M.E. SIMPSON Co., Inc.

July 15, 2025

Mr. Bob Valois
Director of Public Works
Town of Munster
508 Fisher Street
Munster, IN 46321

RE: PROPOSAL FOR A WATER DISTRIBUTION SYSTEM VALVE ASSESSMENT PROGRAM

Dear Mr. Valois,

M.E. Simpson Co., Inc. is pleased to present the Town of Munster, Indiana our proposal for a Water Distribution System Valve Assessment Program. We are honored to be considered for this work and are confident our team will help make the project a success.

M.E. Simpson Co., Inc. is a Professional Services Firm dedicated to developing and providing programs and services designed to maximize peak performance for our clients' water distribution systems. Many of these programs are universally recognized as a part of "Best Management Practices" (BMPs) for utilities. We pride ourselves on delivering solid solutions using the highest quality technical and professional services by way of state-of-the-art technology and a skilled and well-trained staff of professionals. Our highly educated engineers and technical team are committed to the success of this project. They will be ready at a moment's notice to relieve your staff's burden and ensure a seamless continuation of your services.

Our services were developed and refined to provide utilities with programs that can be customized to meet their needs. From complete "Turn-Key" services to assisting with the development of "in-house" programs for utilities, M.E. Simpson Co., Inc. serves our clients with this ultimate goal: to deliver to the public the implicit faith that **"the water is always safe to drink"**.

Thank you for your consideration and this opportunity to acquaint you with our Valve Assessment services and offer this response. We are committed to exceeding your expectations.

Sincerely,

Randy Lusk
Vice President of Innovations & Solutions

3406 Enterprise Avenue
Valparaiso, IN 46383

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Randy Lusk
Vice President of Innovations & Solutions

SCOPE OF WORK

Water Distribution System Valve Assessment and Exercising Program

The Field Scope of Service for the Water Distribution System Valve Assessment, Exercising and GPS Program is understood to be the following:

The Water Distribution System Valve Exercising Program is conducted in the field by our Project Team (M.E. Simpson Co., Inc. uses **TWO** trained technicians on each valve team). When necessary, M.E. Simpson Co., Inc. uses a hydraulic valve machine capable of operating 2" through 60" valves. This machine can be set with a torque as low as 5 foot pounds and is capable of increasing up to 2,500 foot pounds. The hydraulic valve operator with the "adjustable torque control" feature, along with experienced operating personnel, prevents excessive breakage during valve operating. M.E. Simpson Co., Inc. will furnish all labor, material, transportation, tools, and equipment necessary to perform the program. M.E. Simpson Co., Inc. shall provide skilled and trained personnel and equipment necessary to complete the work herein specified. The important operation and location details of each valve will be noted and compiled on our "Valve Assessment Report" and submitted to your office for your permanent records.

The importance of the **Valve Exercising Program** is apparent when major emergencies arise and Utility personnel are unable to either locate or close a valve or several valves during a water main break. The same problem occurs when valves that are normally closed need to be opened during a firefighting effort and these valves then fail in the closed position. These situations may occur if valves are not operated annually or at least every two years.

Any valves that break or fail during the operating program will be repaired or replaced at the expense of the Utility. M.E. Simpson Co., Inc. cannot be held responsible for possible valve failures during operating.

Project Detail

Locating

- All main line water valves will be located and positions recorded in such a manner to allow the location to be known and readily re-creatable by Utility personnel upon demand.
- Water maps will be examined to determine the anticipated location of each water valve.
- The existence of all water valves shown on the water maps will be verified by visual inspection.
- Any water valves shown, but not identified by visual inspection, will be searched for using a magnetic locator.
- Should search by magnetic locator fail, the "missing" valve will be turned over to the water department for further investigation.
- Once located, valve boxes or valve vault covers shall be painted with an environmentally formulated precautionary blue paint for future identification.

Valve Operating

- Each of the located water valves will be operated to an extent to insure its ability to operate through its full range of "turns" or complete revolutions upon demand.
- M.E. Simpson Co., Inc. shall notify the Utility's Director / Superintendent, of the intent to operate a certain group of water valves. We 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 scheduled work.
- We will first 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 hydraulic valve machine.
    - This machine shall be capable of operating all valves in the Utility water system. It shall have torque-limiting capabilities that allow incremental settings from five (5) to twenty-five hundred (2500) foot pounds of torque. Most importantly, this machine shall be solely and completely dependent upon the operator for continuous control of direction and torque, otherwise known as "non-locking" or "adjustable torque control" capability.
    - Valves will be operated with the minimum torque required in order to prevent valve damage. During initial valve closure the valve will be turned no more than five (5) turns before turn direction is reversed for 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 shall be operated from full open to full closure a minimum of three (3) times until such time as this can be done without further turn range improvement or no further reduction in the required operating torque is noted. Then, the top and bottom operation range shall be additionally operated an additional three (3) times.

Information & Data Collection

- All of the information and data collected will be uploaded to the Town of Munster's ESRI ARC GIS online application. This will be accomplished live as the project is proceeding by the means of a laptop or tablet type device with a wireless connection to the internet and log onto the Town of Munster's ESRI ARC GIS.

- The data collected shall include, but not be limited to, the following water valve information:
- Identifying number presently employed by the *Utility's* ERSI ARC GIS online application
- Location referenced by coordinates in landmark system presently employed by the *Utility's* ERSI ARC GIS online application
- Location by street and cross-street names
- Size
- Type
- Identified Problems: Box/Vault full of debris and/or water, Paved Over, Sealed Shut, Misaligned, Buried, Chlorination Whip in Vault, Bent Stem, Packing Leak, Missing Operating Nut, Rounded Operating Nut, Bolt Deterioration, Broken Stem, Inaccessible, Structural Deficiencies

- Operating nut depth
- Enclosure type
- Number of turns to achieve full closure
- Direction of closure
- Present valve position
- Date operated
- If necessary, a graphic drawing of each location with measurements from existing landmarks (Not in Town's ESRI ARC GIS system)

Documentation: As stated above; all documentation will be performed "live", online through the Village's Environmental Systems Research Institute (ESRI) ARC GIS online application. This will be done through a laptop or tablet device provided by M.E. Simpson Co. with wireless connectivity to the web.

- All of the information and data collected will be compiled by means of electronic tablet or laptop computer.
- The data collected shall include, but not be limited to, the following water valve information:
  - Identifying number consistent and compatible with system presently employed by the Utility
  - Location referenced by coordinates in landmark system approved by the Utility
  - Location by street and cross-street names
  - Size
  - Type
  - Operating nut depth
  - Enclosure type
  - Number of turns to achieve full closure
  - Direction of closure
  - Present valve position
  - Date operated

GPS ASSET LOCATION

Assets that are not already GPS with their coordinates in the Town's GIS system will have the following completed. 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 "Scope of Work"
- The Project Team will work will use the Town's existing "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, 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-meter.
- "Control points" will be obtained at selected locations based on established USGS monuments as a way to calibrate locational data.
- The location of "offset" GPS locations shall be accomplished by use of a Laser Rangefinder with an accuracy of 1/10th of a foot with an automatic Electronic Compass coupled to the GPS data collector. This is so that a bearing and distance from the offset location to the target GPS location can be recorded as part of the attribute data. This will allow coordinates to be generated in high tree canopy and urban canyons where normal coverage would not be possible.
- 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 compiled into the Pathfinder Office or TerraSync™ 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. The particular stationary GPS receiver shall be listed in the final report as the station used for differential correction. 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 flash drive in a format agreed upon between the Utility and the Project Team.

- 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:
  - *Identifying number consistent and compatible with system presently employed by the Utility.*
  - *Location referenced by coordinates using the Indiana State Plane Coordinate System.*
  - *Location by street and cross-street names.*
  - *Type of structure.*
  - *Date and time data was collected.*

PRO-MAPS™ Online Subscription

The Utility will have access to their GIS data through Pro-Maps™. Pro-Maps™ Online Subscription program is an online application technology that brings your water, wastewater, and stormwater 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 water, wastewater, and stormwater systems in real time. M.E. Simpson Co., Inc. has teamed with ESRI to bring you our Pro-Maps™ program, using ESRI Field Maps, a GIS-Centric Cloud and Mobile Software as our platform. M.E. Simpson provides for a product that focuses on workflow and business process improvement with the added benefit of better information for decision making and regulatory compliance for all your water, wastewater, and stormwater 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® 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 Company 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 Company.
- Pro-Maps™ online subscription access also includes a live trace function that allows the user to confine water main breaks by indicating which valves are needed for isolation.
- 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 Trimble Unity's software. These photographs will display the visual condition as well as the location of the asset.
- 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, PMF file placed on a flash drive and delivered to the Utility.

M.E. Simpson Company'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.)

Assumptions & Services Provided by the Utility

- The *Utility* will furnish all maps, atlases, in electronic format or paper (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 to make the valve location and operating 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 in the city, town, or village as to the activity of valve operating. This is done so various departments are aware the program is in progress should there be a problem with part of the distribution system, and 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 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.

