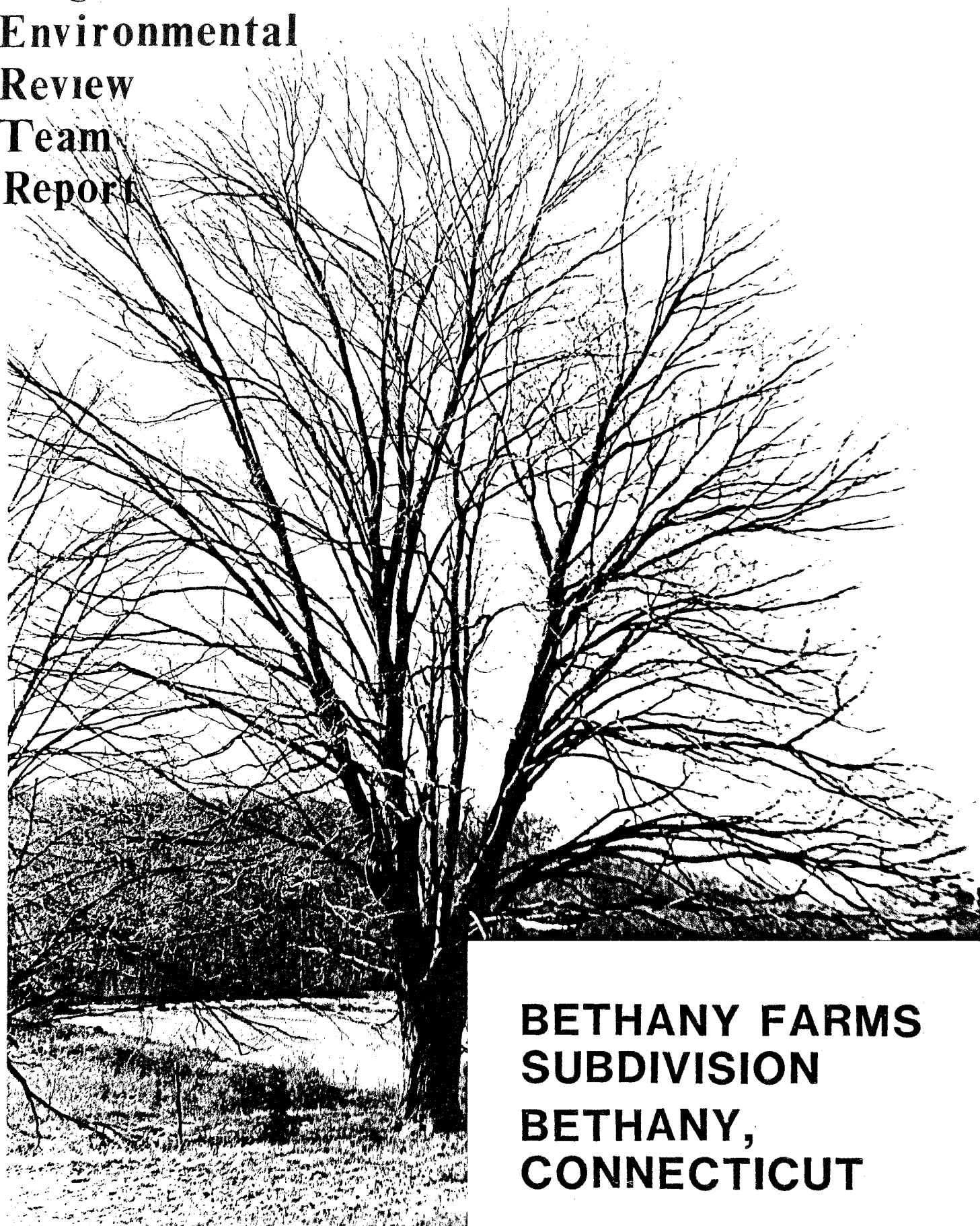


**King's Mark  
Environmental  
Review  
Team  
Report**



**BETHANY FARMS  
SUBDIVISION  
BETHANY,  
CONNECTICUT**

BETHANY FARMS SUBDIVISION

BETHANY, 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

Bethany Planning and Zoning Commission

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 significance to the proposed development and also suggests considerations that should be of concern to the Planning and Zoning Commission and the Town. 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.

FEBRUARY 1988

## ACKNOWLEDGMENTS

The King's Mark Environmental Review Team Coordinator, Nancy Ferlow, 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, Hydrogeologist  
Department of Environmental Protection - Natural Resource Center
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USDA - Soil Conservation Service
- \* Kipen Kolesinskas, Soil Resource Specialist  
USDA - Soil Conservation Service
- \* David Thompson, Archaeologist  
Greater New Haven Archaeological Society
- \* Herbert Burstein, Executive Director  
South Central Regional Council of Governments
- \* Henry Ditman, Traffic Engineer  
Barkan & Mess Associates
- \* Joseph Hickey, Recreational Planner  
Department of Environmental Protection - Parks and Recreation

I would also like to thank Susan Anderson, Secretary for the King's Mark Environmental Review Team for assisting in the completion of this report.

Finally, special thanks to N.H. Borgerson, Jr., Bethany Planning & Zoning Commission and R. David Sanders and Ted Ruderman, owner/developer, Robert L. Jones, engineer for the developer, and Samuel Pine, consultant for the developer, for their cooperation and assistance during this environmental review.

## EXECUTIVE SUMMARY

### Introduction

The Bethany Planning and Zoning Commission has requested that an environmental review be conducted on Bethany Farms, a site proposed for a subdivision development. The site is located in the southwestern corner of town, bordering the town of Woodbridge. A portion of the site is located in Woodbridge. Access is provided via Bethmour Road in Bethany and Route 67 and Sanford Road in Woodbridge.

The 270-acre site is characterized by second growth, mixed hardwood forests, wetlands, and rock outcrops. Steep slopes occur in the central and southern sections of the site. There are scattered wetland communities as well as numerous streamcourses. A remnant of the Blue Trail, named because of the blue blazes, runs through the property. The proposed subdivision would encompass 57 house lots, ranging in size from 2.4 acres to 10.5 acres. A single, looped access road is proposed to serve the subdivision. The subdivision would rely upon on-site septic and water.

The Town was primarily concerned with the potential impact that the proposed development would have on: (1) existing natural resources; (2) effects of erosion and sedimentation; (3) archaeological resources; and (4) site design compatibility. Therefore the Town asked the ERT to inventory on-site resources and determine their suitability for the proposed development.

The review process consisted of four phases: (1) inventory of the site's natural resources; (2) assessment of these resources; (3) identification of resource problem areas; (4) presentation of planning and land use guidelines. Based on the review process, specific resources, areas of concern and development limitations and opportunities were identified. The major findings of the ERT are presented below:

### Setting and Topography

The site contains slopes that range from gentle to steep. The steepest sloping land lies in the southern half. These slopes appear to be controlled by the underlying bedrock, which is at or near the surface. Five streamcourses and accompanying wetlands traverse the site enroute to the Bladens River.

### Geology

Two bedrock units underlie the site: Prospect Gneiss and a member of the Hartland Formation. Both units are metamorphic. A thin blanket of glacial till covers the bedrock on the site. The thinner till tends to be loose and sandy; the thicker till tends to be more compact and silty. A small area of sand and gravel is found in the southwest corner. Post glacial sediments found on the site are alluvium and swamp deposits.

## Geologic Development Concerns

The major geologic limitations of the site include: (1) areas where bedrock is at or near the surface of the ground; (2) areas of moderate to very steep slopes; (3) the presence of compact till soils, which commonly results in elevated ground water tables and slow percolation rates; and (4) areas of seasonal and permanent wetness. These limitations will be a major hindrance in the development of on-site sewage disposal systems. However, proper planning and engineering can overcome some of these limitations.

Interior roads, utility lines, and house foundations constructed in shallow bedrock areas may require blasting. Any blasting which takes place in the study area should be done under the supervision of personnel familiar with the latest technology in blasting. A pre-blast survey of the area would also be wise so as to minimize the chance for damage claims. Steep slopes in the southern limits will greatly limit the ability to develop several lots. Of particular concern will be excessive driveway grades (during inclement weather), installation of on-site septic systems and difficult accessibility for well drilling rigs.

The present interior road system will cross wetland areas in at least five locations. It appears several small drainageways that carry seasonal waters will also need to be crossed. All crossings except one (near lots 8 and 10), consist of relatively narrow bands of wetlands. This one crossing consists of about 90 feet of regulated soils. Shifting the road approximately 100 feet to the south would reduce the amount of the wetland crossing significantly. A large volume of fill will be needed for the wetland crossing near the loop intersection. Shifting the road eastward would minimize the wetland disturbance.

Wetland crossings are generally feasible provided they are properly designed. The roads should be constructed at least 1.5 feet and preferably 2 feet above the surface elevation of the wetlands. This will allow better drainage and decrease the frost heaving potential. The best time for road construction through wetland areas is during the dry time of the year.

Wetlands are regulated under Chapter 440 and the Connecticut General Statutes. Any activity such as filling, grading and/or modification will require a permit from the Inland Wetlands Commission.

## Water Supply

Bedrock wells should be located on a high point on the property, away from sources of pollution. The shallow ledge rock is a concern as soil provides a means for treatment and renovation of pollutants. Well pollution is a problem in areas of shallow ledge rock because sewage effluent can move rapidly and for great distances in permeable drainage channels or crevices on top of ledge. Proper installation and sealing can help prevent this type of well pollution.

