



# CIVIL ENGINEERING



A NORTH WIND COMPANY

# ABOUT US

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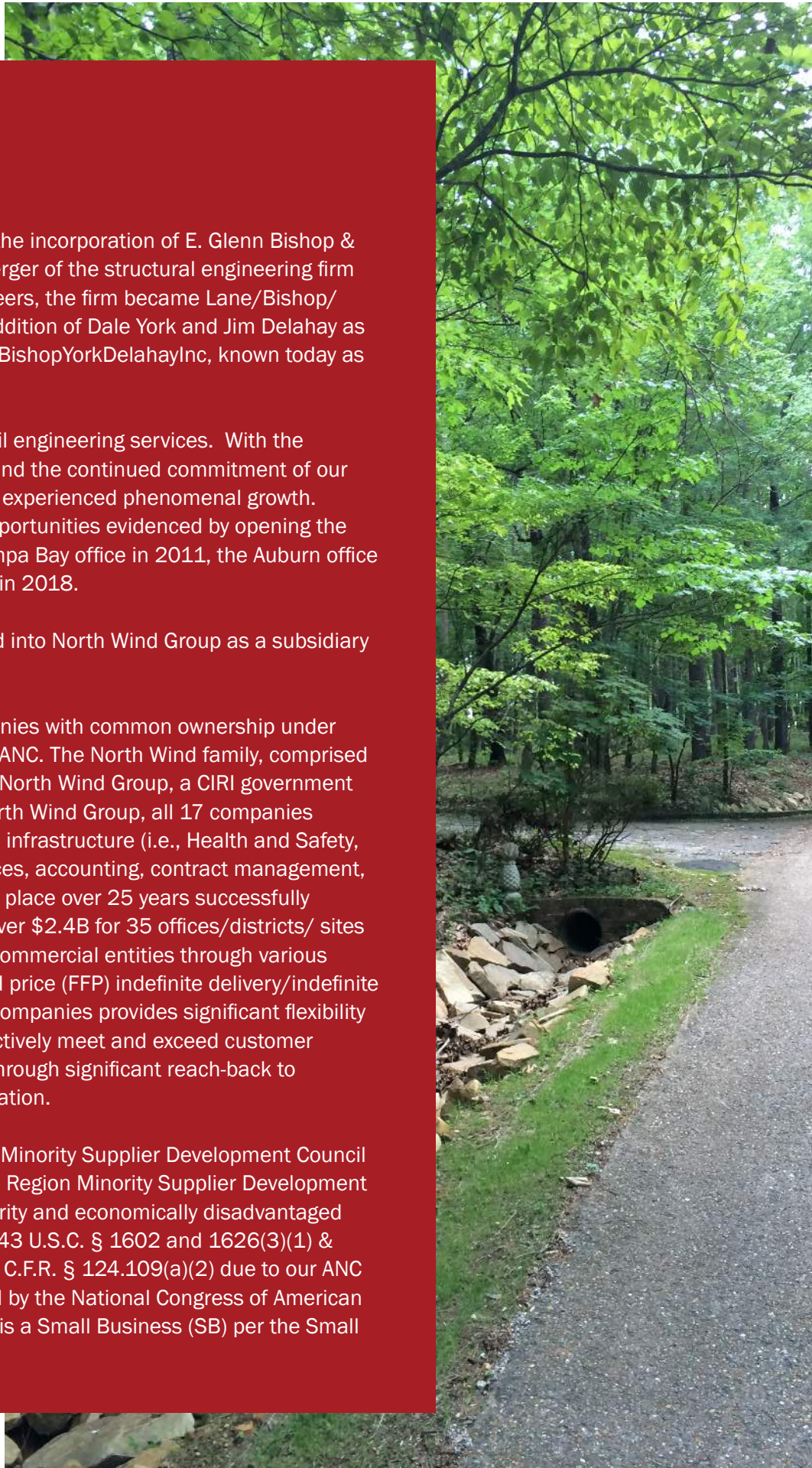
LBYD was founded in 1973 with the incorporation of E. Glenn Bishop & Associates. In 1978, with the merger of the structural engineering firm Lane & Hodnett Structural Engineers, the firm became Lane/Bishop/Hodnett, Inc. In 1987, with the addition of Dale York and Jim Delahay as Principals, the firm became LaneBishopYorkDelahayInc, known today as LBYD, Inc.

In 2001, LBYD began offering civil engineering services. With the addition of the civil department and the continued commitment of our structural department, LBYD has experienced phenomenal growth. We continue to pursue growth opportunities evidenced by opening the Huntsville office in 2009, the Tampa Bay office in 2011, the Auburn office in 2017, and the Nashville office in 2018.

In November 2020, LBYD merged into North Wind Group as a subsidiary company.

LBYD is part of a family of companies with common ownership under Cook Inlet Region, Inc. (CIRI)—an ANC. The North Wind family, comprised of 17 companies, is managed by North Wind Group, a CIRI government contract holding entity. Under North Wind Group, all 17 companies share the same proven corporate infrastructure (i.e., Health and Safety, Quality Programs, human resources, accounting, contract management, project controls) that has been in place over 25 years successfully completing a combined total of over \$2.4B for 35 offices/districts/ sites within 11 Federal agencies and commercial entities through various contract types including firm fixed price (FFP) indefinite delivery/indefinite quantities (IDIQs). This group of companies provides significant flexibility and diversity, enabling us to effectively meet and exceed customer requirements and expectations through significant reach-back to resources within our own organization.

LBYD is certified by the National Minority Supplier Development Council (NMSDC) as well as the Southern Region Minority Supplier Development Council (SRMSP). LBYD is a minority and economically disadvantaged business (SDB) by statute under 43 U.S.C. § 1602 and 1626(3)(1) & (2) and further codified under 13 C.F.R. § 124.109(a)(2) due to our ANC ownership by CIRI, as determined by the National Congress of American Indians (NACI). In addition, LBYD is a Small Business (SB) per the Small Business Association.





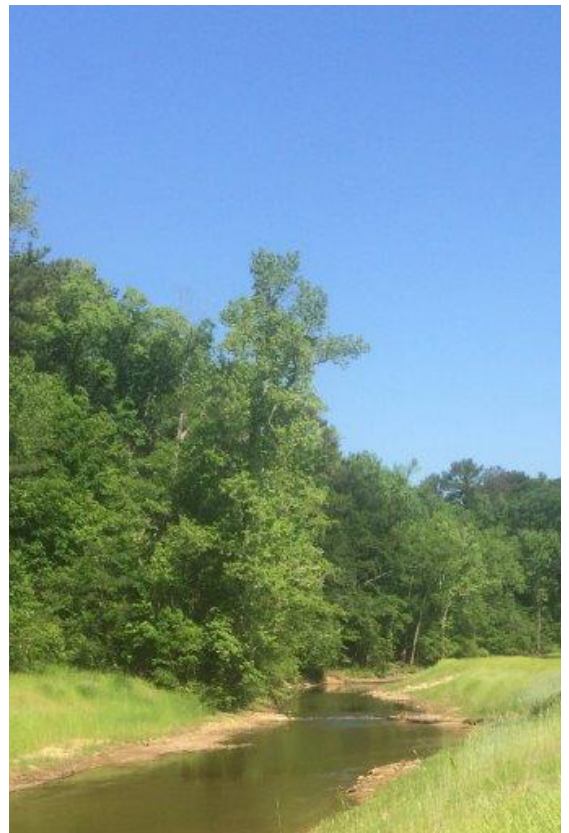
## *LARGE FIRM EXPERTISE, SMALL FIRM RESPONSIVENESS*

Large Firm Expertise, Small Firm Responsiveness has become a staple across our company and is present in the work we do on a daily basis. Starting out as a small one-person firm, and growing to over one hundred engineers, we have provided engineering services for various clients including architects, engineers, contractors, commercial developers, public and private institutions, as well as local, state and federal governments.

## **OUR PROJECTS**

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LBVD provides civil and structural engineering services on a wide variety of project types for architects, engineers, contractors, commercial developers, public and private institutions and local, state and federal governments. Our project experience includes libraries, educational facilities, sports fields and complexes, public parks, office complexes, parking garages, hospitals, mixed-use facilities, convention centers, bridges, stadiums, arenas, correctional facilities, manufacturing and industrial facilities, residential buildings, residential subdivisions, municipal consulting and government facilities.



