



### AGENDA ITEM EXECUTIVE SUMMARY

Agenda Item:	Professional Service Agreement for Water Leak Survey		
Presenter & Title:	Bob Van Gyseghem, Superintendent of Water & Wastewater		
Date:	June 3, 2024		
<b>Please Check Appropriate Box:</b>			
<input checked="" type="checkbox"/>	Committee of the Whole Meeting	<input type="checkbox"/>	Special Committee of the Whole Meeting
<input checked="" type="checkbox"/>	City Council Meeting	<input type="checkbox"/>	Special City Council Meeting
<input type="checkbox"/>	Public Hearing	<input type="checkbox"/>	Other -
Associated Strategic Plan Goal/Objective: EMSII			
Estimated Cost: \$35,000	Budgeted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Other Funding? <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Executive Summary:</b>			
<p>Funding for a professional service contract for a water distribution system leak survey has been included in the FY25 Budget. A Statement of Qualifications was advertised with staff receiving qualifications from four firms. One firm was disqualified as a result of not meeting specifications. An evaluation of the three remaining firms determined that Associated Technical Services, ATS was the best qualified to meet the project scope. Staff met with ATS to negotiate a scope of work and fee for the project. The fee is incentive-based for the number of leaks found. Their proposal contains second and third year pricing dependent upon City Council approval. ATS has a long history of working for the City of Geneva with excellent results as detailed in their proposal.</p>			
<b>Attachments:</b> <i>(please list)</i>			
<ul style="list-style-type: none"> <li>• Resolution</li> <li>• Proposal</li> </ul>			
<b>Voting Requirements:</b>			
<p><i>This motion requires a simple majority of affirmative votes for passage. (City Council Only)</i></p> <p><i>The Mayor may vote on three occasions: (a) when the vote of the alderpersons has resulted in a tie; (b) when one half of the alderpersons elected have voted in favor of an ordinance, resolution, or motion even though there is no tie vote; or (c) when a vote greater than a majority of the corporate authorities is required by state statute or local ordinance to adopt an ordinance, resolution, or motion.</i></p>			
<b>Recommendation / Suggested Action:</b> <i>(how the item should be listed on agenda)</i>			
<p>Recommend approval of a Resolution authorizing approval of a proposal from Associated Technical Services LTD for a Water System Leak Detection &amp; Location Survey in an amount not-to-exceed \$35,000.00</p>			

**RESOLUTION NO. 2024-60**

**RESOLUTION AUTHORIZING EXECUTION OF  
Professional Service Agreement for Water Leak Survey**

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**BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF GENEVA, KANE COUNTY, ILLINOIS**, as follows:

**SECTION 1:** That the City Administrator is hereby authorized to execute, on behalf of the City of Geneva, approval of a proposal from Associated Technical Services LTD, related to a water leak survey.

**SECTION 2:** This Resolution shall become effective from and after its passage as in accordance with law.

**PASSED** by the City Council of the City of Geneva, Kane County, Illinois, this \_\_\_\_ day of \_\_\_\_\_, 2024

**AYES:** \_\_ **NAYS:** \_\_ **ABSENT:** \_\_ **ABSTAINING:** \_\_ **HOLDING OFFICE:** \_\_

Approved by me this \_\_\_\_ day of \_\_\_\_\_, 2024.

\_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
City Clerk

ASSOCIATED TECHNICAL SERVICES LTD

www.ATSLIMITED.com



est. 1979

321 E KENILWORTH AVE. VILLA PARK, IL 60181

Office: 630.834.1558 / Fax: 630.834.5501

May 1, 2024

City of Geneva  
 Department of Public Works  
 22 S. First Street  
 Geneva, Illinois 60134

Attn: Bob VanGyseghem  
 Superintendent of Water & Wastewater

RE: 2024-2026 City of Geneva Water System  
 Leak Detection & Location Survey Proposal

Dear Mr. VanGyseghem,

We are pleased to present the following proposal to perform a "ATS COMPREHENSIVE LEAK DETECTION & LOCATION SURVEY" for the City of Geneva.

