

DOCUMENT 00911

ADDENDUM NUMBER 1

Issued: July 29, 2016

**North Bay Water Reuse Program  
Sonoma Valley County Sanitation District Treatment Plant  
Pumping and Piping Upgrades**

FROM: Sonoma Valley County Sanitation District  
404 Aviation Boulevard  
Santa Rosa, CA 95403-9019

TO: Prospective Bidders

This Addendum forms a part of and modifies the Project Manual dated June 2016. Bidder shall acknowledge receipt of this Addendum in the space provided in Document 00400 (Bid Form).

Modified text is indicated as follows: Double-underline designates text to be inserted; ~~strikeout~~ designates text to be deleted.

Addendum Number 1 consists of 8 pages (size 8 1/2" x 11") and 1 revised Drawing.

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**I. General Changes**

A. No changes.

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**II. Changes to Prior Addenda**

A. N/A.

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**III. Changes to Introductory Information and Bidding Requirements**

A. At all occurrences:

1. Change Bid Opening date from August 2 to August 9, 2016.

B. Document 00100 (Advertisement for Bids):

1. Modify Paragraph 9 as follows:

**9. RESTRICTIONS ON SUBSTITUTIONS.** As a limitation on Bidder’s privilege to substitute “or equal” items, Owner has found that certain items are designated as Owner standards and certain items are designated to match existing items in use on a particular public improvement either completed or in the course of completion or are available from one source. As to such items, Owner will not permit substitution. Such items are: magnetic flow meter, pressure transmitter, valve actuator, air release valve, automatic self cleaning strainer, Programmable Logic Controller, ~~and~~ Motor Control Center, industrial automation software and licenses, and rack-mounted PC server.

- C. Document 00200 (Instructions to Bidders):
1. Insert the following after Paragraph 6.D.1)g:
    - [h. Industrial automation software and licenses](#)
    - [i. Rack-mounted PC server](#)
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#### IV. Changes to Contracting Requirements

- A. No changes.
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#### V. Changes to Conditions of the Contract

- A. No changes.
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#### VI. Changes to Specifications

- A. Section 01100 (Summary):
1. Modify Paragraph 1.7B.1 as follows:
    - B. Special operational constraints include the following:
      1. ~~Power Pump or pipeline s~~Shutdowns: Notify Owner in writing at least 2 Business Days prior to the need for a shutdown of any of the existing electrical, pumping, pipeline, or treatment systems.
    2. Modify Paragraph 1.7C as follows:
      - C. ~~Pump or p~~Pipeline shutdown requirements:
    3. Modify Paragraph 1.7D as follows:
      - D. Unless otherwise approved by Owner, number of shutdowns shall not exceed 6 for Work on the Project, including, but not limited to [shutdown of treatment plant effluent pumps for](#):
  - B. Section 11005 (Equipment: Basic Requirements):
    1. Insert the following after Paragraph 2.2I.9:
      - [10. Provide insulated bearing carrier on the non-drive end for vertical shaft motors.](#)
      - [11. Provide shaft grounding ring on pump motors:](#)
        - [a. Factory installed, maintenance free, circumferential, bearing protection ring with conductive microfiber shaft contacting material.](#)
        - [b. Electro Static Technology AEGIS SGR Bearing Protection Ring or Approved Equal.](#)
  - C. Section 13441 (Control Loop Descriptions):
    1. Modify Paragraph 3.1B.2 as follows:
      2. Reservoir R5 export pumps RWP 020 and 030 can be operated in 2 modes, manual or automatic. [R5 export pumps shall be interlocked with MOG105 such that the R5 export pumps shall not be allowed to run unless MOG105 is fully open.](#)
    2. Insert the following after Paragraph 3.1C:
      - [D. Provide indications and alarms for all points shown on the P&ID's.](#)
      - [E. Wetwell inlet gate, MOG105 and Reservoir Inlet Gate, MOG106:](#)
        - [1. Indicate valve position on screen.](#)
      - [F. Provide screen for acid feed pump manual on-off command, speed command, speed feedback, acid flow rate, and acid bulk storage tank level.](#)

G. Provide screen for existing Aquashade feed pump manual on-off command, speed command, speed feedback, flow rate and Aquashade bulk storage tank level. Provide capability for flow pacing from FIT-001 flow signal.

D. Section 13455 (Programmable Logic Controllers (PLC) and PLC Modifications):

1. Modify Paragraph 2.1 as follows:

**2.1 PRODUCTS**

A. ~~Existing RTU R5, add~~ Rockwell Automation, Allen-Bradley Compact Logix Model 1769-L-33ER processor, back plane, required I/O modules and FO network interface, no substitutions.-

1. This PLC to replace existing Modicon Quantum RI/O in RTU-R5.

~~B. Existing PLC 7, Filter Building, Modicon Quantum series, modules as indicated.~~

~~C.B.~~ Industrial PC panel mounted in MCC 10 HMI Touch panel PC.

1. Panel mounted
2. 21-22" 1920x1080 resolution
3. Intel Core I5 or greater
4. 8GB memory
5. Windows 7-64 bit Enterprise
6. 150GB or larger SSD

~~D.C.~~ Dell PowerEdge R330 Server, TPM 2.0, rack-mounted PC server for SCADA Wonderware Historian ~~rack mounted server installed in Main Control Building.~~ No substitutions.

1. Chassis with up to 4, 3.5" Hot Plug Hard Drives and Embedded SATA
2. Intel® Xeon® E3-1270 v5 3.6GHz
3. PCIe Riser
4. 16GB UDIMM, 2133MT/s, ECC
5. RAID 5, S130, Software RAID
6. 1TB 7.2K RPM SATA 6Gbps 3.5in Hot-plug Hard Drive (4 units)
7. On-Board LOM 1GBE Dual Port (BCM5720 GbE LOM)
8. iDRAC8 Enterprise with vFlash 8GB SD
9. DVD ROM, SATA, Internal
10. Bezel
11. ReadyRails™ Static Rails for 2/4-post Racks
12. Performance BIOS Setting
13. Dual, Hot-plug, Redundant Power Supply, 350W
14. C13 to C14, PDU Style, 13 Amp, 2 feet Power Cord N.Am. (2 units)
15. No Systems Documentation, No OpenManage DVD Kit
16. Windows Server® 2012R2, Standard Ed, Factory Inst, No MED, 2SKT, 2VM, NO CAL
17. Media Kit w/Factory Inst STD DGRD Images
18. 3 Years ProSupport Plus and Mission Critical 4HR On-Site Service

2. Modify Paragraph 2.3D.1.a as follows:

a. Provide programing for control and monitoring of new and existing devices as specified and indicated ~~Provide all hardware and programming required to provide communication between the PLC and the existing Wonderware SCADA.~~

3. Modify Paragraph 2.3D.1.b as follows:
  - b. Provide programing for integration of PLC control and monitoring functions with Wonderware SCADA~~Provide programming to accomplish all control and monitoring requirements of the Drawings and Specifications.~~
4. Delete Paragraph 2.3D.3 in its entirety.  
~~3. Add industrial panel PC with Wonderware 2014 R.2 for MCC 10.~~
5. Delete Paragraph 2.3D.4 in its entirety.  
~~4. Add rack mount Wonderware Historian PC server at Main Control building.~~
6. Insert the following as Paragraph 3.4A and renumber remaining paragraphs accordingly:
  - A. Provide all of the following I/O and wire to existing terminal strips and add terminal strips for all new points.

