City Council

Staff Agenda Report **Agenda Item: 7a.**

Agenda Subject: Consider approval of Resolution No. 2019-26 to approve a finance agreement with Government Capital Corporation for the purchase of a new Ferguson water meter system in the amount of $377,310, the first payment of which would be made October 2020.		
Meeting Date: October 17, 2019	**Financial Considerations: $377,310 (starting FY 2020-2021)** **Budgeted:** ☐**Yes** ☒**No** ☐**N/A**	**Strategic Vision Pillar:** ☐ Financial Stability ☐ Appearance of City ☒ Operations Excellence ☒ Infrastructure Improvements/Upgrade ☐ Building Positive Image ☐ Economic Development ☐ Educational Excellence

Prior Council Action:

Background Information: Staff met with Ferguson Waterworks in July 2019 to discuss the purchase of a new water meter system. The new system will do the following:

- Reduce operational costs by eliminating the manual reading of meters
- Improve capture of water usage, thereby reducing water loss
- Provide ability to view metered water usage by the hour via the web
- Provides alerts that can benefit the utility and the customer (leaks, register malfunctions, etc.)
- Be integrated and automated with Incode
- Have a seamless implementation process
- Have great local support and maintenance

The proposed Mueller meters from Ferguson fit the bill for all of these needs. This purchase will not effect this year's budget as the first capital payment will be made in Oct 2020. It will be a fixed asset addition in FY19/20, with a depreciation component only.

Justification for Request: Purchase Policy requires council approval for purchases over $5,000.

Recommended Action/Motion: Motion to approve Resolution No. 2019-26 to approve a finance agreement with Government Capital Corporation for the purchase of a new Ferguson water meter system in the amount of $377,310, the first payment of which would be made October 2020.

Attachments: Resolution 2019-26
Finance Agreement
Final Pricing
Ferguson Meter Proposal
Propagation Study
Email Chain Regarding Propagation Study

RESOLUTION # 2019-26

A RESOLUTION REGARDING A FINANCING AGREEMENT FOR THE PURPOSE OF PROCURING "***WATER METER SYSTEM ".***

WHEREAS, the City of Dalworthington Gardens desires to enter into that certain Financing Agreement, by and between Government Capital Corporation and the City of Dalworthington Gardens, for the purpose of procuring ***"water meter system ".*** The City desires to designate this Agreement as a "qualified tax exempt obligation" of the City for the purposes of Section 265 (b) (3) of the Internal Revenue Code of 1986, as amended. City of Dalworthington Gardens desires to designate the Mayor, as an authorized signer of the Agreement.

NOW THEREFORE, BE IT RESOLVED BY THE CITY OF DALWORTHINGTON GARDENS:

Section 1. That the City enters into a Financing Agreement with Government Capital Corporation for the purpose of procuring ***"water meter system ".***

Section 2. That the Financing Agreement, by and between the City of Dalworthington Gardens and Government Capital Corporation is designated by the City as a "qualified tax exempt obligation" for the purposes of Section 265 (b) (3) of the Internal Revenue Code of 1986, as amended.

Section 3. That the City of Dalworthington Gardens designates the Mayor, as an authorized signer of the Financing Agreement, by and between the City of Dalworthington Gardens and Government Capital Corporation.

Section 4. That should the need arise, if applicable, City of Dalworthington Gardens will use loan proceeds for reimbursement of expenditures related to the Property, within the meaning of Treasury Regulation § 1.150-2, as promulgated under the Internal Revenue Code of 1986, as amended.

This Resolution has been PASSED upon Motion made by Board Member _____, seconded by Board Member _____ by a vote of _____ to _____ and is effective this _____, 2019.

City of Dalworthington Gardens

_____
Mayor

Witness Signature

_____
City Secretary

GOVERNMENT CAPITAL
CORPORATION

City of Dalworthington Gardens, TX October 4, 2019

Financing for Ferguson Water Meter Project

We are pleased to offer the following preliminary overview of the financing terms:

Financing structure:	Tax Exempt Financing Agreement
Project Description:	Water Meters
Project Pricing Estimate:	$377,310.00
Lender:	Government Capital Corporation
Issuer:	City of Dalworthington Gardens, TX

Term:	5 Years
Annual Payments:	$75,462.00
Effective interest rate:	0.00%*
Payments Commencing:	1 year from funding date and **annually** thereafter

Term:	7 Years
Annual Payments 1-5:	$53,901.43
Annual Payments 6-7:	$61,656.32
Effective interest rate 1-5:	0.00%*
Effective interest rate 6-7:	0.993%
Payments Commencing:	1 year from funding date and **annually** thereafter

Note*: Effective interest rate with Ferguson buying down the interest rate to 0.00%

The above terms assume qualifications under 265(b)3 of the Internal Revenue Code, underwriting approval and mutually acceptable documentation. Proposed funding considers all cost of borrowing. The rates outlined herein are good for 14 days from the date on the proposal.

Our team is prepared to move forward or provide other terms for consideration as needed.

Sincerely,

Landon Newton
Government Capital Corporation
345 Miron Dr
Southlake, Texas 76092
(817) 722-0213 Direct
Landon.Newton@govcap.com

Fixed Base AMI System

Date: 10/3/2019

Customer:

City of Dalworthington Gardens
2600 Roosevelt Dr,
Arlington, TX 76016

Quote Ref: Mueller Systems Mi.Net® AMI System (Solid State Meters)
Quote Expiration: 10/31/2019

Quoted By:

Nik Corkovic
Ferguson Waterworks
2650 S Pipeline Rd
Euless, TX 76040
469-451-6751

Mueller Systems Mi.Net® AMI Meters & Endpoints

Description	Units	Quantity	Unit Sale Price	Extended
5/8x3/4" Solid State Meter with Radio	Each	573	$ 210.00	$ 120,330.00
3/4" Solid State Meter with Radio	Each	64	$ 245.00	$ 15,680.00
1" Solid State Meter with Radio	Each	387	$ 330.00	$ 127,710.00
1 1/2" Solid State Meter with Radio	Each	12	$ 695.00	$ 8,340.00
2" Solid State Meter with Radio	Each	40	$ 750.00	$ 30,000.00
			Meter and Endpoint Price Sub-Total	**$ 302,060.00**

Mueller Systems Mi.Net® AMI System Infrastructure & Reading Equipment

Description	Units	Quantity	Unit Sale Price	Extended
Mi.Hub Multi-Network Data Collector, AC Power* With Installation	Each	2	$ 13,000.00	$ 26,000.00
DC Repeater	Each	5	$ 1,300.00	$ 6,500.00
Mi.Tech Handheld kit v4 (includes cables & Install Radio)	Each	1	$ 6,500.00	$ 6,500.00
			Mueller Systems Mi.Net® AMI System Infrastructure Sub-Total	**$ 39,000.00**

Project Management & Training

Description	Units	Each	Unit Sale Price	Extended
System Project Management	Hourly	40	$ 125.00	$ 5,000.00
Full System Training	Houlry	30	$ 125.00	$ 3,750.00
Finalized Infrastructure Propagation	Each	1	$ 3,500.00	$ 3,500.00
			Project Management and Training Sub-Total	**$ 12,250.00**

Mueller Systems Mi.Net® AMI Mi.Host Software

Description	Units	Quantity	Unit Sale Price	Extended
CIS Mueller Standard File Interface	Each	1	$ 11,000.00	$ 11,000.00
WaterSmart Integration and Implementation (Includes Year 1 Annual Subscription)	Each	1	$ 13,000.00	$ 13,000.00
			Mueller Systems Mi.Net® AMI Mi.Host Software Sub-Total	**$ 24,000.00**

Mueller Systems Mi.Net® AMI System Total: $377,310.00

Annual Mi.Host Subscription/Maintenace and Support *Starting Year 2*

Description	Units	Quantity	Unit Sale Price	Extended
Mi.Host Cloud Based Software & System Monitoring (Annual Pricing)	Each	1	$ 6,500.00	$ 6,500.00
Data Backhaul Fees (from each collector to server) (Annual Price)	Each	2	$ 550.00	$ 1,100.00
WaterSmart Annual Subscription (Annual Price)	Each	1	$ 8,000.00	$ 8,000.00
			Maintenance and Support *Starting Year 2*:	**$ 15,600.00**

The City will be responsible for any integration fees charged by their billing software provider.

FERGUSON WATERWORKS

City of Dalworthington Gardens

Advanced Metering Infrastructure (AMI) System

Nik Corkovic
Ferguson Waterworks – Meter & Automation
M: 469-451-6751
E: Nikola.Corkovic@Ferguson.com

FERGUSON WATERWORKS

Established in 1953 and headquartered in **Newport News, Virginia**, Ferguson opened with several locations dedicated to servicing smaller plumbing contractors. From this modest start, we raised the bar for industry standards as the top-rated and largest wholesale supplier of commercial and residential plumbing supplies in the U.S. However, our expertise goes beyond plumbing. We are a diverse distributor that spans multiple businesses including HVAC/R, waterworks and industrial. In the past 66 years, we've grown from a local plumbing distributor to a **$18 billion company with more than 1,400 locations and over 24,000 associates nationwide**. We pride ourselves on delivering world-class service and our customers know that "Nobody expects more from us than we do" is more than just a tagline. It's a cultural belief that is demonstrated every day through exceptional customer service, product selection and industry knowledge. On the Waterworks side, your servicing branch in Euless represents just one of roughly **200 Ferguson Waterworks locations across the nation**. For added expertise around water meters and AMR/AMI technologies, Ferguson has made a significant investment in creating the Meter and Automation Group. This substantial investment of human and capital resources with a focus specifically on AMR/AMI has allowed us to partner with four of the top five-meter manufacturers in the country and claim a leadership position in the sales and service of AMR/AMI projects. Our partnership with Mueller started eight years ago and has experienced substantial organic growth in eleven states currently. As the authorized distributor for Mueller in Texas, Ferguson can leverage its branch network and municipal sales focus to bring unprecedented support to any meter project.

INDUSTRY LEADER IN AMR/AMI TECHNOLOGY

Dedicated Ferguson AMR/AMI sales, service and support employees

More than 2 million points sold since the year 2000

In-house project management team provides assistance for a variety of water meter installation services

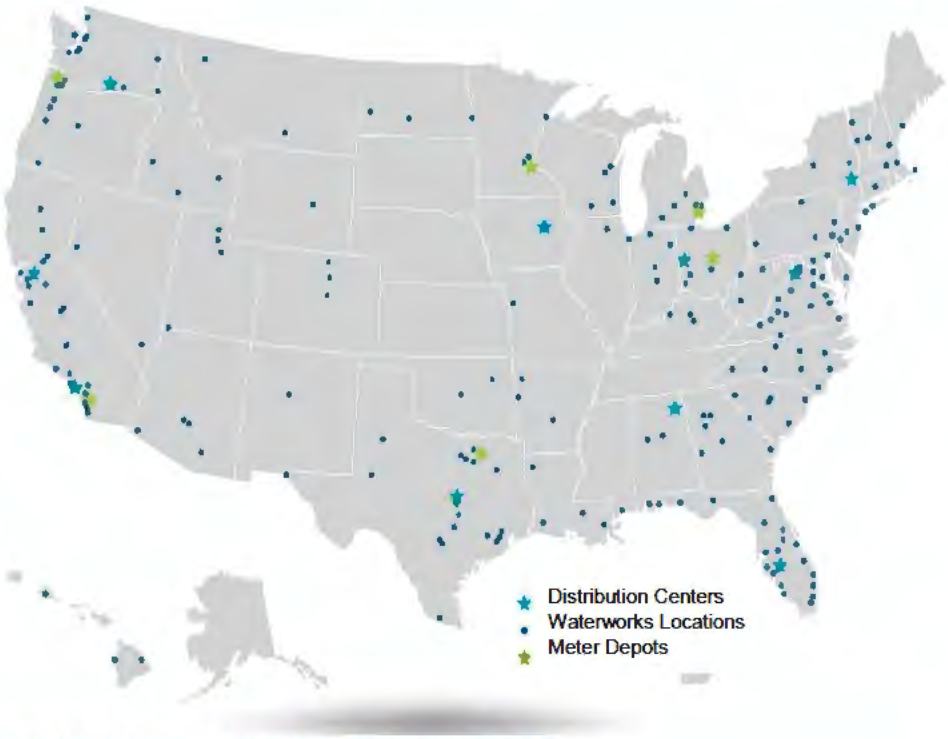
Project management services for subcontractor installation

Service and support with a customized maintenance program after sale and installation

Ferguson Meter & Automation staff work alongside the local Ferguson Waterworks team to offer substantial project resources such as immediate meter inventories, **phone and on-site support**, meter testing, project management, RMA assistance and more. It is the combination of Meter & Automation experts and processes combined with local Waterworks support and product availability that has led to our notable growth. Ferguson has meter line representation in 36 states currently and is working an aggressive strategy to obtain exclusive meter distribution rights in the remaining states over the next couple years. Since inception of the Meter & Automation group, **Ferguson has been awarded and has deployed almost 1,000 systems encompassing approximately two million endpoints.**

FERGUSON WATERWORKS METER DEPOTS

Ferguson Waterworks can better service our customers with seven strategically located meter depots that offer shorter lead times on stocked products, including the most commonly used meters ranging from 5/8" x 1/2" to 8" and metering technology.



FERGUSON LOCATIONS AND LOCAL SUPPORT

Ferguson has over 1,400 office locations across the United States. 200 of which are Waterworks locations, and **over 25 of those Waterworks locations are in the State of Texas**. This allows us to maintain stocking levels to ensure that cities will never have to wait for deliveries. This also means that there is no need to tie up funds in the Utilities warehouse inventory. Our well-trained staff will also be able to quickly respond to any issues as they arise. The success of an AMI system is dependent on solid project experience.

Ferguson and Mueller Systems have assembled a project team from across the industry with deep AMI experience to lead the effort for a successful outcome. Our certifications include Project Management Professional (PMP), Professional Engineers (PE), Certified Public Accountant, Six Sigma experts and others.

Ferguson Enterprises, Inc. Headquarters location.

With more than 65 years of industry experience, Ferguson Waterworks is one of the largest suppliers of water, sewer and storm management products and services to multiple segments of the waterworks sector. We serve public and private water and sewer authorities, residential and commercial utility contractors and treatment plant contractors.

FERGUSON PROJECT TEAM

Zeb Wright, Business Development Manager

Zeb.Wright@Ferguson.com | Mobile: (214) 690-3604

Zeb Wright joined Ferguson Waterworks in 2004. He began his career in Euless, TX, moving through each level of the business, and managing projects in an Inside Sales role. Zeb was then transferred to San Antonio, TX where he managed the new Waterworks counter while performing inside sales duties and managing shipping and receiving logistics. Zeb then took over the Branch Training Manager position for Oregon and SW Washington state. As an additional responsibility, Zeb became the AMR System Support Specialist for that territory and later became a Municipal Outside Sales associate, providing support to Municipalities and Water Districts. During his tenure as a municipal sales associate, Zeb specialized in AMR and AMI projects. In 2010, Zeb Wright accepted a promotion in Texas to become the AMR/AMI Sales Manager and was instrumental in the creation of the Ferguson Meter and Automation Group in the South-Central Waterworks District. In 2014, Zeb Wright then became the Business Development Manager for Ferguson Waterworks' new Meter and Automation Group specializing in the Mueller Systems AMR / AMI product line.

Nik Corkovic, AMR/ AMI Specialist

Email: Nikola.Corkovic@Ferguson.com| Mobile: (469) 451-6751

Nik Corkovic graduated from Texas Tech University in the summer of 2016 with a Bachelor's degree in Finance. He began his career with Ferguson on the Meter and Automation Group in July 2016 and was placed into the training program where he began learning all aspects of Waterworks and the Municipal metering business. Nik advanced out of the Sales Trainee role and accepted the role of Integration Specialist over the territories of Oklahoma, Arkansas, Arizona, and Nevada. Nik's success and dedication lead him to his new role with the Ferguson Meter and Automation Group as the AMR/AMI Specialist for North Texas, where he continues to provide the highest level of service and support to his customer, both new and existing.

DEDICATED AND EXPERIENCED TEAM

Ferguson Waterworks associates have years of experience supporting customer metering needs and assisting with designing and installing a range of devices and technologies. We offer proprietary software that provides customers with unique tools to easily monitor installation information and completion status.

Stacey Granhold Project Manager – TX, LA, OK, AR, AZ, UT, CO

Email: Stacey.Granhold@Ferguson.com | Mobile: (817) 247-9339

In 2004, Stacey entered the waterworks industry as a Technical Trainer for a technology company specializing in automatic meter reading systems. She traveled to utilities nationwide and abroad providing installation, billing integration, software and product training, and project management. In 2010, Stacey accepted the Proposal Management position for a large meter manufacturer, providing sales management and support for an extensive distribution network as well as the national sales team. Stacey joined the Ferguson team in 2014 and assumed the responsibilities of overseeing numerous sales and marketing tasks required to ensure a successful project. In 2016, she moved into the role of Integration Specialist / Project Coordinator where she manages site preparation and component installation for new AMR / AMI projects, administers project deliverables, facilitates system setup and deployment, and manages the final system acceptance process to secure customer sign off. With over 13 years of experience in the AMR / AMI industry, her main focus is the end result and building long term professional relationships with Ferguson's customers.

Jason Henderson, Project Manager

Jason.Henderson@Ferguson.com | Mobile: (612) 437-9691

Jason Henderson has been involved in the water meter business for 8 years. In the last 4 years he has held the position of a Field Supervisor overseeing more than 50, 000 water meter installations. Jason joined the Ferguson Meter and Automation Group in 2016 as a Project Manager covering the territory of Texas, Oklahoma and Louisiana. Jason continues to oversee water meter installations and installers to get the installs complete in a timely and safe manner.

FERGUSON OFFICE LOCATION FOR THE CITY OF DWG

Dallas – Waterworks and Meter Depot

2650 S Pipeline Rd, Euless, TX 76040
Phone: (817) 267-3900
Distance: 10 miles from Dalworthington Gardens

Waterworks

METROLOGY PARTNER

MUELLER

For more than 150 years, the most practical, respected and intuitive products in the water infrastructure industry have been built by Mueller Systems. In 2010, Hersey Meters was renamed Mueller Systems to reflect the company's diverse product offerings, which includes the manufacture of water meters, mobile and fixed-based AMR and AMI systems, meter data management software, software hosting, support, an implementation services along with other products and services for the U.S. municipal water market. As a member of the Mueller Water Products family of companies, we have access to the financial, manufacturing and human resources that allow us to do things better, thereby giving our customers the selection of products and services to do their jobs better.

Mueller Systems was originally founded in 1859 in South Boston, Massachusetts for the manufacture of rotary pumps, bolts, and general machinery. By 1885, the business centered its focus on water meter manufacturing and the Hersey brand was born. By 1889, Hersey meters were being used in more than 35 states and several Canadian Provinces. The company sold its one-millionth water meter in 1924. For more than 150 years, Mueller Systems has manufactured highly durable products that are of the finest quality in the water industry. In 1999 the company was re-organized as a subsidiary of Mueller Water Products, Inc. Mueller Water Products, originally organized in 1857, was founded because of a need for better ways to control the flow of water in distribution systems. In May 2006, Mueller Water Products announced an Initial Public Offering and now trades under the symbol MWA on the NYSE. Mueller Water Products has pro forma revenues of approximately **$1.9 billion**. In 2009 the Hersey Meters brand was integrated with its Mueller Systems division to reflect a breadth of innovative system solutions now available to meet an array of the Utility's needs.

Today, Mueller Systems water meters, Mobile AMR, and Mi.Net AMI Systems are manufactured in Cleveland, North Carolina. The manufacturing facility is 142,000 square feet and achieved ISO certification in 1992. Mueller Systems currently holds ISO 9000-2000 certification. Mueller Systems first began shipping radio devices for water meter reading in 1995. Mueller Systems introduced a proprietary Hot Rod AMR System in 2005 and followed that up with our Mi.Net AMI System in 2009. Since that time, they have shipped over 2 Million of these endpoints to over 800 utilities in the U.S. water market. Based on demand from water utilities, Mueller Systems designed and released the water industry's first and only Remote Disconnect Meter in 2013. The RDM from Mueller Systems fits into a standard laying length and can be remotely disconnected or connected using AMR and AMI systems. This is another example of Mueller's leadership position in the water market and ability to provide products that meet the needs of today's U.S. water utilities.

MI.NET SYSTEM

SYSTEM HIGHLIGHTS

The Mi.Net® system is a unique fixed network AMI system born from a long history of quality offerings by Mueller Systems, a subsidiary of Mueller Water Products. The Mi.Net® system was designed to deliver water utilities with innovative technology that makes the meter data collection process easy, reliable, and feature-rich. The Mi.Net® name itself is meant to represent the adaptability of the system and the multiple options available to cities this application-specific solution.

Smart Water Infrastructure (Beyond Meter Reading)

The Mi.Net® system from Mueller Systems is intended to provide utilities with options that create a true Smart Water Infrastructure System beyond basic meter reading. As the largest water infrastructure manufacturer in the United States, Mueller has developed Smart Infrastructure technology including Acoustic Leak Detection for both distribution and transmission mains, pressure monitoring, valve positioning, and smart flushing for water mains, all using the Mi.Net® system as a platform for the backbone and interconnection point for data management.

Fixed Based Distribution Leak Detection

As a division of Mueller Water Products, Mueller Systems has integrated the industry-leading acoustic leak detection technology from our sister company, Echologics®, into the Mi.Net® system. Echologics has developed leading edge technology that is integrated into our unique Mi.Logger which is supported by the Mi.Net® network. This allows the utility to utilize existing fire hydrants to identify leaks, monitor hydrants for unauthorized access, and report meter data.for data management.

Advanced Analytics and Reports

Graphical and summary reports include interval data analysis, peak usage information, event reporting, trend reports, usage, and variance analysis. This information will help the utility to respond quickly and resolve customer complaints with comprehensive customer usage information.

LoRa Technology

Endpoints and collectors within the Mi.Net® system utilize a specially designed radio chip that allows a radio operating in the 902-928 MHz band to essentially eliminate all interference and transmit substantially further (miles) using very little battery power. Because of this ability, it is quickly becoming the preferred radio chip for leading-edge devices operating in the Internet of Things (IoT). Furthermore, Mueller Systems is a member of the LoRa Alliance along with companies such as IBM® and Cisco®, which provides *open, standards-based communication* and the ability for the utility to "add-on" devices or technology to the network in a plug-and-play fashion, providing more value than simple meter reading alone.

