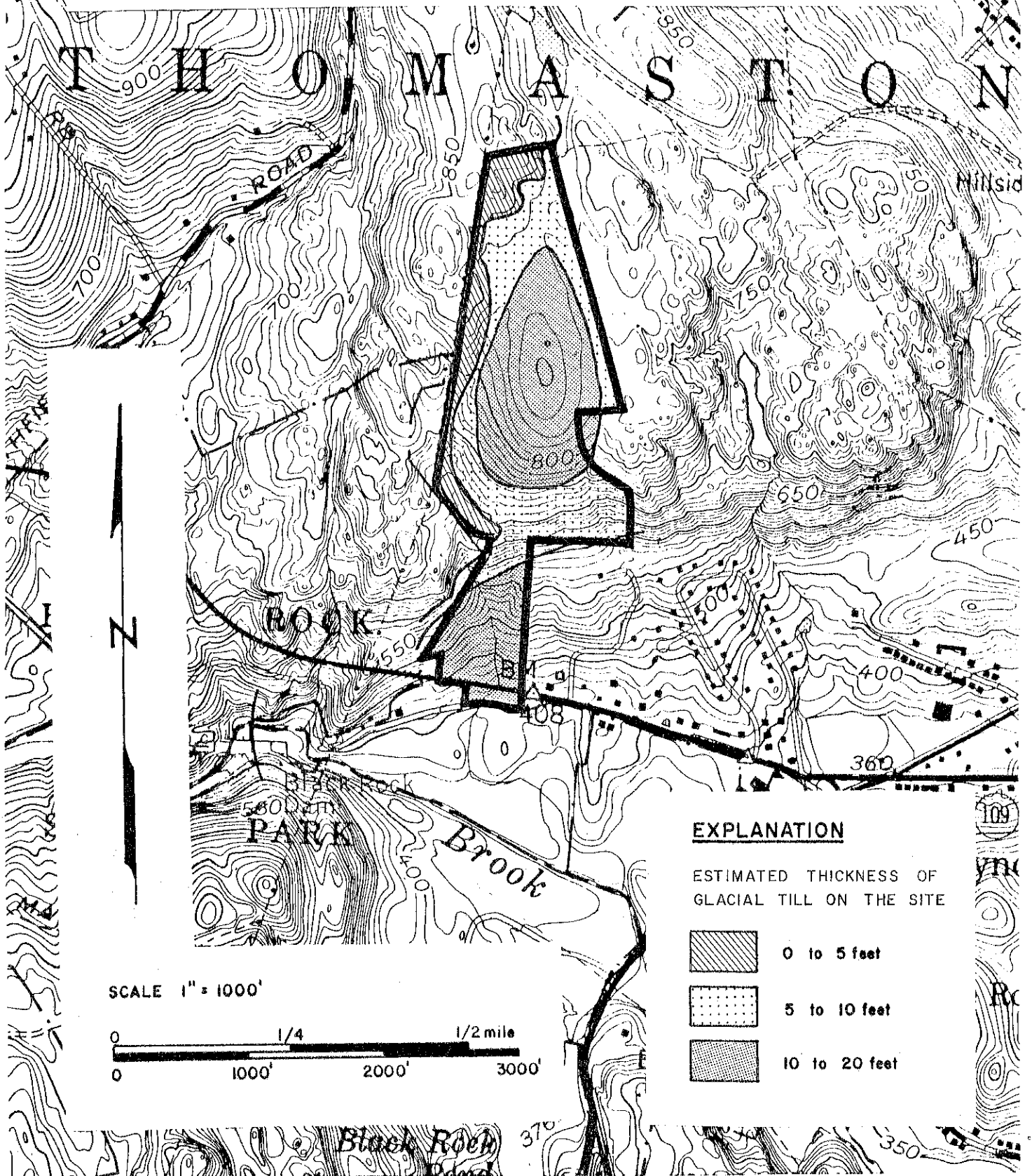
Surficial geologic materials on the property (unconsolidated materials overlying the bedrock and underlying the biologically active soil zone) consist largely of till. Till is a glacial deposit composed of rock particles of all shapes and sizes. These particles were collected by, and later re-deposited from, a moving ice sheet. Silt and sand form the bulk of the till, but large boulders are common and tend to be the most prominent feature. The thickness of the till is variable, but it appears to be less than 20 feet in most places (See Figure 2). In general, the more irregular the topography or the steeper the slope in a specific area of the property, the greater the likelihood that the till is very thin (less than 10 feet).