[for remaining changes, use new paragraph numbering]
7. Modify Paragraphs 3.4B.13, 3.4B.14, and 3.4B.15 as follows:
  13. ~~\*~~+Strainer, STR-011, Run.
  14. ~~\*~~+Strainer, STR-011, Auto.
  15. ~~\*~~+Strainer, STR-011, Fail.
8. Modify Paragraphs 3.4B.22 and 3.4B.23 as follows:
  22. \*Wetwell Inlet Gate, MOG 105, Open.
  23. \*Wetwell Inlet Gate, MOG 105, Closed.
9. Delete Paragraphs 3.4B.24 and 3.4B.27 in their entirety and renumber remaining paragraph(s) accordingly.
  - ~~24. \*Inlet Gate, MOG 105, Remote Mode.~~
  - ~~27. \*Rese4rvoir Gate, MOG 106, Remote Mode.~~
10. Modify Paragraphs 3.4B.24 and 3.4B.25 as follows:
  24. \*Reservoir Inlet Gate, MOG 106, Open.
  25. \*Reservoir Inlet Gate, MOG 106, Closed.
11. Modify Paragraph 3.4B.26 as follows:
  26. \*Acid Feeder, Run.
12. Insert the following after Paragraph 3.4B.26 and renumber remaining paragraph(s) accordingly:
  27. Acid Feeder, Fault.
13. Modify Paragraph 3.4B.28 as follows:
  28. \*Aquashade Feeder, Run.
14. Insert the following after Paragraph 3.4B.28 and renumber remaining paragraph(s) accordingly:
  29. Aquashade Feeder, Fault.
15. Modify Paragraph 3.4C.1 as follows:
  1. ~~\*~~+Export Pump, RWP-010, Start/Stop CMD.
16. Insert the following after Paragraph 3.4C.3:
  4. Acid Feeder run CMD.
  5. Aquashade Feeder run CMD.
17. Modify Paragraph 3.4D.4, 3.4D.6, 3.4D.12, and 3.4D.13 as follows:
  4. ~~\*~~+PIT-025, Export Pressure.
  6. ~~\*~~+Export Pump 010, FIT-012, Pump RWP-010, Flow.

- 12. ~~+~~\*LIT~~0~~-003, Reservoir 5, Level.
- 13. ~~+~~\*FIT-001, Reservoir Inlet Flow.
- 18. Insert the following after Paragraph 3.4D.13:
  - 14. Acid Feeder, Speed.
  - 15. Aquashade Feeder, Speed.
  - 16. Acid Storage Tank, Level.
  - 17. Aquashade Storage Tank, Level.
  - 18. Acid Flow.
  - 19. Aquashade Flow.
- 19. Modify Paragraph 3.4E.4 and 3.4E.5 as follows:
  - 4. \*Acid Feeder, ~~Speed CMD.~~Pacing
  - 5. \*Aquashade Feeder, ~~Pacing/~~Speed CMD.
- 20. Insert the following after the footnote under Paragraph 3.4E.5:
  - \*Existing I/O currently on RIO-R5 to be transferred to PLC-R5.
  - +Existing wired to terminal strips only.
- 21. Insert the following new Article 3.6 after Article 3.5:

**3.6 HARDWARE SCHEDULE FOR PLC AND SCADA**

<u>Hardware</u>	<u>Quantity</u>	<u>Location</u>
<u>Allen Bradley Compact Logix processor</u>	<u>1</u>	<u>RTU-R5 replacing existing Modicon Quantum RI/O</u>
<u>Industrial HMI Touch panel PC</u>	<u>1</u>	<u>MCC 10</u>
<u>Rack-mounted PC server</u>	<u>1</u>	<u>Main Control Building in existing rack</u>

E. Section 15061 (Pipe and Pipe Fittings: Basic Requirements):

- 1. Modify Paragraph 1.2D as follows:
  - D. ANSI/AWWA Ductile-Iron Compact Fittings, ~~3 Inch Through 16 Inch, for C153/A21.53 Water and Other Liquids~~
- 2. Modify Paragraph 3.8B.2.a.2)(a)(v) as follows:
  - (v) Fittings: Either ANSI C110 ductile or gray iron. Optional ANSI C153 ductile iron compact fittings ~~for sizes 3 to 16 Inch.~~
- 3. Modify table in Paragraph 3.8B.2.a.2)(a)(vi) as follows:

<u>Length of Restrained Joints:</u>	
<u>DEGREE OF BENDFITTING</u>	<u>REQUIRED DISTANCE ON EACH SIDE OF BENDFITTING</u>
<del>0 to 11-1/4 Degrees Bend</del>	20 Foot
<del>11 3/8 to 22 1/2 Degrees Bend</del>	40 Foot
<del>22 5/8 to 45 Degrees Bend</del>	75 Foot
<del>45 1/8 to 90 Degrees Bend</del>	180 Foot
<u>Tee, Cap, Plug, or Blind Flange</u>	<u>180 Foot</u>

- 4. Modify Paragraph 3.8B.2.a.2)(b)(i) as follows:
  - (i) Material: PVC C900, ~~DR14 (200 psi)~~Class 150 or PVC C905 ~~DR18 (235 psi)~~Class 165.

