

Contract Change Order # 6

Project Name: <u>City Wide SCADA System</u>	Project Number: <u>155425</u>
Project Location: <u>City Wide - Various Locations</u>	Date of Application: <u>Tuesday, November 12, 2019</u>
Contractor: <u>Prime Controls</u>	Submitted By: <u>Ricky Ellis</u>

Summary of Change in Scope of Work

The following scope of work consisting of work location, work description, established quantities, and timeline for completion has been reviewed and agreed upon by the contractor, the origin funding department, and the Engineering and Construction Department.

Change of Work Items Included in this Change Order:

- 1) As directed by the City of Broken Arrow Engineering and Construction department, the contractor is to furnish and install a rack mounted server with Dell Power Edge R6515 Series Modem, Migrate Current VT SCADA software and configure to new rack mounted server, Configure VTSCADA alarm notification module for modem service, and provide/update O&M's. This change is being directed due to reviewed limitations of utilizing a virtual server as specified within the original contract. The associated costs are inclusive of all applicable costs to provide a complete in place product.

- 2) As directed by the City of Broken Arrow Engineering and Construction department, the contractor is to furnish and install modifications to the LS04 - Adams Creek Northwest Lift Station programs logic controller (PLC) in the existing panel. The work to be installed by the contractor is as follows: replace the UPS, Provide redundant 24v DC power supplies and monitoring inputs from the UPS and 24V DC power supplies into the PLC to be monitored remotely, Replace the PLC power supply, CPU, and Chassis as specified in the technical document supplied by the Engineer of Record. The associated costs are inclusive of all applicable costs to provide a complete in place product.

Change in Contractual Project Time:

No requested additional time

Plan Sheets or Additional Documents Attached: ☒ Yes ☐ No ☒ Other: Prime Controls Cost Proposals & RFI's

Work Order Quantities

Item#	(Spec)	Item Description	Units	Price	Quantity	Total Amount
CO6-1	NA	Server for Remote Sites	LS	\$ 16,496.49	1	\$ 16,496.49
CO6-2	NA	Adams Creek NW - PLC Modifications	LS	\$ 38,287.08	1	\$ 38,287.08
Total Change Cost:						\$ 54,783.57

**Public Contract
Application for
Contractual Changes**

Engineering and Construction Department

485 N. Poplar, Broken Arrow, OK. 74012

Fax: 918-259-8453 - Office: 918-259-7000

Summary of Project Costs

Total Previous Change Orders:	\$ 71,589.90	Original Contract Amount:	\$ 1,559,028.00
Current Change Order:	\$ 54,783.57	Amended Contract Amount:	\$ 1,685,401.47
Total Cost of Change Orders:	\$ 126,373.47	Percent Change in Contract:	8.11%
Total Cost Applicable to CBA:	\$ 126,373.47	Percent Change Applicable to CBA:	8.11%

Change Order Authorization

Change Order # <u>6</u> in the sum of:	\$ <u>54,783.57</u>	has been reviewed by all parties and is recommended for approval by:	
Contractor Submitting Change Order:			
	Name	Signature	Date
Construction Division Manager:	Timothy S Robins, PE		
	Name	Signature	Date
Director of Engineering & Construction:	Mike Kyser		
	Name	Signature	Date
Assistant City Manager - Operations:	Kenneth D Schwab, PE		
	Name	Signature	Date
City Manager:	Michael Spurgeon		
	Name	Signature	Date

This Change is Executed Through:

- ☐ This change to the contract documents is authorized by the City Manager's authority in accordance with the applicable state statutes and COBA Code of Ordinances.
or
☒ This change to the contract documents was approved at the City Council/BAMA meeting held on : Tuesday, August 6, 2019



**Public Contract
Application for
Contractual Changes**

Summary of Project Costs

Total Previous Change Orders:	\$ 71,589.90	Original Contract Amount:	\$ 1,559,028.00
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Total Cost of Change Orders:	\$ 126,373.47	Percent Change in Contract:	8.11%
Total Cost Applicable to CBA:	\$ 126,373.47	Percent Change Applicable to CBA:	8.11%

