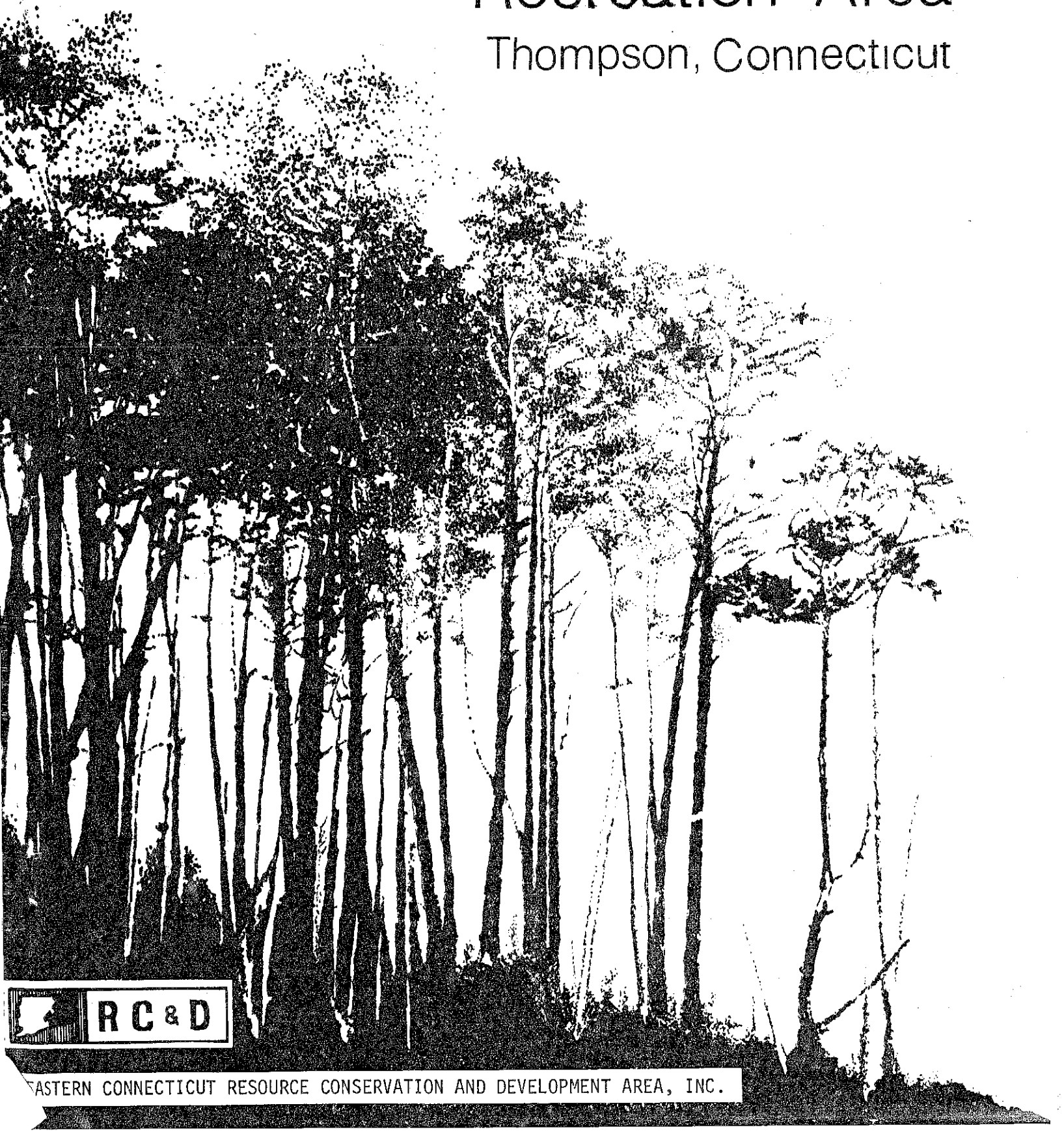
Environmental Review Team Report

Recreation Area

Thompson, Connecticut



R C&D

EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

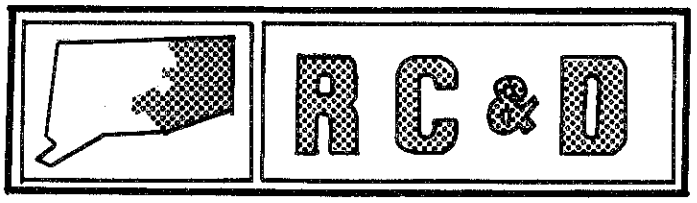
Environmental Review Team Report

on

Recreation Area

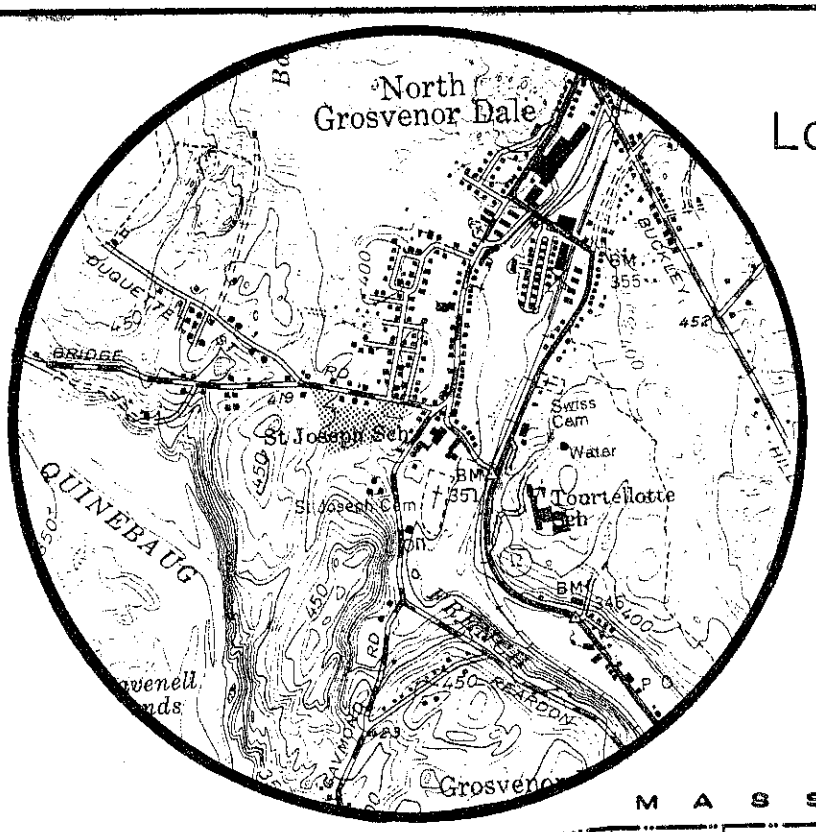
Thompson, Connecticut

April 1980



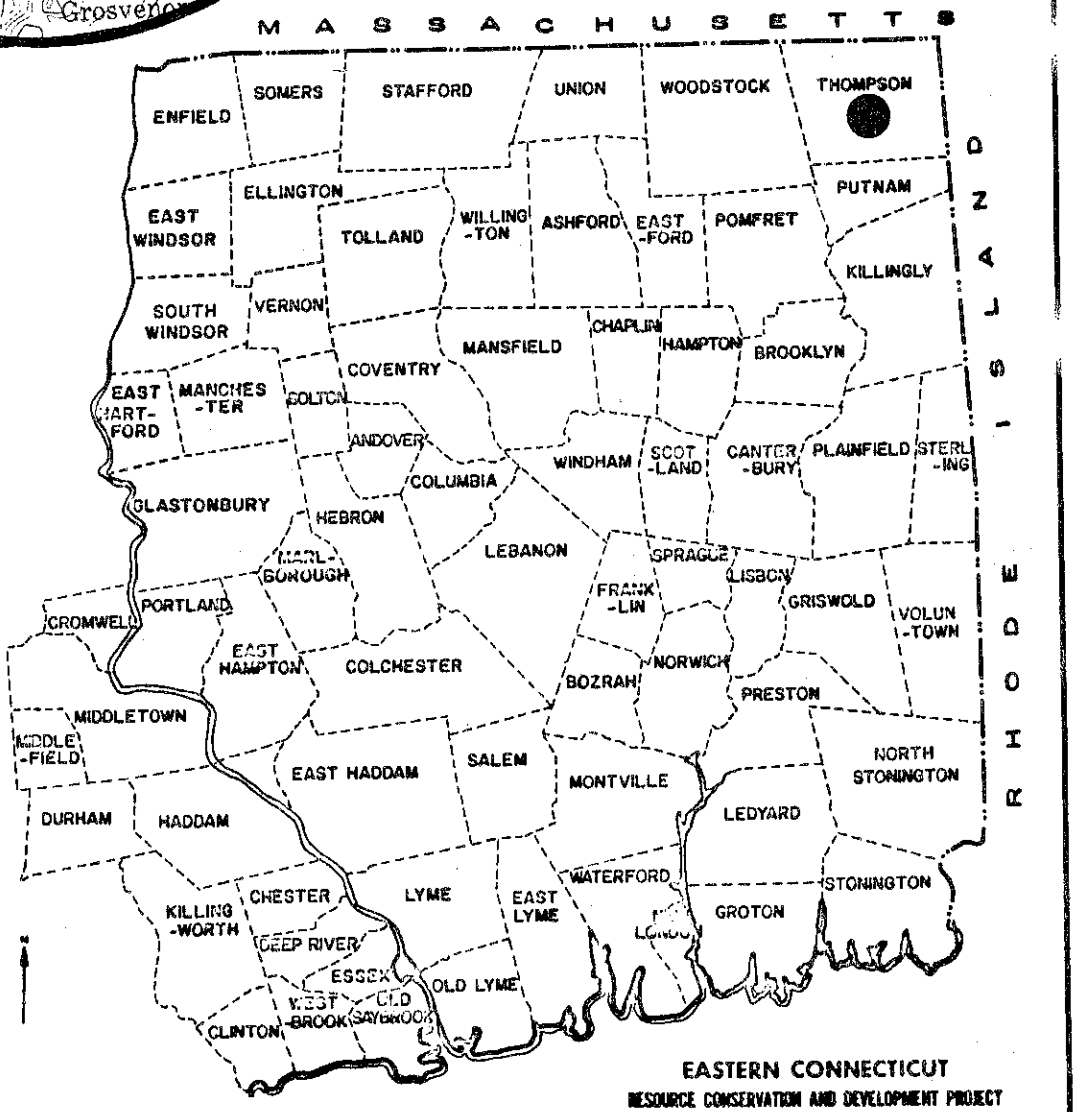
eastern connecticut resource conservation & development area

environmental review team
139 boswell avenue
norwich, connecticut 06360



Location of Study Site

RECREATION AREA
THOMPSON, CONNECTICUT



EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

ENVIRONMENTAL REVIEW TEAM REPORT
ON
THOMPSON RECREATION AREA
THOMPSON, CONNECTICUT

This report is an outgrowth of a request from the Thompson Little League Association to the Windham County Soil and Water Conservation District (S&WCD). The S&WCD referred this request to the Eastern Connecticut Resource Conservation and Development (RC&D) Area Executive Committee for their consideration and approval as a project measure. The request was approved and the measure reviewed by the Eastern Connecticut Environmental Review Team (ERT).

The soils of the site were mapped by a soil scientist of the United States Department of Agriculture (USDA), Soil Conservation Service (SCS). Reproductions of the soil survey map as well as a topographic map of the site were distributed to all ERT participants prior to their field review of the site.