It may be necessary to ascertain that the wells have sufficient yield to provide for normal household uses. Water from certain rock formations can be high in minerals. In such cases water treatment may be needed.

## Hydrology

The site lies within the Bladens River watershed. The conversion of the site to a residential subdivision will be expected to increase the amount of runoff. Stormwater management has not been addressed. Another concern associated with the increase in runoff is the potential for streambank erosion and siltation. It is recommended that Connecticut's Guidelines for Erosion and Sediment Control be followed.

## Soil Resources

The soils occurring on the site are generally mapped in the "Soil Survey of New Haven County, Connecticut". Inland wetland and watercourse locations have been mapped by a soil consultant. Soil limitations on the site include: poorly drained soils, regulated inland wetland soils, steep slopes and shallow soils.

## Erosion and Sediment Considerations

The proposed development will require a detailed sediment and erosion control plan. Activities on the hillsides could cause severe drainage and erosion problems if stormwater management and erosion control concerns are not properly addressed. Wetlands and watercourses should be carefully identified and protected from sedimentation. Many wetland crossings are planned for roads and driveways. Sediment and erosion control plans for these crossings should be required to protect the wetlands. With an equestrian development theme, the problems of keeping horses in a residential area should be addressed. Erosion and runoff from paddocks and pastures can be significant. The existing trail system might be upgraded into a riding and hiking trail system.

Portions of the access road have already been roughed in and some of the disturbed areas are contributing sediment to wetlands. Sediment and erosion controls should be installed to prevent the erosion from continuing. Possible fireponds are planned for wetland areas. Proper sediment and erosion control should be planned to protect the remaining wetlands.

## Threatened and Endangered Plant and Animal Species

According to the DEP - Natural Diversity Database there are no Federally listed Endangered Species or Connecticut "Species of Special Concern" that occur within the study area.

## Archaeological and/or Historical Considerations of the Bethany Farms Subdivision

The most obvious remains on the site are dams and associated mill sites along Pine Brook and Bladens River. They most likely represent the 19th century beginnings of the Industrial Revolution. A bridge for the access road will pass close to one of the mill sites. Care should be taken so that the site is not disturbed or that adequate research is done on the site first. A network of stone walls cross the property, which may represent an earlier land use system. While there are no observable prehistoric sites on the property, likely spots for sites would be hill tops or knolls adjacent to wetlands. Further investigation might be considered.

### Planning Considerations

Concerns of site planning include: (1) relationships between view protection of the prominent site, tree cutting and long-term tree coverage; (2) erosion control and slope; (3) stream/wetlands protection (particularly of Pine Brook and the Bladens River); and (4) house site orientation to take advantage of solar energy. Once decisions have been made as to how to protect the various aspects of the site, the necessary easements or controls should be reflected in the deeds. Septic systems should be shown on the site plans to facilitate decision making.

Lots in Woodbridge might be redesigned to place the houses in Bethany. This will avoid the mixing of municipal services. Moving the road to the north may be necessary to provide appropriate building sites.

### Traffic Circulation Concerns

Emergency access concerns can be met if alternative access is available. This could be a bypass intended for emergency vehicles and pedestrians. Improvement of the access road alignment would be helpful in view of the offset lineups with the local roads. The subdivision will add considerable traffic to the road intersections where difficult sight lines exist. Responsibility for the sight line improvement might be assigned before the subdivision is approved. Responsibility for road maintenance might also be considered in view of the long term costs. The acceptance procedure for roads might be reviewed by the Town.

### Traffic Engineering Considerations

The two separate bridges for the entrance road are an excellent idea, as one might provide for emergency access in case the other is blocked. Sharp curves on the proposed road might be dangerous as they may encourage cutting corners and crossing the center line of the road. A smoother line might be possible. Right angles at intersections of roads and driveways provide much better sight lines and easier turning motions than the acute angles indicated on the plans.

There are several discrepancies in the report submitted by Mr. Hale of Consultant Services. However, the subdivision road should function adequately and safely.

### Recreational Trail

The remains of the so-called "Blue Trail" or "Naugatuck Trail" have no official status. It is felt that the local land trusts have been maintaining the trail. The proposed subdivision lies on a site with severe development constraints. A site such as this might, given the proper zoning, be appropriate for cluster development, with the remainder of the property providing an opportunity for one or more trails.

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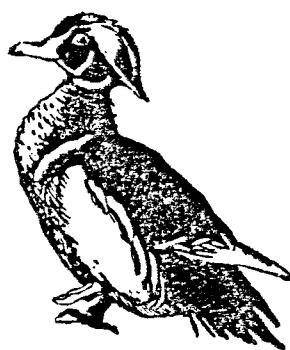
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# INTRODUCTION



## INTRODUCTION

The Bethany Planning and Zoning Commission has requested that an environmental review be conducted on Bethany Farms, a site proposed for a subdivision development. The site is located in the southwestern corner of town, bordering the town of Woodbridge. A portion of the site is located in Woodbridge. Access is provided via Bethmour Road in Bethany and Route 67 and Sanford Road in Woodbridge.

The 270-acre site is characterized by second growth, mixed hardwood forests, wetlands, and rock outcrops. Steep slopes occur in the central and southern sections of the site. There are scattered wetland communities as well as numerous streamcourses. A remnant of a trail, perhaps once part of the Blue Trail (named because of the blue blazes), runs through the property.

The proposed subdivision would encompass 57 house lots, ranging in size from 2.4 acres to 10.5 acres. A single, looped access road is proposed to serve the subdivision. The subdivision would rely upon on-site septic and water.

## THE ERT PROCESS

Through the efforts of the Bethany Planning and Zoning Commission, the developer's representative and the King's Mark ERT, this environmental review and report was prepared for the Town. This report primarily provides a description of on-site natural and archaeological 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 resource problem areas.
- (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 December 21, 1987. 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.

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 into the final ERT report.

The primary goal of this ERT is to inventory and assess existing natural resources occurring on the site as well as providing planning and traffic/access information. Specific objectives include:

- (1) assessment of the geological characteristics of the site, including geological development limitations and opportunities for roads and trails;
- (2) determination of the suitability of existing soils to support the proposed development;
- (3) discussion of soil erosion and sedimentation concerns;

