SECTION 251204

INTEGRATED NETWORK GATEWAYS FOR
enterprise energy management systemS (Eems)

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***NOTE TO SPECIFIER***

*Use this Specification Section for Mail Processing Facilities.*

***This is a Type 2 Specification with primarily editable text; therefore, most of the text can be edited, but there is some required text which is noted within the Section with a “Note to Specifier.” Do not revise these paragraphs without an approved Deviation from USPS Headquarters, Facilities Program Management, through the USPS Project Manager.***

*For Design/Build projects, do not delete the Notes to Specifier in this Section so that they may be available to Design/Build entity when preparing the Construction Documents.*

*For the Design/Build entity, this specification is intended as a guide for the Architect/Engineer preparing the Construction Documents.*

*The MPF specifications may also be used for Design/Bid/Build projects. In either case, it is the responsibility of the design professional to edit the Specifications Sections as appropriate for the project.*

*Text shown in brackets must be modified as needed for project specific requirements.* *See the “Using the USPS Guide Specifications” document in Folder C for more information.*

*The last date that USPS revised this standard specification section occurs in two places, at the end of this section and in the Table of Contents. If the date in this section matches the date in the Table of Contents, then you are using the latest version. Do not delete or revise the “last revised” date at the end of the section during the development of the Project Manual.*

*The footer in this section should be edited to replace the text, “USPS MPF SPECIFICATION” with the project name, and the blank date in the center should be replaced with the submission date, for interim design reviews, or the issue date of the completed Project Manual.*

*This specification is only to be used for projects where the building meets all of the following criteria:*

* *Building is greater than 50k gross square feet*
* *Building HVAC system uses Boilers, Chillers, VAVs, AHUs, etc.*
* *Building is controlled by a Building Automation System (BAS).*

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1. GENERAL
	1. SUMMARY
		1. DESCRIPTION OF WORK
			1. Provide all interface devices and software to provide an integrated system connected to the Enterprise Energy Management System (EEMS) via the USPS IT network.
			2. Fully configure systems and furnish and install all software, programming for a complete and fully functioning system as specified.
		2. SECTION INCLUDES:
			1. Network Integration Gateway.
			2. Network Integration Gateway programming.
		3. RELATED DOCUMENTS:
			1. Section 270500 - Common Work Results for Communications
			2. Section 230500 - Common Work Results for HVAC
			3. Section 250504 - Building Automation System (BAS) General
	2. ADMINISTRATIVE REQUIREMENTS
		1. Pre-installation Meeting: Coordinate a meeting with the relevant subcontractors, including the qualified systems integrator, the USPS Project Manager, USPS Design Team, and the USPS Energy Management Team. Agenda:
			1. Review the system configuration and the data collection requirements.
			2. Review the USPS Enterprise Energy Management System (EEMS) Integration Workbook.
			3. Review requirements to obtain USPS IP, Gateway, and Sub-net Mask addresses and network access approvals (NCRB). All addresses assigned shall use the hardware code “EM”.
			4. Review the current points list for all designated systems which are to be integrated into EEMS.
	3. SUBMITTALS
		1. Refer to Section 013300 for procedural requirements related to the submittal process.
		2. Product data: Manufacturer’s detailed product information regarding the characteristics of the Network Integration Gateway.
		3. Qualification Statements: Provide a detailed statement for each qualified systems integrator.
		4. Draft USPS Enterprise Energy Management Systems (EEMS) Integration Workbook: After the Pre-installation Meeting, submit a draft EEMS Integration Workbook.
		5. Draft Point Summary Table: After the Pre-installation Meeting, submit a draft Point Summary Table indicating all trend and schedule objects.
	4. CLOSEOUT SUBMITTALS
		1. Software:
			1. Licensing for all software needed to configure or operate the system.
			2. Two sets of CDs all software needed to configure or operate the system.
		2. Final USPS Enterprise Energy Management Systems (EEMS) Integration Workbook: Indicate any changes from the draft submission.
		3. Final Point Summary Table: Indicate any changes from the draft submission.
		4. List of Contacts: Coordinate with USPS to generate a list of contacts to be responsible for acknowledgment of EEMS notifications.
	5. QUALITY ASSURANCE
		1. Qualifications: Installation and integration shall be performed by a qualified systems integrator.
2. PRODUCTS

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***NOTE TO SPECIFIER***

***Do not revise the Articles 2.1 and 2.2 without an approved Deviation from USPS Headquarters, Facilities Program Management, through the USPS Project Manager.***

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* 1. MATERIALS
		1. Network Integration Gateway: Tridium Vykon JACE Solution (latest version)
			1. VYKON
			3951 Westerre Parkway, Suite 350
			Richmond, VA 23233
			Customer Support: 877-305-1745
			2. Substitutions: Not permitted.
		2. Power Supply: As required by the manufacturer.
		3. Battery: On-board battery sufficient to prevent memory loss due power failure for a minimum of 14 days.
		4. Lockable Enclosure: Wall-mounted, transparent acrylic, with keyed lock.
		5. Wiring and Devices: All wiring, conduit, and appurtenances necessary to connect the Gateway to electrical power, BAS computers, lighting control system computers, and the nearest LAN access point.
	2. SOFTWARE
		1. Performance Criteria: The software shall execute information translation between the building automation devices and EEMS.
		2. Software communication between the Gateway and the USPS EEMS server shall use one of the following protocols:
			1. FOX
			2. OBIX
			3. MODBUS
		3. Software communication between the Gateway and USPS building automation devices shall use one of the following protocols:
			1. BACnet
			2. MODBUS
			3. FOX
1. EXECUTION
	1. FIELD QUALITY CONTROL
		1. Submit a completed copy of the USPS Enterprise Energy Management Systems (EEMS) Integration Workbook prior to performing any integration work.
	2. GATEWAY INSTALLATION
		1. Install Gateway and materials in accordance with manufacturer's instructions.
		2. Install Gateway in close proximity to the BAS computer.
		3. Extend electrical power, connections to BAS computers, lighting control system computers, and the nearest LAN access point to the Gateway as needed.
	3. SYSTEM CONFIGURATION
		1. Establish communications with all building systems designated by the USPS.
		2. Configure any necessary conversion tables in the installed Gateway so that all monitored EEMS points sent to the EEMS server follow the required point naming convention.
		3. All monitored points must be mapped to the EEMS (Tridium AX Supervisor) and follow established point naming conventions.
		4. Refer to EEMS workbook tab labeled “JACE Configuration” for additional requirements.
	4. COMMISSIONING
		1. Commission the integration of the system with the BAS through EEMS technical support.

END OF SECTION

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