Equipment Used

- Valve keys and Extendable valve keys for manual operation
- Truck mounted hydraulic valve operator and/or hydraulic extendable arm valve operator w/adjustable torque control
- Portable hydraulic valve operator w/adjustable torque control
- 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.
- All necessary safety equipment, including Rose confined space entry equipment and Crowcon air monitoring/gas detection equipment when needed or required.
- Trimble GPS collector
- Schonstedt or Chicago Tape magnetic locator
- Radio Detection RD4000 series line locator

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 of its parts, is 60 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 this project; the ***Utility*** requires a safe work environment for its employees, technical service providers and the general public. The technical service provider is required to provide a safe work environment at all times during this project. The technical service provider will provide personnel trained in **Confined Space Entry & Self-Rescue, Work Place First Aid, CPR and Traffic Control.** While in the field on this project, the technical service provider and its employees will follow all of the necessary safety procedures to protect themselves, the ***Utility*** staff and general public. **M.E. Simpson Co., Inc. uses a minimum of Two-Person Teams at all times for Safety and Quality Assurance.**

Therefore, the technical service provider will adhere to the following:

- Any water meter and/or valve locations located in a **"confined space"** such as pit or vault installations that **require entry** will be treated in accordance with the safety rules regarding **Confined Space Entry as** is designated by the ***Utility***, **The Department of Labor and OSHA**. Project personnel will be ***trained*** (certified were applicable) in Confined Space Entry & Self-Rescue.
- Proper PPE (personal protection equipment) shall be worn at all times. A class III reflective safety vest will be worn for all work. Class II will not be accepted.
- The Project Team will follow all **traffic safety rules**, as is designated by the ***Utility*, The Department of Labor, OSHA and the State Department of Transportation**. Project personnel will be **trained** (certified were applicable) by an organization such as **the American Traffic Safety Services Association (ATSSA)**, in Traffic Control and Safety (MUTCD Standards).
- The Project Team will follow all procedures regarding **Work Place First Aid & CPR**, as is designated by the ***Utility*, The Department of Labor and OSHA**. Project personnel will be **trained** (certified were applicable) in First Aid & CPR.
- The Project Manager and the Project Leader will be trained in accordance with OSHA Standard 1910 (General Industry) and be in possession of an **OSHA 10-Hour or 30-Hour Card**.

VALVES TO BE EXERCISED

The total number of valves to be assessed, exercised, and GPS for the Utility is approximately 1,655 over a three-year period. The number of valves exercised and assessed may vary from the estimated number above. Any additional valves shall be charged a per-unit price.

This project will be delivered in our New Pro Maps online program, in which a yearly subscription is required.

PROPOSED PROJECT SCHEDULE

Project Start Date: TBD

Hold Kick-off meeting: TBD, to cover goals and objectives of Project.

Fieldwork to be completed and documented: TBD days depending on number of hydrants to be flow tested.

Valves Reports: Thirty (30) working days after fieldwork is completed for the project.

INVESTMENT

A commitment to improving and maximizing Town of Munster's water distribution system for future generations.

M.E. Simpson Co., Inc. is pleased to offer the Town of Munster, Indiana, our proposal for a Valve Assessment and Exercising program. This program is based on locating, exercising, assessing, documenting, and GPS where necessary, approximately **1,655** valves in the Town of Munster water distribution system. The system will be divided into sections and we will complete the chosen number of valves on a yearly basis, over three years, listed below. The exercising and documentation will be done by one of our two-man teams', in accordance with the above Scope of Service, with all necessary equipment furnished by M.E. Simpson Co., Inc. as described within this document.

Valve Program Fees:

2026 Valves Exercised at $65.00 each (Approx. 552)	**$35,880.00**
2027 Valves Exercised at $65.00 each (Approx. 552)	**$35,880.00**
2028 Valves Exercised at $68.00 each (Approx. 552)	**$37,536.00**

Valve Program GPS Fees:

Assets requiring GPS services in conjunction with the valve program	**$10.00 each**

*** Any additional valves beyond the original sated amount per year will be assessed a per valve fee for that year.*

These fees are all based on **approximate** numbers of valves to be exercised. **The total price will change according to the actual number of valves completed.** All procedures will be followed according to the above scope of services. This will include the Polcon Pro-Valve® online database for all valves completed.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement, the scope and proposal above for Valve Assessment & Exercising, to be executed on _____, 2025.

Owner

Town of Munster, Indiana

By: _____

Name: _____

Title: _____

Attest: _____

Name: _____

Title: _____

Service Provider

M.E. Simpson Company, Inc.

By: _____

Name: Michael D. Simpson

Title: Chief Executive Officer

Attest: _____

Name: Randy Lusk

Title: V.P of Innovations & Solutions