Environmental Review Team Report

Industrial Zone Change

Brooklyn, Connecticut

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EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

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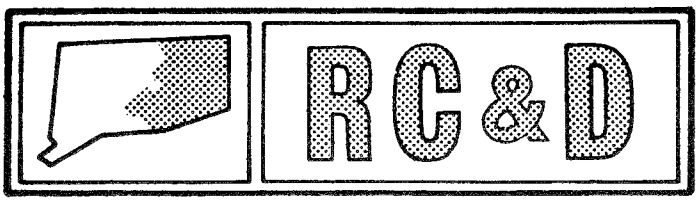
October 1983

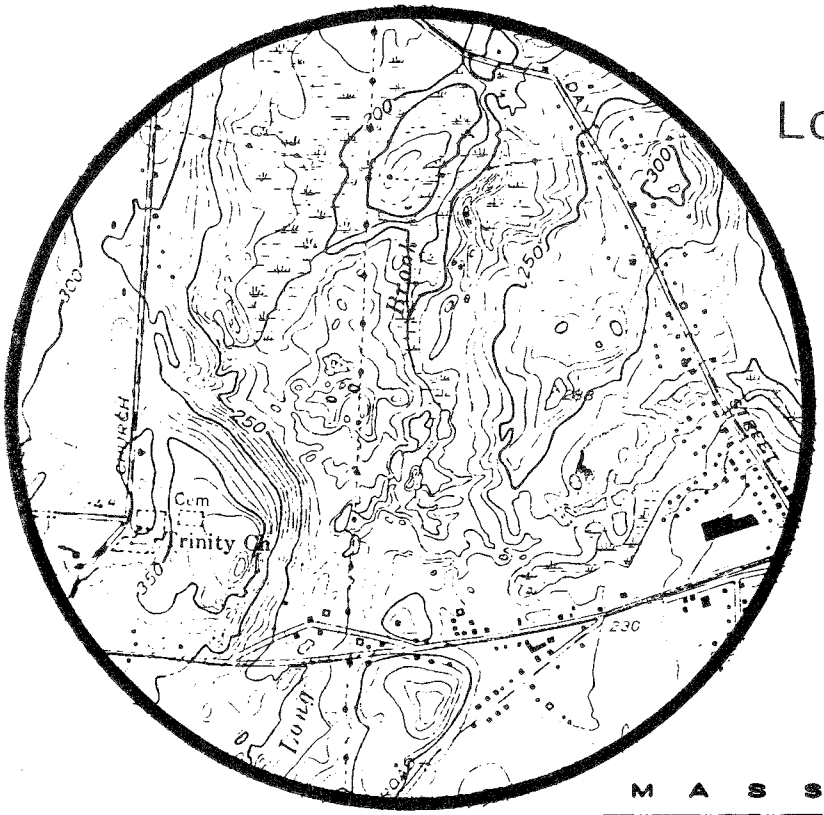


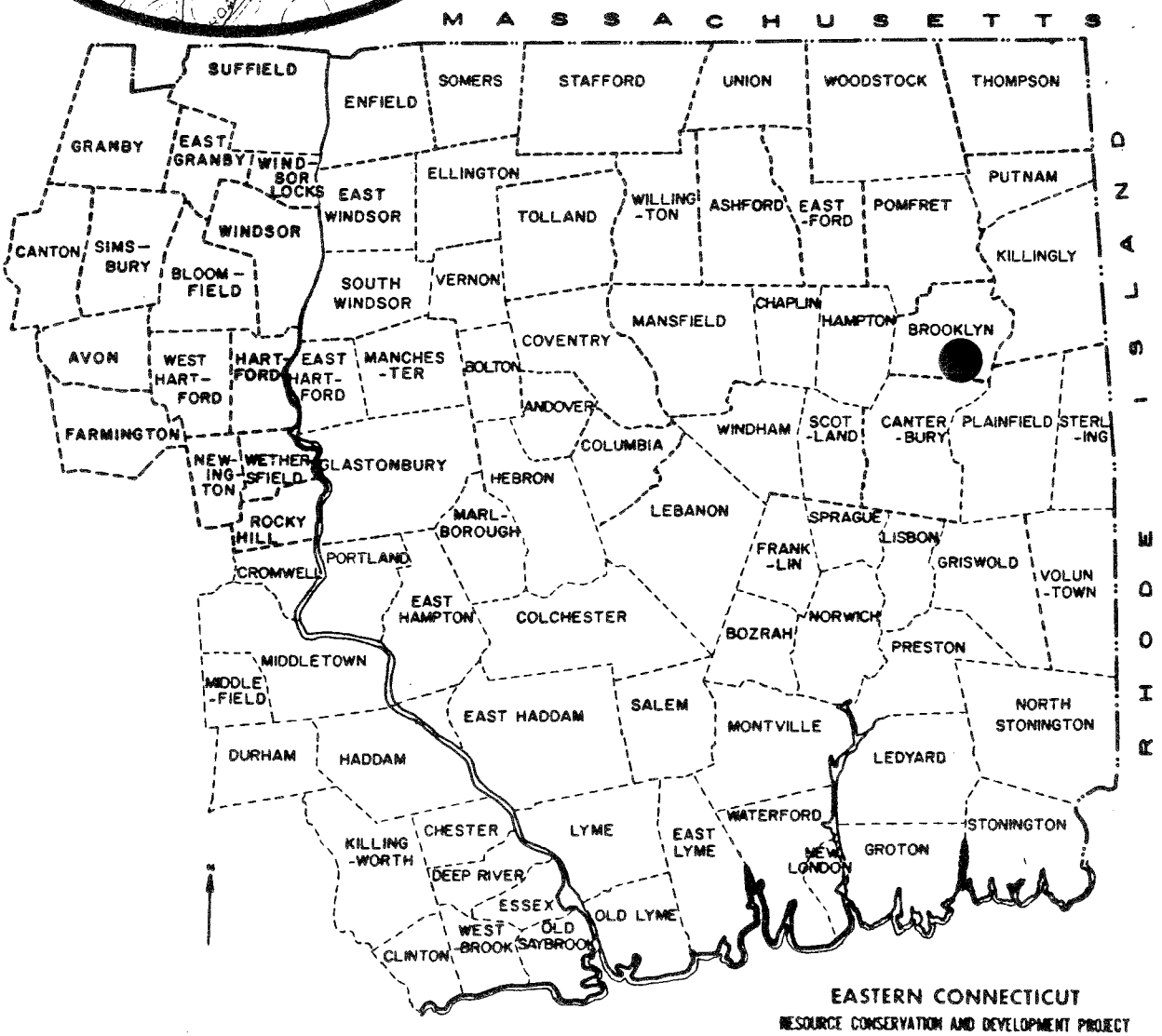
Eastern Connecticut Resource Conservation & Development Area

Environmental Review Team
PO Box 198
Brooklyn, Connecticut 06234

Location of Study Site

INDUSTRIAL ZONE CHANGE
BROOKLYN, CONNECTICUT





ENVIRONMENTAL REVIEW TEAM REPORT
ON
INDUSTRIAL ZONE CHANGE
BROOKLYN, CONNECTICUT

This report is an outgrowth of a request from the Brooklyn 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 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 prior to their review of the site.

The ERT that field-checked the site consisted of the following personnel: Howard Denslow, District Conservationist, Soil Conservation Service (SCS); Bill Warzecha, Geologist, Connecticut Department of Environmental Protection (DEP); Dick Raymond, Forester, DEP; Marcia Banach, Regional Planner, Northeastern Connecticut Regional Planning Agency (NECRPA); Janet Wilscam, Biologist, DEP; David Poirier, Archeologist, Historical Commission; and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

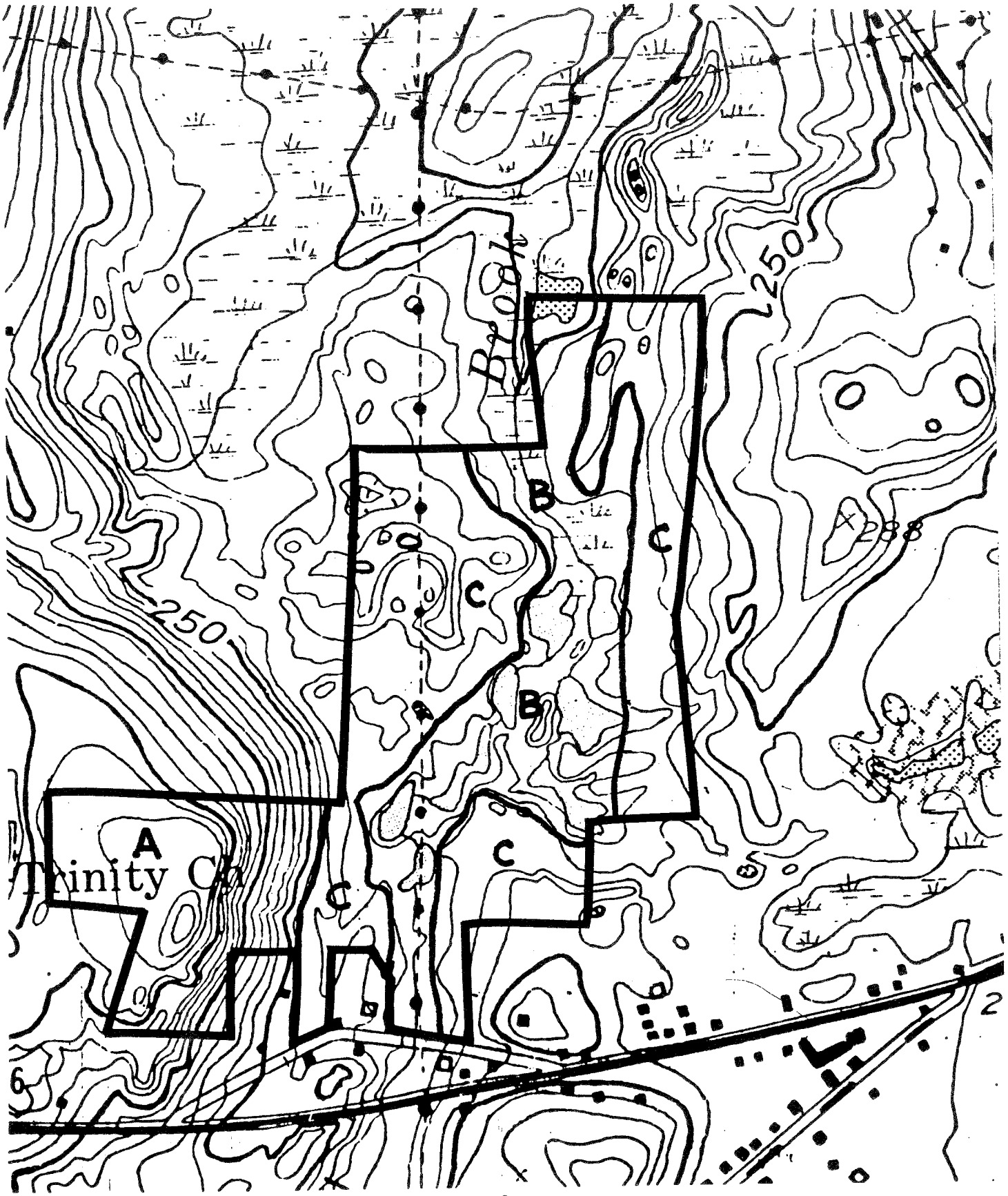
The Team met and field-checked the site on Thursday, August 18, 1983. Reports from each contributing member were sent to the ERT Coordinator for review and summarization for the final report.

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 Brooklyn. 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, P.O. Box 198, Brooklyn, Connecticut 06234, 774-1253.

Topography	Site Boundary	0 660' scale	N



INTRODUCTION

The Eastern Connecticut Environmental Review Team was asked to prepare an environmental assessment for a proposed zone change for industrial development in the Town of Brooklyn. The study site is approximately 104 acres in size and is located on Brickyard Road, a small local road which parallels Route 6. The property is presently in the private ownership of William Mercier, a Brooklyn resident. No site plans had been prepared at the time of the field review.

The property is currently zoned Rural-Agricultural, a zone change to industrial would allow for development of an industrial park in the future. A wood products retail store and processing center is established on the site at present. Municipal sewer service is available to the site. The property was the former site of a brickyard and pottery dating from colonial times. Excavation of clay for the brick making operation has left a series of ponds in the central section of the property. Long Brook runs through these ponds. An electric utility right-of-way extends from north to south across the central section of the site as well. Slopes on the eastern and western boundaries of the property are relatively steep.

