



CERTIFICATE OF ACCREDITATION



Sequoia Consultants, Inc.

in

Orange, California, USA

has demonstrated proficiency for the testing of construction materials and has conformed to the requirements established in AASHTO R 18 and the AASHTO Accreditation policies established by the AASHTO Committee on Materials and Pavements.

The scope of accreditation can be viewed on the Directory of AASHTO Accredited Laboratories (aashtoresource.org).



Jim Tymon,
AASHTO Executive Director



Matt Linneman
AASHTO COMP Chair



SCOPE OF AASHTO ACCREDITATION FOR:

Sequoia Consultants, Inc.
in Orange, California, USA

Quality Management System

Standard:

Accredited Since:

R18	Establishing and Implementing a Quality System for Construction Materials Testing Laboratories	06/19/2008
ISO/IEC 17025	General Requirements for the Competence of Testing and Calibration Laboratories	03/22/2023
C1077 (Aggregate)	Laboratories Testing Concrete and Concrete Aggregates	05/10/2023
C1077 (Concrete)	Laboratories Testing Concrete and Concrete Aggregates	04/08/2016
D3666 (Aggregate)	Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials	04/17/2014
D3666 (Asphalt Mixture)	Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials	04/17/2014
D3740 (Soil)	Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction	05/10/2023
E329 (Aggregate)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	04/17/2014
E329 (Asphalt Mixture)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	04/17/2014
E329 (Concrete)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	04/08/2016
E329 (Soil)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	05/10/2023
E329 (Sprayed Fire-Resistive Material)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	05/10/2023
E329 (Steel Inspection)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	05/10/2023



SCOPE OF AASHTO ACCREDITATION FOR:

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Asphalt Mixture

Standard:

Accredited Since:

R68	Preparation of Asphalt Mixtures by Means of the Marshall Apparatus	09/06/2019
T30	Mechanical Analysis of Extracted Aggregate	10/08/2015
T164	Quantitative Extraction of Asphalt Binder from Hot Mix Asphalt (HMA)	09/06/2019
T166	Bulk Specific Gravity of Compacted Hot Mix Asphalt Using Saturated Surface-Dry Specimens	10/08/2015
T209	Maximum Specific Gravity of Hot Mix Asphalt Paving Mixtures	10/08/2015
T245	Resistance to Plastic Flow of Asphalt Mixtures Using Marshall Apparatus	09/06/2019
T246	Resistance to Deformation and Cohesion of Bituminous Mixtures by Means of Hveem Apparatus	09/06/2019
T247	Preparation of Test Specimens of Bituminous Mixtures by Means of California Kneading Compactor	09/06/2019
T269	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures	10/08/2015
T275	Bulk Specific Gravity of Compacted Bituminous Mixtures Using Paraffin-Coated Specimens	10/28/2014
T283	Resistance of Compacted Mixtures to Moisture Induced Damage	10/28/2014
T308	Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method	10/08/2015
T312	Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor	10/28/2014
T324	Hamburg Wheel-Track Testing of Compacted Hot-Mix Asphalt (HMA)	10/28/2014
T329	Moisture Content of Hot-Mix Asphalt (HMA) by Oven Method	10/28/2014
T355	Density of Bituminous Concrete In Place by Nuclear Methods	09/06/2019
D1560 (Stability)	Resistance to Deformation of Bituminous Mixtures by Means of Hveem Apparatus	06/19/2008
D1561	Preparation of Test Specimens of Bituminous Mixtures by Means of California Kneading Compactor	06/19/2008
D2041	Maximum Specific Gravity of Hot Mix Asphalt Paving Mixtures	06/19/2008
D2172	Quantitative Extraction of Asphalt Binder from Hot Mix Asphalt (HMA)	10/28/2014
D2726	Bulk Specific Gravity of Compacted Hot Mix Asphalt Using Saturated Surface-Dry Specimens	06/19/2008
D2950	Density of Bituminous Concrete In Place by Nuclear Methods	06/19/2008
D3203	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures	06/19/2008



