

GEOLOGIC SECTIONS

The geologic sections are based on data collected from test borings for the Monroe County Pure Waters Sewer Interceptor Project and several bridge-construction projects. Locations of the sections are indicated on plate 2, "Surficial Geology."

EXPLANATION

- al ALLUVIAL SILT, SAND AND GRAVEL--stream deposits of postglacial age; generally high permeability.
- alss ALLUVIAL SANDS AND SILTS--with minor to a trace of gravel; stream deposits of postglacial origin, deposits are mainly reworked proglacial lake sediments, low to moderate permeability.
- oss PEAT, MUCK, MARL AND CLAY--bog deposits of postglacial age; low permeability.
- lsc LAKE CLAY AND SILT--offshore deposits in proglacial or postglacial lakes; low permeability.
- lss LAKE SILT AND FINE SAND--offshore deposits in proglacial and postglacial lakes, moderate permeability.
- ls LAKE SAND--fine to medium; beaches, bars and deltas of proglacial and postglacial lake plains; well-sorted; high permeability.
- ksg KAME SAND AND GRAVEL--ice-margin deposits in proglacial lakes, including kames and eskers; stratified and well-sorted; high permeability.
- t ABLATION AND/OR LODGMENT TILL--mixture of clay, silt, sand and boulders deposited from supraglacial or englacial drift laid down after ice melted or deposited beneath advancing glacier; permeability generally low.
- usg UNDIFFERENTIATED SANDS AND GRAVELS--varying compactness, possibly ablation till, kame, or alluvial in origin; permeability is typically high but may be restricted in highly compact areas.
- ussg UNDIFFERENTIATED SILT, SAND, AND GRAVEL--well logs indicate unit is probably ablation till or kame deposits, moderate permeability.
- Bedrock--sandstones, shales and dolomite, type is noted on some wells.
- GEOLOGIC CONTACT--dashed where uncertain.
- BOULDERS--indicates a till origin of materials.
- WELL OR TEST HOLE--Most numbers correspond to test-hole identification used for engineering and construction information.

GLOSSARY

A horizon.--The uppermost zone in the soil profile, from which soluble salts and colloids have been leached and in which organic matter has accumulated.

Ablation till.--Loosely consolidated rock debris, formerly in or on a glacier, that accumulated in place as the surface ice decayed and melted.

Alluvium.--Rock material deposited by flowing water.

Aquifer.--A saturated formation or part of a formation that yields significant quantities of water to wells and springs.

B-horizon.--The part of the soil zone that is enriched by the deposition or precipitation of material from the overlying A horizon.

Base flow.--Sustained or fair-weather stream discharge, composed primarily of ground water; the flow of a stream without runoff from precipitation.

Bedrock.--General term for rock, generally consolidated but commonly fractured, that underlies soil or other unconsolidated sediments.

Bedrock valley.--A valley eroded into bedrock.

Confining layer.--A layer of earth material, generally clay or other fine-grained sediment, that retards the movement of water.

Deglaciation.--The uncovering of an area from beneath a glacier or ice sheet by melting of the ice.

Discharge area.--The location at which water leaves an aquifer, such as a stream.

Drainage divide.--The boundary between drainage basins; a topographic divide.

Drift.--Rock material (clay, silt, sand, gravel, boulders) transported by a glacier and deposited directly by the ice or water emanating from it. Includes both stratified and unsorted material.

Drumlin.--A streamlined hill or ridge of drift with the long axis parallel to the direction of flow of the former glacier.

Esker.--A narrow ridge of gravelly or sandy drift deposited by a stream bounded by glacier ice.

Ground water.--Water that saturates a geologic stratum beneath land surface; all water below the water table.

Ground-water divide.--A vertical boundary separating two ground-water systems and across which no ground water flows.

Ice-contact deposits.--Stratified drift deposited in contact with melting glacial ice.

Kame.--A low, steep-sided hill of stratified drift, formed in contact with ice.

Lacustrine deposit.--Sand, clay, or silt deposited in a lake.

Lodgment till.--Basal till plastered on bedrock or other sediment beneath a glacier, containing stones commonly oriented with their long axes parallel to the direction of ice movement.

Moraine.--An accumulation of drift deposited in place by the direct action of ice.

Muck.--Dark, finely divided, decomposed organic material containing a high percentage of mineral matter, generally silt; forms surface deposits in some poorly drained areas such as former lake bottoms.

Outcrop.--An area where a given rock unit is exposed at land surface.

Outwash.--Stratified drift deposited by meltwater streams beyond active glacier ice.

Permeability.--Property or capacity of a porous rock, sediment, or soil for transmitting a fluid; a measure of the ease of fluid flow under unequal pressure.

Potentiometric surface.--An imaginary surface, either above or below land surface, that represents the level to which water in an aquifer would rise in a tightly cased well. The water table is one such surface.

Proglacial lake.--A lake formed just beyond the frontal margin of a glacier, generally in contact with the ice.

Recharge area.--The location at which water can enter an aquifer directly or indirectly; generally an area consisting of a permeable soil zone and underlying rock material that allows precipitation or surface water to reach the water table.

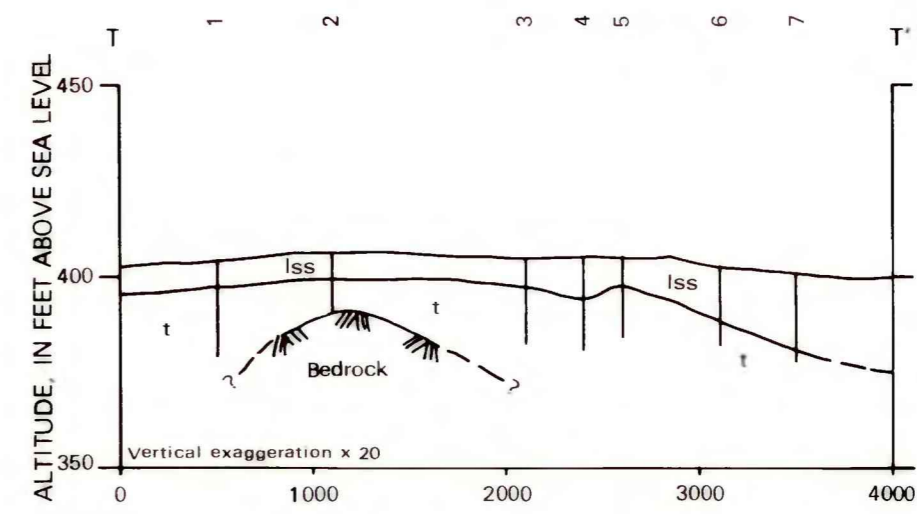
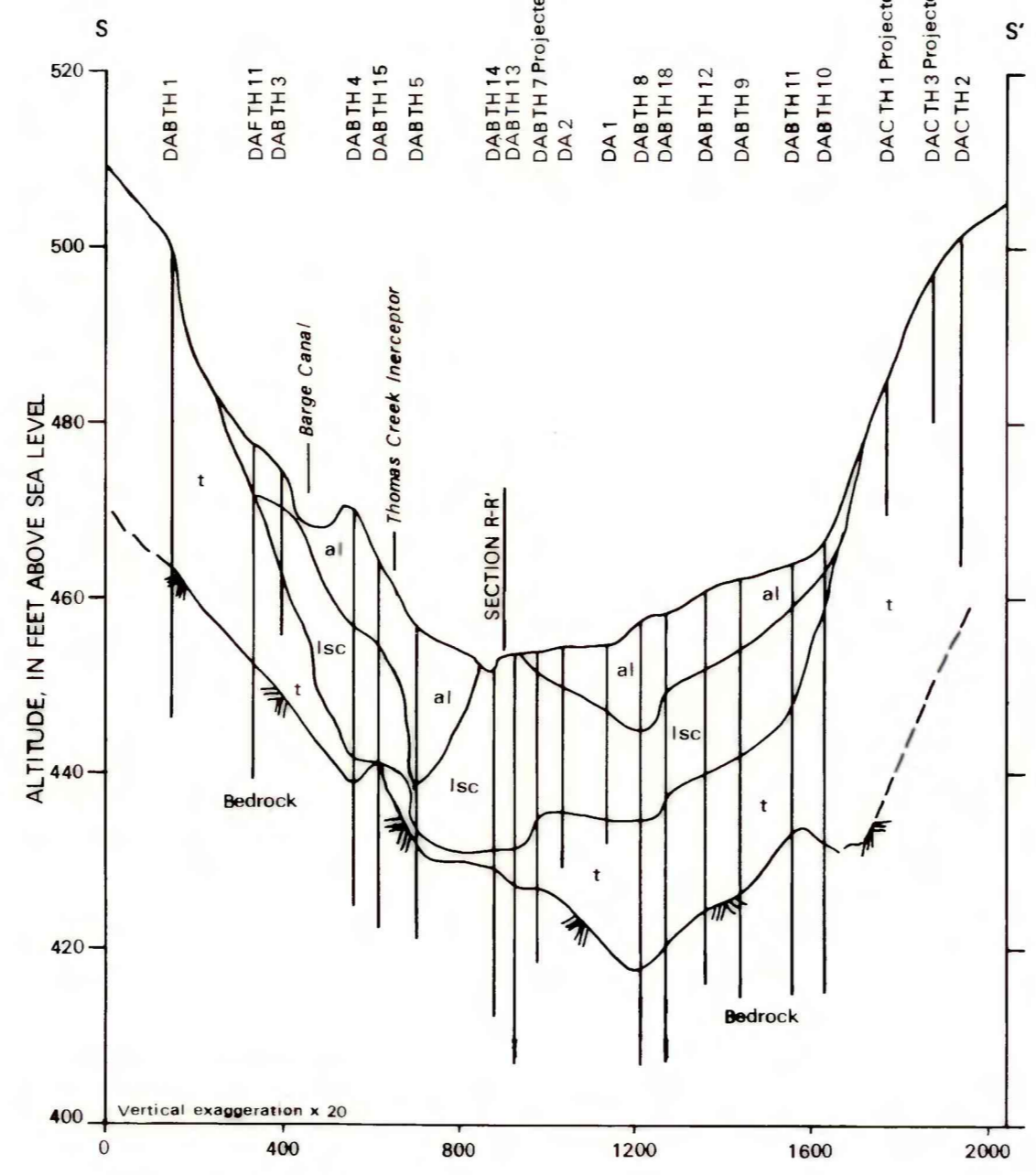
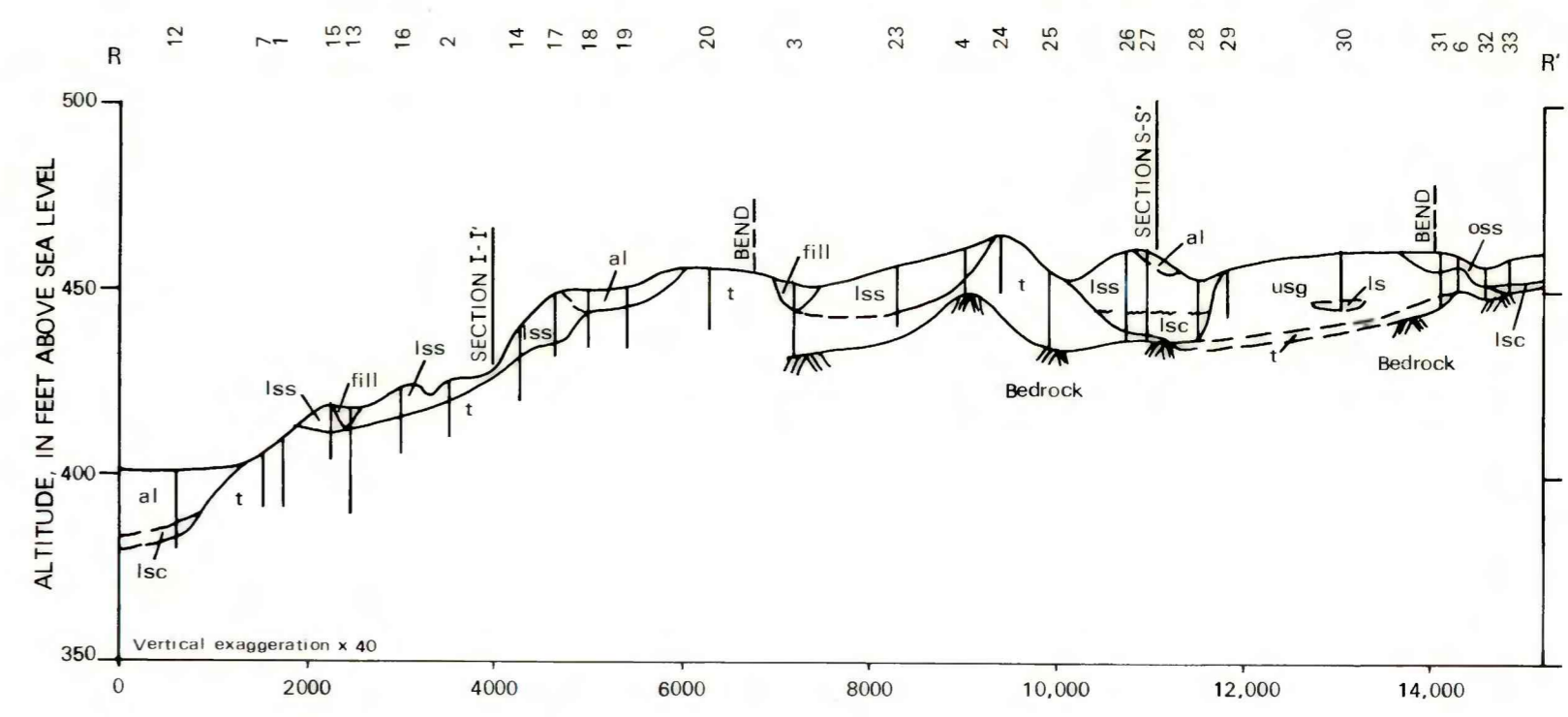
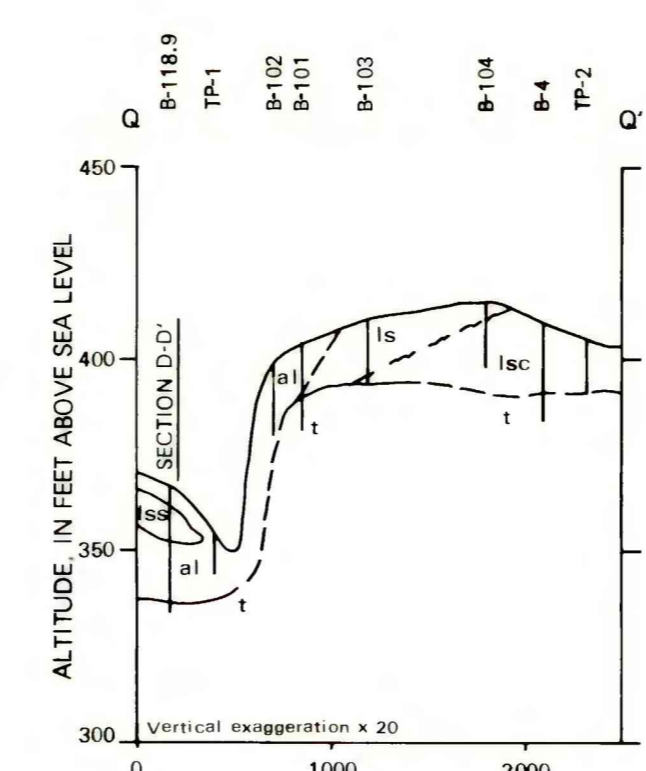
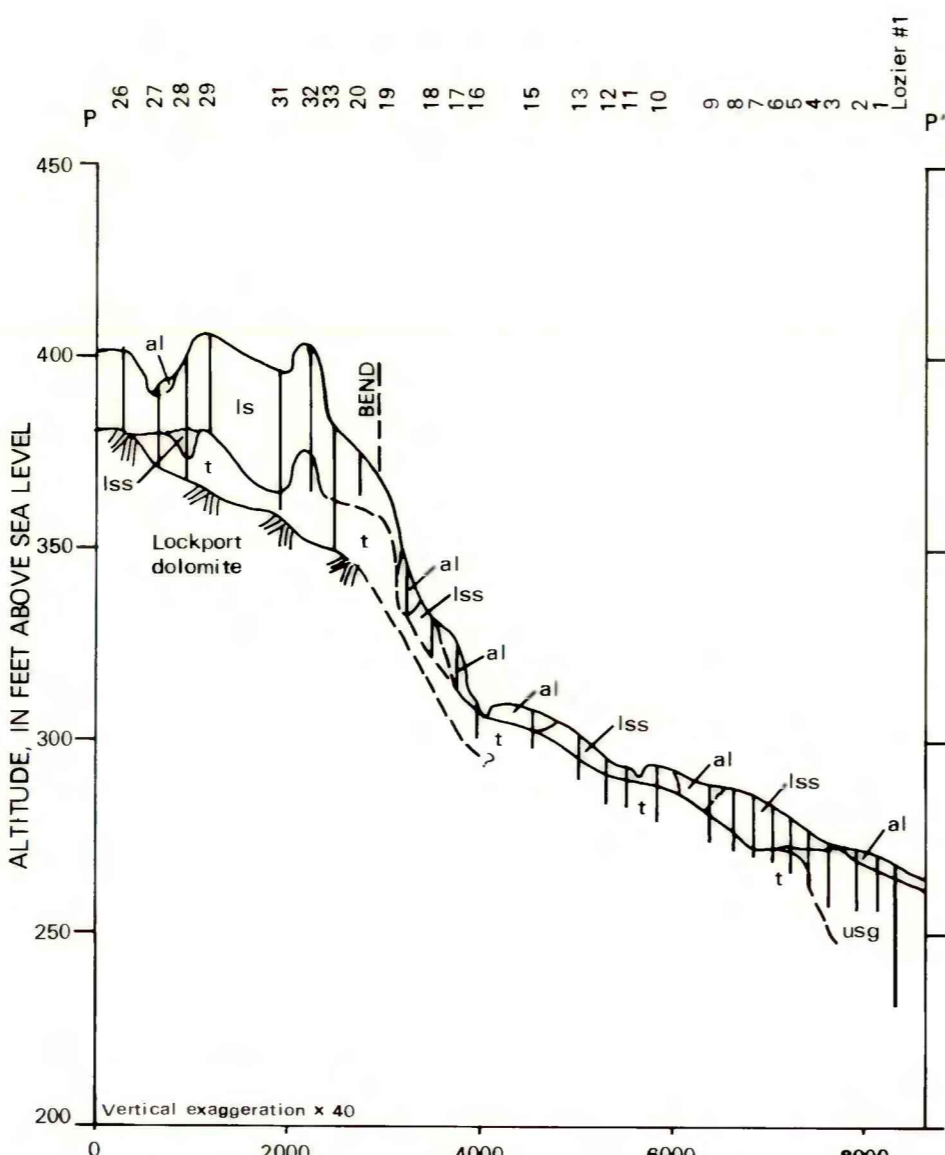
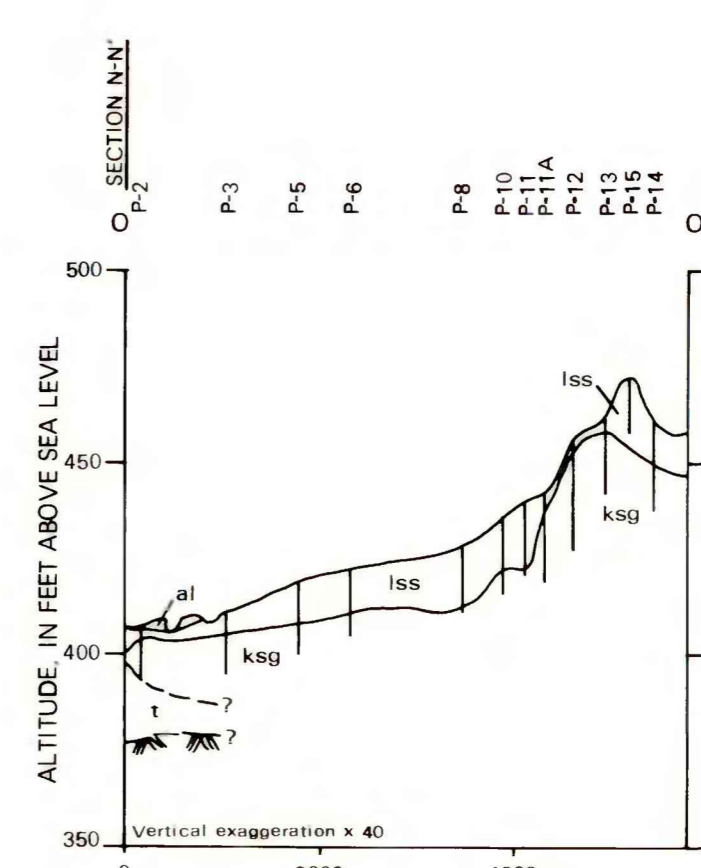
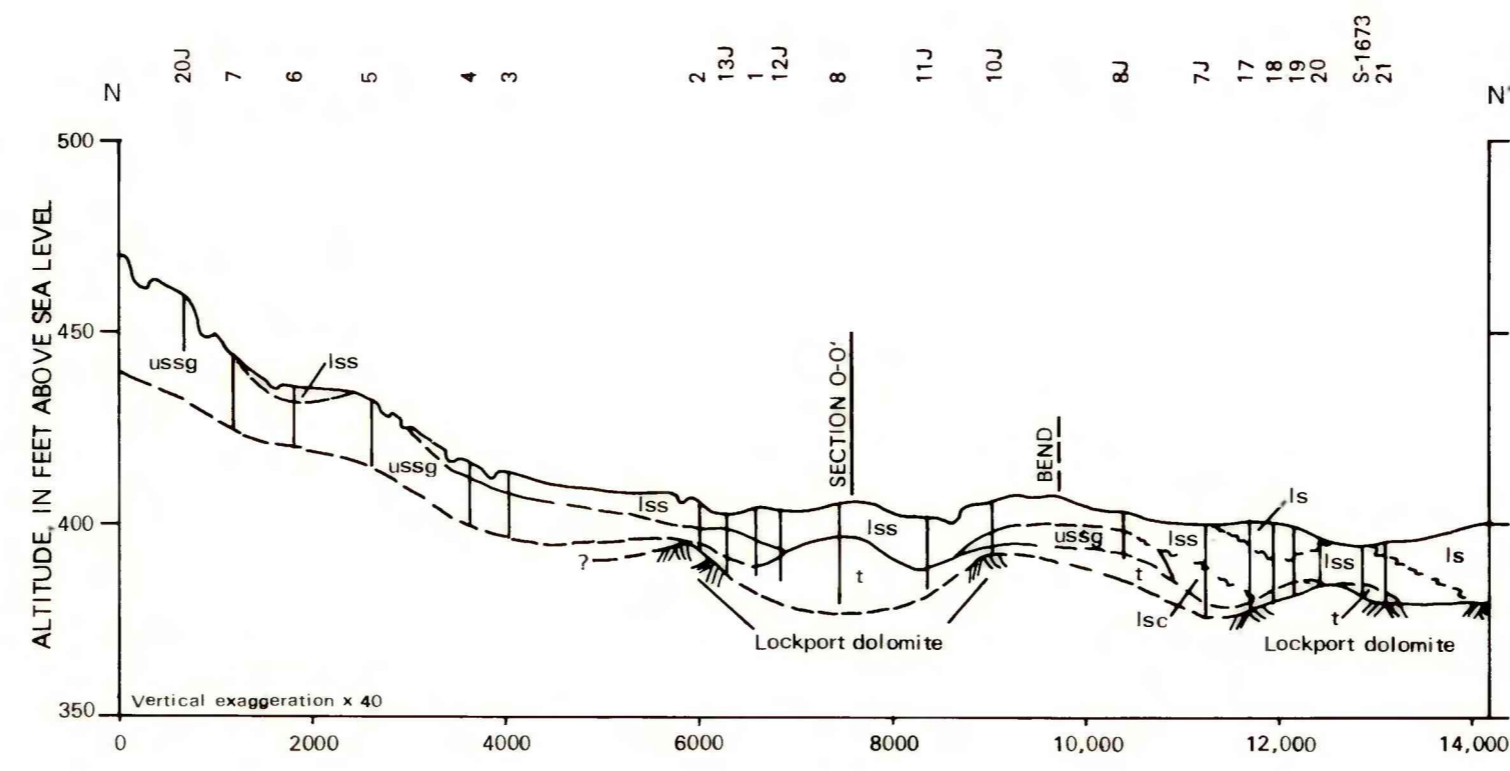
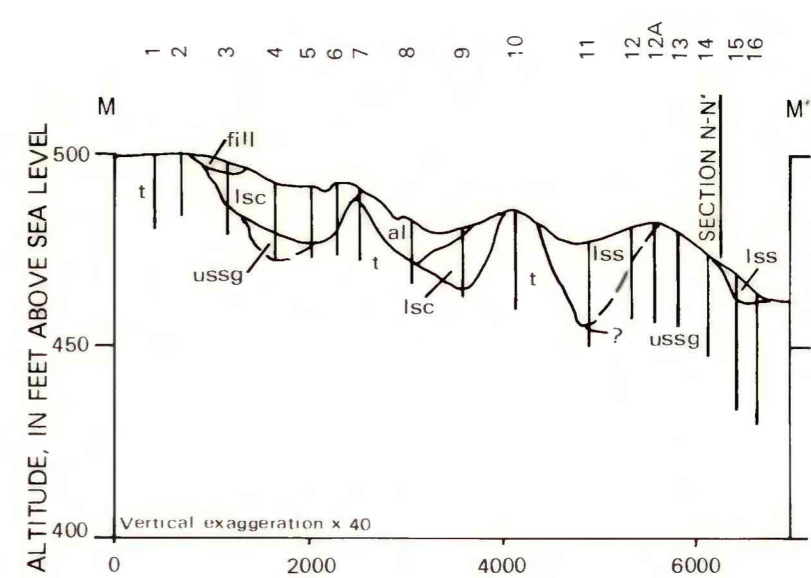
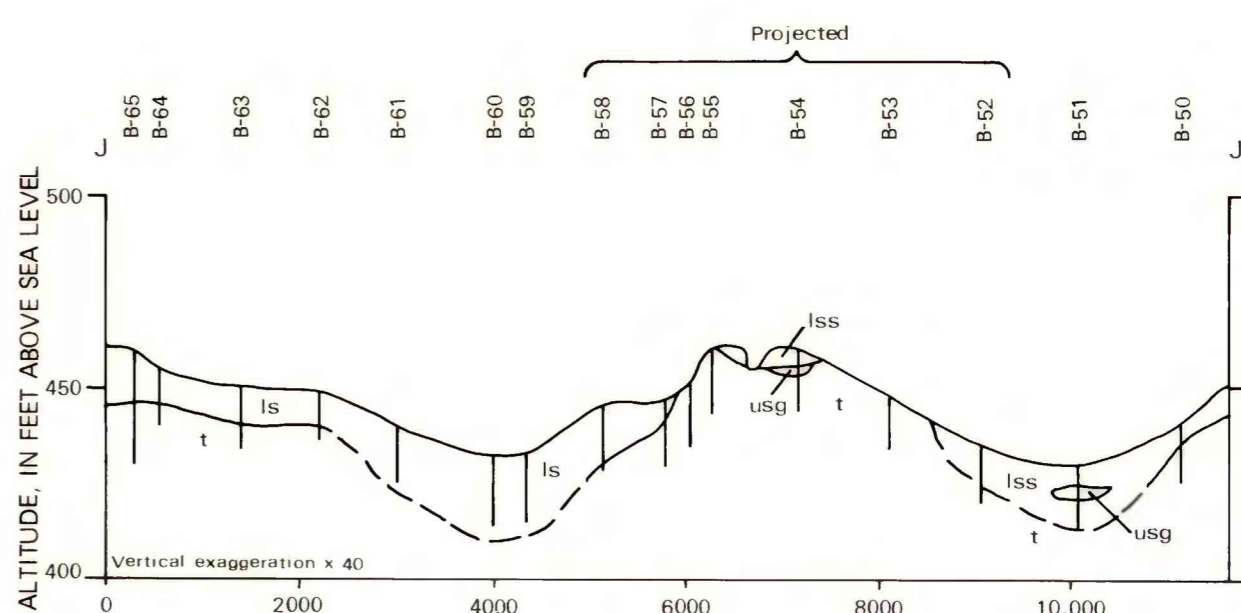