VI. HYDROLOGY

Only one perennial stream exists within the site. The stream is fed by surface runoff and groundwater flow from the western part of the property, as well as from an area adjacent to the site. Elsewhere, surface flow is primarily in the form of sheet runoff, directed toward the south or east. Groundwater flow generally parallels the surface flow patterns. Development of the steep southern section of the property would expose much of the soil to quickly moving runoff during storms, leading to significant erosion problems. Severe gullying of the land, as well as sedimentation in the downstream portion of the brook, are among the predictable results. The actual volume of runoff would increase during and following development, enhancing the erosive capacity of the moving water. Finally, an increase in peak flood flows may be expected; however, it is unlikely that the increase would be crucial in terms of development, as most residences would probably be established away from the brook, due to topographic considerations. Nevertheless, if development proceeds, it would be instructive to analyze the change in peak flows to determine if the culvert along Route 109 will remain adequate.

FIGURE 2.

ESTIMATED THICKNESS OF TILL ON THE SITE



VII. VEGETATION

Abandonment of orchards and pasture land at different times, together with high soil water levels are responsible for the development of six relatively distinctive vegetation stand types on this seventy six acre site. The location of each of these stands is shown in Figure 3,

STAND A - Mixed Hardwoods. This under stocked twelve acre stand is an abandoned apple orchard. Poor quality apple trees are scattered throughout this area along with sapling size redcedar and juniper. Also present are seedling and sapling size white ash, red oak, white oak and sugar maple. Several sawlog size white ash and sugar maple border the brook which runs down the center of this stand. The stand floor is covered with a thick mat of grasses, goldenrod, arrow-wood, sumac and steepleshub. This area is non-commercial forest land, because the excessive slope restricts operation of logging machinery.

STAND B - Mixed Hardwoods. Pole size old field hardwoods dominate this fully stocked sixteen acre stand. Red maple, red oak, white oak and redcedar are relatively abundant with occasional gray birch and black cherry intermixed. Several over-mature white pine with multiple stems are also dispersed over this stand. The understory is made up of scattered mountain laurel and highbush blueberry. Several species of ferns and club mosses comprise this areas ground cover.

