

PROPOSAL FOR CLEANING AND VIDEO INSPECTION OF GRAVITY SEWER LINES

for the City of Greensboro, North Carolina



ORIGINAL



**GREENSBORO
NORTH CAROLINA**

October 1, 2018 • 5:00 p.m.

HYDROSTRUCTURES®

Utility Consulting and Evaluation

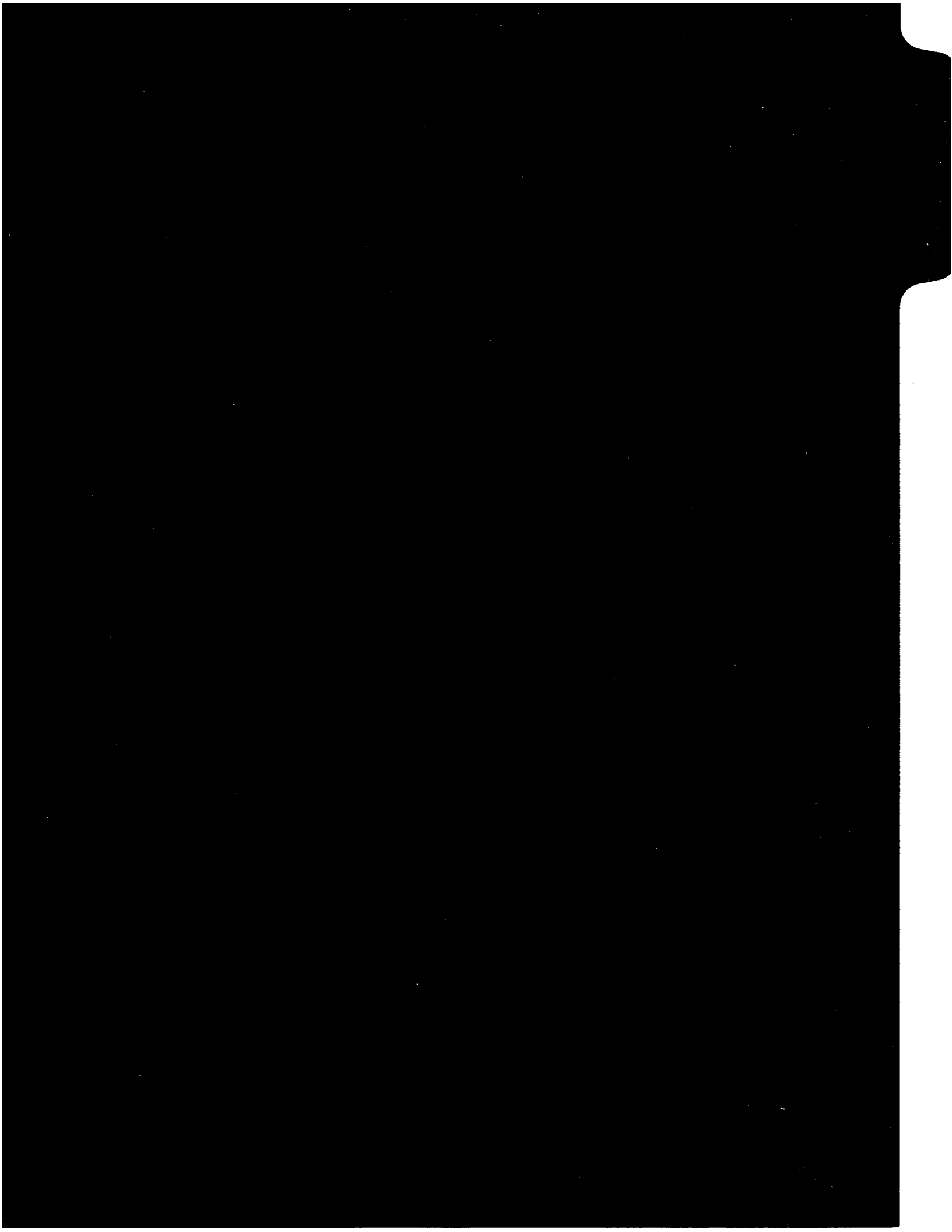




TABLE OF CONTENTS

Table of Contents

- 1** Transmittal Letter
- 2** Firm's Description of Scope of Services
- 3** Firm's Experience and Capabilities
- 4** Cost of Services
- 5** M/WBE Policy



HYDROSTRUCTURES®

October 1, 2018

Ms. Jana Stewart, P.E.
City of Greensboro Water Resources Department
2602 S. Elm-Eugene Street
Greensboro, NC 27406

RE: Proposal for Cleaning and Video Inspection of Gravity Sewer Lines

Dear Ms. Stewart:

Hydrostructures is pleased to submit our proposal for the City of Greensboro's Cleaning and Video Inspection of Gravity Sewer Lines project. We are confident that our 19 years of experience, knowledgeable personnel, and in-house equipment will meet the needs of this important endeavor and that this submittal will highlight those qualifications.

Company Overview: Hydrostructures was founded in 1999 to provide wastewater, water, and stormwater engineering and evaluation services to local area governments, industries, and commercial clients. The services we provide assist system operators in evaluating the overall condition of their facilities, identifying specific problems or shortcomings, and designing the improvements needed to address these concerns. We offer comprehensive in-house services, including CCTV inspection and cleaning, flow metering/monitoring, rain gauge installation, data collection, sanitary sewer evaluation studies, condition assessment reporting, rehabilitation design, construction inspection and management, and Geographic Information Systems (GIS) development. We cater to an expanding client base that spans North Carolina, South Carolina, Maryland, Virginia, Georgia, and Tennessee.

Office Locations: We have two offices that are less than one hour from the City's offices in Greensboro - our headquarters offices in Pittsboro, North Carolina and our office in Winston-Salem, North Carolina. We also have offices in Cayce, South Carolina and Virginia Beach, Virginia. We have 70 full-time employees across these offices including 8 Registered Professional Engineers, more than 38 employees who have PACP/MACP/LACP certifications, an electrical engineer, and employees who are Certified Stormwater BMP Inspection and Maintenance Professionals, and Certified Stormwater BMP Reviewers. We have 8 CCTV/Inspection crews and 4 SSES crews.

Small Business Designation and Licenses: We are a Federally classified small business in the Central Contractor Registration, validated by the Small Business Act (DUNS #183679690, NAICS Code 541330, Engineering Services [primary] & NAICS Code 237110, Water and Sewer). We maintain corporate Professional Engineering licenses in North Carolina (#C-1895), Virginia (#0405001652), Maryland (#48021) and South Carolina (Certificate of Authorization #5525).

Why Choose Hydrostructures?

Your project is the type of work we do
EVERY DAY.

126 Commerce Court • PO Box 1537 • Pittsboro, NC 27312
(p) 919.542.5002 • (f) 919.542.6835
www.hydrostructures.com

M/WBE Commitment: We are committed to meeting the City's goal of 5% MBE participation and 3% WBE participation. We have partnered with CriTek Engineering, an MBE firm located in Greensboro to provide CCTV Data Review Services. We have made good faith efforts to partner with a WBE firm. We had lined up Traffic Control Safety Service, Inc. to be our WBE partner for traffic control services, but at the last minute (the day before we needed to submit this proposal) the subconsultant decided to not be part of the project. Should the project require additional subcontractors beyond what is already on our team, we will make every effort available to ensure that they are a WBE firm.

WHY CHOOSE HYDROSTRUCTURES?

Turn-Key Methodology: Hydrostructures was created with projects such as this in mind. We have the in-house personnel, equipment, knowledge, and resources to ensure that the County receives a quality project. What differentiates us from our competition is our ability to offer you a **turn-key approach**.

The turn-key methodology allows us to give you **one point of contact** for all of your project needs. With this approach, nothing is left to chance. Our staff is fully in control of your project's status from start to finish, and our in-house QA/QC Program ensures reliability of the data that you use. This provides the City of Greensboro with the ability to make qualified, informed decisions about maintaining and upgrading your utility systems.

In addition to our turn-key methodology, the City's other benefits include:

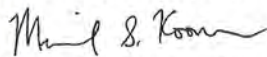
- **An Experienced Team Dedicated to Quality and Customer Service:** Your team possesses excellent management expertise and has many years of experience on similar projects. This record of success is largely due to repeat clients who have learned that we are dependable and deliver what we promise.
- **Commitment to the City of Greensboro:** Over the years, we have learned that the most successful projects have a strong Owner working together in conjunction with the strong engineering team at Hydrostructures to achieve project goals. Your project team worked successfully with similar clients and we understand the goals and objectives Henderson County and are committed to making this project successful.
- **Collaborative Approach:** Hydrostructures has a long history of cooperatively working with its clients to deliver successful projects. Your proposed project team is made up of professionals who are ready to work with the County in meeting the unique requirements of your project.
- **This Is the Type of Work We Do Every Day:** Hydrostructures has specialized in CCTV inspection and cleaning of sewer lines for more than 19 years. The scope of services as stated in the City's RFP are what we do every single day!

Hydrostructures certifies that we will accept the City of Greensboro's Standard Terms and Conditions as provided in "Attachment A" of the RFP.

We look forward to beginning a successful partnership with the City of Greensboro. Should you have any questions, please feel free to contact me at 919.542.5002, extension #222. Thank you for considering Hydrostructures.

