



State of Rhode Island
Department of Administration / Division of Purchases
One Capitol Hill, Providence, Rhode Island 02908-5855
Tel: (401) 574-8100 Fax: (401) 574-8387

ADDENDUM # 2

BID # 7461213

**BID TITLE: MAXIMUM SECURITY HVAC STEAM DISTRIBUTION
UPGRADE**

OPENING DATE AND TIME: 3/20/13 11AM

THIS ADDENDUM POSTS SIGN IN SHEET FROM MANDATORY PRE BID HELD 2/22/13 AT 10AM.

**AS NOTED AT PRE BID QUESTIONS WERE ALLOWED UNTIL 2/27/13, 12 NOON (EASTERN) AT
BIDINFO@PURCHASING.RI.GOV**

THIS ADDENDUM ADDRESSES QUESTIONS RAISED AT PRE BID AND SUBMITTED ELECTRONICALLY.

THIS ADDENDUM MODIFIES PAGE 1 OF THE BID FORM.

**PLEASE NOTE PUBLIC COPY REQUIREMENTS FOR PUBLIC WORKS PROJECTS OVER \$500,000 AS
NOTED AT PRE BID AND ALSO WITHIN SOLICITATION INFORMATION.**

THIS ADDENDUM ADDS SHEET TO SUBMIT WITH BID PROPOSAL ACKNOWLEDGING ADDENDA.

**FOUR (4) PAGE BIDDER CERTIFICATION FORM MUST ACCOMPANY BID PROPOSAL. FAILURE TO DO
SO MAY RESULT IN BID DISQUALIFICATION.**

**DISREGARD ANY REFERENCES TO CONTINGENCY ALLOWANCE. CONTINGENCY ALLOWANCES ARE
NO LONGER ALLOWED.**



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ADDENDA

- THIS BID INCLUDES ADDENDA NUMBERED _____ AND DATED _____.
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UPGRADE

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QUESTIONS:

MJ Daly attended/signed in at the mandatory pre-bid, will they be allowed to bid the project as they are an Arden company?

STATE PROCUREMENT REGULATION 3.4.2 PROVIDES IN PART, “{R}ELATIONSHIPS SHALL BE MAINTAINED IN A MANNER WHICH ASSURES THAT NO CONFLICT OF INTEREST SITUATIONS ARISE.” FURTHER REGULATION 3.4.2.2 PROVIDES “{R}EASONABLE EFFORTS SHALL BE MADE TO PROVIDE FAIR BIDDING OPPORTUNITIES TO ALL QUALIFIED AND INTERESTED SUPPLIERS.

REMAINING QUESTIONS ANSWERED BELOW.

Request for clarification for bid #7461213- Maximum Security HVAC Steam Distribution Upgrade

- * Section 00110 1.4.C Does the Architect/Engineer need to approve the bidders? No.
- * Section 00800 1.2.C Calls for a 2 years warrantee after final acceptance. Contrary to later sections. Please clarify warrantee period. For the plumbing systems, refer to the answer in this document.
- *Section 00800 9.3.2.3 Calls for final payment to be processed 31 days after 7 specified conditions are met including an "Occupancy Permit". Please explain this condition. Delete the Occupancy Permit requirement item (7) and item (6) Extra samples and materials. The other (5) specified conditions must be met before final payment is issued.
- * Section 00800 1.4.A 6.1.11 States no compensation for delays caused by other projects/work scheduled during the same time frame as this work. Please list other scheduled projects, time frames and general impact on scheduling. As confirmed at the pre-bid meeting on February 22, 2013 which the questioning contractor attended, there are no other projects planned.
- * Section 00800 1.9.F Dimensions are not to be relied on and contractor is responsible to field verify all dimensions. Are pipe sizing's and required equipment pipe sizings correct or must they be field confirmed as well. The plumbing system pipe sizes are correct.
- *Section 00800 1.9.H Please clarify actual allowable work hours as this section is in conflict with later sections. For the plumbing systems, refer to the answer in this document.
- * Section 01010 1.5.E Please provide drawings for any projects that may be planned in accordance with Section 00800 1.4.A 6.1.11 that might change site conditions. As confirmed at the pre-bid meeting on February 22, 2013 which the questioning contractor attended, there are no other projects planned.
- * Section 01010 1.6.B Clarification on work hours 7:00 to 3:00, or 24 hour notice to the DOC for overtime or extended hours.
- * Section 01050 1.1.5 states to "Remove sections of installed work as specified for testing" Please list type and quantity of destructive testing. No destructive testing will be done.
- * Section 01050 3.1.D Calls for means and methods such as X-ray to test for embedded components. Please give a scope of where this is required. Any new slab penetration that is suspect needs to be reviewed before core drilling to ensure there is no electrical, control power or other live utility imbedded in the slab.
- * Section 01300 3.3.C.2 Calls for engineer to be reimbursed at 2 ½ times actual cost to evaluate proposed substitutes but there is no listed hourly cost or limitations on this potential cost. It also appears you will be billed whether or not the substitution is accepted or even deemed to be preferred.

Figure an hourly rate of \$145.00 per hour to review substitutes. In most cases there are three Vendors listed. It is recommended to use one of the three Vendors listed on the drawings and specifications.

* Section 01400 1.6 Calls for "Mock Ups" but gives no schedule for them.

Sample mock-ups will include. These will be built in place. One will be done first for approval before any others can be built:

1. A typical LPS, MPS and HPS trap station.
2. A typical PRV station.
3. A typical water heater piping hook-up.
4. A typical condensate pump hook-up.
5. A typical expansion anchor and guide installation.

* Section 01400 1.7 Calls for "Observers" but is solely at the discretion of the Engineer. Please provide a less subjective qualification standard. For the plumbing systems, refer to specification 15400. This only applies for the underground condensate pre-fabricated piping that needs to be inspected by the manufacturer.