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Asphalt Mixture (Continued)

Standard:**Accredited Since:**

D3549	Thickness or Height of Compacted Bituminous Paving Mixture Specimens	05/10/2023
D4867	Resistance of Compacted Mixtures to Moisture Induced Damage	09/06/2019
D5444	Mechanical Analysis of Extracted Aggregate	10/08/2015
D6307	Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method	06/19/2008
D6925	Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor	09/06/2019
D6926	Preparation of Asphalt Mixtures by Means of the Marshall Apparatus	12/11/2012
D6927	Resistance to Plastic Flow of Asphalt Mixtures Using Marshall Apparatus	12/11/2012



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Soil

Standard:

Accredited Since:

R58	Dry Preparation of Disturbed Soil and Soil Aggregate Samples for Test	09/06/2019
T89	Determining the Liquid Limit of Soils (Atterberg Limits)	09/06/2019
T90	Plastic Limit of Soils (Atterberg Limits)	09/06/2019
T99	The Moisture-Density Relations of Soils Using a 5.5 lb [2.5 kg] Rammer and a 12 in. [305 mm] Drop	06/28/2017
T134	Moisture-Density Relations of Soil-Cement Mixtures	09/06/2019
T135	Wetting-and-Drying Test of Compacted Soil-Cement Mixtures	09/06/2019
T180	Moisture-Density Relations of Soils Using a 10 lb [4.54 kg] Rammer and an 18 in. [457 mm] Drop	06/28/2017
T190	Resistance R-Value and Expansion Pressure of Compacted Soils	09/06/2019
T191	Density of Soil In-Place by the Sand Cone Method	09/06/2019
T265	Laboratory Determination of Moisture Content of Soils	09/06/2019
T288	Minimum Soil Resistivity	05/10/2023
T289	pH of Soils for Corrosion Testing	Suspended
T310	In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)	09/06/2019
D421	Dry Preparation of Disturbed Soil and Soil Aggregate Samples for Test	05/10/2023
D558	Moisture-Density Relations of Soil-Cement Mixtures	10/08/2015
D559	Wetting-and-Drying Test of Compacted Soil-Cement Mixtures	10/08/2015
D698	The Moisture-Density Relations of Soils Using a 5.5 lb [2.5 kg] Rammer and a 12 in. [305 mm] Drop	10/08/2015
D1140	Amount of Material in Soils Finer than the No. 200 (75- μ m) Sieve	06/19/2008
D1556	Density of Soil In-Place by the Sand Cone Method	06/19/2008
D1557	Moisture-Density Relations of Soils Using a 10 lb [4.54 kg] Rammer and an 18 in. [457 mm] Drop	06/19/2008
D1633	Compressive Strength of Molded Soil-Cement Cylinders	05/10/2023
D2216	Laboratory Determination of Moisture Content of Soils	06/19/2008
D2487	Classification of Soils for Engineering Purposes (Unified Soil Classification System)	06/28/2023



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Soil (Continued)

Standard:**Accredited Since:**

D2488 Description and Identification of Soils (Visual-Manual Procedure)	10/08/2015
D2844 Resistance R-Value and Expansion Pressure of Compacted Soils	06/19/2008
D4318 Determining the Liquid Limit of Soils (Atterberg Limits)	06/19/2008
D4318 Plastic Limit of Soils (Atterberg Limits)	06/19/2008
D4718 Oversize Particle Correction	09/06/2019
D4829 Expansion Index of Soils	06/28/2017
D4972 pH Testing of Soils	Suspended
D6913 Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis	09/06/2019
D6938 In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)	06/19/2008
G187 Soil Resistivity Using the Two-Electrode Soil Box	05/10/2023



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Aggregate

Standard:

Accredited Since:

