Project# 502-12-102/VA256-15-R-1083 Replace Obsolete HVAC Controls - RFI - AMENDMENT #P0004

RFI	Item	Description	Response
#7		Solicitation states, "A site visit will be conducted for this project. Please reference 52.236-27 for specifics. It will be held on May 17, 2016 at 1:00 CST". We request that additional scheduled site visits will be allowed prior to the bid date. Estimators and electricians will require additional time on-site to field verify existing conditions, existing point counts, field measurements, access to ceiling spaces, existing conduit and wiring availability, panel spaces, etc.	A Second sit visit will take place on 6/8/2016. It will be held from 1:00-4:00 CST. Contractor will meet in the Engineering Conference Room, Building 5, Room 113, at the VA Health Care System, 2495 71N Shreveport Hwy, Pineville, LA 71360. The purpose of the second site visit is to: 1. Access to ceiling spaces 2. Access to existing panel spaces 3. To field verify existing conditions 4. To take necessary notes/photos of existing conditions
#8		States, "No photography of VA premises is allowed without written permission of CO." Is photography of existing conditions in mechanical rooms, above ceilings, etc. allowed during site surveys to assist our electrical subcontractors in pricing installation and to minimize site visits?	See answer above.
#9		States, "When a building and/or construction site is turned over to Contractor, contractor shall accept entire responsibility including upkeep and maintenance therefore:…….Contractor shall maintain in operating condition existing fire protection and alarm equipment. In connection with fire alarm equipment, Contractor shall make arrangements for pre-inspection of site with Fire Dept or Company (Dept of VA or municipal) whichever will be required to respond to an alarm from Contractor's employee or watchman." Under this project, will entire buildings be "turned over to Contractor" necessitating upkeep, maintenance and fire alarm pre-inspection? It was our expectation that all buildings will remain in use and under VA responsibility during the construction period. Is this correct?	Correct
#10		Who is the Owner's current Edwards EST-3 Representative? Is entire campus served by Edwards EST-3 system?	Concept Electronics, yes
#11		Does "replacement of air filtration media in all air handling units (AHUs) after completion of construction" and IAQ testing apply to this project?	Yes
#12		Calls for commissioning of lab exhaust, packaged rooftop AHU's, humidifiers, de-humidifiers, water treatment, Electrical EPMS including power monitoring and PLC systems, Normal Power Distribution Systems, Life Safety Power, Switchboards, Breaker Testing, Fire Detection and Alarm Systems (100% device acceptance testing, system monitoring, fire alarm response). Are these systems to be commissioned as relates to the new DDC system installation or are all of the listed systems to be entirely mechanically and electrically re-commissioned/re-tested?	These systems are to be commissioned as it relates to the DDC control system.
#13		Under "Systems To Be Commissioned - Chilled Water System", there is a note "Does not include Bldg-147". Is this correct? The upgraded campus chiller plant DDC controls do not need to be commissioned?	If the Siemens control system is used it will have to be recommissioned to the updated system and network. If the existing system in Bldg 147 is changed to something other than Siemens, the system will need to be commissioned in accordance with the Contract Documents.
#14		Mentions "seasonal Systems Functional Performance Testing". Do we have to perform FPT and an off-season FPT?	Off-season FPT will be required when either the cooling, heating, or economizer operation can not be satifactorily accomplished whithout causeing unacceptable space conditions.
#15		States, "The Contractor shall provide a wireless internet network in the building for use during controls programming, checkout and commissioning. This network will allow project team members to more effectively program, view, manipulate and test control devices while being in the same room as the controlled device." Is this to say that we must furnish a Wi-Fi network for each building on this project? Is this to be a permanent installation or temporary network? Would it be acceptable to provide laptop connection at local control panels for access to BAS during testing?	Correct. The contractor shall provide secured wireless access points for the network.
#16		The points shown on the "trending and alarm" tables represent typical I/O points and associated trending/alarm configuration values. They are not intended to represent required I/O points for the various systems, correct?	That is correct. All points that are shown in the drawings that appear in this table should be subject to trending and alarm. Points that are only found on this table are not required to be added.
#17		Calls for closures of openings in fire resistant rated construction and smoke partitions. Will drawings be provided to indicate which partitions/construction are fire and smoke rated? We are only responsible for closing openings that we create during construction, not pre-existing openings, correct?	All penetrations by contractors are to be sealed with approved FIRE Caulk.
#18		States "The following HVAC systems will be commissioned: Direct Digital Control System (BACnet or similar LAN, Operator Workstation hardware and software, building controller hardware and software, terminal unit controller hardware and software, all sequences of operation, system accuracy and response time)." However, 01 91 00, 1.7.B includes a much larger list of systems to be commissioned including 11 systems under the heading "HVAC" (including DDC), 2 under "Electrical", 1 under "Electronic Safety and Security" and 1 under "Integrated Systems". Under the scope of this project, are we to commission the campus DDC system and associated systems being controlled by the DDC or all of the systems included in the commissioning tables of 01 91 00, 1.7.B?	Only the DDC system and the associated systems being controlled by the DDC are to be commissioned.

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RFI	Item	Description	Response
#19		Calls for H/W, S/W and wiring "to provide communcation interfaces with each of the systems listed below: a. UPS, b. Advanced Metering System (Schneider & TL Services), c. Additional building metering, d. All existing and future Campus wide utility metering including: new switchgear, electrical distribution system, emergency generators, sustaining generators, and PV system, e. Boiler and Chiller Plants, f. PDUs and Static Transfer, g. ATS switches, h. Computer Room Air Conditioning (CRAC), i. Electrical Power Generators, j. Lighting Control System, k. Fire Alarm System". Are all of the aforementioned existing systems capable of (and configured for) data communication with an EMS? Can we assume that a single point of communication interface using an industry standard open protocol (BACnet, Modbus, Lon) will be provided by the Owner at each of these systems for data integration? Are the systems listed single-seat or standalone in each building (e.g., Is there a single campus lighting control system or multiple lighting control systems serving various buildings, each requiring a separate data integration?)	The existing Advanced Metering Systems by Schneider & TL services are located on the plans. They are tied into a central system, however at the time of design the VA noted that access to the central system would not be possible. The exisitng metering panels are capable of output to an EMS. All new metering shown to be connected to the EMS. The new control system should have the inherent capability for the other types of systems to be integrated in the future.
#20		Calls for "communication interfaces" with numerous systems, including generators and boiler plants. However, 1.2.A..2, 3 & 4 indicate that Bldg-14 (Boiler Plant) and Bldg-41(Emergency Generator) are not included in this project (other than connection to new fiber optic ring, as per 01 00 00, 1.6.H.). Is EMS integration to Boiler Plant and Emergency Generators required?	Integration of the boiler plant and emergency generators is not a part of this project but the new control system should have the inherent capability for these to be integrated in the future.
#21		"Some products are not provided by, but nevertheless integrated with the work executed by, the contractor administered by this Section of the technical specifications" including….."3. Campus wide utility and power generating system. These systems are comprised of existing systems, such as the main switch gear, electric distribution system and emergency generators, as well as the new sustaining generators and PV system. The contractor will be responsible for interfacing to all of these systems and develop and implement the automated and integrated control of all such systems as part of this project." Are all of these sysems existing, including "new sustaining generators and PV system"? Are all of these existing systems capable of (and configured for) data communication with an EMS? What are the intended sequences of operation for the "automated and integrated control of all such systems as part of this project"?	At the time of design the sustaining generator and PV system were a future systems that the controls system would need the inherent capability for these to be integrated in the future. Actual integration of these systems is not a part of this project.
#22		"Some products are not provided by, but nevertheless integrated with the work executed by, the contractor administered by this Section of the technical specifications" including….."7. Unitary HVAC Equipment (computer room units, rooftop air conditioning units, split systems, packaged pumping stations) controls. These include: Discharge Temp Control, Economizer Control, Flowrate Control, Setpoint Reset, Time of Day Indexing, Status Alarm" Is the intent of this line item to require that the EMS contractor provide data integration (where possible) to existing Unitary HVAC Equipment (having pre-existing factory-packaged controls) or to require that the EMS contractor furnish new DDC controls and implement the noted control strategies for these types of existing unitary equipment?	The contractor is to furnish new DDC controls and implement the contol stratagies for units shown on the plans for currently controlled by the Siemens system.
#23		"Some products are not provided by, but nevertheless integrated with the work executed by, the contractor administered by this Section of the technical specifications" including….."10. Primary DDC Panels as follows:" Why are "Primary DDC Panels" grouped under 1.2.D. with third party equipment provided by others that require integration to the EMS? Aren't the "Primary DDC Panels" furnished and installed by the EMS contractor as part of this contract?	1.2.D.10 should not have been grouped under products provided by others. All panels should be by the manufactur of the new control system. 1.2.D.11 should not have been grouped under products provided by others. All controllers should be by the manufactur of the new control system.