Tamper Alerts and Event Notification

These configurable elements of Mi.Net® provide the capability of logging events and sending notifications to utility personnel or consumers in the event of:

- Low and High Leak Detection
- Zero Consumption
- Reverse Flow
- Cut Cable
- Serial Number Mismatch
- Register Removal
- Soft Disconnect
- Provisioned Consumption Alerts

Demand Side Leak Detection

Automatic detection of large and small leaks on the consumer's side of the meter. Customers can be notified, and repair actions taken earlier to prevent extensive damage, property loss or customer-side water waste.

Two Way Communication Network

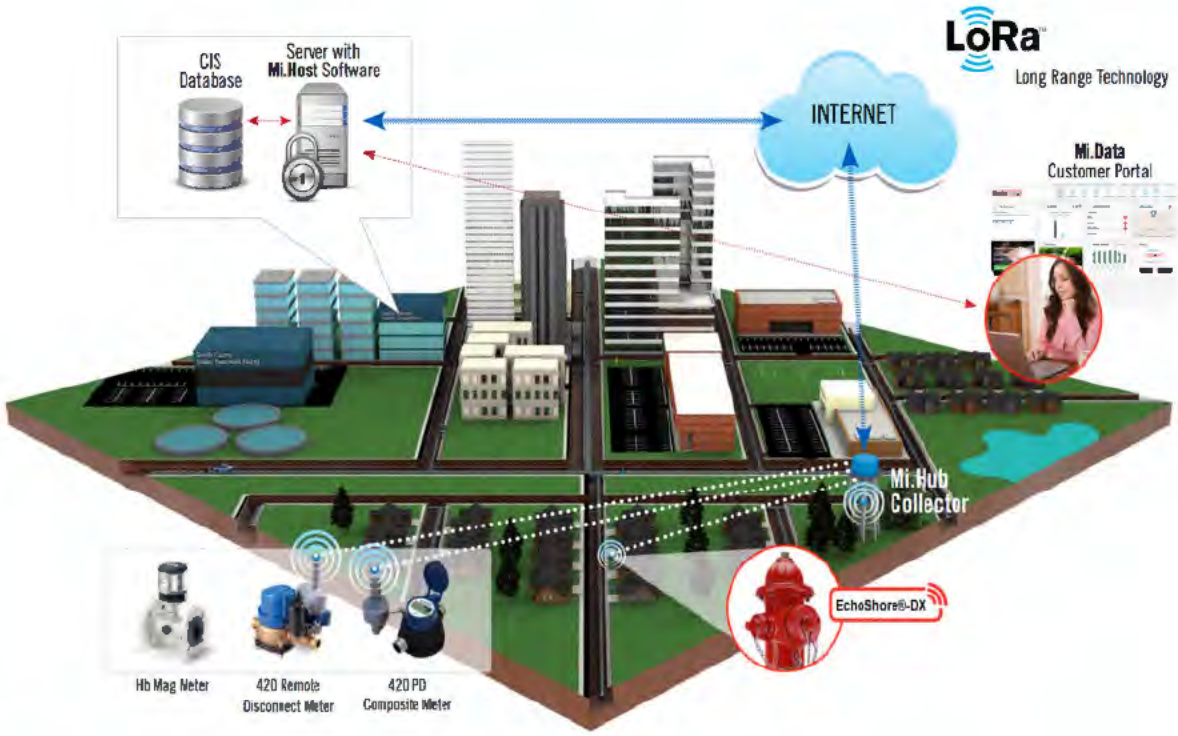
Mi.Net® offers the ability to communicate in real-time with a single meter endpoint or groups of endpoints for the purposes of retrieving stored consumption data, sending commands, and changing operating parameters. In addition to collecting scheduled reads automatically, the Mi.Net® two-way AMI system supports the ability to retrieve data on-demand with the click of a button, remote disconnect and reconnect capability for residential meters, right sizing of meters, customer specific usage detection and alert programming that is fully configurable over-the-air. Move-in/move-out reads, as well as implementing or changing watering restriction programs can be easily performed over the network. Remote Firmware Upgrade (RFU) capability of all system components, including radio endpoints, helps to ensure that meters installed now can be upgraded to support new features and provide the same level of advanced support as systems implemented years later and may be done from the host desktop.

Strategic Battery Usage

Mi.Net® endpoint batteries have a life expectancy of at least **20 years** and are backed by a **20-year warranty**. Mi.Net® insures smart battery management by confirming successful communication at each point and utilizing the minimum amount of transmissions required. Notifications for predictive maintenance on system components also eliminate network downtime.

SYSTEM ARCHITECTURE

The Mi.Net® system uses a robust, two-way communications network for passing both meter data and infrastructure management messages. A variety of hardware and software components make up the system and are organized into four functional operations: field monitoring and recording, network communications, system management and consumer engagement.



LoRa Technology

Endpoints and Infrastructure within the Mi.Net system utilizes a specially designed radio chip that allows an endpoint operating in the 902-928 MHz band to essentially **eliminate all interference and transmit substantially further (miles) using very little battery power**. Because of this ability, it is quickly becoming the preferred radio chip for leading-edge devices operating in the Internet of Things (IoT). Furthermore, Mueller is a Class B member of the LoRa Alliance along with companies such as IBM® and Cisco®, which provides *open, standards-based communication.* The Mi.Net Solution uses a LoRa architecture to collect information from water meters equipped with the Mi.Node AMI endpoint, which transmits this information extreme long distances with great reliability to data collectors mounted at specific locations. The Mi.Hub Collectors 3G backhaul communication sends this information to the data servers that are made available through web-based software. Mi.Net provides two-way communication to collect incoming consumption and alert messages while managing outgoing programming changes, on-demand read requests, or other commands to/from the Utility. This allows utility staff members to get real-time readings or even turn off/on water service with our remote territory, without ever leaving the office. Information is securely transferred by every system endpoint up through the Mi.Hub collectors, then made available to the Utility via a graphical and simple to use Mi.Host web user interface.

Meters and Network Devices

From Residential to Commercial to Fire Service, Mueller enables the precise measurement of water flow through state-of-the-art technology and experience. Mueller has been the leading-edge innovator in water metrology for over 150 years.

Solid State Meters

The SSM meter utilizes ultrasonic measurement technology to provide outstanding accuracy across a broad flow range with extremely low-pressure loss. The static meter design means there are no moving parts inside the meter, so it will not degrade in accuracy over the life of the meter due to mechanical wear, providing exceptional revenue for years to come. With starting flow rates as low as 0.017 GPM and ultra-low flow accuracy of 95% at 0.05 GPM on the 5/8' X ¾" and ¾" short sizes, the SSM is capable of wringing every drop of revenue from your system and detecting the smallest leaks and backflow conditions. The stainless-steel reflectors and measuring tube design channel water over the reflectors to keep them free of debris and increase the velocity of the water as it passes through the tube, contributing to the high degree of meter accuracy.

Mi.Hub Multi-Network Collector

Our Collectors are inexpensive, low-power/solar-power, compact devices which are easily mounted in accessible locations. Ideal mounting heights for the Mi.Hub antenna are 100 feet or higher in order to provide the maximum coverage. The Mi.Hub Collector itself is generally installed at a serviceable height regardless of the antenna height. Mi.Hub data collectors are configured to automatically receive data from the Mi.Node endpoint at prescheduled intervals but can also produce on demand reads.

Mi.Repeater

Mueller Systems also produces the Mi.Repeater signal repeater. These include AC powered, DC powered, and street light mount. This flexibility allows Mueller Systems to design and build the most robust AMI network available at the lowest overall cost. This network will allow City of Valdosta to get reliable data in challenging RF areas.

Mi.Tech Handheld Device

The Mi.Tech field hand held computer allows the installer to accurately retrieve installation work sheets from the Mi.Net AMI server via mobile internet access. At the time of installation, the hand held computer records the GPS Coordinates of the meter and tests/interrogates the Mi.Node endpoints using the install radio.

Mi.Node Radio Module

Each individual water meter is equipped with and read by a two-way radio module known as a Mi.Node endpoint. The Mi.Node endpoint is attached to meters to make meter reading and data collection simple and automatic. In standard configuration, the Mi.Node endpoint stores data in 60-minute intervals. Each Mi.Node endpoint maintains the data in its non-volatile onboard memory for up to 120 days of hourly data in order to protect the Utilities against any single point of failure that would result in system wide, cell wide, or other catastrophic loss of data. In addition to basic consumption data, system alerts such as leak detection, no flow, reverse flow, register removal, low battery alarm, and more are constantly monitored. Priority alerts, such as a reverse flow or high leak, will cause the Mi.Node to immediately wake and send a real-time message over the network. These alerts can generate notification to both the Utilities personnel and individual water consumers. Interval data and non-priority alarms are transmitted back to the User Interface (UI) every 24 hours.

Due to the severe environment of meter pits, it is essential that any AMI device installed is engineered for the harshest of conditions. Mi.Node endpoints are designed to survive life inside the meter pit and be subjected to the nastiest of temperature and moisture extremes. Each Mi.Node circuit board is potted to best in industry standards then isolated within an engineered potting compound inside the enclosure. The Mi.Node is designed with no customer serviceable or replaceable parts, including batteries. This methodology eliminates any possible pathways for moisture intrusion and provides the Utilitu with the highest level of protection against environmental damage to the radio unit. This has been proven effective in similar locations across the country; including multiple installations in Texas, Oklahoma, Arizona and Louisiana. The Mi.Node units are designed and warranted for a 20-year life inside the meter pit.

The Mi.Node is available in multiple mounting configurations for pit installations including versions to mount through metal meter box lids. In order for the radio signal propagation to be most effective, the Mi.Node needs to be through the lid for maximum performance.

Acoustic Leak Detection

The Mueller Mi.Node endpoints can be configured to log data from acoustic leak detection sensors strategically placed on fire hydrants throughout the Utilities service area. Specialized pumper nozzle caps are configured with integrated acoustic sensors which listen for leaks in between several adjacent points and can identify distribution side leaks then use this data to pin-point a location. By monitoring for leaks over the network on a 24/7 basis, the Utilities staff will be able to immediately address leaks as they arise. This leak detection data is passed through the network and analyzed to find distribution side leaks and to lower unbilled water loss.

echologics® A Mueller TECHNOLOGIES COMPANY

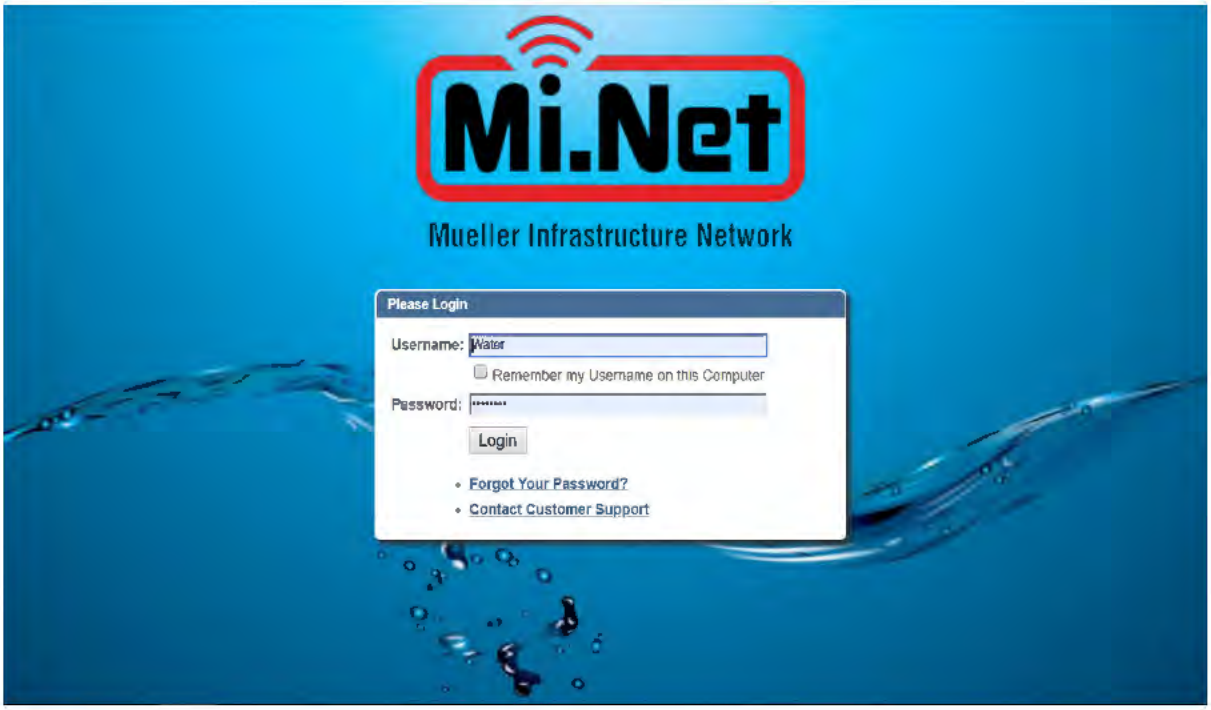
SOFTWARE OVERVIEW

Mi.Host MDM Software

Mi.Host is the name for the data storage, access, and Meter Data Management (MDM) tool for the Mueller Mi.Net System. The data collected from the Mi.Hub collector and is processed, stored and archived on a scheduled basis at the Mi.Host server where it can be quickly and easily accessed through the Mi.Host User Interface (UI). The Mi.Host software is web based, intuitive and simple to learn, and allows for authenticated access from any IP enabled device with a standard web browser. This includes lap tops, PCs, smart phones, tablets, etc. The Mi.Host server is a standard Intel and Windows based Microsoft SQL server chosen for its reliability and scalability as well as its capability of using universally accepted SQL database software.

The Mi.Net log-in screen can be accessed over the web via the internet. All web accesses utilize Transport Layer Security (TLS) and 1024 bit key encryption. Access to the data and manipulation is based on user role and authenticated log-in. There are system administrators, utility users and consumers. The IT administrator can determine the type of role for each user.

Mi.Net Login Page



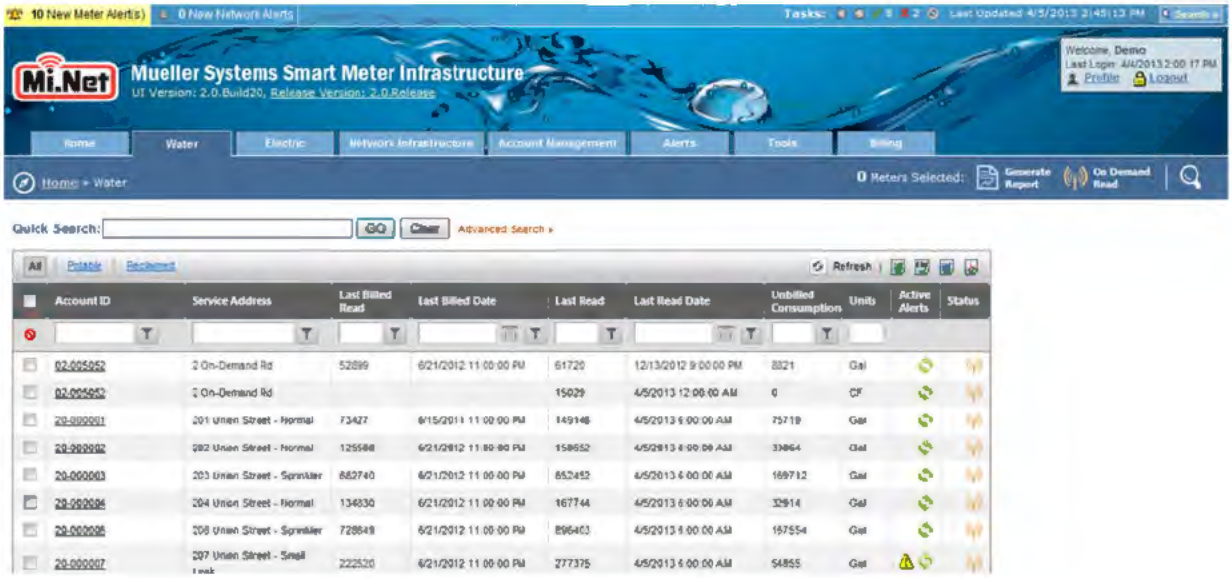
Then once data is received and stored via Mi.Host, the data is instantly available via the UI. The UI is accessible via a secure web address using specific log-on name(s) and password(s). The Mi.Host UI allows Utility personnel to easily access and manipulate meter data. Through the UI, personnel can request on-demand meter readings, generate billing information, view graphs based on usage, view all current alerts in the system, set up daily, weekly or monthly automated reports and much more.

From the log-in screen users are directed to the Mi.Net® home page. At a quick glance, a user can see the total aggregated usage (water sales) for all Utility meters and toggle between this year's consumption, the last 60 or 30 days, or the last 24 hours of usage. Usage is grouped separately for potable and reclaim meters. Mi.Host automatically ties in a feed from the National Oceanic and Atmospheric Administration (NOAA®) which will allow users to overlay and compare precipitation and temperature to usage. By scrolling over the graph, Mi.Net® will display the aggregated usage from a single day or allow the user to zoom-in to a particular week, month, or other grouping. A user can use highlight techniques to select a single day which would display the hour-over-hour Utility water sales or select a particular date range which needs to be investigated.

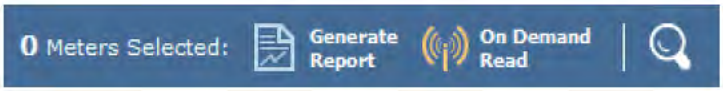
Mi.Net Home Page

From the homepage, Utility personnel can search for specific accounts based on any number of records, such as account ID, meter number, billing or service address, etc. By moving to the water tab, the Utility has access to all of the metered accounts within the database. A user can either select or search for a single account or group of accounts or choose to perform on on-demand read for a single meter a large group of meters. A user can quickly identify accounts with active alerts or request the alert status (sending an actual query to the meter) of a meter or group of meters. All columns are "sortable" by a number of different logical filters (greater than, contains, not equal to, etc.) which allow a user to quickly drill down to specific accounts for report creation. Data is also exportable from this page directly to Microsoft Excel®, Word, or PDF formats. Mi.Host can easily be integrated with Crystal Reports as well.

Mi.Net Account View

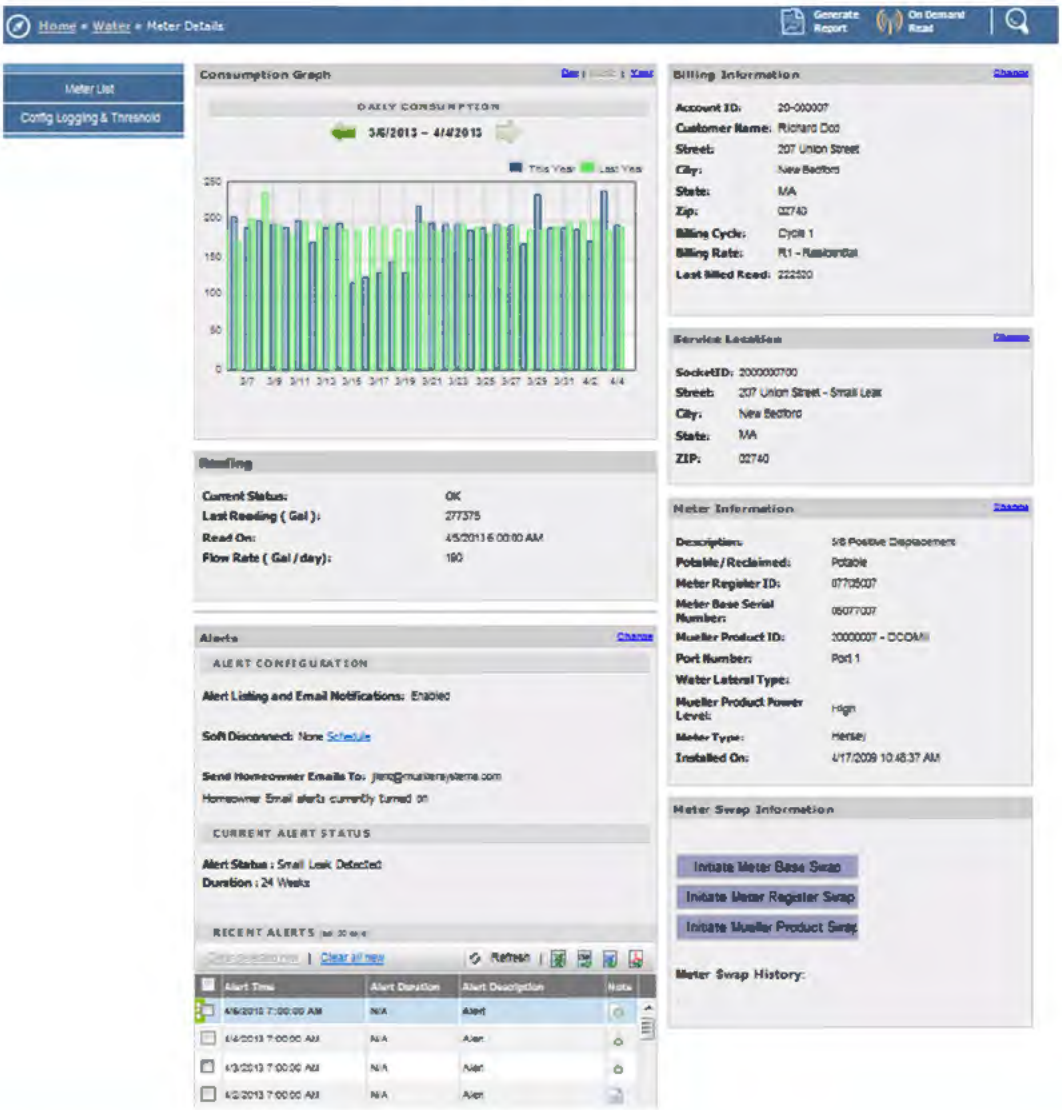


With a simple mouse click, an on-demand read will send a command from the Mi.Host server to the required Mi.Hub or Mi.Hubs which will route the request to the individual Mi.Node(s) requested. This command, once received by the Mi.Node will force the unit to perform an updated read on the register and then report this information back to the Mi.Host server. By forcing a "real-time" register reading instead of bringing back the most recent read from the collector or transceiver, this ensures that the on-demand reading reported by the Mi.Net® system will be the most current register reading. This is especially valuable when readings need to be obtained from meters at the outer edge of your service area, interconnect meters with other utilities, or those times when the customer is standing in his/her yard looking at the meter. The time required for this is typically less than 30 seconds. A user can generate multiple requests for items like on-demand reads or remote disconnects or reconnects and the task feature of Mi.Host will conduct the requested items in the background and inform the user once the operation(s) is complete.



