

Al-Mustaqbal University College

Building & Construction Technology Engineering Department



Soil mechanics

By

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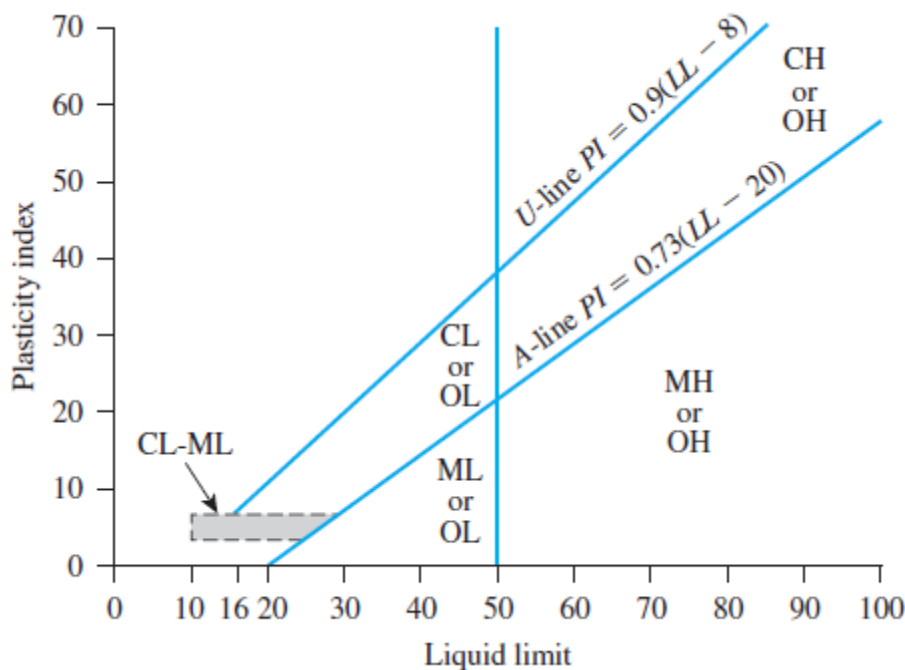
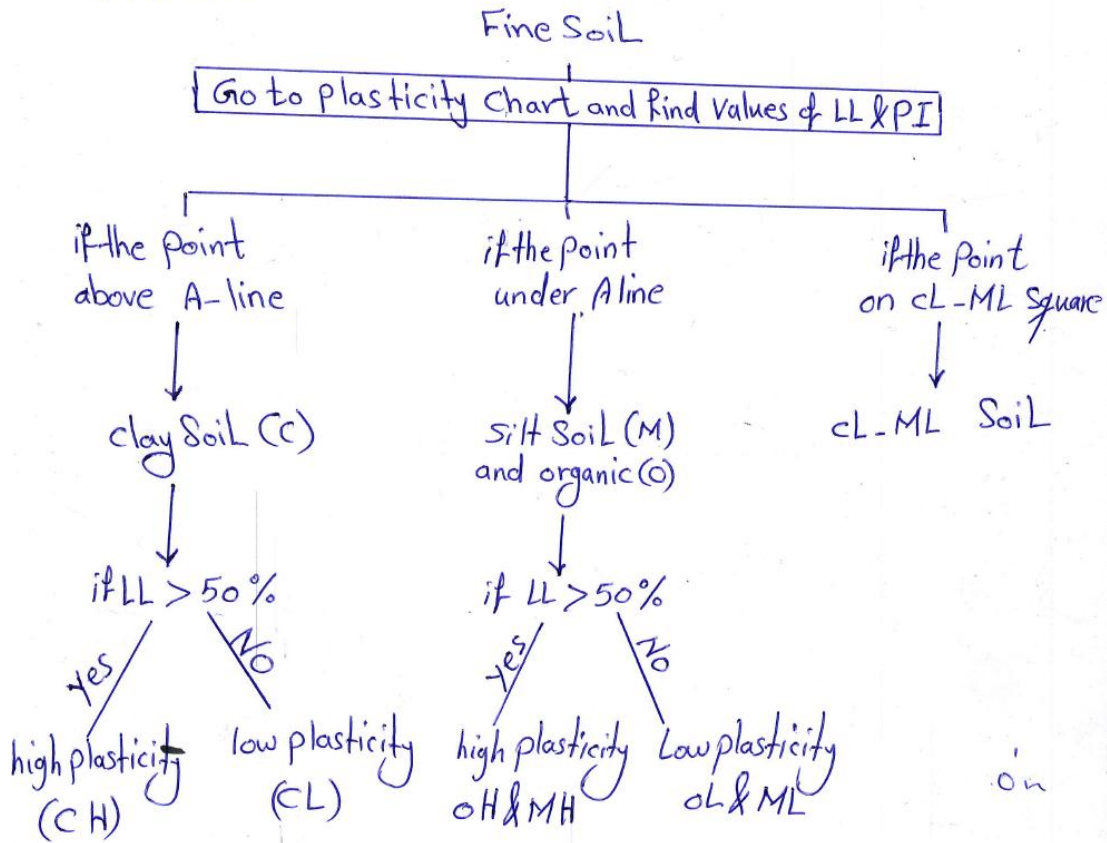
Summary Steps of Soil classifications