#24		"Some products are not provided by, but nevertheless integrated with the work executed by, the contractor administered by this Section of the technical specifications" including….."11. Stand-Alone Application Specific Controllers (ASCs) for terminal equipment (CAV, FP VAV, and VAV units, and fan coil units):" Why are "ASCs" grouped under 1.2.D. with third party equipment provided by others that require integration to the EMS? Aren't the "ASCs" furnished and installed by the EMS contractor as part of this contract? Why are the ASC's referred to here as "Stand-alone Application Specific Controllers"? The terminal equipment listed are to be served by new BACnet DDC controls residing on the campus EMS, correct?	1.2.D.11 should not have been grouped under products provided by others. All controllers should be by the manufactur of the new control system.
#25		Responsiblilty table lists the following "Work/Item/System" to be furnished and installed by DIV23: Terminal Units, Controller for Terminal Units (install) Will any new terminal boxes be furnished by a DIV23 contractor under this project? If so, please provide specifications. If not, will a DIV23 contractor be responsible for field installing "controllers for terminal units" that are furnished by 23 09 23 as indicated in the Responsibility Table?	All terminal units are existing to remain. The responsibility table notes that the 23 09 23 contractor is to furnish & install the controller.

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RFI	Item	Description	Response
#26		Responsiblilty table lists the following "Work/Item/System" to be furnished and installed by 23 09 23: Power Distribution System Monitoring Interfaces Please describe the nature of "Power Distribution System Monitoring Interfaces" in more detail. Will these be electronic cards to be purchased from the manufacturer of a pre-existing power distribution system serving the facility or a new energy meter to be furnished/installed inside main switchboard panel of each building or simply monitoring of alarm and supervisory dry contacts that are existing and available at existing main switchboard panels?	Power distribution monitoring is limited to the existing and new electrical meters shown on the plans.
#27		The Responsibility Table indicates that Fire/Smoke Dampers & Smoke Dampers are furnished/installed by a DIV23 contractor. Will a new Fire/Smoke or Smoke damper be furnished/installed under this project wherever an existing pneumatic fire/smoke and/or smoke damper is indicated on the bid drawings?	It is the contractor's option to change the actuator and have the damper recertified or to install a new damper.
#28	1	States “The direct-digital control system(s) shall be native BACnet”. Is the existing Siemens Apogee System native BACnet?	Yes
#29	2	If the new System is required to be native BACnet, then does Siemens have to upgrade all their existing “non-native BACnet” Controllers to meet the specifications?	Yes
#30	3	States “Provide hardware, software, and wiring to provide communication interfaces with each of the systems listed below” which has “Fire Alarm System” listed. Is the existing fire alarm systems UL-listed for interface and communications with the Siemens BMS system?	Yes
#31	4	States “Provide hardware, software, and wiring to provide communication interfaces with each of the systems listed below” which has “Fire Alarm System” listed. Is the frontend to be a UL Listed frontend so that it can serve as a BMS and a Fire Alarm Operators Workstation?	No
#32	5	States “Provide hardware, software, and wiring to provide communication interfaces with each of the systems listed below” which has “Fire Alarm System” listed. To what degree is the new frontend for the BMS going to communicate with the existing or future fire alarm system?	Integration of the fire alarm system is limited to sending alarms from smoke detectors & smoke dampers to the fire alarm system.
#33	6	States “advanced utility metering systems. These systems may take information from the control system or its component meters and sensors. There is no command or control action from the advanced utility monitoring system on the control system however.” Are each of the existing utility meters to be integrated into the new system as a part of this project?	Yes, see information on sheet M101
#34	7	Spare Point Capacity. States “Each Building Controller shall have a minimum of 10 percent spare point capacity.” However, Specification Section 23 09 23, Page 5, Item 17 states “All DDC controllers shall be installed with 25% spare points (of each type) and 25% spare memory capacity for connection of floor work.” Which is it 10% or 25% spare capacity? 25% spare capacity will require a lot more controllers and a lot more installation costs.	25% spare point capacity with no less than 1 spare of each I/O type.
#35	8	Manufacturer Installed Controls.	
