

CCNA2017029 WORK ORDER Number 2

COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM(CMMS)
SOFTWARE SELECTION PLANNING SERVICES

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CONSULTANT: ARCADIS U.S.

BOARD OF COUNTY COMMISSIONERS
OF INDIAN RIVER COUNTY

By: 

By: _____
, Chairman

Print Name: Celine Hyer

Title: Senior Vice President

BCC Approved Date: _____

Attest: Jeffrey R. Smith, Clerk of Court and Comptroller

By: _____
Deputy Clerk

Approved: _____
Jason E. Brown, County Administrator

Approved as to form and legal sufficiency: _____
Dylan T. Reingold, County Attorney

EXHIBIT 1

Work Order Number 2

COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM(CMMS) SOFTWARE SELECTION PLANNING SERVICES

1) PROJECT UNDERSTANDING

Indian River County Department of Utility Services (IRCDUS) owns and operates both water and wastewater utility infrastructure and serves approximately 50,000 accounts. This infrastructure consists of water production facilities, water wells, potable water distribution networks, wastewater treatment facilities, wastewater collection systems, and reclaimed water distribution networks. This infrastructure is comprised of a considerable number of assets in the form of equipment, buildings, property, pipelines, manholes, supply wells, and a variety of other components used in operating the systems. These assets require preventative and corrective maintenance with a limited service life requiring eventual replacement. In addition, the systems will expand over time as new customers connect to the system, adding additional assets to the infrastructure.

IRCDUS desires to replace their existing Utility Asset Management Computerized Maintenance Management System (CMMS) with a new software system that meets all necessary functional requirements for the successful management of plant, pumping and pipeline assets. The CMMS must provide data-driven metrics to drive decision making, budgetary processes, projections and report/audit functionality. To achieve this goal, IRCDUS is initiating this work order to receive assistance with selecting the best-fit software platform. As part of the Phase I Asset Management work, Arcadis U.S., Inc. (Arcadis) performed an analysis to determine the relative cost to update and correct the existing SEMS implementation at IRCDUS versus replacement, and it was determined that the cost of a new system would be similar to the cost of updating the existing system. Arcadis believes that legacy software system replacements such as this are the ideal time to improve overall business process execution, using the new technology as the lever to make positive changes to the organizational performance. Our proposed approach has been developed based on our extensive experience applying technology to achieve business outcomes and is intended to ensure that IRCDUS' CMMS Software Selection Services project is much more than a technology upgrade. We expect that the resultant system will provide tangible customer service improvements and will provide the foundation for IRCDUS to apply advanced asset management practices.

Detailed scope of work follows.

2) SCOPE OF SERVICES

Upon authorization to proceed from IRCDUS, Arcadis will provide the following identified services.

Task 1 – PROJECT MANAGEMENT AND KICKOFF MEETING

This task consists of overall management of the project including budget management, invoicing, monthly status reports, project scheduling, and coordination with IRCDUS.

- 1.1 **Project Management.** Services provided will include project staffing, budget, schedule management, monthly invoicing, status reports, quality assurance, and deliverable review over the anticipated life of this project. Project Management will be ongoing for the duration of the project.
- 1.2 **Project Schedule.** Upon notice to proceed, Arcadis will finalize the project schedule and submit to IRCDUS for review and approval. During project execution, Arcadis will submit monthly status reports that detail the project's progress, and our Project Manager will conduct regular status calls with the IRCDUS project team.
- 1.3 **Project Kickoff Meeting.** Arcadis will facilitate a kick-off meeting workshop with IRCDUS staff, including the project sponsors, key staff, subject matter experts and other stakeholders, as appropriate, to review the project tasks and schedule, and gain consensus on the overall project objectives. This will be conducted remotely to expedite scheduling and be cost effective. The meeting will help orient all participants on the project approach, gather their expectations, review core function and business practice processes gathered to date, and identify areas of input that will be required for the success of the project.

Task 1 Deliverables:

- Kick-off Meeting agenda and minutes
- Monthly invoicing including a summary of work completed

Task 2 - REQUIREMENTS DEFINITION

Based on our understanding of the needs of this project, IRCDUS desires more than a simple maintenance management system replacement; IRCDUS seeks to implement a system that can support advanced asset management processes. Our approach to asset management requirements definition will take a broad approach, leveraging Arcadis' water industry leading position in asset management and our in-depth knowledge of advanced asset management practices.

The requirements for the CMMS describe how it should function, based on the desired future state. The purpose of this task is to define the system requirements, which are used as the basis for development of a Request for Proposals (RFP) and system procurement.

- 2.1 **Stakeholder Interviews.** Arcadis will consider the needs of various stakeholder groups who may be impacted by the new systems, including information technology, cyber security, customer service, operations and maintenance, field staff, inventory staff, and management. Arcadis will conduct up to three one-hour project interviews via conference

calls with internal stakeholder groups to discuss their needs for the CMMS. At the completion of the interview process, Arcadis will facilitate a series of Asset Management workshops to finalize the requirements, as discussed below. The workshops will be divided into asset management, integration, data conversion and technical requirements.

2.2 **Asset Management Requirements Workshop.**

Two asset management workshops approximately 3 hours in duration will be conducted via video conference call and will cover areas related to work and maintenance management, asset data maintenance, inventory management, and asset condition management. A meeting pre-read packet will be provided prior to the workshops which will contain preliminary requirements for discussion during the workshops. Topics to be covered include areas such as:

- Asset hierarchy
- Work order processing and cost accounting
- Mobile application requirements for work order processing
- Work crews assignments
- Tools and equipment tracking
- Asset valuation, depreciation, refurbishment
- GIS application requirements
- Inventory/warehouse management
- Document management
- Fleet management
- Asset physical condition, performance condition and consequence of failure
- Asset risk
- Reporting and business intelligence

2.3 **Interface Requirements Workshop.**

The CMMS may require integration points with existing systems. Arcadis will conduct one integration requirements workshop of approximately 3 hours via video conference call that will address the desired system interfaces and specific business data needs for the CMMS which might include:

- GIS (Esri ArcGIS Desktop, Portal/Online & ArcGIS Server)
- Customer support (Advanced Utility Systems CIS)
- Sewer pipeline inspections (MTech Granite XP)
- SCADA (Data Flow Systems HT3 / Trihedral VTScada)
- Water/Wastewater model (WaterCad v8i)
- MUNIS

- Indian River County Network
- Mobile, Cellular, Hotspots (Field interface), VPN

2.4 **Data Conversion Requirements Workshop.**

Converting data from your legacy SEMS systems to the new CMMS will be an important project element and the requirements for this must be clearly communicated to the prospective software vendors. Arcadis will conduct one data conversion workshop via video conference call of approximately 3 hours to identify the conversion needs for the CMMS Selection Services project, including areas, such as:

- Asset master data
- Work order history
- Storeroom and inventory records
- Technical requirements for migrating SEMS data to another CMMS
 - SEMS database structure
 - Database conversion requirements (post conversion audit)

2.5 **Technical Requirements Workshop.**

Arcadis will conduct one technical requirements workshop via video conference call of approximately 3 hours. The technical requirements define the underlying architecture, computing systems and telecommunications needed to support the CMMS such as:

- Hardware Requirements
- Environmental Requirements (Space, Power, Temp, Humidity, etc.)
- Human Factors Requirements
- Relational Database Management System
- Operating System
- System Administration
- Mobile computing
- Barcoding
- Support and maintenance
- GIS
- On Premises or Hosted
- Cyber Security
- Data ownership
- Redundancy

For each functional requirement, a vendor verification method shall be designated, such as:

- Testing
- Analysis
- Demonstration
- Inspection

A priority or importance rating shall be assigned to each functional requirement, such as:

- 1 = Must Have; Key Performance Requirement
- 2 = Should Have
- 3 = Nice to Have

Task 2 Deliverables:

- Draft and Final Requirements Memorandum documenting requirements from each subsection of Task 2. Requirements shall include vendor verification methods (requirement traceability), and priority.

