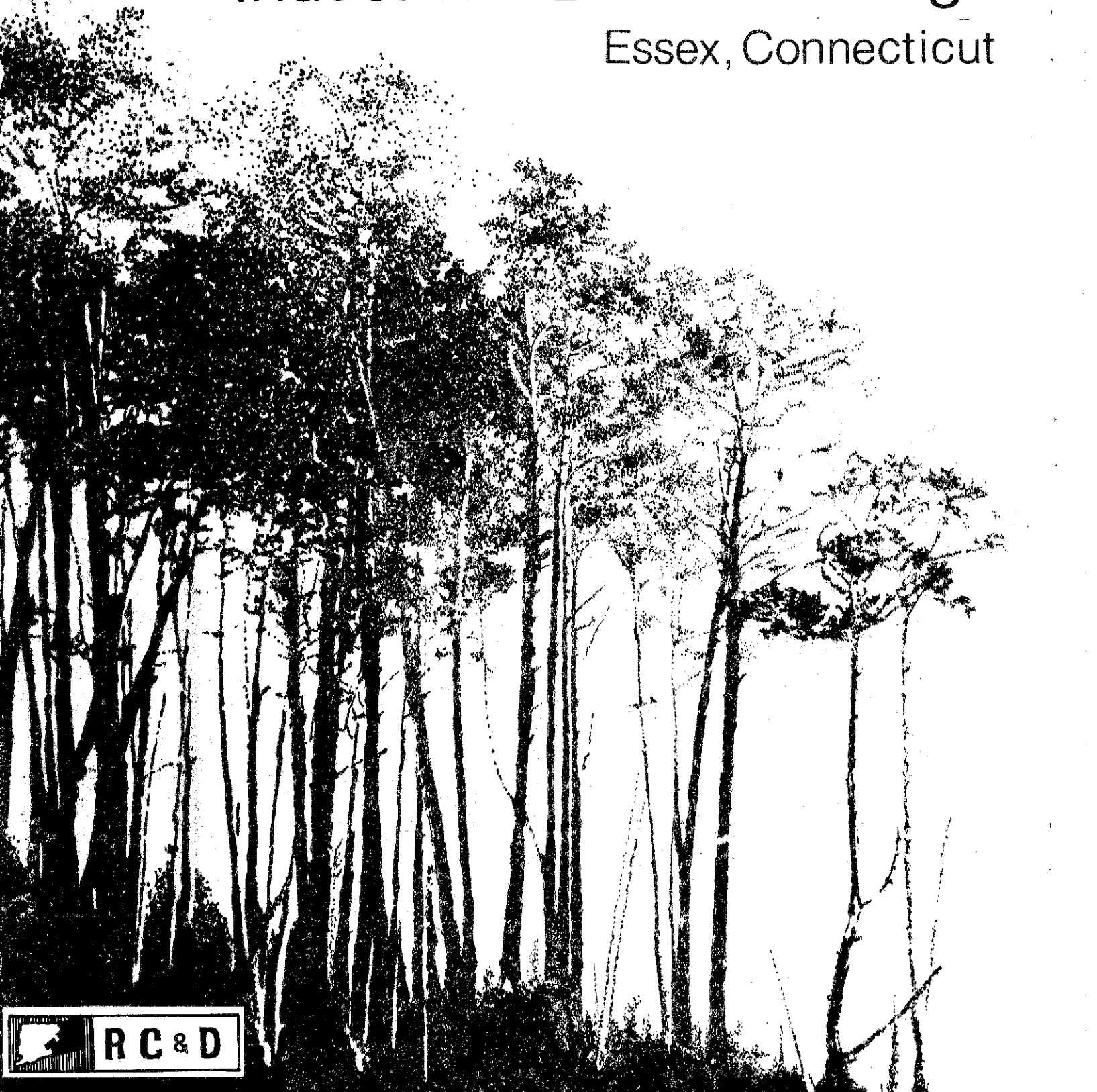


Environmental Review Team Report

Industrial Zone Change

Essex, Connecticut

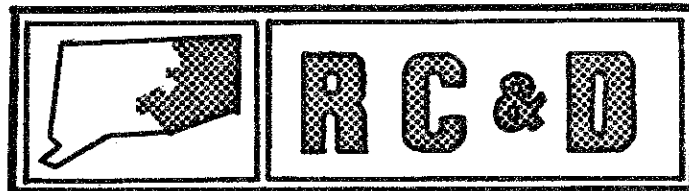


EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

Environmental Review Team
Report
on

Industrial Zone Change
Essex, Connecticut

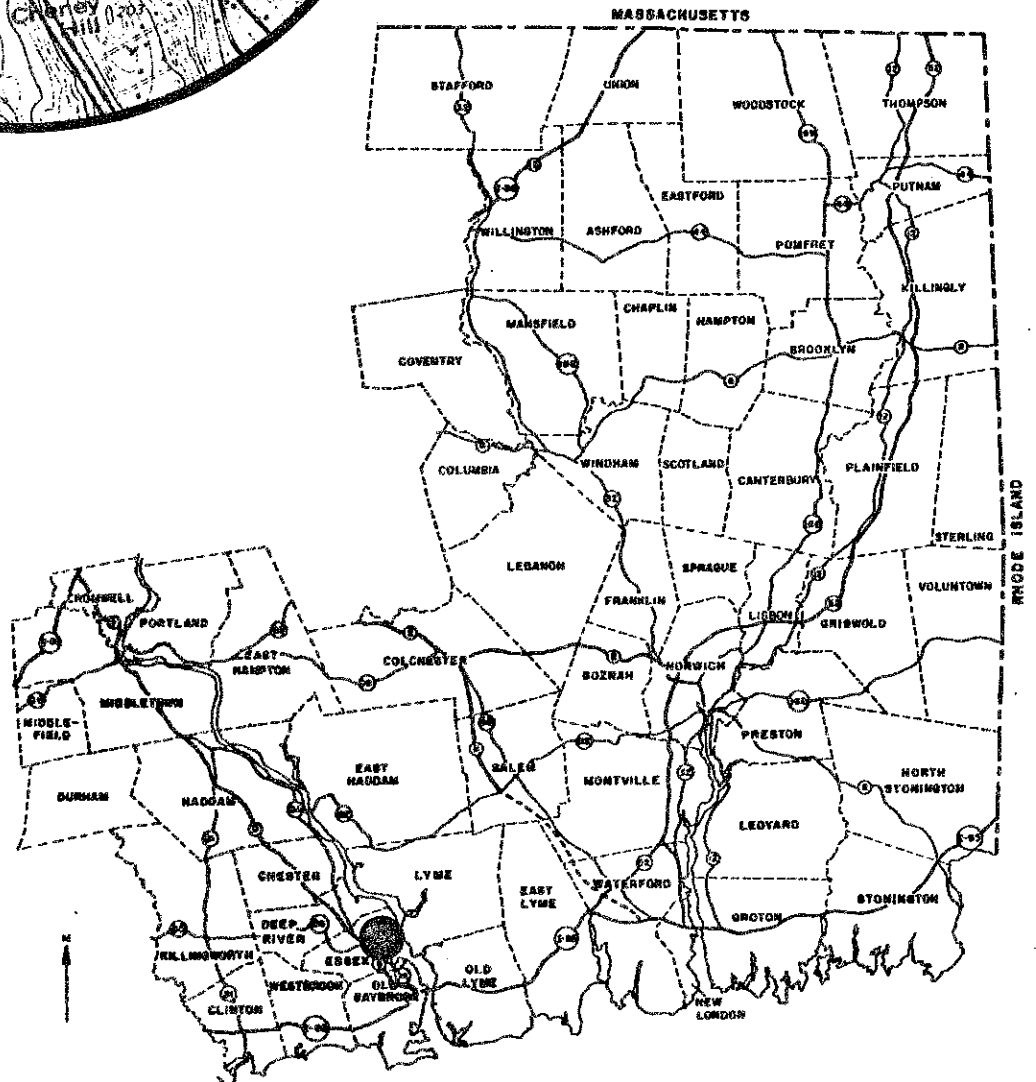
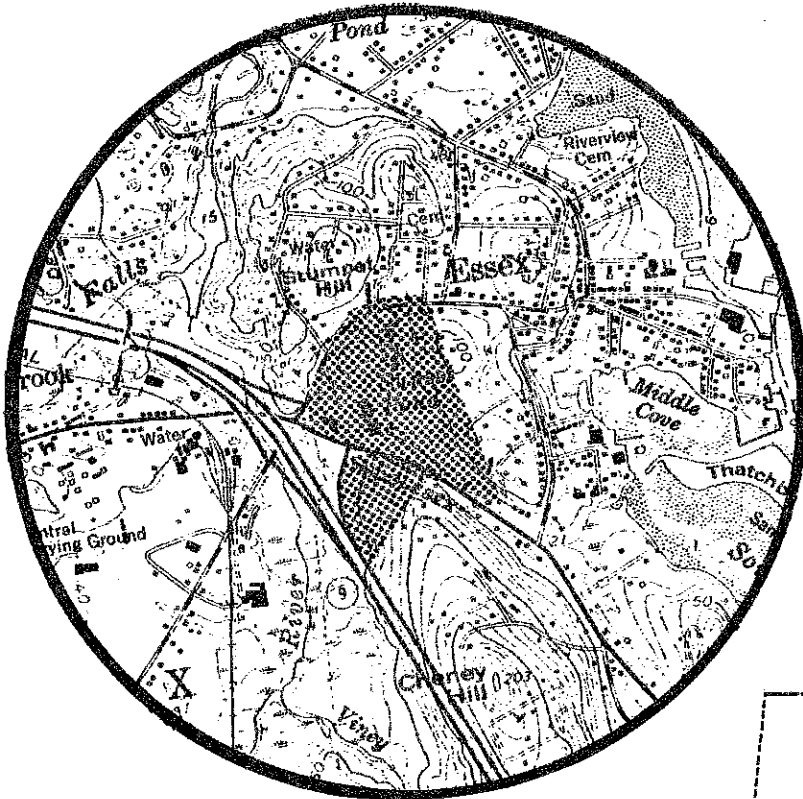
April 1979



