





## GEOLABS, INC.

Geotechnical Engineering

## Soil Log Legend

## **UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)**

| MAJOR DIVISIONS  |  |                              | uscs            |    | TYPICAL<br>DESCRIPTIONS  |
|--|--|------------------------------|-----------------|----|--|
| COARSE-<br>GRAINED<br>SOILS                                    | GRAVELS  | CLEAN<br>GRAVELS             | 0000            | GW | WELL-GRADED GRAVELS, GRAVEL-SAND<br>MIXTURES, LITTLE OR NO FINES   |
|  |  | LESS THAN 5%<br>FINES        | 0000            | GP | POORLY-GRADED GRAVELS, GRAVEL-SAND<br>MIXTURES, LITTLE OR NO FINES   |
|  | MORE THAN 50%<br>OF COARSE<br>FRACTION<br>RETAINED ON<br>NO. 4 SIEVE | GRAVELS WITH FINES           |                 | GM | SILTY GRAVELS, GRAVEL-SAND-SILT<br>MIXTURES  |
|  |  | MORE THAN 12%<br>FINES       |                 | GC | CLAYEY GRAVELS, GRAVEL-SAND-CLAY<br>MIXTURES   |
| MORE THAN 50%<br>OF MATERIAL<br>RETAINED ON NO.<br>200 SIEVE   | SANDS  50% OR MORE OF COARSE FRACTION PASSING THROUGH NO. 4 SIEVE    | CLEAN SANDS                  | 0               | sw | WELL-GRADED SANDS, GRAVELLY SANDS,<br>LITTLE OR NO FINES   |
|  |  | LESS THAN 5%<br>FINES        |                 | SP | POORLY-GRADED SANDS, GRAVELLY<br>SANDS, LITTLE OR NO FINES   |
|  |  | SANDS WITH<br>FINES          |                 | SM | SILTY SANDS, SAND-SILT MIXTURES  |
|  |  | MORE THAN 12%<br>FINES       |                 | SC | CLAYEY SANDS, SAND-CLAY MIXTURES   |
| FINE-<br>GRAINED<br>SOILS                                      | SILTS<br>AND<br>CLAYS  | LIQUID LIMIT<br>LESS THAN 50 |                 | ML | INORGANIC SILTS AND VERY FINE SANDS,<br>ROCK FLOUR, SILTY OR CLAYEY FINE SANDS<br>OR CLAYEY SILTS WITH SLIGHT PLASTICITY |
|  |  |                              |                 | CL | INORGANIC CLAYS OF LOW TO MEDIUM<br>PLASTICITY, GRAVELLY CLAYS, SANDY<br>CLAYS, SILTY CLAYS, LEAN CLAYS                  |
|  |  |                              |                 | OL | ORGANIC SILTS AND ORGANIC SILTY<br>CLAYS OF LOW PLASTICITY   |
| 50% OR MORE OF<br>MATERIAL PASSING<br>THROUGH NO. 200<br>SIEVE | SILTS<br>AND<br>CLAYS  | LIQUID LIMIT<br>50 OR MORE   |                 | МН | INORGANIC SILT, MICACEOUS OR<br>DIATOMACEOUS FINE SAND OR SILTY<br>SOILS   |
|  |  |                              |                 | СН | INORGANIC CLAYS OF HIGH PLASTICITY   |
|  |  |                              |                 | ОН | ORGANIC CLAYS OF MEDIUM TO HIGH<br>PLASTICITY, ORGANIC SILTS   |
| HIGHLY ORGANIC SOILS   |  |                              | 7 77 7<br>77 77 | PT | PEAT, HUMUS, SWAMP SOILS WITH HIGH<br>ORGANIC CONTENTS   |

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS **LEGEND** 

(2-INCH) O.D. STANDARD PENETRATION TEST

(3-INCH) O.D. MODIFIED CALIFORNIA SAMPLE

SHELBY TUBE SAMPLE



**GRAB SAMPLE** 



**CORE SAMPLE** 



<u>7</u>

WATER LEVEL OBSERVED IN BORING AT TIME OF

DRILLING Ţ

WATER LEVEL OBSERVED IN BORING AFTER DRILLING WATER LEVEL OBSERVED IN BORING OVERNIGHT

LL

LIQUID LIMIT (NP=NON-PLASTIC)

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PLASTICITY INDEX (NP=NON-PLASTIC)

TV

TORVANE SHEAR (tsf)

UC

**UNCONFINED COMPRESSION** OR UNIAXIAL COMPRESSIVE STRENGTH

TXUU UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (ksf)

Plate

A

