



RFP No. 500610-FY25-08
SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA)
HUMAN MACHINE INTERFACE (HMI) SOFTWARE

ADDENDUM NO. 1

AUGUST 2, 2024

ITEM NO.1: PRE-PROPOSAL MEETING ATTENDEES

- The attendees of the non-mandatory pre-proposal meeting included representatives from the following firms: DataParc, VTScada by Trihedral, QEI Automation Solutions, Logos Automation, Valley Automation, Inc., M.C. Dean, ARM EnerTech Associates, QEI & Normand Lavoie, QEI, E-Merge Systems, LLC, Dorsett Controls, and SOAP Engineering.

ITEM NO. 2: PRE-PROPOSAL MEETING OVERVIEW

A non-mandatory pre-proposal meeting was held on Monday, July 22, 2024 at 2:30PM via Microsoft Teams.

The Town's Buyer provided an overview of the following procurement information:

- All information regarding this project can be found on the Town's Bid Board:
<http://www.leesburgva.gov/bidboard>
- To receive updates, such as addenda, please register to receive updates on the Town's Bid Board
- Question deadline is 5:00 p.m. on Thursday, July 25, 2024.
- Up until contract award, **all** questions must be submitted in writing to: bidquestions@leesburgva.gov
- Unless modified via addendum, proposals are due on Wednesday, August 21, 2024 @ 3:00 p.m. ET
- Proposal Submission:
 - Proposals must be submitted to the Commonwealth's eProcurement website, eVA
 - **No** late proposals will be accepted.
- Proposal Submittal Instructions (Page 6-11)
- Evaluation Criteria
 - Offeror's qualifications and software capabilities – 35%
 - Compliance with HMI Software Conformance Submittal, Exhibit A – 25%
 - Software Training and Technical Support – 20%
 - Price Proposal – 20%
- Proposal Evaluation and Award
 - A committee will evaluate, and rank proposals based upon the evaluation criteria. Discussions/Negotiations/Demonstrations with proposers may be required.
- Town of Leesburg Demographic Survey (optional)
 - In an effort to help the Town evaluate access to public meetings, a demographic survey is available at: <https://portal.laserfiche.com/h4073/forms/DemoSurvey>.
 - The demographic survey is strictly voluntary and anonymous.

ITEM NO. 3: PRE-PROPOSAL MEETING STATEMENT OF NEEDS DISCUSSION

The Town's Utilities Department described the Statement of Needs as described in the RFP.

- The Town of Leesburg is accepting proposals from qualified vendors to provide a Human Machine Interface (HMI) software to modernize the Supervisory Control and Data Acquisition (SCADA) systems at the Town's Department of Utilities operating facilities. The proposed HMI software should enhance these facilities' operation, monitoring, and management, improving operational efficiency and effectiveness.
- Refer to Statement of Needs (Pages 4-6) of the RFP.

ITEM NO. 4: QUESTIONS AND RESPONSES

Interested offerors shall be mindful of the following responses to the questions received:

1. Do we want a control software?

RESPONSE: Yes, the Town desires a comprehensive, open protocol Supervisory Control and Data Acquisition (SCADA) software platform for our water and wastewater facilities. This platform should integrate with existing PLCs and include supervisory control capabilities, an intuitive Human-Machine Interface (HMI), data acquisition and storage, alarming, reporting, and analytics functionalities.

2. Can the offeror of the HMI software also act as the integrator of the HMI software?

RESPONSE: Yes.

3. Are we looking for hardware?

RESPONSE: No, this RFP is for software only. Hardware will be covered in the Integrator RFP or provided by the Town.

4. How many tags does the Town have?

RESPONSE: For pricing purposes, please refer to Item No. 7 and 9 of this Addendum for point counts. Detailed points and descriptions in Microsoft Excel format will not be provided as part of the HMI Software RFP.

5. Pricing – are we looking for unlimited or defined?

RESPONSE: The Town is requesting defined pricing. During contract negotiations, the Town may request unlimited pricing options.

