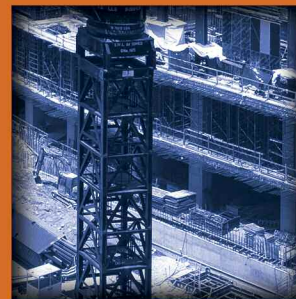
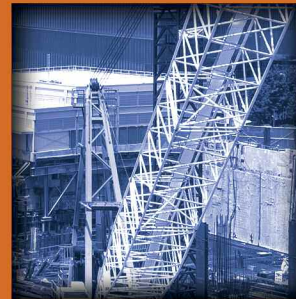




COMPREHENSIVELY BROAD. UNPARALLELED SERVICE®





## UNIVERSAL TESTING + INSPECTION SERVICES, INC. (UNIVERSAL)

is a nationally accredited professional services firm with comprehensively broad expertise in construction materials testing, special inspections, support engineering and geotechnical/environmental services and drilling. Since our inception, Universal has firmly established itself as an industry leader and has evolved into one of the largest full-service regional providers of professional, technical services to a broad-base of clients and projects ranging from straightforward fit-outs to multi-billion dollar complex programs.

After establishing a solid corporate history that spans more than 25 years, we are no longer just the construction materials testing lab that forged our outstanding reputation and trusted name. We have expanded our services and capabilities over the years, building expertise to fit broader markets and industries. Our Team brings a multi-disciplinary proactive approach to the complex challenges of our clients. Our expertise is complemented and supported by one of the largest comprehensive private construction materials testing laboratories in the Northeast and Mid-Atlantic United States.

ONE COMPANY. ONE CALL. ONE SOLUTION.

## FIRM QUALIFICATIONS

Universal is one of only a few New York based firms that are both Nationally Accredited as a Special Inspection Agency through the International Accreditation Service (IAS) and AASHTO Accredited as a Construction Materials Testing Facility. Our IAS Accreditation consists of an unparalleled (53) special inspections categories in all (7) major construction sequences which are: General Building, Fire Code, Plumbing & Mechanical, Structural Materials, Fabricated Materials, Structural and Progress Inspections.

Universal is Nationally Accredited through AASHTO R18 Program-American Association of State Highway and Transportation Officials AAP Program in various material categories such as; soils, portland cement, concrete, aggregates hot mix asphalt and Spray-on Fireproofing. We are also routinely inspected by CCRL-Cement and Concrete Reference Laboratory of National Bureau of Standards and Technology.

### AASHTO R18 Nationally Accredited (E-329, C1077 & C1093)

Asphalt | Concrete | Soil | Aggregates | Spray-on Fire Resistive Materials



### Cement and Concrete Reference Laboratory (CCRL)

Concrete | Aggregates | CMU



### International Accreditation Service (IAS)

Special Inspection Agency (SIA-224NY)



## STAFF QUALIFICATIONS

### Professional Engineers

Arizona | California | Connecticut | Delaware  
Florida | Georgia | Maryland | Massachusetts  
Nevada | New Jersey | New York | Ohio  
Pennsylvania | Rhode Island

### Registered Architects

### International Code Council- ICC Special Inspectors

Structural Steel | Fireproofing | Masonry  
Mechanical | Concrete Welding & Bolting  
Soil Energy Code | Master Special Inspectors

### LEED® Accredited Professionals

### American Concrete Institute (ACI) Field levels I & II

### American Concrete Institute (ACI) Lab levels I & II

### American Concrete Institute (ACI) Strength Testing Techs

### National Institute for Certification of Engineering Technologies (NICET)

### American Welding Society- AWS/CWI

### American Society of Nondestructive Testing (ASNT) SNT-TC-1A

### Certified EPA Asbestos Inspectors, Investigators and Samplers

### Federal Aviation Administration Certified (FAA)

### Northeast Transportation Training and Certification Program

## GEOGRAPHICAL SERVICE AREA

Universal is a New York based firm that provides services throughout the United States, Canada and Caribbean Region. We also provide Quality Assurance services which are extended globally. We have project experience ranging from steel fabrication inspections in Quebec, Canada, to major airport construction in Trinidad & Tobago, to concrete inspections on the World Trade Center project in Manhattan, New York, to geotechnical drilling of more than 3000 homes throughout NYC and Long Island. Universal has the versatility, depth of knowledge and expertise backed by an extensive experience to successfully execute any project of any size or complexity on a local, national and international level.

