

PROPOSAL SUMMARY SHEET
RFP #24-039
Water System Asset Management Program

Business Name: M.E. Simpson Company, Inc.

Street Address: 3406 Enterprise Ave.

City, State, Zip: Valparaiso, IN 46383

Contact Name: Carlos Covarrubias, PMP

Title: Regional Manager

Phone: (800) 255-1521 Fax: (888) 531-2444

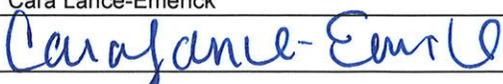
E-Mail address: carlos.covarrubias@mesimpson.com

Price Proposal

<u>Item</u>		<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u> <i>Option Year</i>	<u>2028</u> <i>Option Year</i>
Fire Hydrant Assessment Program	Unit Price per Fire Hydrant	\$47.00	\$47.00	\$50.00	\$53.00	\$53.00
Main Capacity Assessment Program	Unit Price per Fire Hydrant	\$63.00	\$63.00	\$66.00	\$69.00	\$69.00
Valve Assessment Program	Unit Price per Valve	\$58.00	\$58.00	\$61.00	\$64.00	\$64.00

AUTHORIZATION & SIGNATURE

Name of Authorized Signee: Cara Lance-Emerick

Signature of Authorized Signee: 

Title: Chief Financial Officer Date: 3/15/2024



YOUR TEAM FOR SECURE + RELIABLE
Water System Solutions



PROPOSAL TO PROVIDE

Orland Park, IL

Water System Asset Management Program

Due: March 18, 2024





March 18, 2024

Patrick McLaughlin
Utilities Operations Manager
Village of Orland Park
14700 South Ravinia Avenue
Orland Park, IL 60642

RE: PROPOSAL FOR A WATER SYSTEM ASSET MANAGEMENT PROGRAM

Dear Mr. McLaughlin,

M.E. Simpson Co., Inc. is delighted to present our proposal to the Village of Orland Park for the Water System Asset Management Program. We feel privileged to be considered for this endeavor and are confident that our team will contribute to the success of the project.

As a Professional Services Firm, our primary focus is on developing and delivering programs and services that optimize the performance of our clients' water distribution systems. Many of these programs are recognized globally as "Best Management Practices" (BMPs) for utilities. We take pride in providing robust solutions through the utilization of top-tier technical and professional services, leveraging state-of-the-art technology, and employing a highly skilled and well-trained staff of professionals. Our team of educated engineers and technical experts is fully dedicated to the success of this project and ready to alleviate the burden on your staff, ensuring a seamless continuation of services.

Our services have been meticulously developed and refined to cater to the specific needs of utilities. Whether it's offering comprehensive "Turn-Key" solutions or assisting in the development of "in-house" programs, M.E. Simpson Co., Inc. strives to fulfill one overarching goal: to instill public confidence by ensuring the safety and quality of drinking water.

Thank you for your consideration and this opportunity to acquaint you with our Water System Asset Management Program and offer this response. We are committed to exceeding your expectations.

Sincerely,

Carlos Covarrubias
Regional Manager

Carlos Covarrubias
Regional Manager

3406 Enterprise Avenue
Valparaiso, IN 46383

800.255.1521 P
888.531.2444 F

carlos.covarrubias@mesimpson.com

Outline of Proposal

Firm Qualifications & Understanding

- M.E. Simpson Co., Inc. Firm History 4

Scope of Services

- Fire Hydrant Assessment Program 6
- Water Main Capacity Program 10
- Valve Assessment Program 15
- Pro-Maps® Atlas Update Program 19
- GPS Services 22

Project Safety Plan 26

Industry Knowledge 27

Project Approach 28

Schedule 31

Experience of Key Personnel 32

References 36

FIRM HISTORY

M.E. Simpson Co., Inc. was founded in 1979 by Marvin E. Simpson. We are based out of Valparaiso, Indiana, near Chicago, Illinois. Our firm has become the industry leader in developing and providing water loss assessment and distribution system asset management programs and services, aiding our clients in maximizing their peak performance for their water distribution systems. We offer the highest quality Technical and Professional Services, using state-of-the art technologies and highly skilled and trained professionals. Our staff has developed a host of high-tech programs that will ensure that your Utility will be proactive in dealing with your water distribution systems. “Crumbling infrastructure, inaccurate records, conservation, sustainability, water quality, water loss, economic conditions, revenue shortfalls, being green, having enough water”; these are all statements and buzz words in today’s society. Currently in the water industry, these words are our reality, thus making them our responsibility.

We have maximized distribution system performance and optimized distribution system data, records, and mapping for all our clients. To date, we have provided Water Loss Control programs that have included over 85,000 Large Water Meters serviced, 125,000 miles of Leak Detection services and numerous water audit programs. Our Asset Management services have documented over 500,000 valves located and exercised. Our Fire Hydrant Flow testing program has recorded 95,000 fire hydrants inspected, flow tested, and water main capacity information developed.

Fire Hydrant Assessment and Main Capacity Assessment Services History

M.E. Simpson Co., Inc. developed its Fire Hydrant Main Capacity Assessment program in 1995 and expanded it to include Fire Hydrant Maintenance. Over time, we have improved the program so now it is a fundamental asset management and condition assessment program for our clients.

Our crews have been deployed to many locations throughout the United States including Minnesota and overseas. Our crews have the unique ability to be able to respond to individual Utility requests because of the cross training they have received performing all the services M.E. Simpson Co. Inc. provides. We are proud of the work we have performed using the latest technology and meeting the needs of "our customer" the Water Works Industry. We have played an important role in educating utilities about the need for and efficiency of annual maintenance and testing programs.

Fire Hydrant Assessment and Main Capacity Assessment Project Understanding

The Village of Orland Park is seeking a qualified firm to provide services for a Fire Hydrant Assessment and Main Capacity Assessment Program. The program is needed to be able to identify and quantify specific hydrant issues that are occurring in the water distribution system with the end aim of being able to provide specific directions for fire hydrant repair, pressure issues, flow issues and related hydraulic and distribution system concerns.

M.E. Simpson Co., Inc. (MESCO) has been providing Fire Hydrant Flow Testing/Water Main Capacity Testing programs for over twenty-five years.

MESCO has been producing successful Fire Hydrant Assessment and Flow Testing programs in the Chicago metropolitan area, as well as the greater Midwest since 1995 and understands the complexity of implementing long range water distribution system asset management programs. MESCO believes that through this work we have established a proven history of delivery, responsiveness, ingenuity, and environmental stewardship. We share the same mission as The Village of Orland Park and are encouraged by the leadership role that The Village of Orland Park is assuming towards a holistic approach to address water system challenges.

Valve Assessment History

Since its inception in 1986, M.E. Simpson Co., Inc. has continually refined its Valve Assessment program, adapting to the evolving needs of utilities. Originally established as a fundamental asset management tool, the program has grown into a cornerstone of efficient water distribution system maintenance. A notable milestone in our journey was the development of Polcon Pro-Valve®, a pioneering Microsoft Access database that revolutionized valve data management. This database has since transitioned into a cutting-edge cloud-based mapping and asset management system, offering clients seamless integration with their GIS systems and streamlining operational workflows.

Over the years, our services have expanded beyond the confines of the Chicago Metro Area, reaching municipalities and utilities across the Midwest and beyond. From small-scale systems with just a hundred valves to large-scale networks boasting several thousand, our Valve Assessment Programs have left an indelible mark on the water works industry. Our experienced crews, trained in diverse environments and equipped with the latest technologies, have not only served clients domestically but have also lent their expertise to international projects, demonstrating our commitment to excellence on a global scale.

Valve Assessment Program Understanding

The Valve Assessment Program sought by the Village of Orland Park represents an opportunity to leverage MESCO’s extensive experience and proven track record in the field. MESCO has conducted valve assessments for a myriad of clients, ranging from suburban municipalities to major cities across the United States. Our expertise extends beyond mere assessment to encompass comprehensive evaluations, providing actionable insights for short-term and long-term maintenance strategies.

MESCO has been providing valve assessment programs for over thirty-five years.

Having evaluated more than 500,000 valves since 1986, our firm brings unparalleled depth of knowledge and proficiency to the table. Our commitment to excellence is further underscored by our engagement with industry standards and best practices, as evidenced by our active participation in AWWA committees and adherence to Water Audit methodology. By aligning with the objectives of the Village of Orland Park, we stand ready to support their vision for a robust and sustainable water distribution system.

Company Qualifications

M.E. Simpson Co., Inc. is a professional services company that specializes in water distribution asset management and water loss control services. Due to our niche company placement in the water industry, we do not qualify for the title of “contractor”, therefore we cannot be licensed as such. M.E. Simpson Co., Inc. has been performing valve exercising programs for 40 years. We have complete confidence that our knowledge and experience exceed the expectations of the The Village of Orland Park Water System Asset Management Program.

SCOPE OF WORK

Fire Hydrant Assessment Program

The Field Scope of Service for the Fire Hydrant Assessment Program is understood to be the following:

Inspection Process

Hydrants should be inspected on a regular basis, at least once a year. To maintain ISO certification, twice a year inspection needs to be performed. Dry-barrel hydrants require two inspections per year, summer and winter, to mitigate the possibility of water freezing in the barrel. This is especially important in areas with high ground water where proper drainage could be affected.

Insurance ratings and ISO certifications are based in part, on the condition of the hydrants, and how closely they meet the standards for operation. Public safety depends on the ability to identify malfunctioning hydrants and being able to repair them in a timely fashion.

General Hydrant Inspection

- ◆ **Appearance:** The color and condition of the paint, based on the Utilities color scheme, will be assessed. Hydrants that have been displaced due to ground-shifting or collision will be documented, and the Utility notified immediately. If necessary, bollards will be recommended to protect the hydrant from future collisions. Hydrants located very close to roadways and vehicle traffic will be documented, so they can be moved by the Utility.
- ◆ **Accessibility:** A recommendation will be made to raise or lower a hydrant when improper distance from the ground inhibits proper function. Pumper ports and nozzles that do not face the correct direction will be documented, so that the hydrant can be rotated.
- ◆ **Location:** If GPS option is chosen, the exact location will be determined using GPS and “x-y” coordinates, based on permanent local features.
- ◆ **Leakage:** An electronic listening device will be used to ensure that the fire hydrant is not leaking.
- ◆ **Functionality:** The condition of the pumper/nozzle threads and caps will be assessed for damage and proper function and will be lubricated for ease of operation. Dry-barrel hydrants will be checked for proper drainage. The condition of the operating nut will be determined, with regard to excessive wear or rounding. Hydrants that are difficult to operate will be exercised, by repeatedly opening and closing the main valve with the pumper/nozzle caps securely fastened. Hydrants that exhibit evidence of unauthorized operation will be documented so that security devices can be installed to protect against unauthorized usage in the future.

The above is a general description of the type of information gathered during an inspection to determine the condition of the hydrant and would be used to schedule any necessary repairs. Detailed procedures for inspecting fire hydrants are given below (based on AWWA M17 – ‘Installation, Field Testing, and Maintenance of Fire Hydrants’). Our technicians will use the following methodology when performing hydrant maintenance.

Dry-Barrel Hydrant Inspection & Maintenance Procedure

- ◆ Check and record static pressure.
- ◆ Check the hydrants appearance. Condition of paint and proper color-coding will be assessed.
- ◆ Hydrants that need to be raised or lowered will be documented, as well as accessibility issues.
- ◆ Remove one nozzle/pumper cap and, using a listening device, check for main valve leakage. Repair or schedule a repair, as necessary.
- ◆ Replace the nozzle/pumper cap, loose enough for air to escape. Open hydrant a few turns, allowing air to vent from loose cap. Tighten the cap.
- ◆ Open hydrant fully, checking for ease of operation. Repeatedly exercise the operating stem, as needed, to remove buildup and promote better operation. If lubrication or stem replacement is required, perform or schedule the necessary work.
- ◆ With the hydrant fully pressurized, check for leakage around the flanges, nozzles/pumpers, seals, and operating nut. Repair or schedule a repair, as necessary.
- ◆ Partially close the hydrant to open the drain outlets, with the caps in place to ensure static pressure against the weep holes.
- ◆ Completely close the hydrant, and then turn the operating nut $\frac{1}{4}$ turn to $\frac{1}{2}$ turn closed to relieve the pressure on the thrust bearing or packing.
- ◆ Remove a nozzle/pumper cap and attach a diffuser. Flush the hydrant to remove foreign material.
- ◆ Close the hydrant and remove the diffuser. Place your hand over the nozzle/pumper to check for suction as the water drains out of the barrel. For no-drain hydrants, the water must be pumped from the barrel.
- ◆ Check for main valve leakage with an amplified listening device.
- ◆ Remove all nozzle/pumper caps and inspect the threads. Clean and apply approved lubricant to caps and nozzles/pumpers.
- ◆ Inspect cap chains for binding and ease of movement. Unbind or replace, as necessary.
- ◆ Replace the caps and tighten them to the Utilities specification.
- ◆ Check operating nut lubrication and maintain as needed.
- ◆ Inspect breakaway device for damage.
- ◆ **Collect or verify the GPS location of hydrant and the “x-y” location to the same GPS requirements of the valve assessments (sub-meter accuracy).**
- ◆ Notify the Utility immediately of inoperable hydrants needing major repair.
- ◆ Lubrication based on manufacturer’s procedures and recommendations (On fully assembled hydrant)

ISO Requirements

Hydrant maintenance and upkeep is one of many steps leading to ISO certification. ISO certification, with respect to hydrants, requires that a Utility perform hydrant maintenance every six months, including:

- ◆ Location and number identification
- ◆ Identification of physical damage or defect
- ◆ Removing obstructions and debris on or around the hydrant
- ◆ Ensure hydrant outlets face the proper direction
- ◆ Make sure there is a minimum 15” clearance between lowest outlet and the ground and ensure traffic feature, if present, is visible and above grade to ensure that it works as intended
- ◆ Ensure the auxiliary valve is visible
- ◆ Determine the condition of paint and correct color code
- ◆ All outlets have been cleaned and lubricated
- ◆ Determine the status: Public, Private, or Non-Potable hydrant
- ◆ Obtain static pressure reading

- ◆ Operating stem has been exercised and lubricated per manufacturer’s recommendations and procedures
- ◆ Hydrant reflectors and markers have been installed and/or repaired
- ◆ An amplified listening device is used to check for leaks

M.E. Simpson Co., Inc.’s approach to hydrant maintenance comes directly from the AWWA M17 manual and meets or surpasses all ISO requirements.

Fire Hydrant Operation

M.E. Simpson Co., Inc. takes great care when operating the customer’s fire hydrants in their water distribution system. Even with our years of proven experience in water system operations problems occasionally occur. Any valves or fire hydrants that break or fail during the maintenance program will be repaired or replaced at the expense of the water Utility. M.E. Simpson Co., Inc. cannot be held responsible for possible valve or hydrant failures during their operation. M.E. Simpson Co., Inc. cannot be held responsible for damage done to the water system during the fire hydrant maintenance program, such as water leaks, discolored water and turbidity that can possibly occur during the maintenance process. M.E. Simpson Co., Inc. cannot be held responsible for possible damage to the water utilities’ individual water customer.

Utility Observations

The M.E. Simpson Co., Inc. Project Team will welcome having staff of the Utility observe field procedures while the maintenance program is in progress. They will be happy to explain and demonstrate the equipment and techniques that are employed by M.E. Simpson Co., Inc. for fire hydrant maintenance. This may be useful for the staff of the Utility in understanding the parameters of hydrant maintenance.

Final Reports, Documentation & Communications

M.E. Simpson Co., Inc. will perform the following:

- ◆ Project Team will **meet daily** with assigned Utility personnel to go over areas of hydrant maintenance for prior workdays and plan current day.
- ◆ At the end of each day, or as requested, a list of any broken or inoperable valves or hydrants will be turned in.
- ◆ Hydrant location will be documented from existing landmarks and will be a part of each Hydrant record.
- ◆ Information collected by M.E. Simpson Co., Inc. during the program and any other information provided by the Utility shall be regarded as CONFIDENTIAL and will not be shared without permission from the Utility or unless required by law.
- ◆ **Prepare the final report** at the completion of the project which will include all Fire Hydrant Maintenance Testing reports, other problems found in the system during the course of testing that need the attention of the Water Utility. **This final report shall be made available for submission to the Water Department within thirty (30) workdays of the completion of the fieldwork.**

Assumptions & Services Provided by the Utility

- ◆ The Utility will furnish, in an electronic format, all maps, atlases, (two copies) and records necessary to properly conduct the flow testing program.
- ◆ The Utility will make available, on a reasonable but periodic basis, certain personnel with a working knowledge of the water system who may be helpful with general information about the water system. *This person will not need to assist the Project Team on a full-time basis, but only on an “as needed” basis.*
- ◆ The Utility will supply information regarding pressure zone boundary valves, and any other information that may make the job of flow testing easier to perform.
- ◆ The Utility will assist, if needed, to help gain entry into sites that may be difficult to enter due to security issues or other concerns.

Equipment to be Used

The following equipment will be used for fire hydrant operation and maintenance work during the fire hydrant maintenance for the Utility. All materials listed will be on the job site at all times.

- ◆ 2.5” Port diffusers, Pollards with flow gauges
- ◆ Certified and field-tested flow gauges
- ◆ Food grade grease for lubricating the pumper and nozzle ports
- ◆ FCS S30 or Gutermann AquaScope listening device to ensure the hydrant isn’t leaking
- ◆ Grease to lubricate the hydrants operating nut and stem
- ◆ All necessary hand tools
- ◆ Truck mounted Arrow Board/Signage, and warning lights on trucks
- ◆ Traffic control equipment, including properly sized traffic cones with reflective stripes, when needed or required
- ◆ A “Schonstedt”/ “Chicago Tape” magnetic locator
- ◆ A “Radio Detection RD4000” series line locator

Water Main Capacity Testing Program

The Field Scope of Service for the Water Main Capacity Testing Program is understood to be the following:

M.E. Simpson Co., Inc. will furnish all labor, material, transportation, tools, and equipment necessary to perform water main capacity testing in the water distribution system selected by the Utility. M.E. Simpson Co., Inc. shall be required to provide such skilled and trained personnel and equipment necessary to complete the work herein specified. **There will be a minimum of Two Persons per team working on the Fire Hydrant Flow/Watermain Capacity Testing program at all times.**

- ◆ Work in an orderly and safe manner to insure protection of the local residents, Utility employees, and the Field Staff so that no avoidable accidents occur.
- ◆ All Field Staff will have readily observable identification badges worn while in the field. All vehicles used in the field will have company signs attached.
- ◆ The flow testing equipment to be used will be that which was described in the “Equipment to be used” section.
- ◆ M.E. Simpson Co., Inc. Personnel will meet with the Utility to review the project guidelines and answer any questions on procedures.
- ◆ The initial layout of the project will need to involve distribution Utility staff to help identify the flow patterns in the distribution system, flow testing from larger mains into smaller mains, from the water sources (pump stations and water storage structures), out into the system loops and dead ends.
- ◆ Any pressure zones in the distribution system will be identified on the water atlas prior to developing the fire hydrant flow-testing program. This will need to be done with distribution personnel prior to the start of the program.
- ◆ As a part of the Fire Hydrant Flow/Watermain Capacity Testing program, mapping discrepancies found on the current water atlas will be noted and included as a part of the final report so the Utility can make needed corrections. This will be included as a part of the periodic reporting to the Utility, thus enabling the Utility to keep up with mapping corrections.
- ◆ A progression map shall be maintained for each section under study indicating hydrants assessed on the map. This will be especially helpful in quickly determining the work progress of the crews in the field.
- ◆ It may be necessary to conduct parts of the Fire Hydrant Flow/Watermain Capacity Testing during “off hours” such as at night. This may be required in areas of high traffic volume where traffic may affect the ability to conduct safe flow testing, and traffic volume may affect the ability of the Project Team to be able to safely access hydrants on busy streets. The Project Team will give 24-hour advanced notice of intent to flow test hydrants in a particular area that may require after hours work or nighttime work. This is so the Utility can plan for the area to be worked in, give notification to the Police department, as well as other Public Works Divisions as to the activity that will take place.
- ◆ M.E. Simpson Co., Inc. will use large flow testing signs in designated areas to notify areas to be tested and inspected.
- ◆ M.E. Simpson Co., Inc. can provide the Utility an informational letter briefly explaining the fire hydrant flow-testing program to include with the customer’s normal water bill. Frequently, special mailings are used for customer notification. If you choose a special mailing, the Village will be responsible for the postage and printing costs.

- ◆ M.E. Simpson Co., Inc. can issue a press release to briefly explain the fire hydrant flow-testing program and the areas affected. The press releases can be sent to; local newspapers, local radio stations and the Cable Company. This type of customer notification can greatly reduce the number of customer complaints about dirty water.
- ◆ All of the fire hydrants will be recorded on the water atlas and assigned numbers, using your existing numbering system or by creating a numbering system for you, prior to the development of the fire hydrant flow-testing program. This data is critical to establishing an effective and water conserving fire hydrant flow-testing program.
- ◆ All of the pertinent information for each fire hydrant that is flow-tested will be documented. This data is critical to establishing an ongoing flow-testing and maintenance program. The following is a list of the information gathered.
- ◆ If requested, all Fire Hydrant caps will be greased for ease of operation
- ◆ Fire Hydrant nozzle size used for each test will be recorded
- ◆ Residual Pressure will be recorded for each Fire Hydrant tested
- ◆ Static Pressure will be recorded for each Fire Hydrant
- ◆ Flow, GPM (Gallons Per Minute), will be recorded for each Fire Hydrant flowed
- ◆ The amount of time it takes to flush each Fire Hydrant will be recorded. An estimate will be made of the amount of water used during the operation of each Fire Hydrant test
- ◆ Fire Hydrants that are in need of repair, painting, color coding, or have operation defects will be noted with an estimate of repairs needed to make the hydrant operational.
- ◆ The date tested and technicians operating the Fire Hydrant will be recorded.
- ◆ The Fire Hydrant address or location will be recorded.
- ◆ The Project team will set up the flow testing program in such a way that hydrants are operated near the water source first, then the team will move away from the water source in an organized manner to keep water discoloration and distribution disturbances to a minimum. The “flow” hydrant shall be downstream of the “residual” hydrant, thus insuring proper residual readings for full potential fire flow (re: AWWA M-17 manual, page 41).
- ◆ Fire hose and deflection tubes will be utilized, as required, to direct flushing water away from traffic, pedestrians, underground Utility vaults, and private property.
- ◆ Pressure gauges are used to determine the residual pressure during the flow-testing process while insuring that the distribution system pressure remains above 20 psi. Any incidents of the distribution system being unable to supply a residual of 20 psi in the surrounding area will be brought to the immediate attention of the Utility Superintendent.
- ◆ After the Fire Hydrant has been flushed, M.E. Simpson Co., Inc. will verify that the hydrant is seated and is draining properly. We will also check the Fire Hydrant with a FCS S30 or Gutermann AquaScope electronic listening device to ensure that the hydrant is not leaking. A majority of fire hydrant leaks go un-noticed because they are small leaks draining out through the drain holes at the base of the hydrant. Using the S30 or Gutermann AquaScope will help eliminate this type of leakage.
- ◆ All pressure gauges used in the field will undergo **daily testing** against a “standard” gauge to insure the field gauges are accurate during the flow-testing project. Any gauges that are found to not be within acceptable limits will be replaced with gauges that are within accepted standards. This will insure the observed static and residual pressures are accurate and reliable.

Fire Hydrant Operation, Flow-Testing

M.E. Simpson Co., Inc. takes great care when operating, flow-testing the customer’s fire hydrants in their water distribution system. Even with our years of proven experience in water system operations problems occasionally occur.

Any valves or fire hydrants that break or fail during the flow-testing program will be repaired or replaced at the expense of the water Utility. M.E. Simpson Co., Inc. cannot be held responsible for possible valve or hydrant failures during their operation. M.E. Simpson Co., Inc. cannot be held responsible for damage done to the water system during fire hydrant flow testing, such as water leaks, discolored water and turbidity that can possibly occur during the flow testing process. M.E. Simpson Co., Inc. cannot be held responsible for possible damage to the water utilities’ individual water customer.

NFPA Color Coding Standards

Municipal, Private, and Non-Potable fire-hydrants should not be painted the same color (the body of the hydrant) according to the NFPA. Each of the three types should follow the color code listed below. The bonnet and nozzle/pumper caps are also to be color-coded according to the hydrants’ rated flow rate at 20 psi (see below).

The NFPA has published standards regarding the maintenance and color coding of fire hydrants (NFPA 291). The scheme is as follows:



<u>Supply</u>	<u>Body Color</u>
Municipal System:	Chrome Yellow
Private System:	Red
Non-Potable System:	Violet (Light Purple)

Hydrant ratings at 20 psi.

Class C	Less than 500 GPM	Red
Class B	500-999 GPM	Orange
Class A	1000-1499 GPM	Green
Class AA	1500 GPM & above	Light Blue

Utility Observations

The M.E. Simpson Co., Inc. Project Team will welcome having staff of the Utility observe field procedures while the flushing program is in progress. They will be happy to explain and demonstrate the equipment and techniques that are employed by M.E. Simpson Co., Inc. for calculations of fire flows. This may be useful for the staff of the Utility in understanding the parameters of hydrant flow testing, especially during an emergency such as a fire where proper flow is needed for the fire department.

Final Reports, Documentation & Communications

M.E. Simpson Co., Inc. will perform the following:

- ◆ Project Team will **meet daily** with assigned Utility personnel to go over areas of flow testing for prior workdays and plan current day and next two days' areas to flow test.
- ◆ At the end of each day, or as requested, a list of any broken or inoperable valves or hydrants will be turned in.
- ◆ Each step of the fire hydrant flow-testing program will be identified and the hydrants used for each flow-test will be documented in a fire hydrant flow-testing report.
- ◆ Maintain a progression map to be included with the final report of the project indicating areas flow tested and areas that have been tagged for flow testing.
- ◆ The Utility will be provided with flow information in **Pro-Maps™/Pro-Hydrant®** an electronic fire hydrant database. This documentation allows for the flow-testing program to be repeated at a later date. This electronic program is designed to be a complete system for your Utility to establish an effective fire hydrant flow testing, flushing and maintenance program. The electronic database provides an inventory record system, hydrant maintenance and scheduling. The database includes a complete hydrant flow-testing program for calculating flow test results. **Pro-Maps™/Pro-Hydrant®** is a hydrant record database (ODBC). This data will be available in an electronic format to the Utility with the appropriate access. The data will be maintained offsite at a secure location.
- ◆ M.E. Simpson Co., Inc. can also provide the **Pro-Maps™/Pro-Hydrant®**, electronic database, that has the abilities to access and reproduce and edit all aforementioned hydrant location and flow testing information. This program will have the capability to generate upon demand:
- ◆ The individual Hydrant Flow Test reports that includes the flow test data, static pressure and residual pressure, and potential flow at 20psi.
- ◆ A summary listing of all Hydrants with identified defects.
- ◆ A complete listing of all Hydrants by numerical or indexed order.
- ◆ A complete listing of all Hydrants by alphabetically reference to street and cross street names.
- ◆ All pertinent information such as port size, number of ports, flow test results, general condition of the hydrant, and color coding for the **NFPA rating**.
- ◆ Hydrant location will be documented from existing landmarks and will be a part of each Hydrant record.
- ◆ Information collected by M.E. Simpson Co., Inc. during the program and any other information provided by the Utility shall be regarded as CONFIDENTIAL and will not be shared without permission from the Utility or unless required by law.

- ◆ Develop a Flow Testing log of activity to be included with the final report that will include the following:
 1. Type of problems observed
 2. Location of same for problems discovered
 3. Total estimated water used (to be included on each flow test result)
 4. Mapping errors on the water atlas
- ◆ **Prepare the final report** at the completion of the project which will include all Fire Hydrant Flow/Watermain Capacity Testing reports, other problems found in the system during the course of flow testing that need the attention of the Water Utility. **This final report shall be made available for submission to the Water Department within thirty (30) work days of the completion of the fieldwork.**

Assumptions & Services Provided by the Utility

- ◆ The Utility will furnish, in an electronic format, all maps, atlases, (two copies) and records necessary to properly conduct the flow testing program.
- ◆ The Utility will make available, on a reasonable but periodic basis, certain personnel with a working knowledge of the water system who may be helpful with general information about the water system. *This person will not need to assist the Project Team on a full-time basis, but only on an “as needed” basis.*
- ◆ The Utility will supply information regarding pressure zone boundary valves, and any other information that may make the job of flow testing easier to perform.
- ◆ The Utility will assist, if needed, to help gain entry into sites that may be difficult to enter due to security issues or other concerns.

Equipment to be Used

The following equipment will be used for fire hydrant operation and maintenance work during the unidirectional flushing program for the Utility. All materials listed will be on the job site at all times.

- ◆ Pumper Port Diffuser, Hose Monster
- ◆ 2.5” Port diffusers, Hose Monster / Pollards
- ◆ Certified and field tested flow gauges
- ◆ Valve keys
- ◆ FCS S30 or Gutermann AquaScope listening device to ensure the hydrant isn’t leaking
- ◆ All necessary hand tools
- ◆ Truck mounted Arrow Board/Signage, and warning lights on trucks
- ◆ Traffic control equipment, including properly sized traffic cones with reflective stripes, when needed or required
- ◆ A “Schonstedt”/“Chicago Tape”/“Fisher” magnetic locators
- ◆ A Radio Detection line locators

Valve Assessment Services

The Field Scope of Service for the Valve Assessment Services is understood to be the following:

M.E. Simpson Co., Inc. will furnish all labor, material, transportation, tools, and equipment necessary to perform valve assessments on the water distribution system. M.E. Simpson Co., Inc. shall be required to provide such skilled and trained personnel and equipment necessary to complete the work herein specified. **There will be a minimum of Two Persons per team always performing the valve assessments.**

- ◆ Work in an orderly and **safe** manner to ensure protection of the local residents, Utility employees, and the Field Staff so that no **avoidable** accidents occur.
- ◆ All Field Staff will have readily observable identification badges worn while in the field. All vehicles used in the field will have company signs attached.
- ◆ The valve equipment to be used will be that which is described in the “Equipment to be used” section.
- ◆ Project Team Personnel will **meet with the Utility to review the project** guidelines and answer any questions on procedures.
- ◆ Any **pressure zones** in the distribution system will be identified on the water atlas prior to developing the valve assessment program. This will need to be done with distribution personnel prior to the start of the program to avoid having pressure zone problems due to valves opened when they need to be closed.
- ◆ As a part of the valve program, mapping discrepancies found on the current water atlas will be noted and included as a part of the final report so the Utility can make needed corrections. This will be included as a part of the periodic reporting to the Utility, thus enabling the Utility to keep up with mapping corrections.
- ◆ A progression map shall be maintained for each section under study indicating valves assessed on the map. This will be especially helpful in quickly determining the work progress of the crews in the field.
- ◆ It may be necessary to conduct parts of the valve assessment during “off hours” such as at night. This may be required in areas of high traffic volume where traffic may affect the ability to conduct safe valve assessment, and traffic volume may affect the ability of the Project Team to be able to safely access valves on busy streets. The Project Team will give 24-hour advanced notice of intent to operate valves in a particular area that may require after hours work or nighttime work. This is so the Utility can plan for the area to be worked in, give notification to the Police department, as well as other Public Works Divisions as to the activity that will take place.

Valve Location

The Project Team will:

- ◆ **Examine the water maps** to determine the anticipated location of each water valve.
- ◆ **Attempt to verify** the existence of all water valves shown on the water maps by visual inspection.
- ◆ **Search for water valves** shown, but not identified by visual inspection, using a magnetic locator, probing rods and other tools.
- ◆ **Employ a combination** of recorded information, manual and technical testing techniques as needed to establish the location of remaining water valves.
- ◆ **Identify locations where a water valve is expected**, but not shown on the water map, and proceed through verification and search process.
- ◆ **Two attempts shall be made to locate “lost” valves** before these are turned into the Utility for location. The Project Team will ask permission to trace existing water mains by means of line locating equipment

to establish the configuration of existing water mains and probable location of water valves should search by magnetic locator fail. If the Utility cannot locate the valve within five working days, The Project Team shall be paid for the attempted locate.

- ◆ **Valve enclosures will be vacuumed and cleaned** to expose the operating nut.
- ◆ **Corrections to the Utility maps** shall be drawn on the paper maps provided by the Utility and returned to the Utility after the project is completed.
- ◆ **Located valve boxes or valve vault covers** shall be painted with an environmentally formulated **precautionary blue paint** for future identification.

Valve Exercising

The Project Team will:

- ◆ Operate selected valves in accordance with the AWWA manual M-44, “Distribution Valves: Selection, Installation, Field Testing and Maintenance”
- ◆ Attempt to operate each of the valves manually.
- ◆ Valves requiring an operating torque greater than one hundred (100) foot-pounds shall be operated by a portable and/or truck mounted hydraulic valve machine. The valve operators used by the Project Team have torque-limiting capabilities that allow incremental settings from fifty (50) to twenty-five hundred (2500) foot-pounds of torque.
- ◆ The machine shall be solely and completely dependent upon the operator for continuous control of direction and torque, otherwise known as “non-locking” or “torque limiter” capability.
- ◆ All valves will be operated with the minimum torque required preventing valve damage.
- ◆ Maximum torques shall be as follows:
 - 4” gate valves – 300 ft. lbs.
 - 6” and larger gate valves – 600 ft. lbs.
 - Butterfly valves – 200ft. lbs.
- ◆ During initial valve closure, the valve will be turned no more than five (5) turns before turn direction is reversed to two (2) turns, thus allowing the threads of the stem and gate to free themselves. This closure and partial reversal process shall be repeated until the valve has achieved full closure.
- ◆ The valves will then be operated from full open to full closure until such time as this can be done without further turn range improvement or no further reduction in the required operating torque is noted, through a **minimum of two (2) consecutive ranges of operations and a maximum of seven (7) operations.**
- ◆ **The Project Team shall notify** the *Water Superintendent*, of intent to operate a certain group of water valves. The Team shall obtain permission to perform the work, at least twenty-four (24) hours or one (1) working day in advance of the intended start of that work.
- ◆ **Valves found in the closed position** shall be reported to the Utility immediately so verification can be made for operating or not.
- ◆ **Valve vaults and boxes shall be cleaned or pumped out** to gain access to the valve and for inspection of the operating nut.
- ◆ **If there is reasonable evidence that a valve might break during the operating process, the Utility will be notified immediately, and a decision will be made by the Utility to attempt or not to attempt the process. Any valves that fail or break during operation will be repaired or replaced by the Utility. The Project Team cannot be held responsible for possible valve failures during the operating procedure.**

Documentation of Valve Operating

- ◆ All of the pertinent information for each valve that is exercised will be documented in the Utility’s GIS system supplied by the Village of Orland Park, IL. The following is a list of the information gathered.

- *Facility ID, Inspection Company, Ground Surface, Depth to Nut (Ft), Operating Position Found, Diameter, Valve Type, # of Turns, Name of Operator, Valve Leaking?, Stem OK?, Packaging OK?, Lube Req'd, Other Maint Req'd, Notes, Cleaning Required, Location Description, Valve Condition, Date Exercised, Box Type, Current Operating Position, Designator, Operator (Other), Operating Nut OK?, Exercise Completed, Reason Could Not Complete, Reason Could Not Complete Details.*

Valve Operations

Our Project Team takes great care when operating and operating valves in the water distribution system. Even with our years of proven experience in water system operations problems occasionally occur. Any valves that break or fail during the assessment program will be repaired or replaced at the expense of the water Utility. The Project Team cannot be held responsible for possible valve failures during their operation due to pre-existing conditions. The Project Team cannot be held responsible for damage done to the water system during valve operating, such as water leaks, discolored water and turbidity that can possibly occur during the process.

Final Reports, Documentations & Communications

M.E. Simpson Co, Inc. will perform the following:

- ◆ Project Team will **meet daily** with assigned Utility personnel to go over progress for prior workday and plan current day and area of valves to be operated.
- ◆ **Document all valve operating and locating** as indicated in the “**Scope of Work**”.
- ◆ **Maintain a progression valve report** of the project indicating valves operated.
- ◆ **Valves found with problems** shall be documented and turned into the assigned Utility personnel daily so the Utility can make the necessary corrections so the valve can be turned.
- ◆ **Prepare the final report** at the completion of the project which will include all valve documentation per “**Scope of Work**” for the Utility, for the total number of valves operated, valves requiring maintenance, as well as other problems found in the system during the course of the program that need the attention of the Water Utility. This report shall be made available for submission to the Utility within thirty (30) days of the completion of the fieldwork.
- ◆ **The equipment used** will be that which is described in the “Equipment to be used” section.

Assumptions and Services Provided by the Utility

- ◆ The *Utility* will furnish all maps, atlases, (two copies) and records necessary to properly conduct the valve-operating program.
- ◆ The *Utility* will provide records such as old valve cards or any additional information that would make the valve location and operating easier to perform. This information shall be regarded as **CONFIDENTIAL** by the Project Team and will not be shared with anyone outside of the Water Utility without consent of the Water Utility.
- ◆ The *Utility* will notify other departments in the Utility, town, or Utility as to the activity of valve operating so that various departments are aware that a program is in progress. This is to ensure that if there should be a problem with part of the distribution system, notification can be made promptly.
- ◆ The *Utility* will also make available, on a reasonable but periodic basis, certain personnel with a working knowledge of the water system who may be helpful in attempting to locate particularly hard-to-find valves and for general information about the water system. This person will not need to assist the Project Team on a full-time basis, but only on an “as needed” basis.
- ◆ The Utility will assist, if needed, to help gain entry into sites that may be difficult to get into due to security issues or other concerns. This may be required of areas where distribution mains run in easements on private property.

- ◆ The Utility will provide all Valve ID numbers, type of valve (if known), Map page numbers or grid number, and any other additional information that can aid in helping the overall success of the program.

Valves to be Assessed

Reports, Documentation & Communications

- ◆ Project Team will **meet daily** with assigned Utility personnel to go over areas of valve assessments for prior workdays and plan current day and next two days' areas to flow test.
- ◆ At the end of each day, or as requested, a list of any broken or inoperable valves will be turned in.
- ◆ Each step of the valve assessment program will be identified in a valve report.
- ◆ Maintain a progression map to be included with the final report of the project indicating areas where valve assessments have been performed
- ◆ The Utility will be provided with valve assessment information
- ◆ Information collected by the Project Team during the program and any other information provided by the Utility shall be regarded as CONFIDENTIAL and will not be shared without permission from the Utility or unless required by law.
- ◆ Develop a log of activity to be included with the final report that will include the following;
 5. Type of problems observed
 6. Location of same for problems discovered
 7. Mapping errors on the water atlas
- ◆ **Prepare the final report** at the completion of the project which will include all valve assessment reports, other problems found in the system during the course of flow testing that need the attention of the Water Utility. **This final report shall be made available for submission to the Water Department within thirty (30) workdays of the completion of the fieldwork.**

Equipment to be Used

The following equipment will be used for valve operation and maintenance work during the Valve Exercising and Assessment program for the Utility. All materials listed will be always on the job site.

- ◆ All necessary hand tools
- ◆ Truck mounted Arrow Board/Signage, and warning lights on trucks
- ◆ Traffic control equipment, including properly sized traffic cones with reflective stripes, when needed or required
- ◆ A "Schonstedt"/"Chicago Tape" magnetic locator
- ◆ Truck mounted or trailer mounted hydraulic valve operator with adjustable torque control
- ◆ Portable hydraulic valve operator adjustable torque control
- ◆ Truck mounted or trailer mounted Vacuum capable of 300 CFM
- ◆ Trucks are equipped with either a Honda 6.5 horsepower pump capable of discharging 150 GPM or a Stanley Hydraulic pump capable of discharging 450 GPM
- ◆ Extendable valve keys for manual operation

Water Atlas Scope of Services

Our Asset Management Program, Pro-Maps® Atlas Updating is a multi-phase plan encompassing a select group of our services that will assist your Utility in improving records and information as well as optimizing your distribution system's operational performance. Our program will be structured around your specific needs so that you can optimize your results and maintain flexibility in the performance of the various tasks. The Project Team will submit a questionnaire for particular details required for the review.

The Utility will provide all relevant information to conduct the water atlas update program. All data will be provided in an electronic format. In the collection and review of the data, a hierarchical approach will be used.

- ◆ Current information found in the water utility reports, maps, records, GPS data and files will be used as the initial set of data. If the Utility has done previous work with M.E. Simpson Company and Pro-Valve drawings/Pro-Hydrant datasheets are available, they will also be used as reference material during atlas creation. Some discrepancies among the data sets will be resolved by contacting water utility staff.
- ◆ Older legacy water utility data may be consulted and used.
- ◆ Records such as, as-built drawings, installation records and related information will be used as reference information for the Utility's distribution system. Meeting with key Utility staff members to gather information and knowledge about the water system will also be utilized when needed.
- ◆ Base Maps will be provided by the Utility in an electronic format, preferably a file geodatabase for ESRI. Base maps usually include county, street, and parcel information. M.E. Simpson Company will use this information as a foundation for the water system data to create the updated water atlas for your GIS records.
- ◆ System Verification of key assets and related appurtenances will be conducted to create a field verified atlas when necessary, as determined by M.E. Simpson Company.
- ◆ GPS Locations and coordinates of the water, waste water, or storm water system attributes will be provided by the Utility in a suitable electronic format. If GPS coordinates do not exist, M.E. Simpson Company can provide GPS Location Services at an additional fee. A water atlas update program cannot be done if GPS coordinates are not provided.
- ◆ The Utility can choose to receive a PDF version of the atlas via a share file folder between M.E. Simpson Co., Inc. and the Utility at an additional fee. Any updates to the PDF atlas requested by the Utility after the initial creation can be done for an additional charge.
- ◆ M.E. Simpson Co., Inc. will be providing atlas updates as a part of this service. Updated atlas data will be within the scope of the current project. For example: if a valve exercising program is taking place in town by MESCO staff, atlas updates regarding valve placement will be conducted.
- ◆ The Utility can request a 17"x22" printed copy of the updated atlas created by M.E. Simpson Co., Inc. at an additional fee. Printed pages of atlas will be based upon section data supplied by the Utility. If section data is not available, printed pages of the atlas will be determined by M.E. Simpson Co., Inc.
- ◆ Water mains on the updated atlas will be color coded based upon the size of main, valve structures will be color coded based upon operability, and hydrant structures will be color coded based upon flow rate and operability. Color coding will be pre-determined by M.E. Simpson Company. Any changes to the color-coding system set in place could result in additional charges.

- ◆ Additional updates out of scope will be performed only upon agreement between the Utility and M.E. Simpson Company at an additional charge.
- ◆ Optional or additional paper copies of the atlas are available for an additional charge.
- ◆ Online access to a digital atlas / data will be available for an additional subscription fee.

PRO-MAPS® Online Subscription

The Utility will have access to their GIS data through Pro-Maps®, an Esri-based, online subscription application technology that brings your water, waste water, and storm water system maps and data with you wherever you go. This web based real-time product allows your staff to view, inspect, and collect data on your distribution and collection systems in real time. M.E. Simpson Co., Inc. utilizes Esri's ArcGIS Online and Field Maps to bring you our Pro-Maps® program. Using ArcGIS Online, a GIS-centric cloud software and Field Maps, a mobile software as our platform, Pro-Maps® provides for a product that focuses on ease of use and field-friendly features with the added benefit of better information for decision making and regulatory compliance for all your water, waste water, and storm water mapping data and GIS needs. The features included in this subscription are as follows:

- ◆ The Utility will be supplied with a username and password for each user license that is purchased.
- ◆ Map assets such as valves and hydrants can be added to the water atlas to account for new structures in the system. These structures can be added by manually selecting the position or with a GPS collection device such as a Trimble® R1 or R2 unit. In order to collect GPS points through the application, a mobile device with an internet connection is needed; such as a cell phone or tablet device. Access to the state's real-time network is also necessary to collect and process GPS points instantly. Signing up for this service is the responsibility of the Utility and may be a paid-for service depending on the state of operation. The Utility will also have the ability to add service records to all main line valves and hydrants in the water system.
- ◆ Deleting assets from the water system will be handled by M.E. Simpson Co., Inc. at no additional charge. This includes but is not limited to: main line valves, fire hydrants, water mains, etc. This is to ensure the integrity of the data remains intact. Please allow 72 hours for updates handled by M.E. Simpson Co., Inc.
- ◆ Pro-Maps™ has the ability to display the base map view in multiple formats such as; ESRI Topo, ESRI World Street and ESRI Aerial.
- ◆ Photographs of each asset can be collected and stored within Esri ArcGIS Online and Field Maps software. These photographs will display the visual condition as well as the location of the asset.
- ◆ All edits made to the water atlas will be updated immediately on both desktop and mobile devices.
- ◆ Current geodatabase files and shapefiles pertaining to the work completed during the atlas update program will be readily available to the Utility at no additional cost.
- ◆ All of the items listed above are a part of the Pro-Maps® online subscription service and will only be accessible with an annual subscription fee. The Utility will be notified 60 days prior to the end of the subscription. If the Utility chooses not to renew, the subscription will be cancelled and the Utility will lose access to their online data. Once the subscription is cancelled, the Utility will receive their most recent data in an agreed upon format such as; shapefiles, excel spreadsheet, or file geodatabase and placed in an online share file folder for the Utility to download.
- ◆ M.E. Simpson Co., Inc.'s Project Team will furnish all labor, material, and equipment necessary to perform water atlas updates. The Project Team shall be required to provide such skilled and trained personnel and equipment necessary to complete the work herein specified.
- ◆ Project Team Personnel will meet with the Utility to review the project guidelines and answer any questions on procedures.
- ◆ Examine the water maps to determine the anticipated location of each asset (mainline valve, hydrant, valve vault, major service valves, etc.)

Online Historical Data Subscription (Quickbase®)

The Utility will have access to their asset data through Quickbase®, an online CRM (Customer Relationship Management) subscription application that has been customized by M.E. Simpson Co., Inc. This desktop, web-based product allows your staff to view current and historical data on your distribution and collection systems that has been collected in Pro-Maps®. Our customized application synchronizes Esri and Quickbase® to create a seamless connection between both platforms. This gives the Utility the added benefit of viewing both current data on their assets as well as previous historical data for reference.

Final Reports, Documentations & Communications

M.E. Simpson Co, Inc. will perform the following:

- ◆ Project Team will **meet at regularly scheduled intervals** with assigned Utility personnel to go over areas and progress of atlas update program.
- ◆ Our technicians and Engineers will be readily available by phone and email. This will facilitate communications between the Utility and the technicians and engineers. A **24-hour toll-free number** (800) 255-1521 is available for direct contact with M.E. Simpson Co., Inc. professionals.
- ◆ **The Project Manager will** meet with the Utility regularly for a progress report.
- ◆ **Prepare a progress report** at selected intervals for the Utility if requested.
- ◆ **Deliver the completed water atlas** at the completion of the project, which will include all water atlas documentation per “Scope of Work” for the Utility **of the of the water atlas and after the draft has been approved.**

Effective communication...
accurate documentation...
**Ensuring the success for
the atlas update program**

Assumptions & Services Provided by the Utility

- ◆ The Utility will furnish all maps, atlases, as-builts, records, data, and information necessary in an electronic format to properly conduct the water atlas program.
- ◆ The Utility will furnish all GPS coordinates and related data for all water, waste water, storm water and related structures. (If this data does not exist, M.E. Simpson Company can provide GPS location services at an additional fee).
- ◆ The Utility will provide records such as pipe installation records, valve installation records, meter installation records or any additional information in an electronic format that would make the water atlas updates easier to perform. This information shall be regarded as **CONFIDENTIAL** by M.E. Simpson Co., Inc., and will not be shared with anyone outside of the Utility without consent of the Utility.
- ◆ The Utility will notify other departments as to the activity of the water atlas so that various departments are aware that a program is in progress and can provide information needed to complete the atlas.
- ◆ The Utility will also make available, on a reasonable but periodic basis, certain personnel with a working knowledge of the water system who will be helpful in reviewing records, gathering records and for general information about the water system. This person will not need to assist the Project Team on a full-time basis, but only on an “as needed” basis.

GPS Scope of Services

Fire Hydrant GPS Locations

M.E. Simpson Company’s Project Team will furnish all labor, material, transportation, tools, and equipment necessary to perform GPS locations on specified appurtenances in the distribution system, then take these GPS locations and import them into a GPS database, showing all the important locational details needed and desired by the Utility. The Project Team shall be required to provide such skilled and trained personnel and equipment necessary to complete the work herein specified. [There will be a minimum of Two Persons per team performing the asset assessments at all times.](#)

- ◆ Work in an orderly and **safe** manner to ensure protection of the local residents, Utility employees, and the Field Staff so that no **avoidable** accidents occur.
- ◆ All Field Staff will have readily observable identification badges worn while in the field. All vehicles used in the field will have company signs attached.
- ◆ Project Team Personnel will meet with the Utility to review the project guidelines and answer any questions on procedures.
- ◆ As a part of the program, mapping discrepancies found on the current atlases will be noted and included as a part of the final report so the Utility will have a listing of needed corrections. This will be included as a part of the periodic reporting to the Utility, thus enabling the Utility to keep up with mapping corrections made by the Project Team.
- ◆ A progression map shall be maintained for each section under study indicating all assets located on the map. This will be especially helpful in quickly determining the work progress of the crews in the field.
- ◆ It may be necessary to conduct parts of the asset assessment during “off hours” such as at night. This may be required in areas of high traffic volume where traffic may affect the ability to conduct safe collection of GPS points, and traffic volume may affect the ability of the Project Team to be able to safely GPS valves on busy streets. The Project Team will give 24-hour advanced notice of intent to GPS valves in a particular area that may require after hours work or nighttime work. This is so the Utility can plan for the area to be worked in, give notification to the Police department, as well as other Public Works Divisions as to the activity that will take place.
- ◆ Examine the water maps to determine the anticipated location of each asset/appurtenance chosen.
- ◆ Attempt to verify the existence of all selected assets shown on the atlases by visual inspection.
- ◆ Search for assets shown, but not identified by visual inspection, using a magnetic locator.
- ◆ Employ a combination of recorded information, manual and technical testing techniques as needed to establish the location of remaining assets.
- ◆ Identify locations where a main line valve or water main is expected, but not shown on the current maps, and proceed through verification and search process.

GPS Asset Location

- ◆ Once the assets have been physically located, the Project Team will perform the following:
- ◆ The Project Team will collect GPS Coordinates of all assets assessed using the above “Scope of Work”

- ◆ The Project Team will work with the Utility to develop a “data dictionary” which will define the information to be collected for each attribute. The data dictionary shall have the following but not limited to:
 - Date and time the information was gathered.
 - The unique identifying number for each attribute consistent and compatible with system presently employed by the *Utility*.
 - Location for each attribute referenced by Northing and Easting coordinates generated from the GPS location in the Utility’s local State Plane Coordinate system.
 - Type of Attribute (Example: mainline valve, hydrant, tee, elbow, four-way cross, major service line, etc.).
 - Offset information if the attribute needs to have the location determined by an offset coordinate due to blocked signals from the GPS satellites.
 - Any other data required to be collected as part of the attribute data set as defined by the data Dictionary. This data dictionary will be assembled by the Project Team and the Utility.
- ◆ The accuracy of each GPS location will be sub-foot.
- ◆ GPS locations will need to have readings from at least four satellites in position and a reading from a local GPS beacon, or five satellites for the position to be considered accurate as a differentially corrected GPS location.
- ◆ “PDOP” readings need to be less than 5. “PDOP” readings greater than 5 will not be considered as accurate locations.
- ◆ A minimum of 30 readings for each position shall be taken.
- ◆ Position of the GPS satellites shall be given primary consideration. The position of the satellites shall be recorded as part of the data. If the satellites are low on the horizon (below 15 degrees), it is expected that the project team will wait until the position is better before attempting to gather the GPS position.
- ◆ The information collected will be differentially corrected using Pathfinder software database with the ability to export the information into a format acceptable to the Utility such as Microsoft Access, Microsoft Excel, .DXF file, or .SHP file for use in the Utility’s GIS system or CAD mapping program, and also included in the Polcon Pro Valve® database if a valve program is part of the work.
- ◆ All locations will be differentially corrected for accuracy. A stationary beacon or mobile beacon can be set up to allow differential correction. All data will be “Post-Processed”, so that a comparison can be made to a Local stationary GPS receiver. The locations of the stationary GPS stations will be obtained from the Internet. This will allow for a greater accuracy of the GPS locations.

Documentation of GPS Locations

- ◆ The Project Team will provide a location report for each asset located, included in a database or excel spreadsheet on a USB in a format agreed upon between the Utility and the Project Team.
- ◆ The GPS data collected shall include but is not limited to the following information:
 - *Identifying number consistent and compatible with system presently employed by the Utility.*
 - *Location referenced by coordinates using the Illinois State Plane Coordinate System.*
 - *Type of structure.*

- *Date and time data was collected*

GPS Valve Location

Once the valves have been located, the Project Team will perform the following for valves that do not already have GPS coordinates:

- ◆ **The Project Team will collect GPS Coordinates** of all valves assessed using the above “Scope of Work”
- ◆ The Project Team will work with the Utility to develop a “data dictionary” which will define the information to be collected for each attribute. The Data dictionary shall have the following but not limited to:
 - Date and time the information was gathered.
 - The unique identifying number for each attribute consistent and compatible with system presently employed by the *Utility*.
 - Location for each attribute referenced by Northing and Easting coordinates generated from the GPS location in the Utility’s local State Plane Coordinate system.
 - Type of Attribute (mainline valve).
 - Offset information if the attribute needs to have the location determined by an offset coordinate due to blocked signals from the GPS satellites.
 - Any other data required to be collected as part of the attribute data set as defined by the Data Dictionary. This Data Dictionary will be assembled by the Project Team and the Utility.
- ◆ **The accuracy of each GPS location** will be sub-foot.
- ◆ **GPS locations will need to have readings** from at least four satellites in position and a reading from a local GPS beacon, or five satellites for the position to be considered accurate as a differentially corrected GPS location.
- ◆ **Position of the GPS satellites shall be given primary consideration.** The position of the satellites shall be recorded as part of the data. If the satellites are low on the horizon, it is expected that the project team will wait until the position is better before attempting to gather the GPS position.
- ◆ **The information collected** will be compiled into the **Utility** preferred software database with the ability to export the information into a format acceptable to the Utility such as Microsoft Access, Microsoft Excel, .DXF file, or .SHP file for use in the Utility’s GIS system or CAD mapping program, and also included in the Polcon Pro Valve® database. We can export our data into any database that supports open data connectivity.
- ◆ **All locations will be differentially corrected** for accuracy in real-time. A data transformation will be done on the GPS points taken to ensure they are in the correct coordinate system requested by the utility. Our field teams utilize Trimble® R1 units for sub-meter accuracy and Trimble® R2 units for sub-foot accuracy. The level of accuracy taken will be based upon the above scope of work.



Documentation of GPS Valve Locations

M.E. Simpson will provide a location report for each documented valve located, and/or a database, in a cloud-based electronic format agreed upon between the Utility and M.E. Simpson Co., Inc.

