

SECTION 01 81 33
CYBER SECURITY REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. The supplier and all other parties providing parts and services under this Contract are subject to these conditions. This includes hardware and software, licensing, intellectual equipment, patent restrictions and use, copyright, and similar equipment, systems, and appurtenances covered under this section.
2. Requirements for vendors, suppliers and / or Contractor-furnished equipment with microprocessor-based equipment including:
 - a. Providing full and unrestricted use by the Government for equipment supplied under this Contract including access, review, updates, and modification of software code, firmware and configurations of PLCs, PACs, RTUs, HMIs, OITs or any other microprocessor-based equipment.
 - b. Allowing the Government to transfer to designated agents the right to perform this work on their behalf.
 - c. Furnishing software source code for the system supplied. Coordinate with the Contracting Officer to remove default usernames and passwords, to remove contractor passwords at time of system acceptance, and turn-over of all passwords utilized in the system.
3. Requirements for vendors, suppliers and / or Contractor-furnished items for furnishing program code, passwords, keys, and configuration files upon Project milestones and / or as requested by the Contracting Officer after Project completion.

B. Scope:

1. The supplier agrees to assist in cybersecurity basic hygiene practices as dictated by best practices included in this section, government regulation at time of bid, and as provided by the Government's cyber security team. At a minimum, the supplier will coordinate with the Contracting Officer and assign IP addresses and subnet masking, utilized of managed switches with unused ports disabled, provide all equipment with latest firmware at time of field installation.

2. To this end the following are expected standard industry practices that vendors shall abide by:
 - a. All equipment supplied will be current and not be obsolete or subject to a manufacturer's end-of-life notice of less than 2 years after startup.
 - b. Provide any notices of manufacturer's end-of-life notices for all equipment at the time of submittal for approval of equipment. This shall include searching equipment websites during the submittal process to ensure the products are not nearing end of life.
3. The Government shall be granted full use of equipment and services provided by equipment and its associated automation under this section and shall include:
 - a. Full access and use of supplied software within any equipment supplied including PLCs, OIT, networking and communications equipment, gateways, and HMI code (including fully documented source code), internal function blocks or code shall be ceded to the Government for their exclusive use at the location(s) of the equipment. These rights shall transfer to future locations.
 - b. Right to modify, enhance or make changes to the equipment as deemed necessary or desired by the Government, including hardware, software, networking settings, passwords or other information or settings that the Government may change for maintenance, upgrade or cybersecurity reasons.
 - c. Full release of claims to Intellectual Equipment, Trade Secrets, or Sensitive Information as supplied with this equipment as may be claimed by the supplier or any of their subcontractors, subconsultants and the like as regards equipment or services provided herein to the Government.
 - d. No provisions for Non-Disclosure Agreements (NDAs) or other restrictions to restrict or prevent the Government from obtaining or using information, licenses, electronic data, software are allowable.
4. The supplier shall furnish software source code for the equipment supplied. The code or any part of the system may not be hidden or protected by encryption, passwords or other means without providing these passwords or access to the Government's designated personnel.
5. The supplier shall take measures to limit the distribution of information on Government's SCADA network to the minimum personnel required. The supplier shall not publish to public facing media this information at any time.

1.02 SUBMITTALS

A. Submit the following:

1. Comprehensive asset inventory of all networked components:
 - a. Provide in Excel spreadsheet format.
 - b. Coordinate with the Contracting Officer to determine the preferred method of delivery to assure security of information contained in asset inventory.
 - c. Include:
 - 1) Device ID.
 - 2) Manufacturer.
 - 3) Model Number.
 - 4) Serial Number.
 - 5) IP Address.
 - 6) Device Use description.
 - 7) Firmware.
2. Network Diagrams:
 - a. Provide in both AUTO CAD and PDF formats.
 - b. Coordinate with the Government to determine the preferred method of delivery to assure security of information contained in Network Diagrams.
 - c. Logical Network Diagram(s):
 - 1) Depict information flow through network(s), and include:
 - a) Major network devices, subnets, and VLANs.
 - b) Include all wireless communication devices.
 - c) Include the following information for each networked device:
 - (1) Device ID.
 - (2) Device description.
 - (3) Manufacturer/model number.
 - (4) IP address.
 - (5) Ports and Protocols
 - d. Physical Network Diagram(s):
 - 1) Show all network components, ports, protocols, connections and cables.
 - a) Include all wireless communication devices.
3. Software source code for all PLCs, HMIs, OITs and other devices.
4. Configuration files, passwords, encryption information and other sensitive information for the full Project scope.

B. Timing: Submittals will be required at the following Project stages:

1. Network Diagrams and Asset Inventory – with control panel submittals.
2. Draft Software and Configuration Files, and As-Manufactured Network Diagrams – Available At Factory Acceptance Testing.

3. All documents available onsite upon equipment delivery to the Project Site.
4. All documents contained within Operation & Maintenance manuals.
5. Final As-built of all documents and electronic files at Project closeout.

1.03 COPIES OF PROGRAM CODE AND CONFIGURATION FILES

A. Copies of Program Code and Configuration Files – General:

1. Submit as Electronic Documents only. Paper Submittals are not required for program code and configuration files.
2. Files to be securely transferred with limited distribution as requested by the Contracting Officer to protect sensitive information. Provide proof of file transfer for submittal record purposes.
3. In accordance with the Contract Documents, following Substantial Completion, the Government shall have rights to: (a) modify program code and configuration files, (b) update software and firmware, (c) revise system security settings, such as passwords, IP addresses, and other security settings, and (d) implement related modifications, without restriction or interference from Contractor, Subcontractor, Supplier, and others.
4. The Government agrees to use program code and configuration files only with Government's facilities and may be transferred to the Government's assignees.
5. The Government will not be subject to any Supplier-requested non-disclosure agreement that is not part of the Contract Documents.
6. The CMR agrees to not distribute program code and configuration files obtained under the Project, except in exchanging such files with the Government. The CMR will not be party to any Supplier-requested non-disclosure agreement.

B. Configuration Files:

1. Submit copies of system configuration prepared for the Project, such as setpoints for programmable controllers, facility SCADA display configurations, and similar configuration files.
2. Files to be securely transferred with limited distribution as requested by the Government or supplier to protect sensitive information. Provide proof of file transfer for submittal record purposes.
3. Submit as separate files configuration files for each separate control and monitoring device for which configuration files are furnished. Clearly distinguish the device(s) associated with each file.
4. Contractor (including Subcontractors and Suppliers) is not responsible for configurations and control setpoints subsequently changed by the Government, facility manager, or others for whom either is responsible,

not in accordance with Supplier's written recommendations and operation and maintenance instructions.

C. Program Code:

1. Submit copies of program code for programmable logic controllers (PLC), human-machine interfaces (HMI), operator interface terminals (OIT), and other programmable controllers, subject to the following:
 - a. Submit for all PLCs, HMI, OITs, and other programmable controllers furnished as part of the Work, and where the Government's existing devices were modified as part of the Work, regardless of whether such program code is manufacturer's standard, or developed specifically for the Project, or a combination of manufacturer's standard program code and Project-specific program code. Contractor and associated Subcontractors and Suppliers are not responsible for program code modifications made by the Government that result in improper operation of materials, equipment, or systems or that invalidate applicable warranties and manufacturer's recommended operating instructions.
 - b. Third-party, licensed, commercially available software (such as, but not limited to, Microsoft operating system software sold at retail, and commercial SCADA system software platforms, PLC programming software) is excluded from requirements of this article. Furnish copies of commercially-available, licensed, third-party software, where required, in accordance with the Contract Documents.
2. Submit complete logic listings in all formats (ladder logic, function block diagram, sequential function chart, instruction list, structured text).
3. Format Requirements:
 - a. For ladder diagram logic, include complete cross-referencing of all logic elements. Annotate all elements with clearly understandable tags or descriptive labels.
 - b. For function block diagram, label each function block with understandable tags or descriptive labels. Describe purpose and action of each function block.
 - c. For sequential function chart, include extensive comments for each step to describe program step function.
 - d. For instruction list and structured text, include extensive comments for each program line to describe program line function.
4. Submit complete programmable logic controller listing of all input/output address assignments, tag assignments, and pre-set constant values, with functional point descriptions.
5. Submit complete manufacturer's program code manuals.

1.04 REMOTE ACCESS

- A. Suppliers will not be allowed open access to the furnished equipment after installation on the Site due to Cyber Security requirements.
- B. Remote access appliances for interaction with programmable devices will not be accepted during construction or operation.

PART 2 EQUIPMENT (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION