

REQUEST FOR USACE LABORATORY VALIDATION

The USACE validation of engineering testing laboratories is administered and executed by the Director of the Materials Testing Center, located at the USACE Engineer Research and Development Center in Vicksburg, Mississippi. The program was established under USACE Engineer Regulation 1100-1-8100 (31 DEC 1997) and Engineer Regulation 1110-1-261 (Updated 15 JUN 1999).

The validation of a laboratory is executed according to the number of methods required for validation, AASHTO accreditations (if present), and the laboratory's function. The following are the TYPICAL validation scenarios. The Director of the MTC will determine, based on a laboratory's specific circumstances, how a validation will be performed to meet the standards of the USACE and the MTC.

1. **Onsite Inspection** – for laboratories that do not possess current AASHTO accreditations and who require the validation of more than 7 ASTM methods, an onsite inspection, typically requiring up to two full working days to complete, including review of the quality system, inspection of equipment and facilities, and interviews with technicians performing the tests on procedures, calculations, and reporting.
2. **Desk Audit** – for laboratories that do not possess current AASHTO accreditations but only require the validation of 7 or less ASTM methods, the process involves submittals (usually by email) of quality system documentation, digital photographs and facilities, current calibration certificates, personnel qualification documentation, brief and concise written description of procedures, completed data sheets, and final test reports.
3. **Abbreviated Audit** – for laboratories that possess current AASHTO accreditations as stated on the AASHTO website, validation of any methods accredited by AASHTO can be done by submittal of the latest reports from AMRL and/or CCRL.

Once we receive your request for a validation, we will determine the best validation path and provide you with the cost estimate, and a Testing Services Agreement (TSA), which will be executed by an officer of your company. Once we receive the TSA and bank check from your laboratory, the TSA is then executed at the MTC and the check processed. This usually takes 10-15 business days. We will then contact you to set up the onsite inspection and/or begin the audit.

ATTENTION: In order for the MTC to execute ANY validation, the Federal Government requires your laboratory to register with the System for Award Management (SAM), which can be done at www.sam.gov, and provide us with a Commercial and Government Entity (CAGE) Code. When you register with SAM.GOV, you will be assigned a new CAGE Code if one does not exist. If you have an existing code, your information will be updated. There is no fee associated with SAM.GOV or obtaining a CAGE CODE.

In general, the process to validate a laboratory typically takes at least 30 days (15 days to process payments and TSAs, conduct audits, and process validations) and up to 60-90 days if the validation requires an onsite inspection and report.

REQUEST FOR LABORATORY VALIDATION FORM

Please fill in **ALL** of the information on this form below. **Failure to fill out all the information will delay your request and validation process.** Once completed, please email the form to the following email address (this is the fastest way to process) or you can mail the request to the mailing address listed:

E-mail: Brittany.N.Hopkins@usace.army.mil

U.S. Army Engineer Research and Development Center

ATTN: Ms. Brittany N. Hopkins, CEERD-GMC

3909 Halls Ferry Road

Vicksburg, MS 39180-6199

Phone: (601) 634-2142 Fax: (601) 634-3242

DATE OF REQUEST: _____

LABORATORY NAME: _____

LABORATORY ADDRESS/LOCATION: _____

LABORATORY POINT OF CONTACT: _____

LABORATORY POINT OF CONTACT EMAIL: _____

LABORATORY PHONE: _____ LABORATORY FAX: _____

LABORATORY MAILING ADDRESS: _____

Is the lab to be validated a satellite/portable lab reporting to a permanent laboratory location? _____

If the answer is yes, please provide the name and address/location of the permanent laboratory location responsible for the satellite/portable lab: _____

LABORATORY SAM# (CAGE CODE): _____

FAILURE TO PROVIDE YOUR CAGE CODE WILL DELAY YOUR VALIDATION PROCESS.

WHO IS YOUR USACE DISTRICT CONTACT? _____

USACE DISTRICT CONTACT PHONE: _____

IN WHAT TESTING AREAS DO YOU REQUIRE VALIDATION?

Aggregates _____ Bituminous _____ Concrete _____ Masonry _____ Rock _____ Soils _____

The U.S. Army Corps of Engineers Materials Testing Center (MTC) does not certify nor does it provide any accreditation to laboratories. The MTC conducts inspections to validate the capability of a laboratory to perform specific tests as required by contract with the U.S. Army Corps of Engineers.