Change Order Authorization

Change Order # <u>6</u> in the sum of: \$ <u>54,783.57</u> has been reviewed by all parties and is recommended for approval by:		
Contractor Submitting Change Order:	<u>Ricky Ellis</u> Name	<u>[Signature]</u> Signature Date: <u>11/13/19</u>
Construction Division Manager:	<u>Timothy S Robins, PE</u> Name	<u>[Signature]</u> Signature Date: <u>11/13/19</u>
Director of Engineering & Construction:	<u>Mike Kyser</u> Name	<u>[Signature]</u> Signature Date: <u>11/13/19</u>
Assistant City Manager - Operations:	<u>Kenneth D Schwab, PE</u> Name	<u>[Signature]</u> Signature Date: <u>11-13-19</u>
City Manager:	<u>Michael Spurgeon</u> Name	<u>[Signature]</u> Signature Date: _____

This Change is Executed Through:

☐ This change to the contract documents is authorized by the City Manager's authority in accordance with the applicable state statutes and COBA Code of Ordinances.
or

☒ This change to the contract documents was approved at the City Council/BAMA meeting held on :

Tuesday, August 6, 2019

Monday, November 18, 2019



1725 Lakepointe Drive, Lewisville TX 75057
(972) 221-4849 Phone
(972) 420-4842 Fax

Change Order Request

Date: November 6, 2019

To: City of Broken Arrow
Attn: Tim Robins
Project Name: City of Broken Arrow SCADA Replacement
Contract No.: 155425
Subject: LS04 Additional Work
Change Order Request No.: 1851009-12

Source: BAMA Request _ PCM for Server for Remote Sites

Tim,

Prime Controls is pleased to offer our cost proposal for additional work for BAMA after a discussion with City Staff, it has been determined that the limitations with Twilio and security risks associated with alarm notifications is not suitable for a secured SCADA system. This Proposed Contract Modification is to migrate the existing remote site VTScada software and configuration to a rack mount server with modem connection.

Scope of Work

1. Furnish and Installation of a rack mount server with modem. Server shall be a Dell Power Edge R6515 Series.
2. Migrate current VTScada software and configuration to rack mount server.
3. Configure VTScada alarm notification module for modem service.
4. O&M's will be updated.

Sub-Total Cost Breakdown

Materials	\$	8,851.07
Labor	\$	4,593.70
Travel	\$	900.00
Markup (15%)	\$	2,151.72
Total		\$16,496.49

Clarifications

1. Prior to commencement of work, Prime Controls requests an executed copy of this change order request. We expect this change will be accepted in a timely manner. Prime Controls is not liable for schedule delays associated with this change in the scope of work.
2. Our Proposal is valid for 15 days from the date of this letter. Pricing is subject to change based on approval date.
3. The city will obtain phone line for modem.
4. The city will place server in rack and provide power to server and configure for domain access.
5. No submittals required for Server & equipment



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Schedule

Number of additional calendar days requested for this change proposal from the date of notice to proceed.

60

Proposal Approval

Approved By: _____

Date: _____

Should you have any questions regarding this change order request please feel free to contact us.

Sincerely,
Prime Controls, LP

Project Manager

PCM for Server for Remote Sites

After discussion with City Staff, it has been determined that the limitations with Twilio and security risks associated with alarm notifications is not suitable for a secured SCADA system.

This Proposed Contract Modification is to migrate the existing remote site VTScada software and configuration to a rack mount server with modem connection.

Work includes the following;

1. Furnish and Installation of a rack mount server with modem. Server shall be a Dell Power Edge R6515 Series, configured as recommended by Prime Controls.
2. Migrate current VTScada software and configuration to rack mount server.
3. Configure VTScada alarm notification module for modem service.

