environmental review team report

ELDERLY HOUSING SITES

Whewell Property

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West Vine Street Property

STONINGTON, CONNECTICUT

RC&D

EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

ASSISTED BY: U.S. DEPARTMENT OF AGRICULTURE,
SOIL CONSERVATION SERVICE AND COOPERATING AGENCIES

ENVIRONMENTAL REVIEW TEAM REPORT
ON
ELDERLY HOUSING SITES
WHEWELL PROPERTY
WEST VINE STREET PROPERTY
STONINGTON, CONNECTICUT

NOVEMBER, 1976

The preparation of this report was assisted by a grant under Title 1, Section 107(a)4 of the Housing and Community Development Act of 1974, 24 CFR, Part 570, Section 570.406.

EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT PROJECT
Environmental Review Team
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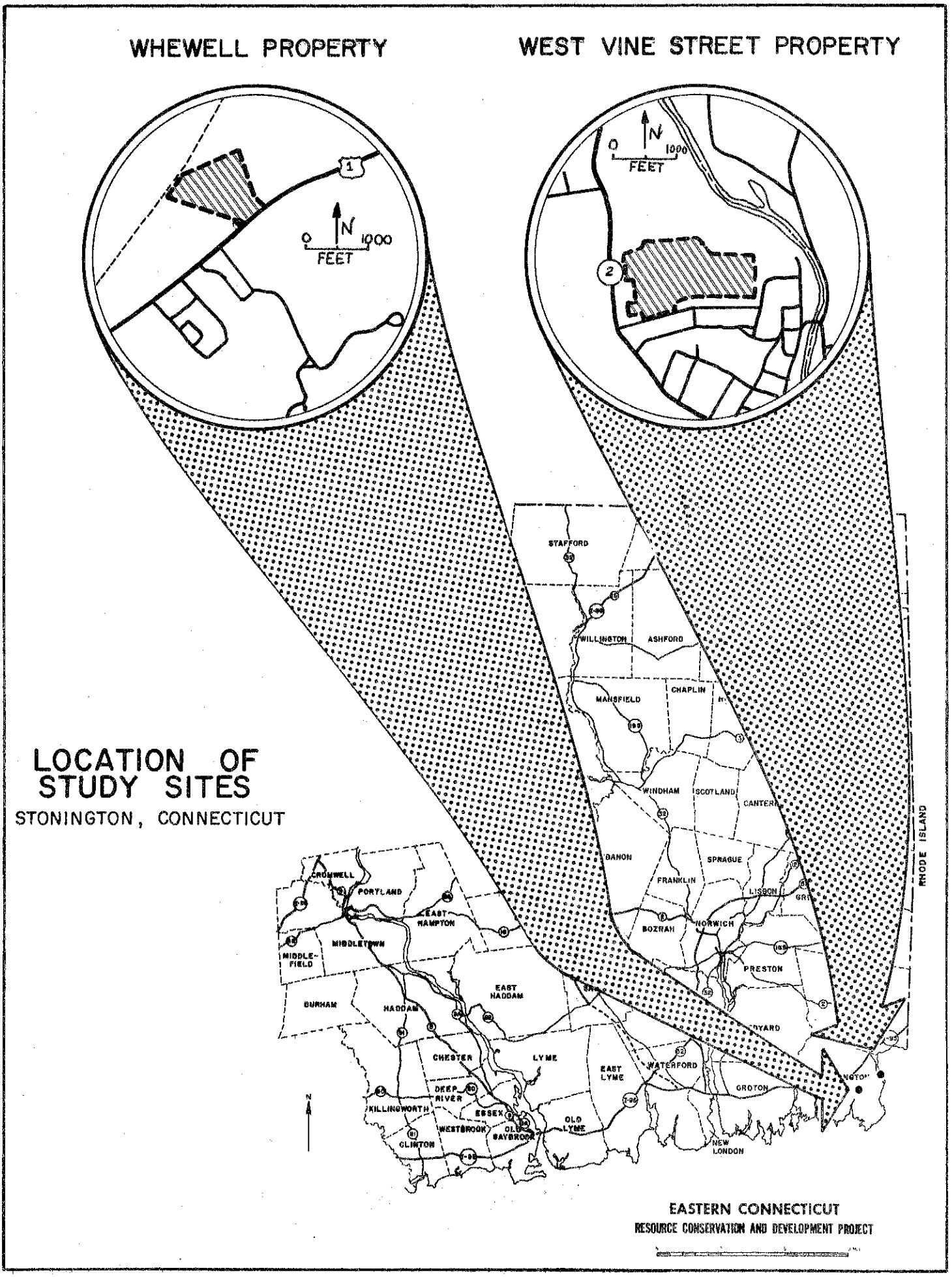
WHEWELL PROPERTY
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LOCATION OF STUDY SITES
STONINGTON, CONNECTICUT
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WILLINGTON
ASHFORD
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CHAPLIN
WINDHAM
SCOTLAND
CANTERBURY
SPRAGUE
FRANKLIN
LISBON
BOZRAH
NORWICH
PRESTON
GRISWOLD
VOLUNTOWN
GROTON
NEW LONDON
WATERFORD
EAST LYME
LYME
OLD LYME
OLD SAYBROOK
ESSEX
WESTBROOK
CLINTON
KILLINGWORTH
DEEP RIVER
CHESTER
HADDAM
EAST HADDAM
DURHAM
MIDDLEFIELD
MIDDLETOWN
EAST HAMPTON
PORTLAND
CROMWELL
RHODE ISLAND
EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

ENVIRONMENTAL REVIEW TEAM REPORT
ON
ELDERLY HOUSING SITES
STONINGTON, CONNECTICUT

This report is an outgrowth of a request from the Stonington Housing Authority, with permission of the landowners, 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, a table of soils limitations for certain land uses, and a topographic map of the site were forwarded to all ERT participants prior to their field review of the site.

