

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE	PAGE OF PAGES
			J	1 3
2. AMENDMENT/MODIFICATION NO. 0001	3. EFFECTIVE DATE 07-Sep-2004	4. REQUISITION/PURCHASE REQ. NO. W68SBV-4201-8272		5. PROJECT NO.(If applicable)
6. ISSUED BY WALLA WALLA DISTRICT, COE - G4P CONTRACTING DIVISION 201 N THIRD AVENUE WALLA WALLA WA 99362-1876	CODE W912EF	7. ADMINISTERED BY (If other than item 6) WALLA WALLA DISTRICT, COE - G4P PATTI RECORD 509/527-7224 PATTI.C.RECORD@USACE.ARMY.MIL WALLA WALLA WA		CODE W912EF
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)			X	9A. AMENDMENT OF SOLICITATION NO. W912EF-04-B-0022
			X	9B. DATED (SEE ITEM 11) 13-Aug-2004
				10A. MOD. OF CONTRACT/ORDER NO.
				10B. DATED (SEE ITEM 13)
CODE	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required)				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) CHARBONNEAU PARK SEWER TREATMENT UPGRADE It has been determined to be in the Governments best interest to amend this solicitation to answer questions from bidders and revise specifications as noted. Delete and Replace Technical Specifications - Section 11310 with attached revised copy. SEE CONTINUATION PAGE				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)		
		TEL: _____ EMAIL: _____		
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED	
_____ (Signature of person authorized to sign)		BY _____ (Signature of Contracting Officer)	07-Sep-2004	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

Amend 1
Charbonneau Park
Answers to Bidder Questions

Div 11310 "PUMPS; SEWAGE AND SLUDGE"

1) Specs call for 120v 3 phase but the plans call for 460v 3 phase. Is 460v/3 correct?

Answer: Specification 11310- par 2.2.1.f changed from 120 VAC to 460 VAC

2) Plans call for 5 hp pumps. We can meet the conditions with 2 hp. Is 2 hp acceptable?

Answer: The pump shall meet the specifications. The note on the drawings about a 5 hp pump is for information only and is not a requirement.

3)The written specs call for a five float configuration (11310 par 2.4.1 g): High Level Alarm; Lag; Lead; Off; Low Level Alarm. The Control Panel Diagram shows a four float configuration (does not show low level alarm). Which would you like to use?

Answer: Changed second sentence in specification 11310- par 2.4.1.g to "One additional switch shall provide the signal for high level alarm.

4)11310- par 2.4.1 h calls for intrinsically safe relays that are not shown on the Control Panel Diagram. I assume that this does need to be Intrinsically Safe?

Answer: Follow specifications. Intrinsically safe relays shall be provided.

5)11310- par 2.4.2:

"a" calls for NEMA 4 Stainless Steel enclosure; NEMA 4 is painted steel, NEMA 4X is Stainless. Do you still want to use stainless?

Answer: Changed par 2.4.2 "a" to Enclosure shall be NEMA 4X, stainless steel..

6)11310- par 2.4.2:

"l" calls for 100 watt utility light outlet. Clarification on what exactly they want there.

Answer: Changed to read "Duplex outlet for local maintenance, 120 V, 15 amp"

7)11310- par 2.4.2:

"p" Remote telemetering contacts. For what conditions?

Answer: Changed to read "One general contact for all alarms"

8)11310- par 2.4.2:

"r" Indicates pad mounted enclosure, however, the drawings show it mounted to 4x4 posts. Which would you like?

Answer: Changed pad to post. And changed par 2.4.2 "a" from pad to post

9)Section 16050- par 2.15.2 for Selector switches states A600 for the switches, that is heavy duty type, but then for the following they do not state heavy duty type for the Indicator Lights. So should every thing be heavy duty or are standard duty acceptable?

Answer: Look in paragraph 2.15.3.

10) Section 11310 par 2.4.2 There seems to be some discrepancies between specification 11310, 2.4.2 and drawing sheets 6 & 7. For example the drawing does not show an inner door but the specifications call out for one. The specifications call out 24V control but the drawings show 120 volt control.

a. Do we go off the drawing or specifications?