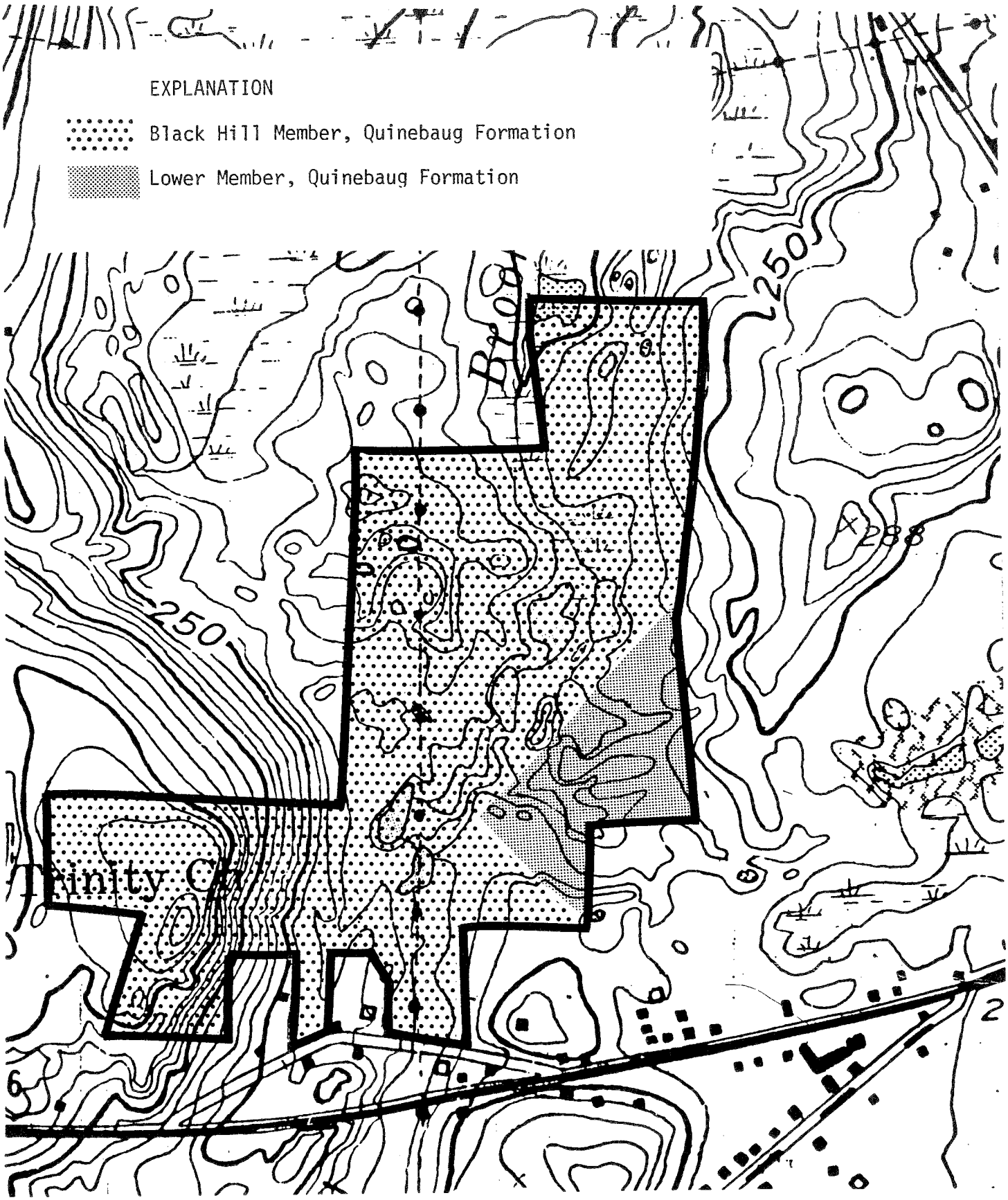
If a zone change is granted, Mr. Mercier intends to sell the property to a development firm who will develop the parcel as an industrial park. Although it is difficult to know the number or type of businesses that will locate in the park at this time, the developers anticipate that there will be approximately 30 to 40% of the site covered with impervious surfaces. Mr. Mercier has indicated that the owners of the utility right-of-way are willing to move the high power lines to the west of their present location. The expense, however, would be born by the developer.

Access to the proposed industrial park would be provided by a new road extending into the parcel from Route 6, across Brickyard Road. There has been discussion of closing Brickyard Road to traffic. This new road would be located between the existing bank parking lot and wetland on Route 6. The developers would hope to have a traffic light installed at this location. Alternate egress from the site would be provided by an interior road connecting to Day Street. Mr. Mercier indicated that this would be for the sole use of car traffic as Day Street is a residential area.

The Team is concerned with the effect of this zone change and potential development on the resource base of the site. Although many severe limitations to development may occur on a site, these limitations can often be overcome with proper engineering techniques. However, these measures are often costly and can make a project financially unfeasible. The developer should be aware of the potential site limitations, necessary mitigation measures and their costs before commencement of construction.

The Team members have evaluated both the zone change and potential for industrial development of this parcel and have commented in detail in the following sections of this report. In general, however, given the site constraints, poor site access and abundant availability of industrially zoned land in Brooklyn without severe limitations to development or poor access, the Team cannot recommend a zone change for this site at this time.

Bedrock Geology



ENVIRONMENTAL ASSESSMENT

TOPOGRAPHY

The Mercier property is approximately 104 acres in size and is located in the eastern portion of town off of Brickyard Road. Its topography can be divided into three sections (see Topographic Map). Section 'A', in the western part of the site, consists of a bedrock controlled hill with a relatively flat summit. Slopes on the eastern flank of the hill are generally moderately steep (25-30%). The topography of section 'B' consists of a wetland system which stretches through the central section of the site. Land surface throughout this area is relatively flat. A series of man-made ponds are found throughout the wetland. These ponds were created when clay and/or silt was extracted from this area and used in the brick making process. Section 'B', which includes land northwest of the wetlands, as well as the eastern limit of the site, is characterized by relatively flat to gently sloped terrain.

Elevations on the site range from approximately 390 feet above mean sea level at the top of the hill in the southwest section of the site, to about 210 feet above mean sea level at the surface of the man made ponds.

GEOLOGY

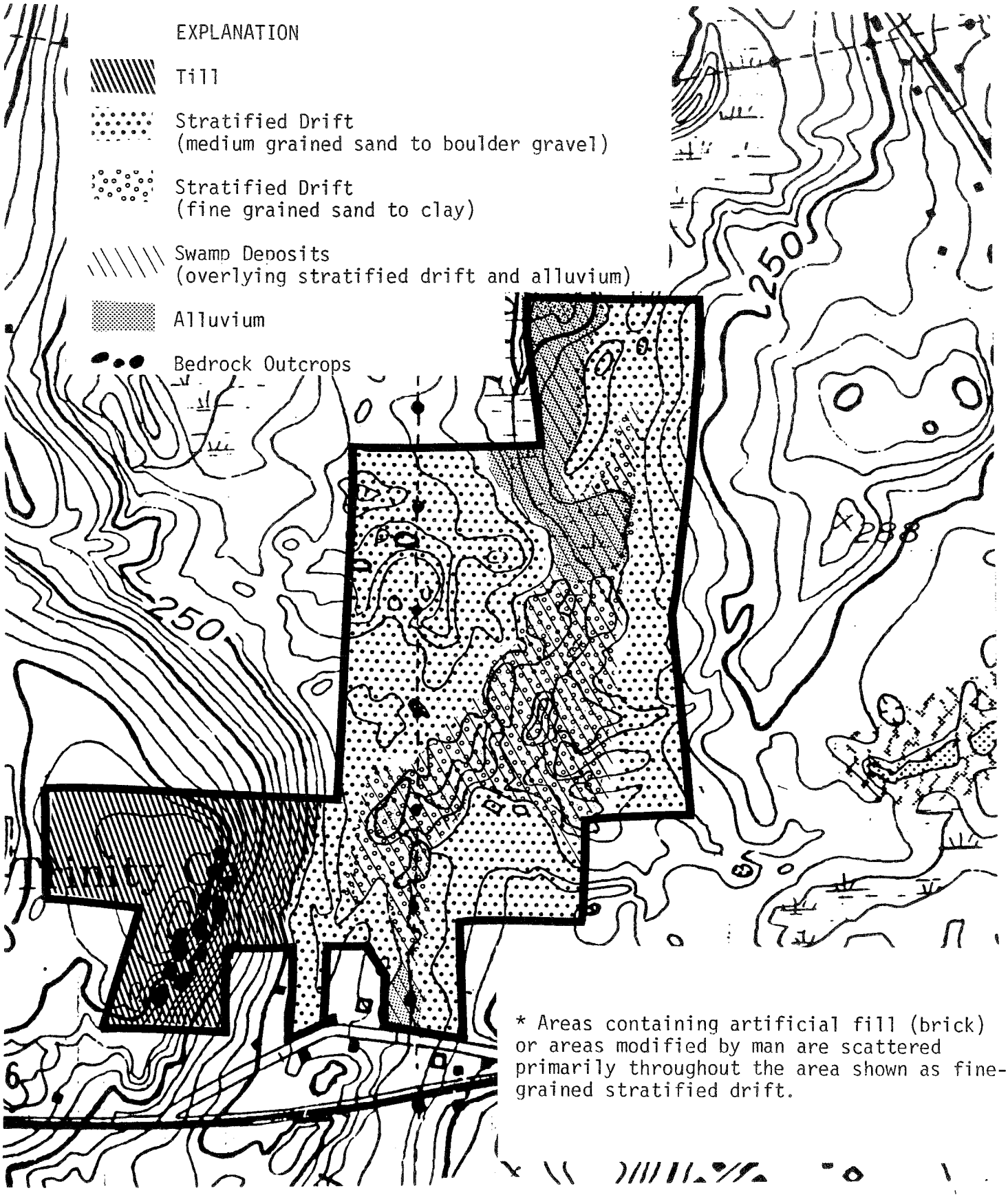
The bedrock geology of the property is described in the Geologic Map of the Danielson Quadrangle by H. Roberta Dixon (Quadrangle Report GQ-696).

Bedrock outcrops on the hill in the southwest corner of the property. Dixon classifies these outcrops as well as the bedrock underlying the largest portion of the site as the Black Hill Member of the Quinebaug Formation. This rock unit consists of a light to dark gray, fine grained calcite-biotite hornblende quartz-oligoclase schist interlayered with minor muscovite quartzite. It should be noted that the minerals calcite and hornblende may not always be present in this rock unit. Accessory minerals include epidote, opaque minerals, sphene and apatite.

"Schists" are metamorphic (rocks altered by great heat and/or pressure) rocks in which elongate or flaky minerals are predominant and aligned, giving the rock a layered structure. The term "quartzite" refers to a metamorphosed sandstone which consists essentially of quartz. Most quartzites are fairly light colored. It is given the variety name "muscovite quartzite" due to the significant amounts of the light-colored mineral muscovite.

A small, southeast portion of the property is underlain by another subunit of the Quinebaug formation referred to as the "lower member." This subunit consists primarily of a dark to greenish gray biotite-andesine hornblende gneiss. Accessory minerals include garnet, allanite, sphene, zircon, apatite, rutile and opaque minerals. This rock unit outcrops a short distance east of the parcel. The term "gneiss" refers to a crystalline, metamorphic rock formed under conditions of high temperature and pressure deep within the earth. Gneisses are characterized by bands which are produced by the alternation of dark and light layers of minerals such as quartz, biotite and hornblende.

Surficial Geology



* Areas containing artificial fill (brick) or areas modified by man are scattered primarily throughout the area shown as fine-grained stratified drift.

Depth to bedrock ranges from zero where it crops out in the southwestern corner of the site to probably not more than thirty feet at various points throughout the remaining portions of the parcel.

While the site will be adequately served by a public water supply, it should be noted that the bedrock aquifer underlying the site could be utilized to supplement the proposed supply. However, the anticipated yield is comparatively small. Based upon statistics presented in Water Resource Bulletin #19 by the U.S. Geological Survey, it is estimated that at 85% of the well sites in the Quinebaug Valley basin, penetrating 100 feet of bedrock could supply at least 3 gallons per minute.

In reviewing a well completion report for two bedrock based wells installed on the subject site, it is reported that yields of 8.5 and 100 gallons per minute (gpm) at 275 feet and 100 feet, respectively, were obtained.

The presence of steep slopes, rock outcrops and shallow soil conditions in the southwest section would impose severe limitations to development. Perhaps this portion of the site, if undeveloped, could be used as open space (i.e., picnic area, hiking trails, etc.). Bedrock underlying the remaining portions of the site should pose no problems especially since public water and sewers would be extended to service the proposed industrial park site.

