



Eastern Connecticut Environmental Review Team Report

Eastern Connecticut Resource Conservation and Development Area, Inc.

ENVIRONMENTAL REVIEW TEAM REPORT ON

**ROUND HILL ROAD RECREATION AREA
SALEM, CONNECTICUT**

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

The ERT met and field checked the site on Tuesday, April 30, 1991. Prior to the review day, each Team member received a summary of the proposed project, a list of the town's concerns, a location map, a topographic map, a soils map and a copy of the proposed long-term plan. During the field review the Team members were given additional information. The Team met with, and were accompanied by two members of the Salem Recreation Commission. Following the review, reports from each Team member were submitted to the ERT Coordinator for compilation and editing into this final report.

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

The Eastern Connecticut RC&D Executive Council hopes you will find this report of value and assistance in making your decisions on the long-term plan of development for the recreation area.

If you require additional information, please contact: Elaine A. Sych, ERT Coordinator, P.O. Box 70, Haddam, CT 06438, (203) 345-3977.

Round Hill Road Recreation Area
Salem, Connecticut

Review Date: April 30, 1991

Report Date: July 1, 1991

**Environmental Review Team
Report #492**

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INTRODUCTION

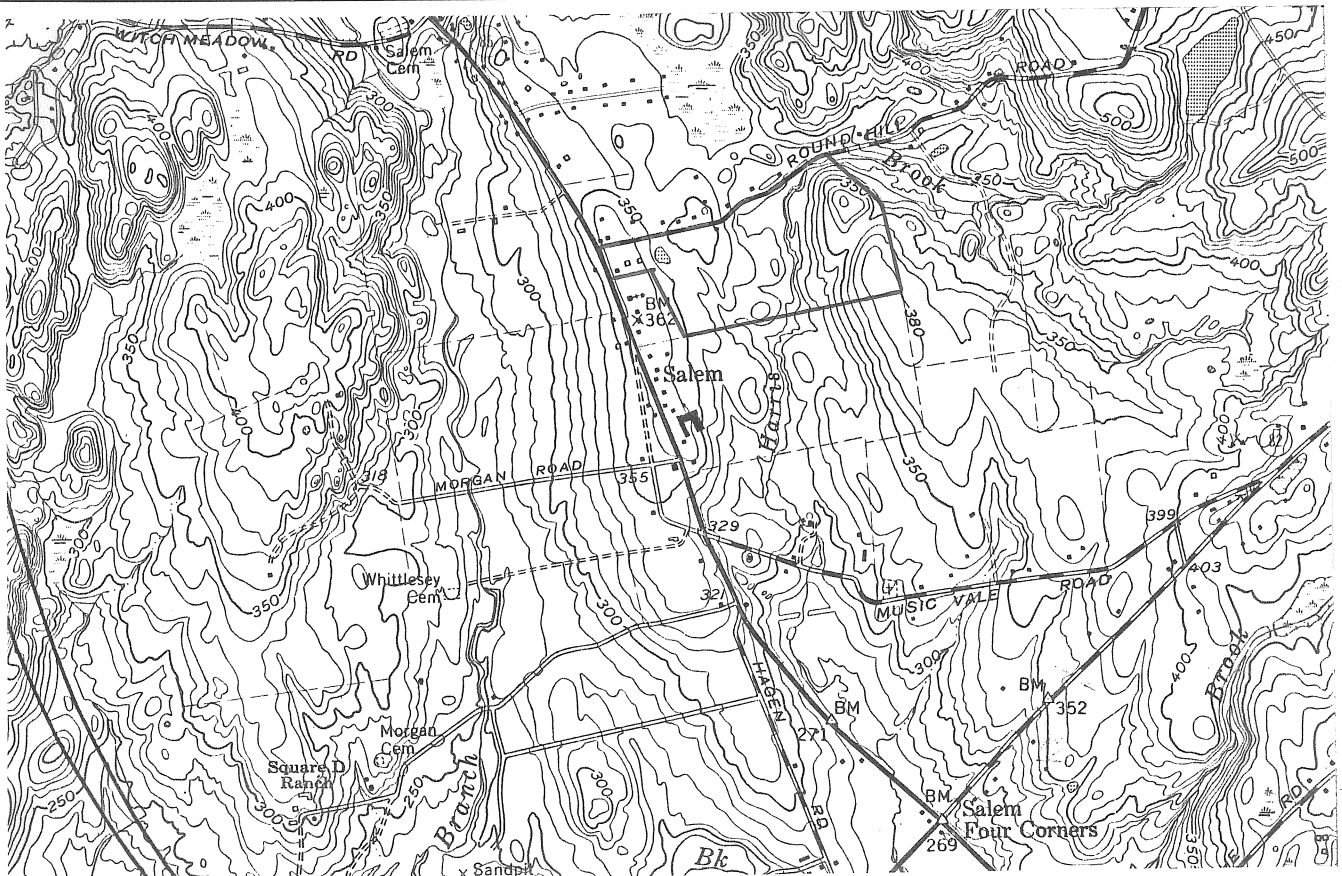
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 Eastern CT Resource Conservation & Development Area, Inc.
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The Salem Recreation Commission requested Environmental Review Team assistance in evaluating a preliminary long-range plan for the 67 acre Round Hill Road Recreation Area. The commission is developing a plan that will blend active and passive recreation areas, be environmentally sensitive to site constraints such as Harris Brook and its wetlands, and address the many future recreational needs of the town.

This report contains information about the natural resource base of the site, and assesses the current use and the proposed future uses that are planned. Major issues discussed are the filling in of the skating pond to create additional parking, traffic and access issues and location and environmental impact of proposed facilities. Specific design of the ballfields, etc. is not given, this report should be used as a planning resource tool with particular attention paid to recommendations concerning further in-depth site analysis.

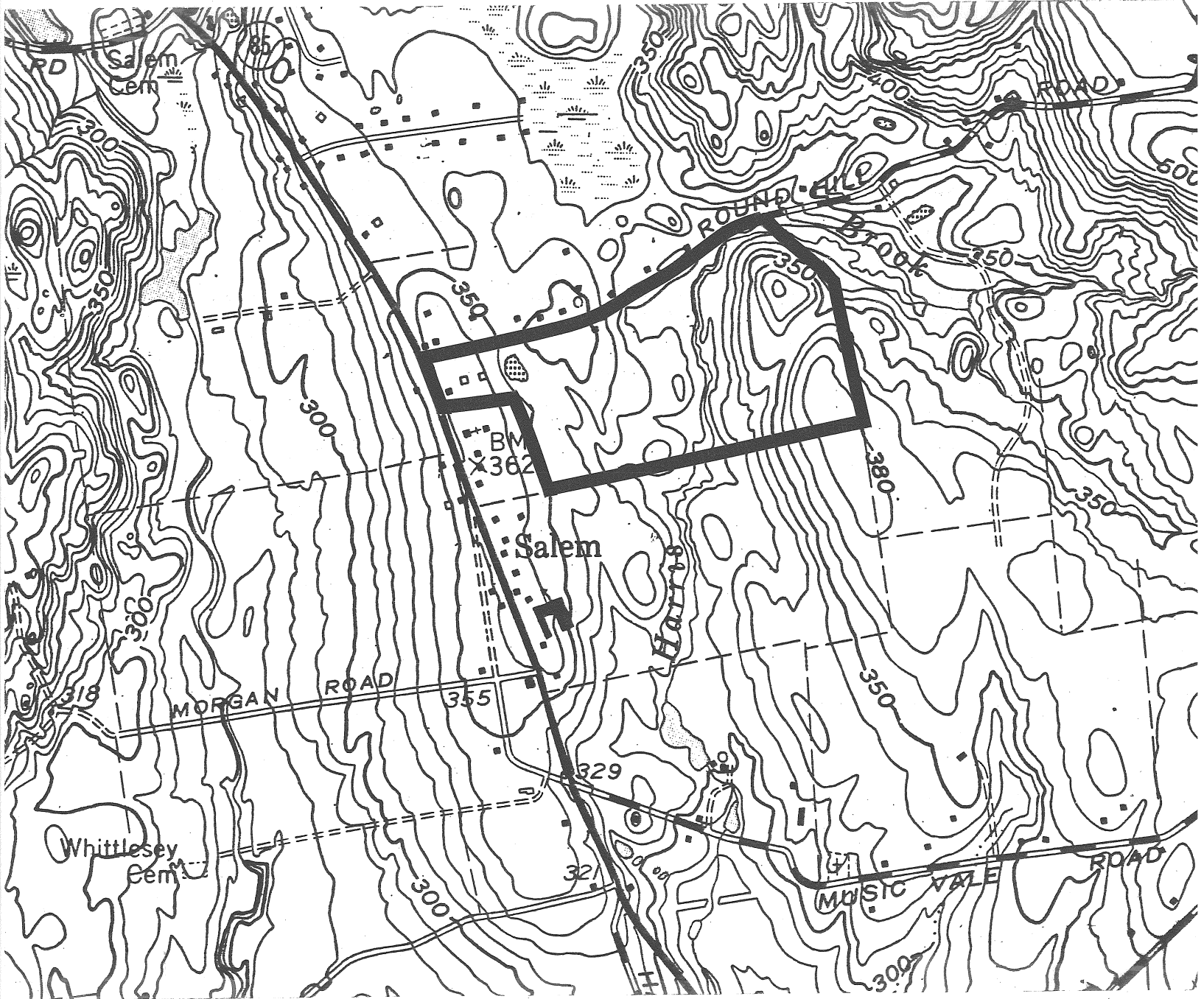
LOCATION MAP

Scale 1" = 2000'



TOPOGRAPHIC MAP

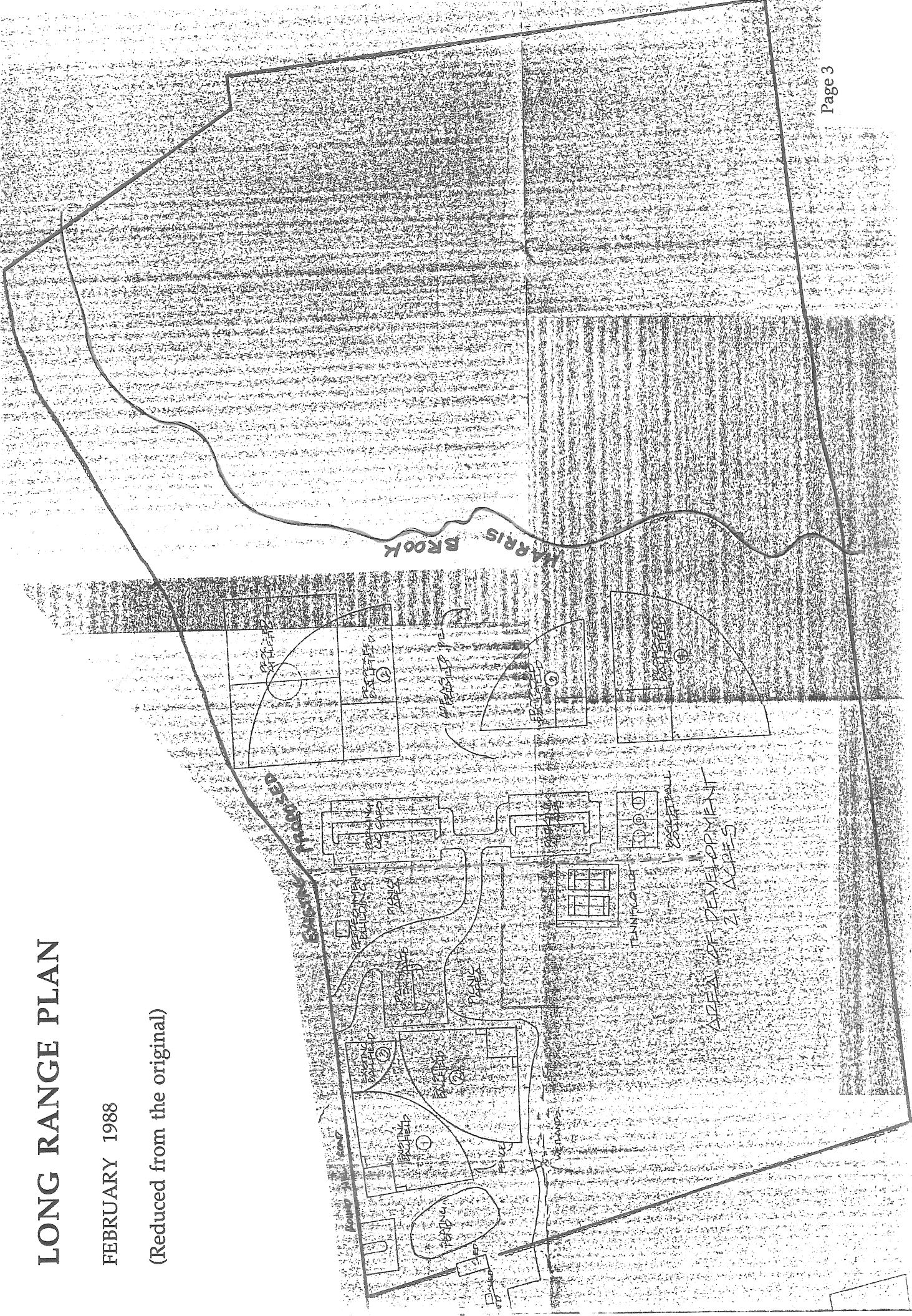
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LONG RANGE PLAN

FEBRUARY 1988

(Reduced from the original)



TOPOGRAPHY AND GEOLOGY

Dr. Norman Gray, Professor & Department Head
Department of Geology & Geophysics-UCONN
Telephone: 486-4434

Topography

The Round Hill Road Recreational Area straddles the valley of Harris Brook in Salem, CT. The western side is characterized by hummocky, irregular topography with moderate to gentle slopes averaging 7%. The eastern portion of the property is smoother in its topographic form, but slopes are somewhat steeper, averaging 14%. Harris Brook is a perennial stream draining an area of 1200 acres.

