

WILLIAM GRAY WELLS, P.E.



President

Gray now serves as President of Christy/Cobb, Inc. and is responsible for the overall management of the firm, consisting of project selection, contract negotiations, and approval of all capital expenditures. Gray joined Christy/Cobb in September 1989 as a structural engineer. Since joining Christy/Cobb, he has worked on numerous residential, commercial, institutional, industrial and bridge projects. Project responsibilities consist of structural design and coordination with other disciplines, project management and construction review. Projects have been located throughout the southeastern states and Puerto Rico.

Gray worked with Bachus Engineering, Inc., a Birmingham based general contractor, from 1975 to 1981 with project involvement in commercial and industrial construction in the Birmingham area. He then joined the engineering department of Harbert International, Inc., another Birmingham based general contractor. While at Harbert, project responsibilities were those of civil/structural engineer for domestic and international projects. Projects consisted of wastewater treatment plants, co-generation plants, ethanol plants, geothermal power plants and a grain storage and transfer facility. Other projects included the design of structures required to support Harbert's coal mining operations in Kentucky.

EDUCATION:

Auburn University
B.S.C.E.

**CIVIC
ACTIVITIES:**

United Way of Central Alabama

**PROFESSIONAL
ACTIVITIES:**

American Council of Engineering Companies of Alabama – Vice President
American Institute of Steel Construction
American Society of Civil Engineers
American Concrete Institute
Association of General Contractors
Construction Specification Institute
Structural Engineers Association of Alabama

LICENSURE:

Alabama, Georgia, Kentucky, Louisiana, Mississippi, South Carolina, Tennessee, Virginia,
NCEES Certification

Infrastructure

Replacement of Bridge over Butler Creek on Lauderdale County Road 61, ALDOT Project ACRZ62145-ATRIP (005) – Lauderdale County, Alabama

Christy/Cobb provided the structural engineering for the replacement of the bridge on Lauderdale County Road 61 over Butler Creek in Lauderdale County, Alabama. The existing bridge built in 1936 has an overall length of 132 feet consisting of three spans of 51 feet, 50 feet and 31 feet. The existing bridge is constructed with steel girders and concrete deck and has a sufficiency rating of 22.6. The replacement bridge has an overall length of 240 feet long with spans consisting of 40 feet, 80 feet, 80 feet and 40 feet. The superstructure of the replacement bridge will be constructed with AASHTO Type I and Type III prestressed bridge girders and concrete deck. The substructure will consist of 42 inch diameter drilled shafts. The existing north side earth embankment approach, approximately 88 feet long, will be removed down to natural grade and stabilized with riprap. No fill is included in the project.

CR-120 Bridge Replacement over Bangdoodle Creek, Greene County, Alabama; ALDOT Project No. ACRZ59390-ATRIP (007)

Christy/Cobb provided the structural design of a 120 foot long, 4 span pre-cast concrete bridge, barrier rails and foundations for the replacement bridge over Bangdoodle Creek in Greene County. The bridge was constructed under the Alabama Transportation and Rehabilitation and Improvement Program (ATRIP).

Birmingham Water Works Board MSA Gradient Interconnect Project - Birmingham, Alabama (2017)

Christy/Cobb provided the structural design and construction support for the restraint of 36 inch and 42 inch diameter pipes during the tapping and stopping of pipes while in service. The project's objective is to interconnect domestic water supply pipes from water sources north of the city of Birmingham with those located south of the city to provide plurality of water supply during drought conditions.

Chilled Water Expansion to Hill Center; University of Alabama at Birmingham, Alabama

Christy/Cobb provided the structural design of three underground concrete manholes constructed along the new utility line extending from UAB Central Plant No. 1 to UAB's new Hill Center at 14th Street.

I-65 North Corridor Bridge Raising and Widening – Jefferson County, Alabama ALDOT Project STPBH-CMAQ-I065 (457)

Christy/Cobb provided construction support services for the raising of bridge numbers 6 and 7A and the widening of the bridges over Second, Third and Fourth Avenues North in downtown Birmingham. Services consisted of the structural design and construction observations for raising falsework and demolition protection for the project. Christy/Cobb also provided the design and submittal preparation of the bridge girder erection details and value engineering of alternate diaphragm construction details that were presented and approved by ALDOT.

