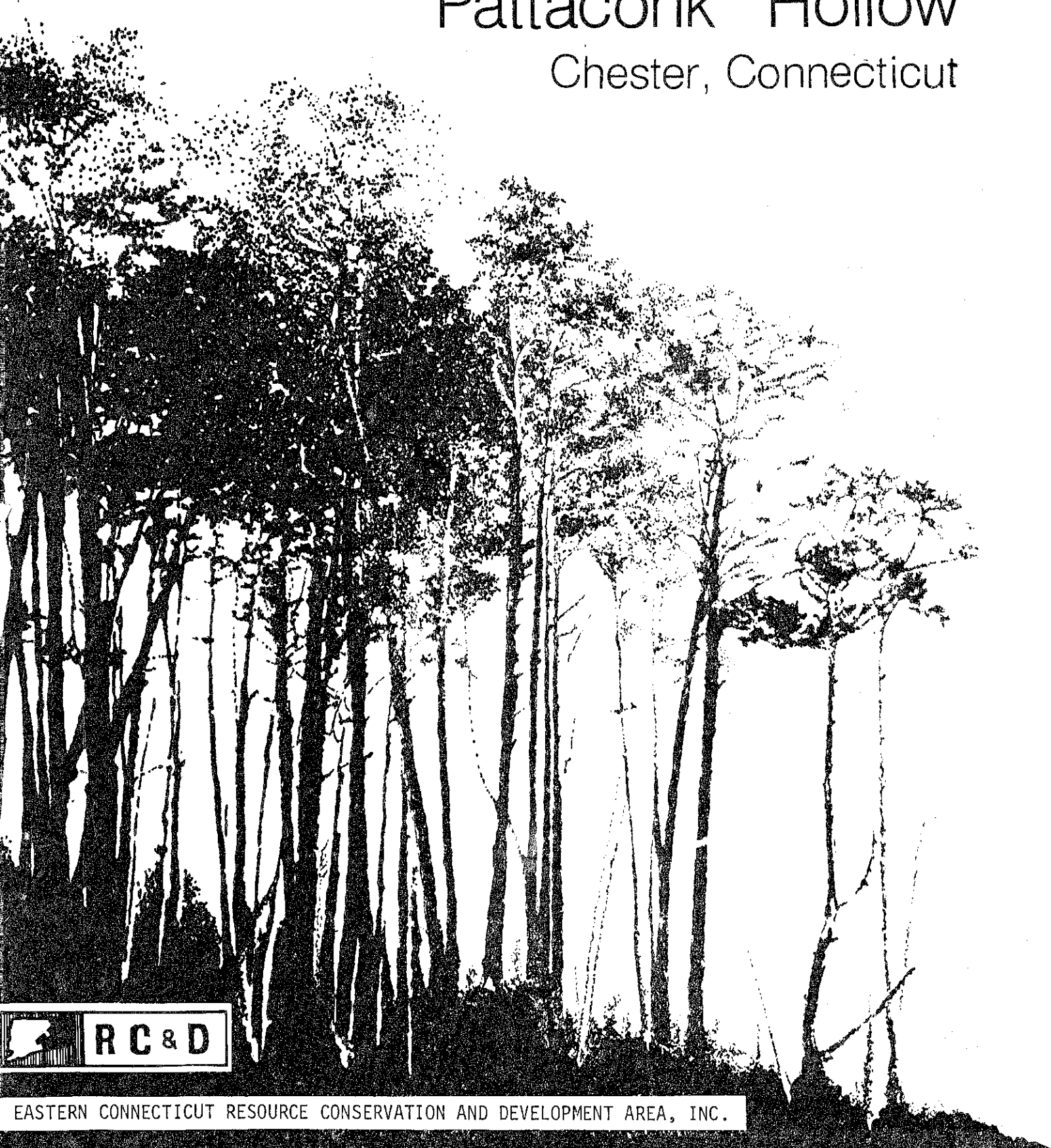


Environmental Review Team Report

# Pattaconk Hollow

Chester, Connecticut



EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.



Environmental Review Team  
Report  
on

Pattaconk Hollow  
Chester, Connecticut

March 1980

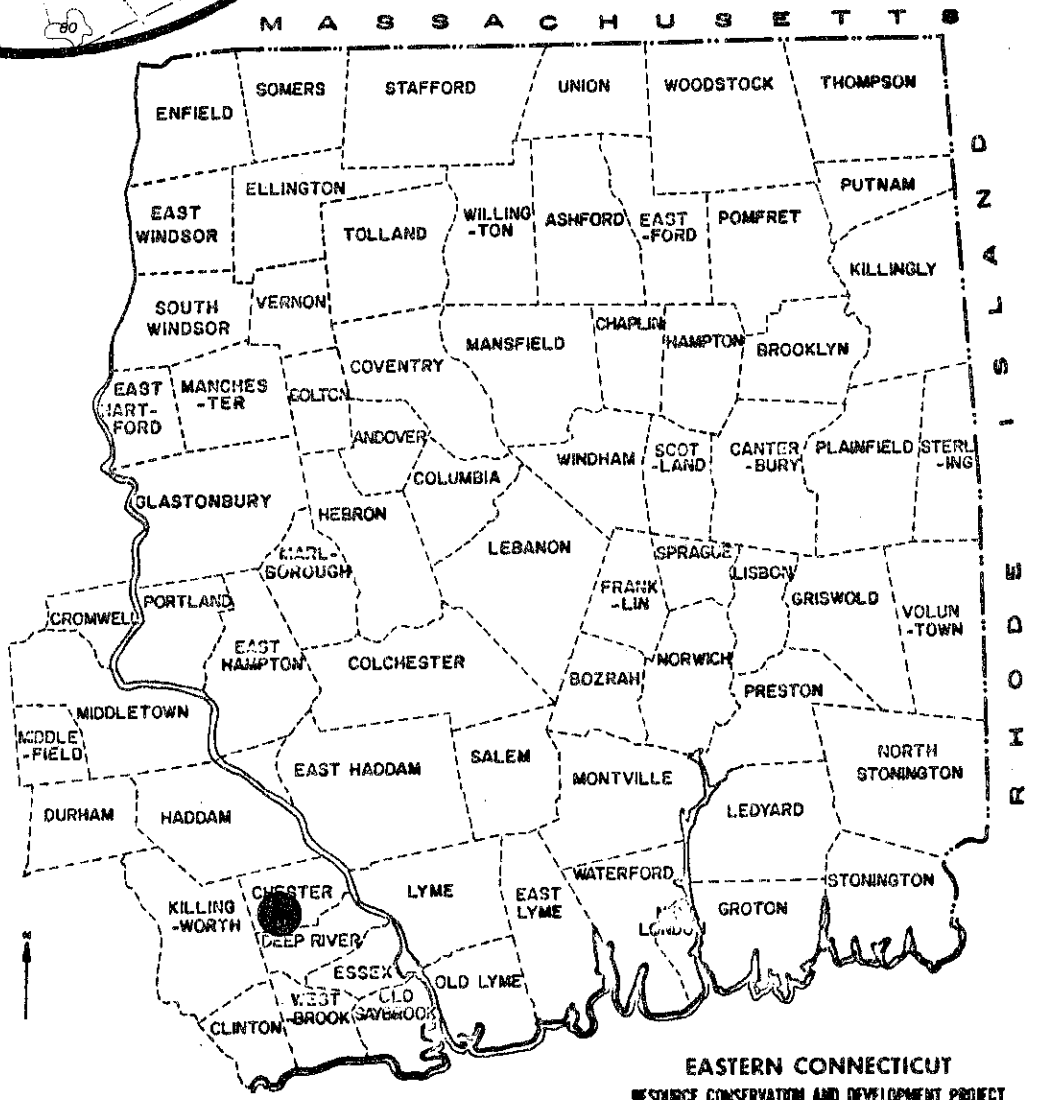
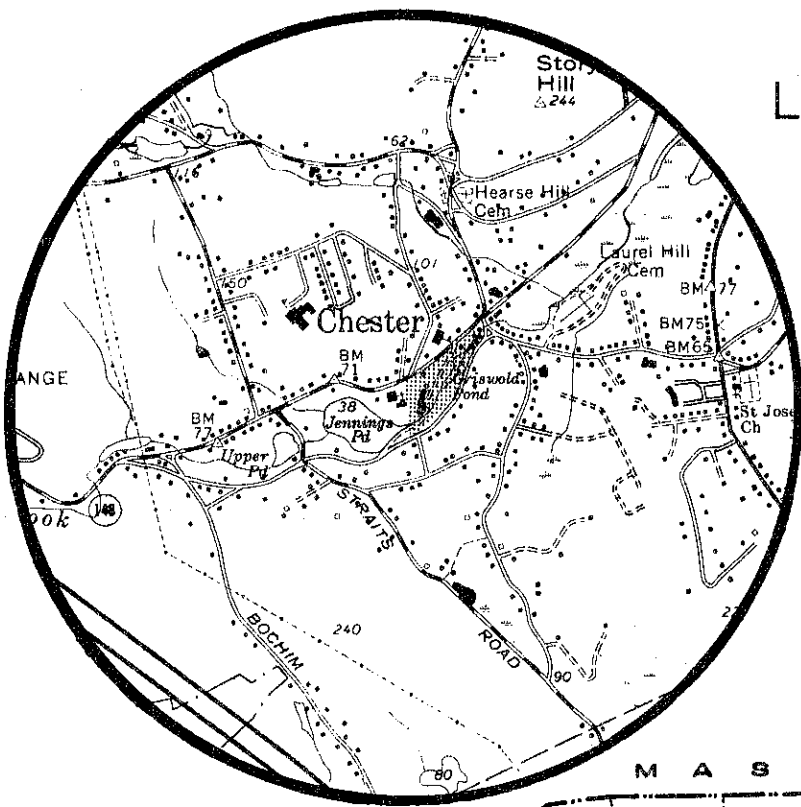


