



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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Valid To: January 31, 2020

Certificate Number: 0153.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory for:

CONSTRUCTION MATERIALS ENGINEERING

ASTM: C1077 (Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation);
C1093 (Standard Practice for Accreditation of Testing Agencies for Masonry);
D3666 (Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials);
D3740 (Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction);
E329 (Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection)

CONSTRUCTION MATERIALS TESTING

<u>Test Method:</u>	<u>Test Description:</u>
<u>Aggregates:</u>	
ASTM C29	Bulk Density (“Unit Weight”) and Voids in Aggregate
ASTM C70	Surface Moisture in Fine Aggregate
ASTM C88	Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C117	Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C127	Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate
ASTM C128	Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate
ASTM C131	Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Sieve Analysis of Fine and Coarse Aggregates
ASTM C142	Clay Lumps and Friable Particles in Aggregates
ASTM C535	Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C566	Total Evaporable Moisture Content of Aggregate by Drying
ASTM C702	Reducing Samples of Aggregate to Testing Size
ASTM D75 ¹	Sampling Aggregates

<u>Test Method:</u>	<u>Test Description:</u>
ASTM D4791	Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
<u>Bituminous:</u>	
ASTM D75 ¹	Sampling Aggregates
ASTM D546	Sieve Analysis of Mineral Filler for Bituminous Paving Mixtures
ASTM D2041(Method A)	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
ASTM D2726	Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
ASTM D2950 ¹	Density of Bituminous Concrete in Place by Nuclear Methods
ASTM D3549	Thickness or Height of Compacted Bituminous Paving Mixture Specimens
ASTM D3665	Random Sampling of Construction Materials
ASTM D4867/D4867M (Sections 8, 9, & 10)	Effect of Moisture on Asphalt Concrete Paving Mixtures
ASTM D6307	Asphalt Content of Hot-Mix Asphalt by Ignition Method
AASHTO T312	Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyrotory Compactor
<u>Concrete:</u>	
ASTM C31/C31M ¹	Making and Curing Concrete Test Specimens in the Field
ASTM C39/C39M	Compressive Strength of Cylindrical Concrete Specimens
ASTM C42/C42M	Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
ASTM C78/C78M ¹	Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
ASTM C780 Annex A6	Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry ¹
ASTM C138/C138M ¹	Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
ASTM C143/C143M ¹	Slump of Hydraulic-Cement Concrete
ASTM C172/C172M ¹	Sampling Freshly Mixed Concrete
ASTM C173 ¹	Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C174/C174M	Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
ASTM C192/C192M	Making and Curing Concrete Test Specimens in the Laboratory
ASTM C231/C231M ¹	Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C617	Capping Cylindrical Concrete Specimens
ASTM C1064/C1064M ¹	Temperature of Freshly Mixed Hydraulic-Cement Concrete
ASTM C1231/C1231M	Unbonded Caps in Determination of Compressive Strength of Hardened Concrete Cylinders
<u>Masonry:</u>	
ASTM C780 Annex A6	Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry ¹
<u>Soils:</u>	
ASTM D421	Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants
ASTM D422 (Withdrawn 2016) ²	Particle-Size Analysis of Soils
ASTM D698	Laboratory Compaction Characteristics of Soil Using Standard Effort

<u>Test Method:</u>	<u>Test Description:</u>
ASTM D854	Specific Gravity of Soil Solids by Water Pycnometer
ASTM D1140	Amount of Material in Soils Finer than No. 200 (75- μ m) Sieve
ASTM D1556 ¹	Density and Unit Weight of Soil in Place by Sand-Cone Method
ASTM D1557	Laboratory Compaction Characteristics of Soil Using Modified Effort
ASTM D1586	Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils
ASTM D1587 ¹	Thin-Walled Tube Sampling of Soils for Geotechnical Purposes
ASTM D2166	Unconfined Compressive Strength of Cohesive Soil
ASTM D2216	Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
ASTM D2419	Sand Equivalent Value of Soils and Fine Aggregate
ASTM D2434 (3/4" Max. Agg.)	Permeability of Granular Soils (Constant Head)
ASTM D2435	One-Dimensional Consolidation Properties of Soils Using Incremental Loading
ASTM D2487	Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D2488 ¹	Description and Identification of Soils (Visual-Manual Procedure)
ASTM D2850	Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils
ASTM D3282	Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes
ASTM D4253 (3/4" Max Agg.)	Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
ASTM D4254	Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density
ASTM D4318	Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D4546	One-Dimensional Swell or Collapse of Cohesive Soils
ASTM D4643	Determination of Water (Moisture) Content of Soil by Microwave Oven Heating
ASTM D4718	Unit Weight and Water Content for Soils Containing Oversize Particles
ASTM D4767	Consolidated Undrained Triaxial Compression Test for Cohesive Soils
ASTM D6913/6913M	Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis
ASTM D6938 ¹	In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
ASTM D7928	Standard Test Method for Particle-Size Distribution (Gradation) of Fine-Grained Soils Using the Sedimentation (Hydrometer) Analysis
<u>Soil-Cement:</u>	
ASTM D558	Moisture-Density (Unit Weight) Relations of Soil-Cement Mixtures
ASTM D559	Wetting and Drying Compacted Soil-Cement Mixtures
ASTM D560	Freezing and Thawing Compacted Soil-Cement Mixtures
ASTM D1633	Compressive Strength of Molded Soil-Cement Cylinders

¹ This laboratory meets A2LA R104 – *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these tests.

² This laboratory's scope contains withdrawn or superseded methods. As a clarifier, this indicates that the applicable method itself has been withdrawn or is now considered "historical" and not that the laboratory's accreditation for the method has been withdrawn.



Accredited Laboratory

A2LA has accredited

ALFRED BENESCH & COMPANY

Lincoln, NE

for technical competence in the field of

Construction Materials Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).



Presented this 9th day of May 2018.

A handwritten signature in black ink, written over a horizontal line.

President and CEO
For the Accreditation Council
Certificate Number 0153.02
Valid to January 31, 2020

For the tests to which this accreditation applies, please refer to the laboratory's Construction Materials Scope of Accreditation.