Bedrock Geology

The Honey Hill Fault, one of the most important features of Eastern Connecticut geology, is inferred to cross the southeastern corner of the property (Lundgren 1966. Quadrangle Report QR-19 of the CT Geologic and Natural History Survey; Rodgers, 1985. State Geologic Map). Rocks south of the fault are Pre-Cambrian in age and are part of the Avalonian terrane. Rocks north of the fault are Ordovician, younger in age, and were separated from Avalonia by hundreds of kilometers of oceanic crust until a "continental collision" which happened sometime in the late Paleozoic age. The Honey Hill fault thus represents a major suture of more than just local significance.

Bedrock in the area is close to the surface and outcrops are common (see attached map). The Canterbury gneiss, a coarse grained, gray colored quartz-feldspar granitic gneiss of Devonian age underlies the northernmost edge of the property. Grey biotite-muscovite schists of the Ordovician Tatnic Hill formation occupy the largest portion of the area north of the Honey Hill fault. South of the fault the rocks are quartz-plagioclase-microcline-hornblende bearing gneisses belonging to the Pre-Cambrian Rope Ferry formation.

All rocks in the area are characterized by a conspicuous northeast trending foliation parallel to the Honey Hill fault zone. Movement along the fault streaked out and sheared the surrounding rocks, imposing upon them their well developed foliation, during the suturing of the continental fragments now making up Eastern Connecticut. The strong foliation and even the fault itself have little topographic expression. The hummocky topography and the course of Harris Brook seem controlled by northerly trending fractures, unrelated to the now, long inactive Honey Hill fault.

Surficial Geology

A thin, zero to a few feet thick, veneer of poorly sorted coarse sandy material blankets the bedrock and possibly, a more compact clayey glacial till lies over the entire property. Small kames and other disconnected glacial stream deposits are found along Harris Brook to the east. The sandy veneer may be related to these deposits or may be local ablation till partially washed and sorted by glacial melt waters.

Hydrogeology

The irregular, hummocky topography and shallowness of bedrock produces an area of apparent paradoxes. In spite of the permeability of the sandy surface veneer, the drainage in areas underlain by closed subsurface bedrock basins is poor.

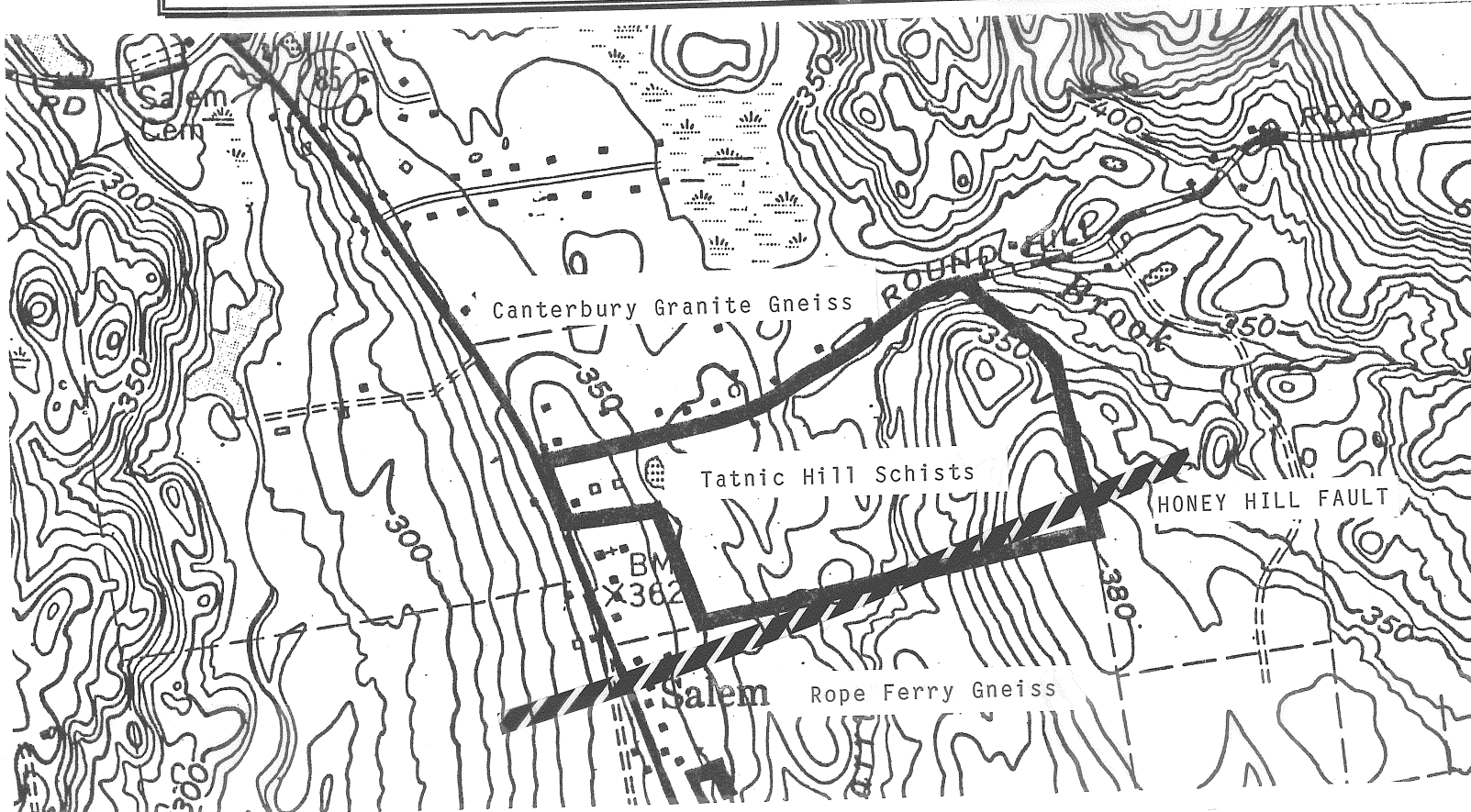
Recommendations

The Commission should be aware of the shallowness of bedrock in planning major playing fields and other landscaping projects.

An annotated nature trail should make some mention of the Honey Hill fault; after all, it is a geologically very significant feature.

GEOLOGIC MAP

Scale 1" = 2000'



SOIL RESOURCES

Mark Edmonds, District Conservationist
 USDA-Soil Conservation Service, New London County
 Telephone: 887-4163

This site is not well suited to the construction of recreation fields. Wetlands, stoniness, and slope are the major limitations. It would be difficult to fit recreation fields on this site without affecting the wetlands. Stones and steep slopes would make construction costs very high. Canton and Charlton soils are well suited for septic tank absorption fields. This areas should be considered for locating new rest room facilities.

With its mixture of wetlands, uplands and the brook, this is an excellent area for wildlife. Nature trail development would be one alternative, especially if arrangements could be made to connect the school property to this property with a nature trail. The area could be used for passive recreation and for outdoor education. Trail location and construction should be chosen to minimize erosion potential and impact on the wetlands and stream.

