FlexNet RNI Site to SaaS Migration and Upgrade With Sensus Analytics and Implementation of SaaS Consumer Portal

1. Services Summary and General Responsibilities

City of League City, TX ("League City") is requesting a migration of the FlexNet Regional Network Interface ("RNI") environment to Sensus Software as a Service solution in Sensus' Data Centers. League City operates the RNI on their customer premise equipment ("CPE"). This statement of work describes the services that will be performed by Aqua-Metric, Sensus and League City in the migration of the RNI from League City's premise site ("Site") to the Sensus Data Center Software as a Service ("SaaS") environment.

Sensus will install, setup, and configure the RNI in the SaaS environment in Sensus' Data Centers. Sensus will perform certain configurations on the CPE to allow the transfer of data to occur from Site to SaaS. Sensus will build, validate and test the SaaS environment and functionality prior to production cut-over. Sensus will also setup and implement the Sensus Analytics ("SA") solution in a SaaS environment.

Aqua-Metric/Sensus will perform integration with the Sensus Analytics solution and will work with League City's billing system provider if changes are necessary to the current interface. Prior to the migration to the production system, Aqua-Metric/Sensus will provide end-user training on the latest version of the RNI, SA solutions and Portal. In addition to the migration of the RNI, this includes the upgrade of the FlexNet RNI to version 3.X.

Pricing provided within this document reflects guaranteed pricing for the term of the Project as detailed herein. This includes up to 35,000 end services, and a minimum five-year term.

As part of the project, Sensus will install the Consumer Portal in the SaaS environment to allow the Residents and Commercial Customer in the City of League City to access to their water consumption information.

Contract documents provided herein include:

- Aqua-Metric Scope of Work (the provisions of this document)
- City of League City Request for Proposal #17-037, MDMS and Customer Portal
- Aqua-Metric Sensus Analytics Upgrade, Customer Portal, and Annual Maintenance and Support Quotes
- Schedule of Events – Gantt Chart

1.1 General Responsibilities

Aqua-Metric and Sensus Responsibilities

- Aqua-Metric shall provide a Project Manager ("PM") to coordinate all aspects of the migration, upgrade, implementation, and integration process. The PM shall serve as the primary Sensus contact for the project, and will coordinate with the League City PM to communicate project timelines and other important information.
- Aqua-Metric/Sensus shall provide technical resources required to support the migration, configuration, and integration of the Sensus FlexNet RNI, SA solution, and League City billing system. Aqua-Metric and Sensus shall be responsible for proper configuration of the various Sensus systems, and shall also provide League City guidance on various application configurations when different options are available.
- Aqua-Metric shall provide integration services for the FlexNet RNI, SA solution and providing the data integration specifications for League City billing system to League City and the Billing System Vendor.

- Aqua-Metric and Sensus shall develop a project schedule and timeline to be provided to League City outlining the key project dates and milestones.
- Aqua-Metric/Sensus shall provide technical resources required to support the setup and configuration of the Sensus Analytics Consumer Portal ("Portal").
- Aqua-Metric shall coordinate with League City, League City's 3rd party backhaul vendors, as well as other IT departments and vendors as necessary to complete the project outlined herein.

League City Responsibilities

- League City shall appoint a Project Manager to act as a single point of contact for League City to coordinate with the Sensus Project Manager on the overall delivery of the solutions described herein.
- League City agrees to engage in Systems Acceptance Testing (SAT) of the FlexNet Regional Network Interface (RNI) in a timely manner after upgrade. League City agrees to provide formal acceptance of the Regional Network Interface (RNI) 3.x environment in writing within 30 days of successful completion of Systems Acceptance Testing (SAT).
- League City shall pay all approved invoices related to the project in a timely manner.

2. Description of Services

2.1 Aqua-Metric Project Management

Designate an Aqua-Metric Project Manager to act as the primary interface with League City for duration of the project. The Aqua-Metric PM will create an overall project plan and timeline to complete the appropriate tasks and activities. The Aqua-Metric PM and League City PM will work jointly to identify any risks associated to the success of the project and work to mitigate such risks. Project management activities are described below.

Aqua-Metric and Sensus Responsibilities

- Provide a single point of contact for project managing all related activities.
- Schedule/Coordinate project kick-off meeting (meeting may be delivered remotely).
  - Provide overall project governance and project kick off presentation.
- Create and review project plan and timeline.
- Review the program guidelines, deliverables, and expectations, and present project schedules and baseline project plan created.
- Communicate activity updates on regular interval agreed upon by League City and Sensus.
- Advise League City on issues related to challenges with project activities or risk mitigation strategies.
- Consult with League City on challenges and open trouble tickets requiring Sensus internal escalation.
- Develop the Systems Acceptance Testing (SAT) plan and agreement with League City.

League City Responsibilities

- Designate League City contact to coordinate activities with Sensus PM and technical resources.
- Schedule resources to attend meetings and assist Sensus when tasks require League City support.
- Provide list of personnel for email distribution of information.
- Establish a communication and activity plan.

- Work to define the terms of SAT and understand how League City will communicate the formal acceptance of the upgrade to Sensus.

2.2 RNI Transition Period and Parallel Data Delivery

During the RNI Transition Period League City will continue to operate the Site-based RNI 3.x system. Sensus will work with League City to export the RNI 3.x database and subsequently import the database into Sensus' SaaS environment. Data delivery and information will be transferred via "piperules" to ensure the latest information is transferred to the SaaS RNI 3.x system in preparation for production cut-over activities.

Aqua-Metric and Sensus Responsibilities

- Sensus shall install, setup, and configure a SaaS RNI on managed servers within the Sensus Data Center.
- The SaaS RNI will be provisioned to support the number of services correlated to the propagation study of record.
- Sensus shall perform database clean-up and maintenance in League City's RNI 3.x system:
  - Clean-up of stale meters,
  - Clean up database of non-existent or irrelevant data,
  - Perform database maintenance such as rebuilding indexes, updating indexes, consistency checks, run SQL query/agent jobs, etc.
- Aqua-Metric and Sensus shall work with League City personnel to make an image of the existing database resident on League City's RNI servers.
- Sensus shall restore the data image retrieved from League City's RNI onto the SaaS RNI servers configured for League City within the Sensus Data Center.
- Sensus shall remotely configure League City's RNI 3.x system using "piperules" to deliver new data from League City's RNI to the SaaS RNI during the transition period.
- Sensus shall configure the "piperules" on the SaaS managed servers in the Sensus Data Center to accept the new incremental data from CPE RNI during the transition period.

League City Responsibilities

- League City will provide Aqua-Metric and Sensus with remote access to League City systems and network.
- League City shall coordinate with Aqua-Metric and Sensus to facilitate the creation of the backup image from the Site-based RNI.
- League City shall coordinate with Aqua-Metric and Sensus to allow the configuration of "piperules" on the Site-based RNI to allow incremental data to be delivered to the hosted FlexNet RNI in the Sensus Data Center.
- League City shall provide network connectivity between League City's Site and the Sensus Data Center to provide data synchronization.
- League City will be responsible to provision firewall policies to facilitate the synchronization via "piperules" between League City's site and Sensus Data Center.

2.3 Setup and Integration of SA Solution with RNI

The Sensus Analytics solution is a Software as a Service (SaaS) solution that provides League City with the ability to aggregate both metering data and customer billing data into a single platform to provide the reporting, dashboards, and analytics that will enable League City to become more operational efficient and effective in making business decisions on a day-to-day basis.

