

#### FAWN WOODS SUBDIVISION

#### ROXBURY, 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

Roxbury Planning Commission

and

Roxbury 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 signficance to the proposed development and also suggests considerations that should be of concern to the developer and the Town of Roxbury. 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.

#### **ACKNOWLEDGEMENTS**

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

- William Warzecha. Geologist Department of Environmental Protection - Natural Resources Center
- \* Kipen Kolesinskas. Soil Resource Specialist U.S. Department of Agriculture - Soil Conservation Service
- \* Clifford Bienko, District Conservationist
  U.S. Department of Agriculture Soil Conservation Service
- \* Frank Schaub, Principal Sanitary Engineer
  Department of Health Services On-Site Sewage Disposal Section
- \* Linda Cardini. Executive Director
  Northwestern Connecticut Council of Governments
- \* Russell Handsman. Ph.D., Archaeologist and Director of Research American Indian Archaeological Institute

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

Finally, special thanks to the following people for their cooperation and assistance during this environmental review: Robert Luburg and Dorothy Westerhoff of the Town of Roxbury Planning and Zoning Commissions. respectively. Arthur Howland, engineer for developer, and Caroline Norden of the Roxbury and Steep Rock Land Trusts.

### EXECUTIVE SUMMARY

#### Physical Setting

The Roxbury Planning and Zoning Commissions requested the services of the King's Mark Environmental Review Team to conduct an environmental review on a site proposed for subdivision development. The site is located in the southeastern section of Roxbury off Route 67 and Transylvania Road. The site is approximately 81 acres in size, and characterized by woodland and wetland habitats. Intermittent streams and drainageways traverse the site, and slopes range from gentle to moderate.

# Proposed Development Plans

The development of 19 house lots are proposed for this site. According to preliminary site plans, one lot totals three acres, with the remaining 18 lots exceeding the three acre minimum. Average lot size is approximately four acres. Existing inland wetlands would need to be crossed to access Lots 5, 6, acres. Existing inland wetlands would need to be serviced by on-site 7, 8, 9, 15, and 19. Individual lots are proposed to be serviced by on-site water and septic systems. The proposed site is surrounded by numerous single-family homes, primarily located on Transylvania Road.

### Areas of Concern

The Town was primarily concerned with the potential impact the proposed development may have on: (1) existing wetland corridors; (2) water quality and supply; (3) suitability of the soils to support on-site sewage disposal; (4) the effects of erosion and sedimentation of wetlands; (5) stormwater drainage; the effects of compatibility. Therefore, the Town asked the ERT to and (6) site design compatibility. Therefore, the Town asked the proposed inventory on-site resources and determine its suitablility 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; and (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. They fall into the following categories: (1) Physical Characteristics; (2) Archaeological Resources; and (3) Land Use and Planning Considerations.

# PHYSICAL CHARACTERISTICS

## Bedrock Geology

Single and continuous bedrock outcrops were observed during the field review. According to deep test pit information, the shallowest bedrock surface on the site was encountered mainly in test pits 28 through 34 (Lots. 7. 8. 9. and 14). It appears that the depth to bedrock in this area ranged between 3.5 feet and about 5.5 feet. On-site test hole work demonstrated that the depth to bedrock on the remainder of the site ranged between 7 and 8 feet. The greatest concern with shallow to bedrock areas will be the ability to install on-site septic systems.

Since the bedrock surface may undulate from point to point in a relatively short distance, it is suggested that several deep test pits be excavated in the shallow to bedrock areas. Excavating sufficient deep test pits in proposed leaching areas will establish a good profile of the bedrock surface.

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Depending upon the ultimate location of driveways and house foundations. there may be a need to blast if bedrock is encountered.

# Soil Characteristics and Concerns

The proposed development site is dominated by nearly level to very steep complexes of deep (<40 inches) to shallow (>20 inches) to bedrock glacial till soils. The property also has extensive areas of wetland soils. These soils have been mapped by a private soil scientist retained by the developer, and generally, the wetland boundaries appear accurate at scale mapped. These wetlands can be divided into two groups. The lower wetlands are mapped as Peat and Muck (Pk). The private soil scentist found inclusions of Muck with mineral soils dominating this area of wetlands. The upland wetlands are indicated to be mineral soils. These two areas of wetlands share similar plant species. Finally, watercourses are not clearly shown on the plans, and some small watercourses are not shown on the map at all on Lots 16 and 17.

The house and septic system for Lot 15 appear to be in a depression and may receive surface and subsurface water from upslope. Deep test pits at a wetter time of year may reveal a seasonal wetness limitation for on-site sewage disposal.

Because of soil limitations and grades, a considerable amount of fill would be needed across wetland soils on Lots 5. 6. 7. 8. 9. 10. Fill and crossings should be minimized or eliminated.

Additional deep test pits may be needed for Lots 8 and 14 to locate suitable soils because of the variable depth to bedrock.

# Erosion and Sedimentation Considerations

During construction, temporary erosion and sediment control measures can protect on-site wetlands which are an intregal part of this property. Use of silt fences, desilting basins and timely seedings are standard methods of erosion and sediment control.

Long-term erosion and sediment control measures are related to careful site planning and good maintenance. Lot grading should disperse roof and driveway runoff. Concentrating runoff tends to lead to erosion problems. This is a common problem where runoff flows unchecked from the top of a driveway to the bottom of the driveway. Proper grading will minimize erosion on unpaved driveways and the buildup of ice on paved driveways.

Proper lot planning will avoid drainage and erosion problems for Lots 11. 12. 16. and 17. These lots have intermittent drainageways not shown on the subdivision plan. House sites and septic fields should not be located within these drainageways. These lots have adequate space for building in better drained areas. Driveway crossings should have culverts to allow free passage of runoff.

#### Watershed Area

The proposed development lies within the headwater regions of an unnamed brook tributary to Transylvania Brook. The brook generally parallels Route 67, and at its point of outflow to Transylvania Brook, the watershed drains an area of about 500 acres or about 0.8 square miles.

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Over 50 percent or 10 of the proposed lots drains to a 2-foot by 5-foot boxarch-type culvert passing under Route 67 in front of Lot 4. Lots 16 to 19 will drain to a deep drainageway on Lot 19 and ultimately joins the unnamed brook in the watershed about 2,600 feet downstream. The remaining five lots will flow to the drainageway that passes under a private driveway, which ultimately passes under Route 67 and Transylvania Road.

The construction of new homes and driveways would be expected to lead to some increases in runoff from the site. However, since the density of development is relatively low for the watershed, it is expected that any peak flow increases would be small.

# Role of On-site Wetlands in Watershed Area

The relatively large, linear wetlands associated with the unnamed brook parallalling the east side of Route 67 are in an excellent position to detain surface runoff following periods of precipitation. Except for a few flat, depressional areas and drainageways on the proposed site, the aforementioned wetlands are the only major wetlands in the watershed capable of storing significant amounts of stormwater runoff.

Prior to approving any fillings in the major wetland on the site, the applicant should be required to assess the risks involved in allowing a wetland area to be filled from both a hydrologic and ecologic standpoint. Alternate routes to developable parts on Lots 5 to 9 should be investigated.

# Water Supply

Each lot in the proposed subdivision will be served by an individual on-site water supply well. The water will be derived from drilled wells which tap the underlying metamorphic bedrock. Yields from bedrock wells depend upon the number and size of fractures that are intersected by the wells.

Town officials voiced concern with regards to insufficient yields. As a precautionary measure, it might be safe to drill a well first to determine what the potential yield would be.

The natural water quality should generally be good, but because of the particular mineralogy of the bedrock underlying the parcel, there is a chance that the water will have elevated concentrations of iron or manganese which will discolor the water and cause a metallic taste.

# On-Site Sewage Disposal

A review of the proposed sewage disposal system locations with respect to the soils mapping indicates all of the proposed leaching areas lie within the Charlton/Hollis soil series which are classified as suitable for installation of on-site sewage disposal systems. Soil conditions do not appear critical enough to warrant design of engineering systems on any specific lot at this time, although the local health department may require such plans based upon further testing.

Based upon an analysis of the soil test data provided, only one of the 19 lots. Lot 8, would require detail engineering plans be prepared by a registered professional engineer. This was due to the shallow ledge rock conditions observed in deep test pits 31 and 32.

The on-site sewage disposal systems appear adequately spaced from designated wetland soils and watercourses.

#### ARCHAEOLOGICAL RESOURCES

#### Archaeological Potential

There is some limited evidence which indicates that prehistoric populations used the dissected landforms between Bronson Mountain and Flagg Swamp Road for hunting camps or perhaps more permanent settlements. This sensitive space is situated about one mile west of the project area and will not be affected by the proposed development.

Closer to the project area, a shelter site has been reported in the outcrops of the geological Hartland Formation, due west of Route 67, along the unnamed tributary of Transylvania Brook. Although this site is south and west of the proposed subdivision, similar resources exist along the same contour lines further to the north, closer to the development site.

#### Protective Measures

The Town of Roxbury and its Planning and Zoning Commissions should require that all construction work be limited to the east side of Route 67. Any channels and culverts installed for drainage purposes must similarly be limited in their scale and potential impact on the landscape immediately west of the project area. In this way, it can insure that any unknown shelter sites will be preserved for future study.

## LAND USE AND PLANNING CONSIDERATIONS

# Consistency of Project with State and Local Plans

The proposed subdivision appears to be generally consistent with the intensity of development recommended in the advisory State Plan. The Roxbury Town Plan is in the process of being updated. This plan notes natural limitations of soil and terrain on development potential in the Town. Use of the subject property for a low density residential subdivision appears to be a compatible land use with the Town Plan. At issue, though, are site design considerations and traffic impacts.

#### Site Planning and Design

The second secon

The prevalence of wetlands and the location of brooks were observed on the property. To offer greater protection to these features, and to the extensive woodlands, alternatives including conservation easements, the Town's cluster provision, and the Town's large-lot zoning should be considered.

Five driveway crossings of the lower wetland and brook are proposed for Lots 5, 6, 7, 8, and 9. In order to protect the hydrological functions of the wetlands (i.e., flood storage), it is suggested that alternate means of access to Lots 5 to 9 be considered so that wetland crossings can be avoided or minimized. Potential wetland crossings serving these lots would undoubtedly require large amounts of fill material due to the broad, flat nature of the wetlands. A series of fillings in the wetlands would undoubtedly reduce the flood storage capacity presently provided.

References were made by Town representatives to well water supply problems in homes in the vicinity of the site. Current Town regulations require drilling of a well during the building permit stage, rather than during the subdivision review process. The Town may wish to identify water supply as an issue in its Town Plan and to address it in that document, as well as in zoning and subdivision regulations. There are precedents in other towns for required drilling at an earlier stage in the development review process.

The issue of privacy was discussed in terms of making maximum use of the extensive woodland on the site. The developer's representative was encouraged to leave a natural vegetative buffer around the building envelope wherever feasible.

### <u>Traffic</u> <u>Considerations</u>

Using the generally accepted standard of 10 trips per day per single-family residence (see Institute of Transportation Engineers Trip Generation Manual, 1979), the 19-lot subdivision would generate approximately 190 trips per day. The majority of this traffic is expected to use Route 67, regardless of which road the lots have frontage on. While the traffic from this subdivision will not exceed the roadway's design capacity, there are safety concerns about so many direct driveways onto a major roadway. In addition, the Town's consulting engineers have noted sight line problems on specific lots (Lots 6, 10, and 13).

Access to a one-lane road raises concern about safety and convenience of travel on such a road. While Transylvania Road carries limited traffic and serves strictly as a local road carrying traffic to homes along it, the advisability of approving a subdivision on a one-lane unimproved road is questionable. The Town may wish to require the developer to commit to a pro rate share of the cost of such improvements.

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# INTRODUCTION



#### INTRODUCTION

#### PHYSICAL SETTING

The Roxbury Planning and Zoning Commissions requested the services of the King's Mark Environmental Review Team (ERT) to conduct an environmental review on a site proposed for subdivision development. The site is located in the southeastern section of Roxbury off Route 67 and Transylvania Road. a gravel-surfaced road (Figure 1).

The site is approximately 81 acres in size and characterized by woodland and wetland habitats. Intermittent streams and drainageways traverse the site, and slopes range from gentle to moderate.

### PROPOSED DEVELOPMENT PLANS

The development of 19 house lots are proposed for this site. According to preliminary site plans, only one lot totals three acres, the minimum allowed by local zoning regulations. The remaining 18 lots exceed the three acre minimum, ranging up to approximately seven acres. Average lot size is approximately four acres. Existing inland wetlands would need to be crossed to access Lots 5, 6, 7, 8, 9, 15, and 19. Individual lots are proposed to be serviced by on-site water and septic systems. There is no provision for public open space or access. The proposed site is surrounded by numerous single-family homes, primarily located on Transylvania Road (Figure 2).

#### AREAS OF CONCERN

The Town was primarily concerned with the potential impact the proposed development may have on: (1) existing wetland corridors; (2) water quality and supply; (3) suitability of the soils to support on-site sewage disposal; (4) the effects of erosion and sedimentation of wetlands; (5) stormwater drainage; and (6) site design compatibility. Therefore, the Town asked the ERT to inventory on-site resources and determine its suitablility for the proposed development.

#### THE ERT PROCESS

Through the efforts of the Town of Roxbury Planning and Zoning Commissions, 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.

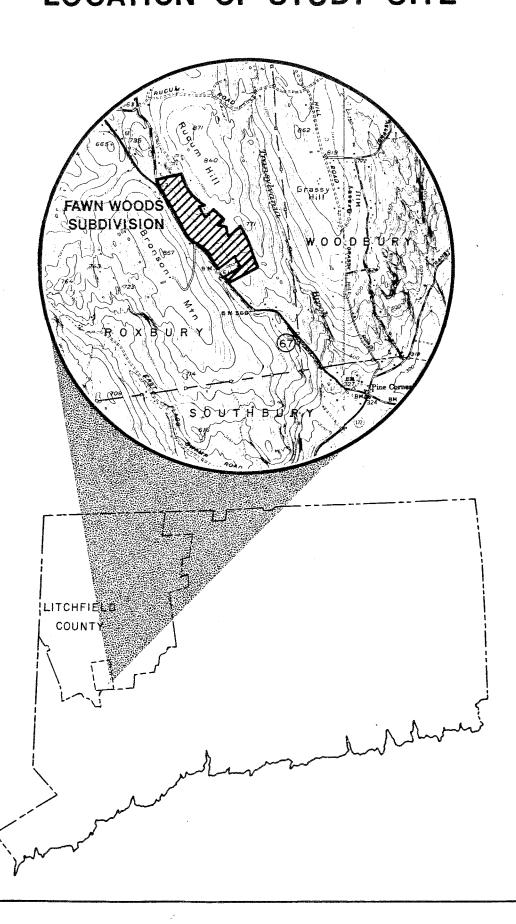
The review process consisted of four phases:

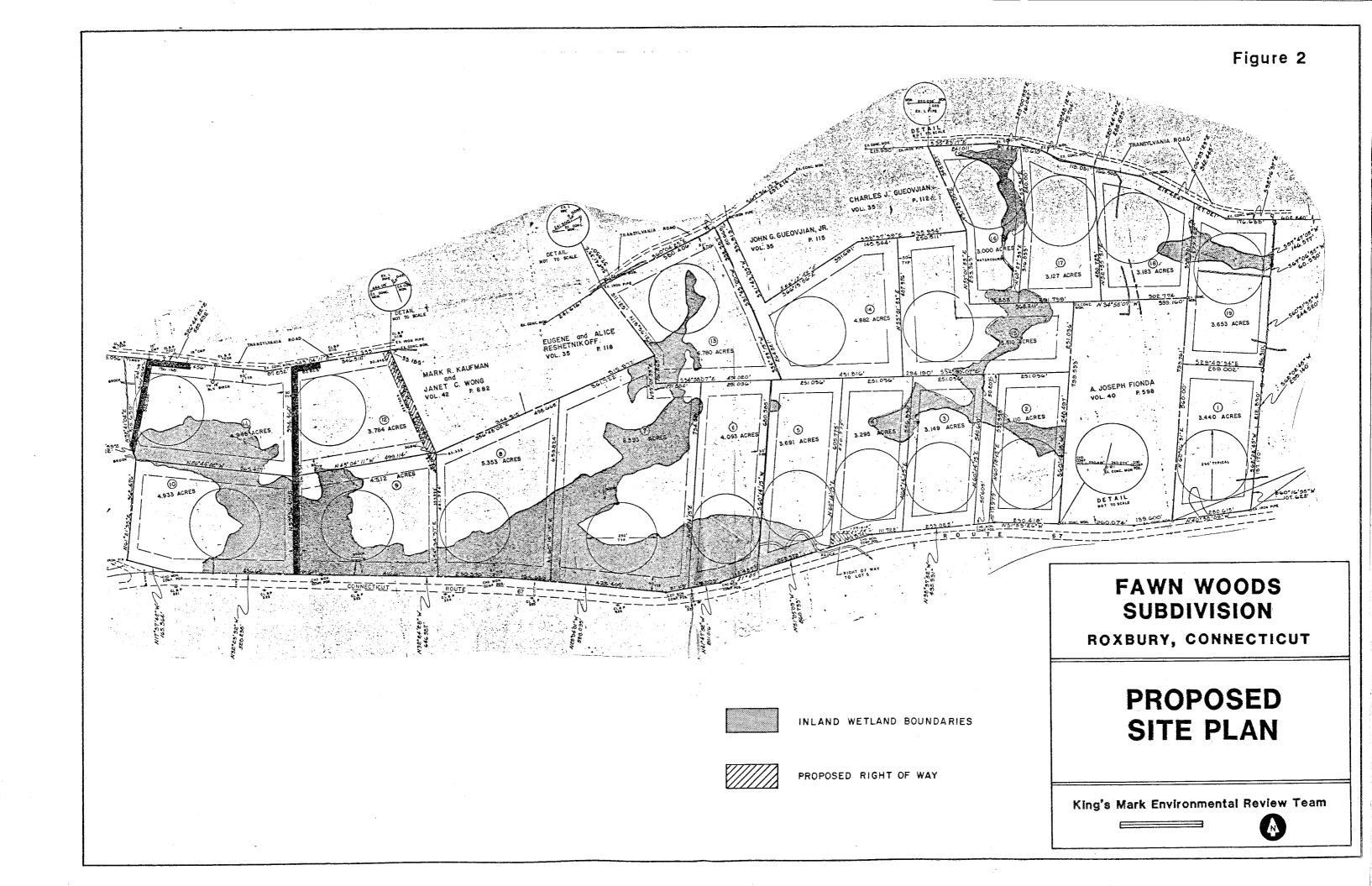
- (1) Inventory of the site's natural resources (collection of data).
- (2) Assessment of these resources (analysis of data).
- (3) Identification of resource problem areas.
- (4) Presentation of planning and land use guidelines.

The data collection phase involved both literature and field research. The ERT field review took place on January 7. 1987. Field review and inspection of the proposed development site proved to be a most valuable component of this

Figure 1

LOCATION OF STUDY SITE

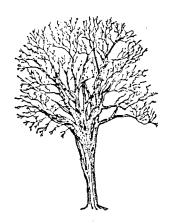




phase. The emphasis of the field review was on the exchange of ideas, concerns or alternatives. Mapped data or technical reports were also perused and specific information concerning the site was collected. Being on site also allowed Team members to check and confirm mapped information and identify other 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.

# PHYSICAL CHARACTERISTICS



#### PHYSICAL CHARACTERISTICS

#### **TOPOGRAPHY**

The proposed Fawn Woods Subdivision consists of an approximately 81 acre tract of primarily wooded land flanking the west side of Rucum Hill in southeast Roxbury. It lies between Transylvania Road and Route 67. The land surface throughtout the site is diverse and controlled largely by the underlying bedrock. The steepest slopes on the site are associated with the numerous bedrock outcrops occupying the central portions of the site. Gentle to moderate slopes characterize the remainder of the site. The northwestern portions of the site forms the headwater region of an unnamed brook and its associated wetlands and floodplain. It parallels Route 67 and is tributary to Transylvania Brook. Surface water on the site drains to this long, narrow streamcourse/wetland corridor. Maximum and minimum elevations on the parcel are about 760 and 600 feet above mean sea level, respectively (Figure 3).

## GEOLOGICAL CHARACTERISTICS

The site lies entirely within the Roxbury topographic quadrangle. A bedrock geologic map (Map GQ-1221, by Robert M. Gates) and a surficial geologic map (Map GQ-611, by Harold E. Malde) for the quadrangle have been published by the U. S. Geological Survey.

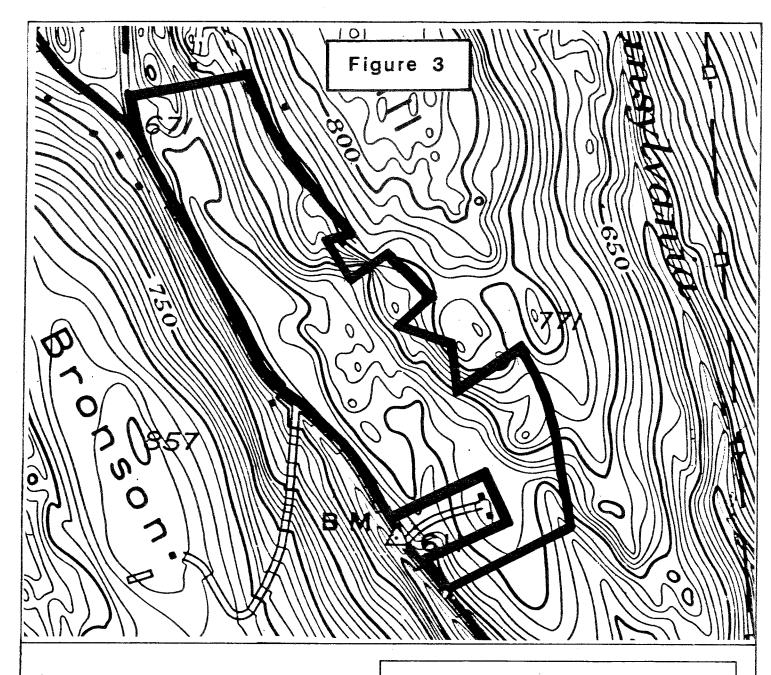
### Bedrock Geology

Single and continuous bedrock outcrops were observed during the field review. According to deep test pit information supplied to Team members by the developer's representative, the shallowest bedrock surface on the site was encountered mainly in test pits 28 through 34 (i.e., Lots 7, 8, 9, and 14). It

appears that the depth to bedrock in this area ranged between 3.5 feet and about 5.5 feet. On-site test hole work demonstrated that the depth to bedrock on the remainder of the site ranged between 7 and 8 feet. The greatest concern with shallow to bedrock areas will be the ability to install on-site septic systems. The State Public Health Code requires a vertical separating distance of four feet between the bottom of the leaching system and the bedrock surface. Because the proposed development site constitutes an "area of special concern." engineered plans for sewage disposal systems may be required before individual sewage and building permits are issued. Since the bedrock surface may undulate from point to point in a relatively short distance on the property, it is suggested that several deep test pits be excavated in these shallow to bedrock areas. Excavating sufficient deep test pits in proposed leaching areas will establish a good profile of the bedrock surface.

Depending upon the ultimate location of driveways and house foundations. there may be a need to blast if bedrock is encountered.

The rock core of the site is well described by Gates. The rock is described as a subunit of a belt of rocks known as the Hartland Formation (Figure 4). The Hartland Formation has been subdivided into groups primarily by mineralogical composition. Most of rock underlying the site is generally described as <a href="mailto:metamorphic">metamorphic</a> rock or rock geologically altered by great heat and pressure. It is known specifically as <a href="mailto:schist">schist</a> and it is composed mainly of mica minerals, quartz and feldspar. In addition, it contains conspicuous large crystals (porphyroblast) of garnet, staurolite and kyanite. Schist is a textural term that refers to crystalline metamorphic rock that is characteristically slabby or well-layered. The foliation or layering in the rock on the site dips moderately to the west.

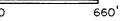


# FAWN WOODS SUBDIVISION

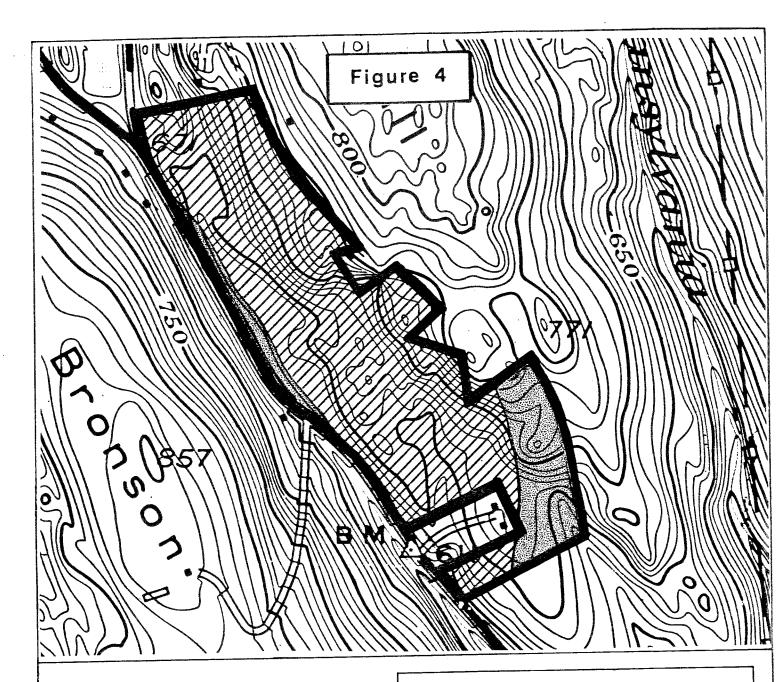
ROXBURY, CONNECTICUT

# **TOPOGRAPHY**

King's Mark Environmental Review Team









HARTLAND FORMATION (See text for description)



MASSIVE TO POORLY FOLIATED MICAQUARTZITE AND SCHIST

# FAWN WOODS SUBDIVISION

ROXBURY, CONNECTICUT

# BEDROCK GEOLOGY

King's Mark Environmental Review Team





Bedrock structure and past glaciation, which took place in Connecticut 10,000 to 12,000 years, influenced the shape of the landforms and the drainage pattern on the site.

The water supply for each lot of the proposed subdivision will be derived from drilled wells that tap the underlying bedrock. As a result, bedrock will affect the potential yields and water quality of the wells (See <u>Water Supply</u> section).

#### Surficial Geology

A relatively thin blanket. probably 10 feet or less of glacial sediment known as till. covers the bedrock on the site. Till. a non-sorted. non-stratified mixture of rock particles of widely varying shapes and sizes. was deposited directly from glacier ice without substantial reworking by meltwater (Figure 5).

Glacier ice moved across the region generally from north to southeast. Where the till is <u>less than</u> five feet thick, it is commonly sandy, very stony and loose; where the till is <u>more than</u> five feet thick, the upper few feet is commonly sandy. The lower portion of the surficial deposit, however, is often siltier and tightly compact. According to soil mapping and deep test hole information made available to Team members by the developer's representative, the variety of till covering most of the site is generally friable and sandy. Based on this deep test hole data, the till-based soils on the site are favorable to moderately favorable for on-site disposal of sewage effluent (See <u>On-site Sewage Disposal</u> section).

According to soils information generated by the developer's private soil scientist and from the published surficial geologic map, the soils adjacent to the south flowing unnamed brook parallelling the east side of Route 67, is

comprised of a relatively wide band of regulated inland wetland soils. There are also several thin bands of regulated inland wetland soils occupying other drainageways on the site (See discussion below). Water from these drainageways ultimately discharges to the unnamed brook and its associated wetlands (See <a href="Hydrology">Hydrology</a> section).

#### SOIL CHARACTERSITICS

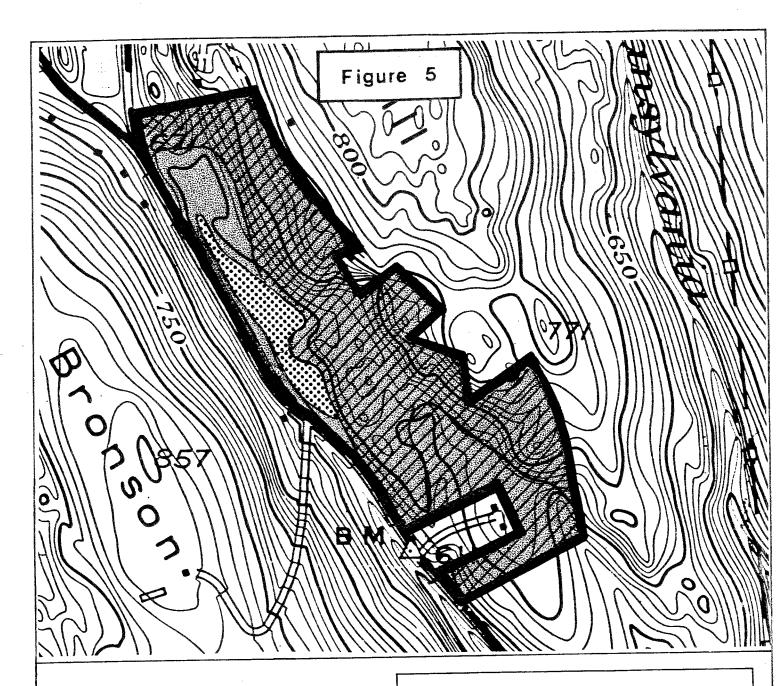
#### Introduction

Landscapes on the property are dominated by nearly level to very steep complexes of deep (i.e., < 40 inches) to shallow (i.e., > 20 inches) to bedrock glacial till soils. A perennial unnamed brook runs along the western side of the parcel, and has associated floodplain and upland wetland soils.

#### Wetland Soils

The proposed development site has extensive areas of wetlands and have been mapped by a private soil scientist retained by the developer. Generally, wetland boundaries appear accurate at scale mapped; however, watercourses are not clearly shown on the plans, and some small watercourses are not shown on the map at all on Lots 16 and 17.

