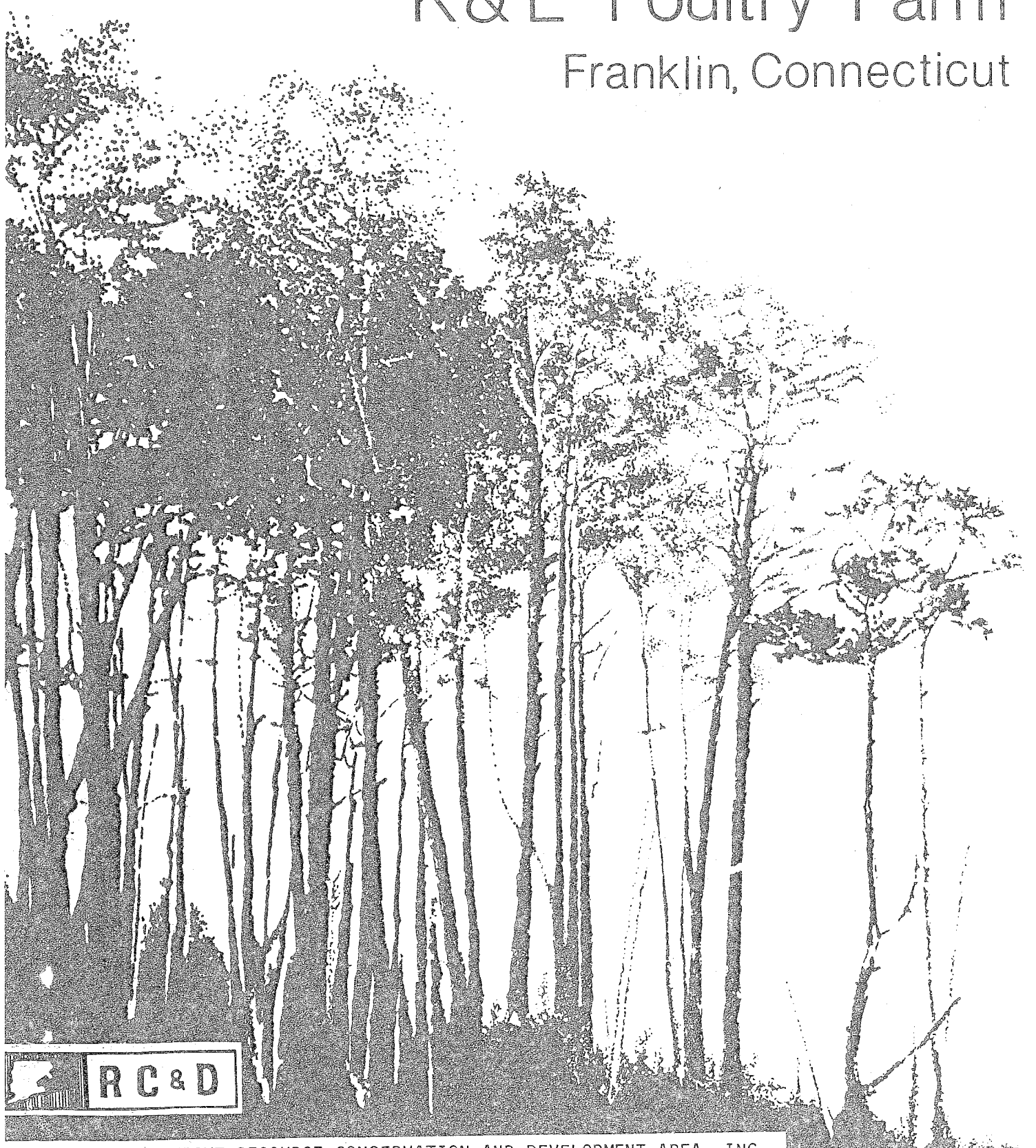


Environmental Review Team Report

K & L Poultry Farm

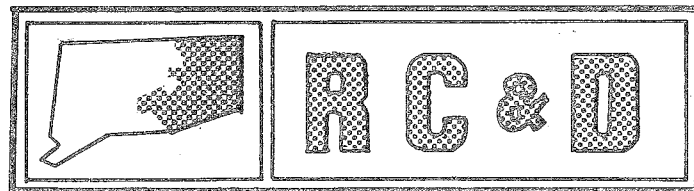
Franklin, Connecticut



Environmental Review Team
Report
on

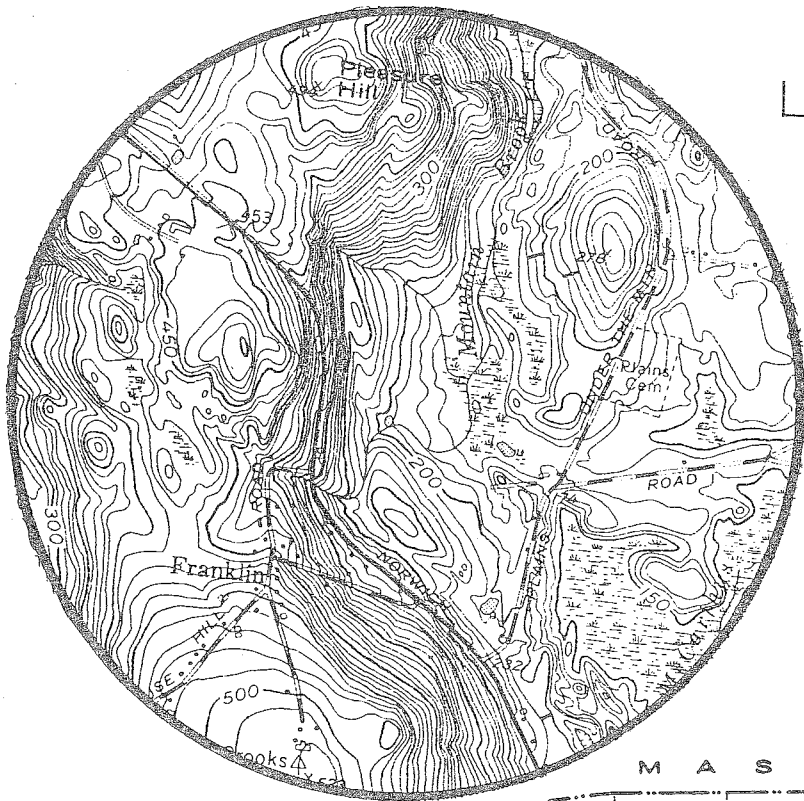
K&L Poultry Farm
Franklin, Connecticut

October, 1981



eastern connecticut resource conservation & development area

environmental review team
139 boswell avenue
norwich, connecticut 06360



Location of Study Site

K&L POULTRY FARM
FRANKLIN, CONNECTICUT



EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

ENVIRONMENTAL REVIEW TEAM REPORT
ON
K & L POULTRY FARM
FRANKLIN, CONNECTICUT

This report is an outgrowth of a request from the Franklin Planning and Zoning Commission to the New London County Soil and Water Conservation District (S&WCD). The S&WCD referred this request to the Eastern Connecticut Resource Conservation and Development (RC&D) Area Executive Committee for their consideration and approval 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: Gary Domian, District Conservationist, Soil Conservation Service (SCS); Mike Zizka, Geologist, Department of Environmental Protection (DEP); Rob Rocks, Forester, (DEP); Warren Hertzog, Poultry Waste Specialist, (DEP); Gerhard Amt, Regional Planner, Southeastern Connecticut Regional Planning Agency; Aaron Spandorf, Poultry Specialist, Connecticut Agricultural Extension Service; and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