The ERT that field-checked the site consisted of the following personnel: Sherm Chase, District Conservationist, SCS; Richard Hyde, Geologist, Connecticut Department of Environmental Protection (DEP); David Miller, Climatologist, University of Connecticut Cooperative Extension Service (UCONN Ext); Daniel Civco, Landscape Architect, UCONN Ext; Manuel Cardoza, Sanitarian, Connecticut Department of Health; Charles Storrow, Regional Planner, Southeastern Connecticut Regional Planning Agency (SCRPA); and Linda Simkanin, ERT Coordinator, Eastern Connecticut RC&D area.

The Team met and field-checked the sites on Thursday, August 12, 1976. 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 of each of the sites, evaluates its significance to the proposed elderly housing development, and also suggests considerations that should be of concern to any developers and the Town of Stonington. The results of this Team action are oriented toward the development of a better environmental quality and the long-term economics of the land use.

The Eastern Connecticut RC&D Area Committee hopes 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: Miss Linda M. Simkanin, Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, 139 Boswell Avenue, Norwich, Connecticut 06360, 889-2324.

INTRODUCTION

The Eastern Connecticut Environmental Review Team was asked to review two sites under consideration for the construction of elderly housing. It was the understanding of the ERT at the time of the review that it was expected that one of the two sites would be chosen by the Stonington Housing Authority for the construction of 30 units of elderly housing with possible expansion room for additional units if needed. The Housing Authority anticipates funding assistance for the project from the Connecticut Department of Community Affairs (DCA).

The preliminary site plans for each site were prepared by the firm of Hermann and Joncus, architects chosen for the project by the Housing Authority.

The Whewell property, which is currently in private ownership, is approximately 25 acres in size. It is located north of Route 1, northeast of Stonington High School. The site is primarily undeveloped, although there is an abandonned car repair garage on a portion of the property which fronts on Route 1. Some remnants of an automobile junkyard prevail as surface litter.

The West Vine Street property, which is currently in Town ownership, is approximately 40 acres in size. It is located in the Pawcatuck section of town, to the north and east of the West Vine Street elementary school. With the exception of the school and associated playgrounds, the site is undeveloped, and is currently in an old field condition.

Both sites offer enough space for the construction of any additional housing units beyond the initial 30. Although both sites are eligible for public water, it will be a minimum of two years before public sewers will be available to either site.

Prior to the field inspection of the two sites, the Team discussed the development objectives with the Housing Authority and the architect for the project. At that time the Team was informed that these two sites were the prime sites under consideration for the elderly housing project.

Some aspects of the proposed development discussed by the Team involve on-site sewage disposal, and the proximity of the housing complex to services such as shopping, banks, and community facilities.

The report also describes the natural characteristics of the site including topography, geology, soils, and vegetative cover. Consideration will be given to the compatibility and suitability of the proposals relative to the natural resource base. Comments or recommendations made within the report are presented for consideration by the town and any developers in the preparation and review of the development plans, and should not be construed as mandatory or regulatory in nature. The report will be divided into two sections offering a separate discussion on each site.

EVALUATION OF THE WHEWELL PROPERTY

The Whewell property, which is currently in private ownership, is approximately 25 acres in size. It is located north of Route 1 (West Broad Street), northeast of Stonington High School, with considerable frontage on Route 1. The site is primarily undeveloped, although there is an abandonned car repair garage on a portion of the property which fronts on Route 1. Some remnants of an automobile junkyard prevail as surface litter.

TOPOGRAPHY

The site encompasses a single knob that originally, before man's disturbance, reached a maximum elevation of just over 50 feet above mean sea level. The highest land surfaces have in the recent past been bulldozed flat and distributed over much of the lower-lying areas to a thickness of several feet. Topographic relief is no more than 20 feet from the highest elevation to the lowest. (Refer to the Topography Map on the following page.)

