

DEFINITIONS

Architect Services, Engineer Services, Land Surveying Services, Assayer Services, Geologist Services and Landscape Architect Services: Those professional services within the scope of the practice of those services as provided in ARS § 32-101.

Branch Office: A geographically distinct place of business or subsidiary office of a firm that has a key role on the team.

Discipline: Primary technical capabilities of key personnel, as evidenced by academic degree, professional registration, certification, and/or extensive experience.

Firm: Defined in ARS § 32-101(B.19.).

Key Personnel: Individuals who will have major contract responsibilities and/or provide unusual or unique expertise.

SPECIFIC INSTRUCTIONS:

1. Complete this form for each branch office seeking work under this RFQ.
 - a. – e. **Firm (or Branch Office) Name and Address.** Self-explanatory.
 - f. **Year Established.** Enter the year the firm (or branch office, if appropriate) was established under the current name.
 - g. **Ownership.**
 - (g1). *Type.* Enter the type of ownership or legal structure of the firm (sole proprietor, partnership, corporation, joint venture, etc.).
 - (g2). *Small Business Status.* A firm is a small business if the firm has less than 100 employees **or** has gross revenues of \$4 million or less.
 - h.-j. **Point of Contact.** Provide this information for a representative of the firm that the Customer can contact for additional information. The representative must be empowered to speak on contractual and policy matters.
 - k. **Name of Firm.** Enter the name of the firm.
2. **Employees by Discipline.**
 - a. Select disciplines from the List of Disciplines (Function Code) listed on Page 3 of 4 Instructions. For employees that do not qualify for any of the disciplines, select Other. *Note: The intended searchable database indicated in the RFQ will be populated from the Qualifications Form I Excel attachment only.*
 - b. Each person can be counted only twice; once for his/her primary function and once for his/her secondary function. Primary and secondary functions should be indicated by including a "P" or an "S" in column b after the Description Title is given.
 - c-d. If the form is completed for a firm (including all branch offices), enter the number of employees by disciplines in column c. If the form is completed for a branch office, enter the number of employees by discipline in column d and for the firm in column c.
3. **Profile of Firm's Experience and Annual Average Revenue for Last Year.**
 - a. Enter the approximate number of projects the firm (or branch) has done attributable by Profile Code listed on Page 3 of 4 Instructions over the last year.
 - b. Enter the appropriate Profile Codes from Instructions Pages 3 of 4 that represent the type of work the firm (or branch) has done over the last year.
 - c. Using the Revenue Index Number on Page 3 of 6 Form, indicate the approximate revenue the firm has

earned over the last year per Profile Code entered into the table.

4. **Resumes of Key Personnel Proposed for This Contract.** Complete this section for each key person who will participate in this contract.
 - a. Self-explanatory.
 - b. Self-explanatory
 - c. Total years of relevant experience (block c1), and years of relevant experience with current firm, but not necessarily the same branch office (block c2).
 - d. Name, City and State of the firm where the person currently works, which must correspond with one of the firms (or branch office or a firm, if appropriate) listed in Section 1.
 - e. Provide information on the highest relevant academic degree(s) received. Indicate the area(s) of specialization for each degree.
 - f. Provide information on current relevant professional registration(s) and in which State(s) they are current.
 - g. Provide information on any other professional qualifications relating to this contract, such as education, professional registration, publications, organizational memberships, certifications, training, awards, and foreign language capabilities.
 - h. Provide information on no more than five (5) projects in the last year which the person had a significant role that demonstrates the person's capability relevant to her/his proposed role in this contract. These projects do not necessarily have to be any of the projects presented in Section 5 for the project team if the person was not involved in any of those those projects or the person worked on other projects that were more relevant than the team projects in Section 5. Use the check box provided to indicate if the project was performed with any office of the current firm. If any of the professional services or construction projects are not complete, leave Year Completed blank and indicate the status in Brief Description and Specific Role.

5. **Example Projects Which Best Illustrate Firms Qualification for this contract.** Select project where multiple team members worked together, if possible, that demonstrate the team's capability to perform work similar to that required for this contract. Complete one Section 5 for each project. List no more than five (5) projects.
 - a. Title and Locations of project or contract. For an indefinite delivery contract, the location is the geographic scope of the contract.
 - b. Enter the year completed of the professional services (such as planning, engineering study, or design), and/or the year completed if construction. If any of the professional services or the construction projects are not complete, leave Year Completed blank and indicate the status in Brief Description of Project and Relevance to This Contract (block f).
 - c. Project Owner or user, such as a government agency or installation, an institution, a corporation or private individual.
 - d. Provide the original budget or not to exceed dollar amount for the project.
 - e. Provide the Total Cost of the Project. If any of the professional services or construction projects is not complete, indicate the percentage complete and whether this project will be on budget, over or under budget.
 - f. Brief Description: Indicate scope, size, and length of project, principle elements and special features of the project. Discuss the relevance of the example project to this contract.

