



Memorandum

To: Mark Gaffino, Village President & Board of Trustees

Cc: Steven Bosco, Village Administrator

From: Brian Richter, Public Works Director

Date: April 29, 2024

Re: Supervisory Control and Data Acquisition (SCADA) Upgrade and Services Proposal Award

The Village of North Aurora owns and operates a municipal potable water system which includes two (2) water treatment plants (WTP), two (2) operating elevated water storage tanks (EWST) and six (6) raw water wells, and approximately 113 miles of water main. The water system currently utilizes an outdated Supervisory Control and Data Acquisition (SCADA) system with deficiencies for monitoring and controlling the water system. The existing system relies on using local HMI touch screens at the facilities and lacks a quality alarm notification system. Currently staff receives phone notifications when there is an alarm at a well or water treatment plants. These notifications do not say what the alarm is for, so the staff must go to the location and determine what the alarm is for. This system will allow the Water Division staff to receive alarms via text or email and they will be able to determine the severity of the alarm, this can all be done from anywhere. This project also replaces an old radio network that is obsolete and no longer supported. The new system will utilize Rockwell Factory Talk View, which is a SCADA program that will create better control of the Village's water system. This new system will allow staff to remotely monitor and operate all six wells, the two treatment plants, and the two water towers. The Village has decided to advance the complete replacement of existing outdated hardware and software with a packaged, turnkey SCADA system.

A Statement of Qualifications (RFQ) and Request for Proposal (RFP) was issued on March 14, 2024, and the proposals were due back on April 12, 2024. Three companies attended the pre-proposal meeting, and two companies submitted a proposal. One of the companies contacted the Village and withdrew from submitting a proposal

due to lack of familiarity with the facilities and they were unable to get a full understanding of the work.

1. Allan ICS – Stanely Consultants \$1,633,658.16
2. Tri – R Systems \$596,000.00

Tri – R Systems was contacted by the staff for some additional clarification of their proposal as staff wanted to ensure that it aligned with the RFP. Staff and Tri -R Systems identified some additional costs that would need to be added to the RFP including changing the model of the programable logic controller (PLC), adding communication to Variable Frequency Drives (VFD), and adding additional critical spare parts for the Village to have on hand. These items were missing from Tri – Rs proposal and it was part of the RFQ. This additional work will add \$40,500.00 to the proposal.

The staff is seeking approval to award the SCADA system upgrade and services work to Tri – R Systems for the adjusted amount of \$636,500.00. Attached are the statements of qualifications, requests for proposals, and the agreement for you to review.



**Village of North Aurora
Request for Statement of Qualifications (SOQ)
and Request for Proposal (RFP) for:**

Supervisory Control and Data Acquisition (SCADA)
Upgrade and Services

Qualifications and Proposals may be mailed
or delivered in person to:

Village of North Aurora
25 E State St.
North Aurora, IL 60542

**Qualifications and Proposals must be received by:
4:00 PM (CST) on 4/12/2024**

Important Dates/Times	
3/25/2024 9:00 AM	Pre-Proposal Meeting
4/1/2024 10:00 AM	Questions Due
4/8/2024	Responses Posted
4/12/2024 4:00 PM	Proposals Due



To whom it may concern:

The Village of North Aurora invites qualified systems integrators to submit a **Statement of Qualifications (SOQ) & Request for Proposal (RFP)** for a replacement Supervisory Control and Data Acquisition (SCADA) system including software, security, programming, licensing, specialized equipment, and integration support for the Village's Water Supply.

OVERVIEW

The Village of North Aurora owns and operates a municipal potable water system which includes two (2) water treatment plants (WTP), two (2) operating elevated water storage tanks (EWST) and six (6) raw water wells. The water system currently utilizes an outdated system with deficiencies for monitoring and controlling the water system. The existing system relies on using local HMI screens at facilities and lacks a quality alarm notification system. The Village has decided to advance the complete replacement of existing hardware and software with a packaged, turnkey SCADA system.

Definitions

The words (A) "Village", (B) "Department", or (C) "Contractor, Respondent, Vendor ", as used in this RFP, shall be understood to refer respectively to (A) the Village of North Aurora, Illinois; (B) the several departments therein; and (C) the person, respondent or corporation with whom the contract is made by said Village or the agent or legal representative who may be appointed to represent such person, respondent or corporation in the signing and performance of said contract.

TECHNICAL ENVIRONMENT

The Village of North Aurora's water supply facilities include a mixture of Allen Bradley PLCs and Schneider Electric SCADAPACK 32 PLC's. Project Locations will include the following Facilities:

East Water Treatment Plant

- Three PLC Cabinets with SCADAPack 32 PLC's and Automation Direct HMI screens. Cabinets connected via fiber optic converters.



- Communicates to the West Water Treatment Plant via internet with VPN.
- East Water Treatment Plant Main PLC hosts the logic control for the starting and stopping of all raw water wells.

East EWST

- Rosemount level transducer which reports to the Well 5 PLC
- Existing Transducer cabinet lacks temp sensor and alarm capabilities.

West Water Treatment Plant

- Two PLC Cabinets connected with Ethernet, cabinets have Automation Direct HMI screens. Utilize SCADAPack 32 PLC's. Communications between East and West Treatment Plants is via Firewall/VPN.

Princeton EWST

- Existing Tank is not utilized for water storage; tank is used for cellular carrier rentals (currently no telemetry).
- Plan for New Tank to be constructed at the same location is underway.

Automall EWST

- Utilizes a SCADAPack 32 PLC. GE iNet 900 radio signal is TX/RX to the West Water Treatment Plant, signal is passed through to the East Water Treatment Plant.

Well 4

- Located at West Water Treatment Plant.
- Well Pumps to the West WTP.

Wells 5

- Cabinet installed in 2023 with Allen Bradley PLC and connected to East Water Treatment switch via Fiber optic cable. The site has an existing Automation Direct HMI touchscreen.
- Well Pumps to the East WTP.

Well 6

- Utilizes a SCADAPack 32 PLC. GE iNet 900 radio signals TX/RX to the West Water Treatment Plant.
- Well Pumps to the West WTP.

Well 7

- Utilizes SCADAPACK 32. Utilizes GE iNet 900 radio to TX/RX with East Treatment Plant. Has a non-functioning Automation Direct HMI touchscreen.
- Well Pumps to the East WTP.

Well 8

- Constructed in 2020 and utilized multiple Allen Bradley PLC's. One for control and one serves to communicate to SCADAPACK protocol. Has an Allen Bradley Panelview Plus HMI touchscreen.



- Utilizes GE iNet 900 radio to TX/RX to the West Treatment Plant
- Well Pumps to the West WTP.

Well 9

- Constructed in 2020 and utilized multiple Allen Bradley PLC's. One for control and one serves to communicate to SCADAPACK protocol. Has an Allen Bradley Panelview Plus HMI touchscreen.
- Utilizes GE iNet 900 radio to communicate with East Treatment Plant
- Well Pumps to the East WTP.

Project Scope and Objectives

The new system will run on the latest version of Rockwell Automation FactoryTalk Software, utilize Win911 for the alarm package, must have a cellular backup auto-dialer for the most critical alarms. The project should be designed for expandability with the idea that future remote stations may be added and integrated. The replacement SCADA and communication project includes, but is not limited to:

Mapping of Existing I/O and Control Logic

The respondent shall provide for any necessary initial mapping of instrumentation and controls and communication network; confirm all I/O of the existing system as a part of design of new system.

General

1. Create a Replacement SCADA System which utilizes SCADA PCs at multiple locations running Rockwell FactoryTalk, all with the ability to run standalone if connection is broken between sites. Utilize a SCADA server with a redundant server, servers shall be located in locked network cabinets at each WTP. The System must be able to be securely accessed remotely, utilizing existing Village iPads and remote laptop computer connections.
2. The SCADA system should be easy to operate and intuitive for users. The System design should enhance Staff's situational awareness and ability to tend to operational tasks, including remote access for operators and supervisory staff (viewing/trending/reporting).
3. Provide a system that allows automated entry from SCADA, provide alarms, alerts, operational reports, and daily readings, including a historian program,



with trending for user created data analysis. Dream Repots shall be provided as a reporting platform.

4. Operator Interfaces – Develop screens at **all facility locations**, that closely mimic and depict how the portions of the water system relate to each other and operate.
5. Provide full control over operating equipment including the ability to start/stop pumps, motors, and other equipment, as well as monitoring communications. Provide for the ability to select which EWST is used for level setting control for wells. Lead/Lag/Auto-alternation and Manual selection of wells must be included.

Communications

1. Provide for replacing radios in all water facilities with either cellular or licensed radios. Provide for communication between WTP's that does not rely upon an internet connection. The Village is interested in Microwave radio but remains open to the best means of communication between facilities that also considers cost.
2. Communication Redundancy – Develop most practical means of preventing or coping with remote station communication problems.
3. It is important that upon communication failure each WTP would revert to communicating locally with the raw water wells which supply the plant and whichever EWST is selected to use as control for start/stop settings.
4. Upon communication failure between a well facility and its associated treatment plant, if in "Auto" the well must shut down and the treatment processes stop.
5. Include measures for cyber security that complies with the latest standards and industry best practices, work closely with Village IT Staff on the implementation of security measures and remote access functions.

Updating Controls & Hardware

1. Identify if existing cabinets can be utilized. Update existing PLC panel boards at all facilities with new hardware components and wiring where necessary, provide the latest Allen Bradley CompactLogix PLCs in both WTP's. Provide Advantech Industrial PC Touchscreens to replace the East and West WTP's Main HMI touchscreens; Rockwell Factory Talk shall run on these PC's.



2. Replace SCADAPACK PLCs in all remote facilities with CompactLogix PLC's and provide Automation Direct HMI screens at EWST's and Wells 6 & 7.
3. Provide for desktop SCADA PCs at each WTP, superintendent's office, and water division field office. The two office locations shall have a large wall mounted monitor.
4. Provide UPS Battery Backup failure relays and alarms at all PLC's and PC's.
5. Provide power quality monitors at each raw water well and treatment plant which can be monitored and trended.
6. Provide new level and temperature sensors at each EWST. Any RTU must be protected from water.
7. Integrate well pump Variable Frequency Drives (VFD) to provide more in-depth operating statuses and alarms.
8. All existing processes must integrate with new system.
9. Provide for monitoring the statuses of Hydrous Manganese Oxide (HMO) Mixers and HMO dosing pump VFD's.
10. Provide for updating the backwash controllers at each water treatment plant and integrate filter bank meters signals to PLC's, must also have the ability to bypass filter banks during backwash.
11. Provide for a level transducer for Well 4.
12. Utilize most current, proven technology that is easy to expand and upgrade.
13. Expandability - Design the project with the idea that future remote stations and I/O may be added and integrated in the future.
14. All equipment must be new, no refurbished or recertified.
15. All wires/cables shall be routed in appropriate conduit and follow NEC.
16. Provide solution for well interlock at the West WTP Sodium Hypo pump control panel which will allow metering pumps to be read and maintain electrical interlock when wells are not operating.
17. Provide for spare radios of any type proposed for the project; i.e. if microwave proposed for communication between WTP's provide a spare, as well as a spare for proposed radio for other remote sites.
18. Village is adding new CL-17's to existing system. Controllers are furnished with Ethernet outputs as well as 4-20 mA outputs. Initial installation will utilize 4-20 outputs; with upgrade we will utilize the Ethernet outputs.

Alarms



1. Provide for working with Village personnel to investigate current alarms in existing PLC's and make recommendations for new alarms to better alert Village Staff to failures and conditions.
2. Alarm conditions should be operator definable wherever practical.
3. Create Well Flow Meter Failure/Low Flow Alarms with a bypass/disable feature. The Village identifies a need to be able to shutoff wells if their flow meter fails, as chemical dosing is flow dependent.
4. Alarm package should display current alarms and provide an alarm history that can be logged.
5. Transmit alarm notifications and alerts via mobile, SMS, and email; provide and configure auto dialer(s) for the most critical alarms.

RFP QUESTIONS AND PRE-PROPOSAL MEETING

There will be one mandatory meeting immediately followed by a facility tour, beginning at the Village of North Aurora Village Hall at 25 E State St, North Aurora IL 60542 on **March 25, 2024, at 9:00 AM (CST)**.

The proposal of any Respondent who has not attended this meeting may be rejected at the discretion of the Village and if accepted no allowance or exception will be made regarding any aspect of the work that such attendance would have revealed or clarified.

All questions concerning this solicitation must be submitted via email to the designated Village contact, Adam Hake, Water Superintendent at ahake@northaurora.org. The official responses to questions or requests for interpretation to this solicitation will be posted on the RFP section of the Village's website (<https://northaurora.org/government/rfp-rfq-bidding/>). The deadline for submission of questions or deviations shall be **10:00 AM (CST) on April 1, 2024**. Any information resulting from questions that causes a material change in the solicitation will be posted on the RFP section of the Village's website as an addendum **by April 8, 2024**. Proposal close date is **4:00 PM (CST) on April 12, 2024**. Late submissions will not be considered. The Village will not be responsible for late submissions of any kind.

IEPA Construction Permit Requirement

Proposer must work with the Village's Engineer to prepare and obtain an IEPA Water Construction Permit prior to project construction. As a part of the phasing



and implementation of the project, Respondent shall prepare Controls and instrumentation drawings of the proposed upgrades, which will be provided for engineering review and used in preparation of an IEPA construction permit. Final As-built drawings shall be provided after completion of installation.

Phased Replacement, Control Transfer and Project Completion

Installation, testing, and transfer of control systems shall be phased so as not to interrupt the Village's water supply operations. A phasing plan shall be submitted and approved. **Substantial Completion** Date shall be **May 1, 2025**. An extension may be granted but must be requested in writing and approved by Village.

DOCUMENT SYSTEM CONFIGURATION

1. Supply digital copies of system configurations and programs.
2. Provide 3 sets of documentation both paper and digital of logical and physical circuit diagrams, system connections and configurations.
3. Supply a digital and printed copy of all manufacturer manuals.

KNOWLEGE TRANSFER

1. Train Village Staff on general usage, remote access, user creation, reporting, trending, and alarm functions.
2. Train Village IT staff on hardware maintenance and remote access/cybersecurity measures.
3. Indicate all custom software configurations are full property of the Village and must provide a copy of configurations.

CHANGE MANAGEMENT

Any additional work identified during the project that is deemed necessary, but outside the original scope of work, must be recorded as a change order and approved by the Village Project Manager before work is started.

SUBCONTRACTING

All proposed subcontracting must be detailed in the firm's proposal. No subcontracting will be allowed without the express written consent of the Village of North Aurora.

COMPLIANCE WITH APPLICABLE LAWS



The proposer will strictly comply with all ordinances of the Village of North Aurora, Village Code, and laws of the State of Illinois.

Prevailing Wage

All bidding packages, requests for bids, requests for proposals and other processes for the approval of services in conjunction with public works to be performed by or on behalf of the Village as defined in the Illinois Prevailing Wage Act (820 ILCS 130/1 et seq.) (hereinafter for purposes of this Section, the "Act") shall stipulate that the persons or entities awarded the work shall perform the work in compliance with the Act, including the payment of prevailing wages, the submission to the Village of certified payrolls and all other requirements of the Act.

Responsible Bidder

The Village has passed by Resolution on September 21, 2009, a resolution that any public works contract under the purview of the Illinois Prevailing Wage Act that is over \$25,000 shall only be awarded to a contractor who is enrolled in a Joint Apprenticeship Training Program that is registered and certified with the United States Department of Labor, Bureau of Apprenticeship and Training. See attached Exhibit A.

DAMAGE TO PROPERTY

Contractor shall repair, at no additional cost to the Village, all damage to Village property caused by the contractor resulting from his work. Where repair of existing work is called for, such patching and replacement shall be made to blend with existing work so that the patch or replacement will be inconspicuous after finishing.

PROJECT MANAGEMENT

The proposed solution must include the assignment of a dedicated Program or Project Manager to the Village's engagement. This person will be the single point of contact for overall communications, project coordination with the Village and vendor accountability issues.

Withdrawal of Proposals

Respondents may withdraw their proposals, without prejudice, prior to the date and time specified for proposal submission, by sending a written request or email to Adam Hake, Water Superintendent at ahake@northaurora.org.



Amendments, Reservations and Omissions

The Village reserves the right to change the RFP schedule or issue amendments to the RFP at any time. In the event the Village amends the RFP, the Village will extend the Proposal Due Date commensurately. The Village also reserves the right to cancel or reissue the RFP.

The Village reserves the right to reject any or all proposals, to waive technicalities or formalities, and to accept any proposal deemed to be in the best interest of the Village. Where two or more respondents are deemed equal, the Village reserves the right to make the award to one of the two respondents.