eastern connecticut resource conservation & development area

environmental review team  
139 boswell avenue  
norwich, connecticut 06360

# Location of Study Site

PATTACONK HOLLOW  
CHESTER, CONNECTICUT



**EASTERN CONNECTICUT**  
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

ENVIRONMENTAL REVIEW TEAM REPORT  
ON  
PATTACONK HOLLOW  
CHESTER, CONNECTICUT

This report is an outgrowth of a request from the Chester Inland Wetlands Commission to the Middlesex 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 by the RC&D Executive Committee and the measure was reviewed by the Eastern Connecticut Environmental Review Team (ERT).

The soils of the site were mapped by a soil scientist from the United States Department of Agriculture, Soil Conservation Service (SCS). Reproductions of the soil survey map, a table of soils limitations for certain land uses and a topographic map showing property boundaries were distributed to all Team members.

The ERT that field-checked the site consisted of the following personnel: Barry Cavanna, District Conservationist (SCS); Mike Zizka, Geologist, Connecticut Department of Environmental Protection (DEP); Rob Rocks, Forester, DEP; Stanley Greimann, Planner, Connecticut River Estuary Regional Planning Agency, Don Capellaro, Sanitarian, State Department of Health; and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

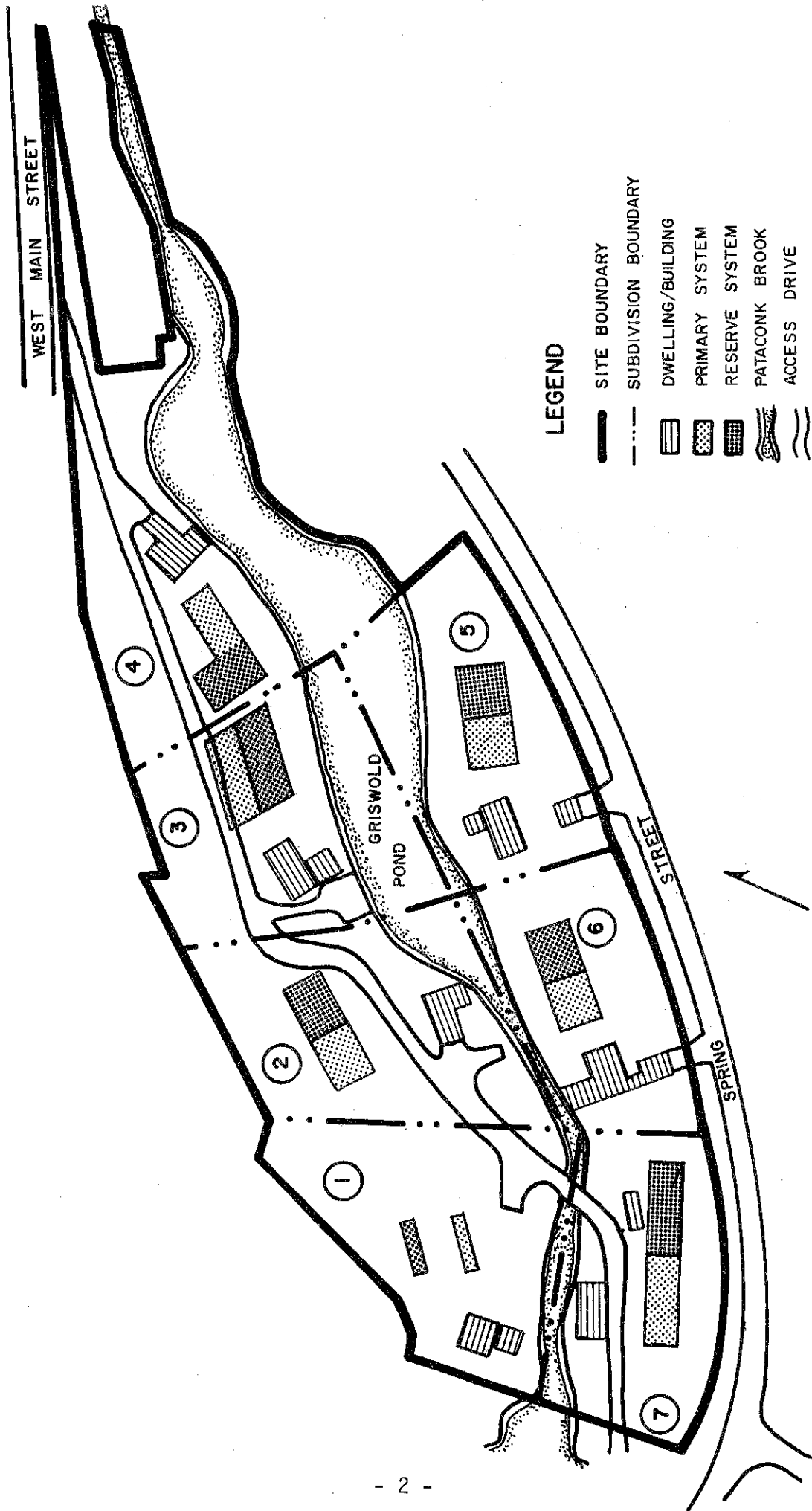
The Team met and field checked the site on Thursday, January 31, 1980. Reports from each contributing Team member were sent to the ERT Coordinator for review and summarization for the final report.

This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. This report identifies the existing resource base and evaluates its significance to the proposed development and also suggests considerations that should be of concern to the developer and the Town of Chester. The results of this Team action are oriented toward the development of a better environmental quality and the long-term economics of the land use.

The Eastern Connecticut RC&D Area Committee hopes that this report will be of value and assistance in making any decisions regarding this particular site.

If you require any additional information, please contact: Ms. Jeanne Shelburn, Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, 139 Boswell Avenue, Norwich, Connecticut 06360, 889-2324.

SITE PLAN  
CHESTER, CT.



## INTRODUCTION

The Eastern Connecticut Environmental Review Team was asked to review a subdivision proposal by the Chester Inland Wetlands Commission. The site is located in the center of Chester village, a very picturesque nineteenth century settlement straddling Pattaconk Brook. It was also the former site of the Jennings Company, one of the principal economic mainstays of the Town at its prime. One brick office structure and an old wood frame barn near the base of the dam are the only structures remaining, aside from the extensive network of sluice walls which channeled the water power of the stream.