* Section 01500 1.7 Creates a "Security Standard" and makes the contractor responsible for "Unauthorized Entry, Vandalism and Theft". This is a prison; please explain the limitations to our ability to provide security and what the expectations of this contract are. The Department of Correction is not responsible for vandalism or theft of vendor property. This is expounded upon in section 15400 1.24.

* Section 01500 1.9 Per last bidding, Mr. Feole stated existing facilities could be utilized for meetings. Is still the case. Yes.

* Sections 01500 2.4 & 2.6 Hard connected job phone and job Fax requirements. Will these be waived? Yes.

* Section 01500 2.11 Please explain where interior enclosures will be required and if they must be removed daily for prison operations. Temporary construction barriers will be needed for any work in the kitchen area to avoid any contamination of the food when the work is performed. The temporary barrier will need to be removed daily. Consult DOC on temporary barrier construction requirements.

* Section 15000 1.6.A Calls for 1 year guarantee on all work. Please explain conflict with earlier section for warrantee periods For the plumbing systems, refer to the answer in this document.

* Section 15000 1.16.B Is there any cost for the required guard to the bidder and are there any limitations to how many crews/guards might be available at any given time to utilize multiple crews As confirmed at the pre-bid meeting on February 22, 2013 which the questioning contractor attended, ACI guards will be made available as required to the contractor in order to expedite his work.

* Section 15090 1.0.E. Do we actually need written approval for any drilling or punching of holes in the building or is there a size threshold before making written request For the plumbing systems, yes. Refer to specification 15400. Any holes need to be scheduled with the DOC.

* Section 15090 1.4.A Since the bidders own all pipe expansions calculations, please provide all design parameters including expected or potential super-heated steam temperatures at building line point.

Per site visit on 2/27/13 the HPS Steam leaves the Power plant at 70 psig and 580 deg. F (superheated)

* Section 15090 1.4.M Please provide a design standard to design to. ANSI B31.1 – Power Piping

* Section 15090 1.5.L.1 How does cold springing take place after the hydro test? Do we cut apart a tested joint to perform the cold spring and who is calculating the cold spring spread . No cold springing will be required. Expansion joints and anchors shall be used accordingly.

* Section 15090 1.6.A.3 If the bidders own a stamped set of seismic drawings, is there any existing data for the structural integrity of existing anchor points No.

* Section 15250 3.1.E Calls for 2" thick canvas removable jackets, but gives no R-value or insulate. Please provide further detail

- Glass mat, type E needled fiber. 1" @ 11.3 LB/CF.
- Estimation of Maximum Use Temperature 1200°F (650°C)

* Section 15400 1.3.H Calls for new piping within 10' of the water heater. Is this measured in radius or developed pipe lengths As specified: "The measured distance from commencement of the piping work at the water heater shall be 24" above finish floor."

* Section 15400 1.6.B Requires all domestically produced products and no imported goods to be installed. Is this an ARRA project any are there any limits or exceptions to this requirement. As specified: "Plumbing piping, fittings, and appurtenances shall be domestic in origin. Foreign manufacturers shall not be allowed unless otherwise specified."

* Section 15400 1.6.E Calls for plumbing work to only be performed when temperatures are 90 degrees F or less. Are we required to A/C this area or is any other plan in place to cool the area. As confirmed at the pre-bid meeting on February 22, 2013 which the questioning contractor attended, the steam system will be turned off during construction so A/C will not be required.

* Section 15400 1.21 Work hours are in conflict with prior sections. Please clarify. For the plumbing systems, refer to the answer in this document.

* Section 15400 1.22 Calls for compliance with Owners safety plan. Is this the same as Owners "Security Plan" included in bid package or is there another Safety Plan As specified: "The Contractor shall comply with all of the safety requirements of OSHA and the Owner's Internal Safety Program throughout the entire period of construction."

* Section 15400 1.38 References "BOCA" Code. Is this the applicable code As specified, the seismic design shall also comply with all requirements listed in the "latest copy of the Rhode Island State Building Code, as well as the requirements of the local authorities having jurisdiction."

* Section 15400 1.42.B Guarantee period is in conflict with prior requirements, please clarify Which prior requirements? As specified: "All materials, equipment and work furnished under this section shall be guaranteed, by this Contractor, against all defects in materials and workmanship for a period of one 1 year commencing with the date of final acceptance."

* Section 15400 1.42.D Please explain how determination is made for debris from existing pipes Vs. debris related to new work and if reimbursement is made for existing system debris There is no reference to any existing debris in Section 15400 1.42.D, so it is unclear as to why this question is being asked.

The terms "... foreign matter being placed in the systems..." and "... repair or replace any work damaged in the course of removing obstructions..." as specified in Section 15400 1.42.D shall be understood to mean any and all new garbage, trash, debris, obstruction, dropping, filth, fragment, junk, odd and end, piece, refuse, rubbish, rubble, scrap, scum, sediment, shaving, solder, tape, lead, oakum, screw, nut, bolt, washer, gasket, electric, pneumatic and hand tool and alike, waste and/or any other foreign and/or non-domestic non-plumbing industry standard, non-code compliant item and/or appurtenance which under normal conditions, is not inherent, conducive to and/or necessary for the proper operation of the ACI's new plumbing systems, which is carelessly, inadvertently, negligently, accidentally, randomly, unexpectedly, unforeseen, unintentionally, purposefully, hastily, hurriedly, recklessly introduced, installed, dropped, put in, left and/or otherwise physically placed into any portion of and/or in the entirety thereof the ACI's new domestic plumbing supply, drainage and venting systems by the awarded plumbing contractor and his/her sub-contractors, where said and all additional systems are specified and shown on and/or depicted in the plumbing contract documents which were issued for bid, permit and/or construction by the State of Rhode Island and Providence Plantations, and which are affiliated and/or associated with, complementary of, and/or interchanged, interconnected, interrelated, intertwined, interwoven, pertinent to, relevant, similar, related, and/or otherwise encompasses all and/or any sub-parts of the ACI's said work as set forth in said documents which is solely and/or in part furnished and installed or is otherwise provided for under this specific contract by said contractor and subs; therefore ad hoc, no consideration, reimbursement and/or relief, whether monetarily or of otherwise equal value, for failing to comply with, or if found by the plumbing engineer of record to be in violation of, the requirements and physical limitations set-forth, in whole or in part, where expressly implied verbally and/or by specificity in writing, in Plumbing Specification Section 15400 1.42.D, shall be made.

