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Santa Clara Valley Water District
Notification of this Addendum is transmitted via email to all current plan holders.
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<https://www.valleywater.org/construction>

June 1, 2021

ADDENDUM NO. 1
TO CONTRACT DOCUMENTS FOR THE
RINCONADA WATER TREATMENT PLANT (RWTP)
RESIDUALS REMEDIATION PROJECT
Project No. 93294058 Contract No. C0671

Notice is hereby given to Prospective Bidder that the Contract Documents are modified as hereinafter set forth.

BID DOCUMENTS

NOTICE TO BIDDERS

1. **REPLACE** Item No. 3, on 3. Summary of Work, A. Project Description, with the following:
“3. Sludge Storage Tank (~~Alternative~~ **Supplemental** bid item for second tank);”

SPECIFICATIONS AND CONTRACT DOCUMENTS

SPECIAL PROVISIONS

Section 12 – Work and Contract Time(s)

2. **REPLACE** Paragraph C.3 in Article 12.03 Contract Time(s) with the following:
“3. **Milestone 3:** Completion of the new and modified centrifuge, conveyor, sludge transfer, **sludge storage tank(s)**, sludge feed, and polymer systems, including yard piping, site electrical work, electrical equipment, conduit, cable, panels, and SCADA and electrical testing and including improvements to Centrifuge Building B.”

Section 14 – Special Requirements

3. **DELETE** Paragraph F in Article 14.10.03. Document Contents in its entirety.
 - F. ~~If, at the time of the Project Bid, any manufacturer, supplier, or Subcontractor offers for use or sale an electronic copy of operations and/or maintenance information, it shall be provided with the paper information.~~

Section 16 – Work Constraints and Site Restrictions

4. **REPLACE** the entry in Table 16.01-01, No. 05, under Facility column with:
“Gravity Thickener 2”
5. **REPLACE** the entry in Table 16.01-01, No. 06, under Facility column with:
“Gravity Thickener 1”
6. **REPLACE** the entry in Table 16.01-01, No. 06, under Comments column with:
“Allow for a 14-day Plant recovery period followed by a 7-day sludge removal period for Gravity Thickener 1 (21 days total) between shutdowns”
7. **REPLACE** the entry in Table 16.01-01, No. 07, under Affected Operations column with:
“Entire plant (cannot send sludge from the clarifiers **sedimentation** basins to the thickeners)”

TECHNICAL PROVISIONS

Section 03 11 00

8. **ADD** Section 03 11 00 – CONCRETE FORMING

Section 03 21 00 – Reinforcement Steel

9. **REPLACE** Paragraph E in Article 3.03 PLACEMENT with the following:
 - “E. For concrete over formwork, provide concrete, metal, plastic, or other acceptable bar chairs and spacers. **Where the concrete will be exposed to water, the bar chairs and spacers shall be NSF 61 certified.**”

Section 09 96 00 – Protective Coating

10. **REPLACE** Paragraph B in Article 2.01 GENERAL with the following:
 - “B. Material Sources: Where manufacturers and product numbers are listed, it is to show the type and quality of coatings that are required. If a named product does not comply with VOC limits in effect at the time of Bid opening **material submittals**, that product will not be accepted, and the CONTRACTOR shall propose a substitution product of equal quality that does comply. Proposed substitute materials will be considered as indicated below. Coating materials

shall be materials that have a record of satisfactory performance in industrial plants, manufacturing facilities, and water and wastewater treatment plants.”

Section 43 21 29.05 – Chemical Metering Pumps

11. **REPLACE** Paragraph B in Article 2.02 with the following:

“B. General: Positive displacement diaphragm type metering pumps with 100:1 turn down ratio without stroke adjustment ~~by means of a brushless type D.C. motor.~~”

Section 43 25 06 – Submersible Solids-Handling Pumps

12. **REPLACE** Paragraph A in Article 2.03 MOTOR with the following:

“A. **Approval:** The pumping system, including the motor and wiring, shall be approved by a nationally approved testing agency for explosion-proof service. The system shall be rated Class I, Division 1, Group C and D service as determined by the National Electric Code and approved by a nationally recognized testing agency (UL or FM) at the time of opening Bids. The CONTRACTOR shall include ~~in the bid~~ **the first submittal, as specified in Article 1.02 Contractor Submittals**, a copy of the certificate of approval.”

Section 43 30 36 – Flow Metering and Control Valves

13. **CHANGE** the page footer on all pages from 09 96 00 to 43 30 36.

Section 43 41 45 – Fiberglass Reinforced Plastic Tanks

14. **REPLACE** Paragraph B in Article 1.01 SUMMARY with the following:

“B. Related sections:

~~General~~ **Standard** Provisions

Special Provisions

Section 01 33 17 – Structural Design, Support and Anchorage.

Section 09 96 00 – Protective Coating.

~~Section 33 12 01 – Basic Mechanical Materials and Methods.~~

~~Section 40 20 20 – Mechanical Piping.~~

~~Section 40 90 00 – Instrumentation and Control for Process Systems.~~

Section 40 05 00 – Piping General

Section 40 91 00 – Process Control & Instrumentation Systems

Section 46 01 00 – Equipment General Provisions”

15. **ADD** Paragraphs A.4., A.5., A.6. and A.7. under Article 1.02 A. American Society for Testing and Materials as follows:

“4. D883 - Definitions of Terms Relating to Plastics.”