#36		a. BMS manufacturer shall furnish ASC and actuator for factory mounting to equipment manufacturer. What new mechanical equipment is to be provided for this project where Factory Mounting of controls is required?	None
#37	9	Are the expectations that all AHUs (whether they are on the existing Siemens System or new controls installed) receive a pre-test on airflows and then a final test and balance on airflows as a part of this project?	Yes
#38	10	Are the expectations that all terminal units (VAVs, FCUs, etc), whether they are on the existing Siemens System or new controls being installed) receive a pre-test on airflows and then a final test and balance report on airflows as a part of this project?	Yes
#39	11	Are the expectations that all air distribution terminals (i.e. supply air diffusers, return air grilles, exhaust grilles and exhaust fans), whether they are on the existing Siemens System or new controls being installed) receive a pre-test on airflows and then a final test and balance on airflows as a part of this project?	yes
#40	12	Are the expectations that all AHUs (whether they are on the existing Siemens System or new controls installed) receive a pre-test on water flows and then a final test and balance report on water flows as a part of this project?	Yes
#41	13	Are the expectations that all terminal units (VAV w/ reheat coils, FCUs, etc), whether they are on the existing Siemens System or new controls being installed) receive a pre-test on water flows and then a final test and balance on water flows as a part of this project?	Yes
#42	14	Are the expectations that all pumps (VFD driven or fixed), whether they are on the existing Siemens System or new controls being installed) receive a pre-test on water flows and then a final test and balance on water flows as a part of this project?	Yes
#43	15	Building 2 controls Valve Replacements – The drawings state that the existing controls on the FCUs are DDC and may be re-used if compatible with the new controls. Is the intent to re-use all the existing water valves on the FCUs?	All Control Valves to be replace with new Valves and electronic Actuators unless otherwise noted
#44	16	Building 2 controls Valve Replacements – In the event that a FCU valve is found to be non-functioning, how will that repair work be handled?	All Control Valves to be replace with new Valves and electronic Actuators unless otherwise noted
#45	17	Building 2 controls Valve Replacements – The drawings state that the existing controls on the AHUs are pneumatic and must be replaced with the new DDC controls. Is the intent to re-use all the existing water valves on the AHUs?	All Control Valves to be replace with new Valves and electronic Actuators unless otherwise noted
#46	18	Building 2 controls Valve Replacements – In the event that an AHU valve is found to be non-functioning, how will that repair work be handled?	All Control Valves to be replace with new Valves and electronic Actuators unless otherwise noted

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RFI	Item	Description	Response
#47	19	Conduit Size – Because there is little available space, can ½" conduit (versus ¾") be utilized for the project where needed?	Per 26 05 33 1/2" conduit is acceptable when sized per NEC.
#48	25	Infection Control – portable vestibules – are portable vestibules with HEPA filtration required for all above ceiling work?	In Class III areas HEPA Filtration is required during dust creating operatioins. In class II areas measuers must be taken to minimize dust creation. (dust creation operations include but not limited to; Drilling, boring, cutting etc.)
#49	26	Reuse of existing Conduit - Can the Contractor reuse existing conduit/raceway?	Yes
#50	27	Ethernet Drop Responsibility - Who is responsible for the Ethernet connections to the BACnet Building Controllers?	Contractor
#51	28	What are the rules, regulations and guidelines for removing ceiling tiles throughout the hospital area? How are patient, lab, common areas, etc. going to allow access during operational hours?	No more that 4 tiles may be removed in a 20 foot section. Area must have active workers present. When no work is happening, ceiling tiles must be replaced.
#52	29	Can screw connectors be used on conduit EMT?	No, only compression steel or maliable iron fittings. Set Screw Steel Fitting only allowed for 2.5" conduit and above
#53	30	Drawings indicate that all the existing DDC devices may be re-used if functional and compatible with new system. Who is responsible for repairing/replacing the devices that are found not functioning?	Replace all DDC Controls
#54	31	If the Contractor is responsible for repairing/replacing the devices that are found to be non-functioning or not compatible with the new DDC System, this will likely cause a large ambiguity in pricing received from Bidders. That said, can we schedule another site visit to revisit the existing control devices on this equipment to get a more accurate understanding of the existing devices and how many may be required to be replaced? Or, can the VA state in an Amendment that a designated percentage of these devices should be carried by all contractors in their proposal for repair/replacement? This would seem to provide a more fair comparison of bid pricing.	Replace all DDC Controls
#55	32	State AHU'S 7-AHU107, 7-AHU108, 7-AHU109, 7-AHU110, 7-AHU101, 7-AHU112, 7-AHU105, & 7-AHU114 ARE CURRENTLY IN THE PROCESS OF BEING REPLACED AND ADDED TO THE EXIST CAMPUS SIEMENS SYSTEM IN A FOUR PHASE PROJECT. THEY ARE SHOWN IN THESE PLANS TO BE EXISTING DDC ON CAMPUS SIEMENS SYSTEM. VERIFY STATUS OF THIS PROJECT DURING PRE-BID WALK-THRU WITH VA. IF THE REPLACEMENT OF THESE AIR HANDLERS HAS BEEN PUT ON HOLD, PROVIDE LINE ITEM PRICE TO CONVERT FULLY EXISTING CONTROLS TO FULLY DDC AND INTEGRATE WITH THE CAMPUS SYSTEM FOR FULL CONTROL. CONTROL SEQUENCES SHALL MATCH EXIST. FIELD VERIFY EXIST CONDITIONS. As contractors, we have no way of understanding if these AHUs are to be considered DDC for bid purposes. Should the contractors consider these eight (8) AHUs are pneumatic or DDC for bidding purposes?	only 2 Air handlers have been replace, 7-AHU107 and 7-AHU108
#56	33	The drawings (M7-211 for example) indicate that all Building 7 reheat coils to be considered currently pneumatically controlled. For bidding purposes are we to consider all Building 7 reheat coils are currently pneumatic?	Yes, except where note otherwise such as the pharmacy, see sheet M7-206.