The site consists of a narrow, steeply sloped valley with the original mill site occupying the valley floor. It is residentially zoned for single-family residences on lots of at least one-half acre in size. Two family dwellings are permitted, provided there is 1/2 acre for each unit on a given lot.

Connecticut Route 148 bounds the site partially on the north, providing the principal access to the site. A secondary access is provided off Spring Street, which bounds the property on the south. Town and institutional buildings (church, library, and lodge) are other abutting uses.

The site is subject to localized flooding and consists largely of well drained terrace soils. Extremely steep slopes enclose the site.

David Mylchreest, a consulting engineer from the Middletown area, has prepared preliminary plans for the project. These plans show a seven lot subdivision to be served in part by public water supply and in part by on-site wells. As this area does not currently have access to a sewer system, on-site subsurface sewage disposal systems will also be required. The plan calls for a total of 5 new structures for the site, as two existing structures will be restored and converted to dwellings. Access to the site will be provided by the existing roadways.

The Team is concerned with the impact of this proposal on the resource base of this site. Although many difficult site limitations can be overcome with engineering techniques, these measures can become costly, making a project economically unfeasible for a developer. Major concerns on this site are related to flooding, potential contamination of the brook and an adequately designed and maintained sediment and erosion control plan. The project engineer has indicated the developer's intention to keep all houses above the 100 year flood elevation, however, the Team feels that this intention should be clearly shown on all maps concerning this subdivision. Both the 100 year flood elevation and the 500 year flood elevation, as well as the house, septic system and well locations, should be shown on maps to be reviewed further by local Commissions and the final maps of record.

The storm drainage system which will be installed on the south side of the site will alleviate erosion problems on that steep slope; however, it may also be discharging road contaminants, such as sand and salt, directly into the brook.

Due to the nature of the soils on site and the small lot sizes which will necessitate well and septic system location in close proximity, there may also

be a problem with poorly renovated septic effluent contaminating the groundwater on site. This is more fully explained in the Hydrology, Water Supply and Waste Disposal sections of this report. Excess nutrient levels may also become present in Griswold Pond as a result of poorly renovated septic effluent infiltrating brook waters. This condition would effect the visual quality, as well as the fish habitat quality of the pond.

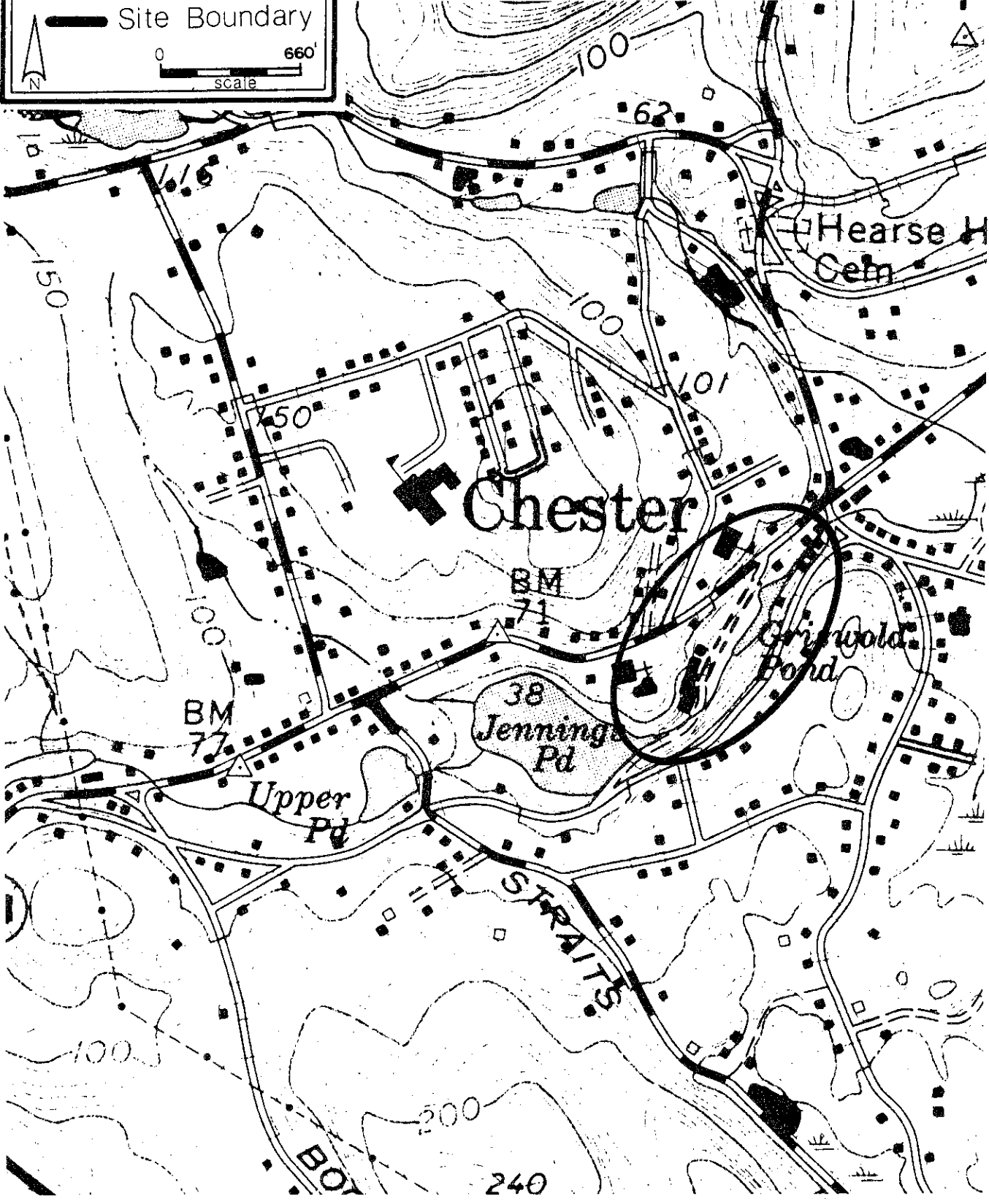
An effective sediment and erosion control plan is essential for this proposal. The District Conservationist has found the proposed plan to be adequate, however, maintenance of these control measures is extremely important. These issues should be of concern to Town Commissions when reviewing these plans.