6. How many users?

RESPONSE: WTP - 18 Users WPCF- 30 Users.

7. Does the Town have any existing network or architecture drawings of existing system or do we have any drawings of what the Town is looking for in the new system.

RESPONSE: Such documents are not available at this time.

8. Pricing – Are we looking for additional drivers, offers, etc.?

RESPONSE: Yes, please include any additional modules or drivers needed to fully implement the system in your proposal.

9. What PLC are we using?

RESPONSE: Schneider M340 and M580, and utilizes Modbus TCP.

10. OPC Provider? Can we reutilize for existing software?

RESPONSE: Kepware OPC. Yes, existing Kepware licenses can be reused.

11. Is the Town looking for a cloud based SCADA?

RESPONSE: No, the solution must be able to operate entirely on-premise and offline.

12. In the functionality section of the RFP, Machine Learning and Analytics, what functionality do you expect to solve and do you have any memory space limitations that we should know about?

RESPONSE: We are primarily interested in predictive maintenance, process optimization, and anomaly detection, but we are also looking at water consumption and demand forecasting. Please include hardware and memory recommendations for the proposed system.

13. Is the industrial maintenance of the plant corrective, preventative, or total productive maintenance?

RESPONSE: The Town is primarily focused on Corrective and preventative maintenance.

14. What are the point counts (status, analog, controls) for both the Water Supply Division (WSD) and Water Treatment Plant (WTP)?

RESPONSE: For pricing purposes, please refer to Item No. 7 and 9 of this Addendum for point counts. Detailed points and descriptions in Microsoft Excel format will not be provided as part of the HMI Software RFP.

15. Will the point counts and descriptions be provided in Microsoft Excel format?

RESPONSE: For pricing purposes, please refer to Item No. 7 and 9 of this Addendum for point counts. Detailed points and descriptions in Microsoft Excel format will not be provided as part of the HMI Software RFP.

16. How many HMI displays are required for Water Supply and Water Pollution Control divisions?

RESPONSE: WPCF – 150~screens WTP 40~screens

17. Can sample HMI displays be provided?

RESPONSE: Yes, we will provide sample HMI displays to shortlisted proposals.

18. What protocol is used for the communication to the Schneider Modicon M580 and M340, PLC's?

RESPONSE: Modbus TCP.

19. Are there any other PLC's/Devices besides the Schneider Modicon M580 and M340? If so, what protocol is used?

RESPONSE: No other PLCs are used.

20. Yubikey is Leesburg's current Multifactor Authentication (MFA) in use. Is support for the MFA required or are alternate systems acceptable?

RESPONSE: Support for MFA is required, but alternative systems may be considered.

21. Exhibit A of RFP – Alarm Management. What is the interface to integrate to the existing Win-911 Alarm Systems?

RESPONSE: The most common method of integrating with Win-911 is through the SCADA OPC DA Server.

22. Exhibit A of RFP – User Management. What is the interface to integrate to existing Microsoft Azure AD and other Single Sign On (SSO) systems?

RESPONSE: The Town is capable of utilizing a number of methods supported by Azure AD/Entra, including but not limited to SAML, OAuth 2.0,

23. Exhibit A of RFP – Data Management. Do the current SCADA systems utilize or plan to utilize standard open protocols including OPC Unified Architecture (OPC UA), Ethernet/IP, PROFINET, BACnet, DNP3 and MQTT?

RESPONSE: Yes, The Town plans to utilize standard open protocols.

24. What is the anticipated award date for the HMI software contract?

RESPONSE: November 2024

25. What is the anticipated RFQ date for the integration?

RESPONSE: October 2024

26. What is the anticipated award date for the integration contract?

RESPONSE: March 2025

27. What is the anticipated date for total project completion?

RESPONSE: November 2025

28. What are the primary operational challenges you hope to address with the new HMI software?

RESPONSE: The Town looks to improve operations through the unification of multiple disparate SCADA systems into a standardized HMI platform that provides a more user-friendly development and configuration environment, robust data historian and trending capabilities, and remote access/notification features to enhance overall operational visibility, efficiency, and responsiveness.