Sincerely,

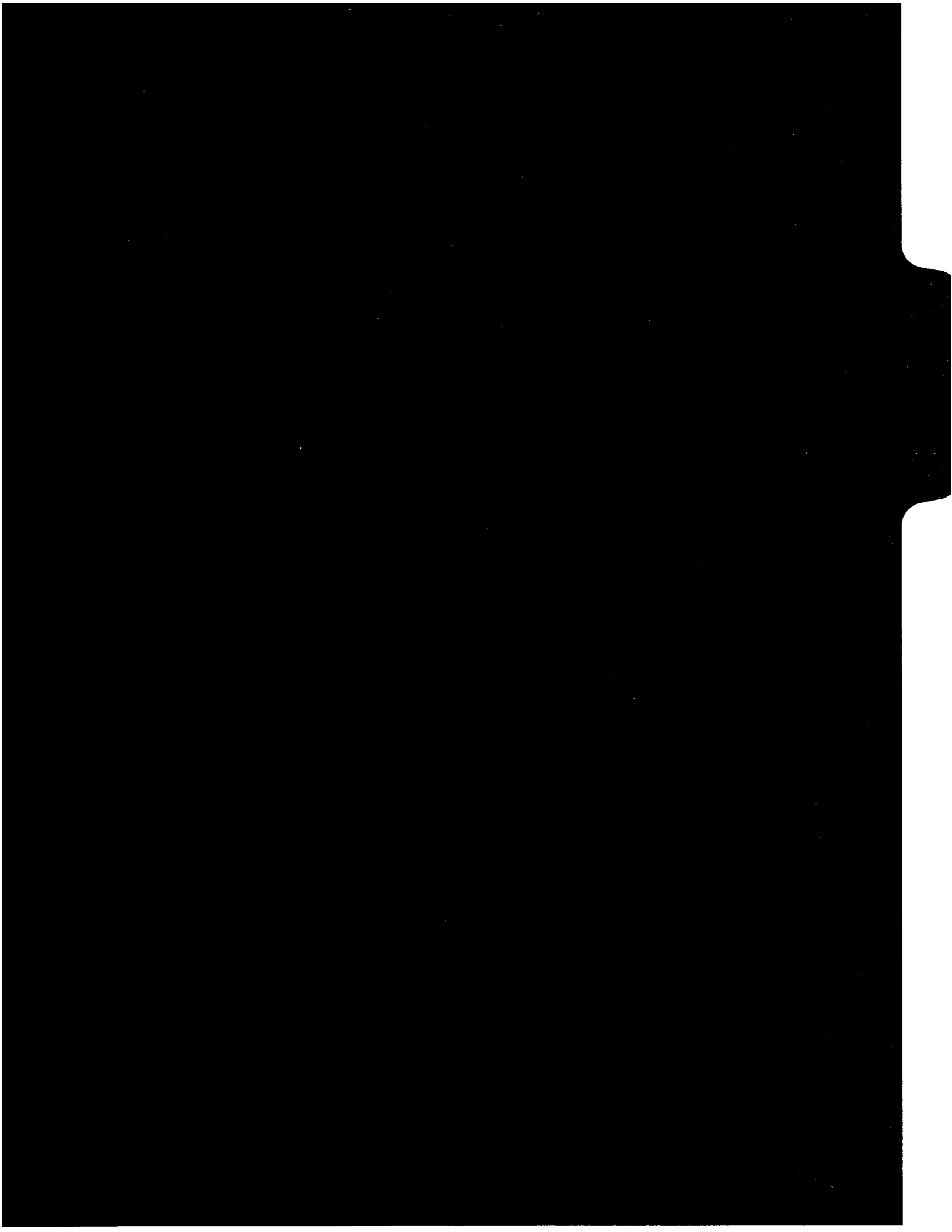
HYDROSTRUCTURES



Michael S. Koonce, P.E.
President



HYDROSTRUCTURES®





2 - FIRM'S DESCRIPTION OF SCOPE OF SERVICES

PROJECT UNDERSTANDING

The City of Greensboro Water Resources Department coordinates cleaning, CCTV inspection, and sonar inspection for a variety of programs, including street resurfacing, sewer rehabilitation, and capacity assurance projects. The data collected from these assessments is used as a basis for rehabilitation/replacement prioritization, planning and design. The City anticipates the need to clean and inspect approximately 65,000 linear feet of sewer ranging in size from 6-inch to 24-inch and 24,000 linear feet ranging from 30-inch to 48-inch.

PROJECT APPROACH

Our proposed project approach is designed to successfully inspect, evaluate, and prioritize the various gravity sewer lines in the project cleaning, CCTV inspection, and sonar. It does so in what we believe is the most cost-effective manner possible to maximize the City's available funding. The finished product of these investigations and analyses will be a report that clearly summarizes the findings from the field investigations and provides the City with rehabilitation/repair/replacement recommendations to insure that the lines continue to operate as originally designed.

We have conducted numerous SSES projects for municipalities in North Carolina and throughout the Southeast. While many other consultants leave cities with volumes of information and no direction, we differentiate ourselves in the following ways:

- **A rigorous Quality Assurance/Quality Control program** to reassure the City that the information being gathered is appropriate, detailed, accurate, timely, and per budget. Our QA/QC plan involves multiple people reviewing the collected field data and comparing it to what was expected, as well as reinspecting structures with questionable data.
- **We realize that City staff is an integral part of a diversified, well-balanced Project Team.** Therefore, staff will always know what's going on, where, and how long it will last. A schedule e-mail providing the exact location of each crew will be distributed to key City staff before we start work. Weekly conference calls or update meetings will be held with the City to provide a schedule of planned field investigations for the upcoming week, to summarize the work completed during the previous week, and to discuss any obstacles that have been encountered. Our business philosophy is to function as an extension of the City's staff so that all parties are working towards a common goal.
- **Your Community Is Important.** It is important that the community in the area immediately surrounding the project area understands the goals and timeline of this project. All homes and businesses will be kept informed on the type of work that will be done, and how it may affect them. We have established a public notification plan, which includes placing door hangers on customers doors whose sewer service might be disrupted a minimum of one week prior to the disruption and meeting with individual homeowners and/or community groups as needed to answer any questions which may arise.

To accomplish this project, we propose the following project approach:

Benefits for the City of Greensboro

Extensive In-House Equipment

We have a wide-range of in-house equipment allowing us to complete any type of cleaning/CCTV work, from small diameter on-road mains to large diameter interceptors.



2 - FIRM'S DESCRIPTION OF SCOPE OF SERVICES

Task 1.0 – Study Area Assessment

Objective: Hydrostructures will work with the City's project members during, and continuing beyond, the project kick-off meeting to develop The City of Greensboro Water Resources Department coordinates cleaning, CCTV inspection, and sonar inspection for a variety of programs, including street resurfacing, sewer rehabilitation, and capacity assurance projects. The data collected from these assessments is used as a basis for rehabilitation/replacement prioritization, planning and design. The City anticipates the need to clean and inspect approximately 65,000 linear feet of sewer ranging in size from 6-inch to 24-inch and 24,000 linear feet ranging from 30-inch to 48-inch. Activities will include:

1. City of Greensboro staff to reaffirm project goals and objectives and establish the project procedures and quality control checks. As part of this discussion, the Project Team will solicit comments and suggestions regarding the approach presented herein. Adjustments to the project approach, phasing/scheduling, and pace of data collection will be evaluated based on the City's goals and objectives.
2. Hydrostructures will review all public notification procedures with the City's staff to ensure acceptability.
3. Preliminary field inspections will be performed to insure that all above-ground structures can be easily located, and to determine specific equipment and techniques needed to access and evaluate each pipe section. This step will insure that the proper equipment and personnel are on-site at the correct time, enabling our Team to stay on schedule throughout the course of the project.

Task 2.0 – Sanitary Sewer Cleaning and Video Inspection

Objective: CCTV Inspection and Cleaning Activities will include:

1. Each line segment shall be cleaned by removing all foreign material including sand, grease, rocks, roots, debris, etc. The cleaning will include starting and terminating manholes of the line segment with a high velocity jetter.
2. For lines located on off-road easements, tracked jetting equipment will be utilized in conjunction with our high volume jet truck to access sewer. With the use of low ground pressure mats the tracked easement equipment can access sewer in very rugged, wet and or sensitive areas with minimal disturbance. Any damage caused by accessing the sewer during the cleaning/CCTV process will be repaired immediately.
3. All material, both solid and/or semi-solid, resulting from cleaning operation shall be removed at the downstream manhole of the segment being cleaned. No debris will be allowed to pass from manhole section to manhole section. All debris and sludge retrieved from these wastewater lines will be properly disposed of in conformance with all Federal, State, and local regulations

Benefits for the City of Greensboro

Your Costs Will Be Controlled

Hydrostructures' upper level managers also serve as hands-on project managers/engineers. This translates to lower overhead and lower design fees. We also pride ourselves in our ability to accurately estimate a project and control costs for both engineering and construction.

Careful research is conducted on marketplace conditions and trends and we keep an updated database of numerous past project costs to draw from to ensure we estimate and budget your project correctly. We strive to understand your facilities and your projects, and we use that knowledge to work effectively with your team to achieve maximum results.



2 - FIRM'S DESCRIPTION OF SCOPE OF SERVICES

concerning solid and hazardous waste. The City will be provided with information regarding the quantity and nature of debris removed from the system and how and where it was disposed of.

4. All line segments shall be visually inspected by means of a color, pan-and-tilt, closed-circuit television inspection camera in accordance with Request for Proposal requirements. The camera equipment shall be propelled through the lines by a tractor unit with adequate lighting to insure a crisp, clear image of the pipe interior.
5. Inspection shall be recorded on data logging computer with PACP certified software by a PACP certified operator.
6. The camera shall stop and inspect all service connections or visible defects (offset joints, open joints, cracked or broken pipe, infiltration, root intrusion, corrosion, etc). Digital photographs shall be taken at each service connection, defect and every 100 feet of pipe. All data shall be entered directly into and stored in a PACP database.

Deliverables:

- All digital videos will be provided in mpeg format and digital photograph in jpeg format on external hard drive. A printed summary report of each sewer line inspected will be provided to the City of Greensboro as an appendix to the final report. Each inspection log will include:
 - » the segment ID number
 - » segment length
 - » diameter
 - » material
 - » depth of flow;
 - » upstream and downstream manhole ID numbers
 - » the location, classification and priority rating of all defects and abnormalities
 - » the location and condition of all service connections
 - » any other data required by the City of Greensboro
- A final submittal of the video inspection shall be provided to the City of Greensboro on external hard drive in PACP format.

SUBCONSULTANTS

We are dedicated to having Minority, Women and Disadvantaged business participation when possible while continuing to deliver the most efficient and cost effective project results for the City of Greensboro. We also value other subcontractors with which we have good working relationships and that can contribute to the success of the project. We are committed to meeting the City's goal of 5% MBE participation and 3% WBE participation. For your project, we have partnered with the following firms:



2 - FIRM'S DESCRIPTION OF SCOPE OF SERVICES



CriTek Engineering Group

1 Centerview Drive, Suite 307, Greensboro, NC 27407 • (p) 336.348.1889

Services to be provided: CCTV Data Review

Certified MBE Firm

CriTek Engineering Group, P.C. is an environmental and civil engineering firm headquartered in Greensboro, North Carolina with a branch office in Gastonia, North Carolina. Since the firm's inception in 2014, CriTek maintains a strong reputation for on-time delivery and budget awareness. CriTek has a pool of seven professional, technical, and administrative staff members with more than 125 years of combined experience and a solid reputation of excellence. CriTek is a certified MBE/SBE/HUB firm that will provide CCTV data review services for this project.