Figure 1

# LOCATION OF STUDY SITE

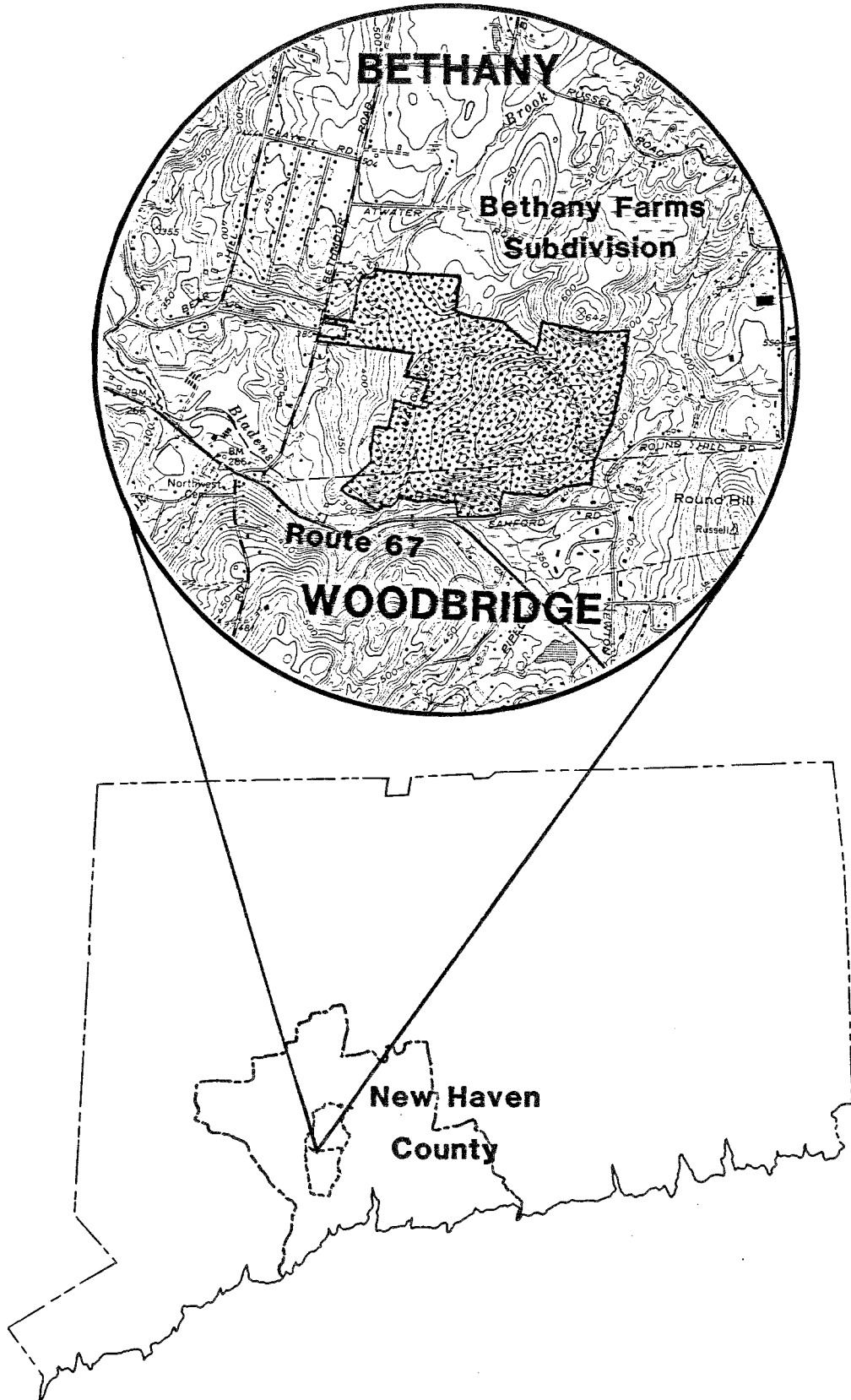
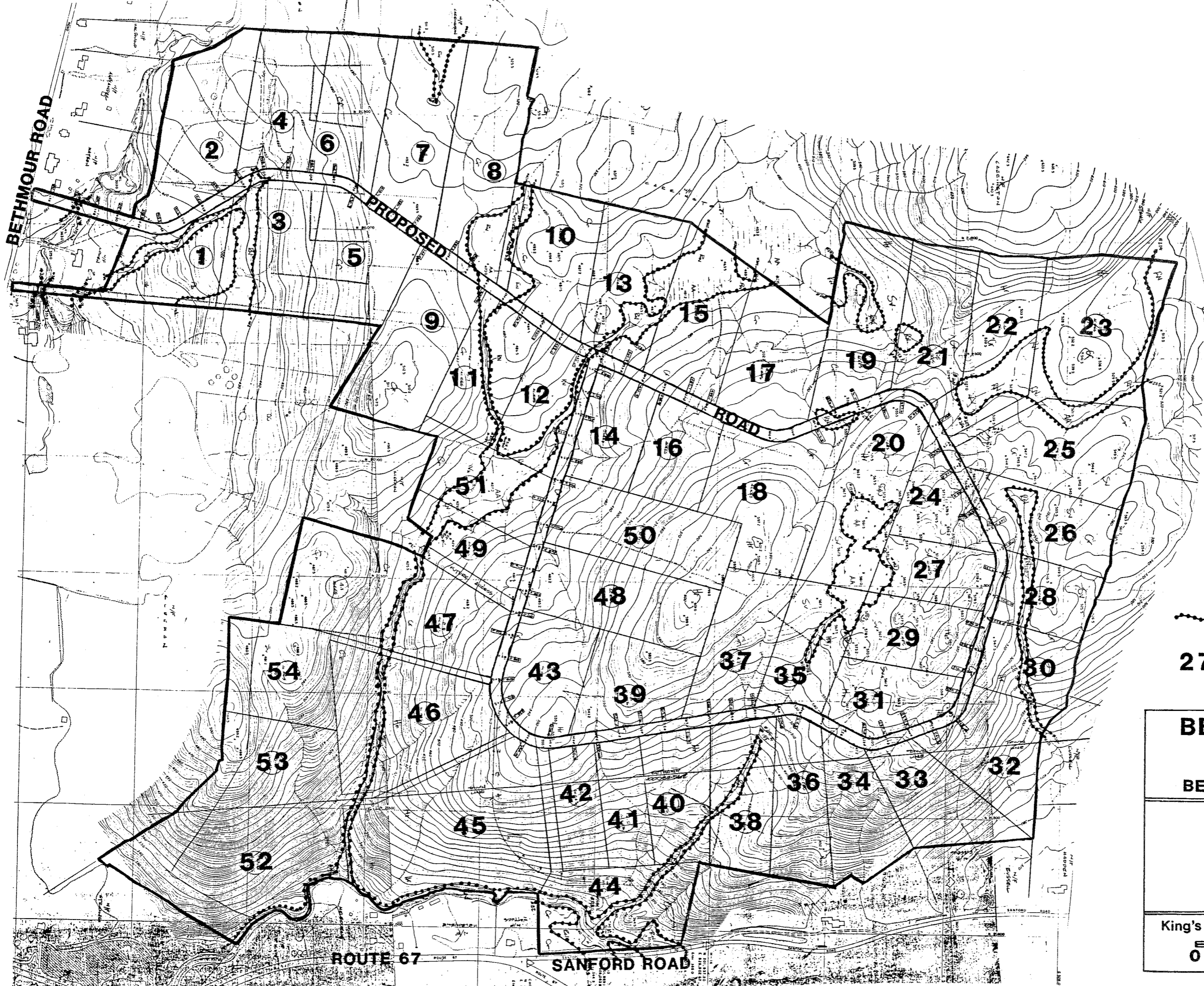



Figure 2



----- WETLAND BOUNDARY  
27 LOT #

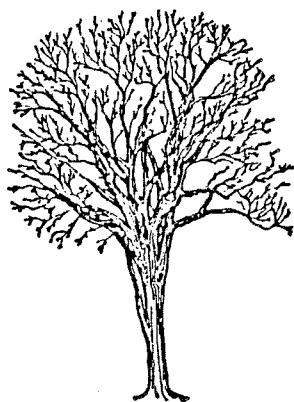
**BETHANY FARMS  
SUBDIVISION**  
BETHANY CONNECTICUT

**PROPOSED  
SUBDIVISION**

King's Mark Environmental Review Team  
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- (4) assessment of the impact of the development on the archaeological resources;
- (5) evaluation of traffic and access concerns, and;
- (6) assessment of planning and land use issues, including open space and trail planning.

# **PHYSICAL CHARACTERISTICS**





## SETTING AND TOPOGRAPHY

The proposed residential subdivision consists of an irregularly shaped parcel of land located in Bethany. A portion of the site is located in Woodbridge. The parcel is comprised of 270 acres of mostly wooded land. The site is characterized by bedrock controlled topography, which has a generally thin soil cover. The steepest sloping land is located primarily through the southern half of the site. These slopes are characterized by bedrock outcrops or conditions where bedrock is at or near ground surface. The remainder of the land is dominated by gentle to moderate slopes.

The highest elevation, which is 600 feet above mean sea level, is located in the central parts of the site. The lowest elevation on the site, about 290 feet above mean sea level, is located along Bladens River in the southern parts (see Figure 3).

At least five streamcourses and their accompanying wetlands traverse the site in a southerly direction enroute to Bladens River. Bladens River forms the southern boundary of the property. Except for the Pine Brook in the western parts, the remainder of these mainly seasonal streamcourses are unnamed. Small, seasonal drainageways that feed the above watercourses are visible throughout the site.

## GEOLOGY

The subject property is located entirely within the Naugatuck topographic quadrangle. Both a bedrock geologic map (QR-9 by M.H. Carr) and a surficial geologic map (QR-35, R.F. Flint) have been published for the quadrangle by the Connecticut Geological and Natural History Survey.

Based on soils mapping data, deep test hole information for subsurface sewage disposal exploration and visual observations made during the field review, most of the land is characterized by generally shallow soils. Numerous outcrops occur in the southeast corner. They also occur in isolated areas in the western and southern parts. Perhaps deeper soil conditions exist in the northwest corner.

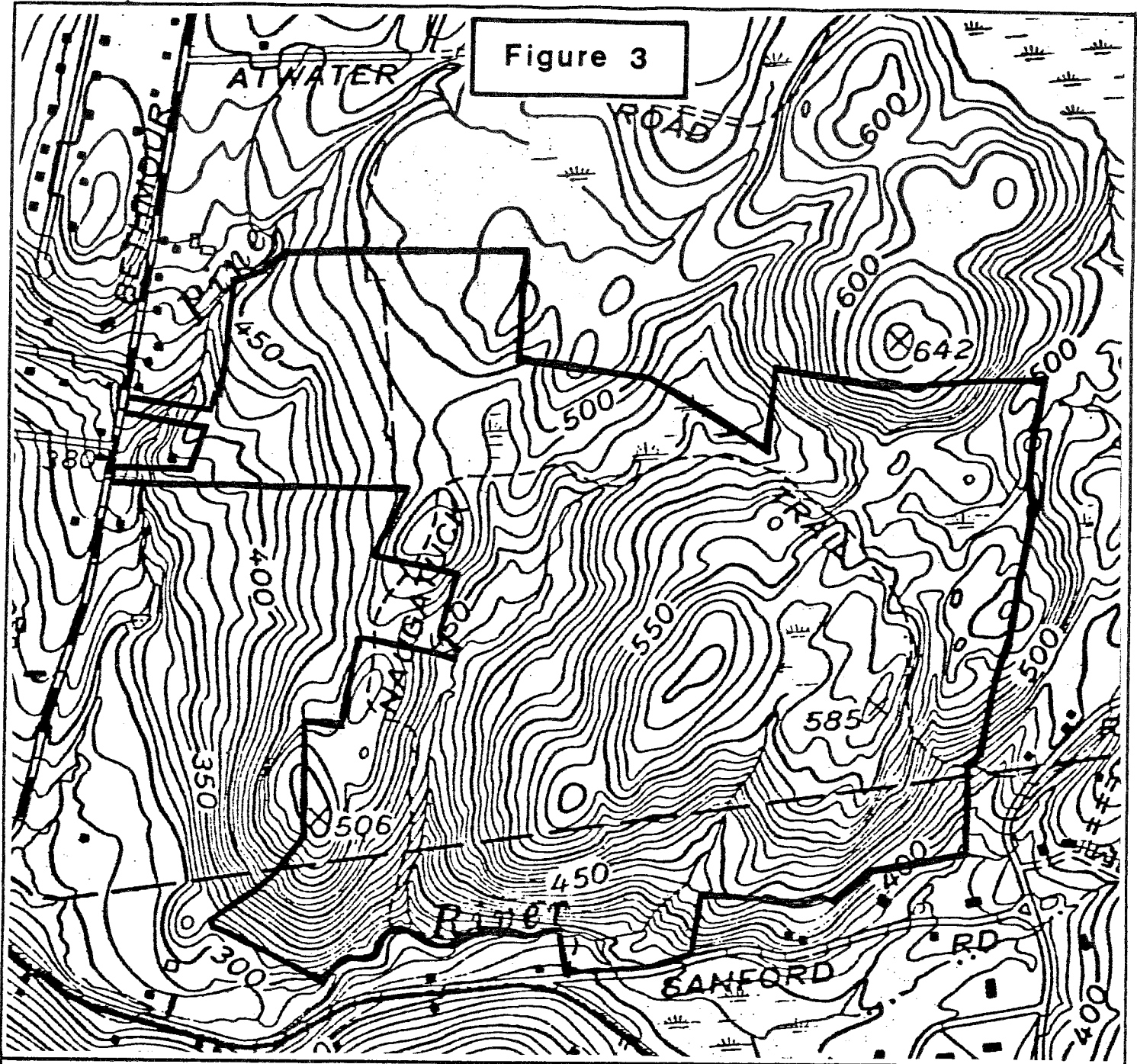
According to Carr's map (QR-9), two bedrock units underlie the site: Prospect Gneiss and a member of the Hartland formation (see Figure 4). These rocks are metamorphic, that is, they have been subjected to great heat and pressure within the earth's crust. The end result of these geologic forces are very complex rock units of variable composition and texture. Most of the site is underlain by Prospect Gneiss. It is described as dark gray augen (eye-shaped lenses of light-colored minerals) gneiss. The southeast corner of the parcel is underlain by a member of the Hartland formation. It is described as a well foliated quartzite which includes the minerals muscovite and biotite. Because the quartzites are fairly resistant to weathering processes, numerous bedrock exposures are visible in the southeast corner.

