

USACE-Certified Laboratory

GeoTest Geotechnical & Construction Material Testing Laboratory

Lab ID: LCP-025

Issue date: Mar 21<sup>st</sup>, 2021

Expiry date: Mar 20<sup>th</sup>, 2022

This letter confirms the completion of inspection and certification for the GeoTest Geotechnical & CMT Laboratory, which is located at Street #4, Near Noorin TV, District #3, Dehberi, Kabul, Afghanistan. This laboratory shall now be considered as **USACE-Certified for a period of 12-months** from the date of this letter. This laboratory should now be considered as certified for use by the US Army Corps of Engineers Transatlantic Afghanistan District (USACE TAA) and other clients, for all tests listed in Table 1 to Table 6, as attached to this letter. This certification will be included with records that are maintained at the ABA and USACE TAA Headquarters in Bagram Airbase, Afghanistan. Retaining the certification will require yearly inspections by the ABA. This certification is also contingent upon the following conditions:

- A. Continued employment of the below individual while without his oversight, the laboratory will require recertification:
  - a. Mr. Ahmad Shahpoor the laboratory manager;
- B. If the calibration certificates of equipment expire or become invalid as per the relevant standard;
- C. If the laboratory is moved to a new location, it will require recertification; and
- D. If the laboratory fails to comply by the approved lab quality management plan, safety standards, and other criteria set forth in the most up-to-date ABA lab certification manual, the lab certification may be suspended.

For verification and good standing of this certification please check our online directory of laboratories at [http://aba.af/lcp\\_directory.php](http://aba.af/lcp_directory.php). The inspection and certification process for GeoTest adhered to procedures outlined by the Materials Testing Center (MTC), which is located at the Geotechnical and Structures Laboratory (GSL), U.S. Army Engineer Research and Development Center (ERDC) in Vicksburg, Mississippi, USA. The MTC is the USACE-authorized agency for certifying laboratories for use in quality control testing for USACE construction projects. To facilitate construction in Afghanistan, the USACE TAA has authorized the ABA to conduct laboratory certifications with strict adherence to MTC protocol. Qualifications of the authors for conducting these certifications include: 12 years of laboratory experience, 12 years of teaching classes on construction materials, and six years of teaching university-level construction classes.

Certified to perform 102 tests, as shown on attached sheets and summarized as:

Table 1: 24  
Table 2: 19  
Table 3: 24  
Table 4: 23  
Table 5: 8  
Table 6: 4

Regards,



Ferdaws Khaliqi, PMP

ABA-Laboratory Certification Program Manager  
(ABA-LCP)



## GeoTest Geotechnical & CMT Certified Laboratory Tests

Table 1. List of Certified Soil Tests

No	Test Method	Test Procedure Title
1	ASTM D421	Standard Practice for Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants
2	ASTM D422	Standard Test Method for Particle-Size Analysis of Soils (Withdrawn 2016)
3	ASTM D427	Standard Test Method for Shrinkage Factors of Soil By the Mercury Method
4	ASTM D854	Standard Test Methods for Specific Gravity of Soil Solids by Water Pycnometer
5	ASTM D1140	Standard Test Methods for Determining the Amount of Material Finer than 75- $\mu$ m (No.200) Sieve in Soils by Washing
6	ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method
7	ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort
8	ASTM D1586	Standard Test Method for Standard penetration Test(SPT) and Split-Barrel Sampling of Soils
9	ASTM D1883	Standard Test Method for CBR(California Bearing Ratio) of Laboratory Compacted Soil
10	ASTM D2216	Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock By mass
11	ASTM D2488	Standard Practice for Description and Identification of Solis (Visual-Manual procedure)
12	ASTM D4220	Standard Practices for Preserving and Transporting Soil Samples
13	ASTM D4546	Standard Test Methods for One-Dimensional Swell or Collapse of Soils
14	ASTM D3282	Standard Practice for Classification of Soils and Soil -Aggregate Mixtures for Highway Construction Purposes
15	ASTM D4972	Standard Test Method of pH of Soils
16	ASTM D5333	Standard Test Method for Measurement of Collapse Potential of Soils
17	ASTM D698	Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort
18	ASTM D4643	Standard Test Method for Determination of Water (Moisture) Content of Soil by Microwave Oven Heating
19	ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
20	ASTM D2166	Standard Test Method for Unconfined Compressive Strength of Cohesive Soil
21	ASTM D3080	Standard Test Method for Direct Shear Test of Soils Under Consolidated Drained Conditions
22	ASTM D2435	Standard Test Methods for One-Dimensional Consolidation Properties of Soils Using Incremental Loading





No	Test Method	Test Procedure Title
23	ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
24	ASTM D4944	Standard Test Method for Field Determination of Water (Moisture) Content of Soil By the Calcium Carbide Gas Pressure Tester

Table 2. List of Certified Aggregate (Fine and Coarse) Tests

No	Test Method	Test Procedure Title
1	ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
2	ASTM C127	Standard Test Method for Relative Density (Specific Gravity) and Absorption of Coarse Aggregate
3	ASTM C128	Standard Test Method for Specific Gravity and Absorption of Fine Aggregate
4	ASTM C29	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
5	ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
6	ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
7	ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
8	ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
9	ASTM D5821	Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate
10	ASTM C 1252	Standard Test Methods for Uncompacted Void Content of Fine Aggregate (as Influenced by Particle Shape, Surface Texture, and Grading)
11	ASTM C117	Standard Test Method for Materials Finer than 75µm (No.200) Sieve In Mineral Aggregates By Washing
12	ASTM C70	Standard Test Method for Surface Moisture In fine Aggregate
13	ASTM C535	Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
14	ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregate By Drying
15	ASTM C702	Standard Practice for Reducing Samples of Aggregate To Testing Size
16	ASTM D75	Standard practice for Sampling Aggregates
17	ASTM D546	Standard Test Method for Sieve Analysis of Mineral Filler for Bituminous Paving Mixtures
18	ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
19	ASTM C123	Standard Test Method for Lightweight Particles in Aggregate