With an "ATS Leak Survey Program" your water conservation program will begin on a successful course. Of the three factors that create an "unaccounted for water loss figure": System Leakage, Metering Errors and Accounting Procedures. "ATS Leak Survey Program" is the most cost-effective and time-efficient measure that a water utility can take to reduce its Unaccounted-for Water Loss. As each newly discovered leak is repaired, Geneva will begin to realize almost immediate returns on your leak survey dollars. In fact, over the years, ATS Leak Surveys have averaged a \$35: \$1 return in recovered water vs. the cost of hiring ATS.

Nationwide studies have determined that of these three major factors, a properly performed leak survey will have the biggest positive impact in reducing a water loss in the least amount of time while spending a fraction of the cost of a typical meter testing & replacement program. Of course, we recommend that both metering and accounting procedures be addressed as an important part of any comprehensive water system audit.

*"What Makes ATS the Best Possible Choice?"*

**QUALITY:** *"Quality is never an accident. It is always the result of high intention, sincere effort, intelligent direction, and skillful execution. It represents the wise choice of many alternatives."*

ATS has earned its standing as one of the most innovative and successful leak location firms in America. We have conducted hundreds of leak surveys in cities of all sizes, ages, and make-up, all across the Midwest region. Many of these cities have also had experience with other leak survey firms in addition to ATS. However, in every one of those cities ATS has never failed to find less than 2 to 5 times the amount of leakage than the competitor's survey that preceded the ATS Survey.

**PROFESSIONAL HIGH TECHNOLOGY SERVICES**

EMERGENCY LEAK PINPOINTING • LEAK DETECTION SURVEYS • UNDERGROUND UTILITY LOCATION  
 • EQUIPMENT SALES & TRAINING

ATS and the City of Geneva: A History of Success

- *ATS* has enjoyed a long and successful relationship with the *City of Geneva*.
- We performed our first emergency call out for *Geneva* on Route 38 on January 25, 1984.
- Since then, *ATS* has pinpointed over 350 leaks during over 100 Scheduled and Emergency Leak Location Callouts: two Street Resurfacing Leak Surveys, one partial Survey and two System-Wide Leak Surveys.

Over the past 44 years, the members of the *Geneva Water Department* have learned that they can rely on *ATS* for efficient and accurate services. Subsequently, *ATS* has always found *Geneva's water department personnel* to be excellent partners that provide valuable assistance to us under the same demanding circumstances. This history of successes together can only benefit our efforts in giving *Geneva* the best possible leak survey program. As *Geneva* has learned from firsthand experience, not all leak detection firms deliver equal performance. Choosing your survey firm based solely upon the lowest bid price may not get the results that *Geneva* deserves. The number of times that *ATS* has been called out over the years for emergency and scheduled water main leak locations further demonstrates the confidence that *Geneva's* water department has had in *ATS*.

*The best example of the value and effectiveness of an ATS Leak Survey Program can be derived from Geneva's own personal experiences.*

Type and Number of Leaks Found

<u>Year</u>	<u>Firm</u>	<u>Mainline</u>	<u>Service</u>	<u>Hydrant</u>	<u>Valve</u>	<u>Total</u>	
1989	ATS	5	21	40	15	81	
1992	ATS	4	26	54	16	100	
2016	ATS*	4	10	3	3	20	* Area's 1,2, & 4
Survey Totals		9	47	94	21	201	

*There are very sound reasons why choosing ATS makes excellent business sense.*

- Superior Experience - *ATS* helped introduce leak location correlators, and subsequently specialized in leak detection in 1979. This was years before any of our competitors purchased their first correlator. As a result, *ATS* has performed more leak surveys and pinpointed more leaks with this technology than anyone. *ATS* developed the leak survey techniques, correlator survey specs and field strategies that have become the standards for the industry. In fact, some of *FCS – Fluid Conservation Systems'* top people including Regional Managers, Sales Staff, Instructors, and their long time Director of Operations received training from *ATS*.
- Conserving Municipal Manpower and Resources - Many public works departments are already stretched to their limit, providing quality services to your citizens. With the tremendous amount of municipal leak survey experience that we have, *ATS* frees up your staff so that they can concentrate on their normal duties without distraction. Typical Municipal involvement is answering routine questions, freeing up inaccessible points and pumping out valves during the location phase on an "as-needed basis". With a few exceptions, *ATS* is completely self-reliant.

Superior Results - Like anything in life, the person who practices their craft everyday is going to have distinct and measurable advantages over the person that doesn't do it as often. For 44 years, *ATS* has been out in the field seven days a week performing leak surveys, utility locations and leak pinpointing. Your survey is more effectively and aggressively accomplished while we detect more leaks and pinpoint them with more consistent accuracy than a more infrequent correlator operator. Compare the actual survey results found by *ATS* and the others. The differences in the survey findings are remarkable. *Call on our references.* We've highlighted towns that have used *ATS* and some of the other firms that made big claims but delivered small results.

Cost Effectiveness – It's never a question of whether an *ATS* Leak Survey is going to pay for itself or not but rather how many times over it is going to pay for itself. Beyond the obvious benefit of recovering lost potential revenue and conserving precious water, there are other benefits that will add to your bottom line. Your system will run more efficiently when it no longer must overcompensate for leaks in the system. Chemical treatment and pumping costs will be reduced. Leaks also represent pressure losses, weaknesses in the pipe structure, which can result in reduced water supply and firefighting capabilities.

ESTIMATE OF COST

The *ATS Comprehensive Leak Survey Program* is the most thorough and successful leak survey program in business on two fronts – *Superior Findings and Consistently Accurate Pinpointing.* Put it all together and you will get the most cost-effective leak survey possible.

*Incentive-Based Pricing* gives the city the most flexibility and the opportunity to save money if the water system turns out to be tighter than expected. The city still wins if it ends up that your water system contains a good number of leaks because you won't spend an extra dollar without getting an accurate leak location in return. Since there are no fee guarantees for *ATS* beyond the detection phase, there is obvious incentive for *ATS* to find as many leaks as possible for the city. The more leaks we find, the more money you save.

Incentive- Based Pricing Option

Detection Phase 2024:	808,353 LF @ \$ 0.035 per LF = \$ 28,292.35
Detection Phase 2025:	808,353 LF @ \$ 0.036 per LF = \$ 29,100.70
<u>Detection Phase: 2026:</u>	<u>808,353 LF @ \$ 0.038 per LF = \$ 30,717.41</u>
Total 3 – year cost Detection only .....	\$88,110.46

Location Phase:2024	\$ 400.00 per main line or service line leak. \$ 100.00 per fire hydrant or valve leak.
Location Phase:2025	\$ 425.00 per main line or service line leak. \$ 120.00 per fire hydrant or valve leak.
Location Phase:2026	\$ 430.00 per main line or service line leak. \$ 125.00 per fire hydrant or valve leak.

Survey Area's

- Area 1: That area which is bordered by the City Limits to the north; the Fox River to the east. State Street (Rte 38) to the south and Lincoln Hwy (Rte 38) to the west.
- Area 2: That area which is bordered by State Street (Rte 38) to the north; the Fox River to the east, the City Limits to the south and Western Avenue to the west.
- Area 3: That area which is bordered by South Street to the north; the Fox River to the east. State Street (Rte 38) to the south and Lincoln Highway (Rte 38) to the west.
- Area 4: That area which is bordered by the City Limits to the north; the City Limits to the east. State Street (Rte 38) to the south and the Fox River to the west.
- Area 5: That area which is bordered by: State Street (Rte 38) to the north; the City Limits to the east, the City Limits to the south and the Fox River to the west.
- Area 6: That area which is bordered by South Street / Kaneville Road to the north; Western Avenue to the east; the City Limits to the south and Randall Road to the west.
- Area 7: That area which is bordered by Keslinger Road to the north; Randall Road to the east, the City Limits to the south and the City Limits to the west.
- Area 8: That area which is bordered by the City Limits to the north; Randall Road to the east, Keslinger Road to the south and the City Limits to the west.