Respondent and/or the Contractor shall not be allowed to take advantage of any errors in or omissions from the Request for Proposals. Full instructions will be given if such error or omission is discovered and timely called to the attention of the Village.

SUBMITTAL REQUIREMENTS

There will be one submittal (4 copies) for this process. Each submittal should have a brief statement of the Proposer's interest in performing the work. Also, a table of contents and sectional tabs should be provided for all submittals. All submittals must be thorough, complete, and accurate and will be limited to 10 pages in length not including a table of contents and tabs. By submitting, you agree that these terms will be able to be met. Submittals can be emailed to ahake@northaurora.org with subject line "VONA SCADA Upgrade and Services Proposal." They can also be delivered to the North Aurora Village Hall and marked "VONA SCADA Upgrade and Services Proposal."

1. Submittal

SOQ & Proposal should include:

- A. Introduction
- B. Name of Proposer
- C. Office Address (within 60 miles of Village of North Aurora)
- D. Office Telephone number
- E. 24-hr. emergency telephone number



- F. Fax number
- G. Name of the contact person
- H. Rate Sheet indicating hourly costs for service calls

2. Project Approach

This section should include the following:

- A. A description of the firm's thorough understanding of the scope of the project.
- B. An overall account of the philosophy and methods the Proposer will utilize to successfully complete this project.
- C. A detailed outline of the tasks associated with each element of the scope of services described above including any additional tasks that the Proposer may choose to identify.

3. Project Team

Provide biographical data and experience on principals and key professional members of the Firm who could be directly involved with this particular project. The key personnel should include the following:

- A. Project Manager who will be responsible for coordinating all activities (must have ten (10) years of experience managing SCADA/Controls Systems installation, integration, and service.
- B. Project Leader with 3-5 years of SCADA/Control Systems Installation and Integration
- C. Technicians/Electricians

4. Similar Project Experience

A statement of qualifications shall summarize key elements of the proposal and highlight qualifications as they relate to this project and the services requested. The statement of qualifications should demonstrate to the Village that the respondent fully understands the scope of services, has industry knowledge, and possesses the qualifications to provide the services requested.

Provide 3 specific examples of municipal SCADA System upgrade projects within the last 3-5 years in Illinois that are similar in nature to this project, and utilized Rockwell FactoryTalk, as well as proposed communication system.



Include a description of each project that includes:

- A. Location
- B. Client Name and phone number
- C. The project team that staffed the project (Project Manager, Field Project Leader, Field Technician)
- D. Duration of the project
- E. Key events or activities that distinguish the project from others

5. Timeline

Provide a timeline for the entire project. Highlight key milestones. Please include the time necessary to order and acquire hardware. Working with Village Staff for a phased installation to minimize interference with water production is required.

6. Cost of Proposal

Provide a cost breakdown of the proposed solution (hardware, software, licensing, services, hosting, support, training, etc.), showing the cost for each part of the scope of work and any additional costs. Costs should be broken down per facility wherever possible. This information shall be followed by a narrative which shall describe and justify the proposed costs, and include an estimate of staff allocations, estimated hours, rates per assigned staff and an estimate of total billable hours. Also identify any assumptions you have built into your costs (e.g., Village performance of any work elements, availability, etc.).

The cost proposal must provide a guarantee that no additional fees beyond those proposed will be charged to the Village of North Aurora without the Village's prior written consent. The Village cannot accept contract clauses that include payment terms within 30 days of the invoice issuance. The Village cannot accept contract clauses where the Village would be required to pay any late fees, interest charges or penalties.

Evaluation of Proposals

The submitted proposals will be reviewed and selected based upon factors in this SOQ/RFQ including the following:



1. Evidence of understanding the objectives set forth above and the ability to successfully accomplish the tasks set forth in the scope of services.
2. Proximity of proposer's office to Village of North Aurora and ability to respond to service calls.
3. Qualifications (resumes) of personnel assigned to work on the project (project team), organizational chart, etc.
4. The Village's prior experience working with the respondent.
5. Demonstrated experience in completing similar projects of similar scope, complexity, and size.
6. Demonstrated availability and capacity for timely oversight and completion of the work, taking into consideration the respondent's current and projected workload and professional and support manpower.
7. Proposed timeline includes a phased approach to meet the Village's water production needs and other considerations.
8. Information on final costs and schedules.
9. Hour estimate for each task with overall not-to-exceed cost.
10. Familiarity and experience with the Village's water production system control and supervision need.

It is anticipated the Village of North Aurora will shortlist two to three companies and conduct additional interviews/site visits in advance of final selection. **In the event of final selection, the final decision on any respondent's selection shall be made by the Village Board in an open meeting of that Board.**

Proposal Review

The selection of a proposal will not be based solely on a monetary evaluation. There will also be an evaluation of each respondent's understanding of the work required and approach to this project with considerable weight being given to the timeline, experience in the areas required, and the track record of the respondent. Ability to respond to service calls and proximity of respondent's business to the Village of North Aurora will also be considered.

Additionally, an independent checking of references may be used to assist in selecting the finalist(s). Award will be made to the respondent offering the most advantageous proposal after consideration of all evaluation criteria set forth in this



RFP. The Village shall not be obligated to accept the lowest priced proposal but will make an award in the best interest of the Village after all factors have been evaluated.

Respondent selected as the finalist may be required to make a presentation of their proposal to the Village before final approval. This presentation will provide the opportunity to clarify their proposals to ensure thorough and mutual understanding. The presentations will be conducted at Village of North Aurora Village Hall.

A Notification of Intent to Award may be sent to any respondent selected. Award is contingent upon the successful negotiation of final contract terms. Negotiations shall be confidential and not subject to disclosure to competing Respondents unless an agreement is reached. If contract negotiations cannot be concluded successfully, the Village may negotiate a contract with the next preferred Respondent or withdraw the RFP.

Nothing contained in this Request for Proposals (RFP) shall create any contractual relationship between the respondent and the Village. The Village accepts no financial responsibility for costs incurred by any respondent regarding this RFP. Each proposal prepared in response to this RFP shall be done at the sole cost and expense of each proposing respondent and with the express understanding that no claims against the Village for reimbursement will be accepted. Work shall not commence under the contract until the respondent has obtained all insurance required herein (see exhibit) and such insurance has been approved by the Village.

Exhibits:

- A. Responsible Bidder Resolution
- B. Insurance Requirements
- C. Facilities Map



Exhibit A

VILLAGE OF NORTH AURORA

RESOLUTION No. R09092101

**RELATING TO BIDDERS AND CONTRACTORS ON
PUBLIC WORKS PROJECTS OF THE VILLAGE OF NORTH AURORA**

WHEREAS, the State of Illinois has enacted “an Act regulating wages of laborers, mechanics and other workers employed in the public works by the State, County, City or any public body or any political subdivision or by anyone under contract for public works (820 ILCS 130/0.01 et seq. (as amended) hereinafter referred to as the “Prevailing Wage Act”); and

WHEREAS, the Prevailing Wage Act requires the Village of North Aurora to require its public works contractors to comply with the prevailing rate of wages as defined in the Prevailing Wage Act for laborers, mechanics and other workers in the locality of the Village employed in performing the construction of public works for the Village.

NOW, THEREFORE, BE IT RESOLVED by the President and the Board of Trustees of the Village of North Aurora, as follows:

1. To the extent and as required by the Prevailing Wage Act, the general prevailing rate of wages in the locality of the Village of North Aurora for laborers, mechanics and other workers engaged in construction of public works coming under the jurisdiction of the Village is hereby ascertained to be the same as the prevailing rate of wages for construction work in this Village as determined by the Department of Labor of the State of Illinois as of June of the current year, a copy of that Determination having previously been adopted and incorporated into the Village of North Aurora Ordinances. As required by the Prevailing Wage Act, any and all revisions of the Prevailing Rate of Wages by the Department of Labor of the State of Illinois shall supersede the Department’s June determination and apply to any and all public works’ construction undertaken by the Village of North Aurora. The definition of any terms appearing herein which are also used in the Prevailing Wage Act shall be the same as in the Prevailing Wage Act.

2. Nothing herein shall prohibit the Village of North Aurora from investigating and ascertaining the prevailing rate of wages for categories of workers not expressly covered by the published Determination of the Department of Labor, nor prohibit incorporating those rates so ascertained into the published Determination of the Department of Labor, provided that those rates ascertained by the Village shall be clearly indicated as such.

3. Any contract within the purview of this Resolution or of the Illinois Prevailing Wage Act for any public works project in excess of \$25,000 shall provide that the contractor shall be enrolled in a joint Apprenticeship Training Program that is registered and certified with the United States Department of Labor, Bureau of Apprenticeship and Training.

4. The Village of North Aurora and/or its authorized representatives shall have the power and authority to request and receive any and all information or documentation that would substantiate proper payment under this Resolution. The contract recipient shall supply the requested documentation or information to the Village or its designee within five (5) working days of the receipt of the request. Failure to comply with the request for information or documentation shall be construed as a material breach of the contract enabling the Village of North Aurora to terminate the



VILLAGE OF NORTH AURORA

contract, seek forfeiture of any performance bond, and proceed with any other remedy against the contractor at law or in equity.

5. Nothing in this Resolution shall be construed to apply to the general prevailing rate of wages as herein ascertained to any work or employment except public works construction of the Village of North Aurora to the extent required by the Prevailing Wage Act.

6. In addition to the foregoing requirements for any public works construction of the Village of North Aurora, the Village may impose other requirements in the discretion of the Board of Trustees as requisites for the award of a contract as are deemed appropriate and necessary for any particular public works project.

6. The Village Clerk shall publicly post or keep available for inspection by any interested party in the North Aurora Village Hall this Resolution, the annual determination of the prevailing rates of wages and any revisions of such prevailing rates of wages. A copy of this determination or of the current revised determination of prevailing rate of wages then in effect shall be attached to all contract specifications.

7. The Village Clerk shall mail a copy of this Resolution and the determination of the prevailing rates of wages to any employer and to any association of employers and to any person or association of employers who have filed their names and addresses, requesting copies of any determination stating that the particular rates and the particular class of workers whose wages will be affected by such rates.

8. This Resolution shall take immediate force and effect from and after its passage and approval as provided by law.

21st Presented to the Board of Trustees of the Village of North Aurora, Kane County, Illinois this day of SEPTEMBER, 2009, A.D.

21st Passed by the Board of Trustees of the Village of North Aurora, Kane County, Illinois this day of SEPTEMBER, 2009, A.D.

Chris Faber yes
Mark Guethle yes
Vincent Mancini NO

Mark Gaffino yes
Michael Herlihy III yes
Robert Strusz yes

Approved and signed by me as President of the Board of Trustees of the Village of North Aurora, Kane County, Illinois this 21st day of SEPTEMBER, 2009, A.D.

Dale Berma
Village President

ATTEST:

Sonia Murray
Village Clerk



Exhibit B

INSURANCE SPECIFICATIONS

A. The successful Bidder **shall not commence work** under the contract until he/she has obtained all insurance required herein and such insurance has been approved by the Village.

B. The successful Bidder shall maintain limits no less than:

**TYPE OF INSURANCE
COVERAGE**

MINIMUM INSURANCE

Commercial General Liability

1. Comprehensive Form	Combined single limit per Occurrence for Bodily Injury and Property Damage	\$1,000,000
2. Premises - Operations		
3. Explosion & Collapse Hazard		
4. Underground Hazard	Personal Injury per Occurrence	\$1,000,000
5. Products/Completed Operations Hazard		
6. Contractual Liability Coverage Included	General Aggregate	\$2,000,000
7. Broad Form Property Damage - construction projects only.		
8. Independent contractors		
9. Personal Injury		

Business Automobile Liability	COMBINED SINGLE LIMIT PER OCCURRENCE FOR BODILY INJURY AND PROPERTY DAMAGE	\$1,000,000
Any Auto, Owned, Non-Owned Rented/Borrowed		

Worker's Compensation and Occupational Diseases
STATUTORY LIMIT



Employer's Liability Insurance per Occurrence

\$1,000,000

Coverage shall be at least as broad as (1) Insurance Services Office Commercial General Liability occurrence form CG 0001 with the Village, its trustees, officials, and employees named as additional insured on a ISO Additional Insured Endorsement form CG2010 or CG2026; Primary and non-contributory ISO Endorsement: CG2001 04 13; and the Village of North Aurora named as Cancellation Notice Recipient (2) if requested, Owners and Contractors Protective Liability policy with the Village named as insured; (3) Insurance Services Office Business Auto Liability form number CA 0001 (Ed. 10/90 or newer), Symbol 01 "Any Auto"; and (4) Workers Compensation as required by the Labor Code of the State of Illinois and Employers' Liability insurance. Owners, partners, and officers of the contractor must be covered by Workers Compensation Coverage if they are participating in the project.

Insurance coverages shall be primary as respects VILLAGE, its officials, agents, employees and volunteers. Any deductibles or self-insured retentions must be declared to and approved by the Village. At the option of the Village, either: the insurer shall reduce or eliminate such deductibles or self-insured retention as respects the Village, its officials, agents, employees, and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigation, claim administration and defense expenses.

The Contractor shall furnish the Village with certificates of insurance naming the Village, its officials, agents, employees and volunteers as additional insureds, and with original endorsements effecting coverage required prior to commencement of any work. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf and shall be in a form acceptable to the Village. The insurance afforded by the policy shall not be suspended, voided, canceled, reduced in coverage or in limits except after prior written notice by certified mail return receipt requested has been given to the Village. VILLAGE shall be endorsed to the policies as a Cancellation Notice Recipient. Such notice shall be addressed as shown in the heading of the endorsement.



C. In the event of accidents of any kind, the successful Bidder shall furnish the Village with copies of all reports of such accidents at the same time that the reports are forwarded to any other interested parties.

D. Any deductibles or self-insured retentions must be declared to and approved by the Village. At the option of the Village, either: the insurer shall reduce or eliminate such deductibles or self-insured retention as respects the Village, its officials, agents, employees, and volunteers; or the successful Bidder shall procure a bond guaranteeing payment of losses and related investigation, claim administration and defense expenses.



Addendum Number 1

Supervisory Control and Data Acquisition (SCADA)

Upgrade and Services

Issued April 5, 2024

Addendum Description

- A Questions and Answers document is attached, clarifying questions submitted.
- Sign-in Sheet from Pre-Proposal Meeting on 3/25/24

Action Required

1. Please sign below acknowledging the change.
2. Return this page with your proposal.

Signature

Date

Printed Name

Title

Q1. Hard copies of drawings were made available at the pre-proposal meeting. There was a request if pdf's of drawings could be provided.

A1. A link to drawings were sent to those in attendance at the pre-proposal meeting. More accurate as-built's of the West Treatment Plant and Well 6 were included.

Q2. Can the Village please confirm the 10-page limit for submissions that include a full scope of services with a timeline and cost breakdown per facility?

A2. The Village will eliminate the restriction of a 10 page submission.

Q3. The RFP states "There will be one submittal (4 copies) for this process." What is meant by 4 copies?

A3. Intended for submitting a hard copy to the Village of North Aurora Village Hall at 25 E State St, North Aurora, IL. One hard copy or emailed submittal will be sufficient. No need to submit 4 copies if submitting a hard copy of the proposal.

Q4. Can the Village please confirm if the Village is requiring hard copies and if email submittals are acceptable.

A4. Hard copies will be accepted, emailed submittals are also acceptable.



Addendum Number 2

Supervisory Control and Data Acquisition (SCADA)

Upgrade and Services

Issued April 5, 2024

Addendum Description

Expanded **Updating Controls & Hardware** section of Project Scope to include 4 additional items. Revised Page 6 of SOQ/RFP Document is attached.

Action Required

1. Please sign below acknowledging the change.
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2. Replace SCADAPACK PLCs in all remote facilities with CompactLogix PLC's and provide Automation Direct HMI screens at EWST's and Wells 6 & 7.
3. Provide for desktop SCADA PCs at each WTP, superintendent's office, and water division field office. The two office locations shall have a large wall mounted monitor.
4. Provide UPS Battery Backup failure relays and alarms at all PLC's and PC's.
5. Provide power quality monitors at each raw water well and treatment plant which can be monitored and trended.
6. Provide new level and temperature sensors at each EWST. Any RTU must be protected from water.
7. Integrate well pump Variable Frequency Drives (VFD) to provide more in-depth operating statuses and alarms.
8. All existing processes must integrate with new system.
9. Provide for monitoring the statuses of Hydrous Manganese Oxide (HMO) Mixers and HMO dosing pump VFD's.
10. Provide for updating the backwash controllers at each water treatment plant and integrate filter bank meters signals to PLC's, must also have the ability to bypass filter banks during backwash.
11. Provide for a level transducer for Well 4.
12. Utilize most current, proven technology that is easy to expand and upgrade.
13. Expandability – Design the project with the idea that future remote stations and I/O may be added and integrated in the future.
14. All equipment must be new, no refurbished or recertified.
15. All wires/cables shall be routed in appropriate conduit and follow NEC.
16. Provide solution for well interlock at the West WTP Sodium Hypo pump control panel which will allow metering pumps to be read and maintain electrical interlock when wells are not operating.
17. Provide for spare radios of any type proposed for the project; i.e. if microwave proposed for communication between WTP's provide a spare, as well as a spare for proposed radio for other remote sites.
18. Village is adding new CL-17's to existing system. Controllers are furnished with Ethernet outputs as well as 4-20 mA outputs. Initial installation will utilize 4-20 outputs; with upgrade we will utilize the Ethernet outputs.

Alarms

April 26, 2024 Rev1

Village of North Aurora – SCADA Upgrade and Services

Statement of Qualifications

1. Firm Information

TRI-R Systems Incorporated is a licensed, union electrical contractor specializing in municipal water and wastewater systems. We have over 36 years of experience in municipal SCADA systems and are based locally, only serving the Chicago Metropolitan region. TRI-R combines a finished package for the instrumentation and control sections (all functions are completed in house) with a complete electrical installation eliminating the confusion so often found tying the two components together. The only subcontractor used would be the tower climbing contractor.

Our current hourly rate for service work:
\$170.00 per hour during normal working hours 7:00 – 3:30 M-F
\$255.00 after hour's emergency service M-S
\$340.00 after hours emergency service Sundays.
We have a (3) hour minimum.

In the event of an emergency call typical response time is 1-3 hours dependent upon where the closest service technician is located.

If a non-emergency service call is needed the customer will be assigned the next available service appointment.

2. Project Approach

- A. This project is similar to numerous other SCADA system upgrades that we have completed over the years. Some customer system upgrades have been ours from the beginning other projects have been new customers.
- B. TRI-R is based out of Dekalb, IL and currently has 10 full-time employees. TRI-R specializes entirely in the design and implementation of water and wastewater SCADA and electrical systems. TRI-R relies on quality service, a quality finished

product, and dependable follow-up service in order to maintain a trustworthy integrated system.

- C. In general, TRI-R takes a very team oriented, hands-on approach to determining an existing system's capabilities and moreover the systems' limitations. This is completed by field investigation and meeting with the personnel that are most familiar with the system. Once the existing system is firmly understood, a discussion with the owner will occur and recommendations will be made for upgrading and/or replacing the existing system in a way that will mitigate unnecessary down time and expense. TRI-R Systems has extensive experience with all of the hardware and software proposed for this project, including, but not limited to; Allen Bradley CompactLogix PLC's, Allen Bradley Factory talk software, and Win-911. At TRI-R, we have implemented the majority of our control systems utilizing a combination of the aforementioned hardware and software. All facility upgrades will be planned with the input from the Village of North Aurora's personal so that there will be limited to no loss of operation during the installation of new equipment at the Well Houses, WTP's and Water Towers. Specifically, to the Village of North Aurora, TRI-R has spent a considerable amount of time working for the Village over the past year. We are extremely familiar with the existing system and TRI-R intends to ensure that the Village gets exactly what they want and need by utilizing the most up-to-date system hardware and software to build a SCADA system that will be reliable and have the functionality to be expanded as needed in the future. Upon completion of a build-out TRI-R takes deep pride in the continued communication with the Owner and timely maintenance of the Owner's system. Furthermore, someone at TRI-R is always on-call for afterhours emergencies involving TRI-R's integrated systems.

3. Project Team:

Ron Mack – Owner and President

Ron is the founder of TRI-R Systems and the primary owner. He studied electrical and computer engineering at Illinois Institute of Technology and has been leading TRI-R for over 36 years. Ron is familiar with all aspects of design, programming, and installation of SCADA systems and continues to run the firm while acting as project manager.

Tim Smith – Owner and Vice President

Tim studied at DeVry and joined Ron in starting TRI-R Systems. Tim also brings over 36 years of experience to the TRI-R team. Tim is experienced in all phases of a project including design, installation, and start-up of water and wastewater automation systems. Tim is a valuable TRI-R asset and will be heavily involved in this project.

TRI-R Systems also employs 4 SCADA technicians (AJ Sosdian (SCADA Programmer & union electrician), Tyler VanGyseghem (SCADA engineer), Matt Martin (SCADA Engineer & Class 1 Wastewater operator), and Josh Smith (SCADA panel designer) which are involved in panel design, assembly, programming, start-up, training and installation. Dusty Bonnell is the project manager that would handle all day-to-day

management of the project. We also have other full-time electricians that have been with the firm for more than 5 years performing electrical work for water and wastewater systems. TRI-R may use one or more of these electricians to assist with installation.

Attached electrical contractor's license

4. Similar Project Experience:

100% of TRI-Rs work is directly with cities and municipalities water and wastewater systems. TRI-R is experienced and highly qualified in all phases of SCADA system development from initiation and design to implementation and start-up. TRI-R currently designs, installs, and maintains many SCADA water and wastewater systems in Northern Illinois. The Village currently uses multiple pieces of software to run the SCADA system, all of which are industry standard software packages that TRI-R has extensive experience with including: Wonderware and Allen-Bradley programming software.

City of Batavia
WTP Improvements
SCADA & Electric
Contact: Jeremy Barkei (630) 806-6171
Completed 2023, \$485,000
Project Manager: Dusty Bonnell
Field Project Leader: Tim Smith
Field Technician: AJ Sosdian, Tyler VanGyseghem, Matt Martin

City of Sandwich
Water System Improvements
SCADA & Electric
Contact : Brian Vokel (815) 509-3052
Completed 2023, \$147,250
Project Manager: Dusty Bonnell
Field Project Leader: Tim Smith
Field Technician: AJ Sosdian, Matt Martin

Village of Glen Ellyn
Water SCADA Software
Contact : Nick Burgoni (630) 742-2782
Completed 2023
Project Manager: Dusty Bonnell
Field Project Leader: Tim Smith
Field Technician: Matt Martin

Village of Plainfield
WWTP Improvements
SCADA & Electric

Contact: Doug Kissel (815) 693-9314
Completed 2023, \$560,000
Project Manager: Dusty Bonnell
Field Project Leader: Tim Smith
Field Technician: AJ Sosdian

Glenbard Wastewater Authority
2016 Facility Improvements Project SCADA
Contact: Rick Freeman (630) 816-0531
Completed 2020, \$2,204,000
Project Manager: Dusty Bonnell
Field Project Leader: Tim Smith
Field Technician: AJ Sosdian

Kishwaukee Water Reclamation District, IL
Wastewater Treatment Plant Phase 1B SCADA & Electric
Contact: Mark Eddington (815) 762-1057
Completed 2020, \$9,900,000
Project Manager: Dusty Bonnell
Field Project Leader: Tim Smith
Field Technician: AJ Sosdian, Tyler VanGyseghem, Matt Martin

Current Projects

Fox Metro
North Aurora LS Improvements
SCADA
Contact: Keith Zollers (630) 327-8926
In Progress, \$421,000
Project Manager: Dusty Bonnell
Field Project Leader: Tim Smith
Field Technician: AJ Sosdian, Tyler VanGyseghem, Matt Martin

Kishwaukee Water Reclamation District, IL
Malta & Kish LS SCADA & Electric
Contact: Mark Eddington (815) 762-1057
In Progress, \$575,000
Project Manager: Dusty Bonnell
Field Project Leader: Tim Smith
Field Technician: AJ Sosdian, Tyler VanGyseghem, Matt Martin

Village of Algonquin, IL
Water MCC VFD & SCADA Upgrade
Contact: Jason Meyer (847) 875-5529
Completed 2020, \$692,000
Project Manager: Dusty Bonnell

Field Project Leader: Tim Smith
Field Technician: AJ Sosdian, Tyler VanGyseghem, Matt Martin

City of Geneva
WWTP Improvements
SCADA

Contact: Bob VanGyseghem (630) 742-7520
Completed 2019, \$4,157,000

Project Manager: Dusty Bonnell
Field Project Leader: Tim Smith
Field Technician: AJ Sosdian, Tyler VanGyseghem, Matt Martin

Additional project examples are available upon request.

5. Timeline

A. Engineering & Submittals, IEPA Permit	4-6 weeks
B. Procure materials	8-10 weeks
C. Assemble panels	1-2 weeks
D. PLC migration & Develop HMI screens	8-10 weeks
E. Develop Station Installation Plan	2 weeks
F. Radio Link Between Towers	2 weeks
G. Cellular Radio Installation at all sites	2 weeks
H. Wells 6 & 7 Installation	2 weeks
I. Water Tower Installations	2 weeks
J. West WTP Installation	2 weeks
K. East WTP Installation	2 weeks
L. Develop Reports	2 weeks
M. Substantial completion	4 weeks
N. Final Completion	

6. Cost of Proposal

Total Project Cost
Price: (\$636,500.00) Dollars

Village of North Aurora SCADA Water System

General Software & Computers

- Furnish and install (1) Dell PowerEdge Servers, UPS and network rack at East Water Treatment Plant.
- Furnish and install (1) Dell Precision workstation with 24" monitor and UPS at East Water Treatment Plant.
- Furnish and install (1) Dell PowerEdge Servers, UPS and network rack at West Water Treatment Plant.
- Furnish and install (1) Dell Precision workstation with 24" monitor and UPS at West Water Treatment Plant.
- Furnish and install (1) Dell Precision workstation with 24" monitor and UPS at Superintendent's office.
- Furnish and install (1) Samsung 60" Smart 4K Monitor connected to Dell Precision workstation with HDMI cabling with 24" monitor at Superintendent's office.
- Superintendent's office needs internet connection to connect to SCADA system.
- Furnish and install (1) Dell Precision workstation with 24" monitor and UPS at Water Division Field office.
- Furnish and install (1) Samsung 60" Smart 4K Monitor connected to Dell Precision workstation with HDMI cabling with 24" monitor at Water Division Field office.
- Water Division Field office needs internet connection to connect to SCADA system.
- Furnish and install Sensaphone Cellular auto dialer.
- Furnish and install Rockwell FactoryTalk View SE software on servers at WTP's.
- Furnish and install Rockwell FactoryTalk SE enterprise development software on servers at WTP's.
- Furnish and install Rockwell FactoryTalk SE Client 10 Pak for deployment to computers.
- Furnish and install Rockwell Historian 1K tag count.
- Furnish and Install Win911 Autodialer Software
- Develop Rockwell FactoryTalk HMI screens with input from Village of North Aurora personnel.
- Furnish and install Dream Reports 1K tags, 1 year support with custom reports developed with Village of North Aurora personnel.
- Provide electrical installation as necessary.
- Provide startup & training.

Price: (\$254,350.00) Dollars

East Water Treatment Plant

Main Control Panel

- Furnish and install Allen Bradley CompactLogix PLC 5069-L320ER Processor with I/O, Advantech 21" Computer Touchscreen, Sierra Wireless Cellular Radio, and UPS with fail relay.
- Furnish and Configure FortiGate VPN Tunnel Firewall. (Needs Business Class Static IP address internet by owner).
- Provide PLC database migration from SCADAPack 32 to Allen Bradley CompactLogix programming.
- Provide electrical installation as necessary.
- Provide startup & training.

HMO Control Panel

- Furnish and install Allen Bradley CompactLogix PLC 5069-L320ER Processor with I/O and UPS with fail relay.
- Connection of existing HMO Mixers and HMO dosing pump VFD's.
- Provide PLC database migration from SCADAPack 32 to Allen Bradley CompactLogix programming.
- Provide existing Automation Direct OIT database migration from SCADAPack 32 to Allen Bradley CompactLogix programming.
- Provide electrical installation as necessary.
- Provide startup & training.

Sodium Hypochlorite Control Panel

- Furnish and install Allen Bradley CompactLogix PLC 5069-L306ER Processor with I/O and UPS with fail relay.
- Provide PLC database migration from SCADAPack 32 to Allen Bradley Compactlogix programming.
- Provide existing Automation Direct OIT database migration from SCADAPack 32 to Allen Bradley CompactLogix programming.
- Provide electrical installation as necessary.
- Provide startup & training.

Filter Control Panel

- Furnish and install Allen Bradley MicroLogix 1400 PLC with I/O and UPS with fail relay.
- Provide PLC database migration from Automation Direct logic 205 to Allen Bradley MicroLogix programming.
- Furnish and Install new Automation Direct OIT with database migration from Automation Direct logic 205 to Allen Bradley MicroLogix programming.
- Furnish and install Filter Flowmeter signals with 3/4" GRC conduit to PLC enclosure.
- Provide electrical installation as necessary.
- Provide startup & training.

Power Monitor

- Furnish and install Allen Bradley Powermonitor 5000 Model 1426-M5E.
- Provide Ethernet connection back to Main Control Panel PLC.
- Provide display of WTP voltage and currents.
- Provide electrical installation as necessary.
- Provide startup & training.

Price: (\$94,250.00) Dollars

West Water Treatment Plant

Main Control Panel

- Furnish and install Allen Bradley CompactLogix PLC 5069-L320ER Processor with I/O, Advantech 21" Computer Touchscreen, Sierra Wireless Cellular Radio, and UPS with fail relay.
- Furnish and Configure FortiGate VPN Tunnel Firewall. (Needs Business Class Static IP address internet by owner).
- Provide PLC database migration from SCADAPack 32 to Allen Bradley CompactLogix programming.
- Provide electrical installation as necessary.
- Provide startup & training.

HMO Control Panel

- Furnish and install Allen Bradley CompactLogix PLC 5069-L320ER Processor with I/O and UPS with fail relay.
- Connection of existing HMO Mixers and HMO dosing pump VFD's.
- Provide PLC database migration from SCADAPack 32 to Allen Bradley CompactLogix programming.
- Provide existing Automation Direct OIT database migration from SCADAPack 32 to Allen Bradley CompactLogix programming.
- Provide electrical installation as necessary.
- Provide startup & training.

Filter Control Panel

- Furnish and install Allen Bradley MicroLogix 1400 PLC with I/O and UPS with fail relay.
- Provide PLC database migration from Automation Direct logic 205 to Allen Bradley MicroLogix programming.
- Furnish and Install new Automation Direct OIT with database migration from Automation Direct logic 205 to Allen Bradley MicroLogix programming.
- Furnish and install Filter Flowmeter signals with ¾" GRC conduit to PLC enclosure.
- Provide electrical installation as necessary.
- Provide startup & training.

Power Monitor

- Furnish and install Allen Bradley Powermonitor 5000 Model 1426-M5E.
- Provide Ethernet connection back to Main Control Panel PLC.
- Provide display of WTP voltage and currents.
- Provide electrical installation as necessary.

- Provide startup & training.

Price: (\$87,350.00) Dollars

Well No. 4

Aquifer Level Transducer

- Furnish Aquifer Level.
- Install Aquifer Level Transducer. in 1" GRC Conduit back to WTP PLC Cabinet. (PVC casing conduit in well installed and provided by others).
- Provide electrical installation as necessary.
- Provide startup & training.

Price: (\$12,500.00) Dollars

Well No. 5

HMI Programming

- Provide PLC programming as necessary to migrate to Rockwell FactoryTalk View SE.

Power Monitor

- Furnish and install Allen Bradley Powermonitor 5000 Model 1426-M5E.
- Provide Ethernet connection back to MicroLogix PLC.
- Provide display of WTP voltage and currents.
- Provide electrical installation as necessary.
- Provide startup & training.

Price: (\$13,000.00) Dollars

Well No. 6

SCADA Panel

- Furnish and install Allen Bradley CompactLogix PLC 5069-L320ER Processor with I/O, Ethernet Switch, Sierra Wireless Cellular Radio and UPS with fail relay.
- Provide PLC database migration from SCADAPack 32 to Allen Bradley MicroLogix programming.
- Furnish, install and program new 7" Automation Direct OIT.
- Provide electrical installation as necessary.
- Provide startup & training.

Power Monitor

- Furnish and install Allen Bradley Powermonitor 5000 Model 1426-M5E.
- Provide Ethernet connection back to MicroLogix PLC.
- Provide display of WTP voltage and currents.
- Provide electrical installation as necessary.
- Provide startup & training

Price: (\$26,250.00) Dollars

Well No. 7

SCADA Panel

- Furnish and install Allen Bradley CompactLogix PLC 5069-L320ER Processor with I/O, Ethernet Switch, Sierra Wireless Cellular Radio and UPS with fail relay.