“5. D2471 - Gel Time and Peak Exothermic Temperature of Reacting Thermosetting Resins.”

“6. D2583 - Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.”

“7. D2584 - Ignition Loss of Cured Reinforced Resins.”

16. **DELETE** Paragraph D in Article 1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS in its entirety.

~~D. National Bureau of Standards (NBS)~~

~~1. NBS PS15-69 Voluntary Product Standard~~

Section 46 41 30 – Vertical Shaft Mixers

17. **DELETE** Paragraph D in Article 2.01 GENERAL in its entirety.

~~D. Factory Test: Each mixer unit shall be subjected to a full size scale factory test by the manufacturer of the units, in the exact field dimensions.~~

18. **DELETE** Paragraph A.1 in Article 2.02 MIXER UNITS in its entirety.

~~1. The units shall be designed to transmit to the water the indicated velocity gradient "G" based on the minimum water temperature indicated below, to provide an adequate pumping capacity, and to produce eddies which are essential to the flocculation process, at a minimum shear.~~

19. **CHANGE** the entries in the Criteria table under Article 2.02 B. as follows:

~~Top of slab to bottom of tank, ft~~ Top of slab elevation, ft
~~Motor Speed (rpm)~~ Maximum Motor Speed (rpm)

20. **REPLACE** Paragraph J in Article 2.02 MIXER UNITS with the following:

“J. Structural Strength and Stability: Structural members and connections shall be designed to withstand, within normal working stresses and deflections, loads imposed on them by rotation of the assembly at maximum design speeds submerged and dry, as well as loads which may be superimposed during or subsequent to erection while the basins are empty. The shaft shall be designed for a maximum stress not to exceed ~~11,000~~ **9,000** psi while under maximum operating loads. The shaft shall be of the overhung design, and the use of bottom steady bearings shall not be permitted. The shaft impeller design shall be such that the operating speed shall not exceed 70 percent of the first lateral critical speed. Lower shaft straightness, rigid coupling squareness, and output shaft accuracy shall give a maximum runout at the lower end of the shaft of 1/8-inch for every 10-feet of overhang, as measured when turning over by hand.”

GENERAL QUESTIONS AND RESPONSES

QUESTION 1: (Date Received: April 29, 2021)

Will the District be providing CAD files? The design data is lacking for an accurate takeoff.

RESPONSE 1:

No, CAD files will not be provided prior to bidding.

QUESTION 2: (Date Received: May 4, 2021)

Can you please provide a copy of the geotech report?

RESPONSE 2:

The April 2, 2020, Geotechnical Report prepared by ENGEO has been posted on the C0671 Construction Website at <http://www.valleywater.org/Construction> under the District Furnished Documents link.

QUESTION 3: (Date Received: May 7, 2021)

Sections 33 12 01, 40 20 20, and 40 90 00 are listed in Section 43 41 45 for the FRP Tanks, can you please tell me where I can locate a copy of those sections as they are not in the spec book? Please advise

RESPONSE 3:

These reference sections have been deleted. See item 14 of this Addendum.

QUESTION 4: (Date Received: May 10, 2021)

Detail S501 / GS-9 shows a Stud / Machine Bolt config for Grating attachment. In our past projects, this config has been difficult to shop weld to ensure the studs will be centered between the Grating Bars. They often need to be cut off in the field for re-welding or shipped loose for field welding. Is it acceptable to use Self-drilling screws? If not, Struct-Fast (www.structfast.com) offers alternative types of grating clips that eliminate the need for field welding. If either of these alternative config is acceptable, it will save the cost for field welding of studs in between bearing bars.

RESPONSE 4:

Using self-drilling screws is not acceptable. Other alternative grating clip configurations that utilize friction, as shown on www.structfast.com, are also not acceptable unless manufacturer can demonstrate the clips will remain firmly attached after a seismic event.

QUESTION 5: (Date Received: May 10, 2021)

At Centrifuge Bldg B, Dwg 4S-1 & Section B/ 4S-3, show a 2' SQ Sump Grating calling out S501 / GS-9, what is the Material of this Grating / Supports?

RESPONSE 5:

The grating material shall be fiberglass reinforced plastic per Specification Section 06 80 00.

QUESTION 6: (Date Received: May 10, 2021)

Per Dwg 4S-2 for the new Beams C10 x 15.3 and W10 x 26, Dwg calls out connection detail S191. However, S191 is not a beam to beam connection detail. Please provide correct Detail call out.

RESPONSE 6:

The detail should reference Standard Detail S562 on Sheet GS-11.

QUESTION 7: (Date Received: May 10, 2021)

At Centrifuge Bldg B Pump Station, Dwg 6S-1 shows a Stair. What is the Material of this Stair / Railings?

RESPONSE 7:

The stairs and railings shall be aluminum.

QUESTION 8: (Date Received: May 10, 2021)

At Centrifuge Bldg B Pump Station, Dwg 6S-1 shows a 2' SQ Sump Grating, what is the Material of this Grating / Supports?

RESPONSE 8:

The grating shall be aluminum as specified in Section 05 50 00 of the Project's Technical Specifications.

QUESTION 9: (Date Received: May 10, 2021)

At Polymer Injection Vault & Flowmeter Vault per Note 7 / 2M-4, could you provide details for the Material / Size of the Channel Beams, Connection detail, Tread PL & Supports?

RESPONSE 9:

The sizes, materials and details shall be determined by the hatch manufacturer.

