

Environmental Review Team Report

Washington Park Groton, Connecticut

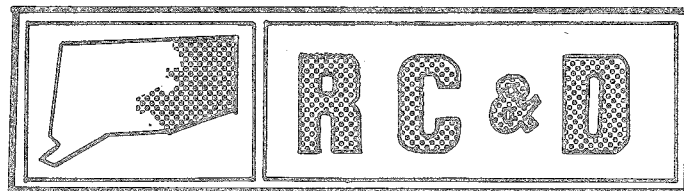


EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

Environmental Review Team
Report
on

Washington Park
Groton, Connecticut

August 1980



eastern connecticut resource conservation & development area

environmental review team
139 boswell avenue
norwich, connecticut 06360

Location of Study Site

WASHINGTON PARK
GROTON, CONNECTICUT

MASSACHUSETTS

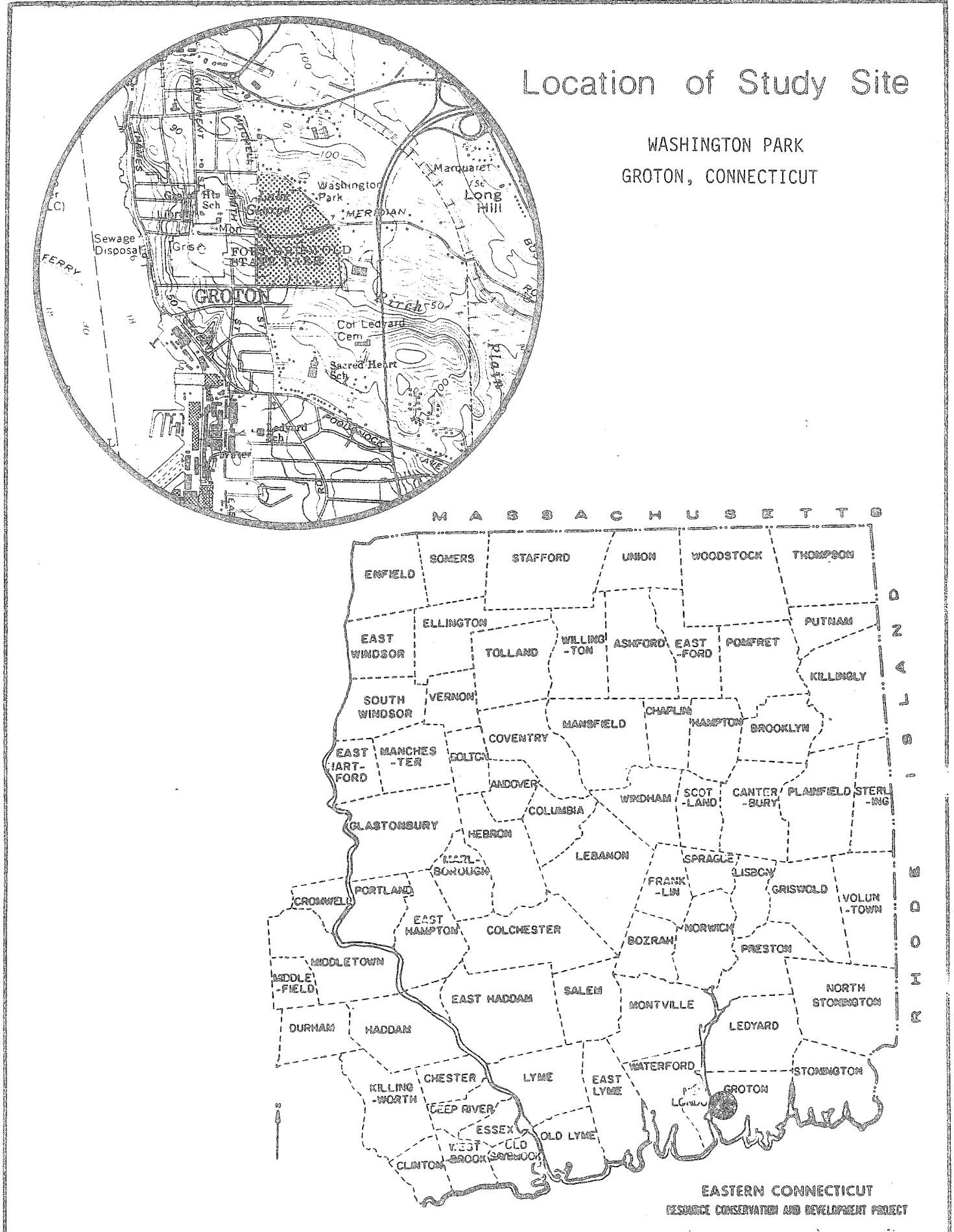
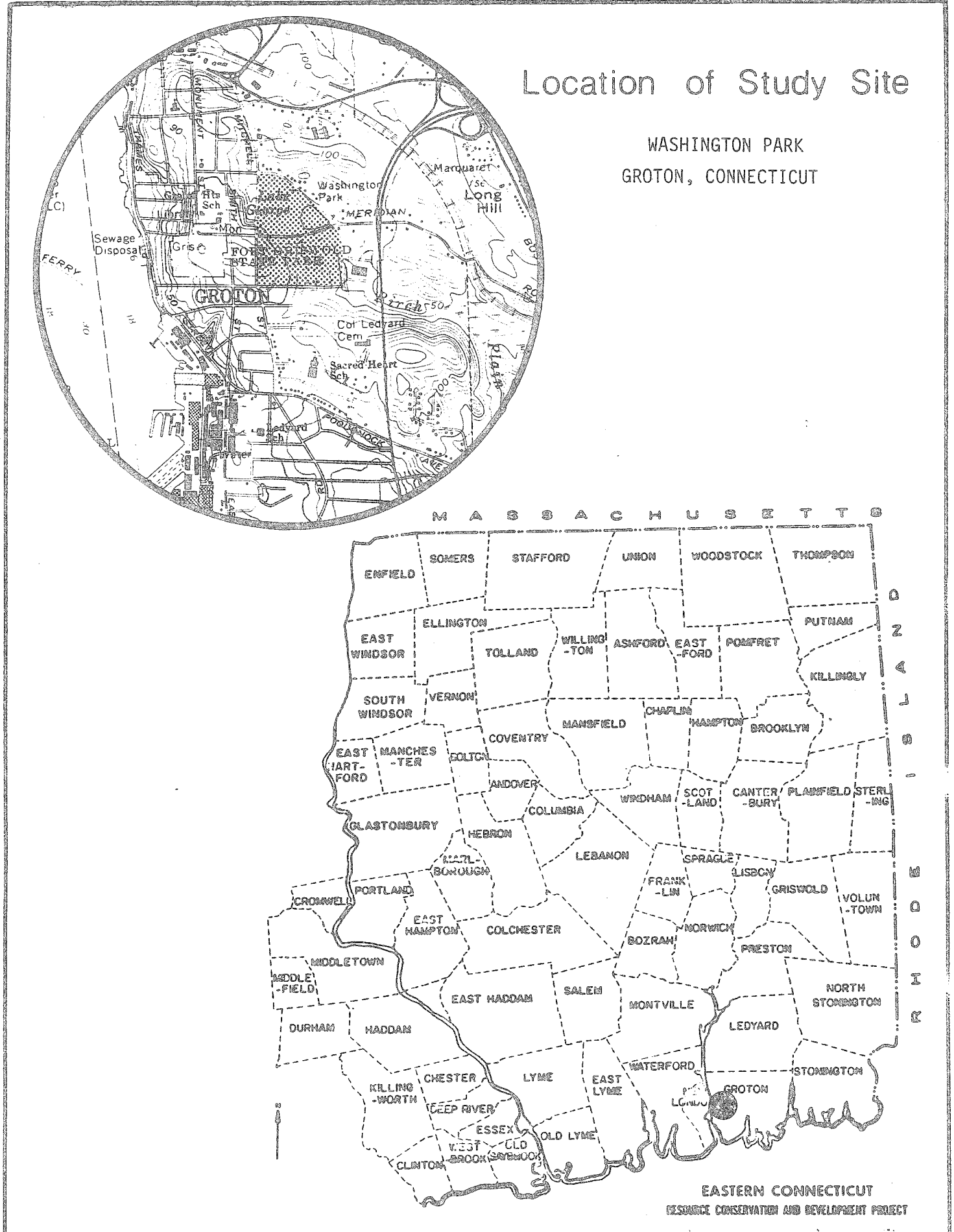
EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

Location of Study Site

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GROTON, CONNECTICUT

M A S S A C H U S E T T S

EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT



ENVIRONMENTAL REVIEW TEAM REPORT
ON
WASHINGTON PARK
GROTON, CONNECTICUT

This report is an outgrowth of a request from the City of Groton Recreation Commission to the New London County Soil and Water Conservation District (S&WCD). The S&WCD referred this request to the Eastern Connecticut Resource, Conservation and Development (RC&D) Area Executive Committee for their consideration and approval. The request was approved and the measure 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.

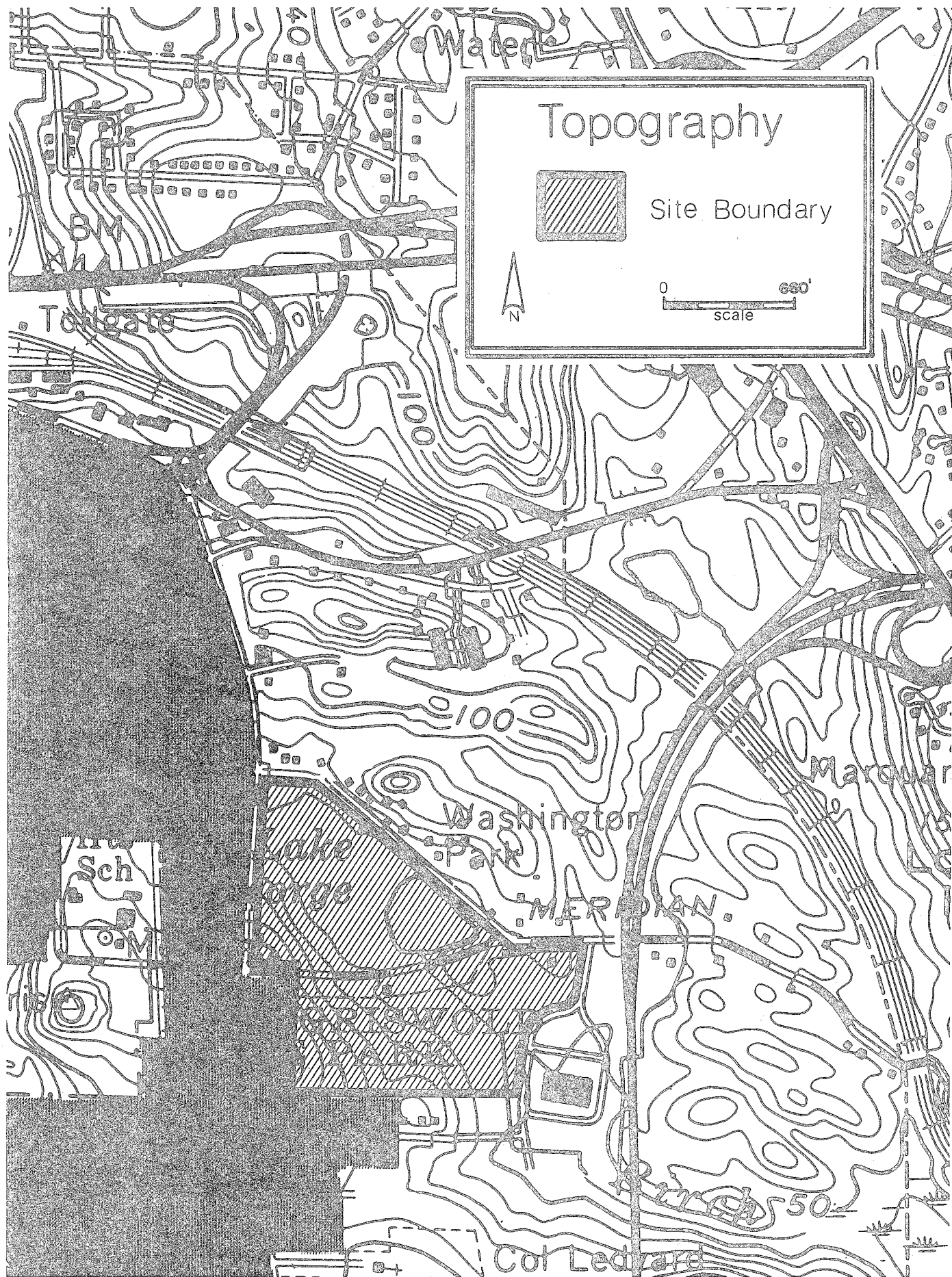
The ERT that field-checked the site consisted of the following personnel: Gary Domian, District Conservationist, SCS; Rob Rocks, Forester, Connecticut Department of Environmental Protection (DEP); Michael Zizka, Geologist, DEP; Andy Petracco, Recreation Specialist, DEP; Tom Seidel, Regional Planner, Southeastern Connecticut Regional Planning Agency; and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

The Team met and field checked the site on Thursday, June 12, 1980. Reports from each contributing Team member were sent to the ERT Coordinator for review and summarization for the final report.

This report is not meant to compete with private consultants. As requested by the city, this report, which identifies the existing resource base of Washington Park, shall constitute the environmental assessment portion of the city's open space application for Federal Department of the Interior, Heritage Conservation and Recreation Service funds to assist in the acquisition of this property.

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

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



DESCRIPTION OF THE PROPOSAL

The Eastern Connecticut Environmental Review Team was asked to prepare an environmental assessment of proposed additional development in Washington Park in the City of Groton. The City is applying for Heritage Conservation and Recreation Service development funding for this project.

The City of Groton currently operates the 30 acre Washington Park, located adjacent to its Municipal Office Building. The park is mostly open lawn area on its flat portions and partially wooded on the sloped portions. Ballfields currently occupy the level areas and picnic sites occupy the wooded portions. A terraced area provides tennis courts. The tract offers a considerable range of facilities in a relatively compact area, but through efficient layout and effective use of space these facilities do not appear crowded. The tract should readily accommodate the additional facilities with no undue taxation of the resource base. Intensive management and maintenance of the park have served to minimize the potentially negative impacts on the trees and lawn and make for the park's having a neat and well cared for appearance.

Improvements call for new lighting for the softball and Babe Ruth fields and tennis courts, the repaving of the basketball courts, and the regrading of the Babe Ruth field after installing a new drainage system. New facilities called for are practice tennis courts, portable bleachers, additional picnic pavilions, and a parcourse. The existing workshop will be renovated and converted to a more suitable concession. A recently acquired residence located near the municipal building will become the new utility building offering more work and storage area. No plans for parking area expansion have been made since existing parking space is felt to be adequate for meeting demand. The city has additional plans to eventually install a football field, but this is not under consideration as a part of this project.

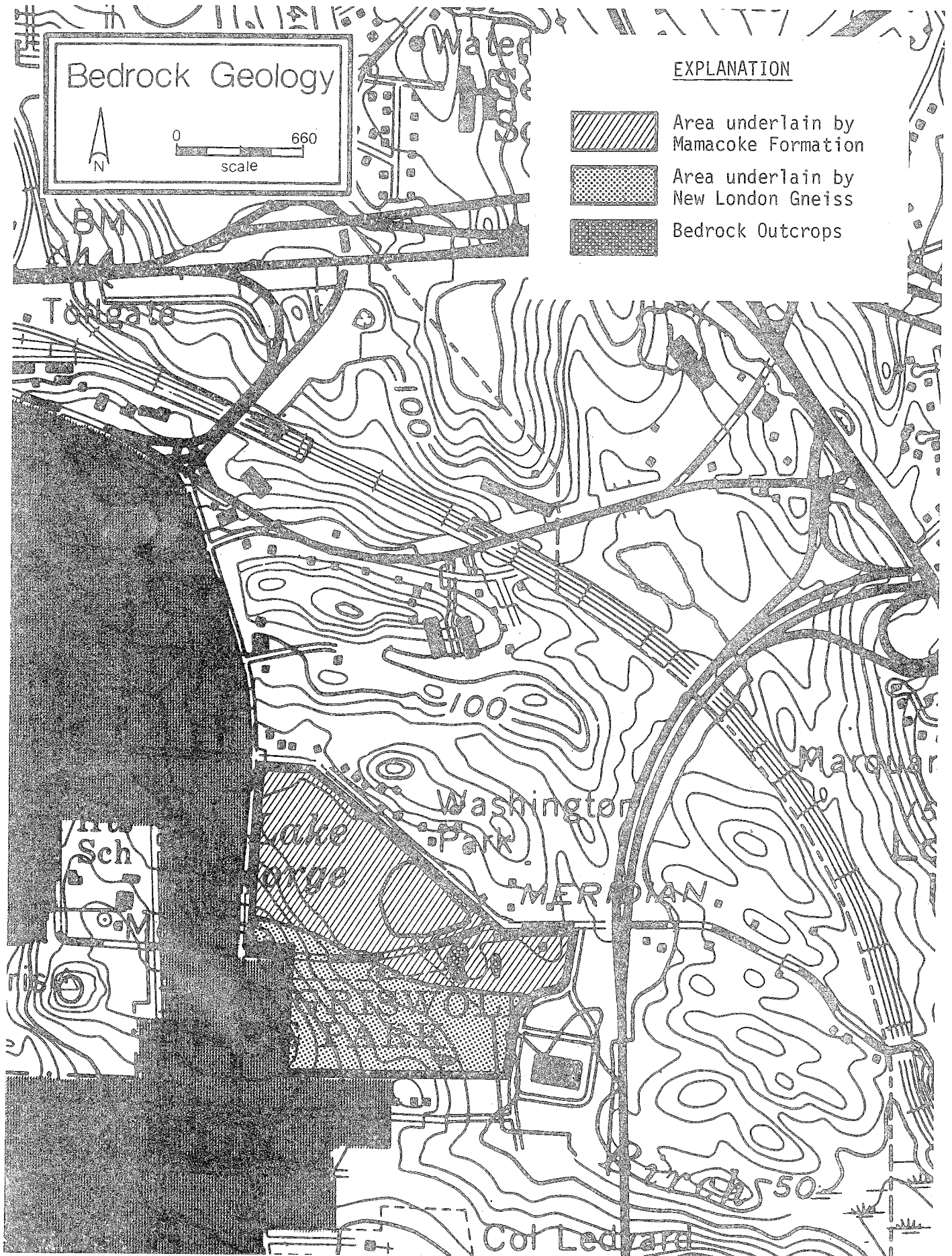
Access to the site is excellent with the nearby Defense Access Highway providing a direct link to Interstate Route 95.

No other open space planning efforts or recreation projects are affected by this project.

DESCRIPTION OF THE ENVIRONMENT

PAST/PRESENT LAND USE

Present and past use of the site has been active recreation. Surrounding land uses are residential and commercial. The area is zoned for recreational-open space. Both the Groton Town Plan and the Regional Development Plan recommend the area for recreation and open space uses.



SOCIO-ECONOMIC CONDITIONS

Population of the City of Groton was 8,933 in 1970. Separate estimates and projections for the City have not been developed since the Census. The City and Town of Groton together are expected to reach 39,000 persons in 1990.

TRANSPORTATION ROUTES

Washington Park is located north-central with respect to the City's population. The site is easily accessible by foot, bicycle, car and bus. The recently incorporated bus service provides hourly service at Smith Street, one block west of the park.

SURFACE/SUBSURFACE GEOLOGIC CONDITIONS

Washington Park is located within the New London topographic quadrangle. Bedrock and surficial geologic maps of the quadrangle have been prepared by Richard Goldsmith and published by the U.S. Geological Survey.

Bedrock cropping out on and underlying the site consists of two major formations: New London Gneiss and Mamacoke Formation. The accompanying bedrock geologic map shows the approximate distribution of the two units. New London Gneiss is a light gray, medium-grained to fine-grained, massive gneissic granodiorite or quartz monzonite. The terms "gneiss" and "gneissic" are given to metamorphic rocks in which the minerals show a distinct lineation. "Granodiorite" and "quartz monzonite" are terms that reflect the mineral composition of the rock. The major minerals in New London Gneiss are oligoclase, quartz, microcline, and biotite. Magnetite is a minor component. Mamacoke Formation consists of gneisses of more widely varying mineral make-ups. Included in this unit are biotite-quartz-orthoclase gneiss, calc-silicate gneiss, biotite-andesine gneiss, and amphibolite. As the names suggest, it is not the minerals themselves that differ greatly from layer to layer but the relative abundance of each mineral with respect to the others.

The surficial geology of the park consists largely of till and artificial fill. Till is a glacial sediment comprising rock particles and fragments of widely ranging sizes and shapes. The rock materials were picked up by an ice sheet as it moved southward through New England, gouging, scraping, and plucking at the preexisting soil-and-bedrock surface. These materials were redeposited directly from the ice and consequently lack any significant layering or grainsize sorting, as they might have if they had been deposited by moving water. Fill has been brought into the park for grading purposes in several areas. The soils map in this report shows the approximate extent of the fill. Bedrock crops out only in a few areas, most noticeably immediately south of the intersection of Park Avenue and Meridian Street. The pond area contains fine-grained stream-deposited sediments and organic materials, probably overlying till.

SOILS

Soil series typical of this site include the Charlton-Hollis series and the Udorthents series.

Land areas that have been disturbed, to an extent that the natural soil layers are no longer recognizable, are mapped as Udorthents. These soils are designated with the mapping unit symbol ML2. Interpretations and limitations are variable because the soil has been disturbed. The baseball fields, basketball courts and dry lake occupy most of these soils.

The moderately steep slopes are occupied by Canton-Charlton fine sandy loam. The soils are designated by the mapping unit symbol 11D. The soils developed in loamy glacial till. The soils are well-drained and have permeability ranging from moderate to rapid. Surface runoff is medium to rapid.

The gently sloping to sloping landforms are occupied by Charlton-Hollis fine sandy loams. These soils are designated by the mapping unit symbol (17LC). The Charlton soils formed in deep friable glacial till, and the Hollis soils formed in glacial till less than 20 inches deep over bedrock. Both soils are well-drained. Charlton soils have moderate to moderately rapid permeability, and the Hollis soils have moderate permeability. Surface runoff is medium to very rapid for Hollis soils and medium to rapid for Charlton soils.

The soil limitations for the park area will not have an impact for some of the improvements planned. The park section that is north of Park Avenue has already been regraded and drainage patterns established. Improvements on the Babe Ruth field should include plans to divert runoff water flowing north, downslope to the ball field. There is evidence of bedrock in the area and this can be a limiting factor in major land regrading projects.

The improvements scheduled south of Park Avenue will also not be severely limited for establishing new picnic pavilion areas. There are some bedrock exposures in the area and these will have to be taken into account when locating the pavilions.

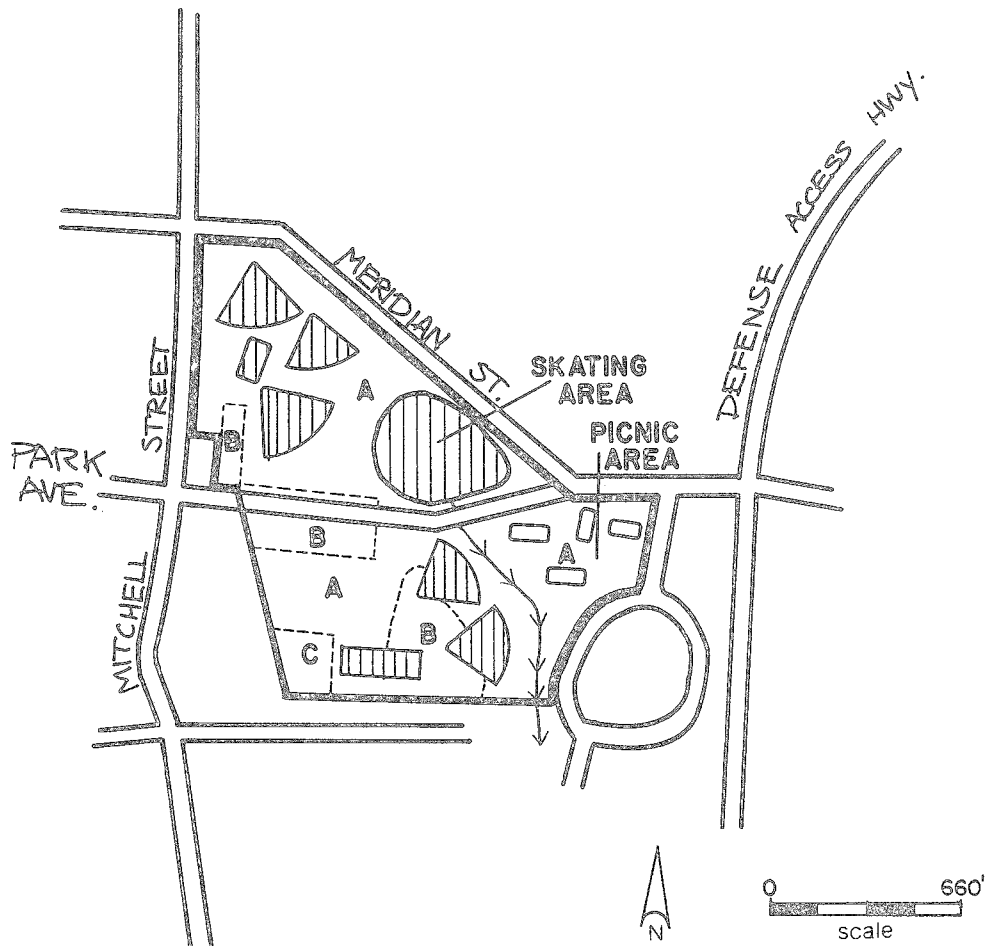
The establishment of new tennis courts are limited because of slope and the possibility of shallow to bedrock conditions. Runoff water control, particularly south of Griswold Street is of concern because of the slope and the regrading that will take place. Runoff water will have to be directed away from present and planned facilities at the park.

WATER RESOURCES





The property lies within the upper watershed of Birch Plain Creek. The one stream on the site originates in the pond area between Park Avenue and Meridian Street. The pond area itself is shallowly flooded only in winter for skating purposes; it is drained for the remainder of the year. The stream is artificially channeled from its origin at the pond area to its passage under the Defense Access Highway, southeast of the site and the Municipal Building. The baseball and softball fields were established on fill that was placed in wetlands and floodplain areas that formerly adjoined the stream. Flood flows are generally confined to the channels and the pond area.

No high-potential aquifers are known or believed to exist on the site. Water for the park is available from the city's public water-supply system.

WASHINGTON PARK GROTON, CONNECTICUT



LEGEND

-  Road
-  Property Boundary
-  Stand Type Boundary
-  Athletic Areas (SOD)

VEGETATION TYPES*

- TYPE A. Open field, 15-acres.
- TYPE B. Mixed hardwoods, 5-acres,
Fully stocked, pole size.
- TYPE C. Old field, 1-acre.

- * Seedling-size = Trees less than 1 inch in diameter at 4 1/2 feet
above the ground (d.b.h.)
- Sapling-size = Trees 1 to 5 inches in d.b.h.
- Pole-size = Trees 5 to 11 inches in d.b.h.
- Sawtimber-size = Trees 11 inches and greater in d.b.h.

WILDLIFE

The site is frequented by urban wildlife forms such as dogs, cats, squirrels, skunks, racoons, chipmunks, seasonal songbirds and pigeons.

VEGETATION

The "Washington Park" area has been intensily developed for recreational purposes. Athletic fields, a skating area and parking areas total approximately ten acres. These areas are vegetated with well maintained turf grasses. The remaining area may be divided into three vegetation types, these include open field, mixed hardwoods and old field. (See Vegetation Type Map).

Type A. (Open Field) - This 15-acre area is well vegetated with turf grasses. Healthy, well maintained, sawtimber-size shade and ornamental trees are present in patches scattered throughout this area. Species present include, but are not limited to, red oak, American elm, weeping willow, black cherry and sugar maple.

Type B. (Mixed Hardwoods) - This 5-acre stand is fully stocked with medium quality pole-size red oak, black oak, white oak, red maple, black cherry and patches of black gum. Understory vegetation has been cleared from this area. Ground cover is made up of grasses, Canada mayflower, oriental bittersweet, poison ivy, whorled loosestrife, bittersweet, night shade, jewel weed and other assorted wild flowers. At present the major portion of the trees in this area are healthy. Dead trees and trees which are obviously unhealthy or damaged should be removed. Their removal will improve aesthetic quality and reduce the possible hazard of injury caused by falling branches.

