

Report on Sub Soil Investigation for the proposed
High School at Aliganj, Block - Ghoshi, District Jehanabad

3. LABORATORY TESTS

Some or all of the following laboratory tests, as necessary, were done on the collected soil samples. Representative soil samples were selected for this from the different soil strata encountered during boring. The tests were performed as per the relevant Indian Standard Codes of Practice.

- (a) Natural moisture content
- (b) Bulk density
- (c) Grain size analysis (using sieves and / or hydrometer)
- (d) Specific gravity of soil solids
- (e) Atterberg's limit tests (liquid, plastic and shrinkage limits)
- (f) Shear Tests :
 - [I] Triaxial compression test (unconsolidated – undrained), generally for fine- grained soils
 - [II] Unconfined compression tests, only on cohesive soils
 - [III] Direct shear tests, generally for coarse-grained soils
- (g) Chemical tests on soil/ground water
- (h) Other tests as and when required.

4. PRESENTATION OF TEST RESULTS

The field and laboratory test results are given in the **Appendix - B**.

5. SOIL STRATIFICATION

The results of field tests in three bore holes sunk at the site [vide Location Sketch in App. A] and the results of laboratory tests conducted on the collected soil samples indicate that the soil stratification at the site is as describe below.

The subsoil in BH 1 and 3 it is sandy silty clay [type CI] up to the depth of about 1.5 m followed by silty sand / sand [type SM-SP / SP] in variable thicknesses and variable sequences up to the investigated depth of 10.5 m bgl. And in BH 2 it is sandy silty clay [type CI] up to the depth of about 3.0 m followed by sandy clayey silt [type MI] up to the investigated depth of 10.5 m bgl. It also gritty from about 4.5 m to 10.5 m depth.

Ground water table was struck at about 1.60 m to 1.70 m depth below GL in November, 2019. It is subject to seasonal variations.

6. FOUNDATION ANALYSIS

The safe capacity of foundation of any type and size may be determined on the basis of the soil data given in this Report by using the standard methods of foundation design and following the relevant Indian Standard Codes.