SURFICIAL GEOLOGY

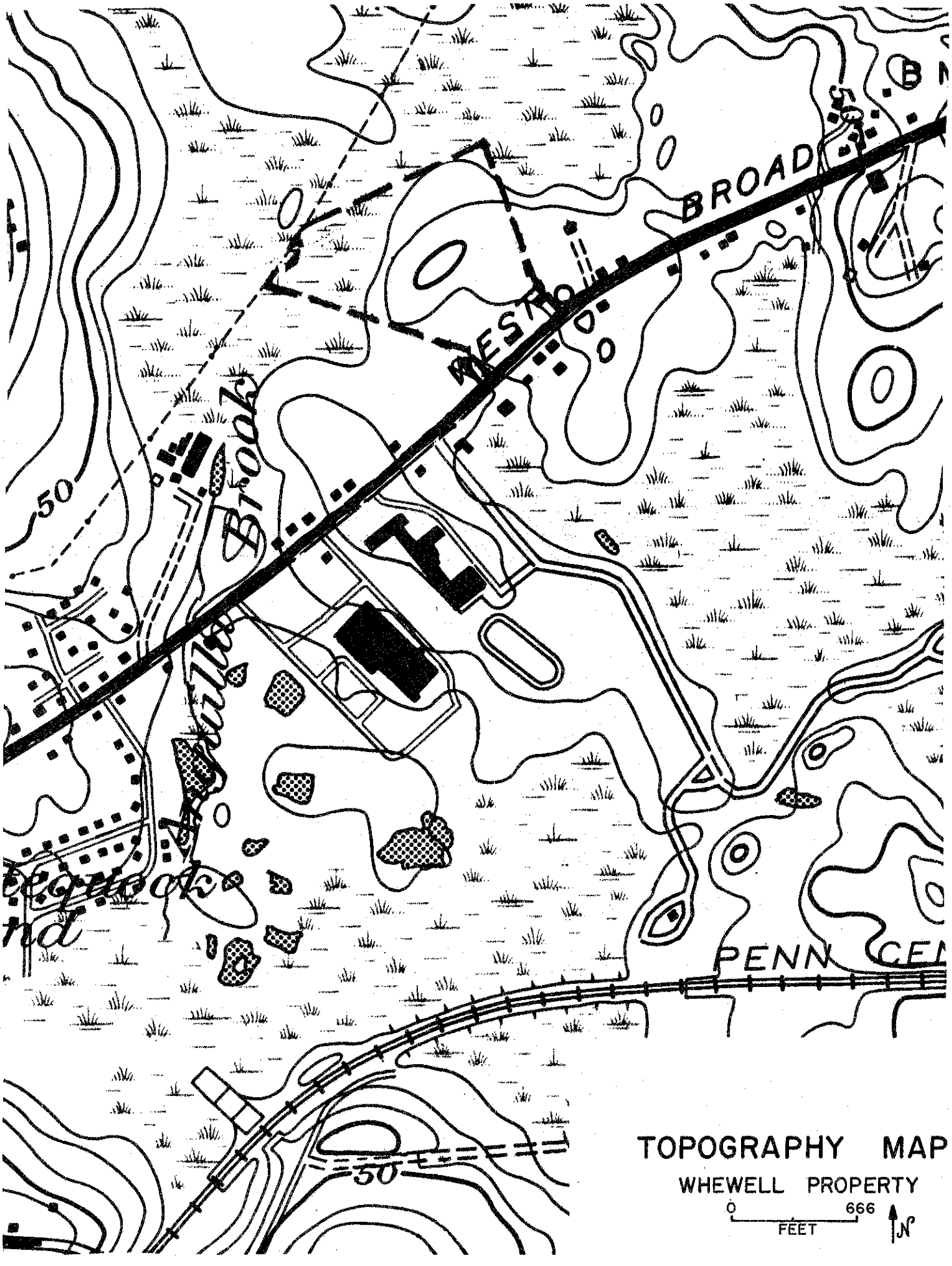
Although the uppermost surface materials have been redistributed over the site, the overburden materials as mapped by the surficial geologist are probably consistent with the data published on "Surficial Geologic Map of the Ashaway Quadrangle" by J.P. Schaffer, 1968. Four types of parent overburden can be found on the Whewell property: swamp and marsh deposits, glacial stream deposits, till, and a variety of till called ablation till.

Swamp and marsh deposits consist of peat, muck, silt, and sand. Many of the locations of this material have been filled. Swamp and marsh deposits which have been principally filled-in occur in the northwestern section of the property, and along the northern boundary.

Glacial stream deposits are found in a portion of the property along West Broad Street and consist of gravel and sand, bedded and generally well sorted according to grain sizes. East of this deposit is an area where a light-gray till is found. Till is the geologist's term for glacial debris that remains after all ice has melted and is formed by various mixtures of clay, silt, sand, gravel, and boulders. The material is relatively unbedded, that is, it is not found in layers of differing particle grain sizes stacked on top of one another, and it is also very poorly sorted and compacted.

Most of the property overburden is classified as ablation moraine material which has many characteristics of both till and glacial stream deposits. The reason for this is because at that point the glacial advance was stopped for a period which allowed the accumulation and the water-working of the till, causing the deposits to be somewhat poorly sorted and stratified but tending to be more sandy or gravelly than that of straight till areas. Numerous large boulders were noted on the site indicating that a large amount of glacial materials has been dumped here with much of the smaller particle sizes being carried away.

Most types of overburden thickness vary from place to place, but based upon the lack of bedrock outcroppings in the surrounding area as well as a review of recorded domestic well locations, it appears that bedrock can be found within 5



TOPOGRAPHY MAP

WHEWELL PROPERTY

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to 10 feet of the land surface along West Broad Street. It appears that overburden thickness increases to 15 to 20 feet or greater along the back portion of the property.

BEDROCK GEOLOGY

The type of solid bedrock underlying the Whewell property is a gray-layered gneissic rock formed from metamorphosed volcanic materials which have been altered under intense heat and pressure. These are hard crystalline rocks consisting of quartz, oligoclase to andesine-labradorite feldspars, biotite mica, hornblende and microline minerals. The layered gneiss dips or plunges into the earth in a north by northeast direction at an angle that varies from place to place from 45° to 85°. Further bedrock information is published in "Bedrock Geologic Map of the Watch Hill Quadrangle" by George E. Moore, Jr., 1967, GQ-655.

SOILS

A detailed soils map of the property is provided here. As the map is an enlargement from the original 1,320'/inch scale to 660'/inch, the soil boundary lines shown should not be viewed as absolute boundaries, but rather as guidelines to the distribution of soil types on the property. The soils map, along with the Special Soils Report, Southeastern Connecticut Region (USDA, SCS, 1969), can serve as an educational tool regarding the identification and interpretation of soils. The natural soil group is also given for each soil. The Natural Soil Group Report published by SCS and the New London County Cooperative Extension Service provides a clear explanation of the natural soil groups.

The soil information as published in the New London County soils reports was supplemented by a field investigation of the soil conditions on-site. Observation pits were dug by a backhoe and examined by the soil scientist. The soils were identified and classified based upon their properties and qualities such as wetness, depth to bedrock, slope, permeability, and texture. The soil interpretations for selected uses for community and urban development presented in the limitations chart are supported by field observations, research investigations, engineering test data, and judgement of experienced soil scientists.

