M.E. SIMPSON Co., Inc.

June 29, 2020

Mr. Stephen Gunty
Director of Public Works
Town of Munster
508 Fisher Street
Munster, IN 46321

RE: PROPOSAL FOR FIRE HYDRANT FLOW/WATERMAIN CAPACITY TESTING

Dear Mr. Gunty,

M.E. Simpson Co., Inc. is pleased to present the Town of Munster, Indiana our proposal for its Fire Hydrant Flow/Watermain Capacity Testing 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 services and offer this response. We are committed to exceeding your expectations.

Sincerely yours,

Randy Lusk
Regional Manager
RL/cml

Randy Lusk
Innovations & Solutions Manager

3406 Enterprise Avenue
Valparaiso, IN 46383

800.255.1521 T
888.531.2444 F

randy@mesimpson.com

SCOPE OF WORK

Fire Hydrant Flow/Watermain Capacity Testing Program

The Field Scope of Service for the Fire Hydrant Flow/Watermain 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 flow test hydrants 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 "flush" 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:

Supply	Body Color
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-Hydrant® an online fire hydrant database. This documentation allows for the flow-testing program to be repeated at a later date. This software program is designed to be a complete system for your Utility to establish an effective fire hydrant flow testing, flushing and maintenance program. The software provides an inventory record system, hydrant maintenance and scheduling. The database includes a complete hydrant flow-testing program for calculating flow test results. Pro-Hydrant® is a hydrant record database (ODBC). This data will be available "online" to the Utility with the appropriate password and login name. The data will be maintained offsite at a secure location.
- M.E. Simpson Co., Inc. can also provide the Polcon Pro-Hydrant®, online 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.

<u>There is no subscription fee to be assessed to the Utility for the online database use.</u>

- 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 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

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**.

HYDRANTS TO BE FLOW TESTED

The total number of hydrants to be flow tested for the Utility is approximately **352 per year out of the total of 1056**. The number of hydrants tested may vary from the estimated number above. Any additional hydrants shall be charged a per unit price.

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.

Hydrant Reports: Twenty (20) working days after fieldwork is completed for the project.

INVESTMENT

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

M.E. Simpson Co., Inc. is pleased to offer the Town of Munster, Indiana our proposal for a Fire Hydrant Flow/Watermain Capacity Testing program. This program is based on locating, documenting, and flow testing **352** fire hydrants per year, in the Munster water distribution system. All procedures and practices will be done in accordance with the above Scope of Services. The flow testing and documentation will be done by one of our two-man team's with all necessary equipment furnished by M.E. Simpson Co., Inc. as described within this document.

Fire Hydrant Flow/Watermain Capacity Testing Fee:

2020 Fire Hydrant Flow Tests at **$48.00** each (Approx. 39) Finish off 2019 zone	**$ 1,872.00**
2020 Fire Hydrant Flow Tests at **$48.00** each (Approx. 352)	**$16,896.00**
2021 Fire Hydrant Flow Tests at **$50.00** each (Approx. 352)	**$17,600.00**
2022 Fire Hydrant Flow Tests at **$50.00** each (Approx. 352)	**$17,600.00**

These fees are all based on approximate numbers of fire hydrants to be flow tested. **The total price will change according to the actual number of fire hydrants completed.** All procedures will be followed according to the above scope of services. This will include the Pro-Hydrant® online database loaded with the fire hydrant database and flow testing information for all fire hydrants completed.

We thank you for this opportunity to acquaint you with our Fire Hydrant Flow/Watermain Capacity Testing services and present you with this proposal. Please call us if you wish to discuss our services in more detail.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement, the scope and proposal above for Fire Hydrant Flow/Water Main Capacity Testing, to be executed on _____, 2020.

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: Regional Manager