

# Rivers Edge

Ashford, Connecticut

February 1988



ENVIRONMENTAL

REVIEW TEAM

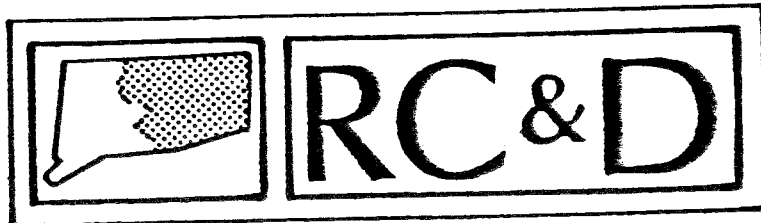
REPORT

# Rivers Edge

Ashford, Connecticut

**Review Date:** DECEMBER 17, 1987

**Report Date:** FEBRUARY 1988



ENVIRONMENTAL REVIEW TEAM

PO BOX 198

BROOKLYN, CONNECTICUT 06234

# Site Location

RIVERS EDGE SUBDIVISION  
ASHFORD, CONNECTICUT



EASTERN CONNECTICUT

RESOURCE CONSERVATION

& DEVELOPMENT AREA

# ENVIRONMENTAL REVIEW TEAM REPORT

ON

## RIVERS EDGE SUBDIVISION

### ASHFORD, CONNECTICUT

This report is an outgrowth of a request from the Ashford Planning and Zoning Commission to the Windham County Soil and Water Conservation District (S&WCD). The S&WCD referred this request to the Eastern Connecticut Resource Conservation and Development (RC&D) Area Executive Committee for their consideration and approval. The request was approved and the measure reviewed by the Eastern Connecticut Environmental Review Team (ERT).

The ERT met and field checked the site on Thursday, December 17, 1987. Team members participating on this review included:

Don Capellaro	--Sanitarian -- CT Department of Health
Howard Denslow	--District Conservationist --U.S.D.A., Soil Conservation Service
Meg Reich	--Planning Director --Windham Regional Planning Agency
Elaine Sych	--ERT Coordinator -- Eastern CT RC&D Area
Bill Warzecha	--Geologist - DEP, Natural Resources Center

Prior to the review day, each team member received a summary of the proposed project, a list of the Town's concerns, a location map, a topographic map, and a soils map. Also included was a soils report from the applicant's soil scientist. During the field review the team members were given plans and test hole information. The Team met with, and were accompanied by the surveyor and the attorney for the applicant. Following the review, reports from each team member were submitted to the ERT Coordinator for compilation and editing into this final report.

This report represents the Team's findings. It is not meant to compete with private consultants by providing site designs or detailed solutions to development problems. The Team does not recommend what final action should be taken on a proposed project -- all final decisions and conclusions rest with the Town and landowner. 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 developer and the Town. The results of this Team action are oriented toward the development of better environmental quality and the long-term economics of land use.

The Eastern Connecticut RC&D Executive Committee hopes you will find this report of value and assistance in making your decisions on this proposed subdivision.

If you require any additional information, please contact:

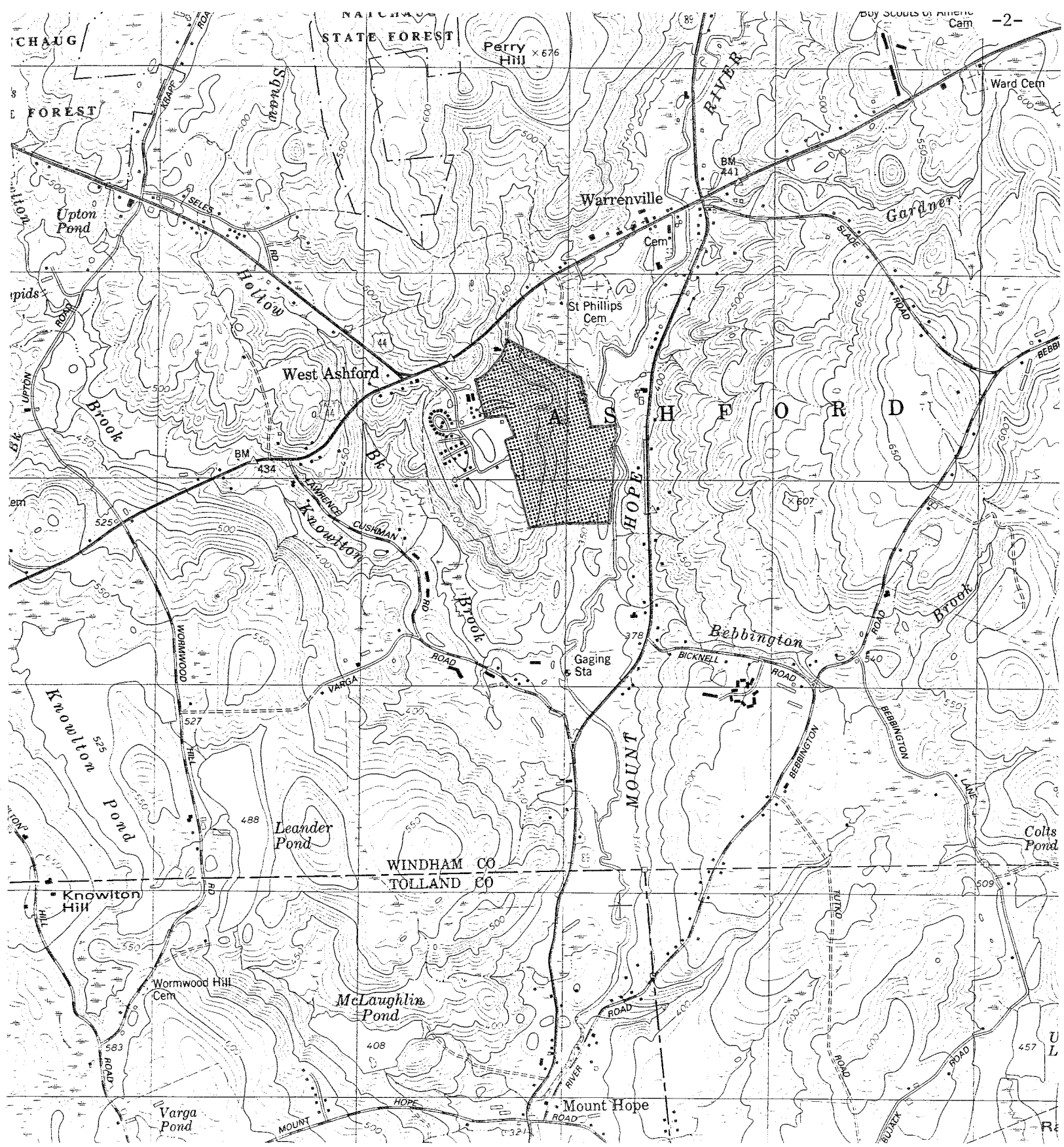
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LOCATION