The words gneiss and quartzite are textural terms given to metamorphic rocks. "Gneisses" are rocks characterized by strong layering or banding and typically coarse-grained. "Quartzites" are quartz-rich sandstones that have been metamorphosed. They typically are light-colored and have a "sugary" or granular texture.

The proposed on-site wells will derive their water from the underlying metamorphic bedrock. Many homes in Bethany rely on the underlying bedrock for domestic water supplies (See Water Supply Section).

A relatively thin blanket of glacial sediment called till covers bedrock on the site (see Figure 5). It consists generally of a non-sorted mixture of

Figure 3



**BETHANY FARMS  
SUBDIVISION**

BETHANY, CONNECTICUT

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**TOPOGRAPHY**

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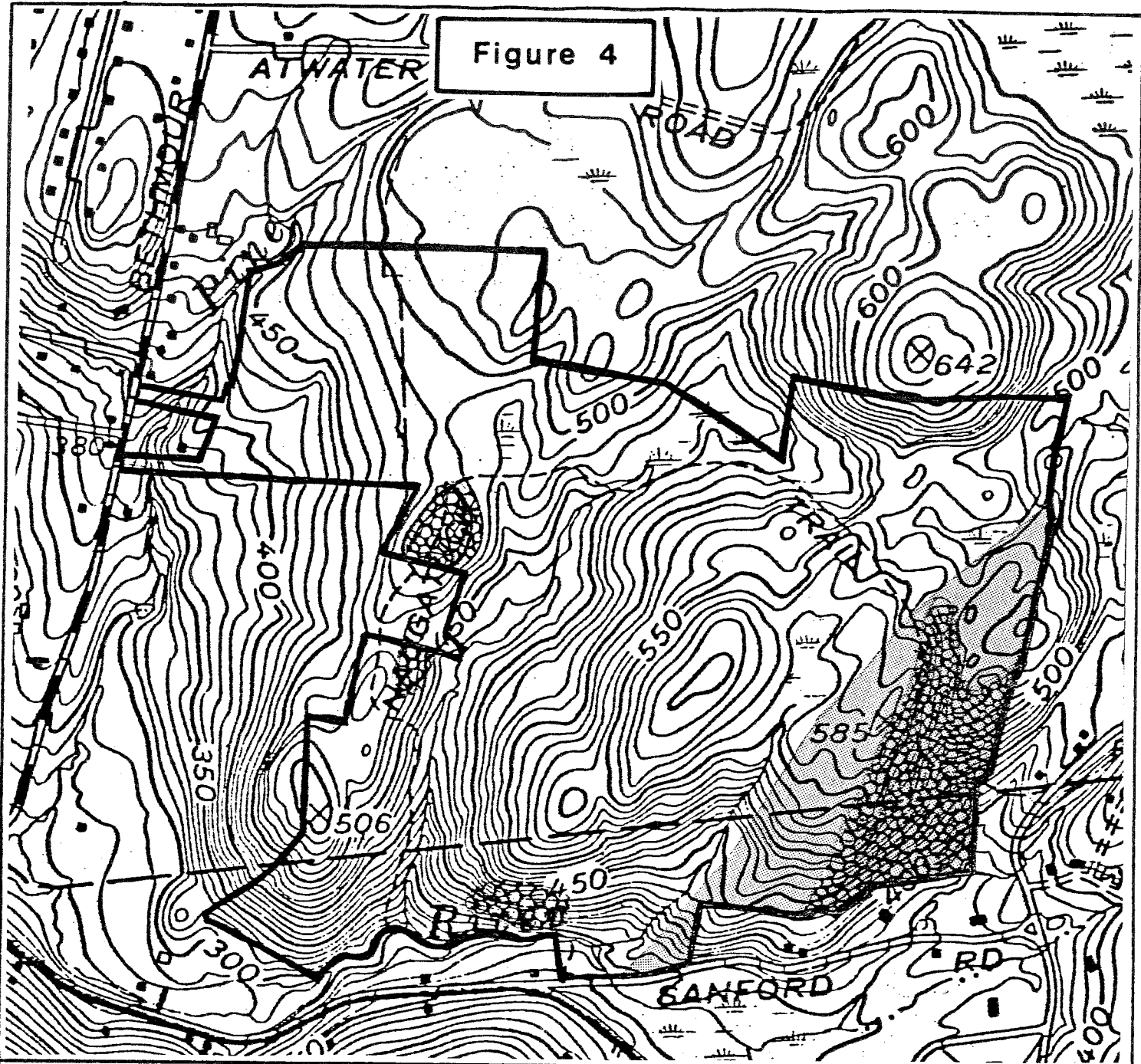
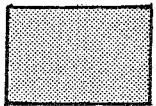


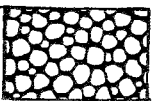
Figure 4



PROSPECT GNEISS



HARTLAND FORMATION



ROCK OUTCROPS

## BETHANY FARMS SUBDIVISION

BETHANY, CONNECTICUT

## BEDROCK GEOLOGY

King's Mark Environmental Review Team

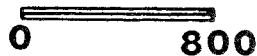
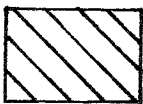
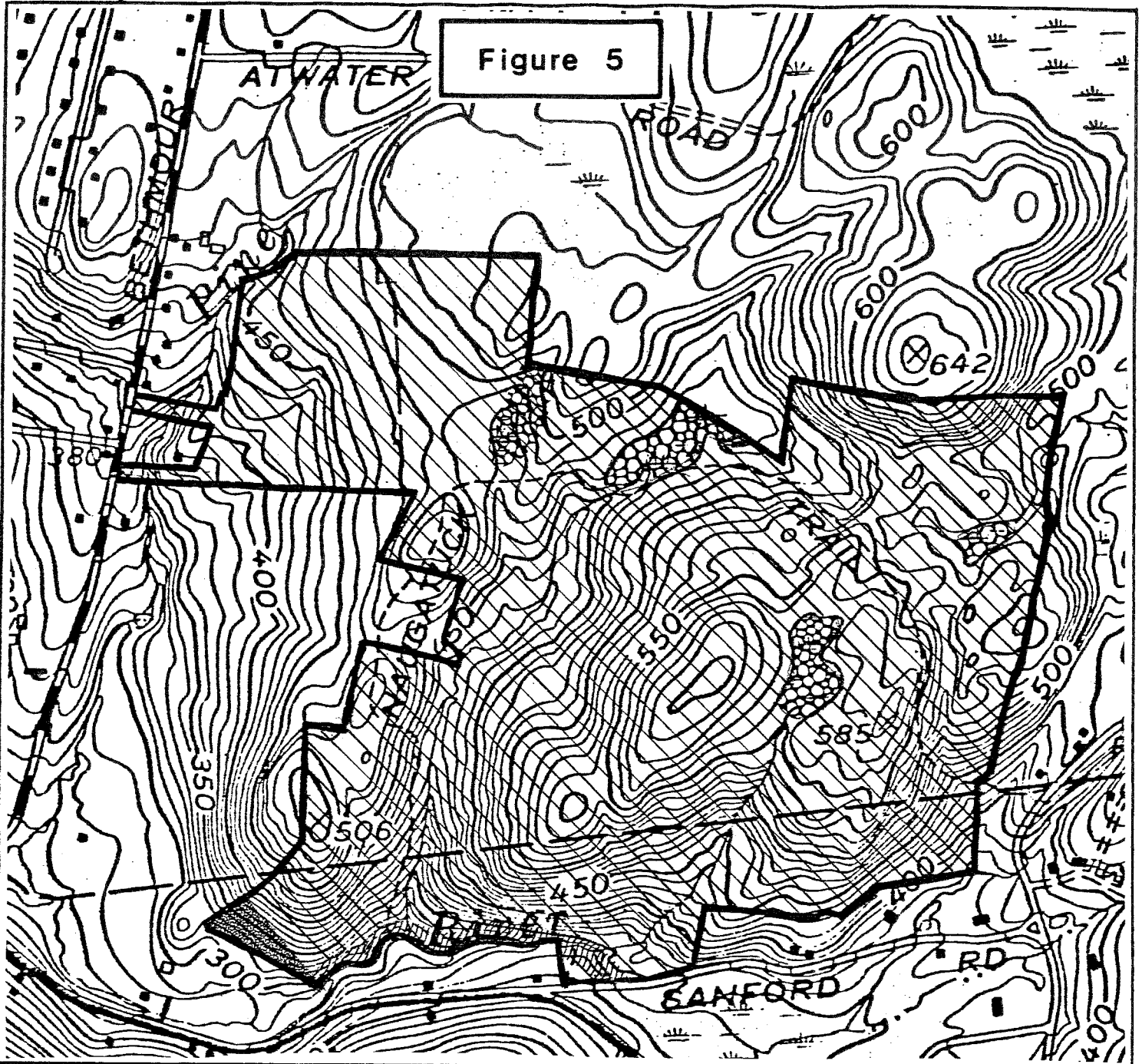
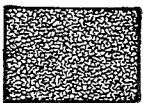


Figure 5



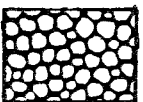
TILL



SAND AND GRAVEL



ALLUVIUM



SWAMP DEPOSITS

## BETHANY FARMS SUBDIVISION

BETHANY, CONNECTICUT

## SURFICIAL GEOLOGY

King's Mark Environmental Review Team

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sand, silt, clay, gravel and boulder. These materials were collected, transported and redeposited by an ice sheet as it moved through the region about 10,000 to 12,000 years ago. Limited soil testing has been conducted on the parcel to date. The test pit data was made available to Team members on the review day. Soils mapping information supplied to Team members suggests that the till is generally shallow (i.e., probably less than 10 feet) throughout most of the site.

Where the till is 5 feet or less (typically shallow to bedrock areas) the texture of the till is commonly sandy, stony and loose. Where the till is deeper, a more silty and compact zone tends to develop. The northwest corner of the site contains the latter variety of till.

A very small area of sand and gravel overlies till and bedrock in the southwest corner. These sediments are also of glacial origin and are called stratified drift. The sand and gravel were deposited by glacial meltwater streams.

The post glacial sediments occurring on the site are alluvium and swamp sediments. A narrow band of alluvial deposits parallels Bladens River in the southern parts. These sediments consist of a thin cover of sand, silt, and gravel deposited on the floodplain of Bladens River. Based on the site plan distributed to Team members, swamp sediments, which are regulated under Chapter 440 of the Connecticut General Statutes along with the alluvial soils mentioned earlier, occur as narrow bands along the southerly flowing streamcourses on the site. These soils, which have a higher mineral content and minor traces of organic material, are seasonally wet. At least five moderately large wetland pockets composed of sand, silt and clay mixed with organic material occur in the northcentral and southcentral parts of the site.

## GEOLOGIC DEVELOPMENT CONCERNS

Based on soils mapping information, limited deep test hole data and geological maps, the major geological limitations of the parcel from the standpoint of residential development include the following: (1) areas where bedrock is at or near the surface of the ground (western, eastern and southern parts); (2) areas of moderate to very steep slopes; (3) the presence of compact till soils, which commonly results in elevated ground water tables and which have slow percolation rates (NOTE: It does not appear that percolation tests have been conducted on any lots to date); and (4) areas of seasonal and permanent wetness (delineated as Rn and Aa soils respectively on the subdivision plan).

It is understood that the proposed 57 lots would be served by on-site sewage disposal systems. The geologic limitations mentioned will be a major hindrance in terms of providing adequate subsurface sewage disposal systems to the proposed homes. However, proper planning and engineering can overcome some of these limitations. In addition, the large lots proposed certainly add some flexibility for locating septic systems on lots. Limited deep test hole data submitted to Team members verifies that most lots will require detailed engineered plans. In order to determine whether or not septic systems can be placed on each lot, detailed soil testing needs to be done on each and every lot, especially in areas of shallow bedrock. Several deep test holes are warranted on lots which have shallow to bedrock conditions in order to establish a good profile of the bedrock surface. It should be noted that only 21 lots have been tested to date. Neither lot numbers nor the location of deep test pits were recorded on the subdivision plan submitted to Team members. A deep test pit in the primary and reserve leaching area should be shown on the

subdivision plan along with the location of the percolation test. Also, locating the proposed house and well would be helpful to land-use decision makers. Finally, the subsurface sewage exploration completed to date was conducted during the dry time of the year. In view of till soils, particularly in the western parts, which have water tables that fluctuate substantially season to season, it is recommended that soil testing be conducted during the wet time of the year (February 1st to May 31st). Leaching areas serving lots characterized by shallow bedrock (provided there is at least four to five feet of naturally occurring soil above the ledge) and seasonally high water tables will need to be filled and raised with specified fill material in order to maintain prescribed vertical separating distances.

The areas (western parts) characterized by "hardpan" soils (Paxton and Woodbridge soils) usually allow for the installation of curtain drains. A properly designed and constructed curtain drain installed in accordance with all applicable codes can effectively lower the groundwater so that it does not interfere with the proper functioning of the septic system.

A curtain drain may be used in conjunction with building footing drains. Footing drains should be required for all homes constructed in the study area, especially in view of the seasonally high water table that characterizes the "hardpan" soils. This will hopefully keep basements from getting wet during the spring months.

Once septic systems are engineered and approved by the proper authorities (i.e., state, local or district health department), it is important that the systems be installed properly, according to the design specifications and also be properly maintained (e.g. pumped every 3-5 years by the homeowner). Because of the geologic limitations mentioned earlier, engineering supervision of septic system installation on each lot is suggested to assure satisfactory performance.



Interior roads, utility lines, and house foundations constructed in shallow bedrock areas may require blasting. Any blasting which takes place in the study area should be done under the supervision of personnel familiar with the latest technology in blasting. This will hopefully reduce the chance for damage from undue seismic shock. A pre-blast survey of the area would also be wise so as to minimize the chance for damage claims. Given the hostile terrain (rock outcrops and steep slopes) that characterize the eastern parts it is suggested that an alternate route, which by-passes the area, be studied.

The hostile terrain (excessive slopes) prevailing along the southern limits will greatly limit the developability of several lots, in particular the rear lots # 44, 52, 53, and 54. Of particular concern, will be excessive driveway grades (during inclement weather), installation of on-site septic systems and difficult accessibility for well drilling rigs.

Based on the subdivision plan submitted to Team members, the present interior road system will cross wetland areas in at least five locations. It appears several small drainageways that carry seasonal waters will also need to be crossed. All crossings except one (near lots 8 and 10), consist of relatively narrow bands of wetlands. This one crossing consists of about 90 feet of regulated soils. Shifting the road approximately 100 feet to the south would reduce the amount of the wetland crossing significantly.

Wetland crossings are generally feasible provided they are properly designed (e.g. culverts are properly sized and installed and permeable road base fill material is used). The roads should be constructed at least 1.5 feet and preferably 2 feet above the surface elevation of the wetlands. This will allow better drainage of the roads and decrease the frost heaving potential of the road. The best time for road construction through wetland areas is during the dry time of the year with adequate provisions for effective erosion and

sediment control. Detailed plans for the road crossings through the wetlands were not available on the review day. Depending on the ultimate location of houses on each lot, there is certainly a chance for driveways to cross wetlands. If there are any such crossings, they will also need to be properly designed.

Based on present plans and visual observations made during the field review, it seems likely that a large volume of fill would need to be placed on regulated soils in order to construct the section of road near the intersection of the loop road in central parts. In order to minimize wetland disturbance in this area, it is suggested that consideration be given to shifting the road eastward.

Because the soils in the preceding paragraphs are classified as inland-wetland soils in Connecticut, they are regulated under Chapter 440 of the General Statutes. Any activity which involves modification, filling removal of soils, etc., will require a permit and ultimate approval by the Town's Inland Wetland Commission. In reviewing a proposal, the Commission needs to determine the impact that the proposed activity will have on the wetlands. If the Commission determines that the wetland is serving an important hydrological or ecological function and that the impact of the proposed activity will be significant, they may deny the activity altogether or, at least, require measures that would minimize the impact.

#### WATER SUPPLY

Based on the geology and topography of the site it would appear that wells would have to be bedrock wells. In general, wells should be located to the higher side of lots consistent with the general layout and surroundings. They

must at at least meet all minimum required separating distances from probable sources of pollution, particularly sewage disposal systems, buried fuel oil storage tanks, discharges from water treatment facilities (softeners), agricultural wastes and chemicals, etc. They must also be properly separated from drains and watercourses, and be protected from surface drainage. The main concern in the area in question relates to the presence of shallow ledge rock. Certainly the depth of soil overlying ledge rock provides means for treatment and renovation of many pollutants. With sewage wastes, a minimum depth of four (4) feet needs to be maintained between the bottom area of a leach system and ledge rock. Experience has shown that well pollution is more of a problem in areas of shallow ledge rock where sewage effluent can move rapidly and for considerable distances in permeable drainage channels or crevices on top of ledge. This is one reason why all wells drilled into rock should be adequately cased and properly sealed where the overlying soil is less than twenty (20) feet deep. Another procedure which may subject wells to pollution in areas of shallow ledge rock is blasting to construct roadways, house basements and foundations, or excavating for septic tanks.