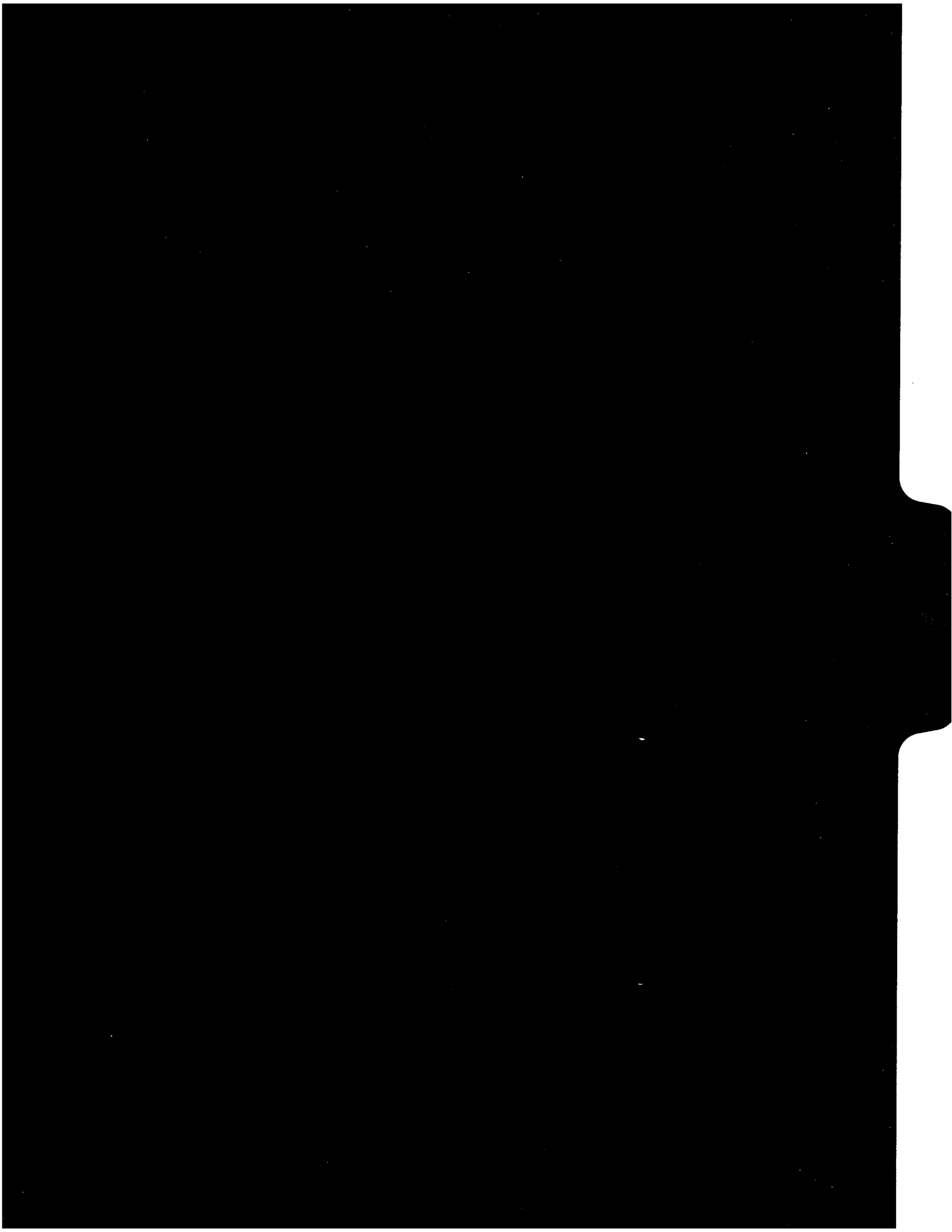


KRG Utility, Inc.

555 Harper Avenue SW, Lenior, NC 28645 • (p) 828.757.0006

Services to be provided: CCTV Inspection & Cleaning Services

KRG Utility, Inc. was founded in 1978 to provide sewer and water rehabilitation services. On this project, they will provide CCTV inspection and cleaning services. Their crews have extensive experience working for the City of Greensboro Water Resources Department, and will supplement Hydrostructures in-house crews to ensure that sufficient resources are available to meet the schedule requirements for any work assignments.





3 - FIRM'S EXPERIENCE AND CAPABILITIES

KEY PERSONNEL

Your North Carolina-based team ensures timely response and accessibility to the project and project site. With your local-based team, questions are quickly answered. We pride ourselves on providing immediate response to your needs. Additionally, your team understands the management process and logistics of your system and your project. We are providing a team that can provide results and will deliver on what they promise and what you need.

Your proposed project team has a combined total of almost 140 years of industry experience. This team has worked together on many projects throughout North Carolina and the Southeast, including a similar project for the Town of Cary. They understand your system and your expectations. Company-wide we have 8 Professional Engineer's on staff covering 4 offices. Additionally, we have 38 employees who have PACP/MACP/LACP certifications. Your proposed project team has the experience, training, and expertise specifically geared toward municipal infrastructure projects. They understand the importance of paying attention to detail, maintaining a safe work environment, and promoting public relations and goodwill in the communities in which they work.

Benefits for the City of Greensboro

Your Team is Dedicated.

Over the years, we have learned that the most successful projects have a strong Owner working in conjunction with the strong engineering team at Hydrostructures to achieve project goals.

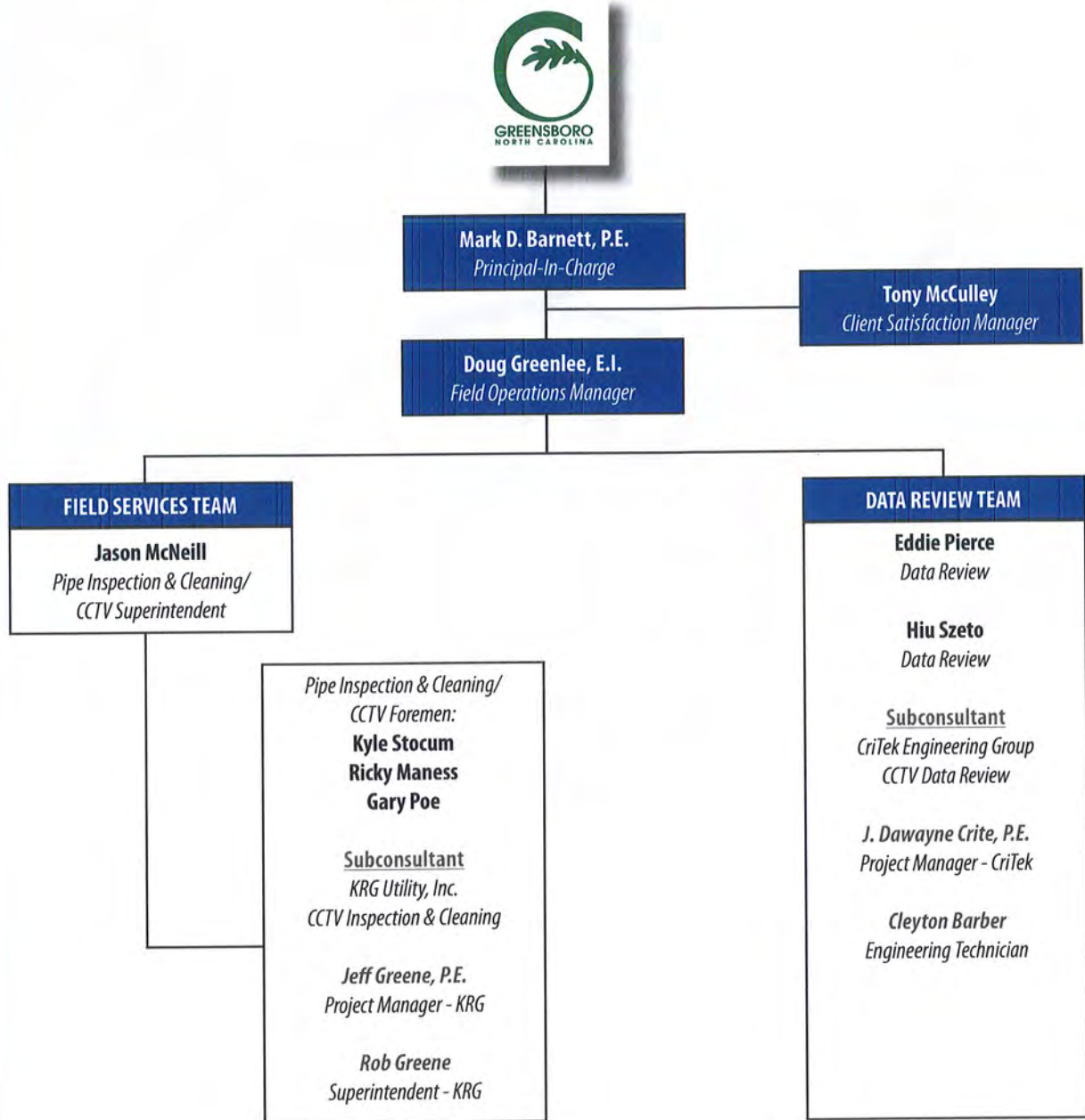
Your proposed project team has demonstrated success in working effectively with many similar municipalities to achieve outstanding project results.

On the following pages please find an Organizational chart and brief resumes for your proposed project team.



3 - FIRM'S EXPERIENCE AND CAPABILITIES


ORGANIZATIONAL CHART






3 - FIRM'S EXPERIENCE AND CAPABILITIES

Resumes

NAME/ROLE	EXPERIENCE/EDUCATION/TRAINING	SAMPLE PROJECT EXPERIENCE
 <p>Mark D. Barnett, P.E. Principal-In-Charge</p>	<ul style="list-style-type: none"> 29 Years Industry Experience Cofounded Hydrostructures in 1999 B.A., Business Administration, St. Andrews College Licensed Engineer, State of NC (#29426) Confined Space Entry & Rescue Training National Safety Council, NSC CPR & First Aid Certified (#271578) PACP/MACP/LACP Certified by NASSCO (#U-1206-1347) 	<ul style="list-style-type: none"> Town of Cary, NC - Cleaning & Video Survey of Gravity Sewer Interceptor Lines Charlotte Water, Charlotte, NC - Sewer Cleaning & CCTV Services (2 Contracts) PWC of Fayetteville, NC - CCTV Inspection of Sanitary Sewer Pipe City of Durham, NC (Engineer: Kimley-Horn) - American Tobacco District Sewer Evaluation City of Goldsboro, NC - Priority Sewer Repairs, Phases 1 & 2

Project Role: Mark serves as technical advisor to the project team, directing the services provided by Hydrostructures. He ensures that sufficient resources are allocated to your project to ensure budget and schedule parameters and remains involved in your project at all times.

 <p>Doug Greenlee, E.I. Field Operations Manager</p>	<ul style="list-style-type: none"> 27 Years Industry Experience 5 Years with Hydrostructures B.S., Civil Engineering, North Carolina State University Certified Engineering Intern (E.I.) National Safety Council, NSC CPR & First Aid Certified (#271573) PACP/MACP/LACP Certified by NASSCO (#U-1013-0619272) 	<ul style="list-style-type: none"> City of Durham, NC (Engineer: Kimley-Horn) - American Tobacco District Sewer Evaluation Eastern Band of Cherokee Indians, Cherokee, NC - SSES/Cleaning & Inspection of Sewer Lines & Manholes Eastern Band of Cherokee Indians, Cherokee, NC - Clean & Inspect Sewer Lines James Island Public Service District (JIPSD), Charleston, SC - SSES & Flow Monitoring Spartanburg Water, Spartanburg, SC - Lawson Fork Creek Large Line Cleaning & CCTV Inspection, Phases 3, 4, 5, 6
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Project Role: Doug has oversight for your project and will oversee field crews, equipment, subconsultants, schedules, and budgets. He will also provide quality control and assurance oversight.

 <p>Jason McNeill Pipe Inspection & Cleaning/ CCTV Superintendent</p>	<ul style="list-style-type: none"> 20 Years Industry Experience 13 Years with Hydrostructures Confined Space Entry & Rescue Training PACP/MACP/LACP Certified by NASSCO (#U-1206-4200) Grade B in Distribution, State of NC Grade 1 in Collections, State of NC National Safety Council, NSC CPR & First Aid Certified (#271577) Traffic Control Measures Training Safety Training: Competent Person; Trenching & Excavating; Heavy Equipment; Defensive Driving 	<ul style="list-style-type: none"> Town of Cary, NC - Cleaning & Video Survey of Gravity Sewer Interceptor Lines Charlotte Water, Charlotte, NC - Sewer Cleaning & CCTV Services (2 Contracts) PWC of Fayetteville, NC - CCTV Inspection of Sanitary Sewer Pipe City of Durham, NC (Engineer: Kimley-Horn) - American Tobacco District Sewer Evaluation City of Goldsboro, NC - Priority Sewer Repairs, Phases 1 & 2
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Project Role: Jason will be responsible for CCTV crews, ensuring your project has the equipment and resources needed to perform all tasks required. He will also be responsible for planning the day-to day tasks of the crews, ensuring the proper equipment and methodologies are used at all times.





3 - FIRM'S EXPERIENCE AND CAPABILITIES


NAME/ROLE	EXPERIENCE/EDUCATION/TRAINING	SAMPLE PROJECT EXPERIENCE
 <p>Eddie Pierce Data Review</p>	<ul style="list-style-type: none"> 18 Years Industry Experience 13 Years with Hydrostructures PACP/MACP/LACP Certified by NASSCO (#U-411-12494) Training: GIS; Microsoft Office; Various PACP/MACP/LACP Certified Programs; AutoCAD; IT Pipes; ARCMAP; WinCanV8; POSM 	<ul style="list-style-type: none"> Town of Cary, NC - Cleaning & Video Survey of Gravity Sewer Interceptor Lines Charlotte Water, Charlotte, NC - Sewer Cleaning & CCTV Services (2 Contracts) PWC of Fayetteville, NC - CCTV Inspection of Sanitary Sewer Pipe James Island Public Service District (JIPSD), Charleston, SC - SSES & Flow Monitoring City of Columbia, SC - Wastewater CCTV Annual Maintenance Contract
<p><i>Project Role: Eddie will assist with data review and QA/QC.</i></p>		
 <p>Hiu Szeto Data Review</p>	<ul style="list-style-type: none"> 12 Years Industry Experience 1 Years with Hydrostructures PACP/MACP/LACP Certified by NASSCO (#U-308-6516) Training: GIS; Microsoft Office; Various PACP/MACP/LACP Certified Programs; AutoCAD; IT Pipes; ARCMAP; WinCanV8; POSM Basic Life Support Adult CPR Certification, CPR Today, Inc. (Cert. #:69900956-3001) OSHA 10-Hour Hazard Recognition Training for General Industry Course Permit-Required Confined Space 8-Hour Entrant & Attendant Program 	<ul style="list-style-type: none"> Town of Cary, NC - Cleaning & Video Survey of Gravity Sewer Interceptor Lines Charlotte Water, Charlotte, NC - Sewer Cleaning & CCTV Services (2 Contracts) James Island Public Service District (JIPSD), Charleston, SC - SSES & Flow Monitoring Winston-Salem City/County Utilities, Winston-Salem, NC - Zion SSES City of Georgetown, SC - West End Sewer Rehabilitation
<p><i>Project Role: Hiu will assist with data review and QA/QC.</i></p>		
 <p>Kyle Stocum Pipe Inspection & Cleaning/ CCTV Foreman</p>	<ul style="list-style-type: none"> 14 Years Industry Experience 14 Years with Hydrostructures PACP/MACP/LACP Certified by NASSCO (#U-113-16920) Confined Space Entry & Rescue Training National Safety Council, NSC CPR & First Aid Certified (#959023) Safety Training: Heavy Equipment; Competent Person; Defensive Driving 	<ul style="list-style-type: none"> Town of Cary, NC - Cleaning & Video Survey of Gravity Sewer Interceptor Lines Charlotte Water, Charlotte, NC - Sewer Cleaning & CCTV Services (2 Contracts) PWC of Fayetteville, NC - CCTV Inspection of Sanitary Sewer Pipe City of Durham, NC (Engineer: Kimley-Horn) - American Tobacco District Sewer Evaluation City of Goldsboro, NC - Priority Sewer Repairs, Phases 1 & 2
<p><i>Project Role: Kyle will perform CCTV inspection and cleaning tasks and will oversee field operators.</i></p>		



3 - FIRM'S EXPERIENCE AND CAPABILITIES


NAME/ROLE	EXPERIENCE/EDUCATION/TRAINING	SAMPLE PROJECT EXPERIENCE
 <p>Ricky Maness Pipe Inspection & Cleaning/ CCTV Foreman</p>	<ul style="list-style-type: none"> 14 Years Industry Experience 14 Years with Hydrostructures PACP/MACP/LACP Certified by NASSCO (#U-1206-4197) Confined Space Entry & Rescue Training National Safety Council, NSC CPR & First Aid Certified (#959037) Safety Training: Heavy Equipment; Competent Person; Defensive Driving 	<ul style="list-style-type: none"> Town of Cary, NC - Cleaning & Video Survey of Gravity Sewer Interceptor Lines Charlotte Water, Charlotte, NC - Sewer Cleaning & CCTV Services (2 Contracts) PWC of Fayetteville, NC - CCTV Inspection of Sanitary Sewer Pipe City of Durham, NC (Engineer: Kimley-Horn) - American Tobacco District Sewer Evaluation City of Goldsboro, NC - Priority Sewer Repairs, Phases 1 & 2
<p><i>Project Role: Ricky will oversee field operators and will also perform CCTV camera operator tasks with his primary responsibility being evaluations using digital inspection cameras and software.</i></p>		
 <p>Gary Poe Pipe Inspection & Cleaning/ CCTV Foreman</p>	<ul style="list-style-type: none"> 5 Years Industry Experience 5 Years with Hydrostructures Confined Space Entry & Rescue Training National Safety Council, NSC CPR & First Aid Certified (#959027) 	<ul style="list-style-type: none"> Town of Cary, NC - Cleaning & Video Survey of Gravity Sewer Interceptor Lines Charlotte Water, Charlotte, NC - Sewer Cleaning & CCTV Services (2 Contracts) PWC of Fayetteville, NC - CCTV Inspection of Sanitary Sewer Pipe City of Durham, NC (Engineer: Kimley-Horn) - American Tobacco District Sewer Evaluation City of Goldsboro, NC - Priority Sewer Repairs, Phases 1 & 2
<p><i>Project Role: In addition to overseeing field operators, Gary will direct and participate in both the cleaning and internal inspection of all lines including in your project.</i></p>		

Subconsultant Resumes

NAME/ROLE/FIRM	EXPERIENCE/EDUCATION/TRAINING	SAMPLE PROJECT EXPERIENCE
 <p>J. Dawayne Crite, P.E. Project Manager CriTek Engineering</p>	<ul style="list-style-type: none"> 19 Years Industry Experience B.S., Civil Engineering, North Carolina State University B.S., Environmental Engineering, North Carolina State University Licensed Engineer, States of NC (#38280); SC (#26067); GA (#38280); CA (#65575) OSHA 30-Hour Construction Training Level II/III Erosion & Sediment Control/ Stormwater Site Manager Training Stormwater BMP Inspection & Maintenance Training Construction Document Technologist 	<ul style="list-style-type: none"> City of Greensboro, NC - SSES Program City of Greensboro, NC - Old Battleground Road Waterline Expansion Project City of Greensboro, NC - Randolph Mega Site Project City of Greensboro, NC - TZ Osborne Package 4 Upgrade, working w/Hazen and Sawyer City of Greensboro, NC - Project Manager & Design Engineer for McCloud Water Booster Pumping Station



3 - FIRM'S EXPERIENCE AND CAPABILITIES

NAME/ROLE/FIRM	EXPERIENCE/EDUCATION/TRAINING	SAMPLE PROJECT EXPERIENCE
 <p>Cleyton Barber Engineering Technician CriTek Engineering</p>	<ul style="list-style-type: none"> • 16 Years Industry Experience • Associates, Guilford Technical Community College • OSHA 10-Hour • Concrete Field Testing Technician I • PACP/MACP/LACP Certified by NASSCO • AutoCAD Training • Microsoft Office Training • Revit Training 	<ul style="list-style-type: none"> • City of Greensboro, NC SSES Program - Data Review for SSES Program/Sewer Assessment • City of Winston-Salem, NC, SSES Program - Data Review for SSES Program/Sewer Assessment • TZ Osborne Water Reclamation Facility, Greensboro, NC - Engineering Technician & Resident Project Representative for TZ Osborne Water Reclamation Bar Screen Improvement Project • Mitchell Water Treatment Plant, Greensboro, NC - Engineering Technician & Resident Project Representative for 1 MG Clearwell & Misc. Improvements • South Buffalo Creek, Greensboro, NC - Resident Project Representative for South Buffalo Creek Water Quality & Habitat Improvement Project
<p>Jeff Greene, P.E. Project Manager KRG</p>	<ul style="list-style-type: none"> • 30 Years Industry Experience • M.C.E., Water Resources, North Carolina State University • B.S., Civil Engineering, North Carolina State University • PACP/MACP/LACP Certified by NASSCO (#U-1105-2593) 	<ul style="list-style-type: none"> • City of Greensboro, NC - Contract 2012-95, Pipe-bursting, Slip Lining, CIPP, Manhole Rehabilitation, CCTV Inspection • City of Greensboro, NC - Contract 2010-13, Pipe-Bursting, Slip Lining, CIPP, Manhole Rehabilitation, CCTV Inspection • City of Reidsville, NC - Holiday Loop Sewer Collector Improvements • City of Greensboro, NC - Contract 2007-04, Pipe Bursting, Slip Lining, CCTV Inspection • Town of Pittsboro, NC - Credle Street Sewer Rehabilitation
<p>Rob Greene Superintendent KRG</p>	<ul style="list-style-type: none"> • 19 Years Industry Experience • Confined Space Training • Grade II Wastewater Treatment Plant Operator License • C-Well Operator License • PACP/MACP/LACP Certified by NASSCO (#U-1105-2158) 	<ul style="list-style-type: none"> • City of Greensboro, NC - Contract 2012-95, Sanitary Sewer & Water Project • City of Winston-Salem, NC - Annual Cleaning Contract • City of Hartsville, SC - 2015 Sanitary Sewer Cleaning/Inspection • City of Simpsonville, SC - FY14 Sanitary Sewer Rehabilitation • City of Hartsville, SC - College Street Sewer Project



3 - FIRM'S EXPERIENCE AND CAPABILITIES

FIRM'S EXPERIENCE

Hydrostructures has been providing CCTV Inspection and Cleaning services and all related tasks since 1999. We offer comprehensive in-house services including, but not limited to, CCTV inspection and cleaning, manhole inspections, sanitary sewer evaluation, condition assessment reporting, engineering design, rehabilitation design, and construction inspection and management. The services we provide assist in evaluating the overall condition of infrastructure assets, identifying specific complications, and designing the improvements needed to address these concerns. To this day, we remain committed to helping our clients improve the condition of their underground infrastructure.

Relevant Experience of the Firm's Capabilities for Maintaining, and Inspecting Sewerage Systems

We are intimately familiar with all of the challenges that projects such as this entail. For example, many larger diameter sewer interceptors such as the ones included in this RFP are located in off-road easements, along creeks and streams, through parks and greenways, and in other difficult to access locations. We have a wide variety of specialized equipment at our disposal to address the challenges such as tracked easement machines with up to 1,000 feet of hose to extend the reach of our jet vac trucks, CCTV camera systems mounted on Centaur all-terrain vehicles, and bucket machine systems to allow us to clean sewers with heavy debris and no access to water for cleaning.

Our data reviewers are all NASSCO PACP/MACP/LACP certified, allowing us to provide consistent and accurate data. Our engineers are experienced with all of the various methods or rehabilitating/repairing/replacing aging sewer pipes, both trenchless and non-trenchless, so that we can guide our clients to the best solution for their particular problem. In summary, this type of project is what we do!

Familiarity with Sewer Database Creation and Documentation of Sewer Systems

The sewer evaluation field has become increasingly reliant on technology since we first started the company in 1999. We realized early on that we needed better tools to manage the enormous amount of data that was being collected during our field evaluation projects, and we embraced the use of GIS and databases for this purpose. Using these tools starts in the earliest stages of a project, when our GIS Specialists obtain the most current maps and databases from the client. This allows us to provide accurate maps for our field crews, pre-populate attribute data to minimize errors, track the progress of the field work, and update the maps as new information is obtained. In the field, our CCTV operators utilize the most current versions of PACP certified CCTV software to inspect pipes and manholes.

When the field data is brought back to the office, the data specialists use the office versions of the same CCTV software used in the field to perform QA-QC reviews on the data, make any needed corrections, and prepare submittals for the client. Finally, our Data Manager works closely with the client to import our data into their existing GIS and work order management systems.

Benefits for the City of Greensboro

Quality of Past Performance.

Hydrostructures has consistently met the budgets and schedules of our clients. Our goal is to go the extra mile for every client, to understand their needs, and establish strong team relationships with Owners. We ensure quality and safety on every project. Finally, we believe that we are accountable to the people we serve - our clients and the communities in which we work, because ultimately they are the judges of our performance.



3 - FIRM'S EXPERIENCE AND CAPABILITIES

We use GIS and databases in the same ways our clients use them and understand the challenges involved with making data compatible with a variety of different software.

Additional Inspection Capabilities

Beyond the standard CCTV inspection equipment that is proposed for use on this project, Hydrostructures has a wide range of inspection technologies in our equipment inventory that is available as needed for this project. These include:

- Sonar – excellent for quantifying debris and identifying defects on pipes flowing near full capacity.
- Combined CCTV/Sonar (TISCIT) – provides a combined image showing video above the flow line and sonar below the flow line.
- Lateral Launch Camera – allows up to 150 feet of service lateral to be inspected from the main.
- Panoramo Manhole Scanner – provides a 3D scanned image and point cloud of the interior of a manhole so that no defects are missed and accurate dimensions can be obtained.
- Laser Profiling – provides highly accurate measurements of pipe interior that can be useful in identifying deformation or measuring coating or pipe loss due to corrosion. (Note: Hydrostructures doesn't own laser profiling equipment, but the equipment and a certified operator can be provided by our equipment provider when needed).

During the Kick-off Meeting for the project we can discuss each of these technologies in more detail with the City, explaining the advantages and disadvantages and provide unit pricing so that can be available for use and enhance the value of this project.

Financial Stability

Hydrostructures, P.A. is a privately held North Carolina S-Corporation established in July 1999 and is registered as an Engineering and Land Surveying firm with the North Carolina Board of Examiners for Engineers and Surveyors (certificate C-1895).

Hydrostructures has a solid record of profitable growth, positive cash flow, and strengthening equity position. In the fiscal year ended December 31, 2017, revenues exceeded \$11.8 Million; net working capital exceeded \$2.1 Million. The Company has a substantial line of credit with its bank, currently at 1.25 Million. The Company's history is clear - no defaults on debt, and no judgments against. The DUNS number for Hydrostructures, P.A. is 18-367-9690.

Banking Reference:

Mr. Timothy C. Dalton, Senior Vice President - BB&T Bank
505 S. Duke Street, Durham, NC 27701
(p) 919.687.7228 • (f) 919.687.7212 • TDalton@BBandT.com

Any questions can be directed to **Gina Moore, Controller**, at
(p) 919.542.5002 • Gina.Moore@hydrostructures.com
126 Commerce Court, PO Box 1537, Pittsboro, NC 27312

Why Choose Hydrostructures?

The City of Greensboro, its staff, and your community are important to us and we will stand accountable to you.

We will deliver on what we promise.



3 - FIRM'S EXPERIENCE AND CAPABILITIES

SIMILAR PROJECTS

A small sample of similar projects within the last five (5) years include:

PROJECT, OWNER, LOCATION	SERVICES	DATES/FEE	OWNER CONTACT INFORMATION
<i>Video Survey & Assessment of Sanitary Sewer Interceptors</i> Town of Cary Cary, NC	<ul style="list-style-type: none"> Sewer Cleaning & CCTV Inspections 244,496 LF 8" - 54" Gravity Sewers 800 Manhole Inspections Rehabilitation & Repair Recommendations Cost Estimates GIS Database Development & Integration Capital Improvements Project Planning & Budgeting 	2009 - 2013 \$1,542,467	Mr. Lynn Brilz, P.E. Project Manager 919.460.4017 lynn.brilz@tonwofcary.org
<i>Cleaning & Video Survey of Gravity Sewer Interceptor Lines</i> Town of Cary Cary, NC	<ul style="list-style-type: none"> Sewer Cleaning & Video Inspection Condition Assessments 107,360 LF of 10" - 48" Interceptor Lines Mapping Grade Survey of Critical Interceptors Detailed Rehabilitation & Repair Recommendations Cost Estimates Repair Prioritization 	2016 - 2017 \$548,159	Mr. Paul Campbell Project Manager 919.319.4544 paul.campbell@townofcary.org
<i>Sewer Cleaning & CCTV Services</i> Charlotte Water Charlotte, NC	<ul style="list-style-type: none"> CCTV Inspection & Cleaning 254,000 LF 6" - 54" Sewer Pipe 	June 2016 - Ongoing \$500,000	Mr. Lewis Harrison Field Operations 704.432.1545
<i>Sewer Cleaning & CCTV Services</i> Charlotte Water Charlotte, NC	<ul style="list-style-type: none"> CCTV Inspection & Cleaning Sewer Cleaning 172,000 LF 6" - 24" Sewer Lines Video Inspection 86,000 LF, including flow control 	Sept 2016 - Ongoing \$574,699	Mr. Trent Hall Field Operations 704.378.6632
<i>CCTV Inspection of Sanitary Sewer Pipe</i> PWC of Fayetteville Fayetteville, NC	<ul style="list-style-type: none"> CCTV Inspection & Cleaning (primarily off-road interceptors) 811,881 LF 18" - 48" Sanitary Sewer Pipe 	2015 - 2017 \$1,436,499	Mr. Marty Tew Field Supervisor 910.223.4761 marty.tew@faypwc.com



3 - FIRM'S EXPERIENCE AND CAPABILITIES

PROJECT, OWNER, LOCATION	SERVICES	DATES/FEE	OWNER CONTACT INFORMATION
Priority Sewer Repairs, Phases 1 & 2 City of Goldsboro Goldsboro, NC	<ul style="list-style-type: none"> • Combined CCTV/Sonar Inspection • 11,800 LF of 24" - 42" Pipe • 507 Manholes • 131,000 LF Smoke Testing • I/I Analysis • SSES • Sewer Rehabilitation Design • Permitting • Bid Coordination • Construction Administration & Inspection 	2013 - 2016 \$1,690,000	Mr. Marty Anderson, P.E. Director of Engineering 919.580.4377 manderson@goldsboronc.gov
Field Services for Wastewater Collection System Rehabilitation City of Goldsboro Goldsboro, NC	<ul style="list-style-type: none"> • CCTV Inspection & Cleaning • 72,278 LF of 6" - 12" Pipe • 5,301 LF of 15" - 21" Pipe • Smoke Testing • Dye Tests • Priority Sewer Rehabilitation Design 	2014 \$284,820	Mr. Marty Anderson, P.E. Director of Engineering 919.580.4377 manderson@goldsboronc.gov
American Tobacco District Sewer Evaluation City of Durham (Engineer: Kimley-Horn) Durham, NC	<ul style="list-style-type: none"> • CCTV Inspection & Cleaning • 335,000 LF 8" - 18" Sewers • 175 Manhole Inspections • 27,000 LF Smoke Testing • Dye Tests - 75 Laterals 	2017 - 2018 \$275,000	Mr. Bryant Green, P.E. Utility Engineering 919.560.4381 bryant.green@durhamnc.gov
SSES/Cleaning & Inspection of Sewer Lines & Manholes Eastern Band of Cherokee Indians Cherokee, NC	<ul style="list-style-type: none"> • CCTV Inspection & Cleaning • 146,000 LF Sewer Mains • SSES • 109,000 LF Smoke Testing • 750 Manhole Inspections • Public Notices/Communications 	2014 - 2016 \$500,000	Mr. Ethan Arch 828.226.7384 ethanarch@nc-chokeee.com
Clean & Inspect Sewer Lines Eastern Band of Cherokee Indians Cherokee, NC	<ul style="list-style-type: none"> • CCTV Cleaning & Inspection • 55,000 LF Sewer Mains • 300 Manholes • Smoke Testing • Public Notices/Communications 	2013 \$175,000	Mr. Ethan Arch 828.226.7384 ethanarch@nc-chokeee.com
Sprague Street Area SSES Winston-Salem City/County Utilities (Engineer: HDR, Inc.) Winston-Salem, NC	<ul style="list-style-type: none"> • Manhole Inspections • Pipe Cleaning & CCTV Inspections • Condition Assessment Reporting 	2017 - 2018 \$225,000	Mr. Michael Stover Project Engineer 336.747.6840 michaelws@cityofws.org



3 - FIRM'S EXPERIENCE AND CAPABILITIES

PROJECT, OWNER, LOCATION	SERVICES	DATES/FEE	OWNER CONTACT INFORMATION
<p>SSES & Condition Assessment Reporting City of Virginia Beach Virginia Beach, VA</p>	<ul style="list-style-type: none"> • Zoom Pipe Camera Inspections • Pipeline Cleaning & CCTV Inspections • I/I Analysis • Manhole Inspections • Smoke Testing • GPS Location of Manholes • Flow Monitoring & Rainfall Gauging • all related tasks • For this client, during the past 10 years, we have evaluated over 60% of the City's sanitary sewer basins, completed more than 2.3 million LF of smoke testing; completed more than 3.2 million LF of CCTV pipe inspections; & inspected over 15,000 manholes 	<p>2013 - 2018 \$5,100,000</p>	<p>Mr. Steve Motley, P.E. Utility Engineering Manager 757.385.1996 smotley@vbgov.com</p>
<p>Sanitary Sewer Condition Survey Moore County Public Works Carthage, NC</p>	<ul style="list-style-type: none"> • Sewer Video Inspection • 5,238 LF of 18" Pipe & 2,375 LF 24" Pipe • Manhole Inspections • Prioritization of Costs & Repairs • Permitting • Surveying • Construction Administration & Inspection • Rehabilitation & Replacement Design 	<p>2011 - 2014 \$131,972</p>	<p>Mr. Randy Gould, P.E. Public Works Director 910.947.6315 rgould@moorecountync.gov</p>
<p>SSES & Flow Monitoring James Island Public Service District (JIPSD) Charleston, SC</p>	<ul style="list-style-type: none"> • Sewer Line CCTV Inspections & Cleaning • 400,000 LF of 6" - 24" Sanitary Sewers • 3,200 Manhole Inspections • 760,000 LF Smoke Testing • Dye Tests • Rehabilitation & Repair Recommendations • Flow Monitoring • Infiltration Analysis & Capacity Assessment Reports 	<p>2016 - Ongoing \$1,832,847</p>	<p>Mr. David Hoffman, Jr. Director of Wastewater Services 843.762.5258 hoffmand@jipsd.org</p>
<p>Wastewater CCTV Annual Maintenance Contract City of Columbia Columbia, SC</p>	<ul style="list-style-type: none"> • CCTV Inspection & Cleaning • 580,000 LF 6" - 30" Gravity Sewer • 11,000 LF 36" & larger Pipe Multi-Sensor Inspections (CCTV; Sonar; Laser Profiling) • Point Repairs • Installation of New Manholes • Bypass Pumping 	<p>2012 - 2014 \$2,323,000</p>	<p>Mr. John Riggs, P.E. Wastewater Engineer 803.545.4322 jtriggs@columbiasc.net</p>



3 - FIRM'S EXPERIENCE AND CAPABILITIES

CLIENT REFERENCES

Mr. Lynn Brilz, P.E., Project Manager

Town of Cary

316 North Academy Street, Cary, NC 27512

(p) 919.460.1047 • lynn.brilz@townofcary.org

Mr. Trent Hall, Field Operations

Charlotte Water

5100 Brookshire Blvd., Charlotte, NC 28216

(p) 704.378.6632

Mr. Steve Motley, P.E., Utility Engineering Manager

City of Virginia Beach

2405 Courthouse Drive, Virginia Beach, VA 23456

(p) 757.385.1996 • smotley@vbgov.com

Mr. Marty Tew, Field Supervisor

PWC of Fayetteville

955 Old Wilmington Road, Fayetteville, NC 28302

(p) 910.223.4761 • marty.tew@faypwc.com

Mr. Randy Gould, P.E. - Public Works Director

Moore County Public Works

PO Box 1927, Carthage, NC 28327

(p) 910.947.6315 • rgould@moorecountync.gov

Mr. David Hoffman, Jr., Director of Wastewater Services

James Island Public Service District (JIPSD)

1739 Signal Point Road, Charleston, SC 29412

(p) 843.762.5258 • hoffmand@jipsd.org

Mr. John Riggs, P.E., Wastewater Engineer

City of Columbia

1200 Simmon Tree Lane, Columbia, SC 29201

(p) 803.545.4322 • jtriggs@columbiasc.net

Benefits for the City of Greensboro

We Will Stand Accountable to You

We believe that reporting and communicating are not aspirations but absolute requirements on complex projects with multiple departments, regulatory agencies, and other stakeholders. We will communicate with you about your project status, budget, and schedules and will be available to the City of Greensboro and its staff if questions arise.

Your Team is 100% dedicated, capable, and able to meet each requirement of your project.



3 - FIRM'S EXPERIENCE AND CAPABILITIES

EQUIPMENT

Our extensive in-house equipment includes:

Sewer Cleaning Equipment

- One (1) 2017 Vac-All Jet/Vac on Freightliner chassis, 85 gpm @ 2,000 psi, 12 cy debris tank, w/21" blower
- One (1) 2015 Vac-All Jet/Vac on Freightliner chassis, 85 gpm @ 2,000 psi, 12 cy debris tank
- One (1) 2015 Vac-All Jet/Vac on Freightliner chassis, 85 gpm @ 2,000 psi, 12 cy debris tank, w/21" blower
- Two (2) 2012 Vac-All Jet/Vacs on Freightliner chassis, 85 gpm @ 2,000 psi, 12 cy debris tank
- Two (2) 2009 Vac-All Jet/Vacs on Sterling chassis, 85 gpm @ 2,000 psi, 12 cy debris tank
- One (1) 2005 Clean Earth Jet/Vac on Freightliner chassis, 85 gpm @ 2,000 psi, 10 cy debris tank
- One (1) 2004 Clean Earth Jet/Vac on International chassis, 85 gpm @ 2,000 psi, 10 cy debris tank
- One (1) 2003 Clean Earth Jet/Vac on International chassis, 85 gpm @ 2,000 psi, 10 cy debris tank, w/27" blower
- One (1) 1998 Clean Earth Jet/Vac, 85 gpm @ 2,000 psi, 10 cy debris tank
- One (1) 1994 Vactor Jet/Vac on Ford chassis, 85 gpm @ 2,000 psi, 12 cy debris tank
- One (1) 2008 Sewer Equip. Jet Truck, 140 gpm @ 2,500 psi, 3,000 Gallon water tank w/1,000 ft. of 1 1/4-inch hose
- Six (6) Jet-Away track-mounted easement machines w/500 ft. of 1-inch hose
- One (1) easement machine mounted on Bobcat T190 skid steer w/1,300 feet of 1-inch hose
- Two (2) Sewer Equipment Company of America bucket machines, w/diesel motors, hydraulic drives, w/1,000 feet of 1/2" cable, & assorted buckets (8"-22")
- 400' of 4" suction hose for remote vacuum cleaning
- Assortment of jetter heads & root cutters (chain, blades & cables) w/root cutting capability in pipe up to 60"
- One (1) - 6" Submersible Hydraulic Pump with 2 self contained 12 cy debris boxes for a closed loop system





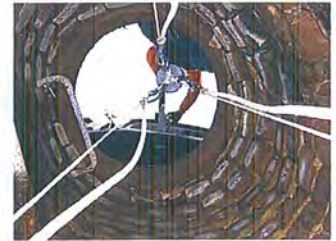
3 - FIRM'S EXPERIENCE AND CAPABILITIES

Pipeline Inspection Equipment

- One (1) RapidView/Ibak High Definition color, pan-and-tilt camera system w/data logging computer, ITPipes software, and 1,600 ft. of cable mounted in a 2017 Kubota 4wd UTV with aluminum work station enclosure
- One (1) RapidView/Ibak color, pan-and-tilt camera system w/data logging computer, ITPipes software, and 1,000 ft. of cable mounted in a 2012 Ford E350 cutaway van. System also equipped w/a LISY lateral launch system capable of inspecting up to 120 ft. of 3" & larger laterals from the main
- One (1) RapidView/Ibak color, pan-and-tilt camera system w/data logging computer, ITPipes software, and 1,000 ft. of cable mounted in a 2012 Ford E350 cutaway van. System also equipped w/lateral launch capability
- One (1) Power Equipment-Power Vision color, pan-and-tilt camera system w/data logging computer, ITPipes software & 1,000' of cable mounted in 2004 Dodge Sprinter van
- One (1) Power Equipment-Power Vision color, pan-and-tilt camera system w/data logging computer, WinCan reporting software & 1,000 ft. of cable mounted on Off-Road John Deere Gator
- Three (3) Aries Pathfinder pan-and-tilt camera system w/datalogging computer, (1) using Wincan or POSM reporting software & (2) using ITPipes software mounted on Centaur all terrain vehicles
- One (1) Aries color, pan-and-tilt camera system w/data logging computer, POSM reporting software & 1,000 ft. of cable, van mounted
- Two (2) RST color, pan-and-tilt camera system w/data logging computer, POSM reporting software & 1,000' of cable, van mounted
- One (1) Power Equipment-Power Vision color, pan-and-tilt camera system w/data logging computer, POSM reporting software & 1,000' of cable mounted in an enclosed trailer
- One (1) Marine Electronics Pipe Profiling Sonar unit w/1,000' of cable

Lateral Camera Equipment

- Three (3) Aries Seeker Push Camera Systems – 200 ft. of cable, self-leveling camera heads, digital video
- One (1) Rigid See Snake Push Camera System – 200 ft. of cable, self-leveling camera head, digital video
- Two (2) Ibak LISY lateral launch camera systems attached to mainline camera systems"





3 - FIRM'S EXPERIENCE AND CAPABILITIES

Pipe Inspection Software Licenses (all software is Version 6.0.1)

- Four (4) POSM
- Four (4) ITPipes
- Two (2) WINCAN
- Two (2) PipeLogix
- One (1) Granite XP



Surveying Equipment

- Three (3) Trimble R8 RTK GPS Units
- GTS 603 Topcon Total Station
- Trimble 5600 Robotic Total Station



Manhole Inspection Equipment

- Two (2) RapidView/Ibak Panoramo SI 3D Optical Manhole Scanner units mounted in Ford Transit vans
- Three (3) Envirosight pole-mounted zoom cameras
- One (1) Zistos pole-mounted zoom camera



Flow Monitoring Equipment

- Twenty-five (25) Hach FL-900 flow loggers w/submersible A/V sensors and cellular modems for remote communication
- Nine (9) Sigma 910 flow loggers w/submersible A/V sensors (including a wide variety of stainless steel mounting bands & hardware)
- Five (5) Isco tipping-bucket rain gauges
- Five (5) AV Sensors
- Thirteen (13) HOBO Rain Gauges
- Six (6) full confined space entry sets including tripods, ventilators, & multi-gas detectors
- One (1) Phaser V1000 hand-held radar surface velocity meter
- Two (2) Yamaha Rhino 4x4 all-terrain vehicles
- One (1) Flowmate 2000 Portable Velocity Meter
- Three (3) Honda portable generators
- Three (3) Laptop Computers with Flo-Ware, FloLink, HOBOWare, Insight
- Five (5) Samsung Galaxy Tablet Computers
- Wide variety of traffic control equipment (signs, cones, etc.)





3 - FIRM'S EXPERIENCE AND CAPABILITIES

Smoke Testing & Night Flow Isolation Equipment

- Four (4) Hurco – Ripcord Smoke Blower utilizing Liquid Smoke
- Four (4) Pressure canisters (for liquid smoke delivery)
- One (1) ISCO Flow Poke flow measurement device
- One (1) Handheld Portable Velocity Meter



GIS Software

- Two (2) Civil 3D 2017 licenses
- Ten (10) ArcGIS desktop licenses (Version 10.3.1*)
** Hydrostructures maintains maintenance agreement with ESRI and periodically updates to newer versions*





3 - FIRM'S EXPERIENCE AND CAPABILITIES

SCHEDULE

Hydrostructures currently operates 8 cleaning and CCTV inspection crews company-wide, including 6 based out of our Pittsboro, NC office, 1 out of our Winston-Salem, NC office, and 1 based out of our Virginia Beach, Virginia office. Assuming an average production rate of 1,500 feet per day per crew, this gives us the ability to evaluate more than 2.5 million feet of pipe per year.

We would initially assign one crew to the project, with additional crews available depending on the size and schedule of the various work assignments.

Hydrostructures has the knowledgeable professionals, time, and the resources to dedicate to your project. Our commitment to provide our clients with projects on-time and within budget differentiates us from our competition. Our hands-on philosophy and turn-key approach ensures that our clients receive specific and focused expertise. The City of Greensboro will **never** be pushed aside by other projects; we are proud to be able to offer each and every client the time and dedication needed for each and every endeavor. Hydrostructures will always be available to Town staff to answer questions or address concerns. We work hard for our clients, and we stake our reputation on our work. **We have 70 full-time personnel across four offices and are able to allocate additional resources to the project should the schedule require them.**

Benefits for the City of Greensboro

Multiple Resource Availability

Our turn-key approach requires us to maintain multiple field crews, data reviewers, and project managers available at all times. We also share resources across our four offices and frequently use qualified subcontractors so that our projects are completed on time and within budget.

We have crews ready to start this project immediately.



3 - FIRM'S EXPERIENCE AND CAPABILITIES

CURRENT PROJECTS

PROJECT	AMOUNT	% COMPLETE
Task 8, CSIP, Quick Start Program Year 2 - Winston-Salem City/County Utilities, NC	\$15,080	38%
Wake Forest University, Design Sanitary Sewer Improvements for HS Moore	\$26,035	33%
Wake Forest University, Locate Storm Water Lines Under Davis Field - Winston-Salem, NC	\$18,690	16%
NCDOT Beltway Construction Inspection - Winston-Salem City/County Utilities, NC	\$310,194	1%
NCAP 2018 Sewer Rehabilitation - NC	\$60,000	12%
Lower Rocky River Interceptor Evaluation & Condition Assessment - NC	\$80,775	63%
Chatham County, Ball Park Water Booster Station Improvements - Pittsboro, NC	\$18,490	71%
Wilson Street to Ellerbe Creek Sanitary Sewer Outfall Relocation - Raleigh, NC	\$94,840	60%
North Buffalo Flow Monitoring - NC	\$126,000	97%
SGWASA Creedmoor AIA - Butner, NC	\$193,300	4%
Pittsboro General Consulting - Pittsboro, NC	\$10,000	50%
Hearne Road Water Main Replacement - Pittsboro, NC	\$59,840	29%
Pittsboro AIA Grant - Pittsboro, NC	\$169,000	1%
Crabtree Interceptor Video Inspection, Phase II (SOW 7) - Raleigh, NC	\$38,825	82%
CCTV & Sonar for 27" Interceptor - Raleigh, NC	\$43,226	74%
Water System Hydraulic Model Update & Training - NC	\$78,500	78%
Charlotte Water, Sewer Cleaning & CCTV - Charlotte, NC	\$2,002,008	71%
Charlotte Water, Sewer Cleaning & CCTV #2 - Charlotte, NC	\$2,049,999	73%
Town of Cary Interceptors, Year 2 - Cary, NC	\$452,721	70%
Duke Medical Center, Grease Trap - Durham, NC	\$28,800	51%
Falconbridge Smoke Testing - NC	\$17,470	91%
Durham Central Park Water Line Replacement - Durham, NC	\$15,800	40%
Sanitary Sewer & Storm Drains W. Main Street & Elizabeth Street - Durham, NC	\$257,860	10%
City of Durham Cleaning & CCTV - Durham, NC	\$453,250	1%
Task Order #1, Pipeline Condition Assessment Sanitary Sewer & Storm Drains on Main Street - Durham, NC	\$17,950	29%
West Club Blvd. SSES - Durham, NC	\$117,900	1%
Storm Drain Cleaning - Fayetteville, NC	\$60,000	70%
Pre-cleaning & CCTV Inspections, East Ridge Basin - TN	\$395,230	81%
Havelock Flow Monitoring Services - Havelock, NC	\$25,000	43%
James Island Public Service District (JIPSD) SSES - Charleston, SC	\$1,832,847	96%
Spartanburg Water, Lawson Fork Phase 6 - Spartanburg, SC	\$185,600	68%
City of Columbia Rocky Branch 01 SSES (Brown and Caldwell) - Columbia, SC	\$265,000	1%
City of Columbia Smith Branch 02 (Stantec) - Columbia, SC	\$208,000	1%



3 - FIRM'S EXPERIENCE AND CAPABILITIES

PROJECT	AMOUNT	% COMPLETE
Smoke Testing, Manhole Inspections, Cleaning & CCTV (Stantec) - City of Columbia, SC	\$313,000	1%
Broad River 02 (DESA)	\$46,800	48%
Broad River 02 SSES (AECOM) - SC	\$283,084	1%
WW Collection System Manhole Survey Task Order #3 - City of Columbia, SC	\$220,940	75%
Smoke Testing & Manhole Inspections (Brown and Caldwell) - City of Columbia, SC	\$54,542	91%
Charleston AFB Joint Base I/I Study - Charleston, SC	\$118,500	1%
Task Order #2, Warrenton SSES Plant South Basin - Warrenton, VA	\$199,898	88%
Task Order #5, Warrenton SSES & CAR, Cedar Run South, Taylor/Cedar Run North, Stuyvesant	\$267,080	65%
Task Order #6, Warrenton Phase II, SSES & CAR, Cedar Run South, Taylor/Cedar Run North Stuyvesant	\$120,825	28%
Work Order #49 - Basin #261 - Virginia Beach, VA	\$99,900	54%
Work Order #51 - Multi SA - Manhole Inserts for Vacuum Pits - Virginia Beach, VA	\$227,600	78%
Work Order #52 - Multi SA - Virginia Beach, VA	\$177,830	42%
Work Order #53 - Multi SA Root Control Follow Up - City of Virginia Beach, VA	\$157,701	75%
Work Order #54 - SA 467 - Virginia Beach, VA	\$57,701	50%
Work Order #55 - SOP's, QA/QC, Data Management & Phase III - Virginia Beach, VA	\$37,070	44%
Work Order #56 - SA 104/501 - Bird Neck Point - Virginia Beach, VA	\$59,521	25%
Work Order #57 - TBD	\$369,718	1%
City of Virginia Beach PUCN-13-0015 - VA	\$366,167	1%
Dominion Power - Surry Power Plant CCTV	\$50,000	27%
Dominion Power - Surry Power Plant CCTV (Vaden Company)	\$65,610	1%
City of Suffolk SSES - Suffolk, VA	\$136,550	3%
Norfolk, VA Flow Monitoring (Brown and Caldwell)	\$13,200	1%
Tri-State HRSD GMP2 059 & 60 Siphon Inspections - VA	\$21,816	72%
PS 54 Service Area Rehabilitation, Phase 5 (Gannett Fleming) - VA	\$8,400	53%
NAVFAC MIDLANT Water Main Investigation - VA	\$7,500	1%
HRM Navy Base Stormwater - VA	104,900	92%
VAMC - VA	425,000	1%
Bennington Road Culvert Evaluations & CAR - VA	\$7,000	1%
Baltimore County, MD - On Call Rehabilitation Design TASK A	\$237,004	85%
Baltimore County, MD - On Call Rehabilitation Design TASK B	\$707,672	83%
Baltimore County, MD - On Call Rehabilitation Design TASK C	\$746,852	72%
Baltimore County, MD - On Call Rehabilitation Design TASK D	\$302,448	89%
Baltimore County, MD - On Call Rehabilitation Design TASK D Phase II	\$1,100,000	2%
Maryland Water Service CAR and Data Analysis - MD	\$24,000	34%
Maryland Water Service GIS Mapping - MD	\$43,531	2%



3 - FIRM'S EXPERIENCE AND CAPABILITIES

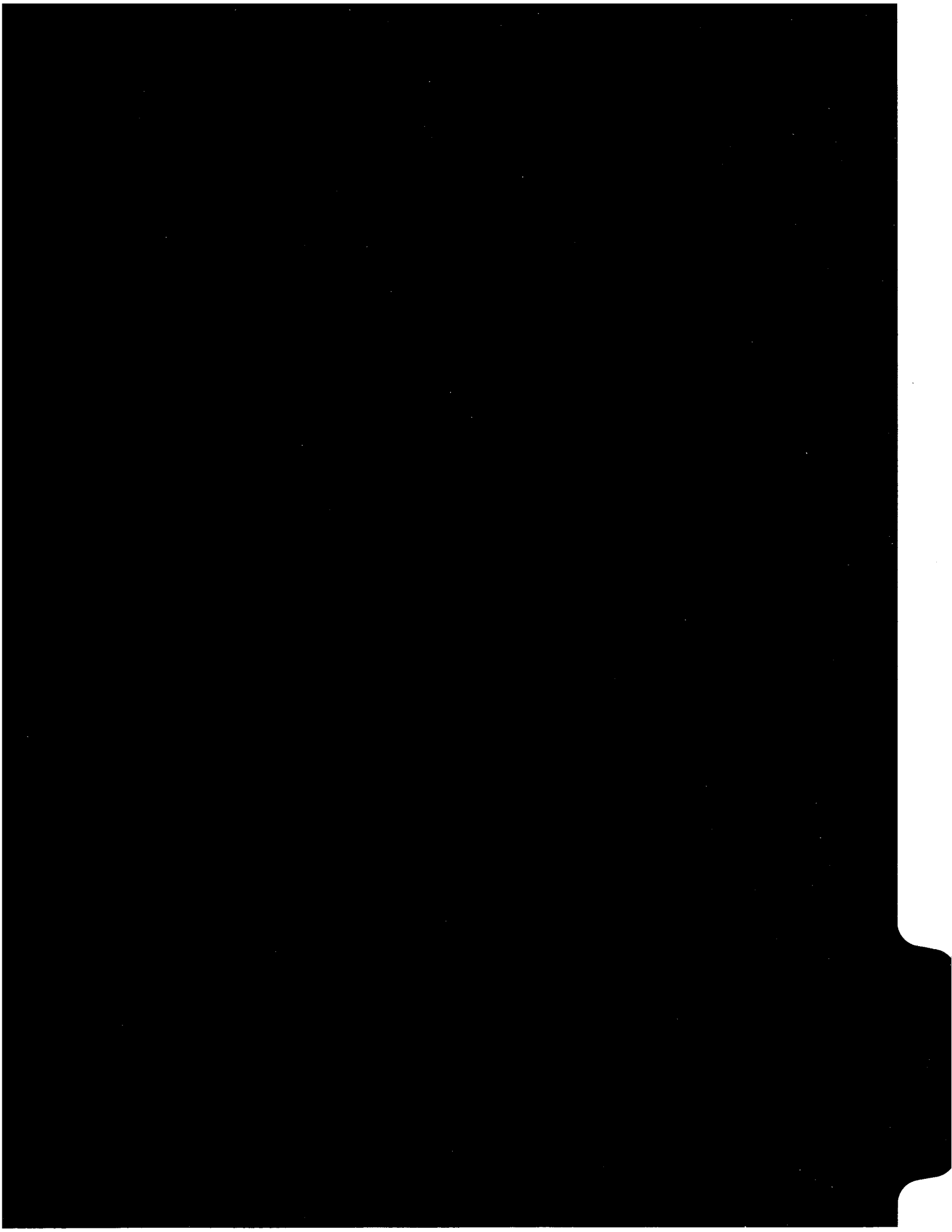
PROJECT	AMOUNT	% COMPLETE
GIS Conversion - Province Utilities, Greeridge Utilities, MD Utility Service & Colchester VA Utilities	\$23,145	3%
Cobb County FY18 Sewer Cleaning & Condition Assessment - Cobb County, GA	\$439,002	1%
Cape Canaveral, FL	\$147,500	1%
SSES, Basin K - Newport Utilities - Newport, TN	\$149,785	85%
SSES, Basin J, Newport Utilities - Newport, TN	\$175,000	1%
GIS Conversion, Massanutten PSC	\$13,681	78%
GIS Conversion, CUPA Penn Estates, CUPA UIP, CUPA Westgate, Montague Water & Sewer NJ	\$26,278	39%
Bucks County Manhole Inspections - Bucks County, PA	\$29,250	84%



**RFP FOR OTHER SERVICES
CLEANING AND CCTV ASSESSMENT**

ITEM DESCRIPTION	QUANTITY	U/M	UNIT COST	TOTAL COST
HYDRAULICALLY CLEAN AND CCTV 6 THRU 8-INCH SEWER	30,000.00	LF	\$2.00	\$60,000.00
HYDRAULICALLY CLEAN AND CCTV 6 THRU 8-INCH SEWER (HIGH TRAFFIC)	3,000.00	LF	3.00	9,000.00
HEAVY CLEANING 6-8 INCH	10,000.00	LF	1.00	10,000.00
HYDRAULICALLY CLEAN AND CCTV 10 THRU 12-INCH	20,000.00	LF	2.50	50,000.00
HYDRAULICALLY CLEAN AND CCTV 10 THRU 12-INCH (HIGH TRAFFIC)	1,000.00	LF	3.50	3,500.00
HEAVY CLEANING 10 THRU 12-INCH SEWER	5,000.00	LF	1.50	7,500.00
HYDRAULICALLY CLEAN AND CCTV 15 THRU 18-INCH	5,000.00	LF	3.00	15,000.00
HYDRAULICALLY CLEAN AND CCTV 15 THRU 18-INCH SEWER (HIGH TRAFFIC)	250.00	LF	4.00	1,000.00
HEAVY CLEANING 15 THRU 18-INCH SEWER	2,000.00	LF	2.00	4,000.00
HYDRAULICALLY CLEAN AND CCTV 20 THRU 24-INCH	1,500.00	LF	4.00	6,000.00
HYDRAULICALLY CLEAN AND CCTV 20 THRU 24-INCH SEWER (HIGH TRAFFIC)	300.00	LF	5.00	1,500.00
HEAVY CLEANING 20 THRU 24-INCH SEWER	500.00	LF	6.00	3,000.00
CCTV 30 THRU 36-INCH SEWER	4,000.00	LF	3.00	12,000.00
CCTV 48-INCH SEWER	20,000.00	LF	3.50	70,000.00
TOTAL				\$252,500.00

1. QUANTITIES ARE APPROXIMATE.
2. LIGHT CLEANING AS REQUIRED TO MEET PACP STANDARDS IS INCLUSIVE OF THE HYDRAULICALLY CLEAN AND CCTV LINE ITEMS
3. IF MULTIPLE PASSAGES OF THE JETTER OR RODDER ARE REQUIRED FOR CAMERA PASSAGE OR THERE IS SIGNIFICANT DEBRIS IN THE LINE, THIS SHALL JUSTIFY HEAVY CLEANING
4. THE MAJORITY OF THE WORK (IF NOT ALL) WILL BE IN ROAD RIGHT-OF WAYS OR EASEMENTS



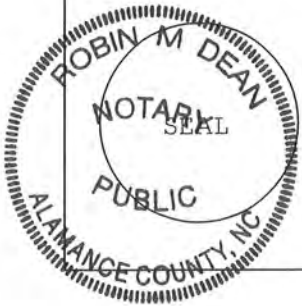
Name of Prime Contractor: **Hydrostructures** Project Name: **Cleaning & Video Inspection of Gravity Sewer Lines**
****Are you a certified M/WBE? _____ Yes X No**

The Bidder/Participant must indicate all subcontracts (M/WBE & NON-M/WBE) it intends to utilize as follows:

MBE	WBE	NON M/WBE	Subcontractor Name & County**	Nature of Work to be Performed	% Utilization	
X			CriTek Engineering Guilford County, NC	CCTV Data Review	5%	
		X	KRG Utility, Inc. Caldwell County, NC	CCTV Inspection & Cleaning	TBD	
**Only M/WBE firms that are certified by the North Carolina Department of Administration or the North Carolina Department of Transportation and have a significant business presence within the Greensboro MSA (Guilford, Randolph, Rockingham, Forsyth, Stokes, Davie, Yadkin, Davidson, Alamance and Surry Counties) will be counted towards the M/WBE goal(s).					Total NON-M/WBE Utilization Commitment	TBD
					Total MBE Utilization Commitment	5%
					Total WBE Utilization Commitment	TBD

(Submit Additional pages, if necessary)

The undersigned will enter into a formal agreement with the M/WBE firm(s) for work listed on this affidavit conditional upon execution of a contract with the City of Greensboro. Breach of this commitment constitutes breach of bidder's contract if awarded. The undersigned hereby certifies that he or she has read the terms of this certification and is authorized to bind the Bidder in accordance herewith. Signature and title of authorized official of the company and the date must be properly executed or this document will be deemed nonresponsive.



Date: **9.28.2018** Name of Authorized Officer: **Michael S. Koonce, P.E.**
 Signature: *[Handwritten Signature]* Title: **President**
 State of **North Carolina** County of **Chatham**
 Notary Public: *[Handwritten Signature]* My commission expires: **Dec. 18, 2019**

Affidavit D-1 - Letter of Intent to Perform as a M/WBE Subcontractor Contract Number: _____

Name of Prime Contractor: Hydrostructures Project Name: Cleaning & Video Inspection of Gravity Sewer Lines

The undersigned intends to perform work in connection with the above project as:

<input checked="" type="checkbox"/>	Minority Business Enterprise		Women Business Enterprise
	Individual	*	A Corporation
	A Partnership		A Joint Venture

The undersigned is certified by the North Carolina Department of Administration or the North Carolina Department of Transportation and is headquartered or has a significant business presence within the Greensboro MSA.

The undersigned is prepared to provide the work (described below) in connection with the above project at the following price: \$ _____. Any changes in this commitment must be approved in advance by the M/WBE Office.

_____ % of the dollar value of the subcontract will be sub-let to (if applicable) _____.

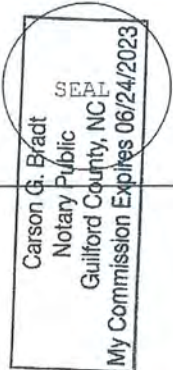
You have projected the following commencement date for such work, and the undersigned is projecting completion of such work as follows:

Description of the Work	Projected Commencement Date	Projected Completion Date
CCTV Data Review	TBD	TBD

This document shall not serve in a manner as an actual subcontract between the two parties. A separate binding agreement will describe in detail the contractual obligation of the contractor and the M/WBE subcontractor. The undersigned will enter into a formal agreement for the above work with you conditioned upon your execution of a contract with the City of Greensboro. Breach of this commitment constitutes breach of bidder's contract if awarded.

The undersigned hereby certifies that he or she has read the terms of this certification and is authorized to bind the Bidder in accordance herewith. Signature and title of authorized official of the company and the date must be properly executed or this document will be deemed nonresponsive.

Date: 9/25/2016 Company Name: CRITEK ENGINEERING GROUP, P.C.
 Name of Authorized Officer: J. DAWAYNE CRITE
 Signature: _____ Title: PRESIDENT
 State of North Carolina County of Sarah
 Notary Public Carla Bradt My commission expires: 06/24/2023

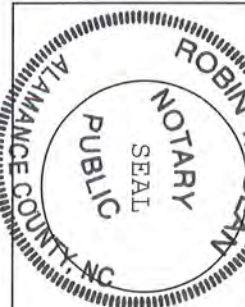


Name of Prime Contractor: _____ **Hydrostructures** Project Name: _____ **Cleaning & Video Inspection of Gravity Sewer Lines**
 If the contract/project M/WBE participation requirements are not achieved, the bidder/participant shall provide the following documentation of Good Faith Efforts to the City.

MBE	WBE	Company Name	Email Address or Fax Number for Initial Contact	Date of Initial Contact	Service/ Material/ Supplies to be Provided	Date of Follow Up Telephone Contact	Phone Number	Person Contacted	Results
	X	Traffic Control Safety Services, Inc.	dhull@nctcss.com	9.25.18	Traffic Control	9.27.18	336.771.7676	Daniel Hull	Sub decided not to bid
	X	Roadmasters Traffic Control, LLC	704.585.2936	9.28.18	Traffic Control	N/A	704.585.9636	n/a - left a voicemail mssg.	was not able to get a hold of anyone
	X	Bird Dog Traffic Control	called - (p) 844.369.0799	9.28.18	Traffic Control	N/A	844.369.0799	n/a - called twice - no answer either time	was not able to get a hold of anyone

(Submit additional Pages, if necessary)

Pursuant to "Special Instructions to Bidders Regarding Compliance with the City of Greensboro Minority and Women Business Enterprise (M/WBE) Program Policies", the Bidder certifies that the above Minority/Women-owned Business Enterprise(s) was (were) contacted in good faith. The undersigned hereby certifies that he or she has read the terms of this certification and is authorized to bind the Bidder in accordance herewith. Signature and title of authorized official of the company and the date the document was properly executed or this document will be deemed nonresponsive.



Signature: _____ Date: 9.28.2018 Name of Authorized Officer: Michael S. Koonce, P.E.
 Title: President
 State of North Carolina County of Greensboro
 Subscribed and sworn to before me this 28 day of Sept, 2018
 My commission expires: Dec 18, 2019

Contact us to see how we can help you

Corporate Headquarters - North Carolina

126 Commerce Court • PO Box 1537 • Pittsboro, NC 27312
(p) 919.542.5002

Winston-Salem Area - North Carolina

3909 Westpointe Blvd. • Suite E • Winston-Salem, NC 27103
(p) 336.497.5798

Virginia Office

5269 Cleveland Street • Suite 101 • Virginia Beach, VA 23462
(p) 757.631.7989

South Carolina Office

1725 12th Street • Cayce, SC 29033
(p) 803.563.5237

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