Expansion of Central Utility Systems to the Western Academic Campus (Phase I); University of Alabama at Birmingham; Birmingham, Alabama

Christy/Cobb provided the structural design of eleven underground vaults to enclose the piping and control valves for steam and chilled water piping servicing the new Football Operations Complex, Business School and additional buildings and facilities planned along the western and southern sides of UAB's campus.

Steam Distribution System; University of Alabama at Birmingham; Birmingham, Alabama

Christy/Cobb performed the structural design for the underground manholes, thrust blocks and pipe supports for the steam and condensate return piping associated with the new steam plant servicing classrooms, administration buildings and buildings making up the university hospital. The project included twenty two cast in place concrete underground manholes located throughout the university under streets, parking and landscaped areas. Structural steel and concrete pipe supports were also included to support the pipe forces produced by the 450° steam as determined by the project's mechanical engineer. The pipe supports are located within the manholes as well as throughout numerous buildings of the university and university hospital complex.

Honda of Alabama, Bridge over CBU Road; Lincoln, Alabama

The project consisted of the structural design for a design build bridge located in the Honda plant. The bridge was designed and constructed with pre-stressed concrete girders. The bridge is 39 feet wide and 180 feet long consisting of three spans, the longest of which is 114 feet.

Creekside Development Access Bridge; Hoover, Alabama

Performed structural design of a 38 foot wide, 100 foot long bridge in the Creekside development. The bridge is a single span bridge designed and constructed using BT54 pre-stressed concrete girders with a concrete deck. Architectural features of the bridge include an attached pedestrian walkway and open concrete bridge rails.

Ross Bridge Parkway; Hoover, Alabama

The project consisted of the design of approximately 4 miles of parkway servicing a new development by Daniel Corp. and USX for the City of Hoover. Christy/Cobb's responsibility consisted of the design of two bridges in the parkway and one on Orchard Avenue. The bridge over CSX railroad consists of two spans with an overall length of 151 feet. The bridge over Shades Creek has an overall length of 456 feet consisting of three 108 foot interior spans and two 65 foot end spans. The bridge at Orchard Avenue is a single span bridge having a length of 85 feet. All bridges are designed using pre-stressed concrete girders.

Gaston Steam Plant Railroad Spur; Wilsonville, Alabama

The project consisted of the design of a new railroad spur servicing Alabama Power's Gaston Steam Plant. The railroad spur consisted of two 10 foot square box culverts, supporting 60 feet of fill combined with the railroad loads and three railroad trestles, the longest of which is 2,556 feet. The trestles are constructed of pre-cast concrete slabs supported by steel H-pile bents.

Buildings

Central Plant 5; University of Alabama at Birmingham; Birmingham, Alabama

The project consisted of the design of a new chilled water central plant servicing various buildings of UAB. The plant consisted of the design of a building to house a 4,000 ton centrifugal chiller (with an ultimate plant capacity of 16,000 tons), four roof mounted cooling towers, two 10 ton bridge cranes, and the associated mechanical and electrical equipment. The building has a total square footage of 21,500 square feet consisting of 17,000 square feet of an at-grade operating floor and 4,500 square feet of an elevated administration area. The building is constructed as a steel framed building with masonry walls. The cooling towers are installed on an elevated steel framed platform.

University of Alabama at Birmingham Football Operations Complex; Birmingham, Alabama

Christy/Cobb provided the structural design for the new two story 46,154 square foot football operations facility, foundations for the 85,000 square foot practice facility and miscellaneous ancillary structures. The Football Operations Building includes coach's offices, auditorium, player treatment, conference rooms, locker room, weight room, laundry and equipment storage.

Birmingham Southern College Lakeview Residence Halls; Birmingham, Alabama

Christy/Cobb performed the structural design for two four-story residence halls located on the Birmingham Southern College campus. With a combined square footage of 65,300, these two residence halls provide housing for up to 167 students. The brick veneered wood framed structures are located on a steeply sloping site and are constructed using pre-engineered wood floor and roof trusses and wood and masonry bearing and shear walls. The project was awarded LEED certification by the Green Building Council.

Alabama A&M School of Business; Huntsville, Alabama

Christy/Cobb performed structural engineering for the design of two buildings for the School of Business at Alabama A&M University. The project consisted of three separate structures. These structures are the administrative and classroom building for the School of Business, a Multipurpose Building for assemblies as well as to provide office space for the University's president and administration, and an elevated plaza connecting the two buildings. All three structures were designed and constructed of reinforced concrete and reinforced masonry.