- ◆ The GPS location data collected will be exported into a database for Utility use
- ◆ The GPS data collected shall include but is not limited to the following information:
 - a. *Identifying number consistent and compatible with system presently employed by the Utility.*

- b. *Location referenced by coordinates using the Village of Orland Park **Coordinate System**.*
- c. *Location by street and cross-street names.*
- d. *Type of structure.*
- e. *Date and time data was collected.*

GPS Leak Location

Once the leaks have been located, the Project Team will perform the following for leaks that do not already have GPS coordinates:

- ◆ **The Project Team will collect GPS Coordinates** of all valves assessed using the above “Scope of Work”
- ◆ The Project Team will work with the Utility to develop a “data dictionary” which will define the information to be collected for each attribute. The Data dictionary shall have the following but not limited to:
 - Date and time the information was gathered.
 - The unique identifying number for each attribute consistent and compatible with system presently employed by the *Utility*.
 - Location for each attribute referenced by Northing and Easting coordinates generated from the GPS location in the Utility’s local State Plane Coordinate system.
 - Type of Attribute (mainline valve).
 - Offset information if the attribute needs to have the location determined by an offset coordinate due to blocked signals from the GPS satellites.
 - Any other data required to be collected as part of the attribute data set as defined by the Data Dictionary. This Data Dictionary will be assembled by the Project Team and the Utility.
- ◆ **The accuracy of each GPS** location will be sub-foot.
- ◆ **GPS locations will need to have readings** from at least four satellites in position and a reading from a local GPS beacon, or five satellites for the position to be considered accurate as a differentially corrected GPS location.
- ◆ **Position of the GPS satellites shall be given primary consideration.** The position of the satellites shall be recorded as part of the data. If the satellites are low on the horizon, it is expected that the project team will wait until the position is better before attempting to gather the GPS position.
- ◆ **The information collected** will be compiled into the **Utility** preferred software database with the ability to export the information into a format acceptable to the Utility such as Microsoft Access, Microsoft Excel, .DXF file, or .SHP file for use in the Utility’s GIS system or CAD mapping program, and also included in the Polcon Pro Valve® database. We can export our data into any database that supports open data connectivity.
- ◆ **All locations will be differentially corrected** for accuracy in real-time. A data transformation will be done on the GPS points taken to ensure they are in the correct coordinate system requested by the utility. Our field teams utilize Trimble® R1 units for sub-meter accuracy and Trimble® R2 units for sub-foot accuracy. The level of accuracy taken will be based upon the above scope of work.
- ◆ GPS leak location is considered an **optional** service and is not to be assumed as included in the line item for leak detection services found on the investment page of this proposal unless otherwise specified. If the Utility decides to include GPS collection, it will be listed under a separate line item on the investment page unless otherwise specified. If GPS collection is included in the line item for leak location services found on the investment page, only one (1) accurate GPS point will be included per leak in the Utility’s distribution system. Re-GPS’d leaks requested by the Utility that have already been GPS’d by M.E. Simpson Co., Inc. with a verified accuracy level will be an additional charge.

PROJECT SAFETY PLAN

M.E. Simpson Co., Inc.'s Safety Programs cover all aspects of the work performed by M.E. Simpson Co., Inc. We take great pride in our safety plan/policy/program and that is evident in our EMR scores over the last five years. The safety of our employees, the utilities employees and that of the general public is our #1 priority.

Our Safety Plan/Policy/Program, with all its parts, is 140 pages in length. In an effort to be more efficient and less wasteful we do not print copies of the safety program for RFPs. There is nothing secretive or proprietary contained within our plan/policy/program and we are happy to share its contents. If you would like a PDF copy of our plan/policy/program please contact Terrence Williams, Operations Manager, at 800.255.1521 and a copy of our program will be sent via email to you.

Below is an overview of our plan/policy/program:



Safety is a major part of any project. M.E. Simpson Co., Inc. always provides a safe work environment for its employees. **Our staff is trained in General Industry OSHA rules, Confined Space Entry & Self-Rescue, First Responder First Aid, CPR, and Traffic Control.**

While in the field on your project, M.E. Simpson Co., Inc., and its employees will follow all the necessary safety procedures to protect themselves, your staff, and the general public.

M.E. Simpson Co., Inc. uses Two-Man Teams for Safety and Quality Assurance.

The use of a "one-person" leak detection team is dangerous and impractical where water mains run under roadways. It would be a dangerous precedent to allow a "one-person" team to access main line hydrant located in the roadway, attempt to listen to the valve with headphones on, and at the same time try to control traffic flow at that person's location in the street.

Therefore M.E. Simpson Co., Inc. adheres to the following:

- ◆ The Project Manager and the Field Manager will be trained in accordance with OSHA Standard 1910 (General Industry) and be in possession of an OSHA 10 Hour or 30 Hour Card.
- ◆ Any listening points located in a "confined space" such as pit and vault installations that **require entry** will be treated in accordance with the safety rules regarding **Confined Space Entry, designated by the Utility, The Department of Labor and OSHA.**
- ◆ All personnel are **trained and certified** in Confined Space Entry & Self-Rescue.
- ◆ We will follow all safety rules regarding **First Responder First Aid & CPR, designated by the Utility, The Department of Labor and OSHA.**
- ◆ All personnel are **trained and certified** in First Responder First Aid & CPR.
- ◆ We will follow all **traffic safety rules, designated by the Utility, The Department of Labor, OSHA, and the State/Local Department of Transportation (per MUTCD).**
- ◆ All personnel are **trained and certified**, by the **AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA)** in Traffic Control and Safety.

Current documentations of safety training and certifications can be provided for all project personnel for the Utility. These certifications are current and up to date (for 2022) for all project personnel.

INDUSTRY KNOWLEDGE

At MESCO, our services are tailored to meet the specific needs of our clients. We offer a range of participation levels, from small specialized work supplementing in-house staff to the complete development of full-scale water system programs.

Through the continuation and enhancement of our water distribution system Water System Asset Management Program, we will support a fundamental cornerstone of water loss control policies. Our team brings demonstrated experience and a unique perspective in leak detection services, providing valuable expertise to our clients.

Based on our in-depth experiences working with several water utilities on water distribution system asset management programs, we have identified common issues that are consistently exposed. Utilities expect the work to be performed at a high level of competence and efficiency, with competent technicians and staff. To ensure success, the Project Team should meet three essential objectives:

1. **Expertise:** Our clients need breadth and depth to help solve the variety of water system challenges they face in maintaining their large, complex, and aging water infrastructure. With our team's experience in every aspect of water loss control and optimization, we can often provide support that extends beyond just the scope of the leak project.
2. **Streamlined Access:** Clients need to be able to easily access and manage the Project Team's expertise to address distribution system leakage issues rapidly and with the least possible administrative burden. However, clients will need to have considerable input to the process by providing the needed data for analysis. In this respect, interaction with utility staff will be necessary to produce quality water system leak detection efforts.
3. **Professional Working Relationships:** Clients must have confidence that the Project Team is working as true professionals, prioritizing their interests. The professionals in their organization must have good working relationships with MESCO's professionals. Both parties should look for opportunities to complement each group's goals and fulfill the ultimate requirements of clients' customers.

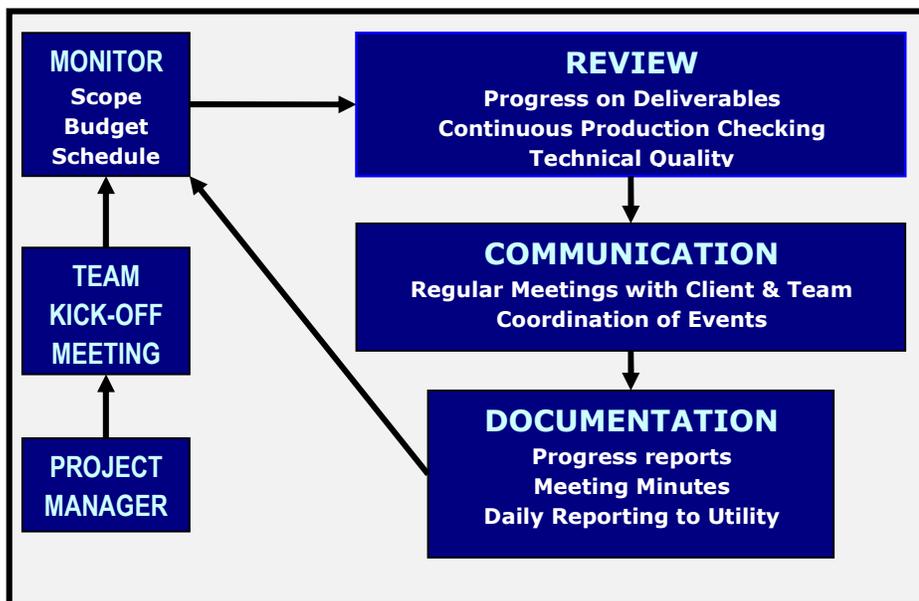
The strengths of M.E. Simpson Co., Inc.'s organization and staff, as well as our specific approach to this assignment, will fulfill all the needs for your Water System Asset Management Program.

PROJECT MANAGEMENT APPROACH

M.E. Simpson Co., Inc.’s project management approach is what leads to our proven track record to complete projects on time and within the budget established. Based on our past experience, we have developed project management practices that will ensure The Village of Orland Park of effective communication and project tracking throughout this project. We will follow the Project Management Institute (PMI) standards, including the Project Management Body of Knowledge (PMBOK). These globally accepted standards will assure this project is planned, executed, monitored and controlled in accordance with world class procedures. M.E. Simpson Co., Inc. has seasoned and experienced managers, project leaders and technicians that will have continuous input, ensuring the results of the Fire Hydrant Assessment and Flow Testing Program for The Village of Orland Park.

Our project management system establishes - the single project manager – who has the responsibility and authority to act on behalf of M.E. Simpson Co., Inc. This project manager will stay with the project from beginning to the successful completion. The project manager’s specific responsibilities include:

- ◆ Coordination of all activities in this project
- ◆ Establishing key decisions and review milestones during this project
- ◆ Preparing an initial project development plan identifying the schedule of work tasks and key personnel to perform the work in the field to meet the milestones and objectives
- ◆ Coordinate communications and meetings with the Utility as needed or required to review technical concepts and alternatives, soliciting staff input and coordinating activities with the project team
- ◆ Prepare periodic reports as needed and meet with the Utility on a regular basis summarizing project scheduling, progress and maintaining the project within the budget stipulated
- ◆ Oversee the execution and development of the project deliverables



Project management remains an important activity during the course of the project and does not stop with the Project Manager. For the Fire Hydrant Assessment and Flow Testing program, each member of the project team is dedicated to providing the best Fire Hydrant Assessment and Flow Testing Program that can be attained using the state-of-the-art technology and equipment, field experience and engineering knowledge.

Our team will be made up of experienced water professionals that are highly skilled and trained professionals in water distribution system hydraulics, fire hydrant assessment/flow testing. These technicians will also have knowledge and experience with water loss control programs such as water meter evaluation/testing (residential, commercial, wholesale, and production meters), leak surveys and pinpointing, as well as asset management programs such as valve assessment and exercising. It is this combination of experience and knowledge that has helped shape our approach to fire hydrant assessment and flow testing in distribution systems because the team members have the capacity to make on the spot decisions regarding any fine tuning of the program.



For the Fire Hydrant Assessment and Flow Testing Program, each Project Team member assigned to specific tasks is dedicated to providing the best Fire Hydrant Assessment and Flow Testing Program knowledge that can be attained. Each team member is highly experienced in the implementation of fire hydrant testing as well as other asset management and water loss control programs. It is our team’s combination of field experience and engineering knowledge that has shape our approach to asset management programs in distribution systems. The individual team members have the capacity to make sound decisions regarding any fine tuning of the hydrant testing program. They will maintain constant communication with The Village of Orland Park and the Project Manager regarding the fire hydrant testing program.

MESCO is sure that the selection of our team to perform this work will provide The Village of Orland Park with exceptional experience, sound decision making, and a level of service providing the following advantages:

- ◆ A professional team with a specialized expertise in fire hydrant evaluation, assessment, testing, documentation and asset management.
- ◆ One of the finest and highly experienced technical and engineering team with the capacity to provide the highest quality work for The Village of Orland Park.
- ◆ A project approach that incorporates interim reporting and continuous input opportunities by The Village of Orland Park.
- ◆ Innovative proven analysis techniques developed from the completion of several similar projects that sought the same scope and results as this project.

Project Quality Assurance/Quality Control

Quality is of the utmost importance to MESCO Team – not merely because of The Village of Orland Park and other client’s requirements, but because it is vital to our continued success and viability. Quality management and services bring to all of us the rewards of jobs well done, satisfied Utility staff, and successful projects.

Our QA/QC program is built around several key elements of each participating firm’s mission and values which consist of:

- ◆ Maintaining a reputation for the highest quality performance
- ◆ Client satisfaction
- ◆ Continuous process improvement
- ◆ Open communication with the field staff and the Utility
- ◆ Team Work

The QA/QC plan for this project is very simple. No work will leave MESCO Team until it has been verified that all the requirements and objectives of the project as well as the requirements of the project QA/QC managers have been met.

During the course of the project, the Project Manager and/or the QA/QC manager will meet with The Village of Orland Park to ensure that the work product is technically correct, but also meets the needs and expectations of The Village of Orland Park. Every step will be well documented for progress reports.

MESCO Team’s professional services are grounded in sound principles that meet the tests of time from past successes of hundreds of fire hydrant maintenance projects will satisfy the quality requirements of the Scope of Service. Each member of the project team has a thorough understanding of the project objectives. Every member of the team will apply sound methodology and principles, and are expected to produce quality, accurate and complete documents. The QA/QC procedure has been developed and implemented based on tried and proven methodologies. The prevention of poor-quality service is based on four sound principles:

- ◆ Quality management of the project by using experienced personnel committed to excellence.
- ◆ Conformance to requirements by being knowledgeable of all local conditions in the field and keeping abreast of new cutting-edge hydrant technology and asset management remediation methods.
- ◆ Prevention of rework and errors by using teamwork, cross checking the hydrant program procedures every step of the way, and having staff knowledgeable in all aspects of the hydrant assessment and flow testing program.
- ◆ Quality is built in - not added on. The project management and staff have shown that a quality service is produced when the project tasks are properly sequenced and carried out to the final termination of the program using the built-in system of checks and balances.

SCHEDULE OF WORK

Kick Off Meeting and Commencement of work: Within 30 days of “Notice to Proceed” or as agreed upon between the Utility and M.E. Simpson to meet with Utility staff to go over project goals and objectives. Field work will begin the same day or agreed upon by the Utility and M.E. Simpson Co., Inc.

Fieldwork to be completed and documented: Field work will be started as agreed upon by the Utility and M.E. Simpson Co., Inc. Assume one field team (2 persons each), are in the field for completion of field work for the Fire Hydrant Assessment and Flow Testing Program.

Daily Work Hours: Normal “on site” daily work hours will be 7:00 AM to 4:30 PM. Any work that needs to be performed outside the normal work hours will be discussed with the Water Superintendent at least 24 hours in advance.

Daily Reporting: The Field staff will meet with assigned Utility staff daily or as needed and determined by the assigned Utility Manager. Hydrant issues that need immediate attention will be documented and submitted immediately for the Utility’s attention. Minor issues will be reported daily for scheduling of repair.

Periodic Reports: Weekly summary reports will be available 10 work days after field work has been validated for the program for each week, for the Hydrant Testing work. These reports will have all the hydrant assessment and testing information compiled during the course of the project for the week.

Final Reports: Final summary reports will be available 30 work days after field work has been completed for the program. These reports will have all the hydrant assessment and testing data compiled during the course of the project.

EXPERIENCE OF KEY PERSONNEL

Our team brings the necessary experience for a project of this magnitude, as well as the personal attributes needed to serve the Village of Orland Park with distinction. We offer our clients the highest quality technical and professional services, using state-of-the-art technologies and highly skilled and trained professionals. The M.E. Simpson Co., Inc. team members selected to serve the Village of Orland Park bring significant experience and a proven track record of delivering timely, cost-effective and sound hydrant program solutions.

They share a passionate commitment to client service and attention to detail required for a successful project. The Organizational Chart at right illustrates the Project Team for the Utility’s Fire Hydrant Flow Testing and Maintenance. One of the two Project Leaders listed will lead the Project Team in the field. **Two-Man Project Teams will be used at all times during the course of the project for reasons of safety and quality assurance.**

Project Manager: Terrence Williams

Terrence Williams has been with M.E. Simpson Company since September 2014. Terrence previously worked in retail management. Terrence is a graduate of Purdue University with a Bachelor of Science in Accounting. Terrence also completed his MBA at Keller Graduate School of Management.

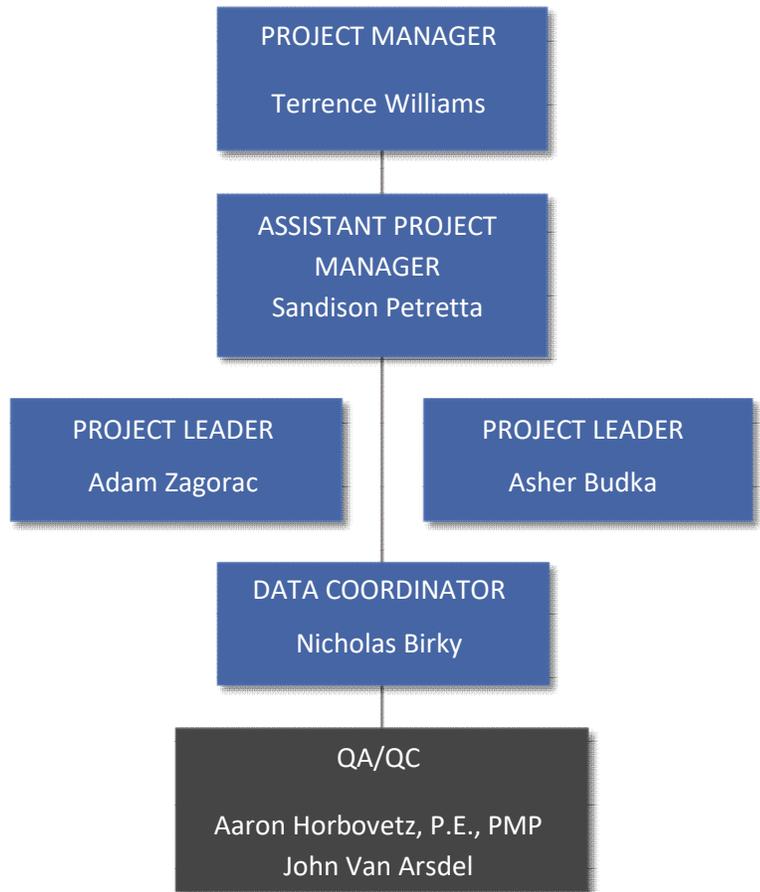
Terrence is currently involved in the preparation of client reports, data quality control, and drafting new paperless database programs. He also has experience in valve location, exercising and mapping, and the use of the state-of-the-art leak detection equipment. Terrence also has experience in fire hydrant and main capacity flow testing, and the operation of our Polcon® Flow Testing equipment.

Professional Certifications:

- ◆ 30 Hour OSHA Certified for General Industry
- ◆ American Red Cross First Aid and CPR with AED Certified
- ◆ American Traffic Safety Services Association Flagging Certified
- ◆ Extensive traffic control training
- ◆ Extensive confined space training

Assistant Project Manager: Sandison Petretta

Sandison Petretta has been with the Company since July of 2000. He previously worked in the commercial painting industry. Sandison has attended numerous classes and lectures related to the operation, maintenance, and



installation of water meters, and completed classes in plumbing. Sandison has experience in the following; maintenance and installation of water meters; valve location, exercising and mapping; fire hydrant and main capacity flow testing; and the use of state-of-the-art leak detection equipment. He is also experienced in the use of all of our Polcon® Flow Testing equipment.

Professional Certifications:

- ◆ 10 Hour OSHA Certified for General Industry
- ◆ American Red Cross First Aid and CPR with AED Certified
- ◆ American Traffic Safety Services Association Flagging Certified
- ◆ Extensive traffic control training
- ◆ Extensive confined space training
- ◆ Licensed Water Operator - Maryland

Project Leader: Adam Zagorac

Adam Zagorac has been with the Company since December of 2007. Adam has attended numerous classes and lectures related to the operation, maintenance, and installation of water meters, and completed classes in plumbing.

Adam has experience in the following: maintenance and installation of water meters; valve location, exercising and mapping; fire hydrant and main capacity flow testing; and the use of state-of-the-art leak detection equipment. He is also experienced in the use of all of our Polcon® Flow Testing equipment.

Professional Certifications:

- ◆ 10 Hour OSHA Certified for General Industry
- ◆ American Red Cross First Aid and CPR with AED Certified
- ◆ American Traffic Safety Services Association Flagging Certified
- ◆ Extensive traffic control training
- ◆ Extensive confined space training

Project Leader: Asher Budka

Asher Budka has been with the Company since August 2007. Prior to being employed at M.E. Simpson Company, Asher served 6 years active duty in the US Navy as a Nuclear Electronics Technician 2nd Class. Asher possesses 4 ½ years of operating US Navy Nuclear Power Plants as a Reactor Operator and performed preventive, and corrective maintenance on Reactor Instrumentation and Control equipment including Venturi flow meter calibrations. He also received training in fluid flow, hydraulics, schematic, and blueprint reading from the Navy that has aided in the understanding of water distribution systems and their flow characteristics. He recently obtained his bachelor’s degree of Science in Project Management from Colorado Technical University.

Asher has traveled all over the country completing various projects in Arizona, California, New Mexico, Texas, Florida, Georgia, Maryland, Connecticut, Massachusetts, New York, Virginia, and has also traveled halfway around the world to perform a project on Diego Garcia. He has attended numerous classes and lectures on the operation and maintenance of water meters. He has experience in the maintenance and installation of water meters, valve location, exercising and mapping, and the use of state-of-the-art leak detection equipment. Asher is experienced in the operation and maintenance of water meters, fire hydrants and main capacity flow testing, and the operation of our Polcon® Flow Testing equipment. He has managed numerous Unidirectional Flushing Programs and trained personnel in the conduction of UDF Programs.

Professional Certifications:

- ◆ 10 Hour OSHA Certified for General Industry
- ◆ American Red Cross First Aid and CPR with AED Certified
- ◆ American Traffic Safety Services Association Flagging Certified
- ◆ Extensive traffic control training
- ◆ Extensive confined space training

Data Coordinator: Nicholas Birky

Nicholas Birky has been with the Company since April of 2010. Nicholas is a graduate of Purdue University with a Bachelor of Science in Economics and a graduate of Indiana University with a master’s in economics. Nicholas maintains and analyzes all leak databases and data for leak detection survey projects.

QA/QC: Aaron M. Horbovetz, P.E., PMP

Aaron Horbovetz has been with the Company since September of 1999. In 2004-2005 he was on hiatus to pursue his engineering degree. He returned to M.E. Simpson Co., Inc. in 2006. He earned his degree in Mechanical Engineering from Purdue University, and is a licensed Professional Engineer in the State of Indiana, since 2016. Aaron is also a certified Project Management Professional (PMP®), since 2013. He is a regular presenter at AWWA conferences, since 2012, both at section meetings and at the ACE conferences, and participates in multiple AWWA committees at both the local and national levels.

Aaron has attended numerous classes and lectures related to the operation, maintenance and installation of water meters, and completed classes in plumbing. He has experience in the following: maintenance and installation of water meters; valve location, exercising and mapping, fire hydrant and main capacity flow testing, and the use of state-of-the-art leak detection equipment. Aaron also manages the company’s hydraulics services division, including all Pitot testing, pump curve analysis, and C-Factor testing.

