MaineDOT

SUPPLEMENTAL QUESTIONS

59000 - Materials Testing and Exploration

Consultant Name: _____ Date: _____

- Service Number 804.00: Laboratories may apply for prequalification consideration on as few or as many test methods they are equipped to run in any of the material categories, including single test methods.
- There is a navigation panel to the left. All firms must answer the General/Mandatory Supplemental Questions, then click on a category to navigate to a table. Check off the applicable specification/test method(s) your laboratory can provide.

Table of Contents **Page No.**

Consultant Name: _____ Date: _____

General/Mandatory Supplemental Questions: The following Supplemental Questions must be answered by all firms submitting any material categories.

1. Submit, as a separate attachment to the submittal email, your Laboratory Quality Management Plan including documentation demonstrating laboratory accreditation and personnel qualifications.
2. Submit, as a separate attachment to the submittal email, examples of test report(s) for each specification/test method your Laboratory is applying for.
3. Submit, as a separate attachment to the submittal email, an example Chain of Custody form or similar documentation required to accompany samples.

General/Mandatory Questions continued on the next page

4. List testing services available with AASHTO (preferred) or ASTM designation. The list shall indicate only those tests that your laboratory is accredited for, unless accreditation is not offered for the test in question. Where alternate test methods are allowed to determine compliance with the relevant specification, the vendor shall state which method will be used.

Note: A separate attachment to the submittal email is acceptable for this question.

5. List three (3) references of companies from whom the laboratory has provided similar services; this information shall include a description of services, a contact name, phone number and email address.

6. List any tests to be performed by a subcontractor.

7. Other pertinent information regarding lab testing services, lab staffing, or quality assurance protocols.

Laboratory Testing of Soil, Aggregate and Rock

Performance of laboratory testing of soil, aggregate and rock samples in accredited laboratories by qualified technicians.

TABLE 1 – TEST METHODS – SOIL, AGGREGATE AND ROCK

(Soil samples shall be stored and transported in accordance with ASTM D 4220, Standard Practices for Preserving and Transporting Soils Samples. Tubes shall be handled and transported in accordance with ASTM D1587.)

Test No.	Title
☐ AASHTO T11	Materials Finer Than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
☐ AASHTO T 27	Sieve Analysis of Fine and Coarse Aggregates
☐ AASHTO T 88	Particle Size Analysis of Soils
☐ AASHTO T 89	Determining the Liquid Limit of Soils
☐ AASHTO T 90	Determining the Plastic Limit and Plasticity Index of Soils
☐ AASHTO T 100	Specific Gravity of Soils
☐ AASHTO T 208	Unconfined Compressive Strength of Cohesive Soil
☐ AASHTO T 216	One-Dimensional Consolidation Properties of Soils
☐ AASHTO T 236	Direct Shear Test of Soils under Consolidated Drained Conditions
☐ AASHTO T 265	Laboratory Determination of Moisture Content of Soils
☐ AASHTO T 267	Determination of Organic Content in Soils by Loss on Ignition
☐ AASHTO T 289	Determining pH of Soil for Use in Corrosion Testing
☐ AASHTO T 296	Unconsolidated, Undrained Compressive Strength of Cohesive Soils in Triaxial Compression
☐ AASHTO T 297	Consolidated, Undrained Triaxial Compression Test on Cohesive Soils
☐ AASHTO T 307	Determining the Resilient Modulus of Soils and Aggregate Materials
☐ AASHTO T 311	Grain-Size Analysis of Granular Soil Materials
☐ AASHTO T 330	The Qualitative Detection of Harmful Clays of the Smectite Group in Aggregates Using Methylene Blue
☐ ASTM C295	Petrographic Examination of Aggregates for Concrete
☐ ASTM D 4186	Constant Rate of Strain Consolidation
☐ ASTM D 5731	Point Load Strength Index of Rock
☐ ASTM D 6528	Direct Simple Shear (DSS)
☐ ASTM D 7012	Unconfined Compressive Strength of Intact Rock Core Specimens
☐ ASTM D 7012	Elastic Modulus of Intact Rock Core Specimens

Consultant Name: _____ Date: _____

Laboratory Testing of Cementitious Materials and Hardened Concrete

Performance of laboratory testing of cement, pozzolan, or hardened concrete samples in accredited laboratories by qualified technicians.