# OUR SERVICES

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## STRUCTURAL ENGINEERING

Our structural engineers are knowledgeable in the development of different framing schemes and foundation designs using a wide variety of construction materials for determining the most economical and constructible structural systems.

## CONSTRUCTION ENGINEERING

We understand that connection design must be safe and must be economical for the fabricator and erector to produce. We work closely with fabricators to provide designs that work well with the fabricator's shop practices and can be erected in the field as easily as possible.

## HYDROLOGY AND WATER RESOURCES

We offer comprehensive hydraulic and hydrology engineering services to ensure quality corrective and preventative measures for stormwater drainage.

## STORM SHELTERS

We design storm shelters within schools and other structures to withstand loading from tornadoes and heavy winds in accordance to ICC 500, and safe rooms according to FEMA P-361.

## INDUSTRIAL APPLICATIONS

We work with industrial clients to identify the problem they are facing, understand the processes that are in place in the facility, and create a custom solution around it to make sure the facility meets their exact needs.

## CITY ENGINEERING

Our engineers can assist municipalities in all areas of city engineering including development plan reviews, roadway inventories and resurfacing schedules, stormwater management and permitting, public works manuals, parks and recreation design, capital improvement plans, funding assistance, and more.

## CIVIL ENGINEERING

Our work includes site grading, storm water management, best management practices, erosion and sediment control, utility design which includes gravity sanitary sewer designs, wetland mitigation, flood plan modifications, stream impacts, on-site sewage disposal, and earthwork calculations.

## TEMPORARY STRUCTURES

We design and verify the structural capacity of temporary structures such as tents, temporary grandstand seating, stage platforms, etc.

## PEER REVIEWS

Peer reviews can include interviews, review of documents obtained during the review process and technical reviews.

## FORENSICS

We offer innovative and economical investigative and corrective design services in areas such as site placement, foundation failures, roofing and envelope investigations, storm damage, earthquake and vibration damage, truss failures, concrete failures, expert testimony and litigation support, and more.

## PARKING

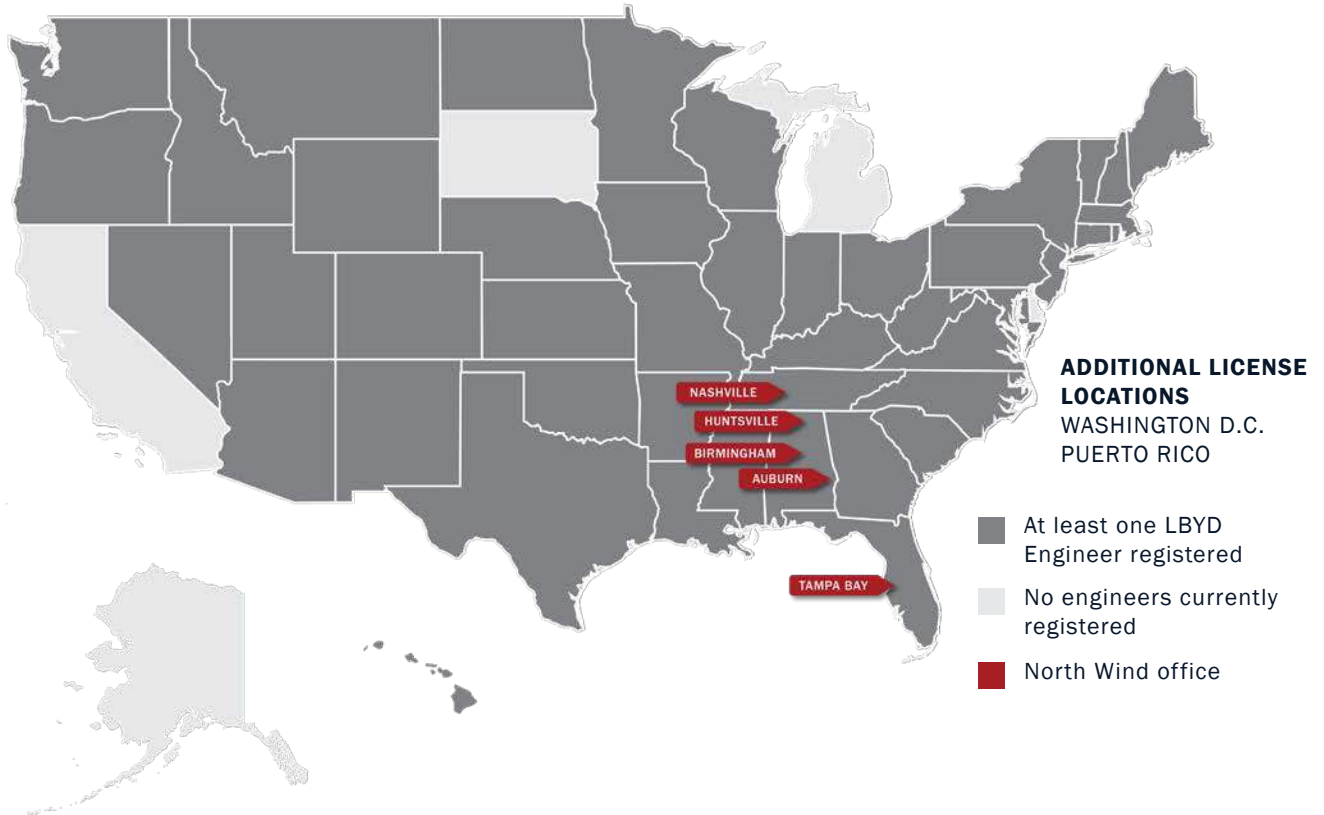
LBYP is a leader in the design of parking facilities in the Southeast. We have designed parking facilities for federal facilities, government facilities, institutional facilities, office buildings, churches, hospitals, mixed-use facilities, commercial buildings, and residential buildings.

## SUSTAINABLE DESIGN

LBYP is a Founding Member of the Alabama Chapter of U.S. Green Building Council. We have designed many facilities that have earned LEED certifications.

# LICENSED LOCATIONS

LBYD has engineers currently registered in multiple states across the country, but we are continually expanding our licensure as needed.



# LEADERSHIP

## BRAD CHRISTOPHER, PE PRESIDENT / SENIOR PRINCIPAL ENGINEER



Brad Christopher is the President & General Manager of LBYD, Inc. and Engineering Group President. He graduated from Auburn University where he received his Bachelor's and Master of Science degrees in Civil Engineering. Brad has over 30 years of design experience covering new construction, renovation, and additions to existing structures for institutional, athletic, commercial, municipal, and industrial uses. He is registered as a professional engineer in 10 states.

Brad is an active member of the Auburn University Engineering Alumni Council, the American Concrete Institute, the International Code Council, Inc., and the Structural Engineers Association of Alabama. He has also served on the Board of Directors for the Structural Engineers Association of Alabama, and Auburn University Civil Engineering Advisory Board, and annually assists with the senior civil engineering design class at Auburn University. Brad has authored three articles for Structure Magazine on economical concrete construction.





# CIVIL ENGINEERING

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LBYP Engineers provides civil design services for site planning and development for commercial, industrial, residential, parks and recreation, and municipal clients. Designs include site development, roadways, grading, storm water management, erosion and sediment control, sanitary sewage and treatment, and hydrology.

Our civil engineers have experience in all aspects of site-development, project management and construction experience with small-to-large-scale residential, commercial, and industrial projects. Our work includes site grading, storm water management, best management practices, erosion and sediment control, utility design which includes gravity sanitary sewer designs, wetland mitigation, flood plan modifications, stream impacts, on-site sewage disposal, and earthwork calculations.

# MASTER PLANNING

We strive to create workable master plans consistent with our clients' vision. Through close collaboration, we convert clients' dreams and visions into projects that efficiently utilize site opportunities, create harmonious relationships to site surroundings and are delivered practically through thoughtful design. We have the capability to provide planning in house or as part of larger teams in a coordinated master planning effort.