## MARKETS & INDUSTRIES SERVED

- Mass Transit | Tunnels  
Subways
- Railroad | Light-rail  
Construction
- Educational Facilities (K-12)  
Colleges | Universities
- Highways | Interstates
- Bridges
- Power Plants | Pipeline  
Utility | Renewable Energy
- Hospitals | Health Care  
Facilities
- High-rise | Low-rise Building
- Correctional Facilities
- Airport Terminals | Runways
- Stadiums and Arenas
- Landfill | Recycling Facilities
- Manufacturing | Fabricators
- Harbors | Marine
- Ship and Vessel Building
- Aviation Industry
- Retail & Big Box Chains

## SERVICE OVERVIEW

At Universal, we take great pride in owning and maintaining one of the most equipped and expansive operations in the New York Tri-State area. When it comes to special inspections, construction materials testing, drilling and quality control management services, no other firm is as well-equipped, experienced and ready to support clients' project needs as we are. We offer our clients a **full-service platform** throughout the entire construction sequence. **Our services include:**

- Construction Materials Testing  
and Evaluations
- Special Inspections
- Progress Inspections
- Energy Code Compliance
- Geotechnical/ Environment Drilling  
and Test Borings
- Coring Drilling
- Environmental Services
- Pre/ Post Construction Surveys
- Specialty and Nondestructive  
Testing Services
- Pavement Services
- Vibration Monitoring
- Mobile On-Site CMT Laboratories
- Forensic Evaluations
- Materials Evaluation and QA Certification
- Onsite Sampling and Laboratory  
Testing of Construction Materials
- Quality Assurance & Quality Control



# CONSTRUCTION MATERIALS TESTING



## CONCRETE | MASONRY

- Development of QC Programs & Specifications
- Third-Party Peer Review and Oversight
- Comprehensive Field Inspections
- Placement Inspection
- Compressive Strength Testing
- Comprehensive Masonry Inspections
- Core Drilling
- Rebar Scanning-GPR method
- Crack Monitoring
- Floor Flatness & Levelness Survey
- Accelerated Aging & Maturity Monitoring
- Windsor Probes & Pin
- Slab Moisture Testing
- Rapid Freeze Thaw
- Petrographic Analysis Management
- Rapid Chloride Permeability (Coulomb Testing)

## SOIL | AGGREGATES

- Subsurface Drilling
- Environmental Drilling & Well Installation
- Geoprobe® Drilling & Sampling
- Compaction Density Testing
- Backfill Supervision
- Field Sampling & Source Verification
- Truck Delivery Inspections (import/ export)
- Gradations, Grain Size & Sieve Analysis

- Environmental Field Screening
- Classification & Visual Identification
- Moisture Density Relationships (proctor)
- Grade Inspection & Sub-Base Measurements
- Dynamic Cone Penetrometer (DCP)
- Bearing California Bearing Ratio (CBR)
- Hydrometer Testing
- Direct Shear Testing
- Permeability and Percolation Testing

## ASPHALT + PAVEMENTS

- Development of QC Plans
- Mix-Design & Implementation Oversight
- Pavement Thickness Measurements
- Core Drilling
- Plant Inspection
- AC Burn-Offs & Gradations
- SUPERPAVE Density Testing & Management
- Pavement Profiling and Smoothness
- Roadway Condition Survey
- Pavement Life Cycle Analysis
- Pavement Design
- Benkelman Beam Deflection Survey

## MATERIAL SUPPLIER SERVICES

- Material and Source Supplier Inspection
- Concrete Plant Inspection

- Asphalt Plant Inspection
- Steel Fabrication Inspections (Internationally)
- Precast Concrete Plant Inspection
- Quarry Sourcing Inspection/ Testing