Notes:

1. The city will obtain phone line for modem.
2. The city will place server in rack and provide power to server.



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Change Order Request

Date: November 6, 2019

To: City of Broken Arrow
Attn: Tim Robins
Project Name: City of Broken Arrow SCADA Replacement
Contract No.: 155425
Subject: LS04 Additional Work
Change Order Request No.: 1851009-10

Source: BAMA Request _ Momorandum from Alan Plummer

Tim,

Prime Controls is pleased to offer our cost proposal for additional work on LS04 as per the Technical Memorandum from Alan Plummer dated 11/4/2019. It has been determined the failure at LS-04 on 10/31/2019 was the result in a prolong loss of phase event. The phase that was lost, happened to be the same phase that powers the PLC Panel. It has also been determined that the UPS in panel was non-functional at the time. This Proposed Contract Modification, is the to replace the UPS, provide redundant 24VDC power supplies and monitoring inputs from the UPS and 24VDC power supplies into the PLC to be monitored remotely. As a precautionary task, the PLC Power Supply, CPU and Chassis are to be replaced.

Scope of Work

1. Installation of DIN Rail mounted UPS, similar to the APC SUA500PDR installed at the WWTP, with bypass switch.
2. Installation of incoming line protector, similar to the Phoenix Contact 2905228 install at the WWTP.
3. Installation of four (4) breakers, and seven (7) fuses for AC and DC power distribution similar to panels at the WWTP.
4. Installation of two (2) 24VDC power supplies, Phoenix Contact 2866763, wired in parallel.
5. Installation of 16 channel digital input module, ALBR1746IB16
6. Installation and programming of UPS on Battery and UPS Low Battery status, to be displayed on central monitoring station.
7. Installation of programming of 24VDC Power supplied failed, wire the contact from each power supply in series.
8. Replacement of PLC power supply, AB 1746-P4
9. Replacement of CPU 5/05 with EEPROM Memory, AB 1747-L553 and 1747-M13
10. Replacement of PLC chassis, AB 1746-A10

Sub-Total Cost Breakdown

Materials	\$	18,511.81
Labor	\$	11,381.30
Travel	\$	3,400.00
Markup (15%)	\$	4,993.97
Total		\$38,287.08

Clarifications

1. Prior to commencement of work, Prime Controls requests an executed copy of this change order request. We expect this change will be accepted in a timely manner. Prime Controls is not liable for schedule delays associated with this change in the scope of work.



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2. Our Proposal is valid for 15 days from the date of this letter. Pricing is subject to change based on approval date.
3. No Programming Software provided.
4. No submittals on parts being furnished.

Schedule

Number of additional calendar days requested for this change proposal from the date of notice to proceed.

20

Proposal Approval

Approved By: _____

Date: _____

Should you have any questions regarding this change order request please feel free to contact us.

Sincerely,
Prime Controls, LP

Project Manager

PCM for LS-04 PLC Panel Modifications

It has been determined the failure at LS-04 on 10/31/2019 was the result in a prolong loss of phase event. The phase that was lost, happened to be the same phase that powers the PLC Panel. It has also been determined that the UPS in panel was non-functional at the time. This Proposed Contract Modification, is the to replace the UPS, provide redundant 24VDC power supplies and monitoring inputs from the UPS and 24VDC power supplies into the PLC to be monitored remotely. As a precautionary task, the PLC Power Supply, CPU and Chassis are to be replaced.

Work includes the following;

1. Installation of DIN Rail mounted UPS, similar to the APC SUA500PDR installed at the WWTP, with bypass switch.
2. Installation of incoming line protector, similar to the Phoenix Contact 2905228 install at the WWTP.
3. Installation of four (4) breakers, and seven (7) fuses for AC and DC power distribution similar to panels at the WWTP.
4. Installation of two (2) 24VDC power supplies, similar to Sola Power Supply, SDN 5-24-100C, wired in parallel.
5. Installation of 16 channel digital input module, AB 1746-IV16
6. Installation and programming of UPS on Battery and UPS Low Battery status, to be displayed on central monitoring station.
7. Installation of programming of 24VDC Power supplied failed, wire the contact from each power supply in series.
8. Replacement of PLC power supply, AB 1746-P4
9. Replacement of CPU 5/05 with EEPROM Memory, AB 1746-L553 and 1747-M13
10. Replacement of PLC chassis, AB 1746-A10