SCALE 1" = 2000'



## 1. INTRODUCTION, SETTING AND TOPOGRAPHY

The proposed Rivers Edge Subdivision consists of a ± 95 acre irregularly shaped tract of land, whose eastern border parallels Mount Hope River. It is located between the Ashford Properties Development Corporation property and Mt. Hope River in the central part of Ashford.

The property will be accessed via Pompey Road near Lots 25 and 4. The new road, which will be called Southworth Drive will be a continuation of and ultimately connect with the existing Southworth Drive servicing the Ashford Properties Development on the west. The applicant wishes to subdivide the parcel into 25 building lots, all of which will be 2 acres or more in size. The hillside, where residential building is proposed, is totally wooded, mainly with deciduous hardwoods. Some areas of the hillside slope at 30% or more where houses are proposed. There is an open 14 acre hay field at the base of the hillside gently rolling toward the river. Not all of this field is within this property. That which is, is proposed as "open space". It is important farmland and is underlain by an aquifer associated with the Mount Hope River. Approximately half of the open space area is comprised of floodplains, while the remainder is upland soils. Access to the open space land will be provided by a 100 foot wide conservation access easement from the end of the proposed driveway serving Lots 1--3.

The proposed Southworth Drive will closely follow the route of an old subdivision road, which was cleared but never constructed.

A thirty foot water line easement traverses the central parts of the site on Lots 6, 8 and 9. The water line, which provides domestic water to the Ashford Properties Development Corporation originates from a gravel-packed well along the Mount Hope River east of Lot 1 and 9.

As mentioned earlier, Mount Hope River forms the eastern boundary of the site. The site is characterized by slopes which range from gently rolling to moderately steep. The western and eastern limits of the parcel are dominated by gently sloping land, while the central part is moderately steep. The topography of the western and central part is controlled by the underlying bedrock. The eastern parts are characterized by a hummocky and gently rolling topography shaped by glacial meltwater deposits of sand and gravel.

Maximum and minimum elevations on the site are about 500 feet above mean sea level and 330 feet above mean sea level, respectively.





TOPOGRAPHY

— APPROXIMATE SITE  
BOUNDARY



1" = 660'



AN

RD

Brook

A

S

H

ROAD

Gaging

BIC

## 2. BEDROCK AND SURFICIAL GEOLOGY

The entire site lies within the Spring Hill topographic quadrangle. Since no bedrock geologic map has been published to date, the Team's geologist referenced John Rodger's Bedrock Geological Map of Connecticut for the bedrock geology section of this report. A surficial geologic map (QR-26 by Perry H. Rahn) for the quadrangle has been produced by the Connecticut Geological and Natural History Survey.

Rodgers identifies the bedrock underlying the site as Hebron Gneiss. He describes the rock formation as an interlayered, dark gray schist and greenish gray, fine to medium grained calc-silicate gneiss.

"Schists" and "gneisses" are crystalline rocks that have been geologically altered by great heat and pressure within the earth's crust. The terms "schist" and "gneiss" refers to the textural aspects of the rocks. The adjective calc-silicate used above means the rock contains a high percentage of calcium and silicate minerals.

The rocks underlying the parcel have undergone deformation one or more times during the period following their creation. The stresses of deformation caused the alignment of platy, flaky and elongate minerals into thin sheets or bands. Where the alignment has resulted in a slabby rock (i.e., one that parts relatively easily along the surface of mineral alignment or foliation planes), the rock is termed a "schist". Where the alignment has resulted in a banded but more massive rock, the rock is termed "gneiss". Both rock types may grade into another into a single outcrop.

Depth to bedrock ranges from zero in places where it has been exposed along Pompey Road, to 42 feet below ground surface in the eastern most part near Mount Hope River. The latter figure is based on the well completion report for the gravel packed well serving Ashford Properties Development Corporation.

The underlying bedrock is a source of water to many homes in Ashford and will be the source of water to the proposed 25 homes on the site.

