

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE	PAGE OF PAGES
			J	1 23
2. AMENDMENT/MODIFICATION NO. 0006	3. EFFECTIVE DATE 28-Mar-2003	4. REQUISITION/PURCHASE REQ. NO. W81G67-2212-3595		5. PROJECT NO.(If applicable)
6. ISSUED BY CONTRACTING DIVISION USACE - ST PAUL 190 5TH STREET E ST PAUL MN 55101-1638	CODE DACW37	7. ADMINISTERED BY (If other than item 6) See Item 6		
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		X	9A. AMENDMENT OF SOLICITATION NO. DACW37-02-B-0015	
		X	9B. DATED (SEE ITEM 11) 24-Feb-2003	
			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 checked="" type="checkbox"/> is extended, <input 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 <u>1</u> 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.) This amendment is to provide changes to the specifications. The required response date has changed from 3 April 2003 to 8 April 2003.				
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)		28-Mar-2003

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES**1. Electrical Changes and Clarifications to SECTION 16528.****1.1 SECTION 16528, Paragraph 1.2, Page 7:**

Change paragraph to read as follows:

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

Lighting System; G, ED
Detail Drawings; G, ED

Detail drawings for for poles, and lighting fixtures.

As-Built Drawings;

Final as-built drawings shall be finished drawings on mylar or vellum and shall be delivered with the final test report.

SD-03 Product Data

Equipment and Materials;

Data published by the manufacturer of each item on the list of equipment and material, to permit verification that the item proposed is of the correct size, properly rated or applied, or is otherwise suitable for the application and fully conforms to the requirements specified.

SD-06 Test Reports

Operating Test; G, ED

Test procedures and reports for the Operating Test. After receipt by the Contractor of written approval of the test procedures, the Contractor shall schedule the tests. The final test procedures report shall be delivered after completion of the tests.

Ground Resistance Measurements;

The measured resistance to ground of each separate grounding installation, indicating the location of the rods, the resistance of the soil in ohms per millimeter and the soil conditions at the time the measurements were made. The information shall be in writing.

SD-10 Operation and Maintenance Data

Lighting System;

A draft copy of the operation and maintenance manuals. Final copies of the manuals as specified bound in hardback, loose-leaf binders with each pump station manual, within 30 days after completing the field test. The draft copy used during site testing shall be updated with any changes required, prior to final delivery of the manuals. The manual shall include names, addresses, and telephone numbers of each subcontractor installing equipment and systems, and nearest service representatives for each item of equipment for each system. The manuals shall have a table of contents and tab sheets. Tab sheets shall be placed at the beginning of each chapter or section and at the beginning of each appendix. The final copies delivered after completion of the field test shall include modifications made during installation checkout and acceptance.

1.2 SECTION 16528, Paragraph 1.3.1, Page 8:

Change paragraph to read as follows:

1.3.1 Lighting System

The lighting system shall be configured as specified and shown. The system shall include all fixtures, hardware, poles, cables, connectors, adapters and appurtenances needed to provide a fully functional lighting system as described on the drawings.

1.3 SECTION 16528, Paragraph 2.7.1, Page 12:

Delete Paragraph "Decorative Street Light Pole for Single Decorative Luminaires."

1.4 SECTION 16528, Paragraph 2.7.2, Page 13:

Delete Paragraph "Decorative Street Light Pole for Single Residential Area Luminaire
."

1.5 SECTION 16528, Paragraph 2.9, Page 13:

Delete Paragraph "ELECTRICAL ENCLOSURES" and all sub paragraphs.

1.6 SECTION 16528, Paragraph 2.10.1.1, Page 16:

Delete Paragraph "Downtown Single Decorative Street Light Luminaire."

1.7 SECTION 16528, Paragraph 2.10.1.2, Page 16:

Delete Paragraph "Single Residential Area Street Light Luminaire."

1.8 SECTION 16528, Paragraph 2.14.2.1, Page 17:

Delete Paragraph "Timer Control Switches."

1.9 SECTION 16528, Paragraph 2.14.3, Page 18:

Delete Paragraph "Safety Switches."