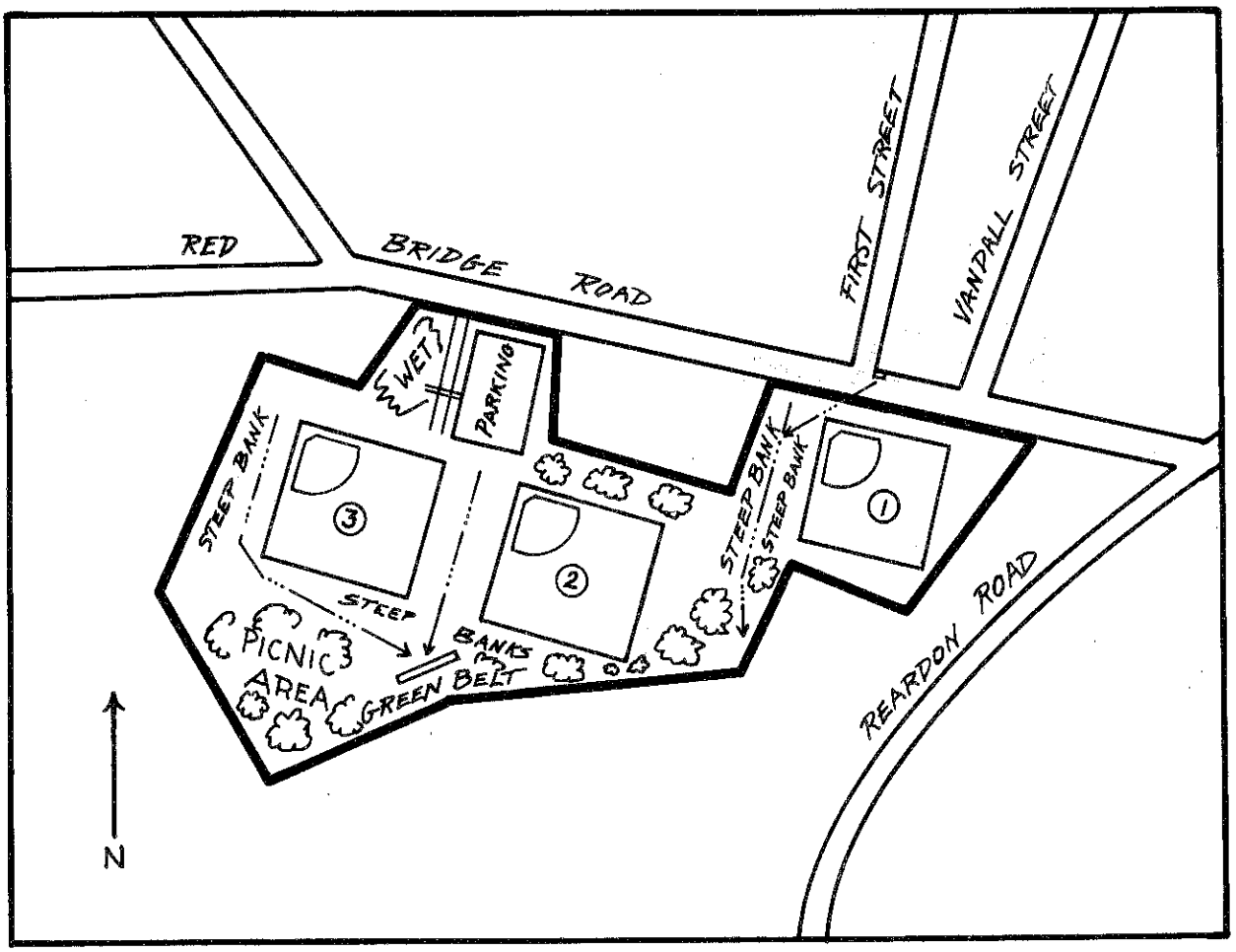
The ERT that field-checked the site consisted of the following personnel: Ed Lukacovic, Soil Conservationist, SCS; Michael Zizka, Geologist, Department of Environmental Protection (DEP); Rob Rocks, Forester, DEP; Andy Petracco, Recreation Specialist, DEP; Bill Sawicki, Sanitarian, State Department of Health; John Cimochowski, Environmental Planner, Northeast Regional Planning Agency (NECRPA); Steven Kushner, Regional Planner (NECRPA); Marcia Banach, Planning Assistant (NECRPA); and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

The Team met and field-checked the site on Thursday, March 13, 1980. Reports from each 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 Town, this report, which identifies the existing resource base of the Thompson Recreation Area, shall constitute the environmental assessment portion of the Town's open space application for Federal Department of the Interior, Heritage Conservation and Recreation Service funds to assist in the development 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 06360, 889-2324.



PROPOSED SITE DESIGN

DESCRIPTION OF THE PROPOSAL

The Thompson Little League Association with the support of all Town of Thompson Commissions, is seeking developing funding from the Heritage Conservation and Recreation Service for further development of their baseball facilities. The 12± acre parcel is located on Red Bridge Road in a highly populated section of the Town. The parcel is gently sloping and partially forested. Wetlands border one of the existing ballfields. The site is also in close proximity to the Quinebaug River.

A portion of the site is presently developed with two ballfields, another Senior League Field is under construction. The Little League Association is applying for funding to complete their development plan for the site. These plans include finishing the field under construction; renovating the existing ballfields and basketball court; providing drainage, seeding and landscaping for the area; establishing a small building to house restrooms, a snack bar, a first aid station and a general storage area; providing bleachers, an unpaved parking area and a paved interior accessway between fields. Potential future plans include picnicking facilities in the wooded section of the site and a tennis court.

This parcel has been classified as open space in the 1970 Thompson Plan of Development.

DESCRIPTION OF THE ENVIRONMENT

PAST/PRESENT LAND USES

Approximately 2.5 acres of this parcel are in active recreation as a Little League Field. The surrounding area is wooded and is of a low density residential land use. It appears that past land use(s) consisted of open space (agriculture) and wooded land.