***A Comprehensive ATS Leak Survey is typically accomplished with these steps:***

- Once our proposal has been submitted and approved, we will be in contact with you to schedule the Pre-Survey Meeting.
- Pre-Survey Meeting – conducted with *ATS Survey Project Manager*, to discuss all aspects of the project with the city.
- The Designated Survey Area is divided up into manageable “survey sub-areas” which are then scaled directly from your maps to get the quantity of water main in each area.
- ATS Crews will check in with the city at the start of every survey workday, so you’ll know where we’ll be that day and what kind of progress we’re making. In addition, all *ATS Crews* and *ATS Main Offices* are available by cell phone 24/7.
- Ultrasonic Leak Detection Phase of each survey sub-area. We will log every monitored appurtenance, every detected suspect leak site, all map discrepancies and any inaccessible points that need to be found or exposed so they can be surveyed.
- Computerized Electronic Leak Location Phase – Re-survey every suspect leak site and accurately pinpoint every subsequently detected leak.
- Leak Location Reports will be submitted daily as leaks are located. Leak locations are marked, diagramed, and documented in detail.
- Final Survey Report - Gather leak repair data, recovery calculations and assemble Final Report. Present the comprehensive Final Survey Report to the City.

**ATS COMPREHENSIVE SURVEY PROGRAM:** Every fire hydrant, accessible hydrant auxiliary valve and every accessible mainline valve will be monitored for leak sounds. Every detected leak site will be thoroughly investigated, and every confirmed leak will accurately be pinpointed with a Leak Noise Correlator. Leaking service lines are also easily detected with our intense survey methods. When a water system starts to get tighter, there is more emphasis on the surveyor to have to dig deeper to find the leaks that are not making obvious leak sounds. This fact makes monitoring every valve essential to finding these tough leaks. Valves are the best quality listening point possible. The thoroughness of this technique ensures that every detectable leak is found and accurately located for repair.

**ULTRASONIC LEAK DETECTION:** The existence and general neighborhood of every detected suspect leak is established with *FCS S30 Ultrasonic Leak Detection Equipment*. A preliminary leak size & type classification is also made at that time. A significant difference between an *ATS Leak Survey* and the other surveyors is in the ultrasonic leak detection phase’s number of checkpoints. No one checks more points for leak sounds with more acute scrutiny than *ATS*. The fact is that the more appurtenances that a surveyor listens to, the more leaks they should detect.

**DETECTION SURVEY RECORDS:** Every accessible fire hydrant, hydrant auxiliary valve and mainline valve is monitored for suspect leak sounds. B-Boxes are checked only in the vicinity of a detected suspect leak site. Valuable survey and system data is collected and logged on these records. *This data includes* Appurtenance Type and Location, General Conditions Encountered, Accessibility, Map Discrepancies and Leak Sound Characteristics.

COMPUTERIZED LEAK ANALYSIS & PINPOINTING: Every suspect leak site, no matter how slight the sound, is electronically confirmed with one of our computerized *FCS AccuCorr*, *FCS Tri-Corr 2002*, *FCS 9090* or *Sewerin SeCorr08 Leak Noise Correlator Systems*. The pinpointing phase begins with ultrasonically resurveying every suspect leak site, electronic Correlator analysis of every suspect leak site to either eliminate a suspect leak site or accurately confirm the presence of the leak and pinpoint its exact location. Every leak's exact location is pinpointed with consistent accuracy by analyzing, timing and measuring leak sound waves simultaneously from two monitoring points. The position of the leak is indicated to the tenth of a foot from a sensor position.

"X" MARKS THE SPOT! The pinpointed location of every mainline, service line and valve leak will be marked in the field with an "X". The exceptions are homeowner's side service leaks and hydrant leaks. A "*Leak Location Report*" form documents the location and type, characteristics of every pinpointed leak.