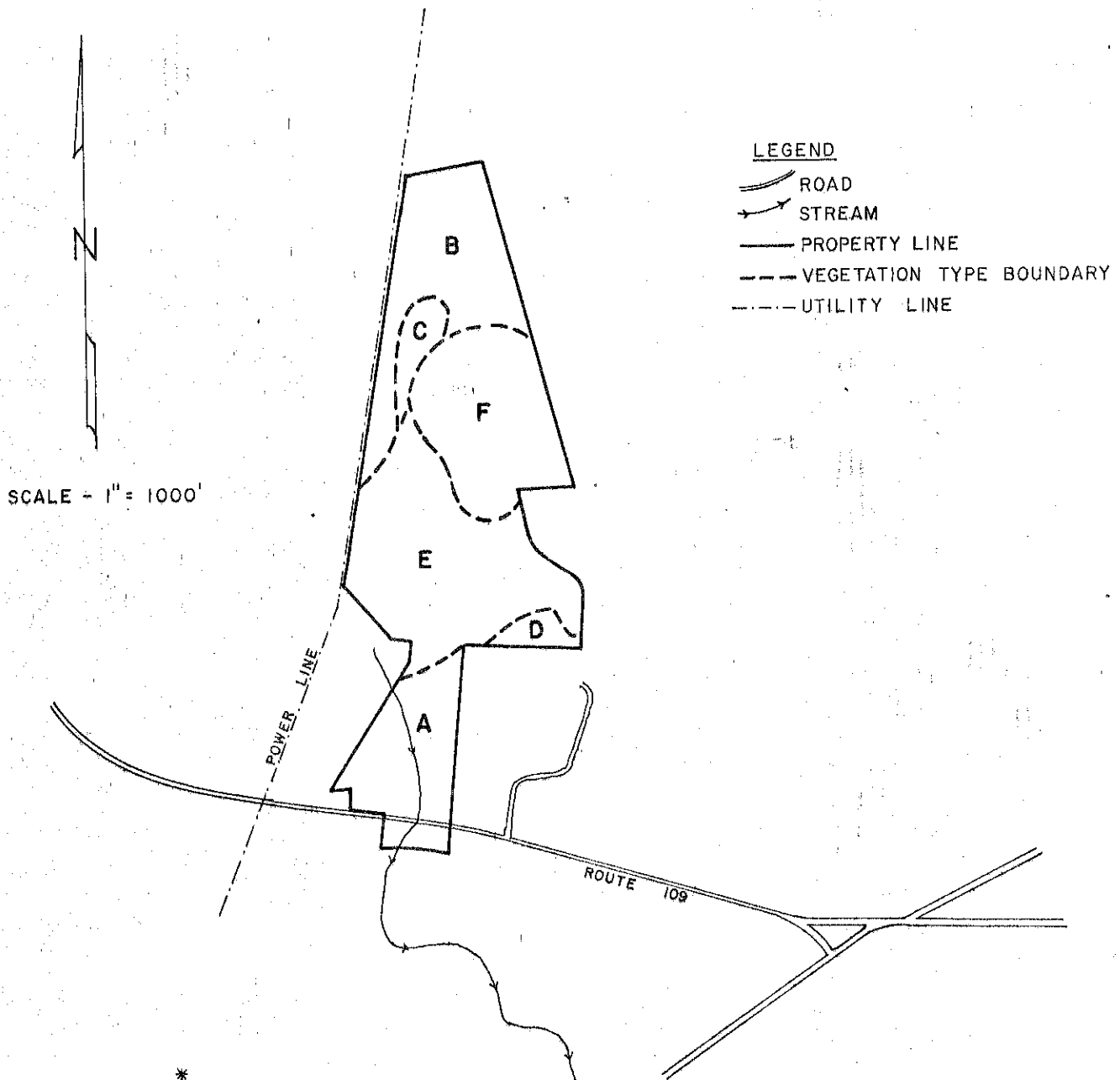
STAND C - Hardwood Swamp. Clumps of pole size red maple dominate the overstory in this three acre wetland site. Sweet pepperbush and highbush blueberry are found as understory species on the drier areas within this stand. Ground cover consists predominately of spagnaum moss and ferns. The slow growth and poor quality of hardwood species growing in this wetland area results in the trees not being commercially important.

STAND D - Old Field. Two acres of fully stocked pole size redcedar occupy this stand with white ash, red oak and sugar maple saplings intermixed throughout. Excessive slope limits use of this area to non-commercial forest purposes.

STAND E - Mixed Hardwoods. This stand contains twenty five acres of pole size fully stocked mixed hardwoods and redcedar. Red oak, white oak, hickory, red maple and black birch are the principle species present in the overstory. Redcedars are distributed over the entire area and are becoming overtopped by the mixed hardwoods. The understory contains some hardwood tree seedlings and mapleleaf viburnum. Ground cover where present consists of club mosses and ferns.

STAND F - Mixed Hardwoods. Sapling and pole size red maple dominate this eighteen acres. Scattered redcedar, white pine and mountain laurel are also present. The red maple is so over crowded in most places that little light is available for understory vegetation to become established.

FIGURE 3. VEGETATION TYPE MAP



VEGETATION TYPES *

- A** MIXED HARDWOODS, SAPLING SIZE (ABANDONED APPLE ORCHARD)
- B** MIXED HARDWOODS, POLE SIZE (OLD FIELD HARDWOODS STILL PRESENT)
- C** HARDWOOD SWAMP, POLE SIZE (RED MAPLE)
- D** OLD FIELD, POLE SIZE (RED CEDAR)
- E** MIXED HARDWOODS, POLE SIZE
- F** MIXED HARDWOODS, SAPLING TO POLE SIZE (RED MAPLE)

* SAPLING SIZE TREES = 1 to 5 INCHES IN DIAMETER AT BREAST HEIGHT

POLE SIZE TREES = 6 to 11 INCHES IN DIAMETER AT BREAST HEIGHT

SAWLOG SIZE TREES = 11 INCHES OR GREATER IN DIAMETER AT BREAST HEIGHT

LIMITING CONDITIONS

Tree health can be adversely altered by changes in soil aeration brought about by changes in depth, composition, or moisture level of the soil beneath a tree's crown.

If soil must be disturbed under a tree's canopy for construction of roads, driveways, septic absorption fields or buildings, then the tree should be removed. It is possible for trees to die up to three years after the soil has been disturbed in an area as a direct result of the disturbance. Removal of affected trees prior to construction will reduce the hazard of dead or dying trees.

Any development around or near wetland areas should be carefully designed so that the water level is altered as little as possible. Trees and shrubs growing in wetland areas are usually affected most by changes in ground water levels. Rises in water level may result in the death of most of the trees and shrubs in the wetland area, as a result of drowning the root systems. Trees found in wetland sites are also very susceptible to blow over due to their shallow root systems.

FOREST MANAGEMENT

In aggregate there are fifty nine acres of fully stocked and over stocked pole size forest stands which would respond well to some form of timber stand improvement (T.S.I.). A selective cordwood harvest of about one third of the stems, removing poor quality or damaged trees along with less desirable species such as red maple would improve the overall condition of the remaining forest. A private Forester could be consulted for help in choosing which trees should be removed. Prior to pursuing T.S.I. of the site, it is important that access to the property be secured from the north. Access from the south is too steep to accommodate a harvesting operation.

The remaining seventeen acres do not lend themselves as readily to T.S.I. practices as a result of limitations caused by severe slopes and high water tables.

VIII. WATER SUPPLY

Water supply to the property probably would be provided by individual on-site wells. No suitable aquifer other than bedrock is apparent for the prospective residential lots. Schistose bedrock, such as that found throughout most of the property, is the least desirable water supply in terms of potential yields. A yield of 3 gallons per minute (gpm) is generally considered adequate for an average household. According to Connecticut Water Resources Bulletin No. 19, approximately one third of the 68 schist-based wells that were surveyed in the lower Housatonic River basin yielded less than 3 gpm. Nevertheless, 50 percent of the wells yielded 4.5 gpm or more.

The exact yield of a specific well depends upon the number and size of water-bearing fractures that are encountered within the bedrock. Schist commonly produces less groundwater because fractures in this rock tend to be

less open than fractures in granitic bedrock. Most of the fractures occur in the upper part of the bedrock. If less than 1 gpm is produced from the first 100 feet of drilled rock, it is likely, although not certain, that deepening of the well will not bring about an adequate yield.

IX. SEPTIC SYSTEMS

As mentioned above, the limitations of the property for septic systems are severe in most areas. Steepness of the slopes, shallowness of the till, and the potential presence of hardpan layers are the most significant problems. Perched or seasonally high groundwater levels are also likely to hinder the proper functioning of the systems in some locations. Because of the methods that are necessary to overcome these types of problems, it is likely that most systems would have to be engineered, and at least partly constructed in fill material. Such systems, if well-designed, may function adequately in the flatter, northern section of the site. However, it is likely that problems would remain in systems placed in fill on the steeper, southern section. Movement of the fill could disrupt the drainage lines and effluent could break out onto the surface downslope from the filled area.

High or perched groundwater levels could affect the systems by flooding the tile lines, causing backups, or by plugging the pore spaces in the channels with sediment. These conditions would also reduce the renovation of the effluent and could lead to breakout on the surface.

In summary, it is safe to say that any septic systems constructed on the northern half of the site should be very carefully designed, installed, and maintained. The southern half of the site seems inhospitable even for engineered systems.

Upon further consideration and planning of the proposed development, it is recommended that the feasibility of providing public water supply and sewers to the area be investigated. Another alternative worthy of consideration is a community type sewage disposal system to serve the housing units. It should be noted however that the state Department of Health generally does not look favorably on community systems due to the administrative/maintenance problems involved.