Task 3 – PROCUREMENT PLANNING

Arcadis will coordinate with County Procurement staff to discuss and understand the overall format and requirements for the RFP including price and qualification criteria, evaluation scoring, bid forms, standard language, etc. Coordination may take place via phone and e-mail as needed to complete the Procurement Planning Technical Memorandum.

Arcadis has recently performed a number of CMMS software selection projects (i.e. Elkhart IN, Canton OH, Youngstown, OH), and we are aware of the current state of the industry. We will augment this knowledge with a Request for Information (RFI), which we will send to water/wastewater industry CMMS vendors. The RFI has two purposes:

1. It allows us to informally solicit information from vendors about their offerings—information that will be used for the technology evaluation.
2. It provides an advanced notification to the vendor community that an RFP may be forthcoming.

In our experience, priming the market prior to starting a formal procurement process greatly improves the competitiveness of the responses.

Specific scope items under this task include:

- 3.1 **Review Procurement Policies:** The County will provide Arcadis with its relevant procurement policies, and Arcadis will conduct one conference call with County

Procurement staff to review and discuss the applicable procurement policies and formats for this RFP.

- 3.2 **Request for Information:** Arcadis will develop the RFI. Upon approval from IRCDUS, Arcadis will send it to prospective CMMS vendors. Arcadis will receive and track the responses from this RFI and provide a summary to IRCDUS in a technical memorandum.
- 3.3 **Procurement Planning Technical Memorandum:** Arcadis will develop a technical memorandum that includes a summary of the RFI responses, the RFP procurement process, an RFP outline, the recommended evaluation criteria, and other procurement considerations. For the evaluation criteria, Arcadis will develop a balanced scorecard that will enable the selection team to rate the proposer and candidate CMMS objectively. Each evaluation element in the balanced scorecard will have a “weight” assigned, allowing the team to account for the ability to perform the required task and the importance of that task. The selection scorecard assessment may include the following:
 - Qualifications of firm / past vendor performance including implementation successes and customer satisfaction, industry evaluation and product review
 - Ability to meet CMMS requirements including proposed scoring methodologies/ weightings for requirements matrix
 - Implementation approach
 - Lifecycle Cost

Arcadis will advise the IRCDUS selection team as needed to support making an informed decision.

Task 3 Deliverables:

- Request for Information to Vendors
- Draft and Final Procurement Planning Technical Memo
- Software selection team support up to 24 hours

3) SCHEDULE

Task	Start Date	End Date
1 – Project Management	5/25/20	7/21/20
2 – Requirements Definition	5/25/20	7/6/20
3 – Procurement Planning	6/1/20	7/21/20

4) FEE ESTIMATE

		Project Manager	Sr. Professional Asset Management (IT/CMMS)	Sr. Professional CMMS/GIS	Lead Project Professional	Assistant Project Professional	Sr Admin	Total Hours	Total Billable	Other Reimbursable expenses (at cost)
Task No.	Task Description	Hyer	Sekuler	Heltzel/Wopershall	Ware	Sekar				
1	Project Management									
1.1 - 1.3	Project Management	2	4	2	4		4	16	\$3,030	
2	Requirements Definition									
2.1 - 2.5	Requirements Workshops and Requirements Matrix	8	60	40	4		2	114	\$27,220	
3	Procurement Planning									
3.1	Procurement Policies Review	2	2		2			6	\$1,410	
3.2	RFI	1	4	2		16		23	\$4,045	
3.3	Procurement Planning Memo & Software Selection Support	4	26	16		16	2	64	\$13,700	
	Total Labor	17	96	60	10	32	8	223	\$49,405	Not to exceed
	Billing Rate	\$265.00	\$250.00	\$230.00	\$190.00	\$145.00	\$70.00			\$1,000
	Estimated Total Billable	\$4,505	\$24,000	\$13,800	\$1,900	\$4,640	\$560			
Total Estimated Fee (Labor + Other Reimbursable Expenses)										\$50,405