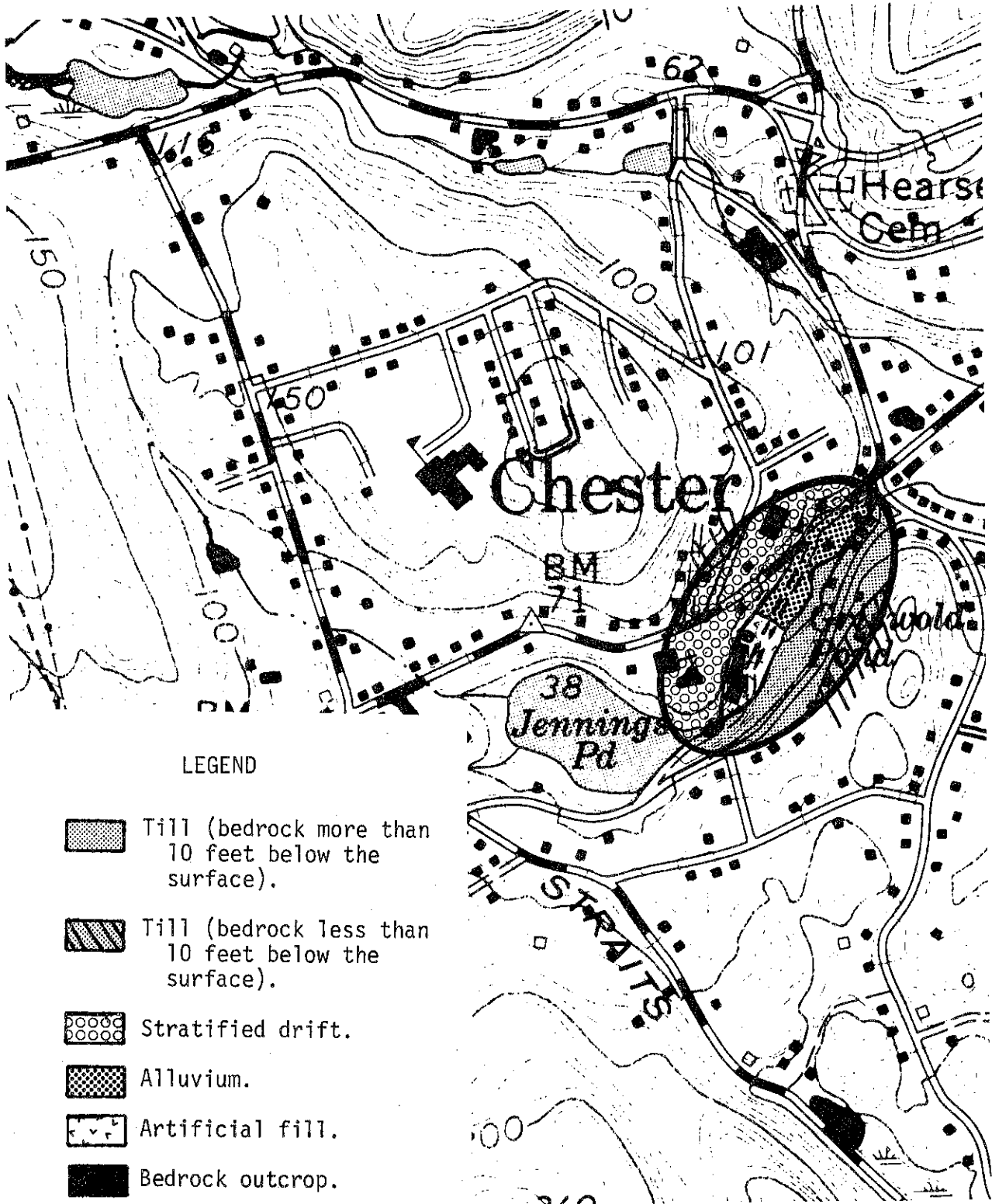
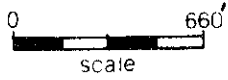
**Topography**

— Site Boundary







0 660'  
scale



# Surficial Geology



## LEGEND

-  Till (bedrock more than 10 feet below the surface).
-  Till (bedrock less than 10 feet below the surface).
-  Stratified drift.
-  Alluvium.
-  Artificial fill.
-  Bedrock outcrop.

## ENVIRONMENTAL ASSESSMENT

### GEOLOGY

The property is located within the Deep River topographic quadrangle. A bedrock geologic map (Connecticut Geological and Natural History Survey Quadrangle Report No. 13, by L. Lundgren, Jr., 1963) and a surficial geologic map (U.S. Geological Survey Map GQ-1370, by D.W. O'Leary, 1977) of that quadrangle have been published.

Bedrock on the site has been mapped as part of the Putnam Gneiss. The rock is dominated by schists; that is, crystalline rocks in which platy or flaky minerals form thin layers or slabs. Biotite and muscovite are the most prominent mineral components, although quartz and plagioclase are more abundant. Minor minerals include hornblende, garnet, graphite, magnetite, sillimanite, pyrite, diopside, and sphene. Outcrops of bedrock were sparse on the site, and were noticeable only near the stream and on the steep northern slope near the abandoned factory.

The surficial geology of the site, as adapted from U.S.G.S. Map GQ-1370, is shown in an accompanying illustration. The deposits consist of stratified drift, alluvial materials, and artificial fill north of Pattaconk Brook, and till south of the brook. Stratified drift is composed of rock materials that were transported by a glacier and ultimately redeposited by meltwater as the ice wasted. Gravel and sand are the major components of the stratified drift on the site. Till is also composed of glacially transported materials, but the till was deposited directly from glacier ice. Consequently, till typically does not show the sorting of grain sizes that stratified drift usually features. Till particles range in size from clay to boulders and in shape from round to angular to flat. Till and stratified drift grade into one another in many areas and it is often difficult to distinguish between them. On this site, the till tends to be coarse-grained (sandy and gravelly) and texturally resembles the stratified drift deposits to the northwest.

Alluvium consists of sand, gravel, and silt that were deposited by streams in channels and along floodplains following the disappearance of ice from the area. These deposits form a thin veneer on bedrock and/or stratified drift in the lower elevation of the property. Artificial fill is composed of materials that were brought in or substantially reworked by man. This type of deposit underlies the old factory and consists largely of locally derived gravel and sand, possibly with some rubbish mixed in.

### HYDROLOGY

The proposed subdivision lies along both sides of Pattaconk Brook, immediately downstream from Jennings Pond and upstream of the impoundment of Griswold Pond. A detailed floodprone-areas map for the site, although not in finalized form, has been prepared for the U.S. Department of Housing and Urban Development (HUD). This map shows the calculated flooding levels and affected areas for the statistical 100-year frequency flood, as well as additional areas that would be inundated by a 500-year flood.

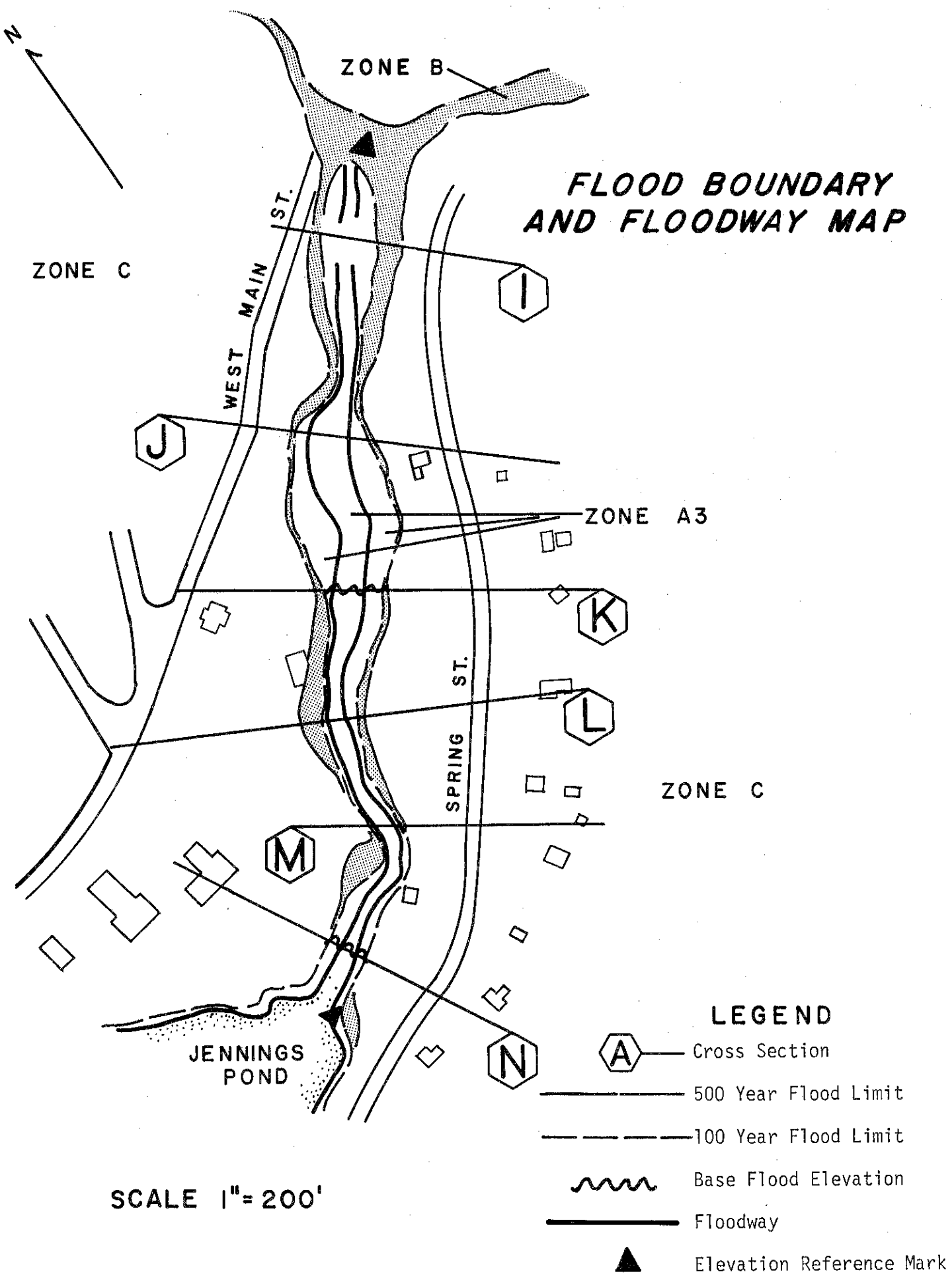
Comparison of the flood elevations shown on the HUD map with the topography shown on the developer's December, 1979, blueprint indicates that most of the proposed dwelling locations lie outside of the 100-year flood zone. Exceptions are the existing barn on lot 7, the northern portion of the proposed house on lot 6, and the southern portion of the proposed house on lot 4. Proposed dwellings in lots 2 and 3 might also be affected during a 500-year flood. Although the developer's engineer has stipulated the developer's intention to keep all houses above the 100-year flood elevations, the team feels that such intentions should be manifested clearly on future site plans by showing the exact location of the HUD floodprone-area boundary and by keeping all houses outside of this boundary. For additional safety, the 500-year floodprone zone should also be designated in future plans.