The Team met and field checked the site on Thursday, September 24, 1981. Reports from each Team member were sent to the ERT Coordinator for review and summarization for the final report.

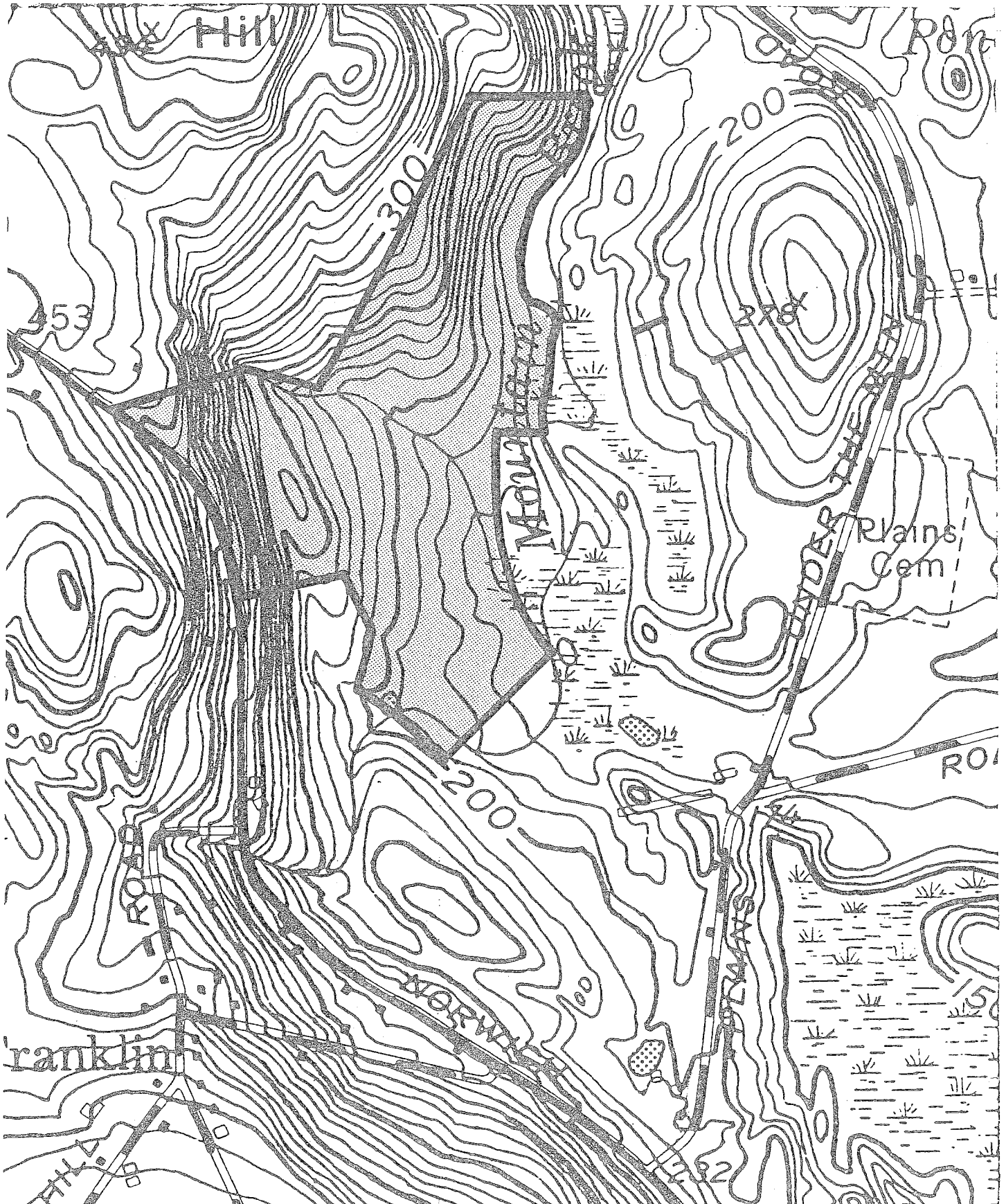
This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. This report identifies the existing resource base and evaluates its significance to the proposed development and also suggests considerations that should be of concern to the developer and the Town of Franklin. 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 Project Committee hopes you will find this report of value and assistance in making your decisions on 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

0 660'
scale



INTRODUCTION

The Eastern Connecticut Environmental Review Team was asked to prepare an environmental assessment for a proposed caged poultry operation located in the town of Franklin. K & L Feed Corporation are proposing this development for an 87 $\frac{1}{2}$ acre site, presently in the private ownership of Rudolf Chieka. The property is located on Under-the-Mountain Road, north and east of its intersection with Route 32.