League City is purchasing the SA Water Enhanced with the following modules: Billing Access, Meter Insight, Device Access, Report Access, Alarm Dashboard and Alert Manager.

Aqua-Metric and Sensus Responsibilities

- Sensus shall setup, install, and configure the SA solution instance for League City.
- Configure the RNI to transmit the required data to the SA solution as follows:
  - CMEP (Reading Data, Alarms & Events)
    - Implement CMEP configuration settings/run time parameters
  - MultiSpeak 4.1 Meter Interactions
    - On Demand Reads Request
- Aqua-Metric and Sensus shall integrate the SaaS RNI 3.x environment with the SA solution per the requirements above, and ensure that data is successfully delivered from the RNI to the SA solution.
- Aqua-Metric and Sensus shall integrate the SA solution with the Portal.

League City Responsibilities

- The League City PM shall engage with the Aqua-Metric PM and shall coordinate with other departments and/or vendors to facilitate the setup and integration of the Sensus RNI and SA solution.

2.4 Configuration of SA solution with League City billing system

Aqua-Metric and Sensus will work to configure the SA solution with League City's billing system according to League City's system requirements.

Aqua-Metric and Sensus Responsibilities

- Aqua-Metric and Sensus shall configure the SA solution so that it can receive data from the League City billing system. This is to ensure that updates to meter information are received daily from the billing system into the SA solution. SA will not be performing file exports for billing. The exports would need to be configured by League City or their Billing System Vendor.
  - Delivery Frequency: Daily
  - Delivery Method: files will be posted to Sensus Secure FTP site by League City
  - Delivery Format: League City will send a file of comma separated values (CSV) format. Values may be in any order but static once an order is determined. A minimum set of fields is required to support the SA solution. The minimum set of fields required is as follows:
    - Account, MeterID, RadioID, Account_Billing_Cycle, Account_Route, Asset_Address, sdp_Lat, sdp_Lon, Cust_Name
  - Additional synchronization fields may be requested by League City for reporting, search, and other functionality of the SA solution. The entire list of fields is as follows. Not including field may limit functionality of the system:
    - meter_id, meter_id_2, radio_id, meter_manufacturer, meter_type, meter_lifecycle_state, sdp_id, sdp_state, sdp_lat, sdp_lon, sdp_grid_id, nearest_branch, asset_address, asset_city, asset_state, asset_zip, account_id, account_status, account_service_type, account_billing_cycle, account_rate_code, service_cycle, service_route, sdp_flow, sdp_zone, sdp_meter_size, sdp_usage_uom, sdp_meter_mult, number of dials, last known read, minimum

usage threshold, maximum usage threshold, customer_name, customer_home_phone, customer_cell_phone, customer_email, non_billable
    - Note: Additional Fields may be added in support of new functionality in future releases of SA
- Additional fields for the synchronazation may be desired by League City for the Portal application.

League City Responsibilities

- The League City PM shall engage with the Aqua-Metric PM and shall coordinate with other departments and/or vendors to facilitate the configuration of the SA solution and League City billing system.
- Collaboration may include, but is not limited to, the creation and delivery of data synchronization files from the billing system.
- League City will be responsible for providing the communication path between SA solution and CIS/billing system for the purpose of the data exchange.
- League City will assist in defining required fields and work with billing vendor to get desired information in the Syncronization file(s).
- Any fees/costs for modification and testing of the billing interface for League City billing system charged by the billing vendor will be responsibility of League City.

2.5 Validation and Testing Services

Sensus will validate and test all functionality of the system prior to the cut-over production of the SaaS RNI 3.x environment. Validation and testing includes the connectivity to/from the base stations, integration to SA solution and League City billing system, and two-way communication.

Aqua-Metric and Sensus Responsibilities

- Aqua-Metric and Sensus will verify the base stations are at the appropriate hardware and firmware build for RNI 3.x, the RF cards are at the required revision and GPS is configured and functional.
- Aqua-Metric will notify League City if base stations require hardware upgrades to be performed.
- Aqua-Metric/Sensus will update/upgrade the firmware and/or hardware required for any base station required to function in order to facilitate the SaaS RNI 3.x upgrade.
- Aqua-Metric/Sensus shall configure the base stations and redirect communication from League City's Site-based RNI 2.x system to the SaaS RNI 3.x system.
    - Sensus shall validate and test meter data information and traffic is transferred from redirected base station to SaaS RNI 3.x system.
    - Aqua-Metric/Sensus shall issue certain two-way commands to League City specified test meters to ensure two-way communication is working and functional.
- Sensus shall test the RNI and SA solution integration and provide written notice to League City when the integration is complete.
    - Aqua-Metric/Sensus shall test the integration from RNI to SA solution to test for on-demand reads, alarms, etc., to verify system functionality.
- Aqua-Metric shall test the SA solution to League City billing system integration and provide written notice to League City when the integration is complete.

- Aqua-Metric/Sensus shall perform a test of the integration between the SA solution and League City billing system to ensure League City receives meter data to issue billing reads.
- Aqua-Metric/Sensus shall perform a test of the Portal spot check that data is showing up in the system as expected.

League City Responsibilities

- League City has performed all necessary base station hardware upgrades as required to perform the RNI 3.x upgrade.
- League City will identify the appropriate base station and specify the select set of test meters to perform system validation and testing.
- League City shall test the interface between the Sensus systems and League City billing system within 30 days after written notice from Aqua-Metric/Sensus that the integration has been completed.
- League City shall test the Consumer Portal after the system is setup and configured.
- Integration testing shall include the verification of the data synchronization from the Sensus systems, as well as the verification of reading data delivered by the Sensus RNI system.
- League City shall provide written notice of acceptance of the integration upon successful completion of the integration testing.

2.6 Production Cut-Over to SA and Redirection of Base Station Connections

Aqua-Metric/Sensus will work with League City to determine production cut-over date and timeline working with Aqua-Metric PM and League City PM. After proper validation and testing has been performed on the SaaS RNI 3.x system, the cut-over activities will take place and Sensus will work with League City to reconfigure all base stations to communicate directly with the SaaS RNI 3.x system.

Aqua-Metric/Sensus Responsibilities

- After League City has provided written acceptance of the SaaS RNI solution and integration, Sensus will remotely reconfigure all FlexNet base stations in service within League City's service area to communicate directly with the SaaS RNI 3.x environment.
- Aqua-Metric/Sensus shall coordinate with the League City PM to facilitate backhaul testing and ensure that network traffic is being routed properly to the SaaS RNI 3.x environment.
- Following the reconfiguration of the base stations, Aqua-Metric/Sensus will work with appropriate League City personnel to configure Open VPN at each site.
- Aqua-Metric will update all system drawings and applicable documentation.

League City Responsibilities

- League City shall coordinate with Sensus to facilitate the reconfiguration of the base stations to communicate directly with the SaaS RNI 3.x environment.
- League City shall coordinate the current network backhaul providers at the base station sites, to redirect the backhaul of the data from the current RNI 2.x production environment to the SaaS RNI 3.x environment.
- League City is solely responsible for network backhaul connections at the base station sites, including any changes to the network backhaul equipment or settings, and any ongoing network backhaul charges from the base station sites.

- League City will need to, prior to the cutover from the non-hosted 2.2.4 RNI and SaaS 3x or 4x RNI, assist with setup of a network link so the two RNIs have the ability to run in parallel. This will allow for proper testing of the new system and to prepare the new system for cutover.
- This will require an open vpn connection between the non hosted and SaaS RNI.
- This connection will exist between the two network controllers over network ports 1194 and 9700.
- It is important that the non-hosted RNI allows port 22, 1194 and 9700 access from the SaaS RNI environment.
- After cutover to the new SaaS structure, Aqua Metric and Sensus will require access to League City's three basestations through the City's existing firewall through additional ports - 9600 and 9800.