1.10 SECTION 16528, Paragraph 2.14.4, Page 18:

Delete Paragraph "Magnetic Contactor."

1.11 SECTION 16528, Paragraph 3.1.2, Page 19:

Delete Paragraph "Existing Equipment."

1.12 SECTION 16528, Paragraph 3.4.2, Page 21:

Delete Paragraph "Direct Burial."

1.13 SECTION 16528, Paragraph 3.4.2.4, Page 22:

Delete Paragraph "Decorative Street Light Pole for Single Decorative Luminaires."

1.14 SECTION 16528, Paragraph 3.5, Page 22:

Change first sentence to read; "Cables shall be extended into the various structures as indicated and shall be properly connected to the indicated equipment."

."

1.15 SECTION 16528, Paragraph 3.6.5, Page 23:

Delete Paragraph "Concrete."

1.16 SECTION 16528, Paragraph 3.6.6, Page 23:

Delete Paragraph "Duct Line Markers."

1.17 SECTION 16528, Paragraph 3.7, Page 23:

Delete Paragraph "HANDHOLES" and all sub-paragraphs.

1.18 SECTION 16528, Paragraph 3.10.2, Page 26:

Delete Paragraph "Time Control Switches."

1.19 SECTION 16528, Paragraph 3.10.3, Page 26:

Delete Paragraph "Magnetic Contactors."

2. Electrical Changes and Clarifications to SECTION 16920:

The specifications have been changed to make the Master Monitoring and Control System completely separate from the existing system. This will include the addition of a new operator workstation at the Public Works Maintenance facility

2.1 Section 16920, Paragraph 1.2, Page 5:

Change paragraph to read as follows:

1.2 SCOPE OF WORK

This document provides specification requirements for the supply of multiple pump controller packages with integrated supervisory control and data acquisition systems, a new master monitoring and control system with computer workstation, and associated engineering services for the city of Wahpeton, ND. The packages will be used to operate the pumping stations associated with this flood control project. The city has unique standards and operating systems that shall be incorporated into the project. The Contractor shall factory assemble, test, install, and field adjust all equipment for satisfactory operation. He shall provide a complete separate master monitoring and control system. The completed project shall provide the city with a standardized automatic monitoring, and control system that is compatible with their existing pumping system infrastructure. The master monitoring and control equipment, and pump controller package components, including programmable logic controller (PLC), human/machine interface (HMI), motor starters (FVNR/RVNR as required), and associated electrical control components shall be from the same manufacturer, and shall be of current model in production. Prototypes, special configurations, and discontinued models, or proprietary configurations are not allowed. Equipment shall be furnished as necessary to meet the requirements of this document, and shall include all items required to provide complete and functional systems, even though individual components may not be specifically described.

2.2 Section 16920, Paragraph 1.4, Page 7:

Replace paragraph 1.4 with the following:

1.4 SCOPE OF SERVICES

1.4.1 General

The Contractor shall furnish and install complete pump controller packages with integrated supervisory control and data acquisition systems (SCADA) at each pump station as indicated. The Contractor shall provide a new PLC based SCADA host control panel with radio, and a new operator workstation with laser printer, and control system software at the city's central monitoring facility. The Contractor shall provide a radio path study. The Contractor shall be responsible for ensuring that all components of the master monitoring and control system are correctly programmed, and operate consistently with the City's existing system.

1.4.2 Existing System Compatibility

The Contractor shall be responsible for reviewing the city's existing pump station control system, and shall assure that system provided operates similarly to the present system. In-Control Incorporated, 10350 Jamestown Street Northeast, Minneapolis, MN 55449, ph:(763)783-9500 is responsible for the city's existing master monitoring and control system.

1.4.3 Master Monitoring and Control Station

The existing master monitoring and control facility is located in the Wahpeton Public Works Maintenance Facility. The new SCADA host control panel and operator workstation shall be installed at the same location.