QUESTION 10: (Date Received: May 12, 2021)

Will there be any participation goals set for this project as we are looking for an opportunity to partner with a prime to be a supplier.

RESPONSE 10:

No participation goals have been established or required for this project.

QUESTION 11: (Date Received: May 12, 2021)

The quote for the Hiller Centrifuges and Related Services does not include sales tax. The bid price for Bid Items 15 & 16 are set on the bid form for the Pre-negotiated amount (without tax). Is the contractor expected to pay sales tax on the centrifuges? If so, what bid item do we put the sales tax in?

RESPONSE 11:

Sales tax for the centrifuges and related services shall be paid for by the contractor and can be included in Bid Item 28.

QUESTION 12: (Date Received: May 12, 2021)

Spec 03 31 00 1.04 B 3 states: "Costs related to trial batch and related laboratory testing shall be CONTRACTOR's responsibility as part of the WORK." Spec 03 31 00 1.06 A 4 states: "The cost of trial batch laboratory tests on cement, aggregates, and concrete shall be the OWNER's responsibility." Please clarify whether the Contractor or the Owner is responsible for trial batch and related laboratory testing costs.

RESPONSE 12:

The cost of preparing the trial batch and the cost of laboratory tests shall be borne by the CONTRACTOR.

QUESTION 13: (Date Received: May 12, 2021)

Drawing 5S-1 for the Sludge Storage Tank includes a callout which states: "CJ w/6" waterstop and sealant (Typ 4 at Slabs and Walls)". Specification Section 03 32 00, 3.03 E. 3 states: "Where joints are indicated to be spaced greater than 40 feet apart, additional joints shall be provided to maintain the 25-foot maximum spacing." The wall segments, as indicated on the drawing with 4 joints, result in a length greater than 40'. Please clarify whether the slabs and walls are to be constructed as shown on 5S-1, or if additional CJ's must be added per 03 32 00.

RESPONSE 13:

For the Sludge Storage Tanks, provide only the construction joints shown on 5S-1.

QUESTION 14: (Date Received: May 12, 2021)

The CJP and 5/16" fillet field welds called out on Section B of Drawing 2S-2 appear to point to the same location. Please clarify these field welding locations on Detail 1.

RESPONSE 14:

The CJP weld is to be provided between the bottom and top halves of the flange plate. The 5/16" fillet weld is between the flange plate and the pipe, for both top and bottom halves

QUESTION 15: (Date Received: May 12, 2021)

When scaling Drawing 5E-1, the scale is 1"=10'. Checking that with the dimensions given on 5S-1, the dimensions do not match with the scale provided. Please verify the scale on Drawing 5E-1.

RESPONSE 15:

Change the scale to NTS. Accurate dimensions can be found on the structural and mechanical drawings.

QUESTION 16: (Date Received: May 12, 2021)

Drawing 5S-2 shows the walkway between Sludge Storage Tank 1 and 2 as a span between the two tanks, with Section C on Drawing 5S-5 indicating the walkway being supported at each end of the span by the concrete corbel of each tank. The Limits of Additive Bid Item No. 2 shown on Drawing 5M-2 indicates this walkway is to be provided whether or not Supplemental Bid Item 2 for Sludge Storage Tank No. 2 is accepted. If Supplemental Bid Item 2 is not accepted, please clarify how the west end of the upper level walkway is to be supported.

RESPONSE 16:

If Supplemental Bid Item No. 2 is not accepted, provide support for the west end of the walkway including support slab similar to the supports and slab shown in Section C/5S-3 on Drawing 5S-5.

QUESTION 17: (Date Received: May 13, 2021)

Technical Specifications, 11.02.02 requires the Contractor to provide the Guaranty Bond for the period of three (3) years after the date of Notice of Completion of Contract and Acceptance of Work in the amount of 15% of the Contract Price. Sureties will require return of the Performance Bond upon delivery of the Guaranty Bond as to avoid duplicative surety coverage. As such, please confirm that no surety bonding is expected for years 4 and 5 of the five-year contractor warranties required in 03 32 00 1.06 Joints Concrete and 13 34 21 1.05 F Pre-Engineered Metal Canopies.

RESPONSE 17:

Confirmed.

QUESTION 18: (Date Received: May 13, 2021)

This project involves work around existing structures / facilities where there is a higher than normal risk of damage to such existing property. Contractor prefers to reserve its third-party liability insurance limits for true third-party exposures for which it cannot cap or limit contractually. Further, the party to the contract which has the ability to insure

such exposure is in the better position to accept the risk for the exposure. As such, District's permanent property insurance should be the primary source of recovery. To the extent the loss is caused by Contractor's negligence or fault, Contractor is willing to accept some limited responsibility for physical damage to District's existing facilities / completed work commiserate to a reasonable deductible amount.

Please consider the following language as an addition to Standard Provisions 4.10, F, "Contractor will be held responsible for any damage (i) to the completed Work occurring after substantial completion to the extent arising from the negligence or willful misconduct of Contractor or its subcontractors or (ii) to District's existing structures, materials, or equipment adjacent to or at the Work site to the extent arising from the negligence or willful misconduct of Contractor or its subcontractors and shall repair or replace any such damaged structures, materials, or equipment at no additional cost to District. Where such loss or damage is the result of the joint negligence of Contractor with any other party including District, Contractor's duty to compensate Owner shall be in proportion to the allocable share of such joint negligence of Contractor, unless the cause(s) of such loss or damage cannot be separately allocated, in which case Contractor shall be liable for the whole of such loss or damage, subject to Contractor's right to obtain contribution or indemnity from parties other than District.

Notwithstanding anything herein to the contrary, Contractor's total liability, including responsibility to compensate District and or repair and replace the damaged Work after Substantial Completion or existing structures, materials or equipment shall be limited to \$25,000* per occurrence and in the aggregate, and District shall release Contractor from and shall defend, indemnify and hold Contractor and its subcontractors harmless from liability for any claim, loss or damage exceeding such amount. District will cause its insurers to issue a waiver of subrogation in favor of Contractor and its subcontractors consistent with the rights and obligations of this Section."

RESPONSE 18:

Standard Provisions language will not be changed

QUESTION 19: (Date Received: May 13, 2021)

With respect to pre-existing hazardous materials/hazardous waste or hazardous materials/hazardous waste not brought onto the site by the Contractor, please confirm that the Owner will be considered the "generator" of such hazardous materials/hazardous waste and sign any necessary generator manifests

RESPONSE 19:

Confirmed.

QUESTION 20: (Date Received: May 13, 2021)

Notice to Bidders Item 16 shows retention of 10%. Spec 6.02.04 F states retention of 5%. Please clarify retention amount.

RESPONSE 20:

As stated in Special Provisions Section 21.03, the retention is 10%.

QUESTION 21: (Date Received: May 14, 2021)

Appendix J - a Non-Disclosure Agreement (NDA) form is included in the Contract Documents. Please explain the intended execution process for this document.

RESPONSE 21:

Per Special Provisions Section 14.16, the CONTRACTOR must submit the form within 10 days of receipt of notice of contract award.

QUESTION 22: (Date Received: May 24, 2021)

Will the District make it a requirement that the System Integrator submit their Statement of Qualifications prior to bid date?

RESPONSE 22:

System Integrator statements of qualifications are not required prior to the bid date.

QUESTION 23: (Date Received: May 24, 2021)

Factory Testing - 46 41 30 [2.01.D] requires a full scale factory test in exact field dimensions but lists no additional requirements. We request removal of this requirement, as it will add a lot of additional cost to the equipment that may not have been budgeted for. If this requirement is to remain, please outline testing requirements.

RESPONSE 23:

Full scale factory testing is not required. See Item 19 of this Addendum.

QUESTION 24: (Date Received: May 24, 2021)

Performance Criteria - 46 41 30 [2.02.A.1] refers to an indicated velocity gradient "G" but no velocity gradient is given. Please clarify what G value is needed.

RESPONSE 24:

A "G" value is not required. See Item 18 of this Addendum.

QUESTION 25: (Date Received: May 24, 2021)

Operating Levels - 46 41 30 [2.02.D] mentions bearings shall be sized to stabilize impeller assembly under operating conditions throughout the range. This implies there may be a range of liquid levels required for operation, while the table only includes 1 liquid level. Please clarify.

RESPONSE 25:

The fluid levels will vary as polymer in the tanks is used and the tanks are filled.

QUESTION 26: (Date Received: May 24, 2021)

Impeller Shaft Stress - 46 41 30 [2.02.G] requires a maximum shaft stress of 9,000 psi while 46 41 30 [2.02.J] requires a maximum shaft stress of 11,000 psi. Industry standard for mixers is 9,000 psi. We request removal of the 11,000 psi requirement within [2.02.J].

RESPONSE 26:

The requirement has been changed to 9,000 psi. See Item 20 of this Addendum.

QUESTION 27: (Date Received: May 24, 2021)

Tank Height - 46 41 30 [2.02.B] lists top of slab to bottom of tank distance as 386 ft. Please clarify.

RESPONSE 27:

The value given is the elevation of the top of slab. See Item 19 of this Addendum. The mixer supplier shall coordinate with the tank manufacturer to determine the required shaft length.

QUESTION 28: (Date Received: May 24, 2021)

Motor Speed - 46 41 30 [2.02.B] lists motor speed as 1750 rpm. We request this to be changed to maximum motor speed in order to reduce capital cost by using a double reduction rather than triple reduction gearbox to achieve desired output speeds.

RESPONSE 28:

The motor speed entry has been changed to maximum motor speed. See Item 19 of this Addendum.

QUESTION 29: (Date Received: May 24, 2021)

Gearbox Arrangement - 46 41 30 2.02.D lists a vertical offset shaft arrangement type gearbox, while later stating that gears may be a combination of helical and spiral bevel. In order to ensure ease of maintenance and motor access, we recommend the gear reducer to be specified as a right angle arrangement type with a combination of spiral bevel and helical gearing.

RESPONSE 29:

A vertical offset shaft arrangement is preferred.

QUESTION 30: (Date Received: May 24, 2021)

Field Service Requirement - 46 41 00 [1.04.A] requires field service for each piece of equipment 10HP and larger. Please clarify if this means that the Vertical Shaft Mixers are exempt from this requirement, as the HP for these units is 2HP.

RESPONSE 30:

Confirmed. These Vertical Shaft Mixers are exempt.

QUESTION 31: (Date Received: May 24, 2021)

Warranty - 46 41 00 nor 46 41 30 makes mention of equipment warranty. This could not be found elsewhere within the specifications. Please clarify warranty requirements on the Vertical Entry Mixers.

RESPONSE 31:

Equipment warranty is subject to the requirements stated in Special Provisions Section 11.02.