## SPRAY-APPLIED FIREPROOFING

- Thickness Testing & Verification
- Pre Apply Inspection
- Pull-Test | High Density Pull-Test
- Adhesion & Cohesion Testing | Density Testing

## COATINGS

- Mill Thickness Analysis
- Application Inspection
- Source Verification
- Pre/ Post Inspection & Testing

## STRUCTURAL STEEL | WELDING BOLTING & PIPING

- Welder Qualifications
- Development of Written Procedures
- Calibration of Impact Guns/Torque Wrenches
- High Strength Bolt Testing
- Ultrasonic Testing of Welds
- Thickness Measurements-UT Method
- Visual Welding Inspection
- Skidmore Wilhelm Testing and Machine Rental

- Coupon Testing
- Pipe Inspection
- Deck Inspection
- Corrosion Testing
- Hardness Testing | Tensile & Bend Strength Testing
- Dye Penetrate
- Steel Wall Thickness Measurements
- Bolted Connection Inspection
- Nondestructive Testing UT | MT | PT | RT

## NONDESTRUCTIVE EXAMINATION + SPECIALTY SERVICES

- Digital Radiographic Testing
- Ground Penetrating Radar
- Concrete Slab Floor Flatness and Levelness
- Pavement Smoothness Profiling
- Concrete Maturity Monitoring
- Pull-Testing (Anchors, Bolts, Rebar, Fasteners, Tile)
- Infrared Surveys
- Vibration Monitoring
- Caisson, Pile & Rock Socket Video Recording

## RELATED SERVICES

- Special Inspections
- Energy Code Compliance
- Drilling and Test Boring Services
- QA/QC Program Management

# SPECIAL INSPECTIONS



Universal has been providing special inspections and construction materials testing since our inception more than 25 years ago and our trusted name and outstanding track record has allowed us to evolve into one of the largest providers of these services in the New York Metropolitan Tri-State area. Unlike engineering, architectural and other inspection type firms transforming themselves into a special inspection company or ‘brokering’ the services due to code changes — thus having a potential of costly learning curves to the client as well as potential delays to the their projects; Universal’s ‘in-house’ full-service capabilities encompasses all required special and progress inspections as well as all required support testing of construction materials. We are one of only a few firms fully accredited in all (7) Construction Sequences and (53) scopes of Special Inspections-including; Energy Code Compliance and Public Assembly Lighting Inspections.



In addition to our National Accreditations, locally Universal is a New York City Department of Buildings (NYCDOB) Approved Class 1 Special Inspection Agency (SIA). We are also (NYCDOB) Approved Concrete Testing Laboratory and an Approved Structural Steel and Welding Inspection Agency-which minimizes the number of consultants retained on a project and in-turn saves our clients time and money while delivering our ‘ultra’-efficiency, effectiveness and quality that is second to none! **Our full service platform consists of:**

## GENERAL BUILDING CONSTRUCTION

- Wall Panels, Curtain Walls and Veneers
- Exterior Insulation Finish Systems (EIFS)
- Chimneys
- Flood Zone Compliance
- Luminous Egress Path Markings

## FIRE PROTECTION SYSTEMS & FIRE-RESISTANT CONSTRUCTION

- Sprayed Fire-Resistant Materials
- Mastic and Intumescent Fire-resistant Coatings
- Smoke Control Systems
- Sprinkler Systems
- Standpipe Systems
- Fire-resistant Penetrations and Joints
- Emergency and Standby Power Systems (Generators)
- Fire Alarm

## PLUMBING & MECHANICAL SYSTEMS

- Mechanical Systems
- Fuel-oil Storage and Fuel-Oil Piping Systems
- Heating Systems
- Soil Percolation Test-Private On-Site Storm Water Drainage Disposal Systems and Detention Facilities
- Private On-Site Storm Water Drainage Disposal Systems and Detention Facilities

## PROGRESS INSPECTIONS

- Footing and Foundation
- Lowest Floor Elevation
- Fire-Resistance Rated Construction
- Energy Code Compliance Inspections
- Public Assembly Emergency Lighting