eastern connecticut resource conservation & development area
environmental review team
139 boswell avenue
norwich, connecticut 06360

Location of Study Site

INDUSTRIAL ZONE CHANGE
ESSEX, CONNECTICUT



EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

ENVIRONMENTAL REVIEW TEAM REPORT
ON
INDUSTRIAL ZONE CHANGE
ESSEX, CONNECTICUT

This report is an outgrowth of a request from the Essex Planning Commission to the Middlesex County Soil and Water Conservation District (S&WCD). The S&WCD referred this request to the Eastern Connecticut Resource Conservation and Development (RC&D) Area Executive Committee for their consideration. It 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: Barry Cavanna, District Conservationist, Soil Conservation Service (SCS); Mike Zizka, Geologist, Connecticut Department of Environmental Protection (DEP); Rob Rocks, Forester, DEP; Chuck Phillips, Fisheries Biologist (DEP); Ed Meehan, Regional Planner, Connecticut River Estuary Regional Planning Agency; Don Capellaro, Sanitarian, State Department of Health; and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

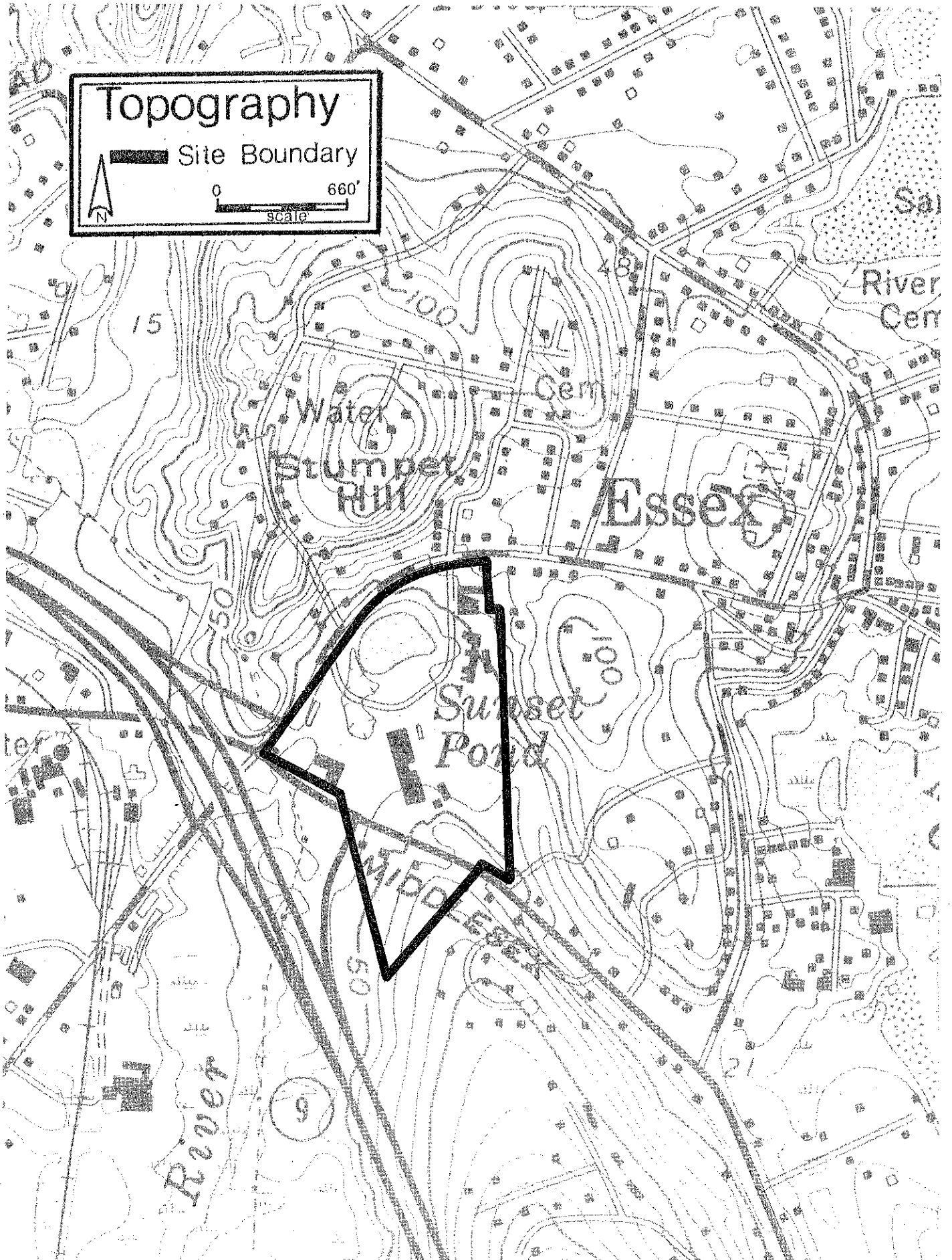
The Team met and field checked the site on Wednesday, March 28, 1979. Reports from each contributing Team member were sent to the ERT Coordinator for review and summarization for the final report.

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

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

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

Topography



INTRODUCTION

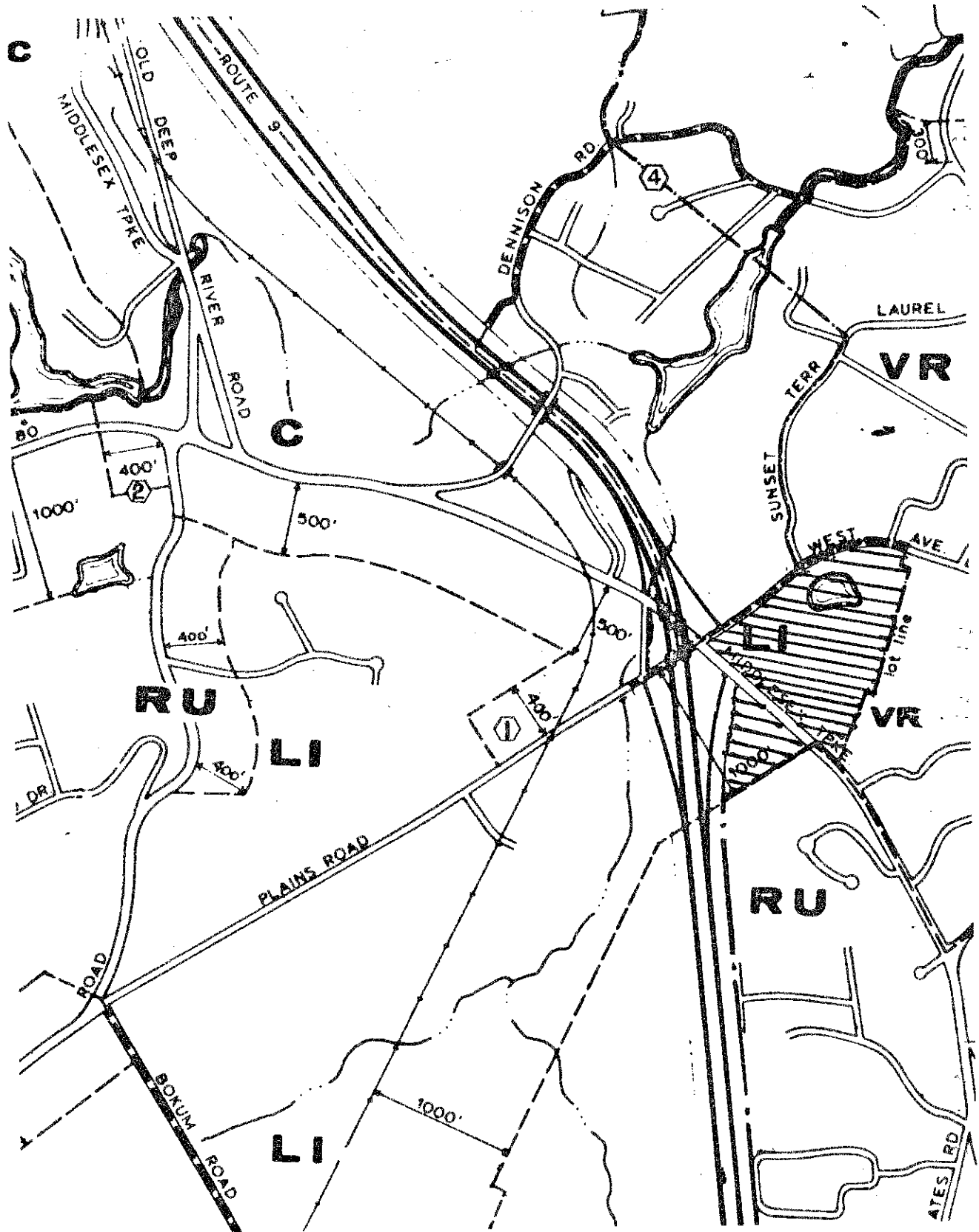
The Environmental Review Team has been requested to report its advisory findings to the Essex Planning Commission relative to a petition before the Essex Zoning Commission which seeks the amendment of the zoning text and map to establish a new section called Limited Commercial District. (See Appendix B) this request has two facets. The first question to be addressed by the Town is the rezoning of a currently unused 29 acre parcel of Industrial land to a proposed new Limited Commercial Zone Classification. The second part of this review concerns the specific site design issues which town officials and the developer should address should such a Limited Commercial District be established and an application made to commence construction on this site.


The site under review is located at the Exit 3 interchange from Route 9 and to the northeast of the intersection of Middlesex Turnpike and West Avenue. Several commercial and industrial uses are already located on the site as well as a State of Connecticut Vocational Training School and commuter parking lot. Residential uses are located on that portion of the site south of Middlesex Turnpike. The site is forested in some areas, but generally the land surface is paved with asphalt. Sunset Pond, currently leased by the Town of Essex for recreation purposes, is located in the northern portion of the site and provides wildlife habitat for urban and aquatic wildlife species.

The specific development proposal for this site, should the zone change occur, will entail adaptive reuse of a vacant building, formerly used for industrial purposes. Proposed site alterations would include installation of a new sub-surface septic disposal system, removal of a portion of the existing pavement, and repaving of part of the area. Plantings would also be installed in areas where none exist and in parking islands.

Generally the Team finds no environmental or planning concerns which would limit a zone change in this area. Site specific development, currently in the preliminary proposal stage, should not cause environmental degradation on the site. Sediment and erosion control measures should be implemented during the construction phase of this proposal. The design plan should also provide for perimeter planting buffers and screening.

ZONING MAP



 Area of potential zone change

PROPOSED ZONE CHANGE

Essex's Zoning Regulations presently divide the town into groups of uses: Residential Districts, Business Districts, Commercial Districts, Limited Industrial Districts and a Conservation District. The zoning map generally follows the future land use recommendations contained in the Essex Plan of Development. The Plan of Development (1971) was prepared in conjunction with Essex's participation in the Community Development Action Program (CDAP). A portion of the parcel reviewed by the Team was proposed in the Comprehensive Plan for a future town Civic Center Study area. Adjacent land at the Route 9/Exit 3 interchange was recommended in the Plan for commercial expansion. The remaining surrounding area was shown in the Future Land Use Plan as existing developed land.

The recommended town Civic Center in the former C.L. & P. building is now no longer a feasible reuse of this structure since it has been acquired by the State of Connecticut for use as a shoreline satellite facility to the Vinal Technical School. However, the introduction of expanded commercial uses around the Exit #3 interchange is feasible and could be a viable alternative to the currently underutilized industrial structures on this site.

A Limited Commercial Zone at this location should not result in adverse physical impacts to the study site or surrounding properties. This site is well served by a limited access State highway, and is at the juncture of two State major collector roads, Route 153 and 9A. In addition, this 29± acre area is served by the Connecticut Water Company. Based on the location of this parcel, its interrelation to surrounding land uses, roads, and the town's long range plan of development the designation of this parcel to establish a Limited Commercial District is, in the opinion of the Team planner, an appropriate reclassification of this parcel.