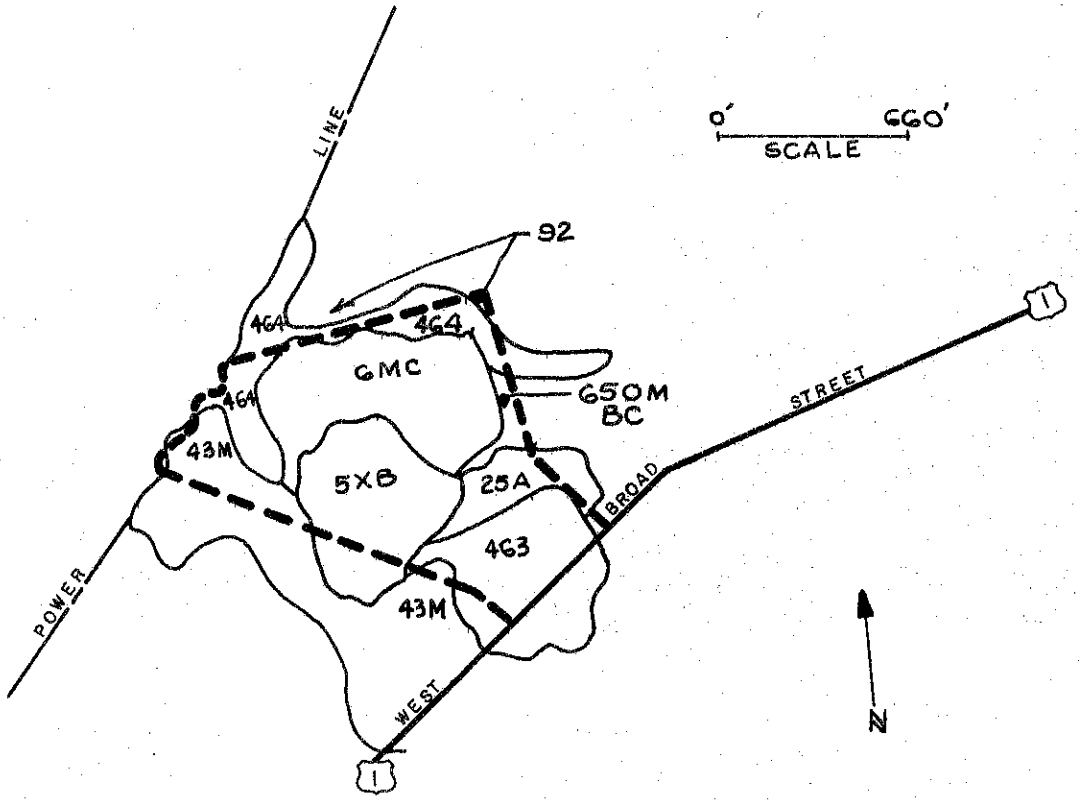
With the examination of the soils map, and the accompanying chart indicating general soils limitations for various land uses, a correlation between the soils and the surficial geology can be seen. As indicated in the SURFICIAL GEOLOGY section of the report, considerable rearrangement of the surface materials, including the addition of fill, has occurred on-site. The Raynham 463 soil type indicated on the soil map was observed in the field as having been filled at an earlier date in order to accommodate the present garage. It appeared from the backhoe pits that the fill was approximately two feet deep. The Raynham soil was observed to be a fine, sandy loam. It is a poorly drained soil which characteristically occupies low-lying, nearly level areas as the Whewell site. The groundwater table is near the surface from late fall through early spring. Water was running into the observation pit at the time of the digging, and continued to accumulate in the hole.

Behind the 463 soil, there is a small area of Ninigret 25A and a large area of Montauk 5XB. As both of these soil types have a high seasonal water table, special drainage measures, or cut and fill may be required for the development. Ninigret soils are moderately well-drained soils which in the observation pits dug by the

SOIL MAP

WHEWELL PROPERTY

STONINGTON, CONNECTICUT



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

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backhoe showed mottling at 14 to 20 inches below the land surface indicating a waterlogged condition, or high water table during wet seasons. The Montauk soils are well drained soils with a slowly to very slowly permeable fragipan at depths of 30 to 40 inches. There may be a perched water table above the fragipan in wet seasons. Because of restricted internal drainage, water moves laterally down the slope over the pan in wet seasons and after heavy rains. The observation pit revealed the fragipan layer; numerous boulders and small stones were observed also.

The Narragansett 6MC is the highest and driest soil on the property. Narragansett soils are well drained and moderately permeable. Stoniness varies from essentially stone-free to very stony.

In general, the Whewell property could be developed, but would require expensive cut and fill. Before cut and fill is attempted, it would be advisable to determine depth to the highest water table, normally in the spring. Also, a grid survey should be made to plan and balance cut and fill relative to the water table. The depth to the water table, below the graded surface, would depend on depth of basements, and whether or not on-site sewage facilities will be needed.

Precautions should be taken to prevent additional silt from entering the stream that flows south across the road, through the school property. In order to accomplish this, an erosion and sediment control plan should be developed and implemented. Components of effective sediment and erosion control include, but are not limited to, keeping much of the area under existing vegetative cover and keeping areas devoid of cover exposed for the shortest practical period of time. Permanent roads should be installed as early as possible. Temporary seeding and mulching may be necessary if development becomes protracted. Sediment basins and other temporary mechanical measures may be necessary to control sediment and reduce the erosive effect of runoff water. Assistance in developing such a plan is available through the New London County Soil and Water Conservation District.

VEGETATIVE COVER

As the natural land surface has been extensively disturbed and altered with the addition of fill material and partial past use of the property as an automobile junkyard, no traces of the original vegetative cover remain. Brush characteristic of disturbed areas prevail. Some natural grass and tree cover exists on the southwestern portion of the site. Extensive plantings including grasses, trees, and in particular, ornamental shrubs will be needed to provide an aesthetically pleasing landscape for potential occupants of the elderly housing development.

CLIMATOLOGY

The area is in the coastal plain of Connecticut and its weather is heavily influenced by Long Island Sound. When the wind blows air from the Sound inland, the effect of the water is a cooling one in spring and summer and a warming one in fall and winter. Many days will have a sea breeze from the sea to the land during the day and a land breeze at night.