* Section 15400 1.43.A Cranston Fire has said they don't issue dumpster permits for the prison. Please explain this requirement As confirmed at the pre-bid meeting on February 22, 2013 which the questioning contractor attended, dumpster permits will not be required.

* Section 15400 1.44.Z Please confirm a 7 day schedule for kitchen operations 6:00am to 9:00am; 10:00am to 12:30pm; 2:00pm to 4:30pm.

* Section 15500 3.3.O Calls for escutcheons on all pipes that are exposed, but pas prison experience had shown these are generally considered a safety hazard in a prison. Please clarify the requirements of this section. Provide on finished side of the pipe penetration. Type to be used shall be approved by the DOC.

* Section 15500 3.3.Q.9 Prohibits piping above electrical lines but this may be a requirement based on existing basement conditions. Please provide process for determining exceptions. This will need to be reviewed when the piping fabrication drawings are submitted. Electrical code clearances will need to be maintained for all new piping.

* Section 15500 3.5.I.1 Requires a full time employee of the piping manufacturer to be on site at all times including loading and unload, placement, installation and testing. This prohibits certified installers, distributors or manufacturers reps. Please explain the need for this requirement as it seems excessive Piping manufacturer to be present for testing and inspection and final approval before the underground piping is covered.

* Section 15500 3.6.C, D,E,F & G are completely subjective and have no established standard other than opinion. Please provide a standard. The criteria is that we want the best qualified/certified welders that you have especially for the HPS.

* Section 15500 3.11 A.1 Calls for an approved chemical company but gives no list of approved companies or a cleaning/flushing standard. Please provide both Use a company that meets the requirements of the State of R.I. to perform chemical treatment work.

* Section 15990 1.1. A –F. Please provide limits of responsibilities to balance system. If maximum amp loads are achieved and volume is not obtained system wide, where is project limitation. Section 1.2 list an end to this, but how much time and money is required to determine it is not achievable. Very vague and subjective. Consult an approved water balancer for pricing.

* Section 15995 1.3.B makes the mechanical contractor responsible for nearly the entire building. Is this the intent of this contract No.

* Section 15995 1.4.C Calls for work specific to the "Commissioning Agent" but prior sections state there will not be a commissioning agent. Please clarify Same in sections 1.6.D which list duties for the Commissioning Agent.

The Commissioning Agent will be the Engineer of Record and the DOC Engineering & Maintenance Staff.

*Section 15995 3.2.A.1.i calls for manufacturers reps to be on site for start up but doesn't list any specific equipment leaving this up to potentially having large crowds of reps on site for start up. Please list required rep's

Steam PRV valve Rep.

Condensate Pump Rep.

Water Heater Rep.

*Section 15995 3.4.D.3.b Calls for a simulated Valve Failure. Please explain what is trying to be shown and what type of failure we are being asked to create. Since this is only a high pressure system, are we testing the existing relief valves and wouldn't they need to be rebuild after they blow?

All PRV valves will be new and shall have stamped certification nameplates and paperwork for factory testing.

Additional Notes:

1. Provide expansion loops, anchors and guides for the new 3" LPC piping shown on H5.3
2. Anchor and guide the new LPC piping similar to what was shown for the existing LPS piping shown on drawings H5.2 and H5.3.
3. The current Power plant is in the process of commissioning the newly installed Desuperheaters to cool the HPS steam down to about 350 deg. F. If this work is not completed by the beginning of the installation of this project then a new Steam Desuperheater may be required in order to protect the newly installed piping systems. The desuperheater would need to be installed upstream of the new steam PRV valves. The DOC and the State of R.I. to decide. Please provide an Add Alternate price (Add Alternate #4) for the following (see attached revised Bid Form):

- A. Installation of a Copes Vulcan VAD Desuperheater - meeting the attached data sheet and drawing requirements. Contact for an acceptable Vendor is:

Kurt C. Anderson
Chalmers & Kubeck North
kurtcander@aol.com
207-838-2232 cell

Provide all associated factory controls including inline temperature sensor, valve actuator and standalone controller. All control and power wiring for this valve to be provided and installed by this contractor.

- B. The desuperheater will require a 1-1/2" domestic cold water feed with 1-1/2" Watts 009 backflow preventer and duplex water pressure boosting system (VFD controlled) capable of taking 10 gpm and raising it from 45 psig to 125 psig. The booster system shall be equal to a Syncroflo #10VMS85PGPC. Provide all electrical costs for wiring the booster system from a local power panel within 100 ft. of the installation location. Contact for an acceptable Vendor is:**

Don Rzasa, Applications Engineer

c/o Gustavo Preston Co., Inc.