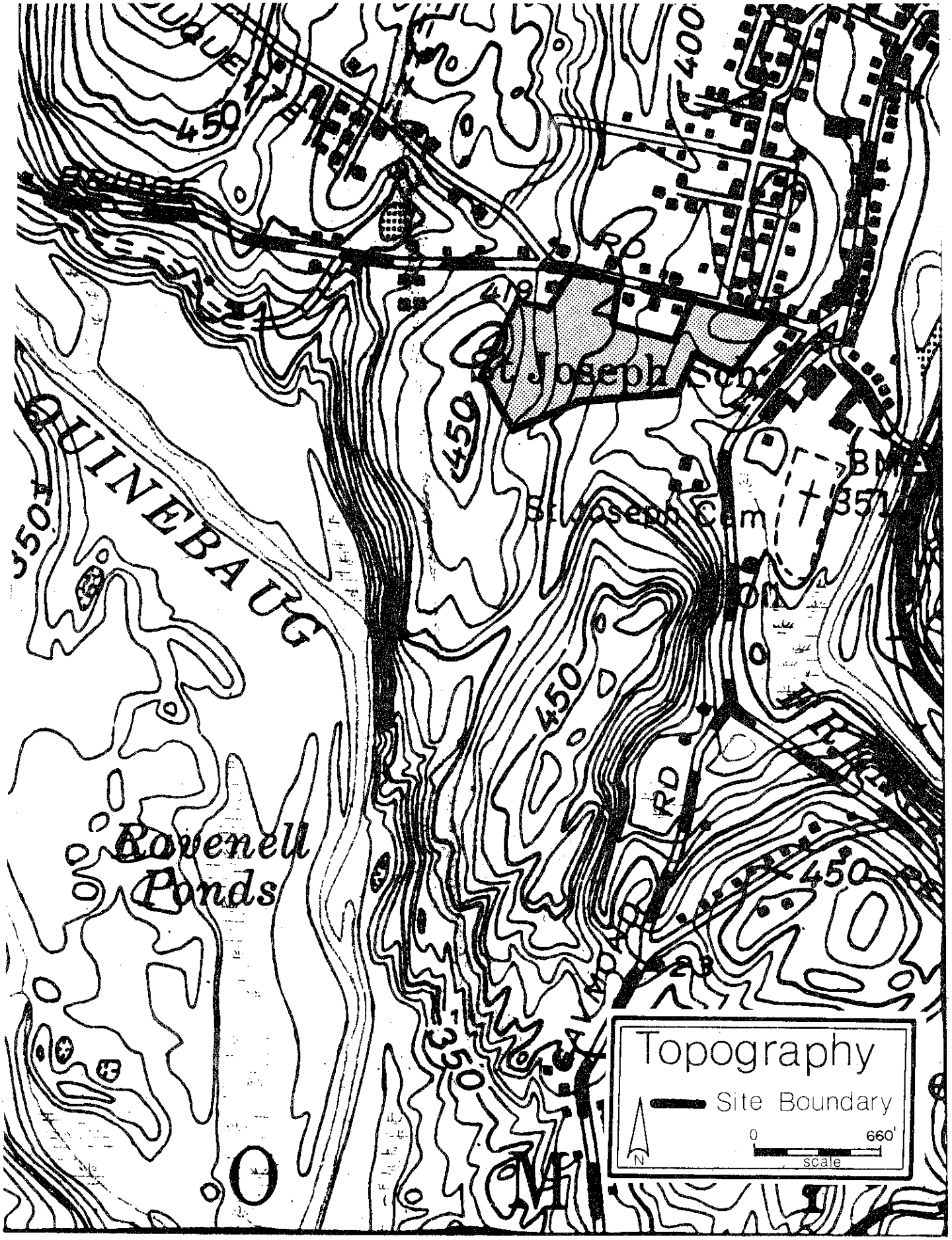
EXISTING SOCIO-ECONOMIC CONDITIONS

Although Thompson is not expected to exhibit a substantial population increase in the next 10 years, recreational needs have been a constant issue within the Town; and the facility proposed will help meet those needs.

Sources: State Department of Health Population Projections
Thompson Plan of Development

EXISTING TRANSPORTATION ROUTES

The site is within three miles of Route 52, the major north-south corridor of Northeastern Connecticut. Access to Route 52 from the site is provided by Connecticut Route 12 which is located within one-half mile of the site. An existing Town road (Red Bridge Road) provides direct access to the parcel. As the site is located in a densely populated section of Thompson, greater numbers of individuals will have access to the facility.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St Joseph Cem
BM
351
QUINEBAUG
Bowenell
Ponds
RD
Topography
Site Boundary
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scale
N

SURFACE AND SUBSURFACE GEOLOGIC CONDITIONS

The site is located within the Putnam topographic quadrangle. A bedrock geologic map of that quadrangle by H.R. Dixon (1976) is open-filed at the Department of Environmental Protection's Natural Resources Center in Hartford. Bedrock was exposed on the site only in a blasted area at the western end. Rock types observed included mica quartzite and a well-lineated schist composed of sillimanite, garnet, muscovite, biotite, plagioclase feldspar, and quartz. Some beryl was observed in the rocks, but it was neither of a quality nor a concentration to merit exploitation. Little if any economic value could be ascribed to the rocks. Dixon describes the general bedrock underlying the site as sillimanite gneiss, composed of medium-grained, medium- to dark-greenish gray sillimanite-garnet-(muscovite)-biotite-andesine-quartz gneiss interlayered with fine-grained, dark gray (garnet)-biotite-sodic andesine-quartz gneiss. Her list of accessory minerals includes zircon, apatite, opaque minerals, epidote, and locally kyanite.

Overlying bedrock on the site is a nonsorted glacial sediment called till. Till contains rock particles and fragments of widely varying shapes and sizes. Although it is composed primarily of sand on this site, the till also contains a substantial amount of finer particles. The percentage of fines probably is greater in the lower portion of the deposit.

Construction of the newer ballfields has required excavation of till and bedrock, as well as grading and filling. Most of the site is therefore covered by fill, which consists in part of large boulders of blasted rock. The older ballfield in the easternmost section of the site overlies a former landfill; the fill for that field consists primarily of sand and gravel.

SOILS

Soil series typical of this site include:

3XC Canton and Charlton very stony fine sandy loams, 8 to 15 percent slopes. Canton and Charlton are well drained soils developed in upland till normally deeper than 5 feet. These soils are rapidly permeable in the subsoil but slowly to very slowly permeable layers may be present below 60 inches. The water table normally is below 60 inches during most of the year. The Canton and Charlton soils are naturally stony and contain few to many stones throughout the soil. Gravel size rock fragments generally make up 10 to 30 percent of the surface and subsoil. Most use problems are related to slope and stoniness. These soils are sloping. Stones cover .1 to 3 percent of the surface area.

