



## SCOPE OF SERVICES



### DESIGN DIVISION

Lead: John Lewis, PE  
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### FIELD DIVISION

Lead: Chris Kotch, PG  
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### PUBLIC DIVISION

Lead: Matt Walter, MCP, CFM  
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### Civil Land Development

Geographic information system • NPDES permits • Site design and permitting • Site feasibility evaluation • Soil erosion control plans • Stormwater analysis and design • Stormwater infiltration testing • Subdivision plans

### Mechanical/Electrical/Plumbing Engineering & Fire Protection

Automatic control systems • Building and energy management systems • Central utilities and master planning • Electric and lighting systems • Emergency power and uninterruptible power supply systems • Energy conservation studies • Fire protection systems • Heating, ventilating and air conditioning systems • Plumbing systems • System evaluations and life cycle and cost benefit analysis

### Structural Engineering

Culvert design • Evaluations, reports and inspections • Historic preservation • Retaining wall design • Seismic analysis and design • Structural design

### Forensic Building Investigation

Building envelope, façade and roof investigations and repairs • Catastrophic evaluations • Expert investigations and witness • Fire, wind, snow and hail evaluations • Flood, collapse and impact evaluations • Insurance claim investigations • Property Condition Assessments • Sinkhole evaluations and repair • Structural assessments and investigations

### Survey

ALTA • Boundary • Construction • Flood elevation certifications • Geographic information system • Global positioning system • Laser scanning • Topographic • Utility

### Environmental Consulting

Act 2 site characterizations and release of liability (PA) • Asbestos inspections, remediation design and management planning • Brownfields services • Geology and hydrogeology studies and permitting • Karst studies • Phase I and Phase II Environmental Site Assessments (ASTM or customized) • PNDI investigations • Sewage disposal testing and design • Sinkhole investigation and remediation • Underground storage tank removal and closure • Wetland delineation, permitting and mitigation

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### Geotechnical Engineering

AASHTO pavement design • Deep foundation installation • Due diligence property evaluations • Foundation design • Geotechnical support during construction • Geothermal well installation • Ground improvement • Pavement and slab rehabilitation • Retaining wall recommendations • Review of blasting plans • Rock mapping • Scour analysis • Settlement remediation • Slope stability analysis • Subsurface investigations • Underpinning inspection

### Construction Materials Testing

Application of sprayed fire-resistant materials • Asphalt core profiles • Atterberg limits (liquid and plastic limits) • Concrete, mortar cube, grout prism and concrete core compressive strength testing • Installation of smoke control systems • Installation of wall panels and veneers • Moisture content of soil/aggregate compaction testing • Retaining wall installation • Shallow and deep foundation installation • Soil particle size analysis (non-hydrometer) • Soils—excavation and fill operations • Steel, concrete, masonry and wood construction

### Code Inspection & Plan Review

Building inspection • Electrical inspection • Energy conservation inspection • Fire inspection • Fire protection system plan review and inspection • Mechanical inspection • Multi-discipline plan review • Plumbing inspection

### Municipal Engineering Services

ADA accessibility studies • Boundary and topographic surveys • Building code plan review and inspection • Design and construction administration of infrastructure improvements • Facility design and construction • Geographic information system • MS4 technical assistance • Parks and recreation planning • Sewage treatment plant design • Stormwater system analysis and design • Street design • Wastewater collection systems • Water distribution systems

### Transportation

Traffic impact studies • Roadway design • ADA ramp design • Detour plans • Maintenance and protection of traffic • PennDOT Highway Occupancy Permits • Railroad crossing permitting • Right-of-way dedication plans • Signage analysis • Traffic circulation studies • Traffic signal design • Trip generation studies

### Landscape Architecture

Bio-retention system design • Green roof design • Landscape design • Parks and recreation facilities and planning • Riverfront and streetscape planning and design • Site lighting • Trail design

### Water & Wastewater

Act 537 plans • Pump station design • Septic design • Soil testing for infiltration and septic systems • Wastewater collection and treatment • Water treatment and distribution

### Grantsmanship

Application tasks coordination • Application writing • Strategic funding plans

### Project Management & Construction Services

Bank project costs and document review • Construction document preparation and bidding assistance • Construction observation services • General construction cost estimation • Owner's representative services • Payment verification observations • Roof consulting