WATER MAIN and VALVE LOCATION: All of the water main and service connections are accurately located in the vicinity of every leak location. This helps ensure that every survey leak is pinpointed as accurately as possible. All utility line location work is performed with *Radiodetection RD7000 and RD8000 RD8100 High Performance Utility Location Systems*, *Radiodetection RD316* and *Schonstedt Ferromagnetic Metal Locators*.

LEAK LOCATION REPORTS: This is an individual report form that details the exact location and characteristics of each pinpointed leak. These forms are submitted as the leaks are pinpointed. The city with actual leak repair information updates each *Leak Report*. This repair information is used by *ATS* to calculate water loss and revenue recovery data for the *Final Report*.

INACCESSIBLE POINTS & MAP DISCREPANCIES: A listing of all appurtenances that are found to be inaccessible or visually un-locatable will be submitted to the city so *ATS* can return to check it once that point has been located and/or prepared for us. We never know when we will encounter a leak that is only detectable at one listening point. This extra measure will help ensure that every detectable leak is detected and pinpointed accurately.

FINAL REPORT: Three (2) copies of a comprehensive *FINAL SURVEY REPORT* will be submitted after the completion of the survey. Additional copies are available upon request. These reports concisely detail all our survey activities and findings, estimated & calculated leak sizes, revenue recovery calculations for each leak, leak location reports, general observations, and recommendations. *Final Survey Reports* are also available in digital format upon request. The *Final Report* will be submitted upon completion of the survey work and leak repairs.

INITIATING THE SURVEY: All we need to initiate your Leak Survey is your verbal authorization followed by your Purchase Order and / or signed *ATS Leak Survey Contracts*. The first thing we'll do is schedule your *Pre-Survey Meeting* which will detail all aspects of the survey and ensure that everyone is on the same page during the survey.

We welcome the opportunity to meet with you and your staff to answer any questions you may have about *ATS Survey Equipment and Methodology*. Thank you for your consideration of *ATS*.

Yours Truly,  
ASSOCIATED TECHNICAL SERVICES LTD.  
*Marcia A. Kaplan*

Marcie A. Kaplan  
Survey Manager

GENERAL CONDITIONS

LEAK DETECTION & LOCATION SURVEYS

Responsibility of ATS / Associated Technical Services Ltd.

- A) Two-Person crew qualified to operate the *ATS Leak Detection & Location System*.
- B) The “*ATS Leak Detection & Location System*” consists of:
- *FCS S30 and FCS S20 Ultrasonic Leak Surveyor Instruments (Leak Detection Phase)*
  - *FCS/Fluid Conservation Systems and Sewerin Leak Noise Correlators (Leak Location Phase)*
  - *FCS and Sewerin Ultrasonic Preamplifiers (Leak Location Phase)*
  - *FCS, Wilcoxon, Vibrometer, Sewerin Accelerometers, Gas Sensors, Hydrophone Sensors*
  - *Radcom FCS SoundSens Programmable Leak Correlation / Localization System*
  - *Radiodetection RD7000 and RD8100 Utility Location Systems; CST Berger, Schonstedt and Radiodetection Ferro Magnetic Location Equipment for buried valve enclosures.*
- C) “*ATS Leakmobile*” - Mobile Van with self-contained power supply and /or capability of operating from an alternate VAC 60 Hz source, or suitable alternate vehicle at the discretion of ATS.
- D) *Mobilization / Mileage* – Round Trip, Portal-to-Portal and On-Site.
- E) *On-Site Consultation with Owner* or their representatives as necessary.
- F) The entire area designated by the *Owner* shall be surveyed for leakage. Detected leaks shall be pinpointed only on that part of the water system maintained by the *Owner*. Unless it is previously specified and ordered, customer service line leaks will only be pinpointed up to the municipal side of the curb stop without additional charges. Leaks on the customer side of the curb stop typically require a separate appointment so *ATS* can make contact with the service line inside the building.
- G) Only those leaks that are detected by the *ATS Leak Survey* are to be included in the pinpointing phase of this contract. Unless other previous arrangements are made, any pinpointing of any incidentally or coincidentally occurring leakage, main breaks or previously known leakage that was not initially included in our proposal or as a part of this agreement shall be charged at our normal rates for scheduled / emergency service callouts.
- H) If the “*Re-monitoring of Repaired Leak Sites*” service is specified, included in our proposal and ordered, this agreement, leak repairs to that site must be completed within 30 days after that leak’s location report was submitted to the *Owner*. The *Owner* then must notify *ATS* at the time of repairs so re-monitoring can be scheduled. All subsequently detected leakage will be located.
- I) *ATS* will establish and mark the location of a leak or leaks in the field with either marking paint, a field stake and / or written individual “*ATS Leak Location Report*”.
- J) *ATS* will provide basic traffic warning equipment and traffic control and re-direction with flagmen on an as-needed basis, whenever conditions dictate the necessity of these safety precautions. *ATS Work Zone Safety Equipment* includes but is not limited to safety vests, vehicle arrow boards, strobe warning lights and safety cones that are used whenever our vehicles are parked during the course of the leak survey on residential and other light or slower traffic areas.