The impact of this zone change from Limited Industrial to Limited Commercial will not significantly reduce the amount of industrially zoned land in Essex. Recent zoning map acreage computations by CRERPA estimate that approximately 230 vacant acres of industrial land is available in Essex. The 29± acre review site and the two other currently under-utilized industrial complexes, which comprise approximately forty acres, are not included and are in addition to this 230 vacant acre estimate.

The proposed zone change will add 29 acres of commercial land to the currently vacant available commercial land in Essex. CRERPA estimates that approximately 80 acres of the C-30 district are available for development and no sizeable parcels of the VB-10 (Village Business) land remains. The impact of the additional 29 acres of Limited Commercial on Essex's future land use categories is consistent with the projections contained in the Plan of Development - Future Land Uses, Table II, page 28.

In addition to its compatibility with the Town Plan of Development the reclassification of this parcel to Commercial Use introduces at this location a transition zone between the Village and Residential Zone Districts and Route 9. Transitional zones are desirable because they can be used to introduce uses which are less intensive and therefore may be less objectionable to adjacent Residential neighbors.

The proposed list of uses in the Limited Commercial District is consistent with typical commercial services commonly permitted in local zoning ordinances. The proposed Limited Commercial uses are similar, in some instances, with uses now permitted in Essex's C-30 and VB-10 Districts. These similarities could result in the duplication of commercial services within the town. Analysis of Essex's retail market is beyond the scope of an ERT report. However, from a town planning viewpoint, it is appropriate that public officials and private business interests recognize that the vitality of Essex's businesses depends on both the stable trade of year-round residents and the special shopping interests of the boating-tourist trade. Should a Limited Commercial District be established in Essex the developers should give careful consideration of those types of commercial services which will meet the retail needs of the community without jeopardizing established merchants.

Another aspect of this zone change which the Essex Planning and Zoning Commissions should consider during their deliberations of this petition is the opportunity to introduce site plan review requirements for all General Principal Uses listed in the Limited Commercial District. As this petition is now written, only Special Principal Uses would have to submit site plan documentation. If established, the Limited Commercial District would be located at the town's "front door". The provision of Site Plan design criteria for all uses in this district would be one Land Use control tool which the Zoning Commission should use to assure the proper development of this highly visible parcel.

ENVIRONMENTAL ASSESSMENT

GEOLOGY

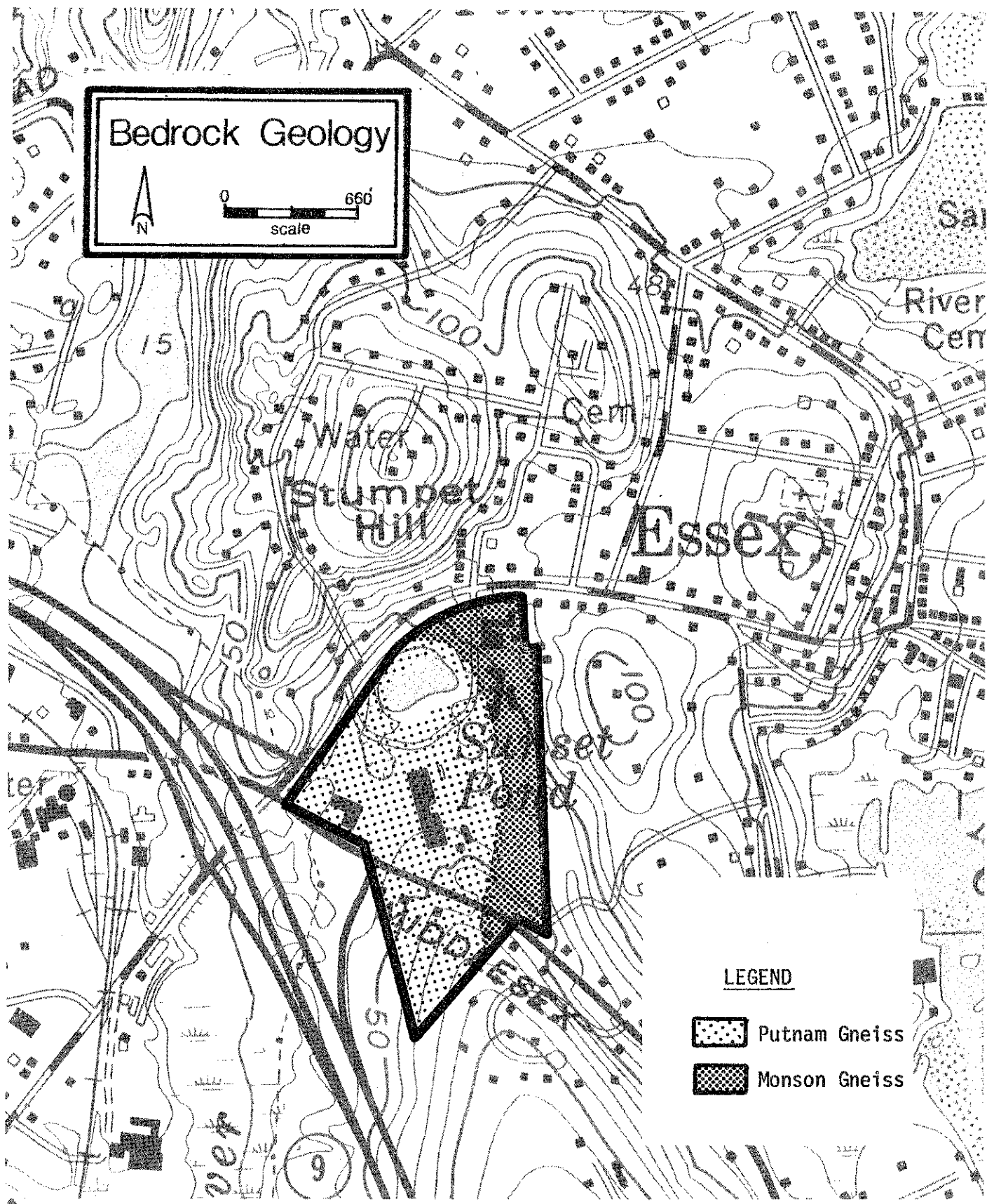
Bedrock and surficial geologic maps of the Essex topographic quadrangle have been published by the Connecticut Geological and Natural History Survey. These publications are, respectively, Quadrangle Report No. 15, by Lawrence Lundgren, Jr., and Quadrangle Report No. 31, by R.F. Flint. The geology of the site itself, as adapted from those reports, is shown in two accompanying illustrations.

Most of the site is underlain by Putnam Gneiss, which occurs as a sparsely garnetiferous, magnetite-bearing, biotite-muscovite schist. This schist is a well-layered rock in which parting surfaces are formed by the alignment of grains of mica. The eastern edge of the property contains Monson Gneiss, which occurs as a light gray, plagioclase-quartz-biotite-hornblende gneiss interbedded with amphibolite and pink granite. The Monson Gneiss is a more resistant and more massive bedrock unit than the Putnam Gneiss.