29. Are there specific features or functionalities that are critical for your operations that need to be emphasized in our proposal?

RESPONSE: The items found in Section C. Functionalities of the Statement of Needs of the RFP are the primary items to be emphasized: real-time processes Control and visualization, Alarm visualization and Management, and Historical Trending and Reporting. (Refer to Section C. mentioned above.)

30. What level and type of training do your staff require to effectively use the new HMI software? Does the training need to be hands-on, on-site, or remote?
- RESPONSE:** Multiple levels of training for staff is desired, from operations staff to technical staff administering and developing the system.
31. Is the documentation developed during the project subject to the Town’s approval? How would this process work?
- RESPONSE:** Services, including documentation, performed under this contract will require Town’s approval at various stages. Approval processes will be specified with the successful offeror.
32. What are your expectations regarding technical support and after-hours service availability? Is there a requested response time?
- RESPONSE:** As it relates to software support, the Town is interested in technical support options that include business hour support plans and 24/7 plans. Application Support will be covered in the Integrator RFP.
33. Is it possible to apply first as a contractor and then as an integrator?
- RESPONSE:** Refer to the Response to Question No. 2 above.
34. How often is data integrated?
- RESPONSE:** Data is continuously integrated from PLCs and sensors throughout the system.
35. How many screens do both current SCADA systems have?
- RESPONSE:** Water Treatment Plant – Around 50. Wastewater has around 150 screens.
36. Current OPC license can be reused by the contractor?
- RESPONSE:** Yes, though licenses may need to be upgraded when consolidating systems.
37. How many change rate do each SCADA systems have?
- RESPONSE:** The Town understands this question to mean, what is the frequency or “rate” at which data points are updated. Our change rate is every second.
38. Which SCADA software’s are running in each facility? (WSD, WPCD)
- RESPONSE:** WSD: ObjectAutomation. WPCD: ObjectAutomation, Wonderware InTouch 2017, Aveva InTouch 2020
39. Please provide a list of features and their importance for Section VI.A.1 – Evaluation Criteria – Offerors Qualifications and Software capabilities to determine if a vendor and product meets the specifications.
- RESPONSE:** The Town will not be providing a list of features in an order of importance. Offerors are encouraged to propose the software package that best meets the functionalities described in Section C. Functionalities and in Exhibit A.

40. Is each software feature in Exhibit A equally weighted? Is the VI.A.2 (Compliance with HMI software conformance submittal) score a summation of these features?

RESPONSE: Yes, each software feature in Exhibit A is equally weighted.

41. During the pre-proposal meeting, it was identified some features are optional. Which software features listed in Exhibit A are optional and required?

RESPONSE: All items in Exhibit A are required and equally weighted. Answers provided in the pre-proposal meeting are non-binding.

42. Please provide a list of features and their importance for Section VI.A.3 Software Training and Technical Support to determine if a vendor meets the specification.

RESPONSE: It is at the offeror's discretion to present their best product and options as it relates to Software Training and Technical Support.

43. Please confirm the Town's existing system integrator will be invited to the software demonstrations for technical feedback to the Town.

RESPONSE: The Town will determine at its sole discretion who will be included in software demonstrations. The Town may or may not invite the Town's existing system integrator to software demonstrations as a technical advisor.

44. Please confirm the Town of Leesburg will include the estimated migration costs (not included in this RFP, but will be required in a future RFP) as an evaluated criteria in the selection process of this RFP.

RESPONSE: These types of costs will be addressed in a future RFP for system integration. The Statement of Needs (Scope of Work) of this contract does not include data migration costs.

45. Please confirm the Town of Leesburg will account for local and certified system integrator support of the software within a 50 mile radius when evaluating the software solution under Qualifications (VI.A.1) and Technical Support (VI.A.3).

RESPONSE: This solicitation does not include a vendor location requirement.

46. Please confirm the selected SCADA platform will require a native software driver to the existing control system hardware of Schneider Electric controllers.

