

To: City of Fernley  
 Attn: Wayne Vanassche  
 Re: City of Fernley  
 SCADA HW/SW Upgrade of Water Treatment Facility

Quote Date: 4/20/2020  
 Quote No.: 20D001Q03A

Dear Wayne:

Thank you for your continued interest in TESCO products, services, and solutions. We are pleased to quote the following scope of work pertaining to the above-referenced project.

### Scope of Work

This quote is inclusive of the SCADA hardware/software and TESCO services required to upgrade and repair the existing SCADA system utilized for the City of Fernley's (City) Water Treatment Facility (WTF). TESCO will supply a new rack-mount server (*Dell PowerEdge R440*) to host a virtualized architecture of the existing WTF SCADA system. Along with constructing the virtualized environment on the new server, TESCO will develop the following Virtual Machines (VMs) required of the SCADA system operations:

*IO Server, Historian, Domain Controller, RDS Server, Broker, vCenter, Engineering/Development, Veeam, and Access Gateway*

The City's existing Dell PowerEdge R530 server will be repurposed within the SCADA network DMZ for use as a gateway manager to help facilitate secure remote access to the Wonderware application.

For compatibility purposes, the upgrade of the SCADA hardware and server operating system will also require an upgrade of the existing Wonderware licensing to the InTouch 2017 version. As part of updating to the newer version, TESCO will implement any application adjustments required to retain the functionality achieved through the current SCADA system.

In addition to the SCADA server and software upgrades, TESCO will also supply and configure the new network equipment required of the WTF SCADA system. The new SCADA network architecture designed and implemented by TESCO will enable the City to securely access the Wonderware application through client/remote devices. Furthermore, the newly deployed SCADA network will align and adhere with cybersecurity best practices.

TESCO will utilize the City's existing server rack/cabinet within the WTF server room to mount the SCADA and network hardware listed in this quote. Refer to the *Scope of Supply* below for a detailed list of the materials and services to be provided by TESCO.

**Please Note: At the City's request, all new/upgraded Wonderware licensing required for this project will be registered and purchased under the City of Fernley's name/title.**

### Scope of Supply

Item	Qty	Description	Price
<b>FERNLEY WATER TREATMENT FACILITY</b>			
1	1	<b>SCADA Hardware</b> to include: <ul style="list-style-type: none"> <li>▪ Dell PowerEdge R440 Rack Server               <ul style="list-style-type: none"> <li>▫ Xeon 2.3GHz Processor</li> <li>▫ 64GB RDIMM</li> </ul> </li> </ul>	\$55,870.00

Item	Qty	Description	Price
		<ul style="list-style-type: none"> <li>▫ RAID 1: (2) 2TB SATA Hard Drives</li> <li>▫ Dual Power Supply</li> <li>▫ Windows Server 2016 OS</li> <li>▫ Microsoft Office Plus</li> <li>▪ Network Attached Storage Device</li> <li>▪ Managed Switch</li> <li>▪ Network Router</li> <li>▪ Firewall/Security Appliance</li> <li>▪ Network Time Protocol Server</li> <li>▪ (2) Serial/Ethernet Converters</li> <li>▪ (2) Workstation Computers with 24" Monitor, Keyboard, &amp; Mouse</li> </ul> <p><b><i>Please Note: To help reduce project costs, TESCO will utilize the City's existing Dell R530 server at the Water Treatment Facility for the purpose of hosting the Access Gateway VM. This gateway server will be configured within the DMZ to assist in the management of secure remote access to the City's Wonderware SCADA application.</i></b></p>	
2	1	<p><b>SCADA Virtualization &amp; Application Software</b> to include:</p> <ul style="list-style-type: none"> <li>▪ VMware vSphere Essentials</li> <li>▪ Veeam Backup &amp; Replication</li> <li>▪ Wonderware InTouch 2017                             <ul style="list-style-type: none"> <li>▫ Development Studio Unlimited, 60k/500</li> <li>▫ Runtime 60k Tag with I/O</li> <li>▫ (5) Runtime 60k Tag without I/O</li> <li>▫ (6) WW CAL with MS SQL CAL Runtime, Single (SQL 2016 Std)</li> <li>▫ Historian Standard, 5k Tag</li> <li>▫ (8) Historian Client Concurrent, Single</li> <li>▫ Customer FIRST – Standard Support (2-year term)</li> </ul> </li> </ul>	\$50,300.00
3	Lot	<p><b>Professional Services</b> to include:</p> <ul style="list-style-type: none"> <li>▪ <u>Project Management</u></li> <li>▪ <u>Engineering</u> <ul style="list-style-type: none"> <li>▫ engineered bill of materials, engineered submittals, technical data, as-built documentation, and project records</li> </ul> </li> <li>▪ <u>SCADA Programming</u> <ul style="list-style-type: none"> <li>▫ participate in a technical workshop with the City operations staff to define and confirm the upgraded SCADA system design and virtualized architecture</li> <li>▫ setup and configuration of the new R440 server as required to host a virtualized architecture and the upgraded Wonderware Intouch 2017 application (I/O and Historian servers)</li> <li>▫ setup and configuration of the City's existing R530 server to function as an Access Gateway within the DMZ of the SCADA network</li> <li>▫ installation and configuration of the VMware software to develop the VMs necessary for supporting the Wonderware SCADA platform</li> <li>▫ installation and configuration of the Veeam software to execute backups and snapshots of the virtualized SCADA architecture and historical data at predefined intervals</li> </ul> </li> </ul>	\$108,110.00