QUESTION 32: (Date Received: May 25, 2021)

Pipe Systems "CPEN" & "TPEN" are referenced in Sheet C-YP-1, C-YP-2, and C-YP-5. These systems call for double containment pipe and are described as PVCP material in the pipe schedule, but there is no specification for double containment pipe in section 40 05 30 "PVC Pressure Pipe". Specification section 33 95 34 "Polyethylene Pressure Piping" contains a section about double containment pipe. Please add a specification for double containment pipe in 40 05 30 or clarify that the Double contained section in 33 95 34 that describes a PE double contained system is to be used for pipe systems CPEN and TPEN where shown to be double contained in the drawings. Note that existing double contained piping appears to be PVC schedule 80 primary pipe with a "split case" PVC containment pipe system. Is the intent to match the existing double containment system?

RESPONSE 32:

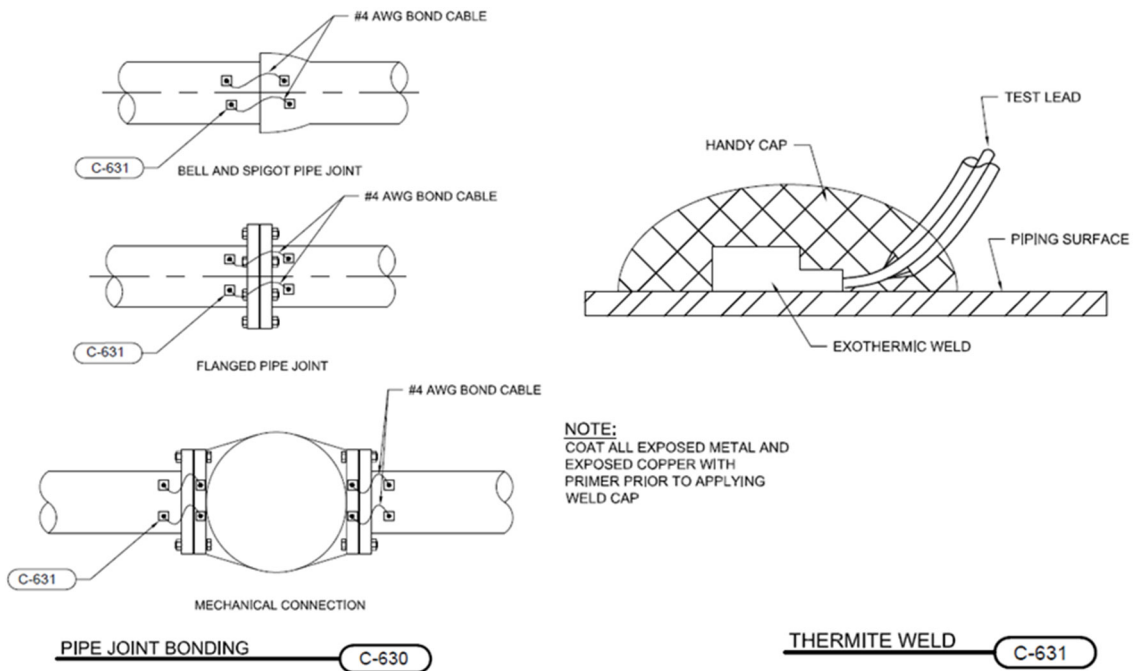
CPEN and TPEN piping outside Centrifuge Buildings A and B shall be double-contained HDPE as specified in Section 33 95 34 – Polyethylene Pressure Piping, 2.02. CPEN and TPEN piping inside Centrifuge Building A shall match the existing PVC double-contained piping in Centrifuge Building A. PVC piping within Centrifuge Building B need not be double-contained. The transition from HDPE to PVC shall be inside the buildings.

QUESTION 33: (Date Received: May 25, 2021)

Specification section 33 92 20 Ductile Iron Piping 2.01 "G" states "Pipe joints shall be prepared for bonding electrical conductivity in accordance with the details indicated. Contractor Shall furnish materials required for joint bonding and electrolysis test station installations." Specification section 40 05 00 Paragraph 2.09 says metallic buried piping shall have bonded joints so that it may be cathodically protected in the future if necessary." Please clarify whether we need cathodic protection as the drawings do not call out any cathodic test stations. If so, please provide a detail and confirm that only jumpers are required at buried ductile joints for bonding.

RESPONSE 33:

Electrically bonded joints shall be provided per Standard Details C-630 and C-631 below. Cathodic protection is not required.



QUESTION 34: (Date Received: May 25, 2021)

Please provide an existing Process Flow Diagram and hydraulic profile of the plant including the solids and treated water streams.

RESPONSE 34:

A Process Flow Diagram and a Hydraulic Profile for the entire plant are not available to be provided to bidders.

QUESTION 35: (Date Received: May 25, 2021)

We are requesting that the bid date be push two weeks – Unfortunately if it cannot push we will not be able to bid this project.

RESPONSE 35:

Valley Water will not be extending the bid opening date.

QUESTION 36: (Date Received: May 27, 2021)

What is the viscosity and specific gravity of the polymer process fluid. The spec that is supposed to have this information does not exist yet. I need this information to determine what type of checks we need on these pumps. (Date Received: May 25, 2021)

RESPONSE 36:

The polymer currently in use is Clarifloc A-6320. The manufacturer indicates that the viscosity is greater than 20 centipoise at 40 degrees C. The polymer batch solutions are planned to be 0.5%. Thus, the viscosity of the fluid pumped by the chemical metering pumps should be less than 20 centipoise. However, no specific information is available for the dilute polymer solution.