- 5. Modify Paragraph 3.8B.2.a.2)(b)(vi) as follows:
  - (vi) Fittings: Either ANSI C110 ductile or gray iron. Optional ANSI C153 ductile iron compact fittings ~~for sizes 3 to 16 Inch.~~
- 6. Modify Paragraph 3.8B.2.a.2)(b)(vii) as follows:
  - (vii) Joints: Push-on with mechanical (stuffing box type) joints at fittings and flanged joints at valves. Restrain joints per the ~~following~~ table [in Paragraph 3.8B.2.a.2\)\(a\)\(vi\) above.](#)

Length of Restrained Joints:	
DEGREE OF BEND	REQUIRED ON EACH SIDE OF BEND
0 to 11 1/4 Degrees	20 Foot
11 3/8 to 22 1/2 Degrees	40 Foot
22 5/8 to 45 Degrees	75 Foot
45 1/8 to 90 Degrees	180 Foot

- 7. Modify Paragraph 3.8B.2.a.2)(c)(vi) as follows:
  - (vi) Joints: Butt-welded with rigid ANSI C207 flanges at valves and structure penetrations. [Restrain joints per the table in Paragraph 3.8B.2.a.2\)\(a\)\(vi\) above.](#)

Length of Restrained Joints:	
DEGREE OF BEND	REQUIRED ON EACH SIDE OF BEND
0 to 11 1/4 Degrees	20 Foot
11 3/8 to 22 1/2 Degrees	40 Foot
22 5/8 to 45 Degrees	75 Foot
45 1/8 to 90 Degrees	180 Foot

**VII. Changes to Drawings**

- A. Delete Drawing No. I03 and replace with Drawing No. I03 attached and marked “7/25/16 Addendum No. 1”
- B. Modify Drawing No. C05, note 5 as follows:
  - 5. ACCESS TO SLIDE GATE REPLACEMENT CHANNEL IS VIA 3’ X 5’ GRATING OPENING IN THE TOP SLAB OF THE CHANNEL. GRATING IS LOCATED APPROXIMATELY 8-FEET NORTH OF CENTERLINE OF SLIDE GATE. [AN EXISTING 18-INCH PVC PIPE RUNS PARALLEL TO THE 3-FT SIDE OF THIS ACCESS GRATING LOCATION IN THE CENTER OF THE 5-FT SIDE OF THE GRATING. PROTECT IN PLACE 18-INCH PVC PIPE. CLEARANCE ON EITHER SIDE OF PIPE IS APPROXIMATELY 21 INCHES. TOP OF PIPE IS APPROXIMATELY 21 INCHES BELOW GRATING.](#)
- C. Modify Drawing No. C08, note 6 as follows:
  - 6. CONTRACTOR TO FIELD VERIFY AND STAKE 18-REW ALIGNMENT PRIOR TO 18-EFFL EXCAVATION WHEN PIPE CENTERLINES ARE INDICATED WITHIN 6-FEET OF EACH OTHER. PROTECT IN PLACE EXISTING 18-REW. PROVIDE TEMPORARY SUPPORTS AS REQUIRED. PIPE BEDDING FOR 18-EFFL TO BE CLSM WHERE PIPES ARE WITHIN 4-FEET (CL TO CL) OF EACH OTHER. HAND REMOVE ANY LOOSE BEDDING OF EX 18-REW AND REPLACE ANY REMOVED 18-REW BEDDING WITH CLSM. [THE INVERT OF THE EXISTING 18-REW IS DEEPER THAN OR EQUAL TO THE SHOWN INVERT ELEVATION OF THE PROPOSED 18-EFFL.](#)

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**VIII. Question(s)/Answer(s)**

Owner's responses to Bidder questions shall be for the purposes of interpretation and clarification of the Contract Documents only, and shall not be construed as changing, superseding, or contradicting any express term in the Contract Documents. If any Bidder believes that a response to a question warrants a change in any term in the Contract Documents, the Bidder shall so request the change be made in writing addressed to Owner and received no later than the latest date for submitting Bidder questions. In the absence of a change in any term of the Contract Documents, the express terms of the Contract Documents shall have precedence. Bidder questions are listed below verbatim.

