

# FIRM PROFILE

CONSTRUCTION MATERIALS TESTING & INSPECTION SERVICES



DELIVERING YOUR VISION ™

## **Construction-Support | Materials & Analytical Laboratory Services**

ES&S technicians are full-time employees, allowing us to maintain consistently-trained, high-quality staff to respond efficiently to our clients' QA/QC testing needs. ES&S' Columbia materials laboratory and mobile materials lab are validated by the *U.S. Army Corps of Engineers* for numerous soils, concrete, mortar and aggregate test procedures. The firm also has certified technicians available for MoDOT projects and for a variety of special inspections required by the *International Building Code* (IBC), *Chapter 17*. Our support staff is familiar with MoDOT's *Local Public Agency* (LPA) guidelines and offer construction observation administration and oversight to meet FHWA and MoDOT requirements. These same services are applicable for all manner of public-sector infrastructure and vertical construction projects. ES&S maintains MoDOT-certified technicians for responsive construction observation and materials testing services on state and local transportation projects.

ES&S believes critical construction activities and field observations requiring added engineering judgment should be overseen by licensed professionals and have registered engineers available for observation of mass excavation, structural backfill, foundations of many types, and can provide a certified weld inspector for inspection and non-destructive testing of structural steel connections. Below is a list of common services provided by ES&S technicians and professional staff.

### **Materials Testing & Quality Assurance/Control**

- Earthwork Observation & Testing
- ◆ Concrete, Grout & Mortar Testing/Mix Design Consulting
- Pavement & Subgrade Condition Assessment
- Reinforcing Steel Placement/Post-Tensioned Concrete Tendon Placement & Loading Documentation
- Foundation Construction Observation & Documentation (Shallow Foundation, Drilled Shafts, Rammed Aggregate Piers, Driven & Auger Cast Piles, Micropiles)
- Non-Destructive Testing
- Certified Welding Inspector for Structural Steel Connections
- ♦ Floor Flatness/Levelness Observation
- Fireproofing Adhesion, Cohesion, Applied Density, & Intumescent Paint

#### **Construction Engineering/Quality Management**

- Maintenance of the Construction Diary
- Quality Assurance/Quality Control Testing
- ♦ Progress Report Preparation
- Wage Rate Interviews/Assist with EEO Compliance
- Document Quantities of Work-In-Place for Pay Estimates
- Change Order Documentation
- Perform Semi-Final Observation/Coordinate Final Observation
- Submit Final Observation Report & Applicable Final Documentation

#### Analytical Laboratory

- Ground Water, Surface Water, Landfill Gas Monitoring & Analyses
- Water, Waste Water, & Sludge Sampling & Analyses (autosampler available for composite samples)
- Storm Water Quality Sampling & Analyses
- Industrial Pretreatment/Process Monitoring & Analyses
- Facilitation of WET Testing, RBCA Testing, etc.
- NPDES Permit Consulting
- ♦ Soil Permeability/Contamination Monitoring & Analyses
- Standards Compliance: EPA, APHA, AWWA, WEF, USBM, ASTM, AASHTO