23 Industrial Avenue

Chelmsford, MA 01824

Direct: 978 654-6946

E-mail: DonRzasa@GustavoPreston.com



Chalmers & Kubeck North

"Solutions for the Process & Energy Industries"

24-34 Elise Street
Westfield, MA
01085

www.candknorth.com

Tel# (413) 568-2461
Fax# (413) 568-6588

QUOTATION

Company: Arden Engineering

Phone: 401-727-3500

To: Tim Elliott

Fax:

E-Mail:

Date: March 3, 2013

From: Kurt C. Anderson
kurtcander@aol.com

No. of Pages: 2 + data sheet

Subject: Pastore Desuperheater ACI Maximum

Quote No.: 030-313-KA-2

Please advise if all pages were not received.

Tim

Following up on your recent e-mails, please find listed below components required for the desuperheater station including temperature measurement and control of the desuperheater spray water control valve. Please feel free to give a call with any questions.

ITEM	QTY	DESCRIPTION	UNIT PRICE	AMOUNT
1	1 lot	<p>Copes Vulcan 6" VAD style desuperheater ASTM A-106-Gr B 300# RF flanged process connections; 1" 300# RF flanged coolant connection -please refer to detailed Spec Sheet and Drawing attached</p> <p>Copes Vulcan 1" Socket Weld A-216 WCB body General Service Globe Control Valve; Cascade Trim; size 60 style 700 air to open spring to close actuator; PS 2 Positioner 4-20 ma input; Air F/R; SS Swagelok fittings and tubing -please refer to detailed Spec Sheet and Drawing attached</p> <p>Siemens Head Mount Temperature Transmitter with Type J Thermocouple sensing element and 304 SS thermowell: -pn: 7NG3212-0NN00 SITRANS TH Temperature Transmitter 7NG3212-0NN00 = SITRANS TH300 temperature transmitter: 4 to 20 mA, HART; STI/ATI THERMOCOUPLE/THERMOWELL ASSY. 1BJ-11.5-C6Y01B0U3-1-0 TYPE J, 11.5" LONG, 316SS, .250" O.D., SPRING LOADED, N.U.N, CAST ALUMINUM HEAD, UNGROUNDED HOT JUNCTION, 3" BARE LEADS, SINGLE ELEMENT. T75H2U3.5304 3/4"H.260 U3.5 304 L5.25" 1/2" NPT INSTR. CONN. .875-.625" O.D.</p> <p>Field Mount Temperature Controller mounted in Gray Wall Mount Enclosure- customer to provide 120 VAC prime power and field</p>		

		interconnect wiring to field mounted Siemens temperature transmitter and Copes Vulcan 1" Coolant Water control valve Siemens 353 Controller capable of providing PID Temperature control loop: -pn: TGX:353A4FNCNB4 -120 VAC prime power The Model 353 Process Automation Controller is a standalone, microprocessor-based industrial controller designed for a small unit batch or continuous process. It can serve as a simple single loop controller with complete control and logic functions. The Model 353s standard Etherent and MODBUS communication enable it to function as an integral element in a plant control/information system		

Delivery: 18 wks ARO, subject to prior sale.
 FOB: Shipping point.
 Shipping & Handling: Prepaid and add.

Please advise if faster delivery is required.
 Terms: Net 30 days
 Quote Duration: 30 days

Please review materials of construction, conditions of service, and all details and specifications stated herein or on attachments to verify our understanding of your requirements. If you wish to place an order, please enter in the name of **Chalmers & Kubeck North**. If you are tax exempt, please advise of your tax-exempt number at time of order placement. If I can be of further assistance, please do not hesitate to contact me. Thank you.

Best Regards,

Kurt C. Anderson
 Chalmers & Kubeck North
 Kurtcander@aol.com

Cc: Mike Bedard, CKN

COPES-VULCAN, SPX Valves & Controls

McKean, PA USA

Phone: 814-476-5800 Fax: 814-476-5854

**VAD DESUPERHEATER
SPECIFICATION SHEET**

Customer Name: **Arden Engineering Constructors**
 Customer Inquiry:
 Customer PO:
 Ultimate User: **ACI**
 Tag:
 Application: **Desuperheater**

CV Inquiry: **91-101256-10**
 CV Job:
 CV Job Ref:
 CV Serial #:
 Item: **1**
 Quantity: **1**

	Inlet						Outlet				Conditions @ Water Valve Inlet			
	Flow	Press	Temp	Enth	Vel	Sp Vol	Flow	Press	Temp	Enth	Flow	Press	Temp	Enth
	lb/hr	psig	deg F	btu/lbm	ft/min	ft ³ /lbm	lb/hr	psig	deg F	btu/lbm	lb/hr	psig	deg F	btu/lbm
	10000	90	580	1319	4830	5.815	11022	89.6	350	1199	1022	100	60	28.05
	4000	90	580	1319	1932	5.815	4406	89.9	350	1199	406	100	50	18.05

Design Pressure: 100 psig Design Temperature: 600 deg F Pipe Size and Schedule: 6" Sch 80	Coolant Press Req'd @ VAD	Water Valve Prelim Cv
	psig	
	96.3	1.1
	95.5	0.38

Description: **6/6" VAD**
 Pressure Class: **ANSI 300**
 Body Material: **ASTM A-106 GrB**
 Inlet Connection: **6" Flanged ANSI 300 Serrated RF**
 Outlet Connection: **6" Flanged ANSI 300 Serrated RF**
 Coolant Connection: **1" Flanged ANSI 300 Serrated RF**
 Maximum Steam Pressure Drop: **0.382 psi**
 Required Capacity: **10,000 lb/hr**
 Maximum Available Capacity (1/3 Sonic @ Annulus): **35545 lb/hr**
 Minimum Distance Required to Temp Sensor: **26.3 ft (8.0 m)**
 Min. Length of Straight Upstream Pipe: **2.7 ft (.8 m)**
 Min. Length of Straight Downstream Pipe: **13.2 ft (4.0 m)**