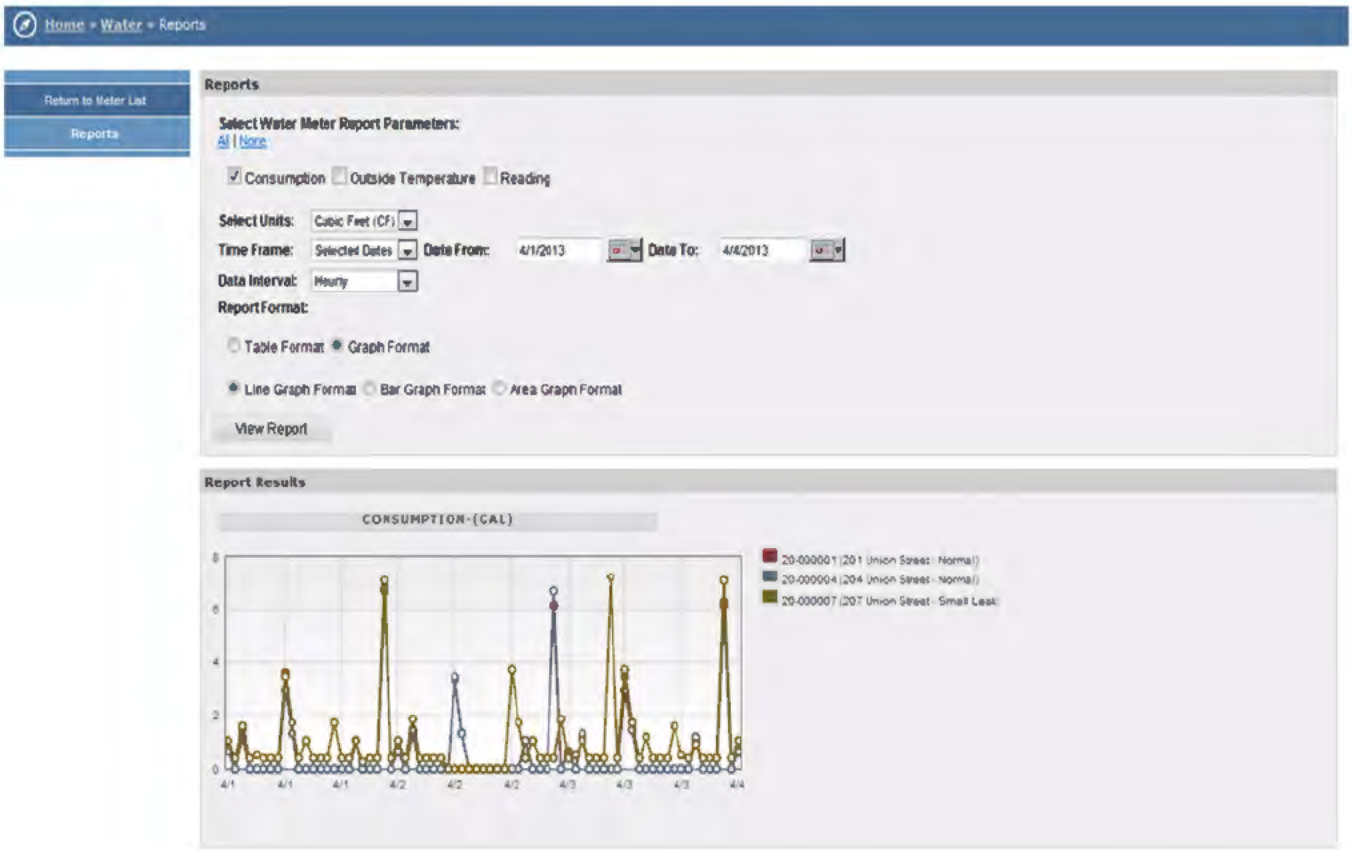
From the individual account page, Utility users can quickly view account specific information such as meter size and type, or register, meter, and radio ID numbers, as well as billing information such as billing cycle, billing address, and rate class. A graphical display toggles between the last 30 days, the previous 30 days, and the past year. This graph automatically compares each period to the same period from the previous year. A user can scroll-over each unit to see the total consumption for that day or month. A customer service representative (CSR) can utilize this information to help resolve customer complaints by initiating an on-demand read directly from the meter details page (individual account page). This is also useful for final reads or move-in/move-outs. Another useful feature is the alert history, which lists all of the active alerts (high leak, reverse flow, zero consumption, etc.) associated with this account within the database along with the time and duration of the alert and any notes associated with this particular alert. This is helpful for those times when an alert is identified such as a high flow alert and investigated by an employee. This employee can note what was found (such as "homeowner filling pool") and then save this information in the event that the customer questions the higher than normal bill down the road.

Individual Account View



To generate custom reports for either an individual account or a group of accounts, a user simply selects a meter(s) and then clicks on the "Generate Report" button or selects "Generate Report" from an individual account page. A user can utilize the reporting feature to generate customizable reports on the interval data for up to 24-months (default standard) of history and for individual meters, or prepare custom reports on multiple meters or groups of meters. These reports can also be saved and scheduled for automatic reporting.

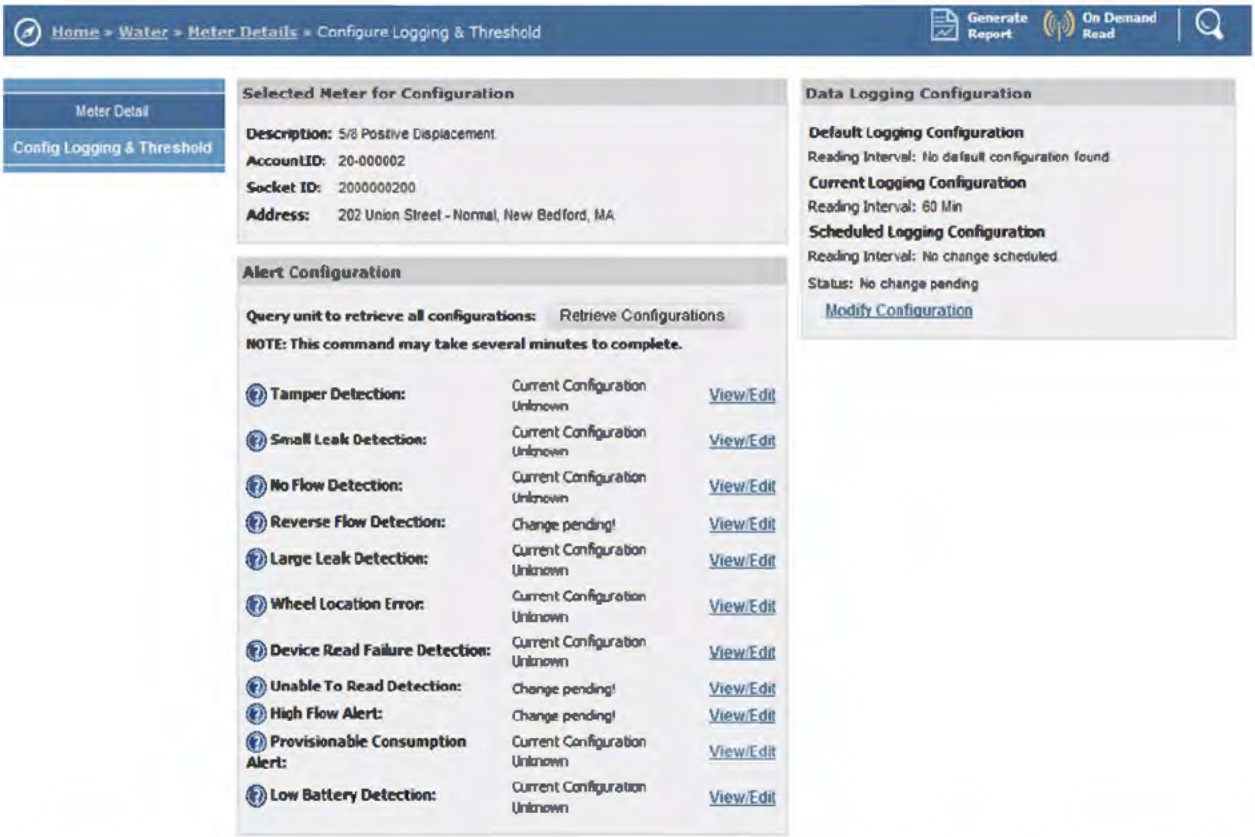
Report Generation Screen



With the Mi.Host UI, Utility users can also utilize "over-the-air" or software-based programming to remotely configure many of the settings within a Mi.Node or group of Mi.Node endpoints in the field. By navigating to a particular account screen and selecting the "Config Logging and Threshold" button, the Utility can configure endpoint based alert settings for issues such as high-leaks or reverse-flows. The Utility can also decide the threshold limits for software-based alerts such as low-leak and no-flow. Alarms are configurable so that changes can be made to the alert settings as watering restrictions and conservation initiative change over time. Mi.Host also supports multiple layers of priority alerting. The Utility can decide which issues are urgent enough to warrant a real-time alert, and which issues can wait to be transmitted along with the next reading. Urgent alerts are set-up to automatically trigger email or text message notifications to Utility personnel, homeowners or consumers, or both.

Provisionable Consumption Alerts are another key programmable feature of the Mi.Net® system. A definable threshold allows Utility staff to monitor large meters based on a defined flow rate instead of just constantly monitoring consumption values. For industrial meters or hospitals where a customer is always using water, traditional leak detection is useless because you expect the meter to always be running which makes it look like the meter always has a leak. With the Mi.Net® system you can turn off the leak detection settings and enable consumption monitoring. Even though the meter is always running, you can set and determine a defined flow rate per hour, day, or week that would indicate abnormal usage. Consumption alarms can be used to monitor either maximum or minimum levels or both at the same time. This allows a staff to monitor drops in usage as well, which may not trigger a non-consumption alarm, but do represent an abnormal drop in usage and revenue to the Utility. This is especially useful for commercial meters or high-volume accounts which represent an important revenue stream.

Configurable Alert Settings

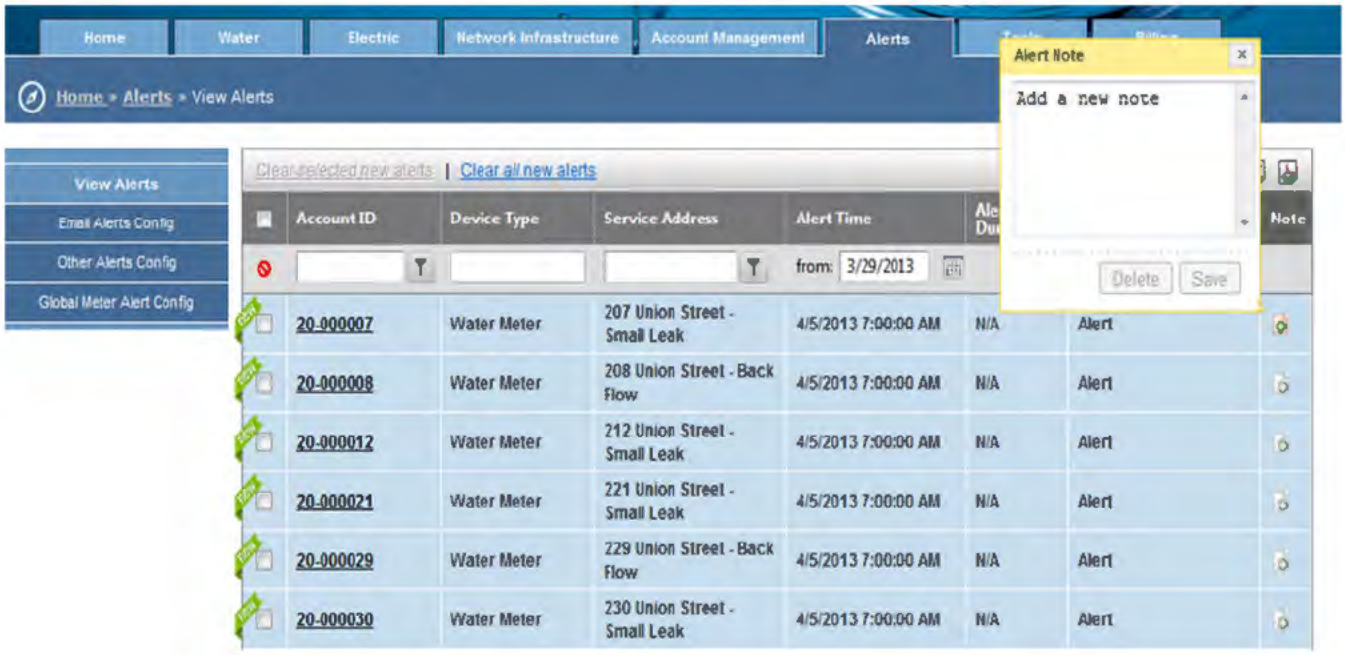


In addition to alert settings, the logging intervals for each Mi.Node can also be remotely configured. While the default setting for each unit is to read and store hourly data, the Mi.Node can be configured to store fifteen or thirty-minute interval data as well. The logging intervals can be remotely programmed to read more granular data for a specific date window, which is especially useful for engineering and conservation studies as well as upon customer request for a more detailed usage pattern analysis, after which the Mi.Node will automatically return to hourly readings to conserve battery life.

These Mi.Node settings can be reprogrammed for an individual meter as shown above, or globally by meter type or size. By utilizing global meter alerts, the Utility can configure different alerts for different meter types such as irrigation meters; reclaim meters, commercial meters, etc. It only makes sense that different customer types use water in different ways and have different needs. Therefore, the priority and type of alerts necessary are also different.

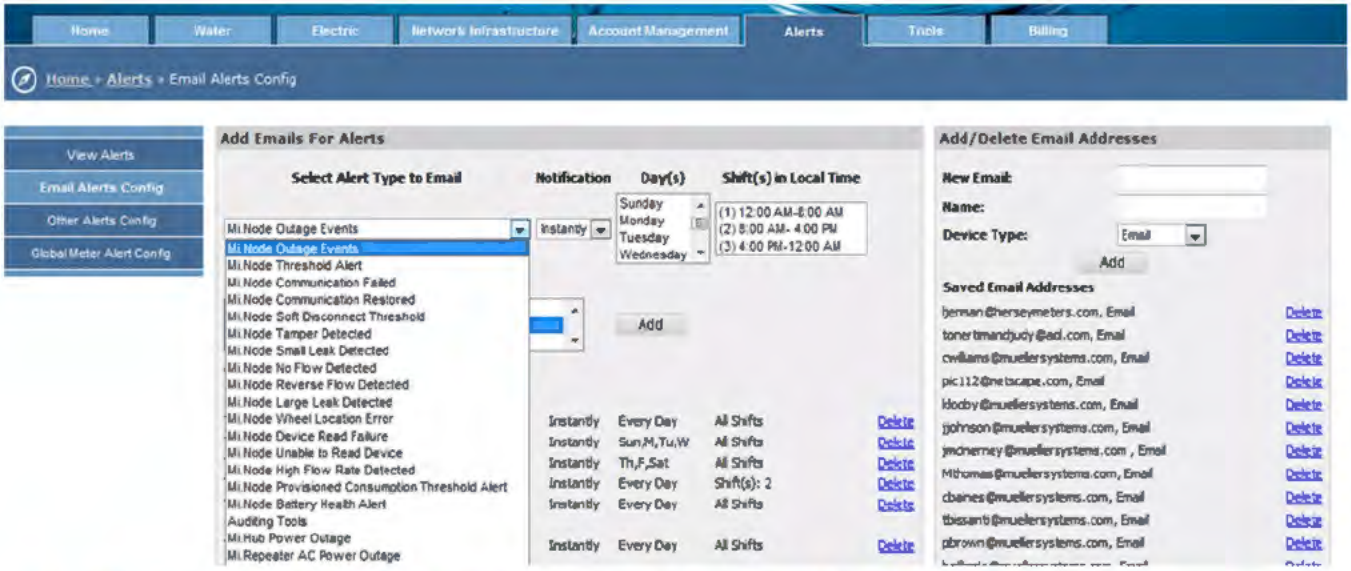
These alerts are immediately viewable in Mi.Host via the Alerts tab. Like the information on the Water tab, Alert information is sortable by a number of logical filters and capable of being exported for reporting. A CSR also has the ability to tag individual alerts with notes specific to that alarm which are then viewable in the Alert History for each individual meter or account.

Alerts Tab



In addition to the ability to remotely configure the alert settings stored at the meter, Mi.Host allows the Utility to configure the way in which the system handles alert notification to both staff and homeowners or consumers. By selecting the "Alerts" tab, a user has the ability to add Utility personnel to the notification list, choose to notify personnel by text or email, and decide which alerts should go to which personnel. This increases efficiency and reduces the total number of "wasted" emails by only sending alerts to the relevant parties. Customer Service can be notified by email for customer leak alerts, Cross Connection Control can be notified by email or text or backflow alarms, Distribution Technicians can be notified for large drops or increases on commercial accounts, Code Enforcement can receive tamper alarms, IT can receive cell health alarms, etc. The Utility can even configure alarm settings differently based on shifts or time of day depending on work schedules or who's on call.

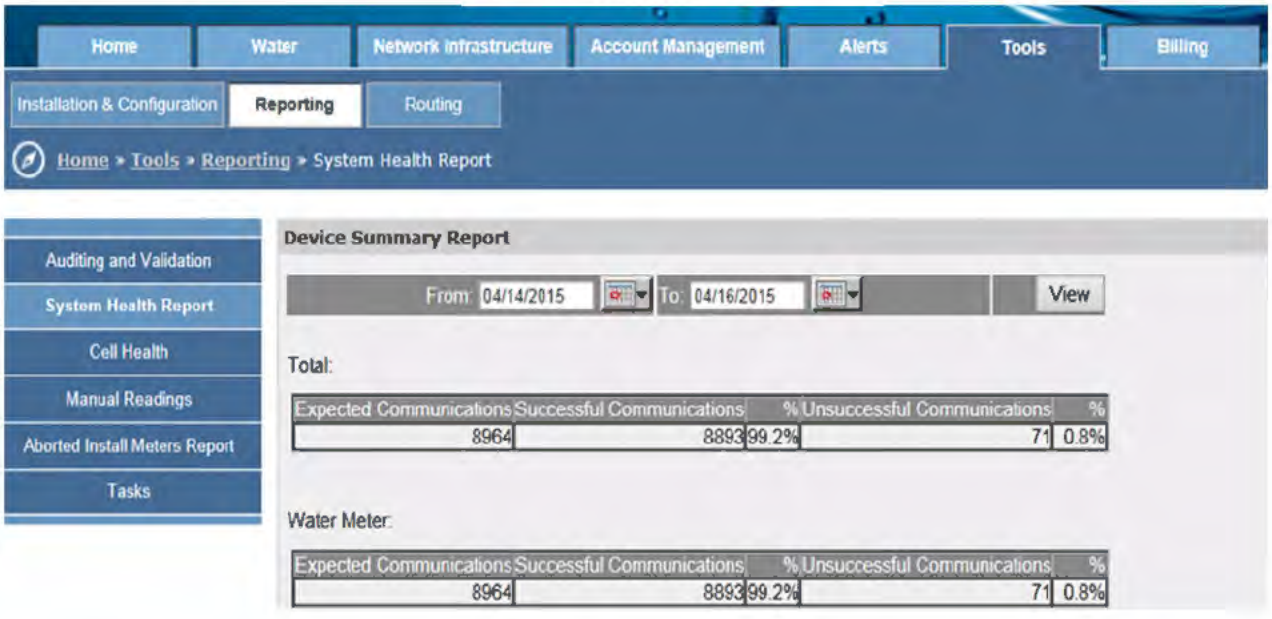
Email Alert Configuration



From the "Tools" Tab a Utility administrator can access a number of useful features for managing and optimizing the Mi.Net® network. This includes the ability to view the overall health of the network or individual cells, verify read rates, communicate with selected Mi.Node endpoints or Mi.Hubs to force time synchs or conduct Remote Firmware Upgrades (RFUs). By using the "Manual Readings" button, staff can load meters or routes onto Mi.Tech handheld devices for manual reads as a backup collection method.

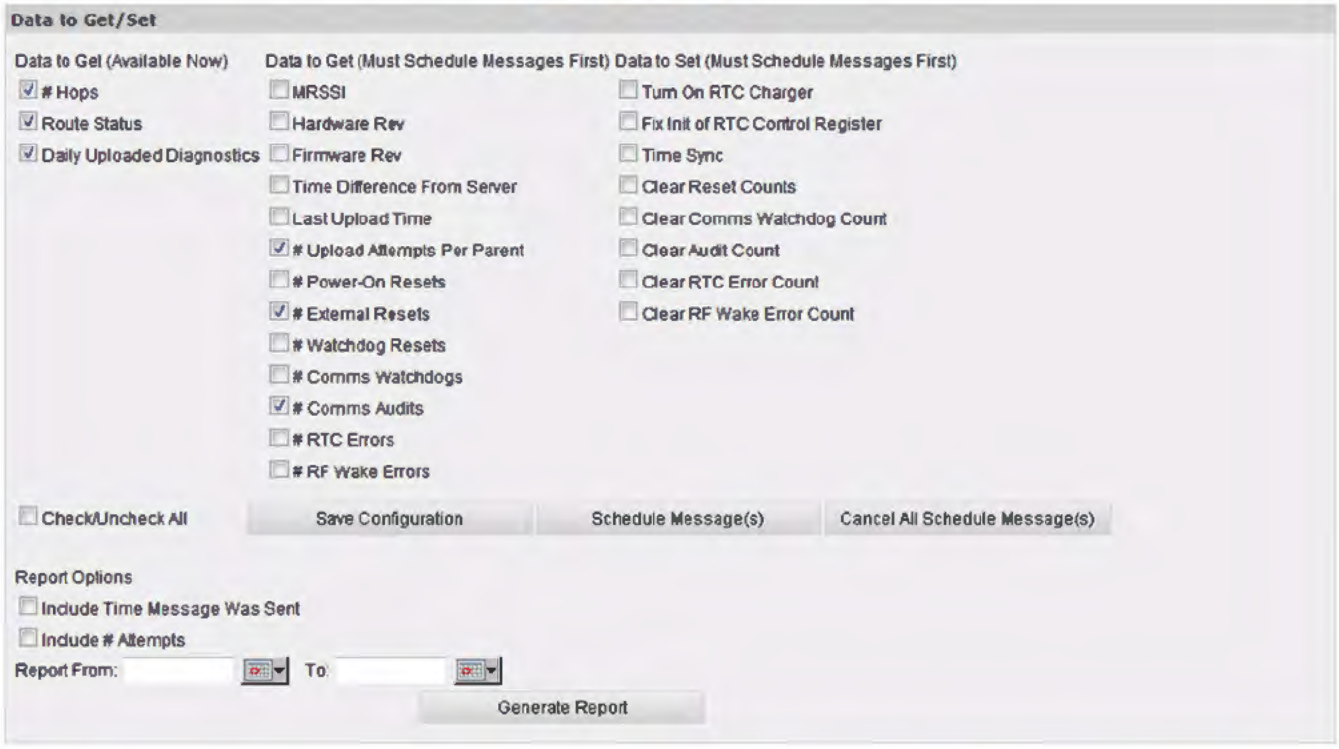
Utility administrators monitoring the health of the network may choose to utilize several of the options from the "Tools" tab. The "System Health Report" will launch a tool to verify the read rate success of the network. This tool not only verifies the overall read rate, but also checks several other programmable measurable to verify the success of all communications within the network.