#57	34	The drawings (M7-211 for example) indicate that all Building 7 fan coil units to be considered currently DDC controlled. For bidding purposes are we to consider all Building 7 Fan Coil Units are currently DDC?	No
#58	35	The controls on the dual steam converter appear to be currently pneumatic. Is the intent to re-use the existing valves or do they need to be replaced as part of this project?	All Control Valves to be replace with new Valves and electronic Actuators unless otherwise noted
#59	36	Indicates that BID ADDITIVE ITEMS A, D, & E WERE NOT SELECTED. Please confirm that this means that the Contractors need to include these bid additive items in our proposals.	That statement means that the work for these bid items was not performed under the recent expansion project. Therefore the existing conditions for these areas of the buildings are as shown in the other building 7 floor plans, ie. Sheet M7-101b, M7-101c, etc, and the existing equipment shown on these plans are to be controlled by the new DDC system.
#60	37	8-AHU-01, do the existing CHW and LPS valves need to be replaced on this AHU or just the actuators?	All Control Valves to be replace with new Valves and electronic Actuators unless otherwise noted
#61	38	8-AHU-01, do the existing smoke detectors need to be replaced on this AHU?	Yes, unless otherwise noted
#62	39	Notes, states INTEGRATE ALL EXISTING METERS EVEN IF THEY ARE REDUNDANT. What does "even if they are redundant" mean?	Some of the existing meters may be measuring the same usage, even so contractor to integrate all existing meters.
#63	40	AHU 16-2 and 16-3 – Does the VFD have to be replaced on these AHUs?	Yes, keynote 2 states the device is to be replaced
#64		Will the government accept integration of the existing devices to a one common platform? Or is the government requesting a new BAS system removing all existing controllers?	The government is requesting a new BAS system. Any existing controllers, panels, etc from the successful bidder may remain so long as they comply with the specifications and are native to the new front end, and are the most up-to-date product

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RFI	Item	Description	Response
#65		Will a joint venture or teaming agreement between one SDVOB and a small business be preferred than a **joint venture** or **teaming agreement** will have preference of one SDVOB with a large business?	This requirement is set-aside for a SDVOSB. Policy and eligiblity of a joint venture listed in clause VAAR 852.219-10 which is located on page 66 of the solicitation.
#66		Please provide an approximate number of hardware points that the BAS will have	The plans contain the point lists and quantity of the various pieces of equipment to be integrated except the existing Siemens system. Avalilabe As-builts of the Siemens system will be provided by the VA.
#67		Please provide information for the existing BAS equipment including Bacnet/IP Supervisory devices and field devices along with their model numbers.	New ones will be installed, no need to supply this information
#68		Please provide a BAS network layout of the existing BAS devices.	The existing BAS network communicates on the VA intranet. A new dedicated network shall be provided for the BAS separate from the VA intranet.
#69		If existing devices can be reused please provide a description of the procedure to use if sensors are found damaged. Can the government provide a table for replacement cost per sensor type?	Contractor to furnish and bear all costs for replacement of damaged sensors.
#70		Are the new VFDs required to be communicated to the BAS or are they going to be controlled externally without the need of communication?	All shall be fully integrated into the new control system.
#71		Please provide a description of the optic fiber cable that will need to be installed. How many feet of cable? How many buildings will need to be connected?	See sheet M100.