COMMENTS

Refer to Installation Guidelines - GN-09

Selection Mode: **AutoSelect On**

Rev	Initials	Description	Date
2	CRR	CL.300	Mar-01-2013
1	CRR	SIZING REVIEW	Mar-01-2013
0	kca	prelim	Mar-01-2013

CUSTOMER NAME: Arden Engineering Constructors

USER NAME: ACI

CUSTOMER PO:

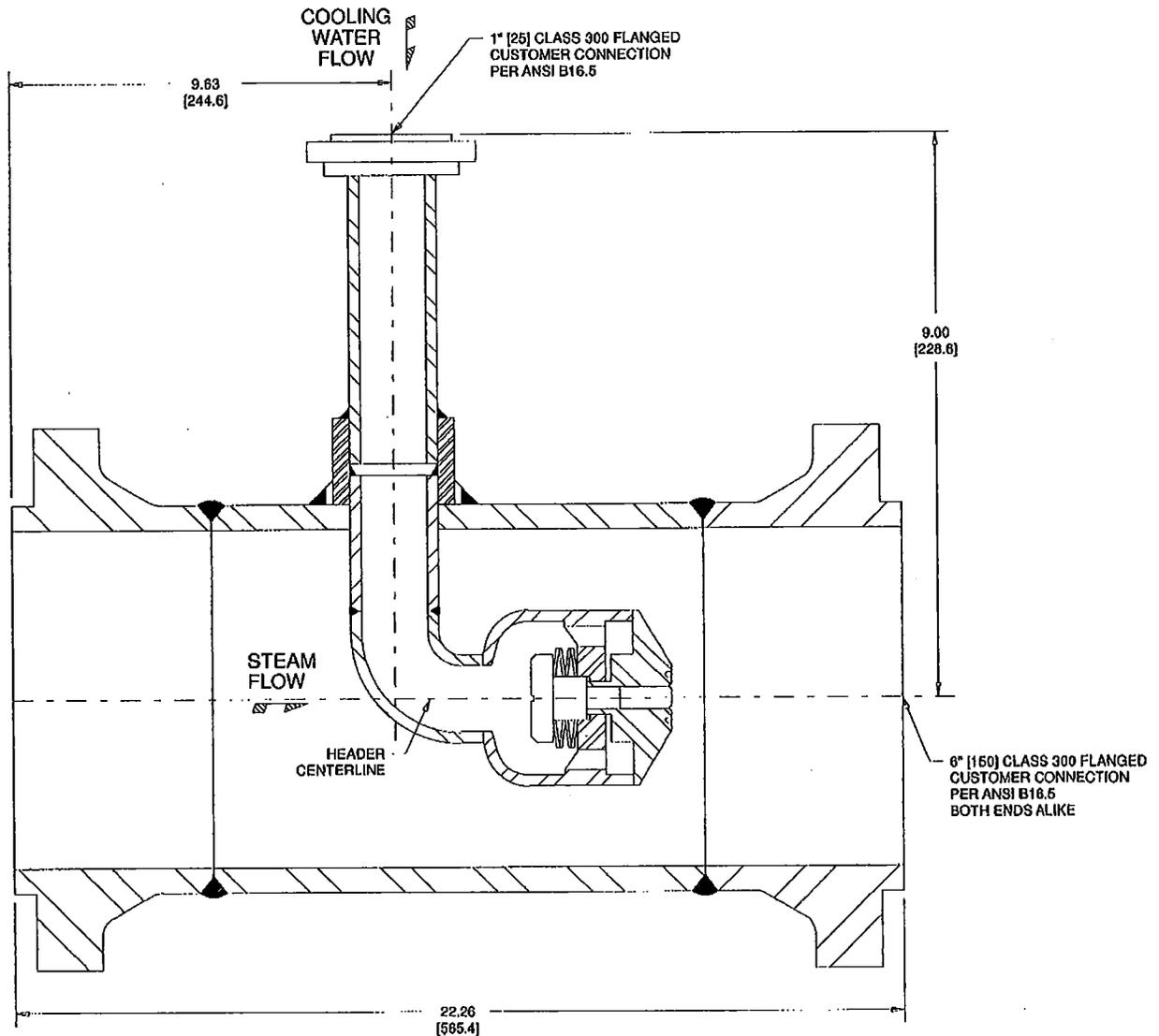
CV INQUIRY: 91-101256-10

TAG:

ITEM: 1

SERIAL #:

APPLICATION: Desuperheater



NOTES:

1. ALL DIMENSIONS ARE IN INCHES AND ARE REFERENCE UNLESS OTHERWISE SPECIFIED. BRACKETS [] INDICATE METRIC EQUIVALENTS.
2. COOLANT FLANGE IS RAISED FACE WITH SERRATED FINISH PER PARAGRAPH 6.4.4.3 PER ANSI B16.5.
3. INLET FLANGE IS RAISED FACE WITH SERRATED FINISH PER PARAGRAPH 6.4.4.3 PER ANSI B16.5.
4. OUTLET FLANGE IS RAISED FACE WITH SERRATED FINISH PER PARAGRAPH 6.4.4.3 PER ANSI B16.5.
5. APPROX. DESUPERHEATER WEIGHT: 110 lbs [50 kg]

THE INFORMATION CONTAINED HEREIN IS PROPRIETARY TO COPE-S-VULCAN AND IS NOT TO BE REPRODUCED OR GIVEN TO ANY OTHER FACILITY WITHOUT THE PRIOR WRITTEN CONSENT OF COPE-S-VULCAN. ANY USE OF THIS INFORMATION IN ANY WAY DETRIMENTAL TO COPE-S-VULCAN IS PROHIBITED.