TABLE 1 - SPECIFICATIONS - CEMENTITIOUS MATERIALS

Test No.	Title
☐ AASHTO M 85	Portland Cement
☐ AASHTO M 240	Blended Hydraulic Cement
☐ AASHTO M 295	Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
☐ AASHTO M 302	Slag Cement for Use in Concrete and Mortars

TABLE 2 – TEST METHODS – CEMENTITIOUS MATERIALS

Test No.		Title
☐ AASHTO T 105	ASTM C 114	Chemical Analysis of Hydraulic Cement
☐ AASHTO T 106	ASTM C 109	Compressive Strength of Hydraulic Cement Mortar
☐ AASHTO T 107	ASTM C 151	Autoclave Expansion of Hydraulic Cement
☐ AASHTO T 129	ASTM C 187	Amount of Water Required for Normal Consistency of Hydraulic Cement Paste
☐ AASHTO T 131	ASTM C 191	Time of Setting of Hydraulic Cement by Vicat Needle
☐ AASHTO T 137	ASTM C 185	Air Content of Hydraulic Cement Mortar
☐ AASHTO T 153	ASTM C 204	Fineness of Hydraulic Cement by Air Permeability Apparatus
☐ AASHTO T 154	ASTM C 266	Time of Setting of Hydraulic Cement Paste by Gillmore Needles
☐ AASHTO T 192	ASTM C 430	Fineness of Hydraulic Cement by the 45-µm (No. 325) Sieve

TABLE 3 – TEST METHODS – HARDENED CONCRETE

Test No.	Title
☐ AASHTO T 22	Compressive Strength of Cylindrical Concrete Specimens
☐ AASHTO T 160	Length Change of Hardened Hydraulic Cement Mortar and Concrete
☐ AASHTO T 198	Splitting Tensile Strength of Cylindrical Concrete Specimens
☐ AASHTO T 277	Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration
☐ AASHTO T 280	Concrete Pipe, Manhole Sections, or Tile
☐ AASHTO T 303	Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars Due to Alkali-–Silica Reaction
☐ AASHTO T 336	Coefficient of Thermal Expansion of Hydraulic Cement Concrete
☐ AASHTO T 358	Surface Resistivity Indication of Concrete's Ability to Resist Chloride Ion Penetration
☐ AASHTO T 380	Potential Alkali Reactivity of Aggregates and Effectiveness of ASR Mitigation Measures (Miniature Concrete Prism Test, MCPT)
☐ ASTM C457	Microscopical Determination of Parameters of the Air-Void System in Hardened Concrete
☐ ASTM C469	Static Modulus of Elasticity and Poisson's Ratio of Concrete in Compression
☐ ASTM C856	Petrographic Examination of Hardened Concrete

Laboratory Testing of Asphalt Materials

Performance of laboratory testing of asphalt binder or mixture samples in accredited laboratories by qualified technicians.

TABLE 1 – SPECIFICATIONS – PG BINDER

Test No.	Title
☐ AASHTO M 320	Performance-Graded Asphalt Binder
☐ AASHTO M 240	Performance-Graded Asphalt Binder Using Multiple Stress Creep Recovery (MSCR) Test

TABLE 2 – TEST METHODS – ASPHALT BINDER

Test No.	Title
☐ AASHTO R 28	Accelerated Aging of Asphalt Binder Using a Pressurized Aging Vessel (PAV)
☐ AASHTO R 59	Recovery of Asphalt Binder from Solution by Abson Method
☐ AASHTO T 44	Solubility of Bituminous Materials
☐ AASHTO T 240	Effect of Heat and Air on a Moving Film of Asphalt Binder (Rolling Thin-Film Oven Test)
☐ AASHTO T 301	Elastic Recovery Test of Asphalt Materials by Means of a Ductilometer
☐ AASHTO T 313	Determining the Flexural Creep Stiffness of Asphalt Binder Using the Bending Beam Rheometer (BBR)
☐ AASHTO T 314	Determining the Fracture Properties of Asphalt Binder in Direct Tension (DT)
☐ AASHTO T 315	Determining the Rheological Properties of Asphalt Binder Using a Dynamic Shear Rheometer (DSR)
☐ AASHTO T 350	Multiple Stress Creep Recovery (MSCR) Test of Asphalt Binder Using a Dynamic Shear Rheometer (DSR)

TABLE 3 – TEST METHODS – ASPHALT MIXTURE

Test No.	Title
☐ AASHTO T 164	Quantitative Extraction of Asphalt Binder from Hot Mix Asphalt (HMA)
☐ AASHTO T 283	Resistance of Compacted Asphalt Mixtures to Moisture-Induced Damage
☐ AASHTO T 319	Quantitative Extraction and Recovery of Asphalt Binder from Asphalt Mixtures
☐ AASHTO T 324	Hamburg Wheel-Track Testing of Compacted Asphalt Mixtures
☐ AASHTO T 378	Determining the Dynamic Modulus and Flow Number for Asphalt Mixtures Using the Asphalt Mixture Performance Tester (AMPT)

Laboratory Testing of Protective Coatings and Traffic Paint

Performance of laboratory testing of traffic paint samples or samples of materials with applied protective coatings in accredited laboratories by qualified technicians.

TABLE 1 – TEST METHODS – PROTECTIVE COATINGS

Test No.	Title
☐ ASTM B117	Operating Salt Spray (Fog) Apparatus
☐ ASTM D522	Mandrel Bend Test of Attached Organic Coatings
☐ ASTM D1653	Water Vapor Transmission of Organic Coating Films
☐ ASTM D2240	Rubber Property—Durometer Hardness
☐ ASTM D2247	Testing Water Resistance of Coatings in 100 % Relative Humidity
☐ ASTM D2794	Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)
☐ ASTM D2805	Hiding Power of Paints by Reflectometry
☐ ASTM D3359	Rating Adhesion by Tape Test
☐ ASTM D3363	Film Hardness by Pencil Test
☐ ASTM D4060	Abrasion Resistance of Organic Coatings by the Taber Abraser
☐ ASTM D4400	Sag Resistance of Paints Using a Multinotch Applicator
☐ ASTM D4541	Pull-Off Strength of Coatings Using Portable Adhesion Testers
☐ ASTM D4585	Testing Water Resistance of Coatings Using Controlled Condensation
☐ NACE TM0174	Evaluation of Protective Coatings and Lining Materials on Metallic Substrates in Immersion Service

TABLE 2 – TEST METHODS – TRAFFIC PAINT

Test No.	Title
☐ ASTM D562	Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using a Stormer-Type Viscometer
☐ ASTM D1394	Chemical Analysis of White Titanium Pigments
☐ ASTM D1475	Density of Liquid Coatings, Inks, and Related Products
☐ ASTM D1640	Drying, Curing, or Film Formation of Organic Coatings
☐ ASTM D2621	Infrared Identification of Vehicle Solids From Solvent-Reducible Paints
☐ ASTM D2697	Volume Nonvolatile Matter in Clear or Pigmented Coatings
☐ ASTM D3723	Pigment Content of Water-Emulsion Paints by Low-Temperature Ashing
☐ ASTM D3960	Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings

Laboratory Testing of Metals

Performance of laboratory testing of samples of metals including reinforcing steel, guardrail and fasteners in accredited laboratories by qualified technicians.

TABLE 1 – TEST METHODS – METALS

Test No.	Title
☐ AASHTO T 244	Mechanical Testing of Steel Products
☐ ASTM F606	Determining the Mechanical Properties of Externally and Internally Threaded Fasteners, Washers, Direct Tension Indicators, and Rivets

Laboratory Testing of Pipe

Performance of laboratory testing of samples of high density polyethylene or polypropylene drainage pipe in accredited laboratories by qualified technicians.

TABLE 1 – TEST METHODS - CORRUGATED POLYETHYLENE PIPE

Test No.	Title
☐ ASTM D2122	Determining Dimensions of Thermoplastic Pipe and Fittings
☐ ASTM D2412	Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading