

# **JAMES G. MCCANTS III (TREY)**

Testing, Engineering & Consulting Services Inc.

235 Buford Drive

Lawrenceville, GA 30045

Phone: 678-878-9253

Email: james.mccants@sgs.com

---

## **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	<b>Chairman 2017 – Present</b>
Committee C09.42	Fiber-Reinforced Concrete	<b>Chairman 2011 – 2017</b>
ASTM C1609	Flexural Performance	<b>Chairman 2009 – Present</b>
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	<b>Secretary 2016 – Present</b>
COS	Committee on Standards	<b>Member 2020 - Present</b>

Fiber Reinforced Concrete Association (FRCA)

Boy Scouts of America – Eagle Scout

## **PROFESSIONAL EXPERIENCE**

**TESTING, ENGINEERING & CONSULTING SERVICES – Lawrenceville, GA      2006-Present**

***Chemist, Laboratory Manager – Construction Materials***

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**

**2006-Present**

***Examiner***

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/Chemical 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 86<sup>th</sup> Street Station  
NY 2<sup>nd</sup> 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  
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  
Precast FRC Tunnel Segments