Preliminary plans, prepared by McKay Engineering, show two 530 foot buildings, 52 feet wide, paralleling each other and connected by an office and storage building. Each building will house approximately 80,000 chickens in tiered cages. Water for the birds will be provided by a cup watering system in each cage. Food will pass each cage on a conveyor belt system. No egg washing room is planned for this project. Eggs will be collected and shipped to a central location for washing and packing. An on-site water supply well is planned for the project, as well as a small septic system which will service employees working at the facility.

The site has a varied topography, ranging from steep slopes near Route 32 to gently sloping areas near the eastern boundary. The property is presently in use as agricultural crop land (corn). Some steep areas are forested. Mountain Brook flows on the eastern boundary of the property and forms an associated wetland area to the east and southeast of the site. Soils typical of the site range from well drained on the hillsides to poorly drained in the flat depressional areas.

The Team is concerned with the impact of the proposed development on the natural resource base of this site. Although many severe limitations to development can be overcome with proper engineering techniques, these methods can become costly, making a project financially unfeasible for the developer. In this case, however, the developer appears to be working well within the natural constraints found on-site.

The Team poultry expert found nothing in the plans or on the site that would lead to the expectation of problems from the proper operation of the proposed poultry houses. The planners of the farm appear to have made extra effort to reduce or eliminate all chances of environmental problems from the poultry operation. The following areas have been specifically addressed:

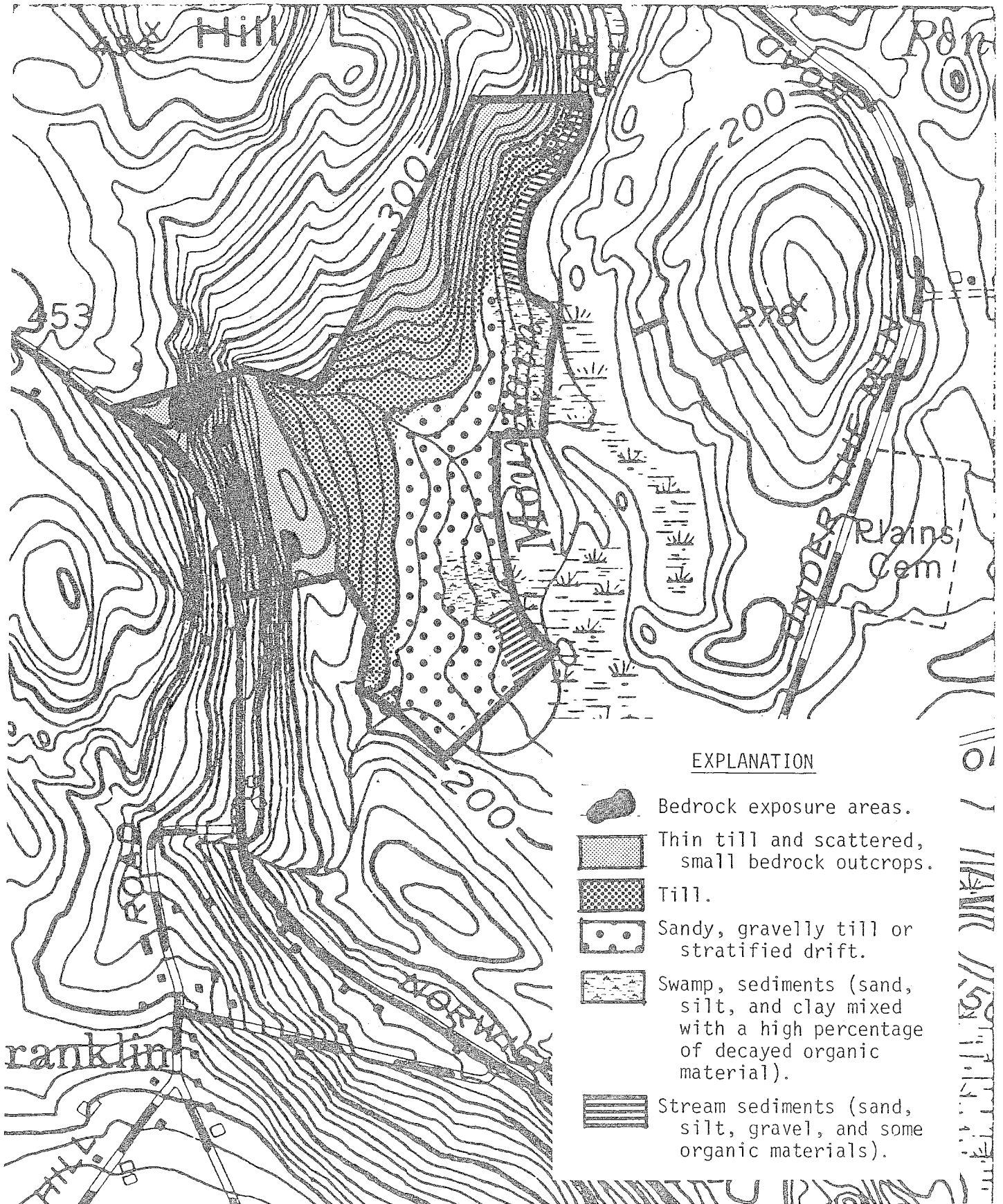
Set back - the operation is planned for the far end of the property, many hundreds of feet from nearby housing.

Fan location - fans will be directed to the area between buildings, thus reducing or eliminating potential noise and dust sources.







Waste handling plans - poultry waste will be kept dry and removed three or four times yearly. Provisions are being made to handle accidentally produced wet manure. Much of the land surrounding the buildings will be used for crop production.

Surficial Geology

0 660
scale



EXPLANATION

-  Bedrock exposure areas.
-  Thin till and scattered, small bedrock outcrops.
-  Till.
-  Sandy, gravelly till or stratified drift.
-  Swamp, sediments (sand, silt, and clay mixed with a high percentage of decayed organic material).
-  Stream sediments (sand, silt, gravel, and some organic materials).

No production of waste water - individual water cups will provide water to chickens. No grading and processing of eggs is planned for this location.