One proposed activity is to fill in the existing skating pond to provide more parking area. While a pond could be constructed elsewhere on the property, it is recommended that the parking area be constructed such that part or all of it could be flooded for skating. This would eliminate additional disturbance in or adjacent to wetland areas, and minimize the cost. It would also freeze faster, providing more skating days, pose no drowning hazard, and eliminate weed control problems.

Soils Descriptions

Typical of this region, soils in the area under consideration are variable (see soils map). Soil series descriptions are below, followed by limitation ratings for recreational development.

*** CbB - Canton and Charlton fine sandy loams,
 3 - 8 percent slopes**

These gently sloping, well drained soils are on glacial till upland hills, plains, and ridges. Permeability of the Canton soil is moderately rapid in the surface layer and subsoil and rapid in the substratum. Permeability of the Charlton soil is moderate or moderately rapid. The available water capacity in these soils is moderate. Runoff is medium. This soil warms up and dries out rapidly in the spring. These soils are well suited to cultivated crops. The hazard of erosion is moderate. These soils are suited to trees.

These soils are in capability subclass IIe.

CcB - Canton and Charlton very stony fine sandy loams,

3 - 8 percent slopes

These gently sloping, well drained soils are on glacial till upland hills, plains, and ridges. Stones and boulders cover 1 - 8 percent of the surface. Permeability of the Canton soil is moderately rapid in the surface layer and subsoil and rapid in the substratum. Permeability of the Charlton soil is moderate or moderately rapid. The available water capacity of these soils is moderate. Runoff is medium. These soils warm up and dry out rapidly in the spring. The soil is strongly acid or medium acid. These soils are not suited to cultivated crops. These soils are suited to trees.

These soils are in capability subclass VIs.

CcC - Canton and Charlton very stony fine sandy loams, 8 - 15 percent slopes

These sloping, well drained soils are on glacial till upland hills, plains, and ridges. Stones and boulders cover 1 - 8 percent of the surface. Permeability of the Canton soil is moderately rapid in the surface layer and subsoil and rapid in the substratum. Permeability of the Charlton soil is moderate or moderately rapid. The available water capacity of these soils is moderate. Runoff is rapid. These soils warm up and dry out rapidly in the spring. It is strongly acid or medium acid. These soils are not suited to cultivated crops. These soils are suited to trees. Steepness of slope is a major limiting factor for community development.

These soils are in capability subclass VIs.

CdD - Canton and Charlton extremely stony fine sandy loams, 15 - 35 percent slopes

These moderately steep to steep, well drained soils are on glacial till upland hills, plains, and ridges. Stones and boulders cover 8 - 25 percent of the surface. Permeability of the Canton soil is moderately rapid in the surface layer and subsoil and rapid in the substratum. Permeability of the Charlton soil is moderate or moderately rapid. The available water capacity of these soils is moderate. These soils warm up and dry out rapidly in the spring. They are strongly acid or medium acid. These soils are not suited to cultivated crops. The hazard of erosion is severe. These soils are suited to trees. Steepness of slope is a major limitation for community development.

These soils are in capability subclass VIIs.

***** Rn - Ridgebury, Leicester, and Whitman extremely stony fine sandy loams**

These nearly level, poorly drained and very poorly drained soils are in drainageways and depressions of glacial till upland hills, ridges, plains, and drumloidal landforms. Stones and boulders cover 8 - 25 percent of the surface. The Ridgebury and Leicester soils have a seasonal high water table at a depth of about 6 inches. The Whitman soil has a high water table at or near the surface for most of the year. Permeability of Ridgebury and Whitman soils is moderate or moderately rapid in the surface layer and subsoil and slow

or very slow in the substratum. The Ridgebury and Whitman soils are strongly acid through slightly acid. Permeability of Leicester soil is moderate or moderately rapid, it is very strongly acid through medium acid. Runoff for the Ridgebury and Leicester soil is very slow or slow. Whitman soil runoff is very slow, or the soil is ponded. The available water capacity for these soils is moderate. These soils are not suited to cultivated crops. The erosion hazard is slight. These soils are suited to trees. Windthrow is common because of the shallow rooting depth above the high water table. The major limiting factors for community development are the high water table and the slow or very slow permeability in the substratum.

These soils are in capability subclass VII.

SwB - Sutton very stony fine sandy loam, 0 - 8 percent slopes

This nearly level to gently sloping, moderately well drained soil is on upland glacial till plains, hills, and ridges. Stones and boulders cover 1 - 8 percent of the surface. The Sutton soil has a seasonal high water table at a depth of about 18 inches. Permeability is moderate or moderately rapid. The available water capacity is moderate. Runoff is slow or medium. Sutton soil warms up and dries out slowly in the spring. It is strongly acid or medium acid in the surface layer and subsoil and strongly acid through slightly acid in the substratum. This soil is not suited to cultivated crops. The hazard of erosion is slight or moderate. This soil is suited to trees. The major limiting factor for community development is the seasonal high water table.

This soil is in capability subclass VI.

Ud - Udorthents-Urban land complex

This complex consists of excessively drained to moderately well drained soils that have been disturbed by cutting or filling, and areas that are covered by buildings or pavement. Urban land consists mainly of areas of houses, small commercial buildings, schools, streets, parking lots, roads, and highways. Permeability of the Udorthents is slow to very rapid. The available water capacity and runoff are variable.

This complex is not assigned to a capability subclass.

WyB - Woodbridge very stony fine sandy loam 0 - 8 percent slopes

This nearly level to gently sloping, moderately well drained soil is on drumloidal, glacial till, upland landforms. Stones and boulders cover 1 - 8 percent of the surface. The Woodbridge soil has a seasonal high water table at a depth of about 18 inches. Permeability is moderate in the surface layer and subsoil and slow or very slow in the substratum. The available water capacity is moderate. Runoff is medium. This Woodbridge soil warms up and dries out slowly in the spring. It is strongly acid or medium acid in the surface layer and subsoil and strongly acid through slightly acid in the substratum. This soil is not suited to cultivated crops. The hazard of erosion is moderate. This soil is suited to trees. The major limiting factors for community development are the seasonal high water table and the slow or very slow permeability in the substratum.

This soil is in capability subclass VI.