17LC Charlton-Hollis fine sandy loams, very rocky, 3 to 15 percent slopes. This gently sloping to sloping unit consists of two soils, Charlton and Hollis, which occur in patterns too intricate to separate in mapping. About 50 percent of the unit is similar to the soil described for the Charlton series. Charlton are well drained soils developed in upland till normally deeper than 5 feet. These soils are moderately permeable in the subsoil but slowly to very slowly permeable layers may be present below 60 inches. The water table normally is below 60 inches most of the year. The Charlton soils are naturally stony and contain few to many stones throughout the soil. Most use problems are related to slopes and stoniness. Hollis soils make up about 30 percent of this mapping unit and occurs when bedrock is a few to 20 inches deep. This mapping unit has rock outcrop covering 1 to 8 percent of the surface and few to many stones on the surface.

41XB Sutton very stony fine sandy loam, 3 to 8 percent slopes. Sutton are moderately well drained soils developed in upland till normally deeper than 5 feet. These soils are moderately permeable in the subsoil but slowly to very slowly permeable layers may be present below 60 inches. The water table normally rises to within 15 to 20 inches of the surface during the winter and spring months. The Sutton soils are naturally stony and contain few to many stones throughout the soil. Most use problems are related to the seasonal high water table and stoniness. This soil is gently sloping. Stones cover .1 to 3 percent of the surface area.

41MC Sutton extremely stony fine sandy loam, 3 to 8 percent slopes. Sutton are moderately well drained soils developed in upland till normally deeper than 5 feet. These soils are moderately permeable in the subsoil but slowly to very slowly permeable layers may be present below 60 inches. The water table normally rises to within 15 to 20 inches of the surface during the winter and spring months. The Sutton soils are naturally stony and contain few to many stones throughout the soil. Most use problems are related to the seasonal high water table and stoniness. This soil is gently sloping and sloping. Areas occur in patterns too intricate to separate in mapping. More than 3 percent of the surface is covered with stones.

43M Ridgebury, Leicester and Whitman extremely stone fine sandy loam. (Designated wetland soil by P.A. 155.) This mapping unit is made up of poorly and very poorly drained soils. These soils occur in an intricate and complex pattern and separation of each individual soil was not practical at the scale surveyed. Each mapping unit may contain an individual soil or a percentage of each of the three soils. More than 3 percent of the surface is covered with stones. In general, these soils are normally deeper than 5 feet. They have a hardpan at a depth of 18-24 inches. They are found in low-lying nearly level upland areas. They are slowly to very slowly permeable in the subsoil, are naturally stony and contain few to many stones throughout. Most use problems are related to the slowly to very slowly permeable subsoils and long seasonal high water tables. The water table is at or near the surface from late fall through early spring.

CF, Cut and Fill. Cut and fill consists of sandy and gravelly soils that have been altered by cutting, filling, grading and paving in some areas. The soils are level to sloping and are well drained to excessively drained. Precise contents of this soil unit can only be determined by on-site investigation. These soils are commonly similar to the soils mapped adjacent to them.

The site is located in an upland area. Two-thirds of the area is presently cut and fill soil with its predominant use in three baseball fields. The other one third is presently in woodland.

A natural drainageway draining 14 acres through the property is located between ballfields #1 and #2. A pipe draining from a catch basin on Red Bridge Road empties into this drainageway. However, the end of this pipe is covered with fill. An access road is to be placed across this drainageway.

Another access road placed east of this area has created a small wetland. The culvert pipe placed under this road is not low enough to drain this area.

A parking lot east of this wet spot and a picnic area southeast of the property is also proposed.

Several exposed steep banks caused by cut and fill operations are located throughout the property.

WATER RESOURCES

One small stream emanating from a culvert flows along the border between the easternmost section of the property and the residential lot immediately to the west of it. The stream flows south into a small, flat wetland. At present, the stream's channel to the wetland is clogged with boulder rubble and trash. The boulders are particularly concentrated near the mouth of the culvert, which appears to have been broken and collapsed. Water in the channel occasionally backs up and flows into the adjacent residential lot. The fill level in the Town property is sufficient to prevent overflow onto that parcel.

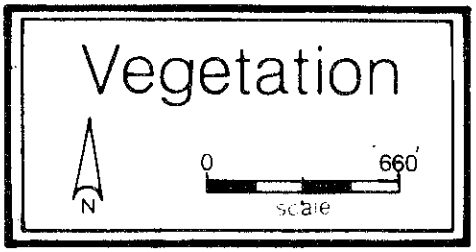
Another small stream flows eastward just south of the site. This stream also passes through the wetland previously mentioned. The streams converge to form a very minor tributary of French River. Drainage from the surface of the property, including springs emanating from the blasted area in the western section, flows in a generally easterly direction, most of it passing through the same wetland. Hence, the wetland serves as a buffer for virtually all surface water passing through or over the site.