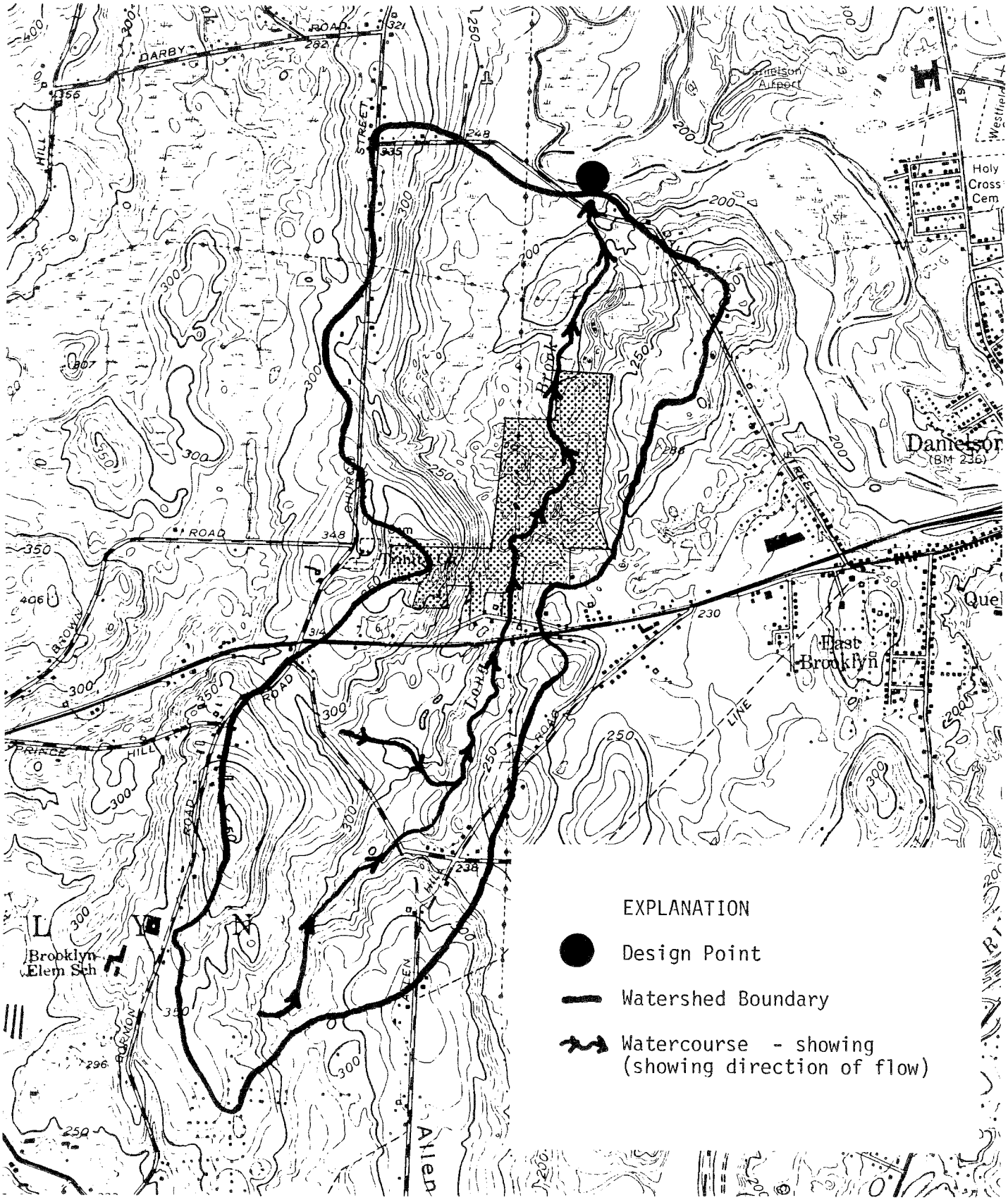
The surficial deposits or those materials overlying bedrock on the property include: (1) till, which covers southwest corner of the site; (2) stratified drift, which covers the remaining portions of the site; (3) swamp deposits, which overlies the stratified drift deposits throughout the central portions of the property; (4) alluvium, which was deposited along the flood plain of Long Brook in the northern and southern sections of the site; and (5) artificial fill, which was deposited by man primarily throughout the central portions of the site.

"Till" refers to sediments that were deposited directly from an ice sheet. These sediments are poorly sorted (i.e., they are thoroughly mixed by grain size) and usually contain rock fragments ranging in size from clay particles to boulders. The texture of till varies from place to place. It is commonly sandy, stoney and relatively loose in the upper few feet or in shallow to bedrock areas and siltier and very compact at greater depths. Till is commonly referred to as "hardpan" because the soil is often tightly compacted and usually hinders the movement of water and plant roots.

The most predominant surficial material covering the site is stratified drift. "Stratified drift" consists of sediments that were deposited by meltwater streams from an ice sheet. These sediments, unlike the till deposits mentioned above, are sorted because of reworking by the glacial streams. Sand and gravel are the major components of this material. The stratified drift deposits surrounding the wetland range in size from medium grained sand to boulder gravel, while the stratified drift deposits throughout the wetland area consists of sediments ranging in size from fine-grain sand to clay. This was the source of clay used for the manufacturing of bricks and pottery by the former brickyard on the site. The commercial value of the stratified drift deposits on the site is unknown, although it seems likely that it could be mined for local fill.

Based on the "Ground Water Availability in Connecticut" map prepared by Daniel B. Meade (1978), the stratified drift deposits underlying the site may be

Drainage Areas



a productive source of water. However, there is not enough hydrogeologic information available for the Team geologist to determine what the yield of such a well or wells would be. Determination of the potential yield of a well tapping stratified drift would require a detailed hydrogeologic investigation, including the installation of a test well. It seems likely that the yield of well tapping the stratified drifts on the property would probably be limited due to the relatively small drainage area and relatively shallow saturated thickness (10-30 feet) of the deposits.

"Alluvium" consists of sand silt and gravel which was deposited on flood plains by Long Brook. "Swamp deposits" consist of partly decomposed organic matter which is commonly mixed with silt and sand. They are identified on the accompanying soils map as Walpole, Sudbury and Scarboro soils. Swamp sediments in this area are commonly two feet deep and are underlain by the surrounding surficial deposit (stratified drift). "Artificial fill," which is composed primarily of irregular or broken bricks manufactured at the former brickyard, has been widely deposited for fill by man throughout sections 'B' and 'C'. If buildings are proposed over this fill material it is recommended that the fill be tested to ensure that it is stable.

From a geological perspective, it appears that the most limiting factors to development on at least half of the property includes either the steep slopes, shallow depths to bedrock and rock outcrops in the southwest corner of the property or the wetlands, which stretch through the central portions of the site. These geologic conditions do represent limitations for development and would require good planning and engineering. Nevertheless, it appears that some portions of the parcel, particularly the flat and gently sloping areas along the eastern and northwestern boundaries, could support some light industrial development.

HYDROLOGY

The site lies entirely within the watershed of Long Brook. It is located in the central portion of the watershed and drains an area of ± 1.84 square miles or ±1214 acres. Surface water on the site drains generally into the wetland in the central portion of the site through which Long Brook flows. Long Brook, which is tributary to the Quinebaug River, flows in a northward course from the site to the river.

Development of the site can be expected to lead to increases in stormwater runoff. The amount of increased runoff will depend largely on the type and extent of development, amount of vegetation removed, impervious surfaces created (i.e., rooftops and paved areas) and the timing of development on each lot. Since an industrial park use would tend to require more impervious surface area, such as large parking lots and bigger buildings, the runoff increase for that type of development would tend to be higher than that of residential development. Therefore, it is highly recommended that a detailed engineering study of the pre- and post-development runoff from the entire site, as well as a careful sediment and erosion control plan be prepared and implemented prior to any development of this site.

As mentioned earlier, a large portion of the central section of the site comprises wetlands. Wetlands serve many hydrological functions which include: (1) act as natural retention basin reducing downstream flood flows during periods of heavy precipitation; (2) trap sediments from upstream areas; (3) through biochemical

processes, wetlands can change water quality often resulting in cleaner water. For these and other reasons, wetland filling or modification should be avoided where possible. Therefore, if wetlands are proposed to be filled or modified, it is recommended that the developer(s) first submit a detailed analysis of the potential effects of the wetland modification together with a detailed plan of the proposed projects for review by appropriate town officials and commissioners (i.e., Inland-Wetlands Commission, Conservation Commission).

The proposed project is to be serviced by public sewers, which should effectively eliminate the risk of substantial groundwater contamination.

SOILS

A soils map of this site and detailed soils descriptions are included in the appendix of this report accompanied by a chart which indicates soil limitations for various urban uses. As the soils 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, buildings 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 Soil Survey, Windham County, Connecticut, 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.

The soils on the site are mostly sandy and gravelly except for some boulders and bedrock outcrops in the till soil areas. In the outwash soil area, primarily along Long Brook, slopes range from 2 to 25 percent with the steepest slopes near the rear of the parcel. These soils range in drainage from excessively drained to very poorly drained. The till soils have slopes from 5 to 35 percent and they are well drained.

The Agawam (AfA), Merrimac (MyB), Ninigret (Nn), Canton and Charlton (CcB), and Sudbury (Sg) soils mapped on the site are prime farmland soils. The Adrian and Palms Mucks (Aa), Scarboro (Sf) and Walpole (Wd) soils are designated inland wetland soils by Public Act 155 but have since been altered with fill materials. These areas are shaded on the soils map. Most of these soil areas now do not meet the required criteria to be classified poorly drained or very poorly drained. These soil areas have been filled with brick from the old brickyard and covered with soil materials. The areas are now used as roads and areas to stack lumber from the sawmill. A small area of Adrian and Palms Mucks still exist just west of the main office building (The Wood Store) where Long Brook enters the property. A very small and almost insignificant area of Scarboro soils along an intermittent waterway still exist in the northwest corner of the property at the base of an esker.

The remaining soils on the property are the Hinckley (HkC, HkD) and Charlton-Hollis soils (CrC, CrD). These soils offer the most restrictions to agricultural use. The ground water table is deep with the principle limitation being slope.

In the areas mapped Charlton-Hollis soils, depth to bedrock is within 20 inches of the surface in most places.

Stability of the areas where the ponds would be filled should be a concern for the proposed use of this property. Improper filling of these areas can result in caving of foundations and cracking of building walls constructed on the sites, if the weight of a building exceeds the bearing strength of the soil materials used.

Consideration should be given to construction of a holding area for the storm water flowing through Long Brook below (north of) any new development, rather than channelling all runoff directly into the Brook flowing to the Quinebaug River. Minor contaminants such as sediment could be trapped in a holding pond.

Another concern is for the type of industrial contaminants which might pollute the ground water and Long Brook. Because of very gravelly soils filtration is not good. If any harmful pollutants get into the soils, they could pollute the ground water. Measures taken to prevent this with any future industry should be essential.

Access to the site from Route 6 has been recognized as a planning and soils problem. Constructing an access across the slope west of Jewett City Bank between Route 6 and Brickyard Road has been discussed. The land here slopes into a wetland through which Long Brook flows. It appears that a portion of this wetland would need to be filled since it is doubtful that an earthern embankment could be stabilized without filling. Careful design and town review of a road here is appropriate. Alternative access routes should be considered.

From some perspectives the 104± acre site has merit to develop as an industrial park. However, there are numerous cultural and resource obstacles to overcome with sound planning and engineering. It is suggested that at least a tentative plan of the industrial development be presented to the town before a zone change is granted.

WETLAND RESOURCES

Wetland vegetation occurs in and around a series of interconnected ponds on-site. According to the property owner, the ponds were excavated for clay and brick and pottery and have been back-filled, to some extent, with unsaleable brick. The ponds are vegetated with yellow pond-lily, bladderwort and duckweed. The stream to the south of Brickyard Road and the wetland bordering the Wood Store operation are bordered with cattails, woolgrass, iris, touch-me-nots, sensitive fern, purple loosestrife, blue vervain, boneset and joe-pye weed. Other ponds have been dredged as swimming holes, and beach sand has been placed in some areas, so that the swimming holes do not support the same wetland forbs. The dominant shrubs of the wetland borders throughout the site are silky dogwood, nannyberry, and alders. Red maple, weeping willow, and white ash also occur in the wetland border areas.

The sand and gravel of the eskers which course through the northern half of the site make the ridges suitable for supporting xeric species, or plant types which are adapted to growing in well-drained soils. White pine, white oak, red oak, and hickory are thus able to dominate the upland portions of the site.

An electrical power line bisects the property on a north-south axis. The line passes over the stream and pond in the southern end of the property and continues north up an incline. The path under the wires in the upland area is vegetated with crabgrass, goldenrod, smooth sumac, witch hazel, and baneberry.

Open fields on-site support clover, goldenrod, blue curls, pearly everlasting, sweet everlasting, bayberry, and red cedar. Mr. Mercier has planted white spruce and firs in the field which he said used to be the campground.

A wide variety of birds was observed during the inspections. Although a large number of species was recorded in the attached list of fauna, it cannot be regarded as a complete list, since many songbirds are inactive in August and September. In addition to those species listed, one would expect to find Yellow Warblers, Canada Warblers, Northern Orioles, Rufous-sided Towhees, Great Blue Herons, Red-shouldered Hawks, Red-tailed Hawks, Kestrels, and Carolina Wrens on the site.

Among the birds observed was a Goshawk. Rare and Endangered Species of Connecticut and Their Habitats, a 1976 publication of the State Geological and Natural History Survey of Connecticut, lists this raptor as rare. The publication notes that the Goshawk occurs in low numbers in Connecticut because this is the southern limit of the bird's breeding range. It occurs in northern coniferous forests, far from human activity. While the Goshawk's breeding range is expanding southward, the population increase may be threatened by hunters.