One should also ascertain with individual on-site wells that they have sufficient yield to provide for normal household usages. Increased well depth and larger storage tanks are means by which supplies can often be made sufficient to meet water demands during peak periods. In the lower Housatonic River basin (the site is encompassed by this area), numerous wells were surveyed for Connecticut Water Resources Bulletin No. 19. Of all the wells surveyed that tapped the type of bedrock similar in characteristics to the bedrock underlying the Bethany Farms Subdivision, 85 percent yielded 2 gallons per minute or more and 24 percent yielded about 10 gallons per minute. A desirable yield for domestic purposes would be about 3 gallons per minute.

This yield computes to 4,320 gallons per day. Assuming a consumption rate of 75 gallons of water per person per day, a family of 5 would use about 375 gallons of water per day.

In certain rock formations, usually those high in iron and manganese, excessive minerals may be found in the groundwater. If these concentrations exceed recommended drinking water standards they can impart taste, color and odor and the water staining of clothes and fixtures can be a problem. In such cases it is necessary to make provisions for appropriate water treatment.

As mentioned earlier in the report, areas of hostile terrain will be a major hindrance, making some areas inaccessible for well drilling rigs.

#### HYDROLOGY

The entire site lies within the Bladens River watershed. At its point of outflow into Naugatuck River, Bladens River drains an area of about 10.6 square miles or 6,784 acres. Surface runoff on this site flows downslope to any of the four major southflowing streamcourses on the site. All of these streamcourses feed Bladens River.

Converting the current land-use of the site (wooded land) to a residential subdivision, would be expected to increase the amount of runoff shed from the site. These increases would result from soil compaction, removal of vegetation and placement of impervious surfaces (roof tops, roads, and driveways, etc.) over otherwise pervious soils.

The applicant's engineer had not addressed the issue of stormwater management on the site to date.

In order to properly assess post-development runoff in the study area, the developer should be required to prepare a stormwater management plan. The plan should include pre- and post-development runoff computations.

Because of the large lot sizes proposed and the close proximity to Bladens River, the need for on-site detention on post-development may not be necessary. The presence of wetland pockets on the site will also help to mitigate post-development runoff during rainy periods. This is another good reason not to disturb wetlands on the site.

Another concern in terms of post-development runoff is the chance for streambank erosion and siltation problems. It is recommended that Connecticut's Guidelines for Erosion and Sediment Control be closely followed with regard to stormwater management on the site. In view of steep slopes and silty soils, a detailed erosion and sediment control plan is imperative, so that water quality to Bladens River, Pine Brook and the other streamcourses on the site is properly protected and no environmental damage, i.e., erosion, siltation, etc. occurs on neighboring properties.

According to DEP, groundwater beneath the site is classified as GA, which means that it is suitable for private drinking water supplies without treatment.

#### SOIL RESOURCES

The Bethany Farms development property consists predominately of shallow (<20 inches) to deep (>40 inches), nearly level to very steep, glacial till soils on bedrock controlled uplands. Throughout the parcel are narrow drainageways of deep till soils and small depressed areas of soils formed in decomposed organic materials over mineral materials (muck deposits). A band of dominately deep till soils is on the western side of the parcel along Pine Brook. These soils may have a firm, dense, substratum (hardpan) in some areas.

The soil map included with this report (Figure 6) is a copy of the map sheet from the Soil Survey of New Haven County, Connecticut, 1979. The soils on portions of the property were evaluated during the field review and resulted in a few changes on the map.

All discussions about inland wetland locations and boundaries should use the wetland maps displayed at 1 inch = 100 ft. and mapped by the soils consultant. Although only small portions of the wetland boundaries on all parcels were evaluated, air photo interpretation indicates the boundaries are generally accurate. Most of the watercourses (regulated areas) also are shown on the map.

A chart of important soil features and interpretations has been prepared (Appendix A). Below is listed some additional soils information on the map units and specific concerns.

1. Map Unit CfC - Included in this unit are small areas of Paxton soils with dense substratum (hardpan).
2. Map Unit CrC - Included with this complex in mapping are areas of moderately deep (20 to 40 inches) to bedrock glacial till soils and small areas of exposed bedrock. Also included in the complex, are areas of moderately well drained to very poorly drained soils in depressions and drainageways.
3. Map Unit HSE - Included with this complex in mapping are areas of deep Charlton soils.
4. With the present layout, substantial blasting, cutting and filling would be necessary for roads, driveways and homesites. Extensive exploration by deep test pits will be necessary to locate areas of deep soils for septic systems. It is strongly recommended that more than one deep hole in each proposed field area be dug since depth to bedrock can change quickly within short distances.
5. Areas shown as "future access" between lots 47 and 49 and 8 and 10 may be poorly located since wetlands and watercourses could be highly impacted.
6. Lots 52, 53 and 54 have major limitations for driveway access with very steep slopes, shallow soils and watercourse crossings. Driveways should be planned on the contour as much as possible.

7. Other lots with major limitations of very steep slopes, watercourses and shallow soils are lots 32, 33, 34 and 36, and 41, 42, 44, 45, 46, 52, 53, and 54.
8. Lots 22, 23, 25, 26, and 28 contain large areas of moderately well to very poorly drained soils intermingled with slightly higher areas of bedrock controlled soils. It will be difficult to locate suitable house/septic system sites on these lots.
9. Wetland impact could be minimized if the loop road connection could be moved further east on lot #14.
10. During the review discussion it was mentioned that these lots may be marketed as "horse farmettes". However, there are very few lots with soils that, when cleared, could be developed into suitable pasture or paddock areas. Most of the soils are too droughty, too steep, or too stony or rocky.

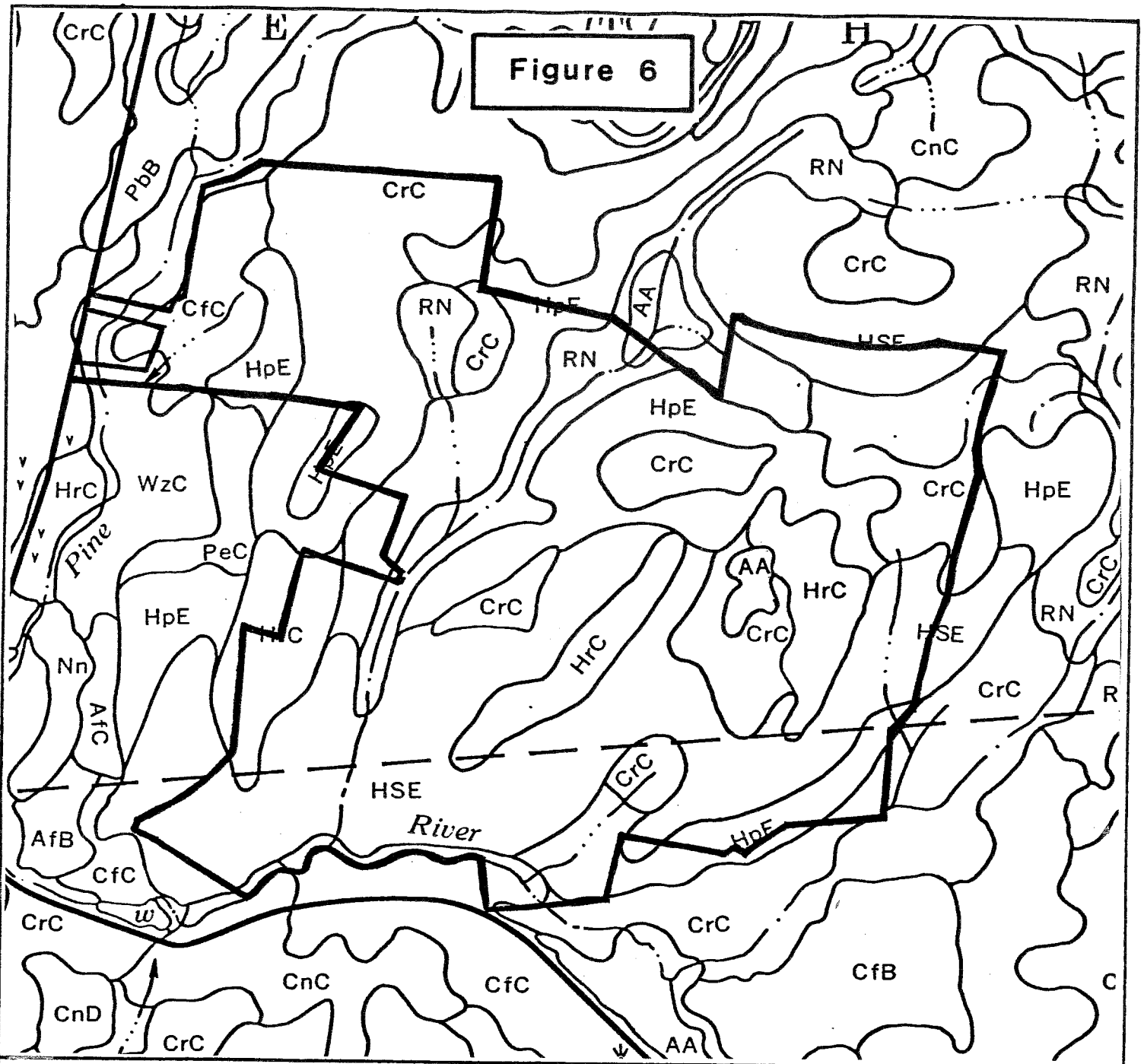
#### EROSION AND SEDIMENT CONSIDERATIONS

The proposed development will require a detailed sediment and erosion control plan. This plan should address items listed on the sediment and erosion control plan worksheet (see Appendix B). The 1985 Connecticut Guidelines for Soil Erosion and Sediment Control should be used as a standard reference.

