

**VILLAGE OF DOWNERS GROVE**  
**REPORT FOR THE VILLAGE COUNCIL MEETING**  
**OCTOBER 14, 2014 AGENDA**

SUBJECT:	TYPE:	SUBMITTED BY:
Automated Meter Reading (AMR) Meter Transmission Unit (MTU) Replacement Project	✓ Resolution Ordinance Motion Discussion Only	Nan Newlon, P.E. Director of Public Works

**SYNOPSIS**

A resolution has been prepared to authorize approval of an agreement for the AMR MTU Replacement Project with Aclara Technologies LLC of Hazelwood, Missouri in the amount of \$1,854,923.75.

**STRATEGIC PLAN ALIGNMENT**

The goals for 2011-2018 identified *Top Quality Infrastructure*.

**FISCAL IMPACT**

The FY15 Proposed Budget includes \$2 million in the Water Fund for the MTU replacement project to include contract work and internal employee costs.

**UPDATE & RECOMMENDATION**

This item was discussed at the October 7, 2014 Village Council meeting. Staff recommends approval on the October 14, 2014 Consent Agenda.

**BACKGROUND**

The project consists of the replacement of 15,050 meter transmission units (MTU) for the Village's automated water metering system beginning in January 2015. The MTUs are one component of the wireless fixed network that collects water usage information for the Village's water billing system. The other components of the network include a water meter for each customer that measures the amount of water used and 14 data collector units that wirelessly gather the data from the MTUs and transmit that data to the system's network control computer. The data collector units and the network control computer were upgraded in 2013.

The MTUs rely on an internal battery with a finite life expectancy to power the unit and transmit readings. The batteries are an integral part of the units and are not designed to be replaced. The units are beginning to fail to transmit readings consistently; a sign that the units are in need of replacement. The MTUs, originally purchased and installed in 2002/2003, have performed as expected with a projected useful life of about 12 years. The Village owns approximately 16,000 MTUs; not all need to be replaced at this time because they were installed more recently.

The scope of the proposed contract includes the purchase and installation of approximately 300 MTUs per week as well as professional services for project management, logistics and communications. At project start up, Aclara will develop a project communication plan and an MTU installation plan. An initial installation of 50 MTUs will be done to test all plans and systems before preparing for the mass rollout. Once started, installations will continue on a consistent basis with audits to ensure that installations are being conducted as expected. The new MTUs carry a full 15-year warranty that is prorated to 20 years.

Communication with residents will be an important element of this project and will be handled by the Village and Aclara. The following key steps will include:

- Messaging regarding the project will begin prior to the project kickoff and will be ongoing throughout the project
- Water customers (residents and businesses) will be notified when work is planned to occur in their area
- Customers will not see service or billing disruptions and there will be channels to resolve problems or concerns if they occur
- The Village will oversee the content of all communication and messaging that comes from the contractor

While the majority of units will be replaced without the need for access to homes, Village staff estimates that approximately 10%-20% of installations may require appointments with property owners for access. Aclara will manage this process, establish a call center and make contact with water customers to complete the work. These contacts will include automated calls, door hangers, personal calls, and postcards.

The Village issued a Request for Qualifications (RFQ) to identify vendors that could meet the Village's needs. Staff evaluated the responses and determined that Aclara, the vendor that installed the initial system, proposed a solution that best meets the Village's needs, provides the best product and the most continuity in metering operations. Staff also conducted a competitive pricing analysis by contacting multiple communities that had completed similar projects recently – either with Aclara's system or a competitor's – and determined the pricing structure proposed by Aclara is competitive with market rates.

#### **ATTACHMENTS**

Resolution

Contract Documents

**RESOLUTION NO. \_\_\_\_\_**

**A RESOLUTION AUTHORIZING EXECUTION OF AMENDMENT NO. 1 TO A MASTER AGREEMENT BETWEEN THE VILLAGE OF DOWNERS GROVE AND ACLARA TECHNOLOGIES, LLC FOR METER READING SERVICES**

BE IT RESOLVED by the Village Council of the Village of Downers Grove, DuPage County, Illinois, as follows:

1. That the form and substance of a certain Amendment No. 1 (the “Agreement”), between the Village of Downers Grove (the “Purchaser”) and Aclara Technologies, LLC (“Aclara”), for the replacement and installation of upgraded meter reading equipment, as set forth in the form of the Agreement submitted to this meeting with the recommendation of the Village Manager, is hereby approved.

2. That the Village Manager and Village Clerk are hereby respectively authorized and directed for and on behalf of the Village to execute, attest, seal and deliver the Agreement, substantially in the form approved in the foregoing paragraph of this Resolution, together with such changes as the Manager shall deem necessary.

3. That the proper officials, agents and employees of the Village are hereby authorized and directed to take such further action as they may deem necessary or appropriate to perform all obligations and commitments of the Village in accordance with the provisions of the Agreement.

4. That all resolutions or parts of resolutions in conflict with the provisions of this Resolution are hereby repealed.

5. That this Resolution shall be in full force and effect from and after its passage as provided by law.

\_\_\_\_\_  
Mayor

Passed:

Attest: \_\_\_\_\_

Village Clerk

AMENDMENT NO. 1  
TO  
MASTER AGREEMENT

UPGRADE EXISTING AMI COMPONENTS

This Amendment No.1 is entered into in duplicate effective as of the date last signed below by and between Aclara Technologies LLC ("Aclara") and Village of Downers Grove ("Purchaser").

WHEREAS, ACLARA and Purchaser are parties to a certain Master Agreement executed on August 9, 2013 (hereinafter "Agreement"); and

WHEREAS, this Amendment modifies, alters or changes specific terms and conditions of the Agreement to reflect the changes in services being purchased;

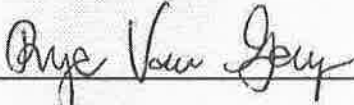
NOW, THEREFORE, in consideration of the foregoing premises and mutual covenants hereinafter expressed the parties hereby agree as follows:

1. The attached Exhibit A-1, Statement of Work dated 8-28-14 is hereby made a part of the Agreement.
2. The attached Exhibit B-1, List of Deliverables and Pricing dated 8-28-14 is hereby made a part of the Agreement.
3. The attached Exhibit E-1, Aclara MTU Warranty dated 8-28-14 is hereby made a part of the Agreement.
4. Except as modified in this Amendment, the Agreement will remain in full force and effect.

IN WITNESS WHEREOF, the parties have executed this Amendment No. 1 as of the date last signed below.

**ACLARA Technologies LLC**

**Village of Downers Grove**

By 

By \_\_\_\_\_

Name Ryne Van Gorp

Name \_\_\_\_\_

Title Chief Financial Officer

Title \_\_\_\_\_

Date 10/3/14

Date \_\_\_\_\_

**Exhibit A-1**  
**Statement of Work**

**Project Name:** Village of Downers Grove ("System Owner") STAR Technology MTU Series 3000 Installation Project ("Project")

This Statement of Work ("SOW") and the terms and conditions of the Master Agreement describe the Services to be provided to System Owner in support of the Project as authorized by Purchaser by signing this Statement of Work.

