



Village of Orland Park

**Water: Meter Replacement
Evaluation, Leak Detection, and
Rate Study**

RFQ #21-035



August 20, 2021

Submitted by:

BAXTER & WOODMAN
Consulting Engineers

Village of Orland Park
Office of the Village Clerk
14700 South Ravinia Avenue
Orland Park, IL 60462

Subject: Water: Meter Replacement Evaluation, Leak Detection, and Rate Study (RFQ #21-035)

Office of the Village Clerk:

Baxter & Woodman understands that today's water studies are more complex and need to consider consumer expectations, rates, water quality, reliability, conservation, and sustainability concerns. We offer the Village extensive firm and project team experience with water system evaluations, system modeling, and rate studies, completing over 200 water engineering projects in the region each year.

We have prepared our qualifications, a full approach, and fee for providing consulting assistance with Work Effort #3: Water, Sewer and Stormwater Rates. Our approach to Work Efforts #1 and #2 would differ somewhat from that outlined in the Request for Proposal. We have not provided a full proposal for Work Efforts #1 and #2, but would be interested in meeting with the Village to discuss those efforts in more detail if the Village does not get a satisfactory submittal for those efforts.

The Baxter & Woodman approach to Work Effort #3: Water, Sewer and Stormwater Rates will provide the Village with the information necessary to make important facility infrastructure and financial decisions, now and in the future

If you have questions about our qualifications or would like to schedule a meeting, please contact Project Manager Sean O'Dell at (815) 444-4438 or sodell@baxterwoodman.com.

Sincerely,

BAXTER & WOODMAN, INC.
CONSULTING ENGINEERS



Sean E. O'Dell, PE
Vice President, Water

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Baxter & Woodman celebrates 75 years in business!

2021 marks our 75th year in business, upholding the founder’s legacy of growing the business and providing superior personal service while building community value.

Operating History

A proud history and service-oriented culture was established in 1946 by firm founders, Richard Baxter & Lorrin Woodman. As a result of hard work, commitment, and ever expanding engineering capabilities, Baxter & Woodman has grown to a full service firm serving communities and governmental agencies throughout Illinois, Wisconsin, Florida, and Texas.

Our experience includes planning, design, construction and technology services for water, wastewater, stormwater and transportation facilities for municipalities, counties and state agencies and more. Environmental, geographic information systems (GIS), water and wastewater operations, and advanced technology needs complement the firm’s civil engineering expertise.

Our combined work force totals 310+ talented individuals including wastewater, civil, transportation, mechanical, structural, electrical, and environmental engineers. The engineering staff is supported by trained technicians, licensed water and wastewater operators, licensed electricians, registered surveyors, GIS/GPS analysts, CAD operators, construction inspectors, and administrative assistants.

Convenient Office Locations

Baxter & Woodman’s 13 regional offices provides our clients with local presence and responsive service. Our team offers services that stretch well beyond typical engineering consulting. We are committed to building community value with each and every project we complete.

Services for the Village will be provided from our Mokena office, however, some staff members routinely work out of various office locations in order to provide the specific services and expertise our clients require.

Available Work Capacity

Baxter & Woodman’s total annual transportation fee capacity is \$44,000,000. We have the available work capacity to readily serve the Village.

ILLINOIS
Chicago
Crystal Lake
Mokena
Naperville
Peoria

WISCONSIN
Burlington
Madison
Milwaukee

FLORIDA
Fort Lauderdale
Key West
Orlando
West Palm Beach

TEXAS
Houston

BAXTER & WOODMAN STAFF		
Total Staff Members: 332		
Total Engineering Staff: 255		
TRANSPORTATION 53	STRUCTURAL 4	CADD 12
INFRASTRUCTURE 15	ELECTRICAL 6	SURVEY 6
STORMWATER 11	GEOLOGIST 1	CONSTRUCTION 50
WATER/ WASTEWATER 53	SPATIAL TECHNOLOGY 7	SCADA/ CONTROLS 37

As of 6/2021

Work Effort #3: Rate Study Approach

Water, Sewer, and Storm Rate Analysis

Municipalities today are asked to meet more demands than ever. Aging infrastructure and new rules and regulations result in an ongoing juggling act with available capital budgets. The Village's Water & Sewer System rate study will provide the Village of Orland Park with powerful information to help you efficiently and responsibly invest your capital.

Comprehensive Water Rate Study Process



Utility Rate Study and Long Range Cash Flow Analysis

The following process will be used to review and update the Village's Water Rate structure.

A Collaborative Process

Baxter & Woodman's approach to Water, Sewer and Storm Rate studies is one of collaboration through an iterative process. Developing a rate structure that is equitable to various classes of rate payers yet generates sufficient revenues to operate and maintain the needed infrastructure systems requires careful consideration of various alternative rate structures, as well as input from Village administrative, finance and public works staff and the Village's elected officials. The perception of what is "fair" for various constituents is subjective. For this reason, we strongly encourage the involvement of one or more Trustees at key points of the rate development process.

Establishing a Fair and Equitable Rate Structure

Throughout the study process, Baxter & Woodman adheres to the guidelines established by the American Water Works Association (AWWA) and the Water Environment Federation (WEF) for developing the cost of service analysis, distribution of costs across various user classes and general rate setting practices. Developing proposed rate structures within this framework of industry standards provides a solid basis for justifying rate increases to the public and to the Village Board.

Funding Capital Improvements

The recommended projects from Capital Improvement Plan review will be used to develop and prioritize the capital investment needs for the Village. Our team will work with you through an iterative process to refine your capital plan and rate structure in a way that balances the need for system maintenance and improvements with acceptable rates for users of the system.

The following is a detailed description of how we propose to work through the study process to accomplish the goal of maintaining a fiscally responsible, self-sustaining water fund:

- 1. Cost of Service Analysis:** The first step in understanding the current financial position of the Village is to construct a Baseline Financial Model of the Water Fund. This financial model allows us to observe the patterns and trends for previous years of key components to the Water Fund such as water consumption versus revenue, water purchasing,

capital expenses, and fixed costs incurred by operations. The model in turn allows us to assign proper inflation values and project the next five years. We will also evaluate the existing rate structure in its capacity to cover current expenses, and its equitable distribution across users groups.

2. Cost of Service Workshop Meeting with Village Staff: Baxter & Woodman will present the findings of the Cost of Service evaluation to Village staff at a working meeting. We recommend that, if at all possible, one or more elected officials attend this meeting as we will be discussing the current status of the funds and what changes are necessary going forward. At this time, adjustments to the capital plan and/or model can be discussed before beginning the rate scenario evaluation. At this meeting we will also present various rate structures, discuss the underlying policy implications for each, and identify which of the structures will be input to the spreadsheet forecast model for further consideration.

3. Rate Scenario Evaluation: The financial model allows us to manipulate several key variables and test various rate structures and/or debt structures to quickly and easily observe the impacts to the fund balance over the study period.

During this phase of the project, we will work with Village staff to identify projects appropriate for long term debt financing as well as those projects which are best funded from cash on hand. A forecast will be developed for each rate scenario identified. We often find this step is an iterative process where we will work with the Village to achieve the balance between the responsibility of the Village to invest in facilities to provide safe and reliable infrastructure systems and the responsibility to rate payers to provide services at an affordable rate.

Additionally, the Village may opt to establish a cash reserve goal by the end of the five year projection period. Rate schedules will be prepared that reflect the required increases to meet the cash reserve, beyond the projected expenses. The financial model will be provided to the Village with easy to adjust fields such that the model can be adjusted as the years pass, updates to actual versus budget numbers can be incorporated.

Report and Presentation

Prepare Needs Assessment and Rate Report:

Baxter & Woodman will prepare a detailed draft report. The report will outline the purpose of the study, the recommend water/sewer/storm system improvement projects, the means and methods of developing various rate structures and recommended revisions. Tables within the report will identify where the Village's rates currently rank in relation to peer communities as well as the impact of proposed rate modifications. Each of the elements identified in the request for proposal will be addressed in the report. Upon completion, the draft report will be provided to the Village for review and comment. Village comments will be incorporated into a final report and presented to the Village Board.

<u>Cost Comparison of Surrounding Communities Capital Investment – Alternate 2</u>	
Community	Average Water & Sewer Bill for 6,000 Gallons Usage per Month
Huntley	\$ 41.54
Woodstock	\$ 41.77
Cary	\$ 46.40
McHenry	\$ 47.44
Algonquin	\$ 49.73
West Dundee	\$ 54.99
Harvard	\$ 58.14
<u>Crystal Lake</u>	<u>\$ 63.23</u>
Johnsburg	\$ 63.67
Lake in the Hills ⁷	\$ 64.14
Fox River Grove	\$ 69.07
Wauconda	\$ 74.05
Round Lake Beach	\$ 76.43
Lakewood	\$103.41
Sleepy Hollow	\$128.98
Average	\$ 65.53

Table showing average user bill compared to other communities.

Added Value - Public Communication

Development of the rate study will provide a sound foundation for elected officials to use as a basis for changes to the water rate structure. The next step is to effectively communicate to the public why a rate increase is necessary and how the changes will impact each individual.

While this task is not in the Village's scope of the project, you will be happy to know that Baxter & Woodman has experience in public communication, and upon your request, can assist the Village in developing a strategy for communicating this information to the public through a variety of resources (mailings, websites, public open houses and other strategies).



Potential Strategies:

- Public Meetings/Open Houses
- Social Media: Twitter, Facebook
- Project Websites
- Fixed/Mobile Webcams
- Project Blogs
- Phone Hot Lines
- Door Hangers/Informational Fliers
- Changeable Message Boards
- Virtual Public Involvement

Experience

Baxter & Woodman completes over 200 water engineering projects per year. The following are a few of our projects that are of similar size and scope to the Village's Water Meter Replacement Program Evaluation, Water Distribution System Leak Detection, and Water and Sewer Rate Study projects.

Water Meter Study and Program

City of Joliet, IL

Baxter & Woodman is providing an evaluation and study of the City's residential water meter system and annual meter replacement program. The project includes consulting services for the review, planning, and prioritization of a water meter replacement program to improve water accountability and increase revenue from water billings.

The study objectives include the following:

1. Non-Automated meter reading (AMR) meter elimination
2. Program architecture (meter type, testing, billing, etc.)
3. Identification of residential meter's contribution to non-revenue water
4. Leak detection infrastructure review and recommendations
5. Short-term and long-term recommendations for meter replacement
6. Identification of staffing and operation & maintenance (O&M) consequences
7. Meter supplier software review and recommendations
8. Databases, Information and Data-based management tools
9. Large meter testing review and improvements

Services

- Evaluation and study of water meter system and annual meter replacement program
- Non-automated meter reading (AMR) meter elimination

Completed

2021

Reference

Allison Swisher, PE
Public Utilities Director
City of Joliet
150 W Jefferson St.
Joliet, IL 60432
(815) 724-4222
aswisher@joliet.gov

Water Meter Replacement Assistance

Village of Homewood, IL

The Village requested assistance in creating bid documents for a comprehensive water meter replacement project.

The project included:

- Two-way
- Fixed based
- Meter reading system (AMI)
- New water meters for all residential and commercial properties within the Village limits

Baxter & Woodman also conducted a feasibility study, provided design documents, assisted with bidding, and presented a final presentation to the Village Board. With over 6,000 meters and one fixed base infrastructure improvement, this \$3 million project was locally funded and completed over a 12-month period.

Services

- Comprehensive water meter replacement project
- Meter reading system (AMI)

Completed

2013

Reference

John Schaefer
Director of Public Works
Village of Homewood
17755 S. Ashland Ave.
Homewood, IL 60430
(708) 206-3470
jschaefer@homewoodil.gov

Water System Performance Contract

City of Oak Forest, IL

The Oak Forest Water System Performance Contract project is an innovative private/public partnership focusing on planning, delivering, and guaranteeing cost reductions for the City's water distribution system via reduced energy consumption and streamlined operations. Baxter & Woodman produced construction documents, and also performed construction and start-up services to deliver the project on time and within budget.

Baxter & Woodman joined Johnson Controls, who provided an Energy Performance Contract which is an alternative financing mechanism designed to accelerate investment in cost-effective energy conservation measures. This project will pay for itself in seven years with the reduction in water loss, increase in water meter revenues, decrease in energy consumption, and optimized system operation. The project combines the best talents of Baxter & Woodman providing water system engineering operations and energy consumption expertise and incorporated them with the controls and instrumentation prowess of Johnson Controls, Inc.

The following specific improvements were identified and are being implemented:

- WaterGEMS Water Model and long-term water loss control strategies
- Complete water meter change out
- System-wide water leakage testing and repair
- Pumping stations pump speed optimization and Master PLC upgrades
- Pumping modifications to reduce water hammer and limit main breaks
- Pump and operational control strategies including off-peak pumping
- VFD replacements at booster pumping stations
- Remote metering facilities
- New pressure zones
- Improved data management services and SCADA
- New pressure zone to reduce water pressure in areas with water main breaks and increase pressure in locations with low fire flows

Johnson Controls funded the initial study (no cost to Oak Forest) and preliminary design, providing an economically viable alternative to traditional project funding.

Guaranteed Results: Johnson Controls guaranteed the projected energy savings and has agreed to pay the difference, if guaranteed savings fall short.

The Performance Contracting model provides:

1. Single Source of Responsibility
2. No Change Orders
3. An Ongoing Measurement
4. Guaranteed Results

The Design-Build project delivery method was used.

Completed

2016

Reference

Darlene Milanowicz
Interim Public Works Director/City
Engineer
City of Oak Forest
15440 South Central Ave.
Oak Forest, IL 60452
(708) 535-4090
dmilanowicz@oak-forest.org

Water Distribution System

Village of Schaumburg, IL

The Village of Schaumburg's water system, as with the water systems of most communities, was constructed over a series of decades through individual projects that addressed localized needs. This water system improvement project, as part of the performance contract, helped consolidate the operation of the Village's utility infrastructure and provide improved functionality.

Baxter & Woodman produced construction documents, and also performed construction and start-up services to deliver the project on time and within budget.

The water system scope goals included updating instrumentation and control to effectively manage storage volumes for fewer water quality issues, minimize water loss, and optimize energy use. Baxter & Woodman teamed with Johnson Controls to provide a systematic evaluation of the various storage facilities, pump stations, and water network that delivered:

- Improved water quality by providing a more consistent chlorine residual through automation of tank turnovers. Water system improvements will include instrumentation at each of the Village's storage sites to calculate the water age and automatically pump at off-peak hours to provide adequate tank turnovers.
- Repurposed operator resources by shifting operational resources from manual site checks to preventative and planned maintenance.
- Renewed aging infrastructure by delivering a number of mechanical improvements throughout pumping stations.
- Minimized water main breaks due to SCADA enhancements that will allow staff to manage system pressures in a better way.
- Improved emergency response time, reduced downtime of equipment, and supplied water.
- Reduced electricity expenses. The improvements will result in approximately \$60,544 per year of electricity savings by reducing demand charges at several sites and reducing operational energy at Plum Grove and Odum pump stations.
- Flexibility for maintenance.
- Reconcile the financial impact of water operations daily. Specifically, indicate and assign a value to water lost on a daily basis.

Services

- Design-Build Project Delivery
- Water Distribution System Analysis
- SCADA
- Water Accountability Portal
- MCC Replacement
- Post-Construction Operational Consulting

Completed

2017

Reference

Michael Hall, PE
Director of Engineering and Public Works
Village of Schaumburg
101 Schaumburg Court
Schaumburg, IL 60193
(847) 923-6616
mhall@ci.schaumburg.il.us

Water & Sewer Rate Study

Village of Berkeley, IL

The Village of Berkeley commissioned their first Water and Sewer Rate Study in recent decades to better understand their utility fund cash flow and allows the Village to measure their existing cash reserves and plan necessary capital improvement projects without taking on debt.

Baxter & Woodman completed a Water and Sewer Rate Study focusing on:

- Identifying major user groups and providing a recommendation on new user rate groups which would allow the Village tighter control over its rate impacts to certain users.
- A ten year forecast of revenues and expenses to generate a minimum schedule of rate increases that would maintain the Village’s target cash reserve.
- Identifying the financial impacts of large industrial users entering or leaving the system.

Baxter & Woodman worked with the Village Administrator and Public Works Director to prepare a Draft Report outlining the new user rate groups and a rate schedule for the next 10 years that will meet the projected needs of the Village’s water and sewer system.

Services

- Identified major user groups and provided recommendations
- Forecasting of revenue and expenses
- Identified financial impacts

Completed

2019

Reference

Rudy Espiritu
Village Administrator
Village of Berkeley
5819 Electric Ave
Berkeley, IL 60163
(708) 449-8840
respiritu@berkeley.il.us

Water System Needs Assessment and Water Rate Analysis

Village of Lisle IL

Baxter & Woodman conducted a full water system evaluation that included the age and condition of the Village’s water towers, treatment equipment, pipes, valves and other critical water infrastructure in order to determine the current and future capital needs of the system. The information collected incorporates data and capital projects from related Village efforts including restoration and street replacement programs.

The capital needs was then brought into a five year Water and Sewer Fund evaluation and rate study to determine the adequacy and equitability of the existing rate structure, and establish a sustainable rate for the forecast period to address the long term needs of the Village’s system. The work included an evaluation of three alternative rate structures, determining a capital projects reserve goal, and presenting these options to the Village Board.

Services

- Full water evaluation
- Rate Study

Completed

2020

Reference

Adam Hall
Assistant Public Works Director
925 Burlington Ave
Lisle, IL 60532
(630) 271-4172
ahall@villageoflisle.org

Qualifications

The success of the Village's projects depends on our ability to collaborate with your staff and address your goals for the projects. The proposed key personnel provides the benefits of a comprehensive, well-coordinated team who have worked together on several similar projects. This in-house expertise allows us to stay on schedule, keep costs down, and respond quickly to requests.

Staff qualification summaries are below and detailed resumes with licensure and similar project experience are included on the following pages.



Sean O'Dell, PE
Project Manager

Sean O'Dell, PE will serve as Project Manager. Sean has over 18 years of experience in the planning, design, and rehabilitation of water and wastewater infrastructure. He works closely with municipalities and sanitary districts on planning infrastructure to serve growth and redevelopment areas. Sean leads the firm's Global Water Group.



Ken Moore
Technical Lead

Ken Moore will be the Technical Lead. With 45 years of experience, he assists our municipal clients with enhanced water and wastewater integrity through the planning, design, and implementation of water meter infrastructure. Ken has implemented concept development/design, acquisition of service, and management of subcontractors for the purpose of provision and installation of over a dozen Chicago area turn-key meter and Automatic Meter Reading and Advanced Metering Infrastructure municipal systems. He is a national leader in meter technologies, helping large communities, including New York, Los Angeles, and Detroit.



Alexis Shotton
Rate Study Engineer

Alexis Shotton will be the Rate Study Engineer. Since joining Baxter & Woodman, Alexis has excelled in the fields of computerized maintenance and management systems, underground infrastructure, and water and sewer rate studies. Alexis has provided support on a variety of municipal projects, from rate studies to several water and sewer main replacement projects. She has performed water/sewer rate studies for Deerfield, Lisle, Plano, and LaGrange.

Education

B.S. Civil Engineering,
Bradley University, 2002

Joined Firm in 2002

Years of Experience: 18

Registrations

Licensed Professional
Engineer: Illinois

Honors & Awards

2015 APWA National
Young Leader Award

2014 Young Leader Award,
APWA Chicago Metro
Chapter

Associations

2017 President of Chicago
APWA Metro Chapter

2015 Vice President of
Chicago APWA Metro
Chapter

2014 Treasurer of Chicago
APWA Metro Chapter

2013 President, APWA
Southwest Branch of Chicago
Metro Chapter

Illinois Public Service Institute
Advisory Committee Member
& 2013 Graduate

Illinois Section of AWWA
(YP Committee)

IWEA, WEF

Papers/Presentations

Water Main Rehabilitation:

- AWWA National
Distribution Conf,
September 2013 (Itasca,
IL)

Sean's focus and expertise is in the planning, design, and rehabilitation of water and wastewater infrastructure. He works closely with municipalities and sanitary districts on planning infrastructure to serve growth and redevelopment areas. Sean's experience with a variety of water, wastewater, stormwater management, and transportation projects has made him proficient in master planning, design, watershed modeling, survey, and GPS. Sean leads the firm's Global Water Group and is also a member of our Trenchless Technology Committee, which meets regularly to discuss and evaluate the industry's newest trenchless construction methods and materials. He is certified in evaluating sewer structural conditions through the PACP (Pipeline Assessment and Certification Program).

Representative Projects

River Forest, IL

Thatcher Avenue Water Main Lining

Project Manager for approximately 1,200 lineal feet of 8-inch cured-in-place-pipe water main liner located along the busy IDOT right of way on Thatcher Avenue. The line included 12 residential service taps, five fire hydrants, three connection points, and had direct conflicts with a 6-inch gas main, 12-inch local storm sewer and 48-inch MWRD sanitary trunk sewer.

Homewood, IL

Water Meter Replacement Project

Assisted the Village in creating bid documents for a comprehensive water meter replacement project. The replacement project allowed residents to receive monthly bills versus previously receiving quarterly bills, easing the strain of bill payers with smaller monthly bills. The accuracy of meters were also improved from 1/4th of a gallon to 1/10th of a gallon. The project included two-way, fixed based, meter reading system (AMI), and new water meters for all residential and commercial properties within the Village limits. The project also included conducting a feasibility study, providing design documents, and presenting a final presentation to the Village board. With over 6,000 meters and one fixed base infrastructure improvement, this \$3 million project was locally funded and completed over a 12-month period.

Country Club Hills, IL

Water Meter Replacement Project

Sean served as the project manager for the assessment for the City's Water Meter Replacement project and also provided design services.

Elmhurst, IL

Water Meter Replacement Program

Sean worked with the City to assist with the planning, design, and construction for their Water Meter Replacement Program. To receive funding from the Public

- SPWDA, August 2013 (Flossmoor, IL)
- B&W Client Seminar, March 2013 (Itasca, IL)
- MSTT, April 2012 (Joliet, IL)
- ISAWWA Webinars - January 2012, August 2011 (web only)
- NASTT, No-Dig Show, March 2012 (Nashville, TN) (co-writer)
- IIT Graduate Seminar, November 2011 (Chicago IL)
- ISAWWA Watercon, March 2011 (Springfield, IL)
- APWA, Chicago Metro Expo, May 2010 (Schaumburg, IL)

Anaerobic Digester Foaming:

- WEFTEC, October 2012 (New Orleans, LA)
- CSWEA, May 2012 (St. Charles, IL)

Inflow and Infiltration Removal - Public and Private Property:

- APWA, Southwest Branch Seminar, April 2012 (New Lenox, IL)

Lake Michigan Water Conversion and Pumping Station Design:

- ISAWWA Annual Conference, March 2008 (Springfield, IL)
- APWA, Southwest Branch Awards, January 2008 (Joliet, IL)

Water Supply Loan Program (PWSLP) administered by the Illinois Environmental Protection Agency (IEPA), Baxter & Woodman had to prepare a project plan approved by the IEPA, and complete an IEPA loan application package.

Oak Forest, IL

Water System Performance Contract

Project Manager for an innovative private/public partnership focusing on planning, delivering, and guaranteeing cost reductions for the City's water distribution system via reduced energy consumption and streamlined operations. The project combined the best talents of Baxter & Woodman providing water system engineering operations and energy consumption expertise and incorporated them with the controls and instrumentation prowess of Johnson Controls, Inc.

LaGrange, IL

Baxter & Woodman provides design and construction engineering for annual water main replacements. Since 2017, many of the project locations include private lead water services, as identified in a recent water meter replacement project. Services include helping Village staff and contractor confirm lead water services, develop access agreements, inspect internal plumbing, and coordination assistance for private property water services replacements.

Water Main Lining Experience:

Sean O'Dell is at the forefront of infrastructure rehabilitation techniques that are efficient and cost-effective for local communities to implement, including water main lining. Sean is a known expert in this new technique and has assisted many communities with training, feasibility reviews, design and construction engineering, as well as QA/QC review of municipal designs. He has completed water main lining design engineering for the following communities:

Oak Park, IL	Crest Hill, IL	Buffalo Grove, IL	Glen Ellyn, IL
Park Forest, IL	Grayslake, IL	La Grange, IL	Lincolnshire, IL
Lisle, IL	Glenview, IL	River Forest, IL	Highwood, IL

Education

B.S., EBA
Hillsdale College

Joined Firm in 2020

Years of Experience: 45

Associations

AWWA

Ken recently joined the firm to assist our municipal clients with enhanced water and wastewater integrity through the planning, design and implementation of water meter infrastructure. Ken has implemented concept development/design, acquisition of service, and management of sub-contractors for the purpose of provision and installation of over a dozen Chicago Area turn-key meter and Automatic Meter Reading and Advanced Metering Infrastructure municipal systems.

Representative Projects

City of Joliet - Water Meter Study and Program

QA/QC for the evaluation and study of the City's residential water meter system and annual meter replacement program. The Project includes consulting services for the review, planning and prioritization of a water meter replacement program to improve water accountability and increase revenue from water billings.

The study objectives include the following:

1. Non-Automated meter reading (AMR) meter elimination
2. Program architecture (meter type, testing, billing, etc.)
3. Identification of residential meter's contribution to non-revenue water
4. Leak detection infrastructure review and recommendations
5. Short-term and long-term recommendations for meter replacement
6. Identification of staffing and operation & maintenance (O&M) consequences
7. Meter supplier software review and recommendations
8. Databases, Information and Data-based management tools
9. Large meter testing review and improvements

Chicago Area Municipal AMR/AMI Projects *(while working for others)*

- Willowbrook, IL
- Hodgkins, IL
- Elmwood Park, IL
- Leyden Township, IL
- Winfield, IL
- Brookfield, IL
- River Grove, IL
- Calumet Park, IL

Previously Held Positions

Veolia Environmental North America – Metering & NRW Optimization Manager NA

(Technical Direction Group)

- DBO / oversaw the staff and directed the operation of the VNA Meter Testing and Analysis Lab Facility in Houston, TX.
- Developed VNA testing protocols and other methodology used in the evaluation of existing and new metrological product.
- Reviewed and provided critical analysis and performance evaluations of available drinking water metering and, AMI / AMR technologies.
- Developed and provided critical analysis relating to NRW and general municipal asset performance Issues.
- Developed policy regarding “Best Practices & Benchmarks US Wide”.
- Provided critical scientific, statistical and, overall analysis / input for the purpose of determining / discovering project oriented financial benefit (ROI).

U.S. projects included

- New York, NY (large meter evaluation & replacement program and testing procedures)
- Buffalo, NY (residential & commercial meter evaluation & targeted replacement)
- Pittsburgh, PA, (meter / AMI evaluation and staged replacement)
- Los Angeles, CA, (evaluation of meter testing methodology, Review of ULFM specifications)
- New London, CT, (validation meter testing and evaluation for state mandate)
- Detroit, MI, (evaluation of metering / AMI and program development)

Midwest Meter, Inc. – Greater Chicago Area

- Development of proper methodology for the acceptance of Water / Wastewater Flow Metering Product, and a variety of technologies to manage the systems developed.

Mueller Company – Southeastern District Manager

- Engineering/Management Liaison for product design and trouble shooting

Education

B.S., Civil Engineering
University of Illinois at
Urbana-Champaign, 2017

A.S, Engineering Science,
Kishwaukee College, 2014

Joined Firm in 2017

Years of Experience: 4

Certifications

Engineer-in-Training, Illinois

Alexis routinely assists senior engineers with the design of water main and sewer improvements. Since joining Baxter & Woodman, Alexis has excelled in the fields of computerized maintenance and management systems, underground infrastructure, and water and sewer rate studies.

Water/Sewer Rate Studies

Deerfield, IL

2020 Water and Sewer Rate Study

Project Engineer for the Village's Water and Sewer Rate Study and development of a new water and sewer rate structure. The project included assessing the Village's historical revenues and expenses, developing a financial forecast model, and the inclusion of a five year capital improvement project plan. Recommendations included modifying the existing rate structure to prorate expenses equitably and justifiably to the Village's customers while maintaining adequate revenues. The study also included a rate comparison survey of the Village's neighboring water and sewer rates for typical bills.

Lisle, IL

2019 Water and Sewer Rate Study

Project Engineer for the Village's Water and Sewer Rate Study and development of a new water and sewer rate structure. The project also involved a capital improvement plan analysis in which a site visit was conducted to review existing infrastructure and determine any additional CIP to be included in the rate study. The Village's historical revenues and expenses were assessed and the work included developing a financial forecast model. A focus was placed on the evaluation of the existing rate structures and its equitability to the Village's customers as well as an educational component to highlight the cost of water and its aging infrastructure. The study also included a rate comparison survey of the Village's neighboring water and sewer rates for typical bills.

Plano, IL

2020 Water and Sewer Rate Study

Project Engineer for the City's Water and Sewer Rate Study. The primary objective of the study was to re-evaluate the existing rates for the forecasted capital improvement projects as well as maintaining their senior tier rates. The City also wanted to investigate moving from a strictly volumetric rate structure to a fixed and volumetric rate structure to create a prorated schedule for its customers. Work included assessing the City's existing revenues and expenses to determine its existing capacity for additional CIP. The study also included a rate comparison survey of the Village's neighboring water and sewer rates for typical bills.

La Grange, IL

2019 Water and Sewer Rate Study

Project Engineer for the Village's Water and Sewer Rate Study. The work included an evaluation of the Village's existing water and sewer systems to establish a capital improvement project plan. Work included the evaluation of multiple rate increase scenarios as well as various new structures to set an equitable schedule of rates for the Village's customers. The study also included a rate comparison survey of the Village's neighboring water and sewer rates for typical bills.

American Water Infrastructure Assessment Reports

Lincolnwood, IL

**Water Pumping Station Infrastructure & Operations Evaluation/
Risk & Resilience Assessment**

Project Engineer for study to assess the existing main water pump station's infrastructure from a mechanical, operational, electrical, and SCADA perspective; determine the system's ability to handle various emergency scenarios; and evaluate costs associated with recommendations made to replace aging infrastructure or add additional components to the system. A USEPA-required risk and resilience assessment was also performed to study the risks of every part of the water system from supply to distribution including physical, cyber, and financial systems.

Berkeley, IL

**American Water Infrastructure Act (AWIA) Risk and Resiliency Assessment
& Emergency Response Plan**

Project Engineer assisting with comprehensive evaluation of the entire water distribution system to develop and achieve a long term water system vision focusing on characterize the existing system, determine critical assets, and summarize existing security measures.

Required Forms

PROPOSAL SUMMARY SHEET

RFP 21-035

Water: Meter Replacement Evaluation, Leak Detection, and Rate Study

Business Name: Baxter & Woodman, Inc,
Street Address: 8678 Ridgefield Rd.
City, State, Zip: Crystal Lake, IL 60012
Contact Name: Sean O'Dell
Title: Vice President Water
Phone: 815-444-4438 Fax: 708-478-8710
E-Mail address: sodell@baxterwoodman.com

Fixed Fee Price Proposal

(Firms may submit for one, two or three work efforts. Clearly indicate if there are discounts if awarded more than one work effort)

Work Effort #1: Meter Replacement Program Evaluation	\$ <u>N/A</u>
Work Effort #2: Water System Loss Control and Leak Detection System	\$ <u>N/A</u>
Work Effort #3: Water and Sewer Rates	\$ <u>70,000</u>
PROPOSAL TOTAL	\$ <u>70,000</u>

Alternate price proposal(s) (optional)

_____ \$ _____

AUTHORIZATION & SIGNATURE

Name of Authorized Signee: Sean O'Dell, PE
Signature of Authorized Signee: 
Title: Vice President Water Date: August 19, 2021

 ORLAND PARK
CERTIFICATE OF COMPLIANCE

The undersigned Sean O'Dell, as Vice President Water
(Enter Name of Person Making Certification) (Enter Title of Person Making Certification)

and on behalf of Baxter & Woodman, Inc., certifies that:
(Enter Name of Business Organization)

1) BUSINESS ORGANIZATION:

The Proposer is authorized to do business in Illinois: Yes ☒ No ☐

Federal Employer I.D.#: 36-2845242
(or Social Security # if a sole proprietor or individual)

The form of business organization of the Proposer is (*check one*):

☐ Sole Proprietor
☐ Independent Contractor (*Individual*)
☐ Partnership
☐ LLC
☒ Corporation Illinois November 20, 1975
(State of Incorporation) (Date of Incorporation)

2) ELIGIBILITY TO ENTER INTO PUBLIC CONTRACTS: Yes ☒ No ☐

The Proposer is eligible to enter into public contracts, and is not barred from contracting with any unit of state or local government as a result of a violation of either Section 33E-3, or 33E-4 of the Illinois Criminal Code, or of any similar offense of "Bid-rigging" or "Bid-rotating" of any state or of the United States.

3) SEXUAL HARASSMENT POLICY: Yes ☒ No ☐

Please be advised that Public Act 87-1257, effective July 1, 1993, 775 ILCS 5/2-105 (A) has been amended to provide that every party to a public contract must have a written sexual harassment policy in place in full compliance with 775 ILCS 5/2-105 (A) (4) and includes, at a minimum, the following information: (I) the illegality of sexual harassment; (II) the definition of sexual harassment under State law; (III) a description of sexual harassment, utilizing examples; (IV) the vendor's internal complaint process including penalties; (V) the legal recourse, investigative and complaint process available through the Department of Human Rights (the "Department") and the Human Rights Commission (the "Commission"); (VI) directions on how to contact the Department and Commission; and (VII) protection against retaliation as provided by Section 6-101 of the Act. (Illinois Human Rights Act). (emphasis added). Pursuant to 775 ILCS 5/1-103 (M) (2002), a "public contract" includes "...every contract to which the State, any of its political subdivisions or any municipal corporation is a party."

4) **EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCE:** Yes ☒ No ☐

During the performance of this Project, Proposer agrees to comply with the "Illinois Human Rights Act", 775 ILCS Title 5 and the Rules and Regulations of the Illinois Department of Human Rights published at 44 Illinois Administrative Code Section 750, et seq. The

Proposer shall: (I) not discriminate against any employee or applicant for employment because of race, color, religion, sex, marital status, national origin or ancestry, age, or physical or mental handicap unrelated to ability, or an unfavorable discharge from military service; (II) examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization; (III) ensure all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, or physical or mental handicap unrelated to ability, or an unfavorable discharge from military service; (IV) send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Vendor's obligations under the Illinois Human Rights Act and Department's Rules and Regulations for Public Contract; (V) submit reports as required by the Department's Rules and Regulations for Public Contracts, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and Department's Rules and Regulations for Public Contracts; (VI) permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and Department for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and Department's Rules and Regulations for Public Contracts; and (VII) include verbatim or by reference the provisions of this Equal Employment Opportunity Clause in every subcontract it awards under which any portion of this Agreement obligations are undertaken or assumed, so that such provisions will be binding upon such subcontractor. In the same manner as the other provisions of this Agreement, the Proposer will be liable for compliance with applicable provisions of this clause by such subcontractors; and further it will promptly notify the contracting agency and the Department in the event any subcontractor fails or refuses to comply therewith. In addition, the Proposer will not utilize any subcontractor declared by the Illinois Human Rights Department to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations. Subcontract" means any agreement, arrangement or understanding, written or otherwise, between the Proposer and any person under which any portion of the Proposer's obligations under one or more public contracts is performed, undertaken or assumed; the term "subcontract", however, shall not include any agreement, arrangement or understanding in which the parties stand in the relationship of an employer and an employee, or between a Proposer or other organization and its customers. In the event of the Proposer's noncompliance with any provision of this Equal Employment Opportunity Clause, the Illinois Human Right Act, or the Rules and Regulations for Public Contracts of the Department of Human Rights the Proposer may be declared non-responsible and therefore ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and this agreement may be canceled or avoided in whole or in part, and such other sanctions or penalties may be imposed or remedies involved as provided by statute or regulation.

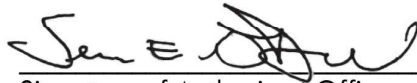
5) **TAX CERTIFICATION:** Yes ☒ No []

Contractor is current in the payment of any tax administered by the Illinois Department of Revenue, or if it is: (a) it is contesting its liability for the tax or the amount of tax in accordance with procedures established by the appropriate Revenue Act; or (b) it has entered into an agreement with the Department of Revenue for payment of all taxes due and is currently in compliance with that agreement.

6) **AUTHORIZATION & SIGNATURE:**

I certify that I am authorized to execute this Certificate of Compliance on behalf of the Contractor set forth on the Proposal, that I have personal knowledge of all the information set forth herein and that all statements, representations, that the Proposal is genuine and not collusive, and information provided in or with this Certificate are true and accurate. The undersigned, having become familiar with the Project specified, proposes to provide and furnish all of the labor, materials, necessary tools, expendable equipment and all utility and transportation services necessary to perform and complete in a workmanlike manner all of the work required for the Project.

ACKNOWLEDGED AND AGREED TO:



Signature of Authorized Officer

Sean O'Dell, PE

Name of Authorized Officer

Vice President Water

Title

August 19, 2021

Date

REFERENCES

Provide three (3) references for which your organization has performed similar work.

Bidder's Name: Baxter & Woodman, Inc.
(Enter Name of Business Organization)

- | | |
|-----------------|---|
| 1. ORGANIZATION | <u>City of Elmhurst</u> |
| ADDRESS | <u>209 N. York St., Elmhurst, IL 60126</u> |
| PHONE NUMBER | <u>630-530-3105</u> |
| CONTACT PERSON | <u>Thomas Trosien</u> |
| YEAR OF PROJECT | <u>2018-2021</u> |
| | |
| 2. ORGANIZATION | <u>Village of Lisle</u> |
| ADDRESS | <u>925 Burlington Avenue, Lisle, IL 60532</u> |
| PHONE NUMBER | <u>630-271-4172</u> |
| CONTACT PERSON | <u>Adam Hall</u> |
| YEAR OF PROJECT | <u>2021</u> |
| | |
| 3. ORGANIZATION | <u>City of Joliet</u> |
| ADDRESS | <u>150 W Jefferson St., Joliet, IL 60432</u> |
| PHONE NUMBER | <u>815-724-4222</u> |
| CONTACT PERSON | <u>Allison Swisher, PE</u> |
| YEAR OF PROJECT | <u>2020</u> |



ORLAND PARK

INSURANCE REQUIREMENTS

WORKERS' COMPENSATION & EMPLOYER LIABILITY

Full Statutory Limits - Employers Liability
\$500,000 – Each Accident \$500,000 – Each Employee
\$500,000 – Policy Limit
Waiver of Subrogation in favor of the Village of Orland Park

AUTOMOBILE LIABILITY (ISO Form CA 0001)

\$1,000,000 – Combined Single Limit Per Occurrence
Bodily Injury & Property Damage

GENERAL LIABILITY (Occurrence basis) (ISO Form CG 0001)

\$1,000,000 – Combined Single Limit Per Occurrence
Bodily Injury & Property Damage
\$2,000,000 – General Aggregate Limit
\$1,000,000 – Personal & Advertising Injury
\$2,000,000 – Products/Completed Operations Aggregate
Additional Insured Endorsements: ISO CG 20 10 or CG 20 26 and
CG 20 01 Primary & Non-Contributory
Waiver of Subrogation in favor of the Village of Orland Park



PROFESSIONAL LIABILITY

\$1,000,000 Limit - Claims Made Form, Indicate Retroactive Date
Deductible not-to-exceed \$50,000 without prior written approval



UMBRELLA LIABILITY (Follow Form Policy)

\$2,000,000 – Each Occurrence \$2,000,000 – Aggregate

EXCESS MUST COVER: General Liability, Automobile Liability, Employers' Liability



UMBRELLA/EXCESS PROFESSIONAL LIABILITY

\$1,000,000 Limit – Claims Made Form, Indicate Retroactive Date
Deductible not-to-exceed \$50,000 without prior written approval



BUILDERS RISK

Completed Property Full Replacement Cost Limits -
Structures under construction



ENVIRONMENTAL IMPAIRMENT/POLLUTION LIABILITY

\$1,000,000 Limit for bodily injury, property damage and remediation costs
resulting from a pollution incident at, on or mitigating beyond the job site



CYBER LIABILITY

\$1,000,000 Limit per Data Breach for liability, notification, response,
credit monitoring service costs, and software/property damage

Any insurance policies providing the coverages required of the Consultant, excluding Professional Liability, shall be specifically endorsed to identify **"The Village of Orland Park, and their respective officers, trustees, directors, officials, employees, volunteers and agents as Additional Insureds on a primary/non-contributory basis with respect to all claims arising out of operations by or on behalf of the named insured."** The required Additional Insured coverage shall be provided on the Insurance Service Office (ISO) CG 20 10 or CG 20 26 endorsements or an endorsement at least as broad as the above noted endorsements as determined by the Village of Orland Park. Any Village of Orland Park insurance coverage shall be deemed to be on an excess

or contingent basis as confirmed by the required (ISO) CG 20 01 Additional Insured Primary & Non-Contributory Endorsement. The policies shall also contain a Waiver of Subrogation in favor of the Additional Insureds in regard to General Liability and Workers' Compensation coverage. The certificate of insurance shall also state this information on its face. Any insurance company providing coverage must hold an A-, VII rating according to Best's Key Rating Guide. Each insurance policy required shall have the Village of Orland Park expressly endorsed onto the policy as a Cancellation Notice Recipient. Should any of the policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions. Permitting the contractor, or any subcontractor, to proceed with any work prior to our receipt of the foregoing certificate and endorsements shall not be a waiver of the contractor's obligation to provide all the above insurance.

Consultant agrees that prior to any commencement of work to furnish evidence of Insurance coverage providing for at minimum the coverages, endorsements and limits described above directly to the Village of Orland Park, Nicole Merced, Purchasing Coordinator, 14700 S. Ravinia Avenue, Orland Park, IL 60462. Failure to provide this evidence in the time frame specified and prior to beginning of work may result in the termination of the Village's relationship with the contractor.

ACCEPTED & AGREED THIS 17 DAY OF August, 2021



Signature

Sean O'Dell, PE / Vice President Water

Printed Name & Title

Authorized to execute agreements for:

Baxter & Woodman, Inc.

Name of Company



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

12/21/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Risk Strategies Company 650 Dundee Road Suite 170 Northbrook IL 60062		CONTACT NAME: PHONE (A/C, No, Ext): (847) 412-1414 FAX (A/C, No): E-MAIL ADDRESS:	
		INSURER(S) AFFORDING COVERAGE	
		INSURER A: Valley Forge Ins Co	
		INSURER B: Continental Insurance Company	
		INSURER C: Continental Casualty Company	
		INSURER D:	
		INSURER E:	
		INSURER F:	

COVERAGES**CERTIFICATE NUMBER:** CL20122188443**REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY			6045872351	1/1/2021	1/1/2022	EACH OCCURRENCE \$ 1,000,000
	☐ CLAIMS-MADE ☒ OCCUR		DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000				
	☒ primary/non contributory		MED EXP (Any one person) \$ 15,000				
	☒ subj to written contract		PERSONAL & ADV INJURY \$ 1,000,000				
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE \$ 2,000,000
	☐ POLICY ☒ PRO-JECT ☐ LOC						PRODUCTS - COMP/OP AGG \$ 2,000,000
	OTHER:						\$
B	AUTOMOBILE LIABILITY			6045872348	1/1/2021	1/1/2022	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	☒ ANY AUTO		BODILY INJURY (Per person) \$				
	☐ ALL OWNED AUTOS ☐ SCHEDULED AUTOS		BODILY INJURY (Per accident) \$				
	☒ HIRED AUTOS ☒ NON-OWNED AUTOS		PROPERTY DAMAGE (Per accident) \$				
			\$				
B	☒ UMBRELLA LIAB ☒ OCCUR			6045872365	1/1/2021	1/1/2022	EACH OCCURRENCE \$ 5,000,000
	☐ EXCESS LIAB ☐ CLAIMS-MADE		AGGREGATE \$ 5,000,000				
	☐ DED ☐ RETENTION \$		\$				
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			6045872379	1/1/2021	1/1/2022	☒ PER STATUTE ☐ OTH-ER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	☐ Y ☒ N	N/A				E.L. EACH ACCIDENT \$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE \$ 1,000,000
							E.L. DISEASE - POLICY LIMIT \$ 1,000,000
C	Professional Liability			AEH591900841	1/1/2021	1/1/2022	Per Claim \$5,000,000 Aggregate \$5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Re: All projects of the named insured subject to policy terms & conditions.

CERTIFICATE HOLDER**CANCELLATION**

Baxter & Woodman, Inc. 8678 Ridgefield Rd. Crystal Lake, IL 60012	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE Michael Christian/CID <i>M.C. Christian</i>

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ACORD 25 (2014/01)

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