## AUBURN UNIVERSITY AT MONTGOMERY WELLNESS CENTER

### MONTGOMERY, ALABAMA

This project included master planning and civil construction documents for a new wellness center as well as improvements to the main campus entrance and parking lot expansions and improvements on the campus of Auburn University in Montgomery, Alabama. Civil design services included site layout, grading, utility design, storm water analysis and erosion control best management practices for a 16-acre site. The parking expansion and redesign includes 760 standard parking spaces and 19 ADA regulation parking spaces. The entrance road was redesigned to incorporate roundabouts and allow additional stacking room to accommodate an active heavy traffic flow as well as maintain the day-to-day access to the campus. Some sustainable designs were incorporated in the project including the use of cut off lighting fixtures to minimize light pollution.



## NORTH AREA INFRASTRUCTURE

### HUNTSVILLE, ALABAMA

This project consisted of an approximately 140±-acre site at Redstone Arsenal graded for future construction. The project included the design, development, and construction documents of the main road network and the installation of primary utilities including electrical, communications, water, sewer, natural gas and storm drainage. This project included a GIS standard and specs. LBYD strategically located infrastructure elements throughout the campus such as the water distribution system, chilled and hot water vault, sanitary sewer, storm drainage, electrical distribution, telecommunications duct banks, and street lighting. Each element is mapped out for its tie into each parcel of land for future use.

# LAND DEVELOPMENT

A successful land development project requires the coordination and integration of many competing needs. LBYD civil engineers have experience in a wide variety of aspects of site-development, project management, jurisdictional permitting and construction. Through this experience we have developed an understanding of the unique nature of a multitude of project types. We have delivered successful developments throughout the country in a variety of project types and delivery methods.

## DC BLOX DATA CENTER

### BIRMINGHAM, ALABAMA

The DC Blox facility is a large data center, consisting of a warehouse of servers. The facility also includes server space rented out to other companies. The project consists of two one-story 10,000 SF warehouse buildings and a two-story 5,000 SF office building. Our team was responsible for both the civil and structural design of these buildings.

LBYD's civil scope included the design of parking and drives, utilities, storm drainage facilities, and grading for the 11.75 acre tract of land. The site development also required the vacation and relocation of an existing county sanitary sewer main as well as a city water main. Additionally included in the scope was the preparation of an ADEM Notice of Intent permit application.

Situated along Interstate 65 in downtown Birmingham, this project brings a new industry to the city and provides a couple hundred new jobs for its residents. This facility was a part of a redevelopment project on

the west side of the city to further develop deserted land and contribute to the area's beautification. The DC Blox Data Center will have a substantial impact on the communications industry in terms of local data storage. This project is groundbreaking due to the servers in this facility being in close proximity to the end users rather than their information being stored in a location on the other side of the country.



# TRANSPORTATION

We plan and design roadways, bridges, intermodal terminals, industrial railroad spurs, airport aprons and taxiways, transit maintenance facilities, and more. Our firm has relationships with local jurisdictions and rail service providers and understands the transportation needs and requirements of the end user.

## BESSEMER INTERMODAL FACILITY

### BESSEMER, ALABAMA

This project consists of a 24-acre industrial development containing railroad and tractor trailer access and loading capabilities. The development has approximately 7,000 LF of railroad with approximately 6,000 LF of rail loading/unloading area for shipping containers from an automotive supplier. The site contains 338 loaded tractor trailer parking stalls and an additional 74 empty container storage spaces.

#### *Upgrades*

This project consists of a 2011 improvement package for the Bessemer Intermodal Facility. These improvements include dust control improvement and the installation of a permanent storm shelter. Civil engineering services included a project site plan, grading and drainage, storm drainage profiles, erosion control and sedimentation plans.



## SARASOTA AIRPORT HANGAR AND FUEL FARM

### SARASOTA, FLORIDA

This project includes the expansion to an existing aircraft hangar in Sarasota, Florida, as well as a new tarmac and apron areas to handle additional aircraft. LBYD also permitted a new 20,000-gallon fuel tank to serve the hangar areas at the airport. LBYD provided multiple schematic layouts and designs for the new addition including the hangar addition, options for office space, multiple additional hangars and mixed-use facilities.



# UTILITY INFRASTRUCTURE

Whether a network of roadways, a system of utilities, a grouping of buildings, or the master planning of a neighborhood or campus, LBYD has the experience to plan, design, and manage your infrastructure needs. Our experience includes the planning, design, and master plan management of higher-education campuses, retail centers, and office parks ranging from 10 acres to 1,000 acres.