2.7 Production Cut-Over of Portal and rollout to League City Water Customers

Aqua-Metric/Sensus will work with League City to determine production cut-over date and timeline working with Aqua-Metric PM and League City PM for the Portal. After proper validation and testing has been performed on the SaaS Consumer Portal, the City will start Rolling out the application to the citizens.

Aqua-Metric/Sensus Responsibilities

- After Acceptance Aqua-Metric will assist League City on creation of a rollout plan of the SA Consumer Portal

League City Responsibilities

- League City shall execute the rollout plan after training and acceptance.

3. Assumptions

- RNI is only required to integrate with:
  - SA solution
  - League City billing system
- MultiSpeak 4.1 and CMEP will be used
- No Enterprise Service Bus (ESB) will be utilized for this project
- Single Sign-on is out of scope for this project

4. Scope

This Statement of Work is limited to the current FlexNet infrastructure in place as of contract signing. The City currently has a total of three (3) base stations. Any additional expansion of infrastructure and/or base stations, as well as any additional request for further systems integration or ongoing management/maintenance of the system, will require a Change Request and pricing will reflect this change.

All infrastructure and base stations will be analyzed to determine if upgrades are necessary. If any additional hardware or work associated to additional hardware is required, League City will pay appropriate fees to purchase hardware and pay associated labor fees accordingly.

There are no hardware upgrades anticipated for the base stations to support migration to either Site to SaaS RNI or Site to Site with Logic.

All work is assumed to be performed remotely, unless otherwise specified within this Statement of Work.

Pricing does not include travel and expenses for on-site work to be performed. If travel and on-site work is required, expenses for these services will be invoiced at actual rates. Estimated airfare is $1,000.00 and daily per diem charges are $300, which includes hotel, meals, and rental car charges.

If any travel is required by League City, the actual travel and expenses plus additional consulting time (at $250/hr) will be billed to League City.

Travel expenses will only be incurred if Sensus personnel is required to be on-site. Aqua-Metric support and Aqua-Metric consulting expenses are covered under the Project Management cost documented in the quote (RNI with Analytics Upgrade).

Any costs or fees associated with the Billing System and the Billing System Vendor for software and/or services are the responsibility of League City.

Any costs or fees to integrate other systems are not included in the current scope.

5. Termination

Aqua-Metric/Sensus understands that City is a governmental entity, and should the Legislature fail to provide funding for any period during the term of this contract, City shall be excused for all liability for payment. City is required to give Aqua-Metric/Sensus written notice within thirty (30) days after learning that the funds will not be available. Upon receiving written notice from City, this contract will automatically terminate. In addition, the City shall be allowed to terminate this contract for any reason upon giving ninety (90) days written notice of its intent to terminate to Aqua-Metric/Sensus.

6. Idemnification, Jurisdiction, and Dispute Resolution

Indemnification: Contractor shall indemnify and hold harmless City , and each of its directors, officers, agents and employees from and against all claims, actions, suits, demands, proceedings, costs, damages and liabilities, including without limitation attorneys' fees and reasonable litigation costs, arising out of, connected with, or resulting from any acts or omissions of Contractor or any agent, employee, subcontractor, or supplier of Contractor in the execution or performance of this contract, to the extent the claim arises from negligence, willful act, breach of contract or violation of law.

Jurisdiction: Any disputes under this agreement shall be brought in a court of competent jurisdiction in Galveston County, Texas and governed by Texas law.

Alternative Dispute Resolution: To the extent that Chapter 2260, Texas Government Code, is applicable to this Contract and is not preempted by other applicable law, the dispute resolution process provided for in Chapter 2260 and the related rules adopted by the Texas Attorney General Pursuant to Chapter 2260, shall be used by City and the Contractor to attempt to resolve any claim for breach of contract made by Contractor that cannot be resolved in the ordinary course of business. The Director of Finance of City shall examine Contractor's claim and any counterclaim and negotiate with Contractor in an effort to resolve such claims. The parties hereto specifically agree that (i) neither the occurrence of an event giving rise to a breach of contract claim nor the pendency of a claim constitute grounds for the suspension of performance by Contractor, (ii) neither the issuance of this Contract by City nor any other conduct, action or inaction of any representative of City relating to this contract constitutes or is intended to constitute a waiver of City's or the state's sovereign immunity to suit; and (iii) City has not waived its right to seek redress in the courts.

7. Signature Page

The undersigned agrees to all the terms, conditions, and expectations listed in the above Statement of Work.

Client/Customer	**Contractor**
City of League City, Texas Company Name	Aqua-Metric Sales Company Company Name
 Authorized Signature	 Authorized Signature
 Authorized Contact (Type or Print)	Michael Cartwright Authorized Contact (Type or Print)
 Title	Operations Manager Title
 Date	August 11, 2017 Date
 Attest	 Attest: Kristy Segarra
 Date	August 11, 2017 Date

A. Sensus Software as a Service (SaaS) Benefits

Where every dollar invested makes more cents.

Our Software as a Service (SaaS) offer provides all the benefits of a Sensus communications network by placing the RNI (Regional Network Interface) in your own private cloud-based solution. When you move to a SaaS model, we provide all of the hardware and software required to operate the RNI through our world-class data centers. There is no need for additional capital expenditures such as IT, additional office space and specialized resources. You can achieve the business outcomes you require, with the lowest total cost of ownership and complete peace-of-mind.

We monitor your servers and network connections around the clock to ensure high availability and reliability. Our data center team performs all hardware maintenance as well as software patches, updates, and upgrades to ensure you have access to the latest features. In addition to standard security testing procedures, we perform quarterly third party audits and security testing by certified Cyber-Security partners to ensure your information is safe. In addition, we eliminate your need to maintain a separate disaster recovery environment using our geographically separated data center locations.

Overview of Sensus Software as a Service

- Sensus owns RNI software and license
- Sensus manages, maintains and monitors software and server hardware
- Annual fee includes all hardware and software licenses
- FlexWare software maintenance is included
- Disaster recovery included

	Customer owns	Sensus owns
RNI License	⊗	✓
Connection to Data Center	✓	⊗
Hardware (servers, storage, etc.)	⊗	✓
Software (OS, 3rd party, RNI)	⊗	✓
Disaster recovery (HW, SW, etc.)	⊗	✓

Benefits and Outcomes Delivered:

- Reduce
- IT and operational costs
- Risk associated with system configuration and maintenance
- Risk in planning for business continuity through disaster recovery
- Environmental impact (carbon footprint)
- Provide predictable costs for budgetary planning
- Increase availability and system performance through our dedicated network and servers
- Increase and strengthen security of your IT systems
- Accelerate time to market with new technologies
- Increase operational efficiency leveraging our Network Operations Center

Compare the Benefits

Own and Operate	
Customer Responsibilities	**Sensus Responsibilities**
NETWORK	
• Configure and manage equipment (non-RNI) • Configure and manage network addresses • Configure and manage Virtual Private Networks (VPNs) • Configure and manage standard time source (NTP or GPS) • Configure and manage security access points • Respond to relevant alarms and notifications	• Assist in configuring connection from base stations to licensed RNI server • Assist in configuring standard time source (NTP or GPS) • Respond to customer incidents when customer calls technical support
STORAGE AREA NETWORK (SAN)	
• Respond to alarms and notifications • Investigate issues using log files • Manage vendor if physical storage is off-site • Configure and verify regular backups are occurring successfully	• None