Item	Qty	Description	Price
		<ul style="list-style-type: none"> <li>▫ upgrade of the City’s existing Wonderware licensing to the Intouch 2017 version                             <ul style="list-style-type: none"> <li>— reconfigure/adjust the upgraded Wonderware application as required to maintain the existing SCADA functionality (<i>monitoring, control, data logging, etc.</i>)</li> </ul> </li> <li>▫ setup of the licensing and user access/permissions required of the WTF SCADA system</li> <li>▫ testing and functional verification of the new SCADA hardware and software</li> <li>▪ <u>Networking/Communications</u> <ul style="list-style-type: none"> <li>▫ coordinate with the project SCADA Engineer to complete the upgraded WTF SCADA system design and determine the communications requirements</li> <li>▫ configuration of the new SCADA system network devices as required to establish proper network isolation and adhere to cybersecurity best practices                                     <ul style="list-style-type: none"> <li>— configuration of the WTF SCADA network firewall and routers to ensure secure remote access for operations staff to the Wonderware application</li> </ul> </li> <li>▫ testing and functional verification of the new SCADA network hardware</li> </ul> </li> <li>▪ <u>Product Startup</u> <ul style="list-style-type: none"> <li>▫ product quality review, verification of installation, parameter/configuration adjustments as required, software upload/download as required, function checks, and startup</li> </ul> </li> <li>▪ <u>Onsite Training</u></li> <li>▪ <u>O&amp;M Manuals</u></li> </ul> <p><b><i>Please Note: To establish secure remote operator access to the WTF SCADA system, the City is required to provide a dedicated static IP address ISP connection that is separate from the existing Business/IT Network ISP connectivity. By assigning a static IP address with the new TESCO provisioned SCADA firewall, it will help ensure the proper network isolation is maintained.</i></b></p>	
<b>TOTAL (Items 1-3, including applicable sales tax):</b>			<b>\$214,280.00</b>

### Project Clarifications

- Unless otherwise indicated by the Scope of Work above, quote is to **furnish only** and does not include any trade labor, trade work, construction work, site improvement, contractor services, or any trade installation services. Any trade labor and/or related trade work shall be performed by others/contractor.
- Unless otherwise indicated by the Scope of Work above, the following is **not** included within this quotation:
  - Conduit, field wire, tubing, or basic trade installation materials (brackets, screws, bolts, j-box, stanchions, pull-box, etc.)
  - Instrumentation mounting components, brackets, stanchions, sunshields, etc.
  - Local control stations and/or field mounted disconnects.
  - Instrumentation, devices, components, or equipment not specifically identified in the above quotation.
  - Fiber optic patch panels, cable, splicing or terminations.
  - Networking infrastructure or architecture modifications to existing facilities.

- Any 3<sup>rd</sup> party testing, harmonic testing/analysis, protective device coordination study, short-circuit analysis, or Arc-Flash Risk Assessment (AFRA) services.
- Electrical interconnection diagrams for equipment not furnished by TESCO.
- ISA process control loop diagrams.
- Signal loop diagrams for equipment not furnished by TESCO.

## Terms & Conditions

- Quote is firm for 30 days unless otherwise stated.
- Intellectual Property and Confidentiality Notice: The scope of work and price quotation shall not be construed as a formal design or recommendations on design for the related project. All content contained within this quotation is the intellectual property under the proprietorship of Tesco Controls, Inc. and is subject to applicable copyright laws. Such intellectual property shall not be duplicated, replicated, copied, or shared without explicit written consent from Tesco Controls, Inc., as it contains confidential information and work product developed exclusively for use by Tesco Controls, Inc.
- Submittals: to be provided approximately **6-8** weeks after receipt of purchase order, written notice of intent, or notice to proceed.
- Delivery: to be scheduled approximately **12-16** weeks minimum after submittal approval.
- Unless otherwise stated above, price does not include any sales tax, use tax, or applicable fees; please apply any taxes and/or fees as appropriate. Please note that all invoices will include sales tax where applicable.
- TESCO price is FOB factory, full freight allowed.
- TESCO warranties against defect in design, workmanship, and materials for a period of one year from date of installation and does not exceed 18 months from the date of shipment from the factory.
- TESCO carries liability insurance, with full workers' compensation coverage.
- Terms are net 30 days on approved credit accounts.
- Interest will be applied to all past due invoices.
- All merchandise sold is subject to lien laws.
- Final retention to be paid within 10 days after the project notice of completion.

Please feel free to contact us at (916) 395-8800 to discuss any questions or comments you may have regarding this quotation.

Sincerely,

TESCO CONTROLS, INC.



John Wright  
Technical Sales  
jwright@tescocontrols.com