

JAMES G. MCCANTS III (TREY)

Testing, Consulting & Engineering Services Inc.

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EDUCATION

Bachelor of Science, Chemistry – Clemson University

2006

CERTIFICATIONS

American Concrete Institute Laboratory Technician Level I
American Concrete Institute Laboratory Technician Level II
American Concrete Institute Strength Testing Technician
American Concrete Institute Aggregate Testing Technician Level I
American Concrete Institute Aggregate Testing Technician Level II
American Concrete Institute Field Testing Technician
American Concrete Institute/CRSI Adhesive Anchor Installer

PROFESSIONAL AFFILIATIONS

Member of the American Chemical Society (ACS)

Member of American Concrete Institute (ACI)

Member of the American Society for Testing and Materials (ASTM)

Committee C01	Cement, Lime Gypsum	
Committee C09	Concrete and Concrete Aggregates	
Committee C09.22	Materials applied to New Concrete Surfaces	
Committee C09.23	Chemical Admixtures	
Committee C09.25	Organic Bonding Materials	Chairman 2017 – Present
Committee C09.42	Fiber-Reinforced Concrete	Chairman 2011 – Present
ASTM C1609	Flexural Performance	Chairman 2009 – Present
Committee C09.43	Section on Self Leveling Materials	
Committee C09.43	Sections C381, C928, C1107	
Committee C09.46	Shotcrete	
Committee C09.62	Abrasion Testing	
Committee F08.18	Treestands	Secretary 2016 - Present

Fiber Reinforced Concrete Association (FRCA)

Boy Scouts of America – Eagle Scout

PROFESSIONAL EXPERIENCE

TESTING, CONSULTING & ENGINEERING SERVICES – Lawrenceville,
GA *Chemist, Laboratory Manager – Construction Materials*

2006-Present

Performs physical and analytical testing of concrete, cement, pozzolans, aggregates, pozzolans, admixtures, epoxies, coatings, metals, and other construction materials in accordance with the required ASTM and AASHTO guidelines. Manages and trains technicians in the laboratory and field testing; hiring of new technicians. Charged with maintaining client relations, marketing, managing multiple high profile projects, and cost estimates. Laboratory is AASHTO R18, ISO 17025, and Army Corp of Engineers accredited.

Performs tension/compression testing using servo-controlled, hydraulic closed looped Instron system
Test procedure design for Instron systems, Fabrication of testing apparatuses and systems. Utilization of linear variable displacement transducers, extensometers, and strain gauges. Research, design, and development in construction materials

AMERICAN CONCRETE INSTITUTE (ACI) – Georgia
Examiner

2006-Present

Laboratory Technician Grade I & II, Aggregate Technician Level I & II, Strength Technician, Field Technician, Adhesive Anchor Installer

AREAS OF TECHNICAL EXPERIENCE

Non-Destructive/Chemical Analysis

Impact Echo, Pulse Velocity, Ultrasonic Thickness, Microscopic Analysis, Spectrophotometry, UV-VIS, Titrations, Conductivity, FTIR, XRF, OES Spectroscopy

Metals/Anchors/Plastics/Thermoplastics

Mechanical Properties, Shear, Flexural, Tensile, Direct Tensile Embedment, Strain Gages, Field data acquisition systems, PT Cable Tension Tests, Anchor Systems Testing, Creep Testing, Rebar

Coatings/Epoxies/Sealants

Epoxy based, Organic, Thermal Insulating, Stucco, Polymer, Wax Emulsions, MMA, Urethanes, Fiber Reinforced Polymer Wrap, Waterproofing Membranes, Elastomerics, Sealants, Color Analysis, Flash Point, UV activated, Adhesive anchors, Paints, Sealers, EIFS Systems

Aggregates

Lightweight, normal, and heavy weight, fine, ASR, dimension stone

Admixtures

Experience utilizing and designing with all types of admixtures A through F, Viscosity Modifiers, Shrinkage reducing, Lithium, ASR Reducing, Redispersible Polymers, Latex, Dry Admixtures, Corrosion Inhibitors, Anti-Washout

Cements/Supplementary Materials

Slag, Fly Ash, Metakaolin, Portland, Calcium Aluminates, Calcium Carbonate, Glass, Masonry Cements, Sulphoaluminates, Wollastonite

Concrete Mix Design/Optimization

Tertiary concrete mix design experience utilizing numerous admixtures, Slabs on Grade, Pavement, Latex Concrete– Polymer Modified, Fiber Reinforced Concrete, Shotcrete, Pre-Cast, GFRC, Lightweight/Cellular, Calcium Aluminate Concrete, Overlays, EPS Foam Coats, Stone Veneer, Roller Compacted, Pervious, Thermal Mass Concrete, Blast containment

Fiber Reinforcement – Chair of ASTM C09.42 Subcommittee on Fiber Reinforced Concrete

Macro/Micro Synthetic, Steel, Glass, Carbon, Blast Containment, Extensive work in evaluation of technical data and design of FRC and Shotcrete, Textile Tensile, Residual Analysis

Repair Products/Mortars

Product Design, Self-Leveling Underlayments, Rapid Setting Patch Materials, Non-Shrink Grouts, Masonry Mortars, Extensive experience with DOT/ASHTTO requirements

Products Testing

Tools, Hardware, Webbing, Fall Arrest Harnesses, Treestands, Septic Tanks, Roof Panels, Encased Pipe Sections, Ladder Safety Devices, Manhole Covers, Shelf Load Tests, Full-Scale Load Tests

Trade Skills

Data acquisition systems, Electronics, Hydraulics, Machining (mill/lathe), Welding, Carpentry, Mechanics, Plumbing

TECHNICAL PROJECTS

U.S. Dept of Energy, Wind Turbines
U.S. Embassy, Gabon, Africa
NY Eastside Access Project
NY Eastside Access Project
NY 86th Street Station
NY 2nd Avenue Subway
NY No. 7 Line
NY Freedom Towers
NY Brooklyn Bridge Overlay
Dulles Corridor Tunnel, Virginia
Lake Mead Tunnel, Las Vegas, NV
South River Tunnel, Atlanta, GA
South Cobb Tunnel, Atlanta, GA
Niagara Falls Tunnel Project
Euclid Creek Tunnel, Cleveland, OH
Mercedes Benz Plant, Birmingham, AL
Volkswagen Plant, Chattanooga, TN
Bridgestone Plant, Aiken, SC
Botanical Gardens Scaffold Collapse, Atlanta, GA
Digester Tank Collapse, City of Atlanta, GA
Power Facility – Turbine Blast Containment, TN
Bridgestone Plant, Aiken, SC
Blue Plains Tunnel, MD

FRC Foundation Design and System Evaluation
Concrete Mix Design and Testing
Shotcrete Mix Design and QA Testing
Shotcrete Failure Analysis
Shotcrete QA
Cast in Place FRC Mix Pre-Construction Testing
Shotcrete QA
Preconstruction Testing
Preconstruction Design & Testing
Shotcrete Mix Design and QA Testing
Shotcrete Evaluation and QA Testing
Shotcrete Evaluation and QA Testing
Shotcrete Evaluation and QA Testing
Cast in Place FRC Mix Pre-Construction Testing
Precast FRC Tunnel Segments
Preconstruction Mix Design Evaluation - FRC
Preconstruction Mix Design Evaluation – FRC
Preconstruction Mix Design Evaluation – FRC
Metals Evaluation for OSHA
Metals Evaluation
FRC Pre-Construction QA Testing
Preconstruction Testing and QA Testing – FRC
Precast FRC Tunnel Segments