Answer: Follow the specifications. We want controls on the inner door - more commonly referred to as a swing out panel.

b. Can I use a Warrick Series 67 Intrinsically Safe Pump Controller?

Answer: An intrinsically safe pump controller is acceptable.

c. Are the lift pump motors going to be 5HP 460VAC?

Answer: 11310- par 2.4.2 changed from "...overload protection for control circuit of 24 V" to **120 V**.

(End of Summary of Changes)

SECTION 11310

PUMPS; SEWAGE AND SLUDGE

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN BEARING MANUFACTURERS ASSOCIATION (ABMA)

ABMA 9 (1990; R 2000) Load Ratings and Fatigue Life for Ball Bearings

ABMA 11 (1990; R 1999) Load Ratings and Fatigue Life for Roller Bearings

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 153/A 153M (1998) Zinc Coating (Hot-Dip) on Iron and Steel Hardware

ASME INTERNATIONAL (ASME)

ASME B40.1 (1991) Gauges - Pressure Indicating Dial Type - Elastic Element

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA ICS 1 (1993) Industrial Controls and Systems

NEMA MG 1 (1993; Rev 1; Rev 2; Rev 3; Rev 4) Motors and Generators

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (1999) National Electrical Code

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Equipment Installation; G, CD

Drawings containing complete wiring and schematic diagrams and any other details required to demonstrate that the system has been

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coordinated and will properly function as a unit. Drawings shall show proposed layout and anchorage of equipment and appurtenances, and equipment relationship to other parts of the work including clearances for maintenance and operation.

SD-03 Product Data

Submersible Centrifugal Pumps; G, EM

Pump characteristic curves showing capacity in gpm, net positive suction head (NPSH), head, efficiency, and pumping horsepower from 0 gpm to 110 percent (100 percent for positive displacement pumps) of design capacity. A complete list of equipment and material, including manufacturer's descriptive data and technical literature, performance charts and curves, catalog cuts, and installation instructions.

Spare Parts; G, EM

Spare parts data for each different item of material and equipment specified, after approval of the related submittals. The data shall include a complete list of parts and supplies, with current unit prices and source of supply.

Field Training; G, EC

Performance test reports in booklet form showing all field tests performed to adjust each component and all field tests performed to prove compliance with the specified performance criteria, upon completion and testing of the installed system. Each test report shall indicate the final position of controls.

Framed Instructions; G, CD

Diagrams, instructions, and other sheets proposed for posting.

SD-06 Test Reports

Field Testing and Adjusting Equipment; G, EC

Performance test reports in booklet form showing all field tests performed to adjust each component and all field tests performed to prove compliance with the specified performance criteria, upon completion and testing of the installed system. Each test report shall indicate the final position of controls.

SD-10 Operation and Maintenance Data

Operation and Maintenance Manual; G, EC

The Contractor shall submit O&M Manuals in accordance with SECTION 1330: SUBMITTAL PROCEDURES PARA.,2.0.

1.3 DELIVERY AND STORAGE

All equipment delivered and placed in storage shall be stored with protection from the weather, excessive humidity and excessive temperature variation; and dirt, dust, or other contaminants.

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1.4 FIELD MEASUREMENTS

The Contractor shall become familiar with all details of the work, verify all dimensions in the field, and shall advise the Contracting Officer of any discrepancy before performing the work.

1.5 Spare Parts

Spare parts data for each different item of material and equipment specified, after approval of the related submittals, shall be provided. The data shall include a complete list of parts and supplies, with current unit prices and source of supply.

PART 2 PRODUCTS

2.1 GENERAL MATERIAL AND EQUIPMENT REQUIREMENTS

Materials and equipment shall be the standard products of a manufacturer regularly engaged in the manufacture of such products and shall essentially duplicate items that have been in satisfactory use for at least 2 years prior to bid opening. Equipment shall be supported by a service organization that is, in the opinion of the Contracting Officer, reasonably convenient to the site. Pump casings shall be constructed of cast iron of uniform quality and free from blow holes, porosity, hard spots, shrinkage defects, cracks, and other injurious defects. Impellers shall be cast iron.

