DATE : _____ **NVLAP LAB CODE:** _____

CONSTRUCTION MATERIALS TESTING
TEST METHOD SELECTION LIST

Instructions: Check each test method for which you are requesting accreditation.

	NVLAP Code	*Test Method Designation*	*Short Title*
ADMIXTURES			
_____	02/A35	ASTM C233	Testing Air-Entraining Admixtures for Concrete
_____	02/A36	ASTM C311	Sampling and Testing Fly Ash or Natural Pozzolans for Use as a Mineral Admixture in Portland Cement Concrete
_____	02/A37	ASTM C441	Effectiveness of Mineral Admixtures in Preventing Excessive Expansion of Concrete Due to the Alkali-Aggregate Reactions
AGGREGATES			
_____	02/A03	ASTM C29	Unit Weight and Voids in Aggregates
_____	02/A04	ASTM C40	Organic Impurities in Fine Aggregate
_____	02/A05	ASTM C87	Effect of Organic Impurities in Fine Aggregates on Strength of Mortar
_____	02/A06	ASTM C88	Soundness of Aggregates by Use of Sodium Sulfate
_____	02/A07	ASTM C117	Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
_____	02/A08	ASTM C123	Lightweight Pieces in Aggregate
_____	02/A09	ASTM C127	Specific Gravity and Absorption of Coarse Aggregate
_____	02/A10	ASTM C128	Specific Gravity and Absorption of Fine Aggregate
_____	02/A11	ASTM C131	Resistance to Degradation of Small-Size Coarse Aggregate in the Los Angeles Machine
_____	02/A12	ASTM C136	Sieve Analysis of Fine and Coarse Aggregates
_____	02/A13	ASTM C142	Clay Lumps and Friable Particles in Aggregates
_____	02/A14	ASTM C289	Reactivity of Aggregates (Chemical Method)
_____	02/A15	ASTM D75	Practice for Sampling Aggregates
_____	02/A16	ASTM D2419	Sand Equivalent Value of Soils and Fine Aggregate
_____	02/A44	ASTM C566	Total Moisture Content of Aggregate by Drying

_____ 02/A46	ASTM C535	Resistance to Degradation of Large-Size Coarse Aggregate in the Los Angeles Machine
_____ 02/A57	ASTM D3744	Aggregate Durability Index

CEMENT

_____ 02/A17	ASTM C109	Compressive Strength of Hydraulic Cement
_____ 02/A18	ASTM C114	Chemical Analysis of Hydraulic Cement
_____ 02/A19	ASTM C115	Fineness of Portland Cement by the Turbidimeter
_____ 02/A20	ASTM C151	Autoclave Expansion of Portland Cement
_____ 02/A21	ASTM C157	Length Change of Hardened Cement Mortar and Concrete
_____ 02/A22	ASTM C183	Sampling and Acceptance of Hydraulic Cement
_____ 02/A23	ASTM C185	Air Content of Hydraulic Cement Mortar
_____ 02/A24	ASTM C186	Heat of Hydration of Hydraulic Cement
_____ 02/A25	ASTM C188	Density of Hydraulic Cement
_____ 02/A26	ASTM C191	Time of Setting of Hydraulic Cement by Vicat Needle
_____ 02/A27	ASTM C204	Fineness of Portland Cement by Air Permeability Apparatus
_____ 02/A28	ASTM C227	Alkali Reactivity of Cement-Aggregate Combinations (Mortar Bar Method)
_____ 02/A29	ASTM C265	Calcium Sulfate in Hydrated Portland Cement Mortar
_____ 02/A30	ASTM C266	Time of Setting of Hydraulic Cement by Gillmore Needles
_____ 02/A31	ASTM C305	Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency
_____ 02/A32	ASTM C430	Fineness of Hydraulic Cement by the 45-µm (No. 325) Sieve
_____ 02/A33	ASTM C451	Early Stiffening of Portland Cement (Paste Method)
_____ 02/A34	ASTM C452	Potential Expansion of Portland Cement Mortars Exposed to Sulfate
_____ 02/A51	ASTM C780 (Annex A7)	Compressive Strength of Molded Masonry Mortar Cylinders and Cubes
_____ 02/A52	ASTM C1019	Sampling and Testing Grout

CONCRETE

_____	02/A01	ASTM C39	Compressive Strength of Cylindrical Specimens
_____	02/A02	ASTM C617	Capping Cylindrical Specimens
_____	02/A40	ASTM C78	Flexural Strength of Concrete – Simple Beam with Third Point Loading
_____	02/A41	ASTM C192	Making and Curing Concrete Specimens in the Laboratory (requires C173, C231, C138, C143, C136, C127, C128, C566, C1064, C29, C40, C117)
_____	02/A43	ASTM C1064	Temperature of Freshly Mixed Portland Cement Concrete
_____	02/A45	ASTM C42	Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
_____	02/A47	ASTM C457	Air-Void Content of Hardened Concrete
_____	02/A48	ASTM C856	Petrographic Examination of Hardened Concrete
_____	02/A53	ASTM C1231	Determination of Compressive Strength of Hardened Concrete Using Unbonded Caps
_____	02/A54	ASTM C666	Resistance of Concrete to Rapid Freezing and Thawing
_____	02/A55	ASTM C140	Sampling and Testing Concrete Masonry Units and Related Units
_____	02/A56	ASTM C1314	Compressive Strength Of Masonry Prisms
_____	02/G01*	ASTM C31 ASTM C172 ASTM C143 ASTM C138 ASTM C231	Making and Curing Test Specimens Sampling Freshly Mixed Concrete Slump of Portland Cement Concrete Unit Weight, Yield and Air Content Air Content-Pressure Method

**Note: 02/G01 is only available for accreditation as a group.*

_____	02/G02	ASTM C173	Air Content-Volumetric Method

GEOTEXTILES

_____	02/L28	ASTM D4354	Sampling of Geosynthetics for Testing
_____	02/L33	ASTM D4632	Breaking Load and Elongation
_____	02/L34	ASTM D3884	Abrasion Resistance
_____	02/L35	ASTM D4886	Abrasion Resistance (Modified Method)
_____	02/L36	ASTM D4533	Trapezoid Tearing Strength
_____	02/L37	ASTM D4884	Seam Strength of Sewn Geotextiles

_____	02/L38	ASTM D792	Specific Gravity
_____	02/L39	ASTM D4491	Water Permeability
_____	02/L40	ASTM D4716	Constant Head Hydraulic Transmissivity
_____	02/L41	ASTM D4751	Determining Apparent Opening Size
_____	02/L42	ASTM D1777	Measuring Thickness of Textiles
_____	02/L43	ASTM D4437	Determining the Integrity of Field Seams
_____	02/L44	ASTM D638	Tensile Properties of Plastic
_____	02/L45	ASTM D4595	Tensile Properties by Wide-Width Strip
_____	02/L48	ASTM D5321	Determining the Coefficient of Soil and Geosynthetic or Geosynthetic and Geosynthetic Friction by the Direct Shear Method
_____	02/L49	ASTM D6243	Determining the Internal and Interface Shear Resistance of Geosynthetic Clay Liner by Direct Shear Method

ROAD AND PAVING MATERIALS

_____	02/M01	ASTM D5	Penetration of Bituminous Materials
_____	02/M02	ASTM D113	Ductility of Bituminous Materials
_____	02/M03	ASTM D140	Sampling Bituminous Materials
_____	02/M04	ASTM D243	Residue of Specified Penetration
_____	02/M05	ASTM D244	Testing Emulsified Asphalts
_____	02/M06	ASTM D402	Distillation of Cut-Back Asphaltic Products
_____	02/M07	ASTM D546	Sieve Analysis of Mineral Filler
_____	02/M08	ASTM D979	Sampling Bituminous Paving Mixtures
_____	02/M09	ASTM D1074	Compressive Strength of Bituminous Mixtures
_____	02/M10	ASTM D1075	Effect of Water on Cohesion of Compacted Mixes
_____	02/M11	ASTM D1188	Bulk Specific Gravity of Compacted Bituminous Mixtures Using Paraffin-Coated Specimens
_____	02/M12	ASTM D1559	Resistance to Plastic Flow – Marshall Apparatus
_____	02/M13	ASTM D1560	Resistance to Deformation and Cohesion by Means of Hveem Apparatus
_____	02/M14	ASTM D1561	Preparation of Specimens – California Kneading Compactor

_____ 02/M15	ASTM D1856	Recovery of Asphalt by the Abson Method
_____ 02/M16	ASTM D2042	Solubility of Asphalt Material in Trichlorethylene
_____ 02/M17	ASTM D2170	Kinematic Viscosity of Asphalts
_____ 02/M18	ASTM D2171	Viscosity of Asphalts by Vacuum Capillary
_____ 02/M19	ASTM D2172	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
_____ 02/M20	ASTM D2872	Effect of Heat and Air on a Moving Film of Asphalt (Rolling Thin Film Oven Test)
_____ 02/M21	ASTM D3142	Specific Gravity or API Gravity of Liquid Asphalts by Hydrometer Method
_____ 02/M22	ASTM D3143	Flash Point of Cutback Asphalt with Tag Open Cup Apparatus
_____ 02/M23	ASTM D3289	Specific Gravity or Density of Semi-Solid and Solid Bituminous Materials by Nickel Crucible
_____ 02/M24	ASTM D2041	Theoretical Maximum Density (Rice Method)
_____ 02/M25	ASTM D2726	Bulk Density of Cores (SSD)
_____ 02/M27	ASTM D6307	Asphalt Content of Hot-Mix Asphalt by Ignition Method
_____ 02/M30	ASTM D6927	Marshall Stability and Flow of Bituminous Mixtures
_____ 02/M31	ASTM D6925	Preparation and Determination of the Relative Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor
_____ 02/M33	ASTM D2950	Density of Bituminous Concrete in Place by Nuclear Methods

SOIL AND ROCK

_____ 02/L01	ASTM D4220	Preserving and Transporting Soil Samples
_____ 02/L02	ASTM D422	Particle Size Analysis of Soils
_____ 02/L03	ASTM D427	Shrinkage Factors of Soils
_____ 02/L04	ASTM D698	Moisture Density Relations of Soils and Soil-Aggregate Mixtures Using 5.5-lb Rammer and 12-inch Drop
_____ 02/L05	ASTM D854	Specific Gravity of Soils
_____ 02/L06	ASTM D1140	Amount of Material in Soils Finer Than the #200 Sieve
_____ 02/L07	ASTM D1556	Density of Soil by the Sand Cone Method
_____ 02/L08	ASTM D1557	Moisture Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb Rammer and 18-inch Drop

_____ 02/L09	ASTM D1558	Moisture Content Penetration Resistance Relations of Fine Grained Soils
_____ 02/L10	ASTM D1883	Bearing Ratio of Laboratory Compacted Soils
_____ 02/L11	ASTM D2166	Unconfined Compressive Strength of Cohesive Soil
_____ 02/L12	ASTM D2168	Calibration of Laboratory Mechanical Rammer Soil Compactors
_____ 02/L13	ASTM D2216	Determination of Water (Moisture) Content of Soil, Rock, and Soil-Aggregate Mixtures
_____ 02/L14	ASTM D2217	Wet Preparation of Soil Samples for Particle Size Analysis and Determination of Soil Constants
_____ 02/L15	ASTM D2435	One-Dimensional Consolidation Properties of Soils
_____ 02/L16	ASTM D2487	Classification of Soils for Engineering Purposes
_____ 02/L17	ASTM D2488	Description and Identification of Soils (Visual-Manual)
_____ 02/L18	ASTM D3080	Direct Shear Tests of Soils Under Consolidated Drained Conditions
_____ 02/L19	ASTM D4254	Minimum Index Density of Soils and Calculation of Relative Density
_____ 02/L20	ASTM D4318	Liquid Limit, Plastic Limit, and Plasticity Index of Soils
_____ 02/L21	ASTM D2434	Permeability of Granular Soils (Constant Head)
_____ 02/L22	ASTM D2850	Unconsolidated, Undrained Strength of Cohesive Soils in Triaxial Compression
_____ 02/L24	ASTM D2974	Moisture, Ash, and Organic Matter of Peat Material
_____ 02/L26	ASTM D4221	Dispersive Characteristics of Clay Soil by Double Hydrometer
_____ 02/L27	ASTM D4253	Max. Index Density of Soils - Vibratory Table
_____ 02/L29	Corps of Engineers	Manual EM-1110-2-1906, Appendix VII, Permeability of Fine Grained Soils Using a Triaxial Apparatus
_____ 02/L30	Corps of Engineers	Manual EM-1110-2-1906, Appendix X, Consolidated Undrained and Consolidated Drained Triaxial Test
_____ 02/L31	ASTM D2167	Density of Soil in Place by the Rubber Balloon Method
_____ 02/L46	ASTM D5084	Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter
_____ 02/L47	ASTM D2844	Resistance *R*-Value and Expansion Pressure of Compacted Soils

_____ 02/L53	ASTM D3967	Splitting Tensile Strength of Intact Rock Core Specimens
_____ 02/L54	ASTM D4543	Preparing Rock Core Specimens and Determining Dimensional and Shape Tolerances
_____ 02/L56	ASTM D5607	Performing Laboratory Direct Shear Strength Tests of Rock Specimens Under Constant Normal Force
_____ 02/L57	ASTM D4644	Slake Durability of Shales and Similar Weak Rocks
_____ 02/L58	ASTM D4648	Laboratory Miniature Vane Shear Test for Saturated Fine-Grained Clayey Soil
_____ 02/L60	ASTM D6938	In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
_____ 02/L61	ASTM D7012	Compressive Strength and Elastic Moduli of Intact Rock Core Specimens Under Varying States of Stress and Temperatures
_____ 02/L62	ASTM D5334	Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure
_____ 02/L63	ASTM D421	Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants

STANDARD PRACTICES AND SPECIFICATIONS

NVLAP will indicate that a laboratory complies with the following standard practices and specifications if: (a) accreditation is granted for all test methods required by the standard practice or specification, and (b) all conditions and requirements stated in the standard practice or specification are complied with. Applicants must be aware that some of these standards require that a professional engineer be in charge of the laboratory, and that performance of a minimum set of test methods is required.

_____ 02/A38	ASTM E329	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction
_____ 02/A39	ASTM C1077	Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation (requires ASTM C31, C39, C40, C117, C127, C128, C136, C138, C143, C172, C173)
_____ 02/A49	ASTM C1222	Standard Practice for Evaluation of Laboratories Testing Hydraulic Cement
_____ 02/A50	ASTM C1093	Standard Practice for the Accreditation of Testing Agencies for Unit Masonry
_____ 02/L32	ASTM D3740	Standard Practice for Minimum Requirement for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction

_____ 02/L59	ASTM D4718	Standard Practice for Correction of Unit Weight and Water Content for Soils Containing Oversize Particles
_____ 02/M26	ASTM D3666	Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Bituminous Paving Materials
_____ 02/M28	ASTM E1816	Standard Practice for Ultrasonic Examinations Using Electromagnetic Acoustic Transducer (EMAT) Techniques
_____ 02/M29	ASTM D6926	Standard Practice for Preparation of Bituminous Specimens Using the Marshall Apparatus
_____ 02/M32	ASTM D5404	Standard Practice for Recovery of Asphalt from Solution Using the Rotary Evaporator
_____ 02/S07	ASTM E709	Standard Recommended Practice for Magnetic Particle Examination
_____ 02/S08	ASTM E165	Standard Recommended Practice for Liquid Penetrant Inspection Method

STEEL MATERIALS

_____ 02/S01	ASTM A370 (Sec. 5-13)/E8	Tension Test - Steel Products
_____ 02/S02	ASTM A370 (Sec. 14)/E190	Guided Bend Test for Ductility of Welds - Steel Products
_____ 02/S03	ASTM A370 (Sec. 14)/E290	Semi-Guided Bend Test for Ductility - Steel Products
_____ 02/S04	ASTM A370 (Sec. 15-16)/E10	Brinnell Hardness - Steel Products
_____ 02/S05	ASTM A370 (Sec. 18)/E18	Rockwell Hardness - Steel Products
_____ 02/S06	ASTM A370 (Sec. 18-23)/E18	Charpy Impact Testing - Steel Products
_____ 02/S09	AWS D1.1, Sec. 6, Part E	Structural Welding Code-Steel: Sec. 6, Part E, Radiographic Testing
_____ 02/S10	AWS D1.1, Sec. 6, Part F	Structural Welding Code-Steel: Sec. 6, Part F, Ultrasonic Testing

DATE : NVLAP LAB CODE:

CONSTRUCTION MATERIALS TESTING
PROFICIENCY TESTING INSTRUCTIONS

Laboratories seeking accreditation for Cement, Concrete, Aggregates, Soil, or Bituminous testing are required to participate in the CCRL/AMRL proficiency sample programs. Individual participation in these programs is determined by the scope of accreditation desired. For example, laboratories applying for accreditation for Concrete testing only, will need to participate only in the Concrete sample program. Those applying for accreditation for Cement, Concrete, Aggregates, Soil, and Bituminous testing will need to participate in all five of these programs.

The proficiency sample program involves testing a sample of material in accordance with the standard test methods specified. The test results are returned for statistical analysis. Group values such as the average, the standard deviation, and the coefficient of variation are determined. Individual results are then compared with the group values and a rating for the specific test is assigned. The proficiency test results can be used for self-evaluation as well as review by NVLAP.

The CCRL/AMRL proficiency sample programs are independent programs and are not affiliated with NVLAP. To participate in the CCRL/AMRL programs, please contact the programs directly for enrollment request forms and payment information:

CCRL, 301-975-6704, www.ccrl.us

AMRL, 301-975-5450, www.amrl.net

Select the sample programs most applicable to the test methods for which accreditation is being requested. Once a laboratory is enrolled, it will be automatically invoiced by CCRL/AMRL before the next proficiency testing round is sent out. To ensure continuing participation, the annual invoice must be paid by the due date noted on the invoice.

For NVLAP new applicant laboratories: New applicant laboratories are required to complete and return the Proficiency Testing Release form (see next page) as part of the initial application. The release form allows CCRL/AMRL to provide NVLAP with access to the proficiency testing results for review.

For NVLAP-accredited laboratories seeking renewal: Renewal applicant laboratories are not required to complete the the Proficiency Testing Release form with each renewal application.

DATE : | **NVLAP LAB CODE:**

CONSTRUCTION MATERIALS TESTING
PROFICIENCY TESTING RELEASE

_____
(Date)

MEMORANDUM FOR Steven Lenker, P.E.
CCRL/AMRL

From: Laboratory Name: _____

Street Address: _____

P. O. Box: _____

City, State, Zip: _____

NVLAP Lab Code: _____

Authorized Representative _____
(Signature)

Subject: Release of CCRL/AMRL Proficiency Sample Reports to the National Voluntary Laboratory Accreditation Program (NVLAP)

Permission is given for the Cement and Concrete Reference Laboratory (CCRL) and the AASHTO Materials Reference Laboratory (AMRL) to release our laboratory's proficiency sample program results to NVLAP, for use in the evaluation process for accreditation. These results fulfill the relevant requirements for NVLAP proficiency testing for the appropriate testing field(s) under the Construction Materials Testing laboratory accreditation program.

This release remains in effect as long as this laboratory participates in the NVLAP program.

Reports from the following proficiency sample programs may be released to NVLAP:

PROFICIENCY TESTING

	CCRL	**AMRL**			
[ ]	Concrete	[ ]	Hot Mix Asphalt Solvent Extraction	[ ]	Coarse Aggregate
[ ]	C 270 Masonry Mortar	[ ]	Hot Mix Asphalt Ignition Oven	[ ]	Fine Aggregate
[ ]	Concrete Masonry Units	[ ]	Hot Mix Asphalt Hveem Design	[ ]	Soil Classification and Compaction
		[ ]	Hot Mix Asphalt Marshall Design	[ ]	Soil Resistance R-Value
				[ ]	Soil California Bearing Ratio (CBR)

Return to: Beth Hackett, NIST/NVLAP, 100 Bureau Drive, Stop 2140, Gaithersburg, MD 20899-2140; e-mail <bethany.hackett@nist.gov>.