# SPECIAL INSPECTIONS

## STRUCTURAL MATERIALS & CONSTRUCTION OPERATIONS

- Structural Steel Welding (Shop Liquid Dye Penetrant Inspection and Field)
- Non-Destructive Testing
- Ultrasonic Inspection
- Magnetic Particle Inspection
- Radiographic Inspection
- Structural Steel–Details
- Structural Steel High-Strength Bolting
- Structural Cold-formed Steel
- High Temperature Hot water Piping- Welding
- High-pressure Steam Piping -Welding
- High Pressure Fuel Gas Piping- Welding
- Aluminum Welding
- Concrete Cast-in-place
- Concrete Precast
- Prestressed Concrete
- Masonry
- Subgrade Inspection
- Subsurface Conditions – Fill Placement & In-Place Density
- Subsurface Investigations (Borings/Test Pits)
- Deep Foundation Elements
- Helical Piles
- Vertical Masonry Foundation Elements
- Structural Stability- Existing Buildings
- Excavations ,Sheeting, Shoring and Bracing

- Underpinning
- Mechanical Demolition
- Seismic Isolation Systems
- Post Installed Anchors (Pull-Testing)
- Alternative Materials

## TOTAL MANAGEMENT & SUPPORT SERVICES

- NCR Logging, Tracking, Consulting, Mitigating and Close-outs
- RFI Submittals, Management and Distribution
- Contractor(s) Submittal Follow-ups and Review
- Project Meetings for Updating, Projections, Report Review and Ensure 'SI Services' are on Track
- Fast Report Distribution, Review, Interpretation
- Comprehensive Inspection Reports with Daily Overview and Support Photos Documentation
- Construction Materials Testing- Laboratory and Field\*
- Full Scope of all NYCDOB (TR Forms)
- NYCDOB / DOT BBP Form– 11 Sidewalk Affidavit Services
- Directive 14 Self Certification



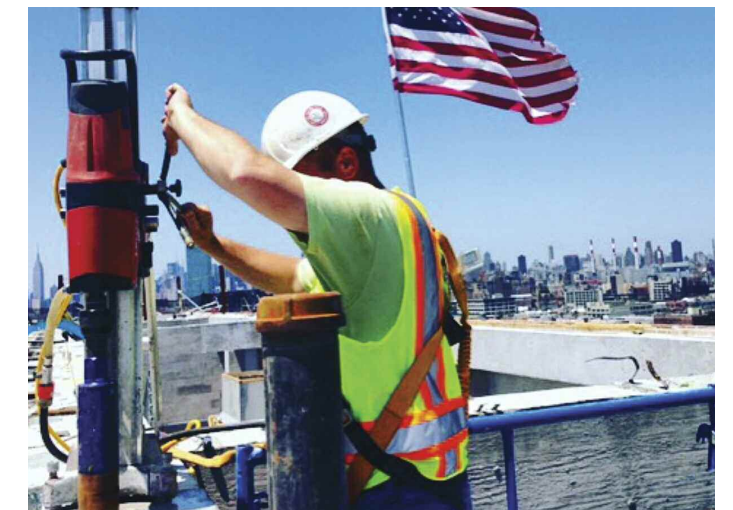
# DRILLING SERVICES



Universal's Drilling Division offers complete professional Geotechnical and Environmental drilling, engineering support and laboratory testing which are vital services to the design and construction of a project. Subsurface soil, rock and ground water conditions identified, detected and classified-play as an important role in a project as the architectural, civil and structural design that's above ground. This is especially true when construction is being considered on a property which may also be potentially contaminated. Properly performed geotechnical and environmental drilling services can result in improved foundation design, reduced construction costs and ensure real estate transactions are sound. Universal provides our clients with accurate and representative information concerning subsurface conditions.