Table 3. List of Certified Cement, Grout, Mortar, & Concrete Tests

No	Test Method	Test Procedure Title
1	ASTM C109	Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)
2	ASTM C430	Standard Test Method for Fineness of Hydraulic Cement by the 45- $\mu$ m (No. 325) Sieve
3	ASTM C191	Standard Test Methods for Time of Setting of Hydraulic Cement by Vicat Needle
4	ASTM C184	Standard Test Method for Fineness of Hydraulic Cement by the 150- $\mu$ m (No. 100) and 75- $\mu$ m (No. 200) Sieves (Withdrawn 2002)
5	ASTM C187	Standard Test Method for Amount of water Required for Normal Consistency of Hydraulic Cement Paste
6	ASTM C188	Standard Test Method for Density of Hydraulic Cement
7	ASTM C204	Standard Test Methods for Fineness of hydraulic Cement by Air-Permeability Apparatus
8	ASTM C359	Standard Test Method for Early Stiffening of Hydraulic Cement (Mortar Method)
9	ASTM C451	Standard Test Method for Early Stiffening of Hydraulic Cement (Paste Method)
10	ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
11	ASTM C1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
12	ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
13	ASTM C138	Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
14	ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
15	ASTM C42	Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
16	ASTM C805	Standard Test Method for Rebound Number of Hardened Concrete
17	ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field
18	ASTM C1019	Standard Test Method for Sampling and Testing Grout
19	ASTM C231	Standard Test Methods for Air Content of Freshly Mixed Concrete by the Pressure Method
20	ASTM C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
21	ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
22	ASTM C617	Standard Practice for Capping Cylindrical Concrete Specimens
23	ASTM C192	Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory
24	ASTM C1437	Standard Test Method for Flow of Hydraulic Cement Mortar





**Table 4. List of Certified Asphalt & Bituminous Tests**

No	Test Method	Test Procedure Title
1	ASTM D979	Standard Practice for Sampling Bituminous Paving Mixtures
2	ASTM D92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
3	ASTM D36	Standard Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)
4	ASTM D5	Standard Test Method for Penetration of Bituminous Materials
5	ASTM D1559	Test Method for Resistance of Plastic Flow of Bituminous Mixtures Using Marshall Apparatus
6	ASTM D3203	Standard Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
7	ASTM D3549	Standard Test Method for Thickness or Height of Compacted Bituminous Paving Mixture Specimens
8	ASTM D2041	Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
9	ASTM D2172	Standard Test Methods for Quantitative Extraction of Asphalt Binder from Asphalt Mixtures
10	AASHTO T166	Standard Test Method for Bulk Sp. Gravity of Compacted Bituminous Mixtures (Gmb)
11	ASTM D70	Standard Test Method for Density of Semi-Solid Bituminous Materials (Pycnometer Method)
12	ASTM D113	Standard Test Method for Ductility of Bituminous Materials
13	ASTM D140	Standard Practice for Sampling Asphalt Materials
14	ASTM D2042	Standard Test Method for Solubility of Asphalt Materials in Trichloroethylene
15	ASTM D2489	Standard Practice for Estimating Degree of Particle Coating of Bituminous Mixtures
16	ASTM D2726	Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
17	ASTM D5361	Standard Practice for Sampling Compacted Asphalt Mixtures for Laboratory Testing
18	ASTM D6926	Standard Practice for Preparation of Asphalt Mixture Specimens Using Marshall Apparatus
19	ASTM D6927	Standard Test Method for Marshall Stability and Flow of Asphalt Mixtures
20	ASTM D1754	Standard Test Method for Effects of Heat and Air on Asphaltic Materials (Thin-Film Oven Test)
21	AASHTO T230	Standard Method of Test for Determining Degree of Pavement Compaction of Bituminous Aggregate mixtures
22	AASHTO T275	Standard Method of Test for Bulk Specific Gravity of Compacted Bituminous Mixtures Using Paraffin Coated Specimen





No	Test Method	Test Procedure Title
23	ASTM D6	Standard Test Method for Loss on Heating of Oil and Asphaltic Compounds

Table 5. List of Certified Masonry Units, Bricks, and Stone Tests

No	Test Method	Test Procedure Title
1	ASTM C20	Standard Test Methods for Apparent Porosity, Water Absorption, Apparent Specific Gravity, and bulk Density of Burned Refractor Brick and shapes by Boiling Water
2	ASTM C140	Standard Test Method for Sampling and Testing Concrete Masonry Units and Related Units
3	ASTM C305	Standard Practice for Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency
4	ASTM C1552	Standard Practice for Capping Concrete Masonry Units, Related Units and Masonry Prisms for Compression Testing
5	ASTM C 170	Standard Test Method for Compressive Strength of Dimension Stone
6	ASTM C67	Standard Test Method for Compressive Strength of Bricks, Sampling of Bricks, Water Absorption of Bricks
7	ASTM C97	Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone
8	ASTM C1314	Standard Test Method for Compressive Strength of Masonry Prisms

Table 6. List of Certified Rock Tests

No	Test Method	Test Procedure Title
1	ASTM D2113	Standard Practice for Rock Core Drilling and Sampling of Rock for Site Exploration
2	ASTM D 6473	Standard Test Method For Specific Gravity And Absorption of Rock For Erosion Control
3	ASTM D6032	Standard Test Method for Determining Rock Quality Designation (RQD) of Rock Core
4	ASTM D 5873	Standard Test Method for Determination of Rock Hardness by Rebound Hammer Method