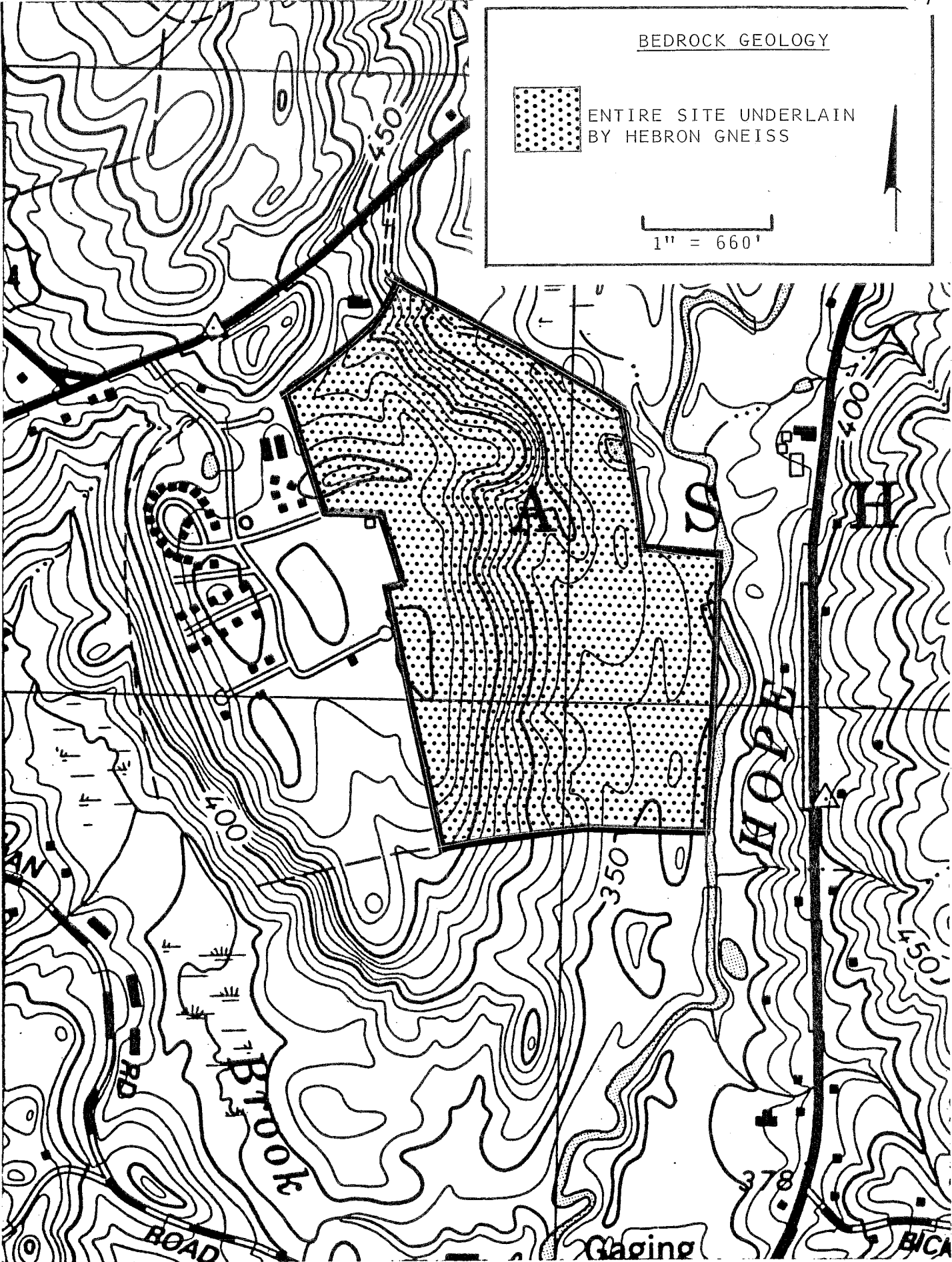
Except for the eastern third of the site, which is covered by sand and gravel deposits, a relatively thin (generally 10 feet or less) blanket of glacial sediment called till covers the site. Till is a poorly sorted mixture of rock fragments and particles deposited directly by glacier ice. Rock fragments and particles found in the soil were derived from gneisses and schists in the area. Most of the till is relatively shallow, probably not exceeding 10 feet in most places. Based on soil mapping data, it appears the till soils on the site are sandy and loose. However, deep test hole data from subsurface sewage exploration supplied by the applicants land surveyor revealed that the till in many holes was silty and compact. The latter condition has resulted in elevated water

