



September 3, 2013

City of Rolling Meadows  
Department of Public Works  
3900 Berdnick Street  
Rolling Meadows, Illinois 60008

Attn: Mr. Dan Seveska  
Supervisor of Underground Utilities

RE: 2013 City of Rolling Meadows Water System  
Leak Detection & Location Survey Proposal

Dear Mr. Seveska,

We are pleased to present the following proposal to perform a two-phase "**ATS LEAK DETECTION & LOCATION SURVEY**" for the **City of Rolling Meadows**. We truly value the long and successful relationship that we have had with the **City of Rolling Meadows** and the City's excellent public works department personnel over the past 30 years. Subsequently, we are pleased to be able to offer you preferred client pricing with no detection price increase from the 2011 leak survey. As a preferred **ATS** Survey Client, you also qualify for discounted scheduled leak location callouts for the duration of 2013.

With another "**ATS Leak Survey**" your annual water conservation program continues on its successful course. Of the three factors that create an "unaccounted for water loss figure": System Leakage, Metering Errors, and Accounting Procedures, an "**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, the **City** begins to realize almost immediate return 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 and water loss reduction program.

### "WHAT MAKES **ATS** YOUR BEST 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-ups, 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 that 2 to 10 times more leakage than the competitor's survey that preceded the **ATS Leak Survey**.

### WATER CONSERVATION AND ASSET MANAGEMENT SPECIALISTS

EMERGENCY LEAK PINPOINTING • LEAK DETECTION SURVEYS • UTILITY LOCATION • VALVE EXERCISING  
GPS / GIS LOCATION SURVEYS • HYDRANT TESTING • WATERMAIN FLUSHING • LOCATION EQUIPMENT SALES & TRAINING

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

- Prepare a Proper Proposal - Once our proposal has been submitted and approved, we will be in contact with you to schedule the **Pre-Survey Meeting**.
- Prepare a Survey Completion Schedule using a detailed Gantt Chart as specified in your RFP upon request. **ATS** uses **Microsoft Office Project Professional** to accomplish this task. This schedule and corresponding milestones dates will be updated as the survey progresses.
- Pre-Survey Meeting – conducted with **ATS Survey Project Manager**, to discuss all aspects of the project from methodology, equipment, documentation and results with the **City**.
- The Designated Survey Area is divided up into manageable “survey sub-areas” which are 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. You’ll always know where we’ll be that day and what kind of progress we’re making. Our office never closes. **ATS Crews and Offices are available 24 hours a day / 365 days a year.**
- 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.
- Develop List of Inaccessible Points that we are unable to locate or access. Submit this list the **City** for preparation as needed so **ATS** can survey these points.
- Map Discrepancies - All appurtenances that are shown incorrectly or not shown at all on your maps will be logged on our survey sheets. They can also be located via GPS upon request so you can update your water atlases.
- Computerized Electronic Leak Location Phase – Re-survey every suspect leak site and accurately pinpoint every subsequently detected leak.
- Leak Location Reports are submitted daily as leaks are located. Leak locations are marked, diagramed and documented in detail, and located with GPS upon request.
- Interim Monthly Progress Reports - Area by area progress summary by phase, total leak types and calculated water and revenue recovery to date. They are typically submitted monthly, or by request anytime you need an update.
- Inaccessible Appurtenances - Monitor all previously inaccessible points so that every possible point is surveyed and pinpoint all of the subsequently detected leaks.
- Re-monitor All Repaired Leak Sites and pinpoint all subsequently detected Leaks.
- Final Survey Report - Gather Leak Repair Data, Recovery calculations, Maps displaying Leak Locations and assemble **Final Report**. Present the comprehensive Final Survey Report to the **City**

## ATS Comprehensive Incentive-Based Leak Survey Program

The *ATS Comprehensive Leak Survey Program* is the most thorough and successful leak survey program in the business on two fronts – *Superior Findings and Consistently Accurate Pinpointing plus Excellent Cost-Effective Pricing and Maximum Results*. Put it all together and you will get the best performing leak survey possible. Final billing will be based upon the actual total amount of surveyed water main, plus the total number and types of pinpointed leaks. With this type of contract proposal, the detection phase is a lump sum figure and pinpointing is priced per leak.