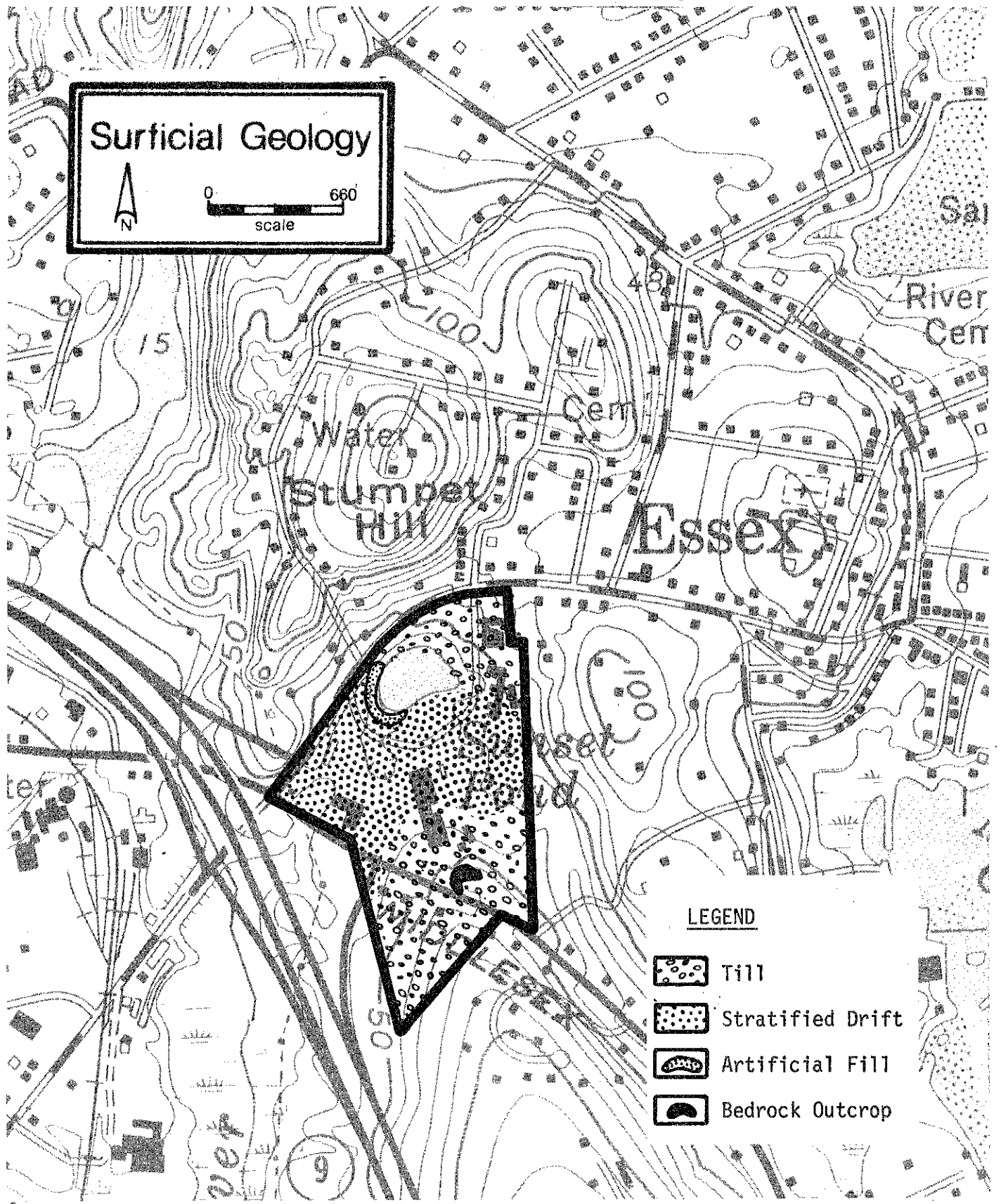
The hillier parts of the site are areas in which bedrock is thinly covered with till, a glacial deposit consisting of an unsorted accumulation of rock particles and fragments of various shapes and sizes. Because of its typically compact, stony texture, till is often called "hardpan" by Connecticut residents. The flat sections of the site are areas in which glacial meltwater stream deposits typically show a form of layering, leading to their designation as "stratified drift".

HYDROLOGY

Virtually all drainage from the site ultimately flows into Mud River, a tribu-



Bedrock geology of the proposed commercial site, Essex. Adapted from Conn. Geol. Nat. Hist. Survey Quad. Report No. 15.



Surficial geology of the proposed commercial site, Essex. Adapted from Conn. Geol. Nat. Hist. Survey Quad. Report No. 31.

tary to the town's longest stream, Falls River. The two streams converge at a shallow artificial pond north of Route 9 and south of Dennison Road. According to a map of the town's public utilities, which was obtained in the Town Hall, Essex has two water-supply wells in the vicinity of the site. The approximate locations of these wells is shown in an accompanying illustration, together with the watershed boundary of Mud River. The present usage of the wells was not determined by the Team.

The Mud River watershed comprises approximately 3.2 square miles within the Towns of Essex, Old Saybrook, and Westbrook. Any development within the watershed may have some effect on water quality both in the river itself and in the sand and gravel deposits that flank it and form its principal aquifers. Protection of the water quality in these aquifers requires consideration of the entire watershed, since high-yielding wells within the aquifers may draw water from the river itself at some times of the year. Still, restriction of certain types of development within the immediate vicinity of such wells is the most effective means of water-supply protection.

In terms of the town well near Centerbrook, the Mud River watershed would be the only area of concern. The town well near Dennison Road, however, draws from the entire upstream watershed area of Falls River. This area comprises about 17 square miles and includes all of the Mud River watershed. Any development of the proposed commercial site would not be likely to affect water quality from either well because of the large size of their respective watersheds. Placement of the anticipated new septic system within the site need be a concern only to the extent that it may influence groundwater quality on the site itself.

VEGETATION

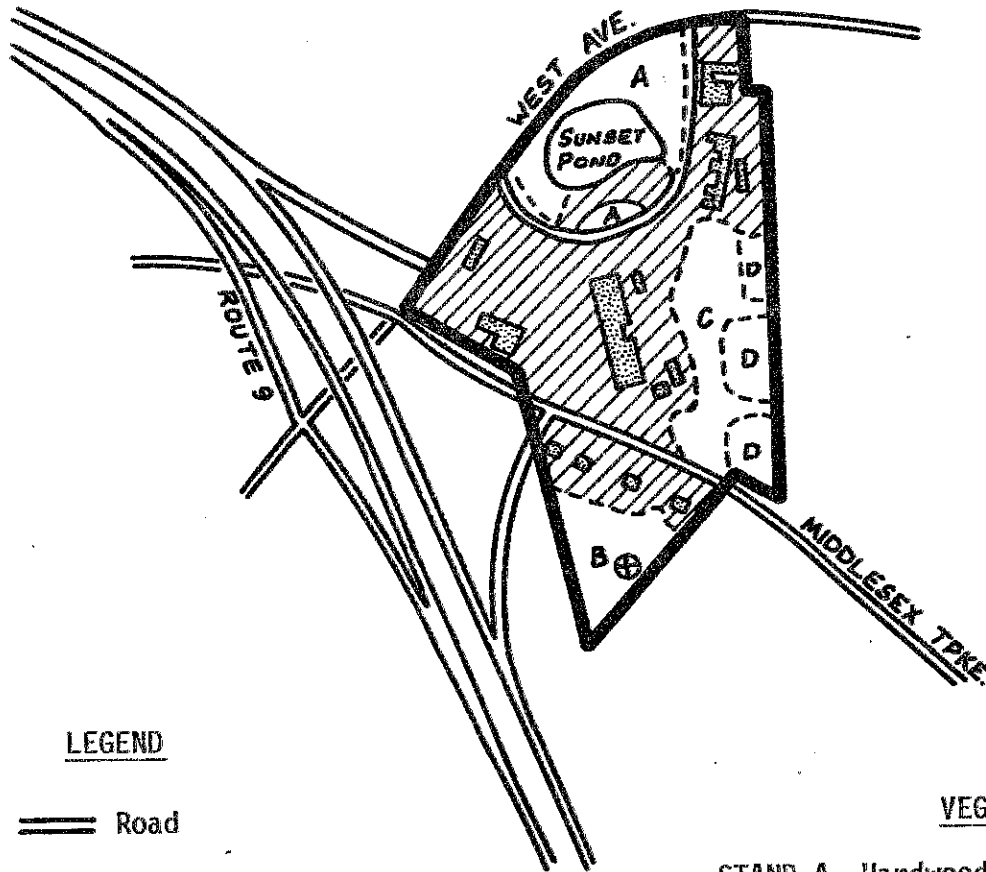
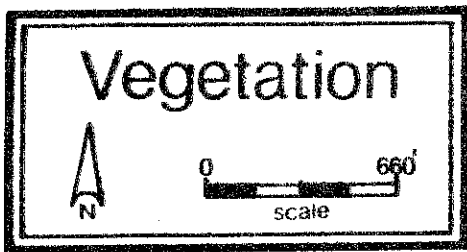
The 29[±] tract under consideration for zone change has limited forestry potential. Buildings and parking lots take up the majority of this area; however, several vegetation types are present. (See vegetation type map and vegetation type descriptions).

The proposed zone change from "Light Industrial" to "Limited Commercial" should have little or no effect on the vegetation present, unless areas are cleared for parking or a septic system. In fact, this action would be the best alternative for parts of Stand C.

Further landscape development of the Sunset Pond area should enhance its recreational potential, and increase wildlife habitat quality.

Vegetation Type Descriptions

Stand A. (Hardwood swamp/land surrounding Sunset Pond.) The wetter parts of the 3-acre site surrounding Sunset Pond are vegetated with pole-size red maple and several shrub species including speckled alder and high bush blueberry. Tussuck sedge and cattails are present in this area with multiflora rose, vine honeysuckle, oriental bittersweet, wild strawberry, wild geranium, wild mint, chives, and several species of ferns. Many of these species were probably introduced from gardens in the area by road runoff.



LEGEND

- Road
- Property Boundary
- Vegetation Type Boundary
- Buildings
- Parking Lots, Residential Land
- White oak four feet in diameter at breast height.

VEGETATION TYPES*

- STAND A Hardwood Swamp/Land surrounding 3 acres Sunset Pond
- STAND B Mixed-Hardwoods, 3 acres, Fully-stocked sapling to pole-size
- STAND C Mixed-Hardwoods, 3 acres, Under-stocked Sapling to pole-size
- STAND D Open Fields, 3 acres

* Sapling-size trees = 1 to 5 inches in diameter at breast height (d.b.h.)
 Pole-size trees = 5 to 11 inches in d.b.h.
 Sawlog-size trees = 11 inches and greater in d.b.h.

Stand B. (Mixed Hardwoods). Sapling to pole-size black oak, hickory, sugar maple, and red maple are present in this 3.5 acre fully-stocked stand. High-bush blueberry, dogwood, poor quality red cedar, grape vines, poison ivy, greenbrier, and honeysuckle form the understory. A small grove (less than 1/2 an acre in size) of sawlog-size white pine, sugar maple, and black cherry, is located in the northeastern portion of this stand. Two white oaks, each with a diameter of four feet, are also present within this stand: one of them is dead, the other reasonably healthy.

Stand C. (Mixed Hardwood). This 3-acre under-stocked stand contains poor quality sapling to pole-size black locust, tree-of-heaven, red maple, sugar maple, hickory, black oak, white oak, and black cherry. Dense green brier, Japanese honeysuckle, oriental bittersweet, and poison ivy are becoming dominant on this site. Multiflora rose, barberry, and staghorn sumac are also present. Most of this site was paved and used as a parking lot in the past.

Stand D. (Open Field). The tree fields present on this property total 3-acres. Grasses are the main form of vegetation with seedling size red cedar and wild strawberry becoming established. The wetter parts of these fields contain moss and sedges. Pole-size sugar maple, red maple, black cherry, and black oak are present along the stone walls which divide these fields from the other stands.

Sunset Pond and the land immediately surrounding it has value for recreation (limited fishing, nature study, and ice skating) and wildlife habitat. If the town were able to acquire this land, its value for recreation and wildlife habitat could be enhanced and preserved.

A large white oak tree with a diameter of four feet is located in Stand B. This tree has value as a specimen tree because of its large size and good health. If preserved, special care should be taken not to disturb the soil under its crown, because any root damage will have a negative impact on this tree's health.

The soils in most parts of Stand C limit vegetative growth to species that are extremely hardy, such as tree-of-heaven, black locust, and the vine species which are present. The poor quality vegetation which has developed on this partially paved ex-parking lot is probably typical of the woody vegetation that would first become established if roads and parking lots in the northeastern urban areas were abandoned. At present this area has little or no value for timber production.

Stand B is at present fully stocked and becoming crowded. The health and vigor of the trees in this stand is declining due to intense competition for space, sunlight, water and nutrients. A fuelwood thinning, removing 1/3 of the volume, would benefit this area by reducing competition. Trees which are in direct competition with high quality, healthy trees should be removed, along with trees which are unhealthy and damaged.

WILDLIFE

There are two areas within this tract that provide important habitat for wildlife. One, perhaps most important, is the Sunset Pond area and the other is the poor-quality mixed hardwood stand which is located on the eastern edge of the site (see vegetation type map).

The Sunset Pond area provides excellent habitat for many species of birds. Most apparent are the pair of mute swans which are nesting on the northeastern section of the pond. These large beautiful birds are well known for their poor dispositions and aggressiveness. The pond itself provides a good feeding and resting area for small numbers of dabbling ducks, such as mallards and black ducks. Ample aquatic vegetation and aquatic insects are available as food to support the water fowl present. Supplemental feedings of bread will increase the number of birds using this area and quickly lower the quality of the pond.

The fruiting shrub and vine species present around the pond provide abundant food and nesting habitat for many species of song birds. This area also provides a home and breeding area for numerous turtles, snakes, frogs, toads, and salamanders. Muskrats and other small mammals are probably present but none were observed on the date of the field review.

Recreational development in the pond need not destroy the quality of wildlife habitat present. Plantings of fruiting shrubs, such as silky dogwood and autumn olive and/or evergreen species like hemlock, norway spruce, white spruce, or white pine in the pond vicinity will increase aesthetic appeal and improve year-round wildlife habitat by increasing food and cover.

Increased recreational use of this area may drive wildlife species that are less tolerant of people from the area. As this happens, urban wildlife species will become more abundant.

The dense tangle of green brier, Japanese honeysuckle, oriental bittersweet, and poison ivy, present in the poor-quality mixed hardwood stand, provide excellent food and cover for many wildlife species. Small mammals, including cottontail rabbit and many species of song birds, frequently use this area. The stone walls which separate this stand from the open fields to the east provide homes for mice, chipmunk, and several species of snakes. Clearing this area for septic systems or parking lots will destroy its ability to support the wildlife species mentioned.

FISH RESOURCES

The existing pond is shallow and of the warm-water variety. Only sunfish were observed during the field review, but it is probable that large-mouth bass, pickerel, and bullheads are resident species. The pond also supports numerous amphibians and some reptiles.

While the pond would not support trout year round, it could be stocked with a small number of trout each year for the purpose of holding a children's fishing derby. The pond also presents a unique opportunity for children, particularly of elementary school age, to observe many aquatic forms of life.

If the town is to assume use of the pond as an ice skating and recreation area, diverting as much road and parking area drainage as possible away from the pond would be a valuable way of preserving water quality. This will help to reduce nutrient and salt levels in the pond.

The proposed zoning change should not adversely affect the pond if buildings are not constructed adjacent to it; a 75 to 100 foot buffer strip around the pond is recommended.

SOILS

A detailed soils map of this site is included in the Appendix to this report, accompanied by a chart which indicates soil limitations for various urban uses. As the soil map is an enlargement from the original 1,320 feet/inch scale to 660 feet/inch, the soil boundary lines should not be viewed as absolute boundaries, but as guidelines to the distribution of soil types on the site. The soil limitation chart indicates the probable limitations of 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 Special Soils Report, Connecticut River Estuary Planning Region, can aid in the identification and interpretation of soils and their uses on this site. Know Your Land: Natural Soil Groups for Connecticut can also give insight to the development potentials of the soils and their relationship to the surficial geology of the site.

Soils typical of the 29 acre proposed zone change area include the Agawam series, the Canton series, the Wethersfield series, the Windsor series and Urban Land (unidentified types of fill). These soils would generally limit development due to their slope, large stones, hardpan, wetness, susceptibility to frost action and excessive permeability.

The Agawam series (69B) consists of nearly level and gently sloping, well-drained soils on outwash plains and stream terraces. They formed in water-sorted sands. Agawam soils have moderately rapid permeability in the surface layer and subsoil, and rapid permeability in the substratum. They have few limitations.

The Canton series (6XC) consists of gently sloping, sloping, moderately steep and steep, well-drained soils on uplands. They formed in a fine sandy loam mantle underlain by friable gravelly sand glacial till. Canton soils have moderately rapid or rapid permeability. Major limitations are related to slope and stoniness.

The Charlton series (6XC) consists of gently sloping, sloping, moderately steep, and steep, well-drained soils on uplands. They formed in friable glacial till. Charlton soils have moderate to moderately rapid permeability. Major limitations are related to slope and stoniness.

The Sudbury series (456B) consists of nearly level, moderately well-drained soils on stream terraces and outwash plains. They formed in water sorted outwash. Sudbury soils have moderately rapid permeability in the surface layer and subsoil, rapid permeability in the substratum, and a seasonal high water table at 18 to 24 inches. Major limitations are related to wetness.

The Wethersfield series (35B) consists of deep, well-drained soils on uplands. They formed in glacial till. Typically these soils in a wooded area have a dark brown loam surface layer 2 inches thick. The subsoil from 2 to 12 inches is reddish brown loam and from 12 to 26 inches is dark reddish brown loam. The very firm and brittle fragipan substratum from 26 to 60 inches is dark reddish-brown gravelly loam. Slopes range from 0 to 35 percent.

Due to the nature of the soils on the site and the uncertainty of the subsurface materials in the area indicated as Urban Land, any development or activity causing soil disturbance within the area of the potential zone change should include a detailed sediment and erosion control plan. Connecticut's Sediment and Erosion Control Handbook can aid both the Town and the developer in designing such a plan. Technical expertise for developing both vegetative and mechanical controls is available from the Soil Conservation Service field office in Haddam.

WATER RESOURCES

Public water service is available to this site from the Connecticut Water Company. A supply line extends from Middlesex Turnpike into the old industrial building. Water supply is adequate to serve the proposed uses listed in the Limited Commercial District.

WASTE DISPOSAL

The review site is shown on the Essex Plan of Development outside of the proposed wastewater service area. The CRERPA and Valley-Shore Selectmen's Association are currently cooperating in an areawide facilities plan. The thrust of this plan will be sewer avoidance and limited community sewer systems. The Facilities Plan will not be completed until the Fall of 1979.

Sewage disposal, will depend upon the installation of on-site subsurface systems. Visual observations, combined with soil survey data and previous test pit information on the Marich Realty property, indicates that a portion of the land should have good drainage with few limitations. The main adverse factors, are the areas of soils having high ground water and soils capable of having a very rapid percolation rate. The overall percentage of the land having these characteristics, however, is low. One of the primary objectives in disposal of sewage and wastewater into the soil is to have the material undergo purification, reducing pollutants to such levels that ground or surface waters are protected from public health hazards and environmental degradation. It would, therefore, be best to avoid these areas of special concern when considering a possible location for the subsurface sewage disposal system.

In general, it would be expected that the wastes associated with a shopping mall, consisting of a number of retail outlets, would have less of an impact on ground and surface waters than from industrial installations involving chemical wastes. The former industrial use conducted at this location had a treated industrial waste discharge (several open lagoons at rear of plant), and generated significant sanitary waste from the number of employees.

In a shopping center, a primary concern would be inclusion of a business, such as a large restaurant or laundromat, which generates a substantial volume of sewage wastes. This does not imply that all food service operations necessarily produce or will require the disposal of a large volume of sewage. However, the wastes from these types of establishments are generally more difficult to treat and to have satisfactory subsurface disposal over an extended period of years. For these reasons special attention should be given to such establishments, when designing the possible size of a leaching system and the size of the area held in reserve for the purpose of enlargement or replacement of the facility. As with any commercial building or

center it is necessary to have a suitable reserve area ready and available during the time of construction (before the project is completed and ready for occupancy).

A careful and detailed engineering investigation with suitable testing and the preparation of specific plans should be made for the parcel(s) in question.

TRAFFIC/ROAD CONDITIONS

Existing road systems have an adequate design capacity to accommodate additional vehicle/truck traffic generated by the proposed Limited Commercial District. The site's immediate access off Exit 3 will divert intertown traffic away from local road systems. As part of the site's entrance design, consideration should be given to turning lanes. Care should be taken not to place the entry way at a location such that the knoll on Route 9A (travelling north) will hinder vehicle vision.

SERVICES TO SUPPORT DEVELOPMENT

Municipal Services to support the Limited Commercial District uses should be adequate. No additional educational demands will be placed on the local or regional school systems. Additional constable patrol will be necessary. Solid waste generated by the commercial uses in this district can be handled at the Essex landfill.

COMPATIBILITY OF SURROUNDING LAND USES

The proposed Limited Commercial District is consistent with the Plan of Development's general recommendations for the area. Commercial use of this parcel will be less intensive than industrial uses permitted under Essex Zoning Regulations.

ALTERNATIVE LAND USES

From a town planning perspective the designation of this 29-acre parcel for Limited Commercial Uses is appropriate. The rezoning of this site is compatible with supporting utilities and road system.

AESTHETIC CONSIDERATIONS

This Limited Commercial District is at a highly visible location off Exit 3 and from West Avenue, the main local road into Essex Village. The Team Planner suggests that the proposed Limited Commercial Zone petition be revised to require all uses in this new district to undergo site plan design and approval by an appropriate local commission. The opportunity to integrate the adjacent pond/open space into the Limited Commercial development plan should be encouraged. The adjacent open space can be used to establish an overall setting for this parcel. The design plan should provide for perimeter buffers and screening, the separation of delivery truck entry way and customer entry and parking.