Software as a Service (SaaS)	
Customer Responsibilities	**Sensus Responsibilities**
NETWORK	
• Configure and manage equipment (non-RNI) • Configure and manage local area network and addresses	• Configure and manage equipment (non-RNI) in Data Center • Configure and manage network addresses in Data Center • Configure and manage Virtual Private Networks (VPNs) • Configure and manage standard time source (NTP or GPS) • Configure and manage security access points • Respond to relevant alarms and notifications
STORAGE AREA NETWORK (SAN)	
• None	• Respond to alarms and notifications • Investigate issues using log files • Manage vendor if physical storage is off-site • Configure and verify regular backups are occurring successfully

Own and Operate	
Customer Responsibilities	**Sensus Responsibilities**
DATABASE	
• Define data retention policy • Archive relevant data • Purge old, irrelevant, and excess data • Monitor space and capacity requirements • Respond to database alarms and notifications • Install database software upgrades and patches • Migrate data during installation and upgrades	• May perform or assist with installation of database patches, updates, and upgrades as a paid service • Perform standard technical support troubleshooting of RNI application and/or database when customer calls for assistance
RNI APPLICATION	
• Research significant problems with meter reads and system performance • Create and manage user accounts • Customize application configurations • Support application users • Investigate application operational issues • Respond to alarms and notifications • Install application upgrades and patches • Perform firmware upgrades over-the-air, or delegate and monitor field personnel for on-site upgrades	• May perform or assist with installation of application patches, updates, and upgrades as a paid service • Perform standard technical support troubleshooting of application when customer calls for assistance
OPERATING SYSTEM AND THIRD-PARTY SOFTWARE	
• Install operating system and other 3rd party software patches, updates, and upgrades • Perform system hardware maintenance, or delegate and monitor maintenance personnel with tasks such as monitor system performance, capacity, and availability	• May perform or assist with installation of system patches, updates, and upgrades as a paid service • Perform standard technical support troubleshooting of system when customer calls for assistance
SECURITY	
• Configure and manage security policies • Install security-related software and hardware upgrades and patches for operating system, database, and applications • Respond to alarms and notifications	• May perform or assist with installation of security patches, updates, and upgrades as a paid service • Perform standard technical support troubleshooting of RNI application and/or database when customer calls for assistance
BUSINESS CONTINUITY	
• Develop and implement a disaster recovery plan • Monitor system performance trends • Monitor for significant equipment and infrastructure faults • Identify problems and tasks required to perform required repairs; delegate to appropriate personnel • Replicate all systems (hardware and software) to a separate location (if available) • Perform complete system switch over to disaster recovery location (if available)	• May consult with customer to create a business continuity plan and/or procedures as a paid service • May assist with switch over of systems to disaster recovery location as a paid service • Perform standard technical support troubleshooting of system when customer calls for assistance during a disaster situation

Software as a Service (SaaS)	
Customer Responsibilities	**Sensus Responsibilities**
DATABASE	
• None	• Define data retention policy • Archive relevant data • Purge old, irrelevant, and excess data • Monitor space and capacity requirements • Respond to database alarms and notifications • Install database software upgrades and patches • Migrate data during installation and upgrades
RNI APPLICATION	
• Research significant problems with meter reads and system performance • Create and manage user accounts • Customize application configurations • Support application users • Investigate application operational issues • Respond to alarms and notifications • Perform firmware upgrades over-the-air, or delegate and monitor field personnel for on-site upgrades	• Install RNI application patches, updates, and upgrades when customer requests per Change Management process • Perform standard technical support troubleshooting of application when customer calls for assistance
OPERATING SYSTEM AND THIRD-PARTY SOFTWARE	
• None	• Install operating system and other 3rd party software patches, updates, and upgrades • Perform system hardware maintenance and monitor system performance, capacity, and availability • Perform standard technical support troubleshooting of system when customer calls for assistance
SECURITY	
• None	• Configure and manage security policies • Install security-related software and hardware upgrades and patches for operating system, database, and applications • Respond to alarms and notifications
BUSINESS CONTINUITY	
• Develop and implement a disaster recovery plan • Inform Sensus when to execute and switch over to the disaster recovery environment (execution fee will apply)	• Develop and implement a disaster recovery plan • Monitor system performance trends • Monitor for significant equipment and infrastructure faults • Identify problems and tasks required to perform required repairs; delegate to appropriate personnel • Replicate all systems (hardware and software) to a separate location • Perform complete system switch over to disaster recovery environment

B. Data Center Highlights

Physical Security:

- 24x7x365 on-site staffed technicians and security personnel with a dedicated guard room protected by ballistics rated glass
- Electronic badge card key and pin access
- Motion activated digital security cameras (interior and exterior)
- Biometric authentication readers on Data Center access doors through a mantrap entrance

Fire Detection & Suppression:

- Multiple zone dry-pipe pre-action fire suppression system
- Incipient early warning fire detection system
- Data Center safe fire extinguishers

Environmental Design:

- Zoned N +1 design – 900 tons of datacenter cooling
- Redundant 630 ton EVAPCO Cooling Towers
- Redundant 450 ton McQuay Chillers
- DataAire and Stulz CRAC units

SAS-70 Type II, SSAE 16 Type 1 Certified

City of League City
Request for Proposal #17-037
MDMS and Customer Portal

1. Introduction:

The City of League City is soliciting proposals from firms who are interested and qualified to provide and install an Advanced Metering Infrastructure (AMI) system. This RFP will cover a system-wide fixed network implementation. It is the intent of the City to select a single firm to accomplish all services outlined in this RFP.

1.1 Clarification and Interpretation of RFP

1.1.1 The words "must" or "will" or "shall" in this RFP indicate mandatory requirements. Taking exception to any mandatory requirement will be grounds for rejection of the proposal.

1.1.2 The City desires to avoid any misunderstanding where it is assumed that a feature is included in the proposal and turns out to be an optional, extra cost feature. As such, any question answered with an indication of compliance will be considered included at no additional cost. Any service that is referred to in the body of this response (does not pertain to attachments and brochures) will be considered included in the basic offer.

1.2 Purpose

The purpose of this RFP is to provide minimum requirements, solicit proposals and gain adequate information from which the City may evaluate the proposer's products and services as they compare to other providers and as they pertain to the needs of the City's organization as defined in this document.

2. Background Information:

2.1 General

League City is a home-rule, incorporated city with a 2017 population of approximately 102,635. The city encompasses approximately 52 square miles and is in the Houston metropolitan area. The city lies in north Galveston County southeast Harris County. League City is experiencing rapid growth, adding approximately 3,000 residents a year.

As of April 30, 2017, the number of active connections was 32,976 with an expected annual growth of 3%.

2.2 Current Software/Equipment

The City of League City Utility Billing (UB) department currently uses 2011 2.x Sensus software with 2003 Microsoft platform to interface with the City's current system, SunGard. (UB will be migrating to Tyler MUNIS in 2018). It provides the ability to read Sensus water meters hourly and transmits data every four (4) hours to the UB office through the Regional Network Interface (RNI) and downloads meter readings for monthly billings, views hourly charted usage and meter readings through MDM as well as archived inquiries and reports.

Current Base Stations and Antennas

Currently, data is transmitted by licensed frequency owned by the City to three towers located at:

- Countryside Water Tower – 5123 ½ Candlewood Dr
- South Shore Water Tower – 6060 South Shore Blvd
- Police Dept Radio Tower – 600 W Walker St

3. Scope of Work:

3.1 Qualified Proposers

The awarded proposer shall provide and install all the hardware and software that together comprise the proposed meter data management system (MDMS) and related software and interfaces.