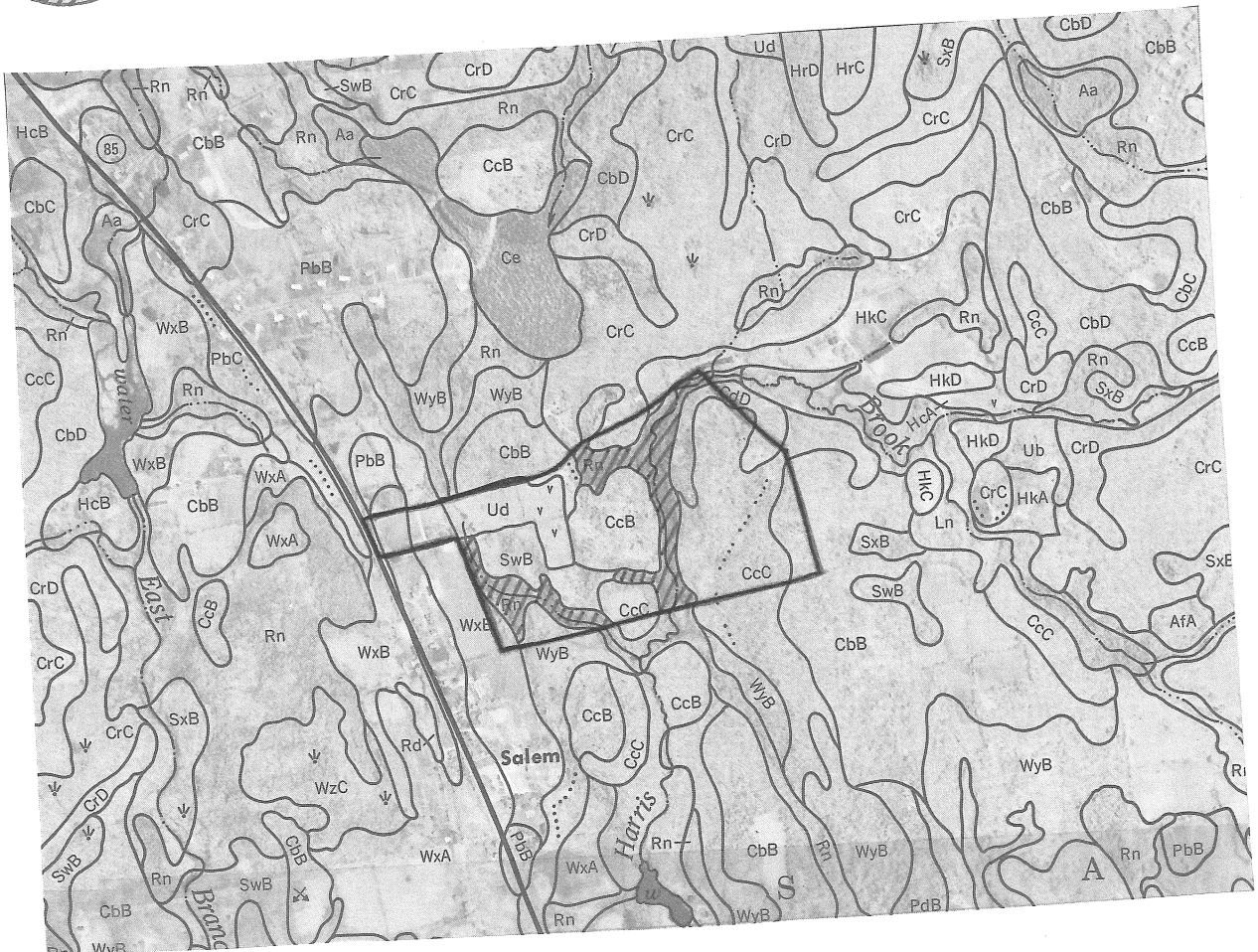
- * - Prime Agricultural Farmland
- ** - Farmland of Statewide Importance
- *** - Wetlands

SOILS MAP

Owner TOWN OF SALEM Operator TOWN OF SALEM
County NEW LONDON State CONNECTICUT
Soil survey sheet (s) or code nos. #44 Approximate scale 1" = 1320'
Prepared by U. S. Department of Agriculture, Soil Conservation Service cooperating
with NEW LONDON COUNTY SOIL AND WATER Conservation District



 - WETLAND SOILS



SOIL LIMITATION RATINGS FOR RECREATIONAL DEVELOPMENT

Soil Symbol	Picnic Areas	Playgrounds	Paths/Trails
CbB	slight	moderate, slope small stones	slight
CcB	moderate, large stones	severe, large stones	slight
CcC	moderate, slope, large stones	severe, slope, large stones	slight
CdD	severe, slope, large stones	severe, slope, large stones	moderate, slope
Rn	severe, large stones, wetness	severe, large stones, wetness	severe, wetness
SwB	moderate, large stones, wetness	moderate, large stones, wetness	moderate, wetness
Ud	no rating	no rating	no rating
WyB	moderate, large stones, percs slowly	severe, large stones	moderate, wetness

Slight: soil properties are generally favorable and that limitations are minor and easily overcome.

Moderate: limitations can be overcome or alleviated by planning, design, or special maintenance.

Severe: soil properties are unfavorable and that limitations can be offset only by costly soil reclamation, special design, intensive maintenance, limited use, or by a combination of these measures.

WETLAND REVIEW

Dan Mayer, Environmental Analyst III
DEP-Inland Water Resources Division

Doug Cooper, Supervising Environmental Analyst
DEP-Inland Water Resources Division
Telephone: 566-7280

Site Description and Proposed Activity

The site under review is approximately 67 acres located on Round Hill Road, off of Route 85 in Salem, CT. Presently the site is the Town's recreation area including three baseball fields, two tennis courts, two picnic areas, a skating pond, refreshment and supply building and parking area. The site contains a reach of Harris Brook and its associated wetlands as well as several intermittent watercourses. Much of the site contains shallow to bedrock conditions and/or soils which possess a high water table. The activities under consideration are the expansion of the facilities to accommodate two additional baseball fields, a soccer field and a basketball court. Also under consideration is the filling of the existing skating pond to create a parking area and basketball courts.

Potential Impacts and Recommendations

Any assessment of impacts at this point is speculative due to the lack of site specific technical and resource information. The Harris Brook corridor is a significant resource for wildlife habitat, passive recreational activities, flood control and other passive functions such as education opportunities and aesthetics. If this site is modified to create the desired recreational facilities significant wetland impacts would most likely result. Due to the site's topography, shallow soil conditions and amount of wetlands, activities of the scope being considered would require significant regrading, filling and possibly blasting in some areas. These activities would result in some degree of loss of wetlands area and present some risk of erosion and sedimentation impacts. An alternative proposing a reduced density of use for the site could be explored in order to eliminate unnecessary wetland impacts.

With regard to the alternative of filling the existing skating pond, it is the opinion of the DEP-Inland Water Resources Division that this activity would result in less significant impacts than alternatives which would encroach upon the Harris Brook corridor. However, this does not mean that the filling of the pond would not result in undesirable impacts. Filling of the pond would result in direct piping of road drainage to the wetland/watercourse into which the pond now discharges. Piping of road drainage would reduce renovation and could result in degradation of other resources on the site if the loss of the pond renovation was not replaced by some means. Overall the site contains considerable constraints to the type and scope of activities proposed and development of

this site would result in some unavoidable impacts to wetlands and watercourses.

In light of the above mentioned impacts and site conditions the following comments and recommendations are offered for consideration.

- 1) While the site presents considerable constraints to development any further investigation into its potential use should require much more technical information including, at a minimum, a site intensive soil survey, topographic mapping and an environmental evaluation. These minimum resources will at least facilitate the evaluation of potential alternatives.
- 2) Alternatives which could be considered include other properties owned by the Town of Salem, varying densities of activities on proposed site and options to either buy or lease other suitable properties in town.