R76	Reducing Samples of Aggregate to Testing Size	05/10/2023
R90	Sampling Aggregate	05/10/2023
T11	Materials Finer Than 75- μm (No. 200) Sieve in Mineral Aggregates by Washing	10/08/2015
T19	Bulk Density ("Unit Weight") and Voids in Aggregate	09/06/2019
T21	Organic Impurities in Fine Aggregates for Concrete	09/06/2019
T27	Sieve Analysis of Fine and Coarse Aggregates	10/08/2015
T37	Sieve Analysis of Mineral Filler for Road and Paving Materials	09/06/2019
T84	Specific Gravity (Relative Density) and Absorption of Fine Aggregate	10/08/2015
T85	Specific Gravity and Absorption of Coarse Aggregate	10/08/2015
T96	Resistance to Abrasion of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	10/08/2015
T112	Clay Lumps and Friable Particles in Aggregate	05/10/2023
T176	Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test	10/08/2015
T210	Aggregate Durability Index	10/08/2015
T255	Total Moisture Content of Aggregate by Drying	09/06/2019
T304	Uncompacted Void Content of Fine Aggregate (Influenced by Shape, Texture, and Grading)	10/08/2015
T335	Determining the Percentage of Fractured Particles in Coarse Aggregate	10/08/2015
C29	Bulk Density ("Unit Weight") and Voids in Aggregate	09/06/2019
C40	Organic Impurities in Fine Aggregates for Concrete	06/19/2008
C117	Materials Finer Than 75- μm (No. 200) Sieve in Mineral Aggregates by Washing	06/19/2008
C127	Specific Gravity and Absorption of Coarse Aggregate	06/19/2008
C128	Specific Gravity (Relative Density) and Absorption of Fine Aggregate	06/19/2008
C131	Resistance to Abrasion of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	09/06/2019
C136	Sieve Analysis of Fine and Coarse Aggregates	06/19/2008



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Aggregate (Continued)

Standard:**Accredited Since:**

C142 Clay Lumps and Friable Particles in Aggregate	05/10/2023
C535 Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	09/06/2019
C566 Total Moisture Content of Aggregate by Drying	09/06/2019
C702 Reducing Samples of Aggregate to Testing Size	05/10/2023
C1252 Uncompacted Void Content of Fine Aggregate (Influenced by Shape, Texture, and Grading)	09/06/2019
D75 Sampling Aggregate	05/10/2023
D546 Sieve Analysis of Mineral Filler for Road and Paving Materials	09/06/2019
D2419 Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test	06/19/2008
D3744 Aggregate Durability Index	09/06/2019
D4791 Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate	06/28/2017
D5821 Determining the Percentage of Fractured Particles in Coarse Aggregate	09/06/2019



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Sprayed Fire-Resistive Material

Standard:

E605 Thickness and Density of Sprayed Fire-Resistive Material(SFRM) Applied to Structural Members

Accredited Since:

05/10/2023



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Iron and Steel

Standard:

Accredited Since:

M111	Zinc Coatings on Iron and Steel: Thickness of Zinc (Magnetic)	06/28/2023
M31-T244	Carbon-Steel Bars, Deformed and Plain: Tension (Elongation)	09/06/2019
M31-T244	Carbon-Steel Bars, Deformed and Plain: Tension (Ultimate Tensile Strength)	09/06/2019
M31-T244	Carbon-Steel Bars, Deformed and Plain: Tension (Yield Strength)	09/06/2019
M31-T285	Carbon-Steel Bars, Deformed and Plain: Bend Test	09/06/2019
M203-T244	Steel Strand, Uncoated Seven-Wire: Tension (Elongation)	08/19/2020
M203-T244	Steel Strand, Uncoated Seven-Wire: Tension (Ultimate Tensile Strength)	08/19/2020
M203-T244	Steel Strand, Uncoated Seven-Wire: Tension (Yield Strength)	08/19/2020
T244	Externally Threaded Fasteners (Bolts): Proof Load Determination	05/10/2023
T244	Externally Threaded Fasteners (Bolts): Ultimate Tensile Strength	05/10/2023
A615	Carbon-Steel Bars, Deformed and Plain: Unit Weight	05/10/2023
A706	Low Alloy Steel Bars, Deformed and Plain: Unit Weight	05/10/2023
A775	Epoxy Coated Reinforcing Bars: Coating Flexibility (Bend Test)	09/06/2019
A775	Epoxy Coated Reinforcing Bars: Film Thickness	06/28/2023
A970	Headed Steel Bars: Bend Test	09/06/2019
A563-E18	Internally Threaded Fasteners (Nuts): Rockwell Hardness	05/10/2023
A775-G62	Epoxy Coated Reinforcing Bars: Coating Continuity (Holidays)	09/06/2019
A123-E376	Zinc Coatings on Iron and Steel: Thickness of Zinc (Magnetic)	06/28/2023
A563-F606	Internally Threaded Fasteners (Nuts): Proof Load Determination	05/10/2023
A615-A370	Carbon-Steel Bars, Deformed and Plain: Tension (Elongation)	10/08/2015
A615-A370	Carbon-Steel Bars, Deformed and Plain: Tension (Ultimate Tensile Strength)	10/08/2015
A615-A370	Carbon-Steel Bars, Deformed and Plain: Tension (Yield Strength)	10/08/2015
A615-E290	Carbon-Steel Bars, Deformed and Plain: Bend Test	12/11/2012