As a provision of this requirement, all proposers shall meet the minimum requirements as follows:

- The proposer must be the factory authorized distributor for the AMI system proposed and be capable of processing the warranty claims for the City.
- The proposer must have an on-staff, factory trained AMI support specialist with the sole responsibility of providing AMI system support and sales.
- The proposed Fixed Base AMI technology manufacturer must have produced an MDM system that has been in commercial use for a minimum of five (5) years and must have a substantial number of completed water fixed base systems currently deployed. Of the deployed systems, the manufacturer must have at least one (1) combined water account utilizing its technology. To ensure the reliability of the system proposed, the manufacturer must have in service an acceptable number (500,000 or more) of AMI endpoint transmitters (either water, gas and electric or combined). Further, the manufacturer must also have a minimum of 100,000 each water, gas and electric (endpoint transmitters of the proposed equipment type are acceptable) of those proposed.

3.2 Meter Data Management Software

Meter Data Management Software

A. Core Capabilities

i. The MDMS Software shall comply with prevailing industry standard hardware, operating systems, databases, and user interfaces.

ii. The MDMS Software must exist as a browser-based (Internet Explorer 11 or later, Chrome, or Firefox) application that operates on a hosted server.

iii. The MDMS Software should provide a customizable file layout structure to interface with the utility's CIS for integrating meter reading data and customer information.

iv. The MDMS Software must support single and dual register meter information.

v. The MDMS Software should be capable of pulling data less than an hour old.

vi. The MDMS Software must be scalable to meet the full deployment requirements in a hosted environment without system and performance impacts to the utility.

vii. The MDMS Software shall be scalable and not require any additional licenses based on number of endpoints.

viii. The MDMS Software provider must be able to describe the methods that support scalability and associated costs.

ix. The MDMS Software must retain all meter reading data for a minimum of 36 months and provide provisions for additional storage if required.

x. The solution should be available as Software as a Service (SaaS) where the provider manages all hardware and software for the Utility. SaaS should be all inclusive for annual maintenance, licenses, upgrades and support.

xi. The AMI solution should provide graphical views to accounts if location data is provided from the Customer Information System and/or headend system.

xii. The AMI solution shall support the import of data from a Walk-By/Drive-By system to assist in a roll out program and be compatible with existing Sensus Systems (AMI).

xiii. The MDMS Software shall allow data from multiple reading technologies (AMR and AMI). The Meter Data Manager (MDM) shall act as a middleware between Customer Information Systems (CIS) and the Sensus FlexNet Regional Network Interface (RNI).

xiv. The system should offer dashboard to report on the following water-based anomalies:

a. Reverse Flow
b. Leak Detected
c. Tamper

xv. MDMS Software shall have a graphical user interface (GUI).

xvi. MDMS Software shall have icon-driven accessibility for ease of navigation and addition of other applications.

xvii. The MDMS Software shall have the following administration and system configuration: Role-based privilege management (Access Control)

xviii. The MDMS Software shall be include the following groups:

a. Filter by: AMI ID
b. Filter by: Billing Cycle
c. Filter by: Commodity Type

B. Import / Export capabilities

i. The MDMS Software must be able to export data to Microsoft Excel, PDF, Common Separated Value (CSV), and Text files.

ii. The MDMS Software must interface to the utility's CIS/billing software. The MDMS Software must have a setup application to map simple interfaces from a CIS/Billing System.

iii. The MDMS Software must import and support GPS type data to identify and display locations of accounts geographically.

iv. MDMS Software must provide a billing export.

v. MDMS Software must have a billing export setup application.

vi. MDMS Software must have a customer information data import setup application.

vii. MDMS Software must have a billing import file setup application (billing request file method).

viii. The billing gateway should allow entry of valid start and stop times for billing purposes.

ix. The MDMS Software shall have export capabilities of greater than 5K rows.

C. Meter Data

i. The MDMS Software shall provide the ability to process hourly time-stamped meter reading taken from all meters and verify the percentage of reads received for particular areas and/or selected meter routes. This data must then be exposed to various configurable parameters set (when provided), such as high/low parameters to assure the accuracy of the data.

ii. The MDMS be able to retrieve California Metering Exchange Protocol (CMEP) files via sftp

a. Registers – Hourly, all new registers received in last hour from all meters

b. Intervals – Hourly, all new intervals received in last hour from all meters

c. Alarms – Every 5 min, all new alarms in last 5min from all meters

d. Sync – Daily, all meter state information (lat/long, status, radio id, etc)

iii. The MDMS system must support MultiSpeak version for Flexnet RNI

a. Alarms – Real time when received by RNI forward to subscriber MultiSpeak servers

b. On Demand reads / Control – Real time requests from Sensus Analytics for data or control from the meter. Valve position changes, On Demand Meter Reading

iv. The MDMS Software must be able to search for records matching specified information.

v. The MDMS Software must provide the following data to the utility on a daily basis for monthly billing applications:

a. Hourly time-stamped meter reading taken from all AMI meters for monthly billing purposes.

b. Hourly usage/consumption readings for resolution of customer billing disputes and improved customer service.

c. Alarm data received from AMI devices for identification of customer site problems.

vi. The MDMS Software must be able to support demand read capability to the meter.

vii. The MDMS Software must provide the capability to store all meter data information for a minimum of three (3) years.

viii. The MDMS Software must utilize the head-end system's ability to back-fill missed reads to eliminate the need for validation routines.

ix. The MDMS Software shall have the following GIS, CIS, and SCADA business interface services:

i. Customer Information System (CIS) integration

ii. CIS daily synchronization

iii. CIS daily synchronization file mapping integration without coding

iv. CIS billing export

v. CIS billing export file mapping without coding

vi. CIS on demand reads

vii. Supervisory Control and Data Acquisition (SCADA) integration via professional services

D. Data Analytics

i. The MDMS Software must perform a high low analysis report. The MDMS Software must be able to check the reported value for the reading is within a percentage threshold of the historic average for the meter, taking into account seasonal variance (or a set value provided from the Customer Information System).

ii. The MDMS Software must allow a standard customizable report on continuous usage, needed for use in leak detection.

iii. The AMI solution should be able to identify and report revenue protection incidents.

E. Data Reporting

i. MDMS Software should translate data for use with reports.

ii. MDMS Software should have ability to search meter data.

iii. The MDMS Software must provide Alert capabilities to include the following:

Alarm	Water	Gas	Electric	Lighting
Tamper Report				
Meter Read Failure				
Metro Bad Register Number				
Cut Wire				
Leak Detected				
Meter Communication Failed				
Non Numeric Read				
Magnetic Tamper				
Swapped Meter				
Meter Communication Failed 30 days Latched				
Meter Low Battery				
Critical Hardware Warning				
Alarm Overflow Latched				
TouchRead Failure Latched				

iv. The MDMS Software must provide the following reports:
   a. All Alarms
   b. Billing Request Mismatch
   c. Consumption Exception (24 Hours)
   d. Consumption
   e. Consumption vs Previous Read
   f. Endpoint Details
   g. High Low Exception Report
   h. Master Route Interval Reads
   i. Master Route No Readings
   j. Master Route Register Reads
   k. Mismatch Report
   l. Negative Consumption
   m. Orphaned Meters
   n. UoM Comparison
   o. Zero Consumption for Period

v. The MDMS Software must have the ability to alert appropriate personnel of certain triggered alarms.

vi. MDMS Software must have email notification of alerts.

vii. MDMS Software must have text message notification of alerts.

viii. The MDMS Software must provide a geo-spatial/map view that includes:
   a. Display of meters
   b. View assets with events on map.