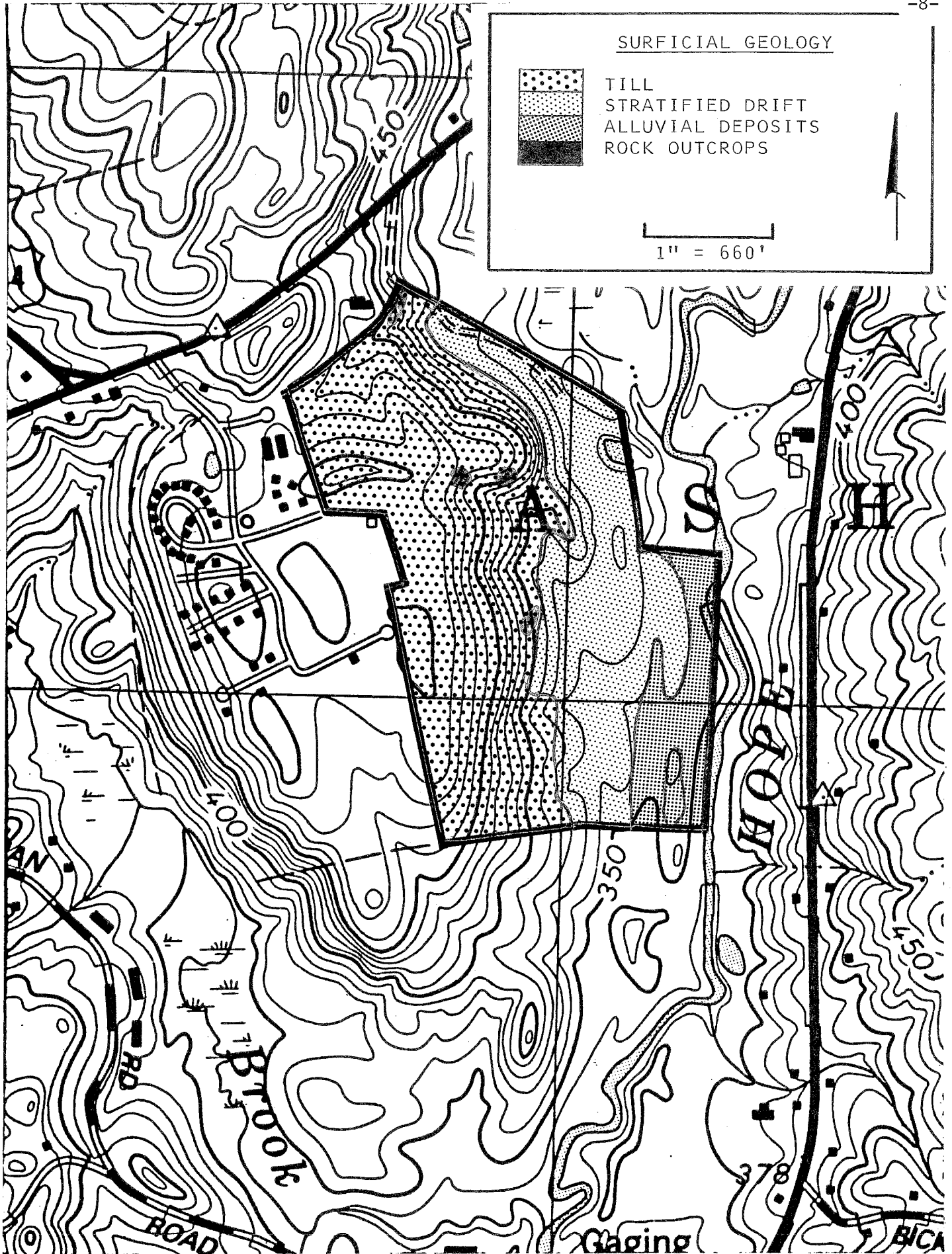
tables, soil mottling and slow percolation rates, all of which can be a hindrance to septic system installation. Also, bedrock was encountered at relatively shallow depths (less than six feet) in numerous dept test holes.

The other major glacial deposit found in the eastern part of the parcel is stratified drift. Stratified drift, whose major components consist of sand and gravel, was deposited by glacial meltwater streams in the Mount Hope River Valley during glacial ice retreat. Based on well drilling logs of test wells for the Ashford Properties Development Corporation east of Lot 1 and 9, it appears that the stratified drift on the site consists of coarse gravel. The remains of a deep excavation pit is visible on a portion of Lot 1 and the one hundred foot conservation access easement. This area should be re-graded so that it does not pose a public hazard condition.

As mentioned earlier, the sand and gravel on the site may be as much as 40 feet thick.

Based on soil flagging of regulated inland-wetland soils on the parcel by the applicant's certified soil scientist, it appears that the wetland areas occur on Lots 1--3, Lots 9--16 and the open space area. The latter also includes floodplain soils, which are also regulated soils.





### 3. SOILS

The soils are shown on the Soils Map within this report. Descriptions of on-site soils are given. The wetland soils have been flagged by a certified soil scientist and are plotted on the plans. There are no wetlands on the upper portion of the hillside, however there is seasonal storm runoff beside Pompey Road on Lot 4 and across Lot 3. This is fed by several acres of drainage area converging at the proposed junction of Southworth Drive and Pompey Road, and from the north side of Pompey Road. One could question whether or not there are wetlands in this immediate area.

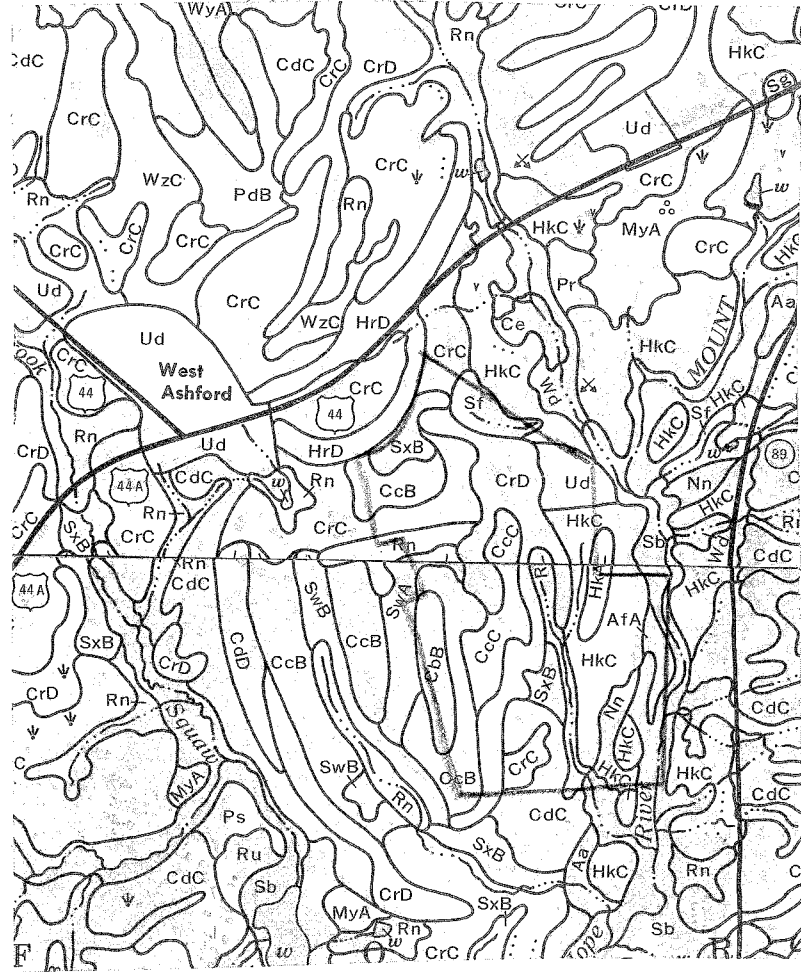
Soils on the steep hillside are basically well drained Canton and Charlton stony fine sandy loams. Where ledge and bedrock are observed the shallow-to-bedrock Hollis soil is mixed in. Moderately-well drained Sutton soil is found in sloping drainage areas on the hill, i.e., on Lots 24, 4 into 3. Wetland soils Saco (Sb) and Ridgebury (Rn) are found at the base of the slope. Runoff and groundwater from above moves through them--eventually to the river associated wetlands. These have been flagged. Soils in the field area are very well drained Agawam, Hinckley, and Ninigret. These are underlain by sands and gravel. The gravel excavation on proposed Lot 1 is evidence of this.