Power Generation and Site Power Facility at Village Creek WWTP; Birmingham, Alabama,

The project consisted of the structural design of the building enclosing eight 4500 hp/3250 kW generators. The building consists of 21,000 sf (320' x 60' x 36' eave ht.) constructed as a reinforced concrete frame with steel roof trusses. The building also enclosed a 25 ton overhead bridge crane. The project also consisted of the miscellaneous structures supporting the exhaust silencers, radiators, pipe supports, mezzanine storage area and underground electrical vault.

Additions and Renovations

Central Plant 1 Renovations; University of Alabama at Birmingham; Birmingham, Alabama

The project consisted of the renovations to an existing chilled water central plant servicing various buildings of UAB and The University Hospital. The plant renovations consisted of the addition of two 2,000 ton centrifugal chillers, five roof mounted cooling towers and the associated mechanical and electrical equipment.

Central Plant 3 Expansion; University of Alabama at Birmingham; Birmingham, Alabama

The project consisted of the renovations to an existing chilled water central plant servicing various buildings of UAB and The University Hospital. The plant renovations consisted of the addition of two 2,000 ton centrifugal chillers, four roof mounted cooling towers, a 10 ton bridge crane and the associated mechanical and electrical equipment. The renovations consisted of a 32 feet by 69 feet building extension. The extension is constructed as an elevated concrete operating floor supporting the chillers and a steel framed roof. The cooling towers are supported on steel framing above the roof level. A 700 sq. foot below grade electrical vault was also included in the project.



LOWELL K. CHRISTY, PE, FACEC, LEED AP BD+C



Senior Structural Engineer

Lowell Christy is one of the founding Principals of Christy/Cobb, Inc. She served as President from March of 1981 until May of 2018, and currently serves as a structural engineer and technical advisor for the firm. Over the years, Lowell developed both technical and managerial skills, functioning as the lead structural engineer or prime design professional on wide variety of projects. The focus of her structural engineering work has varied over the years including residential, commercial, educational, and religious architectural projects; industrial facilities including manufacturing, water, and wastewater treatment plants; special structures such as bridges and excavation bracings; structural evaluations; and historic preservation of various types of structures. Her clients have included owners, state and local governmental agencies, engineers, contractors and architects.

EDUCATION: Civil Engineering, University of Alabama 1967-1971

CIVIC ACTIVITIES: Girl's Incorporated of Central Alabama – Former Trustee, Past President
The Women's Network - Past President
Kiwanis Club of Birmingham

HONORS AND ACHIEVEMENTS: 2019 Alabama Engineering Hall of Fame
2017 UAB Outstanding Woman in the Community
2016 AGC Construction Hall of Fame Inductee
Fellow of the American Council of Engineering Companies
ACEC College of Fellows – 2014 Community Service Award
Cahaba Girl Scout Council - 1994 Women of Distinction
Birmingham Business Journal - 1991 Top 10 Women

PROFESSIONAL ACTIVITIES: University of Alabama at Birmingham's Department of Civil, Construction, and Environmental Engineering Advisory Board – Past Chair
Council of American Structural Engineers – Past Chair
American Council of Engineering Companies of Alabama – Past President
Structural Engineers Association of Alabama
U.S. Green Building Council
Society of Women Engineers
National Trust for Historic Preservation

LICENSURE: Alabama and Florida

REPRESENTATIVE PROJECTS:

Alabama Power Company Indefinite Delivery Contract; Birmingham, Alabama

Structural Project Engineer for new and existing buildings, specialty structures, industrial facilities and office buildings, and consultant for concrete repairs and deck coatings of existing parking structures, repairs to building facades, and emergency repairs associated with fires and accidents.

Renovation and Expansion of Lister Hill Library; University of Alabama at Birmingham; Birmingham, Alabama

Principal in charge for the structural design of a 105,000 square foot medical library addition and renovation. The structure is a seven story composite steel framed expansion supported on deep foundations and connects to the existing structure at five of the lower levels. The design was complicated by many factors including underground utility tunnels, a complex curved building facade and exterior plaza areas which cantilever to connect with existing pedestrian walkways.

