



# CERTIFICATE OF ACCREDITATION



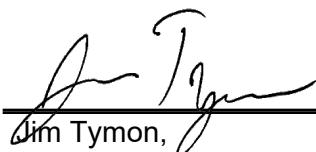
## Froehling & Robertson, Incorporated

in

**Roanoke, Virginia, 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](http://aashtoresource.org)).



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Jim Tymon,  
AASHTO Executive Director



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Matt Linneman  
AASHTO COMP Chair



## SCOPE OF AASHTO ACCREDITATION FOR:

Froehling & Robertson, Incorporated  
in Roanoke, Virginia, USA

## Quality Management System

### Standard:

### Accredited Since:

R18	Establishing and Implementing a Quality System for Construction Materials Testing Laboratories	04/26/2011
C1077 (Aggregate)	Laboratories Testing Concrete and Concrete Aggregates	04/26/2011
C1077 (Concrete)	Laboratories Testing Concrete and Concrete Aggregates	07/22/2011
C1093 (Masonry)	Accreditation of Testing Agencies for Unit Masonry	07/22/2011
D3666 (Aggregate)	Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials	01/22/2018
D3740 (Soil)	Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction	04/26/2011
E329 (Aggregate)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	04/26/2011
E329 (Concrete)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	07/22/2011
E329 (Masonry)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	12/14/2021
E329 (Soil)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	04/26/2011



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## Asphalt Mixture

**Standard:****Accredited Since:**

T166 (Cores) Bulk Specific Gravity of Compacted Hot Mix Asphalt Using Saturated Surface-Dry Specimens (Cores)

01/22/2018

D2726 (Cores) Bulk Specific Gravity of Compacted Hot Mix Asphalt Using Saturated Surface-Dry Specimens (Cores)

01/22/2018



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## Soil

### Standard:

### Accredited Since:

R58	Dry Preparation of Disturbed Soil and Soil Aggregate Samples for Test	04/26/2011
T88	Particle Size Analysis of Soils by Hydrometer	04/26/2011
T89	Determining the Liquid Limit of Soils (Atterberg Limits)	04/26/2011
T90	Plastic Limit of Soils (Atterberg Limits)	04/26/2011
T99	The Moisture-Density Relations of Soils Using a 5.5 lb [2.5 kg] Rammer and a 12 in. [305 mm] Drop	04/26/2011
T100	Specific Gravity of Soils	04/26/2011
T180	Moisture-Density Relations of Soils Using a 10 lb [4.54 kg] Rammer and an 18 in. [457 mm] Drop	04/26/2011
T191	Density of Soil In-Place by the Sand Cone Method	04/26/2011
T193	The California Bearing Ratio	04/26/2011
T217	Determination of Moisture in Soils by Means of a Calcium Carbide Gas Pressure Moisture Tester	11/13/2015
T265	Laboratory Determination of Moisture Content of Soils	04/26/2011
T310	In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)	04/26/2011
D421	Dry Preparation of Disturbed Soil and Soil Aggregate Samples for Test	04/26/2011
D422	Particle Size Analysis of Soils by Hydrometer	04/26/2011
D698	The Moisture-Density Relations of Soils Using a 5.5 lb [2.5 kg] Rammer and a 12 in. [305 mm] Drop	04/26/2011
D854	Specific Gravity of Soils	04/26/2011
D1140	Amount of Material in Soils Finer than the No. 200 (75- $\mu$ m) Sieve	04/26/2011
D1556	Density of Soil In-Place by the Sand Cone Method	04/26/2011
D1557	Moisture-Density Relations of Soils Using a 10 lb [4.54 kg] Rammer and an 18 in. [457 mm] Drop	04/26/2011
D1883	The California Bearing Ratio	04/26/2011
D2216	Laboratory Determination of Moisture Content of Soils	04/26/2011
D2487	Classification of Soils for Engineering Purposes (Unified Soil Classification System)	04/26/2011
D2488	Description and Identification of Soils (Visual-Manual Procedure)	04/26/2011



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### Soil (Continued)

**Standard:****Accredited Since:**

D4318 Determining the Liquid Limit of Soils (Atterberg Limits)	04/26/2011
D4318 Plastic Limit of Soils (Atterberg Limits)	11/13/2015
D4718 Oversize Particle Correction	11/13/2015
D4944 Determination of Moisture in Soils by Means of a Calcium Carbide Gas Pressure Moisture Tester	11/13/2015
D6938 In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)	04/26/2011



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## Rock

**Standard:**

D7012 (Method C without D4543 sample preparation) Compressive Strength of Rock Core Specimens (Method C without D4543 preparation)

**Accredited Since:**

06/28/2013



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## Aggregate

### Standard:

### Accredited Since:

R76 Reducing Samples of Aggregate to Testing Size	04/26/2011
R90 Sampling Aggregate	11/13/2015
T11 Materials Finer Than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing	04/26/2011
T19 Bulk Density ("Unit Weight") and Voids in Aggregate	04/26/2011
T21 Organic Impurities in Fine Aggregates for Concrete	04/26/2011
T27 Sieve Analysis of Fine and Coarse Aggregates	04/26/2011
T84 Specific Gravity (Relative Density) and Absorption of Fine Aggregate	04/26/2011
T85 Specific Gravity and Absorption of Coarse Aggregate	04/26/2011
T96 Resistance to Abrasion of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	04/26/2011
T104 Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate	04/26/2011
T255 Total Moisture Content of Aggregate by Drying	04/26/2011
C29 Bulk Density ("Unit Weight") and Voids in Aggregate	04/26/2011
C40 Organic Impurities in Fine Aggregates for Concrete	04/26/2011
C88 Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate	04/26/2011
C117 Materials Finer Than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing	04/26/2011
C127 Specific Gravity and Absorption of Coarse Aggregate	04/26/2011
C128 Specific Gravity (Relative Density) and Absorption of Fine Aggregate	04/26/2011
C131 Resistance to Abrasion of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	04/26/2011
C136 Sieve Analysis of Fine and Coarse Aggregates	04/26/2011
C535 Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	06/28/2013
C566 Total Moisture Content of Aggregate by Drying	04/26/2011
C702 Reducing Samples of Aggregate to Testing Size	04/26/2011
D75 Sampling Aggregate	11/13/2015



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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	02/11/2014
R60	Sampling Freshly Mixed Concrete	02/11/2014
R100 (Beams)	Making and Curing Concrete Test Specimens in the Field	02/11/2014
R100 (Cylinders)	Making and Curing Concrete Test Specimens in the Field	02/11/2014
T22	Compressive Strength of Cylindrical Concrete Specimens	07/22/2011
T97	Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	07/22/2011
T119	Slump of Hydraulic Cement Concrete	02/11/2014
T121	Density (Unit Weight), Yield, and Air Content of Concrete	02/11/2014
T152	Air Content of Freshly Mixed Concrete by the Pressure Method	02/11/2014
T196	Air Content of Freshly Mixed Concrete by the Volumetric Method	02/11/2014
T231 (5000 psi and below)	Capping Cylindrical Concrete Specimens	09/26/2018
T309	Temperature of Freshly Mixed Portland Cement Concrete	02/11/2014
C31 (Beams)	Making and Curing Concrete Test Specimens in the Field	07/22/2011
C31 (Cylinders)	Making and Curing Concrete Test Specimens in the Field	07/22/2011
C39	Compressive Strength of Cylindrical Concrete Specimens	07/22/2011
C78	Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	07/22/2011
C138	Density (Unit Weight), Yield, and Air Content of Concrete	07/22/2011
C143	Slump of Hydraulic Cement Concrete	07/22/2011
C172	Sampling Freshly Mixed Concrete	07/22/2011
C173	Air Content of Freshly Mixed Concrete by the Volumetric Method	07/22/2011
C231	Air Content of Freshly Mixed Concrete by the Pressure Method	07/22/2011
C511	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	02/11/2014
C617 (5000 psi and below)	Capping Cylindrical Concrete Specimens	09/26/2018



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### Concrete (Continued)

**Standard:**

C1064 Temperature of Freshly Mixed Portland Cement Concrete

C1231 (7000 psi and below) Use of Unbonded Caps in Determination of Compressive Strength of Hardened Concrete Cylinders

**Accredited Since:**

07/22/2011

07/22/2011



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## Masonry

### Standard:

### Accredited Since:

C140 (Full-Size Concrete Masonry Units) Sampling and Testing Concrete Masonry Units and Related Units	06/23/2025
C511	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes
C780 (Annex 1)	Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry - Consistency by Cone Penetration
C780 (Annex 6 - Cylinders)	Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry - Compressive Strength of Cylinders
C1019	Sampling and Testing Grout
C1552	Capping Concrete Masonry Units, Related Units and Masonry Prisms for Compression Testing