COPE-S-VULCAN, SPX Valves & Controls

McKean, PA USA

Phone: 814-476-5800 Fax: 814-476-5854

VAD DESUPERHEATER
6/6" CLASS 300
6" [150] HEADER SIZE
OUTLINE DIMENSIONS

CERTIFIED CORRECT BY: _____ DATE: _____

COPES-VULCAN, SPX Valves & Controls

McKean, PA USA

Phone: 814-476-5800 Fax: 814-476-5854

**CONTROL VALVE
SPECIFICATION SHEET**

Customer Name: **Arden Engineering Constructors**

CV Inquiry: **91-101256-10**

Customer Inquiry:

CV Job:

Customer PO:

CV Job Ref:

Ultimate User: **ACI**

CV Serial #:

Tag:

Item: **2**

Application: **Desuperheater WATER CONTROL VALVE**

Quantity: **1**

Description: **1" (25 mm), CL150, WCB, SW, GS-700-60 RA**

FLUID: **Water**

SERVICE CONDITIONS

	FLOW (lb/hr)	P1 (psig)	P2 (psig)	Temp. (deg F)	Cv	CV (%)	Travel (%)	Valve Outlet Vel. (ft/sec)	Noise * (dBA)	Remarks
	1022	100	96.3	60	1.06	64%	63%	0.8	<75	
	404	100	95.5	50	0.38	23%	29%	0.3	<75	
SHUTOFF		200	0	60	Allowable Leakage:			* Estimated Noise Level with 0" of Insulation		
DESIGN		200	60	Class V						

BODY AND BONNET

Style: **GS - General Service, Globe**
 Size: **1 Inch**
 ASME Class: **150 Standard**
 Body Inlet: **Socket Weld per ANSI B16.11**
 Body Outlet: **Socket Weld per ANSI B16.11**
 Material: **A-216 WCB**
 Inlet Pipe: **1 In. (25 mm), Sch 40**
 Outlet Pipe: **1 In. (25 mm), Sch 40**

Bonnet Type: **Bolted**
 Packing Material: **Teflon**
 Packing Hardware: **Stainless Steel**
 Packing Nut Torque: **4 ft-lbs.**
 Options: **Single Packed**
 Service: **Intermittent Modulation**

TRIM

Size: **#5 with 4 Ports**
 Style: **LOW FLOW PLUG (UnBalanced)**
 Flow Direction: **UNDER THE WEB**
 Stem Diameter: **.75 In.**
 Characteristic: **CASCADE, MEDIUM**

Seat Type: **METAL**
 Trim Material: **400/47 SST**
 Max. Cv Available: **1.67 @Max. Trim Travel of 1" (±1/8)**
 Min. Controllable Cv of Trim: **0.02**

ACTUATOR

Style: **700 DIAPHRAGM**
 Size: **60 (Square Inch)**
 Action: **Spring Closing (Reverse)**
 Handwheel: **None**
 Frame Material: **Ductile Iron**
 Air Pressure Available: **60 psig**
 Air Pressure Required: **27 psig**

Actuator Mounting Style: **Screwed Ring**
 Actuator Spring: **357563**
 Spring Rate: **720 (lbs/inch)**
 Max. Stem Thrust Required to Close: **420 (lbs)**
 Max. Stem Thrust Required to Open: **153 (lbs)**
 Spring Precompression (Diaphragm Air Pressure): **7 (psig)**
 Pressure @ Full Valve Travel (With No Internal Valve Pres.): **19 (psig)**

ACCESSORIES

Positioner: **Copes SIPART PS2, Single Acting**
 Positioner Input Range: **4-20 mA**
 Position FeedBack Module (4-20ma) : **NO**
 Alarm Module : **NO**
 HART Module : **YES**

Airlock: **None**
 Filter/Regulator: **SMC AW20-N02-CZ**
 Solenoid Valve: **None**
 Booster Relay: **None**
 Additional Acc'y:

Qty: **1**

Piping: **Stainless Steel Tubing (Swagelok)**
 Limit Switches: **None**

COMMENTS

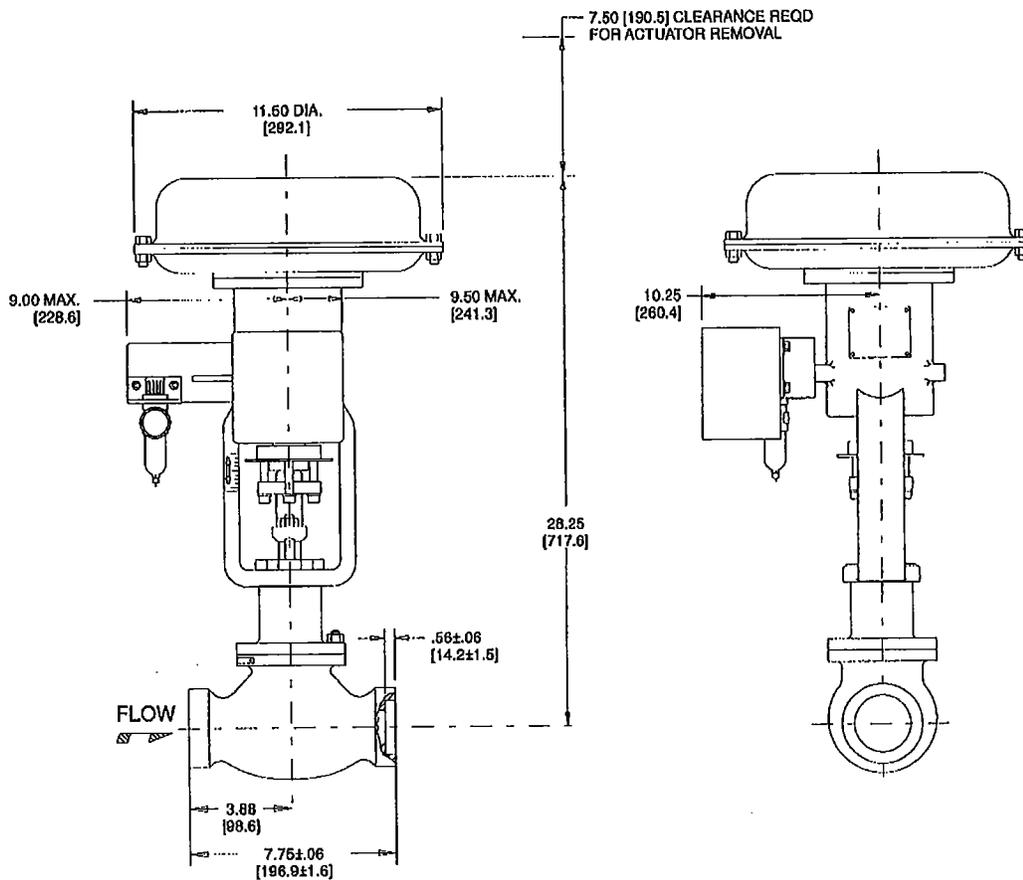
Model = **GS1**
 Body Option: **BDY501010201**
 Bonnet Option: **BNT501170201**
 Trim Option: **TRM501931510402**
 Hardware Pack Option: **HDP5114212**
 Actuator Option: **ACT511020411**
 Stem Option: **STM50201041032**
 Gasket Option: **GSK5019902061**
 Accessory Kit Option: **AC7A25*00022080**
 I.D. Plate: **OPT187019**