1.4.3.1 SCADA Equipment

Supply the master monitoring and control facility with a new PLC based SCADA host control panel, personal computer workstation, and printer. Supply each pump station with a complete, coordinated SCADA wireless data-link to the master monitoring and control facility. The systems shall permit remote monitoring and control of each pump station. All systems shall include battery backup un-interruptible power supplies. The Contractor shall perform radio path studies to determine antenna location and configurations, and include radio relay stations if required. Supply poles and anchor bolts for antenna mounting. The Contractor shall provide radio frequency licenses for the new equipment. The frequency shall be selected to avoid conflict with the city's 453.525-MHz frequency. Supply all equipment with lightning and surge suppression devices.

1.4.3.2 System Integration Services

The Contractor shall provide all services necessary to configure each new pump station control system, and integrate it into the new master monitoring and control system. Pump stations shall be added to new master system as they are completed. The work shall include:

- 1) Programming, and engineering services as required, to ensure that all parts of the overall pumping stations and master monitoring and control system function as a single integrated unit.
- 2) The Contractor shall perform a complete point-by-point verification of all reported data.
- 3) Provide all component assembly drawings, program listings, and documentation required to define the complete automated control and monitoring systems.
- 4) Provide two operation and maintenance manuals, for each pump station, and the master monitoring and control system.

1.4.4 Pump Station Equipment

1.4.4.1 Sump Pump Starters

Provide each new sump pump with a properly sized full-voltage combination motor starter.

1.4.4.2 Storm Water Pump Starters

Provide each new storm water pump with a properly sized autotransformer reduced voltage combination motor starter. The equipment shall be furnished with assembly and installation instructions, and drawings showing all inter-connections with other control components.

1.4.4.3 Supervisory Pump Controller (SCP)

Supply properly configured pump control and monitoring systems for each pump station. Depending on station configuration provide simplex, or duplex alternating pump controllers and alarm systems. The pump controllers shall permit remote monitoring and control of all pumps including sump pumps at each station. The systems shall utilize programmable logic controllers (PLCs), and relays for control. Equipment shall include assembly, and installation instructions, and drawings showing all necessary inter-connections including field connections to other control components, storm water pumps, sump pumps, the radio telemetry, and the emergency generator manual transfer switch and system.

1.4.4.4 Level Control

Supply liquid level control systems for storm water and sump pump control systems. The systems shall include submersible level transducers and liquid level floats arranged to provide redundant operation.

1.4.5 Support Engineering Services

During the construction contract that includes pump station construction, the Contractor shall be available to support the Government's Resident Engineer and the Construction Contractor, with information and assistance to ensure that the pump station controls are correctly installed in each pump station.

1.4.5.1 On-Site Meetings

Provide one on-site meeting at the start of the construction contract, with the Construction Contractor's electrical sub and the Contracting Officer, to review and clarify controller installation procedures and instructions.

1.4.5.2 Resident Engineer Support

Support the Resident Engineer to ensure the supplied equipment is installed as intended. This may involve telephone support, clarification of drawings and instructions, and finding solutions to problems that may arise during the control installation.

1.4.5.3 On-site Inspections

Perform on-site reviews and inspections as requested. The Contractor shall provide at least one site visit to inspect the full installation of the control system before the system is energized, in addition to the on-site startup services described below.

1.4.5.4 Telephone Support

Provide telephone support to the Construction Contractor for interpretations of the engineering intent.

1.4.5.5 Start-up Service

Provide start-up services to configure the equipment and software installed at each pump station and the central control facility. Add new pump stations to master control and monitoring system as construction is completed.

1.4.5.6 Station Startup

For each flood control pump station allow a minimum total of 2 workdays for on-site services to prepare for, activate, and test the operation of the pump station control system.

1.4.5.7 Configuration and Adjustments

Before or during the start up procedure, the Contractor shall properly configure and adjust each pump station control system, and adjust the liquid level on-off settings as directed.

1.4.5.8 Master Control System Startup.

At the time of start up for each pump station, the Contractor shall make whatever modifications are necessary at the master monitoring and control facility to bring the new station "on line".

1.4.5.9 Point-by-Point Verification

The Contractor shall perform a complete point-by-point verification of all reported data at each pump station and the master monitoring and control stations.