The present blueprint incorporates a rerouting of part of the flow of Pattaconk Brook through a rechanneled section of the existing "tail race". The idea for this rerouting arose from the developer's desire to alleviate the stagnant situation now present in the race. In the area of the proposed diversion Pattaconk Brook's channel is straight. In order to induce the flow to bend in the manner desired, the bed of the new race would have to be lower than the bed of the existing channel. Alternatively, to induce such a flow some obstruction would have to be created in the present channel just east of the proposed intersection. If neither of these conditions were met, it is unlikely that any significant flow would pass through the new race. Indeed, natural processes would lead to sedimentation at the entrance to the race, with diverted flow becoming more and more restricted. On the other hand, if an effective diversion were created, the present channel of the brook may experience stagnation and/or sedimentation. Hence, the ultimate advantage of the proposed rechanneling is unclear.

The developer has proposed some rechanneling of storm drainage from Spring Street in the area of lots 5, 6, and 7. The present system has five outlets onto the site, with discharges running along the surface either until reaching the brook or until being absorbed into the ground. The proposed system would route these discharges through three pipes, with outlet points (in rip-rap) immediately adjacent to the brook. The new system would have the advantage of ameliorating the existing erosion problems on the steep slope north of Spring Street. It would have the disadvantage of directly discharging road-derived contaminants (such as sand and salt) into the brook.







One of the most important hydrologic questions with regard to the proposed subdivision is the advisability of placing leaching fields for septic systems directly upslope from house sites. This situation exists in the current plans for lots 2 and 7. Apparently, at least in lot 7, household wastewater would have to be pumped uphill to be discharged through the septic system. Normal groundwater flow would carry the leachate back in the direction of the houses. In lot 2, it is difficult to see where a well could be placed in a position that would not be in the direct path of the returning effluent. The potential for well contamination would be high on this lot with the presently proposed set-up. In lot 7, the suggested well location is also within the possible zone of influence from septic effluent. Moreover, high groundwater levels observed in test pits on that lot raise concerns for potential effluent surfacing near, or leakage into, the basement of the proposed dwelling. A redesign of house and septic system locations on both lots 2 and 7 seems warranted. In making this suggestion, the Team

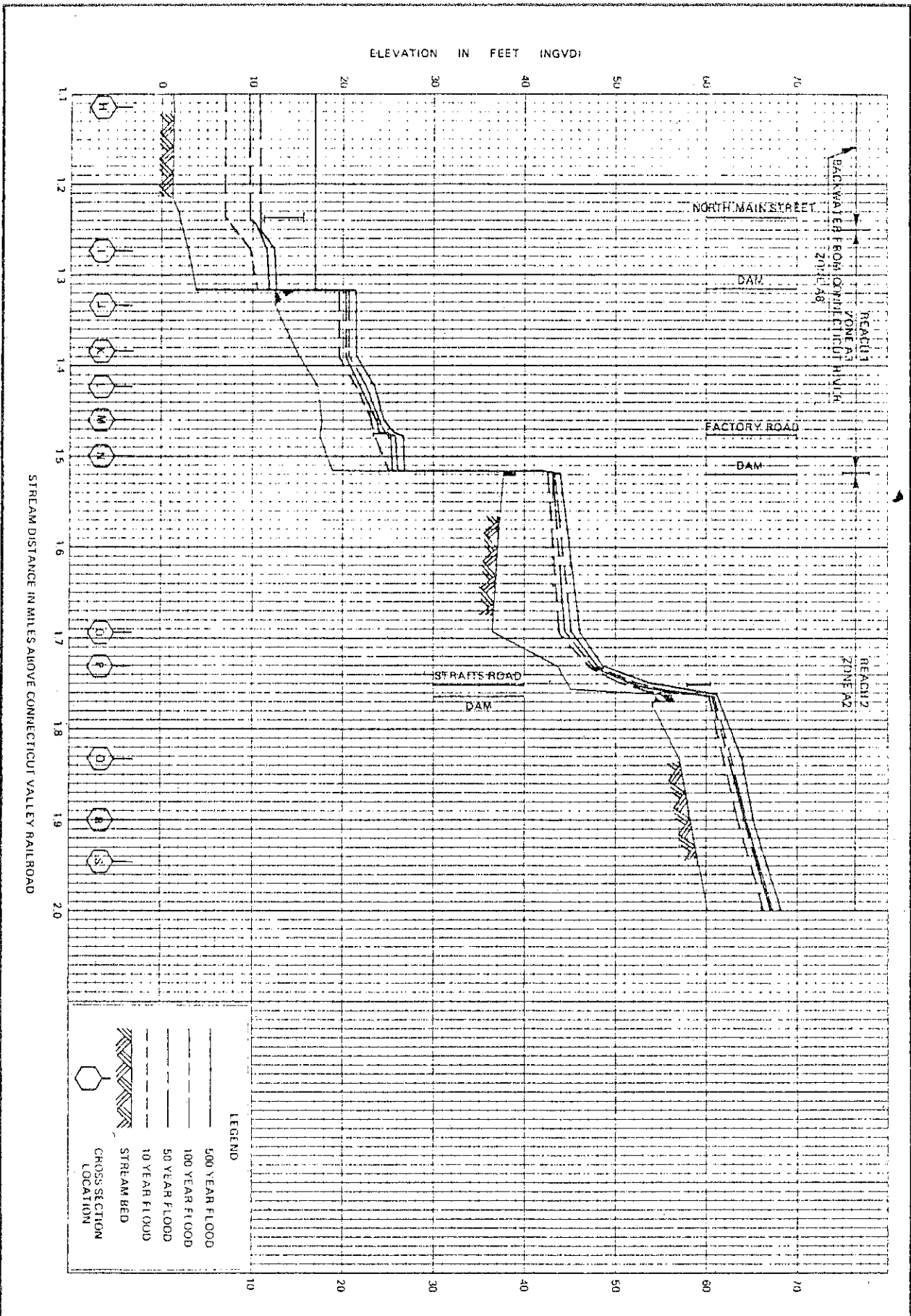
# FLOOD BOUNDARY AND FLOODWAY MAP



SCALE 1" = 200'

## LEGEND

-  Cross Section
-  500 Year Flood Limit
-  100 Year Flood Limit
-  Base Flood Elevation
-  Floodway
-  Elevation Reference Mark



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
Federal Insurance Administration

**TOWN OF CHESTER, CT**  
(MIDDLESEX CO.)

**FLOOD PROFILES**

**PATACONK BROOK**

02P

acknowledges the possibility that public water supply facilities may be extended to lot 2. Such an event would do much to alleviate potential problems on that lot.