Rev	Initials	Description	Date
1	CRR	SIZING REVIEW	Mar-01-2013
0	kca	prelim	Mar-01-2013

CUSTOMER NAME: Arden Engineering Constructors
 USER NAME: ACI
 CUSTOMER PO:
 CV INQUIRY: 91-101256-10
 TAG:
 ITEM: 2
 SERIAL #:
 APPLICATION: Desuperheater WATER CONTROL VALVE
 VALVE END CONNECTIONS:
 Socket Weld per ANSI B16.11
 ACTUATOR:
 Reverse Acting - Spring to close
 Increase in control pressure opens valve

ACCESSORIES:
 POSITIONER: Copes SIPART PS2, Single Acting
 1/2" NPT customer conduit connection
 AIRSET: SMC AW20-N02-CZ [*]
 1/4" NPT customer air supply connection

* NOTE: Accessory picture may not be pictorially correct



NOTES:

1. ALL DIMENSIONS ARE IN INCHES AND ARE REFERENCE UNLESS OTHERWISE SPECIFIED. BRACKETS INDICATE METRIC EQUIVALENTS.
2. APPROX. TOTAL VALVE WEIGHT: 112 lbs [51 kg]

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COPES-VULCAN, SPX Valves & Controls
 McKean, PA USA
 Phone: 814-476-6800 Fax: 814-476-5854

1" [25] CLASS 150
 GS SERIES VALVE
 SOCKET WELD ENDS
 WITH MODEL 700-60 RA ACTUATOR

VALVE OUTLINE DIMENSIONS

CERTIFIED CORRECT BY: _____ DATE: _____

Controllers

Model 353 Process Automation Controller

With Ethernet Communication (Design Level B)
Introduction

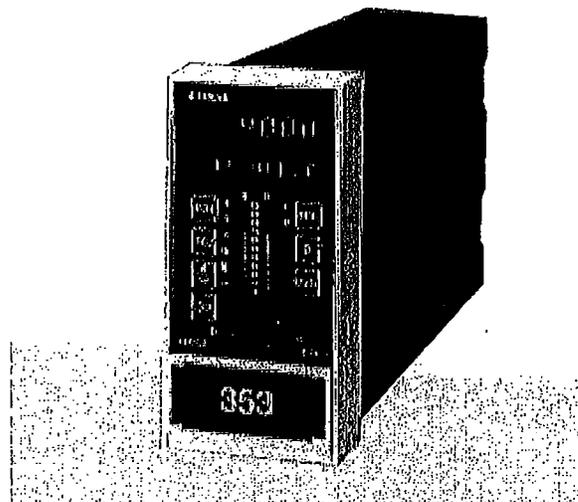
Features & Benefits

- ▶ Affords easy integration with and migration to existing systems
- ▶ Multiple loop capabilities for indication, control, logic, or sequencing accommodate comprehensive process control needs
- ▶ Scalable hardware provides lower entry costs, without limiting future needs
- ▶ Full configuration capability via front faceplate push-buttons allows quick field changes without requiring additional tools
- ▶ Ethernet communication is standard, providing peer-to-peer communications.
- ▶ RS485 MODBUS[®] network connection allows multi-drop wiring for operation, monitoring, troubleshooting, or configuration from a system workstation
- ▶ Front panel PC connection accommodates local configuration, monitoring, or troubleshooting using the graphical configuration software
- ▶ Real Time Clock provides status output based on time of day. Removeable configuration media stores a complete backup copy of the control strategy configuration
- ▶ Factory Configured Options (FCOs) facilitate fast configuration for common applications
- ▶ Password protection provides individual security for various plant personnel
- ▶ Graphical configuration program provides a choice of function block or ladder logic configuration
- ▶ Short case design allows mounting in 12" deep cabinets
- ▶ Coated circuit boards ensure reliable operation and environmental integrity

Description

The Model 353 Process Automation Controller is a stand-alone, microprocessor-based industrial controller designed for a broad range of process applications. It can serve as a simple single-loop controller or as a multi-loop controller with complete control and logic functions for a small unit batch or continuous process. The Model 353's standard Ethernet communication enables it to function as an integral element in a plant system.