① check Percent Passing from Sieve # 200

* Greater than 50% ($> 50\%$)

∴ the soil is Fine

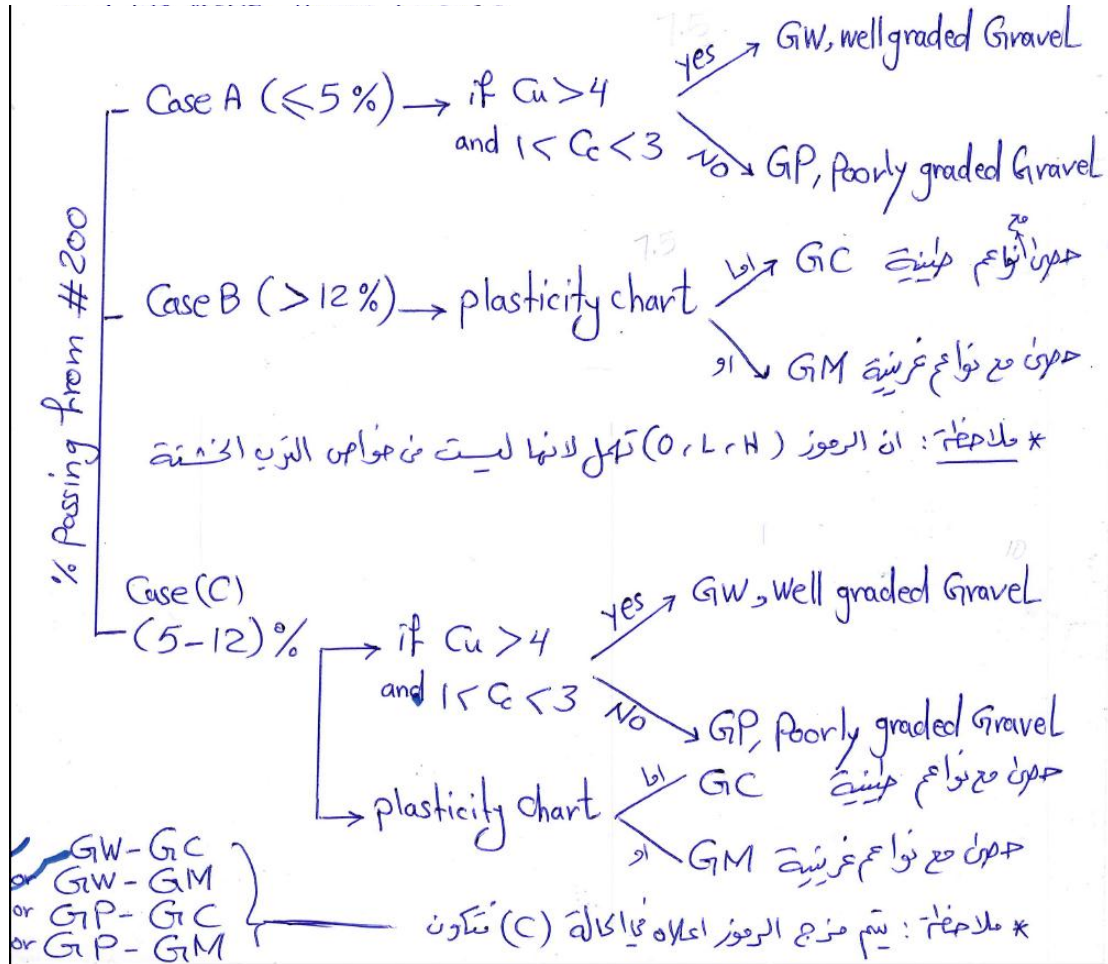
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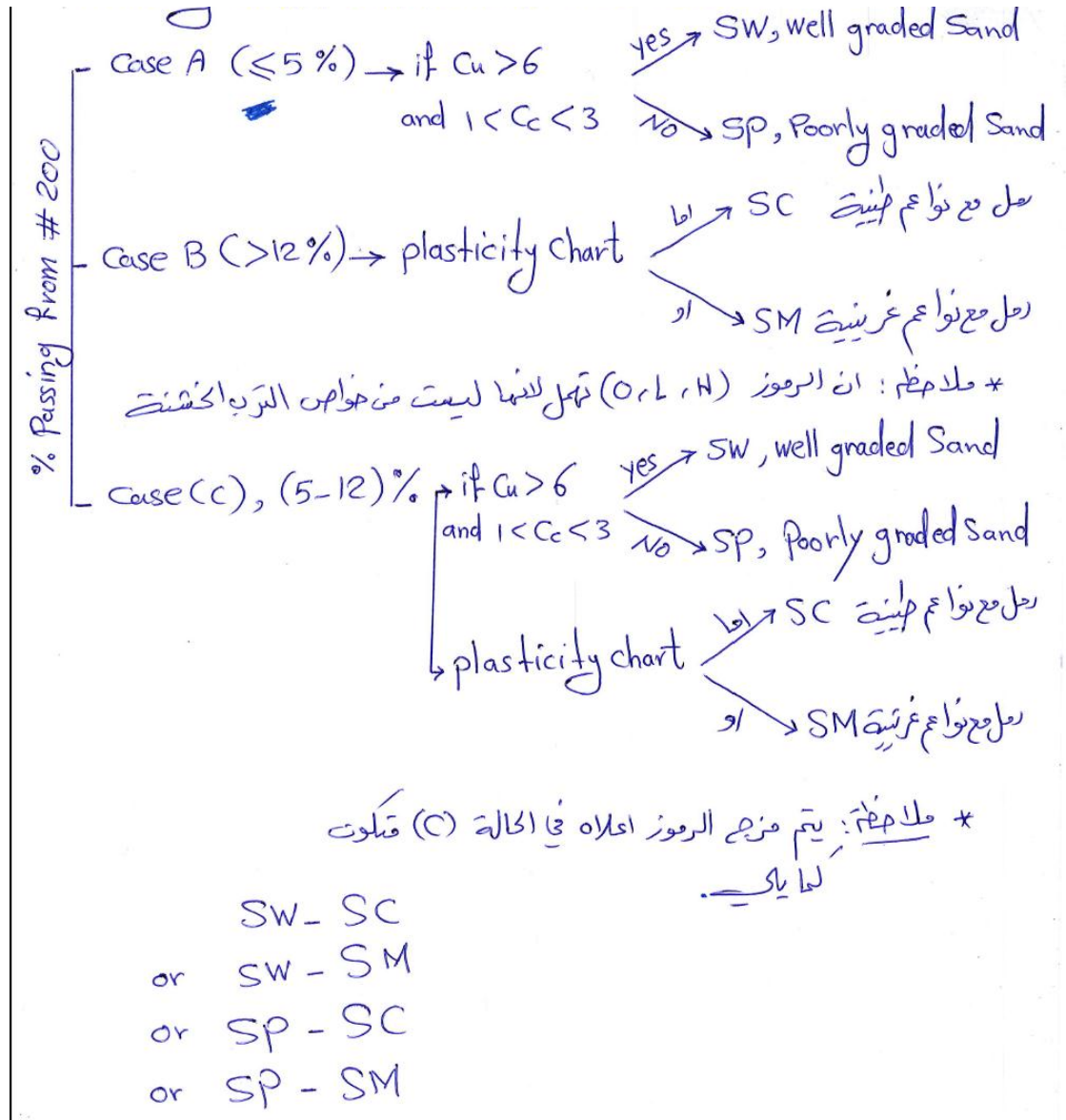
Coarse-grained soils

Percent passing from sieve No 200 less than 50%, the soil is coarse

1. Percent of gravel = 100 - passing sieve No. 4
2. Coarse fraction = 100 - passing sieve No. 200
3. Percent of gravel > 50 % Coarse fraction — gravel



4. Percent of gravel < 50 % Coarse fraction — sand



Some soils are given dual symbol such as (SC- SM) , when the soil characteristics are on the borders between two soil types.

1- The soils have dual symbol (between 5%- 12% fine)

Table 2-10: Soil has dual symbol for fine (5% - 12%)

Gravel		Sand	
GW - GM		SW - SM	
GW- GC	Well graded	SW- SC	Well graded
GP- GM		SP -SM	
GP- GC	Poorly graded	SP- SC	Poorly graded

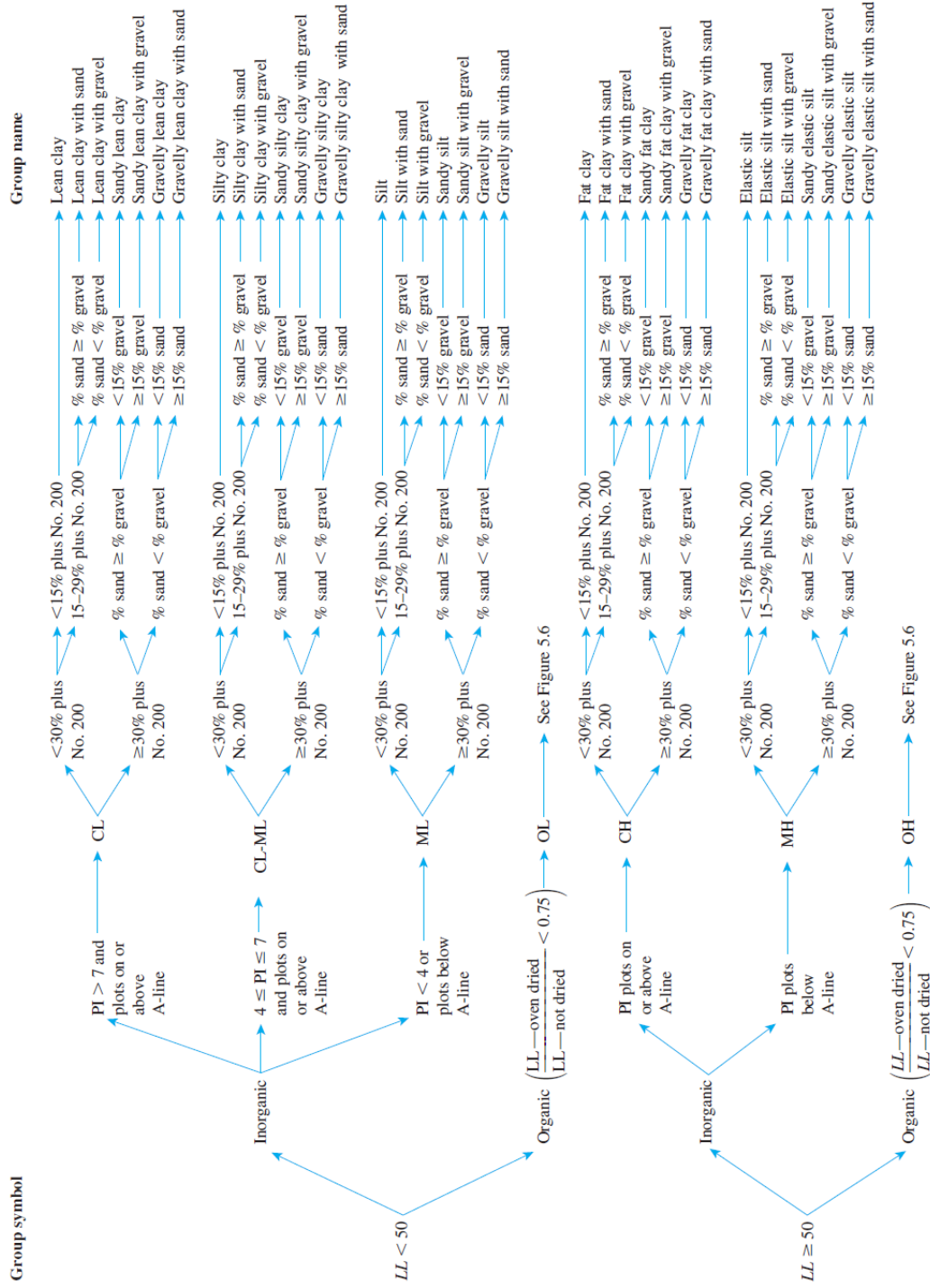


Figure 5.5 Flowchart group names for inorganic silty and clayey soils (Source: From "Annual Book of ASTM Standards, 04.08." Copyright ASTM INTERNATIONAL. Reprinted with permission.)

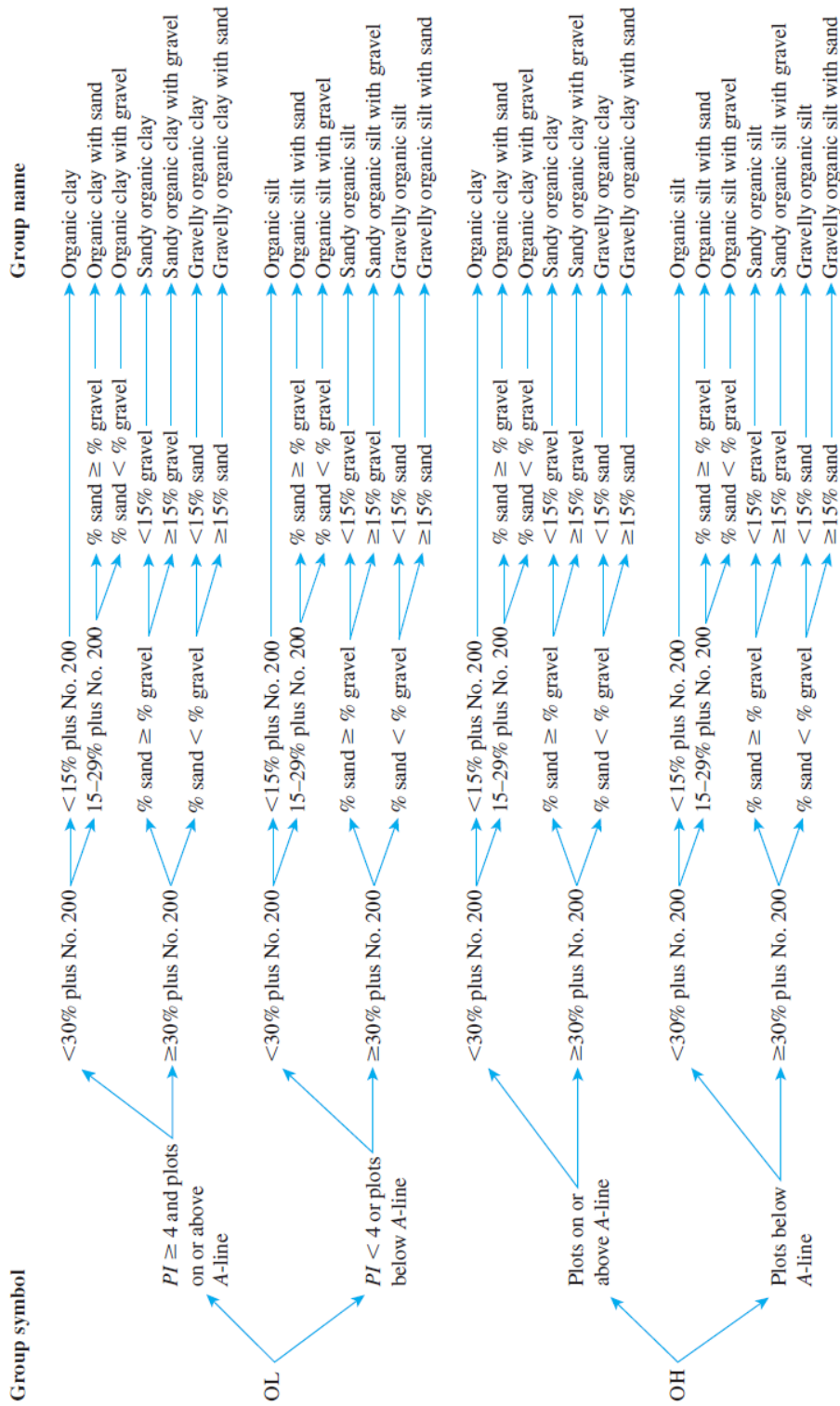


Figure 5.6 Flowchart group names for organic silty and clayey soils (Source: From "Annual Book of ASTM Standards, 04.08." Copyright ASTM INTERNATIONAL. Reprinted with permission.)