6. **Additional Information.** Use this section to provide additional information you feel may be necessary to describe your firm's qualifications for this contract.

7. **Annual Average Professional Services Revenues of Firm for Last 3 Years.** Complete this block for the firm or branch office for which this form is completed. In column a, enter an approximate percentage of total work attributable to State, Federal or Municipal Work. In column b, enter an approximate percentage of total work attributable to Non-Government work. Percentages should take into consideration work completed over the last 3 years.

8. **Authorized Representative.** An authorized representative of the firm or branch office must sign and date the completed form. Signing attests that the information provided is current and factual. Provide the name and title of the authorized representative who signed the form.

**RFQ# ADSP014-00003465, Annual Request for Qualifications and Experience
REVISED - Attachment I – General Qualifications**

List of Disciplines (Function Codes) for Question 7

Aeronautical Engineer	Environmental Engineer	Mining Engineer
Agricultural Engineer	Environmental Scientist	Nuclear Engineer
Archeologist	Fire Protection Engineer	Petroleum Engineer
Architect	Geodetic Surveyor	Photogrammetrist
Architectural Engineering	Geographic Information System Specialist	Project Manager
Biologist	Geological Engineer	Sanitary Engineer
CADD Technician	Geologist	Soils Engineer
Chemical Engineer	Hydrographic Surveyor	Structural Engineer
Civil Engineer	Hydraulic Engineer	Technician/Analyst
Construction Manager	Hydrologist	Transportation Engineer
Construction Inspector	Industrial Engineer	Water Resources Engineer
Control Systems Engineer	Landscape Architect	
Cost Engineer/Estimator	Mechanical Engineer	
Ecologist	Metallurgical Engineer	
Electrical Engineer		

List of Experience Categories (Profile Codes for Question 8)

Acoustics, Noise Abatement	Dredging Studies and Design
Aerial Photography; Airborne Data and Imagery Collection and Analysis	Design & Planning Structured Parking Facilities
Activity Centers	Detention Security Systems
Air Pollution Control	Disability / Special Needs
Airports; Navajds; Airport Lighting; Aircraft Fueling	Ecological and Archeological Investigations
Airports; Terminals and Hangars; Freight Handling	Educational Facilities; Classrooms
Agricultural Development; Grain Storage; Farm Mechanization	Electrical Studies and Design
Animal Facilities	Electronics
Anti-Terrorism/Force Protection	Elevators; Escalators; People-Movers
Area Master Planning	Energy / Water Auditing Savings
Auditoriums and Theaters	Energy Conservation; New Energy Sources
Automation; Controls; Instrumentation	Environmental Impact Studies, Assessments or Statements
Barracks; Dormitories	Fallout Shelters; Blast-Resistant Design
Bridge Design: Bridges	Fire Protection
Cartography	Fisheries; Fish Ladders
Cemeteries (<i>Planning and Relocation</i>)	Forensic Engineering
Chemical Processing and Storage	Garages; Vehicles Maintenance Facilities; Parking
Child Care/Development Facilities	Gas Systems (<i>Propane; Natural, Etc.</i>)
Codes; Standards; Ordinances	Geodetic Surveying: Ground and Airborne
Cold Storage; Refrigeration and Fast Freeze	Heating; Ventilating; Air Conditioning
Commercial Building (<i>Low Rise</i>); Shopping Centers	Highways; Streets; Airfield Paving; Parking Lots
Community Facilities	Historical Preservation
Communications Systems; TV; Microwave	Hospital and Medical Facilities
Computer Facilities	Hotels; Motels
Conservation and Resource Management	<i>Housing (Residential, Multi-Family; Apartments; Condominiums)</i>
Construction Management	Hotels; Motels
Construction Surveying	Hydraulics and Pneumatics
Corrosion Control; Cathodic Protection Electrolysis	Hydrographic Surveying
Cost Estimating; Cost Engineering and Analysis; Parametric Costing; Forecasting	Industrial Buildings; Manufacturing Plants
Cryogenic Facilities	Industrial Processes; Quality Control
Construction Materials Testing	Industrial Waste Treatment
Dams (<i>Concrete; Arch</i>)	Intelligent Transportation Systems
Dams (<i>Earth; Rock</i>); Dikes; Levees	Infrastructure
Desalinization (<i>Process and Facilities</i>)	Irrigation; Drainage
Design-Build - Preparation of Requests for Proposals	Judicial and Courtroom Facilities
Digital Elevation and Terrain Model Development	Laboratories; Medical Research Facilities
Digital Orthophotography	Land Surveying
Dining Halls; Clubs; Restaurants	Landscape Architecture
	Libraries; Museums; Galleries

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REVISED - Attachment I – General Qualifications**

Lighting (*Interior; Display; Theater, Etc.*)
Lighting (*Exteriors; Streets; Memorials; Athletic Fields, Etc.*)
Labs - General
Labs – Research – Dry
Labs – Research – Wet
LEED Accredited A/E
LEED Independent 3rd Party Building Commissioning
Mapping Location/Addressing Systems
Materials Handling Systems; Conveyors; Sorters
Metallurgy
Materials Testing
Measurement / Verification / Conservation Water Consumption Savings
Mining and Mineralogy
Medical Related
Modular Systems Design; Fabricated Structures or Components
Mold Investigation
Museums
Nuclear Facilities; Nuclear Shielding
Office Buildings; Industrial Parks
Outdoor Recreation
Petroleum and Fuel (*Storage and Distribution*)
Photogrammetry
Pipelines (*Cross-Country - Liquid and Gas*)
Phase I Environmental
Prisons & Correctional Facilities
Plumbing and Piping Design
Prisons and Correctional Facilities
Product, Machine Equipment Design Pneumatic Structures, Air-Support Buildings Power Generation, Transmission, Distribution Public Safety Facilities
Radar; Sonar; Radio and Radar Telescopes
Radio Frequency Systems and Shielding's
Railroad; Rapid Transit
Recreation Facilities (*Parks, Marinas, Etc.*)
Refrigeration Plants/Systems
Rehabilitation (*Buildings; Structures; Facilities*)
Research Facilities
Resources Recovery; Recycling
Roof Infrared Imaging to Identify Water Leaks

Roofing
Safety Engineering; Accident Studies; OSHA Studies
Security Systems; Intruder and Smoke Detection
Seismic Designs and Studies
Sewage Collection, Treatment and Disposal
Soils and Geologic Studies; Foundations
Solar Energy Utilization
Solid Wastes; Incineration; Landfill
Special Environments; Clean Rooms, Etc.
Structural Design; Special Structures
Surveying; Platting; Mapping; Flood Plain Studies
Sustainable Design
Swimming Pools
Storm Water Handling and Facilities
Specifications Writing
Toxicology
Testing and Inspection Services
Traffic and Transportation Engineering
Topographic Surveying and Mapping
Towers (*Self-Supporting and Guyed Systems*)
Tunnels and Subways
Traffic Studies
Transportation
Urban renewals; Community Development
Utilities (*Gas and Steam*)
Value Analysis; Life-Cycle Costing
Warehouse and Depots
Water Resources; Hydrology; Ground Water
Water Supply; Treatment and Distribution
Wind Tunnels; Research/Testing Facilities Design
Waste Water Treatment Facility
Water Well Rehabilitation; Water Well Work
Zoning; Land Use Studies

**RFQ# ADSPO14-00003465, Annual Request for Qualifications and Experience
REVISED - Attachment I – General Qualifications**

(If a firm has branch offices, complete for each specific branch office seeking work.)

1. REVISED ADSPO13-00003465: Annual Request for Qualifications

a.	FIRM (OR BRANCH OFFICE) NAME:	Delta Systems Engineering, Inc
b.	FIRM (OR BRANCH OFFICE) STREET:	3550 North Central Avenue, Suite 1900
c.	FIRM (OR BRANCH OFFICE) CITY:	Phoenix
d.	FIRM (OR BRANCH OFFICE) STATE:	Arizona
e.	FIRM (OR BRANCH OFFICE) ZIP CODE:	85012
f.	YEAR ESTABLISHED:	1997
(g1).	OWNERSHIP - TYPE:	Corporate Entity
(g2).	OWNERSHIP - SMALL BUSINESS STATUS:	US SBA Certified Small Business
h.	POINT OF CONTACT NAME AND TITLE:	Brian Downing, PE / President & CEO
i.	POINT OF CONTACT TELEPHONE NUMBER:	(602) 266-4658 x209
j.	POINT OF CONTACT E-MAIL ADDRESS:	marketing@deltaseinc.com
k.	NAME OF FIRM <i>(If block 1a is a branch office):</i>	

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REVISED - Attachment I – General Qualifications**

2. EMPLOYEES BY DISCIPLINE

a. Discipline Title	b. Function: Primary (P) or Secondary (S)	c. No. of Employees - Firm	d. No. of Employees - Branch
CADD Technician	P	2	2
Construction Manager	P	2	2
Control Systems Engineer	P	6	3
Electrical Engineer	P	5	2
Project Manager	P	7	5
Other	P	25	12
Total		47	26

3. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST YEAR

a. Approximate No. of Projects	b. Experience	c. Revenue Index Number (see below)
	Design-Build - Preparation of Requests for Proposals	6
	Water Supply; Treatment and Distribution	6
	Electrical Studies and Design	4
	Waste Water Treatment Facility	6

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4. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section 4 for each key person.)

a. NAME Brian Downing, PE	b. ROLE IN THIS CONTRACT Principal-in-Charge	c. YEARS EXPERIENCE	
		1. TOTAL 34	2. WITH CURRENT FIRM 16

d. FIRM NAME AND LOCATION (City and State)
Delta Systems Engineering, Inc.
Phoenix, Arizona

e. EDUCATION (DEGREE AND SPECIALIZATION) B.S. Electrical Engineering, Arizona State University	f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Engineer, Electrical Engineering in AZ, CA, NV and CO.
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g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

IEEE – Institute of Electrical & Electronics Engineers, ISA – Instrument Society of America, NSPE – National Society of Professional Engineers.

Brian Downing's technical background spans 34 years. His technical knowledge, management ability, work ethic, and concern for his clients have enabled him as President and CEO of Delta Systems Engineering (DeltaSE). He is highly skilled in the design of process control systems, SCADA, telemetry; Programmable Logic Controller (PLC) based control systems, and motor control systems. His managerial skills include managing multiple departments, projects, engineering and programming staff. He uses project management tools such as Deltek Vision, Microsoft Project and Access for tracking projects and budgets. He has also performed on-site construction observations, and system startup testing and commissioning.

H. RELEVANT PROJECTS

(1) TITLE AND LOCATION (City and State) CCWRD PLC Conversion and SCADA Network Upgrades Las Vegas, NV	(2) Year Completed	
	Professional Services Ongoing	Construction (if applicable) Ongoing

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Check if project performed with current firm

1) Delta Systems Engineering (DeltaSE) was hired by the Clark County Water Reclamation District (CCWRD) to assist with their PLC conversion and SCADA network upgrades project. As a part of this project, DeltaSE has completed an exhaustive and detailed inventory of the District's existing PLC5 and ControlLogix communication cards, the availability of fiber optic connections, the quantity and type of existing Ethernet switches, the space available in each panel for Ethernet switch installation, and topology specifications. Prototype design testing was conducted to verify effective network configurations. DeltaSE designed the system including PLC panel and wiring modifications, fiber optic connections, new IP addressing, VLAN layout according to CCWRD facility, panel locations, and scheduling of installation. DeltaSE is now providing procurement and construction services to oversee the installation of the new system. Ultimately, DeltaSE will provide project management, conversion, and training services required to re-configure the existing PLC cabinets from the ControlNet communications system to the Ethernet/IP communications system. DeltaSE will also provide and configure all the new processors, managed Ethernet switches, IO boards and communications modules required for this upgrade. DeltaSE will also be responsible for Record Drawings, FAT testing for the re-configured PLC systems, and quality testing of the fiber optic network. Contract amount: \$406,000; Role: Principal-in-Charge

2) (1) TITLE AND LOCATION (City and State) Avondale Water SCADA Five Year Master Plan Avondale, Arizona	(2) Year Completed	
	Professional Services 2009	Construction (if applicable) 2009