### CONSTRUCTION-SUPPORT SERVICES: CONSTRUCTION MATERIALS TESTING & INSPECTION EXPERIENCE

	CLIENT /		Year	Earth work Observation & Testing	Foundation / Subbase Observation & Testing	Compaction Testing Soil & Aggregate)	Apphalt Compaction testing and Coring	Concrete Mix Design (Asphaltic / PCC)	Concrete Testing	Mortar/Grout Testing	ost-Tensioned Concrete oading & Tendon Place.	sinforcing Steel acement Documentation	ructural 5 teel Connection spection	ructural Steel Weld esting	loor Placement Observ. / foisture Test	fireproofing Observation & Documents from	Constr. Observ. / Quality Mgmt. (Full- or Part-Time)	Construction Surveys / Staking	ОТНЕЯ	Engineering Surveys & Services
PROJECT NAME	OWNER	LOCATION	Complete	2 5	2 8		~ -	್ಕಿತ್ತ UCTK		<del></del>	:	ě E	20 25	S F	E 2	E 0		3 %	5	COMMENTS
Site Preparation for ISFSI Facility @ CEC	Ameren UE	Reform, MO	2015																	High-density concrete mix design to meet NRC standards
New Hannah Cole Primary &	Boonville R-VI	Boonville, MO	2009																	Geotechnical investigation;
Boonville HS Expansion South Katy RR Bridge Trailhead	School District City of Boonville,	Boonville, MO	2015																	Recreational Trails Program coord (RTP 2014-
Improv., Phase I City Government Center Expansion	Missouri City of Columbia.	Columbia, MO	2011																	08) QA testing provided under on-call testing
COU: Columbia Regional Airport	Missouri City of Columbia,	Columbia, MO	varied		-															services master agreement sub to Burns & McDonnell, prime consultant
Construction-Support Services	Missouri	•																		for City's 5-year On_Call Engr Svcs MSA
Intersection Improv. Runway 2-20 / 13-31 & Taxiway A / B, Phase I	City of Columbia, Missouri	Columbia, MO	2015																	Geotechnical investig.; QA testing in response to emergency repairs (2019)
COU: Runway Extension / Reloc of Rangeline Road	City of Columbia, Missouri	Columbia, MO	2016																	sub to Burns & McDonnell; provided Q.M services on an as-needed basis
COU: Runway Extension / Reloc of MO Route H	City of Columbia, Missouri	Columbia, MO	2020																	
COU: Taxiway A Reconstr	City of Columbia, Missouri	Columbia, MO	2012			<del>                                     </del>														sub to BMcD; utilized drainable, coarse
CWL: East 24-inch Water Transm.	City of Columbia,	Columbia, MO	2014																	aggregate and cement base matl under pvmt over 22.000-LF of pipeline; bores under I-70
Main (North & Middle Sections) CWL: COLT RR Bridge over US	Missouri City of Columbia,	Columbia, MO	2010																	and US Route 63 Full-time resident inspection services (quality
Route 63 P&R: Hominy Creek Trail	Missouri City of Columbia,	Columbia, MO	2014																	manager); drilled micropile foundations; QA testing provided under on-call testing
	Missouri	•																		services master agreement
PWD: Aurora Drive & Nova Way Connectors & RABs	City of Columbia, Missouri	Columbia, MO	2021																	
PWD: Maguire Blvd. Extention & Bridges over Grindstone Creek	City of Columbia, Missouri	Columbia, MO	2010																	ES&S work as sub to Affinis Corp & directly for City, ind Chg Order Negot support
PWD: Forum Blvd Trail & Pedestrian Bridge over Hinkson	City of Columbia, Missouri	Columbia, MO	2016																	
PWD: Nifong Blvd Improvements,	City of Columbia,	Columbia, MO	2021																	
Providence to Willowcreek PWD: Parking Structure - 5th &	Missouri City of Columbia,	Columbia, MO	2011		$\vdash$	-														QA testing provided under on-call testing
Walnut Streets PWD: Parking Structure - Short	Missouri City of Columbia,	Columbia, MO	2014		-	-														services master agreement  QA testing provided under on-call testing
Street PWD: Regional WWTP Upgrade /	Missouri City of Columbia,	Columbia, MO	2013			_														MSA sub to Black & Veatch
Expansion	Missouri																			
Water Street Pavement Stabilization	City of Jefferson, Missouri	Jefferson City, MO	2011																	Geotechnical investigation; constr observation; geo-grid installation
Main Street Accessibility Improvements, Phase I	City of Monroe City	Monroe City, MO	2020																	ADA-compliance
Constr. Engr. Inspection (CEI) Svcs- 2018 Water Project - Phase 1	- City of Sedalia, Missouri	Sedalia, MO	2020		†															Daily field diany; wage rate interv.; mat'ls. docum; pay applic. review; progress mtgs.
Constr. Engr. Inspection (CEI) Svcs	City of Sedalia,	Sedalia, MO	2019																	Daily field diary; wage rate interv.; mat'ls.
W Broadway Ave. Water Line Downtown Streetscape,	Missouri City of Sedalia,	Sedalia, MO	2015		ļ															docum; pay applic. review; progress mtgs.
Phase Illa - Downtown Gateway  Downtown Streetscape,	Missouri City of Sedalia,	Sedalia, MO	Ph I - 2009																	
Phases I & II New Brouder Science Center	Missouri Columbia College	Columbia MO	Ph II - 2010 2013								ļ									some sves as subconsultant to SOA.
	-																			controctor
Upgrades	Columbia Public Schools	Columbia, MO	2014																	
New Battle High School	Columbia Public Schools	Columbia, MO	2013																	315,000-sf facility; performed Internescent paint testing; synthetic athletic field
Business Loop 70/Conley Road Extension	Conley Road TDD	Columbia, MO	2018																	
DBRL Library Facility Parking Lot &		Columbia &	2016																	ind 4-span bridge over Hinkson Creek
	Regional Library MoDOT - Central	Callaway Co Boone   Cooper	ongoing																	subconsult to Lunda Construction;
Rocheport I-70 Concrete Panel & Patch	District MoDOT - Central	Counties Various	varied																	maturity meter; night work; subconsult to
Maintenance On-Call MO Route Z Improvements	District MoDOT - Central	Counties Boone County,	2013																	Lamke Construction; sub to Don Scheiders Excav; plan prep.& QA
MoDOT Maintenance Facility	District MoDOT - Central	MO Columbia, MO	2007																	testing to implement contractor's QM plan
Relocation	District	,																		
US Route 131 (J3S3083)	MoDOT - KC District	Johnson   Lafayette Cos.	2022																	subconsult to Radmacher Excavating;
US Route 50 J-Turns (J3P3181)	MoDOT - KC District	Saline County	2022																	subconsult to Radmacher Excavating;
Patient Parking Structure, Phase I - Harry S Truman VA Hospital	U.S. Department of Veterans Affairs	Columbia, MO	2016																	Pier observation & monitoring; sub to C. Rallo Constr & Prost Constr
South Providence Medical Park	University of	Columbia, MO	2016																	Coron at rosa coron
Paved Trail Memorial Stadium East Side Tower		Columbia, MO	2014																	Geotechnical engineering; drilled pier
Expansion (multiple projects) Memorial Stadium South End Zone	Missouri-Columbia University of	Columbia, MO	2019																	foundations; regular onsite constr Geotechnical engineering; drilled pier
Expansion (multiple projects) Missouri Orthopaedic Institute -	Missouri-Columbia University of	Columbia, MO	2010																	foundations; regular onsite constr
Phase I	Missouri-Columbia																			performed Internescent paint testing;
Missouri Orthopaedic Institute - Phase II	University of Missouri-Columbia	Columbia, MO	2016																	performed Internescent paint testing;
Parking Structures: Conley Avenue Structure #7 - University Hospital	University of Missouri-Columbia	Columbia, MO	2007 2009																	performed post-construction settlement investigation
South Providence Medical Building / Park - Phase I		Columbia, MO	2014																	IR non-destructive test for OMU grout placement
State Historical Society of MO -	University of	Columbia, MO	2019																	Proceedings
Center for Missouri Studies	Missouri-System																			