United States  
Department of  
Agriculture

Soil Conservation Service  
Agricultural Center  
Brooklyn, CT 06234  
774-0224

RIVER EDGE SUBDIVISION (25 lots)  
Pompey Road and Southworth Drive  
Ashford, CT



The Soil Conservation Service  
is an agency of the  
Department of Agriculture

SOILS

- #AfA - Agawam fine sandy loam, 0 to 3 percent slopes.
- #CbB - Canton & Charlton fine sandy loams, 3 to 8 percent slopes.
  - CcB - Canton & Charlton very stony fine sandy loams, 3 to 8 percent slopes.
  - CcC - Canton & Charlton very stony fine sandy loams, 8 to 15 percent slopes.
  - CdC - Canton & Charlton extremely stony fine sandy loams, 3 to 15 percent slopes.
  - CrC - Charlton-Hollis fine sandy loams, very rocky, 3 to 15 percent slopes.
  - CrD - Charlton-Hollis fine sandy loams, very rocky, 15 to 35 percent slopes.
  - HkC - Hinckley gravelly sandy loam, 3 to 15 percent slopes.
- #Nn - Ninigret fine sandy loam.
- \*Rn - Ridgebury, Leicester & Whitman extremely stony fine sandy loams.
- \*Sb - Saco silt loam.
- \*Sf - Scarboro fine sandy loam.
  - SwA - Sutton very stony fine sandy loam, 0 to 3 percent slopes.
  - SxB - Sutton extremely stony fine sandy loam, 3 to 8 percent slopes.
  - Ud - Udorthents, smoothed
- # Prime farmland soil
- \* Designated wetland soils by Public Act 155



#### 4. RESOURCE CONCERNS

Severe slope, and drainage impact are the major concerns with the subdivision as proposed. Although it is possible to plan and design to overcome both, the terrain does present a serious challenge. The following considerations are offered:

--Lot 3 is very poor for building because of an excessively steep slope 30%± - crowding into the uphill drainageway. Plans show "Direct Flow Swale" to intercept this drainageway. Only a designed rip-rapped or paved channel, or storm culvert pipe could handle the storm velocity flow from above without causing erosion. Storm runoff calculations will support this. Design details of such a channel should be requested, as well as a detailed erosion and sediment control plan for building disturbance of this lot.

--Lots 1, 2, and 3 are show to be serviced by 2 access strips. A culvert or entrance burm should be installed at their junction with Pompey Road. Runoff down Pompey Road should not run down these drives unchecked or else they will wash and ice. The "Level Spreaders" or waterbars spaced farther down the access drives are good. A culvert would be needed beneath the drives to #2 and #3 to exit the wetland with it's uphill flow. This would be before the drive to Lot 2. Additional gravel base may need to be placed in the low wetter areas of these proposed accesses.

--As with Lot 3, a detailed erosion and sediment control plan should be proposed for 1 and 2. It is suggested that a final grading plan be shown with 2 foot contour intervals of cut and filled ground.

--Plans in hand, dated September 1987, show no planned paving or other improvements of Pompey Road except at the junction with new Southworth Drive. With more vehicular traffic, especially during development, Pompey Road will deteriorate. Rutting and washing can be expected unless it is paved. Deterioration of course, can lead to problems lower on Pompey Road. The Town is urged to require Pompey Road be upgraded to the access drive to Lots 1 and 2. Beyond that point Pompey Road could be blocked, at least out near Route 44, to discourage hazardous entrance/exit onto Route 44. (See SECTION ELEVEN.)

-Assuming Southworth Drive and maybe Pompey Road are to be accepted as Town roads, Ashford might consider having the developer post a bond for road and drainage work as part of the required erosion and sediment control plan. This could tie to the construction sequence in the plan. The Windham County Conservation District may be contacted for information on such bonding.

--Southworth Drive storm drainage and downhill piping have been well designed. Installed and functioning as planned the storm drainage system should not cause hillside erosion. However lower field and wetlands investigation indicate the storm flow into the wetlands may cause some increased seasonal flooding in the open field. The edge of the field has been ditched at some past time to stop and divert wetland water.

--Lots 8 -- 16 all show building homes, driveways, and septic fields on the steepest portions of the lots. With 25-30% slopes these will be tough sites to cut and fill and prevent soil erosion. The cut slopes will seep water. Revegetating the now-wooded and stable slopes will take time. Costly landscaping may be necessary. Driveways will wash until they are paved. Drivers on Southworth Drive may look over the roof-lines of homes down off the road. Placing homes on these sites as proposed presents a real engineering challenge. Since these 9 lots make up greater than 1/3 of the 25 proposed, should clustering homes-condominiums-be considered above on the level ground? Building the same number of housing units clustered above would have less potential negative impact on the hillside. The same amount or more open space, could be preserved. These last thoughts are expressed by the writer of this section and may not be consensus of the Team making this environmental review.

--Overall the Erosion and Sediment Control Plan proposed is good. However, a detailed plan for each lot showing cuts and fills with 2 foot contour intervals, culvert installations as needed, etc. is in order. Also a contractor's name - the person responsible to talk with, should be forthcoming. The Town may wish to know when (time of year) construction is planned, when the road will be in, drainage, etc.

## 5. GEOLOGIC DEVELOPMENT CONCERNS

In terms of the proposed subdivision, the major geologic concerns, which warrant close attention include the following:

- (1) Lots which have shallow to bedrock conditions generally 7 feet or less (Lot 4-6, 14-16 and 21-25).
- (2) Areas of moderate to steep slopes (mainly the central part).
- (3) The presence of till (hardpan) soils which have moderately slow to slow percolation rates and elevated groundwater tables. The latter two conditions appear to result from a silty and more compact soil zone which develops with depth on several of the lots.

The above geologic limitations will weigh heaviest on the ability to provide adequate subsurface sewage disposal systems serving homes constructed in the proposed subdivision. Based on subsurface data supplied by the applicant's engineer, it seems likely that special engineered design plans will be required on most lots to overcome the geologic limitations mentioned above. For example, improvements such as curtain drains/and or elevating areas designated for leaching systems with suitable fill material will be required for lots with either high groundwater conditions or shallow to bedrock conditions. Sufficient exploratory work is warranted on the lots, which are characterized by shallow to bedrock conditions. Septic system areas should ideally be located in areas where slopes do not exceed 25 percent. Finally, leaching systems for all lots should be kept shallow, relatively large and spread out with the contours to encourage lateral dispersal.

A letter from the Northeast District Department of Health made available to Team members indicates that septic systems and water supply wells can be installed on each lot.

## 6. HYDROLOGY

The entire site lies within the Mount Hope River watershed. Surface runoff and to a large degree, subsurface runoff flows easterly to Mount Hope River.

The subdivision as planned, followed by the construction of new homes, driveways and rooftops will lead to some increases in runoff from the property. In order to determine the potential increases of post-development runoff and its resulting impact on Mount Hope River, the applicant's engineer needs to prepare a proper stormwater management plan that includes pre-and post-development runoff conditions. Because of the site's close proximity Mount Hope River, the potential for flooding problems do not appear to be great. Also, the presence of wetlands in the eastern part should help to mitigate post-development runoff increases.

Besides flooding problems, increased runoff can lead to additional water related problems including streambank erosion, siltation and gullying. Because of the moderately steep slopes that characterize the central part, the potential for erosion and siltation problems needs to be addressed in detail. By properly controlling runoff from the site and reducing the potential for erosion this will help to protect water quality to Mount Hope River, the community water supply wells serving Ashford Properties Development Corporation, and neighboring properties. In this regard, it is recommended that a comprehensive erosion and sediment control plan be developed and enforced for each stage of the proposed subdivision. Disturbed areas should be kept to a minimum under such a plan. The erosion and sediment control measures called for under the plan should be shown on the final subdivision plan.

Based on the plans submitted to Team members on the review day at least one major wetland crossing is proposed on Lot 3 in the eastern portion.

The proposed driveway serving Lots 1 and 2 would be constructed in about 160 feet of wetland soils. Based on visual observations made during the field review, it appears that less disturbance of wetlands could be accomplished if the existing drive was upgraded and shared by Lots 1 and 2. This alterante route should be given consideration.

If the wetlands are crossed, the road crossing needs to be properly designed (e.g., culverts are properly sized and installed, permeable road base fill material used, etc.). All unstable organic material should be removed before placing the permeable road base. The roads should be constructed sufficiently above the surface elevation of the wetlands. This will allow for better drainage of the roads and decrease the frost heaving potential of the road. It is advised that any road construction through wetland areas be done during the dry time of the year with adequate provisions for effective erosion and sediment control. Detailed plans for any proposed road crossing through wetlands should first be submitted to the proper Town authorities or commissions for their review, comment and final approval prior to any construction.

Because of the present layout, the remaining wetlands on the site should be relatively free of any disturbance or development activity. Consideration should be given to imposing conservation easements or deed restrictions to protect wetlands on the site. For example, restrictions such as on clear cutting of trees, establishing lawns and the construction of outbuildings or other structures could be imposed under the conservation easement or deed restriction.

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

## 7. WATER SUPPLY

Present plans indicate that the proposed house lots would be served by individual on-site wells. The underlying bedrock will be the likely source of water to the wells. Although, not prolific aquifers, the crystalline bedrock beneath the site is generally capable of yielding quantities of water adequate for most domestic uses. The exact yield of a bedrock floored well is a function of many hydrogeologic factors including the number and size of fractures present in the bedrock. Because the fractures are unevenly spaced throughout the rock, there is no real practical way, short of expensive geophysical testing, to assess the potential of any particular site for a satisfactory well.

An assessment of 134 bedrock based wells has been conducted for the Shetucket River basin which includes the subject site (Source: Connecticut Resources Bulletin No. 11, Shetucket River Basin). This assessment indicates that 90 percent or 9 out of 10 of the wells yielded 3 gallons per minute or more. A well yielding three gallons per minute should adequately meet the needs of most domestic households.

As noted earlier the eastern third of the site was covered by sand and gravel deposited in the Mount Hope River Valley during glacial ice retreat. Where these types of deposits are saturated, coarse-grained, and near major streams or water bodies, they can be capable of yielding water at very high rates (50 gallons per minute or more), especially compared to wells tapping the crystalline bedrock. In fact, a well field comprised of 3 wells (1 active, 2 inactive) is located along Mount Hope River east of Lots 1 and 9. The community water supply called Ashford Properties Water Company presently serves about 72 people residing in the apartment complex west of the parcel.

There is very little well information on the well field. The one active well is about 45 feet deep and taps the sand and gravel deposits. Its exact withdrawal rate is unknown. However, the well has safe yield (maximum sustainable yield under worst case or low flow conditions) of 80 gallons per minute or 86,000 gallons per day. Also, the pump capacity is set at 80 gallons per minute. Because of the wells close proximity to Mount Hope River, it seems likely that it is drawing surface water from the River by a process called induced recharge. Induced recharge occurs when the "cone of depression" reaches as far as the River, thereby lowering the water table beneath it. If there are no impermeable barriers such as clay in the river bed, the pump will pull water from the river down through the aquifer and into the well. The "cone of depression" mentioned above occurs when a pumping well creates an artificial discharge area by drawing down or lowering the water table around the well. This area of drawdown is called the "cone of depression". The "cone of depression" for the pumping well serving Ashford Properties Water Company is unknown. Mount Hope River is probably its eastern boundary but depending on its yield covered expand beyond the River. The western boundary is unknown. In order to properly protect the community water supply, special care needs to be taken so that septic systems and road/surface drainage from the proposed development does not impact the well field. The

State Public Health Code requires that a separating distance of 200 feet be maintained between a well with a withdrawal rate in excess of 50 gallons per minute or more and any portion of a septic system. It is assumed that the well is pumping 80 gallons per minute. Because of the highly porous nature of the sand and gravel deposits in the eastern part, it is suggested that the 200 foot separating distance be doubled to 400 feet. Present plans indicate that the nearest leaching area (reserve area for Lot 1) proposed for the site is about 440 feet. Also, the outlet for any road drainage should also be conservatively separated from the well field and preferably directed away from it.

Leaching systems serving lots which are traversed by the 30 foot wide water line easement should be at least 10 feet from the easement line.

NOTE: The Team member responsible for Sections 8 -- 12 walked this proposed development site on February 4, 1988 with maps, plans and profiles dated September and October 1987 provided by the ERT Coordinator.

Memos from engineering consultants Hultgren & Bowen dated November 9, 1987 and January 7, 1988 were reviewed. Comments provided herein do not generally include those already commented upon in those reports. This reviewer generally concurs with the recommendations made therein.

## 8. DESIGN AND ENVIRONMENTAL CONSIDERATIONS - CLUSTER CONCEPT

The proposed 25 lot subdivision, as proposed, is essentially a new phase of the existing Ashorfd Park Development which contains clustered condominium units and single family homes. This new phase, however, is not being undertaken by the same developers as those who developed existing sections and in many ways is a departure from the original overall Ashford Park concept plan. While it is adjacent to, and physically an extension of the existing development, it does not propose to continue the "cluster" design concept for the original sections with community recreation and water supply, but instead proposes single family homes on large lots with on-site wells and no new "recreation" areas, simply undeveloped open space.

The original plans from 1970± (before current zoning regulations) proposed 700+ apartments and homes in the entire complex when fully developed. Ashford's current Zoning Regulations have become effective since that time and this new subdivision is generally in compliance with existing regulations, but not in line with the original concept plan for the parcel. From a design standpoint, however, the reviewer feels a continuation of the cluster concept (albeit with fewer total units overall) for this site could prove more appropriate, than the standard single family layout subdivision proposed. The steep slopes, floodplain and wetlands on the site are physical constraints to development which along with lack of public sewer or water supply result in the need for larger lots. A well designed cluster development with an extension of the adjacent water supply could make better use of the site, minimize development costs, and provide more open space for recreation and preservation of the sites natural resources. The proposed number of units (25) or potentially even more could be accommodated with a cluster design. Circumstances do work against the use of the cluster concept in that; 1) the developer has not proposed such a layout 2) Ashford's land use regulations do not provide for cluster development 3) a community water supply would probably be necessary to decrease lot sizes needed for clustering. Enlargement or extension of the existing community water supply is not feasible or cost effective for the new section, according to the developer's representative.



## 9. LOT LAYOUT AND LIVABILITY

As noted previously, a cluster design with small lots served by the adjacent community water supply, would be preferable to the proposed "standard" layout in that more space or common recreation land could be retained, and construction on steep slopes avoided.

As proposed, the subdivision lot layout raises some issues to be addressed.

- The existing water line easement divides Lot 22 in half. This easement would preferably make a "natural" lot line dividing two lots instead of constraining uses of one.
- The steep slopes of the lots proposed to the east of Southworth Drive provide little useable space on those lots for yards, gardens and play spaces without major regrading or terracing. Again, a cluster development could potentially better address this issue.
- As noted previously, Lots 10 through 16 would be better designed and open space enhanced if the field areas contained in those lots were incorporated into the open space, using the tree line or wetland boundary as a more "natural" lot line.
- Lots 1 and 2 seem to have no access on a Town road, but rather have access strips along the easement to the proposed open space and current well and pump house for Ashford Park. Private ownership or easement over access to a public facility may not be appropriate or the legal constraints and considerations should, at least, be carefully reviewed. Section 2.08 of Ashford's Subdivision Regulations seems to prohibit "privately owned reserve strips which control access to land dedicated to public use...".
- Should the water line easement serve as access to the existing recreation area behind Lot 22? Is this open space available for use of the residents of the new subdivision?
- Will "Rivers Edge" homeowners and "Ashford Park" homeowners be members of the same association or have access to the recreation and open space in each section?
- While all proposed lots are large enough for solar access, if homeowners so desire, provisions of C.G.S. Section 8-25(b) (which requires that any person submitting a subdivision plan demonstrate to the commission that solar access has been a consideration of the plan) have not been complied with.