**Universal's Drilling Division maintains its own drilling fleet and support equipment, consisting of:**

- |  |  |
|--|--|
| (1) Acker Soil Sentry Truck Mounted                | (2) Acker Portable Tripods (gas/electric)                    |
| (2) CME 45C Truck Mounted w/Automatic SPT Hammers  | (11) Core Drilling Machines                                  |
| (2) CME 55 Truck Mounted                           | (2) Box Trucks/ Mobile Laboratories w/ On Board Generators   |
| (1) Mobile B57 Rubber Tire ATV                     | (1) Skid Steer Loader  |
| (1) BR 3000 Track Rig (limited access)             | (1) Backhoe Excavator  |
| (1) Geoprobe® 7822DT Track w/ Automatic SPT Hammer | (1) Underground video camera system (capable of depths -600) |
| (1) Geoprobe® 6600 Truck                           |  |





# DRILLING SERVICES

Subsurface explorations are conducted for commercial projects (high-rise, low-rise and warehouses), industrial and manufacturing plants, schools and universities, residential developments, roadways, railways, airports, tunnels and bridge projects. Universal's Drilling and Engineering Divisions provide services to Design Engineers and Architects (E/AoR), Government Agencies, Public and Private Owners, Developers and Contractors.

## ENGINEERING SUPPORT SERVICES

- Subsurface Investigation Geotechnical Reporting
- Phase I & II Environmental Assessments
- Foundation Recommendations
- Development of Environmental Sampling Plans
- Development of Construction Documents
- Development of Remediation Plans
- Boring Logs, Field Reports and Photo Logs
- Geotechnical Laboratory Testing
- Existing Footing and Foundation Investigation

## GEOTECHNICAL & ENVIRONMENTAL DRILLING

- Subsurface Exploratory Investigations
- Geotechnical / Environmental Drilling
- Foundation Test Borings
- Helical Pile Drilling and Installation
- Environmental Impact Condition and Plum Delineation
- Geoprobe® Drilling Services

- Rock Coring
- Monitoring well Installations
- Instrumentation Installation
- Water Sampling & Testing
- Drum & Container Management
- Ground Treatment Injections
- Test Pitting & Excavating Service
- Underground Video Logging
- Grouting
- Percolation and Infiltration Testing
- Contaminated Soil Removal

## CORE DRILLING

- Pavement, Slabs and Walls
- Sidewalk Coring
- Asphalt Pavement
- Runway Pavement Cores
- Block and Masonry Wall
- Bridge Decks and Tunnel Walls

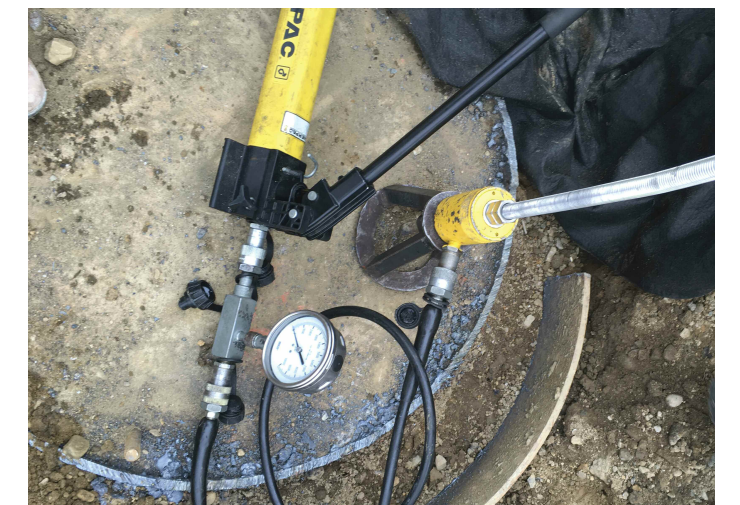
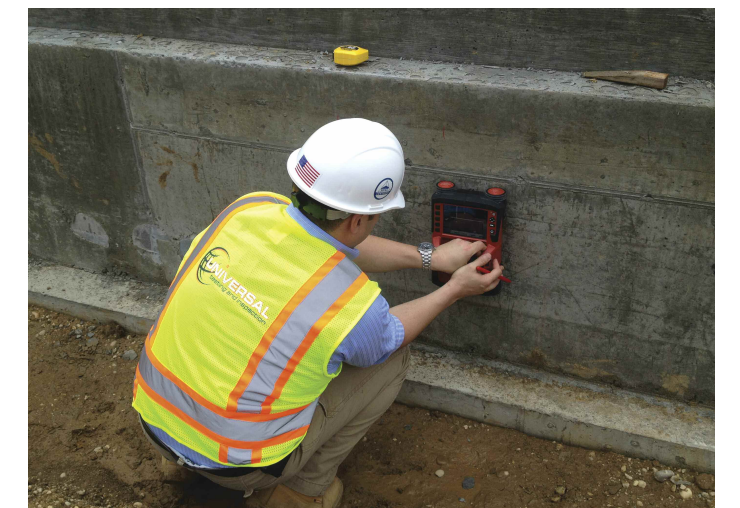


# SPECIALTY + NDT SERVICES



At Universal, we specialize in unique specialty testing, inspection and verification services. Universal owns and operates a wide- array of testing, surveying, NDT tools, vehicles and special instrumentation equipment to perform specialty type services. These services are provided by trained and certified professionals with project experience second to none. **Our services consist of:**

- Dye Penetrant/Magnetic Particle/ Ultrasonic Testing
- Phased Array Ultrasonic
- Radiographic Testing of Welds
- Ground Penetrating Radar
- In-Place Concrete Soundness
- Floor Flatness and Levelness
- Pavement Smoothness and Ride Ability Profiling
- In-Place Concrete Maturity Monitoring
- Seismic and Vibration Monitoring
- Pre/ Post Construction Evaluations Video Documenting
- Concrete Maturity Monitoring
- Pull-Testing (Anchors, Rebar, Bolts, Fasteners and Tile)
- Rebar Locating
- Underground Video Recording
- Caisson/Rock Socket Video Recording
- Steel Wall Thickness Evaluation
- Ground Penetrating Radar – GPR Concrete Scanning
- Tile Bond Strength Testing
- Windsor Probes Windsor Pin
- Skidmore Testing



# ENVIRONMENTAL SERVICES



Universal provides a full-range of environmental drilling, sampling, management, project oversight, field/ lab testing and inspections. These services are performed by Professional Engineers, Environmental Engineers, Technicians and Drillers. From daily air monitoring utilizing PID Meters to remediation services- Universal has you covered! **Our services consist of:**

- Phase I and II Environmental Assessments
- Program Management
- Development of Sampling and Handling Plans
- Development of Contractors Handling Plan
- Development of Remediation Plans
- End Point Sampling
- Geoprobe® Drilling
  - Macro Core Sampling
  - Discrete Sampling, Continuous Sampling
  - Gas, Water & Vapor Extractions
- Groundwater Monitoring Wells
- In-Field Testing & Scanning
- Drum Management
- Sample Management & Lab Delivery
- Cleanup Supervision & Oversight Cleanups, Excavating and Trucking Arrangements
- Gas, Water & Vapor Extractions
- Plume Delineation & Pin-Pointing
- Ground Treatments & Grouting
- Water Sampling
- PID Scanning & Reporting



# PAVEMENT SERVICES



Universal offers complete pavement management and consulting as well as perform a variety of engineering support functions including pavement evaluation and design, geophysical surveys, subsurface utility mapping, inspection and testing.

We have extensive experience in pavement analysis and design as well as materials testing, inspection and the selection of appropriate pavement types and treatments for different pavement structures under various conditions. We provide an integrated team of professionals with deep expertise in all aspects of pavement management who partner with our clients to provide solutions to their specific needs. We have provided infrastructure services throughout the United States and the Caribbean Island Region. **Our services consist of:**

- Pavement Condition Reports
- Pavement Evaluation Reports
- Pavement Smoothness and Ride- Ability Survey
- Pavement Management Systems
- Elusion Mixed-In-Place
- Recycling Pavement Materials
- Pavement Materials Engineering
- Comprehensive Mix-Designs
- Onsite Laboratories (FAA / FHWA)
- Superpave Laydown Inspection
- Density & Compaction Management
- Inspection and Testing Services
- Core Drilling
- Pavement Thickness & Composition Determination
- Benkelman Beam Deflection Survey





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