RESPONSE: Offeror's SCADA platform should support open protocol drivers, such as Modbus TCP/IP, EtherNet/IP, and OPC UA, to ensure compatibility with the existing Schneider Electric Modicon M580 and M340 PLCs.

47. Will the Town forward technical questions to the system integrator for validating the correct licenses to be purchased?

RESPONSE: Offerors are to submit proposals based on the information contained within this RFP. The Town will be conducting a future solicitation for system integration of the software selected under this RFP.

48. Are the WTP and WPCF facilities communicating with each other?

RESPONSE: In accordance with the Town's security policy, we will not provide a public response on this matter. Any requirement in this regard will be negotiated with the successful offeror.

49. How many tags will be historized in each facility?

RESPONSE: Each facility will historize all data points, including discrete, analog, calculated, alarm, setpoint, counter, and totalizer tags.

50. Is this 2 independent systems or 1 system with historians at each location?

RESPONSE: The SCADA infrastructure will consist of two independent systems, each with dual historians. In each system, the primary historian will reside on the operational technology network for real-time data collection, while a replicated historian on the business network will support business intelligence and reporting.

51. Can you share with us the network diagram?

RESPONSE: Please refer to the Response to Question # 7 above.

ITEM NO. 5: INSURANCE REQUIREMENTS

Section VII.B.31 is hereby revised to delete the Insurance Requirements in its entirety and replaced with the following:

~~31. Insurance Requirements: Offeror shall secure at its own expense general liability insurance in an amount not less than \$2,000,000 solely contained in a Commercial General Liability Policy or in combination with an Umbrella or Excess Policy. Included shall be coverage for Bodily Injury and Property Damage resulting from the operations, products, and completed operations of the contractor.~~

~~Offeror shall also carry automobile insurance in an amount not less than \$2,000,000 solely contained in a Commercial Auto Policy or in combination with an Umbrella or Excess Policy. Offeror shall also carry Workers Compensation insurance, which meets the statutory requirements of the Commonwealth of Virginia. In addition, offeror shall also carry other insurance coverage deemed by the Town to be appropriate to his agreement.~~

~~The above mentioned coverage shall be placed with an insurance carrier licensed to do business in the Commonwealth of Virginia. The carrier must have an AM Best Rating of A or better. A Certificate of Insurance identifying coverage and naming the Town of Leesburg as additional insured shall be furnished to the Town. Liability coverage shall contain wording prohibiting cancellation of coverage, failure to renew, or reduction in limit without the insurer first giving 30 days prior written notice of such action to the Town.~~

Offeror shall secure at its own expense general liability insurance in an amount not less than \$2,000,000 solely contained in a Commercial General Liability Policy or in combination with an Umbrella or Excess Policy. Included shall be coverage for Bodily Injury and Property Damage resulting from the operations, products, and completed operations of the contractor.

Offeror shall also carry automobile insurance in an amount not less than \$2,000,000 solely contained in a Commercial Auto Policy or in combination with an Umbrella or Excess Policy. Offeror shall also carry Workers Compensation insurance, which meets the statutory requirements 18 of the Commonwealth of Virginia. In addition, offeror shall also carry other insurance coverage deemed by the Town to be appropriate to his agreement.

Offeror shall also protect the Town for claims resulting from alleged cyber events. The limits of the liability shall not be less than \$2,000,000 solely contained in a Commercial Policy or in combination with an Umbrella or Excess Policy.

The above-mentioned coverages shall be placed with an insurance carrier licensed to do business in the Commonwealth of Virginia. The carrier must have an AM Best Rating of A or better. A Certificate of Insurance identifying coverage and

naming the Town of Leesburg as additional insured shall be furnished to the Town. Liability coverage shall contain wording prohibiting cancellation of coverage, failure to renew, or reduction in limit without the insurer first giving 30 days' prior written notice of such action to the Town.