## AUBURN UNIVERSITY HEALTH SCIENCES SECTOR INFRASTRUCTURE PACKAGE

### AUBURN, ALABAMA

This project includes new utilities infrastructure that will provide utility services to the first two buildings to be constructed in the new Health Science sector on the campus of Auburn University. These utilities are to be designed with a phased approach for mains so that they provide connection capability for future Health Science Campus build-out. Utilities include domestic water, sanitary sewer main, storm water, chilled and hot water, natural gas, electrical distribution, communications, improvements to existing roadways, bike lanes and traffic signals. A new domestic water main will tie to the existing main at the intersection of Lem Morrison Drive and South Donahue Drive and be designed for future extension capabilities. Valves and fire hydrants will be provided on the new main

as it extends along the North side of the proposed service drive. A new sanitary sewer main will tie to the existing main near the intersection of Lem Morrison Drive and Woodfield Drive and will be extended along the South side of Lem Morrison Drive approximately 1,100 LF. The site improvements will include mass grading to provide building pad ready sites for both the Pharmacy Research and School of Nursing buildings and common courtyard areas. A new storm drainage system will be designed to provide storm infrastructure in addition to a common storm water detention pond adequately sized to meet pre- and post-storm water hydraulics considering the construction of the Pharmacy Research Building and School of Nursing sites. A new natural gas main and master ALAGASCO meter will be designed to provide a 3rd campus feed location for increased redundancy and an extension of the campus gas system. Designs for roadway improvements to Lem Morrison Drive and South Donahue Drive will include road widening to provide bike lanes and turn lanes.



# WATER RESOURCES

While focusing on the relationship between human use and the conservation of natural resources, we strive to Protect Life and Property through stormwater management. We provide our clients with information and cost-effective solutions for even the most intricate of floodplain and stormwater management issues.

## Hydraulics and Hydrology

The study of the movement, distribution, and quality of water in addition to the methods of conveyance of water. As a part of every project, hydraulics and hydrology of stormwater form the basis of our water resources services. We provide comprehensive H&H services to ensure quality corrective and preventive measures for watersheds and riparian/river systems. Our H&H engineers led by our Certified Floodplain Manager (CFM) are skilled in the use of Hec-RAS and Hec-HMS as well as EPA SWMM, Storm and Sanitary Analysis, ICPR and other software for designing large drainage systems and interconnected ponds.

## Stream Restoration

The process of improving the environmental health of a river or stream to restore the natural state of the river system in support of ecology, recreation, landscape, and flood management. We can provide full stream restoration design services as prime consultant or as the design partner in a design-build project delivery method.

## Low Impact Development

The methodology to manage stormwater runoff emphasizing the use of on-site natural features to protect water quality within a watershed. With LEED certified engineers and numerous LEED certified projects throughout the country, we are able to provide LID consulting services whether incorporated within the civil design of a project or as an external consultant to a design team.

## Stormwater Management

Our thorough understanding of floodplain management, as regulated by FEMA and NFIP, and our familiarity with their processes and procedures allow us to provide quality flood study and mapping services that meet regulatory standards and flood insurance guidelines. LBYD can assist communities in strategic planning with flood forecasting and analysis. Accompanying this knowledge is our proven design and engineering experience to provide mapping and procedures that will make floodplain management work within the community. We provide our clients with information and cost-effective solutions for even the most intricate of floodplain and stormwater management issues including:

- Floodway and Flood Plain mapping and revisions
- Regional detention
- Lake Hydrology and Spillway Design

## CAHABA RIVER ENHANCEMENT

### TRUSSVILLE, ALABAMA

This project consists of an enhancement for the Cahaba River in the vicinity of the Civitan Park and located on the stretch of river between US Highway 11 and Cherokee Drive. The total project reach is approximately 3,200 LF. The existing condition of the stream was impaired due to the severe stream bank erosion, mid-channel sediment bars, lack of deep rooted native vegetation, invasive plants and lack of in-stream habitats. The goal is to achieve water quality, in-stream and habitat stability, urban natural channel design, stream enhancement and stormwater management. A portion of the project will be used for on-site compensatory mitigation for the stream impacts generated by the new Hewitt-Trussville High School Football stadium.



# CONTACT US



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