As stated in previous sections, the development site has steep slopes, soil limitations, and is crossed by wetland systems. Activities on the hillside could cause severe flooding and erosion problems downslope and downstream from the development if stormwater management and erosion control concerns are not properly addressed in the subdivision planning process and carefully implemented during construction phases.

Extensive cuts and fills will be needed to construct the roadways to regulation and grade lots for residential use. This can greatly increase the erosion risk on a construction site. Wetlands and watercourses should be carefully identified and protected from sedimentation. The preliminary plans

Figure 6



- AA - ADRIAN AND PALMS MUCK \*
- CfC - CHARLTON FINE SANDY LOAM,  
8 TO 15% SLOPES
- CrC - CHARLTON-HOLLIS FINE SANDY LOAMS,  
3 TO 15% SLOPES
- HpE - HOLLIS-CHARLTON FINE SANDY LOAMS,  
15 TO 35% SLOPES
- HrC - HOLLIS-ROCK OUTCROP COMPLEX,  
3 TO 15% SLOPES
- HSE - HOLLIS-ROCK OUTCROP COMPLEX,  
15 TO 35% SLOPES
- Rn - RIDGEBURY, LEICESTER AND WHITMAN  
EXTREMELY STONY FINE SANDY LOAMS \*
- WzC - WOODBRIDGE EXTREMELY STONY FINE  
SANDY LOAM, 3 TO 15% SLOPES

\* WETLAND SOILS

## BETHANY FARMS SUBDIVISION

BETHANY, CONNECTICUT

## SOILS

King's Mark Environmental Review Team

0 800

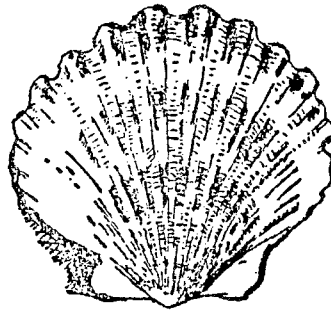




## THREATENED AND ENDANGERED PLANT AND ANIMAL SPECIES

According to the DEP - Natural Diversity Database there are no Federally listed Endangered Species or Connecticut "Species of Special Concern" that occur within the study area. The Natural Diversity Data Base contains the most current biologic data concerning endangered or threatened plant or animal species. On-going research continues to locate additional populations of species or locations of habitats of concern as well as updating existing data.

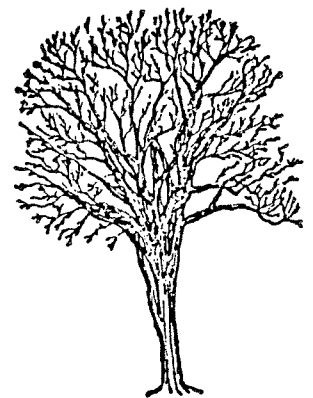
# ARCHAEOLOGICAL RESOURCES



particular rock outcrop had a vertical straight face about 6'-8' high and about 20'-30' long. Near this was a short section of stone wall. Possibly the rock face was selected as a convenient location to construct a small enclosure for farm animals. If the mills in the valleys of Pine Brook and Bladens River are lumber mills then they are obviously part of the same socio-cultural system as are the stone walls.

There are no observable prehistoric sites in the proposed development. This does not mean that they are not there. To find them would require permission to enter the property for several days during the spring with a crew of volunteers in order to dig by hand small test pits approximately 50cm x 50cm in likely locations. All soil would be sifted through 1/4" hardware cloth and then the pits would be filled. Likely locations might be hill tops, or lower well drained knolls adjacent to streams or wetlands, but not in the wetlands. If these wetlands are to be turned into fire ponds, as has been suggested, then archaeological research should be done first.

**LAND USE AND PLANNING  
CONSIDERATIONS**



### Lots in Woodbridge

Southerly lots straddling the Woodbridge Town Line should clearly offer suitable "building envelopes" in Bethany to avoid awkwardness relative to municipal services; particularly relative to school transportation. Moving the roadway to the north might be necessary to provide appropriate building sites. Even realignment may be insufficient to insure adequate building lots (meeting septic guidelines) in southerly areas of high slope; particularly "rear lots" identified as 3.4 acres (53), 8.6 acres (52) and 5.8 acres (44) (drawing entitled "Bethany Farms Preliminary Subdivision Application", August 24, 1987.)

## TRAFFIC CIRCULATION

### Single Access Point

Emergency access concerns can be met if alternate access is available across Pine Brook and roadway cross sections offer "off the road" capabilities between Bethmour Road and the internal loop; i.e. over the first 2,800 feet of roadway. Alternate access over Pine Brook might take the form of a short narrow by-pass clearly intended for emergency vehicles, pedestrians and bicycles.

### Bethmour Road Alignment

Mr. Ruderman's intent to improve alignment in front of and immediately north of the access point was noted during the site visit. Improvement would be particularly helpful in view of adjacent offsets with Anella Drive and Poplar Swamp Road. "T-ing up" with one or the other cross street would, of course, be preferable.

### Bethmour Road/Route 67 Intersection

Subdivision activity will add considerable traffic to the Seymour Road/Bethmour Road intersection where difficult sight lines exist immediately north of Route 67. The developer and the Towns of Bethany and Woodbridge might jointly consider and allocate responsibility for sight line improvements before subdivision approval.

### Responsibility for the Subdivision Road

Consideration should be given to the long term cost of maintaining the roads as several bridges are contemplated to traverse wetlands and/or watercourses. There might be alternative ways of accepting responsibility for maintenance. Consideration might also be given as to when municipal services might begin; e.g. will snow plowing of the complete 9,400 foot long roadway or school bus service begin with initial occupancy or at some later predetermined date associated with significant occupancy. A review of the road acceptance policies for Bethany might be in order. The subdivision approval process can, if desired, establish clear cut guidelines and require that they be recorded on deeds to all parcels. Advice from Bethany's Town Attorney would appear necessary and appropriate at an early point in time.

### TRAFFIC ENGINEERING CONSIDERATIONS

The preliminary site plan, dated August 24, 1987, was reviewed. The proposed 57 house lots would be served by a new road built through the property with only one access point to Bethmour Road; the new road would be slightly greater than one mile in length.

A watercourse traverses the property and crosses the road near station 2+00. The subdivision land owner, Mr. Ted Ruderman, indicated that he would build two separate bridges over the water, separated by a wide median strip on

the approaches. This is an excellent idea in case one bridge must be blocked or closed. The width of each bridge and approach road should be a minimum of 20 feet.

Sharp curves and reverse curves (curving first in one direction then in the opposite direction) are considered to be dangerous because of the potential for cutting corners and going across the center line. Some of the curves on the subdivision plan could be made less severe. The alignment of the road might also be made smoother for easier driving. Better sight lines and easier turning movements are obtained by having road and driveway intersections form 90 degree angles, rather than the acute angles indicated. Any right-of-way set aside for proposed future access roads should also intersect with the main road right-of-way at 90 degrees.

The traffic report for the subdivision prepared by Consultant Services, dated July 27, 1987, was also reviewed. Mr. Hale, its author, states that Bethmour Road by the access road is straight and gradually rises from south to north. Mr. Hale fails to note that the gradual rise is actually a steep grade just north of the site.

He also informs the readers that the posted speed limit is 30 miles per hour. However, due to the steep downgrade, prevailing speeds were observed to be significantly greater than the posted speed. He states that, based on the 30 miles per hour posted speed, the sight distances in both directions of 300-400 feet are more than adequate. He uses the stopping sight distance measure of 200 feet as the dictating criterion for that conclusion. That conclusion is not necessarily correct. The intersectional sight distance should be the governing distance in this instance.

The intersectional sight distance (ConnDOT's values) for 30 miles per hour is 310 feet, while for a prevailing speed of 40 miles per hour in the downhill direction, it is 505 feet. This last value is desirable, but a minimum of 365 feet is acceptable.

Mr. Hale also fails to point out that these sight lines cannot be obtained without the removal of trees and undergrowth along Bethmour Road south of the access road and without the removal of an embankment and a paved private driveway to the north. It appears that an easement to do that work must be obtained from that property owner immediately to the north. Only through this work can the proper intersectional sight lines and distances be obtained.

The report says that approximately 22 vehicle trips would be generated during both the morning and afternoon peak hours, using an old 1965 study done by Mr. Israel Zevin of ConnDOT as a source for his trip rates. Those rates, and resultant vehicle volumes, are extremely understated based on Mr. Zevin's 1975 updated study, on Barkan and Mess Associates' experience with the rates for single-family subdivisions, and on the statistical information found in the 1987 Institute of Transportation Engineers' Manual, Trip Generation.

It is expected that the 57 single-family houses at this location and of the type planned would generate about 60-80 vehicle trips (both directions) during each of the peak hours, not the 22 stated in the report.

In conclusion, even though there is some exception taken to some of the items and statements in the Peter Hale report, it is expected that the proposed subdivision will function adequately and safely, based on these recommendations.