A. Is there any Good Faith Effort Requirements for the project above?

Owner's response: This is in the Bidding Documents. See documents including, but not necessarily limited to, Document 00457 (DBE Checklist), Section 00815 (Regulatory Requirements - Funding), and Attachment D of Section 00815 (U.S. Department of the Interior, Bureau of Reclamation [USBR] WaterSmart Program Funding Outreach Requirements).

B. Section 13455 – Part 2.3 / D2: Existing SCADA

What is the tag count on your existing Wonderware SCADA? How many tags are you using at the moment?

Owner's response: Bid per Bidding Documents.

C. Section 13455 – Part 2.3 / D3: Industrial PC

Which size would you like?  
Preferred Hardware Specification ?

Owner's response: Answered in this Addendum above.

D. Section 13455 – Part 2.3 / D4:

Do you have a favorite brand? (DELL , HP, etc.)  
Is this server going to run Wonderware Historian only?  
What is the tag count on the Historian Server?  
Do you have any hardware specification? Physical or Virtual?

Owner's response: Answered in this Addendum above.

E. Note 6 on C08 indicates that the existing 18 REW line is directly next to proposed 18 EFFL Alignment (2' c/1 to c/1 separation) for approximately 500 LF. Contractor needs to know the profile depth of existing 18 REW line. If 18 EFFL is below the existing 18 REW then it will much more difficult to support the existing 18 REW. Can Contractor assume the 18 EFFL is at or above the 18 REW invert elevation?

Owner's response: Answered in this Addendum above.

F. Spec Section 15061-3.8 details the amount of restrained pipe joints on each side of a given pipe fitting. The schedule seems to omit Tees and Blind Flanges. Consider adding these.

Owner's response: Answered in this Addendum above.

G. The question we would like to get clarification on is that System #10 buried allows C153 compact fittings up to 16"? Most of the pipe as you know in the REW and the EFFL lines are 18", Can we use C153 fittings on these sizes or do we need to use C110 on anything larger than 16"?

Owner's response: Answered in this Addendum above.

- H. The other question I have is that the basic requirements on the Option #2 Buried pipe is that they are calling out for AWWA C905 DR18 (235 psi rated), but the PVC pipe specification 15064 calls out AWWA C905 DR25 (165 psi rated)? Can we use DR25 purple or do we have to use DR18 purple?

Owner's response: Answered in this Addendum above.

- I. The specified automatic self cleaning filters for this project we sent the specifications to Amiad for a project quote. I have attached a letter from Amiad for this project for clarification on. Please review the letter with outlined questions that are in line with the written specification so we can identify these and quote the correct filter.