System Health Report



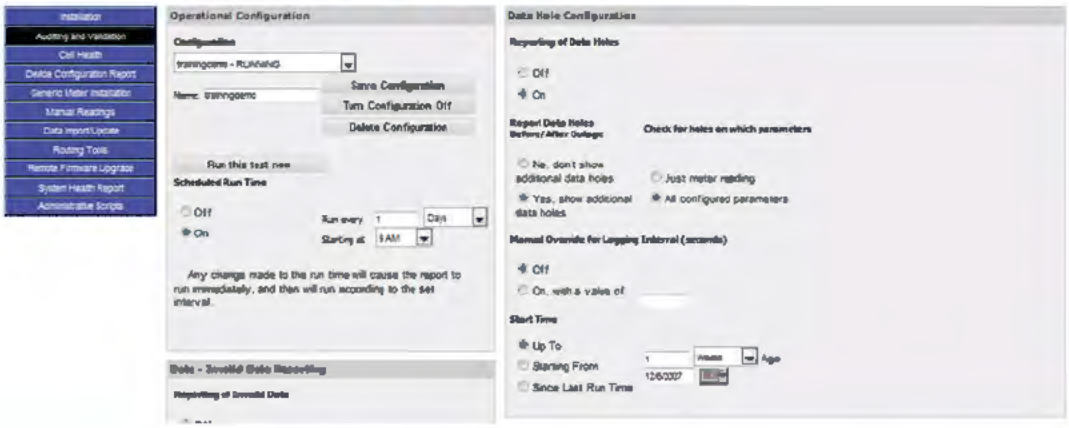
The "Cell Health" tool is used to run reports on the "health" of selected Mi.Node endpoints, Mi.Hubs or other groupings. Health reports include checking things like received signal strength of Mi.Node endpoints, time differences, firmware revisions, wake errors, number of attempts, and external resets as well as others. The Utility can select the meter or group of meters to check, select the dates for reporting and then select "Generate Report" as shown below.

Cell Health Tool



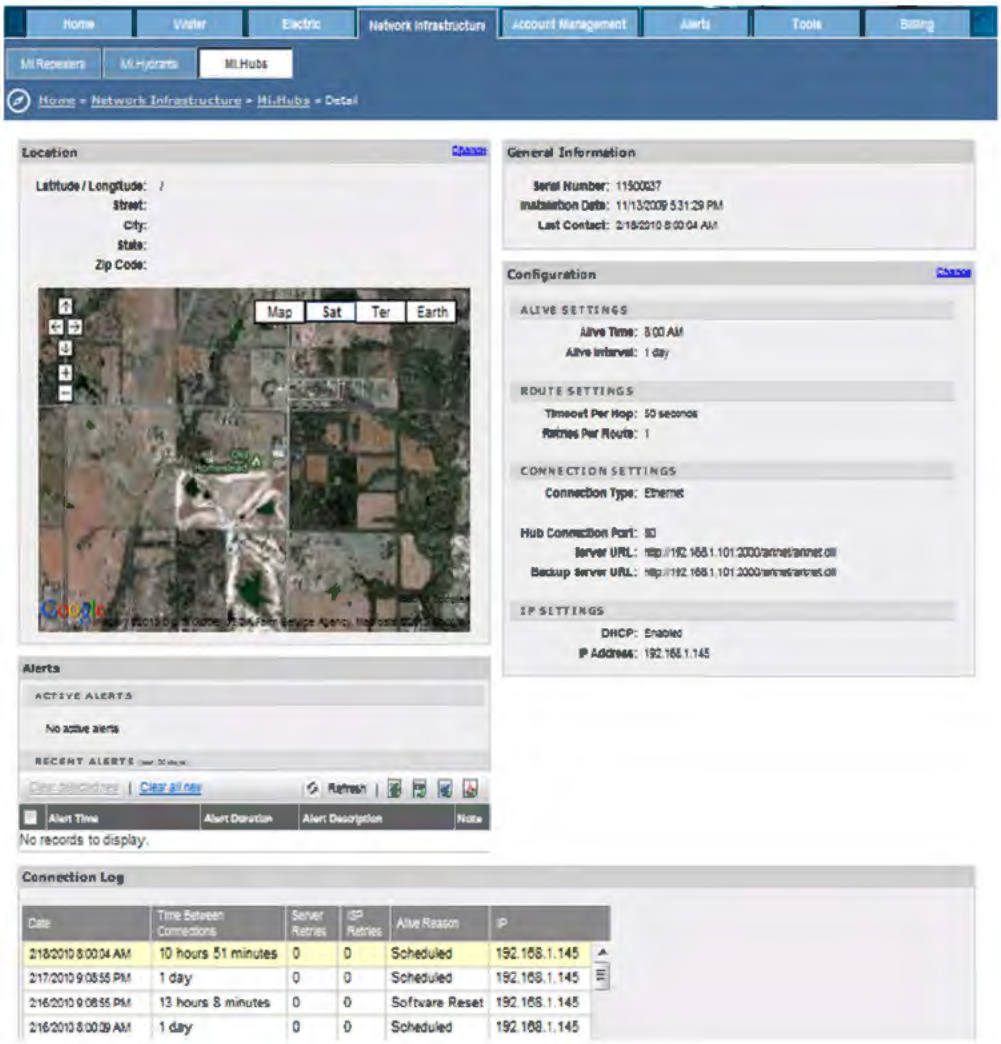
The "Auditing and Validation" tool lets Utility staff configure the way in which the network monitors for health status and the reporting features available at the Mi.Hub units. The Utility can use this tool to set data parameters for violation, data hole checking, monitoring for partial uploads, and Mi.Node endpoints or Mi.Hubs not reporting.

Auditing and Validation Tool



Mi.Host is also utilized to manage the health and status of infrastructure such as Mi.Hub Collectors and network repeaters. The Network Infrastructure tab allows Utility employees to view information such as GPS coordinates, reporting statistics and communication logs for Mi.Hub collectors or battery status for DC powered repeaters.

Network Infrastructure Tab



Mueller Systems understands that deploying the network means that any solution must be able to provide the ability to read meters manually until they are eventually equipped with a Mi.Node transceiver. The Mi.Net® transceiver will allow the Utility to utilize a single meter data management solution and a single interface with CIS.

Mi.Host fully supports the ability to provide both manual and mobile meter read capability both for non-deployed areas of the service grid but also as a backup method of data collection in the event of communication loss between the Mi.Hub collector and the Mi.Host server for an extended period of time.

Mueller Systems puts a heavy emphasis on insuring that the Mi.Net® system meets the ever-changing needs of water utilities. Mueller Systems depends heavily on utilities, like the Utility for guidance and input on what changes and updates are needed to ensure that the Mi.Net® system provides the needed functionality for growing and forward-thinking water utilities. Due to the ever-evolving nature of the system, the ability to upgrade the entire deployed network with the features and enhancements is critical. Remote Firmware Upgrades (RFUs) for both the Mi.Node units as well as all network communication infrastructure, including the Mi.Hubs and repeaters, are an essential part of Mi.Net® or any true two-way AMI system. The ability to conduct an RFU means that the Utility will be able to provide all of its customers the same level of functionality and reliability, regardless of when the meter was installed. RFUs are handled through the "Tools" tab and conducted by the network in the following manner.

1. Mi.Host server sends the upgrade information to each Mi.Hub in the system.
2. Mi.Hubs are responsible for sending upgrades to each Mi.Node as directed by the server.
3. AMI system confirms the success of the upgrade at each Mi.Node and makes a second attempt to upgrade the firmware at any Mi.Node endpoints required.
4. Mi.Node endpoints that fail to upgrade will appear in a report listing all that have not been successfully upgraded.
5. Newly uploaded firmware is checked to ensure it is complete and error free before it is swapped with the existing operating firmware.

The time required for completion depends upon the priority of the upgrade. Generally, firmware upgrade network traffic is assessed a low priority with respect to normal metering data traffic. This approach minimizes impact on day-to-day system operation. Depending on the size of the network and its particular topology, a firmware upgrade may take from days to weeks running as a background task to fully distribute the new image. This rate is acceptable for feature enhancements. If a critical update were required, higher priority is placed to minimize upgrade time. The system supports various methods to control when the new firmware is applied to ensure that stable network operation is maintained during the upgrade process. Cost to the Utility for upgrades for all associated Mi.Net® firmware and software is included as a part of the annual maintenance agreement.

WATERSMART SOFTWARE

With over 100 utilities in 26 states representing over 4 million customer accounts, WaterSmart is the largest and most experienced customer engagement and self-service platform provider in the utility industry with Total Customer Engagement rates of 80%. We serve water suppliers with AMI, AMR, and manual read meter technologies and can accommodate a mix of meter read frequencies (hourly, daily, monthly). Our platform reduces customer support costs, improves operational efficiency and increases customer satisfaction.

Customer Engagement and Self-Service Platform

Utility Analytics Dashboard

The Utility Analytics Dashboard provides powerful analytical insights regarding customer consumption (use by account type, high users, etc.), outbound and inbound communications (outgoing leak or other alerts, incoming emails, etc.), and use of the Customer Portal (visit frequency, device access, most visited pages, etc.) The Dashboard also identifies and notifies Utility staff about suspected leaks in both AMI and non-AMI environments, and allows Utility staff to monitor compliance requirements. The Dashboard delivers information on all customer classes whose data are provided to WaterSmart and integrates external data sources like property records and maps. The Utility Analytics Dashboard is available to all Utility staff, each with their own unique login.

REDUCE SUPPORT CALLS

The water industry's only online leak resolution system, with easy, step-by-step instructions and videos to help customers find and resolve leaks on their own. 40% of customers reported being able to resolve their leak without calling or e-mailing their utility.

REACH MORE CUSTOMERS

Multi-channel leak alerts (e-mail, text, voice, and print) allow utilities to give all their customers the benefits of these valuable, property protecting communications. Leak detection and resolution is available for AMI and non-AMI meters, and with no registration requirement to access alerts, click-thru and resolution rates are industry leading.

DRIVE DIGITAL CONVERSION

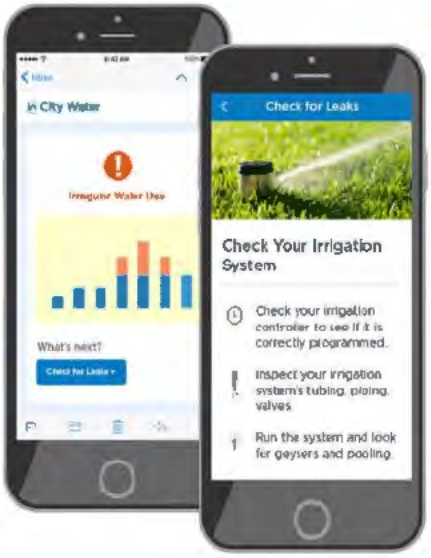
Print leak alerts are an effective tool to reach the 50% of utility customers who haven't provided e-mail information, encourage those customers to register for the Customer Portal, and adopt digital communications channels to reduce communications costs.

INCREASE CUSTOMER SATISFACTION

Leak alerting and resolution is proven to increase customer satisfaction, with over 90% of customers reporting that they find it valuable

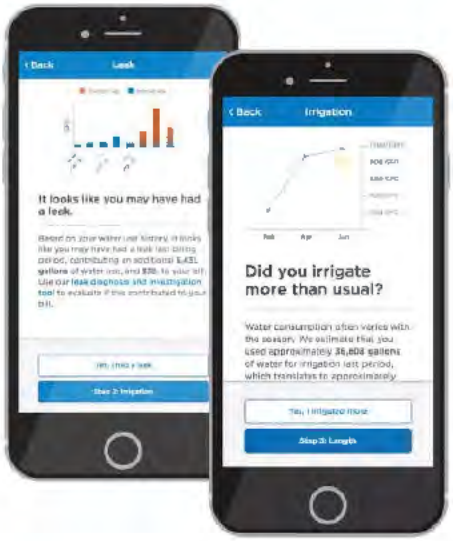
Alerts and Notifications

WaterSmart provides alerts to customers to notify of potential high volume or continuous use leaks, to notify a customer that they have reached a self-selected consumption threshold, or to inform customers before the end of the billing cycle that they are likely to have high water use on their upcoming bill. Threshold notifications and leak alerts are further enabled by AMI, though they are also available for non-AMI customers. Alerts can be sent through multiple channels—email, SMS text message, automated voice call, or print. Burst leak alerts are currently targeted at single-family residential accounts and irrigation-only accounts, whereas continuous leak alerts are available for all meter classes. The leak resolution workflow helps customers identify the source of their leak and resolve the leak on their own.



Bill Explainer

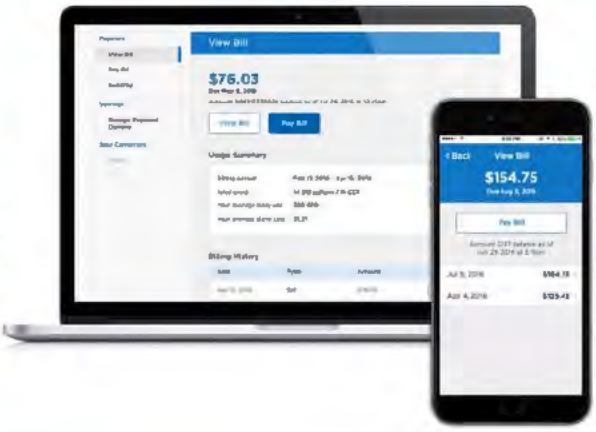
Bill Explainer is a great resource within the Customer Portal, providing automated self-help to customers to identify and resolve concerns over high bills. Bill Explainer analyzes a customer's billing period consumption data in conjunction with their property data and information collected in their Household Profile to provide a personalized assessment of the most likely drivers for their bill amount. Likely causes may include a leak, over-irrigation, a rate increase, or a longer billing period length. Utility staff see the same information as the customer on the Utility Dashboard, supporting their efforts to respond to customer calls about perceived high bills in a faster, more satisfying manner.



Group Messenger & Lists

Group Messenger is a module within the Utility Analytics Dashboard that allows rapid delivery of targeted, timely, and topical messages to groups of customers. The integrated 'Lists' tool allows the Utility to create a custom list of accounts to analyze or communicate with. The Utility can use Group Messenger and Lists to reach out to the highest users, inform a defined geographic region of a boil water notice or service outage, target watering day violators with a message to check their irrigation controller (AMI only), and more. Group Messenger supports multiple communication channels, including email, SMS text, and automated voice.

Electronic Bill Presentment



WaterSmart's Electronic Bill Presentment is a convenient option for Utility customers who want to view their bills online and link seamlessly to their bill payment site. Integrated water consumption and bill information gives Utility customers context on their water use and a better understanding of the value of water services. The Utility will gain persistent savings by avoiding print costs, encouraging on-time payments, and answering fewer billing-related support calls.

Optional Product Solutions & Services

Customer Letter

Water utilities can optionally send a Customer Letter to explain the WaterSmart program and its benefits to end-use customers. The Customer Letter is branded for the Utility including logo, contact information, and a signature line from an appropriate representative, and informs recipients about the program and what they can expect to receive.

Water Reports

Water Reports are personalized, informative, carefully designed reports that help Utility customers better understand their water use and the cost and effort it takes the Utility to deliver high quality and reliable water services. Water Reports can be sent via mail or email to any account type, and may be targeted to certain accounts, sent to randomly selected accounts as part of a randomized control trial, or sent to all of a Utility's customers. Every Water Report is customized by our proprietary content personalization to tailor messages and recommendations specifically to each end-user.

Print Leak Alerts

Print Leak Alerts help utilities reduce the amount of time they spend manually contacting customers about leaks. If no email address is on file for a customer, Print Leak Alerts ensure that if a leak has been detected, a print alert is sent via mail to the customer's address. Print Leak Alerts are available to AMI Single Family Residential and Irrigation-Only customers.

Spanish Language Availability

If selected by Utility (as noted in the Program at a Glance), the WaterSmart Customer Portal is available in English and Spanish, and in any other languages specifically noted in the Program at a Glance. A customer can change their preferred language within the Portal. Payment pages may not be available in languages beyond English depending on availability from payment provider. Take Action Recommendations may not be available in languages beyond English. Customer Welcome Letters can be sent with messages in multiple languages (subject to space and character constraints). Translated text must be provided by
Utility.

Payment Website Integration with Single Sign-On (SSO) or Click-Through Registration

WaterSmart can provide log-in to our customer Portal using third party credentials (i.e. billing provider or other government website registration information) through SSO (Single Sign-On) using the SAML 2.0 or OAUTH2 protocol, as well as Facebook Connect. This provides for bi directional, seamless registration to multiple portals using a single set of credentials. Optionally WaterSmart supports Click-Through Registration for uni-directional sign-on from a third party site to WaterSmart using a URL redirect with key-based encrypted data[1]

1 Click-Through Registration can be configured FROM WaterSmart TO 3rd party site (e.g. payments site) IF the 3rd party site can provide us with a published, documented protocol.

SOFTWARE INTEGRATION

Securing a state-of-the art AMI system shouldn't risk previous investment in legacy software tools such as customer information software (CIS), ESRI geographic information software (GIS), asset management, work order management (WOMS), or other systems. Mueller Systems can help the Utility leverage these platforms and provide the highest level of service through a well thought out system integration plan. Mueller can support open architecture communications through a multitude of formats such as flat file, FTP, GP, XML, API and others. Mueller Systems is certified in industry standard integration languages such as MultiSpeak and can also write custom interfaces.

When implementing Mi.Host, it must interact with the CIS or billing system. Mi.Host fully supports the meter to cash process for the utility, so billing interfaces can be automated or executed via the Mi.Host user interface manually.

All meter data is stored within the Mi.Host dedicated database residing on the host server. As shown in the diagram below, metered data is then available to provide the basis for all billing calculations each billing cycle. The billing data will be provided by Mueller Systems in a mutually agreed upon integration format for the utility's CIS. Mueller Systems will work closely with the Utility prior to installation to determine the best method of transferring data. There are no restrictions as to file transfer protocol (FTP/PGP). The billing output information is automatically sent to CIS where the data is processed, and the customers' bills are calculated, printed, and readied for mailing. This represents the complete cycle of gathering a customer's usage data and sending the customer a bill for that usage automatically and without the introduction of human intervention and inevitable error into the process.

Transfer of data from Mi.Host to CIS supports CIS as the primary system of record for customer billing data. The Utility' Customer Service Representatives (CSR) access CIS for billing issues, exceptions, or questions. If examination of the detailed meter data is required in order to respond to customer inquiries or solve billing investigations, the CSR can access Mi.Host via a web browser, then drill down to retrieve this information.

Mi.Host can also be integrated with an asset management and work order management systems such as currently used by the utility. Mi.Host supports standard APIs such as MultiSpeak that can be used to integrate systems.

SOFTWARE HOSTING SERVICES

For utilities who select the Mi.Net® AMI Network, Mueller Systems provides the option of both on-premise and Software-as-a-Service (hosted) solutions.

For utilities who wish to purchase and maintain the data servers and software, Mueller Systems offers a perpetual license for all applications to run on Windows® based server platform and Microsoft SQL. For the utility, Mueller Systems would recommend Dell® PowerEdge servers or any other Windows SQL 2008 compatible server, typically a Dell PowerEdge 905 with 2 CPUs with both database and web application servers. The Mi.Host database server runs SQL Server 2008, 64-bit Enterprise Edition. Microsoft IIS 7 or later is required for the web server.

However, due to the increased benefits of cloud-based computing and the cost of managing and replacing expensive servers, more and more utilities are opting to select Mueller Systems hosted model for software. We are proposing a Hosted Solution for the utility as by utilizing this service, the Utility would utilize Mueller Services Tier 3 Data Center located in Atlanta, GA. This state of the art data storage facility provides climate-controlled facilities along with redundant lines of communication to provide the Utility *the most secure and reliable* data services available on the market. Since all Mi.Net® software platforms are web-based, the utility will have the exact same levels of software access and capability with any IP enabled device in either an on-premise or hosted environment.

Mueller Systems has teamed with INAP®, an industry leading IT infrastructure Provider to provide secure data storage and lightning fast access for hosted networks. INAP®'s scalable Managed Hosting solution is supported by its Performance IP service, which ensures fast, reliable Internet connectivity. Performance IP leverages numerous major carrier networks worldwide to provide diverse Internet routes in conjunction with INAP® 's patented Managed Internet Route Optimizer technology, which analyzes network performance characteristics to deliver customer traffic over the fastest, most reliable networks available in real-time.

Mueller Systems SSM

Solid State Meter
Sizes 5/8" x 3/4" and 3/4" Short; 3/4" Long; and 1"

APPLICATIONS: The Mueller Systems solid state meter (SSM) is available in 5/8" X 3/4" through 2" sizes. The SSM meter provides 8 digits of granular data for visual reads and 8 digits in encoded electronic format for use in Mueller Systems Mi.Net AMR/AMI applications. The meter can be used in any residential or commercial application where a high degree of accuracy at low flow rates is important.

Construction: The SSM meter utilizes a low lead copper alloy body with a polymer measuring tube and patented stainless steel reflectors. A heat treated glass lens and polymer lid and surround provide protection for the liquid crystal display. 3.6 volt lithium batteries provide power for the processor for 20 years of life. All internal electronics are potted to prevent water intrusion in the toughest environments.

Operation: The SSM meter utilizes ultrasonic measurement technology to provide outstanding accuracy across a broad flow range with extremely low pressure loss. The static meter design means there are no moving parts inside the meter so it will not degrade in accuracy over the life of the meter due to mechanical wear, providing exceptional revenue for years to come.

With starting flow rates as low as 0.017 GPM and ultra-low flow accuracy of 95% at 0.05 GPM on the 5/8' X ¾" and ¾" short sizes, the SSM is capable of wringing every drop of revenue from your system and detecting the smallest leaks and backflow conditions. The stainless steel reflectors and measuring tube design channel water over the reflectors to keep them free of debris and increase the velocity of the water as it passes through the tube, contributing to the high degree of meter accuracy.