Coosa Valley Medical Center West Wing Addition; Sylacauga, Alabama

Principal in charge responsible for design of a large, three-story addition to an existing hospital using a composite structural floor system. The design and drawings were completed on a fast-track schedule with foundation construction commencing prior to completion of the super-structure design.

C&B Piping; Leeds, Alabama

Coordinating design professional and principal in charge of the structural design for this multi-building industrial facility. Responsible for working closely with the Owner and Contractor, coordinating the project programming and developing the general arrangement, preparing the contract documents and administering the construction phase services.

Intermodal Facility Office & Customs Buildings at the Huntsville-Madison County Airport;- Huntsville, Alabama

Project Engineer responsible for the structural design and construction phase services for two buildings housing the inspection, support and administrative staff for cargo transfer within a "Duty Free" zone. Some years after the original construction, Christy/Cobb provided emergency evaluation and design of repairs after a gantry crane collapsed onto the roof of the three story Customs Building during a high wind event.

Decatur Water Treatment Plant Upgrades; Decatur Utilities; Decatur, Alabama

Project Manager for the structural design of the upgrades to the existing water treatment plant. The structural engineering services included upgrades of flocculation basins 1 through 4, design the existing biosolids building to support two new centrifuges with service monorails, a foundation for an emergency generator and an owner supplied enclosure, the design of blower pads to be installed on the existing slab on grade in the blower building and a foundation for a chemical feed pump and an owner supplied enclosure.

Gorgas House Renovation at the University of Alabama; Tuscaloosa, Alabama

In collaboration with Ellis Architects, Lowell performed the structural portion of the Historic Building Analysis and Cost Estimate for one of the oldest buildings in the campus. She has worked with Richard B. Hudgens designing the structural renovation and adaptive reuse to incorporate visitor support services. The building has served as a dormitory and dining hall, the residence of the University's first president and is now a museum.

Carillon and Stone Restoration for the Cathedral Church of the Advent; Birmingham, Alabama

Principal in charge, worked with Brasfield & Gorrie, Carraway & Associates and The Verdin Company to modify the Bell Tower to house a carillon. The structural work included stone restoration as well as a new roof, bell chamber and platform to support a future clavier. The second phase of the project included a lime mortar restoration of the entire exterior.



MICHELLE DITIZIO BALLEW



Information Technology Manager, Graduate Engineer and Director

Michelle is the firm's Information Technology Manager and CAD Specialist. She is responsible for evaluating and procuring the firm's hardware and software. As a Director, Michelle serves as the Secretary and Treasurer of the firm's Corporate Board. She has been with the firm for 33 years. Michelle is proficient in the use of the firm's administrative, cad and analytical software. She also serves as the CAD and BIM operator, network administrator and webmaster. Michelle joined Christy/Cobb in 1986 as a project engineer responsible for structural design of commercial, residential and industrial projects and continues to serve as a staff engineer.

Michelle's experience prior to joining Christy/Cobb, Inc. included working with a computer analysis group specializing in nuclear projects for United Engineers and Contractors, Inc. in Philadelphia, Pennsylvania and establishing a central computer center for on-site engineers at Seabrook Nuclear Station in New Hampshire. She later joined Control Data Corporation in Boston as a Technical Applications Representative with responsibilities ranging from installation of CADD systems, on-site customer training, and continued customer support.

EDUCATION:

Drexel University
B.S.C.E.

**PROFESSIONAL
ACTIVITIES:**

Society of Women Engineers (SWE)
2020-22 Birmingham Outreach Committee & Girl Day Sponsorship Chair
2018-20 Birmingham Communications Chair and Webmaster
2017-18 Birmingham Section President
2016-17 Section Representative and Outreach Committee
2003 National Conference Treasurer
1994-96 Region Director – National Board of Directors
1987 Charter Member

Engineering Council of Birmingham (ECOB)
2019-2022 ECOB Foundation Treasurer
2018-19 President
1999-00 President

AWARDS:

Girls Scouts of North Central Alabama - 2011 Women of Distinction
SWE – 2003 College of Fellows
ECOB - 2002 Distinguished Service Award

REPRESENTATIVE PROJECTS:

APCo Parking Deck Repairs; Alabama Power Company; Birmingham, Alabama

Performed site inspections, prepare contract documents and construction phase services of repairs for the Employee and Fleet Decks.