Fly control - fly control on farms now operated by the proposed owners has always been excellent. In addition, it is expected that new fly-control methods, soon to be available, will eliminate all concern for fly control. This material is expected to be available in 1982.

A major concern of the town is related to degradation of groundwater quality. Issues of sediment and erosion control and agricultural run-off are discussed in detail in the Hydrology and Soils sections of this report. Generally, the Team agrees that this proposal will not cause an adverse impact to the site and surrounding properties, if constructed and operated as planned.

ENVIRONMENTAL ASSESSMENT

GEOLOGY

The proposed poultry and egg farm is located in an area encompassed by the Fitchville topographic quadrangle. A surficial geologic map of the quadrangle, prepared by Fred Pessl, Jr., has been published by the U.S. Geological Survey (Map GQ-485). That map indicates that most of the property is covered by till. Till is a sediment that was deposited directly from a former sheet of glacier ice. The ice was capable of moving rocks and rock fragments of widely assorted shapes and sizes, and it transported and deposited these sediments virtually without regard to their individual characteristics. As a result, till is a nonsorted, generally nonstratified (nonlayered) mixture of clay, silt, sand, gravel, and boulders. Many local residents refer to till as "hardpan" because of its often compact, stony nature.

In the valley of Mountain Brook, glacial meltwaters deposited layered, relatively well-sorted sediments known as stratified drift. These deposits consist largely of sand and gravel but they may include some silt and boulders. Although Pessl's map shows no stratified drift west of Mountain Brook on the site, the soils map for the property indicates that the flatter areas of the cornfields are indeed underlain by stratified drift. Since the area in question is a contact zone for the two types of deposit, and since the process of mapping necessarily involves interpretation, it is quite likely that both types of sediment may actually be found in the area. Site-specific testing will, therefore, be crucial in determining the feasibility of the proposed septic system. The preliminary investigation, however, suggests that little difficulty will be encountered in establishing a subsurface sewage-disposal facility in the desired location.

Bedrock is unlikely to be a major factor in the proposed operation. Bedrock is near the surface only at the western edge of the site, particularly on the steep slope bordering Route 32. The rock appears to be largely composed of mica schist and quartzite. Huge boulders of quartz were seen on the steep slope.

HYDROLOGY

Drainage from the site is collected by Mountain Brook, a stream that originates a short distance to the south of the parcel. The brook flows north from the property, ultimately entering Mahoney Pond and then Beaver Brook. Mahoney Pond has a drainage area of approximately 700 acres, or about 1.1 square miles. Much of the length of Mountain Brook is surrounded by swamps, including to the south and to the east of the proposed building site.

The town expressed concerns about the potential effects of the farming operation on the water quality of Mountain Brook and Mahoney Pond. From the description of the proposal as presented to the Team, it seems unlikely that any significant water-quality threat would be engendered by the management of the poultry and egg operation itself. If the building foundations are properly sealed and remain dry, the major opportunity for damage from this portion of the business would be careless handling of the manure as it is removed from the buildings. If the town is particularly concerned about this aspect, then perhaps a local health official could be advised when the periodic removals of manure are scheduled to occur, and could be on hand to monitor the procedure. The more serious concern, in the Team's opinion, will be the spreading of manure on the cornfields. Agricultural runoff is sometimes a significant source of organic nutrients that may pollute groundwater, or may lead to or speed up the eutrophication of surface water-bodies. However, several factors should operate to reduce the potential for pollution from this site. First, the soils are capable of a relatively high degree of water absorption because of their sandy nature. This will lessen the amount of surface runoff that might otherwise be generated during periods of precipitation. Second, the land is gently sloping in most of the established cornfields, so that runoff velocities will be slow and water will have a greater opportunity to soak into the ground. Third, the wetland areas through which Mountain Brook flows should act as partial buffers to the nutrients carried by the stream. The water quality of the stream as it enters Mahoney Pond will probably be improved in comparison to the quality near the site.

None of the considerations above is meant to suggest that potential agricultural-runoff problems should be ignored. Judicious application procedures are essential. As an example, manure should not be spread on the fields while the ground is frozen or when the upper soil zone is saturated (waterlogged). Nevertheless, the site has many attributes for farming, and, of course, the cornfields are an established usage. The proposed project is an example of different agricultural activities supplementing and enhancing each other. To the extent that the cornfields are already being utilized and to the further extent that the poultry-egg operation, in and of itself, does not appear to pose a water-quality threat, there seems to be little hydrologic justification for not proceeding with the plans.

One further consideration that should be addressed is the possibility that some of the presently wooded areas will be converted to cornfields. This change would increase the source areas for potential pollution. Most of the wooded sections have moderately steep or steep slopes. Once the trees are removed, erosion could become a problem. In addition, the soils in these areas are the more compact, less absorptive tills. Fertilizer-laden runoff is more likely to pose problems in these areas. For these reasons, the Team suggests that the landowner proceed slowly and cautiously, if at all, with the conversion of land from woods to fields.

SOILS

A detailed soils map of this site and detailed soils descriptions are 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'/inch scale to 660'/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 sewage disposal, buildings with 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, New London County Interim Soil Survey Report, 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.

Descriptions of soil types found on this site are as follows:

The sloping well drained uplands are occupied by Canton and Charlton fine sandy loams. This soil is designated by soil mapping unit symbol 11C. The letter "C" denotes slopes of 8 to 15 percent. Canton soils formed in a fine sandy loam underlain by friable gravelly sandy glacial till. Canton soils have moderately rapid or rapid permeability. Surface runoff is medium. Charlton soils formed in friable glacial till. Charlton soils have moderate to moderately rapid permeability. Surface runoff is medium to rapid.

The moderately steep well drained uplands are occupied by Canton and Charlton fine sandy loams. This soil is designated by soil mapping unit symbol 11D. The letter "D" denotes slopes of 15 to 25 percent. Canton soils formed in a fine sandy loam mantle underlain by friable gravelly sandy glacial till. Canton sorts have moderately rapid or rapid permeability. Surface runoff is medium. Charlton soils formed in friable glacial till. Charlton soils have moderate to moderately rapid permeability. Surface runoff is medium to rapid.

The sloping well drained soils on uplands are occupied by Canton and Charlton very stony fine sandy loams. This soil is designated by soil mapping unit symbol 11XC. The letter "X" denotes a very stony surface condition. The letter "C" denotes slopes of 8 to 15 percent. Canton soils formed in a fine sandy loam mantle underlain by friable gravelly sandy glacial till. Canton soils have moderately rapid or rapid permeability. Surface runoff is medium. Charlton soils formed in friable glacial till. Charlton soils have moderate to moderately rapid permeability. Surface runoff is medium to rapid.

The gently sloping to sloping land forms adjacent to the highest elevations in the landscape are occupied by Charlton-Hollis fine sandy loams, very rocky. The soil mapping unit symbol is 17LC. The letter "L" denotes very rocky, and "C" denotes a slope range of 3 to 15 percent. Both these soils are well drained. Charlton soils formed in deep, friable glacial till and the Hollis soils formed in shallow glacial till less than 20 inches deep over bedrock. Charlton soils

have moderate to moderately rapid permeability and Hollis soils have moderate permeability. Surface runoff is medium to very rapid for Hollis soils and medium to rapid for Charlton soils.

The moderately steep to steep land forms adjacent to the highest elevations in the landscape are occupied by Charlton-Hollis fine sandy loams, very rocky. The soil mapping unit is 17LD. The letter "L" denotes very rocky, and "D" denotes a slope range of 15 to 45 percent. Both soils are well drained. Charlton soils formed in deep, friable glacial till, and the Hollis soils formed in shallow glacial till less than 20 inches over bedrock. Charlton soils have moderate to moderately rapid permeability and Hollis soils have moderate permeability. Surface runoff is medium to very rapid for Hollis soils and medium to rapid for Charlton soils.

The moderately steep to steep land forms that are bedrock controlled are occupied by Hollis-Charlton-Rock outcrop complex. The soils are designated by the mapping unit symbol 17MD. The letter "M" denotes rock outcrop and the letter "D" denotes a 15-35 percent slope. Hollis soils formed in glacial till less than 20 inches thick over bedrock, Charlton soils formed in deep loamy glacial till, and Rock outcrop is exposed, weathered and unweathered rock. The Hollis soils have moderate permeability and the Charlton soils have moderate to moderately rapid permeability. Hollis soils have medium to very rapid surface runoff and Charlton soils have medium to rapid surface runoff.

The sloping well drained areas on drumlins or elongated hills of uplands are occupied by Paxton and Montauk fine sandy loam. This soil is designated by soil mapping unit symbol 35C. The letter "C" denotes slopes of 8 to 15 percent. Paxton and Montauk soils formed in compact glacial till. Permeability is moderate in the surface layer and subsoil and slow in the substratum (fragipan). Surface runoff is medium to rapid.

The low lying, nearly level areas along drainageways in the uplands are occupied by Ridgebury, Leicester and Whitman extremely stony fine sandy loams. The soils are designated by the mapping unit symbol 43M. The letter "M" denotes extremely stony conditions. The Ridgebury and Whitman soils formed in compact glacial till; the Leicester soils formed in friable glacial till. The Ridgebury and Leicester soils have moderate to moderately rapid permeability in the surface layer and subsoil and slow or very slow permeability in the substratum (fragipan). The Leicester soils have moderately rapid permeability throughout. The seasonal highwater table for Ridgebury and Leicester soils is at or near the surface 7 to 9 months of the year. The Whitman soils have high runoff potential. Runoff is slow to medium in Ridgebury soils and slow in Leicester soils. This soil is designated as a wetland soil and is regulated under Public Act 155.

The gently sloping to sloping terraces or outwash plains are occupied by Hinckley gravelly sandy loam. The soil mapping unit symbol is 60C. The letter "C" denotes a slope range of 3 to 15 percent. Hinckley soils formed in water sorted outwash. The soils are excessively drained and have rapid permeability in the surface layer and subsoil and very rapid permeability in the substratum. Runoff is slow.

The moderately steep to steep terraces or outwash plains are occupied by Hinckley gravelly sandy loam. The soil mapping symbol is 60D. The letter "D" denotes a slope range of 15 to 35 percent. Hinckley soils formed in water sorted outwash. The soils are excessively drained and have rapid permeability in the surface layer and subsoil and very rapid permeability in the substratum. Runoff is slow.

The gently sloping terraces and outwash features are occupied by Merrimac sandy loam. The mapping unit symbol is 70B, and the letter "B" denotes a 3 to 8 percent slope. Merrimac soils formed in water-sorted material called outwash. The soils are somewhat excessively drained and have moderately rapid or rapid permeability in the surface layer and subsoil, and rapid permeability in the substratum. Runoff is slow or medium. This soil qualifies as a Prime Farmland soil in Connecticut.

The sloping terraces and outwash features are occupied by Merrimac sandy loam. The mapping unit symbol is 70C and the letter "C" denotes an 8 to 15 percent slope. Merrimac soils formed in water-sorted material called outwash. The soils are somewhat excessively drained and have moderately rapid or rapid permeability in the surface layer and subsoil, and rapid permeability in the substratum. Runoff is slow or medium.

The nearly level, very poorly drained areas on stream terraces and outwash plains are occupied by Scarborough mucky loamy sand. Scarborough soils are designated by soil mapping unit symbol 75. They formed in thick sandy outwash and usually have from 3 to 16 inches of black organic matter on the surface. Scarborough soils have rapid or very rapid permeability and a high water table at or near the surface 9 to 10 months of the year. Surface runoff is slow. Scarborough mucky loamy sand is designated as a regulated wetland soil according to P.A. 155.

The nearly level, very poorly drained depressional areas within outwash plains, lake plains, till plains, and moraines are occupied by Adrian and Palms mucks. This soil is designated by the soil mapping unit symbol 91. Adrian soils formed in mucky organic deposits, 16 to 51 inches thick, over sandy mineral deposits. The soils have rapid permeability and a high water table at or near the surface 9 to 10 months of the year. Surface runoff is very slow to ponded. Palms soils formed in mucky organic deposits, 16 to 51 inches thick over loamy minerals deposits. The soils have moderately slow permeability and a high water table at or near the surface 9 to 10 months of the year. Surface runoff is very slow. This soil is designated as a regulated wetland under Public Act 155.

The nearly level, very poorly drained bogs and other depressional areas within lake plains, outwash plains, till plains and moraines are occupied by Carlisle muck. This soil is designated by soil mapping unit symbol 92. Carlisle soil formed in muck deposits greater than 51 inches thick. Permeability is slow to rapid and a high water table exists at or near the surface 9 to 10 months of the year. Surface runoff is very slow. Carlisle muck is designated as a regulated wetland soil under Public Act 155.

The nearly level to gently sloping, moderately well drained areas on stream terraces and outwash plains are occupied by Sudbury sandy loam. Sudbury sandy loam is designated by soil mapping unit symbol 456A. The letter "A" denotes slopes of 0 to 5 percent. Sudbury soils formed in water sorted outwash. Permeability is moderately rapid in the surface layer and subsoil and rapid in the substratum. A seasonal high water table exists at 19 to 24 inches. Surface runoff is slow to moderate. Sudbury sandy loam qualifies as Prime Farmland in the State of Connecticut.

The soils located where the two chicken poultry buildings are proposed are (70B) Merrimac sandy loams and (456A) Sudbury sandy loams. Merrimac soils have few limitations for the proposed type of development. Sudbury soils have limitations due to wetness at 18 to 24 inches during the late fall and spring months.

This limitation is easily overcome by subsurface drainage or by raising the development out of the seasonal high water table zone. The site plan indicates that the driveway and buildings will be above the seasonal high water table.

Runoff water from the watershed west and north of the property will be diverted away from the buildings. The ditch that will carry the runoff water will end before entering the wetlands. Sediment and erosion control measures will be necessary to keep earth material from entering the brook and wetlands. Seeding and mulching the side slopes of the ditch is recommended. During construction, staked haybale erosion and sediment control checks will be needed downstream from the construction site. Several check dams should be installed. After completion of the ditch, the sediment and check dams can be removed.

After construction of the buildings and grading is complete, all slopes and bare areas should be limed, fertilized and seeded to grass. This will provide slope stability, help decrease building runoff problems and prevent soil erosion.

Construction of the access road west of Under-the-Mountain Road and through the wetland (92-Carlisle muck) has begun. Road construction has been difficult through the muck area because of uneven settling of the fill material. Carlisle soils have a severe rating for local roads and streets because of low strength of the organic material, wetness and the possibility of flooding. The organic material is poor roadfill material for the reasons mentioned above. Adequate drainage will have to be provided under the access road to permit Mountain Brook to flow its northerly course.

The previously constructed road section has serious erosion along the road banks caused primarily by road runoff. Curbing and paved runoff chutes over the road bank would minimize the erosion hazard over the lifetime of the road. Seeding the road banks with grasses or a grass and legume mixture would further reduce roadside erosion and reduce maintenance of the road.

VEGETATION

The 87 \pm acre parcel which has been proposed for the development of the K & L Poultry Farm may be divided into six vegetation types. These include 33 \pm acres of Agricultural land, 29 \pm acres of mixed hardwoods, 15 \pm acres of hardwood swamp, 7 \pm acres of old field, 2 \pm acres of open field, and 1 \pm acre of open swamp.

(See the Vegetation Type Map and Vegetation Type Descriptions.)

The impact of this development on the surrounding vegetation will be slight. Conversion of the old field areas and also part of the mixed hardwood stand (Type G) to crop land in the future is feasible. The feasibility of conversion of other areas is limited by poorly drained soils and steep rocky slopes.

Vegetation Type Descriptions

Type A. (Agricultural Land.) Approximately 33 acres of this tract were under cultivation at the time of the field investigation. Corn and alfalfa were the principal crops present. Pole and small sawtimber size red maple, black cherry, white ash and pignut hickory are growing along the stone walls which border or pass through these fields.

Type B. (Mixed Hardwoods.) This 17 $\frac{1}{2}$ acre stand was recently harvested of its larger sawtimber size trees. Those which remain include pole and occasional small sawtimber size red maple, black cherry, black oak, quaking aspen and big-tooth aspen. This stand is now understocked with quality trees. The understory is made up of highbush blueberry, spice bush, red osier dogwood, gray-stemmed dogwood, winterberry, maple leaved viburnum and arrowwood. Ground cover consists of grasses, goldenrod, aster, poson ivy, Virginia creeper, Pennsylvania sedge, Canada mayflower, raspberry, barberry, Christmas fern and club moss.