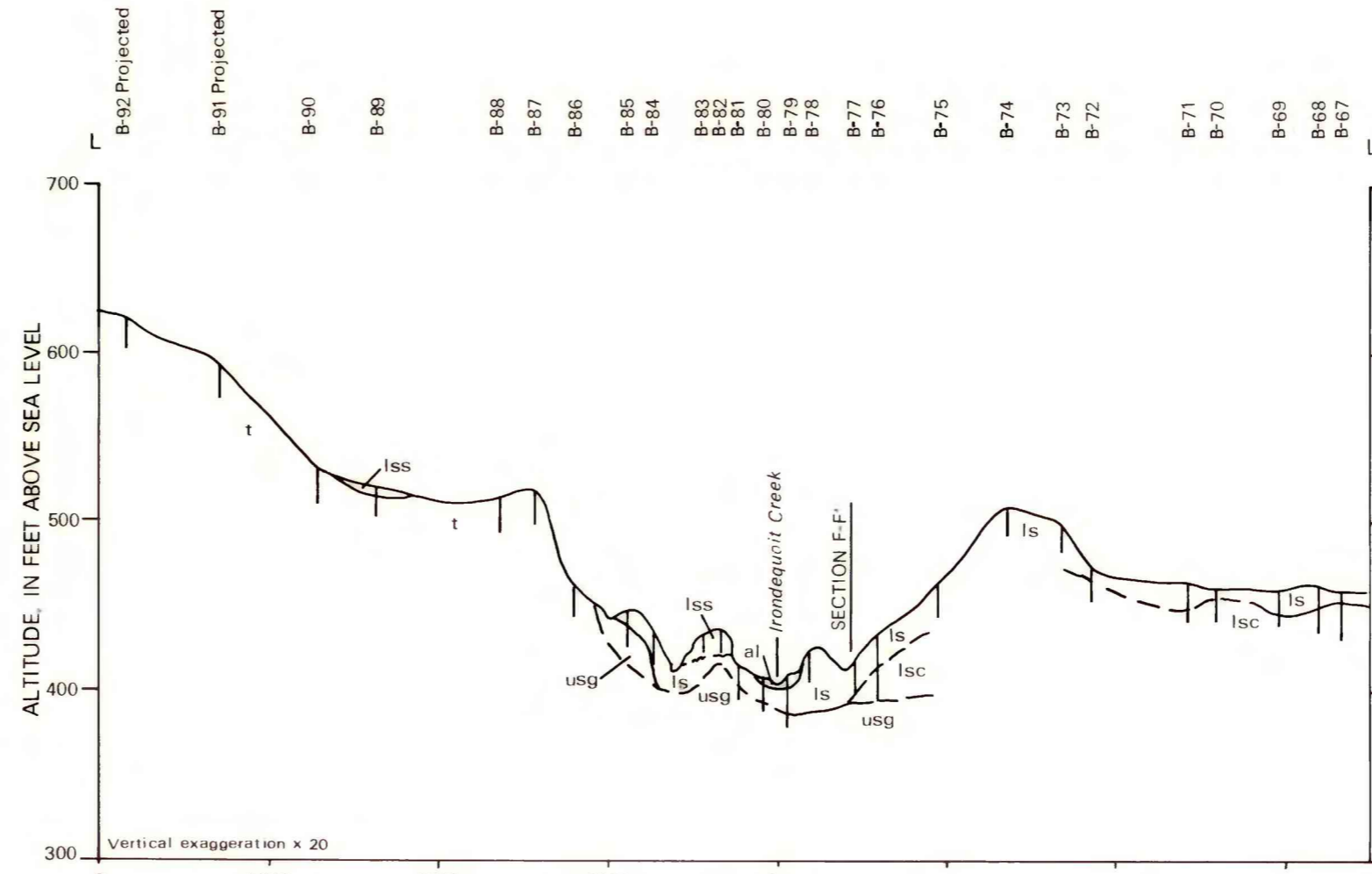
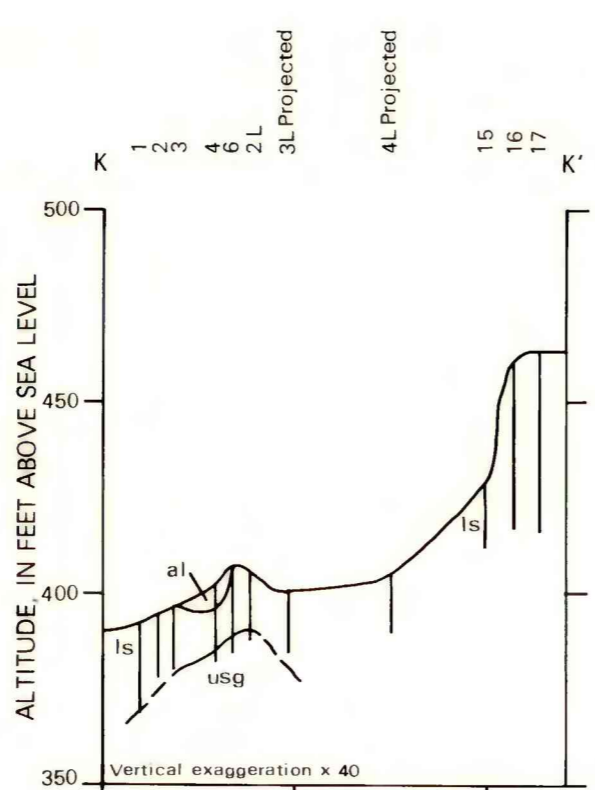
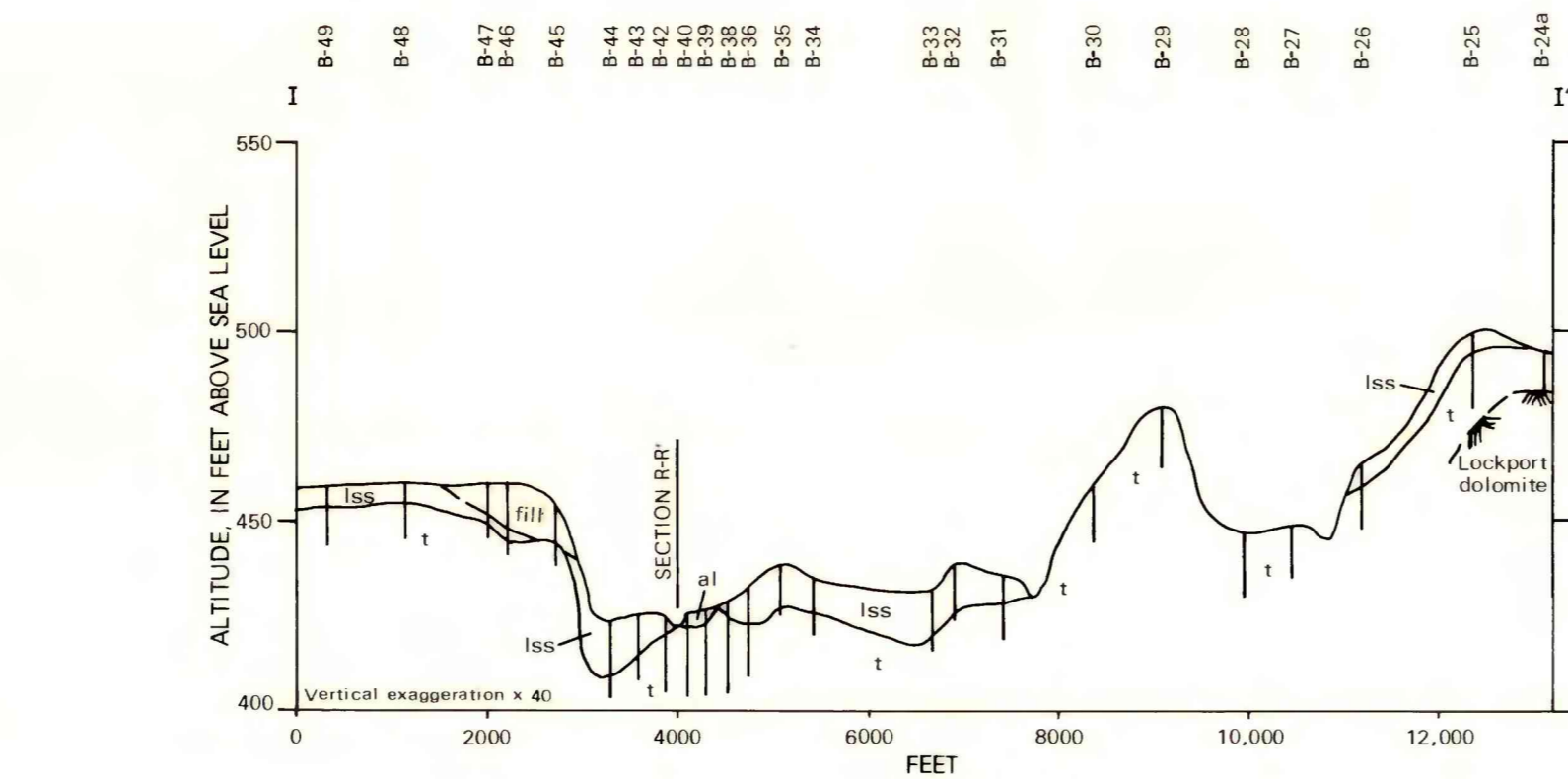
Soil zone (horizon).--The layer of soil at land surface that has developed characteristics produced through soil-building processes. The letters A, B, and C are used to designate specific horizons in the soil.

Subcrop.--An area where a given rock unit outcrop is below unconsolidated land surface.

Till.--Unsorted, unstratified sediment carried or deposited by a glacier.

Unconsolidated material.--A sediment or rock composed of particles that are not cemented together.

Water table.--Top of the zone of saturation.



GEOHYDROLOGY OF THE IRONDEQUOIT CREEK BASIN NEAR ROCHESTER, NEW YORK

GEOLOGIC SECTIONS

By
Richard M. Yager, Phillip J. Zarriello, and William M. Kappel