#72		Due to the complexities of the project could the government provide more time to prepare proposals? This is our expertise and we would like to do a more in-depth detailed proposal.	yes
#73		Building 5 is indicating that new utility meters are to be installed as part of this project. No drawings have been provided for Building 5. Can the VA provide drawings indicating where the new meters are to be installed?	See Pg M100
#74		On the drawings where Fire/Smoke dampers are existing pneumatic, are the new electrical actuation and end switches to be 120v or 24v?	24v
#75		We have no plans or documentation for “Building 147 – Chiller Plant”. This building is listed in the Direct Digital Control System specification (section 230923 - page 2) as needing the controls to be completely replaced/upgraded. Will this be supplied?	System to be upgraded/replaced. Avaliable as-builts will be provided.
#76		The “Direct Digital Control System” specification (page 95) states that all temperature sensors must use platinum RTD elements only with a 4-20mA signal. However, most vendors (including Trane) use 10,000 ohm thermistors for all temperature sensing applications. 10,000 ohm thermistors are less expensive, they meet the specified design intent and they are not as complex as RTD transmitters making them more robust. Will the 10,000 ohm thermistors be acceptable as an alternative to platinum RTD transmitters?	10,000 ohm thermistors are acceptable provided the meet the accuracies specified.
#77		States, "Provide a color printer for printing of dynamic trend graph report, Excel reports, graphics, and any other screen displays." Do we need to provide one such printer for each of the five operator workstation locations or a single printer for the overall system. What are performance requirements for this graphics-report printer? Inkjet? Laserjet?	Provide printer for each workstation. Printer shall be minimum resolution 600 dpi, color laser printer, connected to the computer through a USB interface.
#78		States, "The Operator Workstation Software shall be capable of BACnet IP communications. The BACnet Advances Workstation (B-AWS) shall have demonstrated interoperability during at least one BTL Interoperability Workshop, have demonstrated compliance to BTL B-AWS device classification through BTL listing as specified in ANSI/ASHRAE 135." Mention is made here of a BACnet B-AWS workstation, although it is not plainly stated that B-AWS workstations are required by these specifications. Are the five Operator Workstations to be furnished under this project and specified under 23 09 23, 2.3.A. required to be BTL-listed BACnet Advanced Workstations (B-AWS)?	Yes.
#79		Calls for Bldg controllers to have 10% spare point capacity with no less than 1 spare of each I/O type. This conflicts with 23 09 23, 1.2.A.17, which states,"All DDC controllers shal be installed with 25% spare points (of each type) and 25% spare memory capacity". Which is correct?	25% spare point capacity with no less than 1 spare of each I/O type.

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RFI	Item	Description	Response
#80		Fire/Smoke Dampers: "Dampers designated "F/SM" on the plans - (only those dampers designated on the plans will be provided with position switches and will be wired for remote status and remote open/close operation, but all dampers will be provided with position indicators for possible future use). Note that dampers which are controlled from a central fire command station shall be provided with a 212F heat sensor.....a second heat sensor...wired through a manual override switch on the central fire command station. Dampers which are not controlled from a central fire command station shall have a fusible link which melts on heat causing damper to close..." a) As per 1.2.E. Responsibility Table, all Fire/Smoke and Smoke Damper Low Voltage and Line Power wiring is provided by DIV28 contractor, correct? b) Are all "F/SM" and "SM" shown on the bid plans to be complete, new damper/actuator assemblies or is the retrofit of existing pneumatic actuators with new electronic damper actuators allowed? c) How are we to know which "F/SM" dampers are to be controlled by a Central Fire Command Station and which will not be? d) Are the heat sensors mentioned above to be integral to the new "F/SM" or an external device furnished by the DIV28 contractor? e) Does the statement "...but all dampers will be provided with position indicators for possible future use" mean that we are to furnish/install damper endswitches (two per damper) on all new "F/SM" dampers shown on the drawings, as well as on all existing "F/SM" dampers (to remain) that are not shown on the drawings? If yes, please provide a list of the quantity and location in each building of the existing "F/SM" dampers that are not shown on the drawings.	a) Correct. Low voltage & line power provided by Div 28. b) Retrofit of the existing pneumatic actuators is allowed but requires recertification of the damper assymbly. It is acceptable to replace the damper if that is a more cost effective option. c) Per Detail 2 sheet M9-202, all F/SM & SM dampers are to be connected to the fire alarm system. d) If contractor provides new damper then the heat sensor is factory installed in the damper, if the contractor retrofits the actuator the heat sensor is provided by Div 23 per the Responsiblity Table. e) Only dampers that are shown on the plans as being retrofited from pneumatic control to electronic control are included in the scope of work. All other existing fire dampers are outsided the scope of work for this project.