ITEM NO. 6: SAMPLE CONTRACT

Section 31 of the Sample Contract is hereby revised to delete the Insurance Requirements in its entirety and replaced with the following:

31. Insurance.

~~Contractor shall secure at its own expense general liability insurance in an amount not less than \$2,000,000 solely contained in a Commercial General Liability Policy or in combination with an Umbrella or Excess Policy. Included shall be coverage for Bodily Injury and Property Damage resulting from the operations, products, and completed operations of the contractor.~~

~~Contractor shall also carry automobile insurance in an amount not less than \$2,000,000 solely contained in a Commercial Auto Policy or in combination with an Umbrella or Excess Policy. Contractor shall also carry Workers Compensation insurance, which meets the statutory requirements of the Commonwealth of Virginia. In addition, Contractor shall also carry other insurance coverage deemed by the Town to be appropriate to this agreement.~~

~~The above-mentioned coverage shall be placed with an insurance carrier licensed to do business in the Commonwealth of Virginia. The carrier must have an AM Best Rating of A or better. A Certificate of Insurance identifying coverage shall be furnished to the Town. The Town of Leesburg shall be named as an additional insured on commercial general liability, umbrella/excess coverage, and automobile coverage. Liability coverage shall contain wording prohibiting cancellation of coverage, failure to renew, or reduction in limit without the insurer first giving 30 days' prior written notice of such action to the Town.~~

Contractor shall secure at its own expense general liability insurance in an amount not less than \$2,000,000 solely contained in a Commercial General Liability Policy or in combination with an Umbrella or Excess Policy. Included shall be coverage for Bodily Injury and Property Damage resulting from the operations, products, and completed operations of the contractor.

Contractor shall also carry automobile insurance in an amount not less than \$2,000,000 solely contained in a Commercial Auto Policy or in combination with an Umbrella or Excess Policy. Contractor shall also carry Workers Compensation insurance, which meets the statutory requirements of the Commonwealth of Virginia. In addition, Contractor shall also carry other insurance coverage deemed by the Town to be appropriate to his agreement.

Contractor shall also protect the Town for claims resulting from alleged cyber events. The limits of the liability shall not be less than \$2,000,000 solely contained in a Commercial Policy or in combination with an Umbrella or Excess Policy.

The above-mentioned coverages shall be placed with an insurance carrier licensed to do business in the Commonwealth of Virginia. The carrier must have an AM Best Rating of A or better. A Certificate of Insurance identifying coverage and naming the Town of Leesburg as additional insured shall be furnished to the Town. Liability coverage shall contain wording prohibiting cancellation of coverage, failure to renew, or reduction in limit without the insurer first giving 30 days' prior written notice of such action to the Town.

ITEM NO. 7: STATEMENT OF NEEDS

Section III.A of the Statement of Needs is hereby revised. Refer to the following revisions.

A. General Requirements:

1. ~~The Software must be IEC 62443-4-1 certified, ensuring it meets the international standards for secure development life cycle requirements.~~
2. ~~The HMI Software Conformance Submittal is attached as Exhibit A.~~
- ~~1.3.~~ 3. The HMI application must be a complete, ready-made software package.
- ~~2.4.~~ 4. The application must be developed and supported within North America.
- ~~3.5.~~ 5. The software must be scalable to accommodate an increased number of clients, tags, and workstations.
- ~~4.6.~~ 6. The Contractor must coordinate with and provide support to the Integrator.

Section III.B of the Statement of Needs is hereby revised. Refer to the following revisions.