- Provide PLC database migration from SCADAPack 32 to Allen Bradley MicroLogix programming.
- Furnish, install and program new 7” Automation Direct OIT.
- Provide electrical installation as necessary.
- Provide startup & training.

Power Monitor

- Furnish and install Allen Bradley Powermonitor 5000 Model 1426-M5E.
- Provide Ethernet connection back to MicroLogix PLC.
- Provide display of WTP voltage and currents.
- Provide electrical installation as necessary.

Provide startup & training

Price: (\$26,000.00) Dollars

Well No. 8

SCADA Panel

- Furnish and install Sierra Wireless Cellular Radio and UPS with fail relay.
- Provide PLC programming as necessary to migrate to Rockwell FactoryTalk View SE
- Provide electrical installation as necessary.
- Provide startup & training.

Power Monitor

- Furnish and install Allen Bradley Powermonitor 5000 Model 1426-M5E.
- Provide Ethernet connection back to CompactLogix PLC.
- Provide display of WTP voltage and currents.
- Provide electrical installation as necessary.
- Provide startup & training

Price: (\$16,000.00) Dollars

Well No. 9

SCADA Panel

- Furnish and install Sierra Wireless Cellular Radio and UPS with fail relay.
- Provide PLC programming as necessary to migrate to Rockwell FactoryTalk View SE
- Provide electrical installation as necessary.
- Provide startup & training.

Power Monitor

- Furnish and install Allen Bradley Powermonitor 5000 Model 1426-M5E.
- Provide Ethernet connection back to CompactLogix PLC.
- Provide display of WTP voltage and currents.
- Provide electrical installation as necessary.
- Provide startup & training

Price: (\$16,000.00) Dollars

Automall EWST

- Furnish and install Allen Bradley CompactLogix PLC 5069-L320ER Processor with I/O, Ethernet Switch, Sierra Wireless Cellular Radio and UPS with fail relay.
- Furnish and install new Vega pressure transducer.
- Furnish and install new temperature transducer.
- Provide PLC database migration from SCADAPack 32 to Allen Bradley MicroLogix programming.
- Furnish and Install new Automation Direct OIT with database migration from SCADAPack 32 to Allen Bradley MicroLogix programming.
- Provide electrical installation as necessary.
- Provide startup & training.

Price: (\$25,300.00) Dollars

East EWST

- Furnish and install new Vega pressure transducer.
- Furnish and install new temperature transducer.
- Provide PLC programming as necessary to migrate to Rockwell FactoryTalk View SE
- Provide electrical installation as necessary.
- Provide startup & training.

Price: (\$4,500.00) Dollars

Princeton & East EWST Radio Link

- Furnish and install new Ethernet Radio between towers.
- Furnish spare radio.
- Provide electrical installation as necessary.
- Provide startup & training.

Price: (\$35,500.00) Dollars

Recommended Spare Parts

- | | |
|---|------------|
| • 5069-L320 ER Processor | \$5,100.00 |
| • 5069-L306 ER Processor | \$1,700.00 |
| • 5069-IA16 120 VAC Digital Input Card | \$590.00 |
| • 5069-IB16 24 VDC Digital Input Card | \$525.00 |
| • 5069-OW16 16 Point Digital Output Card | \$1,025.00 |
| • 5069-OW4I 4 Point Digital Output Card | \$525.00 |
| • 5069-IF8 8 Point Analog Input Card | \$1,300.00 |
| • 5069-IY4 4 Point Analog Input Card | \$850.00 |
| • 5069-OF8 8 Point Analog Output Card | \$2,100.00 |
| • 5069-OF4 4 Point Analog Output Card | \$1,250.00 |
| • 5069-FPD Field Potential Distributer Card | \$250.00 |
| • Serial Communication Card | \$970.00 |
| • MicroLogix 1400 | \$1,250.00 |
| • 1762-OW16 16 Point Digital Output Card | \$375.00 |
| • 24 VDC Power Supply | \$190.00 |

Price: (\$18,000.00) Dollars

Well's 4,5,7,8 &9 VFD's Ethernet Communications Cards

- Furnish and install new Ethernet Communications Cards to VFD's

Price: (\$7,500.00) Dollars

April 12, 2024

Village of North Aurora – SCADA Upgrade and Services

Statement of Qualifications

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Field Project Leader: Tim Smith
Field Technician: AJ Sosdian, Matt Martin

Village of Glen Ellyn
Water SCADA Software
Contact : Nick Burgoni (630) 742-2782
Completed 2023
Project Manager: Dusty Bonnell
Field Project Leader: Tim Smith
Field Technician: Matt Martin

Village of Plainfield
WWTP Improvements
SCADA & Electric

Contact: Doug Kissel (815) 693-9314
Completed 2023, \$560,000
Project Manager: Dusty Bonnell
Field Project Leader: Tim Smith
Field Technician: AJ Sosdian

Glenbard Wastewater Authority
2016 Facility Improvements Project SCADA
Contact: Rick Freeman (630) 816-0531
Completed 2020, \$2,204,000
Project Manager: Dusty Bonnell
Field Project Leader: Tim Smith
Field Technician: AJ Sosdian

Kishwaukee Water Reclamation District, IL
Wastewater Treatment Plant Phase 1B SCADA & Electric
Contact: Mark Eddington (815) 762-1057
Completed 2020, \$9,900,000
Project Manager: Dusty Bonnell
Field Project Leader: Tim Smith
Field Technician: AJ Sosdian, Tyler VanGyseghem, Matt Martin

Current Projects

Fox Metro
North Aurora LS Improvements
SCADA
Contact: Keith Zollers (630) 327-8926
In Progress, \$421,000
Project Manager: Dusty Bonnell
Field Project Leader: Tim Smith
Field Technician: AJ Sosdian, Tyler VanGyseghem, Matt Martin

Kishwaukee Water Reclamation District, IL
Malta & Kish LS SCADA & Electric
Contact: Mark Eddington (815) 762-1057
In Progress, \$575,000
Project Manager: Dusty Bonnell
Field Project Leader: Tim Smith
Field Technician: AJ Sosdian, Tyler VanGyseghem, Matt Martin

Village of Algonquin, IL
Water MCC VFD & SCADA Upgrade
Contact: Jason Meyer (847) 875-5529
Completed 2020, \$692,000
Project Manager: Dusty Bonnell

Field Project Leader: Tim Smith
Field Technician: AJ Sosdian, Tyler VanGyseghem, Matt Martin

City of Geneva
WWTP Improvements
SCADA

Contact: Bob VanGyseghem (630) 742-7520

Completed 2019, \$4,157,000

Project Manager: Dusty Bonnell

Field Project Leader: Tim Smith

Field Technician: AJ Sosdian, Tyler VanGyseghem, Matt Martin

Additional project examples are available upon request.

5. Timeline

A. Engineering & Submittals, IEPA Permit	4-6 weeks
B. Procure materials	8-10 weeks
C. Assemble panels	1-2 weeks
D. PLC migration & Develop HMI screens	8-10 weeks
E. Develop Station Installation Plan	2 weeks
F. Radio Link Between Towers	2 weeks
G. Cellular Radio Installation at all sites	2 weeks
H. Wells 6 & 7 Installation	2 weeks
I. Water Tower Installations	2 weeks
J. West WTP Installation	2 weeks
K. East WTP Installation	2 weeks
L. Develop Reports	2 weeks
M. Substantial completion	4 weeks
N. Final Completion	

6. Cost of Proposal

Total Project Cost
Price: (\$596,000.00) Dollars

Village of North Aurora SCADA Water System

General Software & Computers

- Furnish and install (1) Dell PowerEdge Servers, UPS and network rack at East Water Treatment Plant.
- Furnish and install (1) Dell Precision workstation with 24" monitor and UPS at East Water Treatment Plant.
- Furnish and install (1) Dell PowerEdge Servers, UPS and network rack at West Water Treatment Plant.
- Furnish and install (1) Dell Precision workstation with 24" monitor and UPS at West Water Treatment Plant.
- Furnish and install (1) Dell Precision workstation with 24" monitor and UPS at Superintendent's office.
- Furnish and install (1) Samsung 60" Smart 4K Monitor connected to Dell Precision workstation with HDMI cabling with 24" monitor at Superintendent's office.
- Superintendent's office needs internet connection to connect to SCADA system.
- Furnish and install (1) Dell Precision workstation with 24" monitor and UPS at Water Division Field office.
- Furnish and install (1) Samsung 60" Smart 4K Monitor connected to Dell Precision workstation with HDMI cabling with 24" monitor at Water Division Field office.
- Water Division Field office needs internet connection to connect to SCADA system.
- Furnish and install Sensaphone Cellular auto dialer.
- Furnish and install Rockwell FactoryTalk View SE software on servers at WTP's.
- Furnish and install Rockwell FactoryTalk SE enterprise development software on servers at WTP's.
- Furnish and install Rockwell FactoryTalk SE Client 10 Pak for deployment to computers.
- Furnish and install Rockwell Historian 1K tag count.
- Furnish and Install Win911 Autodialer Software
- Develop Rockwell FactoryTalk HMI screens with input from Village of North Aurora personnel.
- Furnish and install Dream Reports 1K tags, 1 year support with custom reports developed with Village of North Aurora personnel.
- Provide electrical installation as necessary.
- Provide startup & training.

Price: (\$254,350.00) Dollars

East Water Treatment Plant

Main Control Panel

- Furnish and install Allen Bradley CompactLogix PLC 5069-L320ER Processor with I/O, Advantech 21" Computer Touchscreen, Sierra Wireless Cellular Radio, and UPS with fail relay.
- Furnish and Configure FortiGate VPN Tunnel Firewall. (Needs Business Class Static IP address internet by owner).
- Provide PLC database migration from SCADAPack 32 to Allen Bradley CompactLogix programming.
- Provide electrical installation as necessary.
- Provide startup & training.

HMO Control Panel

- Furnish and install Allen Bradley CompactLogix PLC 5069-L320ER Processor with I/O and UPS with fail relay.
- Connection of existing HMO Mixers and HMO dosing pump VFD's.
- Provide PLC database migration from SCADAPack 32 to Allen Bradley CompactLogix programming.
- Provide existing Automation Direct OIT database migration from SCADAPack 32 to Allen Bradley CompactLogix programming.
- Provide electrical installation as necessary.
- Provide startup & training.

Sodium Hypochlorite Control Panel

- Furnish and install Allen Bradley CompactLogix PLC 5069-L306ER Processor with I/O and UPS with fail relay.
- Provide PLC database migration from SCADAPack 32 to Allen Bradley Compactlogix programming.
- Provide existing Automation Direct OIT database migration from SCADAPack 32 to Allen Bradley CompactLogix programming.
- Provide electrical installation as necessary.
- Provide startup & training.

Filter Control Panel

- Furnish and install Allen Bradley MicroLogix 1400 PLC with I/O and UPS with fail relay.
- Provide PLC database migration from Automation Direct logic 205 to Allen Bradley MicroLogix programming.
- Furnish and Install new Automation Direct OIT with database migration from Automation Direct logic 205 to Allen Bradley MicroLogix programming.
- Furnish and install Filter Flowmeter signals with 3/4" GRC conduit to PLC enclosure.
- Provide electrical installation as necessary.
- Provide startup & training.

Power Monitor

- Furnish and install Allen Bradley Powermonitor 5000 Model 1426-M5E.
- Provide Ethernet connection back to Main Control Panel PLC.
- Provide display of WTP voltage and currents.
- Provide electrical installation as necessary.
- Provide startup & training.

Price: (\$94,250.00) Dollars

West Water Treatment Plant**Main Control Panel**

- Furnish and install Allen Bradley CompactLogix PLC 5069-L320ER Processor with I/O, Advantech 21" Computer Touchscreen, Sierra Wireless Cellular Radio, and UPS with fail relay.
- Furnish and Configure FortiGate VPN Tunnel Firewall. (Needs Business Class Static IP address internet by owner).
- Provide PLC database migration from SCADAPack 32 to Allen Bradley CompactLogix programming.
- Provide electrical installation as necessary.
- Provide startup & training.

HMO Control Panel

- Furnish and install Allen Bradley CompactLogix PLC 5069-L320ER Processor with I/O and UPS with fail relay.
- Connection of existing HMO Mixers and HMO dosing pump VFD's.
- Provide PLC database migration from SCADAPack 32 to Allen Bradley CompactLogix programming.
- Provide existing Automation Direct OIT database migration from SCADAPack 32 to Allen Bradley CompactLogix programming.
- Provide electrical installation as necessary.
- Provide startup & training.

Filter Control Panel

- Furnish and install Allen Bradley MicroLogix 1400 PLC with I/O and UPS with fail relay.
- Provide PLC database migration from Automation Direct logic 205 to Allen Bradley MicroLogix programming.
- Furnish and Install new Automation Direct OIT with database migration from Automation Direct logic 205 to Allen Bradley MicroLogix programming.
- Furnish and install Filter Flowmeter signals with 3/4" GRC conduit to PLC enclosure.
- Provide electrical installation as necessary.
- Provide startup & training.

Power Monitor

- Furnish and install Allen Bradley Powermonitor 5000 Model 1426-M5E.
- Provide Ethernet connection back to Main Control Panel PLC.
- Provide display of WTP voltage and currents.
- Provide electrical installation as necessary.

- Provide startup & training.

Price: (\$87,350.00) Dollars

Well No. 4

Aquifer Level Transducer

- Furnish Aquifer Level.
- Install Aquifer Level Transducer. in 1" GRC Conduit back to WTP PLC Cabinet. (PVC casing conduit in well installed and provided by others).
- Provide electrical installation as necessary.
- Provide startup & training.

Price: (\$12,500.00) Dollars

Well No. 5

HMI Programming

- Provide PLC programming as necessary to migrate to Rockwell FactoryTalk View SE.

Power Monitor

- Furnish and install Allen Bradley Powermonitor 5000 Model 1426-M5E.
- Provide Ethernet connection back to MicroLogix PLC.
- Provide display of WTP voltage and currents.
- Provide electrical installation as necessary.
- Provide startup & training.

Price: (\$13,000.00) Dollars

Well No. 6

SCADA Panel

- Furnish and install Allen Bradley MicroLogix 1400 PLC with I/O, Ethernet Switch, Sierra Wireless Cellular Radio and UPS with fail relay.
- Provide PLC database migration from SCADAPack 32 to Allen Bradley MicroLogix programming.
- Furnish, install and program new 7" Automation Direct OIT.
- Provide electrical installation as necessary.
- Provide startup & training.

Power Monitor

- Furnish and install Allen Bradley Powermonitor 5000 Model 1426-M5E.
- Provide Ethernet connection back to MicroLogix PLC.
- Provide display of WTP voltage and currents.
- Provide electrical installation as necessary.
- Provide startup & training

Price: (\$21,250.00) Dollars

Well No. 7

SCADA Panel

- Furnish and install Allen Bradley MicroLogix 1400 PLC with I/O, Sierra Wireless Cellular Radio and UPS with fail relay.

- Provide PLC database migration from SCADAPack 32 to Allen Bradley MicroLogix programming.
- Furnish, install and program new 7” Automation Direct OIT.
- Provide electrical installation as necessary.
- Provide startup & training.

Power Monitor

- Furnish and install Allen Bradley Powermonitor 5000 Model 1426-M5E.
- Provide Ethernet connection back to MicroLogix PLC.
- Provide display of WTP voltage and currents.
- Provide electrical installation as necessary.

Provide startup & training

Price: (\$21,000.00) Dollars

Well No. 8

SCADA Panel

- Furnish and install Sierra Wireless Cellular Radio and UPS with fail relay.
- Provide PLC programming as necessary to migrate to Rockwell FactoryTalk View SE
- Provide electrical installation as necessary.
- Provide startup & training.

Power Monitor

- Furnish and install Allen Bradley Powermonitor 5000 Model 1426-M5E.
- Provide Ethernet connection back to CompactLogix PLC.
- Provide display of WTP voltage and currents.
- Provide electrical installation as necessary.
- Provide startup & training

Price: (\$16,000.00) Dollars

Well No. 9

SCADA Panel

- Furnish and install Sierra Wireless Cellular Radio and UPS with fail relay.
- Provide PLC programming as necessary to migrate to Rockwell FactoryTalk View SE
- Provide electrical installation as necessary.
- Provide startup & training.