F. Device Access

i. From one application and without having to search on the account a second time, the Customer Service Representative (CSR) should be able to see all account information, interval and register reads for a selectable amount of time, and see any alarms that have been reported for the account.

ii. This information should be exportable to the windows clipboard, pdf file, CSV file or Excel.

G. Software Provider

i. MDMS Software shall be Sensus Analytics Enhanced Version Software or approved equal as determined by the utility.

Hosting

A. The proposed solution must host the MDMS Software on server hardware at a remote secure data center.

B. The Proposer will provide upgrades the MDMS Software to Latest Releases, Including all security patches and updates.

C. The Proposer will submit a daily file containing consumption reads and all available alarms collected by the network, including exception reports such as zero Consumption Reads, non-responding meters (including traceability to the meter location when the utility provides the meter location codes to Sensus)

D. The Proposer will provide 24x7x365 server and network monitoring using diagnostic software tools.

E. The Proposer will provide secure, off-site vaulting of encrypted backup tapes containing one year of history for auditing purposes.

F. The Proposer will provide a disaster recovery solution via data replication to a fault tolerant data center with 1 business day or less recovery time.

Customer Portal Overview

Consumer Portal Software

A. Customer Web Portal
   i. The software shall be accessible to customers using PC web browsers (Internet Explorer or Firefox) or mobile web browsers from major manufacturers.
   ii. The software shall allow the customer to initialize an account using address, account number and amount of the last payment received. Initializing a customer account shall require no involvement of City staff, everything should be done through e-mail.
   iii. The software shall allow the customer to set up an e-mail user name and a password of a specific length.
   iv. The software shall allow the customer to retrieve or re-set their forgotten password via the previously established email.
   v. It must show 24 hours of hourly meter reading data. It should also have the option of showing 7 days, 30 days and 12 months of meter data
   vi. Allow customers to manage multiple accounts with City under one user id.
   vii. Allow customers that have multiple meters on same account to be show on a single account.
   viii. Provide city ability to customize and make it look like the cities other websites and incorporate their logo.
   ix. Ability to send **email, text** when **Water Meters** report:
      a. Billing Cycle Usage Warning
      b. Vacation Usage Warning
      c. Leak Detected
   x. Ability to translate/show portal text in English or Spanish.
   xi. Provide dashboard for showing this month vs. last month for the billing periods.
   xii. Allow city to post notices to customers in Customer Portal.
   xiii. The solution should be available as Software as a Service (SaaS) where the provider manages all hardware and software for the Utility. SaaS should be all inclusive for annual maintenance, licenses, upgrades and support.

Hosting

G. The proposed solution must host the Portal Software on server hardware at a remote secure data center.
H. The Proposer will provide upgrades the Portal Software to Latest Releases, Including all security patches and updates.
I. The Proposer will maintain a web portal access to the MDMS Software.
J. The Proposer will provide secure, off-site vaulting of encrypted backup tapes containing one year of history for auditing purposes.
K. The Proposer will provide a disaster recovery solution via data replication to a fault tolerant data center with 1 business day or less recovery time.

Kristy Segarra - Manager, Bids & Proposals
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Email: kristy.segarra@aqua-metric.com
www.aqua-metric.com

August 16, 2017

Quote for	City of League City, Texas
Attention	Purchasing Department
Address	300 West Walker Street
City, State, ZIP	League City, Texas 77573
Phone	(281) 554-1000

Sensus Analytics MDMS, Consumer Portal, and Annual Support

Quantity	Description	Unit Price	Extended
	Year One Setup and Services		
1	RNI Setup Fee	$3,750.00	$3,750.00
1	RNI Core Education	$5,000.00	$5,000.00
1	Sensus Analytics Setup Fee	$3,750.00	$3,750.00
1	Sensus Analytics Basic Integration to CIS[7,8]	$2,000.00	$2,000.00
1	Sensus Analytics Onsite Training	$2,500.00	$2,500.00
1	Project Management	$12,500.00	*No Charge*
1	Annual RNI Software-as-a-Service (SaaS) Fee[5,6]	$14,705.88	$14,705.88
1	Annual Sensus Analytics Enhanced SaaS Fee[5,6]	$11,764.71	$11,764.71
TBD	Annual Sensus Analytics Alert Manager Text Message Block of 6,000 Messages (Optional)[5,6]	$750.00	*To Be Determined*
1	Consumer Portal Core - Annual Cost for Minimum User 1,500[5,6]	$5,000.00	$5,000.00
7000	Consumer Portal Core - Annual Cost for Minimum Over 1,500[5,6,10], Price per User	$1.20	$8,400.00
1	Consumer Portal System Setup	$0.00	$0.00
1	Consumer Portal CIS Integration Fee[7,8]	$0.00	$0.00
1	Consumer Portal On-Site Training	$0.00	$0.00
1	Consumer Portal Annual Text Message Block of 6,000 Messages (Optional)[5,6]	$0.00	$0.00
1	Aqua-Metric Annual Maintenance and Support, 2017-2018[6] *Includes Basestation Maintenance Program for Three S50 Basestations*	$12,000.00	$12,000.00
		Total:	**$68,870.59**
	Recurring Costs - Year 2[8]		
1	Annual RNI SaaS Fee - Year Two[5,6]	$18,823.53	$18,823.53
1	Annual Sensus Analytics Enhanced SaaS Fee - Year Two[5,6]	$13,529.41	$13,529.41
TBD	Annual Sensus Analytics Alert Manager Text Message Block of 6,000 Messages (Optional)[5,6]	$825.00	*To Be Determined*
1	Consumer Portal Core - Annual Cost for Minimum User 1,500[5,6]	$0.00	$0.00
7000	Consumer Portal Core - Annual Cost for Minimum Over 1,500[5,6,10], Price per User	$1.20	$8,400.00
1	Consumer Portal Annual Text Message Block of 6,000 Messages (Optional)[5,6]	$0.00	$0.00
1	Aqua-Metric Annual Maintenance and Support, 2018-2019[6] *Includes Basestation Maintenance Program for Three S50 Basestations*	$12,000.00	$12,000.00
		Total:	**$52,752.94**
	Recurring Costs - Year 3[8]		
1	Annual RNI SaaS Fee - Year Three[5,6]	$22,941.18	$22,941.18
1	Annual Sensus Analytics Enhanced SaaS Fee - Year Three[5,6]	$15,294.12	$15,294.12
TBD	Annual Sensus Analytics Alert Manager Text Message Block of 6,000 Messages (Optional)[5,6]	$907.50	*To Be Determined*
1	Consumer Portal Core - Annual Cost for Minimum User 1,500[5,6]	$6,631.25	$6,631.25
7000	Consumer Portal Core - Annual Cost for Minimum Over 1,500[5,6,10], Price per User	$3.00	$21,000.00
1	Consumer Portal Annual Text Message Block of 6,000 Messages (Optional)[5,6]	$796.25	$796.25
1	Aqua-Metric Annual Maintenance and Support, 2019-2020[6] *Includes Basestation Maintenance Program for Three S50 Basestations*	$12,000.00	$12,000.00
		Total:	**$78,662.80**