QUESTION 37: (Date Received: May 27, 2021)

Is MRC to quote the 5 pump control panel or is Burlingame using someone else? And if that is the case, are we supplying the AB Powerflex 70 VFDs again like we did for Rinconada in 2017, or not?

RESPONSE 37:

The pump control panel can be supplied by MRC, but it is not required.

QUESTION 38: (Date Received: May 27, 2021)

P&ID drawing I-16 asterisk notation indicates that these pumps and accessories are to be supplied as skids. However, the written specs do not indicate any skids. also the piping drawings do not show skids. So is this an error on the P&ID. If so, then we should not be supplying manual valves for this system. Please clarify.

RESPONSE 38:

The note says "supplied as part of a vendor package" not as a skid.

QUESTION 39: (Date Received: May 27, 2021)

We have been reviewing the specs and plans on the subject project for the Fiberglass Reinforced Plastic Tanks (Attached Spec Section 43 41 45) and we would love to have NOV Belco Tanks listed as an approved equal. We have written some comments/questions in the attached FRP spec.

RESPONSE 39:

Fiberglass Reinforced Plastic Tanks material will be reviewed for "approved equal" status with submittals.

QUESTION 40: (Date Received: May 27, 2021)

In regards to specification 43 21 29.05, we have a question. There seems to be some conflicting information about the motors to be provided. 1.07A states 3 phase, 60Hz, 240VAC. The motor spec 2.01 calls for IEEE 841 Motors (which are only available in 460V), and 2.02 calls for DC motors. Can you please confirm which motor is preferred on the chemical metering pumps? THIS QUESTIONS INCLUDED A SCREENSHOT OF PART 2 -- PRODUCTS, 2.01 MOTOTRS CONFORMING TO IEEE Standard 841 - 2009 through A and B.

RESPONSE 40:

The pump motors shall be 240 VAC. See Item 11 of this Addendum.


QUESTION 41: (Date Received: May 27, 2021)

Please confirm that liquidated damages are the sole and exclusive remedy for delay caused by the Contractor.

RESPONSE 41:

Please refer to the contract documents, public contracting code, and other applicable laws, as those documents detail remedies for delay caused by the Contractor..

THIS ADDENDUM NO. 1, WHICH CONTAINS 15 PAGES AND ONE (1) ATTACHMENT, IS A PART OF THE SPECIFICATIONS AND CONTRACT DOCUMENTS FOR THIS PROJECT.

DocuSigned by:

09E2E1708C2D418...
Date: 6/1/2021

Heath McMahon, P.E.
Deputy Operating Officer
Water Utility Capital Division

Enclosure(s):

ATTACHMENT NO. 1 - Specification Section 03 11 00 – Concrete Forming

ATTACHMENT NO. 1

Section 03 11 00 Concrete Forming

SECTION 03 11 00**CONCRETE FORMING****PART 1 -- GENERAL****1.01 THE SUMMARY**

- A. The CONTRACTOR shall furnish concrete formwork, bracing, shoring, and supports for cast-in-place concrete and shall design and construct falsework, all in accordance with the Contract Documents.

1.02 CONTRACTOR SUBMITTALS

- A. Furnish submittals in accordance with Section 7 of Standard Provisions – Submittal Management.
- B. Manufacturer's information demonstrating compliance with requirements for the following:
 - 1. Form ties and related accessories, including taper tie plugs, if taper ties are used.
 - 2. Concrete blocks and reinforcement bars used to support reinforcement on subgrade.
 - 3. Form gaskets.
 - 4. Form release agent, including NSF certification if not using mineral oil.
 - 5. Manufacturer's design information on formwork, form materials, and locations for use.
- C. Shop Drawings: Detailed plans for the fabrication and erection of falsework to be used. Such plans shall be in sufficient detail to indicate the general layout, sizes of members, anticipated stresses, grade of materials to be used in the falsework, means of protecting existing construction which supports falsework, and typical soil conditions. Include a list of form materials and locations for use.
- D. Falsework Calculations and Drawings: The CONTRACTOR's attention is directed to the provisions of Section 1717 of the Division of Industrial Safety, Construction Safety Orders, as revised November 1973, which requires that all falsework or vertical shoring installations where the height of the falsework or vertical shoring, as measured from the top of the sills to the soffit of the superstructure, exceeds 14-feet, or where individual horizontal span lengths exceed 16-feet, or provision for vehicular or railroad traffic through falsework or vertical shoring is made, shall be approved and signed by a civil engineer, registered in the State of California; provided further, that a copy of the falsework plan or shoring layout shall be available on the Site at all times.

1.03 QUALITY ASSURANCE

- A. Tolerances: The variation from required lines or grade shall not exceed 1/4-inch in 10-feet, non-cumulative, and there shall be no offsets or visible waviness in the finished surface. Other tolerances shall be within the tolerances of ACI 117 - Standard Tolerances for Concrete Construction and Materials

PART 2 -- PRODUCTS**2.01 GENERAL**

- A. Except as otherwise expressly accepted by the ENGINEER, lumber brought on the Site for use as forms, shoring, or bracing shall be new material. Forms shall be smooth surface forms and shall be of the following materials:

Walls	Steel, fiberglass, or plywood panel
Columns	Steel, plywood or fiberglass
Roof and floor	Plywood
All other WORK	Steel panels, fiberglass, plywood or tongue and groove lumber

- B. Form materials that may remain or leave residues on or in the concrete shall be certified as compliant with NSF Standard 61 – Drinking Water System Components.
- C. Water-based form release agent shall be **Clean Strip J1EF** by **Dayton Superior**, or equal.