X. PLANNING CONSIDERATIONS

A. CONFORMANCE WITH LOCAL ZONING

The proposal is generally in conformance with the Thomaston Zoning Regulations. The zoning for the area (RA-40) specifies lots of at least 1 acre, which reflects the initial thinking of the tribe. According to the cluster provisions of the regulations, for tracts of at least 25 acres, lot sizes can be reduced up to 20%. If community on-site septic systems or sewerage is used, clustering may be worth considering. Mikki Aganstata, DEP Indian Affairs Coordinator, indicated to the ERT that the tribe anticipates constructing up to 30 single family houses and a community center, raising crops,

keeping livestock, and having craft training and sales on the property. In RA-40 zones, single family houses, the keeping of livestock, and agricultural operations are permitted by right. Special permits are required for community centers and buildings or stands for selling agricultural products. It appears that a zone change would be necessary in order to permit craft training and selling.

B. CONFORMANCE WITH REGIONAL LAND USE PLAN

Less than 50% of the property is recommended for development in the Regional Land Use Plan of the Central Naugatuck Valley Regional Planning Agency. The land in the southern half of the property (elevations below 750-800 ft.) has steep slopes except for the land directly adjacent to Rt. 109. In the northern half, land adjacent to the power line has a shallow depth to bedrock. These portions of the property have been classified as Natural Areas in the Regional Plan because of the severe restrictions to development.

The Plan considers the rest of the property to be conditionally suitable for development -- the condition being that development in this non-sewered area occur on lots of at least 2 acres. The 2 acre minimum is recommended to ensure a large enough area on each lot to find pockets of good percolating soils, necessary for the successful operation of on-site septic systems. However, if septic systems were to fail, the property will have two feasible points for tying into sewers in the future. Engineering work is proceeding on a trunk sewer line along Rt. 109. Also, a sewer line on Northfield Road from Rt. 109 to Babbitt Road is part of the project. Thus, sewer connections could be made at the property line along Rt. 109 or if sewer lines are extended on Northfield Road to the Fish & Game Club, a connection could be made through the Club.

If the reservation is developed with 2 acre lots, the property could only accommodate about half of the 30 proposed houses since less than 50% of the property is considered developable according to the Regional Plan. Even if the land were to be developed on 1 acre lots, there would only be room for houses -- the agricultural activities proposed by the tribe would not be feasible because of steep slopes and shallow bedrock in the undevelopable portion of the property. With further consideration of this parcel of land, the tribe should consider clustering their houses according to the town's zoning regulations and then using a community leaching field if adequate soils are available and satisfactory administrative/maintenance mechanisms can be arranged.

C. ACCESS TO THE PROPERTY

Access to the property presents problems. Access from Rt. 109 to the developable portion of the property would be extremely difficult because of slopes of over 25% in parts of the property's southern half. Based on road standards of the American Association of State Highway and Transportation Officials, the maximum grade for a local road should be 12% with relatively short lengths permitted to have grades up to 18% if traffic volumes are low (less than 250 vehicles per day). At the narrowest point of the property, the slope is at least 25%, and the width is less than 400 feet. This is very tight for constructing a road traversing the slope with a series of switchbacks.