**1. Scope of Work**

This Statement of Work addresses the Implementation of Professional Services required to replace existing Meter Transmission Units (MTUs) more than five years old as of the date this Statement of Work is approved with Series 3000 MTUs.

**2. Project Approach**

The Aclara Professional Services Team ("Aclara Team") assigned to this project will complete the Aclara tasks described herein and will perform work for the System Owner for the duration of the Project at designated System Owner U.S. facilities and from remote locations.

The scope of the services engagement for this Statement of Work is set forth in Attachment 1, hereto. Attachment 1 also includes certain Responsibilities and Assumptions that are the responsibility of the System Owner. In addition to the tasks specified in Attachment 1 hereto, the System Owner agrees to provide appropriate Project resources, including but not limited to data, information, and appropriate and cooperative personnel, to facilitate the performance of the Services. The System Owner shall designate a Project Manager(s) to work with the Aclara Team to facilitate the provision of the Services. Once this SOW is executed, Aclara and the System Owner will assign resources to the project. The Aclara Team will work on the Project, and provide support as specified by the scope of work.

**3. Assumptions and Responsibilities**

Project Assumptions and Responsibilities are set forth in Attachment 1.

**4. Changes**

Any change to this Statement of Work shall be subject to mutual written agreement of the parties and shall be made in accordance with Attachment 3 hereto, Change Order, which is hereby incorporated by reference. Aclara shall not commence work on any such change unless and until the change has been agreed to in writing by both parties.

**IN WITNESS WHEREOF**, the Parties have executed this Statement of Work as of the date last signed below.

**Aclara Technologies LLC (Aclara)**

**Village of Downers Grove (System Owner)**

By: 

By: \_\_\_\_\_

Print name: Ryne Van Gorp

Print name: \_\_\_\_\_

Title: Chief Financial Officer

Title: \_\_\_\_\_

Date: 10/3/14

Date: \_\_\_\_\_

**Attachment 1 = Project Definition**  
**Attachment 2 = Rate Schedule**  
**Attachment 3 = Change Order Procedure**

**Attachment 1  
to  
Statement of Work**

**Project Definition**

**1. STAR MTU Series 3000 Installation Project Scope**

The tasks listed below are those that are included in this Project Scope.

Aclara will provide the Project Management and Installation Labor to replace the System Owners' 15,050 MTUs (all MTUs more than 5 years old as of the date of approval of the Statement of Work). MTUs will be replaced in the same location as the existing MTU, unless requested by the System Owner.

<b>STAR Technology for Water</b>
<i>MTU Deployment Project Management</i>
Provides a single point of contact from Aclara for Project duration
Provides timely project updates on Aclara tasks and system performance
Serve as point of escalation for issues related to Project
<i>MTU Deployment Installation</i>
Installation labor for 15,050 replacement MTUs
Coordination and management of field installers
Customer communication and call center management
Work Order Management (WOMS) Integration with Field Programmer and Customer Information System (CIS)

**A. Interface Scope**

There are no permanent interface updates in scope for this Statement of Work. WOMS integration will be provided on a temporary basis for the scope of this Project as defined in this SOW.

**B. Environments and Upgrades**

NCC upgrades are not provided as part of this SOW.

**C. Modifications**

No Modifications to core product will be made under this SOW.

**D. DCU Installation Scope**

No modifications to the DCUs or the DCU network will be made under this SOW.

**E. Out of Scope Areas**

In the event the System Owner requires Services for any work outside the scope of this SOW, Aclara could provide such additional Services as Additional Services through a separate Statement of Work or through the change order procedure set forth in Exhibit 3.

**2. Project Logistics****A. Uniforms and Identification, Vehicles and Safety Equipment**

All Aclara Personnel performing installation services in the field shall wear easily recognizable uniforms containing Aclara's subcontractor's name, as well as prominently displayed picture identification badges. Aclara will work with the System Owner to approve installation staff identification. All field staff will be equipped with safety equipment including safety glasses, gloves, footwear, and any other protective equipment required by the System Owner or local regulations. On-site service vehicles including private vehicles used for the work shall have decaling approved by the System Owner prominently displayed on both sides of the vehicle. Vehicles used for installation purposes will be labeled with System Owner approved labels.

**B. Warehousing**

- 1) The System Owner will provide a secure space for Aclara's use to store Aclara MTUs and the equipment required for Aclara to execute the Project, as well as space to complete Project-related work. The space does not need to be dedicated to Aclara and the Project and can be part of or next to existing System Owner facilities.
- 2) The System Owner will provide a 300-500 square foot room in its Public Works Facility with normal heating and cooling. Restroom facilities and Wi-fi internet access will be available. The room will have a table or desk large enough to hold three computers/laptops as well as a desk or table for docking and charging installer handhelds. Aclara can store at least two pallets of inventory and other materials in the room. The room has interior and exterior access. The room can be locked. Aclara can park its vehicles in the Public Works Facility parking lot.
- 3) Aclara needs to be able to access the space at all hours using keys, passes, or other secured access, and Aclara needs to be able to receive materials off of a truck between 8:00AM and 5:00PM on working days.
- 4) Aclara and the System Owner agree to review space alternatives and pick a System Owner facility that meets the needs of the Project without impacting System Owner operations.
- 5) In the event the above-described room does not meet Aclara's needs, Aclara will provide an offsite warehousing location at the System Owner's cost.

**C. Work Order Management**

- 1) Aclara will manage the Project using an electronic, automated Work Order Management System (WOMS) that integrates all Project activities, data, and reporting into a single system. The WOMS is to be used to manage all aspects of the Project including but not limited to:
  - a. Scheduling and staffing
  - b. Routing and dispatch
  - c. Inventory management
  - d. Quality control
  - e. Work order status and tracking

The System Owner will have access to the WOMS during the project.