## GENERAL CONDITIONS FOR LEAK SURVEYS

### RESPONSIBILITY OF OWNER

The *Owner* will ensure easy access to all main line valves, valve boxes or other strategically necessary access points. This may also include exposing and cleaning out auxiliary valves and b-boxes on an as-needed basis if they will facilitate the accurate confirmation and pinpointing of a detected leak. *This could include* breaking loose needed valve covers; pumping water out all valve vaults and boxes and, if necessary, removing debris from those enclosures to make the valves and adjoining pipelines accessible. The *Owner* will also make access available to any point or location strategically needed by *ATS* to perform said work at the discretion of *ATS*.

- If the *Owner* orders leak pinpointing between the curb stop and the customer's building, the *Customer* shall be responsible for contacting *ATS* for scheduling and pricing. Pinpointing can be performed on a weekday from 9:00 AM to 1:00 PM without incurring overtime charges.
- The *Owner* will make available to *ATS* all available location maps, schematics, as-built drawings, final reports from previous leak surveys, and any other data pertaining to the area being surveyed.
- The *Owner* will make available knowledgeable, qualified personnel for consultation and assistance regarding the *Owner's* water system.
- Identify the authorized representatives of the *Owner* to act on behalf of the *Owner* and sign *ATS* agreements, purchase orders and additional work orders.
- Give *ATS* right of access, and necessary identification required, and notify appropriate authorities (Police, Fire Dept., Public Works Dept., etc.) as needed of program underway.
- The *Owner* will at its option, provide Traffic Warning Equipment, Traffic Control and Re-Direction with Flagmen on an *as-needed basis*, should conditions dictate the necessity of this safety precaution. Instances such as a lane closure in a heavy traffic area may require hiring the services of a Work Zone Safety Vendor to provide the necessary traffic control equipment such as barricades, warning lights, arrow panels and temporary barriers. The *Owner* must approve any use of a Work Zone Safety Vendor in advance. *Owner* will be responsible for the costs of the Work Zone Safety Vendor.
- *Owner's* repair crews shall make a reasonable effort to provide *ATS* with accurate leak repair information whenever this data is available. *Repair data should detail the following:* Date of repair; type of leak; approximate size and shape of the leak orifice; approximate water pressure; and method of repair. This information is necessary for *ATS* to make leak size, water loss and revenue recovery calculations for a comprehensive "*Leak Survey Final Report*".

*Please Note:* *ATS* does not guarantee the detection or accurate pinpointing of a leak or leaks but does assure that the best effort in that regard will be put forward.

Certain input data to the *ATS Leak Detection & Location System* is based upon information received from the *Owner*. The accuracy of the *Owner's* data will directly affect the results of the Leak Survey. *ATS* will attempt to verify such data by consultation with the *Owner* and thereupon will have a right to rely upon the accuracy of the *Owner's* data. *ATS* is not liable for any costs to the *Owner* as a result of incomplete or inaccurate data supplied by the *Owner* or their representatives.