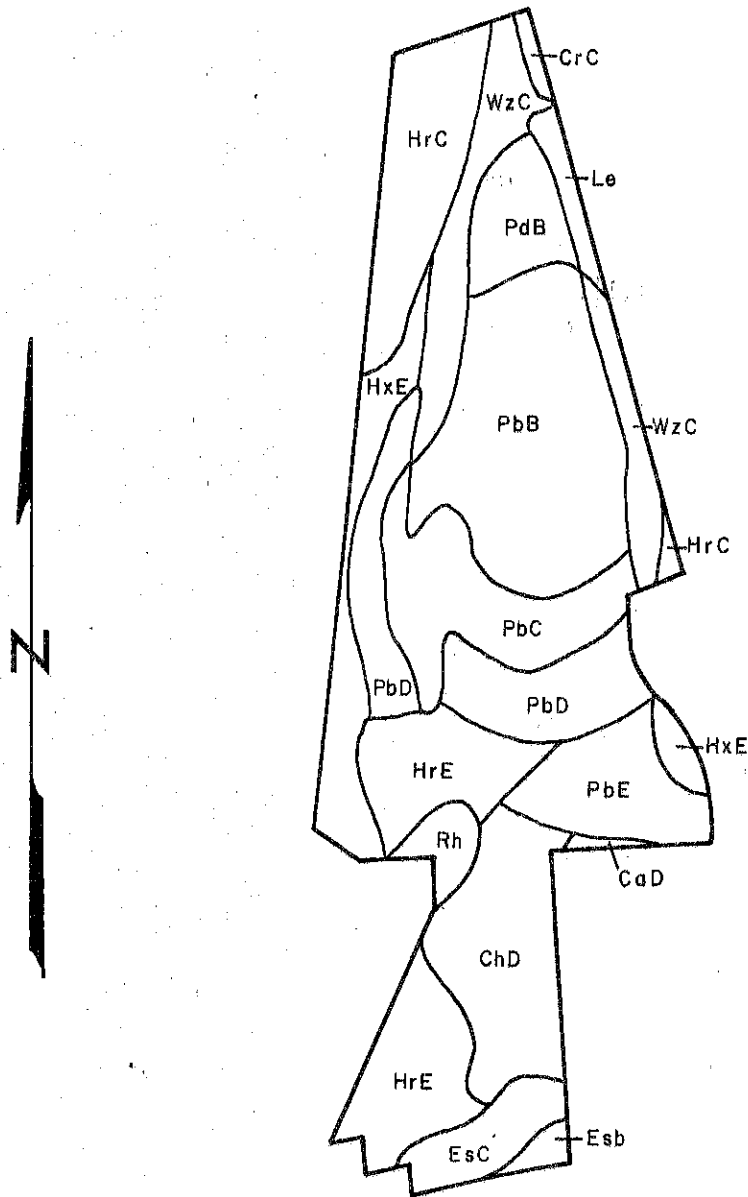
Several alternative access roads were examined. The first, the private road from Old Northfield Road to the Thomaston Fish and Game Club, comes fairly close to the northern boundary of the property and would provide easy access. The road, however, is private; and a right-of-way easement would have to be granted or purchased from the Club and any other owners. Another possibility that could be explored would be the construction of a new 1,000 foot road from Old Northfield Road on gradually sloping land west of the existing Fish and Game Club road, assuming the right-of-way could be purchased. Based on a 1978 CNVRPA study of local zoning, the cost of constructing this road would be at least \$19.00 per linear foot (minimum). This is a conservative figure because the \$19/ft does not include grading.

The other alternative is Dug Road, a narrow, dirt, unimproved woods road which extends westerly from a town road through Hillside Cemetery. To provide access to the property, roughly 2,500 feet of Dug road would have to be improved. The ownership of the road right-of-way is uncertain and would have to be researched. If privately owned, the required right-of-way (50 feet) would have to be purchased, and the tribe would have to pay for road construction. Assuming a cost of at least \$19.00 per linear foot, a road of 2,500 feet would cost a minimum of \$47,500. If the right-of-way is privately owned, the cost of acquisition would total \$2,860, assuming land prices of \$1,000/acre, or \$1,430, assuming land prices of \$500/acre. In any event, while it might be feasible to construct, the Dug Road alternative would be more costly and more circuitous than an access road from Old Northfield Road.

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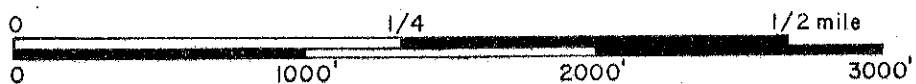
APPENDIX

SOILS MAP



Prepared by USDA - SCS
1968
Advance copy
Subject to change.

SCALE 1" = 660'