Mean Annual Temperature	51°F
Mean Annual Snowfall	35 inches
Average Annual Heating degree days	5,600

Average length of frost free season	190 days
Mean annual precipitation	48 inches

The development of the site will not have a detectable effect on the local climate. The climate has no serious limitations for the development.

HAZARDS

As numerous sharp or bulky metal objects, or glass are littered or partially buried on the site, careful clean-up, filling, and landscaping is needed to correct a potentially hazardous condition to any occupants of the proposed development.

AESTHETICS

In terms of overall scenic quality, in its present state, the Whewell property ranks rather low. This rating is attributed to the remnants of the former occupation of the site, a garage and junkyard, as well as to the unbuffered adjacent commercial establishments.

The Whewell Property requires extensive site preparation if it is to meet the requirement of providing an aesthetically pleasing environment for the elderly residents. The surface litter should be entirely eliminated. It is also recommended that the housing units be sufficiently buffered on the south and east; this will have the effect of screening the visual distractions inherent to Route 1, as well as to provide a partial noise and air pollution filter.

The site should be liberally planted with ornamentals, in particular, seasonally-varying flowering shrubs, to increase visual interest. As the site does not have a topsoil that is conducive to optimal growth of desirable plantings, proper fill must be brought in to insure the success of any landscaping. A certified landscape architect should be contracted to prepare a final plan for the site and its respective design. Property treated, the Whewell property can offer internal visual quality; much consideration should be given to toning down the off-site visual detractions of the site.

WATER SUPPLY

The site is within the service area of the Westerly water supply system which services the Pawcatuck section of Stonington.

WASTE DISPOSAL

At the time of the review, the initial contracts for the Pawcatuck municipal sewerage system had been put out to bid. It is expected that municipal sewerage will be available to the Whewell site about two years from the present time.

In the event that the development is approved for this site, and completed before the availability of public sewers, an on-site septic system will be needed. It is advised to locate the leaching fields in the Narragansett 6MC soil, if pos-

sible, and thereby avoid the wetter soil areas described earlier in the section on soils.

ROADS

The Whewell property has its only access onto U.S. Route 1. This constitutes another friction point along this very heavily traveled, two-lane major cross-route of Stonington.

From the point of view of vehicular egress from the site, the location is not ideal for the installation of an access road because the sight lines especially towards the west are not long. In that direction there is a curve in the road and a slight rise in grade, both of which will limit visibility for cars entering or leaving the property. This problem might be compounded by elderly drivers.

SERVICES TO SUPPORT DEVELOPMENT

There is, within walking distance, a block of stores which forms the initial element of a large shopping center. If development of the shopping center continues, then the site will be adjacent to this facility. However, there are no sidewalks on Route 1 and the shopping center design will almost certainly be vehicle-oriented. Pedestrian access for elderly people would have to be carefully designed. In the event that this site is chosen for the development, efforts should be made to suggest that the needs of the elderly in terms of access to the stores, and the type of stores needed to serve the elderly, be considered for the new shopping center.

COMPATIBILITY TO SURROUNDING LAND USES

The surrounding area, including the Whewell site, is commercially zoned. At the present time, existing commercial development is rather widely scattered. The pressure for increased commercial uses will most likely increase as soon as sewers are available. It would seem that the proposed housing complex, although not incompatible with the existing commercial development in terms of the visual relief it might provide in the landscape design, would tend to isolate the elderly from other residential and open space areas.

ALTERNATIVE LAND USES

Alternative land uses for the Whewell property would seem to be either roadside commercial, in conformity with current zoning, or residential. The Town's Plan of Development is under revision at the present time, which makes the question of alternative uses difficult to answer. However, a residential use, of the cluster or planned unit development types would seem more desirable than more commercial development, if only to prevent this section of Route 1, like similar sections in other towns, from becoming completely commercially developed.

OTHER CONSIDERATIONS

Although the Whewell property appears to be sufficiently large to contain 150 units of elderly housing, the expected DCA grant to the Housing Authority is for 30 units. As an alternative to ultimately building all future units on one site, the Team suggests that it may be more socially desirable for the elderly population to be housed in smaller developments located closer to the three urban centers in Stonington: Mystic, the Borough, and Pawcatuck. The principal reasons for this would be first, to avoid the institutional atmosphere of a large project, and second, to perhaps let the people remain close to the neighborhoods where they had formerly lived. Also, shopping services would be more readily available in these existing residential centers. While the costs to operate separate small developments might be higher, this should be thoroughly investigated and considered with the health, safety, and welfare of the senior citizens who will be occupying the housing development.

EVALUATION OF THE WEST VINE STREET PROPERTY

The West Vine Street property, which is currently in Town ownership, is approximately 40 acres in size. It is located in the Pawcatuck section of town, to the north and east of the West Vine Street elementary school. With the exception of the school and associated playgrounds, the site is undeveloped, and is currently in an old field condition.

TOPOGRAPHY

The site covers an area of steep rock outcropping previously utilized as a stone quarry, as well as a hill in the northwestern corner of the site which has apparently not been mined. The property's lowest elevation of 50 feet above mean sea level is located in the northeastern corner of the site, with the land surface relief increasing to 170 feet in the south central portion and 180 feet in the northwest.

SURFICIAL GEOLOGY

The thin surficial deposits lying on top of the solid bedrock over much of this site can be called glacial till. As described earlier, till is a heterogeneous mixture of various amounts of clay, silt, sand, gravel, and boulder-sized particles showing little evidence of sorting or stratification by water action. These deposits are very thin over most of the site, probably averaging less than 5 feet in thickness but there may be pockets of 10 to 15 feet thick along the north central boundary. Small portions of the property along the north central and extreme eastern sections contain glacial stream deposits such as those described earlier for the Whewell property.

