

Soft storey - A building which has a floor which is less than 70% as stiff as the floor immediately above it, or less than 80% as stiff as the average stiffness of the three floors above it.

Toughness - to absorb energy in plastic range

Resilience - to absorb energy in elastic range

Ductility - to deform in plastic range without breaking

Ground displacement - measured by a seismometer.

Elastic Limit - greatest stress applied to elastic body without permanent deformation

Elasticity - tendency of solid materials to return to their original shape after being forces are applied on them. When the forces are removed, the object will return to its initial shape and size

Liquification - sudden drop of shear strength

Center of rigidity - resultant of the resistance to the applied lateral force act

Center of mass - point on a structure through which the applied seismic force acts

Orthotropic material - The material composition is the same but its mechanical properties are different in every direction

Yielding - material begins to deform plastically

- will have an appreciable deformation when small amount of stress is experienced

Reciprocal of stiffness - refers to the flexibility of a structure

Reciprocal of deflection - refers to the rigidity of a structure

Torsional shear stress - will develop if the center of mass and center of rigidity of a structure does not coincide

Storey drift - refers to the lateral displacement of one level relative to the other level above or below

$k = k_1 + k_2$ - If two springs with stiffness k_1 and k_2 , are arranged in parallel, which of the following gives the combined stiffness k ?

Which of the following best describes liquefaction?

- A. Decrease in pore water pressure
- B. **sudden drop of shear strength - ans**
- C. increase in effective stress.
- D. increase in bearing capacity