The following questions concern the quality assurance system of the laboratory location being validated.

Please be aware that AASHTO accreditation of a permanent laboratory location CANNOT be transferred to a satellite/portable laboratory location. However, satellite/portable laboratories that operate under the responsibility of a permanent laboratory location that is AASHTO accredited can use the Quality Assurance System credentials of the parent lab for their validation process. This usually results in a discount of cost for validation of a satellite/portable laboratory.

**LABORATORY QUALITY ASSURANCE SYSTEM QUESTIONNAIRE
(ASTM C 1077-16, C 1093-15, D 3666-16, D 3740-12, E 329-14)**

QUALITY SYSTEM		YES	NO
Does the laboratory maintain a quality manual?			
Does the laboratory participate in proficiency testing programs in any of the testing areas requested for this validation? (If an area was not requested above please check "No" for that area.)	Aggregates?		
	Bituminous?		
	Concrete?		
	Masonry?		
	Soils?		

TECHNICIAN CERTIFICATIONS	Number
How many of your laboratory technicians are certified by the American Concrete Institute (ACI)? (If none then "N/A")	
How many of your laboratory technicians are certified by the National Institute for Certification in Engineering Technologies (NICET)? (If none then "N/A")	

ACCREDITATION PROGRAMS *****SEE NOTE BELOW*****	YES	NO
Does the lab have current accreditation with AASHTO (AMRL)?		

INSPECTIONS	Date
Date of the last inspection by the MTC (USACE): (If none then "N/A")	
Date of last inspection by AASHTO Materials Reference Lab (AMRL): (If none then "N/A")	
Date of last inspection by Cement and Concrete Reference Lab (CCRL): (If none then "N/A")	

*******If you are AASHTO accredited, you are required to send us a copy of your most recent inspection from AMRL and/or CCRL.*******

Aggregate Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by AMRL or CCRL within the past two years.

If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure	No.	Check	AMRL/CCR
	REQUIRED TESTS PER ASTM C 1077-16			Inspection
ASTM C 117-17	Material Finer than 75 μm (No. 200) Sieve	A1		
ASTM C 127-15	Specific Gravity & Absorption in Coarse Aggregate	A2		
ASTM C 128-15	Specific Gravity & Absorption in Fine Aggregate	A3		
ASTM C 136-14	Sieve Analysis of Aggregates	A4		
	OPTIONAL TESTS PER ASTM C1077-16			
ASTM C 29-17	Unit Weight and Voids in Aggregate	A5		
ASTM C 40-16	Organic Impurities	A6		
ASTM C 70-13	Surface Moisture in Fine Aggregate	A7		
ASTM C 87-17	Effects of Organic Impurities on Mortar Strength	A8		
ASTM C 88-13	Sulfate Soundness	A9		
ASTM C 123-14	Lightweight Particles	A10		
ASTM C 131-14	Los Angeles Abrasion Resistance on Small-Size Coarse Aggregate	A11		
ASTM C 142-17	Clay Lumps	A12		
ASTM C 227-10	Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar)	A13		
ASTM C 295-12	Petrographic Examination	A14		
ASTM C 441-11	Effectiveness of Mineral Admixtures or GBFS on Preventing	A15		
ASTM C 535-16	Los Angeles Abrasion Resistance on Large Size Coarse Aggregate	A11		
ASTM C 566-13	Total Moisture Content	A16		
ASTM C 586-11	Alkali Reactivity of Carbonate Rocks (Rock Cylinder Method)	A17		
ASTM C 641-09	Staining Materials in Lightweight Aggregates	A18		
ASTM C 702-11	Reducing Samples to Testing Size	A19		
ASTM C 1105-08 (16)	Length Change Due to Alkali-Carbonate Reaction	A20		
ASTM C 1138-12	Abrasion Resistance of Concrete (Underwater Method)	A21		
ASTM C 1260-14	Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)	A22		
ASTM C 1293-08 (15)	Length Change Alkali-Silica Reaction	A23		
ASTM D 75-14	Sampling	A24		
ASTM D 546-10	Sieve Analysis of Mineral Filler	A25		
ASTM D 2419-14	Sand Equivalent Value	A26		
ASTM D 3744-11	Aggregate Durability Index	A27		
ASTM D 4791-10	Flat or Elongated Particles	A28		
ASTM D 5821-13	Percentage of Fractured Particles in Coarse Aggregate	A29		
CRD-C 104-80	Fineness Modulus	A4		
CRD-C 119-91	Flat and Elongated Particles	A28		
CRD-C 130-89	Scratch Hardness	A30		
CRD-C 171-94	Percentage of Crushed Particles in Aggregate	A31		