These wetlands can be divided into two groups. The lower wetlands are situated roughly parallel to Route 67 and are mapped as Peat and Muck (Pk) in the county soil survey. The private soil scentist found inclusions of Muck with mineral soils dominating this area of wetlands. The upland wetlands are indicated to be mineral soils. These two areas of wetlands share similar plant species. Both areas have some capability for flood detention, with the lower wetlands being more significant in this regard. The most noteable difference





TILL



AREAS OF NUMEROUS OR CLOSELY SPACED OUTCROPS SEPARATED BY THIN DEPOSITS OF TILL



SWAMP SEDIMENTS

# FAWN WOODS SUBDIVISION

ROXBURY, CONNECTICUT

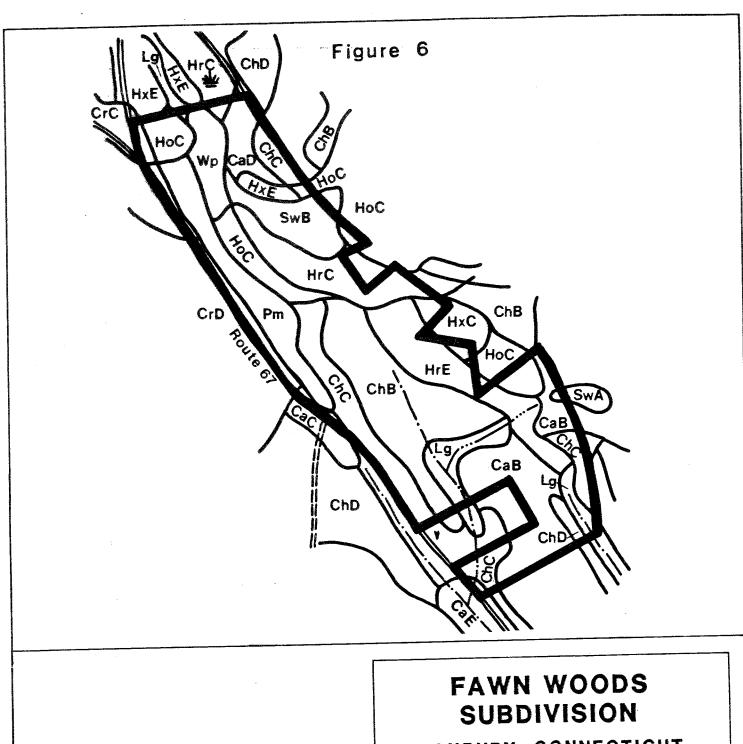
# SURFICIAL GEOLOGY

King's Mark Environmental Review Team



660'





ROXBURY, CONNECTICUT

# DISTRIBUTION OF SOILS

King's Mark Environmental Review Team

660'



between these two areas of wetlands is the presence of a unnamed brook in the lower wetland. This brook does support a fish population. Whether or not this brook functions as a spawning area, or has other biological significance of this order is not known at this time. The soil map (Figure 6) is from the Soil Survey of Litchfield County (1970) at a scale of  $1^{\circ}$  = 1320°. It has been slightly updated to reflect additional information gained in the field.

#### Specific Soil Concerns

- (1) The house and septic system for Lot 15 appear to be in a depression and may receive surface and subsurface water from upslope. Deep test pits at a wetter time of year may reveal a seasonal wetness limitation for on-site sewage disposal.
- (2) Because of soil limitations and grades, a considerable amount of fill would be needed across wetlands on Lots 5, 6, 7, 8, 9, and 10. Fill and crossings should be minimized or eliminated.
- (3) Additional deep test pits may be needed for Lots 8 and 14 to locate suitable soils because of the variable depth to bedrock.

# Erosion and Sedimentation Considerations

Erosion and sedimentation controls are necessary for the short-term period during construction and over the long period where maintenance of constructed features are concerned.

During construction, temporary erosion and sediment control measures can protect on-site wetlands which are an intregal part of this property. Use of silt fences, desilting basins and timely seedings are standard methods of erosion and sediment control. The Litchfield County Soil and Water Conservation District, upon request from the Town, will review the erosion and sediment control plan for the final subdivision proposal.

Long-term erosion and sediment control measures are related to careful site planning and good maintenance. Lot grading should disperse roof and driveway

runoff. Concentrating runoff tends to lead to flooding and erosion problems.

This is a common problem where runoff flows unchecked from the top of a driveway to the bottom of the driveway. Proper grading will minimize erosion on unpaved driveways and the buildup of ice on paved driveways.

Placement of driveways is also critical. For example, the driveway for Lot 5 should not be routed straight up the hill. Presently part of this driveway would have a grade of 20 percent or more with this particular route.

Proper lot planning will avoid drainage and erosion problems for Lots 11, 12, 16, and 17. These lots have intermittent drainageways not shown on the subdivision plan. House sites and septic fields should not be located within these drainageways. These lots have adequate space for building in better drained areas. Driveway crossings should have culverts to allow free passage of runoff water.

#### Streambank Erosion

Besides potential flooding problems, increased runoff can lead to additional water-related problems such as streambank erosion and gullying. In view of the moderate to steep slopes present in the watershed, it appears that erosion may be a problem, especially if a comprehensive erosion and sediment control plan is not developed covering each stage of the proposed subdivision. On July 1, 1985, the Soil Erosion and Sediment Control Act (P. A. Number 83-388) became fully effective. As a result, a detailed erosion and sediment control plan will be required for the project. Enforcement of the the Act by the Town is imperative in order to minimize environmental damage. Disturbed areas should be kept to a minimum. The erosion and sediment control measures called for under the plan should clearly be shown on the subdivision plan. According to present plans, it appears that some driveways will need to be

constructed on moderate slopes (greater than 10 percent). The need to install catch basins and road drainage appears evident. The crossing of brooks and drainageways associated with steep unpaved. driveways would be a source of unwanted sediment to these watercourses. Pavement of driveways and catch basins along the driveways would eliminate the potential for sediment to reach these watercourses on the site.

The lower section of the major watercourse draining the site is controlled by the underlying bedrock. Given this geologic setting and the presence of steep slopes, increased runoff from the upper parts of the watershed, may lead to severe streambank erosion problems in this area. Therefore, it is imperative that each prospective developer in the watershed do his/her part to control runoff from future development in the area.

#### HYDROLOGY

#### Watershed Area

The proposed development lies within the headwater regions of an unnamed brook tributary to Transylvania Brook. The brook generally parallels Route 67, bisecting the watershed in a north/south direction enroute to Transylvania Brook. At its point of outflow to Transylvania Brook, the watershed drains an area of about 500 acres or about 0.8 square miles. The watershed tends to follow the crests of local hills such as Rucum Hill and Bronson Mountain. Except for spotted residential development along Route 67 and Translyvania Road, the watershed area is only lightly developed and predominately wooded. (Figure 7).

Based on topographic conditions and existing culverts under Route 67, the Team's Geologist separated the watershed area into three subwatershed areas.

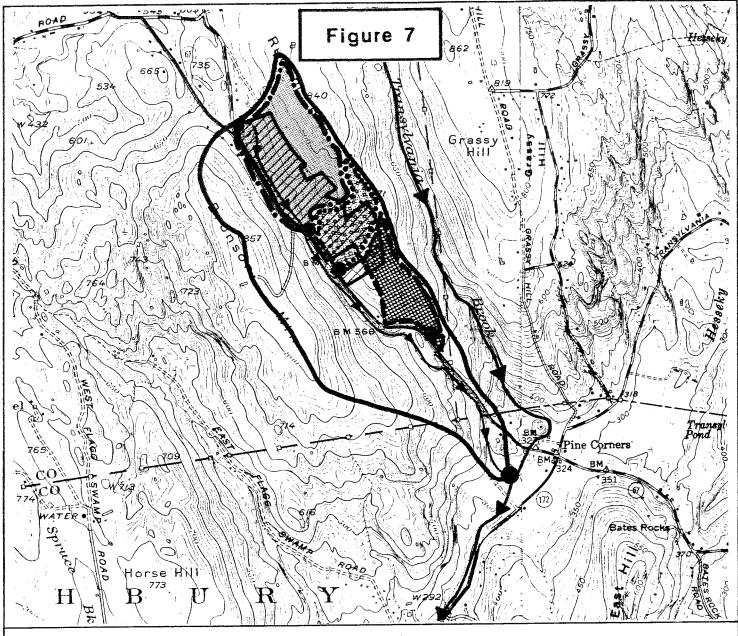
As such, over 50 percent or 10 of the proposed lots, drain to a 2-foot by 5-foot boxarch-type culvert passing under Route 67 in front of Lot 4. Four lots along Transylvania Road (i.e., 16 to 19) will drain to a deep drainageway on Lot 19 and ultimately joins the unnamed brook in the watershed about 2,600 feet downstream. The remaining five lots will flow to the drainageway that passes under a private driveway (Fionda property, see Figure 2) and which ultimately passes under Route 67 and Transylvania Road.

## Role of On-site Wetlands in Watershed Area

### Runoff Considerations

Because of moderate to steep slopes and the lack of wetland pockets on the west side of Route 67 (i.e., Bronson Mountain), surface runoff following periods of precipitation has little opportunity to be temporarily detained. Rather, it runs off quickly to the unnamed brook which eventually passes under the road to the west side of Route 67. On the other hand, the relatively large, linear wetlands associated with the unnamed brook parallelling the east side of Route 67 are in an excellent position to detain surface runoff following periods of precipitation. Except for a few flat, depressional areas and drainageways on the proposed site, the aforementioned wetlands are the only major wetlands in the watershed capable of storing significant amounts of stormwater runoff. As previously mentioned, the lower section of the unnamed brook is controlled by the bedrock surface.

The subdivision of the property as planned, followed by the construction of new homes and driveways would be expected to lead to some increases in runoff from the site. As previously mentioned, increased runoff generated from the proposed subdivision would be divided into three subwatersheds. This should help lessen the effects of post-development runoff on any one subwatershed.



TRANSYLVANIA BROOK SHOWING DIRECTION OF FLOW

UNNAMED WATERCOURSE ON THE SITE, SHOWING DIRECTION OF FLOW

WATERSHED BOUNDARY FOR UNNAMED WATERCOURSE AND ITS POINT OF OUTFLOW AT TRANSYLVANIA BROOK

SUBWATERSHED AREA AND ITS POINT OF OUTFLOW FOR THE AREA THAT DRAINS IO LOTS IN THE NORTHERN PARTS

SUBWATERSHED AREA AND POINT OF OUTFLOW FOR THE STREAMCOURSE THAT FLOWS UNDER THE FIONDA DRIVEWAY

SUBWATERSHED AREA AND POINT OF OUTFLOW FOR THE AREA THAT DRAINS LOTS 16-19

# FAWN WOODS SUBDIVISION

ROXBURY, CONNECTICUT

# WATERSHED BOUNDARY

King's Mark Environmental Review Team





Since the density of development is relatively low for each subwatershed, it is expected that any peak flow increases would be small.

The wetlands along Route 67, to which the highest percentage of lots (about 50 percent) will drain, is in an ideal location to serve as a natural runoff control basin, particularly since it is in the upper part of the watershed. This will allow runoff arising from the upper third of the watershed to be temporarily detained during the remainder of the watershed, where there is little opportunity for natural detention to drain quickly. Runoff stored in the wetlands will begin to drain once the unnamed brook has crested, thereby lessening the effects of flooding downstream. Finally, as a matter of policy, the applicant's engineer should supply the Town with a stormwater management plan which includes hydrologic calculations. Closer examination of downstream culverts, especially those passing under Route 67 and Fionda's driveway is also warranted.

# Wetland Crossing

In order to protect the hydrological functions of the wetland (i.e., flood storage), it is suggested that alternate means of access to Lots 5 to 9 be considered so that wetland crossings can be avoided or minimized. Potential wetland crossings serving these lots would undoubtedly require large amounts of fill material due to the broad, flat nature of the wetlands, the steep drop off of Route 67, and a Town regulation requiring a five percent grade for a 20-foot flat gradient for driveways from their point of entry. Driveways can be no more than 15 percent grade. A series of fillings in the wetlands would undoubtedly reduce the flood storage capacity presently provided. In addition, other hydrological and ecological functions performed by the wetland would be affected.

Prior to approving any fillings in the major wetland on the site. the applicant should be required to assess the risks involved in allowing a wetland area to be filled from both a hydrologic and ecologic standpoint. Alternate routes to developable parts on Lots 5 to 9 should be investigated.

wetlands on the site will need to be crossed by driveways. Although undesirable, these wetland road crossings would be less substantial than the wetland crossings for proposed driveways via Route 67. All wetland crossings need to be properly engineered and the road should be constructed adequately above the surface elevation of the wetland. A properly designed crossing will allow for better drainage and also decrease the frost heaving potential of the road. Provisions should be made for removing unstable material beneath the road and backfilling with a permeable road base fill material. Road construction through wetlands should preferably be done during the dry time of the year and include provisions for effective erosion and sediment control. Finally, culvert(s) should be properly sized and located so as not to alter the water levels in the wetland or cause flooding problems. These general comments would be applicable for most wetland crossings (See also Alternative Wetland Crossings section).

## WATER SUPPLY

Each lot in the proposed subdivision will be served by an individual on-site water supply well. The water will be derived from drilled wells which tap the underlying metamorphic bedrock. Generally speaking, a well drilled no more than 200 feet into the underlying bedrock should be capable of yielding a few gallons of water per minute (gpm), but there is at least a slight chance

less than a one gpm) or a very high yield (i.e., greater than 10 gpm). Yields from bedrock wells depend upon the number and size of fractures that are intersected by the wells. Density and size of fractures in different bedrock zones vary widely but generally occur within the first 100 to 150 feet of the surface. Since the yield of a given well depends upon the number and size of water-bearing fractures that it intersects, and since the distribution of fractures in bedrock is irregular, there is no practical way, outside of expensive geophysical testing, of predicting the yield of a well drilled in a specific location. However, it has been shown that the probability of increasing the yield of a well decreases with depth below 250 feet.

A survey of 734 wells in the Upper Housatonic River Basin indicated that about 80 percent of bedrock-based wells tapping bedrock similar to that underlying the proposed development site provided three gpm or more; 50 percent yielded seven gpm or more; and only 10 percent yielded 30 gpm or more. (DEP. Water Resources Bulletin #21. Upper Housatonic River Basin). A yield of 2 to 3 gallons per minute is usually sufficient for residential demands. A survey of well completion reports of domestic drilled wells along Transylvania Road reviewed by the Team's Geologist revealed the following yields: (1) 0.5 gpm at 450 feet; (2) seven gpm at 375 feet; (3) four gpm at 300 feet; and (4) 1.5 gpm at 230 feet. One well completion report lacked water yield data.

Town officials voiced concern with regards to insufficient yields. As a precautionary measure, it might be safe to drill a well first to determine what the potential yield would be. For example, the Town of Old Lyme has a regulation requiring the on-site well to be developed first on any designated building lot before proceeding with general house construction. This is to ensure the lot has a water source with an adequate yield for the intended

purpose. This regulation is enforced through the local health department.

In order to ensure that water qualty throughout and off the parcel is adequately protected, all wells will need to be installed in accordance with all applicable Town regulations, the State Public Health Code, and the State Well Drilling Board. The Town Sanitarian will need to inspect all well locations before the wells are drilled. All wells will need to be properly cased into the underlying bedrock. Finally, all yield data reported on well completion reports should be checked by the Town Sanitarian to ensure adequate yields.

The natural water quality should generally be good, but because of the particular mineralogy of the bedrock underlying the parcel, there is a chance that the water will have elevated concentrations of iron or manganese which will discolor the water and cause a metallic taste. Depending upon the ultimate concentrations of these minerals, there may be a need for filtration devices.

# ON-SITE SEWAGE DISPOSAL

### Introduction

Approximately 50 deep test holes had been excavated in order to identify suitable leaching areas for on-site sewage disposal. The description of soil layers and the results of percolation testing was available at the time of the site inspection.

# Suitability of Site to Support On-site Sewage Disposal

A review of the proposed sewage disposal system locations with respect to the soils mapping indicates all of the proposed leaching areas lie within the Charlton/Hollis soil series which are classified as suitable for installation of on-site sewage disposal systems. The soil data collected from the test pit excavation further confirms the suitability of soils with respect to on-site sewage disposal. In general, no signs of seasonally high groundwater were observed in deep test pits with the exception of Lot 13. On that lot, soil mottling was observed approximately three feet below existing grade in a test pit excavated adjacent to the house location. Soil conditions in test pit 28, which was somewhat further from the flagged wetlands, identified suitable soil conditions. Based upon an analysis of the soil test data provided, only one of the 19 lots. Lot 8, would require detail engineering plans be prepared by a registered professional engineer. This was due to the shallow ledge rock conditions observed in deep test pits 31 and 32.

As is typical for subdivision testing throughout the State, designated leaching areas shown on subdivision plans represent only one of perhaps several suitable areas for septic installation. This is particularly true on lots larger than one acre where a greater flexibility for shifting house and septic location exists. It is for this reason that local health departments routinely require additional soil testing within exact designated leaching areas once a builder or perspective homeowner prepares site development plans. The results of that additional testing should determine whether detailed engineering plans will be required.

### Design of Septic Systems

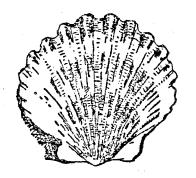
It is reasonable to assume at most of the sewage disposal systems will most likely consist of standard shallow leaching trenches. The soil test data results indicate a shallow trench system could be installed on most lots approximately two feet deep spread out over a relatively wide area. The upper

permeable soil layers have adequate capacity to disperse projected sewage flows. and will filter and detain effluent so as to not cause adverse impact on the adjacent wetlands.

#### Conclusions

In summary, all of the proposed 19 lots would be classified as <u>suitable</u> with respect to construction of on-site sewage disposal systems. Soil conditions do not appear critical enough to warrant design of engineering systems on any specific lot at this time, although the local health department may require such plans based upon further testing. The sewage disposal systems appear adequately spaced from designated wetland soils and watercourses.

### ARCHAEOLOGICAL RESOURCES



### ARCHAEOLOGICAL RESOURCES

### INTRODUCTION

Much of the upland area in the Town of Roxbury has never been surveyed systematically by archaeologists. All of the five recorded prehistoric sites in the files of the American Indian Archaeological Institute are located along the corridor of the Shepaug River which flows along the Town's western edge. The archaeological records of the drainages of Jack's Brook and Transylvania Brook are almost unknown and unexplored.

### ARCHAEOLOGICAL POTENTIAL

There is some limited evidence which indicates that prehistoric populations used the dissected landforms between Bronson Mountain and Flagg Swamp Road for hunting camps or perhaps more permanent settlements. This sensitive space is situated about one mile west of the project area and will not be affected by the proposed development. Closer to the project area, a shelter site has been reported in the outcrops of the geological Hartland Formation, due west of Route 67, along the unnamed tributary of Transylvania Brook. Although this site is south and west of the proposed subdivision, similar resources exist along the same contour lines further to the north, closer to the development site.

### PROTECTIVE MEASURES

The Town of Roxbury and its Planning and Zoning Commissions should require that all construction work be limited to the east side of Route 67. Any channels and culverts installed for drainage purposes must similarly be limited in their scale and potential impact on the landscape immediately west of the project area. In this way, it can insure that any unknown shelter sites will be preserved for future study.

### LAND USE AND PLANNING CONSIDERATIONS



### LAND USE AND PLANNING CONSIDERATIONS

### CONSISTENCY OF PROJECT WITH STATE AND LOCAL PLANS

The State policies Plan for the Conservation and Development of Connecticut (proposed revision for 1987-1992), classifies the proposed development site as either "rural land" or "conservation area." The state action strategy for the rural land designation is "...avoiding support of structural development form and intensities which exceed on-site carrying capacity for water supply and sewage disposal on a permanent basis, which are inconsistent with open rural character or conservation values of adjacent areas and which are more appropriately located in rural community centers..." The state action strategy for conservation areas is "...plan and manage for the long-term public benefit the lands contributing to the state's need for food, fiber, water and other resources, open space, recreation and environmental quality, and insure that changes in use are compatible with the identified conservation values..."

The proposed subdivision appears to be generally consistent with the intensity of development recommended in the advisory State Plan.

The Roxbury Town Plan is in the process of being updated. This plan notes natural limitations of soil and terrain on development potential in the Town. Use of the subject property for a low density residential subdivision appears to be a compatible land use with the Town Plan. At issue, though, are site design considerations and traffic impacts. These are discussed below.

### SITE PLANNING AND DESIGN

While the proposed site plan may meet local zoning and subdivision requirements, certain issues regarding wetlands, stream protection, water supply, and privacy were raised during the field review.

### Alternative Wetland Crossings

The prevalence of wetlands and the location of brooks were observed on the property. To offer greater protection to these features, and to the extensive woodlands, alternatives including conservation easements, the Town's cluster subdivision provision, and the Town's large-lot zoning were discussed. A representative of the Steep Rock and Roxbury Land Trust organizations was present and could offer typical conservation easement wording to the Town upon request.

wetlands running parallel to Route 67 were considered a concern because of potential negative impacts on water quality and wetland integrity. The crossings are proposed for Lots 5. 6. 7. 8, and 9. Lots 6 and 7 and Lots 8 and 9 have their driveways adjacent to one another. separated by the property line (see Figure 2). By town regulations, the minimum driveway width is 12 feet. Crossing the wetlands and brook for these driveways will require extensive fill. For example, two adjacent driveways will have a top width of 24 feet. For stability, the fill should be graded with a minimum of 2:1 sideslopes. Using a figure of eight feet of fill, the base of the sideslopes would extend 16 feet from each top edge of fill. Therefore, the total base width would be approximately 56 feet (i.e., 24 + 16 + 16 = 56). This figure can be applied to two adjacent driveways crossings. The single driveway crossing would have a base of approximately 44 feet.

Construction of these crossings will necessitate diverting the brook by either ditching or piping. Silt fence or other methods should be used to control movement of sediment from the fill before the vegetation is established on the fill side slopes. Work can be timed so that machinery is not in the floodplain/wetland during or soon after a storm. Fill should be sufficiently

coarse so that any groundwater is not prevented from passing through the driveway. The placement of driveways and sizing of brook culverts creates the possibility of detaining stormwater runoff from the subdivision. Therefore, to reduce the needed number of crossings, a number of alternative wetland crossing are presented below.

Alternative means of accessing Lots 5, 6, 7, 8, and 9 are possible. Lot 5 could be accessed from below the brook crossing of Route 67 via a right-of-way on Lot 4. This would eliminate one driveway crossing of the wetland.

Another alternative is the construction of a new road off Transylvania Road for access to these lots. One possible route for this road is from Lot 18, passing through lots 17, 15, 14, 13, 7, 8, 9, 12 to Lot 11. This route can follow the level in some areas, but in other areas grades will require careful route layout. Some wetlands on Lot 7 would be crossed by this alternative route. Though a new road would cause some environmental impact, increase the potential for stormwater runoff, and require a significant capital outlay, the culmulative impacts on the unnamed brook and all existing wetlands would be lessened considerbly, and curbs cuts entering Route 67 would be substantially reduced.

A third alternative is accessing Lots 8 and 9 with a driveway from Transylvania Road via a right-of-way on Lot 12. Direct access from Lot 12 may be impractical due to the steep grades (i.e., 30 percent) in portions of this lot. Accessing Lot 11 may be possible if the driveway cuts diagonally through this lot.

If the first and third alternatives are used, only two adjacnt driveway crossings of the lower wetland and brook will occur (Lots 6 and 7). If the second alternative is used, the lower wetland and brook will not be crossed by any driveways. Access to these lots would be provided from the proposed road.

### Water Supply

References were made by Town representatives to well water supply problems in homes in the vicinity of the proposed development site. Current Town regulations require drilling of a well during the building permit stage, rather than during the subdivision review process. Concern was expressed that future water yield problems would be a Town responsibility in that the Town would approve the subdivision. Reference was also made to other subdivision applications submitted in the Town and in the adjacent Town of Woodbury which raised questions about the cumulative impact of a concentration of wells in this area. The Town may wish to identify water supply as an issue in its Town Plan and to address it in that document, as well as in zoning and subdivision regulations. There are precedents in other towns for required well drilling at an earlier stage in the development review process. Groundwater mapping assistance may be available through the DEP - Natural Resources Center and the U.S. Geological Survey in Hartford.

### Privacy

The issue of privacy was discussed in terms of making maximum use of the extensive woodland on the site. The developer's representative was encouraged to leave a natural vegetative buffer around the building envelope wherever feasible.

### TRAFFIC CONSIDERATIONS

The subdivision has frontage and access to Route 67 and to Transylvania Road. Route 67 is a two-lane paved facility with a posted speed of 45 mph. The Department of Transportation has maintenance responsibility for this road and will control driveway permits. Transylvania Road is a one-lane town road. with a gravel surface.

Using the generally accepted standard of 10 trips per day per single-family residence (see Institute of Transportation Engineers <u>Trip Generation Manual</u>. 1979), the 19-lot subdivision would generate approximately 190 trips per day. The majority of this traffic is expected to use Route 67, regardless of which road the lots have frontage on. While the traffic from this subdivision will not exceed the roadway's design capacity, there are safety concerns about so many direct driveways onto a major roadway. In addition, the Town's consulting engineers have noted sight line problems on specific lots (i.e., Lots 6, 10, and 13) (see letter from Conklin & Soroka, October 14, 1986). To further consolidate driveways, it is suggested that Lots 2 and 3 share one curb cut on Route 67.

Access to a one-lane road raises concern about safety and convenience of travel on such a road. While Transylvania Road carries limited traffic and serves strictly as a local road carrying traffic to homes along it. the advisability of approving a subdivision on a one-lane unimproved road is questionable. Is such a roadway within Town road specifications? Will the Town be under pressure from subdivision residents to widen and pave this road? The Town may wish to require the developer to commit to a pro rate share of the cost of such improvements. (Note: This must be review by the Town Attorney.)

APPENDIX A

SOILS LIMITATION CHART

## SOILS LIMITATION CHARI

# FAWN\_WOODS\_SUBDIVISION\_=\_ROXBURY.\_CT

MAP UNIT NAME	MAP SYMBOL		GENERAL SOIL PROPERTIES	DRAINAGE CLASS AND DEPTH TO SEASONAL	MAJOR LIMITAT HOMES WITH BASEMENTS	LIMITATIONS FOR THE DEVELOPMENT WITH ONSITE SEPTIC ROAD NITS	PMENT OF: ROADS &
Charlton fine sandy loam, 3-8% slopes	CaB	9.0 1.0	- <del>-</del>	well drained >4 ft.	None	None	None
Charlton fine sandy loam, 8-15% slopes	CaC	6) 90	. 02	well drained >4 ft.	slope	slope	slope
Charlton fine sandy loam, 15-25% slopes	CaD	6) 80 10	i co a	well drained >6 ft.	steep slopes	steep slopes	steep slopes
Charlton stony fine sandy loam, 3+8% slopes	gro ,	10 M	!	well drained >4 ft.	700e	none	none
Charlton-Hollis complex very rocky, 8-15% slopes	ChC	61 67 7	,	well drained to excessively drained >4 ft.	Variable dep. to bedrock	Variable depth to bedrock	Variable depth to bedrock
Charlton-Hollis complex very rocky, 15-35%	cho	9. y	ill n deep w over	well drained to excessively drained >4 ft.	Steep slopes variable dep. to bedrock	Variable depth bedrock, steep slopes	Variable depth to bedrock, steep slopes
Hollis rocky fine sandy loam, 3–15% slopes	HoC	Complex of glaci soils from deep shallow over bed formed in loamy	al til to rock materi	well drained to somewhat excessively drained >6 feet	Depth to bedrock variable	Depth to bed- rock	Variable depth to bedrock
Hollis very rocky, fine sandy loam, 3-15% slopes		Complex of glaci soils from deep shallow over bed formed in loamy	al til to rock materi	Well drained to excessive- ly drained >6 feet	Variable depth to bedrock	Depth to bed- rock	Variable depth to bedrock
Hollis extremely rocky fine sandy loam, 15-35% slopes	W X	Complex of glaciscils from deep shallow over bec	glacial till deep to ar bedrock	Well drained to excessive- ly drained >6 feet	Depth to bedro Steep slopes	bedrock,Steep slope pes Depth to bed- rock	Depth to bedrock, Slope

MAP UNIT NAME	1	мар ѕүмвос	GENERAL SOIL PROPERTIES	DRAINAGE CLASS AND DEPTH TO SEASONAL	MAJOR LIMITA HOMES WITH BASEMENTS	MAJOR LIMITATIONS FOR THE DEVELOPMENT OF: HOMES WITH ONSITE SEPTIC ROADS & BASEMENTS SYSTEMS	PMENT OF: ROADS & STEEFTS
Leicester, Ridgebury & Whitman very stony fine sandy loam, nearly level	Lg	Glacial mainly f ways and	Glacial till soils, mainly found drainage- ways and depressions	Poorly drained to very poorly drain +1-1.5 feet	Wetness	**************************************	Wetness Subject to frost action
Saco silt loam	qs			Very poorly drained water table at or near the the surface most of the year O feet, subject to flooding	Wetness flooding	Wetness flooding	Subject to frost action
Sutton stony fine sandy loam 0-3% slopes	<b>A</b> MS	Glacial till soil formed in loamy materials	till soils n loamy s	Moderately well drained 1-2 feet	Seasonal wetness	Seasonal	Seasonal
Sutton stony fine sandy loam, 3-8% slopes	1 m 30 m	Glacial till soil formed in loamy materials	till soils n loamy s	Moderately well drained 1-2 feet	Seasonal Wetness	Seasonal wetness	Seasonal
Whitman stony fine sandy loam 0-3% slopes	3	Glacial till soi formed in loamy materials	till soils n loamy s	Very poorly drained O feet	Wetness	Wetness, ponding of water on surface	Wetness Subject to frost action

### 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 BEVIEW

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

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