

## **Materials Engineer – Additive Construction (3D Concrete Printing)**

Requires travel to various project locations.

**Supervised By:** Director of Innovation & Technology

**Position Type:** Full-Time

### **About FMGI**

FMGI is transforming the delivery of retail and commercial buildings through advanced construction automation. Our work brings together robotics, large-scale 3D-printed concrete, advanced cement chemistry, and high-efficiency building systems to redefine how structures are designed and built. In collaboration with leading industry partners, we develop cutting-edge robotic technologies and proprietary printable concrete materials engineered for consistent, high-performance results in real-world field conditions.

### **Position Overview**

FMGI is seeking a hands-on Materials Engineer to support the development, testing, and field deployment of printable cementitious materials for concrete 3D printing. This role is ideal for someone who enjoys laboratory experimentation, structured testing, and translating material science into reliable field performance. The work is highly practical and directly tied to FMGI's active 3DCP operations.

### **Key Responsibilities**

- **Research & Development**
  - Develop and prepare experimental cementitious formulations for lab and field evaluation.
  - Conduct mechanical and rheological testing to optimize strength, pumpability, printability, and durability.
    - Perform statistical analysis and comparison of test results to guide formulation improvements.
- **Quality Control & Testing**
  - Execute field and laboratory tests on fresh and hardened materials.
  - Maintain accurate documentation, test records, and reproducibility of results.
  - Support continuous improvement of QC procedures for 3D printable materials.
- **Field Operations Support**
  - Assist FMGI's 3D Concrete Printing team during active print operations.
  - Troubleshoot mix performance under varying environmental and site conditions.
  - Operate, calibrate, and maintain mixing equipment and material delivery systems.
- **Safety & Compliance**
  - Adhere to FMGI's safety protocols and participate in site safety audits.
  - Ensure testing and material development comply with ASTM standards and project specifications.

### **Qualifications**

- 2+ years of experience in R&D or execution in one or more of the following areas:
  - Concrete materials
  - Cement chemistry / cementitious systems
  - Construction materials testing laboratories
    - Familiarity with ASTM testing procedures.
    - Experience with 3D concrete printing (3DCP) is a strong plus.
    - Bachelor's degree in Civil Engineering, Materials Science, Chemical Engineering, Construction Materials, or a related field; Master's or PhD preferred.
    - Ability to work in field environments and lift up to 50 lbs.
    - Strong organizational, analytical, and communication skills.