Type C. (Old Field) - This one-acre old field is vegetated with black cherry seedlings, poison ivy, grasses, goldenrod, clover, buttercup, cinquefoil, field hawkweed, yarrow, wild strawberry and blue star grass.

PROBABLE FUTURE ENVIRONMENT

If development funding is unavailable, the area will remain in recreational use, but use to its fullest potential will be unrealized.

ENVIRONMENTAL IMPACT

EFFECT ON LAND USE

The effect on land uses in the area should be minimal. One more field and the tennis courts will be lighted for use later into the evening. The area between the houses on Baker Avenue and the tennis courts is composed of some woody vegetation. A coniferous buffer in this area would better shield the courts from these homes.

EFFECT ON SOCIO-ECONOMIC CONDITIONS

This proposal should have no appreciable effect on socio-economic conditions in the area.

EFFECT ON TRANSPORTATION ROUTES

Transportation routes should be affected very little. The parking lot of the adjoining municipal building could be used for any overflow parking. Because the park is in an urban setting the modes of transportation previously discussed mean that all access will not be by auto. This should promote energy conservation.

EFFECT ON WATER RESOURCES

Only one of the proposed projects would have any bearing on the water resources of the site. New drainage pipes are proposed for Babe Ruth Field. These pipes would drain excess groundwater from the field, improving playing conditions. No noticeable impact on either ground or surface waters would result.

One other consideration is the potential need for expansion of septic facilities to accommodate the anticipated increased usage of the park (the increase is expected to be up to 50 percent, according to city recreation officials). Most of the additional usage would be on the Babe Ruth Field, where lighting would be improved. Toilets in that area are connected to the city sewer system, so groundwater would not be affected. Toilets in the area of the farm league and girls' softball fields are connected to septic systems. The capacity of those systems should be evaluated in terms of anticipated increases in usage of that area. Assuming adequacy of the septic system, no groundwater-quality deterioration should be experienced.

EFFECT ON WILDLIFE

This proposal should have no adverse impact on wildlife using the area.

EFFECT ON VEGETATION

The improvements proposed for "Washington Park" will have little, if any, negative impact on the vegetation present. Ground cover vegetation will be removed in areas where the new picnic pavilions and practice tennis court will be constructed. Loss of this vegetation will be insignificant.

IRRETRIEVABLE COMMITMENTS OF RESOURCES

No unavoidable adverse impacts on geological or water resources are anticipated. No irreversible or irretrievable commitments of such resources are involved.

ALTERNATIVES TO THE PROPOSED ACTION

The alternative of no action is not realistic. The park is in an urban setting and the scheduled improvements will increase the park's use, attractiveness, and availability. Promoting more and better use of a facility close to the population it serves makes sense in a time of energy shortages.

RECREATION POTENTIAL

The southeast corner of the park abuts a residential area with those residences visible from the tennis courts. A conifer screen planting along this boundary would provide mutual sight and sound screening and a feeling of more privacy to both the park users and residents. Arborvitae, white pine, and hemlock are some species which can be used to this end, with best species selection based on the site suitability and a landscape designer's recommendation.

An attempt should be made to minimize erosion and compaction potential when installing the parcourse. Trail routing in sloped areas is particularly critical from an erosion standpoint. Foot compaction and erosion possibilities can be reduced by proper trail construction, providing a porous gravel or crushed stone subgrade and stone dust surface. Wood chip use would be impractical on a trail designed for this use. Trail portions directly routed up slopes should incorporate diversions to direct water off the trail before its velocity can build up and cause erosion. Exercise stations should be similarly constructed. Erosion on steep slopes may result from severe storms despite design attempts to preclude this occurrence.

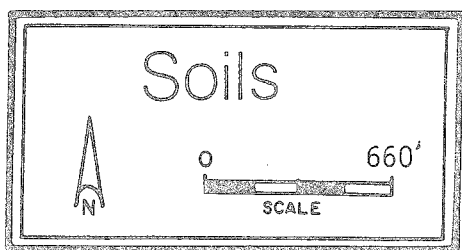
The installation of practice tennis courts adjacent to the existing courts will provide expanded opportunities for use. The existing courts are said to be heavily used.

Three additional picnic pavilions are planned for installation. These would supplement the existing pavilions and provide temporary shelter to picnickers and other park users during summer showers. Use of these shelters is anticipated as being rather heavy.

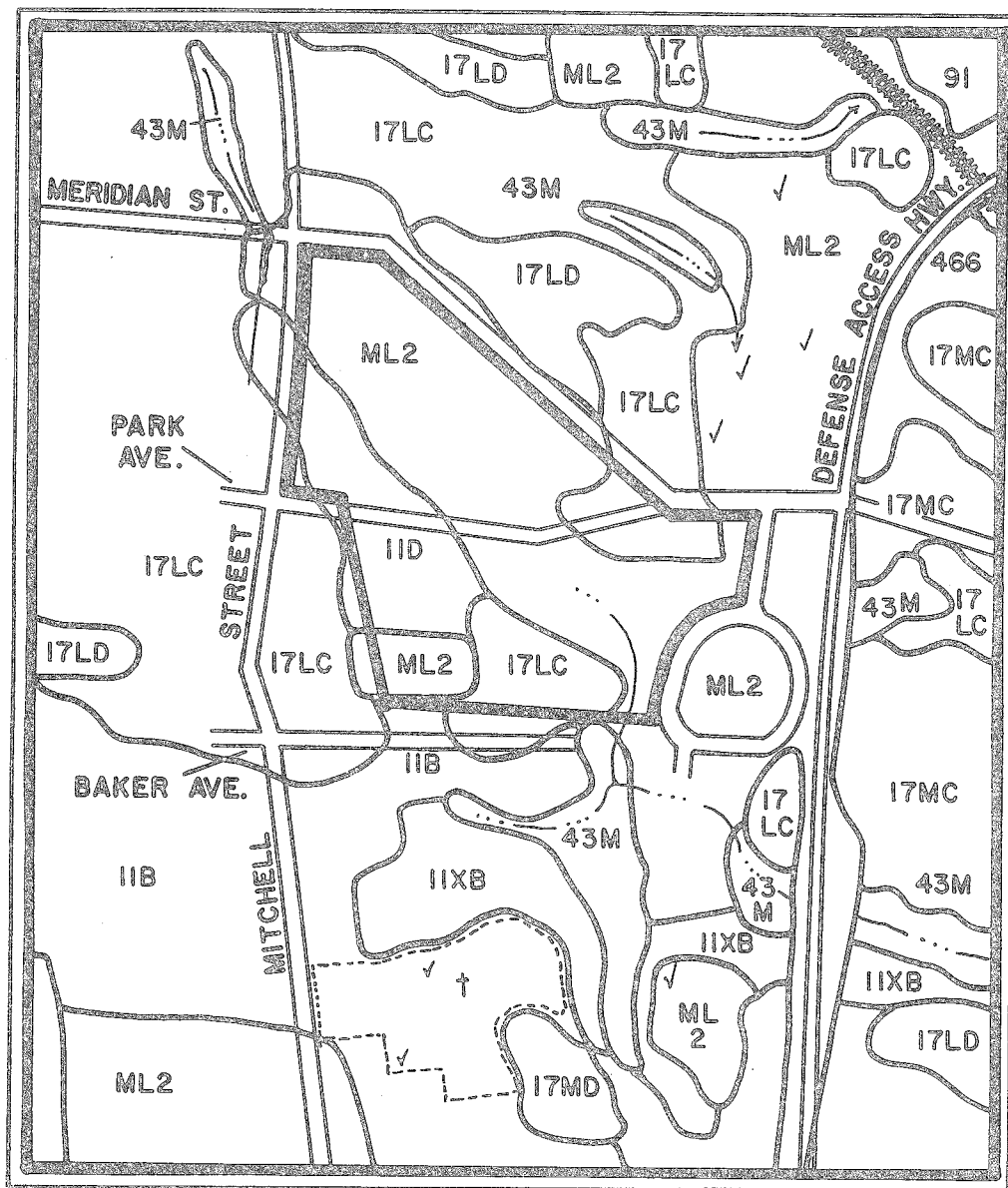
Much of the work to be done involves the upgrading of existing facilities. This upgrading will enhance the usability of some park components and when combined with facility expansion should accommodate a larger number of people in an efficient manner.

Erosion control measures should be incorporated in the construction phase (particularly on sloped portions) to prevent translocation of soil to and reduced usability of adjacent facilities.

Appendix



— SITE
BOUNDARY



WASHINGTON PARK
GROTON, CONNECTICUT

PROPORTIONAL EXTENT OF SOILS AND THEIR LIMITATIONS FOR CERTAIN LAND USES

Soil Series	Soil Symbol	Approx. Acres	Percent of Acres	Principal Limiting Factor	Urban Use Limitations*			
					On-Site Sewage	Picnic Areas	Play-grounds	Paths and Trails
Canton-Charlton	11D			Slope	3	3	3	2
Charlton-Hollis Charlton Part Hollis Part	17LC			Slope, depth to rock	2 3	2 2	3 3	2 2
Udorthents	ML2			Limitations determined on-site.				

Limitations: 1=slight, 2=moderate; 3=severe.

SOIL INTERPRETATIONS FOR URBAN USES

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

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

Slight Limitations

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

Moderate Limitations

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

Severe Limitations

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

About the Team

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

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

PURPOSE OF THE TEAM

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

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

REQUESTING A REVIEW

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

For additional information regarding the Environmental Review Team, please contact Jeanne Shelburn (889-2324), Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, 139 Boswell Avenue, Norwich, Connecticut 06360.