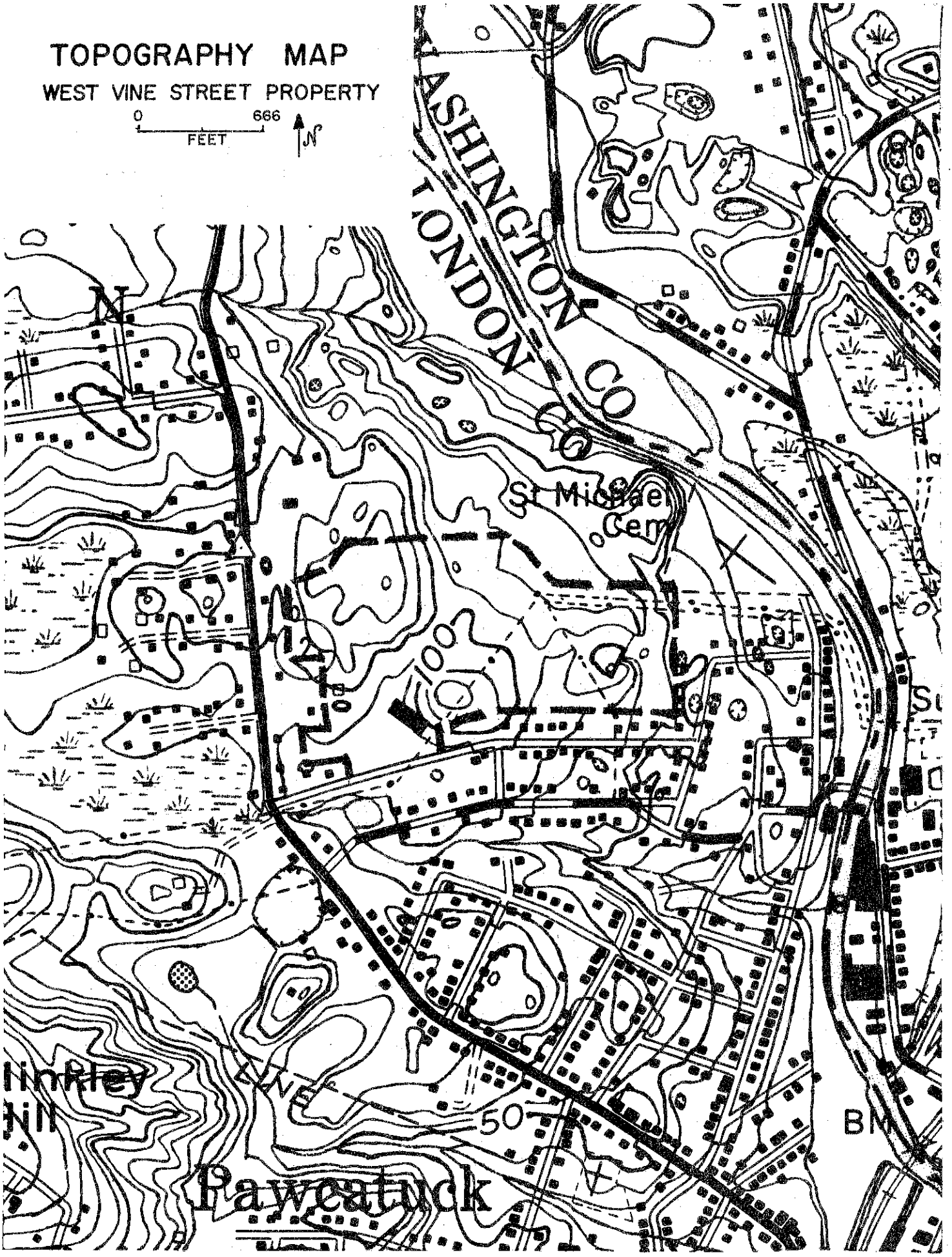
BEDROCK GEOLOGY

The bedrock type found underlying the West Vine Street Property has been classified as falling into the Narragansett Pier Granite, a medium-grained, reddish-pink granite formed from a molten mass deep within the earth. Principal mineral constituents are pink and white feldspars, smoky quartz, and black biotite mica flakes. The rock type makes a fair building material as is evident by the abandoned quarry face located in the south central region of the property.

SOILS

A detailed soils map of the property is provided here. As the map is an enlargement from the original 1320'/inch scale to 660'/inch, the soil boundary lines shown should not be viewed as absolute boundaries, but rather as guidelines to the distribution of soil types on the property. The soils map, along with the Special Soils Report, Southeastern Connecticut Region (USDA, SCS, 1969), can serve as an educational tool regarding the identification and interpretation of soils. The natural soil group is also given for each soil. The Natural Soil Group Report published by SCS and the New London County Cooperative Extnesion Service provides a clear explanation of the natural soil groups.

The soil information as published in the New London County soil reports was supplemented by a field investigation of the soil conditions on-site. Observation pits were dug by a backhoe and examined by the soil scientist. The soils were identified and classified based upon their properties and qualities such as wetness,


TOPOGRAPHY MAP
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depth to bedrock, slope, permeability, and texture. The soil interpretations for selected uses for community and urban development presented in the limitations chart are supported by observations, research investigations, engineering test data, and judgement of experienced soil scientist.