2.02 FORM AND FALSEWORK MATERIALS

- A. Materials for concrete forms, formwork, and falsework shall conform to the following requirements:
1. Lumber shall be Douglas Fir or Southern Yellow Pine, construction grade or better, in conformance with U.S. Product Standard PS 20 - American Softwood Lumber Standard
 2. Plywood for concrete formwork shall be new, waterproof, synthetic resin bonded, exterior type Douglas Fir or Southern Yellow Pine plywood manufactured especially for concrete formwork, shall conform to the requirements of PS 1 – Construction and Industrial Plywood, for Concrete Forms, Class I, and shall be edge sealed.
 3. Form materials shall be metal, wood, plywood, or other material that will not adversely affect the concrete and will facilitate placement of concrete to the shape, form, line, and grade indicated. Metal forms shall accomplish such results. Wood forms for surfaces to be painted shall be Medium Density Overlaid plywood, MDO Ext. Grade.

4. Steel leave in place forms shall not be used.
- B. Unless otherwise indicated, exterior corners in concrete members shall be provided with 3/4-inch chamfers or be tooled to 1/2-inch radius. Re-entrant corners in concrete members shall not have fillets unless otherwise indicated.
- C. Forms and falsework to support the roof and floor slabs shall be designed for the total dead load, plus a live load of 50 psf minimum. The minimum design load for combined dead and live loads shall be 100 psf.

2.03 FORM TIES

- A. Form ties shall be provided with a plastic cone or other suitable means for forming a conical hole to insure that the form tie may be broken off back of the face of the concrete. The maximum diameter of removable cones for rod ties or other removable form tie fasteners having a circular cross-section shall not exceed 1-1/2 inches; and all such fasteners shall be such as to leave holes of regular shape for reaming. Form ties for water-retaining structures shall have integral waterstops that tightly fit the form tie so that they cannot be moved from mid-point of the tie. Form ties shall be **ST-4 Hex Head Snaptide** by **MeadowBurke**, **Snap-Ties** by **Dayton/Richmond**, or equal.
- B. Removable taper ties may be used when approved by the ENGINEER. A preformed neoprene or polyurethane tapered plug sized to seat at the center of the wall shall be inserted in the hole left by the removal of the taper tie. Use **HD-9 Taper-Tie** by **MeadowBurke**, **Taper-Tie** by **Dayton/Richmond**, or equal.

PART 3 -- EXECUTION

3.01 GENERAL

- A. Forms to confine the concrete and shape it to the required lines shall be used wherever necessary. The CONTRACTOR shall assume full responsibility for the adequate design of forms, and any forms that are unsafe or inadequate in any respect shall promptly be removed from the WORK and replaced. Provide worker protection from protruding reinforcement bars in accordance with applicable safety codes. A sufficient number of forms of each kind shall be available to permit the required rate of progress to be maintained. The design and inspection of concrete forms, falsework, and shoring shall comply with applicable local, state, and Federal regulations. Plumb and string lines shall be installed before concrete placement and shall be maintained during placement. Such lines shall be used by CONTRACTOR's personnel and by the ENGINEER and shall be in sufficient number and properly installed. During concrete placement, the CONTRACTOR shall continually monitor plumb and string line form positions and immediately correct deficiencies.
- B. Concrete forms shall conform to the shape, lines, and dimensions of members required, and shall be substantial, free from surface defects, and sufficiently tight to prevent leakage. Forms shall be properly braced or tied together to maintain their position and

shape under a load of freshly-placed concrete. If adequate foundation for shores cannot be secured, trussed supports shall be provided.

- C. Forms shall be removed unless approved otherwise by the ENGINEER.

3.02 FORM DESIGN

- A. Forms shall be true in every respect to the required shape and size, shall conform to the established alignment and grade, and shall be of sufficient strength and rigidity to maintain their position and shape under the loads and operations incident to placing and vibrating the concrete. Suitable and effective means shall be provided on forms for holding adjacent edges and ends of panels and sections tightly together and in accurate alignment so as to prevent the formation of ridges, fins, offsets, or similar surface defects in the finished concrete. Plywood, 5/8-inch and greater in thickness, may be fastened directly to studding if the studs are spaced close enough to prevent visible deflection marks in the concrete. The forms shall be tight so as to prevent the loss of water, cement, and fines during placing and vibrating of the concrete. Specifically, the bottom of wall forms that rest on concrete footings or slabs shall be provided with a gasket to prevent loss of fines and paste during placement and vibration of concrete. Such gasket may be a 1- to 1-1/2-inch diameter polyethylene rod held in position to the underside of the wall form. Adequate clean-out holes shall be provided at the bottom of each lift of forms. The size, number, and location of such clean-outs shall be as acceptable to the ENGINEER. Whenever concrete cannot be placed from the top of a wall form in a manner that meets the requirements of the Contract Documents, form windows shall be provided in the size and spacing needed to allow placement of concrete to the requirements of Section 03 31 00 - Cast-in-Place Concrete. The size, number, and location of such form windows shall be as acceptable to the ENGINEER.