THE NATURAL DIVERSITY DATA BASE

Nancy Murray, Sr. Environmental Analyst
DEP-Natural Resources Center
Telephone: 566-3540

The Natural Diversity Data Base maps and files regarding the project site have been reviewed and according to the information, there are no known extant populations of Federally Endangered and Threatened species or Connecticut "Species of Special Concern" occurring at the site in question.

Natural Diversity Data Base information includes all information regarding critical biologic resources available to us at the time of the request. This information is a compilation of data collected over the years by the Natural Resources Center's Geological and Natural History Survey and cooperating units of DEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultation with the Data Base should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. ↵

VEGETATION

Pete Merrill, Forester
DEP-Patchaug State Forest
Telephone: 376-2513

Vegetative Cover Types

Area #1 - this is an area of open land including town buildings, parking lots, lawn, ball fields and tennis courts.

Area #2 - this cover type is commonly referred to as "old field". It is an area that has reverted from field and pasture to woodlot in the last thirty years or so. There are several stands of red cedar with dwarf juniper that are in various stages of being over-topped by scarlet oaks, red maples, or black birch. Other areas are of nearly pure hardwoods with black and scarlet oak predominantly, with some black birch, gray birch, red maples and hickories mixed in. Highbush blueberries are common, especially in some of the more open areas among the red cedars, as well as azalea, several species of viburnum and sheep laurel. There are a few large trees, especially along the walls that are a remnant of the days when these were pastures. Most of the remainder of the trees are less than six inches in diameter and less than 20 years of age.

Area #3 - an "old field" also, but this area has been abandoned even longer, 30 years or more. There are still some of the red cedars evident, but the rest of the area looks like a black oak, hickory, black birch forest with blue beech, horn beam and maple leaf viburnum in the understory.

Area #4 - this area has wetter soils and has an overstory that is nearly pure red maple. There are a few American elms and a few black gum. The understory varies from quite open in some of the more dense red maple stands to quite dense, where some of the maple has been killed out as a result of the temporary beaver flooding. Understory species include highbush blueberry, spice bush, blue beech and azalea. There is an area along the brook of two or more acres where the larger trees have all died as the result of the flooding. Shrubs, grasses and reeds are invading this area.

Area #5 - this encompasses the high ground east of Harris Brook. The overstory is a stand of mixed oaks, red, white and black with a few sugar maples, shag bark hickories, black birch and red maple. The understory contains seedlings and saplings of all of the above species, especially the sugar maple and black birch along with hop horn beam, highbush blueberries and various viburnums.

Planning and Utilization

Area #1 is already occupied by man-made structures and features.

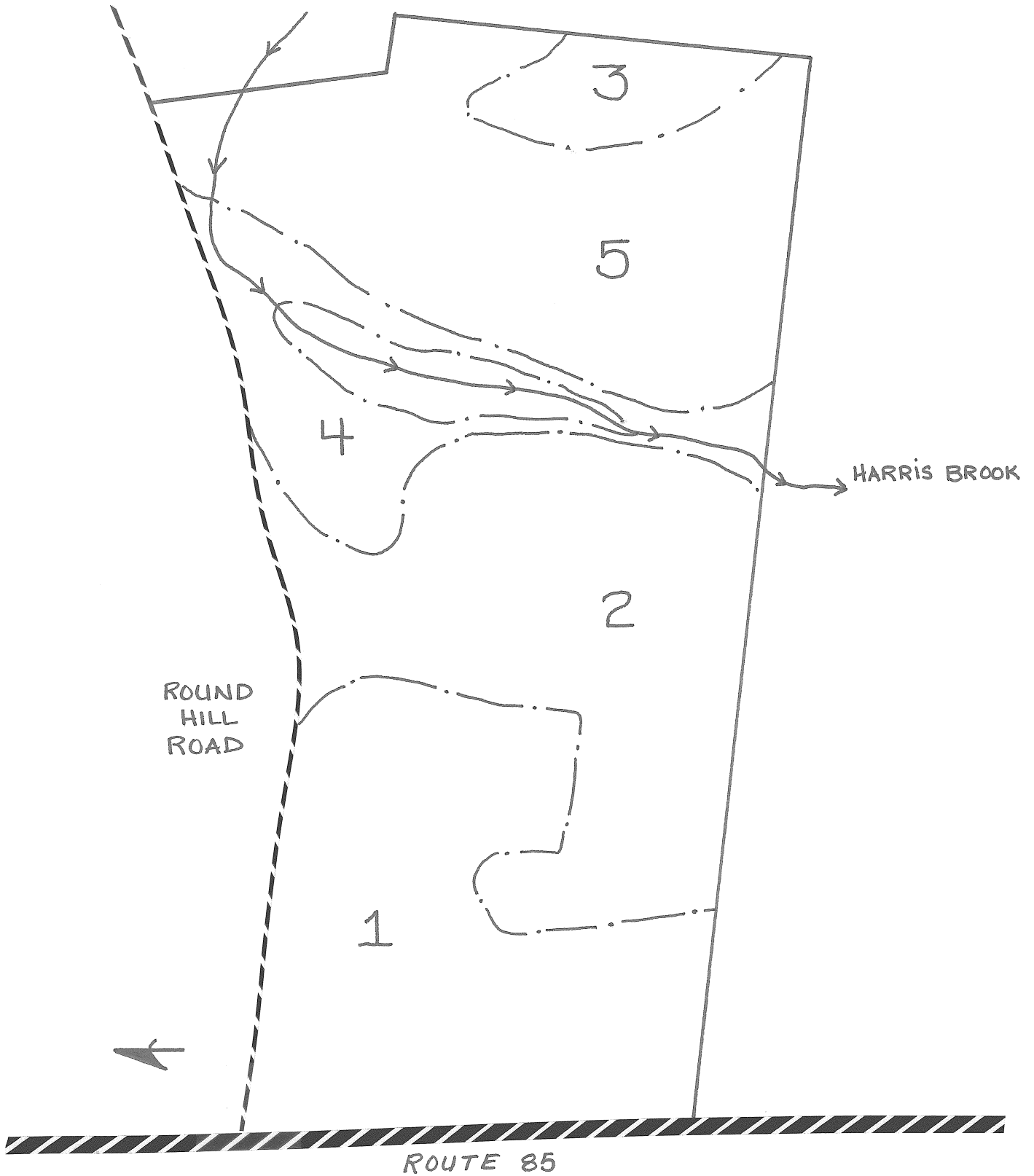
Area #2 has a lot of open and semi-open areas suitable for passive recreation such as hiking or camping. Because of the small tree size, clearing should be fairly easy and not too expensive; however, there seemed to be several areas where the bedrock was exposed which will make leveling and grading of larger areas difficult. Small fields, picnic groves and hiking paths would be compatible.

Area #4 would lend itself to some very interesting, mature trails if the time and money were put into raised or boardwalk trails. Wetland and water associated ecology is always more striking and more varied than uplands. A seasonal high water table precludes most other uses of this area.