Bituminous Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by AMRL within the past two years.
If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure (ASTM D 3666-16)	No.	Check	AMRL
				Inspection
ASTM D 5-13	Penetration	B1		
ASTM D 36-14	Softening Point	B2		
ASTM D 70-17	Density of Semi-Solid Bituminous Mat'ls (Pycnometer Method)	B3		
ASTM D 139-16	Float Test	B4		
ASTM D 140-16	Sampling Bituminous Materials	B5		
ASTM D 243-14	Penetration Residue	B6		
ASTM D 244-09 (17)	Emulsified Asphalts	B7		
ASTM D 402-14	Distillation of Cut-Back Asphalts	B8		
ASTM D 979-15	Sampling Bituminous Paving Mixtures	B9		
ASTM D 1074-17	Compressive Strength	B10		
ASTM D 1075-11	Effect of Water on Compressive Strength	B11		
ASTM D 1188-07 (15)	Bulk Specific Gravity & Density Using Coated Samples	B12		
ASTM D 1461-17	Moisture or Volatile Distillates in Bituminous Paving Mixtures	B13		
ASTM D 1560-15	Resistance to Deformation & Cohesion by Hveem	B14		
ASTM D 1561-13	Preparation by CA Kneading Compactor	B15		
ASTM D 1754-09 (14)	Effect of Heat & Air by Thin Film Oven	B16		
ASTM D 1856-09 (15)	Recovery of Asphalt by Abson	B17		
ASTM D 2041-11	Theoretical Maximum Specific Gravity & Density (Rice)	B18		
ASTM D 2042-15	Solubility by Trichloroethylene	B19		
ASTM D 2170-10	Kinematic Viscosity	B20		
ASTM D 2171-10	Viscosity by Vacuum Capillary Viscometer	B21		
ASTM D 2172-17	Quantitative Extraction	B22		
ASTM D 2726-17	Bulk Specific Gravity and Density	B23		
ASTM D 2872-12	Effect of Heat & Air on Moving Film by Rolling Thin Film Oven	B24		
ASTM D 2950-14	Density of Bituminous Concrete in Place by Nuclear Methods	B25		
ASTM D 3142-17	Density of Liquid Asphalts by Hydrometer	B26		
ASTM D 3203-17	Percent Air Voids	B27		
ASTM D 3289-17	Density by Nickel Crucible	B28		
ASTM D 3665-12 (17)	Random Sampling of Construction Materials	B29		
ASTM D 4125-10 (16)	Asphalt Content by Nuclear Method	B30		
ASTM D 4867-09 (14)	Effect of Moisture	B31		
ASTM D 5404-12 (17)	Asphalt Recovery by Rotary Evaporator	B32		
ASTM D 5444-15	Mechanical Size Analysis of Extracted Aggregate	B33		
ASTM D 6307-16	Asphalt Content of Hot-Mix Asphalt by Ignition Method	B34		
ASTM D 6925-15	Relative Density of Asphalts by Superpave Gyratory Compactor	B35		
ASTM D 6926-16	Preparation of Bituminous Specimens using Marshall	B36		
ASTM D 6927-15	Marshall Stability and Flow of Bituminous Mixtures	B37		
CRD-C 650-95	Density and Percent Voids	B38		

Concrete Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by CCRL within the past two years.

