ESSENTIALS OF SOIL MECHANICS

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Symbols

a_v	Coefficient of compressibility
c	Total stress cohesion intercept
c'	Effective stress cohesion intercept
c_v	Coefficient of consolidation
C_c	Coefficient of curvature (Chapter 1) or Compression index (Chapter 4)
C_r	Recompression index
C_u	Coefficient of uniformity
D	Maximum drainage path length
D_r	Relative density
e	Void ratio
g	Acceleration of gravity
G_s	Specific gravity of solids
γ	Unit weight
γ_b	Buoyant unit weight
γ_d	Dry unit weight
γ_m	Moist unit weight
γ_{sat}	Saturated unit weight
γ_t	Total unit weight
γ_w	Unit weight of water
h_e	Elevation head
h_p	Pressure head
h_t	Total head
i	Hydraulic gradient
k	Permeability
K_0	At-rest earth pressure coefficient
K_a	Active earth pressure coefficient
K_p	Passive earth pressure coefficient
LL	Liquid limit
M_s	Mass of solids

M_t	Total mass
M_w	Mass of water
n	Porosity
n_d	Number of total head drops in flow net
n_f	Number of flow channels in flow net
OCR	Overconsolidation ratio
p_a	Active pressure
p_p	Passive pressure
P_p	Preconsolidation pressure
PI	Plasticity index
PL	Plastic limit
ϕ	Total stress friction angle
ϕ'	Effective stress friction angle
ρ	Density
ρ_d	Dry density
ρ_m	Moist density
ρ_s	Density of solids
ρ_{sat}	Saturated density
ρ_t	Total density
ρ_w	Density of water
q	Seepage flow rate
R_a	Active earth pressure resultant
R_p	Passive earth pressure resultant
s	Settlement (Chapter 4) or Shear strength (Chapter 5)
s_u	Undrained shear strength
S	Degree of saturation
σ	Total normal stress
σ_1	Major principal total stress
σ_3	Minor principal total stress
σ_d	Deviator stress
σ_h	Horizontal total stress
σ_v	Vertical total stress
σ'	Effective normal stress
σ_1'	Major principal effective stress
σ_3'	Minor principal effective stress
σ_h'	Horizontal effective stress
σ_v'	Vertical effective stress
t_{99}	Time required for average degree of consolidation of 99%
T	Time factor
τ	Shear stress
u	Pore water pressure

u_σ	Stress-induced pore water pressure
U	Average degree of consolidation
v	Discharge velocity
v_s	Seepage velocity
V	Volume
V_a	Volume of air
V_s	Volume of solids
V_t	Total volume
V_v	Volume of voids
V_w	Volume of water
w	Water content