The display provides large numerals and icons that permit verification of the 8 digit meter volume as well as direction of flow, error and alarm status, and battery life. A unique, never duplicated 8 digit serial number on the SSM meter faceplate and lid identifies it as the basis for all systems communication. The register face plate and housing provide visual information specific to the registration units, model, size, date of manufacture, and billing units, to provide verifiable and retrievable data in the event it is required.

CONFORMANCE TO STANDARDS: Mueller Systems SSM meter complies with AWWA C-700 requirements for accuracy and odometer wheel height as well as the American Standard Code for Information Interchange or ASCII.

OPERATION: When interrogated by a Mueller Systems AMR/AMI device, the SSM meter communicates the unique 8 digit serial number and 8 digit electronic reading in ACSII format where it can be recorded and maintained within the reporting structure of the AMR/AMI system. In the event that field testing is required, an optical button located on the display faceplate can be utilized to place the meter in test mode which provides excellent resolution for testing purposes.

MAINTENANCE: The Mueller Systems SSM meter is designed and manufactured to provide a 20 year service life with virtually no maintenance required. Meter lids are available as replacement components in the event of vandalism or the need for meter retrofits.

Mueller Systems Solid State Meter
5/8" X 3/4" - 1"

Materials and Specifications

MODEL	Solid State Meter (SSM)
REGISTER TYPE	Solid State Encoder Register
SIZES	5/8" through 2" Ultrasonic Meters
STANDARDS	Manufactured and tested to meet or exceed all applicable accuracy and pressure loss requirements of the AWWA C-700 standard and the American Standard Code for Information Interchange (ASCII)
TEMPERATURE OPERATING RANGE	34°F to 158°F
STORAGE TEMPERATURE RANGE	-4°F to 158°F
WATER TEMPERATURE RANGE	34°F to 140°F
CONNECTION OPTIONS	18" Nicor Connector, 5' or 25' flying lead wire, with factory potted connections
MATERIALS	Processor/register housing and lid - thermoplastic; Register lens – heat treated, tempered glass; LCD, polymer measuring tube, SST reflectors
AMR/AMI COMPATIBILITY	Mi.Net AMR/AMI system, and other AMR/AMI systems that can utilize the standard 8 digit encoder protocol output.

Mueller SYSTEMS

Solid State Meter
Sizes 5/8" x 3/4" and 3/4" Short; 3/4" Long; and 1"

GENERAL TECHNICAL DATA

	5/8" – 3/4" – 1"
Medium temperature range	°F 34 ... 122
Ambient operating temperature	°F 34 ... 158
Ambient storage temperature	°F -4 ... +140 (>90° F max. for one hour)
Maximum pressure	psi 200
Power Supply	3.6 VDC lithium battery
Battery Lifetime	20 years
Interfaces	Industry standard Encoder protocol, ASCII output for compatibility with all AMR/AMI systems
Data Storage	Alarms and consumption values
Protection class	IP 68

TECHNICAL DATA DISPLAY

	5/8" – 3/4" – 1"
Display Indication	LCD, 8-digit
Units	Flow and volume (GPM, gal, Ft^3)
Values displayed	Volume - flow - reverse flow - water temperatures - display test - error and alarm status - battery lifetime
Values transmitted	8 digit electronic resolution only

APPROVAL

	5/8" – 3/4" – 1"
NSF	Complies with NSF/ANSI Standard 61, Annex F/G
AWWA	Meets or exceeds applicable sections of the AWWA/ANSI C700 Standards
FCC	Complies with FCC part 15 B

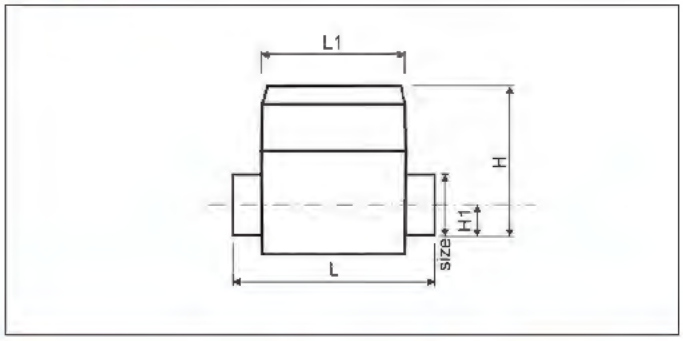
MATERIAL

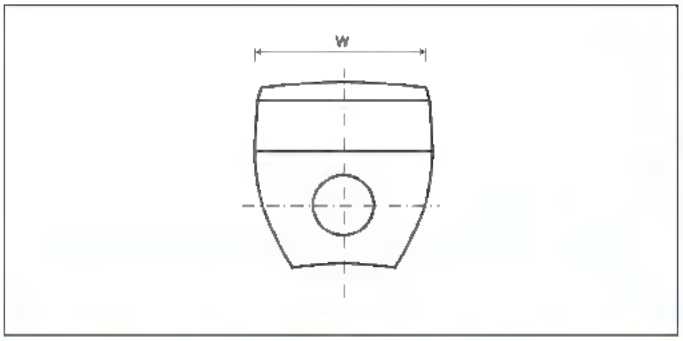
	5/8" – 3/4" – 1"
Measuring pipe	Lead-free copper alloy "CUPHIN®"
Register Housing	Engineered Polymer
Transducers	Composite
Reflectors	Stainless steel

Mueller Systems SSM

Solid State Meter
Sizes 5/8" x 3/4" and 3/4" Short; 3/4" Long; and 1"

DIMENSIONS

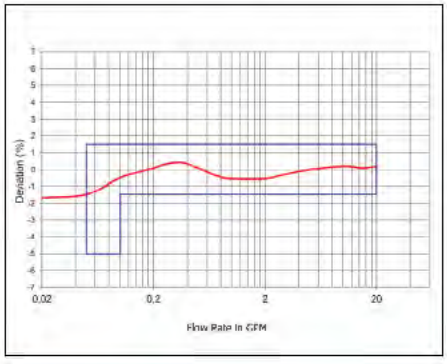




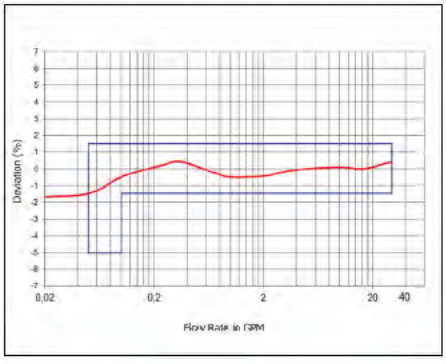
SIZE			5/8" X 3/4"	3/4" S	3/4" L	1"
LAY LENGTH	L	INCH	7.5"	7.5"	9.0"	10.75"
Register Length	L1	INCH	3.5"	3.5"	3.5"	3.5"
Register width	W	INCH	3.7"	3.7"	3.7"	3.7"
Heigth to center of pipe	H	INCH	4.0"	4.0"	4.0"	4.2"
Heigth to center of pipe	H1	INCH	1.3"	1.3"	1.3"	1.4"
Nominal thread size			1"-11.5 NPSM	1"-11.5 NPSM	1"-11.5 NPSM	1.25"-11.5 NPSM
Net weight		Lb.	2.8	2.8	3.1	3.5

TYPICAL FLOW CHARTS

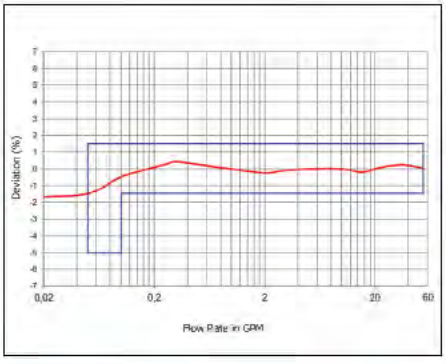
Typical Flow Chart 5/8" Mueller Systems SSM



Typical Flow Chart 3/4" Mueller Systems SSM



Typical Flow Chart 1" Mueller Systems SSM



TECHNICAL DATA

SIZE			5/8" X 3/4"	3/4" S	3/4" L	1"
LAY LENGTH	L	INCH	7.5	7.5	7.5	10.75
Operating Flow Range		GPM	0.1 - 20	0.1 - 30	0.1 - 30	0.4 - 55
Low Flow Range		GPM	0.05 - 0.1	0.05 - 0.1	0.05 - 0.1	0.25 - 0.4
Operating Range accuracy		%	±1.5	±1.5	±1.5	±1.5
Low Flow Range accuracy		%	-5 / ±1.5	-5 / ±1.5	-5 / ±1.5	-5 / ±1.5
Pressure Loss			2.0 psi at 15 GPM	2.0 psi at 15 GPM	2.0 psi at 15 GPM	1.5 psi at 25 GPM
Operating Performance			In the temperature range of 45 to 85° F, meter consumption measurement is accurate to ±1.5% over the normal flow range (reference: approved test bench, ISO9001 certified.			

Mueller Systems SSM

Solid State Meter
Sizes 1½" & 2"

SSM 1.5" & 2"

APPLICATIONS: The Mueller Systems solid state meter (SSM) is available in 5/8" X 3/4" through 2" sizes. The SSM meter provides 8 digits of granular data for visual reads and 8 digits in encoded electronic format for use in Mueller Systems Mi.Net AMR/AMI applications. The meter can be used in any residential or commercial application where a high degree of accuracy at low flow rates is important.

Construction: The SSM meter utilizes a low lead copper alloy body with a polymer measuring tube and patented stainless steel reflectors. A heat treated glass lens and polymer lid and surround provide protection for the liquid crystal display. 3.6 volt lithium batteries provide power for the processor for 20 years of life. All internal electronics are potted to prevent water intrusion in the toughest environments.

Operation: The SSM meter utilizes ultrasonic measurement technology to provide outstanding accuracy across a broad flow range with extremely low pressure loss. The static meter design means there are no moving parts inside the meter so it will not degrade in accuracy over the life of the meter due to mechanical wear, providing exceptional revenue for years to come.

With ultra-low flow accuracy of 95% at 0.08 GPM on the 1-1/2" sizes, the SSM is capable of wringing every drop of revenue from your system and detecting the smallest leaks and backflow conditions. The stainless steel reflectors and measuring tube design channel water over the reflectors to keep them free of debris and increase the velocity of the water as it passes through the tube, contributing to the high degree of meter accuracy.

The display provides large numerals and icons that permit verification of the 8 digit meter volume as well as direction of flow, error and alarm status, and battery life. A unique, never duplicated 8 digit serial number on the SSM meter faceplate and lid identifies it as the basis for all systems communication. The register face plate and housing provide visual information specific to the registration units, model, size, date of manufacture, and billing units, to provide verifiable and retrievable data in the event it is required.

CONFORMANCE TO STANDARDS: Mueller Systems SSM meter complies with AWWA C-700 requirements for accuracy and odometer wheel height as well as the American Standard Code for Information Interchange or ASCII.

OPERATION: When interrogated by a Mueller Systems AMR/AMI device, the SSM meter communicates the unique 8 digit serial number and 8 digit electronic reading in ACSII format where it can be recorded and maintained within the reporting structure of the AMR/AMI system. In the event that field testing is required, an optical button located on the display faceplate can be utilized to place the meter in test mode which provides excellent resolution for testing purposes.

MAINTENANCE: The Mueller Systems SSM meter is designed and manufactured to provide a 20 year service life with virtually no maintenance required. Meter lids are available as replacement components in the event of vandalism or the need for meter retrofits.

Mueller Systems Solid State Meter
Sizes 1½" & 2"

Expected availability for 1.5" and 2" SSM meters is second quarter of 2018.

Materials and Specifications

MODEL	Solid State Meter (SSM)
REGISTER TYPE	Solid State Encoder Register
SIZES	5/8" through 2" Ultrasonic Meters
STANDARDS	Manufactured and tested to meet or exceed all applicable accuracy and pressure loss requirements of the AWWA C-700 standard and the American Standard Code for Information Interchange (ASCII)
TEMPERATURE OPERATING RANGE	34°F to 158°F
STORAGE TEMPERATURE RANGE	-4°F to 158°F
WATER TEMPERATURE RANGE	34°F to 140°F
CONNECTION OPTIONS	18" Nicor Connector, 5' or 25' flying lead wire, with factory potted connections
MATERIALS	Processor/register housing and lid - thermoplastic; Register lens – heat treated, tempered glass; LCD, polymer measuring tube, SST reflectors
AMR/AMI COMPATIBILITY	Mi.Net AMR/AMI system, and other AMR/AMI systems that can utilize the standard 8 digit encoder protocol output.

GENERAL TECHNICAL DATA

	1.5" and 2"
Potable water temperature range	°F 34 ... 122
Ambient operating temperature	°F 34 ... 158
Ambient storage temperature	°F -4 ... +140 (>90° F max. for one hour)
Maximum pressure	psi 300
Power Supply	3.6 VDC lithium battery
Battery Lifetime	20 years
Interfaces	Industry standard Encoder protocol, ASCII output for compatibility with all AMR/AMI systems
Data Storage	Alarms and consumption values
Protection class	IP 68
Operating performance	In the temperature range of 45 to 85° F, meter consumption measurement is accurate to ±1.5% over the normal flow range (reference: approved test bench, ISO9001 certified.

TECHNICAL DATA DISPLAY

	1.5" and 2"
Display	LCD, 8-digit
Units	Flow and volume (GPM, gal, Ft³)
Values displayed	Volume - flow - reverse flow - water temperatures - display test - error and alarm status - battery lifetime
Values transmitted	8 digit electronic resolution only

APPROVAL

	1.5" and 2"
NSF	Complies with NSF/ANSI Standard 61, Annex F/G
AWWA	Meets or exceeds applicable sections of the AWWA/ANSI C700 Standards
FCC	Complies with FCC part 15 B

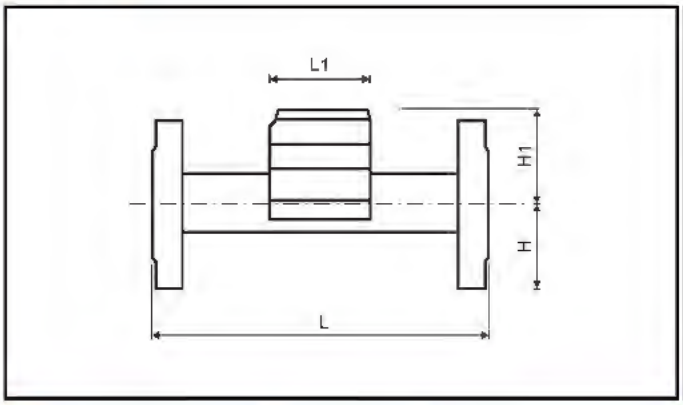
MATERIAL

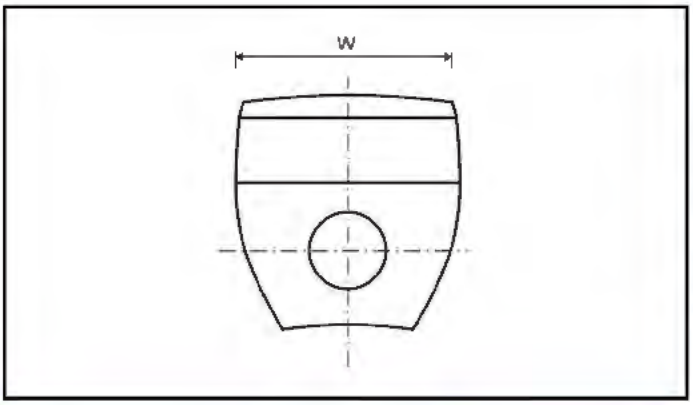
	1.5" and 2"
Measuring pipe	Lead-free copper alloy "CUPHIN®"
Register Housing	Engineered Polymer
Transducers	Composite
Reflectors	Stainless steel

Mueller Systems SSM

Solid State Meter
Sizes 1½" & 2"

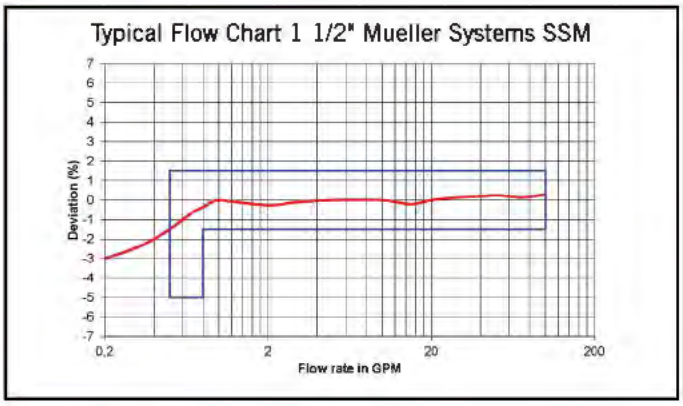
DIMENSIONS

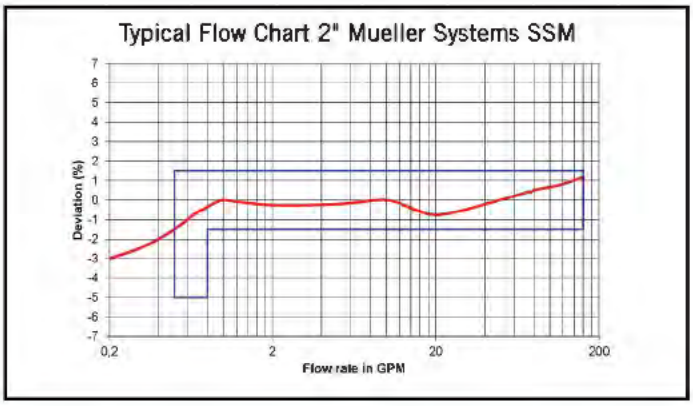




SIZE			1.5"	2" L
LAY LENGTH	L	INCH	13"	17"
Register Length	L1	INCH	3.5"	3.5"
Register width	W	INCH	3.75"	3.75"
Heigth to center of pipe	H1	INCH	2"	2.5"
Heigth to center of pipe	H1	INCH	3.3"	3.3"
Net weight		Lb.	14.1	19.2

TYPICAL FLOW CHARTS





TECHNICAL DATA

SIZE			1.5"	2" L
LAY LENGTH	L	INCH	13"	17"
Operating Flow Range		GPM	0.8 - 100	0.8 - 160
Low Flow Range		GPM	0.5 - 0.8	0.55 - 0.8
Operating Range accuracy		%	±1.5	±1.5
Low Flow Range accuracy		%	-5 / ±1.5	-5 / ±1.5
Pressure Loss			3.5 psi at 70 GPM	3.6 psi at 110 GPM

Mi.Net® Mueller Infrastructure Network

Mi.Node Meter Interface Unit

Mueller SYSTEMS

Features

TWO WAY COMMUNICATIONS: The Mueller Systems Mi.Node meter interface unit provides a direct connection to all Hersey water meters equipped with a Translator® encoder register. The primary function of the Mi.Node is to provide full, two way communications between the **Mi.Net** Fixed AMI System and the smart meter.

SYSTEM COMPONENTS: Information retrieved from a water meter is stored temporarily within the Mi.Node unit's internal memory. As a default, the Mi.Node will transmit hourly meter data at a predetermined time once per day to the Mi.Hub collector. On demand reads to the Mi.Node can been requested at any point in time and are typically delivered within seconds. This data is sent to a Mi.Hub collector via an unlicensed radio frequency and then relayed to the **Mi.Net** host server for analysis and storage. The Mi.Node utilizes advanced noise filtering technology that allow the Mi.Net System to maximize range while keeping infrastructure to a minimum. Multiple routing routing options for each Mi.Node unit ensure that the data will be retrieved by the server.

CONSTRUCTION: The Mi.Node unit incorporates multiple moisture barriers to eliminate concerns over moisture intrusion even in meter box environments. An o-ring sealed thermoplastic enclosure, coated electronic board and potting compound provide a watertight package that permits Mueller Systems to offer a 20 year warranty on the Mi.Node unit. A large lithium ion battery provides plenty of power over the life of the unit.

SCALABLE AND UPGRADABLE: Other Mi.Node modules provide connectivity to electric meters. The various models of Mi.Node meter interface units allow the **Mi.Net** System to provide robust and efficient AMI, water and energy conservation solutions for all types of residential and commercial applications.

The Mi.Node's functionality can be upgraded remotely. A firmware upgrade made over the **Mi.Net** network allows the Mi.Node to be upgraded autonomously. All system Mi.Node units can be scheduled for an upgrade at one time and the system will notify the user when the process is complete.

The Mi.Node seamlessly connects directly to the Mueller Remote Disconnect (RDM) meter for easy but secure actuation of the valve through the user interface.

Materials and Specifications

Interfaces with water meters that output a protocol similar to the Mueller Systems Translator
Logs and stores meter data in internal memory
Automatically detects encoder meter type connected
No external power supply required for operation
Notifies the system of low battery level for preemptive maintenance
RF antenna contained inside Mi.Node unit enclosure
FCC compliant
Mi.Node Wire Lengths To Translator 3', 15', or 25'
Power Source D Cell Lithium Battery
Transmit Frequency 902 Mhz – 928 Mhz
Data Integrity Verified with every data message
Temperature Range: -40°F to + 158°F (-40°C to + 70°C)
Humidity:0% - 100% condensing
Dimensions 6-5/8" high x 2-15/16" wide x 3-3/8" deep

Mi.Net® Mueller Infrastructure Network

Mi.Hub and Mi.Hub XR-R Data Collectors

Mueller SYSTEMS

Features

OVERVIEW: The Mueller Systems **Mi.Hub** and **Mi.Hub** XR-R data collectors enable efficient, robust data acquisition across the **Mi.Net®** Mueller Infrastructure Network for Utilities by providing for long range wireless communications from originating **Mi.Nodes** to the user's **Mi.Net** Software Platform. The wide range provides an extended coverage area and dramatically reduces system cost and maintenance.

The **Mi.Hub** product family enables full two-way radio frequency (RF) communication between water meters equipped with Translator encoder registers, **Mi.Node** W meter interface modules, **Mi.Node** E electric modules and the **Mi.Host** server. Collectors are equipped with a large array of non-volatile memory and are able to take advantage of unique multi-path routing innovation that provides redundant paths to transfer information across the network. This results in resilient communications, a robust network and ultimately peace of mind for the user.

REAL TIME DATA: The **Mi.Hub** collector automatically receives data from Mi.Node modules at prescheduled intervals or "on demand" providing real-time updates from all or selected nodes. The stored data is then transferred to the **Mi.Host** server, where it immediately provides utility personnel with node status, system reports and usage analytics. Collection intervals can be adjusted in order to pinpoint usage issues.