1.4.5.10 Startup Difficulties

If startup for a required pump station fails Contracting Officer acceptance, the Contractor shall be responsible for furnishing, at no additional cost, to the Government, all additional field site services during re-startup until the Contracting Officer has determined such re-startup work has been acceptably completed.

2.3 Section 16920, Paragraph 2.8.1., Page 26:

Replace paragraph 2.8.1 with the following:

2.8.1 SCADA Host Controller

The City's existing master monitoring and control system includes a Zetron Model 1700 SCADA system controller configured for MODBUS communications protocol. The device is manufactured by Zetron, Inc. PO Box 97004, Redmond WA 98073-9704 USA, Ph: (425) 820-6363 Fax: (425) 820-7031 Email: Zetron@zetron.com.

The new master monitoring and control system for the project shall include a new SCADA host controller with surge protector, radio, master PLC and un-interruptible power supply. The master PLC shall be interfaced with the host controller radio and the operator workstation computer. The new SCADA host controller shall include new antenna, coax

cable, and grounding. Provide all equipment in a NEMA 1 wall mount enclosure with all of the circuit breakers, relay logic, dc power supplies, and UPS as required. See PARAGRAPH 16920-3.1.1.2 "New SCADA Host Control Panel" for additional requirements.

2.4 Section 16920, Paragraph 2.8.2., Page 26:

Replace paragraph 2.8.2 with the following:

2.8.2 SCADA RTU

The equipment shall utilize standard Modbus communication protocols for communication throughout the pump controller package and shall allow Modbus messages to be sent to and from the PLC, the HMI, and any other Modbus-compatible network device. RTU functionality shall enable issuing commands, receiving commands, and gathering data either to or from Remote pump stations or main SCADA host control systems.

(1) The communication device and associated power supply units shall be contained in the main PLC enclosure of the pumping control system.

(2) The RTU shall enable polling over local area network/wide area network (LAN/WAN) devices functioning in a master/slave mode. The RTU option shall function in the following types of network structures: single-master/multi-slave network, multi-master/multi-slave network, variable time slot multi-master/multi-slave network.

(3) The RTU shall enable point-to-point communication between remote LAN/WAN RTUs and point-multipoint communication with master supervisory control and data acquisition (SCADA) systems.

(4) Any RTU in the network shall be able to function as a full master RTU. Each RTU shall provide unsolicited reporting capability, which allows any RTU to initiate communications in the event of an alarm condition or when a field device status changes. Unsolicited reporting shall be supported simultaneously with full integrity polling. Additionally, all RTUs shall support report by exception.

(5) The RTU shall communicate using Modbus ASCII or Modbus RTU protocol. When required, the RTU option shall include protocol conversion packages to ensure the ability to interface with proprietary communications networks.

(6) The RTU shall be capable of sending Modbus messages from the PLC to. The RTU shall be capable of sending ASCII messages to modems for modem connectivity and to other ASCII devices (such as printers and displays) for visual display of process information. The RTU package shall support communication baud rates from 300 to 19,200 baud.

(7) The RTU shall incorporate an industry-standard communication interface that is capable of supporting various communication mediums. Supported communication mediums shall include spread

spectrum and licensed frequency radios, dial-up or leased line modems, and fiber optics. All communications must be provided using Modbus industry-standard protocol.

(8) RTU diagnostics shall be accessible either at the RTU or (remotely) from the host. Battery health, I/O health, and other field device status data shall be available by means of LED indicators on the components themselves.

2.5 Section 16920, Paragraph 2.19.1, Page 32:

Delete entire paragraph "Braided Steel Jacket."

2.6 Section 16920, Page 35:

Add new paragraph 2.23 as follows:

2.23. MASTER CONTROL STATION OPERATOR WORKSTATION COMPUTER

Computer shall be a standard desktop or tower configuration, unmodified digital computer of modular design. Computing devices, as defined in 47 CFR 15, supplied as part of the control system shall be certified to comply with the requirements of Class B computing devices and shall be labeled as set forth in 47 CFR 15.

