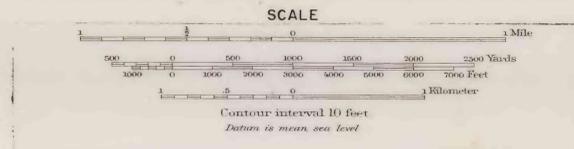


50-31

SURFICIAL GEOLOGIC MAP
OF
PARTS OF BILLERICA, WILMINGTON & LEXINGTON QUADRANGLES
SHOWING
DISTRIBUTION OF SOIL MATERIALS, BEDROCK EXPOSURES AND
SAND AND GRAVEL PITS
ALONG AND ADJACENT TO PROJECTED RELOCATION OF ROUTE 3



GEOLOGY COMPILED BY R. O. CASTLE



EXPLANATION

Generally unsuitable as sources of granular materials.

- CLAY AND SILTY CLAY
cl, clay, and si, silty clay at low levels near swamps and marshes
- SAND AND SILT UNDIFFERENTIATED
op, outwash plain, fine-grained outwash sands, silts and fine gravel at low levels

Chief sources of medium textured granular deposits, (mostly sand and fine to medium gravel)

- SAND PREDOMINATES
kf, kamefield; sand plain of irregular surface, with numerous small to medium sized hillocks also composed of sand
kt, kame terrace; flat-topped terrace composed mostly of sand, but with a few lenses or beds of gravel

Granular materials chiefly of variable texture and thickness.

- GRAVEL AND SAND, UNDIFFERENTIATED
kf, kamefield; sand plain of irregular surface, with numerous small hillocks that usually contain gravel of variable texture
kt, kame terrace; flat-topped terrace composed of mixed sand and gravel

Chief sources of coarse, granular material.

- GRAVEL OF COARSE TO MEDIUM TEXTURE PREDOMINATES
e, esker; elongated ridge with steep sides, composed mostly of coarse to medium gravel, with numerous cobbles and boulders
k, kame; a hillock composed prominently to predominantly of poorly sorted, coarse to medium gravel

- TILL
(in many places covered by a few inches to a few feet of fine, wind-blown sand)
till is a heterogeneous unsorted mixture of materials ranging from boulder to clay sizes; commonly known as "hard-pan"
- gm, ground moraine, relatively thick till
gmr, relatively thin till over bedrock
- BEDROCK AT SHALLOW DEPTHS
in part includes numerous small exposures, not practicable to indicate
- SWAMP
swamps in the area usually contain peat which may be underlain by clay and/or sand and gravel
- approximate formational or unit contact
- probable formational or unit contact
- centerline of projected highway
- bedrock exposures

This map has not been edited for geologic names or for geologic map standards