If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure	No.	Check	CCRL
	REQUIRED TESTS PER ASTM C 1077-16			Inspection
ASTM C 31-15	Making and Curing Test Specimens in the Field	C1		
ASTM C 39-17	Compressive Strength of Cylindrical Specimens	C2		
ASTM C 138-17	Unit Weight and Air Content by Gravimetric	C3		
ASTM C 143-15	Slump	C4		
ASTM C 172-14	Sampling	C5		
ASTM C 173-16	Air Content by Volumetric ***required if C231 not performed***	C6		
ASTM C 231-17	Air Content by Pressure ***required if C173 not performed***	C7		
ASTM C 1064-12	Temperature of Concrete	C8		
	OPTIONAL TESTS PER ASTM C 1077-16			
ASTM C 42-16	Drilled Cores and Sawed Beams	C9		
ASTM C 78-16	Flexural Strength by Third Point Loading	C10		
ASTM C 157-08 (14)	Length Change of Concrete and Mortars	C11		
ASTM C 174-17	Concrete Thickness by Drilled Cores	C12		
ASTM C 192-16	Making and Curing Test Specimens in Laboratory	C13		
ASTM C 215-14	Fundamental Frequencies of Concrete	C14		
ASTM C 232-14	Bleeding of Concrete	C15		
ASTM C 293-16	Flexural Strength by Center Point Loading	C16		
ASTM C 341-13	Length Change of Drilled or Sawed Concrete	C17		
ASTM C 403-16	Time of Setting by Penetration Resistance	C18		
ASTM C 418-12	Abrasion Resistance by Sand Blasting	C19		
ASTM C 457-16	Air-Void System by Microscopic Determination	C20		
ASTM C 469-14	Static Modulus of Elasticity and Poisson's Ratio	C21		
ASTM C 470-15	Molds for Forming Concrete Test Cylinders Vertically	C22		
ASTM C 490-17	Apparatus for Length Change of Cement Paste, Mortar, & Concrete	C23		
ASTM C 495-12	Compressive Strength of Lightweight Insulating Concrete	C24		
ASTM C 496-11	Splitting Tensile Strength	C25		
ASTM C 511-13	Moist Cabinets, Moist Rooms, Water Storage Tanks	C26		
ASTM C 512-15	Creep of Concrete in Compression	C27		
ASTM C 567-14	Unit Mass of Structural Lightweight Concrete	C28		
ASTM C 597-16	Pulse Velocity Through Concrete	C29		
ASTM C 617-15	Capping Cylindrical Specimens	C30		
ASTM C 642-13	Density, Absorption, and Voids	C31		
ASTM C 666-15	Freezing & Thawing Concrete Specimens	C32		
ASTM C 672-12	Scaling Resistance by Deicing Chemicals	C33		
ASTM C 779-12	Abrasion Resistance of Horizontal Surfaces	C34		
ASTM C 803-17	Penetration Resistance of Hardened Concrete	C35		
ASTM C 805-13	Rebound Number of Hardened Concrete	C36		
ASTM C 823-12 (17)	Examination and Sampling Hardened Concrete in Construction	C37		

Concrete Inspection Checklist Continued

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by CCRL within the past two years.

If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	OPTIONAL TESTS PER ASTM C 1077-16	No.	Check	CCRL
ASTM C 856-17	Petrographic Examination of Hardened Concrete	C38		Inspection
ASTM C 873-15	Compressive Strength of Cast in Place Cylinders	C39		
ASTM C 876-15	Half-Cell Potentials of Uncoated Reinforcing Steel	C40		
ASTM C 900-15	Concrete Pullout Strength	C41		
ASTM C 918-13	Early Age Compression Test	C42		
ASTM C 944-12	Abrasion Resistance by Rotating-Cutter Method	C43		
ASTM C 1040- 16	Density of Concrete by Nuclear Method	C44		
ASTM C 1074-11	Estimating Concrete Strength by Maturity Method	C45		
ASTM C 1084-10	Portland Cement Content of Hardened Concrete	C46		
ASTM C 1152-04 (12)	Acid-Soluble Chloride in Concrete	C47		
ASTM C 1202-12	Electrical Indication of Concrete to Resist Chloride Ion	C48		
ASTM C 1218-17	Water-Soluble Chloride in Concrete	C49		
ASTM C 1231-15	Unbonded Caps	C50		
CRD-C 114-97	Soundness by Freezing and Thawing of Concrete	C51		

What is the capacity of the compression testing machine(s)? _____

How many ranges are associated with the test machine(s)? _____

Masonry Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by AMRL or CCRL within the past two years.

If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure (ASTM C 1093-15)	No.	Check	CCRL
				Inspection
ASTM C 109-16	Compressive Strength of Cement Mortars Using Cube Specimens	M1		
ASTM C 140-17	Sampling and Testing Concrete Masonry and Related Units	M2		
ASTM 151-16	Autoclave Expansion of Portland Cement	M3		
ASTM C 185-15	Air Content of Hydraulic Cement Mortar	M4		
ASTM C 187-16	Normal Consistency of Hydraulic Cement	M5		
ASTM C 266-15	Time of Setting of Hydraulic-Cement Paste by Gillmore Needles	M6		
ASTM C 305-14	Mechanical Mixing of Cement Pastes & Mortars of Plastic Consistency	M7		
ASTM C 780-17	Evaluation of Mortars for Plain and Reinforced Unit Masonry	M8		
ASTM C 1019-18	Sampling and Testing Grout	M9		

Rock Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by AMRL or CCRL within the past two years.