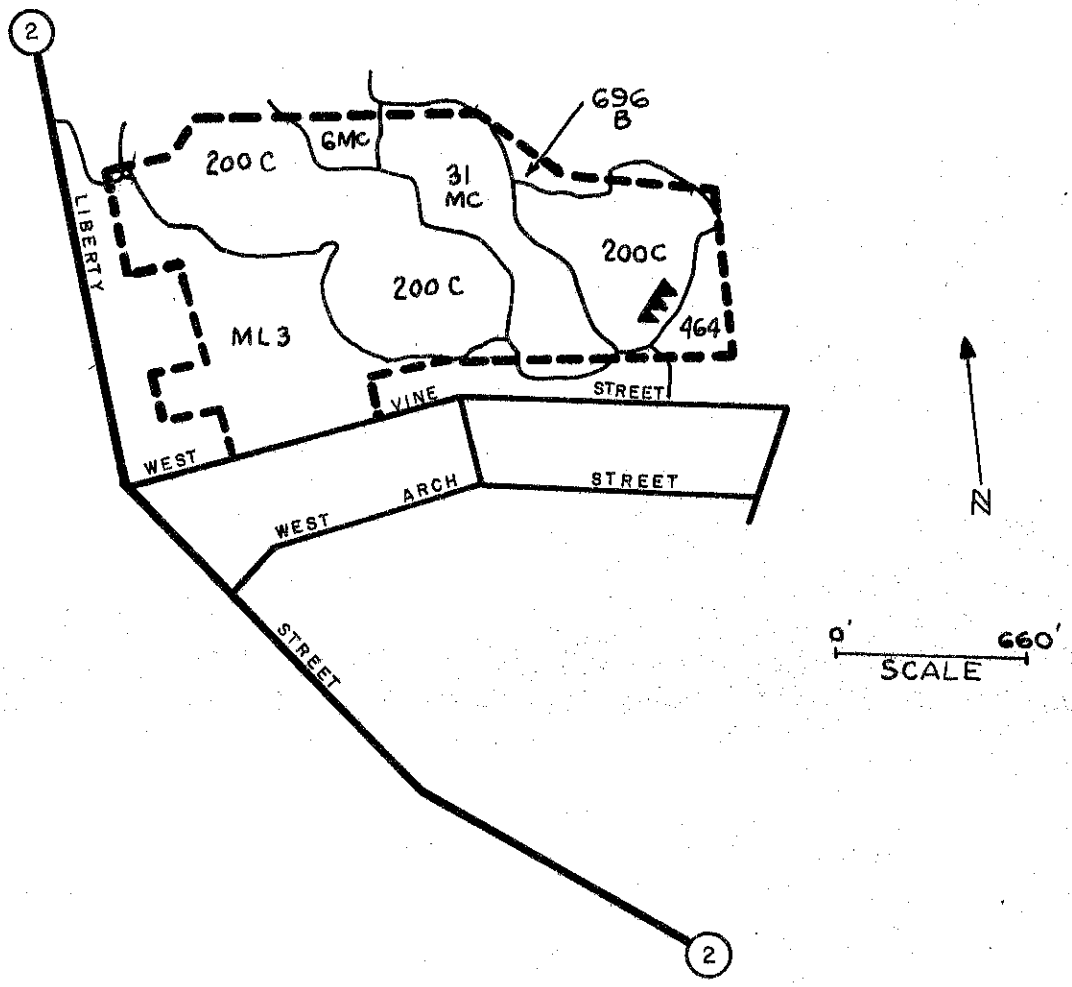
With the examination of the soils map, and the accompanying chart indicating general soils limitations for various land uses, a correlation between the soils and the surficial geology can be seen. The West Vine Street property has difficult soil for development. If this property is considered, it would be advisable to determine depth to bedrock on the soil shown as 200C which is the major soil type on the portion of the site available for the housing development. The 200C soil type of the Narragansett-Hollis complex consists of 55% deep well-drained silty soils, and 45% shallow to bedrock and moderately well drained silty soils. Surface stoniness and rockiness ranges from stony and rocky to extremely stony and rocky. The topography is characterized by undulating to sloping upland ridges up to a 15% grade. The shallow to bedrock soils occur on the ridges, as was observed on the West Vine Street site, and the deeper silty soils occur in the depressions. Ledge rock can make the installation of roads, basements, and subsurface sewage facilities very expensive. Although the soil map does not indicate the depth to bedrock, the record of the deep pits dug on-site by a backhoe give a general indication of the depths to bedrock on this site.

DEEP OBSERVATION PIT DATA

Pit #1	0-6" top loam 6-24" yellow silty loam Mottling at 24" 24-60" sand loam with silt Refusal at 60"
Pit #2	0-5" top loam 5-24" silty yellow loam 24-66" sandy loam Refusal at 66"
Pit #3	Refusal at 48"
Pit #4	Refusal at 52"
Pit #5	0-6" top loam 6-33" silty yellow loam Mottling at 33" 33-47" silty loam with clay stratas 47-96" silty sandy loam
Pit #6	0-6" top loam 6-29" yellow silty loam Mottling at 29" 29-64" silty loam Refusal at 64"
Pit #7	0-5" top loam 5-56" yellow silty loam Refusal at 56"

SOIL MAP

WEST VINE ST. PROPERTY
STONINGTON, CONNECTICUT



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

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Pit #8	0-5" top loam 5-25" yellow silty loam 25-55" silty sandy loam Refusal at 55"
Pit #9	0-6" top loam 6-30" yellow silty loam 30-50" silty loam with fray clay stratas Heavy mottling at 30" Refusal at 50"
Pit #10	0-5" top loam 5-24" silty loam 24-44" hardpan with heavy mottling strata 44-82" boney gravel

Bedrock depth in the observation pits ranged from 50 to 66 inches. Numerous bedrock outcrops and other large boulders were observed. It appears highly improbable that an area of the Narragansett-Hollis complex soils extensive enough to support the septic system required for this project exists. However, if such factors such as location, economics, or other special considerations outweigh soil use problems, more intensive site investigation may locate a suitable area with sufficient soil depth to afford adequate renovation of sewage material.

The Woodbridge 31MC soil type present on-site also has severe limitations for on-site sewage disposal, and causes problems with basements and roads due to a seasonally high water table. Fill and/or drainage can overcome these problems, and this also can be relatively expensive.