#### **ES&S Core Practices**

ES&S operates three core service areas, integrated to provide planning and design of civil infrastructure and site development from concept through construction. Meet the leaders for each service group.



## BEN ROSS, PE, PTOE CIVIL ENGINEERING

- ES&S since 1995, managing the spectrum of civil infrastructure & facility site design projects
- Over one dozen civil engineers, most licensed in Missouri, some in other states
- Provide planning & design for transportation, environmental (water & waste water systems), storm water management, and site development



## FRED CARROZ, PLS LAND SURVEYING

- ES&S since 1996, managing traditional boundary & topographic surveying & utility mapping
- Overseeing data collection and precision surveys using 3-D scanning & UAS (drone) technologies
- Land acquisition assistance including title research & legal descriptions, easement displays, stakeholder outreach, and negotiation support.



## JOSH LEHMEN, PE GEOTECHNICAL & CONSTRUCTION-SUPPORT

- ES&S since 2010, oversees the firm's geotechnical engineering and lab/ field services
- Subsurface investigations
- Foundation & pavement design recommendations
- Certified lab & field materials testing technicians
- USACE-validated materials laboratory

## **Partnering with ES&S**

Throughout the firm's history, ES&S has regularly partnered with A/E firms that provide engineering discipline and design support services (right) that are often required on our clients' projects. Partnering with firms that provide these services has allowed ES&S to actively seek

Structural Engineering Traffic Study/Signal Design Landscape Architecture MEP Engineering Enviro. Studies/NEPA Public Outreach

relationships with disadvantaged business enterprise (DBE) firms to help our clients meet their internal utilization goals, and to strategically structure teams for efficient, successful project delivery, at times when there is no utilization goal.

#### **ES&S Value**

- One of the strongest and most stable engineering and design/construction support practices in mid-Missouri. Our firm-wide staff is approximately fifty a mix of registered professional engineers and surveyors; design drafting and field services technicians; and laboratory specialists.
- Outstanding design-support staff that is integrated into the planning & design process throughout the life of a project.
- ◆ A commitment to the region, the State of Missouri, and our clients developed over ES&S' nearly seven-decade history of providing professional services to the design and construction community!

ES&S has three locations in mid-Missouri, offering efficient and effective response to your needs for design, design-support, and construction-support services. We have onsite construction materials testing labs in Columbia, Jefferson City, and Sedalia; and a USACE-validated mobile testing lab.

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 SEDALIA

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