If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure (ASTM D 3740-12)	No.	Check	AMRL/CCRL Inspection
ASTM D 3967-16	Tensile Strength, Splitting (Brazilian) Method	R1		
ASTM D 4435-13	Rock Bolt Anchor Pull Test	R2		
ASTM D 4543-08	Preparing Rock Core Specimens and Determining Tolerances	R3		
ASTM D 4644-16	Slake Durability of Shales and Weak Rocks	R4		
ASTM D 5312-12 (13)	Durability of Rock to Freezing and Thawing	R5		
ASTM D 5313-12 (13)	Durability of Rock to Wetting and Drying	R6		
ASTM D 5607-16	Laboratory direct Shear Tests on Rock Under Constant Normal	R7		
ASTM D 5731-16	Point Load Index	R8		
ASTM D 5878-08	Rock-Mass Classification for Engineering Purposes	R9		
ASTM D 7012-14	Compressive Strength & Elastic Moduli of Rock Core Specimens	R10		
CRD-C 144-92	Resistance of Rock to Freezing and Thawing	R5		
CRD-C 148-69	Expansive Breakdown on Soaking in Ethylene Glycol	R12		
CRD-C 169-97	Resistance of Rock to Wetting and Drying	R6		

Soils Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by AMRL within the past two years.

If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure (ASTM D 3740-12)	No.	Check	AMRL
				Inspection
ASTM D 421-85 (07)	Dry Preparation for Particle Size Distribution & Soil Constants	S1		
ASTM D 422-63 (07)	Particle Size Analysis	S2		
ASTM D 558-11	Moisture-Density of Soil-Cement	S3		
ASTM D 559-15	Wetting & Drying Soil-Cement	S4		
ASTM D 560-16	Freezing & Thawing Soil-Cement	S5		
ASTM D 698-12	Compaction Characteristics by Standard Effort	S6		
ASTM D 854-14	Specific Gravity of Soils	S7		
ASTM D 1140-17	Material Finer than 75 :m (No. 200) Sieve	S8		
ASTM D 1556-15	Density & Unit Weight by Sand Cone	S9		
ASTM D 1557-12	Compaction Characteristics by Modified Effort	S10		
ASTM D 1883-16	CA Bearing Ratio (CBR)	S11		
ASTM D 2166-16	Unconfined Compressive Strength	S12		
ASTM D 2167-15	Density & Unit Weight by Rubber Balloon	S13		
ASTM D 2168-10	Calibration of Laboratory Mechanical-Rammer Soil Compactors	S14		
ASTM D 2216-10	Water Content	S15		
ASTM D 2435-11	One-Dimensional Consolidation Properties	S16		
ASTM D 2487-11	Classification of Soils	S17		
ASTM D 2488-17	Description & Identification of Soils (Visual-Manual Procedure)	S18		
ASTM D 2850-15	Unconsolidated, Undrained Strength in Triaxial Compression	S19		
ASTM D 2937-17	Density by Drive Cylinder Method	S20		
ASTM D 2974-14	Moisture, Ash, & Organic Matter of Peat & Other Organic Soils	S21		
ASTM D 3080-11	Direct Shear Test in Consolidated Drained Conditions	S22		
ASTM D 4220-14	Preserving & Transporting Samples	S23		
ASTM D 4253-16	Maximum Index Density by Vibratory Table	S24		
ASTM D 4254-16	Minimum Index Density	S23		
ASTM D 4318-17	Liquid & Plastic Limits & Plasticity Index	S26		
ASTM D 4546-14	One-Dimensional Swell or Settlement Potential	S27		
ASTM D 4643-17	Determination of Water Content of Soil by Microwave Oven	S28		
ASTM D 4767-11	Consolidated-Undrained Triaxial Compression	S29		
ASTM D 5084-16	Hydraulic Conductivity using a Flexible Wall Permeameter	S30		
ASTM D 6913-03 (09)	Particle-Size Distribution of Soils Using Sieve Analysis	S31		
ASTM D 6938-17	Density and Water Content by Shallow Depth Nuclear Method	S32		