## 10. OPEN SPACE

The proposed open space (14.3 acres or 15% of the 95 acre site) along the Mount Hope River and adjacent to the well reserve area for the Ashford Park community water supply is appropriate to leave undeveloped, particularly if the town wishes to maintain a green belt along the river and preserve the existing fields for continued agricultural use. This area could also be suitable for active recreation uses such as playing fields (softball, soccer, etc.). Much of this land is wetland soils, flood plain or flood hazard area, and functionally unbuildable. Open space for recreation purposes is often recommended to be "good" land rather than land with such constraints. Under the circumstances, however, the proposed open space is appropriate to: 1) protect the adjacent community water supply wells and the aquifer which one day may potentially be further utilized to supply Warrenville and development of the town center. (Tremko property) 2) protect the Mount Hope River from encroachment 3) minimize flood hazard and damages 4) maintain and protect existing agricultural uses.

The open space is delineated on the east by the rear lot lines of Lots 10 through 16. The rear quarter of most of these lots, all 4 or more acres, contain part of the open fields currently used for agriculture, making continued use of these fields for agriculture difficult. A more natural delineation of the open space would be the tree line at the edge of the field or the wetland boundary which straddles these lots. The Town's zoning regulations, require a minimum of 2 contiguous acres, free of wetland soils, steep slopes or ledge for a houselot. These lots, all of which contain such "unbuildable" soils, are four or more acres to accommodate this requirement. Since the homes are all proposed to be built close to Southworth Drive, at the front of the lot and the field portion of each lot is at the rear of each lot, separated from each house by the wetlands, the field serves no function, other than to meet the minimum buildable area criteria in any of these 7 lots. Indeed, the field is accessible only by crossing the wetlands. Under these circumstances, these lots should be allowed to end at the wetlands or treeline/field interface and the remaining rear portion of each lot instead be incorporated into the open space.

Ownership of the open space could be by a homeowner's association which could lease the land for agricultural purposes to local farmers who have voiced interest in continued haying of the fields. Best management practices established by the Soil Conservation Service should be required in managing the land. Application of certain chemicals typically used in agriculture (pesticides and herbicides) may need to be minimized to protect the adjacent wells, aquifer and river.

The remnants of the sand and gravel operation in the proposed open space should be graded to eliminate any hazards for open space or agricultural uses.

## 11. TRAFFIC AND CIRCULATION ISSUES

Single family homes and assumed to generate an average of ten vehicle trips per day. This 25 lot development, therefore, can be expected to generate 250 vehicle trips per day. At peak periods (morning and afternoon trips to and from work) approximately 10% of those trips can be expected to occur in any one hour; so, for example, between 5 and 6 p.m., it would be expected that 25 vehicles would come or go on an average day, from this new development.

Permanent cul-de-sacs or dead end streets are recommended for a maximum average daily traffic load of no more than 200 vehicles per day, or 20 homes, and a maximum length of 1,000 feet, due to the possibility that an emergency may occur and the road be blocked. (ConnDOT Guidelines for Subdivision Streets 1/87 and Institute of Traffic Engineers) the proposed extension of Southworth Drive is, therefore, appropriate.

Plans for upgrading Pompey Road, to the intersection with the new Southworth Drive extension need to be addressed. Pompey Road is an existing Town road which needs to be paved, due solely to the purposed development. It is increasingly typical for developers to volunteer to provide such improvements which their projects cause, or to at least split the cost with the Town.

Access to the development for emergency vehicles (Ashford Volunteer Fire Service from Warrenville) would be facilitate from nearby Route 44, if Pompey Road were improved all the way to the Route 44 intersection, but unlimited access to traffic would probably not be appropriate, since the existing Pompey Road/Route 44 intersection is a dangerous one with sight line limitations and fast moving traffic on Route 44.

Improving the road and intersection might be appropriate if turning movements off Route 44 onto Pompey Road could be limited to emergency vehicles only. The Connecticut Department of Transportation has recently begun design work for Route 44 improvements under the I-84 Trade-In Concept Plan. ConnDOT's engineers working on this project and the State Traffic Commission should be consulted on this matter.

## 12. OTHER ISSUES

The proposed subdivision name "Rivers Edge" may pose problems for emergency response personnel (fire, police, ambulance), particularly in this rural community which depends on mutual aid from adjacent towns. "River's Edge" is also the name of a 16 unit condominium complex on Depot Road in nearby South Willington.

# About The Team

The Eastern Connecticut Environmental Review Team (ERT) is a group of professionals in environmental fields drawn together from a variety of federal, state, and regional agencies. Specialists on the Team include geologists, biologists, foresters, climatologists, soil scientists, landscape architects, archeologists, recreation specialists, engineers and planners. The ERT operates with state funding under the supervision of the Eastern Connecticut Resource Conservation and Development (RC&D) Area--an 86 town area.

The Team is available as a public service at no cost to Connecticut towns.

## PURPOSE OF THE TEAM

The Environmental Review Team is available to help towns and developers in the review of sites proposed for major land use activities. To date, the ERT has been involved in reviewing a wide range of projects including subdivisions, sanitary landfills, commercial and industrial developments, sand and gravel operations, elderly housing, recreation/open space projects, watershed studies and resource inventories.

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

## REQUESTING A REVIEW

Environmental reviews may be requested by the chief elected officials of a municipality or the chairman of town commissions such as planning and zoning, conservation, inland wetlands, parks and recreation or economic development. Requests should be directed to the Chairman of your local Soil and Water Conservation District. This request letter should include a summary of the proposed project, a location map of the project site, written permission from the landowner allowing the Team to enter the property for purposes of review, a statement identifying the specific areas of concern the Team should address, and the time available for completion of the ERT study. When this request is approved by the local Soil and Water Conservation District and the Eastern Connecticut RC&D Executive Council, the Team will undertake the review on a priority basis.

For additional information regarding the Environmental Review Team, please contact Elaine A. Sych (774-1253), Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, P.O. Box 198, Brooklyn, Connecticut 06234.