- 2) It is to be used by the call center, warehousing staff, field contractors, and managers for project execution, tracking, and reporting. It is to be integrated with the field technology solution utilized by field installation staff and the software used to program the MTU.
- 3) The WOMS will accept a batch data download from the System Owner's Customer Information System (CIS) to populate the WOMS with account, premise, meter and MTU data. The WOMS will also be able to provide batch uploads updates to the Aclara Network Control Computer and the System Owner's CIS of data collected in the field during the installation process. WOMS will store and catalog field, MTU-specific, and geospatial (GPS) data collected in the field, as well as photos taken at MTU locations. This data will be available to the System Owner via the WOMS website.
- 4) Aclara's WOMS will integrate with the System Owner's CIS at the start of the project to obtain account and meter information for schedule and installation updates. On an interval to be agreed upon by Aclara and the System Owner, the System Owner will supply an updated list of added, changed, and deleted accounts and meters for use by Aclara to update installation planning.
- 5) Aclara will provide file-based integration for the standardized WOMS interface for the input integration with the System Owner's CIS. Aclara will provide standard interface file formats to the System Owner for integrating with their CIS. It is the System Owner's responsibility to integrate these standards with their CIS. The System Owner is responsible for the extract of data from the System Owner systems to integrate with Aclara interfaces. The System Owner is also responsible for consumption of updated data from the WOMS website. It is the responsibility of the System Owner to format the data for the WOMS integration in the standard Aclara integration format.
- 6) Aclara will track data relevant to an installation, including dates, times, locations, conditions, and meter and MTU-specific fields related to the hardware and installation. The WOMS will also capture photographs and GPS coordinates for each MTU. A list of data fields to be tracked will be supplied to the System Owner.
- 7) A WOMS handheld will pass new MTU details to the NCC Software and the existing interface between the Aclara NCC and the System Owner's CIS will pass pre-integrated fields into the System Owner's CIS.
- 8) If the System Owner transfers inventory from themselves to Aclara, the System Owner will provide corresponding MTU inventory tracking data, for use in the WOMS.

#### **D. Field Devices and Workflow**

Aclara will provide field technology such as handheld computers, tablets, or ruggedized laptop computers for field Work Order Management, including meter identification and reporting for use by Aclara during the Project.

#### **E. Customer Notification Process**

- 1) The System Owner will provide a final list of all MTUs to be replaced in Section order during the Project Start-Up phase of the Project. Installations will be divided by Sections. Each Section will be defined jointly with the System Owner during the Project Start-Up phase. The System Owner will provide its Customer (hereinafter referred to as "Customer") contact information to Aclara. The contact information will provide Customer's account, premise, meter, and MTU data from its systems in order to facilitate the Customer notification and appointment tracking process, in the format supplied by



Aclara. All written text and call center scripts will be reviewed and approved by the System Owner during the Project Start-Up phase of the Project.

- 2) The timing of all correspondence and calls will be determined by the mutually defined Installation Plan, with the process commencing prior to the start of installations in a Section.
- 3) Prior to installation Aclara shall do the following:
  - a. Call the Customers two (2) weeks prior to the scheduled installation; and
  - b. Call the Customers two (2) days prior to the scheduled installation.
- 4) Initial Site Visit for MTU Installations
  - a. Aclara will first attempt to see if the Customer is home to let them know Aclara is starting work at the home. If Aclara cannot find the MTU and the Customer is home, Aclara will ask the Customer for assistance in finding the MTU. If the Customer is not home or does not respond to Aclara's inquiry, Aclara will then attempt to complete the installation.
  - b. Aclara shall leave a door hanger notifying the Customer whether they completed the installation or were unable to do so.
  - c. If an installation cannot be completed for any reason on the first site visit, the reason will be noted in the WOMS and the door hanger will be filled out appropriately and left with the Customer, in-person if possible. The door hanger will request that the Customer contact the call center to make an appointment.
- 5) If an installation cannot be completed and the Customer fails to contact the call center to schedule an appointment, Aclara shall do the following:

Make three (3) personal telephone calls to the Customer, one week apart;

Make automated telephone calls to the Customer in between the personal calls;

Send a postcard to the Customer 1-2 days after the second personal telephone call.

Aclara shall document the above attempts to contact the Customer and provide to the System Owner upon request. In the event the Customer still has not scheduled the appointment after Aclara has performed all of the above-described actions, the endpoint will be reported to the System Owner as a Return to Utility ("RTU") for appointment scheduling.
- 6) If an installation cannot be completed due to a safety issue the endpoint will be reported to the System Owner as an RTU for the System Owner to address the issue or reason with the Customer.

Once an endpoint is reported to the System Owner as an RTU, the System Owner will schedule an appointment through the Aclara WOMS, and/or rectify the endpoint issue, as needed, so that Aclara can revisit the endpoint and complete the installation. If the System Owner is not able to make the endpoint ready for installation within thirty (30) business days prior to the end of scheduled MTU installation per the installation production plan, the endpoint will be removed from the list of sites to be installed by Aclara. Aclara and the System Owner may mutually agree to return a site to the installation list, but neither Aclara nor the System Owner is required to do so.

**F. Call Center**

Aclara shall maintain a call center to handle inbound and outbound calls related to installation appointment settings. Aclara will provide System Owner-specific introductory text for use as a call is made or answered and the System Owner will be provided with one round of edits on this text. Aclara will handle calls in English or Spanish; no other languages are supported. The call center will be open to make calls and receive appointments during non-holiday weekdays and Saturdays. The call center hours will be designated by Aclara. The call center will use Aclara's WOMS directly as its basis for account reference and appointment scheduling.

**G. Installation Execution**

- 1) All MTUs will be installed per the Aclara MTU installation manual. The actual process will include:
  - a. Removal and turn-off of the existing MTU, including cutting wires and physical removal
  - b. Mounting of the new MTU in the same location as the previously existing MTU
  - c. Splicing of the existing wires from the meter to the new MTU
  - d. Programming the MTU

Aclara will replace MTUs in pits or confined spaces as defined by OSHA at an additional charge as set forth in Exhibit B-1.

- 2) Once field installation staff gains access to the MTU location they are to commence and complete the installation process efficiently using the approved field process. If the existing MTU is not installed per Aclara guidelines, Aclara will note this in the WOMS Handheld and take a picture of the existing installation.
- 3) Aclara installation staff will seal all holes from the old MTU, and any new holes made, using clear silicon sealant. Any loose wire will be secured behind the MTU and/or using insulated staples. Aclara will leave the installation site clean and undisturbed other than sealed holes required during the installation process. Aclara is not responsible for refinishing the area behind a replaced MTU.
- 4) Sites where the existing MTU has been damaged or may have been tampered with will be replaced, and the site noted to be reported to the System Owner through Aclara.
- 5) Follow-up paperwork will be provided to each Customer after each installation in the form of a door hanger providing a summary of the process completed and the call center number for questions.
- 6) Field installation staff will be prepared to answer basic questions regarding their work, and shall refer all other questions to the call center, if related to this Project, or the System Owner, if unrelated to this Project. Field installation staff will treat Customers and the general public with the utmost respect and courtesy at all times.

**H. Audits**

Physical audits will be performed regularly, at Aclara's discretion. Audits shall include:

- 1) Review of existing register reads versus reads recorded in the WOMS
- 2) Review of AMI MTU installation against as-trained installation practices, including RF blocking conditions

3) Review of AMI MTU connectivity

Travel for physical audits requested by Aclara will be at Aclara's expense.

**I. Field Issues**

Aclara will develop a comprehensive plan for handling issues that fall outside of the standard, trained process for both residential and commercial installations to be included in the MTU Installation Plan. The plan will account for issues directly due to the installation as well as other issues not tied to the installation but still possible to impact safety, health, utility infrastructure, or cause other damage.

This plan will be provided to the System Owner.