2.23.1 Minimum Processor Operating Speed

Minimum processor operating speed shall be 1 GHz.

2.23.2 RAM Memory

Ram memory shall be minimum 256MB DDR SDRAM.

2.23.3 Minimum Power Supply

Minimum power supply shall have a capacity of 250 watts.

2.23.4 Real Time Clock (RTC)

Real time clock accurate to within plus or minus one minute per month. Battery backed for a minimum of 3 months. (e) Serial Ports: Two EIA ANSI/EIA/TIA-232-F ports. Data transmission rate shall be software adjustable between 9600 and 57,600 bps.

2.23.5 Parallel Port

One enhanced parallel port.

2.23.6 SVGA Color Monitor

SVGA color monitor shall be no less than 21 inches, with a minimum resolution of 2048 by 1546 pixels/75 Hz Multi-scan, non-interlaced, and a maximum dot pitch of 0.23 millimeters. The video output card shall support at least 32 bit colors at a resolution of 2048 by 1536 at a minimum refresh rate of 75 Hz.

2.23.7 Keyboard

A 101 key, 64 character standard ASCII character set based on ANSI X3.64 and ANSI X3.154.

2.23.8 Hard Disk

Hard disk with a minimum of 100 gigabytes of formatted storage.

2.23.9 Floppy Disk Drives

One high density floppy disk drive and controller in 90 mm 3-1/2 inch diameter size shall be provided.

2.23.10 Zip Drive: One zip drive and controller with 100 megabyte of formatted storage shall be provided.

2.23.11 Modem:

Modem shall operate on analog telephone lines 56K kbps, full duplex using asynchronous communications. It shall have an error detection, auto answer/autodial, and call progress detection. The modem shall meet the requirements of MNP-4, ITU V.42, MNP-2, MNP-3 for error correction and MNP-5, ITU V.42bis for data compression standards, and - ITU V.21, ITU V.22, ITU V.22bis, ITU V.29, ITU V.32, ITU V.32bis, ITU V.34, ITU V.90, ITU Group 3 Fax, ITU V.17, ITU V.23, ITU V.27ter, k56Flex for Analog Modulation Protocol. Model shall be suitable for operating on unconditioned voice grade telephone lines in conformance with 47 CFR 68.

2.23.12 Mouse

Wheel Mouse with minimum resolution of 16 dots per mm. 400 dots per inch.

2.23.13 CD Drive

Read/write drive with storage capacity of 650 megabytes of formatted storage, 48X speed.

2.23.14 Network Interface Card

Network interface card shall be provided for LAN equipment functions. The network interface card shall use a 16 bit interface to the data bus; it shall be supplied with an on-board RJ45 connector and transceiver for direct connection to the LAN. It shall also have an auxiliary unit input port for performing diagnostics. Onboard buffer of at least 16K bytes shall be included to prevent the loss of data packages.

2.23.15 Uninterruptible Power Supply (UPS)

A self contained UPS suitable for installation and operation at the workstation computer shall be provided. The unit shall be sized to provide a minimum of 15 minutes of operation of the workstation

computer. The UPS shall be in accordance with paragraph "UNINTERRUPTIBLE POWER SUPPLY (UPS)."

2.7 Section 16920, Page 35:

Add new paragraph 2.24 as follows:

2.24 MASTER CONTROL STATION LASER PRINTER

One laser printer is required. The printer shall meet the following requirements: The input interface shall be a parallel port connection. Resolution shall be a minimum of 23 by 23 dots per mm 600 by 600 dots per inch. Printing speed shall be a minimum of 4 pages per minute. The data buffer size shall be a minimum of 10 megabytes. The size for paper and other media shall be 8.5 X 11 inches. The paper cassette shall have a 250 sheet minimum capacity.

2.8 Section 16920, Page 35:

Add new paragraph 2.25 as follows:

2.25 COMMUNICATIONS AND PROGRAMMING DEVICE

A hand-held communication and programming device shall be provided. The communication and programming device shall connect to PLC'S directly for readout of variables, override, control, servicing, troubleshooting and adjustment of control parameters. The device shall be provided with all necessary cables, connectors and adapters to allow connection to the PLC. The device shall communicate in English language for inquiry, reporting and programming purposes.

