SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

CARLSON TESTING, INC.
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Valid To: January 31, 2020 Certificate Number: 0258.01

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);
E543 (Agencies Performing Nondestructive Testing)

CONSTRUCTION MATERIALS TESTING

Test Method:	**Test Description:**
Aggregates:	
ASTM C29	Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C40	Organic Impurities in Fine Aggregates for Concrete
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 C566	Total Evaporable Moisture Content of Aggregate by Drying
ASTM C702	Reducing Samples of Aggregate to Testing Size
ASTM C1252	Uncompacted Void Content of Fine Aggregate (as Influenced by Particle Shape, Surface Texture and Grading)
ASTM D75[1]	Sampling Aggregates
ASTM D4791	Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate

Test Method:	Test Description:
Aggregates (cont.):	
ASTM D5821	Determining the Percentage of Fractured Particles in Coarse Aggregate
Bituminous:	
ASTM D75[1]	Sampling Aggregates
ASTM D140	Sampling Asphalt Materials
ASTM D979[1]	Sampling Bituminous Paving Mixtures
ASTM D1188	Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples
ASTM D2041	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
ASTM D2172	Quantitative Extraction of Bitumen From Bituminous Paving Mixtures
ASTM D2489/D2489M	Estimating Degree of Particle Coating of Bituminous-Aggregate 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 D3203	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
ASTM D3549[1]	Thickness or Height of Compacted Bituminous Paving Mixture Specimens
ASTM D3665	Random Sampling of Construction Materials
ASTM D4867	Effect of Moisture on Asphalt by Concrete Paving Mixtures
ASTM D5444	Mechanical Analysis of Extracted Aggregate
ASTM D6307	Asphalt Content of Hot-Mix Asphalt by Ignition Method
ASTM D6925	Preparation and Determination of the Relative Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor
ASTM D6926	Preparation of Bituminous Specimens Using Marshall Apparatus
ASTM D6927	Marshall Stability and Flow of Bituminous Mixtures
Concrete:	
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 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	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 C496/C496M	Splitting Tensile Strength of Cylindrical Concrete Specimens
ASTM C617	Capping Cylindrical Concrete Specimens
ASTM C1064/C1064M[1]	Temperature of Freshly Mixed Hydraulic-Cement Concrete
ASTM C1140	Preparing and Testing Specimens from Shotcrete Test Panels
ASTM C1231/C1231M	Unbonded Caps in Determination of Compressive Strength of Hardened Concrete Cylinders
ASTM C1260	Potential Alkali Reactivity of Aggregates (Mortar-bar Method)
Fireproofing:	
ASTM E605[1]	Thickness and Density of Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members
ASTM E736[1]	Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members

Test Method:	Test Description:
Masonry:	
ASTM C140	Sampling and Testing Concrete Masonry Units and Related Units
ASTM C780[1] (Section A.6)	Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry
ASTM C1019[1]	Sampling and Testing Grout
ASTM C1314	Compressive Strength of Masonry Prisms
ASTM C1552	Capping Concrete Masonry Units, Related Units and Masonry Prisms for Compression Testing
Soils:	
ASTM D422 -Withdrawn[2]	Particle-Size Analysis of Soils
ASTM D558	Moisture-Density (Unit Weight) Relations of Soil-Cement Mixtures
ASTM D698	Laboratory Compaction Characteristics of Soil Using Standard Effort
ASTM D854	Specific Gravity of Soils
ASTM D1140	Amount of Material in Soils Finer than No. 200 (75-µm) 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 D1633-Withdrawn[2]	Compressive Strength of Molded Soil-Cement Cylinders
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 D2487	Classification of Soils for Engineering Purposes (USCS)
ASTM D2488	Description and Identification of Soils (Visual-Manual Procedure)
ASTM D4318	Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D4718	Unit Weight and Water Content for Soils Containing Oversize Particles
ASTM D6938[1]	In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
Steel (Shop & Field)[1]:	
AWS D.1.1	Structural Welding Code – Steel (Clause 6, Inspection)
AWS D1.3	Structural Welding Code – Sheet Steel (Clause 6, Inspection)
AWS D1.4	Structural Welding Code – Reinforcing Steel (Clause 6, Inspection)
AWS D1.5	Bridge Welding Code (Clause 6, Inspection)
AWS D1.8	Structural Welding Code – Seismic Supplement (Clause 6, Inspection)
AISC 360	Specification for Structural Steel Buildings (Chapter N, QA/QC, Fabrication & Erection)
RCSC	Specification for Structural Joints Using High-Strength Bolts (Section 9, Inspection)
Nondestructive (Laboratory & Field)[1]:	
ASTM E114	Standard Practice for Ultrasonic Pulse Echo Straight Beam Contact Testing
ASTM E164	Contact Ultrasonic Testing of Weldments – Straight and Angle
ASTM E165	Standard Practice for Liquid Penetrant Examination for General Industry
ASTM E709	Standard Guide for Magnetic Particle Testing (AC Yoke, Wet/Dry)

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

[2]NOTE: 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

CARLSON TESTING, INC.

Tigard, OR

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 23rd day of February 2018.

President and CEO
For the Accreditation Council
Certificate Number 0258.01
Valid to January 31, 2020

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