

Statement of Qualifications

For

Public Works Engineering

2009



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STATEMENT OF QUALIFICATIONS

OUR COMPANY

H & H Resources, Inc. was founded in 2001 as a civil engineering consulting firm that assists clients in finding practical, feasible, and economical design and permitting solutions. In doing so, our goal is to deliver products and services that are on time, accurate, and within budget. **HHR** has project experience in a variety of public works projects for both city and county clients.

Our principals, Eric Friedrich, P.E., CFM and Wayne Fowler, P.E., CFM, each have over 25 years of experience. The staff includes additional registered professional engineers plus technician and administrative support, bringing to the firm a variety of design experience and resources for accomplishing project tasks.

To illustrate our company's varied background, our engineers have worked as staff or consultants for the following public entities:

- U.S.D.A Natural Resources Conservation Service
- Texas Department of Transportation
- Georgia Department of Transportation
- Fort Bend County Toll Road Authority, Texas
- Texas Cities of Houston, Fort Worth, Bryan, Georgetown
- Georgia Cities of Albany, Douglas, and Hiawassee
- Georgia Counties: Union, Henry, Lee, Fulton
- Harris County, TX Flood Control District
- Texas A&M University's Texas Engineering Extension Service
- UT Austin Center for Lifelong Engineering Education
- University of Texas at Arlington

In an effort to serve our clients better, our engineers continue to update their skills by receiving continuing education in various software programs and engineering topics related to drainage floodplain management. As leaders in our profession, we provide instructors and training courses in the fields of hydrology, hydraulics, and erosion control. Our principals or employees have been involved in the development of drainage standards, policies, and procedures for local and state governments, and have published technical and research documents.

HHR is registered as a consulting engineering firm to practice in the states of Texas, Georgia, and North Carolina.

OUR PUBLIC WORKS ENGINEERING PRACTICE

HHR has the project experience to offer these services for public works projects:

- Water and Sewer
 - Water Source Development
 - Water Delivery
 - Sanitary Sewer Collection
 - Sewer Lift Stations
 - Standards Development
 - Stormwater Management
 - NPDES
 - Stormwater Utility
 - Drainage Master Planning
 - Erosion/Sediment Control
- Transportation
 - Road Design
 - Railroad Design
- Water Resources
 - Floodplain Studies
 - Floodplain Management
 - Flood Mitigation Planning
 - Storm Sewer
- Consulting
 - Expert Witness
 - Staff Training
 - Funding Source Development
 - Ordinance Writing
 - Plan Review
 - Agency Coordination
 - Construction Observation

Our public works engineering requires us to be knowledgeable about federal, state, and local regulations. We have coordinated with state environmental and transportation agencies, the U.S. Army Corps of Engineers, the Federal Emergency Management Agency (FEMA), and local flood control districts.

Our engineers have used a variety of design software, aids, and procedures, including:

- Ten States Standards
- Minimum Standards for Public Water Systems
- EPA-SWMM
- NRCS TR-20, TR-55
- Geopak Drainage
- Georgia Stormwater Management Manual
- FEMA Flood Insurance Studies (FIS), Flood Insurance Rate Maps (FIRM)

Water and Sewer

HHR can assist a community in improving and extending its water and sewer services. Our experience includes well permitting, new community water systems, state permitting for water extensions, booster pumps, storage tanks, troubleshooting, and development of standards and specifications. We have designed sewer pump stations, sewer line extensions, and coordinated environmental permitting. Communities rarely need onsite wastewater management designs, but our experience includes that also. We can assist communities in finding funding sources.

Transportation

Roads and related drainage issues are a significant part of our practice. We have designed new roads for communities and improvements to existing roads. We have assisted communities in finding funding. For communities expanding their industrial base, we can provide rail engineering.

Water Resources

As Certified Floodplain Managers, we have extensive experience with floodplain engineering related to FEMA's National Flood Insurance Program (NFIP). We can assist a community with floodplain mapping and revisions, ordinance revisions and program updates, flood mitigation planning, and Community Rating System (CRS) implementation.

HHR can address drainage problem areas by designing improvements to storm sewers, detention ponds, water quality, culverts and bridges. We can provide master planning for drainage improvements. We have assisted communities with NPDES Ph 2 implementation and establishing a local stormwater utility to fund stormwater improvements. We are qualified and experienced in erosion and sediment control design, and are instructors in Georgia's Erosion and Sedimentation Control certification program.

Our drainage projects have required HHR to coordinate with FEMA, U.S. Army Corps of Engineers, and state environmental regulations.

Consulting

HHR has provided expert witness on drainage-related issues and pre-litigation design as result of complaint. Courts have held governments liable for increasing flood and erosion damages on private property by changing natural drainage patterns and by increasing the location and rates of runoff due to drainage projects. Governmental units are liable for inadequately maintaining or operating culverts, bridge crossings, and channelization projects.

We have assisted communities with engineering review of plans and permit applications, master planning, ordinance writing and revisions, multi-jurisdictional hazard mitigation planning, and major investment (capital improvement) studies.

Communities have retained HHR to develop funding sources, such as DOT state aid grants, Community Development Block Grants, and local stormwater utility.

Our services have been used by communities to meet state and federal regulatory requirements, such as applying for groundwater use permit, developing water conservation plans, and complying with the National Flood Insurance Program.

OUR PEOPLE

At **HHR**, we believe our staff is second to none. Our employees are selected based on their exceptional qualifications in our areas of expertise. We have engineers, technicians, and administrative staff that work together to meet the needs of our clients.

Eric R. Friedrich, P.E., CFM

President

B.S. Civil Engineering, University of Texas, 1983

Mr. Friedrich's primary area of expertise is transportation and drainage engineering. He is a registered professional engineer in Texas. He has extensive experience in preliminary engineering and PS&E development for highway and bridge projects, particularly hydrology and hydraulics analysis and design. He has managed projects for roadway, bridge and drainage design. In 2001 he founded **H & H Resources, Inc.** His prior experience includes 11 years with the TxDOT Bridge Division Hydraulics Section and the Fort Worth District.

He has provided drainage studies, culvert, bridge, storm sewer, channel hydraulics, detention ponds, erosion control, bridge scour, pump station design, and floodplain/floodway coordination with FEMA. Modeling expertise includes THYSYS Culvert and WinStorm; HEC-1, HEC-HMS, HEC-2, HEC-RAS; SCS TR-20, WSP-2, USGS PeakFQ, Geopak Drainage and EPA SWMM. Mr. Friedrich is an instructor under contract with University of Texas at Arlington teaching hydrology and hydraulics to TxDOT personnel.

Mr. Friedrich has been involved in the development of the following technical publications, standards development, and policy-generation:

- TxDOT Procedures for Coordinating Floodplain Encroachments with FEMA, 1984
- TxDOT Bridge Division Hydraulic Manual 3rd Edition, 1985
- AASHTO Task Force on Hydrology and Hydraulics, 1985 – 1990
- TxDOT IH 10 Katy Freeway Reconstruction Program, Drainage Design Criteria, 2001-05
- TxDOT US 290 / Hempstead Corridor Program Management, Drainage Design Criteria, 2006-09

Mr. Friedrich is a member of the American Society of Civil Engineers (ASCE), and the Texas Floodplain Management Association (TFMA).

Wayne E. Fowler, P.E., CFM

Vice President

B.S. Engineering, Auburn University, 1983

Post-graduate studies, Auburn University, 1984

Mr. Fowler is experienced in drainage, floodplain, transportation, water, and sewer projects. He has served as County Engineer, and has been involved with ordinance revisions, plan review, and other areas of county operations. Mr. Fowler is a registered professional engineer in Georgia, Texas, North Carolina, and Alabama. He has experience in a variety of public and private sector civil engineering projects, particularly in hydrology and hydraulics analysis and design. He has managed roadway, drainage, floodplain, utility, and land development projects. In 2001, he founded a consulting firm that later merged with **H & H Resources, Inc.** Prior employment experience includes USDA-NRCS; engineering consulting firms in TX, GA, and AL; and a 2-yr international assignment in water resource development.

Mr. Fowler is a member of the American Society of Civil Engineers (ASCE), Association of State Floodplain Managers (ASFPM), and Georgia Association of Floodplain Management (GAFM). He is an instructor in Georgia's Erosion Control Certification Program.

Mike L. Talley, P.E., CFM

Project Manager

B.S. Civil Engineering, Georgia Institute of Technology, 1998

Mr. Talley manages the Albany, GA branch office. He is experienced in water, sewer, stormwater, and transportation projects. On the engineering staff of Albany, GA, he was involved with plan review, NPDES implementation, and other areas of City planning and operations. He is a registered professional engineer in Georgia and Texas.