**J. Working Hours**

Working hours will be flexible and may include Mondays through Saturdays, excluding federal, state, and local holidays defined during the Project, with a minimum of a 40-hour work week. Work days and hours may be adjusted for reasons such as weather conditions, Customer appointments, and meetings.

It is expected that Aclara will not allow their staff to work in unsafe weather conditions such as active lightning.

**K. Waste Materials, Recycling and Trash**

The existing MTUs will be turned off at the time of replacement and returned to the warehouse. The System Owner is responsible for disposing of legacy MTUs. No extra materials or trash will be left in the field.

**L. Installations by Section**

Aclara will define an MTU Installation Plan during the Project Start-Up phase. MTU installations will be completed by defined and continuous Sections. Aclara will work with the System Owner to determine the implementation order and the definition of the Sections, which will be defined in the MTU Installation Plan.

**M. MTU Installation Warranty**

Aclara warrants the installation for workmanship for one year from the MTU installation date, regardless of the project closeout date. It is expected that these issues will be reported directly to the System Owner, but may be reported to Aclara or as part of the quality control process or normal utility operations. Workmanship-related issues potentially affecting safety or property will be repaired within five business days, and other issues will be repaired within 15 business days.

**N. Revisits**

- 1) At Aclara's discretion, Aclara may revisit a site where Aclara installed a replacement MTU as part of this Project.
- 2) Any revisit at the request of the System Owner or a Customer that is not due to an Aclara installation issue will be considered an RTU.
- 3) The System Owner may request Aclara to revisit an MTU that was not installed per Aclara guidelines and move the MTU to satisfy Aclara guidelines. This revisit will be considered an RTU. All requests for revisits for these MTUs need to be received within 30 business days of the end of scheduled MTU installation, per the installation

production plan. This time period may be shortened at the end of the project in order to complete the project within the defined schedule.

**O. Return to Utility (RTU) Rate**

If the number of RTUs experienced during Aclara's installation exceeds five percent (5%) of the total number of endpoints to be installed, Aclara is due compensation from the System Owner per RTU at the fee in Exhibit B.

**P. On-Site Presence**

The Aclara Project Manager will provide remote Project oversight with one on-site visit per month, excluding the Project kick-off. If additional travel is required by the System Owner, it will be billable to the System Owner at actual costs.

The Aclara Installation Project Manager will be regularly on site during the Project.

**Q. Completion Milestones**

Completion milestones for the Project include:

- 1) Completion of an Endpoint deployment
- 2) Completion of a Section
- 3) Completion of the Project

Delineation of each type of completion milestone is noted below.

**a. Endpoint Completion**

An Endpoint is considered complete when:

- i. It has been correctly installed and is communicating with the Aclara Network Control Computer.
- ii. It has been correctly installed and is not communicating with the Aclara Network Control Computer due to a meter, register, wiring, or other System Owner-related technology issue, an MTU issue not related to RF communications, or a RF communications issue.

**b. Section Completion**

- i. Aclara will install by defined Section and will provide Project resources until a 98.5% reception percentage is received over a seven (7) day period for each Section. The reception percentage calculation for each Section will exclude MTUs that have been removed from the Aclara installation list for reasons listed in this SOW, MTUs that were not installed per Aclara guidelines and MTUs on the revisit or RTU list. Acknowledgement of Section completion shall be passed along in writing from Aclara to the System Owner.
- ii. Once a Section is accepted, it is the responsibility of the System Owner to perform MTU maintenance to maintain an acceptable read rate, using maintenance practices from Aclara's training and references. Revisits for installation warranty issues continue throughout the warranty period.

**c. Project Completion**

The Project is considered complete when all Sections are complete by above definition. Once the Project is complete, no further installation work may be done under this SOW

except for installation-related warranty work. Acknowledgement of Project completion shall be passed along in writing from Aclara to the System Owner.

### 3. Project Approach

The Aclara Project approach can be described within the below project phases. Each phase is described with an objective, team responsibilities and deliverables.



#### A. **Project Start-Up**

- 1) The project kick-off meeting is scheduled to introduce the project teams and formalize the start of the project. Aclara works with the System Owner to confirm the project scope, define the project team organization, and develop the communication plan between Aclara and the System Owner. The kickoff meeting focuses on reviewing project logistics and outlining the tasks and the plan for the project. The goals for this meeting are to ensure that Aclara and the System Owner are in agreement on the steps and acceptable outcomes for both MTU acceptance and mass installation.
- 2) During the start-up phase, Aclara completes all tasks needed to support the start of MTU deployment and the field installation plan documents the approach, logistics, timing and requirements for installations. Preparations focus on process, staffing, logistics, safety, quality assurance, WOMS integration, Customer notification, warehousing, tools, technology, vehicles, and project-specific training for MTU installations.
- 3) During this phase, Aclara will schedule MTU installation and WOMS training for the System Owner. Aclara also prepares for System Acceptance Testing to ensure end to end functionality of the system. A testing strategy document is delivered to the System Owner to document System Acceptance Testing criteria and logistics, and Aclara and the System Owner will agree on the plan laid out in this document. System Acceptance Testing will be conducted on fifty (50) MTUs to ensure data is flowing correctly from the MTU to the billing system. The System Acceptance Testing effort is completed, and the results approved by the System Owner, during the end-point acceptance phase and prior to the start of mass installation execution.
- 4) Responsibilities:
  - a. Project Management: The Aclara project management team is identified and is led by a Project Manager. The Project Manager is responsible for leading the implementation efforts, including managing timeline, cost and scope. The Project Manager is expected to maintain a detailed project plan and manage the deliverable responsibilities of the project staff. The Project Manager is also responsible for System Owner satisfaction, minimizing project risk and ensuring on-time delivery. The Project Manager reviews the project plan with the System Owner, delivers the communication plan, and coordinates and executes the on-site Project Kickoff meeting. The Project Manager coordinates and schedules MTU installation training with the Aclara training team. The Project Manager is responsible for understanding issues and risks and driving them to closure throughout the Project. The Project Manager will schedule regular project status discussions, to be defined by Aclara and the System Owner. These status discussions can be held via teleconference or webinar unless the Project Manager is on-site.

- b. Deployment Team: Aclara is responsible for planning, coordinating and troubleshooting all field activity, including all details mentioned above, MTU Field Programmer setup, WOMS data integration, and actual MTU installation. The project kick-off meeting will include a discussion of deployment logistics including field processes, WOMS integration, field technology, Customer communication, safety review, logistics review (vehicles, warehousing) and inventory process review.
- c. System Owner: The System Owner is responsible for identifying a Project team and an appointed Project Manager. The System Owner Project Manager works with the Aclara Project Manager formally on a weekly basis to review the project plan and Project status, and on an ad-hoc basis as needed to ensure Project schedule and quality. In this phase, the System Owner assigns their Project team, participates and assists with coordination of the Project kickoff meeting, and attends Project planning discussions. Appropriate System Owner staff attends MTU installation training conducted by Aclara's training team. The System Owner will provide required data for WOMS integration as well as prepare to send and receive data in the System Owner's CIS per the Aclara interface standards.

5) Deliverables:

- a. Project Communication Plan: Includes Project contact list, escalation plan and Project meeting logistics.
- b. Project Plan: Lists the different phases and tasks, important milestones, approximate duration for each task, resource requirements and projected start/end dates.
- c. Project Kickoff Materials: Includes Project kickoff meeting agenda and materials presented and discussed during the Project kickoff meeting.
- d. MTU Installation Plan: Details roles, responsibilities, timing, predecessors and logistics around MTU installation as discussed in Section 2 of this SOW. This plan includes the definition of installation Sections.
- e. WOMS Standardized Interface Details: Includes standard fields for WOMS integration so the System Owner can integrate the standard WOMS interface with their CIS.
- f. Test Plan: Lists test cases to be executed during System Acceptance Testing.
- g. Customer Communication & Appointment Plan: The System Owner reviews and approves the communication and appointment plan provided by Aclara. The System Owner is provided one round of edits on all written text and call center scripts.
- h. Training: Aclara provides STAR on-site training classes prior to any installation of MTUs. PowerPoint presentation and associated training materials will be provided to all training attendees and for distribution post-training.

**B. MTU Acceptance**

- 1) Aclara works with the System Owner to conduct a System Acceptance Test to validate the functionality of the system before mass installation of MTUs. Aclara installs fifty (50) MTUs to validate the end to end functionality of the system from the capture of the read in the meter through billing. Aclara provides test cases and supports the System Owner as they execute the System Acceptance Test cases, and quickly corrects any problems

identified during testing so that the System Owner can retest as necessary. Once the test cases have been executed, the System Owner will sign an Acceptance Certificate provided by Aclara, signifying acceptance of the product so that Mass Installation can begin.

- 2) Aclara will also test the installation processes and systems implemented for the mass installation of MTUs, and will identify and correct (via resolution or work-around) any issues encountered during this effort.
- 3) The signed Acceptance Certificate acknowledges that Aclara products function as expected and concludes System Acceptance Testing. This phase will be completed once all System Acceptance Testing cases have been executed, all Severity 1 and Severity 2 issues have been resolved, or a work-around identified, and the Acceptance Certificate is signed. Severity levels are defined below and apply to issue prioritization throughout the engagement.

Severity Level	Description
1	Requires immediate attention –Service is lost or degraded for <u>all users</u> preventing operation of business
2	Requires priority attention - Service is lost or degraded for single or small number of users, affecting significant business functionality
3	Requires attention – Users are able to continue business operations, but a problem or issue has been identified that affects operation of business
4	There is a problem or issue that does not affect operation of business

- 4) Responsibilities:
  - a. Project Management: The Project Manager is responsible and accountable for the successful execution of System Acceptance Testing. The Project Manager is responsible for maintaining status and managing issues through resolution. The Project Manager monitors the progress of System Acceptance Testing and coordinates the signing of the Acceptance Certificate with the System Owner.
  - b. Deployment Team: This team manages the plan, resources, and logistics for installation of the MTUs installed to support System Acceptance Testing. These initial MTU installations adhere to the installation plan developed in the startup phase of this project, both in order to ensure safety and quality and to test the processes, logistics, and communication protocols set in the startup phase. Aclara works with the System Owner to validate the installation plan and ensure initial MTU installations are completed properly.
  - c. System Owner: The System Owner is responsible for executing the System Acceptance test cases and signing the Acceptance Certificate before proceeding with mass installation.
- 5) Deliverables:

Signed Certificate of Acceptance: Aclara delivers the Certificate of Acceptance to the System Owner after the completion of System Acceptance Testing. The certificate is

signed by the System Owner to signify the completion of System Acceptance Testing and provide the go-ahead for mass installation.

### **C. Mass Installation**

The Aclara Project Management infrastructure remains in place throughout mass installation and provides day-to-day oversight. The following items are provided to the System Owner during mass installation to provide insight on the performance of the system and the success of the installations:

- 1) As MTU installation begins, Aclara's deployment team proactively monitors the STAR AMI system to check for installation issues. Such a program is important to quickly identify any potential issues with installations or batches of product. As part of this effort, weekly reports are furnished and discussed with the System Owner. The reports provide a breakdown of installation areas for comparison of performance.
- 2) Aclara assists in identifying specific MTUs that have been installed and are not functioning as expected.
- 3) Aclara provides one on-site field audit per month during mass deployment. This random audit of installed MTUs and oversight of the installers, on top of the deployment team's existing quality assurance program, ensures Aclara installation practices are tightly followed and assists installers with field-specific issues.
- 4) Aclara provides one virtual audit per month, where installation photographs, NCC, and WOMS data are reviewed to ensure compliance with Aclara's installation requirements and the project plan. This virtual audit is conducted separately from the on-site audit.
- 5) Responsibilities:
  - a. Project Management: The Project Manager coordinates installation activities and manages any issues that arise, and oversees auditing activities.
  - b. Deployment Team: The deployment team completes MTU installations, and assists with troubleshooting production issues in coordination with the Aclara support team. The deployment team also provides field and virtual audits to ensure the installation work is completed correctly.
  - c. System Owner: The System Owner provides support for unanticipated field and Customer issues.
- 6) Deliverables:
  - a. MTU Installation Progress Reports: Reports, described above, that monitor the progress and the success of MTU installations
  - b. MTU Troubleshooting Reports: Reports, described above, that identify MTUs that are not functioning correctly
  - c. Audits: On-site and virtual auditing of the MTU installation process and expert guidance for troublesome installation areas.

### **D. Project Close-Out**

- 1) Once the Project has been completed per the definition in Section Q above, Aclara and the System Owner meet to close out the Project. The agenda for this Project Close-Out meeting includes at a minimum:
  - a. Review of final project reporting and status



- b. Review of remaining sites, if needed
  - c. Transition plan for all data, tools, hardware, and inventory to be delivered to System Owner
  - d. Close down of warehousing
  - e. Finalization of open tasks and action items
  - f. Final invoicing
- 2) At the conclusion of the mass installation phase, Aclara concludes project management activities and the Account Manager is responsible for the Customer relationship moving forward.
- 3) Responsibilities:
- a. Project Management: The Project Manager coordinates project close-out activities and works to transition any remaining tasks internally within Aclara or with the System Owner.
  - b. Deployment Team: The deployment team completes installation close-out tasks.
  - c. System Owner: The System Owner is responsible for following the Aclara support process for entering any post production issues into the Aclara help desk system and working with Aclara to develop a transition plan for any open items.
- 4) Deliverables: None