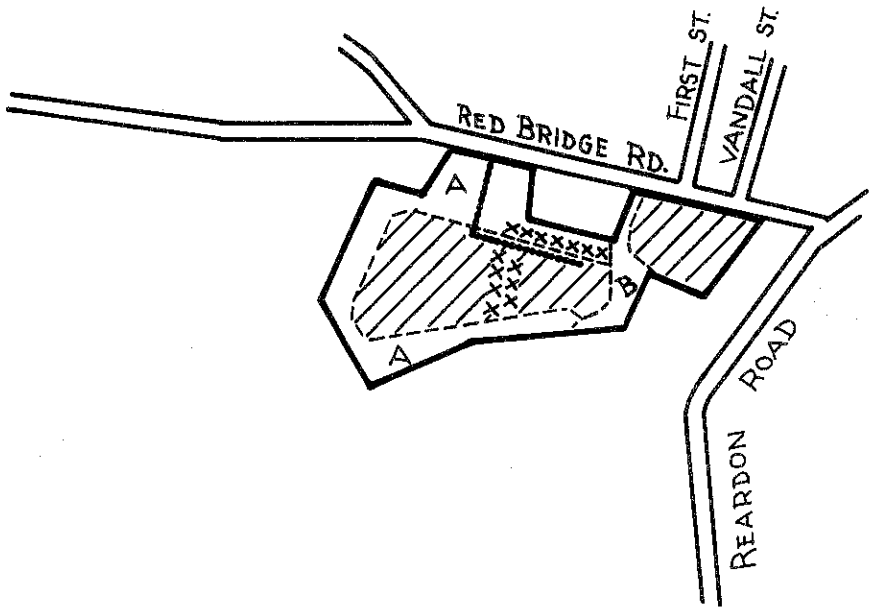
Although connection of the new facilities to the Town's public water supply is possible, the Town may wish to use a well or wells in the western section to minimize costs. Because no suitable surficial geologic deposit is available to serve as a water-supply aquifer on the site, a well drilled into bedrock would be the most reliable source. Yields from bedrock-based wells depend upon the number and size of water-bearing fractures intersected. While the blasting in the western section may have opened up some fractures, it may have closed others. In addition, the normal distribution of fractures in bedrock is irregular, so the yield of a well drilled at any particular place cannot be predicted. Nevertheless, experience with the bedrock aquifer indicates a probability of about 90 percent that a yield of 3 gallons per minute will be obtained with sufficient drilling at any location. "Sufficient drilling" should involve a penetration of no more than 200 feet of bedrock; the amount of fractures, or at least the ability of fractures to transmit water, appears to decrease markedly with increasing depth. A supply that is very inadequate after 200 feet of rock has been penetrated is likely to be inadequate after another 200 feet. Nevertheless, a yield of 3 gpm or more seems very probable and the types of activities involved in the proposal do not seem to necessitate a greater yield.

VEGETATION

The major portion of this 12± acre tract has been developed into ballfields. Two vegetation stands remain on site, they include mixed hardwoods (3.5 acres) and hardwood swamp (1+ acre). No unusual rare or endangered species were observed during the field investigation Impact from the proposed development on the remaining vegetation will be slight. The planting of trees and shrubs for landscaping and vegetative barriers will improve the aesthetics of the area.

Vegetation Type A (mixed hardwoods). This 3.5 acre fully stocked stand is dominated by pole, with occasional sawtimber, size red oak, shagbark hickory, sugar





LEGEND

- Paved Road
- Access Road
- Property Boundary
- Vegetation Type
- Ball Fields, 8 Acres
- XXXXXXXX Proposed Buffer Planting

VEGETATION TYPES

TYPE A — Mixed Hardwoods, 3.5 acres Pole to Sawtimber-size, fully stocked.

TYPE B — Hardwood Swamp. 1+ acres Pole-size, understocked.

Seedling size = trees less than 1 inch in diameter at 4 1/2' 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 greater than 11 inches in d.b.h.

maple, red maple and white ash. The understory is dominated by eastern white pine seedlings with patches of maple-leaf viburnum and high bush blueberry. Smooth sumac has become established around the edges of this stand where full sunlight is available. Grasses, clubmoss, sedges, wild strawberry, partridgeberry, wild raspberry, marginal woodfern, lady fern, Christmas fern and bracken fern form an almost complete ground cover in this area. There are several extremely poor quality sawtimber size trees in this stand located near Red Bridge Road. These trees will probably be removed during future construction of the service building or parking lot.

Vegetation Type B (hardwood swamp). Poor quality pole-size red maple dominate this 1+ acre understocked stand. Occasional sapling size swamp white oak are also present along with scattered white pine seedlings. The understory is dominated by spicebush with multiflora rose, barberry and arrowwood. Ground cover is made up of skunk cabbage, sphagnum moss, cinnamon fern, sedges, poison ivy and on the drier areas, club moss.

WILDLIFE

Wildlife typical of this area include urban species such as dogs, cats, skunks, raccoons, mice, and seasonal songbirds; as well as species more typical of upland and wetland "edge" habitats such as rabbits, muskrats, oppossum and woodchucks.

PROBABLE FUTURE ENVIRONMENT

Should development monies not be available to help complete the proposed plan for the parcel, drainage and sediment and erosion problems would continue to exist in the playing field areas. Informal picnicking could occur in designated areas. The parcel would remain in some sort of recreational use.

ENVIRONMENTAL ASSESSMENT

QUANTIFIABLE LAND USE CHANGES

With the exception of parking and additional traffic, land uses in the area would not be greatly affected.

SOCIO-ECONOMIC CHANGES

The local tax structure could be increased, due to local contributions necessary to fund the project. Additional recreational staff and field maintenance staff would be required. Area residents would benefit from the additional recreation facilities acquired. The surrounding area could be affected by higher noise levels from the recreation facilities. Human values may be affected in that people place a high value on recreation. Additional recreation facilities could provide additional opportunities for recreation for children of lower income families.

TRANSPORTATION ROUTES

The existing Town access roads may experience traffic congestion during special athletic events. During special events, adequate parking capacity may not be met by the proposed parking area.

ENERGY CONSUMPTION

Energy consumption on this site will be minimal. It would be reflected by field lighting if utilized, automobile usage, and operation of the facilities building.

EFFECT ON WATER RESOURCES

In general, water percolating through relatively freshly blasted or crushed rock will become mineralized to some extent. This effect results from the sudden exposure of a great cumulative area of mineral surfaces to the process of weathering. The moving water picks up some of the physical and chemical residues of this process, transporting them into the ground or into surface water courses or bodies. Over time, mineral concentrations in the water will decrease as the blasted rock surfaces become more stabilized with respect to the physical environment.

Some mineralization of the surface water and groundwater in the vicinity of the blasted area and the westernmost ballfield may be expected. The surface water effects would be, at most, minimally significant. Virtually all drainage from the site passes through a wetland south of the easternmost ballfield. This wetland should serve as a buffering agent, removing a substantial percentage of the suspended and dissolved mineral residues. Moreover, two other wetland areas lie along the short distance (approximately 1,600 feet) which the stream that drains the site must travel, before flowing into French River. These other wetlands provide a secondary buffer potential which should further reduce mineral levels. In general, the primary effect of the project on surface water probably will be sedimentation in the wetland in the southeastern section of the site.