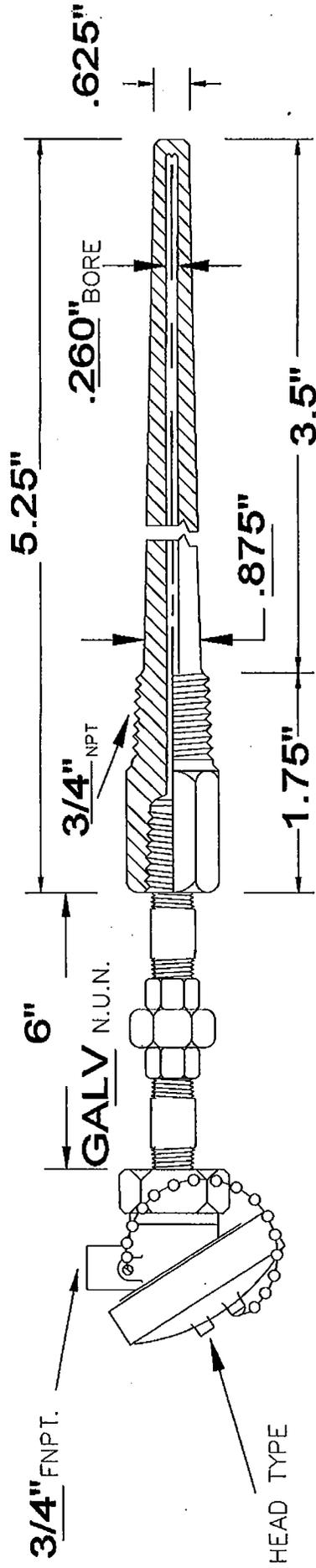
Loops are configured for control, sequence, or logic as needed within the Model 353. Each configured loop can have a virtual operator display that is viewed locally using the LOOP button on the faceplate and is mapped to network communication for a plant operator station. Alarm management is handled



using the L (Loop) & S (Station) indicator lights along with the priority assignments and flashing options of each alarm.

User defined pushbuttons in each loop can be used for traditional functions, such as Console/Local, External/Internal Switching or individual user requirements, such as Start, Stop or Jog. Multiple variables are displayed on the operator faceplate and viewed using the D button. User defined units assigned to each variable are displayed via the UNITS button. Complete configuration of the Model 353 is available using buttons located behind the flipdown ID door.

A built-in library of preconfigured control strategies (FCOs) enable selection of common basic controller types for quick field set-up. A large selection of reusable function blocks enable simple changes to FCOs or the design of a custom control strategy to meet the needs of specific process control application. The Model 353 Configuration Utility accommodates design, downloading, uploading, and on-line monitoring capabilities for improved management of controller configurations. In addition, sequencer/logic loops can be configured and monitored on-line in ladder diagram format for those more familiar with this language.



CAST NO BLOCK
ALUM.

T/W MAT'L 304SS

ITEM# 1

QTY 2

CALIB J

NO ELEMENTS SINGLE

HJ UNGRND.

MAT'L 316SS

SPRING LOADED YES

DWG. BY	DWH	REV.	0
DATE		DWG. NO.	
STI MFG.			

Bid Form
SECTION 00300

Date: _____

To: The Department of Administration
Office of Purchases
One Capitol Hill
Providence, Rhode Island 02908

Project: Plumbing Upgrade Project
Adult Correctional Institute
40 Howard Avenue
Cranston, RI 02920

Submitted By: _____
(Include Bidder's
Address, Tel., Fax,
and License No.
if Applicable) _____

1.1 BID

Having examined the Place of the Work and all matters referred to in the "Instructions to Bidders" and "Supplementary Instructions to Bidders", and in the Contract Documents prepared by the Engineer, Arden Engineering Constructors, LLC, for the above mentioned project, we the undersigned, hereby propose to enter into Contract to perform the Work for the sum of

BASE BID _____
(Written and Numerically)

ADD ALTERNATE #1 _____
(Written and Numerically)

ADD ALTERNATE #2 _____
(Written and Numerically)

ADD ALTERNATE #3 _____
(Written and Numerically)

ADD ALTERNATE #4 _____
(Written and Numerically)

STATE of RHODE ISLAND

DEPARTMENT of ADMINISTRATION DIVISION of PURCHASES

MANDATORY PRE-BID CONFERENCE ATTENDANCE SHEET MAXIMUM SECURITY HVAC STEAM DISTRIBUTION UPGRADE

BID # 7461213

DATE 2/22/13

TIME STARTED

10:00 AM

TIME ENDED

11:40

NAME

COMPANY NAME

EMAIL (OR PHONE)

Jim Grundy

Atlantic Controls

Jim@AtlanticControlSystems.com

Tim Wood

MJ Daly

Twood@mjdalyllc.com

Carl Nordstrom

Tower construction

sal@Towerconstructioncorp.com

401-944-3770

TIM COYNE

J Coyne Co

Tim@Jcoyneco.com

Derek Coyne

J Coyne Co

derek@jcoyneco.com

JOSÉ BHERANZ

DELTA MECHANICAL

J.BHERANZ@DELTA MECH LLC.COM

Luke Bahry

Bahry Building Co.

MB@BahryBuilding.com

JOE VELA

ASPER DESIGN GROUP

JVELA-ASPER@CD.COM

Tim Elliott

Arden Eng.

telliott@ardeneng.com

José M. G. Estrella

J.O.C.

JMG.ESTRELLA@GMAIL.COM

STATE of RHODE ISLAND

DEPARTMENT of ADMINISTRATION DIVISION of PURCHASES

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BID # 7461213

DATE 2/22/13

TIME STARTED

10:00 AM

TIME ENDED

11:40

NAME

COMPANY NAME

EMAIL (OR PHONE)

William Miller

Miller Mech Inc.

401-435-9500
MillerMechanical@cox.net

Patrick Toohy

Miller Mech. Inc.

Toborg23@verizon.net

David Adams

SPRINT PUEBLOS