SECURE COMMUNICATION: A variety of options for **Mi.Hub** collector communication are available. Wired network connections (Ethernet, fiber, DSL), wireless cellular or any existing network infrastructure are all supported to fully utilize available utility assets to communicate to users. One **Mi.Hub** collector can support up to 10,000 individual water or electric meters. **Mi.Hub** communications are heavily encrypted to ensure security and guard against theft or corruption of data.

AC powered **Mi.Hub** collectors are directly powered from a 120-240VAC source and contain a rechargeable backup battery capable of powering them for up to eight hours during a power outage. DC powered **Mi.Hub** collectors are powered from any 12V DC source or from an attached solar panel and battery.

MI.HUB XR-R OPTION: The Mueller Systems **Mi.Hub** XR-R extended range data collector system presents all of the features of the **Mi.Hub** radio combined with the addition of an external long range amplifier module for extending the wireless radius of the collector. This simplifies system layout and dramatically reduces system cost and installation time because fewer collectors are required to cover a given geography. The remotely installed power amplifier unit is powered off of the **Mi.Hub** base unit, through the RF cable, which reduces the wiring cost and installation overhead.

All **MiHub** and **Mi.Hub** XR-R collectors are enclosed in rugged, weather proof enclosures that can be mounted in virtually any location.

Mi.Hub Data Collector

Mi.Hub XR-R remote amplifier box installed on top of tower locations

Benefits

- AC 120v or 12vDC solar
- Increases operational efficiency
- Accounts for non-revenue water and electricity consumption
- Reduces utility system operating cost and dramatically decreases installation and maintenance expense
- Easy mounting options for pole, tower or building mounting
- Enables robust and resilient network communications
- Enables instant remote access to usage and demand data
- Large data capacity for storing weeks of data across thousands of meters
- Seamless interoperability with all existing **Mi.Net** devices
- Backup battery keeps system fully operational even during power outages
- Optionalsolar photovoltaic module eliminates need for external power
- Reduces carbon footprint

See Specifications on next page

Dalworthington Gardens, (TX) — Mi.Net M Propagation Study

Study Details

Available Information

- Water Towers available in service area
- Groundwater Storage Tanks available in service area
- ~1,079 Water Meters (100% Plastic pits)

Estimated Infrastructure Requirements

- Two (2) Multi-Network Collectors (on Water Tower and Water Storage Tank)
- Five (5) DCXR Repeaters (on 10' Sign Poles)

Assumptions

- ~1,079 meter locations were provided to Mueller Systems for this study. Additional meter locations provided after this study may require additional infrastructure.
- Study assumes all water meters mounted through plastic pit lids. Nodes must be mounted through the lid with a Mueller TTLH adapter.
- Areas with low signal strength may require additional infrastructure.
- Assets proposed for infrastructure locations will require a site survey to determine any nearby assets/locations viable for infrastructure placement. After site survey, if there are no viable assets, study will need revision.
- **For asset assumptions see pages labeled 'Infrastructure Installation notes and assumptions'.**

Performance Goals

- RF Coverage of installed base of meter/modules to be at 100%
- Read rate of at least 98.5% over a 3-day window of the installed base of active meter/modules.

Note:

This RF propagation study was conducted using the available information and assumptions stated in this document. Quantities and infrastructure locations are subject to change after detailed site survey following award.

Dalworthington Gardens, (TX) — Mi.Net M Propagation Study

Multi-Network Collector Locations

EXISTING ASSETS:

Type	Height Assumption	Asset Name	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Labor Part Number
MNC	150'	Water Tower	32.706248	-97.158690	LABOR-COLLECTOR2
MNC	30'	Roosevelt Storage Tank	32.692634	-97.152882	LABOR-COLLECTOR5

Dalworthington Gardens, (TX) — Mi.Net M Propagation Study

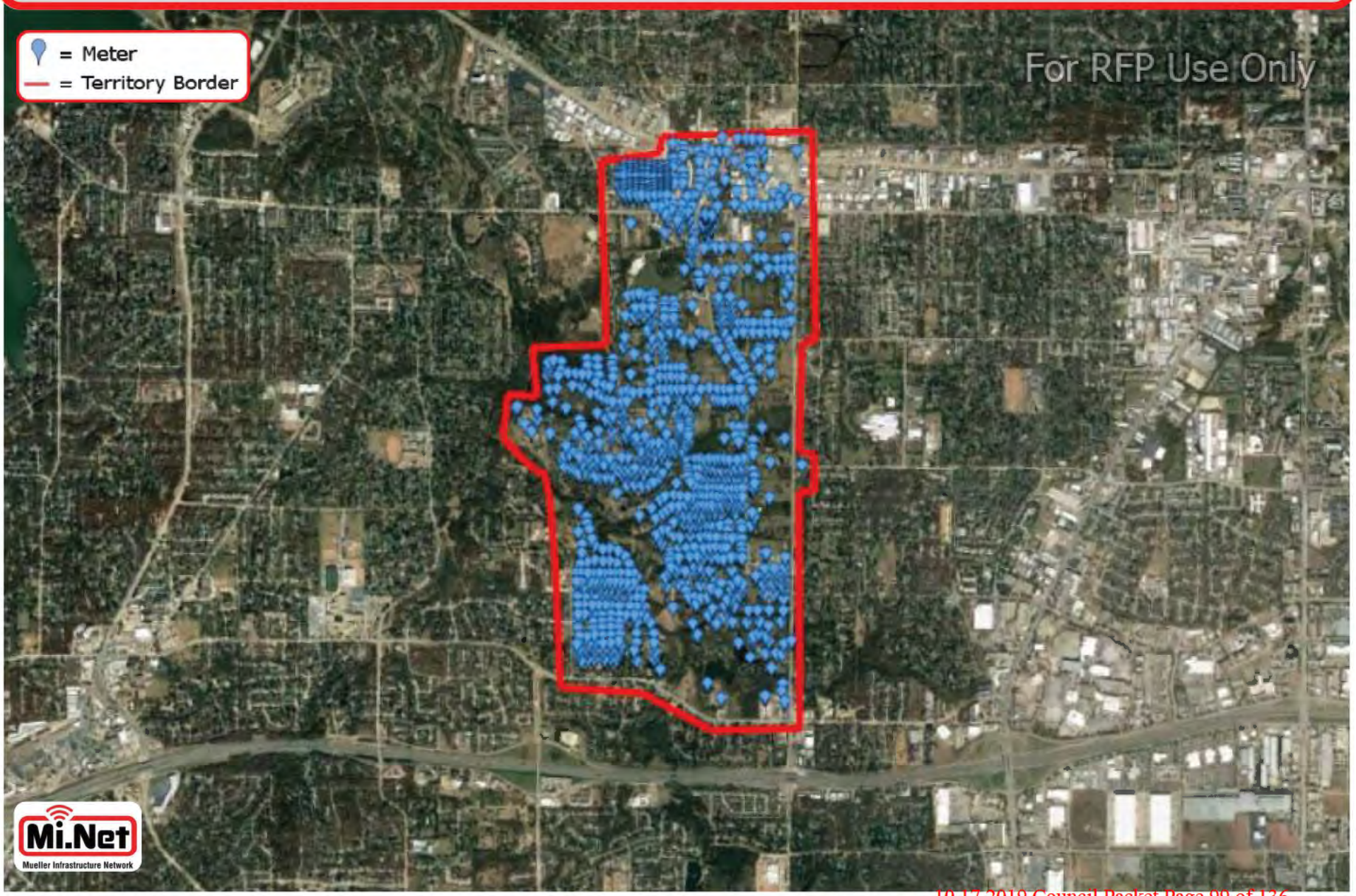
XR Repeaters

EXISTING ASSETS:

Type	Height Assumption	Asset Name	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Labor Part Number
DCXR	10'	Sign Pole 1	32.69168161	-97.16131099	LABOR-REPEATER1
DCXR	10'	Sign Pole 2	32.68111924	-97.14953082	LABOR-REPEATER1
DCXR	10'	Sign Pole 3	32.68606759	-97.15530527	LABOR-REPEATER1
DCXR	10'	Sign Pole 4	32.6808248	-97.1625855	LABOR-REPEATER1
DCXR	10'	Sign Pole 5	32.69388017	-97.16646036	LABOR-REPEATER1

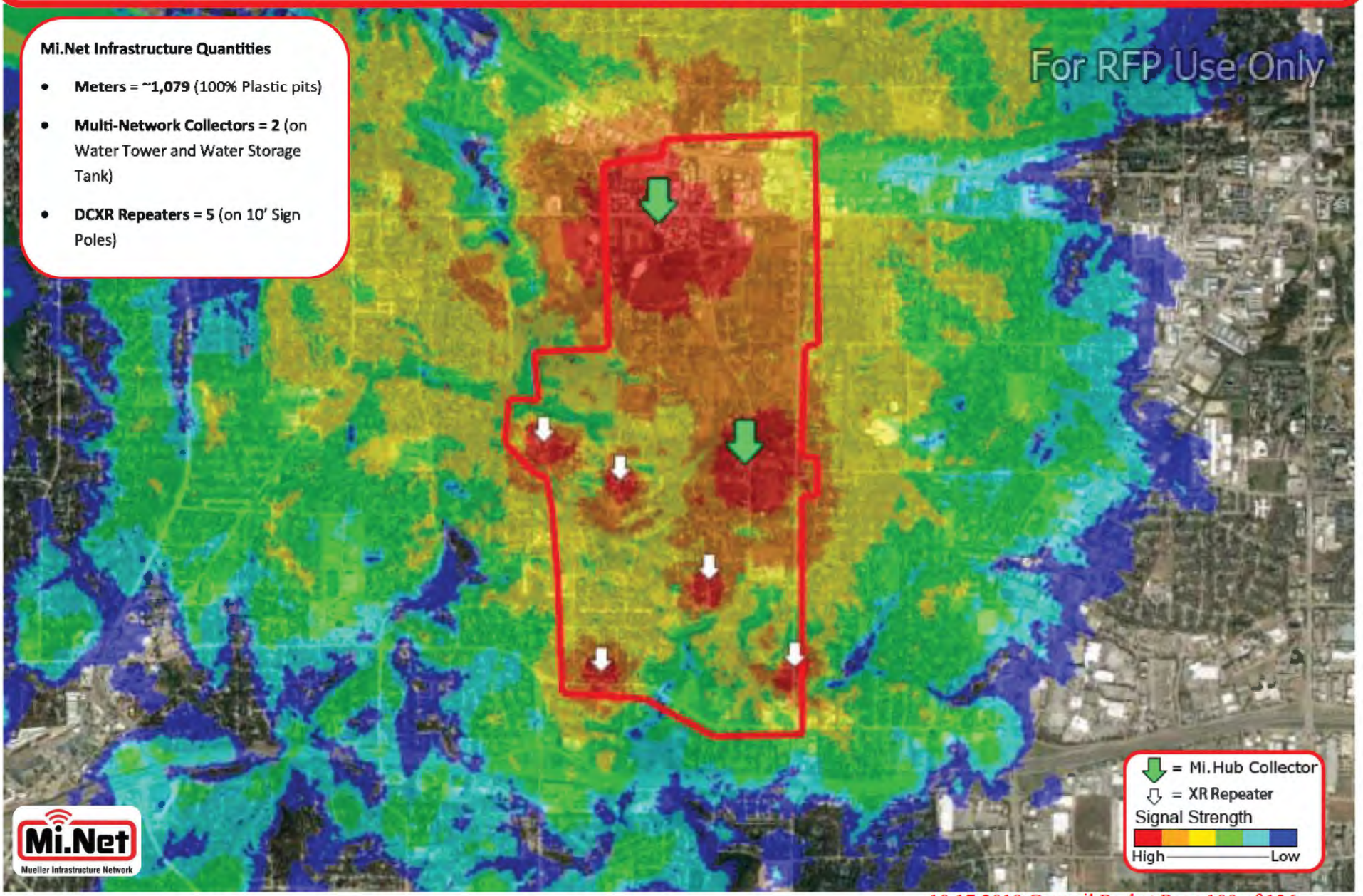
Dalworthington Gardens, (TX) — Mi.Net M Propagation Study

Estimated Service Area and Meter locations



Dalworthington Gardens, (TX) — Mi.Net M Propagation Study

Estimated RF Analysis Coverage



Dalworthington Gardens, (TX) — Mi.Net M Propagation Study

Infrastructure Installation Notes and Assumptions

Type/Part Numbers	Device	Notes/Assumptions
Tank <150': **LN: LABOR-COLLECTOR1** **PN: MS-G4-AC-B-3G-R** Tank >150': **LN: LABOR-COLLECTOR2** **PN: MS-G4-AC-B-3G-R**	MNC/RMR/SMR on utility owned tank	Includes installation of antenna and amplifier/filter on top of tank to existing structure (i.e. corral or railing), running and securing coax from amplifier to collector on available raceway within arm's reach of ladder down the tank. Installation of the Collector at base of tank on utility supplied mounting panel or post, weather proofing all connections and RF sweep of connections. **a.** Assumes available AC source within close (3ft) range of the collectors installed site **b.** Assumes collector can be installed to an existing circuit or to an additional circuit breaker in an existing panel and that a good ground is provided or available for lightning arrestor **c.** Assumes suitable grounding point provided at top of structure, within 6ft of TTU installation location. *Does not include the following:* **d.** Other manual work not directly associated with installation of the Collector such as hand trenching from tank to Collector or electrical junction box and buildup of collector mounting frame **e.** Securing and encasing RF or AC cable in any form of conduit. **f.** Structural analysis or RF study of device with information provided by tower owner upon request, at cost plus 20%.

Mi.Net
Mueller Infrastructure Network

Dalworthington Gardens, (TX) — Mi.Net M Propagation Study

Infrastructure Installation Notes and Assumptions

Type/Part Numbers	Device	Notes/Assumptions
Communication Tower <150': **LN: LABOR-COLLECTOR3** **PN: MS-G4-AC-B-3G-R** Communication Tower >150': **LN: LABOR-COLLECTOR4** **PN: MS-G4-AC-B-3G-R**	MNC/RMR/SMR on communication tower	Includes installation of Antenna and Amplifier/filter on tower, running and securing coax from amplifier to collector down the tower. Installation of the Collector at base of tower on supplied mounting panel or post, weather proofing all connections, and RF sweep of connections. **a.** Assumes available AC source within close (3ft) range of the collectors installed site **b.** Assumes collector can be installed to an existing circuit or to an additional circuit breaker in an existing panel and that a good ground is provided or available for lightning protection at top of tower for TTU and bottom of tower for hub enclosure *Does not include other manual work not directly associated with installation of the Collector such as hand trenching from tank to Collector or electricol junction box and buildup of collector mounting frame.* **a.** Does not include monthly lease fees (approx. $200 to $500 per month). **b.** Structural analysis or RF study of device with information provided by tower owner upon request, at cost plus 20%. *Assumes MS will negotiote terms of rental agreement on behalf of utility. Utility will enter into agreement with tower owner.*

Mi.Net
Mueller Infrastructure Network

Dalworthington Gardens, (TX) — Mi.Net M Propagation Study

Infrastructure Installation Notes and Assumptions

Type/Part Numbers	Device	Notes/Assumptions
Utility Asset **LN: LABOR-COLLECTOR5** **PN: MS-G4-AC-B-3G**	MNC/RMR/SMR on Utility asset	Collector and MS provided hardware mounted to utility-provided asset at the height indicated in the prop study. Either bolted or clamped to building/pole provided with no additional mounting considerations using supplied mounting hardware. a. Assumes available AC source within close (3ft) range of the collectors installed site b. Assumes all parts of the installation can be accessed with a ladder and no man-lift required c. Assumes collector can be installed to an existing circuit or to an additional circuit breaker in an existing panel d. Structural analysis or RF study of device with information provided by asset owner upon request, at cost plus 20%.
Pole 25' or Smaller: **LN: LABOR-COLLECTOR6** **PN: MS-G4-AC-B-3G** Pole 25.1' to 55': **LN: LABOR-COLLECTOR7** **PN: MS-G4-AC-B-3G**	MNC/RMR/SMR with MS Supplied Pole	Includes selected non-telescopic and non-tilting pole provided by MS and labor to locate, set and install pole and collector by MS in utility approved right of way. **a.** Assumes available AC source within close (3ft) range of the collectors installed site **b.** Assumes collector can be installed to an existing circuit or to an additional circuit breaker in an existing panel -Hurricane rated poles or specialized installations priced separately in accordance with requirements. *Any right of way permitting provided by utility.*

Dalworthington Gardens, (TX) — Mi.Net M Propagation Study

Infrastructure Installation Notes and Assumptions

Type/Part Numbers	Device	Notes/Assumptions
Utility Asset **LN: LABOR REPEATER 3** **PN: MSW-NODE4-AC**	ACXR on Utility Asset	Repeater and MS provided hardware mounted to utility-provided asset at the height indicated in the prop study. Either bolted or clamped to building/pole provided with no additional mounting considerations using supplied mounting hardware. **a.** Assumes available AC source within close (3ft) range of the repeater installed site **b.** Assumes all parts of the installation can be accessed with a ladder and no man-lift required **c.** Assumes repeater can be installed to an existing circuit or to an additional circuit breaker in an existing panel.
Pole set **LN: LABOR-REPEATER1** **PN: MSW-NODE4-DC**	DCXR with Pole set	Includes 10' street sign typepost provided by MS and labor to locate and set post, and install repeater by MS in utility approved right of way. *Any right of way permitting provided by utility.*
Utility Asset **LN: LABOR-REPEATER2** **PN: MSW-NODE4-DC**	DCXR on Utility Asset	Repeater and MS provided hardware mounted to utility provided asset (i.e. street sign type post). Either bolted or clamped to asset provided with no additional mounting considerations using supplied mounting hardware.

Mi.Net
Mueller Infrastructure Network

Dalworthington Gardens, (TX) — Mi.Net M Propagation Study

Customer Signature Approval

Customer Approval

By: _____
Authorized Signature

_____
Name (Print or Type)

_____
Title

From: Nikola.Corkovic@Ferguson.com
To: Kay Day
Subject: Re: [EXTERNAL] Propagation Study
Date: Tuesday, August 6, 2019 12:47:38 PM

Yes ma'am. I'm sorry I overlooked the quantity of those.

Nik Corkovic
AMI Specialist: North Texas | Ferguson Waterworks
Mobile: 469-451-6751
nikola.corkovic@ferguson.com

From: Kay Day <kday@cityofdwg.net>
Sent: Tuesday, August 6, 2019 12:45:23 PM
To: Corkovic, Nikola [Ferguson] - 3654 EULESS TX WW MUELLER METER <Nikola.Corkovic@Ferguson.com>
Subject: RE: [EXTERNAL] Propagation Study

So are we looking at another $3900 (3 x $1300)?

Regards,

From: Nikola.Corkovic@Ferguson.com <Nikola.Corkovic@Ferguson.com>
Sent: Tuesday, August 6, 2019 12:27 PM
To: Kay Day <kday@cityofdwg.net>

Subject: Re: [EXTERNAL] Propagation Study

A repeater is a battery powered unit that is used as a radio extender. It's essentially a stronger radio. This won't require any electric work. The 2 collectors can be connected to existing electricity on the towers.

As for the 2 vs 5, I made an error on the quote and put 2 rather than 5. As I mentioned this is just an extender on some low areas. There is no yearly maintenance or annual fee on them. And when it says "poles" were mounting them just off of the ground on stop signs etc. I can provide pictures of what this looks like.

Regarding the FCC licensing, we use the 902-928 MHz range. The is the open frequency, and doesn't have a yearly cost or renewal from the FCC.

Nik Corkovic
AMI Specialist: North Texas | Ferguson Waterworks
Mobile: 469-451-6751
nikola.corkovic@ferguson.com

From: Kay Day <kday@cityofdwg.net>
Sent: Tuesday, August 6, 2019 12:18:32 PM
To: Corkovic, Nikola [Ferguson] - 3654 EULESS TX WW MUELLER METER <Nikola.Corkovic@Ferguson.com>
Subject: RE: [EXTERNAL] Propagation Study

Confused. Talks of 5 repeater poles in addition to the 2 DC units?

The Quote shows 2 DC units and 2 DC Repeaters

With the other vendors we only talked about 2 DC units and the ability to have to add an electric meter to one of the locations.

What exactly does your configuration require?

Regards,

From: Nikola.Corkovic@Ferguson.com <Nikola.Corkovic@Ferguson.com>
Sent: Tuesday, August 6, 2019 11:59 AM
To: Kay Day <kday@cityofdwg.net>
Subject: [EXTERNAL] Propagation Study

Here you go!

Sent via IPhone.

Nik Corkovic
AMI Specialist: North Texas | Ferguson Waterworks
Mobile: 469-451-6751
nikola.corkovic@ferguson.com

City Council

Staff Agenda Report **Agenda Item: 7b.**

Agenda Subject: Discuss and possible action regarding amendments to the FY 2020 budget in amounts not to exceed $10,000.00.		
Meeting Date: October 17, 2019	**Financial Considerations: Unknown but won't exceed $10,000** **Budgeted:** ☐**Yes** ☐**No** ☒**N/A**	**Strategic Vision Pillar:** ☒ Financial Stability ☐ Appearance of City ☒ Operations Excellence ☐ Infrastructure Improvements/Upgrade ☐ Building Positive Image ☐ Economic Development ☐ Educational Excellence

Prior Council Action:

Background Information: This is a standing agenda item that will appear on all future agendas. The item was requested by Council Member Mark McGuire, and staff worked with the city attorney to ensure the agenda language was as transparent as possible. The idea is provide an item whereby staff can discuss needs that come up after the agenda posting deadline. These would only be items that, without council approval, would otherwise put operations on hold.

Justification for Request:

Recommended Action/Motion: If action needed: Motion to approve an amendment to the FY 2020 budget in an amount not to exceed [state dollar amount] for the purpose of [state specific purpose].