Power Monitor

- Furnish and install Allen Bradley Powermonitor 5000 Model 1426-M5E.
- Provide Ethernet connection back to CompactLogix PLC.
- Provide display of WTP voltage and currents.
- Provide electrical installation as necessary.
- Provide startup & training

Price: (\$16,000.00) Dollars

Automall EWST

- Furnish and install new Nema 12 Enclosure with Allen Bradley MicroLogix 1400 PLC with I/O and UPS with fail relay.
- Furnish and install new Vega pressure transducer.
- Furnish and install new temperature transducer.
- Provide PLC database migration from SCADAPack 32 to Allen Bradley MicroLogix programming.
- Furnish and Install new Automation Direct OIT with database migration from SCADAPack 32 to Allen Bradley MicroLogix programming.
- Provide electrical installation as necessary.
- Provide startup & training.

Price: (\$20,300.00) Dollars

East EWST

- Furnish and install new Vega pressure transducer.
- Furnish and install new temperature transducer.
- Provide PLC programming as necessary to migrate to Rockwell FactoryTalk View SE
- Provide electrical installation as necessary.
- Provide startup & training.

Price: (\$4,500.00) Dollars

Princeton & East EWST Radio Link

- Furnish and install new Ethernet Radio between towers.
- Furnish spare radio.
- Provide electrical installation as necessary.
- Provide startup & training.

Price: (\$35,500.00) Dollars



Addendum Number 1

Supervisory Control and Data Acquisition (SCADA)

Upgrade and Services

Issued April 5, 2024

Addendum Description

- A Questions and Answers document is attached, clarifying questions submitted.
- Sign-in Sheet from Pre-Proposal Meeting on 3/25/24

Action Required

1. Please sign below acknowledging the change.
2. Return this page with your proposal.

Timothy C. Smith

4/12/2024

Signature

Date

Timothy C. Smith

Vice President

Printed Name

Title



Addendum Number 2

Supervisory Control and Data Acquisition (SCADA)

Upgrade and Services

Issued April 5, 2024

Addendum Description

Expanded **Updating Controls & Hardware** section of Project Scope to include 4 additional items. Revised Page 6 of SOQ/RFP Document is attached.

Action Required

1. Please sign below acknowledging the change.
2. Return this page with your proposal.

Timothy C. Smith

4/12/2024

Signature

Date

Timothy C. Smith

Vice President

Printed Name

Title

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT - BLANKET

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

State	Description
IL	Any party with whom the insured agrees to waive subrogation in a written contract.

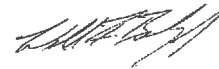
This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective Date: 02/01/2023 Policy Number: **BNUWC0159080** Endorsement No.:

Insured Name: Premium:

Insurance Company:



Countersigned by

WC 00 03 13

(Ed. 4-84)

AGREEMENT BETWEEN OWNER AND CONTRACTOR

This agreement is hereby made and entered into this 6 day of May, 2024, by and between Village of North Aurora, IL, hereafter called Owner, and TRI-R Systems Incorporated, hereafter called Contractor.

The said parties, for the considerations hereinafter mentioned, hereby agree to the following:

1. The Contractor agrees to provide all of the material and labor required to perform the following work for:

VONA-SCADA-Upgrade-SOQ-RFP-2024 per attached quotation.

2. The Owner hereby agrees to pay the Contractor, for the aforesaid materials and labor, the sum of \$ 636,500.00, in the following manner:

Per attached schedule of values with monthly pay requests

3. The Contractor agrees that the various portions of the above-described work shall be completed on or before the following dates:

356 days

and the entire above-described work shall be completed no later than the 1st day of May, 2025.

4. The Contractor agrees to provide and pay for all materials, tools and equipment required for the prosecution and timely completion of the work. Unless otherwise specified, all materials shall be new and of good quality.

5. In the prosecution of the work, the Contractor shall employ a sufficient number of workers skilled in their trades to suitably perform the work.

6. All changes and deviations in the work ordered by the Owner must be in writing, the contract sum being increased or decreased accordingly by the Contractor. Any claims for increases in the cost of the work must be presented by the Contractor to the Owner in writing,

and written approval of the Owner shall be obtained by the Contractor before proceeding with the ordered change or revision.

7. The Owner, Owner's representative and public authorities shall at all times have access to the work.

8. The Contractor agrees to re-execute any work which does not conform to the drawings and specifications, warrants the work performed, and agrees to remedy any defects resulting from faulty materials or workmanship which shall become evident during a period of one year after completion of the work.

9. The Contractor agrees to maintain full insurance on the above-described work during the progress of the work, in his own name and that of the Owner.

10. In the event the Contractor is delayed in the prosecution of the work by acts of God, fire, flood or any other unavoidable casualties; or by labor strikes, late delivery of materials; or by neglect of the Owner; the time for completion of the work shall be extended for the same period as the delay occasioned by any of the aforementioned causes.

11. The Contractor agrees to obtain insurance to protect himself against claims for property damage, bodily injury or death due to his performance of this agreement.

12. Neither the Owner nor Contractor shall have the right to assign any rights or interest occurring under this agreement without the written consent of the other, nor shall the Contractor assign any sums due, or to become due, to him under the provisions of this agreement.

13. This agreement shall be interpreted under laws of the State of Illinois.

14. Attorney's fees and court costs shall be paid by the defendant in the event that judgment must be, and is, obtained to enforce this agreement or any breach thereof.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed the day and year first above written.

TRI-R Systems Incorporated
Contractor

Village of North Aurora, IL
Owner

By: _____

By: _____

Dated: _____

Dated: _____

Corporate Seal:

Corporate Seal:

Apprenticeship or Training Program Certification

The Village has passed by Resolution on September 21, 2009, a resolution that any public works contract under the purview of the Illinois Prevailing Wage Act that is over \$25,000 shall only be awarded to a contractor who is enrolled in a Joint Apprenticeship Training Program that is registered and certified with the United States Department of Labor, Bureau of Apprenticeship and Training.

- 1. Each bidder is required to certify and provide information on the apprenticeship or training program(s) approved and registered with the United States Department of Labor’s Bureau of Apprenticeship and Training in which the bidder participates that is relevant to the portion(s) of this project that is/are subject to the State of Illinois’ Prevailing Wage Act below.

The requirements of this certification and disclosure are a material part of the contract, and the bidder shall require this certification provision to be included in all approved subcontracts. The bidder is responsible for making a complete report and shall make certain that each type of work or craft job category that will be utilized on the project is accounted for and listed. The Village at any time before or after ward may require the production of a copy of each applicable Certificate of Registration issued by the United States Department of Labor evidencing such participation by the contractor and any or all of its subcontractors.

Signed: _____

Print Name: _____

Title: _____

Company: _____

Date: _____

(State of Illinois) SS County of _____

I, the undersigned, a notary public in and for the State and County aforesaid, hereby certify that

_____ appeared before me this day in person and, being first duly sworn an oath, acknowledged that he/she executed the foregoing certification as his/her free act and deed.

Dated: _____

Notary Public: _____



ALLAN INTEGRATED CONTROL SYSTEMS, INC

A Partnership with:



Allan Integrated Control Systems, Inc. (Allan-ICS),

Allan Integrated Control Systems, Inc. (Allan-ICS)

Allan-ICS has over 50 years of experience in the Instrumentation and Control (I&C), Automation and Integration (A&I), Supervisory Control and Data Acquisition (SCADA) System, Operational Technology (OT) and Information Technology (IT) business for Water and Wastewater utilities.

Allan-ICS' has been integrating SCADA systems and remote site communications systems, day-in and day-out, satisfying the needs of our clients for over 50 years, first as a division of the Allan Engineering Co., a company that sold and serviced water and wastewater treatment equipment in the upper Midwest, and then as Allan-ICS, a standalone, family owned and operated, company, a spin-off of the I&C group of the Allan Engineering Co.

Integrating SCADA systems for water and wastewater utilities is Allan-ICS' core business. It is our core competency. It is what we do and what we do well. It is that for which we have a proven and recognized expertise. Allan-ICS has integrated SCADA systems for the world's largest water filtration plants and distribution systems and wastewater treatment plants and conveyance systems as well as for communities throughout Wisconsin and Illinois. Allan-ICS regularly works on projects large and small including satisfying the Milwaukee Metropolitan Sewerage District, The Water Reclamation District of Greater Chicago, the City of Highland Park, the Village of Kenilworth, the Village of Wilmette, City of Chicago Department of Water Management, Chicago O'Hare Airport, Village of Glencoe, and the Village of Arlington Heights.

Allan-ICS Contact Information

Chicago Office

914 S. Racine Ave., Chicago, IL 60607

Phone – 262-642-7800

24/7 Emergency - 262-642-7800

Fax – 262-642-7870

Web – www.allan-ics.com

Contact – Ben Beard, bbeaird@allan-ics.com, 920-889-0942

Allan-ICS Project Management (PM) and Systems Integration (SI) Team

The Allan-ICS PM and SI Team has the unique combination of knowledge, experience, sensitivities, skills and abilities to successfully deliver our client's SCADA Projects. Allan-ICS fully understands and appreciates the complexities of conventional wastewater treatment facilities and collection systems, conventional surface water treatment facilities as well as the pumping processes and communications associated with the distribution system to customers, their operations and the systems involved, and is prepared to deliver reliable open-systems-technology, fault tolerant, operationally flexible, simple to operate and maintain, upgradeable, expandable, secure, proven yet innovative, customer-satisfying solutions for the lowest cost in this complex environment.

Ted Zess, Project Executive Contact at Allan-ICS and Chief Engineer (Co-Owner), with 35+ years of Electrical Controls Engineering and Project Management experience will be the Principal involved as well as the Project Manager for Allan-ICS. Ted successfully project managed SCADA projects for the City of Chicago, the City of Highland Park, the Village of Wilmette, the City of Appleton, WI, and the Village of Arlington Heights.

Ben Beard, Project Manager at Allan-ICS, will be the Lead Development and On-site Project Engineer for Allan-ICS. He has 15+ years of experience with VFDs, remote site communications systems using various technologies, Local Control Panel (LCP) hardwired and failover controls, including various panel-mounted) PID Single Loop Controllers (SLCs), Modicon Momentum, M340, and Quantum PLC hardware, their associated Concept and Unity programming software packages, multiple Allen Bradley PLC platforms and multiple HMI/SCADA applications programming. Ben is focused on leading the technical development of the project based on the detailed design. Ben's most recent success has been leading Allan-ICS' SCADA system upgrades and expansion development and on-site efforts on the Lake County Des Plaines River Water Reclamation Facility (WRF) Improvements Project in Buffalo Grove, IL. This project involved SCADA system upgrades and expansions with LCP hardwired controls, VFDs, PID SLCs, PLC control logic reverse engineering, translation and enhancement, Ethernet network communications and switching, HMI and Historian system computer and software upgrades, installations, startup, commissioning and extensive factory, operational readiness and functional acceptance testing.

Brian Worzalla, Allan-ICS Senior Project Engineer, with 35+ years of experience with VFDs, including most manufacturers and their latest generation of VFDs, Local Control Panel (LCP) hardwired and failover controls, including various panel-mounted PID SLCs, various PLC platforms, and a wide range of instrumentation, will be a Project Engineer for Allan-ICS focused on process applications programming.

David Farkas, Allan-ICS Project Engineer, with 27+ years of overall experience in Information Technology (IT) and SCADA systems, including 21+ years in software development and network administration including system design, installation and support of medium-to-large computer networks and 5+ years of HMI and Historian systems design, development and deployment experience, including extensive knowledge of and experience with multiple SCADA/HMI software packages as well as multiple Ethernet network systems. He is a Project Engineer for Allan-ICS, focused on SCADA application programming, operational readiness testing, startup and functional acceptance testing matters.

Other key Allan-ICS Engineers/Technicians that will be involved with the City of Chicago SCADA Maintenance project include;

- **Joe Sterle** - has extensive experience with large scale SCADA systems including the Fish Dispersal Barrier's for the Army Corp of Engineers, and with the City of Chicago DWM JWPP Chlorine Control System. Joe also has data reporting experience utilizing multiple platforms.
- **Kyle Bindrim** – Extensive experience with Chicago's Proficy iFIX, Proficy Historian, and Rockwell FactoryTalk HMI systems for the pumping stations and both water plants.
- **Josh Kirkorian** – Allan-ICS's PLC wiz has experience with AB PLC programming and control panel design.
- **Michael Mott** – PLC and HMI programmer with specialized skills in custom coding.
- **Joe Jahner** – Instrumentation & Controls engineer, PLC / HMI programmer.
- **Jim Bennett** – PLC programmer with AutoCAD drafting experience.

Allan-ICS Team-of-Experts also include a range of other personnel involved in control panel design and building in our UL-508A/UL-698A listed Panel Shop, field personnel involved in field installation, calibrations, startup and maintenance for various customers, multiple Engineers involved in Instrument system design, PLC programming and testing, and in HMI development. Our Panel Shop is highly experienced with multiple control system platforms including Rockwell Automation/Allen Bradley control/automation products and is a Schneider Electric / Square D Top Builder for control panels. Our shop also has mechanical fabrication abilities with Mechanical Engineers on staff and has a CNC milling machine for custom fabrication of parts.

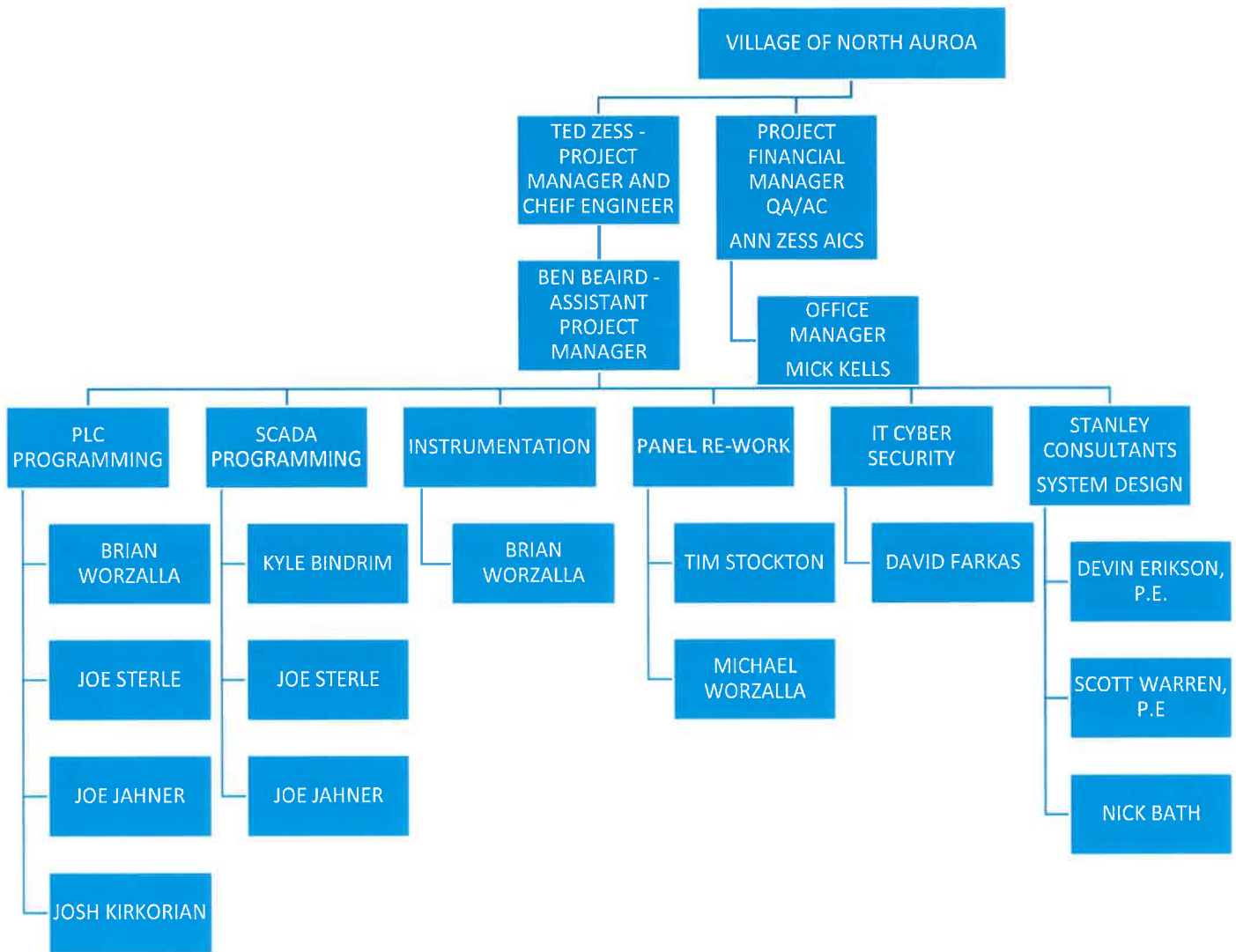
Allan-ICS & Stanley Consultants Project Partnership has been developed over the years for these unique SCADA upgrades where a Design Build is the better fit for the customer. With the accelerated schedule and completion date of Summer 2025 Allan-ICS and Stanley Consultants will be able to better Staff the project and divide up each of the unique tasks to keep on track.

IEPA Funding and Permitting, not only will Stanley Consultants be used for their Investigation and Design capabilities. Stanley Consultants has extensive experience in a wide variety of grant and loan financing assistance for communities faced with significant water or wastewater infrastructure investments. Our financing related experience includes funding/loan application assistance, cost estimating, capital improvement plan preparation and budgeting, sewer/water fund rate analysis for existing and future conditions with projected rate adjustments, cash flow analysis, environmental clearances, environmental assessments and impact studies, coordination of regulatory agencies and permitting requirements with funding agency requirements. We are very acquainted with and have worked with multiple municipalities and agencies on several projects containing a variety of funding sources.

Stanley Consultants is familiar with SRF IEPA funding and the project requirements, from developing the project plan, in design and bidding, through construction. We prepare and manage the initial IEPA loan application information; conform all drawings, specifications and contract documents to meet the requirements of the IEPA loan; complete the IEPA loan application after the project has been bid; administer the IEPA loan requests and payouts during construction.

In 2023, we closed the a loan process following construction completion of the Morton Grove Nile Water Commission Water Supply project which was a \$98 M project including I&C and SCADA design. Stanley Consultants assisted with the complete cycle of the loan application process.

Team Organizational Chart



Relevant Project Experience

Reference #1

Jardine Water Purification Plant – Overall SCADA Upgrades

- Contact
 - a. Hesham El-Hajje – Instrumentation and Control Supervisor
 - b. 1000 East Ohio Street
 - c. Chicago, IL 60611
 - d. (312) 742-1303
 - e. Hesham.ALHajje@cityofchicago.org
- Project Timeframe – September, 2019 to 2020
- Key AICS Personnel – Ted Zess, Ben Beard, Joshua Kirkorian, Joe Sterle
- Allen Bradley CompactLogix PLC's, Panelview Plus HMI
- Complete system / panel and software design and retrofits.

The Chlorination and Evaporator project consisted of replacing all 31 outdated Fisher and Porter based Control System with a new CompactLogix PLC's. Adding an Ethernet network throughout the plant and updating the SCADA Screens with new graphics. The project was completed during planned shutdowns in which multiple panels were replaced at a time.

Reference #2

Fox Metro Water Reclamation District – South Plant Expansion

- Contact
 - a. Nick DeVivo – Senior Automation & Instrumentation Tech
 - b. 682 State Route 31
 - c. Oswego, IL 60543
 - d. 630-301-6852
 - e. ndevivo@foxmetro.org
- Project Timeframe – September, 2017 to 2021
- Key AICS Personnel – Ted Zess, Ben Beard, Joshua Kirkorian, Kyle Bindrim
- Allen Bradley ControlLogx PLC's, FactoryTalk SCADA
- Complete system / panel and software design.

The SCADA system upgrade consisted of new South Waste Water plant with PlantPAX based Control System with a new ControlLogix PLC's. Adding a fiber network throughout the plant and updating the SCADA with new Screens.

Reference #3

City of Melrose Park, IL – SCADA Maintenance & Water System Upgrades

- Contact
 - a. Mike Lagioia – Water Plant Superintendent
 - b. 1000 N. 25th Avenue
 - c. Melrose Park, IL 60160
 - d. (708) 768-1523
 - e. lagioiamike@att.net
- Project Timeframe – October 2023 to Present
- Key AICS Personnel – Ted Zess, Brian Worzalla, Joesph Jahner
- Allen Bradley CompactLogix PLC's, Panelview Plus HMI, Aveva Wonderware

Complete SCADA system maintenance including PLC Programming, field instrument calibration and troubleshooting. Pumping Station improvements including new 350hp VFD's and upgrading existing Allen Bradley SLC500 to latest Compactlogix PLC.

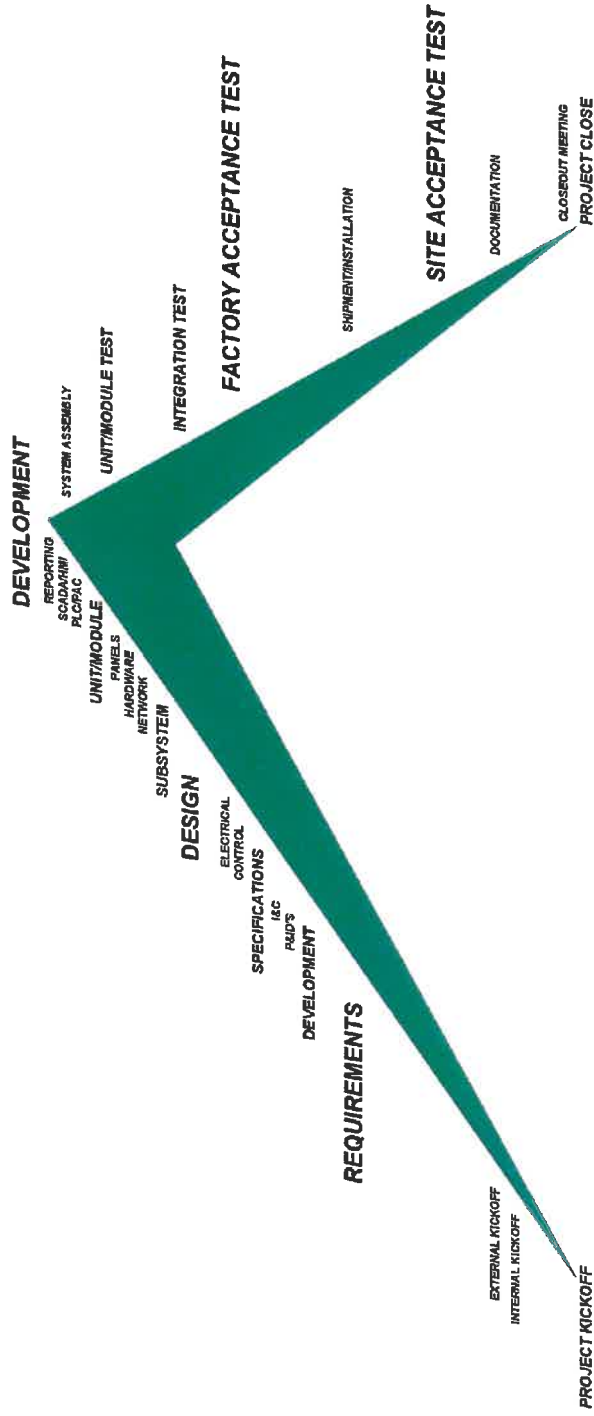
1) Summary of Fit

Allan-ICS employs a Team-of-Experts that has an extensive variety of SCADA, Information Technology (IT) skills, and instrumentation abilities, experiences, and sensitivities necessary to meet the needs of our client's SCADA project. Our team individually and collectively fully understand and appreciate the architectures, configurations and therefore the complexities of our client's proposed systems. Additionally, in this time of aging and obsolete equipment, Allan-ICS has performed more PLC Replacement Projects in the past 5 years than new installations. Our Team-of-Experts are used to the rigors of swapping a critical water system PLC.

For full SCADA and/or Control System projects, the Allan-ICS Team-of-Experts approaches the final definition of projects using a Technical Memorandum approach to workshop and discover, evaluate and document alternatives and recommended alternatives. The Allan-ICS team approaches the design of its projects based on the Design Report which will workshop and then document the final scope and alternatives selected from the Optional Project Scope items along with the Base Project Scope items and the alternatives and recommended alternative discussed in the Technical Memorandum. The Allan-ICS team approaches the development and deployment of this project using the proven and standard Allan-ICS Project Methodology. Allan-ICS, a member of the Control Systems Integrators Association (CSIA), uses this methodology on every project. This methodology closely follows the industry standard project methodology as standardized by the CSIA and is illustrated in the attached document. Allan-ICS understands that the key to the successful final definition, design, development, and deployment in any project is communications. Extensive communications with our clients are beneficial to ensure our understanding of their project scope and schedule expectations and extensive communications within the Allan-ICS Team-of-Experts to ensure each and every firm's understanding of their roles and responsibilities and their complete understanding of our client's scope and schedule expectations.

The Allan-ICS Team-of-Experts' technical approach to any project results in the delivery of the most reliable open-systems-technology, fault tolerant, operationally flexible, simple to operate and maintain, upgradeable, expandable, secure, proven yet innovative, customer-satisfying solution for the lowest cost. The teams' standards driven technical approach will include, for example, the use of only the latest top-shelf proven-reliable open-systems-technology SCADA system components, proven cost-effective fault tolerant features, the ability to operate the process equipment locally manually and remotely manually and automatically for maximum operational flexibility, intuitive and operator friendly and familiar enhanced graphical display layouts and navigation, all secured appropriately and with clear future upgrade paths and the ability to incorporate next-generation process, instrumentation, control and information technologies.

AICS PROJECT METHODOLOGY



SYSTEM DEVELOPMENT LIFECYCLE

		ALLAN INTEGRATED CONTROL SYSTEMS		PROJECT METHODOLOGY		Sheet #
REV:		DATE:		DATE: 10-24-15		001
DESCRIPTION:		BY: APPROVED		DWG #: AICS-METHODOLOGY		

2) Project Approach Outline

System Review and Recommendation Phase

This phase is broken out into 6 sub categories, where during the review of the existing system we are not only looking at physical hardware but engaging the Village Staff through interviews to better understand the needs of the new SCADA System. Our Engineers will also look beyond the SCADA system and note any instruments or components that are integral to SCADA and determine if there is a need for upgrades there. After site visits are done, a software demo with Rockwell FactoryTalk is recommended to give personnel a better understanding of the capabilities and if there is any more Factory components that should be considered including IT Cyber Security concerns. After all this an Existing System Technical Memorandum will be released for review.

1. Review of Existing System
2. Interviews with personal to better define future SCADA System Criteria
3. Deficiency Analysis of any other SCADA related components
4. Recommendations and Strategic Plan
5. IT Department Collaboration
6. Control/SCADA Existing System Technical Memo

System Design Phase

With the use of the Interviews from the previous phase a Technical Design memo will be drafted. This will include and overall SCADA system diagram showing the selected equipment and how it interconnects. A Sequence Plan of Action of how systems can be replaced with minimal disruption as well as a rough construction schedule based on current lead times.

1. SCADA Architecture Network Diagram
2. Equipment List
3. Termination Inventory
4. Technical Design Memo
5. Plan of Action
6. Construction Schedule

IEPA Construction Permit

With the use of the System Design, Stanley Consultants will work with Villages Engineer to prepare and obtain the IEPA Water Construction Permit.

Construction Phase

Based on the Recommendations and Design phase the construction phase will bring everything together. Graphics will be developed, reviewed, and refined. PLC Programming will take place and once the Graphics are completed a Factory Witness Test will take place. The factory test will demonstrate in a simulation how all systems will function and give a last chance for changes.

1. Review and submit documents and compile construction documents.
2. Develop New SCADA system Architecture.
3. New Parts Procurement.
4. Graphic Standards Inventory
5. PLC Programming Standards
6. Factory Witness Testing

Implementation, Start-up, and Training Phase

The system will be implemented in phases, this will be determined by criticality of systems as well as recommendations from the village. Once each system is implemented, additional systems training will take place and a final O&M assembled.

1. Develop staffing plan.
2. Develop responsibility matrix and identify roles.
3. Determine construction phasing and identify critical systems to be maintained
4. Complete commissioning schedule and maintain.
5. Lead any and all implementation activities
 - o East Water Treatment Plant
 - o East Elevated Water Storage Tank
 - o West Water Treatment Plant
 - o Princeton Elevated Water Storage Tank
 - o Automall Elevated Water Storage Tank
 - o Well #4
 - o Well #5
 - o Well #6
 - o Well #7
 - o Well #8
 - o Well #9
6. Oversee training programs and develop manuals.
7. Submit Final O&M for review and approval.

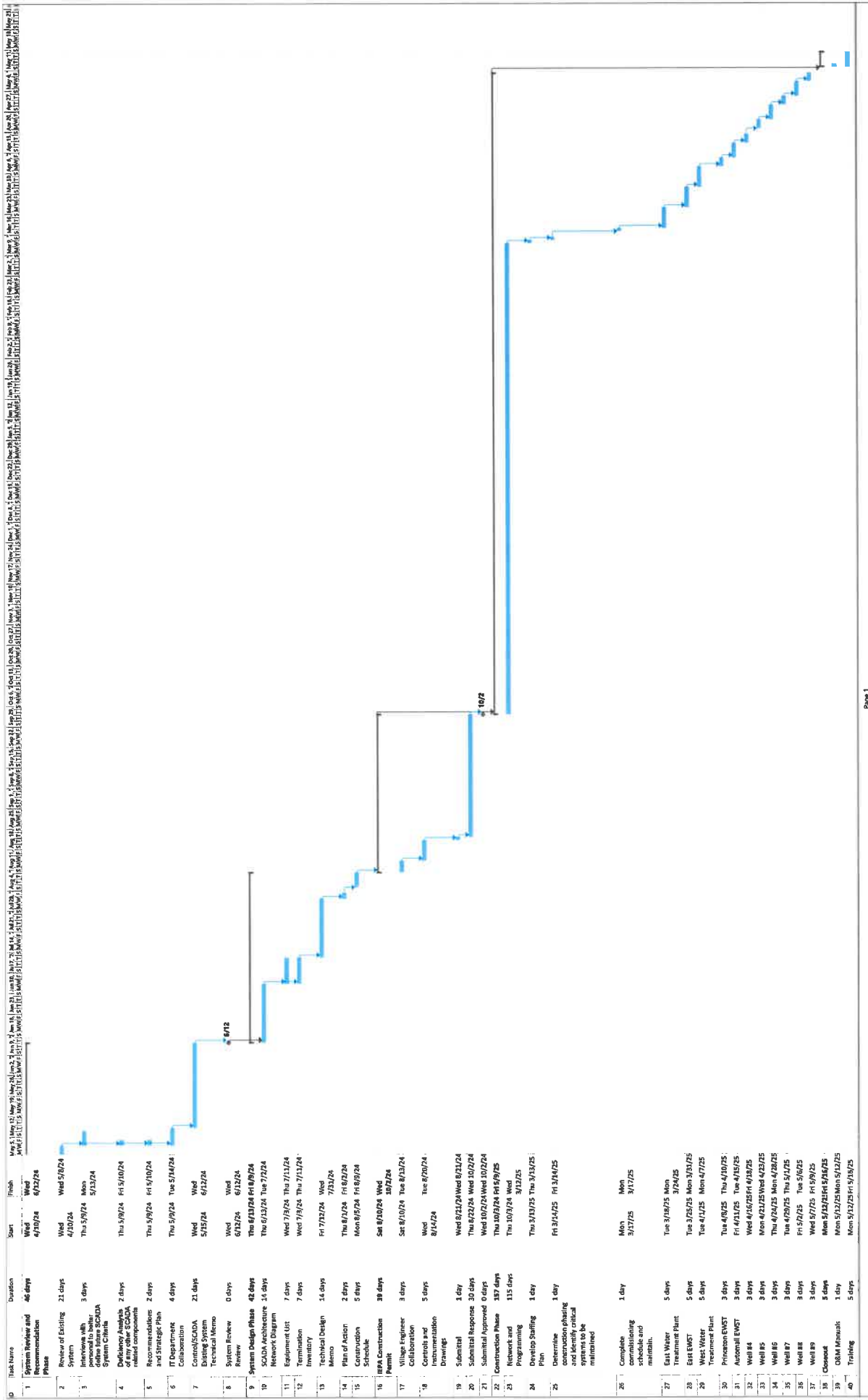
3) Risks

Allan-ICS core business is Water/Wastewater, it is engrained in our philosophy to protect the system at all costs. We understand the need for uptime and over time have defined 6 points of reducing risks in replacement projects like this.

1. Sequencing - Perform upgrades incrementally for water treatment plant to remain operational.
2. Reliability - Determine systems critical processes to keep drinking water safe during upgrades.
3. Commissioning - Conduct factory acceptance test for each system to verify the system works as planned before construction.
4. Standards - Define operation staffs' and engineers' expectations for design to be easily understood and operated
5. Flexibility - Call upon our strength of multidisciplined staff to respond quickly to obstacles to keep the project moving forward
6. Security - Design system to comply with Buffalo Grove IT Security requirements and discuss possible improvements.

4) On-Call Services

A cell-phone list, including a 24-7 hour number, is released. Besides the 24-7 number each individual is documented on their roles of expertise and will be reachable by cell phone.