*ATS accepts the challenge that you can't lose*. This unique contract pricing puts the burden on *ATS* to produce results. It also gives the **City** 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 a money saving and water conserving leak in return. Since there are no fee guarantees for *ATS* beyond the detection phase, there is natural incentive for *ATS* to accurately find as many leaks as possible for the **City**.

The *Incentive-Based Program Option* is our most popular program. Since we are paid by the leak, there is obvious incentive to find every possible leak. On the other hand, the client can save money if the water system turns out to be tighter than expected. Of course we're hoping to find one leak on top of another. Either way, the **City** doesn't spend a dime in extra location fees without getting a money saving / water conserving leak location in return. This type of pricing provides *ATS* and the **City of Rolling Meadows** with a no risk / win-win survey program.

### ESTIMATE OF COST

For purposes of developing this estimate of cost, we have used measurements taken from previous leak surveys for the total amount of water main designated for survey. We are once again offering an incentive-based contract proposal. Final billing will be based upon the actual amount of surveyed main, plus the total number of pinpointed leaks. The **City** only pays for leaks that are pinpointed plus a lump sum fee for detection services. The **City** doesn't spend an extra dollar without getting a money saving leak in return. This survey pricing provides natural incentive for the surveyor to find as many leaks as possible. It the perfect type of survey pricing for a water system that is typically as tight as Rolling Meadows has become with your annual leak surveys. Holding prices down like we have for the past several years is made possible by the combination of our excellent knowledge of your water system and the excellent working relationship that has been forged between *ATS* and your staff.

#### Ultrasonic Leak Detection Phase:

**436,769 LF of water main @ \$ 0.023 per lineal foot of surveyed water main = \$ 10,045.69**

#### Computerized Leak Location Phase:

**\$ 350.00 per main line or service line leak that is pinpointed in the field.**

**\$ 100.00 per leak that is determined to be a leaking fire hydrant or valve.**

#### Leak Location Callouts: Preferred Customer Discount

For the duration of your **2013 Leak Survey**, any incidental leak location callout services that can be performed during normal weekday business hours, will be billed at the same rate as a main line survey leak plus mileage. This **Preferred Customer Discount** represents a savings of at least \$ 250.00 per leak. Emergency after-hour and weekend four-hour minimum callout price structures remain the same but the **City** does qualify for a **Preferred Customer** rate that is a better rate than what other clients are being charged.

City of Rolling Meadows  
2013 Leak Survey Proposal

September 3, 2013

*The City of Rolling Meadows has realized great success with 26 annual ATS Leak Surveys.*

<u>Year</u>	<u>Main Line</u>	<u>Service Line</u>	<u>Hydrant</u>	<u>Valve</u>	<u>Leak Totals</u>	<u>Water Recovery</u>
1983	0	4	5	2	11	218,906 GPD
1985	1	1	14	2	18	28,570 GPD
1987	1	3	17	5	26	63,690 GPD
1989	0	1	9	3	13	32,400 GPD
1990	4	1	15	3	23	430,797 GPD
1991	5	3	14	5	28	323,086 GPD
1992	2	1	21	6	30	70,320 GPD
1994	0	2	12	6	20	25,200 GPD
1995	1	1	12	2	16	20,880 GPD
1996	4	2	9	4	19	37,800 GPD
1997	2	1	5	1	9	20,700 GPD
1998	2	1	15	0	18	684,200 GPD
1999	0	0	2	1	3	4,320 GPD
2000	1	0	12	0	13	29,520 GPD
2001	4	4	6	1	15	401,044 GPD
2002	3	0	6	0	9	54,720 GPD
2003	1	2	3	2	8	71,349 GPD
2004	1	0	5	0	6	25,920 GPD
2005	3	4	10	0	17	233,841 GPD
2006	3	1	0	0	4	35,035 GPD
2007	4	3	3	2	12	320,835 GPD
2008	4	2	1	2	9	240,624 GPD
2009	2	1	11	3	17	431,939 GPD
2010	2	4	6	1	13	573,600 GPD
2011	0	2	8	2	12	24,480 GPD
2012	6	5	5	2	18	431,785 GPD
<b>Totals:</b>	<b>57</b>	<b>50</b>	<b>225</b>	<b>54</b>	<b>398</b>	<b>4,808,561 GPD</b>

**Annual Average Survey Recovery and Savings to the City for 1983-2013**

<u>Main Line</u>	<u>Service Line</u>	<u>Hydrant</u>	<u>Valve</u>	<u>Leak Totals</u>	<u>Water Recovery</u>
2	2	9	2	15	184,944 GPD

184,944 GPD recovery @ \$ 6.35 per 1,000 gallons = \$1,174.40 per day = \$ 428,655.47 per year

*The following features are included with this type of ATS Leak Survey Program:*

**ATS COMPREHENSIVE SURVEY PROGRAM:** Every fire hydrant, accessible hydrant auxiliary valve, and every accessible mainline valve will be monitored for leak sounds. 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 insures that every detectable leak is found.

**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, Suspect Leak Sound Decibel Measurements and Characteristics.

**COMPUTERIZED LEAK ANALYSIS & PINPOINTING:** Every suspect leak site, no matter how slight the sound, is electronically confirmed with one of our computerized *FCS Accu-Corr, FCS Tri-Corr, FCS 9090 and Sewerin SeCorr-09 Leak Noise Correlator Systems*. The pinpointing phase begins 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. The Correlator then analyzes, times and measures the leak sound waves simultaneously from two monitoring points, so that the leak's exact location will be pinpointed with consistent accuracy.

**"X" MARKS THE SPOT!** The pinpointed location of every mainline, service line and valve leak will be marked in the field with spray marking paint with an "X". Exceptions are homeowner's side service leaks and hydrant leaks that are documented but not marked in the field. Every leak, regardless of type or location, is documented with a "*Leak Location Report*" form.

**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 insure that every survey leak is pinpointed as accurately as possible. All utility line location work is performed with *Radiodetection RD4000 and RD8000 High Performance Utility Location Systems, Radiodetection RD316 and Schonstedt Ferromagnetic Metal Locators*. ***No one works a leak site harder than ATS!***

**LEAK LOCATION REPORTS:** This is an individual report form that details the exact location and characteristics of each pinpointed leak. These forms are submitted daily 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*.

**GPS LEAK LOCATION DATA:** Upon request, every pinpointed leak can also be documented using *Magellen Mobile Mapper CX Professional GPS Receivers*. Locations will be electronically provided with industry standard sub-meter accuracy with sub-foot accuracy available. *GIS Import / Export:* ESRI .SHP, MapInfo .MIF, and AutoDesk .DXF import/export and .CSV export. Incidentally, every leak location is already displayed in the survey area maps of your *Final Leak Survey Report*.

**REMONITORING:** After leaks have been repaired, every leak site will then be re-monitored by *ATS* to confirm the repair and check for additional leaks that may be located nearby and covered up by the sounds of the original leak. It is not unusual for us to detect another leak or two with this extra step.

**INACCESSIBLE POINTS & MAP DISCREPANCIES:** A listing of all appurtenances that are found to be inaccessible will be submitted to the *City*. Once that point has been located or prepared for us, *ATS* will return to check it. We never know when we will encounter a leak that is only detectable at one listening point. This measure helps ensure that every detectable leak is detected.

**FINAL REPORT:** Three (3) copies of a comprehensive *FINAL SURVEY REPORT* will be submitted after the completion of the survey. Additional copies are available upon request. These reports detail all survey activities and findings; calculated leak sizes; revenue recovery calculations; survey; color maps with leak locations, leak location reports; observations and recommendations.

**SURVEY COMPLETION TIME:** We estimate that the *DETECTION PHASE* can be completed in 12 workdays. The duration of the *LOCATION PHASE* will depend upon the number of suspect leak sites to investigate further and actual number of pinpointed leaks. Weather and general conditions are always a factor as well. Temperature is not a problem but heavy winds and rain can cause delays.

**INITIATING THE SURVEY:** Your verbal authorization followed by your *Purchase Order* and / or signed *ATS Leak Survey Contracts*, is all we need to schedule your *Pre-Survey Meeting*, thus initiating your Leak Survey. The *Pre-Survey Meeting* details all aspects of the survey. We will discuss how the survey will be performed, how to interpret the survey documentation, and the type of assistance and mutual cooperation that will be required during the survey. We can schedule your survey shortly after receiving your approval to start the project.

Thank you for your consideration of *Associated Technical Services Ltd*. We appreciate this opportunity to be of ongoing service to you and the *City of Rolling Meadows*.

Yours Truly,  
ASSOCIATED TECHNICAL SERVICES LTD.



Ralph L. Gross  
Vice President