Attachments: None

City Council

Staff Agenda Report **Agenda Item: 7c.**

Agenda Subject: Discussion and possible action to select a bidder for the 45th Year CDBG Project for paving, water, and sewer improvements in Ambassador Row; and to approve the total budgeted cost of $231,399, $65,569 of which is the City's responsibility and $165,830 coming from Tarrant County through the CDBG program.		
Meeting Date: October 17, 2019	**Financial Considerations:** **$231,399 ($2,162 more than budgeted for this project for city's portion)** **Budgeted:** **☒Yes ☒No ☐N/A**	**Strategic Vision Pillar:** ☒ Financial Stability ☐ Appearance of City ☒ Operations Excellence ☐ Infrastructure Improvements/Upgrade ☐ Building Positive Image ☐ Economic Development ☐ Educational Excellence

Prior Council Action:

Background Information: The city contracted with Mr. Dick Perkins to prepare application for the 45th Year CDBG Project for Ambassador Row and to manage said project for the city. Three bidders submitted bids for this project: Reliable Paving, McClendon Construction Co., and Texas Civil Construction. Mr. Perkins recommends we choose Reliable Paving for this project. Below are some other details staff received regarding the difference in cost from Mr. Perkins and estimate and the bids received. Mr. Perkins was also asked whether the city has the option to deny the bids or not. Also, please note how the impact of the street fund and enterprise fund has changed because of the difference between the projected cost and the bids received.

From Mr. Perkins:
"The Opinion of Probable Construction Cost (OPCC) was prepared before I began the design for the project since I had to send that to Tarrant County just to get the project approved and design started. That is the reason for the fact that an 8" water line was called for in the OPCC. When I got into the design I realized that we had only a 6" water line on both ends of the project, so I opted to only design a 6" water line in lieu of the 8" water line in the OPCC.

Regarding the higher costs, this is probably due to the fact that we had so few bidders on this project. There is a lot of work being bid, so we can expect higher bid prices when that is the case. Regarding the change from the tapping sleeve and valve, since we are tying into asbestos cement pipe, in the design I thought it better to make the tie-in on both ends of the project to the existing 6" water line with cut-in tees and gate valves rather than tapping sleeves and valves. The cut-in tees are covered in the bid item for "ductile iron fittings".

There would definitely be more cost to the County and to the City if we had to re-bid the project. I have never had to do that with any of my clients on CDBG projects in the past, and I am not sure if the County would re-bid the project. If the Council opted not to build the project, the County would most likely defer your project until the next funding year, which would be 2021. HUD frowns on such action as it conveys to them that the money they are providing is not needed by the City. Unfortunately, this project does not lend itself to any deductive alternates or reduction in the length of the project that would reduce the cost."

Justification for Request: Council is the authority for bid approval

Recommended Action/Motion: Motion to select Reliable Paving, Inc., as recommended by the project engineer, for the 45th Year CDBG Project for Ambassador Row in an amount not to exceed $231,399.

Attachments: Letter from Mr. Perkins
Bid Tabulation
Staff's Quote Comparison
Estimate Analysis

J. Richard Perkins, P.E.

Honorable Mayor and City Council
City of Dalworthington Gardens
2600 Roosevelt Drive
Dalworthington Gardens, Texas 76016

Re: 45th Year CDBG Project (Ambassador Row Paving, Water, and Sewer Improvements (Roman Court to Madrid Court), Contract Award Recommendation

Dear Mayor and Aldermen:

In accordance with your request, bids were received on the subject project on September 25, 2019 at 10:30 a.m. at the Tarrant County offices. Bids were received from three (3) contractors, and the low bid was submitted by Reliable Paving, Inc. in the amount of $231,399.00. This bid was $28,992.00 more than my construction estimate of $202,407.

There was no opportunity to provide a deductive alternate to try to reduce the cost for the project as was provided in the previous CDBG project.

I have enclosed a bid tabulation of the individual unit prices submitted by the contractors for your review.

The available funding from Tarrant County (HUD) for this project is $165,830.00; therefore, the City will be required to fund the remainder, which is $65,569.00. If these funds are available from the City, I would recommend award of this contract to Reliable Paving, Inc. I have had previous experience with this contractor both on the previous CDBG project on Ambassador Row and with other cities and find them to provide good work and product in the area of paving improvements.

If this bid is approved by the City Council, the resolution needs to state that the City will fund the project for all costs above the HUD funding amount of $165,830.00. The resolution, after being signed by the Mayor, needs to be sent directly to Brad Hearne, CD Program Manager, Tarrant County Community Development Division, 1509 B. South University Drive, Ste. 276, Fort Worth, Texas 76107 with a copy to Cynthia Walker at the same address.

Should you have any questions regarding this recommendation, please advise.

Very truly yours,

J. Richard Perkins, P.E.

JRP/sap

xc: Mr. Greg Petty, Interim City Administrator
Ms. Lola Hazel, City Secretary

BID TABULATION REPORT

CLIENT: Tarrant County / City of Dalworthington Gardens, Texas
PROJECT DESCRIPTION: Ambassador Row (Roman Court to Madrid Court)
45th Year Tarrant County CDBG Project

BID DATE Wednesday, September 25, 2019
BID TIME 10 30 AM

				Bid Tabulation							
				Reliable Paving, Inc.		McClendon Construction Co., Inc.		Texas Civil Construction			
ITEM NO.	DESCRIPTION OF ITEMS	QUANTITY	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
	BASE BID										
1	Mobilization / Demobilization	1	LS	$24,000 00	$24,000.00	$9,000.00	$9,000.00	$13,900.00	$13,900.00		
2	Sawcut & Remove 6" Reinf. Concrete Valley Gutter	487	SF	$3 00	$1,461.00	$2.00	$974.00	$9.00	$4,383.00		
3	Sawcut & Remove 6" Reinf. Concrete Alley	455	SF	$3 00	$1,365.00	$2.00	$910.00	$9.00	$4,095.00		
4	Sawcut & Remove Curb & Gutter	391	LF	$10 00	$3,910.00	$3.00	$1,173.00	$9.00	$3,519.00		
5	Sawcut & Remove 6" HMAC Pavement	904	SY	$10 00	$9,040.00	$7.00	$6,328.00	$8.00	$7,232.00		
6	Unclassified Excavation	1	LS	$3,000 00	$3,000.00	$33,000.00	$33,000.00	$15,000.00	$15,000.00		
7	Sawcut, Remove, & Replace HMAC Transition Pavement	797	SF	$10 00	$7,970.00	$10.00	$7,970.00	$10.50	$8,368.50		
8	Construct 6" Reinf. Concrete Allley	444	SF	$6.00	$2,664 00	$20.00	$8,880.00	$15.00	$6,660.00		
9	6" Lime Stabilized Subgrade @ 32#/S.Y.	1,117	S.Y.	$12.00	$13,404 00	$8.00	$8,936.00	$17.00	$18,989.00		
10	Hydrated Lime for Stabilization	18	TN.	$180.00	$3,240 00	$195.00	$3,510.00	$250.00	$4,500.00		
11	Construct 6" Reinf. Concrete Pavement	1,046	SY	$52.00	$54,392 00	$75.00	$78,450.00	$86.00	$89,956.00		
12	Remove & Replace 4' Dia. SSMH (All Depths)	1	EA	$11,500.00	$11,500 00	$6,500.00	$6,500.00	$9,400.00	$9,400.00		
13	Remove 6" VCP Sewer Pipe & Install 6" PVC Sewer	57	LF	$115.00	$6,555 00	$95.00	$5,415.00	$110.00	$6,270.00		
14	Connect New 6" PVC Sewer Pipe to Exist. 6" VCP Sewer	2	EA	$4,800.00	$9,600 00	$850.00	$1,700.00	$4,700.00	$9,400.00		
15	Abandon Existing 6" Water Line	2	EA	$3,000.00	$6,000 00	$850.00	$1,700.00	$2,900.00	$5,800.00		
16	Remove Existing Fire Hydrant	1	EA	$2,500.00	$2,500 00	$600.00	$600.00	$2,400.00	$2,400.00		
17	Furnish & Install Fire Hydrant	1	EA	$6,600.00	$6,600 00	$4,500.00	$4,500.00	$5,800.00	$5,800.00		
18	Plug & Block 6"x6" Tee	2	EA	$3,000.00	$6,000 00	$800.00	$1,600.00	$2,900.00	$5,800.00		
19	Plug & Block 6" fire Hydrant Lead Line	1	EA	$2,500.00	$2,500 00	$600.00	$600.00	$2,400.00	$2,400.00		
20	Concrete Encase 6" Water Line	10	LF	$100.00	$1,000 00	$75.00	$750.00	$100.00	$1,000.00		
21	Furnish & Install 6" Gate Valve	5	EA	$2,000.00	$10,000 00	$1,500.00	$7,500.00	$1,750.00	$8,750.00		
22	Furnish & Install 6" PVC Water Line	273	LF	$66.00	$18,018 00	$80.00	$21,840.00	$65.00	$17,745.00		
23	Furnish & Install Ductile Iron Fittings	0 26	TN.	$13,000.00	$3,380 00	$7,500.00	$1,950.00	$10,000.00	$2,600.00		
24	Connect to Existing System	2	EA	$5,400.00	$10,800 00	$2,000.00	$4,000.00	$4,700.00	$9,400.00		
25	Traffic Control	1	LS	$7,500.00	$7,500 00	$7,000.00	$7,000.00	$8,500.00	$8,500.00		
26	Yard / Parkway Restoration	1	LS	$5,000.00	$5,000 00	$24,000.00	$24,000.00	$6,500.00	$6,500.00		
	TOTAL AMOUNT BASE BID				**$231,399.00**		**$248,786.00**		**$278,367.50**		
	Calendar Days Bid				**100**		**100**		**100**		

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

19-Jan-19

J. Richard Perkins, P.E.
City Consulting Engineer

City of Dalworthington Gardens, Texas
Ambassador Row Paving, Water, & Sewer Impr's (Madrid Ct. to Roman Ct.)

ITEM NO.	DESCRIPTION OF ITEM	SPEC. SECTION No.	UNIT	TOTAL QUANTITY	UNIT PRICE	COST
1	Mobilization/Demobilization	1.	L.S.	1	10000.00	10000.00
2	Sawcut & Remove Exist. Curb & Gutter	4.	L.F.	468	10.00	4,680.00
3	Sawcut & Remove 6" Conc. Valley Gutter	2	S.F.	300	6.00	1,800.00
4	Saw., Rem. & Repl. 6" Reinf. Conc. Alley	3	S.F.	400	17.00	6,800.00
5	Sawcut & Remove Exist. 6" HMAC Pvm't.	5	S.Y.	987	21.00	20,727.00
6	Construct Type "2" H/C Ramp	7&8?	EA.	4	3,200.00	12,800.00
7	6" Lime Stabilized Subgrade	9	S.Y.	1,156	10.00	11,560.00
8	Hydrated Lime for Stabilization	10	TN.	17	220.00	3,740.00
9	Construct 6" Reinf. Concrete Pavement/Curb	11	S.Y.	1,100	65.00	71,500.00
10	Abandon 6" Water Line	15	EA.	1	2,000.00	2,000.00
12	6"x6" Tapping Sleeve & 6" Valve		EA.	2	2,500.00	5,000.00
13	Rem. & Repl. Fire Hydrant Assembly	16&17	EA.	1	4,500.00	4,500.00
14	Furnish & Install 8" PVC Water Line		L.F.	260	65.00	16,900.00
15	Saw., Rem. & Repl. 6" HMAC Pvm't (water)		L.F.	40	25.00	1,000.00
16	Remove & Replace 4' Dia. SSMH	12	EA.	1	7,000.00	7,000.00
17	Remove 6" Sewer Line	13	L.F.	50	20.00	1,000.00
18	Furnish & Install 8" PVC Sewer Line	14	L.F.	50	80.00	4,000.00
19	Traffic Control		L.S.	1	4,000.00	4,000.00
20	Yard/Parkway Restoration		L.S.	1	5,000.00	5,000.00

Sub-Total Const. Cost	194,007	**$184,007.00**
10% Contingencies	19,400	$18,400.00
Engineering/Surv.		$18,000.00
TOTAL CONSTRUCTION COST		**$220,407.00**
		231,407.00

BID TABULATION REPORT

CLIENT: Tarrant County / City of Dalworthington Gardens, Texas
PROJECT DESCRIPTION: Ambassador Row (Roman Court to Madrid Court)
45th Year Tarrant County CDBG Project

BID DATE: Wednesday, September 25, 2019
BID TIME: 10:30 AM

				Bid Tabulation							
				Reliable Paving, Inc.		McClendon Construction Co., Inc.		Texas Civil Construction			
ITEM NO.	DESCRIPTION OF ITEMS	QUANTITY	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
	BASE BID										
1	Mobilization / Demobilization	1	LS	$24,000.00	$24,000.00	$9,000.00	$9,000.00	$13,900.00	$13,900.00		
2	Sawcut & Remove 6" Reinf. Concrete Valley Gutter	487	SF	$3.00	$1,461.00	$2.00	$974.00	$9.00	$4,383.00		
3	Sawcut & Remove 6" Reinf. Concrete Alley	455	SF	$3.00	$1,365.00	$2.00	$910.00	$9.00	$4,095.00		
4	Sawcut & Remove Curb & Gutter	391	LF	$10.00	$3,910.00	$3.00	$1,173.00	$9.00	$3,519.00		
5	Sawcut & Remove 6" HMAC Pavement	904	SY	$10.00	$9,040.00	$7.00	$6,328.00	$8.00	$7,232.00		
6	Unclassified Excavation	1	LS	$3,000.00	$3,000.00	$33,000.00	$33,000.00	$15,000.00	$15,000.00		
7	Sawcut, Remove, & Replace HMAC Transition Pavement	797	SF	$10.00	$7,970.00	$10.00	$7,970.00	$10.50	$8,368.50		
8	Construct 6" Reinf. Concrete Alley	444	SF	$6.00	$2,664.00	$20.00	$8,880.00	$15.00	$6,660.00		
9	8" Lime Stabilized Subgrade @ 32#/S.Y.	1,117	S.Y.	$12.00	$13,404.00	$8.00	$8,936.00	$17.00	$18,989.00		
10	Hydrated Lime for Stabilization	18	TN.	$180.00	$3,240.00	$195.00	$3,510.00	$250.00	$4,500.00		
11	Construct 6" Reinf. Concrete Pavement	1,046	SY	$52.00	$54,392.00	$75.00	$78,450.00	$86.00	$89,956.00		
12	Remove & Replace 4' Dia. SSMH (All Depths)	1	EA	$11,500.00	$11,500.00	$6,500.00	$6,500.00	$9,400.00	$9,400.00		
13	Remove 6" VCP Sewer Pipe & Install 6" PVC Sewer	57	LF	$115.00	$6,555.00	$95.00	$5,415.00	$110.00	$6,270.00		
14	Connect New 6" PVC Sewer Pipe to Exist. 6" VCP Sewer	2	EA	$4,800.00	$9,600.00	$850.00	$1,700.00	$4,700.00	$9,400.00		
15	Abandon Existing 6" Water Line	2	EA	$3,000.00	$6,000.00	$850.00	$1,700.00	$2,900.00	$5,800.00		
16	Remove Existing Fire Hydrant	1	EA	$2,500.00	$2,500.00	$600.00	$600.00	$2,400.00	$2,400.00		
17	Furnish & Install Fire Hydrant	1	EA	$6,600.00	$6,600.00	$4,500.00	$4,500.00	$5,800.00	$5,800.00		
18	Plug & Block 6"x6" Tee	2	EA	$3,000.00	$6,000.00	$800.00	$1,600.00	$2,900.00	$5,800.00		
19	Plug & Block 6" fire Hydrant Lead Line	1	EA	$2,500.00	$2,500.00	$600.00	$600.00	$2,400.00	$2,400.00		
20	Concrete Encase 6" Water Line	10	LF	$100.00	$1,000.00	$75.00	$750.00	$100.00	$1,000.00		
21	Furnish & Install 6" Gate Valve	5	EA	$2,000.00	$10,000.00	$1,500.00	$7,500.00	$1,750.00	$8,750.00		
22	Furnish & Install 6" PVC Water Line	273	LF	$66.00	$18,018.00	$80.00	$21,840.00	$65.00	$17,745.00		
23	Furnish & Install Ductile Iron Fittings	0.26	TN.	$13,000.00	$3,380.00	$7,500.00	$1,950.00	$10,000.00	$2,600.00		
24	Connect to Existing System	2	EA	$5,400.00	$10,800.00	$2,000.00	$4,000.00	$4,700.00	$9,400.00		
25	Traffic Control	1	LS	$7,500.00	$7,500.00	$7,000.00	$7,000.00	$8,500.00	$8,500.00		
26	Yard / Parkway Restoration	1	LS	$5,000.00	$5,000.00	$24,000.00	$24,000.00	$6,500.00	$6,500.00		
	TOTAL AMOUNT BASE BID				$231,399.00		$248,786.00		$278,367.50		
	Calendar Days Bid				100		100		100		

45th CDBG PROJECT

	BUDGET				RELIABLE PAVING BID				BID vs BUDGET			
	Grant	City	TOTAL		Grant	City	TOTAL		Grant	City	TOTAL	
Water	24,499.00	13,296.00	37,795.00		54,724.00	28,540.00	83,264.00		30,225.00	15,244.00	45,469.00	
Sewer	10,000.00	5,427.00	15,427.00		23,216.00	11,317.00	34,533.00		13,216.00	5,890.00	19,106.00	
Enterprise Fund	**34,499.00**	**18,723.00**	**53,222.00**		**77,940.00**	**39,857.00**	**117,797.00**		**43,441.00**	**21,134.00**	**64,575.00**	
Street - General Fund	**115,501.00**	**62,684.00**	**178,185.00**		**87,890.00**	**43,712.00**	**131,602.00**		**(27,611.00)**	**(18,972.00)**	**(46,583.00)**	
Total CDBG Project Cost	**150,000.00**	**81,407.00**	**231,407.00**		**165,830.00**	**83,569.00**	**249,399.00**		**15,830.00**	**2,162.00**	**17,992.00**	
	Grant	City-Eng	City-Const	TOTAL	Grant	City-Eng	City-Const	TOTAL	Grant	City-Eng	City-Const	TOTAL
Water	24,499.00	2,940.00	10,356.00	37,795.00	54,724.00	5,940.00	22,600.00	83,264.00	30,225.00	3,000.00	12,244.00	45,469.00
Sewer	10,000.00	1,200.00	4,227.00	15,427.00	23,216.00	2,520.00	8,797.00	34,533.00	13,216.00	1,320.00	4,570.00	19,106.00
Enterprise Fund	**34,499.00**	**4,140.00**	**14,583.00**	**53,222.00**	**77,940.00**	**8,460.00**	**31,397.00**	**117,797.00**	**43,441.00**	**4,320.00**	**16,814.00**	**64,575.00**
Street	**115,501.00**	**13,860.00**	**48,824.00**	**178,185.00**	**87,890.00**	**9,540.00**	**34,172.00**	**131,602.00**	**(27,611.00)**	**(4,320.00)**	**(14,652.00)**	**(46,583.00)**
Total CDBG Project Cost	**150,000.00**	**18,000.00**	**63,407.00**	**231,407.00**	**165,830.00**	**18,000.00**	**65,569.00**	**249,399.00**	**15,830.00**	**-**	**2,162.00**	**17,992.00**
		FY 18/19	FY 19/20									

Financial Impact of Bid vs Budget Variance			
	General Fund	Enterprise Fund	TOTAL
CDBG Grant Revenue	$ (27,611.00)	$ 43,441.00	$15,830.00
City Cash Outlay	$ (18,972.00)	$ 21,134.00	$ 2,162.00
Total CDBG Project Costs	**$ (46,583.00)**	**$ 64,575.00**	**$17,992.00**

City Council

Staff Agenda Report **Agenda Item: 7d.**

Agenda Subject: Discussion and possible action regarding a Street Conditions Survey for street reconstruction projects.		
Meeting Date: October 17, 2019	**Financial Considerations:** **Unknown at this time** **Budgeted:** ☐**Yes** ☐**No** ☒**N/A**	**Strategic Vision Pillar:** ☐ Financial Stability ☒ Appearance of City ☒ Operations Excellence ☐ Infrastructure Improvements/Upgrade ☐ Building Positive Image ☐ Economic Development ☐ Educational Excellence

Prior Council Action: At the September 19, 2019 meeting, council was informed not much crack sealing work was needed, but that Mr. Perkins would be providing a report regarding potential street reconstruction projects.

Background Information: Mr. Perkins put together the attached list and is asking for feedback from Council regarding priority.

Justification for Request: Not much crack sealing work is needed, therefore, a survey was conducted so council can prioritize street reconstruction.

Recommended Action/Motion:

If reconstruction desired: Motion to approve setting priority for street reconstruction as follows.

If no reconstruction is desired: Motion to not take action at this time.

Attachments: Agreement

J. Richard Perkins, P.E.

September 23, 2019

Ms. Sherry Roberts, City Administrator
City of Dalworthington Gardens
2600 Roosevelt Drive
Dalworthington Gardens, Texas 76016

Re: Street Conditions Survey

Dear Sherry:

The following is my report of the City's street conditions based on our drive thru of all the streets last week. The intent of the survey was to assess the street conditions in view of setting priorities for the next crack sealing project.

As we both noted in the survey, there are a few streets that would benefit from crack sealing, but there are so many streets that have either local problem areas or need complete or even partial reconstruction, that my recommendation is that the City concentrate on which reconstruction areas can be addressed with the funds available for crack sealing and any other paving needs and postpone any crack sealing this year.

Rather than addressing the condition of each street in the City, I have chosen to highlight the streets that have the greatest need for some type of reconstruction or repair. While the crack sealing projects in the past have been effective in prolonging the life of those streets, we noted several streets that are showing signs of more severe cracking which is an indication of the fact that none of the asphalt streets, without curb and gutter, have been constructed with any type of either lime or cement stabilization.

Broadacres Lane: There are repair areas needed at several driveways where they intersect the street. A few low areas were also noted that need repair.

Burlwood Drive: Several low areas were noted that need repair, and the worst of these is in front of the house on the east end of the street where the curb and gutter has failed (sunk).

Clover Lane: This street has been crack sealed in two previous contracts; however, the cracks at the west end of the street have widened and deepened. This portion of the street needs to be reconstructed with lime or cement stabilization.

Country Place: Needs minor crack sealing, but don't recommend it at this time.

Courtney Court: Needs minor crack sealing, but don't recommend it at this time.

Elkins Drive: Some low spots near the box culvert west of City Hall need repair.

Gardenia Drive: There are two (2) areas on the north side of the street that have adjacent tree roots that have upheaved the pavement. These areas need repair; however, the removal of the tree roots will either kill the trees, or the roots will grow back and disturb the pavement surface later. If this project is pursued, I would recommend that the trees be removed as a part of the street repair work.

Harder Lane: Needs minor crack sealing, but don't recommend it at this time.

Idlecreek Drive: After crack sealing the street last year, new cracks have developed, and the previous cracks have widened. Recommend full reconstruction of this street.

Indian Trail: This street is scheduled for full reconstruction with bond funds.

Michigan Avenue: The north end of this street needs minor crack sealing, but don't recommend it at this time.

