

USACE-Certified Laboratory

Omran Geotechnical Company (OGC)

Lab ID: LCP-005

Issue date: Dec 31st, 2020

Expiry date: Dec 30th, 2021

This letter confirms the completion of inspection and Certification for the OGC, which is located at House #49, Street #4, Opposite to Khuwaja Mula Mosque, Kart-e-Seh, Kabul, Afghanistan. This laboratory should 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. Samad Heidari 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. The inspection and certification process for OGC 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 99 tests, as shown on attached sheets and summarized as:

Table 1: 33
Table 2: 15
Table 3: 17
Table 4: 19
Table 5: 3
Table 6: 12

Regards,



Ferdaws Khaliqi
Ferdaws Khaliqi, PMP

**ABA Laboratory Certification Program Manager
(ABA-LCP)**

OGC Certified Laboratory Tests

Table 1. List of Certified Soil Tests

No	Test Method	Test Procedure Title
1	ASTM D421	Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants
2	ASTM D422	Particle-Size Analysis of Soils
3	ASTM D6913	Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis
4	ASTM D698	Laboratory Compaction Characteristics of Soil Using Standard Effort
5	ASTM D854	Specific Gravity of Soil Solids by Water Pycnometer
6	ASTM D1556	Density and Unit Weight of Soil in Place by the Sand Cone Method
7	ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics by Modified Effort
8	ASTM D1883	CBR (California Bearing Ratio) of Laboratory-Compacted Soils
9	ASTM D2166	Unconfined Compressive Strength of Cohesive Soil
10	ASTM D2216	Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
11	ASTM D2487	Classification of Soils for Engineering Purposes
12	ASTM D4546	Standard Test Methods for One-Dimensional Swell of Collapse of Cohesive Soil
13	ASTM D4829	Standard Test Method for Expansion Index of Soils
14	ASTM D4318	Liquid Limit, Plastic Limit, and Plasticity Index of Soils
15	ASTM D6951	Use of the Dynamic Cone Penetrometer in Shallow Pavement Applications
16	ASTM D4943	Determining the Shrinkage Factors of Soils
17	ASTM D1196	Nonrepetitive Static Plate Load Tests of Soils and Flexible Pavement Components, for Use in Evaluation and Design of Airport and Highway Pavements
18	ASTM D1586	Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils
19	ASTM D1587	Thin-Walled Tube Sampling of soils for geotechnical purposes
20	ASTM D4647	Standard Test Method for Identification and Classification of Dispersive Clay Soils by the Pinhole Test
21	ASTM D2113	Rock Core Drilling and Sampling of Rock for Site Investigation
22	ASTM D4220	Preserving and Transporting Soil Samples
23	ASTM D5434	Field Logging of Subsurface Explorations of Soil and Rock
24	ASTM D3550	Standard Practice for Thick Wall, Ring-Lined, Split Barrel, Drive Sampling of Soils
25	ASTM D2434	Standard Test Method for Permeability of Granular Soils (Constant Head)
26	ASTM D2435	Standard Test Methods for One-Dimensional Consolidation Properties of Soil Using Incremental Loading
27	ASTM D5333	Standard Test Method for Measurement of Collapse Potential of Soils
28	ASTM D3080	Standard Test Method for Direct Shear Test of Soil under Consolidated Drained Condition

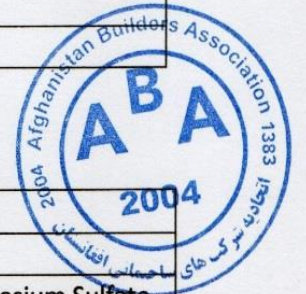
No	Test Method	Test Procedure Title
29	ASTM D6528	Standard Test Method for Consolidated Undrained Direct Simple Shear Testing of Fine Grain Soils
30	ASTM D2850	Standard Test Method for Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils
31	ASTM D4746	Standard Test Method for Consolidated Undrained Triaxial Compression Test for Cohesive Soils
32	ASTM D7181	Standard Test Method for Consolidated Drained Triaxial Compression Test for Soils
33	ASTM G57	Soil Resistivity Using Wenner 4-Electrode Method

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

No	Test Method	Test Procedure Title
1	ASTM C29	Unit Weight and Voids in Aggregate
2	ASTM C88	Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
3	ASTM C117	Material Finer than 75 um (No. 200) Sieve in Mineral Aggregates by Washing
4	ASTM C127	Specific Gravity and Absorption of Coarse Aggregate
5	ASTM C128	Specific Gravity and Absorption of Fine Aggregate
6	ASTM C131	Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
7	ASTM C136	Sieve Analysis of Fine and Coarse Aggregates
8	ASTM C142	Clay Lumps and Friable Particles in Aggregates
9	ASTM C535	Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
10	ASTM C1260	Aggregate Alkali-Reaction Potential, Mortar-Bar Method
11	ASTM D75	Sampling Aggregates
12	ASTM D2419	Sand Equivalent of Soils and Fine Aggregate
13	ASTM D5821	Determining the Percentage of Fractured Particles in Coarse Aggregate
14	ASTM C702	Reducing Samples of Aggregate to Testing Size
15	ASTM D4791	Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate

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

No	Test Method	Test Procedure Title
1	ASTM C31	Making and Curing Test Specimens in the Field
2	ASTM C39	Compressive Strength of Cylindrical Specimens
3	ASTM C143	Slump of Hydraulic-Cement Concrete
4	ASTM C172	Sampling Freshly Mixed Concrete
5	ASTM C192	Making and Curing Test Specimens in the Laboratory
6	ASTM C231	Air Content of Freshly Mixed Concrete by the Pressure Method
7	ASTM C617	Capping Cylindrical Concrete Specimens
8	ASTM C188	Density of Hydraulic Cement



9	ASTM C191	Time Setting of Hydraulic Cement by Vicat Needle
10	ASTM C187	Standard Test Methods for Normal Consistency of Hydraulic Cement
11	ASTM C1437	Standard Test Method for Flow of Hydraulic Cement Mortar
12	ASTM C1019	Sampling and Testing Grout
13	ASTM C109	Compressive Strength of Hydraulic Cement Mortars
14	ASTM C1064	Temperature of Freshly Mixed Portland Cement Concrete
15	ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
16	ASTM C78	Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
17	ASTM C204	Fineness of Hydraulic Cement by Air-Permeability Apparatus

Table 4. List of Certified Asphalt Cement and Asphalt Concrete Tests

No	Test Method	Test Procedure Title
1	ASTM D5	Penetration of Bituminous Materials
2	ASTM D36	Softening Point of Bitumen
3	ASTM D70	Density of Semi-Solid Bituminous Materials (Pycnometer)
4	ASTM D92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
5	ASTM D140	Sampling Bituminous Materials
6	ASTM D546	Sieve Analysis of Mineral Filler for Bituminous Paving Mixtures
7	ASTM D979	Sampling Bituminous Paving Mixtures
8	ASTM D2041	Theoretical Maximum Specific Gravity and Density of Bituminous Pavement Mixtures
9	ASTM D2172	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
10	ASTM D2726	Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
11	ASTM D3203	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
12	ASTM D3549	Thickness or Height of Compacted Bituminous Paving Mixture Specimens
13	ASTM D5361	Sampling Compacted Bituminous Mixtures for Laboratory Testing
14	ASTM D5444	Mechanical Size Analysis of Extracted Aggregate
15	ASTM D6926	Preparation of Bituminous Specimens Using Marshall Apparatus
16	ASTM D6927	Marshall Stability and Flow of Bituminous Mixtures
17	AASHTO T182	Coating and Stripping of Bitumen-Aggregate Mixtures
18	AASHTO T230	Determining Degree of Pavement Compaction of Bituminous Aggregate Mixtures
19	ASTM D5867	Standard Test Method for Effect of Moisture on Asphalt Concrete Paving Mixtures

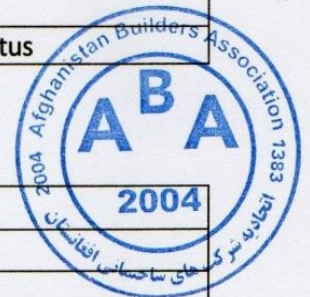


Table 5. List of Certified Brick, Stone, and Concrete Masonry Units Tests

No	Test Method	Test Procedure Title
1	ASTM C67	Sampling and Testing Brick and Structural Clay Tile
2	ASTM C97	Absorption and Bulk Specific Gravity of Dimension Stone
3	ASTM C1552	Capping Concrete Masonry Units, Related Units and Masonry Prisms for Compression Testing

Table 6. List of Certified Petrography and Rock Mechanic Tests

No	Test Method	Test Procedure Title
1	ASTM C295	Petrographic Examination of Aggregates for Concrete
2	ASTM D2845	Standard Test Method for Laboratory Determination of Pulse Velocities and Ultrasonic Elastic Constants of Rock
3	ASTM D3967	Standard Test Method for Splitting Tensile Strength of Intact Rock Specimens
4	ASTM D5607	Standard Test Method for Laboratory Direct Shear Strength Tests of rock specimens under constant normal force
5	ASTM D5873	Determination of Rock Hardness by Rebound Hammer Method
6	ASTM D6473	Specific Gravity and Absorption of Rock
7	ASTM D5731	Standard Test Method for Determination of the Point Load Strength Index of Rock
8	ASTM D7012	Standard Test Method for Compressive Strength and Elastic Moduli of Intact Rock core Specimens (Under Constant State of Stress and Temperature, ASTM D7012-Method D)
9	ASTM D7012	Standard Test Method for Unconfined Compressive Strength of Intact Rock Core Specimens (ASTM D7012-Method C)
10	ASTM D7012	Standard Test Method for Triaxial Compressive Strength of Intact Rock Core Specimens without Pore Pressure Measurements (ASTM D7012-Method B)
11	ASTM D4644	Slake Durability of Shale and Similar Weak Rocks
12	ASTM D6032	Standard Test Method for Determining Rock Quality Designation (RQD) of Rock Core