2.1.1 Nameplates

Each major item of equipment shall have the manufacturer's name, address, type or style, model or serial number, and catalog number on a plate secured to the item of equipment.

2.1.2 Equipment Guards

Belts, pulleys, chains, gears, projecting setscrews, keys, and other rotating parts so located that any person may come in close proximity thereto shall be enclosed or guarded.

2.1.3 Special Tools

One set of special tools, calibration devices, and instruments required for operation, calibration, and maintenance of the equipment shall be provided.

2.1.4 Electric Motors

Motors shall conform to NEMA MG 1.

2.1.5 Motor Controls

Controls shall conform to NEMA ICS 1.

2.1.6 Bolts, Nuts, Anchors, and Washers

Bolts, nuts, anchors, and washers shall be steel; galvanized in accordance with ASTM A 153/A 153M.

2.1.7 Pressure Gauges

Standard pressure gauges on the discharge side of pumps. Gauges shall

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comply with ASME B40.1 and shall be 3.5 inches. Gauge ranges shall be as appropriate for the particular installation.

2.2 SUBMERSIBLE CENTRIFUGAL PUMPS

Submersible centrifugal pumps shall be centrifugal type pumps designed to pump solids up to 3 inches in diameter and shall be capable of withstanding submergence as required for the particular installation.

2.2.1 Pump Characteristics

Pumps shall have the following operating characteristics:

- a. Pump Service: effluent.
- b. Design Operating Point: 108 gpm flow, 21 feet head.
- d. Operating Speed: minimum 1725 rpm.
- e. Depth of Submergence: manufacturer's minimum for long term operation.
- f. Electrical Characteristics: 460 volts ac, 3 phase, 60 Hz, 3 horsepower.
- g. Motor Size: Within rated load driving pump at specified rpm.

2.2.2 Pump Casing

The casing shall be capable of withstanding operating pressures 50 percent greater than the maximum operating pressures. The volute shall have smooth passages which provide unobstructed flow through the pump.

2.2.3 Coatings

Exterior surfaces of the casing in contact with sewage shall be protected by a sewage resistant epoxy coating. All exposed nuts and bolts shall be stainless steel.

2.2.4 Impeller

The impeller shall be of the non-clogging design to minimize clogging of solids, fibrous materials, heavy sludge, or other materials found in sewage. The impeller shall be statically, dynamically, and hydraulically balanced within the operating range and to the first critical speed at 150 percent of the maximum operating speed. The impeller shall be securely keyed to the shaft with a locking arrangement whereby the impeller cannot be loosened by torque from either forward or reverse direction.

2.2.5 Wearing Rings

Wearing rings, when required, shall be renewable type and shall be provided on the impeller and casing and shall have wearing surfaces normal to the axis of rotation. Material for wear rings shall be standard of pump manufacturer. Wearing rings shall be designed for ease of maintenance and shall be adequately secured to prevent rotation.

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2.2.6 Pump Shaft

The pump shaft shall be of high grade alloy steel and shall be of adequate size and strength to transmit the full driver horsepower with a liberal safety factor.

2.2.7 Seals

A tandem mechanical shaft seal system running in an oil bath shall be provided. Seals shall be of tungsten-carbide with each interface held in contact by its own spring system. Conventional mechanical seals which require a constant pressure differential to effect sealing will not be allowed.

2.2.8 Bearings

Pump bearings shall be ball or roller type designed to handle all thrust loads in either direction. Pumps depending only on hydraulic balance end thrust will not be acceptable. Bearings shall have an ABEMA L-10 life of 50,000 hours minimum, as specified in ABMA 9 or ABMA 11.

2.2.9 Motor

The pump motor shall have Class F insulation, NEMA B design, in accordance with NEMA MG 1, and shall be watertight and rated for continuous duty operation. The motor shall be either oil filled, air filled with a water jacket, or air filled with cooling fins which encircles the stator housing. Assure motor is capable of running dry for extended periods without damage to motor or seal.