Area #5 and Area #3 are high and dry and not too stony, though the larger trees would make clearing costly. There are areas with minimal gradient, but they appear too remote to lend themselves to anything other than hiking and primitive camping. One of the biggest obstacles is crossing Harris Brook. Although the main canopy of trees is over 12 inches, the trees are relatively young and in good health so light cuttings or thinnings for trails, etc. would have little affect on the site. ↵

VEGETATION MAP

No Scale Given



WILDLIFE RESOURCES

Steve Hill, Wildlife Biologist
DEP-Eastern District Headquarters
Telephone: 295-9523

Habitat Type Descriptions

The major habitat types include mixed hardwoods and wetlands.

Mixed Hardwood Forest: This habitat consists of a variety of hardwood species including oak, maple, birch, and hickory. Understory vegetation includes witchhazel, elderberry, multiflora rose, grape, blackberry and hardwood regeneration. Wildlife frequenting such habitat types include deer, fox, raccoon, gray squirrel, woodpeckers, ovenbirds, scarlet tanagers, blackthroated blue and green warblers.

Wetland/Riparian Habitat: This habitat type consists of streams and associated wetland habitat. A small wetland pond used for skating is located in the western section of the property.

Impacts of Development

Upland Wooded Areas: Fragmentation and loss of habitat will lead to a decline in species diversity and richness. Wildlife populations will be reduced in proportion to the amount of habitat lost.

Wetland/Riparian habitat: Wetlands support a high diversity of wildlife due to the complexity of the vegetative structure, high productivity and abundant food supply which allow for a high carrying capacity (Brown et. al. 1978). There are many species that require access to streams or water body margins for survival even though they may spend much of their time in other habitats (Milligan and Raedeke 1986). Part of the food supply for many vertebrates is the high abundance and diversity of insect populations that are typical of wetland ecosystems (Brown et al. 1978). Wetlands presently provide important habitat for a variety of wildlife species and function as areas for absorption of natural runoff.

Vegetation removal in wetlands may have severe impacts on wildlife, especially reptiles and amphibians. One or several of the cover, food, breeding habitat, and hibernation areas may be altered. Species dependent on specialized habitat are eliminated and more adaptable species are reduced in numbers (Campbell 1973). To minimize impact maintain a 100 foot wide buffer zone of vegetation around wetland/riparian areas.

Mitigation of Disturbances

1. Maintain a 100 foot wide buffer zone of natural vegetation around wetland/riparian areas to help filter and trap silt and sediments.
2. Set aside open space areas contiguous with buffer zones and that encompass other areas of vegetation so as not to create small isolated islands.

Preserving Natural Habitats

Management of wildlife resources is in a large part dependent upon habitat management. The manipulation of vegetation is a key element of wildlife management. Sustaining wildlife populations means regulating on a continual basis the kind, the amount, and the spatial arrangement of food and cover plants to provide for the needs of wildlife.

Wildlife management goals for the site should include production of optimum habitat diversity to maximize production of wildlife species. This can be done by creating and/or maintaining a diversity of food and cover with a mosaic of nesting, resting, and loafing sites scattered throughout the area.

Ideal upland/forestland habitats for general wildlife considerations are composed of:

- 1) Two to three percent of the land mass in permanent grass-legume plots.
- 2) Five to seven percent of the land mass in permanent openings maintained to encourage early successional stage, native vegetation.
- 3) Ten percent of the land mass in cover species such as young growth conifer patches (1/8 to 2 acres).
- 4) Managing the forestland should be a combination of two systems: a) roughly 75 percent of the forestland in even-aged and b) 25 percent in uneven-aged stands. Eventually the management unit would consist of 25 percent seedling/sapling, 25 percent poles, and 50 percent saw timber. If these stands are well-mixed, optimum wildlife habitat will result.

Natural History Education/Trails

Trails are the key to bringing people and wildlife together. They should be located to take advantage of terrain and existing habitat and conform to existing landscape textures. Effective trail planning and layout can enhance the learning and aesthetic aspects of outdoor recreation by providing easy access to varied habitats. A nature trail which includes informational signs provides insight into the ecology of an area. The information provided helps the general public appreciate a particular animal, plant or habitat and its ecological value.

Some guidelines to follow when developing a trail system:

1. Know the characteristics of the property and plan the layout so that the trail passes

by or through a variety of habitat types.

⚡ Make sure the trail is safe as well as exciting. If feasible, a portion of the trail system should be made accessible to the handicapped.

⚡ Follow a closed-loop design, beginning and ending at the same point.

⚡ Avoid long, straight stretches. Trails with curves and bends are longer, add an element of surprise and anticipation, and seem more natural. Straight stretches should not exceed 100 feet.

⚡ The trail system should be well marked and accompanied by an informational pamphlet. This will allow interested individuals, not just organized groups, to have an educational opportunity. If management practices are conducted (i.e. openings, plantings, bluebird boxes) they should be discussed. The major wildlife topics to emphasize should be the value to wildlife of vegetation types/succession and wetland areas.

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FISHERIES RESOURCES

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Fish Population

Harris Brook flows through this parcel which is being considered for development of both active and passive recreation facilities. This stream is annually stocked with more than 300 yearling brook trout in the town of Salem. The exact fisheries composition of the stretch of stream that runs through the parcel is not known; however, stream dwelling species expected to inhabit this watercourse are: native brook trout, blacknose dace, longnose dace, tessellated darter, common shiner, fallfish, white sucker, and American eel.

Recommendations

The following recommendations are provided to assist with on-site planning.

1. Any development should focus upon minimizing disturbance to on-site wetlands; hence, an initial step would be to hire a certified soil scientist to delineate all on-site freshwater wetlands. Once wetlands are flagged, the town should target only non-wetland areas for future development. It may also be useful to hire a recreational consultant to assist with specific location and planning of proposed needed facilities.

2. It is highly recommended that at the minimum, a 100 foot open space buffer zone be maintained along the wetland boundary of Harris Brook. No construction nor alteration of existing habitat should be allowed in this zone.

3. Harris Brook and its associated wetlands could serve as a valuable ecological study area for town residents. A nature/hiking trail system could be developed on the property which follows through various habitat types. The established trail system should follow a closed-loop, that is, begin and end at the same point and be well marked.

4. Future ballfields should be carefully developed to control soil erosion during initial phases of construction. Stormwater runoff should not be concentrated, but be allowed to disperse via sheetflow. Additionally, liming and fertilization practices should be carefully controlled to eliminate nutrient loading to Harris Brook.

5. Rather than filling in the existing skating pond to develop a parking lot, the pond could be dredged and deepened to serve a dual purpose, that of a fishing pond as well as a skating pond. A warmwater pond fishery could be created by stocking a combination of largemouth bass and bluegill sunfish. This pond would especially be useful to introduce

children to basic fishing techniques. Also, small numbers of trout could be stocked in the early spring to create a temporary put-and-take fishery. Fish could be harvested during organized fishing derbies. If the town wishes to pursue fish stocking, please call the Team's fisheries biologist for further details concerning fish stocking rates. ↵

PLANNING COMMENTS

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The Round Hill Road Recreation Area is a 67-acre tract of land on the south side of Round Hill Road, purchased by the Town of Salem in 1968 with the help of a \$30,000 grant from the federal Land and Water Conservation Fund. In 1977 another grant from the same source was approved for the development of the skating pond, tennis courts, baseball fields, and a storage and snackbar building at the Round Hill Road facility and for improvements to Bingham Field next to the Salem Elementary School. All of these improvements were completed in 1980.

The Recreation Commission's long-term plan for the Round Hill Road property is conceptual and indicates the types and relative sizes of desirable additional facilities. These include an expanded parking area, an outdoor basketball court, two more baseball fields, and an all-purpose field. This concept plan assumes that the physical obstacles presented by the natural landscape can be overcome.

The property has a variety of natural features that present both problems and potentials for recreation uses. In general, it is well suited in its natural state for the development of hiking trails, picnic areas, and camping sites. Several knolls and low ridges, interspersed with wetlands and watercourses, present an interesting landscape for the naturalist. Harris Brook and its associated wetlands offers unique woodland vistas unparalleled in the region. These same characteristics increase both the complexity and the costs of developing the site for organized sports facilities. In fact, it is unlikely that the development scheme contemplated by the Commission's concept plan can be achieved without significant adverse environmental impacts.

A major problem related to the present use of the site is vehicle parking and access. There is an area for parking at the northwestern corner of the property, between the skating pond and Round Hill Road. Its access location is reasonably good, but the area is limited in size and contains few parking spaces. Expansion of this area would require either filling in the skating pond or eliminating the adjacent ball field. The second, and larger, parking area is located between the ball fields and the storage and snackbar building. The physical characteristics of the land abutting this area will complicate its enlargement. More importantly, however, are safety issues related to this parking area. Persons walking between the ball fields and the snackbar have to pass through the parking lot where vehicles may be maneuvering. Also of concern is the driveway providing access to Round Hill Road. It intersects with the road at a sharp angle and the sight line to the east along the road is interrupted by brush at the edge of the road and by a sharp vertical curve.

Clearly, further development of this property for active recreation purposes will be difficult. If it is to occur at all, better information is needed about the physical limitations.

Available soils information, for example, is not sufficiently detailed to indicate even generally where new access, parking, or recreation facilities might be located without violating regulated wetlands. Such issues were of less concern when the present facilities were built in 1980. Also, additional facilities should not be constructed until the problems related to vehicle access and parking are solved. Unfortunately, alternative access locations on Round Hill Road to the larger parking lot are blocked by existing ball fields, and access from other directions does not appear to be feasible at this time. Consideration might be given to expanding the existing smaller parking area by the skating pond in the direction of the school bus parking area unless the pond itself is filled in and that area used as the primary parking area.

Public safety would certainly be enhanced if the snackbar and storage building were moved to another location. Simply relocating it to the opposite corner of the parking area would greatly reduce the present conflict between vehicles and pedestrians.

For the long term, the Commission should consider providing facilities in other parts of the town that may not be feasible at the Round Hill Road property. It may be possible to acquire sites for such facilities when large land holdings are subdivided for residential development. To enhance the possibilities of achieving this, the Commission should prepare a detailed list of present and projected needs and make sure all appropriate boards and commissions in the town are aware of its contents. ↵

STATE PARK PLANNER COMMENTS

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Developed Facilities

The facilities at the Round Hill Road Recreation Area are basically very handsome with well developed ballfields and tennis courts for a community of this size and despite the naturally stony character of the site. The Park Planner's only major question relates to field #3, which seems too small to be useful. Also, the close proximity of fields without a buffer strip may pose a safety hazard from home runs landing in adjacent fields. In the Park Planner's view there is no problem in filling the skating pond if parking is needed in that location and developing a new pond further to the south along the same swale. (*Please see Wetland Review section and Fisheries Resources section for additional opinions and comments on this issue*) It was noted that the picnicking area shown as existing immediately south of the refreshment building shows no sign of development as such.

Proposed Facilities

New facilities will be dictated largely by natural constraints. For example the area of CCB and SWB soils can be developed into ballfields, etc., despite their innate stoniness. (*Please refer to the Soil Resources section for further detail.*) Perhaps the limitation is lessened somewhat by indications of stone removal during previous agricultural use. However a wide belt of land along Harris Brook and along a small feeder brook flowing easterly from Round Hill Road is wetland with physical and regulatory limitations. Similarly, the inland area east of Harris Brook has physical limitations including slope and stoniness as well as lacking ready access. In addition the rather steep slope east of the Recreation Building will have development limitations with much extensive site work. With these factors in mind the following comments can be made:

- 1.** The proposed combination ballfield/athletic field east of the Recreation Building is not feasible because it is largely located in an inland wetland.
- 2.** The proposed parking area between the Recreation Building and the proposed combination ballfield/athletic field will pose development problems and likely substantial expenses because of slope and the need to regrade the site.

3. The proposed ballfields, basketball courts and parking area east of the existing tennis courts seem feasible although stoniness will be a factor and some regrading will be necessary.

4. The poorly drained streambelt along Harris Brook which includes a former beaver dam should be retained intact providing some fishing opportunity.

5. The hilly upland east of Harris Brook should remain as is; as a natural component of the park. Because of the prevailing width of the Harris Brook wetland, trail access to this area from within the park will be difficult to develop requiring a bridge and boardwalk/bog bridge. This issue deserves further analysis. ↗

ARCHAEOLOGICAL REVIEW

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A review of the State of Connecticut's Archaeological Site Files and Maps show no prehistoric Native American site in the project area. However, Indian fishing camp sites are often located along waterways like Harris Brook which bisects the project area. The Office of State Archaeology recommends that an archaeological reconnaissance survey be conducted in areas along the brook where active recreation is planned. The survey will locate and identify any cultural resources which might exist prior to landscaping activities.

The Town of Salem's existing open space/recreation area is located behind the town's civic and institutional center. Salem's historic center, along Route 85, is listed on the National Register of Historic Places. However, if the proposed improvements are located as shown behind the existing skating pond, there would appear to be no direct or indirect effect upon the historic ambience of the Salem National Register Historic District. Based upon an on-site review, the project area would appear to possess minimal sensitivity vis-a-vis historic archaeological sites.

In summary, the proposed recreational area contains no known archaeological sites. The potential for historic sites is minimal, however, prehistoric Indian fishing encampments may be located along Harris Brook. It is recommended that an archaeological survey be conducted in areas along the brook that will be effected by any landscaping activities to ensure the preservation and conservation of the cultural resources which may exist in the project area. ↻

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, soil specialists, engineers and planners. The ERT operates with state funding under the supervision of the Eastern Connecticut Resource Conservation and Development (RC&D) Area --- an 86 town region.

The services of the Team are 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, landfills, commercial and industrial developments, sand and gravel excavations, 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 official 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 and the ERT Coordinator. A request form should be completely filled out and should include the required materials. 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 and request forms regarding the Environmental Review Team please contact the ERT Coordinator: 203-345-3977, Eastern Connecticut RC&D Area, P.O. Box 70, Haddam, Connecticut 06438.