#### 4. Project Timelines

- A. **Draft Schedule.** The draft schedule below presents a high level overview of the Project implementation schedule. Aclara will provide the System Owner an actual start date and update to this high level plan once the SOW has been executed and the Project Kick-Off Phase is completed. The confirmed schedule will be made by mutual agreement during the Project Kick-Off Phase.
- B. **Term.** The project has a 14 month implementation timeline with a maximum of 12 months related to installations. In accordance with Master Agreement Article 5, Time for Performance Section D, if Purchaser causes a delay in installation performed by Aclara beyond 13 months that is not otherwise excused thereunder, Aclara reserves its rights for additional compensation due to the increased costs caused by the delay(s).
- C. **Schedule Overview**

SCHEDULE ON NEXT PAGE

ID	Task Mode	Task Name	Duration	Start	Finish
1		<b>Downers Grove Series 3000 Installation</b>	<b>317 days</b>	<b>Mon 10/6/14</b>	<b>Tue 12/22/15</b>
2		<b>Project Kickoff &amp; Planning</b>	<b>12 days</b>	<b>Mon 10/6/14</b>	<b>Tue 10/21/14</b>
8		<b>Order Product</b>	<b>6 days</b>	<b>Wed 10/22/14</b>	<b>Wed 10/29/14</b>
11		<b>Product Training</b>	<b>18 days</b>	<b>Wed 10/22/14</b>	<b>Fri 11/14/14</b>
15		<b>MTU Shipment, Initial Installs</b>	<b>19 days</b>	<b>Thu 10/23/14</b>	<b>Tue 11/18/14</b>
22		<b>Product Acceptance</b>	<b>18 days</b>	<b>Tue 11/18/14</b>	<b>Thu 12/11/14</b>
23		Review Terms of Product Acceptance	0.5 days	Tue 11/18/14	Tue 11/18/14
24		MTU Installation(50) Needed for UAT	5 days	Tue 11/18/14	Mon 11/24/14
25		Conduct UAT	10 days	Tue 11/25/14	Mon 12/8/14
26		Review UAT results	2 days	Tue 12/9/14	Wed 12/10/14
27		Sign Acceptance Certificate	1 day	Thu 12/11/14	Thu 12/11/14
28		<b>Mass MTU Deployment</b>	<b>311 days</b>	<b>Tue 10/14/14</b>	<b>Tue 12/22/15</b>
29		<b>Project Prep</b>	<b>23 days</b>	<b>Tue 10/14/14</b>	<b>Thu 11/13/14</b>
30		<b>Logistics</b>	<b>15 days</b>	<b>Tue 10/14/14</b>	<b>Mon 11/3/14</b>
35		<b>Training</b>	<b>18 days</b>	<b>Tue 10/14/14</b>	<b>Thu 11/6/14</b>
38		<b>Appointment Center</b>	<b>13 days</b>	<b>Tue 10/14/14</b>	<b>Thu 10/30/14</b>
48		<b>WOMS Integration</b>	<b>16 days</b>	<b>Wed 10/22/14</b>	<b>Wed 11/12/14</b>
49		Complete project-specific programming	10 days	Wed 10/22/14	Tue 11/4/14
50		Test project-specific programming	5 days	Wed 11/5/14	Tue 11/11/14
51		Signoff on project-specific programming	1 day	Wed 11/12/14	Wed 11/12/14
52		Signoff on readiness for installation	1 day	Thu 11/13/14	Thu 11/13/14
53		<b>Execute installation</b>	<b>260 days</b>	<b>Fri 12/12/14</b>	<b>Thu 12/10/15</b>
56		<b>Project wrapup</b>	<b>8 days</b>	<b>Fri 12/11/15</b>	<b>Tue 12/22/15</b>
57		Installation complete review	3 days	Fri 12/11/15	Tue 12/15/15
58		Remove infrastructure (warehouse, v	2 days	Wed 12/16/15	Thu 12/17/15
59		Signoff on installations	5 days	Wed 12/16/15	Tue 12/22/15

**D. Project Organization**

- 1) The System Owner agrees to provide appropriate Project resources including but not limited to, data, information, remote access, workspace and appropriate and cooperative personnel, all as necessary to facilitate Aclara's performance of the Services.
- 2) The System Owner will allocate the following described personnel to the Project appropriate knowledge of the indicated area and the skills to perform the System Owner tasks, and any additional personnel that may be necessary for the System Owner to perform its obligations under the implementation work plan.
  - a. Project Manager
  - b. Field Resources to support site surveys, installations and troubleshooting
  - c. System Acceptance Testing Resources
  - d. STAR system administrators
  - e. CIS subject matter experts
  - f. Escalation Resources

**E. Project Governance**

The Project will have sponsorship from the System Owners identified escalation point, who will be available on a timely and regular basis to monitor the Project progress and to act as a decision maker for policy decisions.

## 5. Project Deliverables

The tables contained in this Section list the key Deliverables of the Project.

### A. **Accountability**

The following shows the key that is used to identify accountability for each deliverable:

#### **[R] Responsibility**

*Indicates that the designated Party has responsibility and accountability for the applicable Deliverable or milestone.*

#### **[A] Approve**

*Indicates that the designated Party is responsible for reviewing and approving the content of the applicable Deliverable or milestone.*

B. The table below describes the responsibilities and obligations of each Party with respect to each Deliverable listed in this Section.

Phase/Deliverable	Accountability	
	Aclara	System Owner
Project Start-Up Phase		
Communication Plan	R	A
Project Plan	R	
Project Kickoff Materials	R	
MTU Installation Plan	R	A
WOMS Standardized Interface Details	R	
Test Plan	R	
Customer Communication & Appointment Plan	R	A
Training Materials	R	
<b>MTU Acceptance</b>		
Certificate of Acceptance	R	A
<b>Mass Installation</b>		
MTU Installation Progress Reports	R	
MTU Troubleshooting Reports	R	
MTU Auditing	R	