#81		Automatic Control Valves, states, "Control valves shall be 2-way or 3-way type single seated globe type for 2-position or modulating service as shown. Valves shall meet ANSI Class IV leakage rating…failsafe in either normally open or normally closed position in the event of power failure." Please confirm that ANSI Class IV leakage is required for all control valve applications (except "zone valves" where Class III leakage is allowed) on this project. Class IV leakage in globe valves over 2.5" become very expensive. Please confirm that all control valves (even terminal units) are required to provide spring return failsafe operation, unless otherwise stated in sequences of operation. 23 09 23, 2.11.G.8.a.3.c) mentions "fail in place" operation, but not clear if/where this is allowed.	Class IV leakage required except for zone valves. "fail in place" operation is allowed where the fail safe operation isn't noted in the contract documents and is not required for freeze, moisture, and smoke or fire protection.
#82		This section is entitled, "Valve Specification for Characterized Ball Valves". Where are the specified characterized ball control valves allowed to be used? i.e., AHU coils, humidifers, fan coil unit coils, terminal box coils, heat exchanger coils, minimum flow bypass, boiler mixing valves, etc?	Per the 23 09 23 2.11.G.7 these valves may be used in chilled water & hot water applications where the line size is 1/2" to 2".
#83		Automatic Control Valves - where do we have to replace existing control valves and where can we simply replace the existing pneumatic actuator with a new electronicactuator?	All Control Valves to be replace with new Valves and electronic Actuators unless otherwise noted
#84		Please designate applications where "Air Velocity Sensors" (thin film thermal anemometer) are to be used and where "Airflow Measuring Stations" (traverse probes) are to be used on this project?	Airflow Measurings Stations are to be used unless noted otherwise.
#85		Where can existing control devices (e.g., valves, actuators, dampers, temperature sensors, airflow stations, freezestats, firestats, DP switches, humidity sensors, pressure sensors, etc.) remain and be re-used and where must they be replaced?	All Control devices to be replaced
#86		Temperature Sensors - "All temperature sensors shall be Pt RTD elements only, Nickle or Silicon is not acceptable. All control signals shall be via a 4-20mA loop." Temperature sensor accuracies are specified to be +/- 0.7F for zone temperature and 0.54F for immersion and duct sensors. Our 1KOhm Platinum Class A sensors provide +/-0.35F accuracy at 70F, but are 2-wire passive RTD's rather than active 4-20mA devices. Are these sensors acceptable?	RTD sensors are acceptable provided the meet the accuracies specified.
#87		Where are Water Leak Detection Systems required?	No leak detection systems required. Specification information included as basis for future work.
#88		Where are Audio/Visual Alarm Units required?	Provide on unit at the workstation in Bldg. 5 Room G09.
#89		Where must fuel oil flow meters be furnished (e.g. how many/location of duplex fuel oil pumps and fuel oil jockey pumps required to have new fuel oil flow meters on this project)? Who is responsible for installing these fuel oil flow meters?	No fuel oil flow meters required. Specification information included as basis for future work.

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RFI	Item	Description	Response
#90		States, "All wiring cabling (sic) shall be installed in conduits". Please confirm that all new control cabling furnished under this project is to be enclosed in conduit. Can any of the existing control cabling and/or conduit be re-used with the new BAS system? If existing control cabling can be re-used, is it permissible to re-use existing exposed, plenum-rated control cabling?	All control cabling must be in conduit. Existing cabling & conduit may be reused provided it is suitable and in good condition. Exposed cabling cannot be reused without installing the existing cabling in conduit.
#91		States, "All metering shall be displayed through the campus DDC control system." Is this to say that the campus DDC control system is synonymous with "Site Data Aggregation Device". ie. Will the campus DDC control system provide all utility metering collection, storage and reporting features described under 25 10 10?	Yes they are synonomous and the DDC control system will provide all utility metering collection, storage, & reporting as described in 25 10 10. Note that there is already a similar system installed that reports elsewhere, these existing meters as listed on M101 and locations shown on the various floor plans shall be connected to the DDC control system so that the existing meters report thier data to both the existing metering system and the new DDC system. The new meters to be added only report to the new DDC control system.
#92		States, "Provide data heads at each meter, converting analog and pulsed information to digital information. Data heads shall allow for up to 24 hours of data storage (including time stamp, measured value and scaling factor)." Are we required to provide a "data head" for each meter (electrical power meter, natural gas distribution flow meter, fuel gas flow meter, fuel oil flow meter, steam flow meter, steam condensate flow meter, chilled water flow meter, heating water flow meter, domestic water flow meter, recovered water flow meter, makeup water flow meter) that is part of the Advanced Utility Metering System or only for those meters that present data in an analog or pulsed format? i.e. Are data heads required for meters such as Chilled Water BTU that will be furnished from the factory with a BACnet MS/TP interface and where the DDC Building Level controller could provide 24 hours of data storage for the meter?	Only those meters that present data in analog or pulsed format so long as the DDC building cocntroller can provide the data storage for the BACnet meters.
#93		Calls for vortex shedding flow meters for HVAC hydronic flow. However, 23 09 23.T. called for insertion turbine type flow meters for HW and CHW applications. Which is correct?	Either is acceptable so long as they are installed per mfr. recommendations.
#94		Calls for vortex shedding flow meter for Natural Gas Meters. However, 25 10 10, 2.7.C. calls for turbine flow meter for Natural Gas. Which is correct?	Either is acceptable so long as they are installed per mfr. recommendations.
#95		Calls for Screw type flow meter for No.2 Oil Duty with a meter head having a hermetically sealed flow computer with digital readout and register. Note however, 23 09 23 called for "contacting head type" meter for fuel oil systems. Which type of meter is required?	Either is acceptable so long as they are installed per mfr. recommendations.
#96		States, " Unless otherwise specified elsewhere in these specifications, control wiring shall be as specified herein, except that the minimum size shall be not less than No. 14 AWG". However, 23 09 23, 2.12.B allows for 18 Ga Class-2 control wiring. Which is correct?	18 Ga shall be the minimum.
#97		States, "Install a separate power supply circuit for each system, except where otherwise shown on the drawings." Can power supply circuits serving existing HVAC controls be used for new controls?	Yes so long as they don't overload the existing circuit.
#98		Please provide a schedule indicating the type and quantity of meters required in each building for this project?	See sheet M101 for list of exsiting and new metering.
#99		Is a UPS required at every new BAS Panel?	Only surge protection is required.
#100		Is a UPS required at every existing panel which remains?	Please Clarify what is meant by Panel
#101		Will Plenum wire be accepted in non exposed areas if properly strapped and concealed?	No. all cabling must be in conduit.
#102		Spec calls for the Control Panels to have a display screen. Is it the VAs intent for each new control panel to have a display?	Keyboard and display required for all Advanced Application Controllers.
#103		Are all new VFD's to be located in the Basement required to be installed in NEMA 4 enclosure?	No
#104		Who is responsible for providing Ethernet drops local to each network controller?	Contractor
#105		Who is responsible for providing iP addresses	Contractor
#106		Is Contractor to assume that of the 24 strand MM fiber being installed that one strand of fiber will be utilized for the LAN for the BAS System?	All 24 strands are to be terminated. Per sheet M100, 12 strands are to be terminated for the BAS system and the remaining 12 are to be terminated for future use.
#107		What are the remaining strands going to be utilized for?	Future use
#108		Is the VA going to furnish and install Ethernet switches on this new fiber network for the BAS System or is the Contractor responsible?	Contractor
#109		What areas within the Hospital will require a Containment tent for work?	Depending on when work is done, The OR, SPS, and Pharmacy Areas.
#110		Is it the VA's intent to replace only the valve actuator or must they replace the valve body also?	All Control Valves to be replace with new Valves and electronic Actuators unless otherwise noted
#111		Is it the VA's intent to have all BACnet field level network controllers, (Fan coil units, and VAV boxes) by the same manufacturer?	Yes
#112		The specification calls for 5 workstations, are these to be new computers furnished under this contract?	Yes
#113		If Contractor is to provide new PCs, does the VA have a particular specification for the required hardware?	See 23 09 23 2.3.
#114		Will the VA allow the server to be used as one of the 5 workstations?	No. the server is located in Bldg. 7, see sheet M7-100c. The workstation locations are listed in 23 09 23 2.2

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RFI	Item	Description	Response
#115		Building 2 Drawings indicate that 146 FCU controllers are to be replaced while M2-201 has a note to replace 110 FCU controllers. Which one is correct?	I've counted 144 total FCU's shown on sheets M2-102 & 103 as well as 144 on the schedules on sheet M2-201.