The effect on groundwater is less clear. Suspended materials in the percolating water should be trapped within the soil but dissolved constituents (iron, manganese, calcium, or other elements) may enter the bedrock aquifer. High mineral concentrations may therefore appear in the groundwater drawn from wells drilled on the site, particularly in the vicinity of the blasted area. Several filtration methods are available to solve such problems.

Runoff from the site will be greater following recreational development than it was when the site was fully vegetated. This increase should be relatively small, however, since the only additional impermeable surfaces will be those associated with the new buildings. Plans for improving the drainage on the site (e.g. clearing the culvert and channel near the existing ballfield and channeling runoff between and around the new fields) have been made. These measures should increase flow rates in the stream south of the site, but the presence of several wetlands downstream from the property, the short distance to French River, and the lack of development near the stream should minimize any adverse effects from these flows.

EFFECT ON SOILS

Erosion potential is high on this site, as many steep cut banks remain unstabilized. All exposed steep banks could be stabilized by grading, liming, fertilizing, and seeding with an appropriate conservation plant. Crownvetch would be best suited for these steep banks. All other exposed areas not to be used for vehicle or foot traffic can be seeded to lawn grass for erosion control. The Soil Conservation Service will provide specific recommendations if requested.

The wet spot caused by the construction of the access road can be eliminated by lowering the pipe. The pipe can be extended beyond the proposed parking area so as not to permit flooding to occur in this area.

The buried pipe draining from the catch basin will reduce flooding in the street if uncovered and left to flow freely.

The access road to cross this drainageway would probably need a 36 inch culvert pipe with an eight foot head to be able to handle the storm water from the 14 acre watershed. These figures were calculated for a 25 year frequency storm.

A diversion will be needed to collect surface runoff and seepage from the steep bank on the western edge of the property. This is necessary in order to keep water off ballfield #3. Since there is little room for a grass diversion, an asphalt diversion two feet wide, one foot deep with a six inch berm on the ballfield side can be installed. An eight inch corregated metal pipe will be needed to conduct the runoff underneath the corner of the baseball field since no space is available for the diversion to go around. A grassed waterway eight feet wide and one foot deep can then carry runoff away from the pipe.

Another diversion between ballfields #2 and #3 (eight feet wide and one foot deep) can be installed to handle runoff from field #3. A level lip spreader 30 feet long, 8 feet wide and one foot deep can collect the storm water from both drainages. This will allow the runoff to spill evenly over the steep bank.

It is suggested that a drainage control plan be written locating the needed components discussed. Personnel from the Soil and Water Conservation District office could assist with this.

EFFECT ON VEGETATION

The impact on the remaining vegetation with the proposed completion of the ballfield complex will be slight.

An area approximately two acres in size near Red Bridge Road will have to be cleared of vegetation for the construction of the proposed buildings and parking area. Vegetation in this area is of marginal value, and losses will not be great. Suitable trees should be utilized as fuelwood.

WATER SUPPLY

Potable water for the project will be supplied by an on-site bedrock based well.

WASTE DISPOSAL

The proposed facilities building will be served by a public sewer line.

ADVERSE ENVIRONMENTAL EFFECTS

Provision of development funding for this project will help to alleviate adverse environmental effects existing on site (i.e. erosion, drainage problems).

IRREVERSIBLE COMMITMENTS OF RESOURCES

Further development of these playing fields and associated services (parking/ sanitary facilities) will cause no irreversible commitments of resources.

RECREATION POTENTIAL

The site has been modified by cut and fill to accommodate the existing facilities. It is in need of some erosion control work and vegetation to minimize the chance for site deterioration. Some blasting of ledge has been done to provide a level area for a playing field. Portions of the perimeter of this northwest field are comprised of the rocks and boulders which were left from the blasting work and used for fill. This area needs final site grading and dressing. Seeding these slopes would enhance the appearance of the site and reduce erosion problems in this area. If ballfield access paths are planned over these slopes, steps should be provided on the steeper portions to help minimize erosion potential.

Bleachers should be appropriately located to take advantage of sun direction where possible (so spectators will not be looking at the field into the sun) and pathways providing access to the bleachers situated and constructed in a manner which will minimize maintenance.

A bridge has been proposed to cross a small drainage ravine, providing pedestrian and small maintenance equipment (e.g. mowers) access to the two portions of the site divided by a ravine. Vehicular use of the bridge is not anticipated. Cleanup and final site dressing of the ravine's slopes is suggested in the manner proposed for the ballfield perimeter. A secondary consideration might be the planting of conifers and shrubs on the ravine's slopes to eventually screen off the rear portion of the tract, thereby providing a degree of privacy to the rear ballfields and proposed picnic area. House lots located on Red Bridge Road and abutting the tract could also benefit from a screen planting of white pine and hemlock in the understory of the existing woods between their backyards and the ballfields. This would form a sight and sound buffer zone which would provide the residents more privacy, as considerable noise can be generated by ballgames and similar activities.

A picnic area is tentatively proposed for the wooded section of the tract. The location considered for this is the southwest corner of the property where some tree thinning has been undertaken. The high ground in the southwest corner appears to be the only practical area for this activity since the remaining woodland is generally wet. Between 8-15 picnic tables might be accommodated in this area. Woodlot management, the underplanting of conifers to reinforce the existing stand of trees which are likely to be negatively impacted by the heavy use,

and liberal use of woodchips to moderate this impact, are recommended. Chemical toilets may be desirable for servicing the picnic area since the flush toilet building will probably be located too far away for convenient use.

A consideration possibly worth investigating would be the potential acquisition of the narrow strip of land lying between the stone wall marking the park's western boundary and the gravel road lying further to the west. Ownership of this land strip along with a right of public passage over the gravel road could enhance the use of the proposed picnic area by providing for vehicle access, a possible parking area for picnickers, and area for expanded picnicking. Parking could thereby be provided in the relatively flat area being proposed for acquisition.

Since the park is relatively compact in size and the land has been considerably modified to accommodate the facilities sought, it could benefit greatly from some simple landscaping. The use of native shrubs such as mountain laurel to dress up embankments and soften the austere look of bleachers would help enhance the overall appearance of the park by tying the individual components into an integrated whole. Mass plantings of shrubs can also be used to discourage foot traffic, thereby directing it to the appropriate pathways. Planting a few trees in non-critical parts of the cut and fill areas, which are now completely barren would also aid in softening the stark look. The foot bridge proposed could become an interesting feature if suitably framed with trees and shrubs.

The utility/restroom/concession building is planned for location within the existing access corridor off of Red Bridge Road. This is based on the area being the only undeveloped portion of the park suitably situated for this facility. The soils limitations and drainage patterns will help determine the exact location to be recommended.

The existing layout should be analyzed to determine what portion of the level ground might lend itself to the location of a tennis court without the crowding together of facilities. Since additional parking must be provided and available unused space is scarce, tennis courts may have to be located in close proximity to the parking area(s) or dispensed with entirely. Acquisition of the aforementioned abutting property on the west side might enhance the options for accommodating tennis courts.

Posting the portion of Red Bridge Road near the park as a NO PARKING zone while taking enforcement action on violators may be necessary, due to the narrowness of the road and the anticipated increase in park usage. Traffic volume would certainly increase during ballgames. Roadside parking may negatively impact on local residents. On site parking capacity should therefore be as close to the park's user design capacity as possible, to minimize chances for a conflict whereby Red Bridge Road would have to be widened to accommodate overflow parking.

Since the proposal offered involves modest expansion on existing facilities and upgrading of existing facilities, the end result will be the improvement of the park's functional and aesthetic considerations. A no action alternative would at this stage in the park's development, probably result in site degradation due to the erosion currently occurring and the park's inability to adequately serve town residents in its present state.

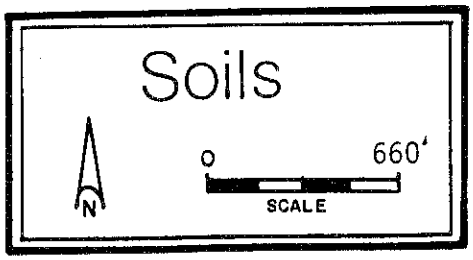
MITIGATING MEASURES

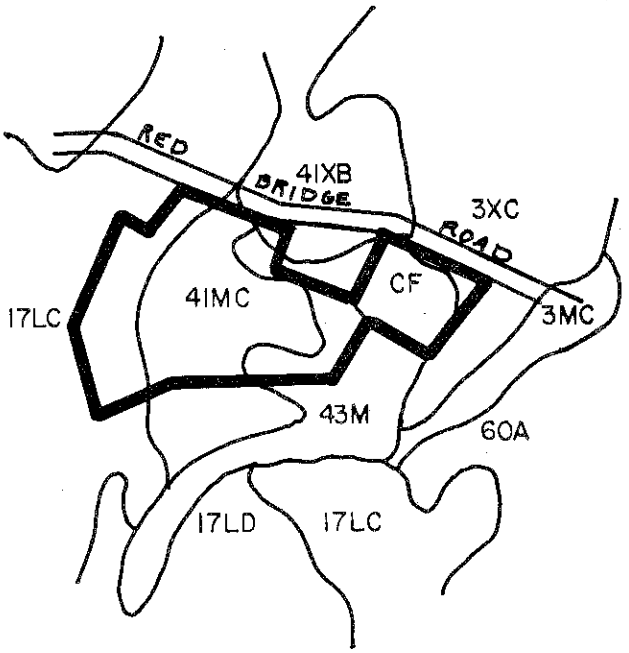
Previously cleared areas, including the ballfields, should be revegetated with sod as soon as possible to reduce erosion problems.

Landscaping, including the planting of trees and shrubs, will vastly improve the aesthetics of the area.

Planting a buffer strip of a combination of hemlock and eastern white pine between the ballfields and private residences (see vegetation type map) will provide a much needed visual barrier. These trees should be planted in two or three staggered rows approximatley eight feet apart. Flowering shrubs, including crabapple, dogwood and autumn olive may be interspersed with the pine and hemlock to provide color, contrast and improve habitat for wildlife. This same planting could be used between ballfields if this type of barrier is desired.

Appendix





Soil Map Symbol	Soil Name
3XC	Canton and Charlton very stone fine sandy loams, 8 to 15 percent slopes.
17LC	Charlton-Hollis fine sandy loams, very rocky, 3 to 15 percent slopes.
41XB	Sutton very stone fine sandy loam, 3 to 8 percent slopes.
41MC	Sutton extremely stony fine sandy loam, 3 to 8 percent slope.
43M*	Ridgebury, Leicester and Whitman extremely stone fine sandy loams.
C.F.	Cut and Fill.

* Designated wetland soil by PA 155.

SOIL INTERPRETATIONS

Soil Symbol and Series	Acres	Excavated Pond Aquifer Fed	Picnic Areas	Playgrounds	Path and Trails	Lawns and Land-scaping
3XC Canton & Charlton	0.2	No water	Moderate, slope	Severe, slope	Moderate, large stones	Moderate, large stones
17LC Charlton-Hollis	3.0	Severe, no water	Moderate, slope, large stones	Severe, slope, large stones	Slight	Moderate, slope, large stones
41XB Sutton	0.2	Deep to water, large stones	Slight	Moderate, slope, large stones	Moderate, large stones	Moderate, large stones
41MC Sutton	5.7	Deep to water, large stones	Moderate, large stones	Severe, large stones	Severe, large stones	Severe, large stones
*43M Ridgebury, Leicester & Whitman	1.5	Severe, no water	Severe, large stones, wetness, percs. slowly	Severe, slope, large stones, wetness	Severe, wetness	Severe, wetness
C.F.	2.2 12.8					

*Designated wetland soil by P.A. 155

SOIL INTERPRETATIONS FOR URBAN USES

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

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

Slight Limitations

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

Moderate Limitations

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

Severe Limitations

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

About the Team

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

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

PURPOSE OF THE TEAM

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

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

REQUESTING A REVIEW

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

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