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Iron and Steel (Continued)

Standard:

Accredited Since:

A706-A370	Low Alloy Steel Bars, Deformed and Plain: Tension (Elongation)	09/06/2019
A706-A370	Low Alloy Steel Bars, Deformed and Plain: Tension (Ultimate Tensile Strength)	09/06/2019
A706-A370	Low Alloy Steel Bars, Deformed and Plain: Tension (Yield Strength)	09/06/2019
A706-E290	Low Alloy Steel Bars, Deformed and Plain: Bend Test	09/06/2019
A970-A370	Headed Steel Bars: Tension (Elongation)	09/06/2019
A970-A370	Headed Steel Bars: Tension (Ultimate Tensile Strength)	09/06/2019
A970-A370	Headed Steel Bars: Tension (Yield Strength)	09/06/2019
A416-A1061	Steel Strand, Uncoated Seven-Wire: Tension (Elongation)	08/19/2020
A416-A1061	Steel Strand, Uncoated Seven-Wire: Tension (Ultimate Tensile Strength)	08/19/2020
A416-A1061	Steel Strand, Uncoated Seven-Wire: Tension (Yield Strength)	08/19/2020
A615-A1034	Carbon-Steel Bars, Deformed and Plain: Testing Mechanical Splices	09/06/2019
A706-A1034	Low Alloy Steel Bars, Deformed and Plain: Testing Mechanical Splices	09/06/2019
F3125	Externally Threaded Fasteners (Bolts): Rotational Capacity	05/10/2023
F436-E18	Hardened Steel Washers: Rockwell Hardness	05/10/2023
F3125-E18	Externally Threaded Fasteners (Bolts): Rockwell Hardness	05/10/2023
F1554-A370	Anchor Bolts: Tension (Elongation)	08/19/2020
F1554-A370	Anchor Bolts: Tension (Ultimate Tensile Strength of bar stock)	08/19/2020
F1554-A370	Anchor Bolts: Tension (Yield Strength)	08/19/2020
F1554-F606	Anchor Bolts: Tension (Ultimate Tensile Strength of finished bolts)	05/10/2023
F3125-F606	Externally Threaded Fasteners (Bolts): Proof Load Determination	05/10/2023
F3125-F606	Externally Threaded Fasteners (Bolts): Ultimate Tensile Strength	05/10/2023
A615-CT670	Carbon-Steel Bars, Deformed and Plain: Testing Mechanical and Welded Splices	09/06/2019
A706-CT670	Low Alloy Steel Bars, Deformed and Plain: Testing Mechanical and Welded Splices	09/06/2019