2.2.10 Power Cable

The power cable shall comply with NFPA 70, Type SO, and shall be of standard construction for submersible pump applications. The power cable shall enter the pump through a heavy duty entry assembly provided with an internal grommet assembly to prevent leakage. The cable entry junction chamber and motor shall be separated by a stator lead sealing gland or terminal board which shall isolate the motor interior from foreign material gaining access through the pump top. Epoxies, silicones, or other secondary sealing systems are not acceptable.

2.2.11 Temperature Monitor

Furnish the motor with a temperature monitor embedded in the motor windings. Arrange controls so as to shut the pump down and provide an alarm should the temperature exceed the high temperature set point. Set temperature set point of the temperature monitor at not higher than 90 percent of insulation temperature rating.

2.2.12 Installation Systems

The pumps shall either be free standing or shall have a guide rail assembly.

2.2.12.1 Rail Mounted Systems

Rail mounted installation systems shall consist of guide rails, a sliding bracket, and a discharge connection elbow. Guide rails shall be of the size and type standard with the manufacturer and shall not support any portion of the weight of the pump. The sliding guide bracket shall be an

integral part of the pump unit. The discharge connection elbow shall be permanently installed in the wet well along with the discharge piping. The pump shall be automatically connected to the discharge connection elbow when lowered into place and shall be easily removed for inspection and service without entering the pump well.

2.2.12.2 Bolt Down Systems

The pump mount system shall include a base designed to support the weight of the pump. The base shall be capable of withstanding all stresses imposed upon it by vibration, shock, and direct and eccentric loads.

2.2.12.3 Lifting Chain

Lifting chain to raise and lower the pump through the limits indicated shall be provided. The chain shall be stainless steel and shall be capable of supporting the pump.

2.2.12.4 Winch

Secure a manually operated, cable-type winch capable of lifting the pumps. Provide winch with a fabricated steel support frame and with a minimum capacity of 1.5 times pump weight. Fit cable end with a grab hook to properly link up with the lifting chain.

2.3 ELECTRICAL WORK

Electrical motor driven equipment specified shall be provided complete with motors, motor starters, and controls. Electric equipment and wiring shall be in accordance with Section 16050 ELECTRICAL WORK. Electrical characteristics shall be as specified or indicated. Motor starters shall be provided complete with thermal overload protection and other appurtenances necessary for the motor control specified. Manual or automatic control and protective or signal devices required for the operation specified, and any control wiring required for controls and devices but not shown, shall be provided.

2.4 ACCESSORIES

2.4.1 Float Controls

- a. Provide four sealed float-type mercury switches to control pumps and provide alarm signal.
- b. Seal mercury tube switches in a solid polypropylene float.
- c. Provide float with large radius top at electrical cable connection to assure trouble-free operation.
- d. Suspend floats on their own cable.
- e. Provide floats to operate at elevation shown on drawings.
- f. Design floats to be field-adjustable.
- g. Three floats are to control pumps: One for lead pump start, one for lag pump start and one for all pumps stop. One additional switch shall provide the signal for high level alarm. The high level alarm shall not turn the pumps on.
- h. Provide an intrinsically safe relay for each level control circuit to reduce the energy in the circuit to the point that no spark is created by switching.

2.4.2 Control Panel

Furnish and install locally mounted automatic control panel at location shown on drawings and rated for area classification. Include combination circuit breaker type controller with short circuit, overload, and three overload relays, interior-mounted motor starter(s), and transformer with disconnect and overload protection for control circuit of 120 V. Include a terminal board for connection of level sensors. Provide the following features:

- a. NEMA 4X stainless steel watertight free standing enclosure for post mounting with continuous hinge, neoprene gasket in door and continuous seam weld. Include locking mechanism complete with padlock. The inner door shall be where the control devices are mounted.
- b. Hand-Off-Automatic selector switches.
- c. Automatic alternator.
- d. High level alarm and alarm light.
- e. Low level alarm and alarm light.
- f. Pump running lights.
- g. Elapsed time meters.
- h. Overload reset button to reset overload relays.
- i. Lightning protection.
- j. Condensation heater.
- k. Moisture detector alarm light and alarm contact but do not shut down pump.
- l. Duplex outlet for local maintenance, 120 V, 15 amp.
- m. Auxiliary contacts wired to terminal blocks.
- n. Power ON control relay.
- o. High motor temperature detector alarm light, alarm contact and pump shut down.
- p. One general contact for all alarms
- q. Inner door in cabinet-mounted on a continuous vertical steel hinge; size to completely cover wiring and components mounted on the back panel; provide for mounting of controls and instruments on inner door.
- r. Post mounted enclosure.
- s. Mounting bolts.

2.4.3 Manhole Access Frames and Doors

- a. Furnish and install double hinged door constructed of aluminum, for H-20 loading.
- b. Furnish size recommended by pump manufacturer.
- c. Equip with nonsparking upper guide rail support, float bracket, and flush locking mechanism.
- d. Door shall be able to remain in open position while work is being performed.
- e. Securely place frame above pumps.
- f. Provide doors of skidproof design.
- g. Provide doors with snap locks and removable handle.
- h. Provide door hardware including latching mechanism and hinges of stainless steel materials.

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PART 3 EXECUTION

3.1 EQUIPMENT INSTALLATION

3.1.1 Pump Installation

Pumping equipment and appurtenances shall be installed in the position indicated and in accordance with the manufacturer's written instructions. All appurtenances required for a complete and operating pumping system shall be provided, including such items as piping, conduit, valves, wall sleeves, wall pipes, concrete foundations, anchors, grouting, pumps, drivers, power supply, seal water units, and controls.

3.1.2 Concrete

Concrete shall conform to Section 03300.

3.2 PAINTING

Pumps and motors shall be thoroughly cleaned, primed, and given two finish coats of paint at the factory in accordance with the recommendations of the manufacturer.

3.3 FIELD TESTING AND ADJUSTING EQUIPMENT

3.3.1 Operational Test

Prior to acceptance, an operational test of all pumps, drivers, and control systems shall be performed to determine if the installed equipment meets the purpose and intent of the specifications. Tests shall demonstrate that the equipment is not electrically, mechanically, structurally, or otherwise defective; is in safe and satisfactory operating condition; and conforms with the specified operating characteristics. Prior to applying electrical power to any motor driven equipment, the drive train shall be rotated by hand to demonstrate free operation of all mechanical parts. Tests shall include checks for excessive vibration, leaks in all piping and seals, correct operation of control systems and equipment, proper alignment, excessive noise levels, and power consumption.

3.3.2 Retesting

If any deficiencies are revealed during any test, such deficiencies shall be corrected and the tests shall be reconducted.

3.4 MANUFACTURER'S SERVICES

Services of a manufacturer's representative who is experienced in the installation, adjustment, and operation of the equipment specified shall be provided. The representative shall supervise the installation, adjustment, and testing of the equipment.

3.5 POSTING FRAMED INSTRUCTIONS

Framed instructions containing wiring and control diagrams under glass or in laminated plastic shall be posted where directed. Condensed operating instructions, prepared in typed form, shall be framed as specified above and posted beside the diagrams. The framed instructions shall be posted before acceptance testing of the system.

3.6 FIELD TRAINING

A field training course shall be provided for designated operating and maintenance staff members. Training shall be provided for a total period of 8 hours of normal working time and shall start after the system is functionally complete but prior to final acceptance tests. Field training shall cover all of the items contained in the operating and maintenance manuals.

3.7 Operation and Maintenance Manual

Operating and maintenance manual including manufacturer's descriptions and specifications shall be furnished. The manual shall include the manufacturer's name, model number, service manual, parts list for all features, specifications and schedule for maintenance required on pumps, motors, switches, and other equipment, and instructions on repair or replacement of worn or damaged equipment.

-- End of Section --