Task Description	Technical Advisor	Project Manager	QA/QC	Sr. Controls Consultant	Controls Consultant	Electrical Engineer	Engineering Support - Permitting	Cost Estimating	Senior Designer	CAD	R/C Principal Design Engineer	R/C Engineer	R/C Technician	Hardware	Total Hours	Labor
On-Site Installation and Startup	\$ 275.00	\$ 205.00	\$ 250.00	\$ 179.00	\$ 130.00	\$ 191.00	\$ 200.00	\$ 152.00	\$ 205.00	\$ 152.00	\$ 175.00	\$ 160.00	\$ 130.00		64	\$ 9,280.00
Automall Elevated Water Storage Tank																
PLC/HMI Programming											40	120			160	\$ 26,200.00
SCADA Programming												80			80	\$ 12,800.00
On-Site Installation and Startup												32			64	\$ 9,280.00
Well #4																
PLC/HMI Programming											24	120			144	\$ 23,400.00
SCADA Programming												80			80	\$ 12,800.00
On-Site Installation and Startup												32			64	\$ 9,280.00
Well #5																
PLC/HMI Programming											24	120			144	\$ 23,400.00
SCADA Programming												80			80	\$ 12,800.00
On-Site Installation and Startup												32			64	\$ 9,280.00
Well #6																
PLC/HMI Programming											24	120			144	\$ 23,400.00
SCADA Programming												80			80	\$ 12,800.00
On-Site Installation and Startup												32			64	\$ 9,280.00
Well #7																
PLC/HMI Programming											24	120			144	\$ 23,400.00
SCADA Programming												80			80	\$ 12,800.00
On-Site Installation and Startup												32			64	\$ 9,280.00
Well #8																
PLC/HMI Programming											24	120			144	\$ 23,400.00
SCADA Programming												80			80	\$ 12,800.00
On-Site Installation and Startup												32			64	\$ 9,280.00
Well #9																
PLC/HMI Programming											24	120			144	\$ 23,400.00
SCADA Programming												80			80	\$ 12,800.00
On-Site Installation and Startup												32			64	\$ 9,280.00
Subtotal	30	126	64	474	338	64	8	54	18	340	528	3,176	496	711,710.16	5,716	\$ 921,948.00
	\$8,250	\$25,830	\$16,640	\$84,846	\$43,940	\$12,224	\$1,600	\$8,208	\$3,690	\$51,680	\$92,400	\$508,160	\$64,480	\$711,710.16	LABOR	\$ 921,948.00
																\$ 711,710.16
																\$ 1,633,658.16

Total Labor \$ 921,948.00
Total Hardware \$ 711,710.16
Project Total \$ 1,633,658.16

**EDUCATION &
TRAINING**

- AAS, Computer Engineering Technology, Milwaukee School of Engineering, 1985
- BS, Electrical Engineering Technology, Milwaukee School of Engineering, 1987
- Project Management
- Leadership Training
- ABB Mod-300 Digital Control System (DCS)
- Rockwell Automation (RA) Allen Bradley (AB) PLCs: PLC-5, SLCs, ControlLogix, CompactLogix
- RA Rockwell Software (RS) PLC Programming Packages: RSLogix 5, 500 & 5000
- RA RS FactoryTalk (FT) View Supervisory Edition (SE) HMI (FTView SE)
- General Electric (GE) Proficy w/ Cimplicity HMI
- GE Proficy (Intellution iFix) HMI
- Invensys Wonderware HMI
- GE (Proficy) Historian

BACKGROUND

Mr. Zess has 32+ years of I&C, SCADA and IT systems experience with 26+ years of entrepreneurial experience as a member of the company ownership group. Mr. Zess has a broad range of experience in all facets of I&C, SCADA and IT systems definition, design, development and deployment. Despite Mr. Zess' entrepreneurial exuberance and his un-quenching desire to be a part of all projects from start-to-finish, Mr. Zess now mostly uses his highly refined project management and leadership skills to coach, mentor and motivate the Allan-ICS employees to produce high quality applications engineering solutions and to ensure that company projects' scopes are completed on schedule and within budget.

KEY EXPERIENCE**2004-PRESENT**

- Member of Allan-ICS Ownership Group (wife/husband) and Chief Engineer for Allan-ICS. Duties include company leadership and management providing company strategic execution, project management, project planning and design, and otherwise, assisting with all aspects of all projects, as needed.

1993-2004

- Member of Company Ownership Group with responsibility for instrumentation and control system division of the company. Duties included system quoting, project management, project design, programming, and system startup.

1987-1993

- Lead project engineer for instrumentation and control systems. Duties included system quoting, project management, project design, programming, and system startup.

RECENT PROJECT MANAGEMENT PROJECTS**2017 TO PRESENT – MMSD JI & SS WRF HISTORIAN UPGRADE PROJECT – \$800K**

- Final design, develop and deploy the JI and SS WRF Plant Historian Systems, components of the MMSD Integrated Historian System, designed around GE (Proficy) Historian, into an overall highly available system architecture with multi-server GE Historian Systems for data collection from JI and SS and distribution throughout MMSD facilities with over 120,000+ combined Conveyance, JI and SS data points readily available for analysis and reports to all MMSD facilities.

2018 TO PRESENT – CITY OF CHICAGO JARDINE WATER PURIFICATION PLANT - SWGR - \$1.4M

- Development and deployment of a switchgear replacement and SCADA system including instruments, panels, AB ControlLogix PLCs and PanelViews, final SCADA system integration design, GE Proficy (Intellution iFix) HMI and GE (Proficy) Historian systems.

2014 TO PRESENT – WILMETE, IL WATER SYSTEM - \$750K

- The original project started in 2014 and since completed was for the development and deployment of a Schneider Electric Modicon PLC and Operator Interface Terminal (OIT) and GE Proficy (Intellution iFix) HMI based SCADA system. Additional scope items, still ongoing, include design, development and deployment of expansions to that SCADA system.

2013 TO 2015 – EVANSTON, IL WATER PLANT - \$1.9M

- Final design, development and deployment of a plant-wide SCADA system including instruments, panels, AB ControlLogix PLCs and PanelViews, final SCADA system integration design, GE Proficy (Intellution iFix) HMI and GE (Proficy) Historian systems.

2014 TO 2018 – CITY OF CHICAGO SPRINGFIELD AVE PUMPING STATION - \$1.8M

- Development and deployment of a station electrification and SCADA system including instruments, panels, AB ControlLogix PLCs and PanelViews, final SCADA system integration design, GE Proficy (Intellution iFix) HMI and GE (Proficy) Historian systems.

2013 TO 2018 – GREATER PEORIA SANITARY DISTRICT – \$850K

- Development and deployment of SCADA system for plant expansions and updates including instruments, panels, AB ControlLogix PLCs and PanelViews, final SCADA system integration design, GE Proficy (Intellution iFix) HMI and GE (Proficy) Historian systems.

EDUCATION & TRAINING

- AAS, Industrial Controls and Automation, Milwaukee Area Technical College, 2007
- RA AB PLCs: PLC-5, SLCs, ControlLogix, CompactLogix
- RA RS PLC Programming Packages: RSLogix 5, 500 & 5000
- RA RS FTView SE HMI
- GE Proficy (Intellution iFix) HMI
- Invensys Wonderware InTouch HMI
- GE (Proficy) Historian
- AB and Yaskawa VFDs

BACKGROUND

Mr. Beaird has 10+ years of I&C, SCADA and IT systems experience including the development and deployment of electromechanical hardwired logic controls, PID SLCs, VFD configurations and VFD/PLC interfaces, and PLC and HMI programming in the water and wastewater industry. Mr. Beaird has a diverse background in the water and wastewater industry. He started his career building Original Equipment Manufacturer (OEM) water and wastewater process equipment. He gained valuable experience reviewing submittals, shop drawings, Process and Instrumentation Diagrams (P&IDs), developing plans and specifications, providing AutoCAD design support as well as preparing as-built field documentation in a smaller consulting engineering office. Mr. Beaird now specializes in on-site installation, operational readiness testing, startup and commissioning, functional acceptance testing and field service of I&C, SCADA and IT systems with responsibility for the oversight of entire integration projects.

KEY EXPERIENCE

2018 TO 2020 – CITY OF CHICAGO JARDINE WATER PURIFICATION PLANT – CHLORINATOR UPGRADE

- Developed and deployed AB CompactLogix PLC system to replace legacy Fischer & Porter control systems in all 26 Chlorinators and 5 Evaporators. Programming enhanced the operations by providing individual touchscreens for control.

2018 TO PRESENT – CITY OF CHICAGO O’HARE AIRPORT – TERMINAL HEATING SYSTEM AUTOMATION

- Development and deployment of SCADA system for upgrading the airport terminal hot water heating systems including instruments, panels, AB ControlLogix PLCs and Redundant I/O, final SCADA system integration design, and Wonderware HMI.

MAY 2016 TO PRESENT – FOX METRO WATER RECLAMATION DISTRICT

- Development and deployment of SCADA system for plant expansions and updates including instruments, panels, AB ControlLogix PLCs and PanelViews, final SCADA system integration design, Rockwell RS-View SE HMI

JULY 2017 TO PRESENT – LAKE COUNTY DPW – DES PLAINES RIVER WWTP

- Development and deployment of SCADA system for plant expansions and updates including instruments, panels, AB ControlLogix PLCs and PanelViews, final SCADA system integration design, and Wonderware HMI.

2013 TO 2018 – GREATER PEORIA SANITARY DISTRICT

- Development and deployment of SCADA system for plant expansions and updates including instruments, panels, AB ControlLogix PLCs and PanelViews, final SCADA system integration design, GE Proficy (Intellution iFix) HMI and GE (Proficy) Historian systems.

JULY 2014 – CITY OF CHICAGO JARDINE WATER PURIFICATION PLANT – FILTRATION UPGRADE

- Developed and deployed AB CompactLogix PLC system to replace legacy Square-D PLCs while enhancing the backwash and effluent flow controls on all 196 sand filters.

2013 TO 2015 – EVANSTON, IL WATER PLANT

- Final design, development and deployment of a plant-wide SCADA system including instruments, panels, AB ControlLogix PLCs and PanelViews, final SCADA system integration design, GE Proficy (Intellution iFix) HMI and GE (Proficy) Historian systems.

JULY 2014 – MILWAUKEE METROPOLITAN SEWAGE DISTRICT – PRELIMINARY TREATMENT FACILITY UPGRADE

- Developed and deployed SCADA system upgrades to the JI WRF Preliminary Treatment Facility including PLC and HMI upgrades, drawing modifications, Operational Readiness Testing, startup and commissioning assistance and Functional Acceptance Testing. Successfully updated Jones Islands first Redundant PLC System to Firmware Revision 19.

NOVEMBER 2013 – MILWAUKEE METROPOLITAN SEWAGE DISTRICT – MILORGANITE FACILITY UPGRADE PHASE II

- Developed and deployed Milorganite Facility SCADA system upgrades including PLC and HMI upgrades, drawing modifications, Operational Readiness Testing, startup and commissioning assistance and Functional Acceptance Testing.

EDUCATION & TRAINING

- Associates Degree in Electrical Engineering - Milwaukee School of Engineering
- Associates Degree in Physical Science – University of Wisconsin, Waukesha
- Certified Industrial Electronics Technician by The International Society of Certified Electronics Technicians (ISCET)
- RA AB PLCs: PLC-5, SLCs, ControlLogix, CompactLogix
- RA RS PLC Programming Packages: RSLogix 5, 500 & 5000
- RA RS FTView SE HMI
- GE Proficy (Intellution iFix) HMI
- GE (Proficy) Historian

BACKGROUND

Mr. Worzalla has 33+ years of I&C, SCADA and IT systems experience including the development and deployment of electromechanical hardwired logic controls, PID SLCs, VFD configurations and VFD/PLC interfaces, and PLC and HMI programming in the water and wastewater industry.

KEY EXPERIENCE

2018 TO 2020 – FERMILABS CASEYS PUMPHOUSE UPGRADE

- Provided development and controls of the Caseys Pond pump house utilizing controls of different pump sizes to maintain constant supply pressure.

2017 TO PRESENT – CITY OF CHICAGO JARDINE WATER PURIFICATION PLANT - SWGR

- Development and deployment of a switchgear replacement and SCADA system including instruments, panels, AB ControlLogix PLCs and PanelViews, final SCADA system integration design, GE Proficy (Intellution iFix) HMI and GE (Proficy) Historian systems.

2015 TO PRESENT – CITY OF CHICAGO SOUTH WATER PURIFICATION PLANT - SWGR

- Development and deployment of a switchgear replacement and SCADA system including instruments, panels, AB ControlLogix PLCs and PanelViews, final SCADA system integration design, GE Proficy (Intellution iFix) HMI and GE (Proficy) Historian systems.

2014 TO 2018 – CITY OF CHICAGO SPRINGFIELD AVE PUMPING STATION - ELECTRIFICATION

- Development and deployment of a station electrification and SCADA system including instruments, panels, AB ControlLogix PLCs and PanelViews, final SCADA system integration design, GE Proficy (Intellution iFix) HMI and GE (Proficy) Historian systems.

2004 TO 2008 – CITY OF CHICAGO SOUTHWEST PUMPING STATION - ELECTRIFICATION

- Development and deployment of a station electrification and SCADA system including instruments, panels, AB PLCs and PanelViews, final SCADA system integration design, GE Proficy (Intellution iFix) HMI and GE (Proficy) Historian systems.

2012 – CITY OF CHICAGO PARK DISTRICT'S BUCKINGHAM FOUNTAIN

- Mr. Worzalla was instrumental in the design, programming, installation, and start-up of the AB CompactLogix PLC control system for the pumps and valves at Buckingham Fountain.

2011 TO PRESENT—CITY OF CHICAGO O'HARE AIRPORT STORM WATER BASINS

- Mr. Worzalla has been involved in the programming, start-up, and maintenance of the AB ControlLogix PLC controlled systems for collection of stormwater runoff.

GENERAL

- Mr. Worzalla has a number of control applications that required the conversion to the AB ControlLogix platform, most notably for Chicago's Department of Water Management's Southwest and Springfield Pumping Stations.



SCOTT WARREN, P.E

Control Systems Technical Lead
Stanley Consultants
16 Years of Experience

Scott has served as project manager and Lead Control Systems Engineer on a wide variety of power plants, water treatment plants and central heating and cooling plants. He has extensive experience with both DCS- and PLC based control systems and has designed, tested, and commissioned Emerson Ovation DCS, Siemens PCS7 and Siemens S7-300 PLCs.

Professional experience consists of design and engineering of control systems including programmable logic software design and implementation, programming guide design, instrument selection, equipment data sheets, input/output listings, control system descriptions, operating procedures, training guides, datalink coordination, specification development, P&ID design, cable schedules, termination drawings and control panel design.

Construction phase services experience encompasses startup field assistance, construction observation, and operational training for various baghouse/scrubber projects, central heating plant boilers and water and wastewater pump stations. Experience also includes design and implementation (network design, setting sheet development, etc.) of Foundation Fieldbus and Profibus DP bus technologies for monitoring and control.

PROJECT EXPERIENCE

LP Moon Pumping Station, and Xenia Pump Station Improvements Sodium Hypo/Feeds Modifications, Des Moines Water Works, Des Moines, IA

Project Manager and Lead Controls Engineer responsible for management as well as controls engineering expertise for an expansion of a sodium hypochlorite injection system for potable water to the communities of Waukee, Clive and Urbandale, Iowa. Project deliverables included construction drawings for demolition, mechanical, electrical and controls installation of hypo equipment. Permit application documents for IDNR were provided as part of the deliverables as well.

Joint Maffitt Lake Booster Station; Des Moines Water Works; Des Moines, IA

Lead Control Systems Engineer responsible for providing instrumentation and controls engineering design for a new pump station housing five VFD driven pumps and control system panel to control the equipment. Deliverables included piping and instrumentation diagrams, equipment coordination, construction drawings and specification review. Engineering during construction services were also provided.

Plant Control System Evaluation, Texas A&M University, College Station, TX

Project Manager responsible for providing project management, as well as controls engineering expertise on a study to evaluate control system. Control system spans five plant sites; and encompasses power generation, hot water boilers, chillers, wastewater facility and interfaces with various other control systems. Study included probable cost of construction, evaluation of seven control systems, and facilitation of onsite vendor meetings.