B. Licensing:

1. Contract must provide unlimited tags, clients, and connections with a single license, or offers a licensing model that aligns with the Town's needs for the two treatment facilities as follows:

a. Water Treatment Facility

- i. ~~5x HMI Application Workstations (Runtime)~~
 1. ~~(2 duty/standby servers~~
 - ~~2. 3 stand-alone workstations)~~
- ii. 10 x HMI Application Clients
- iii. ~~2 x Application Historian and database (local and remote networks)~~
- iv. ~~2 x Development Workstation~~
- v. ~~20,000 Tags~~
- ~~iii.~~ vi. ~~Communication and Tag Drivers~~
- ~~iv.~~ vii. ~~1 x Development Workstation (HMI Design Environment)~~
- ~~v.~~ viii. ~~Communication and Tag Drivers~~

b. Water Pollution Control Facility

- i. 5x HMI Application Workstations (Runtime)
 - 1. (2 duty/standby servers
 - 2. 3 stand-alone workstations)
- ii. 10 x HMI Application Clients
- iii. 2 x Application Historian (local and remote networks)
- iv. 2 x Development Workstation (HMI) Design Environment)
- v. 20,000 Tags
- vi. Communication and Tag Drivers
- ~~iv. 1 x Development Workstation (HMI Design Environment)~~
- ~~v. Communication and Tag Drivers~~
- c. Include all licensing required for both physical and virtual machines.
- ~~d. The application software license must have an unlimited tag structure.~~

ITEM NO. 8: Exhibit A

Exhibit A contained within the RFP is hereby deleted in its entirety and replaced with the attached Exhibit A.

Exhibit A - HMI Software Conformance Submittal

Functionality	Requirement	Meets Requirement (Yes/No)	Explanation if Does Not Meet Requirement
General Requirements	1.1 The proposed application and supporting software must be a comprehensive, ready-made software package capable of connecting to PLCs, networks, and databases, facilitating report creation, and tracking data over time without additional programming. The SCADA software should include robust control capabilities, allowing for real-time monitoring and control of various processes. The system must support seamless integration with existing hardware and software infrastructures, ensuring efficient data collection, visualization, and analysis. The solution should also provide user-friendly interfaces, customizable dashboards, and advanced alarm management features.		
	1.2 The application and software must be developed and supported within the Northern American borders.		
	1.3 The software must be scalable for increased number of clients, tags and workstations.		
	1.4 Contractor must have staffing and training team to coordinate and support with an Integrator.		
	1.5 The Developer shall be IEC 62443-4-1 certified.		
Licensing	2.1 Application must provide unlimited tags, clients, and connections with a single license, or offers a licensing model that aligns with the Town's needs as outlined.		
	2.2 Software includes licensing for physical and virtual machines.		
	2.3 The application software license must have an unlimited tag structure.		
Process Visualization	3.1 The HMI interface must provide dynamic and real-time visualization of all operational data. This includes live updates of process conditions, status indicators, and alerts that reflect changes instantaneously.		
	3.2 The application must have tools that allow users to interact with the data, such as zooming, panning, and clicking through to detailed views or historical data.		
	3.3 The application must include various representation tools such as charts, graphs, and diagrams.		
	3.4 The application must have the ability to create condensed operational dashboard that contain overview/pertinent system information. The application must have the ability to navigate from this operational dashboard down to more granular system representation.		
	3.5 The application must have the functionality to add live 'sticky' notes to the HMI screens/ faceplates to enable users to pass important information onto other system users. The application should be able to log these notes as an audit trail even after removal from the graphic.		
	3.6 The application must have the ability to personalize the interface according to specific operational needs and user preferences. This includes modifying layouts, colors, and control elements to fit different roles and responsibilities within the team.		
	3.7 The application must have the ability to configure the screen and display layout/pined screens to the specific user that is logged in.		
	3.8 The application must have the ability to link datasheets, user manuals and maintenance information in to the graphic screen in a .pdf or .doc file.		
	4.1 The contractor must demonstrate the system capabilities for handling alarms, including remote notifications via Phone, email, and SMS, and detailed alarm logging for review and analysis.		