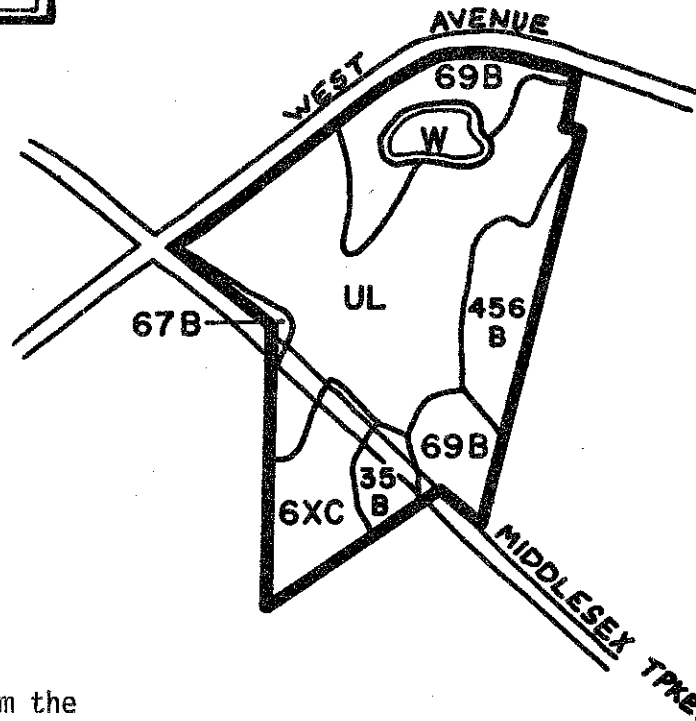
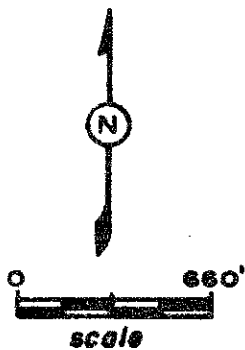
HAZARDS

No known natural hazards exist on this site; however, the Team observed several man made hazards in the form of waste treatment settling pits, on this site. Prior to closing these pits it might be advisable to seek analysis of any waste by-products left over from the previous industrial operation.

Appendix

Soils

INDUSTRIAL ZONE CHANGE
ESSEX, CONNECTICUT



This is an enlargement from the original 1,320'/inch scale to 660'/inch.

SOIL LEGEND

<u>Symbol</u>	<u>Soil Name</u>	<u>Slope</u>
69B	Agawam fine sandy loam	3-8%
6XC	Canton very stony fine sandy loam	3-8%
456B	Sudbury sandy loam	3-8%
UL	Urban Land	Variable
35B	Wethersfield	3-8%
67B	Windsor	3-8%

Information taken from: Special Soils Report, Connecticut River Estuary Planning Region, July, 1975; soil survey sheet Nos. 443, 445; prepared by the United States Department of Agriculture, Soil Conservation Service. Advance copy, subject to change.

INDUSTRIAL ZONE CHANGE
ESSEX, 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	Buildings with Basements	Streets & Parking	Land-Scaping
Agawam	69B	5	17		1	1	1	1
Canton-Charlton	6XC	3	10	Slope, Large Stones, Frost Action	2	2	2	2
Sudbury	456B	3	10	Excessive Permeability, Wetness, Frost Action	3	3	2	1
Urban Land	UL	13	45	Limitations Determined On Site				
Water	W	2	7					
Wethersfield	35B	2	7	Hardpan	3	1	2	2
Windsor	67B	1	4	Sandy, Droughty Potential for Groundwater Pollution	1*	1	1	3

Urban Use 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.

SECTION 81 (NEW)LIMITED COMMERCIAL DISTRICTS

81A. USES PERMITTED. In a Limited Commercial District, there shall be permitted:

81A.1. GENERAL PRINCIPAL USES. The following principal uses and buildings:

- (A) One-family dwelling; public schools;
- (B) Professional and business offices and financial institutions;
- (C) Retail stores, including, but subject to the provisions of 112, the sale of packaged alcoholic beverages;
- (D) Barber shop, beauty parlor, cleaning or laundry agency, custom tailoring, watch or shoe repair or similar retail service establishment;
- (E) Delicatessen, bakery, confectionery store;
- (F) Blueprinting and similar reproduction service;
- (G) Business, secretarial or vocational schools;

81A.2. SPECIAL PRINCIPAL USES. The following principal uses and buildings only when specifically authorized in the particular instance by a special exception granted by the Commission subject to the conditions prescribed in or pursuant to 130:

- (A) Any special principal use and building permitted in a Village Residence District, under the provisions of 60A.2.;
- (B) Theaters for indoor motion picture projection or dramatic or musical productions operated by a governmental or non-profit corporation;
- (C) Billiards parlors, bowling alleys, indoor skating rinks and similar commercial places of recreation;
- (D) Dance studios, establishments for musical or theatrical instruction and physical culture; and
- (E) Restaurants.

81A.3. ACCESSORY USES. Any accessory use or improvement but not including:

- (A) SIGNS. Any sign unless it conforms to the requirements prescribed therefor in these Regulations;
- (B) BUILDINGS. Any buildings used for residence purposes unless the area of the lot upon which the principal use is located conforms to the minimum required for all dwelling units thereon including such accessory building; and
- (C) LIVESTOCK. The keeping of livestock or the keeping of poultry or other animals except as household pets.

81A.4. SIGNS. In addition to any sign permitted under 111B. and subject to the limitations prescribed in 111A., signs as accessory uses as follows:

- (A) RESIDENCE USES. Accessory to a use described in 81A.1. (A) one resident name sign, not exceeding 2 square feet in area; and
- (B) OTHER USES. Accessory to a use described in 81A.1.(B) through (G) or in 81A.2.(A) through (E), and only as authorized by the special exception authorizing such use:
 - (1) two business name signs, each not exceeding 12 square feet in area and,
 - (2) one or more advertising signs.

81B. LANDSCAPING. All lots used in a Limited Commercial District shall provide a strip of land not less than 6 feet wide, adjacent to and extending for the length of the street line, which strip shall be kept in lawn or otherwise suitably landscaped. Such strip may be transversed by not more than two driveways, and one additional driveway for each 200 feet of frontage of the lot in excess of 300 feet. Not more than 25% of all parking provided shall be located between the principal building and the street. The balance of parking provided shall be located in an area either behind the building or screened from the view of the street, except at entrances to and exits from the parking area. Such screening shall consist of either evergreen vegetation or an opaque fence between four and five feet high.

81C. REQUIRED CHARACTERISTICS. The lot and the buildings involved in any general or special use in a Limited Commercial District shall conform to the following characteristics:

DISTRICT

LC

<u>Minimum Lot Area</u>	<u>Minimum Lot Width</u>	<u>Minimum Lot Area Per Family Dwelling Unit</u>	<u>Front Set- back</u>	<u>Side Set- backs Each</u>	<u>Rear Set- backs</u>	<u>Maximum Building Coverage</u>	<u>Maximum Building Height</u>
Sq. Ft.	Ft.	Sq. Ft.	Ft.	Ft.	Ft.	%	Ft.
30,000	150	30,000	10	15	30	25	30

SECTION 30

DIVISION INTO DISTRICTS

30A.

DISTRICTS. The Town is hereby divided into the following named Districts as drawn on the Zoning Map dated June, 1966, which, with all explanatory matter thereon, shall be considered a part hereof:

Residence Districts: including	
Village Residence District	(VR)
Rural Residence District	(RU)
Rural Residence - Multi- Family District	(RM)
Business Districts: including	
Village Business District	(VB)
Waterfront Business District	(WF)
Commercial District	(C)
LIMITED COMMERCIAL DISTRICT	(LC)
Limited Industrial District	(LI)
Conservation District	(CONS.)

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.