Water Pollution Control Facility Electric Generators Control System Upgrade Study; City of Cedar Rapids; Cedar Rapids, IA

Control Systems Engineer responsible for preparing a study detailing a cost estimate for redesign of flood damaged controls onsite. Provided control system upgrade of four 1.5 MW diesel generators. Interfaced Modicon PLCs with recloser from Alliant substation. Project

Education

Bachelor of Science,
Electrical Engineering,
Northern Illinois
University

Associate of Applied
Science,
Robotics/Automation
Systems, Indian Hills
Community College

Professional Registrations

Professional Engineering:
IL, #062-064622
IA, #21525
WI, #43464-6
MI, #6201064859
GA, #041774

Electrical Engineering:
LA, #0037969

NCEES Record Holder,
#13-536-19

Professional Societies

» International Society of
Automation

Specialized Training and Certifications

» 10-Hour OSHA
Construction Safety
and Health
» ANSI/ISA99 – IEC
62443 Standards to
Secure Industrial
Control Systems
Course



deliverables included detailed panel wiring diagrams, location plan drawings and detailed specifications.

Wastewater Municipal Incorporation Design; Baxter Healthcare Corporation; Round Lake, IL

Lead Control Systems Engineer responsible for providing wastewater pump station controls design. Design included PLC control and local HMI monitoring, custom programming for multiple output monitoring scenarios, AMI connected flowmeter and provisions for remote radio-based monitor. Deliverables included P&ID, programming guide and specifications.

Wastewater Treatment Plant Disinfection Study; City of Ames; Ames, IA

Control Systems Engineer responsible for coordinating the controls system for adding an ultraviolet disinfection system to the wastewater treatment plant. System and building were sized to accommodate 50 MGD of future flow. Deliverables included specifications for UV system, coordinating fiber optic SCADA communications with existing system, network diagram, and P&IDs. Project scope consisted of evaluation of wastewater disinfection technologies and selection of the most appropriate technology to disinfect the effluent. Detailed analysis was performed on sodium hypochlorite, peracetic acid, UV light, UV/peracetic acid and wetlands with UV disinfection selected based on non-monetary and capital and life cycle cost considerations.

Water Treatment Facility Replacement; U.S. Department of Agriculture, APHIS; Mission, TX

Control Systems Engineer responsible for providing controls design and upgrades for addition of a new Water Boy treatment unit to the existing water treatment plant.

Water Hammer Hazard Mitigation Project; Sewerage & Water Board of New Orleans; New Orleans, LA

Lead Control Systems Engineer responsible for providing pump controls design for water hammer mitigating modifications to 170 MGD of existing pumping capacity in three stations at the plant site. Design includes PLC control and local HMI monitoring, instrumentation for pump stations and elevated storage tanks, control system descriptions and operating sequence descriptions.

Hooper Road Pump Stations; City of Baton Rouge/Parish of East Baton Rouge Department of Public Works; Baton Rouge, LA

Lead Control Systems Engineer responsible for providing wastewater pump controls design for 16 pump stations ranging in size from 400 GPM to 20,000 GPM. Large pump station pumps were variable speed controlled. Design included PLC control and local HMI monitoring, and provisions for remote radio-based monitor was also provided. Deliverables included P&IDs, specifications, instrument cost estimates, as well as detailed control schematics for the hardwired control system and variable frequency drives.

Auxiliary Boiler Addition; Alliant Energy; Sheboygan, WI

Lead Control Systems Engineer responsible for providing instrumentation and controls engineering design for installation of new electric boiler. Deliverables included equipment coordination, procurement specifications, cable schedule, termination drawings and coordination of datalink to DCS from boiler control system. Owner's Engineer services included for performing an engineering study, preparing procurement and construction specifications, and providing detailed design to install an auxiliary boiler to an existing power generating station in response to plans for decommissioning one of the two remaining generating units.

Unit 5 Generator Excitation System Power Supply System; Alliant Energy; Madison, WI

Lead Control Systems Engineer responsible for providing controls and instrumentation design and specifications for medium voltage switchgear addition to the Unit 5 generator exciter system (420 MW). Integrated switchgear into DCS and provided datalink for monitoring switchgear. Project deliverables included breaker logic, I/O list, cable schedule and DCS loop diagrams.



DEVIN ERIKSON, P.E.

Senior Control Systems Engineer
Stanley Consultants
10 Years of Experience

Devin's experience ranges from onsite startup through commissioning for water pumping stations, district cooling plants, engine plants, university boilers through to selective catalytic reactors and scrubber baghouses on power generation plants up to 750 MW. His extensive experience includes DCS logic and wiring for ABB Symphony Plus and Emerson Ovation; specifying and designing networks to integrate new DCS cabinets and operator and engineering workstations. Also, his experience includes selecting the proper instrumentation and integrating it into the PLC, SCADA or DCS control systems. His technical expertise includes P&IDs, I/O lists, wiring diagrams, panel design, logic diagrams, cable termination diagrams, controls installation details, contract management, specifications, and troubleshooting. He has successfully commissioned projects from 200 I/O points up to 2,000. His responsibilities included commissioning instrumentation, motors, control panels, MCCs, DCS cabinets; control wiring loop checkouts, IO point verification, updating instrumentation signal ranges and alarms, implementing temporary logic modifications; and troubleshooting all while coordinating with site safety personnel and onsite workers. Also, his experience includes troubleshooting controls system glitches found during startup, and coordination and planned equipment startup with contractor, plant personnel and safety officers.

PROJECT EXPERIENCE

Windy Gap Pump Station P&ID and Controls; Northern Colorado Water Conservancy District; Granby, CO

Lead Control Systems Engineer responsible for the development of new P&ID's, I/O Loop drawings, and I/O lists for the installation to better support operations and maintenance activities for these remotely monitored and operated facilities.

West Chiller Plant Piping and Instrumentation Drawing Development, Mortenson Company, Seattle, WA

Lead Control Systems Engineer responsible for performing walk-down of current system and developing P&ID drawings for as-built conditions. Chiller plant consisted of three chillers and cooling towers.

Power Plant Upgrade, Phase 2, University of Washington, Seattle, WA

Lead Control Systems Engineer responsible for providing specification of replacement Burner Management Control systems PLCs, new steam turbine generators and Diesel Rotary UPS system. Design also included specification of Instrumentation and Control device upgrades as well as designing and coordinating the integration into the existing ABB Symphony DCS.

Turbine Water Induction Prevention Feasibility Study, MidAmerican Energy, Council Bluffs, IA

Control Systems Engineer responsible for assisting with providing an engineering review of the Walter Scott Energy Center's existing Unit 4 feedwater heater level control system to determine if the unit complies with ASME TDP-1, TWIP. Reviewed existing plant equipment and components, DCS control logic, valving, safety features and testing features to determine compliance and deficiencies with ASME TDP-1. Prepared a study report with recommended hardware and software changes.

Education

Bachelor of Science,
Electrical Engineering,
University of Wisconsin-
Platteville

Professional Registrations

Professional Engineering:
WI, #45346-6
IA, #24144

Electrical Engineering:
TX, #134005
WA, #22002215

Specialized Training and Certifications

» 10-Hour OSHA
Construction Safety
and Health Training
Course



District Cooling Plant 4 Convention Center Cooling Plant, City of Austin TX, Austin, TX

Lead Control Systems Engineer responsible for specifying controls of an entire packaged chiller plant including instrumentation, input/output lists, Allen Bradley PLC panels and cables. Reviewed vendor shop drawings to confirm they meet specifications.

Wastewater Treatment Plant Upgrade, City of Iowa City, Iowa City, IA

Control Systems Engineer responsible for assisting the Lead Controls Engineer by performing the preliminary review of instrumentation, panel layouts and PLC termination shop drawings.

Plant DCS Conversion and Upgrades, University of Michigan, Ann Arbor, MI

Control Systems Engineer responsible for supporting Lead Control Systems Engineer with upgrading 13 existing ABB Bailey DCS cabinets to Emerson DeltaV. Responsibilities included designing layout for a DeltaV control cabinet; verifying and maintaining large input/output lists; and checking and updating demolition drawings, cabinet arrangement drawings, plan drawings, schematic drawings, and fiber termination drawings.

North Thermal Energy Plant Chiller 3 Replacement, Confidential Client, San Antonio, TX

Lead Control Systems Engineer responsible for I&C design to demolish an existing chiller and replace with a New York YK MAXE series chiller. Also responsible for creating specifications and sizing instrumentation such as flow control valves, flow meters. Coordinated instrumentation and chiller controls integration into the existing Siemens Apogee control system.

Edgewater Unit 5 Scrubber Baghouse Retrofit, Wisconsin Power and Light Company, Sheboygan, WI

Commissioning Engineer responsible for performing a variety of equipment control design activities which included creating instrument cable loop drawings, instrument location plans, and shop drawing reviews; and modifying existing balance-of-plant logic to add two additional ID Booster Fans. Other responsibilities included generating the instrumentation cable schedule utilizing source destination tagging. Testing and approving the Emerson Ovation DCS logic and graphics at factory acceptance test. Onsite experience for six months; responsibilities included control system expansion overview, point-to-point loop checks, instrument installation checkouts and troubleshooting. Operation experience with Emerson Ovation, logic troubleshooting and modification and equipment startup. Instrument settings setup on Rosemount, Yokogawa and Limitorque equipment. Coordinated startup test procedures with plant personnel and safety officers. Control loop tuning on tank level, flue gas recirculation steam heating, and various other processes. Assisted with unit startup and operation.



NICK BATH

Electrical Consultant
Stanley Consultants
10 Years of Experience

Nick is a Controls engineer with a strong background in control system design, programming, and commissioning. He has provided process control solutions in water, wastewater, irrigation and oil and gas industries. With a wide variety of project under his belt, Nick is well equipped to take a project from concept to implementation. He has spearheaded controls design, including development of I/O lists, instrument lists, instrument datasheets, location plans, install details, control panel layouts, power distribution, and I/O termination details, and control narratives. When projects move into construction, Nick has coordinated contractors on upgrades, rehabilitation, and grassroots projects to terminate control wiring and configure instrumentation. With a background in PLC and HMI programming, Nick can program from the ground up or jump into existing control system code to troubleshoot, debug and get the system functioning as intended.

PROJECT EXPERIENCE

Wastewater Treatment Plant Controls Upgrades - Municipal Sewer District of Greater Cincinnati

Programmed and commissioned over 20 Rockwell PLCs, PanelViews, and associated GE iFix SCADA servers across four different Wastewater treatment plants, in an effort to upgrade and standardize MSDGC's control systems. Implemented standard power monitoring using PQM-II interfaced with Prosoft modbus TCP-IP modules across all four sites. Reviewed contractor submittals and responded to requests for information during construction, and dynamically scheduled programming efforts based on construction progress. Updated all P&IDs of the four plants in AutoCAD.

Dayton Lime Reclamation, Lime Reclamation Plant Expansion, City of Dayton, OH

Programmed and commissioned two GE RX3i controllers for new truck unloading and sludge blending processes at the facility. The new system featured a truck weighing, recording, and ticketing system used for tracking the weights of residual lime and reclaimed lime. This required integration of a Red Lion HMI with a thermal printer via ASCII commands issued over RS-232. The integrated product provided tickets for truck drivers, reporting their entrance and exit weight, while recording truck load weights in the City of Dayton's iFix SCADA.

Glacier Club Wastewater Plant Improvements

Provided a modernized control system and Ignition SCADA for a complete plant upgrade, which included new blowers, RAS pumps, effluent pumps and instrumentation at the WWTP. Worked closely with construction and operations staff for a streamlined and efficient control system implementation. Configured all supplied instrumentation, including mass flow meters, magmeters, ultrasonic level sensors, DO and LEL sensors.

Coca-Cola North America Paw Water Reclamation Plant Upgrade

Led control panel design and PLC/HMI software development to replace and consolidate legacy control systems at the plant. Developed a new pH control, chemical dosing, and aeration flow control strategies in order to enhance effectiveness of treatment and improve the quality of water sent to discharge. The existing PLC and HMI programming was non-standardized across controllers so all logic and visualization was reverse-engineered and re-built using standardized add-on instructions in Studio 5000 and global objects in Factorytalk View, in order to make the system easier to learn, operate and maintain.

Education

Bachelor of Science,
Chemical Engineering,
University of Colorado-
Boulder

Specialized Training and Certifications

- » Allen Bradley, RSLogix/Studio – ControlLogix/CompactLogix, SLC Micrologix/PLC-5; Schnieder-Unity Pro XL; Quantum Modicon M340; GE Proficy Machine Edition; RX3i
- » Control System Design - Piping & Instrumentation Diagrams, PLC Panel Layout/BOM; I/O Lists & Terminations; Control Narratives; Motor & Valve Control Schematics; Instrument Datasheets & Location Plans; Conduit & Conductor Schedules; Network Architecture
- » Human-machine Interface (HMI) - SCADA - Ignition, iFix, Factorytalk View SE; Touchscreen OITs - Factory talk View ME (Panelview), Vijeo Designer (Magelis); Crimson (Red Lion); C-More; DCS - Foxboro I/A Series
- » Control System Commissioning -Factory & Site Acceptance Testing, I/O Checkout, PLC program verification with live process; PID loop tuning



Addendum Number 2

Supervisory Control and Data Acquisition (SCADA)

Upgrade and Services

Issued April 5, 2024

Addendum Description

Expanded **Updating Controls & Hardware** section of Project Scope to include 4 additional items. Revised Page 6 of SOQ/RFP Document is attached.

Action Required

- 1. Please sign below acknowledging the change.**
- 2. Return this page with your proposal.**



Signature

4/10/24

Date

BEN E. BEIRO

Printed Name

PROJECT MANAGER

Title



2. Replace SCADAPACK PLCs in all remote facilities with CompactLogix PLC's and provide Automation Direct HMI screens at EWST's and Wells 6 & 7.
3. Provide for desktop SCADA PCs at each WTP, superintendent's office, and water division field office. The two office locations shall have a large wall mounted monitor.
4. Provide UPS Battery Backup failure relays and alarms at all PLC's and PC's.
5. Provide power quality monitors at each raw water well and treatment plant which can be monitored and trended.
6. Provide new level and temperature sensors at each EWST. Any RTU must be protected from water.
7. Integrate well pump Variable Frequency Drives (VFD) to provide more in-depth operating statuses and alarms.
8. All existing processes must integrate with new system.
9. Provide for monitoring the statuses of Hydrous Manganese Oxide (HMO) Mixers and HMO dosing pump VFD's.
10. Provide for updating the backwash controllers at each water treatment plant and integrate filter bank meters signals to PLC's, must also have the ability to bypass filter banks during backwash.
11. Provide for a level transducer for Well 4.
12. Utilize most current, proven technology that is easy to expand and upgrade.
13. Expandability – Design the project with the idea that future remote stations and I/O may be added and integrated in the future.
14. All equipment must be new, no refurbished or recertified.
15. All wires/cables shall be routed in appropriate conduit and follow NEC.
16. Provide solution for well interlock at the West WTP Sodium Hypo pump control panel which will allow metering pumps to be read and maintain electrical interlock when wells are not operating.
17. Provide for spare radios of any type proposed for the project; i.e. if microwave proposed for communication between WTP's provide a spare, as well as a spare for proposed radio for other remote sites.
18. Village is adding new CL-17's to existing system. Controllers are furnished with Ethernet outputs as well as 4-20 mA outputs. Initial installation will utilize 4-20 outputs; with upgrade we will utilize the Ethernet outputs.

Alarms



Addendum Number 1

Supervisory Control and Data Acquisition (SCADA)

Upgrade and Services

Issued April 5, 2024

Addendum Description

- A Questions and Answers document is attached, clarifying questions submitted.
- Sign-in Sheet from Pre-Proposal Meeting on 3/25/24

Action Required

1. Please sign below acknowledging the change.
2. Return this page with your proposal.


Signature

4/10/24
Date

BEN. E. BEARD
Printed Name

PROJECT MANAGER
Title

Q1. Hard copies of drawings were made available at the pre-proposal meeting. There was a request if pdf's of drawings could be provided.

A1. A link to drawings were sent to those in attendance at the pre-proposal meeting. More accurate as-built's of the West Treatment Plant and Well 6 were included.

Q2. Can the Village please confirm the 10-page limit for submissions that include a full scope of services with a timeline and cost breakdown per facility?

A2. The Village will eliminate the restriction of a 10 page submission.

Q3. The RFP states "There will be one submittal (4 copies) for this process." What is meant by 4 copies?

A3. Intended for submitting a hard copy to the Village of North Aurora Village Hall at 25 E State St, North Aurora, IL. One hard copy or emailed submittal will be sufficient. No need to submit 4 copies if submitting a hard copy of the proposal.

Q4. Can the Village please confirm if the Village is requiring hard copies and if email submittals are acceptable.

A4. Hard copies will be accepted, emailed submittals are also acceptable.