## RECREATIONAL TRAIL

The main recreational issue here involves the remains of the so-called Blue Trail or Naugatuck Trail as it is designated on the USGS map for the area. In checking with the Connecticut Forest and Park Association, it was confirmed that this trail has no official status as a Blue Trail. However, it was felt that it and a similar trail stretch in the neighboring Round Hill area of Woodbridge might be remnants of a former trail leading north from Woodbridge to the Naugatuck State Forest. It was further felt that local land trusts may have been maintaining these remnants but reportedly had been unable to link them together.

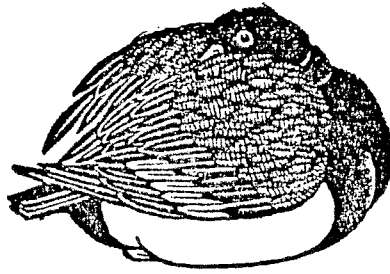
Therefore, the hiking trail in question on this property consists of a small semicircular trail which has no statewide or regional significance. Its significance in existing or modified form would be local unless, as is highly unlikely, a through route north to the state forest could be developed at this late date. If local or regional hiking interests do wish to pursue the objective of such a through trail, it is suggested that a more feasible routing would be to utilize the Quinnipiac Trail north to the vicinity of Mount Sanford and then negotiate with the South Central Connecticut Regional Water Authority and the Connecticut Water Company to establish a trail westerly through their holdings to state forest land near Beacon Cap at Route 63.

The proposed subdivision layout also deserves attention. Although the proposed lot sizes exceed the minimum required by zoning, the difficult character of such of the property must be considered in view of the fact that on-site water and septic systems will be provided and that erosion and siltation problems could result from development. Constraints to development include a very large portion of the area over 15% in slope, with much of the

southern section in particular classified as HSE soil (Hollis-Rock outcrop complex, 15-35%). Considerable other acreage falls into the HrC category (Hollis-Rock outcrop complex, 3-15%). Furthermore, a north-south running streambelt bisecting the property is classified as poorly to very poorly drained. In summary, the bulk of the property has serious to very serious development constraints.

A site such as this might, given the proper zoning, be appropriate for cluster development. Here, homes could be clustered in areas of CrC soil, with surrounding areas used to provide needed minimum lot size. The remainder of the property could be dedicated as open space, under the control of a neighborhood association, the local land trust or the town. Such open space would protect environmentally sensitive areas especially along the north side of Bladens River, help provide a desirable natural boundary between the two towns, provide opportunity for a trail or trails running through the property and would serve as a neighborhood amenity.

## APPENDICES



Appendix A: Soils Limitation Chart

MAJOR LIMITATIONS TO THE DEVELOPMENT OF:

POTENTIAL\*  
RATING FOR ROADS AND  
SEPTIC SYSTEMS STREETS

DRAINAGE CLASS AND  
DEPTH TO SEASONAL  
HIGH WATER TABLE

GENERAL SOIL  
PROPERTIES

MAP UNIT  
NAME

HOMES WITH SEPTIC  
BASEMENTS SYSTEMS

Wetness, Extremely low Wetness,  
subsides, ponding,  
subject to  
frost action

Wetness, None  
ponding

Wetness, None  
subsides,  
ponding

Very poorly drained  
+1 - 0ft.

Soils formed in  
deposits of  
decomposed organic  
matter over loamy or  
sandy materials.

None

None

None

Well drained  
>4 ft.

Soils formed in  
deep loamy glacial  
till materials.

Variable  
Charlton part  
Very high  
Hollis part  
Very low

Variable  
depth to  
bedrock

Variable  
depth to  
bedrock

Well drained to  
excessively drained  
>6 ft.

Complex of deep to  
shallow glacial  
till soils over  
bedrock formed in  
loamy materials.

Depth to  
bedrock,  
slope

Depth to  
bedrock,  
slope

Depth to  
bedrock,  
slope

Well drained to  
excessively drained  
>6 ft.

Complex of shallow  
to deep glacial  
till soils over  
bedrock formed in  
loamy materials.

Depth to  
bedrock

Depth to  
bedrock

Depth to  
bedrock

Well drained to  
excessively drained  
>6 ft.

Complex of shallow  
and moderately deep  
glacial till soils  
and exposed bedrock  
formed in loamy  
materials.

Depth to  
bedrock,  
slope

Depth to  
bedrock,  
slope

Depth to  
bedrock,  
slope

Well drained to  
excessively drained  
>6 ft.

Complex of shallow  
and moderately deep  
glacial till soils  
and exposed bedrock  
formed in loamy  
materials

MAJOR LIMITATIONS TO THE DEVELOPMENT OF:

POTENTIAL\*

HOMES WITH SEPTIC SYSTEMS RATING FOR SEPTIC SYSTEMS ROADS AND BASEMENTS SEPTIC SYSTEMS STREETS

DRAINAGE CLASS AND DEPTH TO SEASONAL HIGH WATER TABLE

GENERAL SOIL PROPERTIES

MAP UNIT NAME	GENERAL SOIL PROPERTIES	DRAINAGE CLASS AND DEPTH TO SEASONAL HIGH WATER TABLE	Wetness	Wetness	Wetness	Wetness, subject to frost action
Rn - Ridgebury, Leicester and Whitman extremely stony fine sandy loams	Soils formed in deep loamy glacial till materials.	Poorly to very poorly drained +1 to 1.5 ft.	Wetness	Wetness	Very low	Wetness, subject to frost action
WzC - Woodbridge extremely stony fine sandy loam, 3 to 15% slopes	Soils formed in firm, dense loamy glacial till materials.	Moderately well drained 1.5 to 2.5 ft.	Wetness	Wetness, substratum percs slowly	Low	Subject to frost action

\* For an explanation of soil potential ratings, see: Soil Potential Ratings, Septic Tank Absorption Fields for Single Family Residences, New Haven County, Connecticut 1985. Available from the New Haven County Soil and Water Conservation District.

Appendix B: Erosion and Sediment Control Plan Worksheet



New Haven County Soil and Water Conservation District  
322 North Main Street - Wallingford, Connecticut 06492 - Phone (203) 269-7509

### EROSION AND SEDIMENT CONTROL PLAN WORKSHEET

This guide is presented to assist with the preparation and review of E&S control plans. Local commissions should be consulted for regulatory requirements concerning E&S control planning.

The checked items have been provided on the current erosion and sediment control plan. Items identified with a star (\*) should be incorporated into final plans in order to complete the review.

Proposed development \_\_\_\_\_

Date of plan \_\_\_\_\_ Submitted by \_\_\_\_\_

Town \_\_\_\_\_ Agency \_\_\_\_\_

Received \_\_\_\_\_ Reviewed by \_\_\_\_\_

Narrative section describing:

=====

- \_\_\_ The development
- \_\_\_ Purpose of activity.
- \_\_\_ Total acreage and acres to be disturbed in the project.
- \_\_\_ The schedule of grading and construction activities including start and completion dates.
- \_\_\_ The design criteria for all proposed E&S Control measures
- \_\_\_ Design details for all proposed E & S control measures.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- \_\_\_ Installation procedures for all proposed E&S control measures.
- \_\_\_ The operations and maintenance program for all proposed E&S control measures.
- \_\_\_ The name of the person or organization that will be responsible for the maintenance program.

-CONTINUED-



A Site Plan at a sufficient scale to show:

=====

- The location of the proposed development
- Adjacent properties.
- North arrow
- Roads, streets
- Major drainageways and watershed limits
- Major land uses of adjoining areas
- The existing and proposed topography

PROJECT FEATURES

- Property lines
- Limit and acreage of development
- Planned and existing roads
- A Plan legend
- Access roads; temporary and permanent
- Lot and/or building numbers

NATURAL FEATURES

- The soil data
- Identification of wetlands, watercourses and water bodies  
on the site as flagged in the field by a Soil Scientist  
and surveyed onto the plans.
- Rock outcrop areas
- Seeps, springs
- Floodplains (100 yr.)
- Channel encroachment line
- Existing vegetation

CLEARING AND GRADING

- The sequence of grading and construction activities
- The proposed area alterations including:
  - Limits and acreage of disturbed areas
  - Areas to be cut or filled (acres)
  - All proposed structures
  - Profiles and/or cross-sections of graded areas
- Contours - present and planned
- Disposal of cleared material (location)
- Location of stockpiled topsoil and subsoil
- Temporary erosion protection for stockpiles

VEGETATIVE STABILIZATION

- \_\_\_ The sequence for final stabilization of disturbed areas
- \_\_\_ Areas & acreage to be vegetatively stabilized
- \_\_\_ Amount of topsoil to be spread (depth in inches)
- \_\_\_ Seedbed preparation
- \_\_\_ Seeding mixture and rates
- \_\_\_ Fertilizer application rate
- \_\_\_ Mulch application rate
- \_\_\_ Mulch anchoring measures
- \_\_\_ Landscaping Details

EROSION AND SEDIMENT CONTROL MEASURES

- \_\_\_ The sequence for installation and application of all E&S control measures
- \_\_\_ Temporary erosion control protection of disturbed areas
- \_\_\_ Temporary erosion protection when time of year or weather prohibit establishment of permanent vegetative cover
- \_\_\_ The location and construction details of all proposed E&S control measures. (sediment barriers, etc.)
  - \_\_\_ Sediment Barriers
  - \_\_\_ Outlet Protection
  - \_\_\_ Rip Rap
  - \_\_\_ Construction Entrance
  - \_\_\_ -----
  - \_\_\_ -----

ADDITIONAL COMMENTS:

NOTES

# 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 identifying 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 Nancy Ferlow, 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.