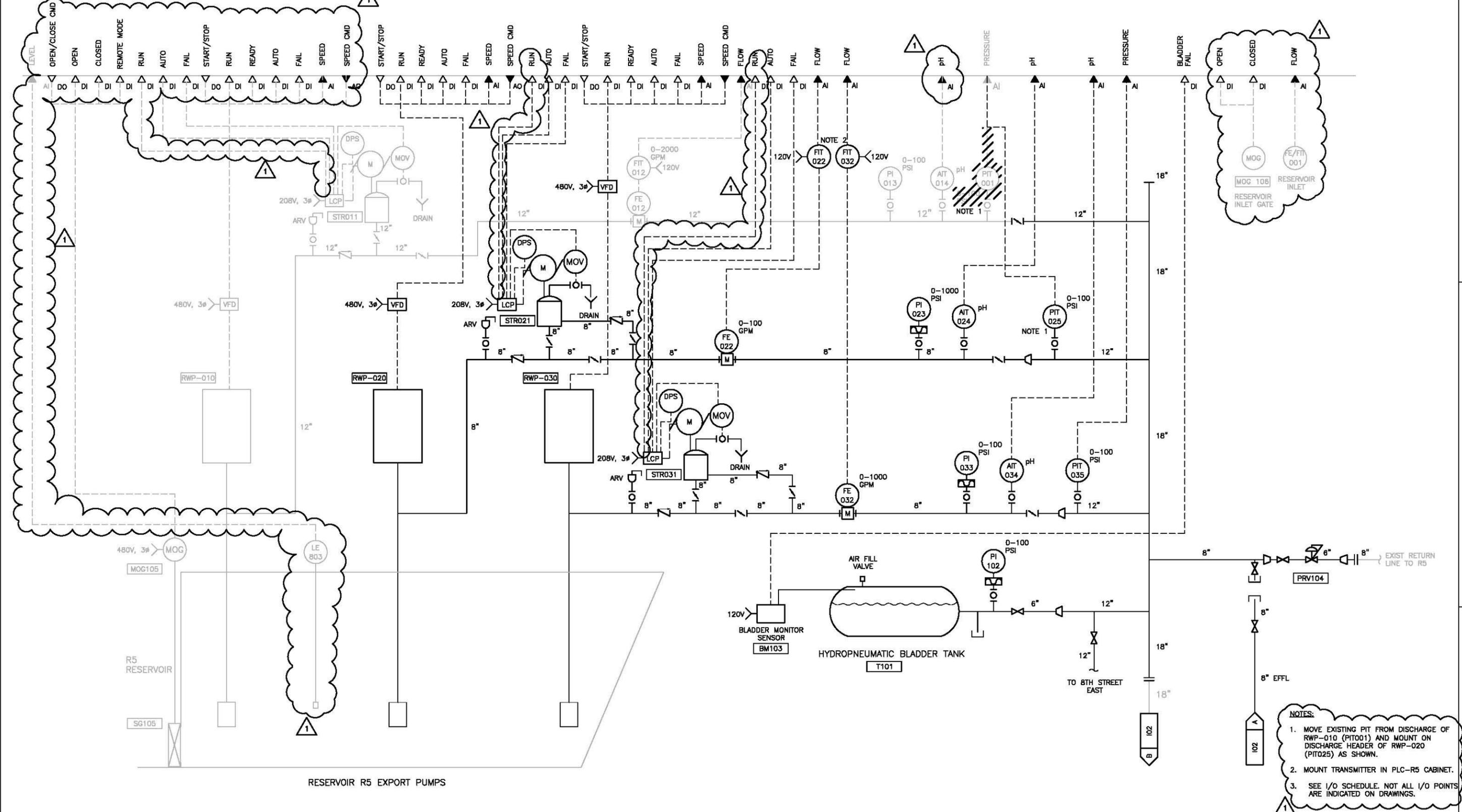
Owner's response: This question will be answered in a subsequent Addendum.

- J. It is unclear whether a Buy America clause applies to this contract. Please clarify , thank-you.

Owner's response: Bid per Bidding Documents. [The Buy American Act does not apply to this Project.]

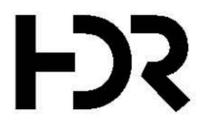
END OF DOCUMENT

EXISTING PLC-R5  
IR5 RESERVOIR



- NOTES:**
1. MOVE EXISTING PIT FROM DISCHARGE OF RWP-010 (PIT001) AND MOUNT ON DISCHARGE HEADER OF RWP-020 (PIT025) AS SHOWN.
  2. MOUNT TRANSMITTER IN PLC-R5 CABINET.
  3. SEE I/O SCHEDULE. NOT ALL I/O POINTS ARE INDICATED ON DRAWINGS.

RESERVOIR R5 EXPORT PUMPS



ISSUE	DATE	DESCRIPTION
1	7/25/16	ADDENDUM NO. 1
A	6/16/16	ISSUED FOR BIDS

PROJECT MANAGER	CRAIG OLSON, PE W. ETTLICH
DESIGNED	R. NATOLI, PE
CHECKED	M. BECK, PE
DRAWN	P. VAN MEURS
PROJECT NUMBER	9240-144908
DISTRICT PROJECT	

REVIEWED	
REVIEWED	



**North Bay Water Reuse Program**  
Sonoma Valley County Sanitation District  
Treatment Plant  
**PUMPING AND PIPING UPGRADES**

<b>P&amp;ID</b>	
<b>RESERVOIR R5 EXPORT PUMPS</b>	
0 1" 2"	SCALE NONE
FILENAME 144908_I03.dwg	SHEET 103