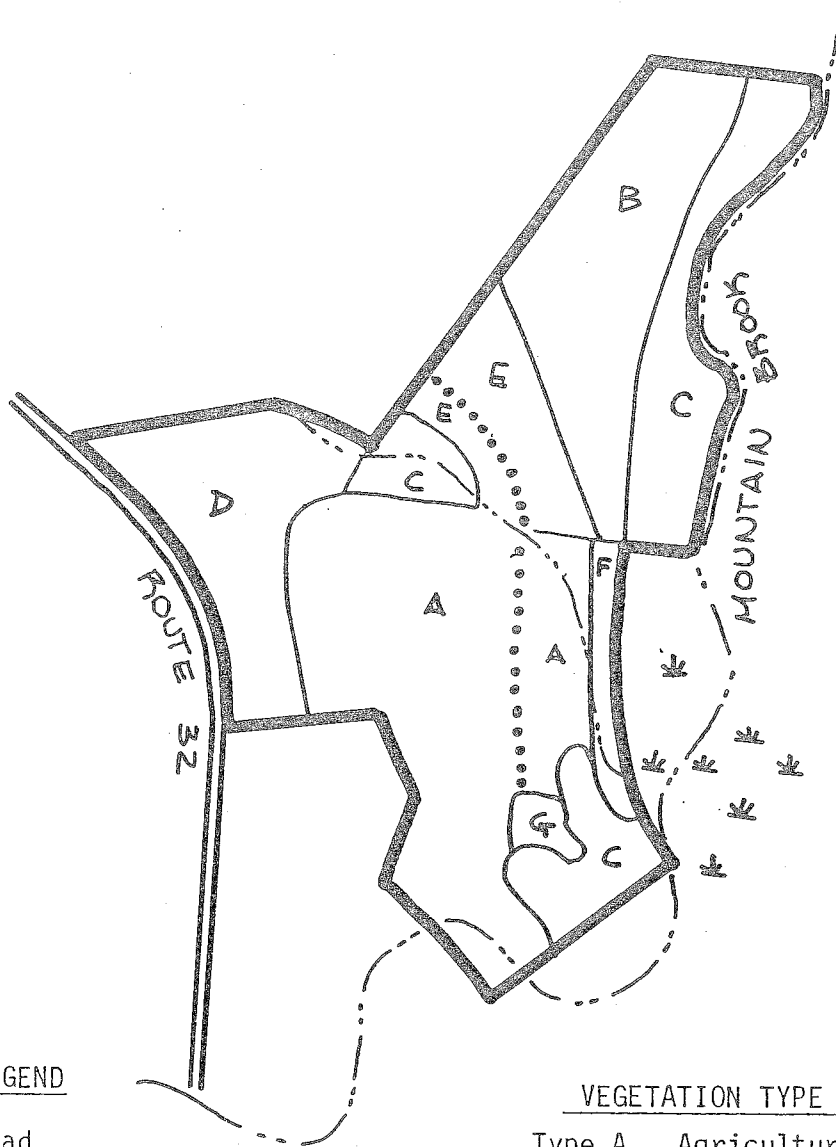
Type C. (Hardwood Swamp.) Poor quality sapling to pole size red maple and medium to high quality pole size white ash are present in these understocked stands which total approximately 15 acres. American elm are also present, however, they are widely scattered. A dense understory which includes highbush blueberry, spice bush, sweet pepperbush, arrowwood, speckled alder, winterberry, swamp rose and swamp dogwood, is present throughout these stands. Tussock sedge, skunk cabbage, sphagnum moss, poison ivy, touch-me-not, bloodroot, marsh-blue violet, wild leek, wild geranium, false nettle, cinnamon fern, lady fern, royal fern, and sensitive fern form the ground cover in these areas. At present, management of the trees in these stands for the production of timber is not feasible. Operability limitations outweigh potential improvements through management.

Type D. (Mixed Hardwoods.) Sapling to pole-size black birch, sugar maple, white ash, pignut hickory, black cherry and occasional black oak are present in this 12 $\frac{1}{2}$ acre fully stocked stand. Flowering dogwood, hardwood tree seedlings, spice bush and scattered red cedar form the understory in this stand. Japanese knotwood has become very dense along Route 32. Ground cover throughout this area is made up of poison ivy, aster, barberry, Virginia creeper, Pennsylvania sedge, wild sarsaparilla and Christmas fern. Management, although not needed in this stand at this time, is limited by steep rocky slopes.

Type E. (Old Field.) This 7 $\frac{1}{2}$ acre old field area is understocked with seedling and sapling size black cherry, flowering dogwood, gray birch and eastern red cedar. Speckled alder, multiflora rose, red osier dogwood, and maleberry are also present along with spreading dogbane, grasses, goldenrod, milkweed, ragweed, virgins bower, yarrow, Queen Anne's lace, hyssop leaved boneset, raspberry, black-eyed-Susan, poison ivy, fox grape, wild strawberry, cinque-foil and Deptford pinks.

Vegetation

0 660
scale



LEGEND

- Road
- Property Boundary
- Vegetation Type Boundary
- Stream
- Stone Walls

VEGETATION TYPE DESCRIPTION*

- Type A. Agricultural Land, 33 \pm acres.
- Type B. Mixed Hardwoods, 17 \pm acres.
Under-stocked, pole to small sawtimber size.
- Type C. Hardwood Swamp, 15 \pm acres.
Under-stocked, sapling to pole-size.
- Type D. Mixed Hardwoods, 12 \pm acres.
Fully-stocked, sapling to pole-size.
- Type E. Old Field, 7 \pm acres.
- Type F. Open Field, 2 \pm acres.
- Type G. Open Swamp, 1 \pm acre.

- Seedling size = Trees less than 1 inch in diameter at 4 1/2 feet above the ground (D.B.
- Sapling size = Trees 1 to 5 inches in D.B.H.
- Pole size = Trees 5 to 11 inches in D.B.H.
- Sawtimber size = Trees 11 inches and greater in D.B.H.

Type F. (Open Field.) Approximately two acres of open field which is vegetated with grasses, touch-me-not, goldenrod, velvet leaf, pokeweed, milkweed, field thistle and multiflora rose is present within this tract.

Type G. (Open Swamp.) Tussock sedge is the dominant species found within this 1 $\frac{1}{2}$ acre open swamp area. Other species which are present include sensitive fern, cattail, skunk cabbage, touch-me-not and larger blue flag iris.

Development of the poultry farm as proposed will have very little impact on area vegetation. The area which has been chosen for these buildings is presently characterized by a combination of cultivated crop land and open fields. The loss of this area from the production of crops and other vegetation will not be significant.

The proposal has also been made to eventually convert all suitable land within the tract into cropland. Several areas would be suitable for this conversion without major alterations, while others would not.

The old field area (Vegetation Type E), the open field area (Vegetation Type F) and also the southernmost tip of the mixed hardwood stand (Vegetation Type B) could be converted to cropland with only brush and sapling size tree removal. Note that the larger trees have already been removed from this portion of Vegetation Type B.

Areas which are not suitable for conversion to cropland include the wetland areas (Vegetation Types C and G) and also sections of the mixed hardwood stands (Vegetation Types B and D).

The poorly drained and saturated soils which are present in the wetland areas greatly restrict the use of these areas for crop production. Improving the drainage conditions may reduce these restrictions, however, costs may make this option unfeasible.

The steep slopes which are present throughout Vegetation Type D (mixed hardwoods) and the northern section of Vegetation Type B (mixed hardwoods) limit the use of these areas for crop production. Clearing and utilizing these areas for the production of crops may result in considerable runoff and erosion problems.

WATER SUPPLY

Little information was available to the Team with regard to the thickness of the unconsolidated glacial sediments in the vicinity of the proposed building locations, or to the texture of these materials at depth. It is not clear, therefore, whether these sediments could sustain a well with a useful, reliable yield. If the sediments are sandy and gravelly at depth and if there is at least twenty feet of material below the water table and above bedrock, a satisfactory dug well might be possible to achieve. If such a well is used, the water quality should be examined periodically, particularly during the summer, to determine whether it is being affected by fertilizer applications.

Bedrock may be a more reliable water source, but the costs of providing a bedrock-based well are higher than for a dug well, and the yields are likely to be lower. Nevertheless, most bedrock wells in eastern Connecticut can supply at least three gallons per minute. In addition, a bedrock well on this site would not be as susceptible to water quality problems.

WASTE DISPOSAL

The Water Compliance Unit of the Department of Environmental Protection is responsible for the control of water pollution problems. Enforcement authority is provided in Sections 25-54 of the General Statutes.

In recent years, a number of water pollution problems have resulted from caged poultry operations. These problems were the result of poor initial design, improper siting, deficient equipment or poor operation. Because of these problems, Commissioner Pac addressed an open letter to the agricultural community stating the requirements of certain agricultural operations for obtaining a 25-54i discharge permit.

The proposed caged poultry operation under review does require a 25-54i permit and an application has been filed with the Department. In making an application for permit for an agricultural operation, the Department would expect the applicant to address the waste products that would be generated and how they would be stored, treated and disposed and utilized in a manner that will protect the waters of the state from pollution.

Summary of Proposed Waste Handling.

The K & L Feed Corporation proposes to construct two buildings of deep pit, high-rise construction to house 80,000 birds (each). Watering of the birds will be accomplished by cup waterers. Eggs will be collected and packed on-site, washing will be accomplished off-site.

Sanitary facilities will be constructed to serve the employees.

The following items were addressed in the Water Compliance review of the management of the farm wastes generated: manure, dead bird disposal, broken egg disposal, bird watering and fly control program.

A) Manure Storage, Handling and Disposal:

From the operation as is proposed, some 8,400 tons of manure will be generated per year. Manure will fall from the cages into the basement of the building for storage. It is proposed to handle the manure as a solid and all efforts will be made to keep the manure dry. It is proposed to remove the manure from the buildings at least twice a year, using conventional manure handling equipment (loaders, trucks, tractors, and spreaders). Several area dairy farmers have provided letters of intent indicating their interest in utilizing the manure. Based upon the Water Compliance review of the proposal, the building outlay, and the management scheme the proposal and method of operation will protect the waters of the state from pollution.

B. Dead Bird and Broken Egg Disposal:

Dead birds and broken eggs will be disposed of by a pathological waste incinerator. This will be reviewed by the Air Compliance Unit of the Department of Environmental Protection.

C. Bird Watering:

Birds will be watered by cup waterers. Improvements in design over the years have made this type of waterer efficient and reliable. Through careful management, no discharge will result. This, in turn, will minimize the effect on the stored manure consistency.

D. Fly Control:

Fly Control can be a serious problem on caged poultry farms. Through careful management, use of insecticides, and development of biological controls, the problem can be minimized. Sufficient flexibility is provided in the proposed operation to control flies.

PLANNING CONCERNS

The proposed location of the buildings should have a negligible impact on surrounding land uses. It is surrounded by woods and by fields presently under cultivation. State-owned open space buffers a substantial part of the eastern boundary of the site. The buildings are likely to be visible from five or six residences, but only at a distance of 1,000 feet or more and, in some cases, only when the leaves are off the trees. Widening the existing tree line along the western edge of the field where the buildings are to be located could soften the visual impact of the structures on what is now a particularly scenic rural view from residences located to the southwest of the site.

Franklin's Zoning Regulations classify the proposed use as Specialized Agricultural Buildings, which are permitted as special exceptions. The proposed use appears to meet the conditions of the Regulations.

Traffic generated by the proposed use will be most noticeable on Under-the-Mountain Road and the western end of Plains Road, for a total distance of about one-half mile. However, the expected vehicle trips involve only one feed truck per day, three egg trucks per week, and less than ten round-trips per day for employees. An increase in truck traffic can be expected when the manure from the buildings is removed two or three times each year.

Such low volumes of additional traffic might go unnoticed except that traffic on these roads is already quite low. It will be important to ensure that the foliage at the intersection of Plains Road with Route 32 be kept cut well back from the intersection. Traffic moves fast on Route 32, and good visibility for vehicles entering from Plains Road is critical. Attention should also be given to the design of the intersection of the access road with Under-the-Mountain Road. Visibility here is equally important even though traffic volumes are considerably lighter. A clear view of 300 feet in both directions from a point twenty feet back from the edge of the paved road is desirable.

Appendix

SOILS

— Site Boundary

0 660'
scale

N

<h1 style="margin: 0;">SOILS</h1>	Site Boundary	<p style="margin: 0;">0 660'</p> <p style="margin: 0;">scale</p>	<p style="margin: 0;">N</p>
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K & L POULTRY FARM
FRANKLIN, 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
** Adrian-Palms	91	2	3%	Wetness	3	3	3	3
Canton-Charlton	11C	11	15%	Slope	2	2	2	2
Canton-Charlton	11XC	2	3%	Slope, large stones	2	2	2	2
Charlton-Hollis Charlton Part Hollis Part	17LC	8	11%	Slope, depth to bedrock	2	2	2	2
Charlton-Hollis	17LD	9	13%	Slope, depth to rock	3	3	3	3
Hollis-Rock Outcrop	17MD	5	7%	Slope, depth to bedrock	3	3	3	3
Merrimac	70B	15	21%		1	1	1	1
Merrimac	70C	4	6%	Slope	2	2	2	2
Paxton	35C	5	7%	Slope, frost action	3	2	2	2
** Ridgebury, Leicester, Whitman	43M	2	3%	Wetness, large stones, frost action	3	3	3	3
** Scarboro	75	7	10%	Wetness	3	3	3	3
Sudbury	456	1 71	1% 100%	Wetness, frost action	3	3	2	1

* LIMITATIONS: 1=Slight; 2=Moderate; 3=Severe

** Wetland soil regulated under 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.