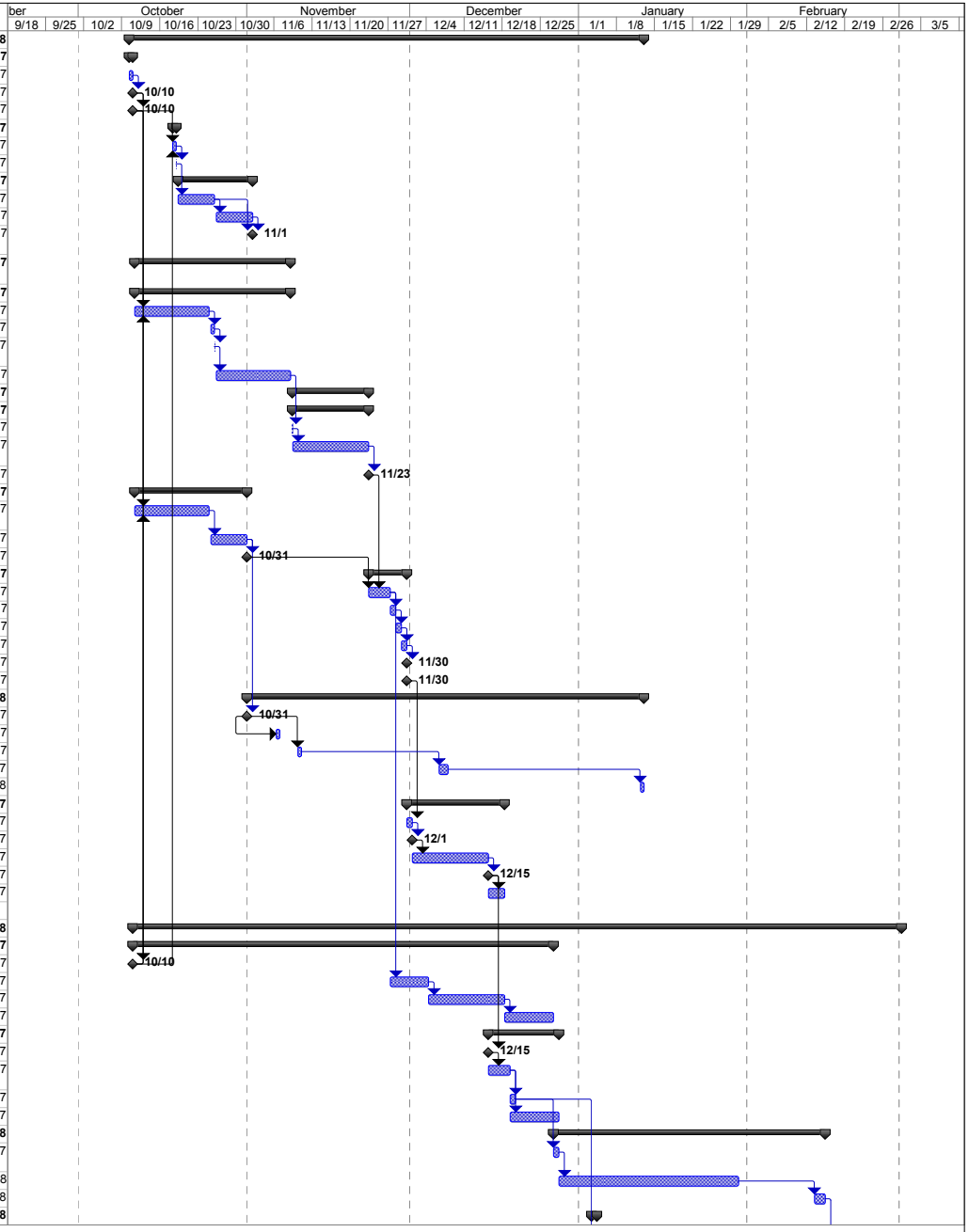
	Recurring Costs - Year 4		
1	Annual RNI SaaS Fee - Year Four[5,6]	$27,058.82	$27,058.82
1	Annual Sensus Analytics Enhanced SaaS Fee - Year Four[5,6]	$17,058.82	$17,058.82
TBD	Annual Sensus Analytics Alert Manager Text Message Block of 6,000 Messages (Optional)[5,6]	$997.50	*To Be Determined*
1	Consumer Portal Core - Annual Cost for Minimum User 1,500[5,6]	$6,830.00	$6,830.00
7000	Consumer Portal Core - Annual Cost for Minimum Over 1,500[5,6,10], Price per User	$3.09	$21,630.00
1	Consumer Portal Annual Text Message Block of 6,000 Messages (Optional)[5,6]	$820.00	$820.00
1	Aqua-Metric Annual Maintenance and Support, 2020-2021[6] *Includes Basestation Maintenance Program for Three S50 Basestations*	$12,000.00	$12,000.00
		Total:	**$85,397.64**
	Recurring Costs - Year 5		
1	Annual RNI SaaS Fee - Year Five[5,6]	$31,176.47	$31,176.47
1	Annual Sensus Analytics Enhanced SaaS Fee - Year Five[5,6]	$18,823.53	$18,823.53
TBD	Annual Sensus Analytics Alert Manager Text Message Block of 6,000 Messages (Optional)[5,6]	$1,097.50	*To Be Determined*
1	Consumer Portal Core - Annual Cost for Minimum User 1,500[5,6]	$7,035.00	$7,035.00
7000	Consumer Portal Core - Annual Cost for Minimum Over 1,500[5,6,10], Price per User	$3.18	$22,260.00
1	Consumer Portal Annual Text Message Block of 6,000 Messages (Optional)[5,6]	$843.75	$843.75
1	Aqua-Metric Annual Maintenance and Support, 2021-2022[6] *Includes Basestation Maintenance Program for Three S50 Basestations*	$12,000.00	$12,000.00
		Total:	**$92,138.75**

Five Year Subtotal: **$377,822.72**

This quotation on the product and services named, may be subject to the conditions noted below:

1. Net 30 Days to Pay
2. Freight Allow on orders over $7,500.00
3. All quotes are valid for 90 days from date of quotation
4. Return product may be subject to 25% restocking fee
5. Pricing guaranteed for term of Project - date ranges as shown
6. Minimum 5 Year Term; 5% Increase on All Annual Services Years 6-10 (from Year 5 Costs)
7. Basic Integration for Sensus side only. Billing provider may have additional costs associated with integration
8. During year two or three, League City will up updating their billing software to Munis. Additional integration fees will apply from Sensus and Munis. We are unable to determine costs at this time.
9. Pricing based on up to 35,000 services
10. Consumer Portal Annual User price will be calculated and invoiced at the end of the year, once an understanding of overage users has been calculated
11. Pricing does not include any type of bonding

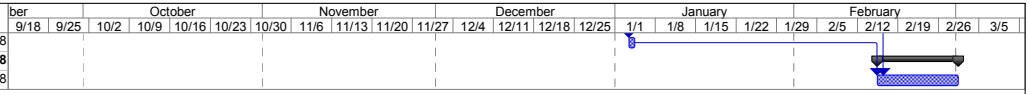
ID	Task Name	Duration	Start	Finish
1	**AMI Upgrade Phase I Project**	**63 days**	**Tue 10/10/17**	**Fri 1/12/18**
2	**Project Documents**	**1 day**	**Tue 10/10/17**	**Tue 10/10/17**
3	Contractual Agreement	1 day	Tue 10/10/17	Tue 10/10/17
4	Confirm Sensus Addendum Base Terms Document (Signed)	0 days	Tue 10/10/17	Tue 10/10/17
5	Purchase Order for Upgrade Migration and SaaS related Fees	0 days	Tue 10/10/17	Tue 10/10/17
6	**Kickoff Meeting**	**1 day**	**Wed 10/18/17**	**Wed 10/18/17**
7	Sign-off on Project Plan and SOW	0.5 days	Wed 10/18/17	Wed 10/18/17
8	Confirm/verify any requirements and expectations	0.5 days	Wed 10/18/17	Wed 10/18/17
9	**Infrastructure Preparation**	**10 days**	**Thu 10/19/17**	**Wed 11/1/17**
10	Setup City Network IP addresses (external) for the current 2.x RNI	5 days	Thu 10/19/17	Wed 10/25/17
11	Setup City Network IP addresses (external) for the current TGBs	5 days	Thu 10/26/17	Wed 11/1/17
12	Confirm Remote Access - access to all devices (Aqua Metric / Sensus)	0 days	Wed 11/1/17	Wed 11/1/17
13	**Installation of Infrastructure & SaaS FlexNet RNI and Sensus Analytics**	**21 days**	**Wed 10/11/17**	**Wed 11/8/17**
14	**RNI Installation (Hosted)**	**21 days**	**Wed 10/11/17**	**Wed 11/8/17**
15	Servers provisioned/installed at Sensus Data Center Site	10 days	Wed 10/11/17	Tue 10/24/17
16	RNI Commissioning (initial configuration)	0.5 days	Wed 10/25/17	Wed 10/25/17
17	Sensus Network Connectivity Test (remote access, Old RNI, 3xTGB)	0.5 days	Wed 10/25/17	Wed 10/25/17
18	Migrate data from RNI 2.x environment to SaaS (if required)	10 days	Thu 10/26/17	Wed 11/8/17
19	**Infrastructure Post Installation Tasks**	**10.13 days**	**Thu 11/9/17**	**Thu 11/23/17**
20	**Sensus Infrastructure Unit Test**	**10.13 days**	**Thu 11/9/17**	**Thu 11/23/17**
21	Confirm Infrastructure Test Scope	1 hr	Thu 11/9/17	Thu 11/9/17
22	Link up Old RNI and New SaaS RNI for data to flow from TGB to OldRNI to NewRNI until Cutover	10 days	Thu 11/9/17	Thu 11/23/17
23	SaaS Deployment (milestone)	0 days	Thu 11/23/17	Thu 11/23/17
24	**Billing Integration - Billing System(League City)**	**15 days**	**Wed 10/11/17**	**Tue 10/31/17**
25	Contract Sensus Billing Interface with Billing System for Automated vFlex File sent to SaaS RNI (Est)	10 days	Wed 10/11/17	Tue 10/24/17
26	Configure Sensus Analytics to work with Billing System	5 days	Wed 10/25/17	Tue 10/31/17
27	Delivery of Integration (Meter Sync and Billing Request/Response)	0 days	Tue 10/31/17	Tue 10/31/17
28	**Sensus Analytics Test**	**4 days**	**Thu 11/23/17**	**Thu 11/30/17**
29	Load CIS import file into Analytics	1 day	Thu 11/23/17	Mon 11/27/17
30	Verify import process	1 day	Mon 11/27/17	Tue 11/28/17
31	Generate a Readings File from Analytics	1 day	Tue 11/28/17	Wed 11/29/17
32	Run the import file into CIS system	1 day	Wed 11/29/17	Thu 11/30/17
33	Repeat if necessary until data verified	0 days	Thu 11/30/17	Thu 11/30/17
34	Verified - Production Environment	0 days	Thu 11/30/17	Thu 11/30/17
35	**Training**	**47 days**	**Tue 10/31/17**	**Fri 1/12/18**
36	Sensus Analytics Configured with Billing	0 days	Tue 10/31/17	Tue 10/31/17
37	Sensus Analytics and RNI Prerequisite Training	0.5 days	Mon 11/6/17	Mon 11/6/17
38	Validation Workshop look at data flow and resolution	1 day	Fri 11/10/17	Fri 11/10/17
39	Sensus Analytics Training	2 days	Wed 12/6/17	Thu 12/7/17
40	Sensus Analytics Follow-up Training	1 day	Fri 1/12/18	Fri 1/12/18
41	**AMI Phase Project Closeout**	**12 days**	**Thu 11/30/17**	**Mon 12/18/17**
42	Switch TGBs to Populate directly SaaS environment	1 day	Thu 11/30/17	Fri 12/1/17
43	Go-Live Switch to Using Hosted Environment	0 days	Fri 12/1/17	Fri 12/1/17
44	Final Billing System & Sensus Analytics Review	10 days	Fri 12/1/17	Fri 12/15/17
45	AMI Analytics Upgrade Complete (Milestone)	0 days	Fri 12/15/17	Fri 12/15/17
46	Documentation Archiving	1 day	Fri 12/15/17	Mon 12/18/17
47				
48	**Analytics Consumer Portal**	**95.13 days**	**Tue 10/10/17**	**Thu 3/1/18**
49	**Project Documents**	**52.13 days**	**Tue 10/10/17**	**Wed 12/27/17**
50	Purchase Order for SaaS Consumer Portal and related Fees	0 days	Tue 10/10/17	Tue 10/10/17
51	Agree on Approach for Rollout to Customers	5 days	Mon 11/27/17	Mon 12/4/17
52	Build Customer Communication Plan	10 days	Mon 12/4/17	Mon 12/18/17
53	Agree on Test Approach	5 days	Mon 12/18/17	Wed 12/27/17
54	**Configure and Setup Consumer Portal**	**7 days**	**Fri 12/15/17**	**Thu 12/28/17**
55	Sensus Consumer Portal Commissioning	0 days	Fri 12/15/17	Fri 12/15/17
56	Setup Parameters and Skin Like League City's other Customer Portals	2 days	Fri 12/15/17	Tue 12/19/17
57	Link to League City's Bill Pay Site and Home Site	1 day	Tue 12/19/17	Wed 12/20/17
58	Confirm all data is passing via vFlex file for Consumer Portal	5 days	Tue 12/19/17	Thu 12/28/17
59	**Testing**	**33 days**	**Wed 12/27/17**	**Thu 2/15/18**
60	Select City Accounts and City Employees that Live in League City to Test	1 day	Wed 12/27/17	Thu 12/28/17
61	Pilot Testing with City Accounts	4 wks	Thu 12/28/17	Tue 1/30/18
62	Pilot Rollout to Select Citizens	2 days	Tue 2/13/18	Thu 2/15/18
63	**Training**	**1 day**	**Wed 1/3/18**	**Thu 1/4/18**



Project: Untitled
Date: Wed 6/21/17

Task	Project Summary	Inactive Task	Duration-only	Finish-only			
Split	External Tasks	Inactive Milestone	Manual Summary Rollup	Progress			
Milestone	External Milestone	Inactive Summary	Manual Summary	Deadline			
Summary	Inactive Task	Manual Task	Start-only				

ID	Task Name	Duration	Start	Finish
64	Training for Billing and Public Works Personnel	1 day	Wed 1/3/18	Thu 1/4/18
65	**Production Rollout**	**10 days**	**Thu 2/15/18**	**Thu 3/1/18**
66	Execute Customer Communication Plan	10 days	Thu 2/15/18	Thu 3/1/18



Project: Untitled
Date: Wed 6/21/17

Task	Project Summary	Inactive Task	Duration-only	Finish-only			
Split	External Tasks	Inactive Milestone	Manual Summary Rollup	Progress			
Milestone	External Milestone	Inactive Summary	Manual Summary	Deadline			
Summary	Inactive Task	Manual Task	Start-only				