## FISH RESOURCES

If the development is built as planned, septic leachate will likely reach the brook. Leachate will effect high nutrient levels and increased biological oxygen demand in the brook, reducing oxygen available to aquatic life including the fish.

It may be expected that during low flow periods the high nutrient levels will exclude fish life from the section of Pattaconk Brook below the proposed development. If sufficient leachate is present the fish will neither choose to inhabit nor be capable of survival in this section of the stream.

While Pattaconk Brook is stocked with trout by the State, the stocking is confined to that segment of the brook between Pattaconk Lake and Cedar Lake, well upstream of the proposed development.

## VEGETATION

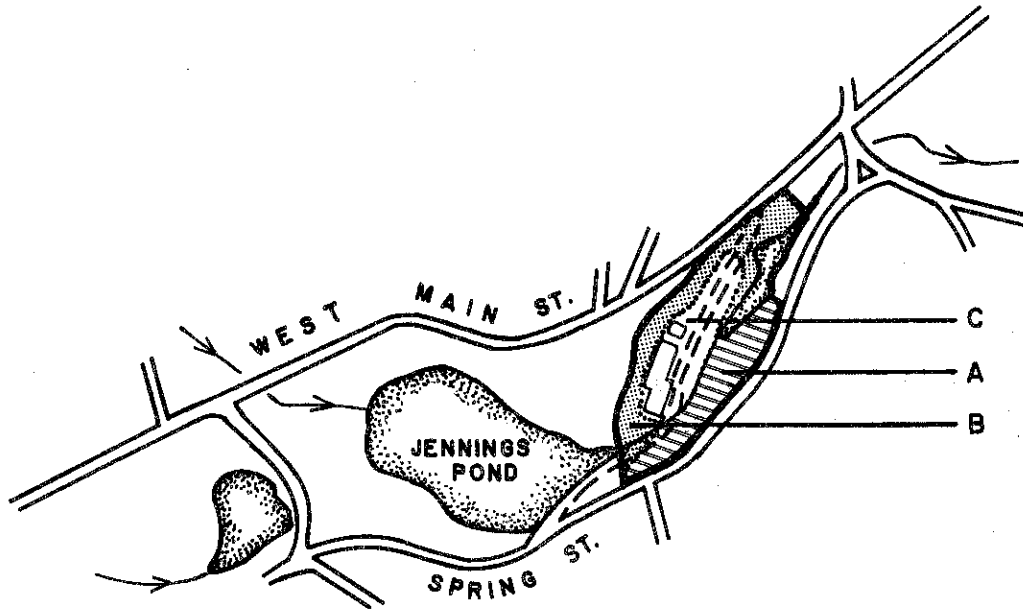
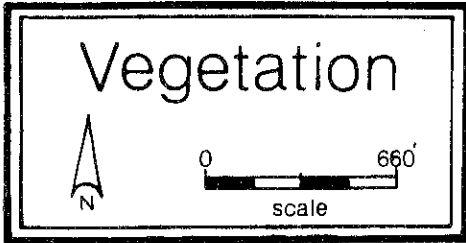
Three vegetation types are present on this 5± acre tract, they include northern hardwoods, mixed hardwoods and open area/disturbed area. (See vegetation type map and vegetation type description.) The intensive development proposed for this area will demand extensive clearing. Preservation of the few large healthy trees present will help improve the aesthetic quality of the area. Removal of the severely damaged and unhealthy large trees will help to reduce the potential hazard of falling branches. Eradication of the tree-of-Heaven may be desirable.

### Vegetation Type Descriptions

Vegetation type A. (Northern hardwoods.) This two-acre fully stocked stand is made up of high quality sapling-size sugar maple with occasional poor quality sawtimber size white ash. Seedling size sugar maple dominate the understory in this area. Many of these seedlings are being strangled by Oriental bittersweet. Raspberry and barberry are also present. Common winter creeper has become established and is becoming widespread with grasses and Christman fern as ground cover.

Vegetation type B. (Mixed hardwoods.) Poor quality pole-size red maple, black locust, tree-of-Heaven and occasional sawlog size red oak, white oak, sugar maple and white ash, of varying quality, are present in this 1.5 acre stand. The understory in this area is made up of hardwood tree seedlings, multi-flora rose, barberry and winged Euonymus. Oriental bittersweet and foxgrape are abundant throughout this site. Grasses and poison ivy form the ground cover in this area.

Vegetation type C. (Disturbed area.) This 1.5 acre area is being invaded by hardwood seedlings, including gray birch, red maple, black cherry, black birch and tree-of-Heaven. At present, grasses, goldenrod and other assorted weed species appear to dominate this area.



— LEGEND —

	Road
	Property Boundary
	Stream
	Pond
	Buildings/Foundations

VEGETATION TYPES\*

TYPE A	Northern hardwoods. Fully-stocked, sapling size, 2 acres.
TYPE B	Mixed hardwoods. Under to fully-stocked, pole size, 1.5 acres.
TYPE C	Open area/disturbed area. Under-stocked, seedlings and weed species, 1.5 acres

\* Seedling size = trees 1 inch and less in diameter at breast height (d.b.h.)  
 Sapling size = trees 1 to 5 inches in d.b.h.  
 Pole size = trees 5 to 11 inches in d.b.h.  
 Sawtimber size = trees 11 inches and greater in d.b.h.



Several medium quality large sawtimber-size white ash, sugar maple, and red oak are present in areas A and B. These trees, as a result of their size have high aesthetic value, and should be preserved for that reason. If they are preserved, care should be taken during construction not to disturb the soil within the entire area under their crowns. Such disturbances may stress these trees, potentially causing mortality within several years. Dead branches present on these trees should be properly pruned to prevent potential hazards.

### Potential Hazards and Mitigating Practices

There are several extremely poor quality sawtimber size trees on this property. These trees have structural damage and large dead limbs which may become hazardous to future lot owners. Removal of these trees prior to subdivision would eliminate this hazard. These trees could be utilized as fuelwood.

The tree-of-Heaven which has become established in areas B and C, is less than desirable on residential houselots. Its large compound leaves and conspicuous flowers and fruit produce a very unpleasant odor. It is an extremely hardy species, and once established it is difficult to eradicate. If this tree is merely cut down it will send up a multitude of extremely vigorous sprouts. Complete eradication calls for cutting and stump treatment with herbicides or removal of the entire root system.

### SOILS

A detailed soils map of this site is included in the Appendix to this report, accompanied by a chart which indicates soil limitations for various urban uses. As the soil map is an enlargement from the original 1,320 feet/inch scale to 660 feet/inch, the soil boundary lines should not be viewed as absolute boundaries, but as guidelines to the distribution of soil types on the site. The soil limitation chart indicates the probable limitations for each of the soils for on-site sewerage, buildings with basements, building without basements, streets and parking, and landscaping. However, limitations, even though severe, do not preclude the use of the land for development. If economics permit large expenditures for land development and the intended objective is consistent with the objectives of local and regional development, many soils and sites with difficult problems can be used. The soils map, with the publication Special Soils Report, Connecticut River Estuary Planning Region, can aid in the identification and interpretation of soils and their uses on this site. Know Your Land: Natural Soil Groups for Connecticut can also give insight to the development potentials of the soils and their relationship to the surficial geology of the site.

Soils typical of this site include the Canton-Charlton series, the Merrimac series, the Hinckley series, the Manchester series and the Podunk series. The Podunk series is a regulated wetland soil under Connecticut P.A. 155. Limitations to development on these soils range from excessive permeability to flood prone areas.

Canton series (6MD) consists of deep well-drained stony soils on uplands. They formed in a fine sandy loam mantle underlain by gravelly sandy glacial till derived mainly from granite and gneiss. Typically these soils have a stony dark brown fine sandy loam surface layer 2 inches thick. The subsoil between 2 and 22

inches is very friable yellowish-brown and light yellowish brown fine sandy loam. The substratum from 22 to 60 inches is friable light olive gray and olive gray gravelly loamy sand. Slopes range from 0 to more than 35 percent.