The Mercier property's primary wildlife value is as a habitat for songbirds, deer, and raptors. Fruit-bearing shrubs, including Russian olive, nannyberry, silky dogwood, dewberry, and red cedar, are important food sources for songbirds. The availability of insects and abundance of open water contribute to the site's value as songbird habitat. The close proximity of shrubs and trees to wetland feeding areas provides songbirds with adequate cover and nesting sites.

Because of the combination of open water, emergent vegetation, fruit-bearing shrubs and trees, the wetland bordering the lumber operation is especially valuable to songbirds. Indeed, a large number of birds were observed in this area during the inspections.

The presence of a rare raptor suggests that large-scale development on-site should be avoided. If a zone change is granted and the development is begun, it is recommended that the following be considered:

1. Positioning the entry roadway to avoid filling in the wetland.

2. Avoiding construction in the wetland bordering on and immediately to the north of the Wood Store lot.

3. Using native, fruit-bearing shrubs and trees in landscaping the site. Recommended species include flowering dogwood, silky dogwood, nannyberry, elderberry, bayberry, and red cedar. Siebold's viburnum would also be a good choice.

FOREST RESOURCES

The parcel may be divided into three vegetation types. These include 36± acres of softwoods, a softwoods-hardwoods stand of 32± acres and 15± acres of mixed hardwoods. An additional 36± acres of open or developed land and 8± acres of open water make up the property.

Type A. This 36± acre variably stocked softwood stand consists of medium to high quality pole to sawtimber sized white pine. Pitch pine, red cedar, scarlet oak, black oak, white oak and red maple form a minor component of the stand. The ground cover consists of goldenrod, viburnums, hardwood seedlings, white pine seedlings, ferns and grasses. Portions of this stand were used for the campsites and have been thinned for timber.

Type B. A fully stocked stand of pole to sawtimber-sized softwoods-hardwoods, this stand occupies 32± acres. It contains white pine, black oak, scarlet oak, red oak, white oak, red maple and black birch. A ground cover of blueberry, sweet fern, hardwood seedlings, white pine seedlings and various ferns and grasses exists.

Type C. This 15± acre fully stocked mixed hardwood stand is omposed of pole to sawtimber-sized red oak, black oak, scarlet oak, white oak, red maple and black birch. White pine occurs in small scattered groups. Hardwood and white pine seedlings, viburnums, blueberry, huckleberry, ferns and grasses form the ground cover.

The open land is occupied by the sawmill site, waste piles, old campsites and powerline. Certain areas of the open land such as the powerline, are covered by red cedar, hardwood seedlings, sumac, viburnums, silky dogwood, juniper, ferns and grasses.

The proposed utilization of the forested portions of the property for industrial development will impact the vegetative cover negatively, dependent upon the extent of cleaning. The extent of vegetation losses will depend upon the type and magnitude of development. Removal of all woody vegetation from roads, packing areas and building sites will be necessary. Clearing operations should, if possible, remove only the lowest quality trees and those which are a hazard to area users. The healthier, more vigorous trees should be retained, where possible, for their high aesthetic value.

In the industrial park, buffer strips of trees, both softwoods and hardwoods, together with lesser vegetation should be retained or created between each industrial site and between the industrial park and other uses for screening and noise reduction. Care should be exercised during the construction period not to disturb or damage the trees that are to be retained. Construction practices may disturb the balance between soil aeration, soil moisture level and soil composition. The disturbances may cause a decline in tree health and vigor, resulting in tree mortality within three to five years. Mechanical injury may produce the same results. Dead trees reduce the aesthetic quality of an area and may become hazardous and expensive to remove if near roads, buildings and utility lines.

The trees which are removed during cleaning operations for the development should be utilized for sawtimber, fuelwood and woodchips. Trees that are to be

Vegetation

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scale

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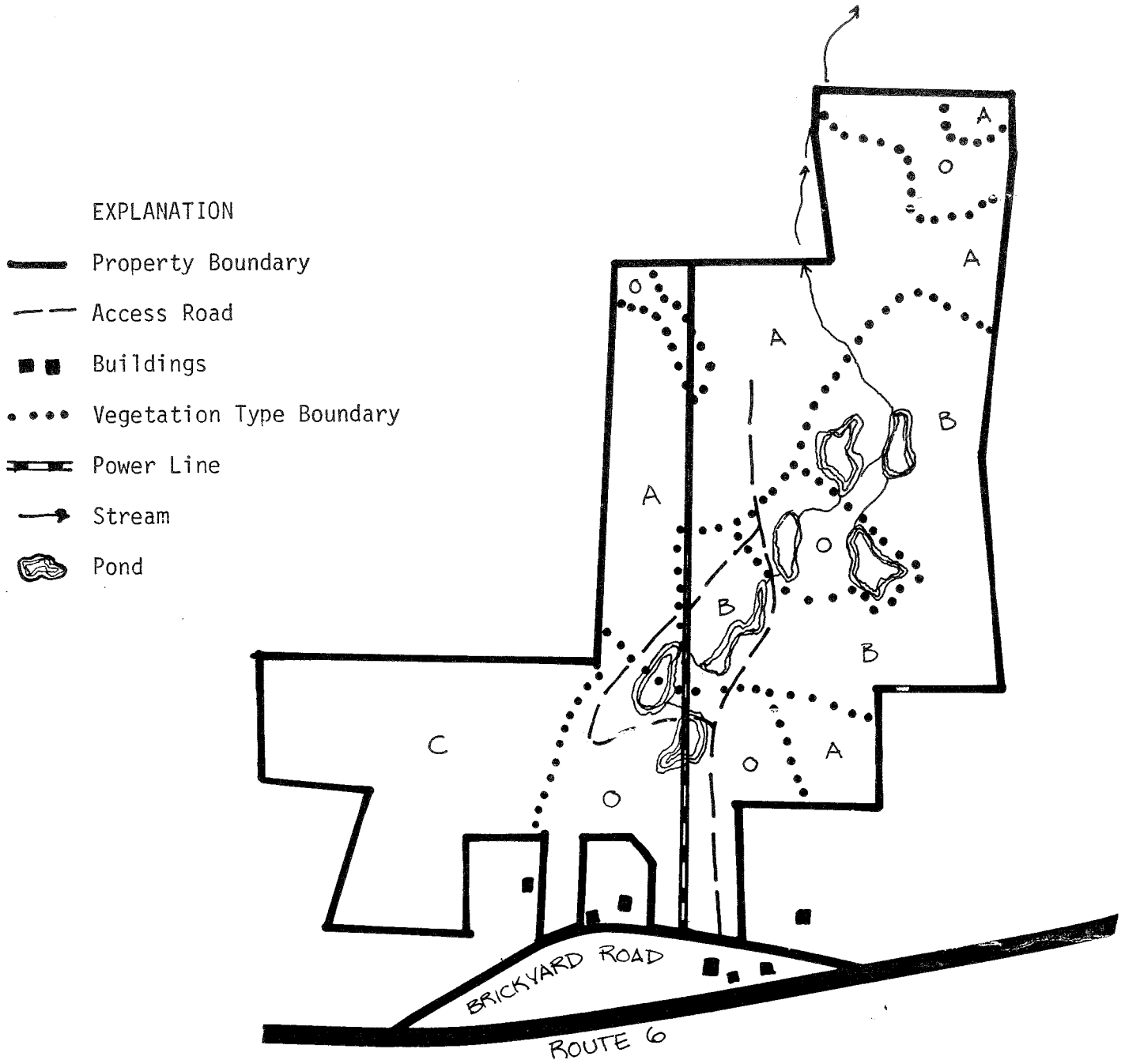

Vegetation Type Descriptions*

TYPE A: Softwoods, 36 acres, variably stocked, pole to sawtimber size.
TYPE B: Softwoods-Hardwoods, 32 acres, fully stocked, pole to sawtimber size.
TYPE C: Mixed Hardwoods, 15 acres, fully stocked, pole to sawtimber size.
TYPE O: Open/Developed, 36 acres.

* Seedling size: Trees less than 1" Diameter at 4½' above ground (DBH).
Sapling size: Trees 1 to 5" DBH.
Pole size: Trees 5 to 11" DBH.
Sawtimber size: Trees 11" DBH and greater.

removed should be marked to lessen the likelihood of removing desirable trees.

Dead and dying trees, which may be hazardous to users of the facilities, should be removed and where possible, utilized for the highest value use.

Vegetation Types B and C could be thinned by a sawtimber harvest. Up to one-third of the total sawtimber value could be removed. The best formed oak and pine should be retained to form the residual stand.

Trees in Vegetation Type A are well spaced due to the recent harvest and will not need additional cultural operations for the next ten years.

Open acres could be planted to a mixture of Norway spruce, white pine and larch if desired. Seedlings for forest planting are available from the State Forest Tree Nursery.

A public service forester or private consultant forester could be contacted to help select the trees to be removed in the thinnings if they are agreed upon. Revenue from these thinnings will more than cover consultant costs.

PLANNING CONCERNS

There are numerous planning concerns regarding development of an industrial park at the proposed site. These concerns focus on development potential of the site, transportation and access, and determination of municipal needs for industrial development.

Site Concerns

General standards for industrial locations have been developed and include the following requirements (De Chiara, et al., 1969)*;

(a) Fast, easy and convenient access to good transportation facilities including rail, highway and air.

(b) Reasonable location with respect to labor supply, raw materials source and markets.

(c) An adequate amount of suitable land, free from foundation and drainage problems with a sufficient reserve for future growth.

(d) An adequate and reliable supply of utilities: water, waste disposal, power and fuel.

(e) Protection from encroachment of residential or other land uses.

(f) Location so as to minimize obnoxious external effects on neighboring non-industrial land uses.

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*De Chiara, Joseph, and Lee Koppelman, 1969. Planning Design Criteria, New York: Van Nostrand Reinhold Company.

The proposed site does not severely depart from any of the above criteria with the possible exception of "suitable land free from foundation and drainage problems." As noted in other sections of this report, engineering tests should be performed to determine the suitability of the filled areas for foundations.

The site overlies a primary recharge area of an aquifer. Thus, discharges must be monitored carefully to ensure that contamination of this valuable ground water resource does not occur.

Site limitations do exist which would be very costly to overcome. Most notable of these limitations is the existence of power transmission lines across a portion of the most desirable section of the site. While relocation of the power lines can be done, this an extremely costly procedure which must be financed by the developer. There are at least six towers which would have to be relocated. Also, there are some residences, plus a restaurant in close proximity to the site. The potential for log noise/air pollution from the site must be considered.

Traffic/Access

The major planning concerns for this site involve transportation and access problems if the site is actually developed as an industrial park.

The intersection with Route 6 which would be created by construction of the proposed access road would be hazardous. There is an inadequate sight line from the proposed access road toward the east on Route 6 (left turn from the access road) due to a rise in elevation. Trucks turning right (west) onto Route 6 enter Route 6 at the base of a steep hill, which would cause considerable traffic congestion behind the trucks.

The width of Route 6 is insufficient for large (18-wheel) trucks to exit the park without construction of a wide apron on the access road. The wide apron will, in turn, create a hazardous condition for smaller vehicles entering and exiting the park as there will not be a clear land through which to enter/exit.

The possibility of improvements to Route 6 by CONN DOT of a magnitude to alleviate the above hazards is extremely unlikely. CONN DOT has included improvements to Route 6 as part of its "concept plan" for trading in I-84 funds, which would be carried out over the next eight years. However, major reconstruction of that segment of Route 6 is not part of the plan. The plan specifically includes plans to "upgrade, rehabilitate and relocate where necessary," but vertical realignment or major widening at that location are not probable.

Installation of a traffic light at the newly created intersection also does not appear highly likely at this time. There are six criteria, at least one of which has to be met, for the State Traffic Commission to approve installation of a signal device:

- minimum vehicular volume
- interruption of continuous traffic
- minimum pedestrial volume
- progressive movement
- accident experience
- combination of warrants (criteria)

The proposed intersection site does not currently meet any of these conditions.

A through-road which exits into existing subdivisions off Day Street would also be undesirable, as it would generate a hazardous amount of traffic through the residential area, and it would be difficult to restrict the route to passenger car vehicles only.

Evaluation of Industrial Land Needs

Basic relationships between the population of a municipality and desired industrial development to fulfill the needs of the municipality have been determined (De Chiara, et al., 1969). This relationship demonstrates that a municipality generally requires 12 acres of industrial land per 1,000 population, plus reserve land for 50 years' future growth. Brooklyn would therefore need 110 acres of land based on its current population, plus 50 years' reserve (this figure allows for a highly improbable doubling of Brooklyn's population in 50 years). The town's current industrial park contains approximately 360 acres, or more than three times the needed amount. It is probably unrealistic to anticipate that such a large amount of industrial acreage will ever be used in Brooklyn.

Due to the major limitations presented to site development and access to the site, this site does not appear to represent a viable, desirable industrial site for the town. This is especially noticeable as the current industrially zoned land contains none of the above limitations.

Appendix

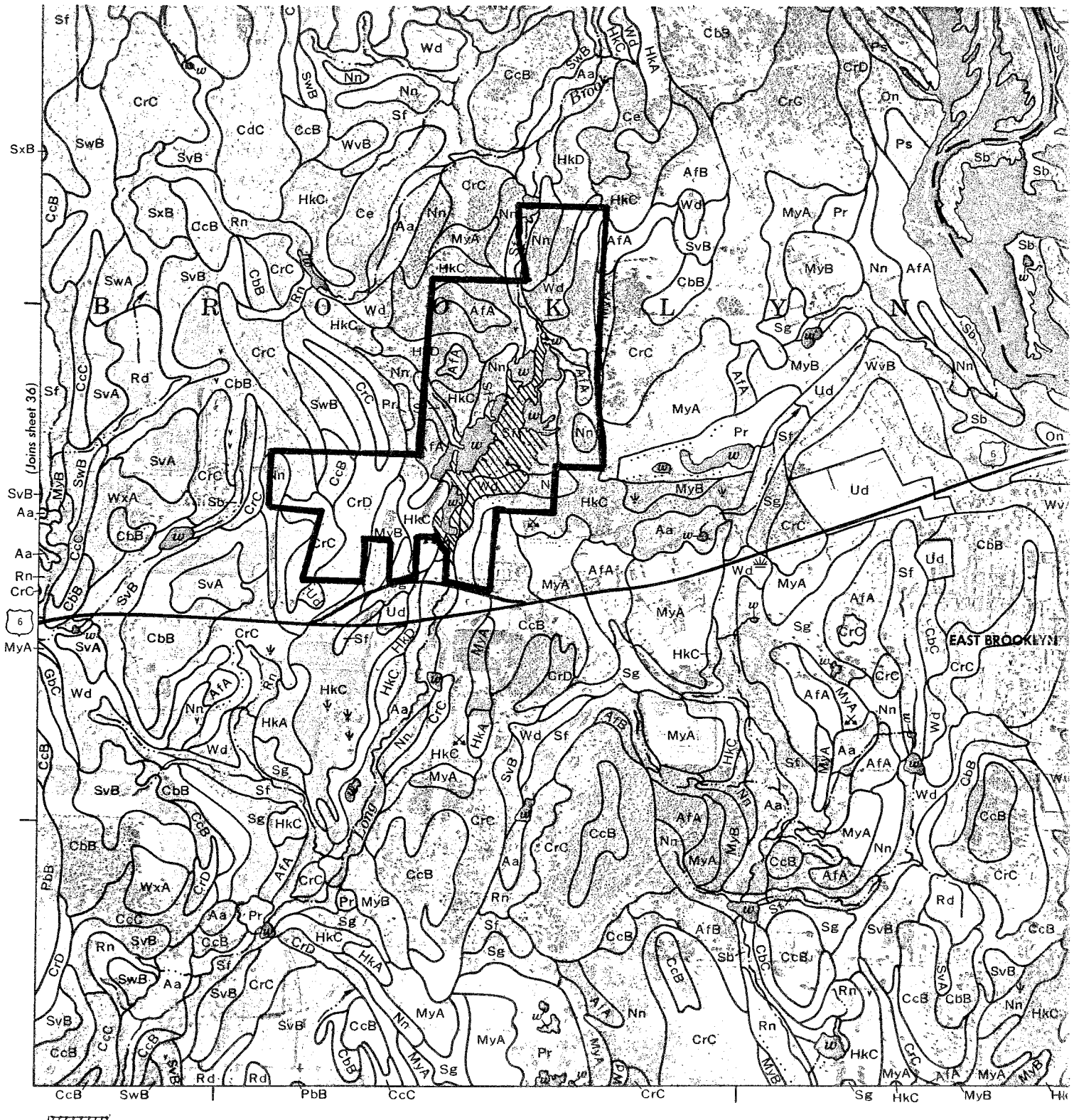
Soils

scale 0 1320'

N

WINDHAM COUNTY, CONNECTICUT SHEET NO. 37

This map is compiled on 1975 and 1976 aerial photography by the U. S. Department of Agriculture, Soil Conservation Service and cooperating agencies. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



SOILS

* Aa - Adrian and Palms Mucks

#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 loam, 3 to 8 percent slopes.
CcC - Canton & Charlton very stony fine sandy loam, 8 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.
HkD - Hinckley gravelly sandy loam, 15 to 40 percent slopes.

#MyA - Merrimac sandy loam, 0 to 3 percent slopes.
#MyB - Merrimac sandy loam, 3 to 8 percent slopes.

#Nn - Ninigret fine sandy loam.

*Sf - Scarboro fine sandy loam.

#Sg - Sudbury sandy loam.

*Wd - Walpole sandy loam.

Prime Farmland
* Designated wetland soil by Public Act 155

WILLIAM & JOYCE MERCIER
BROOKLYN ZONE CHANGE PROPOSAL

Principal Limitations and Ratings of Soils for: Industrial Development

SOIL MAP SYMBOL AND SOIL NAME	SMALL COMMERCIAL BUILDINGS	LOCAL ROADS AND STREETS	SEPTIC TANK ABSORPTION FIELDS	GRAVEL	DRAINAGE
#AfA - Agawam	Slight	Slight	Severe-poor filter	Probable	Deep to water
#CbB -					
Canton	Moderate-slope	Slight	Severe-poor filter	Improbable-excess fines	Deep to water
Charlton	Moderate-slope	Slight	Slight	Improbable-excess fines	Deep to water
CcB -					
Canton	Moderate-slope	Slight	Severe - poor filter	Improbable-excess fines	Deep to water
Charlton	Moderate-slope	Slight	Slight	Improbable-excess fines	Deep to water
CcC -					
Canton	Severe-slope	Moderate-slope	Severe -poor filter	Improbable-excess fines	Deep to water
Charlton	Severe-slope	Moderate-slope	Moderate-slope	Improbable-excess fines	Deep to water
CrC -					
Charlton	Severe-slope	Moderate-slope	Moderate-slope	Improbable-excess fines	Deep to water
Hollis	Severe-depth to rock,slope	Severe-depth to rock	Severe-depth to rock	Improbable-excess fines. thin layer	Deep to water
CrD -					
Charlton	Severe-slope	Severe-slope	Severe-slope	Improbable-excess fines	Deep to water
Hollis	Severe-depth to rock, slope	Severe-depth to rock, slope	Severe-depth to rock, slope	Improbable-excess fines, thin layer	Deep to water

WILLIAM & JOYCE MERCIER
BROOKLYN ZONE CHANGE PROPOSAL

Principal Limitations and Ratings of Soils for: Industrial Development

SOIL MAP SYMBOL AND SOIL NAME	SMALL COMMERCIAL BUILDINGS	LOCAL ROADS AND STREETS	SEPTIC TANK ABSORPTION FIELDS	GRAVEL	DRAINAGE
HkC - Hinckley	Severe-slope	Moderate-slope	Severe-poor filter	Probable	Deep to water
HkD - Hinckley	Severe-slope	Severe-slope	Severe-slope, poor filter	Probable	Deep to water
#MyA - Merrimac	Slight	Slight	Severe-poor filter	Probable	Deep to water
#MyB - Merrimac	Moderate-slope	Slight	Severe-poor filter	Probable	Deep to water
#Nn - Ninigret	Moderate-wetness	Moderate-frost action,wetness	Severe-wetness, poor filter	Probable	Cutbanks cave
*Sf - Scarboro	Severe-ponding	Severe-ponding, frost action	Severe-ponding, frost action	Improbable-too sandy	Cutbanks cave. frost action
#Sg - Sudbury	Moderate-wetness	Moderate-wetness, frost action	Severe-wetness, poor filter	Probable	Cutbanks cave
*Wd - Walpole	Severe-wetness	Severe-wetness, frost action	Severe-wetness, poor filter	Probable	Frost action, cutbanks cave

Prime farmland

* Designated wetland soil by Public Act 155

Aa—Adrian and Palms mucks. This unit consists of nearly level, very poorly drained organic soils in depressions and along streams of outwash plains and glacial till uplands. The areas are mostly oval or long and narrow and range from 5 to 40 acres. Slopes range from 0 to 2 percent but are mostly less than 1 percent. About 45 percent of the total acreage of this unit is Adrian soils, 35 percent is Palms soils, and 20 percent is other soils. Some areas of the unit consist almost entirely of Adrian soils, some almost entirely of Palms soils, and some of both. The Adrian and Palms soils were mapped together because there are no significant differences in their use and management.

Typically, the Adrian soils have a surface layer of black and very dark gray muck 12 inches thick. The subsurface layer is black muck 21 inches thick. The substratum is gray gravelly sand to a depth of 60 inches or more.

Typically, the Palms soils have a surface layer of black muck 9 inches thick. The subsurface layer is very dark brown and black muck 21 inches thick. The substratum is gray and grayish brown silt loam and fine sandy loam to a depth of 60 inches or more.

Included with this unit in mapping are small areas of very poorly drained Carlisle, Saco, Scarboro, and Whitman soils. A few small areas have a thin, loamy surface layer.

These Adrian and Palms soils are wet most of the year. Water is on the surface for several weeks from fall through spring and after heavy summer rains. The soils have a high available water capacity. The Adrian soils have moderately rapid permeability in the organic layers and rapid permeability in the substratum. The Palms soils have moderately rapid permeability in the organic layers and moderate or moderately slow permeability in the substratum. Runoff is very slow on both soils. Both soils are strongly acid to medium acid in the organic layers and medium acid to slightly acid in the substratum.

The soils in this unit are used mainly as woodland, or they are in marshgrasses and sedges. A few cleared areas have been drained and are used for pasture.

Wetness makes the soils of this unit generally unsuitable for cultivated crops. Most areas are difficult to drain, and subsidence is a hazard in areas that are drained.

Wetness also makes the soils poorly suited to trees. It severely limits the use of equipment and causes a high rate of seedling mortality. The high water table limits rooting, causing a hazard of uprooting during windy periods.

Wetness and low strength in the organic layers limit these soils for community development, especially for onsite septic systems.

AfA—Agawam fine sandy loam, 0 to 3 percent slopes. This soil is nearly level and well drained. It is on outwash plains and stream terraces. Areas of this soil are irregular in shape or long and narrow and mostly range from 4 to 20 acres.

Typically, the surface layer is dark grayish brown fine sandy loam 10 inches thick. The subsoil is yellowish brown and strong brown fine sandy loam 20 inches thick. The substratum is very pale brown fine sand and sand to a depth of 60 inches or more.

Included with this soil in mapping are small areas of excessively drained Hinckley and Windsor soils, somewhat excessively drained Merrimac soils, well drained Occum soils, moderately well drained Ninigret soils, and poorly drained Walpole soils. Included areas make up about 10 percent of the unit.

The water table in the Agawam soil is commonly below a depth of 6 feet. The available water capacity is moderate. This soil has moderately rapid permeability in the surface layer and upper part of the subsoil, moderately rapid or rapid permeability in the lower part of the subsoil, and rapid permeability in the substratum. Runoff is slow. The soil is strongly acid to slightly acid.

This soil is used mainly as cropland. In a few areas it is used as woodland or for community development.

This soil is well suited to cultivated crops and to trees. Tilth is easy to maintain in cultivated areas, and the hazard of erosion is slight. The use of cover crops and minimum tillage are the common crop management practices.

The rapid permeability in the lower part of the soil causes a hazard of ground-water pollution in areas used for onsite septic systems. Some excavations in this soil are unstable.

CbB—Canton and Charlton fine sandy loams, 3 to 8 percent slopes. This unit consists of gently sloping, well drained soils on ridges, hills, and side slopes of glacial till uplands. The areas are mostly rectangular or irregular in shape and mainly range from 3 to 30 acres. Slopes are generally smooth and convex and 200 to 400 feet long. About 45 percent of the total acreage of this unit is Canton soils, 40 percent is Charlton soils, and 15 percent is other soils. Some areas of this unit consist almost entirely of Canton soils, some almost entirely of Charlton soils, and some of both. The soils were mapped together because they have no significant differences in use and management.

Typically, the Canton soils have a surface layer of very dark grayish brown fine sandy loam 2 inches thick. The subsoil is yellowish brown fine sandy loam, gravelly fine sandy loam, and gravelly sandy loam 21 inches thick. The substratum is pale brown gravelly loamy sand to a depth of 60 inches or more.

Typically, the Charlton soils have a surface layer of dark yellowish brown fine sandy loam 5 inches thick. The subsoil is yellowish brown fine sandy loam and sandy loam 20 inches thick. The substratum is light yellowish brown and light brownish gray sandy loam to a depth of 60 inches or more.

Included with these soils in mapping are small areas of somewhat excessively drained Gloucester and Hollis soils, well drained Paxton soils, and moderately well drained Sutton soils. Also included are a few large, nearly level areas and a few areas that have a compact substratum at a depth of 40 to 50 inches.

The water table in these Canton and Charlton soils is commonly at a depth of more than 6 feet. The permeability of the Canton soils is moderately rapid in the surface layer and subsoil and rapid in the substratum. The permeability of the Charlton soils is moderate or moderately rapid. Both soils have medium to rapid runoff, have moderate available water capacity, and both are very strongly acid to medium acid.

Most areas of this unit are used for crops, mainly corn for silage, hay, vegetables, and pasture (fig. 4). Some areas are in community development or are used for recreation.

The soils of this unit are well suited to cultivated crops. Tilth is easy to maintain. The use of cover crops and minimum tillage are farming management practices that help to control a moderate erosion hazard.

The soils are well suited to use as woodland, but productivity is higher on the Charlton soils than on the Canton soils.

Instability of some excavations in the Canton soils is the main limitation of the unit for community development.

CcB—Canton and Charlton very stony fine sandy loams, 3 to 8 percent slopes. This unit consists of gently sloping, well drained soils on ridges, hills, and side slopes of glacial till uplands. The areas are mostly long and narrow or oval and range from 5 to 50 acres. Slopes are mainly smooth and convex and are 200 to 400 feet long. Stones cover 1 to 8 percent of the surface. About 45 percent of the total acreage of this unit is Canton soils, 40 percent is Charlton soils, and 15 percent is other soils. Some areas of this unit consist almost entirely of Canton soils, some almost entirely of Charlton soils, and some of both. The soils were mapped together because they have no significant differences in use and management.

Typically, the Canton soils have a surface layer of very dark grayish brown fine sandy loam 2 inches thick. The subsoil is yellowish brown fine sandy loam, gravelly fine sandy loam, and gravelly sandy loam 21 inches thick. The substratum is pale brown gravelly loamy sand to a depth of 60 inches or more.

Typically, the Charlton soils have a surface layer of dark yellowish brown fine sandy loam 5 inches thick. The subsoil is yellowish brown fine sandy loam and sandy loam 20 inches thick. The substratum is light yellowish brown and light brownish gray sandy loam to a depth of 60 inches or more.

Included with these soils in mapping are small areas of somewhat excessively drained Gloucester and Hollis soils, well drained Paxton soils, and moderately well drained Sutton soils. Also included are a few large, nearly level areas and a few areas that have a compact substratum at a depth of 40 to 50 inches.

The water table in these Canton and Charlton soils is commonly at a depth of more than 6 feet. The permeability of the Canton soils is moderately rapid in the surface layer and subsoil and rapid in the substratum. The permeability of the Charlton soils is moderate or moderately rapid. Both soils have moderate available water capacity and medium runoff, and both are very strongly acid to medium acid.

Most areas of this unit are woodland. The soils in a few areas are used for pasture or hay. In some areas they are in community development or are used for recreation.

The soils of this unit generally are too stony for cultivation. Stone removal makes the soils well suited to cultivated crops but is difficult. The soils are well suited to use as woodland, but the Charlton soils have higher productivity than the Canton soils.

Some excavations in the Canton soils are unstable. The stones on the surface limit landscaping.

CcC—Canton and Charlton very stony fine sandy loams, 8 to 15 percent slopes. This unit consists of sloping, well drained soils on ridges, hills, and side slopes of glacial till uplands. The areas are mostly long and narrow and range from 3 to 20 acres. Slopes are mainly smooth and convex and less than 200 feet long. Stones cover 1 to 8 percent of the surface. About 45 percent of the total acreage of this unit is Canton soils, 40 percent is Charlton soils, and 15 percent is other soils. Some areas of this unit consist almost entirely of Canton soils, some almost entirely of Charlton soils, and some of both. The soils were mapped together because they have no significant differences in use and management.

Typically, the Canton soils have a surface layer of very dark grayish brown fine sandy loam about 2 inches thick. The subsoil is yellowish brown fine sandy loam, gravelly fine sandy loam, and gravelly sandy loam 21 inches thick. The substratum is pale brown gravelly loamy sand to a depth of 60 inches or more.

Typically, the Charlton soils have a surface layer of dark yellowish brown fine sandy loam 5 inches thick. The subsoil is yellowish brown fine sandy loam and sandy loam 20 inches thick. The substratum is light yellowish brown and light brownish gray sandy loam to a depth of 60 inches or more.

Included with these soils in mapping are small areas of somewhat excessively drained Gloucester and Hollis soils, well drained Paxton soils, and moderately well drained Sutton soils. A few areas have a compact substratum at a depth of 40 to 50 inches.

The water table in these Canton and Charlton soils is commonly at a depth of more than 6 feet. The permeability of the Canton soils is moderately rapid in the surface layer and subsoil and rapid in the substratum. The permeability of the Charlton soils is moderate or moderately rapid. Both soils have moderate available water capacity and rapid runoff, and both are very strongly acid to medium acid.

Most areas of this unit are in woodland. A few areas are used for pasture and hay. Some areas are in community development.

The soils of this unit are too stony for cultivation. Stone removal makes the soils suited to cultivated crops but is difficult. The soils are well suited to woodland, but the Charlton soils have higher productivity than the Canton soils.

Slope is the main limitation of the soils for community development, especially for onsite septic systems. Slopes of excavations are unstable. The stones on the surface limit landscaping.

CrC—Charlton-Hollis fine sandy loams, very rocky, 3 to 15 percent slopes. This unit consists of gently sloping to sloping, somewhat excessively drained and well drained soils on hills and ridges of glacial till uplands. The areas of this unit are mostly irregular in shape and range from 5 to 200 acres. Slopes are mostly complex and 100 to 200 feet long. Stones cover 1 to 8 percent of the surface, which is marked by a few narrow, intermittent drainageways and small, wet depressions. This unit is about 55 percent Charlton soils, 20 percent Hollis soils, 15 percent other soils, and 10 percent exposed bedrock. The Charlton and Hollis soils are in such a complex pattern that it was not practical to map them separately.

Typically, the Charlton soils have a surface layer of dark yellowish brown fine sandy loam 5 inches thick. The subsoil is yellowish brown fine sandy loam and sandy loam 20 inches thick. The substratum is light yellowish brown and light brownish gray sandy loam to a depth of 60 inches or more.

Typically, the Hollis soils have a surface layer of dark grayish brown fine sandy loam 2 inches thick. The subsoil is yellowish brown gravelly fine sandy loam 12 inches thick. Hard, unweathered schist bedrock is at a depth of 14 inches.

Included with this unit in mapping are small areas of somewhat excessively drained Brimfield soils; well drained Brookfield, Canton, and Paxton soils; moderately well drained Sutton and Woodbridge soils; and poorly drained Leicester soils. Also included are small areas with bedrock at a depth of 20 to 40 inches and a few large areas that have been cleared of stones.

The water table in this unit is commonly at a depth of more than 6 feet. The available water capacity is moderate in the Charlton soils and very low or low in the Hollis soils. Both soils have moderate or moderately rapid permeability and medium to rapid runoff. Both are very strongly acid to medium acid.

Most areas of this unit are in woodland. A few areas are used for pasture or community development.

The stones on the surface and areas of exposed rock hinder the use of farm equipment and make the soils generally unsuitable for cultivation. Some cleared areas are suitable for pasture and some for hay (fig. 6).

This unit is suited to woodland production. However, the Hollis soils are droughty, and seedling mortality is high. Uprooting during windy periods is common on the Hollis soils because of the shallow rooting depth.

The areas of exposed rock and the depth to bedrock in the Hollis soils limit this unit for community development, especially as a building site or as a site for onsite septic systems. The stones on the surface restrict landscaping.

CrD—Charlton-Hollis fine sandy loams, very rocky, 15 to 35 percent slopes. This unit consists of moderately steep to steep, somewhat excessively drained and well drained soils on hills and ridges of glacial till uplands. Areas of this unit are mostly long and narrow or oval and range from 5 to 100 acres. Slopes are mainly convex and 100 to 500 feet long. Stones and boulders cover 1 to 8 percent of the surface. This unit is about 55 percent Charlton soils, 20 percent Hollis soils, 15 percent other soils, and 10 percent exposed bedrock. The Charlton and Hollis soils are in such a complex pattern that it was not practical to map them separately.

Typically, the Charlton soils have a surface layer of dark yellowish brown fine sandy loam 5 inches thick. The subsoil is yellowish brown fine sandy loam and sandy loam 20 inches thick. The substratum is light yellowish brown and light brownish gray sandy loam to a depth of 60 inches or more.

Typically, the Hollis soils have a surface layer of dark grayish brown fine sandy loam 2 inches thick. The subsoil is yellowish brown gravelly fine sandy loam 12 inches thick. Hard, unweathered schist bedrock is at a depth of 14 inches.

Included with this unit in mapping are small areas of somewhat excessively drained Brimfield soils; well drained Brookfield, Canton, and Paxton soils; and moderately well drained Sutton and Woodbridge soils. Also included are areas with bedrock at a depth of 20 to 40 inches and a few small areas with slopes of more than 35 percent.

The water table in this unit is commonly at a depth of more than 6 feet. The available water capacity is moderate in the Charlton soils and very low or low in the Hollis soils. Both soils have moderate to moderately rapid permeability and rapid runoff. Both are very strongly acid to medium acid.

Most areas of this unit are in woodland. A few areas are in pasture, and a few are used for community development.

The stones on the surface, the areas of exposed rock, and the slope limit the use of farming equipment and make the soils generally unsuitable for cultivation. Some cleared areas are suitable for pasture.

The soils are suited to use as woodland. However, the Hollis soils are droughty, and seedling mortality is high. Uprooting during windy periods is common on the Hollis soils because of the shallow depth to bedrock. The slope and the stones and exposed rock limit the use of timber harvesting equipment.

The slope, the exposed rock, and the depth to bedrock in the Hollis soils limit this unit for community development, especially as a site for onsite septic systems and buildings.

HkC—Hinckley gravelly sandy loam, 3 to 15 percent slopes. This is a gently sloping to sloping, excessively drained soil on terraces of stream valleys and on glacial outwash plains. The areas of this soil are oval or irregular in shape and range from 5 to 200 acres. Slopes are convex or undulating and are mostly less than 200 feet long.

Typically, the surface layer is very dark grayish brown gravelly sandy loam 2 inches thick (fig. 7). The subsoil is dark yellowish brown, yellowish brown, and brownish yellow gravelly sandy loam and gravelly loamy sand 16 inches thick. The substratum is pale yellow gravelly sand to a depth of 60 inches or more.

Included with this soil in mapping are small areas of excessively drained Windsor soils, somewhat excessively drained Merrimac soils, well drained Agawam soils, and moderately well drained Sudbury soils. Also included are a few areas of a soil with a surface layer of fine sandy loam and a few small areas with a few stones on the surface. Included areas make up about 15 percent of the unit.

The water table in this Hinckley soil is commonly below a depth of 6 feet. The available water capacity is low. Runoff is rapid. This soil has rapid permeability in the surface layer and subsoil and very rapid permeability in the substratum, and it is extremely acid to medium acid.

Most areas of this soil are in woodland. Some areas are in cropland, and a few large areas are in community development.

Irrigated areas of this soil are well suited to cultivated crops; nonirrigated areas are fairly suited. The soil dries and warms early in the spring and is easy to till. Minimum tillage and cover crops help to minimize the moderate erosion hazard in cultivated areas.

Droughtiness makes this soil poorly suited to use as woodland; it increases seedling mortality.

This soil generally is suited to community development, but the rapid permeability imposes a hazard of ground-water pollution in areas used for septic tanks. The slopes in some excavated areas are unstable.

HkD—Hinckley gravelly sandy loam, 15 to 40 percent slopes. This soil is moderately steep to very steep and excessively drained. It is on side slopes and terrace breaks of stream valleys and outwash plains. The areas of this soil are long and narrow or irregularly shaped and range from 5 to 60 acres. Slopes are convex or undulating and are mostly less than 300 feet long.

Typically, the surface layer is very dark grayish brown gravelly sandy loam about 2 inches thick. The subsoil is dark yellowish brown, yellowish brown, and brownish yellow gravelly sandy loam and gravelly loamy sand 16 inches thick. The substratum is pale yellow gravelly sand to a depth of 60 inches or more.

Included with this soil in mapping are small areas of excessively drained Windsor soils, somewhat excessively drained Merrimac soils, and well drained Agawam soils. Included areas make up about 15 percent of the unit.

The water table in this Hinckley soil is commonly below a depth of 6 feet. The available water capacity is low. Runoff is rapid. This soil has rapid permeability in the surface layer and subsoil and very rapid permeability in the substratum, and it is extremely acid to medium acid.

Most areas of this soil are in woodland. A few areas are in pasture or hay.

Slope and a severe erosion hazard make this soil poorly suited to cultivated crops. Maintaining a permanent plant cover helps to control runoff and erosion in cultivated areas.

This soil is suited to woodland, but droughtiness causes a high rate of seedling mortality and slope hinders the use of some harvesting equipment.

Slope is the major limitation of this soil for community development. The rapid permeability causes a hazard of ground-water pollution in areas used for septic tanks.

MyA—Merrimac sandy loam, 0 to 3 percent slopes. This soil is nearly level and somewhat excessively drained. It is on terraces and outwash plains in stream valleys. The areas are irregular in shape and mostly range from 10 to 70 acres.