3.03 CONSTRUCTION

- A. Vertical Surfaces: Vertical surfaces of concrete members shall be formed, except where placement of the concrete against the ground is indicated. Not less than 1-inch of concrete shall be added to the indicated thickness of a concrete member where concrete is permitted to be placed against trimmed ground in lieu of forms. Permission to do this on other concrete members will be granted only for members of comparatively limited height and where the character of the ground is such that it can be trimmed to the required lines and will stand securely without caving or sloughing until the concrete has been placed.
- B. Construction Joints: Concrete construction joints will not be permitted at locations other than those indicated, except as may be acceptable to the ENGINEER. When a second lift is placed on hardened concrete, special precautions shall be taken in the way of the number, location, and tightening of ties at the top of the old lift and bottom of the new to prevent any unsatisfactory effect whatsoever on the concrete. Pipe stubs and anchor bolts shall be set in the forms where required.
- C. Form Ties

1. **Embedded Ties:** Holes left by the removal of form tie cones shall be reamed with suitable toothed reamers so as to leave the surface of the holes clean and rough before being filled with mortar. Wire ties for holding forms will not be permitted. No form-tying device or part thereof, other than metal, shall be left embedded in the concrete. Ties shall not be removed in such manner as to leave a hole extending through the interior of the concrete members. The use of snap-ties that cause spalling of the concrete upon form stripping or tie removal will not be permitted. If steel panel forms are used, rubber grommets shall be provided where the ties pass through the form in order to prevent loss of cement paste. Where metal rods extending through the concrete are used to support or to strengthen forms, the rods shall remain embedded and shall terminate not less than 1-inch back from the formed face or faces of the concrete.
2. **Removable Ties:** Where taper ties are approved for use, the larger end of the taper tie shall be on the wet side of walls in water retaining structures. After the taper tie is removed, the hole shall be thoroughly cleaned and roughened for bond. A precast neoprene or polyurethane tapered plug shall be located at the wall centerline. The hole shall be completely filled with non-shrink grout for water bearing and below-grade walls. The hole shall be completely filled with non-shrink or regular cement grout for above-grade walls that are dry on both sides. Exposed faces of walls shall have the outer 2-inches of the exposed face filled with a cement grout that shall match the color and texture of the surrounding wall surface.

3.04 REUSE OF FORMS

- A. Forms may be reused only if in good condition and only if acceptable to the ENGINEER. Light sanding between uses will be required wherever necessary to obtain uniform surface texture on exposed concrete surfaces. Exposed concrete surfaces are defined as surfaces which are permanently exposed to view. In the case of forms for the inside wall surfaces of hydraulic/water retaining structures, unused tie rod holes in forms shall be covered with metal caps or shall be filled by other methods acceptable to the ENGINEER.

3.05 REMOVAL OF FORMS

- A. Careful procedures for the removal of forms shall be strictly followed, and this WORK shall be done with care so as to avoid injury to the concrete. No heavy loading on green concrete will be permitted. In the case of roof slabs and above-ground floor slabs, forms shall remain in place until test cylinders for the roof concrete attain a minimum compressive strength of 75 percent of the 28 Day strength in Section 03 31 00. No forms shall be disturbed or removed under an individual panel or unit before the concrete in the adjacent panel or unit has attained 75 percent of the 28 Day strength and has been in place for a minimum of 7 Days. The time required to establish said strength shall be as determined by the ENGINEER who will make several test cylinders for this purpose from concrete used in the first group of roof panels placed. If the time so determined is more than the 7 Day minimum, then that time shall be used as the minimum length of time. Forms for vertical walls of waterholding structures shall remain in place at least 36 hours after the concrete has been placed. Forms for parts of the WORK not specifically

mentioned herein shall remain in place for periods of time as recommended in ACI 347 - Guide to Formwork for Concrete.

3.06 MAINTENANCE OF FORMS

- A. Forms shall be maintained in good condition, particularly as to size, shape, strength, rigidity, tightness, and smoothness of surface. Before concrete is placed, the forms shall be thoroughly cleaned. The form surfaces shall be treated with a nonstaining mineral oil or other lubricant acceptable to the ENGINEER. Any excess lubricant shall be satisfactorily removed before placing the concrete. Where field oiling of forms is required, the CONTRACTOR shall perform the oiling at least 2 weeks in advance of their use. Care shall be exercised to keep oil off the surfaces of steel reinforcement and other metal items to be embedded in concrete.

3.07 FALSEWORK

- A. The CONTRACTOR shall be responsible for the design, engineering, construction, maintenance, and safety of falsework, including staging, walkways, forms, ladders, and similar appurtenances, which shall equal or exceed the applicable requirements of the provisions of the OSHA Safety and Health Standards for Construction, the requirements of the Construction Safety Orders of the California Division of Industrial Safety, and the requirements herein.
- B. Falsework shall be designed and constructed to provide the necessary rigidity and to support the loads. Falsework for the support of a superstructure shall be designed to support the loads that would be imposed if the entire superstructure were placed at one time.
- C. Falsework shall be placed upon a solid footing, safe against undermining, and be protected from softening. When the falsework is supported on timber piles, the maximum calculated pile loading shall not exceed 20 tons. When falsework is supported on any portion of the structure which is already constructed, the load imposed by the falsework shall be spread, distributed, and braced in such a way as to avoid any possibility of damage to the structure.

END OF SECTION