The Charlton series (6MD) consists of deep, well drained soils on uplands. They formed in glacial till derived mainly from schist and gneiss. Typically these soils have a dark brown very stony or extremely stony fine sandy loam surface layer 6 inches thick. The subsoil from 6 to 26 inches is yellowish brown and light olive brown fine sandy loam. The substratum from 26 to 60 inches is grayish-brown gravelly fine sandy loam. Slopes range from 0 to 45 percent.

The Hinckley series (158) consists of deep, excessively drained soils on terraces, outwash plains, deltas, kames and eskers. They formed in water-sorted material. Typically these soils have a very dark grayish brown loamy sand surface layer 7 inches thick. The subsoil layers from 7 to 15 inches are strong brown and yellowish brown gravelly loamy sand. From 15 to 18 inches the subsoil is yellowish brown gravelly sand. The substratum from 18 to 50 inches is light olive brown stratified sand, gravel, and cobblestones. Slopes range from 0 to 60 percent.

The Manchester series (158) consists of deep, excessively drained soils on terraces. They formed in glacial outwash deposits. Typically these soils have a reddish brown gravelly sandy loam surface layer 6 inches thick. The yellowish red subsoil from 6 to 10 inches is gravelly sandy loam and from 10 to 16 inches is gravelly loamy sand. The substratum from 16 to 60 inches is reddish brown stratified sand and gravel. Slopes range from 0 to 45 percent.

The Merrimac series (70B) consists of deep, somewhat excessively drained soils on outwash plains, valley trains, kames, eskers, and high terraces. They formed in water-sorted material. Typically, these soils have a very dark grayish brown fine sandy loamy surface layer 10 inches thick. The subsoil layers from 10 to 26 inches are brown fine sandy loam, dark yellowish brown sandy loam, and dark yellowish brown gravelly loamy sand. The substratum from 26 to 60 inches is dark grayish brown stratified sand and gravel. Slopes range from 0 to 35 percent.

The Podunk series (816) consists of deep, moderately well drained soils on floodplains. They formed in sandy alluvial sediments. Typically these soils have a dark yellowish brown fine sandy loam surface layer 10 inches thick. The subsoil from 10 to 30 inches is light olive brown fine sandy loam with mottles below a depth of 18 inches. The mottled substratum from 30 to 48 inches is olive gray loam fine sand. Slopes range from 0 to 3 percent.

Two houses are proposed to be built on the very steep slope off Spring Street. There is evidence of erosion from off-site storm drainage in this area. Any construction disturbance on this terrain will cause severe erosion problems, if not properly controlled during development. A sediment and erosion control plan has been submitted with this proposal, reviewed by the District Conservationist, and found to be adequate for proposed development on this site. Control measures should be in place when construction begins and carefully maintained during the construction process. Town surveillance of control measure compliance is a necessity, if lots 5 and 6 are approved.

As discussed more fully in the Waste Disposal section of this report, Hinckley soils, found in some sections of this site, are excessively drained and may not provide adequate filtration of septic effluent. This situation may cause concern for water quality on-site, as there is a potential for poorly renovated effluent to infiltrate the water supply for wells on the property.

Podunk soils occupy most of the level areas on-site. These soils are regulated wetlands soils under P.A. 155. Therefore any activity taking place in this portion of the site is subject to approval by the Chester Inland Wetlands Commission.

## WATER SUPPLY

Water supply for the subdivision is proposed as a mixture of having public water (Connecticut Water Company) for three lots along the West Main Street side with the remaining lots serviced by private on-site wells. This is apparently done as the public supply is conveniently available along West Main Street (Route 148) while not being installed on Spring Street. Some difficulty or additional costs would be envisioned to bring a line across Pattaconk Brook in order to service the proposed lots situated on the south side of the Stream.

In some of the lots, potential may exist for gravel-packed wells in the surficial deposits. This potential would depend upon the texture of the materials at depth and the total thickness of the saturated section. Despite such potential, gravel-packed wells would not be desirable in some lots because of the proximity of septic-system leaching fields. Lots 2 and 7 seem particularly vulnerable; lots 1, 3, and 4 would merit at least some concern. The Hydrology section of this report contains further discussion of the possible problems.

Bedrock-based wells would be a safer, albeit more costly to install, alternative. If tightly cased through the surficial materials and into the upper part of the bedrock, movement of effluent into the well may be largely precluded. Yields would probably be smaller, but most bedrock wells are capable of supplying 2-3 gallons per minute, an amount considered adequate for the needs of an average family.

It has generally been recognized where both on-site wells and subsurface sewage disposal is to be provided, lot sizes should be a minimum of an acre. In this respect, as the public water supply is generally available and proposed lot sizes are under an acre, it is recommended that more effort or an in depth evaluation be made towards the possibility of obtaining the use of this supply for the entire subdivision. In particular, lot #1, which is next to the dam and adjacent to a lot which would have public water, should also be able to have this facility.

The three wells, with the exception of the one for proposed lot #7, are located towards the high side of the lots and would meet the minimum required separating distance from the proposed sewage disposal areas. A well for lot #7 should be better positioned, keeping towards a higher elevation, further separated from the proposed sewage disposal area and from the proposed storm drain line. Houses on Spring Street, opposite the proposed lots, should also be checked as to the location of their sewage disposal systems. If such systems are located towards the front yards, they could infringe on the necessary separating distance(s) from proposed well sites.

## WASTE DISPOSAL

As the town, at the present time, does not have a public sewerage system, this area will require on-site sewage disposal systems. It is expected the community will implement plans for sewerage a limited number of properties, mainly having direct sewage discharges, in the center portion of town. However, the property in question would be outside the sewerage area and as the sewer project would be limited in scope, (total number of units to be serviced) there are no plans to include this site or other future projects which may lend themselves to sewerage.

Soil mapping data and the consulting engineer's deep test pit information indicate soils which are well drained. There is some concern that particular soils (Merrimac, Hinckley series) are excessively drained and would have too rapid a seepage rate. This in turn may not provide for the desired filtration and renovation of the sewage effluent. It is noted that percolation test results provided by the engineer indicate varying rates but mainly a slower rate than would be normally expected for soils excessively drained. The two fastest rates obtained were on lots which would be located on Spring Street. The possible depth at which the percolation testing was done may have a bearing on the rates. Some site conditions which will need particular attention are the areas where high ground water is in evidence (lot #7) and/or where surface drainage from storm drains or runoff (including possible ground water seepage) enters from the higher sloping terrain. This drainage will need to be controlled and diverted from the subsurface leaching areas where it could have an adverse affect on the septic systems. On proposed lot #1 a raceway from Jennings Pond, which serviced the factory building, is piped through the lot. This would need to be removed in the area of the leaching system as sewage may gain entrance and be conducted along its length toward the tail race. It would also be desirable to establish the high water or potential flooding elevation for Griswold Pond as several of the proposed system areas do not appear to be on terrain much higher than the flood zone in elevation. In some areas existing rubble and/or unsuitable fill will need to be removed and replaced with suitable, uniform material in order to prevent sewage from traveling through it (without receiving adequate filtration treatment) towards the watercourse. It would also be desirable to have all leaching systems located at least 50 feet from the watercourse.

Due to the possibility that one or several of the sewage systems may necessitate pumping of the effluent, elevated ground water, and other general site constraints or concerns, it appears that detailed engineering plans should be required for individual lot approval before building permits are issued.

## ROADS

Due to the steep terrain, both existing driveway entrances to the site enter the public streets at very acute angles. Site lines are not good. No other alternatives appear feasible, however, due to the configurations of the site and its property boundary limits. No new streets are proposed nor desirable in this instance to serve the seven proposed dwelling sites. Through traffic should not be encouraged, however, as the current layout suggests.

## COMPATIBILITY OF SURROUNDING LAND USES

The proposal is basically consistent with the surrounding land use patterns, as it is adjacent to the village commercial center and surrounded by residences and institutional uses on similar terrain and at similar densities.