Exhibit A - HMI Software Conformance Submittal

Alarm Management	4.2	The software should provide configurable alerts and notifications for potential issues detected, enabling proactive maintenance and immediate corrective actions to prevent downtime.		
	4.3	The software must have the ability to integrate with existing Win-911 Alarm systems.		
User Management	5.1	The software must have the following user management features: Multi-user support with customizable roles and permissions; Secure and differentiated access controls; Audit trails for user actions;		
	5.2	The software must have the ability to integrate with Azure AD and other Single Sign on(SSO) systems.		
	5.3	The software must support Multifactor Authentication, including the use of a YubiKey or other device designated by the Town. The Town currently utilizes YubiKeys for authentication.		
	5.4	The application must support user management including multi role definition and user audit tracking.		
Programming and Configuration	6.1	The software must provide the following features to enable a user-friendly configuration environment: Standardized Graphics/block database; User definable faceplate library; GUI libraries; Arranged as a Low/no code development process; Clear methodology to graphic addition, subtraction and replication		
	6.2	The software must have built in flexibility to support scalable adjustments and system updates		
	6.3	The software must support error report logging to enable users to provide feedback during a system errors along with providing maintenance staff additional information on the observed error		
	6.4	The software must have the following functionality: A testbed environment to test or verify modifications before deployment to the runtime application; Inbuilt version control allowing for notation of version changes and rollback to previous deployed versions; Online modification in real-time without interrupting ongoing processes; The ability to push changes from a centralized location to all workstations and clients.		
Reliability	7.1	The software should be architected with a focus on high availability, reducing downtime to a minimum and guaranteeing uninterrupted operation essential for industrial settings. Information about the software should include details on the mean time between failure, any stress testing performed, and the strategies employed to mitigate system downtime.		
	7.2	The system must support standalone, networked, and distributed architectures with client/server functionality.		
	7.3	The software must allow for redundant systems and failover mechanisms that automatically switch to a backup system without disrupting the service if the primary system fails.		
	7.4	The software must have the ability to Operate in an Air-Gapped Network.		
	7.5	The software should include Real-time monitoring tools that have the ability to continuously assess the health and performance of the SCADA system and alert users to an issue / provide predictive maintenance suggestions.		
	8.1	The application should have database system that starts automatically, uses memory efficiently, ensures data accuracy and security, and integrates floating-point arithmetic for precise calculations.		
	8.2	The software must maintain high performance and data integrity during multitasking, seamlessly integrating with the operating system without requiring workarounds. Provide information on the following points: Error Detection and correction; Backup and System recovery; Audit logs; Data Encryption		

Exhibit A - HMI Software Conformance Submittal

Data Management	8.3	The software should support industry-standard open protocols including OPC Unified Architecture (OPC UA), Ethernet/IP, PROFINET, BACnet, DNP3, and MQTT.		
	8.4	The software must be compatible with existing onsite PLC hardware, Schneider Modicon PLCs. The contractor must provide detail of how integration with the Modicon platform is provided and managed.		
	8.5	The software must provide tools for easy tag configuration and management within an active system, including direct management in a graphics editor and via a spreadsheet-style program.		
	8.6	The software must have the capability to handle tag imports and exports with external files like ASCII or MS Excel, independent of graphics creation.		
	8.7	The application historian data must be exportable in a format that can be imported by the Town's enterprise asset management system, CentralSquare Enterprise Asset Management System (EAM formally Lucity), and other Esri Business Partner Systems.		
	8.8	The software will include the ability to encrypt data transmission and storage for backup and archiving, data back-up frequency must be adjustable with selections of hourly, daily, weekly, monthly and user defined period.		
	9.1	The software must include a built-in historian that efficiently collects, stores, and manages large volumes of historical data generated from industrial processes.		
	9.2	The historian should provide time-stamped data storage, ensuring that all data entries are marked with the exact time of recording to facilitate precise tracking and analysis. Frequency of data archiving should be fully configurable by the user.		
Historical Data and Reporting	9.3	The system must support high-speed data capture and be able to handle data inputs from multiple sources simultaneously without loss of fidelity or performance degradation.		
	9.4	The software should offer robust tools for querying and retrieving historical data based on various criteria such as date range, event, machine, or other custom tags. (Query Builder)		
	9.5	The software should allow for the visualization of data through graphs, charts, and dashboards that can be customized to meet specific user needs and preferences. Graphing should have the ability to create a 'live graph' from a blank template with different pen options (user defined process conditions) selected from a dropdown menu.		
	9.6	Ensuring data integrity, the application must have mechanisms in place to protect historical data against corruption, unauthorized access, or accidental loss.		
	9.7	The software should include data redundancy solutions, such as mirroring or replication, to ensure data is not lost and can be recovered in the event of a system failure.		
	9.8	Security protocols must be outlined, including encryption of stored data and secure access controls to protect sensitive information.		
	9.9	The historian must be scalable to accommodate future growth in data volume without a significant drop in system performance.		
	9.10	The historian should be compatible with existing systems and able to integrate seamlessly with other software tools used within the facility, such as NJBSoft SAMS or CentralSquare Enterprise Asset Management systems(EAM formally Lucity), or other enterprise systems.		
	9.11	Ability to replicate the Historian for reporting purposes on a business network through a data diode.		