SOILS LIMITATION CHART
GOLDEN HILLS TRIBE LAND ACQUISITION

MAP SYMBOL	SOIL NAME	SEPTIC ABSORPTION FIELDS		BUILDINGS W/ BASEMENTS		ROADS OR DRIVEWAYS		LANDSCAPING	
		RATING	REASON	RATING	REASON	RATING	REASON	RATING	REASON
CaD	Charlton fine sandy loam, 15-25% slopes	Severe	Slope	Severe	Slope	Severe	Slope	Severe	Slope
CrC	Charlton very stony fine sandy loam, 3-15% slopes	Moderate	Slope	Moderate	Slope	Moderate	Slope	Moderate	Slope
ChD	Charlton stony fine sandy loam, 15-25% slopes	Severe	Slope	Severe	Slope	Severe	Slope	Severe	Slope, Large Stones
EsB	Enfield silt loam, 3-8% slopes	Slight	Slope	Slight	Slope	Slight	Slope	Slight	Slope
EsC	Enfield silt loam, 8-15% slopes	Moderate	Slope	Moderate	Slope	Moderate	Slope, Frost Action	Moderate	Slope
HrC	Hollis very rocky fine sandy loam, 3-15% slopes	Severe	Depth To Rock	Severe	Depth To Rock	Severe	Depth To Rock	Severe	Depth To Rock
HrE	Hollis very rocky fine sandy loam, 15-35% slopes	Severe	Slope, Depth To Rock	Severe	Slope, Depth To Rock	Severe	Slope, Depth To Rock	Severe	Slope, Depth To Rock
HxE	Hollis extremely rocky fine sandy loam, 15-35% slopes	Severe	Slope, Depth To Rock	Severe	Slope, Depth To Rock	Severe	Slope, Depth To Rock	Severe	Slope, Depth To Rock
Le	Leicester stony fine sandy loam	Severe	Wetness	Severe	Wetness	Severe	Wetness, Frost Action	Severe	Wetness
PbB	Paxton fine sandy loam, 3-8% slopes	Severe	Percs Slowly	Moderate	Wetness	Moderate	Frost Action	Moderate	Small Stones
PbC	Paxton fine sandy loam, 8-15% slopes	Severe	Percs Slowly	Moderate	Wetness	Moderate	Frost Action	Moderate	Small Stones
PbD	Paxton fine sandy loam, 15-25% slopes	Severe	Slope	Severe	Slope	Severe	Slope	Severe	Slope
PbE	Paxton fine sandy loam, 25-35% slopes	Severe	Slope	Severe	Slope	Severe	Slope	Severe	Slope
PbF	Paxton stony fine sandy 3-8% slopes	Severe	Percs Slowly	Moderate	Wetness, Large Stones	Moderate	Frost Action	Moderate	Large Stones

MAP SYMBOL	SOIL NAME	SEPTIC		BUILDINGS W/		ROADS OR		LANDSCAPING	
		RATING	REASON	RATING	REASON	RATING	REASON	RATING	REASON
Rh	Rockland	Severe	Depth To Rock	Severe	Depth To Rock	Severe	Depth To Rock	Severe	Depth To Rock
WZC	Woodbridge very stony fine sandy loam, 3-15% slopes	Severe	Percs Slowly	Severe	Wetness	Severe	Frost Action	Moderate	Large Stones

- EXPLANATION OF RATING SYSTEM
1. SLIGHT LIMITATION: indicates that any property of the soil affecting use of the soil is relatively unimportant and can be overcome at little expense.
 2. MODERATE LIMITATION: indicates that any property of the soil affecting use can be overcome at a somewhat higher expense.
 3. SEVERE LIMITATION: indicates that the use of the soil is seriously limited by hazards or restrictions that require extensive and costly measures to overcome.

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, foresters, climatologists, soil scientists, landscape architects, recreation 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 47 town area in western Connecticut.

As a public service activity, the team is available to serve towns and developers within the King's Mark Area --- free of charge.

PURPOSE OF THE TEAM

The Environmental Review Team is available to help towns and developers in the review of sites proposed for major land use activities. To date, the ERT has been involved in the review of a wide range of significant activities including subdivisions, sanitary landfills, commercial and industrial developments, and recreation/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 identifying the natural resource base of the project site and highlighting opportunities and limitations for the proposed land use.

REQUESTING A REVIEW

Environmental Reviews may be requested by the chief elected official of a municipality or the chairman of an administration agency such as planning and zoning, conservation, or inland wetlands. Requests for reviews should be directed to the Chairman of your local Soil and Water Conservation District. This request letter 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 address. When this request is approved by the local Soil and Water Conservation District and the King's Mark RC&D Executive Committee, the team will undertake the review. At present, the ERT can undertake two reviews per month.

For additional information regarding the Environmental Review Team, please contact your local Soil Conservation District Office or Richard Lynn (868-7342), Environmental Review Team Coordinator, King's Mark RC&D Area, P.O. Box 30, Warren, Connecticut 06754.