APCo Headquarters Façade; Alabama Power Company; Birmingham, Alabama

Performed site visits and consultation regarding periodic inspections of precast concrete panels on Headquarters Building and Employee Parking Deck. Keep a database and drawings of data collected and repairs made.

APCo 1925 Building Façade; Alabama Power Company; Birmingham, Alabama

Performed site visits to systematically monitor interior and exterior areas surrounding windows and masonry cracks in the 1925 Building and 1950 Annex regarding interior distress and leaking.

Empire Lock Control Buildings; Shavers-Whittle Construction, LLC; Plaquemines Parrish

Performed site visits to Modular Connections in Bessemer, Alabama to observe and report on the progress of the construction of three modular control rooms to be located at Empire Lock Control Buildings.

Hoover Public Safety Center; City of Hoover; Hoover, Alabama

Performed a series of site visits to record data to assist in determining the cause of cracks that appeared in the east entrance and the fleet service area of this single story facility and wrote a final report of all findings with recommendations for repairs.

APCo GSC Bldg 8B Renovation; SDR Studio; Shelby County, Alabama

Design Engineer responsible for drawing production of the structural modifications of the existing building known as the Boat Shed.

UAB-801 Bldg Elevator (EBSCO)

Design Engineer responsible for drawing production of the structural modifications and addition of an elevator in the Lobby of the original portion of the EBSCO Media Building, a two story wood framed building.

University of Alabama at Birmingham Football Operations Complex; Birmingham, Alabama

Design Engineer responsible for Revit modeling and drawing production for the new two story 46,154 square foot football operations facility, foundations for the 85,000 square foot practice facility and miscellaneous ancillary structures.

Birmingham Southern College Lakeview Residence Halls; Birmingham, Alabama

Design Engineer responsible for drawing production of two four-story residence halls located on the Birmingham Southern College campus.

Alabama Highway Department Material Testing Laboratory; Birmingham, Alabama

Project Engineer responsible for the design of a 6,000 square foot laboratory with masonry bearing walls and prefabricated wood trusses for roof.

Children's Hospital Incinerator, University of Alabama at Birmingham; Birmingham, Alabama

Project Engineer responsible for the structural design of an open structural steel facility to house the incinerator for Children's Hospital.

Hess's Department Store; Biltmore Square Mall; Asheville, North Carolina

Project Engineer responsible for the design and construction phase services of an 80,000 square foot department store with masonry bearing walls and joist and joist girder roof.

New River Valley Mall, Phase II; Blacksburg/Christiansburg, Virginia

Project Engineer responsible for the design and construction phase services of a 42,707 square foot addition to the main mall.

GLORIA D. JACKSON, CDFA, LEED Green Associate



Vice President-Operations, Director

Gloria serves as Vice President of Operations and is Chairman of the Board of Directors for Christy/Cobb. She has been with the firm 29 years and is responsible for managing the firm's finances, human resources and internal office operations. As Chairman, Gloria is responsible for the financial health of the company and facilitating financial decisions to promote company growth. Gloria joined Christy/Cobb in 1992. Prior to joining the firm, she worked at Angeles Corporation as an Office Manager /Project Assistant in Birmingham and earned her SAHMA accreditation for management of subsidized housing. In March 2018 she earned LEED Green Associate certification. She is a 2019 graduate of Goldman Sachs 10,000 Small Businesses Program.

In managing the firm's operations, Gloria's responsibilities include overseeing all accounting processes, project billing, and preparation of internal financials. She is also responsible for negotiating corporate insurance policies, reviewing contracts, securing and maintaining professional registrations and licenses, and other management operations. She endeavors to increase their business revenues through relationship building.

Human Resources – Gloria's focus on employee management includes the recruitment, resume review, hiring and engagement of employees. She is tasked with negotiating contracts for all benefit packages offered by the firm, which includes Workplace Wellness initiatives. She maintains personnel records, performs payroll processes and provides regular corporate tax reporting and year-end tax reporting for the firm.

EDUCATION: B.S. University of Alabama – Business Management
Goldman Sachs 10,000 Small Businesses Graduate

**CIVIC AND
COMMUNITY:** United Way
Dfree Counselor for Debt-Free Living
American Heart Association

**PROFESSIONAL
ASSOCIATIONS:** Society for Design Administration (SDA), Member-At-Large
SDA National Membership Committee
SDA Certified Design Firm Administrator
LEED Green Associate
American Institute of Professional Bookkeepers