He has worked on a wide range of engineering projects, including drainage, water supply and distribution, sanitary sewer, and transportation. His drainage engineering experience includes storm sewer improvements, floodplain studies, storm water management, and third party review of reports/designs. Project types include commercial, residential, transportation (road and rail), and municipal (water and sewer design). He has participated in developing city policies and standards. Previous employment includes: Norfolk Southern Railroad in Atlanta, Georgia; Stevenson & Palmer Engineering, in Albany, Georgia; and the City of Albany Georgia.

Mr. Talley is a member of the Georgia Association of Floodplain Management. He has recently completed continuing education in NPDES Phase II, XP-SWMM, Erosion and Sediment Control Design, and Transportation Safety Audits. He has experience with HEC-2, HEC-RAS, GEO-RAS, HEC-HMS, XP-SWMM, GIS (Arcmap, Spatial Analyst, 3D analyst), Geopak. Mr. Talley is a member of the Georgia Association of Floodplain Management (GAFM).

OUR PROJECTS

Our public works projects vary in size and scope. The following is a sample listing of projects that demonstrate some of the various types of services we can provide for public works projects.

- **Countywide Floodplain Mapping, Henry County, GA (2008-present);** Drainage sub-consultant. Future floodplain mapping required by Metropolitan North Georgia Water Planning District. Effective data conversion. Limited Detailed hydraulic analysis. Sub-consultant to URS Corporation.
- **Consulting Services, Lee County, GA (2008-present);** Transportation design, plan review, NPDES compliance.
- **Coosa Water Authority, Union County, GA (2008-present);** Standards and specification development, remedial design for low pressure area, EPD compliance, groundwater use permit.
- **Consulting Services, Union County, GA (2001-2008);** Ordinance revisions, plan review, coordinate with state and federal agencies, design for transportation and drainage improvements, floodplain mapping, staff training.
- **Water System Extensions, Young Harris, GA (2008-2009);** Design and permitting for extensions to serve proposed Young Harris Village and The Valley at Brasstown Creek subdivisions.
- **Flood Mitigation Assistance Plan, Lee County, GA (2008-2009);** Study and report to evaluate flood risks in Lee County. Developed mitigation strategies to reduce/eliminate losses associated with Severe Repetitive Loss Properties. Prepared written document for approval by FEMA. Coordinated with County FPA, GEMA and FEMA.
- **Stormwater Utility, Americus, GA (2009);** Analysis of maintenance and capital improvements needs. Assist in development of stormwater utility.
- **Sewer System Extension, Young Harris, GA (2007-2009);** Design and permitting for sewer collection system, two lift stations. Coordination with City, Georgia EPD.
- **Airport Terminal Road, Union County, GA (2006-2008);** Design for new road, including alignment, drainage, erosion control, coordination with U.S. Army Corps of Engineers.
- **Precinct Line Rd. at Walker Branch, Fort Worth, TX (2006-08);** Hydrology and hydraulics design of bridge replacement and approach embankment in floodplain for City, TxDOT. Watershed analysis, channel improvements and lining, impact/mitigation analysis, floodplain study (CLOMR request). Coordinated with City FPA, FEMA's review contractor.
- **Crisp County Courthouse Flood Study, Crisp County, GA (2008);** Base flood elevation determination. Hydrologic and hydraulic analysis of a Zone A flood zone to determine existing and proposed base flood elevations. Coordination with County, City FPA, architect.

- **Longview Street, Hiawassee, GA (2007);** Drainage analysis and design to alleviate flooding and citizen complaints.
- **Water System Extension, City of Clayton, GA (2007);** Design and permitting for extension to serve proposed Pinnacle Pointe subdivision.
- **Water System Extensions, City of Blue Ridge, GA (2006-2007);** Design and permitting for extensions to serve proposed Blackgum Ridge and River Ridge subdivisions.
- **Water System Extension, City of Blairsville, GA (2007);** Design and permitting for extension to serve proposed Butternut View subdivision.
- **Water System Relocation, City of Blairsville, GA (2006);** Design and permitting for relocation of water main along state route. Coordination with Georgia EPD, DOT.
- **Hog Pen Ditch, Albany, GA (2005-2006);** Hydrologic and hydraulic analysis of proposed improvements to levee to alleviate interior flooding along Flint River. Prepared CLOMR and LOMR documentation. Coordinated with US Army Corps of Engineers, City FPA, GDOT, and FEMA.
- **Seaboard Branch at MacArthur Drive, Camilla, GA (2001-2005);** Hydrology, hydraulic design, floodplain analysis, CLOMR and LOMR documentation for improved road crossing. Funded by the Georgia Emergency Management Agency (GEMA) under the Hazard Mitigation Grant Program (HMGP).

OUR REFERENCES

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OUR LOCATIONS

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