Oak Trail Court: There are several low spots in the street and there are two (2) sewer manholes with concrete collars that are either raised above the road or the street has sunk in these two (2) areas. Both of these problem areas need to be addressed.

Roosevelt Drive: There is a crack in the center line of the street north of Arkansas Lane, but I would recommend full reconstruction of this part of the street. South of California Lane there are sporadic cracks that could be sealed, but I remember that Roosevelt is on the bond program to be reconstructed in the future; therefore, I would not recommend crack sealing the street at this time.

Sieber Drive: The portion of Sieber north of Sunset Lane has been previously crack sealed, but the cracks are opening wider. This portion of the street needs to be fully reconstructed with lime or cement stabilization.

Sunset Lane: The portion of this street between Park Drive and Sieber has been crack sealed but the cracks are widening. Recommend reconstruction of this part of the street. The portion of the street between Park and Roosevelt is in need of crack sealing at a later date. The portion of this street between Sieber and Country Place has developed some very wide cracks since the street was crack sealed last year. Therefore, I would recommend full reconstruction of this portion of the street.

Texas Drive: The crack sealing that was done last year has not held, and this street needs to be fully reconstructed.

Twin Lakes Court: The southern portion of this street south of Twin Springs Drive is in great need of full reconstruction with lime or cement stabilization.

Twin Springs Drive: This street was crack sealed last year, but numerous cracks have widened and deepened since then. There are also major dips in the street especially near the box culvert toward the east end of the street. This street is also in great need of full reconstruction with lime or cement stabilization.

I have not tried, at this point, to establish construction priorities for these streets, but will rely on input from the City Council as to their preference based on funding available. If the Council has no definitive priorities, I can prepare an estimate of the streets that can be reconstructed after a budget has been established, if desired.

I am trusting that all requested information has been properly submitted; however, should you have any questions regarding the contents of this survey, please do not hesitate to call or email me at (817) 692-4439.

Very truly yours,

J. Richard Perkins, P.E.

JRP/sap

City Council

Staff Agenda Report **Agenda Item: 7e.**

Agenda Subject: Discussion and possible action regarding approval of an off-premise sign at Pleasant Ridge and Bowen Road, and other locations suggested by sign vendor; and possible action regarding the design of the signs. Signs will not be installed until agreement and ordinance are approved by City Council.		
Meeting Date: October 17, 2019	**Financial Considerations:** **Budgeted:** ☐**Yes** ☐**No** ☒**N/A**	**Strategic Vision Pillar:** ☐ Financial Stability ☒ Appearance of City ☒ Operations Excellence ☒ Infrastructure Improvements/Upgrade ☐ Building Positive Image ☐ Economic Development ☐ Educational Excellence

Prior Council Action: A vendor approached the city a few months back about putting an off-premise sign at the corner of Arkansas and Bowen. Staff has been waiting for the sign ordinance edits to be complete prior to discussing design or the contract for the sign.

Background Information: The purpose of this item is to discuss other potential locations for off-premise signs. After conversations with persons involved with the land located at Arkansas and Bowen, it is believed a sign at that location may deter a development there, or at the very least, interfere with signage from a development. Staff has been in touch with the sign vendor and they are looking at ways to put a sign at the corner of Pleasant Ridge and Bowen Road, and they were asked to see if any other areas in the city seemed desirable for a sign. The vendor always wants to talk about design of the potential sign to be prepared for that step once the contract and ordinance are in place.

Justification for Request:

Recommended Action/Motion: Possible action to select design choices and sign location.

Attachments: None

City Council

Staff Agenda Report **Agenda Item: 7f.**

Agenda Subject: Discussion and possible action to set special meeting date for accessory dwelling ordinance.		
Meeting Date: October 17, 2019	**Financial Considerations:** **Budgeted:** ☐**Yes** ☐**No** ☒**N/A**	**Strategic Vision Pillar:** ☐ Financial Stability ☒ Appearance of City ☒ Operations Excellence ☒ Infrastructure Improvements/Upgrade ☐ Building Positive Image ☐ Economic Development ☐ Educational Excellence

Prior Council Action:

Background Information: A special meeting date needs to be set to discuss the accessory dwelling ordinance.

Justification for Request:

Recommended Action/Motion: Motion to set the following date and time for a work session for the accessory dwelling ordinance: [state date and time]

Attachments: None

City Council

Staff Agenda Report **Agenda Item: 7g.**

Agenda Subject: Presentation of outstanding ordinances/project to City Council; and discussion and possible action to set a priority list for said projects.		
Meeting Date: October 17, 2019	**Financial Considerations:** **Budgeted:** ☐**Yes** ☒**No** ☐**N/A**	**Strategic Vision Pillar:** ☐ Financial Stability ☐ Appearance of City ☒ Operations Excellence ☒ Infrastructure Improvements/Upgrade ☐ Building Positive Image ☐ Economic Development ☐ Educational Excellence

Prior Council Action:

Background Information: Staff wanted to provide a list of outstanding ordinances to the council just for informational purposes. Staff's goal moving forward will be to finish one ordinance before beginning another. Unless council has another priority, staff will be finishing the gas well ordinance, the sign ordinance once ready, and then the animal control ordinance. Staff will be making simple revisions to the chapter 13 sanitation ordinance to bring back instead of redoing the entire ordinance. The Comprehensive Plan should be completed at the beginning of 2020 for council review.

- Sign ordinance
- Animal control ordinance
- Comp Plan
- Chapter 13 ordinance
- Water, sewer ordinance
- Accessory building
- Operational gas well ordinance
- Small cell node ordinance (unless council says no to this one in November)
- Personnel policy (start in 2020 after comp plan)

Justification for Request:

Recommended Action/Motion: If desired, motion to set priority list as follows: [state specific list in order of priority]

Attachments: None

City Council

Staff Agenda Report **Agenda Item: 7h.**

Agenda Subject: Discussion and possible action to change the regular meeting date for December.		
Meeting Date: October 17, 2019	**Financial Considerations:** **Budgeted:** ☐**Yes** ☐**No** ☒**N/A**	**Strategic Vision Pillar:** ☐ Financial Stability ☐ Appearance of City ☒ Operations Excellence ☐ Infrastructure Improvements/Upgrade ☐ Building Positive Image ☐ Economic Development ☐ Educational Excellence

Prior Council Action:

Background Information: The meeting date in December falls on December 19. The mayor will be out of town this week. The city secretary will be out the week prior to this. If council desires to leave the date on the 19th, the council packet will have to be completed a week earlier than usual (December 6th).

Justification for Request: Council sometimes changes this meeting date.

Recommended Action/Motion: Motion to move the meeting date from December 19, 2019 to [state specific date].

Attachments: None

City Council

Staff Agenda Report **Item: 7i.**

Agenda Subject: Discussion and possible action to approve the purchase of police mobile data terminals (MDT) in an amount not to exceed $46,000.		
Meeting Date:	**Financial Considerations: $46,000** **Budgeted:** ☒**Yes** ☐**No** ☐**N/A**	**Strategic Vision Pillar:** ☐ Financial Stability ☐ Appearance of City ☐ Operations Excellence ☒ Infrastructure Improvements/Upgrade ☐ Building Positive Image ☐ Economic Development ☐ Educational Excellence

Prior Council Action:

Background Information: DPS purchased our current mobile computers five years ago which were refurbished at the time. They have exceeded their life expectations and will no longer be supported by Microsoft after January 1, 2020.

This purchase will allow us to outfit all DPS vehicles, one fire truck, and one motorcycle allowing DPS staff to have access to all necessary information in the field. DPS is requesting to spend up to $46,000 for the purchases of new computers and any necessary items or instillation fees that may occur.

Recommended Action/Motion: Motion to approve the purchase of police mobile data terminals (MDT) in an amount not to exceed $46,000.

Attachments: Quote

Turn-Key Mobile, Inc.
210 Prodo Drive
Jefferson City, MO 65109
573-893-9888 Office 314-754-9794 Fax

Proposal

Date	Proposal #
10/2/2019	23789

Name / Address
Dalworthington Gardens DPS Department of Public Safety 2600 Roosevelt Drive Dalworthington Gardens, TX 76016

Sales Rep	Prepared By	PO #	Accepted By
MRL	Terry		

Item	Description	Qty	Rate	Total
FZ-M1JEBGAVM	Panasonic Win10 Pro, Intel Core i5-7Y57 1.20GHz, vPro, 7.0" WXGA 10-pt Gloved Multi Touch, 8GB, 256GB SSD, Intel WiFi, TPM 2.0, Bluetooth, 4G LTE-Advanced Multi Carrier (EM7455), Webcam, 8MP Cam, Bridge Battery, Standard Battery, 2D Barcode Laser (EA30), Bump Out	1	2,327.00	2,327.00
DS-PAN-906-2	Havis Toughbook Certified Docking Station with Dual Pass-through Antenna for Panasonic's FZ-M1 and FZ-B2 Rugged Tablets with Power Supply (Basic Port Replication)	1	567.00	567.00
CF-20G5-05VM	Panasonic Public Sector Specific, Win10 Pro, Intel Core i5-7Y57 1.20GHz, vPro, 10.1" WUXGA 10-pt Gloved Multi Touch+Digitizer, 8GB, 256GB SSD, Intel WiFi a/b/g/n/ac, TPM 2.0, Bluetooth, Dual Pass (Ch1:WWAN/Ch2:WWAN-GPS), 4G LTE-Advanced Multi Carrier (EM7455), Infrared Webcam, 8MP Cam, Bridge Battery, Emissive Backlit Keyboard, Toughbook Preferred, CF-SVCPDEP3Y - Toughbook & Toughpad Premier Deployment - Includes Imaging, Customer Portal Access, Multilocation Shipping and Disk Image Management at the Panasonic National Service Center (Years 1,2,3), CF-SVCLTNF3YR - Protection Plus Warranty - Laptop (Years 1, 2 &3), CF-SVC256SSD3Y - 256GB SSD - Toughbook No return of defective drive (Years 1,2 & 3)	1	2,763.00	2,763.00
H-20-LVD2-LND	Panasonic Havis laptop 2-in-1 vehicle dock (dual pass) with LIND power supply. USB 3.0 (2), Serial, Ethernet, HDMI, VGA, Docking Connector, Dual RF, Power, Release Lever, Secondary Locking Arm, Lock (Keyed alike). Requires keyboard. For the Panasonic CF-20	1	1,070.00	1,070.00

Proposals are good for 30 days. Please ask your rep for updated pricing and availability.

Total

Shipping is not included.

Signature

Turn-Key Mobile, Inc.
210 Prodo Drive
Jefferson City, MO 65109
573-893-9888 Office 314-754-9794 Fax

Proposal

Date	Proposal #
10/2/2019	23789

Name / Address
Dalworthington Gardens DPS Department of Public Safety 2600 Roosevelt Drive Dalworthington Gardens, TX 76016

Sales Rep	Prepared By	PO #	Accepted By
MRL	Terry		

Item	Description	Qty	Rate	Total
CF-33LE-34VM	Panasonic Public Sector Specific, Win10 Pro, Intel Core i5-7300U 2.60GHz, vPro, 12.0" QHD Gloved Multi Touch+Digitizer, 16GB, 512GB SSD, Intel WiFi a/b/g/n/ac, TPM 2.0, Bluetooth, Dual Pass (Upper:WWAN/Lower:dGPS), 4G LTE Multi Carrier (EM7511), dGPS, Hello Webcam, 8MP Cam, Contactless SmartCard, 2D Bar Laser (N6603), Toughbook Preferred, CF-SVCPDEP3Y - Toughbook & Toughpad Premier Deployment - Includes Imaging, Customer Portal Access, Multilocation Shipping And Disk Image Management At The Panasonic National Service Center (Years 1,2,3), FZ-SVC512SSD3Y - 512GB SSD - Toughpad No Return Of Defective Drive (Years 1,2,3), FZ-SVCTPNF3YR - Protection Plus Warranty - Tablet PC (Years 1, 2, 3), CF-SVCBIOS1 - NSC Custom BIOS Post Sale Entitlement, CF-SVCADDPRM12B - Absolute Resilience - 12 Month Term - Panasonic PS Bundle Sled Customer Only.	1	3,850.00	3,850.00
CF-33LE-30VM	Panasonic Public Sector Specific, Win10 Pro, Intel Core i5-7300U 2.60GHz, vPro, 12.0" QHD Gloved Multi Touch+Digitizer, 8GB, 256GB SSD, Intel WiFi a/b/g/n/ac, TPM 2.0, Bluetooth, Dual Pass (Upper:WWAN/Lower:dGPS), 4G LTE Multi Carrier (EM7511), dGPS, Hello Webcam, 8MP Cam, Contactless SmartCard, Flat, Toughbook Preferred, CF-SVCPDEP3Y - Toughbook & Toughpad Premier Deployment - Includes Imaging, Customer Portal Access, Multilocation Shipping And Disk Image Management At The Panasonic National Service Center (Years 1,2,3), FZ-SVC256SSD3Y - 256GB SSD - Toughpad No Return Of Defective Drive (Years 1,2, 3), FZ-SVCTPNF3YR - Protection Plus Warranty - Tablet PC (Years 1, 2, 3), CF-SVCBIOS1 - NSC Custom BIOS Post Sale Entitlement, CF-SVCADDPRM12B - Absolute Resilience - 12 Month Term - Panasonic PS Bundle Sled Customer Only.	8	3,070.00	24,560.00

Proposals are good for 30 days. Please ask your rep for updated pricing and availability.

Total

Shipping is not included.

Signature

Turn-Key Mobile, Inc.
210 Prodo Drive
Jefferson City, MO 65109
573-893-9888 Office 314-754-9794 Fax

Proposal

Date	Proposal #
10/2/2019	23789

Name / Address
Dalworthington Gardens DPS Department of Public Safety 2600 Roosevelt Drive Dalworthington Gardens, TX 76016

Sales Rep	Prepared By	PO #	Accepted By
MRL	Terry		

Item	Description	Qty	Rate	Total
H-33-TVD2-L-LND	Panasonic HAVIS CF-33 TABLET LITE VEHICLE DOCK (DUAL PASS) TABLET ONLY WITH LIND POWER SUPPLY. USB 2.0 (4), USB 3.0 (2), SERIAL, ETHERNET (2), DOCKING CONNECTOR, DUAL RF, POWER, RELEASE LEVER, LOCK (KEYED ALIKE)	9	826.00	7,434.00
IK-88-TP-USB-P	Panasonic iKey Full Travel Keyboard - Cable Connectivity - USB InterfaceTouchPad - Emergency, Adjustable Backlighting Hot Key(s) INTEGRATED TOUCHPAD & USB CABLE	9	318.00	2,862.00
C-ADP-114	Havis Adapter plate that allows for mounting a C-UMM monitor mount to a C-HDM-304	9	15.50	139.50
C-UMM-101	Havis Universal Monitor/ Tablet Mount Assembly	9	52.50	472.50
C-KBM-202	Havis Rugged Keyboard Mount and Adapter Combination	9	115.00	1,035.00
SHIP	SHIPPING AND HANDLING	1	75.00	75.00
Misc Sales	Trade in CF-31s and Havis docks. CF-31 must have touch screen, power cords and be in good working condition with no burn in marks. All ports must work , no missing keys on keyboard and no cracks in casing. Havis docks must have power supply, working ports, no bent pins or major physical damage. Discount is apply after TKM headquarters fully checks out units.	-6	400.00	-2,400.00

Proposals are good for 30 days. Please ask your rep for updated pricing and availability.

Total $44,755.00

Shipping is not included.

Signature

City Council

Staff Agenda Report **Agenda Item: 7j.**

Agenda Subject: Discussion and possible action to consider approval of purchasing a soccer goal in an amount not to exceed $1,500.		
Meeting Date: October 17, 2019	**Financial Considerations:** **$1,500** **Budgeted:** ☐**Yes** ☒**No** ☐**N/A**	**Strategic Vision Pillar:** ☐ Financial Stability ☒ Appearance of City ☐ Operations Excellence ☒ Infrastructure Improvements/Upgrade ☐ Building Positive Image ☐ Economic Development ☐ Educational Excellence

Prior Council Action: Council approved the purchase of some equipment for park back in September.

Background Information: When Council approved equipment for the park, council specifically excluded a soccer goal was was included in the original quote. It was discovered there was an error when the order was originally placed, but Heartland was aware and would be returning the soccer goal to their warehouse. Last week, staff was informed the soccer goal is indeed in the park and was included in the invoice sent for payment. Staff contacted Heartland, informed them of the error, and Heartland confirmed the goal was to be returned. The Heartland representative stated they would come back and pick up the goal as originally planned, but he also offered an alternative. The goal would need to be taken apart in order to return it, and Heartland is willing to sell the goal to the City for $1,500 versus the original $1,999 on the quote. It would save them the headache of having to take it apart. If the City does decide to return it, it will be at a cost of $250.

Justification for Request: Council is the authority for non-budgeted items.

Recommended Action/Motion: Motion to approve the purchase of a soccer goal in an amount not to exceed $1,500.

Attachments: Final bid without the soccer goal
Invoice with the soccer goal at full price
Bid for return freight for soccer goal

HEARTLAND Park & Recreation, LLC

BID/PROPOSAL

www.HeartlandPlay.com

Date: August 28, 2019

Bill To:

City of Dalworthington Gardens

Installation Address:

Dalworthington Gardens City Park

2600 Roosevelt

Arlington TX 76016

Option 3

Larry Barnes

(214) 236-6346

larry@heartlandplay.com

Corporate Office

HEARTLAND Park & Recreation, LLC

PO Box 505 . White Oak, Texas . 75693

Contact #1:	Jeannine Calhoon	Ofc:	(817) 460-1955	Fax:	
Contact #2:		Mobile:	(817) 300-8180	Email:	jeannine@tcupharmacy.com

Qty.	Item #	Description/Colors/Mounting/Etc...	Unit Price	Freight	Extended Amount
4	Trash Can	Flare top w' rain bonnet and liner,	$ 604.00		$ 2,416.00
		in-ground mount. Green			$ -
2	Grill	Camp Grill 24" black	$ 269.00		$ 538.00
3	Belt Seat	Swing Seat (green. White not available)	$ 75.00		$ 225.00
1		Soccer Net, white, 12'x6.5'x7'	$125.00		$ 125.00
		(This net may not be an exact fit)			$ -
9		Swing/Slide Wear Mats, 54"L x32"w x 2"	$ 130.00		$ 1,170.00
		beveled top			$ -
1		Freight	$ 895.00		$ 895.00
					$ -
					$ -
					$ -
					$ -
		With City PO we will not require a deposit			$ -
					$ -

50% deposit due (if applicable):	
Purchase Order Number:	

Subtotal	**$ 5,369.00**
Install	**$ 1,695.00**
Tax	**$ -**
Total	**$ 7,064.00**

Order Approved By (signature): _____

Date: _____

Quote is valid for 30 days on all equipment and install. Quote is valid for 10 days on all freight. Quote excludes site preparation. The customer is responsible for locating all underground phone & utility lines 72 hours prior to the installation date by calling Dig Test at (800) 245-4545. By initialing, customer acknowledges that any damage done as a result of not locating these lines will be the customers liability. (Initial) _____

Without installation, customer is responsible for arranging for the off-loading of equipment & check-in. If during installation, large rocks or concrete are found additional costs for removal will occur. Additional expenses must be approved by both parties. All customers are required to pay local and state taxes. If a customer has tax exempt status, Heartland Playgrounds must retain a copy of 501(C)(3) or other proof of tax exempt status.

INVOICE

HEARTLAND
Park & Recreation, LLC

City of Dalworthington
2600 Roosevelt Road
Dalworthington, Texas 76016
lhazel@cityofdwg.net

INVOICE DATE: 43745
CUSTOMER PO NUMBER:
SALES CONSULSANT: Larry Barnes
TERMS: DUE UPON RECEIPT
OUR ORDER NUMBER:

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
4	Trash Can Flare Top W/ Rain Bonnet and Liner	$604.00	$2,416.00
2	Camp Grill 24"	$ 269.00	$ 538.00
3	Belt Swing Seat	$ 75.00	$ 225.00
1	12 x 6.5 x 7 Soccer Goal	$ 1,999.00	$ 1,999.00
1	12 x 6.5 x 7 Soccer Net	$ 125.00	$ 125.00
9	Swing/Slife Wear Mats	$ 130.00	$ 1,170.00
		SUBTOTAL:	$ 6,473.00
		INSTALL:	$ 1,695.00
		FREIGHT:	895.00
			$ 9,063.00 Pay this amount

DIRECT ALL INQUIRIES TO:
Kristal Stuckey
Office Phone: 903.297.6624
Email: kristal@heartlandplay.com

MAKE ALL CHECKS PAYABLE TO:
Heartland Park & Recreation
Attn: Accounts Receivable
P.O .BOX 505
White Oak, Texas 75693-0505

THANK YOU FOR YOUR BUSINESS!

HEARTLAND Park & Recreation, LLC

BID/PROPOSAL

www.HeartlandPlay.com

Date: August 28, 2019

Bill To:

City of Dalworthington Gardens

Installation Address:

Dalworthington Gardens City Park

2600 Roosevelt

Arlington TX 76016

Option 3

Larry Barnes

(214) 236-6346

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Corporate Office

HEARTLAND Park & Recreation, LLC

PO Box 505 . White Oak, Texas . 75693

Contact #1:	Jeannine Calhoon	Ofc:	(817) 460-1955	Fax:	
Contact #2:		Mobile:	(817) 300-8180	Email:	jeannine@tcupharmacy.com

Qty.	Item #	Description/Colors/Mounting/Etc...	Unit Price	Freight	Extended Amount
1		Return Freight for Soccer Goal	$ 250.00		$ 250.00
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
		With City PO we will not require a deposit			$ -
					$ -

50% deposit due (if applicable):	
Purchase Order Number:	

Subtotal	**$ 250.00**
Install	
Tax	**$ -**
Total	**$ 250.00**

Order Approved By (signature): _____

Date: _____

Quote is valid for 30 days on all equipment and install. Quote is valid for 10 days on all freight. Quote excludes site preparation. The customer is responsible for locating all underground phone & utility lines 72 hours prior to the installation date by calling Dig Test at (800) 245-4545. By initialing, customer acknowledges that any damage done as a result of not locating these lines will be the customers liability. (Initial) _____

Without installation, customer is responsible for arranging for the off-loading of equipment & check-in. If during installation, large rocks or concrete are found additional costs for removal will occur. Additional expenses must be approved by both parties. All customers are required to pay local and state taxes. If a customer has tax exempt status, Heartland Playgrounds must retain a copy of 501(C)(3) or other proof of tax exempt status.

180. 40. 6245 SR