Exhibit A - HMI Software Conformance Submittal

	9.12	The HMI historian must be able to automatically export data for monthly/annual reporting requirements. The successful bidder must demonstrate that software can extract data to other applications in a usable format.		
Machine Learning and Analytics	10.1	Applicaion must have built-in machine learning and analytical features for predictive maintenance, anomaly detection, trend analysis, and automated reporting and data visualization.		

ITEM NO. 9: PRICING FORM

The Pricing Form contained within the RFP is hereby deleted in its entirety and replaced with the attached Pricing Form.

PRICING FORM

RFP NO. 100161-FY23-47

SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) HUMAN MACHINE INTERFACE (HMI) SOFTWARE

LOT A – Years 1 and 2					
Item	Description of Product/Service	Estimated Quantity	Unit of Measure	Unit Price	Extended Price
1	Software License	N/A	Lump Sum	N/A	\$
1a	- Runtime	10	Each	\$	N/A – Included Above
1b	- Development	4	Each	\$	N/A – Included Above
1c	- Clients	20	Lump Sum	\$	N/A – Included Above
1d	- Tags	40,000	Lot	\$	N/A – Included Above
1e	- Historians	4	Each	\$	N/A – Included Above
2	Maintenance, Software Upgrades, and Technical Support	N/A	Lump Sum	N/A	\$
3	Training	40	Hourly Rate	\$	\$
4	Integration Support	120	Hourly Rate	\$	\$
Subtotal Years 1 and 2 (Line Items 1-4)					\$

LOT B – Year 3					
5	Maintenance, Software Upgrades, and Technical Support	N/A	Lump Sum	N/A	\$
6	Training	40	Hourly Rate	\$	\$
Subtotal Year 3 (Line Items 5-6)					\$

LOT C – Year 4					
Year 4					
7	Maintenance, Software Upgrades, and Technical Support	N/A	Lump Sum	N/A	\$
8	Training	40	Hourly Rate	\$	\$
Subtotal Year 4 (Line Items 7-8)					\$

LOT D - Year 5					
9	Maintenance, Software Upgrades, and Technical Support	N/A	Lump Sum	N/A	\$
10	Training	40	Hourly Rate	\$	\$
Subtotal Year 5 (Line Items 9-10)					\$

TOTAL PROPOSED PRICE (YEARS 1-5)	\$
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<p>Instructions to Offerors:</p> <p>Proposals must be sealed. Complete all items or your proposal may not be considered. Subject to terms and conditions contained in the Request for Proposal.</p> <p>Proposed prices shall include all labor, supervision, tools, equipment, transportation (including fuel, tolls, etc.), permit and licenses, and management to perform the services as stated herein.</p> <p>Signature: _____ Name & Title: _____ Date: _____</p>

Offerors must take due notice and be governed accordingly. This addendum must be acknowledged as indicated in the Request for Proposal or your proposal may not be considered.

*For the Town of Leesburg,
 Kelly Neff, CPPB, VCO
 Buyer
 Town of Leesburg, Virginia
 Email: kneff@leesburgva.gov
 Bid Board: <http://www.leesburgva.gov/bidboard>*