2.9 Section 16920, Paragraph 3.1.1.1, Page 35:

Change paragraph heading from "Existing Telemetry Equipment" to "Existing SCADA Host Control Panel".

2.10 Section 16920, Paragraph 3.1.1.2, Page 35:

Change paragraph to read as follows:

3.1.1.2 New SCADA Host Control Panel

The Contractor shall provide a new SCADA Host Control Panel that includes:

- 1) Omni-directional antenna with mast
- 2) Antenna coaxial cable.
- 3) Lighting and surge suppression.
- 4) Radio/Modem transceiver with RS232 interface to master PLC.
- 5) New radio frequency and license selected to avoid conflict with 453.525-MHz
- 6) Master PLC with input and output modules as required.
- 7) Invensys/Best Power model PW9120 uninterruptible power supply.
- 8) Ethernet interface to SCADA computer with Hub.
- 9) Circuit breaker for incoming power.
- 10) DC power supplies as required.

- 11) High temperature enclosure fan with adjustable thermostat.
- 12) Fluorescent light.
- 13) Convenience outlet rated 120 volts, 15/20 amps.
- 11) NEMA 1 enclosure.

Panels shall be fabricated in accordance with PARAGRAPH "16920-3.2 PANEL FABRICATION REQUIREMENTS." Installation at the Wahpeton Public Works Maintenance Facility shall include all power and signal circuits in conduit required for the new SCADA host control panel, and new operator workstation.

2.11 Section 16920, Paragraph 3.1.1.3, Page 36:

Change paragraph to read as follows:

3.1.1.3 Operator Workstation

The existing operator workstation includes a personal computer with:

- 1) Windows NT operating system.
- 2) Allen-Bradley RSView32 graphical monitoring and control software.
- 3) Printer.
- 4) Uninterruptible power supply.

The new operator workstation equipment and software shall be configured like the existing system. Software shall be the latest version commercially available. Hardware shall be as specified.

The Government will furnish the Contractor, upon request, a downloaded copy of the programmed interface from the existing master monitoring and control system. The Contractor shall use the existing interface program as a starting point for development of the new master monitoring and control interface. The Contractor shall be fully responsible for the proper documentation and operation of the delivered product, including any existing programming that is utilized. The Contractor shall develop custom report printouts for the new pump stations that are equivalent to those presently in use on the existing master monitoring and control system. The master monitoring and control system programming shall be installed and on-line within 90 days of start-up of the first pump station. Additional completed pump stations shall be incorporated into the master monitoring and control station within 30 days of successful start-up.

3. Electrical Changes and Clarifications to Section 01270:

Add new paragraph 1.2.11 as follows:

1.2.11 Master Monitoring and Control Station

1.2.11.1 Payment

Payment will be made for work associated with furnishing materials, equipment, supplies and labor and performing all operations necessary for the electrical features of the master monitoring and control station.

Electrical features include but are not limited to raceways, conductors, enclosures, grounding, power distribution, receptacles, SCADA host controller, operator workstation, printer, UPS, software, and programming. This shall also include the satisfactory completion of all required tests. All incidentals shall be included.

1.2.11.2 Unit of Measure

Unit of measure: lump sum.

4. The following drawings are changed:

4.1 Drawing R-P-WB-64/063, coordinate D1:

Change "NOTE 6" to the following:

6. HEAVY DUTY POWER INLET WITH BACK BOX AND ANGLE ADAPTOR. CROUSE-HINDS ARKTITE. AREX 400, STYLE 1, 400-AMP, 3-PHASE, 4-WIRE, 4-POLE RECEPTACLE WITH S-22 REVERSED CONTACTS. 42-IN MOUNTING HEIGHT. POWER INLET SHALL BE COMPATABLE WITH MATING PLUG AP404512 WITH S-22 REVERSED CONTACTS.

4.2 Drawing R-P-WB-64/073, coordinate F4:

Add new "NOTE 7" as follows:

7. REPLACE PANEL ECP HEAVY DUTY POWER INLET WITH CROUSE-HINDS ARKTITE. AR20422, STYLE 1, 200-AMP, 3-PHASE, 4-WIRE, 4-POLE RECEPTACLE WITH S-22 REVERSED CONTACTS. POWER INLET SHALL BE COMPATABLE WITH MATING PLUG AP204513 WITH S-22 REVERSED CONTACTS.

4.3 Drawing R-P-WB-64/080, coordinate D4:

Change note to read as follows:

EMERGENCY RECEPTACLE C-H #AR40412-S22 WITH ANGLE ADAPTER

4.4 Drawing R-P-WB-64/089, coordinate C4:

Change note to read as follows:

EMERGENCY RECEPTACLE C-H #AR40412-S22 WITH ANGLE ADAPTER

4.5 Drawing R-P-WB-64/095, coordinate G5:

Add new "NOTE 6" as follows:

6. REPLACE PANEL ECP HEAVY DUTY POWER INLET WITH CROUSE-HINDS ARKTITE. AR40422, STYLE 1, 400-AMP, 3-PHASE, 4-WIRE, 4-POLE RECEPTACLE WITH S-22 REVERSED CONTACTS. POWER INLET SHALL BE COMPATABLE WITH MATING PLUG AP404512 WITH S-22 REVERSED CONTACTS.

5. SECTION 00010 - SOLICITATION CONTRACT FORM

The required response date/time has changed from 03-Apr-2003 02:00 PM to 08-Apr-2003 02:00 PM.

6. CHANGES TO THE BID SCHEDULE

CLIN 0056

This CLIN has been renumbered to CLIN 0057.

CLIN 0057

This CLIN has been renumbered to CLIN 0058.

CLIN 0058

This CLIN has been renumbered to CLIN 0059.

A new CLIN 0056 has been added for a "Master Monitoring and Control System."

A new bid schedule is attached to this amendment and should be utilized for bid submission.

7. CHANGE TO DRAWING R-P-WB-64/060

Drawing R-P-WB-64/060, Coordinate G-6, BUILDING MECHANICAL EQUIPMENT SCHEDULE, MARK NO. H-1: In the remarks section, delete "... USE H AND GEARED TROLLEY." and replace with the following: "USE MOTORIZED TROLLEY PER THE SPECIFICATION. ALTERNATE HOIST MANUFACTURERS ARE ACCEPTABLE PROVIDED THE SPECIFICATION REQUIREMENTS ARE MET."

8. QUESTIONS FROM CONTRACTORS WITH RESPONSES

Question #1

On Sheet 58 of 83 you call out for a float switch terminal box for the floats and analog level transmitter. This is on pump station #1A and #7. You do not call out for them on the remainder of the stations. Do you want them also on the other stations or will we run straight from the SCP to the conduit via the vented skirt area?

Response: Run into panel via stub-ups in the vented skirt area. Cable should be sealed where it enters the control panel with cord-grip bushings.

Question #2

On 16920 page 32, 2.19.1

Braided Steel Jacket

Do you want this special wire from the supervisory control panel to the float termination box or from the float termination box to the floats?

Response: Required in the wetwell area only to prevent problems with rodents.

Question #3

On 16920 page 32, 2.19.1

Braided Steel Jacket

Do you have a brand and part number for this special cable.

Response: We do not have a recommended source, but sources can be found on the Internet using the search phrase "tubular braided stainless steel jacket."

Question #4

The bid form or Section 00010 Solicitation Contract Form

The breakout prices are listed by pump station.

On 16920 page 35, 3.1.1.2 New Telemetry Equipment

The bid form does not have a breakout price for this equipment. (New Master PLC enclosure) Do you want me to divide the cost of this station into the other seven (7) stations and add this amount to each station?

Response: Include this item with the new CLIN for the master control workstation that is included by this amendment.

(End of Summary of Changes)

Bidding Schedule

Basic Items

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	Pump Station 1A Structure	1	Lump Sum		
0002	Pump Station 1A Electrical	1	Lump Sum		
0003	Pump Station 1A Mechanical	1	Lump Sum		
0004	Pump Station 1A Install Pump	2	Each		
0005	Pump Station 1A Sluice Gates	2	Each		
0006	Pump Station 1A Electrical Service	1	Lump Sum		
0007	Pump Station 7 Structure	1	Lump Sum		
0008	Pump Station 7 Electrical	1	Lump Sum		
0009	Pump Station 7 Mechanical	1	Lump Sum		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0010	Pump Station 7 Install Pumps	2	Each		
0011	Pump Station 7 Sluice Gates	2	Each		
0012	Pump Station 7 Electrical Service	1	Lump Sum		
0013	Pump Station 1 Structure	1	Lump Sum		
0014	Pump Station 1 Mechanical	1	Lump Sum		
0015	Pump Station 2 Structure	1	Lump Sum		
0016	Pump Station 2 Electrical	1	Lump Sum		
0017	Pump Station 2 Mechanical	1	Lump Sum		
0018	Pump Station 3 Structure	1	Lump Sum		
0019	Pump Station 3 Electrical	1	Lump Sum		
0020	Pump Station 3 Mechanical	1	Lump Sum		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0021	Pump Station 4 Structure	1	Lump Sum		
0022	Pump Station 4 Electrical	1	Lump Sum		
0023	Pump Station 4 Mechanical	1	Lump Sum		
0024	Pump Station 4 Install Pumps	1	Each		
0025	Pump Station4 Electrical Service	1	Lump Sum		
0026	Pump Station 5 Structure	1	Lump Sum		
0027	Pump Station 5Electrical	1	Lump Sum		
0028	Pump Station 5 Mechanical	1	Lump Sum		
0029	Pump Station 5 Install Pumps	1	Each		
0030	Pump Station 5 Electrical Service	1	Lump Sum		
0031	Pump Station 6 Structure	1	Lump Sum		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0032	Pump Station 6 Electrical	1	Lump Sum		
0033	Pumps Station 6 Mechanical	1	Lump Sum		
0034	Clearing and Grubbing	1	Lump Sum		
0035	Demolition	1	Lump Sum		
0036	Select Impervious Fill	3,760	Cubic Yard		
0037	4" Topsoil and Seed	36,990	Square Yard		
0038	8" Topsoil and Seed	7,110	Square Yard		
0039	Stripping	455	Cubic Yard		
0040	Inspection Trench	650	Cubic Yard		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0041	Aggregate Surface Course	80	Cubic Yard		
0042	Excavation	138,458	Cubic Yard		
0043	Riprap Type R20	1,290	Net Ton (2,000 LB)		
0044	Riprap Type R30	120	Net Ton (2,000 LB)		
0045	Riprap Type R45	620	Net Ton (2,000 LB)		
0046	Bedding Type B1	640	Net Ton (2,000 LB)		
0047	Bedding Type B2	250	Net Ton (2,000 LB)		
0048	Sanitary Manhole at 4th Ave N	1	Lump Sum		
0049	Sanitary Manhole at 2nd Ave N	1	Lump Sum		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0050	Sanitary Manhole at 3rd Ave S	1	Lump Sum		
0051	Sanitary Manhole at 7th Ave S	1	Lump Sum		
0052	Storage Shed	1	Lump Sum		
0053	Pad for Portable Pumps	3	Each		
0054	Storm Sewer B	1	Lump Sum		
0055	Storm Sewer C	1	Lump Sum		
0056	Master Monitoring and Control System	1	Lump Sum		
0057	Bonds for Basic Items (Performance and Payment)	1	Lump Sum		

Subtotal for Basic Items (CLINS 0001 through 0057)

Option Items

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0058		1	Lump Sum		
OPTION	Storm Sewer C1			_____.	_____.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0059		1	Lump Sum		
OPTION	Bonds for Option 1 (Performance and Payment)			_____.	_____.

Subtotal for Option Items (CLINS 0058 through 0059) _____

TOTAL FOR ALL ITEMS _____