Typically, the surface layer is dark brown sandy loam 8 inches thick. The subsoil is yellowish brown sandy loam and loamy sand 16 inches thick. The substratum is yellowish brown gravelly sand and stratified sand and gravel to a depth of 60 inches or more.

Included with this soil in mapping are small areas of excessively drained Hinckley and Windsor soils, well drained Agawam soils, and moderately well drained Sudbury soils. A few large areas have a surface layer of fine sandy loam. Included areas make up about 15 percent of the unit.

The water table in this Merrimac soil is commonly below a depth of 6 feet. The available water capacity is moderate. This soil has moderately rapid permeability in the surface layer and upper part of the subsoil, moderately rapid or rapid permeability in the lower part of the subsoil, and rapid permeability in the substratum. Runoff is slow. The soil is extremely acid to medium acid.

Most areas of this soil are in cropland. A few areas are in woodland, and a few are used for community development or recreation.

This soil is well suited to cultivated crops, but it is droughty during extended dry periods. Minimum tillage and cover crops help to maintain tilth in cultivated areas.

The soil is suited to woodland, but droughtiness causes a moderate rate of seedling mortality.

This soil generally is suited to community development, but the rapid permeability of the substratum causes a hazard of pollution to the ground water in areas used for septic tanks. Some slopes of excavations in this soil are unstable.

MyB—Merrimac sandy loam, 3 to 8 percent slopes. This soil is gently sloping and somewhat excessively drained. It is on terraces and outwash plains of stream valleys. The areas are irregular in shape and mostly range from 5 to 40 acres. Slopes are smooth and convex and less than 200 feet long.

Typically, the surface layer is dark brown sandy loam 8 inches thick. The subsoil is yellowish brown sandy loam and loamy sand 16 inches thick. The substratum is yellowish brown gravelly sand and stratified sand and gravel to a depth of 60 inches or more.

Included with this soil in mapping are small areas of excessively drained Hinckley and Windsor soils, well drained Agawam soils, and moderately well drained Sudbury soils. A few large areas have a surface layer of fine sandy loam. Included areas make up about 15 percent of the unit.

The water table in this Merrimac soil is commonly below a depth of 6 feet. The available water capacity is moderate. This soil has moderately rapid permeability in the surface layer and upper part of the subsoil, moderately rapid or rapid permeability in the lower part of the subsoil, and rapid permeability in the substratum. Runoff is slow to medium. The soil is extremely acid to medium acid.

Most areas of this soil are in cropland. A few areas are in woodland, and a few are used for community development or recreation.

This soil is well suited to cultivated crops, but it is droughty during extended dry periods and has a moderate erosion hazard. Cover crops and minimum tillage help to control runoff and erosion in cultivated areas.

The soil is suited to woodland, but droughtiness causes a moderate rate of seedling mortality.

This soil generally is suited to community development, but the rapid permeability of the substratum causes a hazard of pollution to the ground water in areas used for septic tanks. Some slopes of excavations in this soil are unstable.

Nn—Ninigret fine sandy loam. This soil is nearly level to gently sloping and moderately well drained. It is in slight depressions of stream terraces and outwash plains. Slopes range from 0 to 5 percent. The areas of this soil are irregular in shape and mostly range from 5 to 30 acres.

Typically, the surface layer is very dark grayish brown fine sandy loam 8 inches thick. The subsoil is mostly mottled, yellowish brown and light olive brown fine sandy loam and is about 17 inches thick. The substratum is yellowish brown and light olive brown sand to a depth of 60 inches or more.

Included with this soil in mapping are small areas of well drained Agawam soils, moderately well drained Sudbury soils, and poorly drained Walpole soils. Some small areas have a few stones on the surface, and a few large areas have a surface layer of silt loam. Included areas make up about 10 percent of the unit.

This Ninigret soil has a seasonal water table at a depth of about 20 inches from fall to spring. The available water capacity of the soil is moderate. The soil has moderately rapid permeability in the surface layer and subsoil and rapid permeability in the substratum. Runoff is slow to medium. The soil is very strongly acid to medium acid.

Most areas of this soil are in cropland. A few areas are in woodland. Some areas are used for community development or recreation.

This soil is well suited to woodland and cultivated crops. Providing drainage to alleviate wetness in early spring is a main crop management concern. Minimum tillage and cover crops help to maintain tilth in cultivated areas.

The seasonal high water table is the main limitation of this soil for community development. The water table and the rapid permeability in the substratum cause a hazard of ground-water pollution in areas used for septic tanks. Some slopes of excavations in this soil are unstable.

Sg—Sudbury sandy loam. This soil is nearly level to gently sloping and moderately well drained. It is in slight depressions of outwash plains and stream terraces. The areas are mostly oval or irregular in shape and range from 4 to 20 acres. Slopes range from 0 to 5 percent.

Typically, the surface layer is dark brown sandy loam 10 inches thick. The subsoil is mottled, yellowish brown and strong brown sandy loam, gravelly sandy loam, and gravelly loamy sand 18 inches thick. The substratum is light brownish gray and dark gray stratified sand and gravel to a depth of 60 inches or more.

Included with this soil in mapping are small areas of somewhat excessively drained Merrimac soils, well drained Agawam soils, moderately well drained Ninigret soils, and poorly drained Walpole soils. Included areas make up about 10 percent of the unit.

This Sudbury soil has a seasonal high water table at a depth of about 20 inches from fall through spring. The soil has moderately rapid permeability in the surface layer and subsoil and rapid permeability in the substratum. Runoff is slow. The soil has moderate available water capacity and is very strongly acid to medium acid.

This soil is mostly used for corn for silage and hay and pasture. A few areas are in woodland, and some are used for community development or recreation.

This soil is well suited to woodland and cultivated crops. The seasonal high water table is the main limitation for crops. It causes the soil to dry and warm slowly in the spring. Artificial drainage helps to dry the soil earlier in the spring, but even if drained, the soil remains wet for several days after heavy rains. Minimum tillage and cover crops help to maintain tilth in cultivated areas.

The seasonal high water table is the main limitation of this soil for community development. Steep slopes of excavations in this soil are unstable. Lawns are soggy in autumn and spring. The rapid permeability in the substratum causes a hazard of ground-water pollution in areas used for septic tanks.

Sf—Scarboro fine sandy loam. This soil is nearly level and very poorly drained. It is in low depressions of outwash plains and terraces. The areas are mostly irregular in shape and range from 3 to 25 acres. Slopes range from 0 to 2 percent.

Typically, the surface layer consists of 4 inches of black muck over a 14-inch layer of very dark gray, black, and dark grayish brown fine sandy loam and sandy loam. The substratum is grayish brown loamy sand and sand to a depth of 60 inches or more.

Included with this soil in mapping are small areas of poorly drained Walpole soils and very poorly drained Adrian and Palms soils. Included areas make up about 10 percent of the unit.

This Scarboro soil has a seasonal high water table at or near the surface from fall until late spring. The soil has rapid permeability in the surface layer and very rapid permeability in the substratum. Runoff is slow, and water is on the surface of some areas. The soil has low available water capacity and is very strongly acid to medium acid.

This soil is mostly in woodland. A few small areas are in pasture.

The seasonal high water table makes this soil unsuited to cultivated crops and poorly suited to woodland. The water table restricts the use of equipment and causes a high rate of seedling mortality. The water table is also a major limitation for community development.

Wd—Walpole sandy loam. This soil is nearly level and poorly drained. It is in depressions and drainageways on stream terraces and outwash plains. The areas are mostly irregular in shape and range from 3 to 15 acres. Slopes range from 0 to 3 percent.

Typically, the surface layer is very dark brown sandy loam 6 inches thick. The subsoil is mottled, dark grayish brown and grayish brown sandy loam and gravelly sandy loam 17 inches thick. The substratum is mottled, light brownish gray gravelly loamy sand and gravelly sand to a depth of 60 inches or more.

Included with this soil in mapping are small areas of moderately well drained Ninigret, Pootatuck, and Sudbury soils; poorly drained Rippowam soils; and very poorly drained Scarboro soils. A few large areas have a surface layer of silt loam. Included areas make up about 10 percent of the unit.

This Walpole soil has a seasonal high water table at a depth of about 10 inches during fall and spring. This soil has moderately rapid permeability in the surface layer and subsoil and rapid or very rapid permeability in the substratum. Runoff is slow. The soil has moderate available water capacity and is very strongly acid to medium acid.

This soil is mostly in woodland. Some areas are used for pasture or hay, and a few areas are in community development.

Drained areas of this soil are suited to cultivated crops. Even when drained, however, this soil remains wet for several days after heavy rains, restricting the use of farming equipment. Minimum tillage and cover crops help to maintain tilth in cultivated areas.

The soil is suited to woodland, but seasonal wetness causes a high rate of seedling mortality and restricts the use of some types of harvesting equipment. Uprooting is a hazard during windy periods.

The seasonal high water table is a major limitation of this soil for community development, especially for onsite septic systems. Steep slopes of excavations in this soil are unstable. Lawns on this soil are soggy in fall and spring and after heavy rains.

APPENDIX C

VEGETATION INVENTORY

A. WETLAND VEGETATION

Grasses and Grass-like Species
Cattails (Typha latifolia)
Tussock sedge (Carex stricta)
Spike rush (Eleocharis sp.)
Nut sedge (Cyperus esculeatus)
Rice cutgrass (Leersia oryziodes)
Foxtail grass (Setaria sp.)
Wool grass (Scirpus americanus)

Forbs & Ferns
Milkweed (Asclepias sp.)
Touch-me-not (Impatiens capensis)
Sensitive fern (Onoclea sensibilis)
Yellow Pond-lily (Nuphar advena)
Hay-scented fern (Dennstaedtia punctilobula)
Spearmint (Mentha spicata)
Steeple-bush (Spiraea tomentosa)
Arrow-leaved Tearthumb (Polygonum sagittatum)
Bladderwort
Iris (Iris prismatica)
Duckweed (Lemna sp.)
Purple loosestrife (Lythrum salicaria)
Monkey flower (Mimulus ringens)
Water pepper (Persicaria hydropiper)
Dock-leaved persecaria (P. lapathifolia)
Water hemlock (Cicuta maculata)
Blue vervain (Verbena hastata)
Boneset (Eupatorium perfoliatum)
Joe-pye weed (E. purpureum)
Water horehound (Lycopus americanus)
Small-flowered gerardia (Gerardia paupercula)

Shrubs & Vines

Silky dogwood (Cornus amomum)
Nannyberry (Viburnum lentago)
Multiflora rose (Rosa multiflora)
Bayberry (Myrica pensylvanica)
Elderberry (Sambucus canadensis)
Dodder (Cuscuta gronovii)
Alders (Alnus rugosa & A. serrulata)

Trees

Red maple (Acer rubrum)

Weeping willow (Salix sp.)
Cottonwood (Populus deltoides)
White ash (Fraxinus americanus)

B. UPLAND VEGETATION

Grasses & Grass-like Species

Crabgrass (Digitaria sanguinalis)
Barnyard grass (Echinochloa sp.)
Redtop (Agrostis alba)
Little bluestem (Andropogon scoparius)
Couch grass (Agropyron repens)
Timothy (Phleum pratens)
Wild oats (Avena sp.)
Switchgrass (Panicum virgatum)
Deer's tongue grass (P. clandestinum)
Old witch grass (P. capillare)

Forbs & Ferns

Queen Ann's lace (Daucus carota)
Bladder campion (Silene cucubalus)
Common plantain (Plantago major)
English plantain (P. lanceolata)
Common mullein (Verbascum thapsus)
Starcap moss
Pipsissewa (Chimaphila umbellata)
Striped wintergreen (C. maculata)
Indian tobacco (Lobelia inflata)
Clover (Trifolium spp.)
White sweet clover (Melilotus alba)
Fleabane (Erigeron sp.)
Jack-in-the pulpit (Arisaema atroruben)
Great Solomon's seal (Polygonatum canaliculatum)
Puffballs
New York fern (Thelypteris noveboracensis)
Pink lady's slipper (Cypripedium acaule)
Yarrow (Achillea millefolium)
Ragweed (Ambrosia artemisiifolia)
Common mugwort (A. vulgaris)
Canada mayflower (Maianthemum canadense)
Evening primrose (Oenothera biennis)
Cinquefoil (Potentilla sp.)
Self heal (Prunella vulgaris)
Indian pipes (Monotropa uniflora)

Common speedwell (Veronica officinalis)
Everlasting pea (Lathyrus latifolius)
Lance-leaved goldenrod (Solidago graminifolia)
Rough-stemmed goldenrod (S. rugosa)
Gray goldenrod (S. nemoralis)
Hay-scented fern (Dennstaedtia punctilobula)
Rock polypody (Polypodium sp.)
Blue curls (Trichostema dichotum)
Sweet everlasting (Gnaphalium obtusifolium)
Pearly everlasting (Anaphalis margaritacea)
Nodding burr marigold (Bidens cernua)
Canada hawkweed (Hieracium canadense)
Curly dock (Rumex crispus)
Calico aster (Aster laterifolius)
Ground pine (Lycopodium obscurum)
Ground ceder (L. complanatum)