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Concrete

Standard:**Accredited Since:**

M201	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	08/30/2021
R39	Making and Curing Concrete Test Specimens in the Laboratory	08/30/2021
R60	Sampling Freshly Mixed Concrete	08/30/2021
R100 (Beams)	Making and Curing Concrete Test Specimens in the Field	08/30/2021
R100 (Cylinders)	Making and Curing Concrete Test Specimens in the Field	08/30/2021
T22	Compressive Strength of Cylindrical Concrete Specimens	08/30/2021
T24	Obtaining and Testing Drilled Cores and Sawed Beams of Concrete	08/30/2021
T97	Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	08/30/2021
T119	Slump of Hydraulic Cement Concrete	08/30/2021
T121	Density (Unit Weight), Yield, and Air Content of Concrete	08/30/2021
T148	Measuring Thickness of Concrete Elements Using Drilled Concrete Cores	08/30/2021
T152	Air Content of Freshly Mixed Concrete by the Pressure Method	08/30/2021
T160	Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete	08/30/2021
T196	Air Content of Freshly Mixed Concrete by the Volumetric Method	08/30/2021
T197	Time of Setting of Concrete Mixtures by Penetration Resistance	08/30/2021
T198	Splitting Tensile Strength of Cylindrical Concrete Specimens	08/30/2021
T231 (10000 psi and below)	Capping Cylindrical Concrete Specimens	02/12/2025
T309	Temperature of Freshly Mixed Portland Cement Concrete	08/30/2021
C31 (Beams)	Making and Curing Concrete Test Specimens in the Field	02/01/2011
C31 (Cylinders)	Making and Curing Concrete Test Specimens in the Field	02/01/2011
C39	Compressive Strength of Cylindrical Concrete Specimens	10/21/2008
C42	Obtaining and Testing Drilled Cores and Sawed Beams of Concrete	05/29/2014
C78	Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	02/01/2011



SCOPE OF AASHTO ACCREDITATION FOR:

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Concrete (Continued)

Standard:

Accredited Since:

C138	Density (Unit Weight), Yield, and Air Content of Concrete	10/21/2008
C143	Slump of Hydraulic Cement Concrete	10/21/2008
C157	Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete	05/14/2014
C172	Sampling Freshly Mixed Concrete	10/21/2008
C173	Air Content of Freshly Mixed Concrete by the Volumetric Method	10/21/2008
C174	Measuring Thickness of Concrete Elements Using Drilled Concrete Cores	04/21/2016
C192	Making and Curing Concrete Test Specimens in the Laboratory	05/14/2014
C231	Air Content of Freshly Mixed Concrete by the Pressure Method	10/21/2008
C403	Time of Setting of Concrete Mixtures by Penetration Resistance	08/30/2021
C469	Static Modulus of Elasticity and Poisson's Ratio of Concrete in Compression	09/14/2018
C495	Compressive Strength of Lightweight Insulating Concrete	08/30/2021
C496	Splitting Tensile Strength of Cylindrical Concrete Specimens	08/30/2021
C511	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	05/29/2014
C617 (10000 psi and below)	Capping Cylindrical Concrete Specimens	02/12/2025
C1064	Temperature of Freshly Mixed Portland Cement Concrete	10/21/2008
C1140 (Obtaining and Testing Specimens)	Preparing and Testing Specimens from Shotcrete Test Panels	08/30/2021
C1231 (7000 psi and below)	Use of Unbonded Caps in Determination of Compressive Strength of Hardened Concrete Cylinders	02/12/2025
C1542	Measuring Length of Concrete Cores	08/30/2021
C1604	Standard Test Method for Obtaining and Testing Drilled Cores of Shotcrete	08/30/2021



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Masonry

Standard:

Accredited Since:

C511	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	08/30/2021
C780 (Annex 1)	Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry - Consistency by Cone Penetration	08/30/2021
C780 (Annex 6 - Cubes)	Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry - Compressive Strength of Cubes	08/30/2021
C780 (Annex 6 - Cylinders)	Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry - Compressive Strength of Cylinders	08/30/2021
C1019	Sampling and Testing Grout	08/30/2021
C1314 (Prisms Constructed of Full-Size Concrete Masonry Units)	Compressive Strength of Masonry Prisms	04/16/2025
C1552	Capping Concrete Masonry Units, Related Units and Masonry Prisms for Compression Testing	08/30/2021