VEGETATIVE COVER

With the exception of the quarry areas, the majority of the site exhibits a natural vegetative cover. Grasses and low fruiting shrubs cover much of the site. Bayberry and low bush blueberry were in high abundance. A thick tree border exists on the northern boundary of the property. Additional tree plantings would enhance any development by breaking up an otherwise low vegetative profile.

CLIMATOLOGY

Refer to the Climatology section under the Whewell Property.

HAZARDS

The West Vine Street property, because of its history of quarry operations, contains several places where sharp dropoffs and excavated pools exist, which, if not properly fenced or posted, could prove hazardous to elderly residents in certain situations.

In addition, in places where the overburden materials lie on top of the bedrock surface, particularly on the Vine Street property, and where there are steep land slopes, the potential for soil erosion increases dramatically when development disturbs the vegetative cover. If the West Vine Street parcel of land is to be utilized, the site plans should try to locate roads and buildings away from such critically unstable areas of land. If there must be development on such areas, however, the land should be prepared, construction started and completed and final

landscaping initiated in the shortest time period possible to minimize all adverse effects.

AESTHETICS

The West Vine Street property can be described as slightly scenic to scenic. The higher visual quality of this site can be attributed to the rugged terrain. The former use of a portion of the site was a granite quarry which is evidenced to day by the exposed bedrock ledges and surface water impounded at the base of these ledges. The landscape is fairly natural, bearing few of the scars that mining operations often leave behind. From the top of the ledges, a panoramic view of the Town of Westerly, Rhode Island is offered.

Ornamental plantings of trees and seasonally-varying flowering shrubs which increase visual interest should be undertaken. Adequate buffers (fifty feet or wider) should be located at the West Vine Street site along Route 2 and West Vine Street sides so that privacy will be maximized. The on-site attributes of the site should be emphasized.

WATER SUPPLY

The site is within the service area of the Westerly water supply system which services the Pawcatuck section of Stonington.

WASTE DISPOSAL

It is expected that municipal sewerage will be available to the West Vine Street site within two years from the present time.

In the event this site is selected for the construction of the elderly housing development, and the development completed before the availability of public sewers, an on-site septic system will be needed.

On the basis of the 10 deep hole observation pits which were dug by a backhoe on the West Vine Street site, it was found that the majority of the site appears to be underlain with ledge and/or large rock formations. Ledge rock was encountered in 8 of the 10 deep observation pits that were dug.

The proposed area also appears to have a high seasonal ground water table. High seasonal ground water is the most common cause of failure of subsurface sewage disposal systems. Ground water levels show considerable seasonal variation, and it is necessary to determine the maximum level in order to design a leaching system which will function properly.

The Public Health Code requires that the bottom of leaching systems be located at least 18 inches above the maximum ground water level which generally occurs for one month or more during the wettest season of the year. The Public Health Code also provides that leaching systems must not be located in areas underlain by shallow rock unless the bottom of the leaching system can be kept 4' above the ledge. Greater distance may be required where the ledge forms a basin or ravine which causes a buildup of ground or surface water during wet periods.

It appears the possibility of providing sucessful subsurface sanitary waste facilities for the proposed elderly housing complex does not appear feasible at this time without great economic cost to the Town.

ROADS

This site only has frontage on West Vine Street, which is a residential street in a residential area. It is conceivable that a ultimate 150-unit project could overload the street and cause congestion which would inconvenience people living in the existing single-family houses in the area.

SERVICES TO SUPPORT DEVELOPMENT

The area is one of comparatively new houses in a completely residential neighborhood. There are no shopping facilities suitable for elderly people within easy walking distance.

ALTERNATIVE LAND USES

The only appropriate land use for the West Vine Street property other than its current vacant undeveloped status would seem to be residential, since it is in a suburban residential area. However, since the terrain is very rough and there are many natural limitations, development of any kind would be very difficult. Residential development would have to be at a very low density. Perhaps the best use for the property would be as open space both because it is town-owned, and because of its physical characteristics.

APPENDIX

STONINGTON: ELDERLY HOUSING SITES

PROPORTIONAL EXTENT OF SOILS AND THEIR LIMITATIONS FOR CERTAIN LAND USES

Soil Series	Natural Soil Group	Soil Symbol	Approx. Acres	Percent of Acres	Principal Limiting Factor	Urban Use Limitations* On-Site Sewage	Buildings with Basements	Streets & Parking	Land-Scaping
Whewell Property									
Montauk	C-1a	5XB	5.0	19.9	Fragipan,slope	3	2	2	2
Narragansett	B-1c	6MC	8.0	31.9	Stony,slope	2	2	3	3
Ninigret	A-2	25A	1.8	7.2	Seasonal high water table	2	2	2	2
Leicester/Ridgebury/ Whitman	C-3b	43M**	3.0	11.9	High water table	3	3	3	3
Raynham	G-3a	463**	4.5	17.9	"	3	3	3	3
Raypol	A-3a	464**	2.8	11.2	High water table stony	3	3	3	3
			25.1	100.0%					
West Vine Street Property									
Narragansett	B-1c	6MC	1.2	3.1	Stony,slope	2	2	3	3
Woodbridge	C-2b	31MC	6.6	16.8	Seasonal high water table,slope stony	3	2	3	3
Narragansett/ Hollis	D-1	200C	19.5	49.6	Shallow to bed-rock,slope	3	3	3	3
Raynham	A-3a	464**	2.0	5.1	High water table stony	3	3	3	3
Made land	___	ML3	10.0	25.4	_____	_	_	_	_
			39.3	100.0%					

* Urban Use Limitations: 1 = slight; 2 = moderate; 3 = severe (see back of this page for a further explanation of limitation classifications).

** Inland Wetland soils as defined by Public Act 155, as amended.

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.