**6. Payment Schedule****A. MTU Installation Payments**

- 1) Installation Fees stated in Exhibit B-1 shall be invoiced bi-weekly based on the number of successful installations to Aclara's standards during the month. The System Owner is responsible for RTUs as defined and at the fees stated in Exhibit B-1.
- 2) Aclara will invoice for each MTU Installation based upon the category of installation noted at the time of the Site Visit. MTUs will be categorized as Outdoor or Indoor.
- 3) Aclara may invoice for an Initial Site Visit MTU Installation when:
  - a. Aclara correctly installs and programs an MTU and:
    - i. It successfully communicates with the Aclara Network Control Computer; or
    - ii. It does not communicate with the Aclara Network Control Computer and the issue is found to be due to the meter, register, wiring, or other System Owner infrastructure; or
    - iii. It does not communicate with the Aclara Network Control Computer and the issue is found to be due to a RF communications issue; or
    - iv. It does not communicate with the Aclara Network Control Computer and the issue is found to be the MTU was not installed per Aclara guidelines
    - v. Aclara cannot access the MTU during an Initial Site Visit due to an access or safety issue, after the five (5) percent RTU count has been met.
    - vi. Aclara arrives for a scheduled Initial Site Visit Appointment and the System Owner's Customer (hereinafter "Customer") does not attend the appointment, does not allow access, or the MTU cannot be accessed due to a safety issue, after the five percent RTU count has been met.
- 4) Aclara may not invoice for an RTU until the five percent RTU count is met. Once the five percent RTU count is met, Aclara may invoice for an RTU when:
  - a. Aclara correctly installs and programs an MTU on a visit following a RTU and:
    - i. It successfully communicates with the Aclara Network Control Computer
    - ii. It does not communicate with the Aclara Network Control Computer and the issue is found to be due to the meter, register, wiring, or other Utility-owned infrastructure
    - iii. It does not communicate with the Aclara Network Control Computer and the issue is found to be due to a RF communications issue
    - iv. It does not communicate with the Aclara Network Control Computer and the issue is found to be the MTU was not installed per Aclara guidelines
    - v. Aclara arrives for a scheduled follow-up appointment following a RTU and the Customer does not make the appointment, does not allow access, or the MTU cannot be accessed or the previous issue has not been remediated.
- 5) Aclara may not invoice for an MTU installation or RTU when:
  - a. The trip is made to diagnose or repair an installation-related issue; or
  - b. Aclara cannot access the MTU due to an access or safety issue, before the five (5) percent RTU count has been met; or

- c. Aclara arrives for a scheduled appointment and the Customer does not make the appointment, does not allow access, or the MTU cannot be accessed due to a safety issue, before the five (5) percent RTU count has been met; or
- d. The revisit is requested by Aclara to address a communications issue; or
- e. Aclara arrives late or misses an appointment, and no work is done at the endpoint; or
- f. The Revisit is requested by Aclara for auditing purposes.

**B. Professional Services Payment Milestones**

The Professional Services fee for this project is defined in Exhibit B-1. Aclara will invoice the System Owner based on the Project milestones defined below. The number of MTUs installed will be calculated based on the total number of MTUs on the Aclara installation list at the time of the calculation and will not include any MTUs that are with the System Owner for exception purposes (including RTUs).

Milestone/Event	Percentage of Professional Services Fee	Amount
Mobilization Fee (upon contract execution)	20%	\$28,200
Kick Off Meeting Concluded	15%	\$21,150
System Acceptance Testing Complete	15%	\$21,150
25% MTUs Installed	15%	\$21,150
50% MTUs Installed	15%	\$21,150
75% MTUs Installed	10%	\$14,100
Project Close-Out Meeting Complete	10%	\$14,100

**Attachment 2  
to  
Statement of Work**

**Rates**

The following categories have been defined for Aclara Professional Services staff in the event of a change order:

Professional Services Staff	Hourly Rate	Off-hours hourly rate	On-call hourly rate
Sr. Technical Advisor	250	375	120
Product Manager	200	300	120
Project Manager	195	290	120
Systems Engineer	165	240	120
Systems Analyst	165	240	120
DBA	185	270	120

**Expenses: as incurred per visit                      Mileage: then current IRS mileage rate**

- A. Services will be charged at the applicable Rates as follows:
- 1) Standard Hourly Rates will apply to all service hours expended that do not exceed eight (8) consecutive hours during Aclara's normal business hours of 6:30 a.m. - 6:00 p.m. Central Time, Monday through Friday, excluding Aclara Holidays.
  - 2) Off-Hours Hourly Rates will apply to all service-hours expended beyond eight (8) consecutive hours during Aclara's normal business hours of 6:30 a.m. - 6:00 p.m. Central Time, Monday through Friday excluding Aclara Holidays.
  - 3) On-Call service is a pre-arranged service by which System Owner places a request to have an Aclara staff member accessible for a specified time period. During the period for which an Aclara staff member is accessible, On-Call Rates will be charged. If an Aclara staff member must actually perform services during the On-Call period, the services will be billed at the appropriate Hourly Rate or Off-Hours Hourly Rate, instead of the On-Call rate. This service will be provided remotely via a telecommunications link.
- B. If Aclara is requested to travel to the Customer's site to provide Services outside of the scope of this SOW, the costs and expenses associated with such travel will be borne by Customer and invoiced. Unless otherwise mutually agreed, Aclara's travel expenses for On-Site Services shall include, but are not limited to, airfare, lodging, meals, automobile rental, fuel, parking and associated administration fees, and will be charged to the System Owner on an actual basis.
- C. Aclara reserves the right to change the above rates upon 30 days' notice after a period of two (2) years from the SOW signature date. Changed rates shall not apply retroactively.

**Attachment 3  
to  
Statement of Work**

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***A SAMPLE CHANGE ORDER FORM FOLLOWS***

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**Change Order Procedure**

Any change to a Statement of Work must be agreed upon in writing by both parties. The following procedure (whether requested by the System Owner or Aclara) will be used to control all changes. All Requests for Change ("RFC") to the applicable Statement of Work must be made in writing and shall be submitted by the appropriate Project Manager. Each request will contain the following information:

- The requested change;
- The impact, if any, on the existing work product;
- Estimated impact, if any, on project schedule; and
- Estimated change, if any, in Services fees.

The Project Manager shall review and accept or reject the RFC. If rejected, the RFC shall be returned to the submitting party with written reasons for rejection and, as appropriate, any alternatives.

All approved RFC's will be incorporated into the Change Order to this Statement of Work. Aclara will not perform any Services outside of the Statement of Work until the RFC has been signed by both parties.

1. \_\_\_\_\_ D  
describe the requested change: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. \_\_\_\_\_ D  
define the impact, if any, on existing work product: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. \_\_\_\_\_ D  
define additional work product required as a result of the requested change, if any: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. \_\_\_\_\_ D  
define the impact, if any, to the existing Project schedule. Provide an updated Project schedule, if appropriate. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. \_\_\_\_\_ P  
provide an updated work product and payment schedule, if appropriate. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Accepted By:**  
**Aclara Technologies LLC (Aclara)**

By: SAMPLE  
Print name: SAMPLE  
Title: SAMPLE

SOW – Village of Downers Grove

**Accepted By:**  
**Village of Downers Grove (System Owner)**

By: SAMPLE  
Print name: SAMPLE  
Title: SAMPLE





Confidential

Date: SAMPLE

Date: SAMPLE

CONFIDENTIAL



**EXHIBIT B-1  
LIST OF DELIVERABLES AND PRICING**

STAR® Fixed Network AMR System

Date:

Item	Product Description	Qty	Unit	Unit Price	Extended Price	Delivery/ARO
<b>Equipment</b>						
1a	Water Meter MTU Single Port 3321-012-DB <sup>1 2 3</sup>	15,050	ea	\$75.00	\$1,128,750.00	3-8 weeks
1b	Water Meter MTU Dual Port 3322-012-DB <sup>1 2 3 4</sup>	100	ea	\$100.00	\$10,000.00	3-8 weeks
1c	Water Meter MTU Extended Range 3321-012-DBW <sup>1 2 3</sup>	10	ea	\$85.00	\$850.00	3-8 weeks
<b>SUBTOTAL</b>					<b>\$1,139,600.00</b>	
<b>Installation</b>						
2a	Outdoors MTU Installation <sup>2 5 6</sup>	13,550	ea	\$34.50	\$467,475.00	14 months
2b	Indoor Access MTU Installation <sup>2 5 6</sup>	1,500	ea	\$53.00	\$79,500.00	14 months
2c	Confined Space Access MTU Installation <sup>2 5 6 7</sup>	TBD	ea	\$167.00		NA
2d	RTU Revisits <sup>5</sup>	TBD	ea	TBD		NA
<b>SUBTOTAL</b>					<b>\$546,975.00</b>	
<b>Services</b>						
3	Professional Services <sup>9</sup>	1	job	\$141,000.00	\$141,000.00	14 months
4	5% Contingency based on Line Items 2 Installation Fees <sup>10</sup>		job	\$27,348.75	\$27,348.75	
<b>NOT TO EXCEED TOTAL</b>					<b>\$1,854,923.75</b>	

**Notes**

- 1 Reserved
- 2 Exact quantities and types of MTUs required and installed, to be determined.
- 3 1,344 MTUs will be shipped bi-weekly until total quantity in Exhibit B-1 is met.
- 4 Dual Port MTU supports two water meters or one dual register water meter.
- 5 If the total number of MTUs installed for replacement by Aclara decrease by more than 5%, Aclara reserves the right to modify the installation pricing.
- 6 Fee will be applied based on the installation location that applies.
- 7 Confined space is as defined by OSHA and includes manholes and pits.
- 8 The RTU Revisit is caused by location access issue, MTU not installed per Aclara guidelines, customer communications issue and technology issues unrelated to the MTU functionality as stated in Exhibit A, Statement of Work. Fee for RTU Revisit will be based on type of location (2a, 2b or 2c).
- 9 Professional Services Fees will be invoiced at the completion of the milestones identified in Exhibit A, Statement of Work.
- 10 For installation costs that cannot be determined at this time.

**Exhibit E-1**

**Aclara STAR Warranties**

**STAR® MTU Warranty**

# STAR® MTU Warranty

## Basic Warranty

Aclara Technologies LLC warrants to the original PURCHASER of a STAR® Utility Meter Transmission Unit (MTU) that the MTU shall perform in accordance with the specifications in effect at the time of original product shipment and shall be free from defects in material and workmanship for a period of fifteen (15) years from the date of original product shipment (the "full warranty period").

Any STAR® Utility MTU manufactured by Aclara Technologies LLC that, within the full warranty period: (i) fails to perform in accordance with the specifications in effect at the time of original product shipment or (ii) fails as a result of a defect in material or workmanship, when returned to Aclara Technologies LLC, freight prepaid, will be repaired or replaced at the option of Aclara Technologies LLC without charge to the PURCHASER. A STAR® Utility MTU which has been repaired or replaced by Aclara Technologies LLC will be returned to the PURCHASER by Aclara Technologies LLC, freight prepaid. All costs associated with the removal and/or reinstallation of a defective STAR® Utility MTU shall be the responsibility of the PURCHASER. Aclara Technologies LLC warrants replacement MTUs for the longer of (i) the remaining term of the full warranty period applicable to the STAR® Utility MTU repaired or replaced or (ii) one year from the date the repaired STAR® Utility MTU or its replacement is returned to PURCHASER. Aclara Technologies LLC reserves the right to supply factory refurbished equipment, new equipment, or a newer model that provides equivalent or better performance.

## Extended Warranty

Subject to the limitations set forth below, Aclara Technologies LLC, will replace any STAR® Utility MTU that, after expiration of the full warranty period but before the expiration of the twentieth (20<sup>th</sup>) full year after the date of original product shipment (the "extended warranty period"): (i) fails to perform in accordance with the specifications in effect at the time of original product shipment or (ii) fails as a result of a defect in material or workmanship. The cost of replacement will be prorated in accordance with the following table based on the number years of service before failure:

Years of Service	Replacement Cost Percentage
15	75%
16	80%
17	85%
18	90%
19	95%
20	100%

The cost of replacement will be calculated by multiplying the applicable replacement cost percentage by the STAR® Utility MTU price in effect at the time of replacement. The defective MTU must be returned to Aclara Technologies LLC by the PURCHASER, freight prepaid; Aclara Technologies LLC will pay the freight charges for the return of the replacement to the PURCHASER.

All costs associated with the removal and/or reinstallation of a defective STAR® Utility MTU shall be the responsibility of the PURCHASER. Aclara Technologies LLC warrants MTUs replaced pursuant to the Extended Warranty for fifteen (15) years (in accordance with the terms of the Basic Warranty) from the date the replacement is returned to the PURCHASER. Aclara Technologies LLC reserves the right to supply factory refurbished equipment, new equipment, or a newer model that provides equivalent or better performance.

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The information contained herein is proprietary and confidential to Aclara Technologies LLC and shall not be released or disclosed to any third party without prior written approval.

The STAR® Utility MTU warranties do not cover repairs or replacements required as a result of: misuse, mishandling, improper storage, accident, modification, improper operation, installation errors, meter failures, theft, vandalism, repair by unauthorized personnel, or battery life for MTUs that are configured and operated for more than two (2) to four (4) transmissions per day.

Aclara Technologies LLC makes no warranty whatsoever with respect to the minimum communication distance or reliability of the radio propagation path of STAR® Utility MTUs.

Each MTU includes software which is proprietary to Aclara Technologies LLC and which is protected by United States Copyright Laws with which the PURCHASER must comply. PURCHASER has the right to utilize the software in the MTU with the MTU, but PURCHASER may not disassemble, decompile, or modify the software. The software is confidential and the property of Aclara Technologies LLC and shall not be disclosed to others.

THE WARRANTIES CONTAINED HEREIN ARE IN LIEU OF ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES FOR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

THE LIABILITY OF ACLARA TECHNOLOGIES LLC SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF ANY DEFECTIVE PRODUCT. IN NO EVENT SHALL ACLARA TECHNOLOGIES LLC BE LIABLE FOR ANY DAMAGES, INCLUDING BUT NOT LIMITED TO SPECIAL, DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, RESULTING FROM PRODUCT INSTALLATION, USE, REMOVAL OR REINSTALLATION. THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE, AND IN NO EVENT SHALL THE LIABILITY OF ACLARA TECHNOLOGIES LLC EXCEED THE PRICE OF THE PRODUCT ON WHICH SUCH LIABILITY IS BASED. THE LIMITATION OF REMEDIES SET FORTH HEREIN IS IN RECOGNITION OF THE DIFFICULTIES OF PROOF OF LOSS AND THE INCONVENIENCE AND NON-FEASIBILITY OF OTHERWISE MEASURING DAMAGES AND OBTAINING AN ADEQUATE REMEDY.