## ALTERNATIVE LAND USES

In the Team Planner's opinion, the best use of the site would be conversion to a public park, dedicated to the nineteenth century industrial origins of Chester, which was based on water power. The Town already owns the water rights and bits of real estate upstream originally owned by the Jennings Company, whose mill site this once was. The location for public use is ideal and the potential for a beautiful town park is outstanding.

## AESTHETIC CONSIDERATIONS

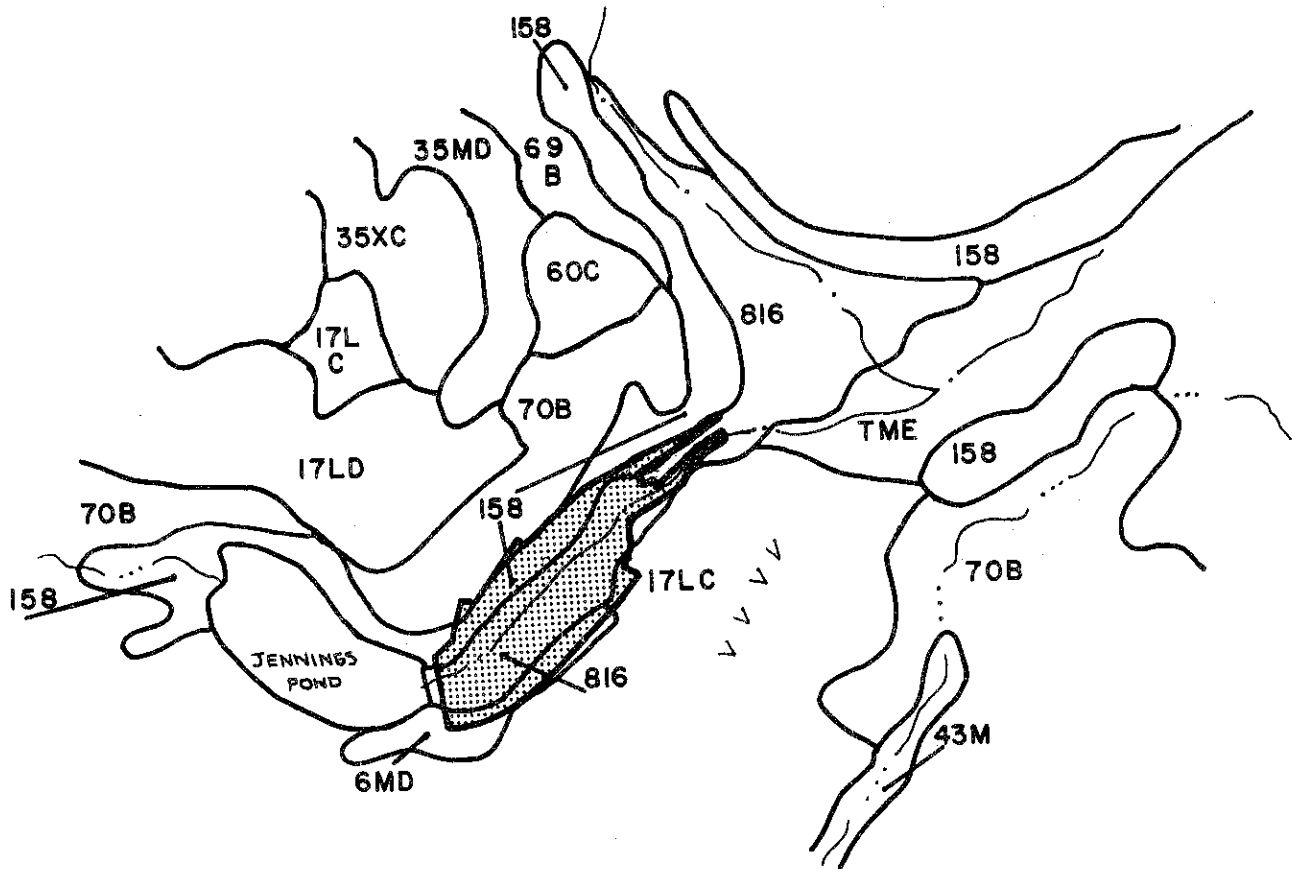
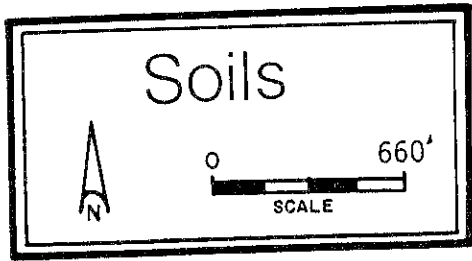
The site is an unusual one, having great scenic potential. It has, however, recently been severely vandalized. Rubble from the destroyed factory should be removed and the small pond should be cleaned. The existing structures should either be restored or removed, depending on the specific circumstances of site use. The old stone walls that abound are a unique, man-made feature of the site that should be retained and repaired as needed.

## NATURAL AND MAN-MADE HAZARDS

The most obvious natural hazard present on-site is one of flooding. The flood hazard map information for the 100 year flood indicates that such an occurrence would remain substantially within the bounds of the old stone walls and/or within the existing steep natural slopes of the site. New structures should be built at elevations above the flood levels (ranging from EL. 26 to EL.21) depending on their specific location. The existing barn, if converted to residential use, should not have living accommodations on the lower level. The other safety factor to be kept in mind is dam failure. Four of the seven proposed house sites would be in danger if such an event occurred. The dam must be regularly inspected and properly maintained at all times. Ideally, no new structures should be built on the valley floor, just in case of failure.



# Appendix



SITE



PATTACONK HOLLOW  
CHESTER, CONNECTICUT

PROPORTIONAL EXTENT OF SOILS AND THEIR LIMITATIONS FOR CERTAIN LAND USES

<u>Soil Series</u>	<u>Soil Symbol</u>	<u>Principal Limiting Factor</u>	<u>Urban Use Limitations*</u>			
			<u>On-Site Sewage</u>	<u>Buildings with Basements</u>	<u>Streets &amp; Parking</u>	<u>Land-Scaping</u>
Canton-Charlton	6MD	Slope, Stones	3	3	3	3
Hinckley	158	Poor filtration, Slope, Droughty	3	2	2	2
Manchester	158	Slope, Droughty, Small stones	2	2	2	3
Merrimac	70B	Poor filtration, Slope	3	2	2	2
**Podunk	816	Floods, Wetness	3	3	3	3

\* Limitations: 1 = slight; 2 = moderate; 3 = severe.  
\*\* Regulated wetland soil under P.A. 155.

## SOIL INTERPRETATIONS FOR URBAN USES

The ratings of the soils for elements of community and recreational development uses consist of three degrees of "limitations:" slight or no limitations; moderate limitations; and severe limitations. In the interpretive scheme various physical properties are weighed before judging their relative severity of limitations.

The user is cautioned that the suitability ratings, degree of limitations and other interpretations are based on the typical soil in each mapping unit. At any given point the actual conditions may differ from the information presented here because of the inclusion of other soils which were impractical to map separately at the scale of mapping used. On-site investigations are suggested where the proposed soil use involves heavy loads, deep excavations, or high cost. Limitations, even though severe, do not always preclude the use of land for development. If economics permit greater expenditures for land development and the intended land use is consistent with the objectives of local or regional development, many soils and sites with difficult problems can be used.

### Slight Limitations

Areas rated as slight have relatively few limitations in terms of soil suitability for a particular use. The degree of suitability is such that a minimum of time or cost would be needed to overcome relatively minor soil limitations.

### Moderate Limitations

In areas rated moderate, it is relatively more difficult and more costly to correct the natural limitations of the soil for certain uses than for soils rated as having slight limitations.

### Severe Limitations

Areas designated as having severe limitations would require more extensive and more costly measures than soils rated with moderate limitations in order to overcome natural soil limitations. The soil may have more than one limiting characteristic causing it to be rated severe.

# 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.

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, and a statement identifying the specific areas of concern the Team should address. When this request is approved by the local Soil and Water Conservation District and the 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 Jeanne Shelburn (889-2324), Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, 139 Boswell Avenue, Norwich, Connecticut 06360.

