Mansfield Professional Park
Storrs, Connecticut 06238

February 26, 1970

Mr. William S. Boyce
Behrens and Boyce
12 West Point Road
East Hampton, Connecticut 06424

Dear Sir:

Attached is a soils report on the proposed sub-division located on Brown Road, Mansfield, Connecticut. The soils information was taken from the Published Tolland County Soil Survey issued December, 1966.

A preliminary field investigation of the property was made February 20, 1970, by myself and staff members of the SCS. It is a consensus of opinion that this particular sub-division not be reviewed by the Sub-Division Practice Team.

The property in question presents many difficulties for urban development, it has severe and very severe limitation for most urban uses.

Please read the enclosed soils descriptions and interpretations and if you have any further questions please feel free to contact me.

Sincerely,

William L. Lucas
Project Coordinator

Enclosures

WLLUCAS:st

# SOILS DESCRIPTIONS

GeC - Gloucester and Charlton very stoney soils. 3-15% slope.

CrC - Charlton very stoney fine sandy loam. 3-15% slope.

The many stones on these soils limit their use. This soil has adequate permeability, but septic tank systems are difficult to install because of the slopes and the stones on the surface and in the soil. The size of the stones ranges from 10 inches to 10 feet or more. Excavations of foundations may be difficult if there are bedrock outcrops of many large stones. Surface stones must be removed before lawns can be established.

WzC - Woodbridge very stoney fine sandy loam. 3-15% slope.

SxB - Sutton very stoney fine sandy loam. 3-15% slope.

These soils are the very stoney phases of the moderately well drained soils formed in glacial till. They have severe limitations for septic tank drainage fields. A high water table may flood the drainage field from late in fall to late in spring and cause backups and surface seepage of effluent. Many surface stones and boulders hinder the installation of drainage fields. This soil has internal drainage problems and wet basements may result. Excavation difficulties, in some places may be caused by bedrock outcrops or large surface boulders. High water table in spring often cause seepage into foundation holes and trenches. Removal of stones is necessary before lawn can be established.

PbB - Paxton fine sandy loam. 3-8% slope.
PeC - Paxton very stoney fine sandy loam. 3-15% slope.

The limitations for septic tank systems are severe because a compact layer occurs at a depth of less than 30 inches and is very slowly permeable. Surface seepage of septic tank effluent may occur on the steeper slopes. Septic tank systems on these soils are difficult to install and require special design. Internal drainage problems occur when water moves laterally over the compact layer in early spring or late in the fall. Drainage problems are generally less severe on upper slopes than on the middle or lower slopes. Wet basements may occur in the spring.

Excavation difficulties because of bedrock outcrops or large surface boulders may occur in places on the Paxton very stoney phase. Seepage may occur in foundation holes and trenches and hinder building operations. Slopes in disturbed areas should be protected to prevent erosion.

Road construction and maintenance are difficult on the steeper slopes. Adequate drainage of road subgrade is necessary to prevent frost heaving.

HrC - Hollis very rocky fine sandy loam. 3-15% slope.

This soil is not suited for extensive urban development. Shallowness severely limits the installation of septic tank systems, but some small areas have scattered inclusions of deeper soil on which dwellings can be built. Only by detailed examination can the location and extent of these patches of deeper soil be determined.

Internal drainage problems are few and this soil is usually droughty.

Excavation problems are numerous. Blasting is often necessary when foundations are excavated. Well drilling may also be difficult and costly. Disturbed areas should be protected at all times as erosion is severe on this soil.

Lg - Leicester-Ridgebury-Whitman very stoney complex.

This soil is generally found in natural drainageways and depressions. The water table is 0 to 12" from the surface during the spring and lasts until early in summer. The water table severely limits these soils as sites for septic tank systems. Internal drainage limitations are severe. Wet basements are probable . Excavation difficulties are compounded by the high water table and by large surface boulders, and some bedrock outcrops. Ponding is common in low areas that receive considerable runoff from surrounding slopes. These areas are sometimes ponded for several days late in fall and in spring, especially when soil is frozen.

Pk - Peat and muck.

This soil is severely limited for septic tank systems. It has a permanently high water table that rarely drops below 18" during the dry summer. Water usually stands on the surface during spring and even at times in the summer. A septic tank cannot operate under these conditions. Internal drainage limitations are severe. Wet basements are probable. Because of their instability, peat and muck areas do not provide a suitable base for fill. Excavation difficulties are severe because of the persistent high water table. Many stones and boulders also present difficulties. Surface ponding is extensive and persists for long periods.

# SOILS REPORT

It is the intention of the tabular material to call to the attention of the user probable limitations associated with each soil type. Limitations, even though very 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 development, many soils and sites with difficult problems can be used.

The ratings of the soils for elements of urban uses consist of four degrees of "limitations". In the soil interpretive scheme various physical properties are weighed before judging their relative severity of limitations.

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 higher than average outlay when such areas are compared with areas 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.

Very Severe Limitations. Areas rated as having very severe limitations are generally not feasible for the specific use or the limitations would require extreme and costly measures to correct.

TABLE: SOILS, PROPORTIONAL EXTENT, INTERPRETATION FOR URBAN USES

| Mapping Symbol | Acres | % | Natural Soil Group | On-Site Sewage | Homesites W/Basements | Landscaping | Roads & Parking |
|---|---|---|---|---|---|---|---|
| Crc Charlton | 1.9 | 4.1 | B-1c | Severe Stoniness slope. | Severe | Severe | Severe |
| GeC Gloucester-Charlton | 5.6 | 11.9 | B-1c | Severe Stoniness slope. | Severe | Severe | Severe |
| SxB Sutton | 8.1 | 17.3 | B-2b | Severe Stoniness | Severe | Severe | Severe |
| PbB | 0.5 | 1.0 | C-1a | Severe | Slight | Slight | Moderate |
| PeC | 6.6 | 14.1 | C-1c | Severe | Severe | Severe | Severe |
| WzC | 7.9 | 16.8 | C-2b | Severe | Severe | Severe | Severe |
| HrC | 2.0 | 4.3 | D-1 | Severe | Severe | Severe | Severe |
| Lg | 9.5 | 20.3 | B-3b | Very Severe | Very Severe | Very Severe | Very Severe |
| Pk | 4.8 | 10.2 | F-1 | Very Severe | Very Severe | Very Severe | Very Severe |

TABLE: SUMMARY

| | LIMITATIONS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Slight | | Moderate | | Severe | | Very Severe | |
| | Ac. | % | Ac. | % | Ac. | % | Ac. | % |
| On-Site Sewage Disposal | 0 | 0 | 0 | 0 | 32.6 | 69.5 | 14.3 | 30.5 |
| Homesites with Basements | 0.5 | 1.0 | 0 | 0 | 32.1 | 68.5 | 14.3 | 30.5 |
| Landscaping | 0.5 | 1.0 | 0 | 0 | 32.1 | 68.5 | 14.3 | 30.5 |
| Streets and Parking | 0 | 0 | 0.5 | 1.0 | 32.1 | 68.5 | 14.3 | 30.5 |