Shrubs & Vines

Baneberry (Actaea sp.)
Smooth sumac (Rhus glabra)
Poison ivy (R. radicans)
Russian olive (Eleagnus angustifolia)
Grape (Vitis americana)
Dewberry (Rubus flagellaris)
American pokeweed (Phytolacca americana)
Common juniper (Juniperus communis)
Virginia creeper (Parthenocissus quinquefolia)
Sweet fern (Myrica asplenifolia)
Witch hazel (Hamamelis virginiana)
Japanese barberry (Berberis thungergi)
Japanese knotweed (Polyganum cuspidatum)
Chokecherry (Prunus virginiana)

Trees

Red cedar (Juniperus virginiana)
Red maple (Acer rubrum)
American beech (Fagus grandifolia)
White pine (Pinus strobus)
White ash (Fraxinus americana)
Black birch (Betula lenta)
Grey birch (B. populifolia)
Hickory (Carya spp.)
Quaking aspen (Populus tremuloides)
Wild black cherry (Prunus serotina)
White spruce (Picea glauca)
Fir (Albies balsamea)
White oak (Quercus alba)
Red oak (Quercus rubra)
American elm (Ulmus americana)

FAUNA

A. Birds

Blue Jay
Slate colored Junco
Least Flycatcher
Willow Flycatcher
American Robin
Green Heron
American Crow
Grey Catbird
Chipping Sparrow
Mourning Dove
Rock Dove
Red-eyed Vireo
Veery
Eastern Phoebe
Cardinal
Kingbird
Common Yellowthroat
American Goldfinch
Northern Goshawk
Eastern Wood Pewee
House Sparrow
Black-capped Chickadee
Common Bobwhite

B. Mammals

Deer
Grey squirrel
Raccoon

C. Fish and Amphibians

Carp
Turtles
Frogs

D. Insects

Mosquitoes
Gnats
Crickets
Bumblebees & Yellowjackets
White moths
Beetles
Waterskimmers
Blue-tailed dragonflies
Monarch Butterfly

Tentworm

Office of the
STATE
HISTORIC
PRESERVATION
OFFICER
for Connecticut

59 SOUTH PROSPECT STREET - HARTFORD, CONNECTICUT 06106 - TEL: (203) 566-3005

October 11, 1983

Ms. Jeanne Shelburn
Team Coordinator
Environmental Review Team
Eastern CT Resource Conservation
& Development Area
Route 205
Box 198
Brooklyn, CT 06234

Subject: Mercier Property
Brooklyn, CT

Dear Jeanne:

Based upon the ERT's on-site inspection of the above-named property, it appears that the remains of the 19th century brickyard operation represent a significant archaeological resource. In particular, the surviving industrial archaeological remains, that is , the drying yard, waster piles, filled-in clay pits, pug mills, and other related features, may meet the eligibility criteria for the National Register of Historic Places. However, formal acknowledgement of such eligibility would require additional documention concerning the site's industrial history and the integrity of the archaeological remains. This office in not aware of any other surviving 19th century brickyard operations in the state and therefore the Mercier site, despite its extensive alterations, maybe of state wide significance.

This office believes that it may be feasible for the proposed industrial development and the in situ conservation of the industrial archaeological evidence to coexist. To accomplish such a possibility, it is imperative that a professional archaeological study be undertaken to locate, identify, map and evaluate the 19th century archaeological remains. This office would be please to provide additional information concerning both the National Register nomination process and the identification of archaeological organizations, who might be willing to provide further technical assistance.

The enclosed National Park Service "How To" provides information concerning potential federal tax incentive for the preservation of significant archaeological resources.

If I can be of further assistance, please advise.

Sincerely,

David A. Poirier
Archaeologist

DAP/IJ

Enclosure

6 HOW TO

U.S. Department of the Interior
National Park Service
National Register Division
Washington, D.C. 20240

Summer
1981

HOW TO QUALIFY HISTORIC PROPERTIES UNDER THE NEW FEDERAL LAW AFFECTING EASEMENTS

by Emma Jane Saxe
Architectural Historian

The Tax Treatment Extension Act of 1980 makes permanent the Federal income and estate tax deductions for charitable contributions of partial interests in real property (land and buildings). Taxpayers' gifts of qualified interests must be "exclusively for conservation purposes."

Provisions of the Law (Amendment to Section 170 of Internal Revenue Code of 1954)
—A "qualified real property interest" includes any restrictions on the use which may be made of the real property. Restrictions, which must be granted in perpetuity, include easements, covenants or other conditions placed upon the property.
—The qualified real property interest must be contributed to "a qualified organization," defined to include governments and publicly supported charities.
—The contribution of the interest must be "exclusively for conservation purposes." One of these purposes is defined as the preservation of "historically important" land areas and certified historic structures. A "certified historic structure" is defined much in the way that it is defined for purposes of the historic structures amortization and accelerated depreciation provisions (listed in the National Register or located in a registered historic district and certified by the Secretary of the Interior as being of historic significance to the district), with two modifications:
—A certified historic structure can be either depreciable or non-depreciable property, thus qualifying owner-occupied residences.
—A certified historic structure means a "building, structure, or land area."

GENERAL INFORMATION

1. What are easements or restrictive covenants?

"Preservation Easements", a publication of the Maryland Historical Trust, defines an easement as "an interest or right in property which is less than the full, or fee simple, interest." This partial interest results in a restriction on the use of the property, such as a limitation on land development or structure modification. Another publication entitled "Conservation and Historic Preservation Easements to Preserve North Carolina's Heritage," by Lance Peacock and Charles Roe, elaborates further. A conservation or preservation easement is conveyed by a legal document and is written in deed form and filed with the county recorder of deeds. An easement may run with the title to the land, thereby affecting each succeeding owner in the same way as it does the first.

2. Why would a property owner consider donating an easement?

An owner who donates an easement is initiating protective measures which may not be available through governmental regulation to insure the ongoing preservation and future appropriate use of a parcel of land or a structure and its setting. He or she may qualify for certain tax benefits (explained below) while achieving protection of an historic property from incompatible alterations and pressures to develop the land to its "highest and best" use.

3. How does an easement protect property?

Typically a deed of easement gives the easement holder the right of prior review and approval of proposed alterations to a structure or its setting. The easement could require approval of any proposed changes in land use, such as subdivision, in order to provide, for example, for the preservation of specific natural habitats. The holder of the easement is authorized to enforce the easement terms in the event of a violation.

4. How are easements valued?

Conservation easements are typically valued as the difference between the fair market value of the property before and after the grant of the easement. The valuation is made by a professional appraiser, who can be located by consulting with the several professional appraisal societies that qualify their members. The appraiser needs to consider the effects of historic designation on current property values and the likelihood of changes in zoning, but in actuality the appraisal principles employed are similar to those used in valuing public access and flowage easements.

SPECIFIC INFORMATION

1. How do easements on structures and land qualify as a contribution "exclusively for conservation purposes"?

One way an easement contribution can qualify is to meet the purpose of preserving either historically important land areas or certified historic structures. Buildings and structures can become qualified through the existing certification process for structures in registered historic districts, under current Department of the Interior regulations (36 CFR 67, formerly 36 CFR 1208), or by being listed individually in the National Register. Registered historic districts include any district listed in the National Register and any district, designated under a certified state or local statute, which itself is certified as meeting substantially all of the requirements for the listing of districts in the National Register.

The owner initiates the certification process for structures by submitting a completed Part 1 of the Historic Preservation Certification Application form to the State Historic Preservation Officer (SHPO), who makes a recommendation to the National Park Service (NPS) regional office within 45 days. The NPS then has 30 days to issue a certification decision. If the donor's structure is individually listed, no further action is necessary. The donor can provide proof of the listing to the Internal Revenue Service (IRS) by copying the pertinent page of the annual listings in the "Federal Register."

An "historically important land area" will most likely be defined, once IRS regulations are issued, as land areas that meet National Register criteria, though actual

listing in the Register may not be required. Other land areas that may also qualify under forthcoming regulations include land on which a certified historic structure in a district stands and vacant land within a district. Land areas which currently do qualify are those listed individually in the National Register as "sites" and land included with a structure that is individually listed.

Donation of an easement on either structures or land may also qualify as being for conservation purposes under two additional criteria contained in the law:

> "the preservation of land areas for . . . the education of the general public (and) the preservation of open space (including farmland and forest land) where such preservation is (I) for the scenic enjoyment of the general public or (II) pursuant to a clearly delineated Federal, State, or local governmental conservation policy, and will yield a significant public benefit."

Specific procedures for qualifying properties under these criteria will be addressed in forthcoming IRS regulations.

2. How should owners proceed in cases where their potential certified historic structures are not yet listed in the National Register or certified as significant?

Owners wishing to donate easements in this situation need to consider carefully the timing of the donation. The property on which an easement is being donated must be listed on the National Register or certified as significant (Part 1) by the time of the donation or by the time that the taxpayer files his tax return for the taxable year in which the transfer is made. Although tax returns are due April 15, a 3 month extension is possible if requested and a 3 month additional extension is possible for showing just cause, so the taxpayer will generally have until October 15 of the year following the donation to have his property listed or certified. It is our understanding that it will not be possible to take tax deductions for charitable donations (conservation contributions) based upon the receipt of a preliminary certification as an owner can do with the historic structures amortization provisions of the tax code. Listing or final Part 1 certification will be required by the time the deduction is claimed.

3. What are the tax consequences?

For federal income tax purposes, the value of the donated easement is deductible as a charitable contribution deduction (not to exceed 50% of the taxpayer's adjusted gross income in the year of donation), thereby reducing the donor's taxable income. The value in excess of 50% of adjusted gross income may be carried for five succeeding tax years. Special rules pertain to the donation of an easement on property whose value has appreciated. In the case of appreciated property, the owner may deduct an amount up to 30% of adjusted gross income, with any excess amount allowed to be carried over as a deduction for up to five more consecutive years. An alternative method allows the taxpayer to deduct up to 50% of adjusted gross income if the value of the easement is first reduced by 40% of the amount of the appreciation that would be realized if the property were sold at a fair market value.

Federal estate taxes, too, may be reduced by donation of an easement. The value of the estate upon which such taxes are assessed will be reduced because of the limitations the easement may put on development potential.

Conservation contributions may also have an effect on state income and estate taxes if state laws authorize deductions similar to those allowed by the federal government.

Depending on state law, property owners may also benefit from the contribution of an easement by saving on the amount of property taxes due each year. This would occur if the easement reduced the assessed value of the land, which should occur when the owner permanently relinquishes future development rights on the property.

4. Which organizations meet the definition of "a qualified organization" to receive tax deductible easement contributions for conservation purposes?

Organizations which qualify are (1) state or local governmental agencies which have legal authority to accept interests in property and (2) private organizations which meet the statutory requirements for a publicly supported charity. These include charitable, educational and other non-profit groups such as a state-wide preservation fund, a local historical society, or a local preservation organization. A potential donor should consult with legal counsel and may wish to verify an organization's status as a publicly supported charity by using the Cumulative List of Organizations, published as Internal Revenue Service Publication 78.

Additional Resources (Persons and Publications)

Department of Interior, National Park Service,

- Division of the National Register of Historic Places, 440 G Street, N.W., Washington, D.C. 20243 Sally Oldham or Emma Jane Saxe, (202) 272-3504
- Rocky Mountain Regional Office, P.O. Box 25287, Denver, Colorado 80225, Glenn Tiedt, (303) 234-6457

National Trust for Historic Preservation, 1785 Massachusetts Ave., N.W. Washington, D.C. 20036 (202)673-4000, offers technical assistance and refers potential donors of preservation easements to their regional offices. The trust's acceptance of easements is limited to properties with National Historic Landmark status.

Conservation and Historic Preservation Easements to Preserve North Carolina's Heritage, available from the North Carolina Division of Archives and History, North Carolina Department of Cultural Resources, 108 East Jones Street, Raleigh, N.C. 27611 (919)733-6545

Easements and Other Legal Techniques to Protect Historic Houses in Private Ownership, by Thomas Coughlin, Assistant General Counsel, National Trust for Historic Preservation, available from Historic House Association of America, 1600 H Street, N.W., Washington, D.C. 20006 (202)272-3703

"Legal Tools to Preserve Archeological Sites" by Geoffrey M. Gyrisco, Archeologist, District of Columbia State Historic Preservation Office in Special Issue, Fall 1980, of 11593, U.S. Department of Interior, Heritage Conservation and Recreation Service. Author discusses use of easements as tool to aid in the protection of archeological resources. Available from Division of State Plans and Grants, National Park Service, Department of Interior, 440 G Street, N.W., Washington D.C. 20243 (202)343-6221

Preservation Easements, available from the Maryland Historical Trust, 21 State Circle, Annapolis, MD 21401 (301)269-2212

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 activitis. 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 (774-1253), Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, P.O. Box 198, Brooklyn, Connecticut 06234.