

CASE STUDY

Badger[®] GALAXY[®]

Fixed Network System



The Repeater is located on top of the water tower. Its low profile makes it nearly invisible to see when compared to the cellular antennas.

Village of South Elgin, IL Installs Badger Meter's GALAXY[®] Fixed Network System

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Over the River and Through the Woods

The Village of South Elgin, Illinois Public Works Department maintains a water distribution system of approximately 6,800 services for a population of about 20,000 people. The community served is over 100 years old and features a variety of landscapes from gently rolling hills to the varied topography of the beautiful Fox River Valley. Older and historic homes with dense, mature vegetation to newly built modern subdivisions create a varied setting for this community located about 30 miles West of Chicago.

A Defined Need

Over time, as South Elgin's water needs grew and changed with the community, its meter reading needs also changed. To meet changing demand, the Public Works Department first depended on Badger Meter's ACCESSplus[®] telephone line based automatic meter reading (AMR) system.

With further passing of time and continued technological advances, the Public Works Department realized that many homeowners were eliminating their land lines and moving to cellular service as their primary means of communication. This created a void in home phone lines, which altered the Department's means of efficiently reading their Badger[®] water meters. "The ACCESSplus system allowed us to obtain meter readings without the use of meter readers and equipment," said Water Superintendent Dan Mann. "When we started to lose land lines we utilized a number of TRACE[®] AMR modules to get our readings. Although this allowed us to get our readings, we had to assign staff that we really did not have available to collect readings." As more homes eliminated their land lines, more drive-by units were installed, leading the Public Works Department to reevaluate its needs and resolve that a fixed network was the right solution to support its AMR and staffing level requirements.

Competitive Evaluation

The question of which network to select was taken very seriously. The Public Works Department reviewed other fixed network systems and found

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that the cost of the required infrastructure and software was often prohibitive. Dan noted that, "A big plus of the GALAXY system was the compatibility of their existing AMR system, Badger® CONNECT software, and billing software." The software package for the system, GALAXYnet, was easily configured to work with the existing system. It could also stand alone and process all data directly to the billing software used by the village. GALAXYnet required no costly changes to the existing billing structure, any additional computers, or dedicated servers to run the fixed network. GALAXYnet can run on a desktop PC with other utility applications.

Installation

In South Elgin, Badger's GALAXY system uses a data collector located at the Public Works office and a repeater located on top of each of four water tanks in the Village. They have installed over 600 transmitters and add more each day through a combined effort of the Water Utility and Badger Meter's Turnkey Solutions group. When asked about the installation of the system Dan replied, "Very quick and easy in the homes. No more running wire or attaching phone lines. Fairly simple using the handheld installation tool." The Water Utility staff easily installed the infrastructure after attending a brief training session.

System Performance

Dan stated, "We are very pleased

with reading performance. Range is better than we anticipated as we were concerned about the remote units in the Fox River Valley, but those units are being read across town to the repeater on the west side" (approximately 3 miles distance). The water utility now enjoys a fixed network system that meets its needs. For meters connected to a Badger GALAXY transmitter, they no longer have to send out a person to obtain a final reading. GALAXY easily provides this reading and other important information. "We now have the ability to track water usage, determine consumption patterns, and apply other management tools in the software," said Dan. The system software also provides graphs of usage trends for customer service inquiries, tools to calculate unaccounted for water in the system, and the utility can create settings to place an alert on accounts that exceed a certain volume of water use over time. All these tools are at the direct command of the utility on their own PC.

Next Steps

The Public Works Department and Badger Meter's Turnkey Solutions group will continue to install transmitters at the Village of South Elgin. Their plan is a staged installation that will complete the system gradually. They have the data collector and repeaters installed so that all they have to do is install any new transmitter and upload the new account to the system. With the strong performance of this

GALAXY system, it is very easy to expand the transmitter population as needed.

By installing the Badger GALAXY Fixed Network AMR system, the Village of South Elgin solved its meter reading needs and is ready for the future. When asked if they would recommend the system to other utilities, Dan responded "Definitely." ■



Ron Alford installs a remote transmitter in the floor joists of a newly constructed condominium.



Dan Mann (right), Water Superintendent and Ron Alford, both of South Elgin Public Works, install a Badger® GALAXY® remote transmitter to a Recordall® Compound Series meter inside the high school.