Mr. Horbovetz is responsible for the Engineering Division of M.E. Simpson Co., Inc. overseeing many of the more complex programs associated with hydraulic studies and Master Metering services.

Professional Certifications:

- ◆ Licensed Professional Engineer, Indiana
- ◆ Certified Project Management Professional (PMP)
 - Member of Project Management’s Institute Calumet Chapter
- ◆ 10 Hour OSHA Certified for General Industry
- ◆ American Red Cross First Aid and CPR with AED Certified
- ◆ American Traffic Safety Services Association Flagging Certified
- ◆ Extensive traffic control training
- ◆ Extensive confined space training

QA/QC: John H. Van Arsdel

John H. Van Arsdel has been with the Company since May 1989. He graduated from Valparaiso University with a B.A. in Geography with an emphasis in Locational Evaluation and Research Design. Additional classes include water operator’s classes and seminars on Water Filtration and Distribution, Vulnerability Assessment Class for the Sandia Labs RAM-W method and the RAM-W “modified” for small to medium systems (*licensed for the Sandia Labs RAM-W Method, and the RAM-W “modified” for small to medium water systems*), along with classes related to the operation and maintenance of water meters, and system hydraulics specifically related to the Polcon® Flow Testing equipment.

John has over 36 years of experience directing projects for water utilities including water audits, loss prevention, leak detection programs, meter evaluation and maintenance, flow testing using the Polcon[®] Flow Testing method (large flow meter assessments, C-factors, pump curves, zone flow measurements), mainline valve assessments (location, exercising and mapping programs), and fire hydrant and main capacity flow testing programs. He has presented numerous classes for continuing education credits for water operators for over 24 years to several local and state water works organizations on Water Loss Reduction including Water Audits, Leak Detection, Meter Testing and Flow Testing. He has presented water loss papers at the AWWA ACE in 2007, 2008, 2009, 2012, 2015, 2016, 2018, and the former DSS (now the WIC), 2010, 2011, 2012, 2014, the NAWL 2015, 2017, and 2019. In 2003, he conducted classes on Vulnerability Assessments and Emergency Response Planning for water utilities and conducted several VA and ERP projects. He served from 2010 to 2014 as Chair of the AWWA Water Loss Control Committee. For the Illinois Section in 2014-2015 he set up the Train the Trainer classes for Water Auditing and trained several sets of trainers and was the lead trainer for the Indiana Section AWWA Water Auditing and Validation training for 2019-20 that is being handled by the Indiana Finance Authority. John is a Certified Water Audit Level 1 Validator for California and Indiana.

Professional Certifications:

- ◆ 30 Hour OSHA Certified for General Industry
- ◆ American Red Cross First Aid and CPR with AED Certified
- ◆ American Traffic Safety Services Association Flagging Certified
- ◆ Certified Water Audit Validator

REFERENCES

Fire Hydrant Assessment and Flow Testing Projects

[Village of Downers Grove, Illinois \(2009 – Current\)](#)

M.E. Simpson Co., Inc. has performed a Fire Hydrant Flow Testing Program for the Village of Downers Grove for several years as well as a Fire Hydrant Maintenance program. Most recently 608 hydrants were located and tested. Of these hydrants, 596 were found to be in good working condition, 4 were found to be usable but with minor problems and 8 were found to be unusable. The total number of problem hydrants has decreased greatly with annual fire hydrant flow testing and inspections. For 2022, the program cost \$134,327.00.

David Moody
Water Manager
Village of Downers Grove
5101 Walnut Avenue
Downers Grove, IL 60515-4074
(630) 434-5495
dmoody@downers.us

[City of Rockford, IL \(2018 – Current\)](#)

M.E. Simpson Co., Inc. has been working with the City of Rockford, IL for many years. The hydrant program most recently completed was a success, reporting the hydrants which are in good working condition, usable, or unusable. These flow testing programs are very important to the City, thanks to this program the City can now correct the problems with those hydrants found to be unusable so that, should the need ever arise, they can be used in an emergency. The 2022 cost for this project was \$49,600.00.

Ms. Jamie Rott, P.E.
Water Superintendent
City of Rockford
523 S. Central Avenue
Rockford, IL
(779) 348-7654
jamie.rott@rockfordil.gov

[Village of Hazel Crest, IL \(2015 – Current\)](#)

M.E. Simpson Co., Inc. has performed Fire Hydrant Maintenance for the Village of Hazel Crest for several years. Most recently 225 hydrants were located and classified. The total number of problem hydrants has decreased greatly with annual fire hydrant flow testing and inspections. The cost for this project was \$16,760.00.

Dante Sawyer
Director of Public Works
Village of Hazel Crest
3000 W 170th Place
Hazel Crest, Illinois 60429
(708) 335-9600 x202
dsawyer@villageofhazelcrest.com

Valve Assessment Projects

[Village of Schaumburg, Illinois \(2016 - Current\)](#)

M.E. Simpson Co., Inc. has provided annual mainline valve assessments for the Village of Schaumburg, Illinois. The assessments include locating each valve and operating each valve through the full cycle of turns, three times. 25 % of the system (approximately 1,000 valves) are operated each year to insure full operability of the system valves. GPS coordinates are taken for each location and all data is put into the valve database for the utility. For 2022, this project cost \$44,191.00.

Mr. Brian Wagner
Superintendent of Utilities
Village of Schaumburg
(847) 895-7100
bwagner@schaumburg.com

[Village of Downers Grove, Illinois \(2008 - Current\)](#)

We have been providing valve assessment services for the Village of Downers Grove since 2008. M.E. Simpson Co., Inc. was contracted to perform valve exercising, locating, and documenting services for the city. Each year $\frac{1}{2}$ of the valves are assessed to ensure full operability of the system valves as part of a regular maintenance program. The 2022 cost for this project was \$98,260.00.

Mr. David Moody
Asst. Director of Public Works
Village of Downers Grove
(630) 434-5462
dmoody@downers.us

[Village of Tinley Park, Illinois \(2015 - Current\)](#)

M.E. Simpson Co., Inc. has been providing valve assessment services for the Village of Tinley Park for several years. This is a distribution system that has over 3000 valves. The system is divided into areas of 1125 valves each year to be assessed. The work has helped the utility maintain the distribution system so that it can meet the demands and challenges of the area growth.

Joe Fitzpatrick
Water Superintendent
Village of Tinley Park
(708) 444-5500
jfitzpatrick@tinleypark.org

PROPOSAL SUMMARY SHEET
RFP #24-039
Water System Asset Management Program

Business Name: M.E. Simpson Company, Inc.

Street Address: 3406 Enterprise Ave.

City, State, Zip: Valparaiso, IN 46383

Contact Name: Carlos Covarrubias, PMP

Title: Regional Manager

Phone: (800) 255-1521 Fax: (888) 531-2444

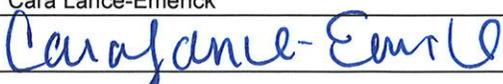
E-Mail address: carlos.covarrubias@mesimpson.com

Price Proposal

<u>Item</u>		<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u> <i>Option Year</i>	<u>2028</u> <i>Option Year</i>
Fire Hydrant Assessment Program	Unit Price per Fire Hydrant	\$47.00	\$47.00	\$50.00	\$53.00	\$53.00
Main Capacity Assessment Program	Unit Price per Fire Hydrant	\$63.00	\$63.00	\$66.00	\$69.00	\$69.00
Valve Assessment Program	Unit Price per Valve	\$58.00	\$58.00	\$61.00	\$64.00	\$64.00

AUTHORIZATION & SIGNATURE

Name of Authorized Signee: Cara Lance-Emerick

Signature of Authorized Signee: 

Title: Chief Financial Officer Date: 3/15/2024

 **ORLAND PARK**
CERTIFICATE OF COMPLIANCE

The undersigned Cara Lance-Emerick, as Chief Financial Officer
(Enter Name of Person Making Certification) (Enter Title of Person Making Certification)

and on behalf of M.E. Simpson Company, 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.#: 35-1474720
(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 Indiana 9/12/1979
(State of Incorporation) (Date of Incorporation)

2) STATUS OF OWNERSHIP

Illinois Public Act 102-0265, approved August 2021, requires the Village of Orland Park to collect "Status of Ownership" information. This information is collected for reporting purposes only. Please check the following that applies to the ownership of your business and include any certifications for the categories checked with the proposal. Business ownership categories are as defined in the Business Enterprise for Minorities, Women, and Persons with Disabilities Act, 30 ILCS 575/0.01 *et seq.*

Minority-Owned Small Business ([SBA standards](#))
Women-Owned Prefer not to disclose
Veteran-Owned Not Applicable
Disabled-Owned

How are you certifying? Certificates Attached Self-Certifying

STATUS OF OWNERSHIP FOR SUBCONTRACTORS

This information is collected for reporting purposes only. Please check the following that applies to the ownership of subcontractors.

Minority-Owned Small Business ([SBA standards](#))
Women-Owned Prefer not to disclose
Veteran-Owned Not Applicable
Disabled-Owned

3) **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.

4) **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."

5) **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.

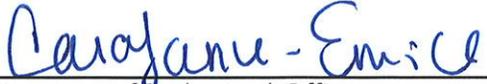
6) **TAX CERTIFICATION:** Yes [X] No []

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.

7) **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

Cara Lance-Emerick

Name of Authorized Officer

Chief Financial Officer

Title

3/15/2024

Date

REFERENCES

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

Bidder's Name: M.E. Simpson Company, Inc.
(Enter Name of Business Organization)

1. ORGANIZATION Village of Downers Grove
ADDRESS 5101 Walnut Avenue, Downers Grove, IL 60515
PHONE NUMBER (630) 434-5495
CONTACT PERSON Mr. David Moody, Assistant Director of Public Works
YEAR OF PROJECT 2009 - Current

2. ORGANIZATION City of Rockford, IL
ADDRESS 523 South Central Avenue, Rockford, IL 61101
PHONE NUMBER (815) 987-5700
CONTACT PERSON Ms. Jamie Rott, Water Superintendent
YEAR OF PROJECT 2018 - Current

3. ORGANIZATION Village of Schaumburg, IL
ADDRESS 714 South Plum Grove Road, Schaumburg, IL 60193
PHONE NUMBER (847) 895-7100
CONTACT PERSON Mr. Brian Wagner, Superintendent of Utilities
YEAR OF PROJECT 2016 - Current

 **ORLAND PARK**
INSURANCE REQUIREMENTS

Please provide a policy Specimen Certificate of Insurance showing current coverage's along with this form

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: *(not applicable for Goods Only)*
ISO CG 20 10 or CG 20 26
and
CG 20 01 Primary & Non-Contributory
Blanket Waiver of Subrogation in favor of the Village of Orland Park

CG 20 37 Additional Insured – Completed Operations (provide if box is checked)

In addition to the above, please provide the following coverage, if box is checked.

LIABILITY UMBRELLA (Follow Form Policy)
 \$1,000,000 – Each Occurrence \$1,000,000 – Aggregate
 \$2,000,000 – Each Occurrence \$2,000,000 – Aggregate
 Other: _____

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

PROFESSIONAL LIABILITY
 \$1,000,000 Limit – Claims Made Form, Indicate Retroactive Date
 \$2,000,000 Limit – Claims Made Form, Indicate Retroactive Date
 Other: _____
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

9/9/22

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, 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 18th DAY OF March, 2024

Cara Lance-Emerick

Signature

Cara Lance-Emerick, CFO

Printed Name & Title

Authorized to execute agreements for:

M.E. Simpson Co., Inc.

Name of Company