

**Guide for Estimating Subgrade Soil Strengths
(Fine-Grained Soils)**

| Estimated Consistency by: | | Tested by: | Correlates to: | | | |
|---------------------------|--|--|--------------------|--------------|-----------|----------------|
| Feel | Visual | Standard Penetration Test (blows/foot) | Shear Strength, Cu | | CBR | R Value AASHTO |
| | | | (psi) | (tsf) | (%) | |
| Very Soft | Man Standing Sinks more than 3 inches | <2 | <1.7 | <0.125 | <0.4 | |
| Soft | Man Walking Sinks about 2 to 3 inches | 2 - 4 | 1.7 - 3.5 | 0.125 - 0.25 | 0.4 - 0.8 | <0.36 |
| Medium | Man Walking Sinks About 1 inch | 4 - 8 | 3.5 - 7 | 0.25 - 0.50 | 0.8 - 1.6 | 0.36 - 2.5 |
| Stiff | Pickup Truck Ruts about 1/2 - 1 inch | 8 - 15 | 7 - 14 | 0.50 - 1.0 | 1.6 - 3.2 | 2.5 - 6.8 |
| Very Stiff | Loaded Dump Truck Ruts 1 - 3 inches | 15 - 30 | 14 - 28 | 1.0 - 2.0 | 3.2 - 6.4 | 6.8 - 15.5 |
| Hard | Insignificant Ruts from Loaed Dump Truck | >30 | >28 | >2.0 | >6.4 | >15.5 |

After: Portland Cement Assocation, E I. DuPort Literature; McCarthy, David F., "Essentials of Soil Mechanics and Foundations," 1977: AASHTO, "1993 Guide for Design of Pavement Structures", Van Till et. al. NCHRP 128.