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(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm This project consisted of providing consultant services for a preliminary design study and report for the City of Avondale Water Master SCADA Five Year Plan to accomplish full monitoring and controls of the City's water system. The existing City of Avondale Water Master SCADA consisted of a radio communication system. The infrastructure of the Master SCADA system is mostly in place. The focus of the preliminary design study and report included recommendations on how best to utilize the Master SCADA system; define the requirements to achieve SCADA optimization; provide budgetary cost estimates for implementation; and preparation of a recommended implementation schedule. This project included several workshops to define and prioritize requirements; provide recommendations for implementation of Wonderware InSQL software; develop standard specifications for SCADA related equipment, and provide program documentation of existing RTU controllers. Role: Principal-in-Charge						
(1) TITLE AND LOCATION (<i>City and State</i>) Scottsdale RWDS Evaluation and Conceptual Design Scottsdale, Arizona	(2) Year Completed <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Professional Services</td> <td style="width: 50%; padding: 2px;">Construction (<i>if applicable</i>)</td> </tr> <tr> <td style="text-align: center; padding: 2px;">2012</td> <td style="text-align: center; padding: 2px;">2012</td> </tr> </table>		Professional Services	Construction (<i>if applicable</i>)	2012	2012
Professional Services	Construction (<i>if applicable</i>)					
2012	2012					
3) (3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The goal of this project is to provide a detailed analysis of the Raw Water Distribution System primary pump stations and generate a preferred design alternative to serve as the basis for a Phased Conceptual Design. The RWDS system is composed of four primary Booster Pump Stations that are connected in series and includes 14.3 Miles of primary transmission main. The electrical analysis for this project includes existing Remote Telemetry Unit and network communication system architecture assessment, field testing of instrumentation, power distribution switchgear upgrade assessment, electrical equipment efficiency assessment, and conceptual level drawings associated with improvement alternatives. Role: Principal-in-Charge						
(1) TITLE AND LOCATION (<i>City and State</i>) Gilbert Design-Build WTP SCADA Change-Out Gilbert, Arizona	(2) Year Completed <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Professional Services</td> <td style="width: 50%; padding: 2px;">Construction (<i>if applicable</i>)</td> </tr> <tr> <td style="text-align: center; padding: 2px;">2007</td> <td style="text-align: center; padding: 2px;">2007</td> </tr> </table>		Professional Services	Construction (<i>if applicable</i>)	2007	2007
Professional Services	Construction (<i>if applicable</i>)					
2007	2007					
4) (3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm During the expansion of the Town's Water Treatment Plant, DeltaSE was selected to complete a change-out of the existing WTP control system as a sub-contractor. The water treatment plant facility is currently being expanded to process 45MGD. Design services included preparation of electrical plans, detailed fabrication drawings, and bill of materials for preparing the Guaranteed Maximum Price (GMP) for the Phase 2 Construction Contract. During the construction phase, DeltaSE also completed a conversion from Wonderware InTouch version 7.1 to Wonderware InTouch version 9.5 and implemented Wonderware's Industrial Application Server (IAS). Role: Principal-in-Charge						
(1) TITLE AND LOCATION (<i>City and State</i>) Jomax Water Reclamation Facility Peoria, Arizona	(2) Year Completed <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Professional Services</td> <td style="width: 50%; padding: 2px;">Construction (<i>if applicable</i>)</td> </tr> <tr> <td style="text-align: center; padding: 2px;">2003</td> <td style="text-align: center; padding: 2px;">2004</td> </tr> </table>		Professional Services	Construction (<i>if applicable</i>)	2003	2004
Professional Services	Construction (<i>if applicable</i>)					
2003	2004					
5) (3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm DeltaSE provided the electrical and I&C design for the Phase I and II construction of a new \$14.3 million water reclamation facility for the Shea Homes Pleasant Point development, in Peoria, Arizona. The plant's 12,470-volt primary power distribution system consists of loop fed distribution switches connected to dual 12,470/480 transformer substations, with main-tie-main switchgear for redundancy, feeding 480-volt motor control centers and load centers. A 12,470-volt generator provides standby power through a transfer switch connected to the main service entrance equipment. We designed the plant control systems for unattended operation. Packaged systems and Modicon Quantum PLCs communicating to an Intellution iFIX SCADA system control the processes. The main plant process areas consist of the headworks influent pump station, screening and grit removal, intermittent cycle reactor, aeration blowers, RAS/WAS pump station, solids handling facility with belt filter presses, traveling bridge filters, UV disinfection, and effluent pump station. Broadband wide-area network connections allow the City to remotely monitor the facility over their SCADA system. DeltaSE also provided system integration programming services during construction, along with shop drawing review, construction observations, and plant startup services. Work for which firm was responsible: \$755K. Role: Principal-in-Charge						

4. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (*Complete one Section 4 for each key person.*)

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
Craig Gorman	Engineering Manager	1. TOTAL 38	2. WITH CURRENT FIRM 12

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d. FIRM NAME AND LOCATION (City and State)
Delta Systems Engineering, Inc.
Phoenix, Arizona

e. EDUCATION (DEGREE AND SPECIALIZATION) f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Training: C Programming, Visual Basic, AutoLisp, National Electrical Code – Glendale Community College, Maximizing AutoCAD – CADtech Seminars, Facility Protection, Lightning Protection, Grounding/Bonding, Surge Protection - ERICO Technical, Engineering Seminar.

Prior to joining Delta Systems Engineering (DeltaSE), Mr. Gorman had over 26 years of experience in control design and technical support in the manufacturing environment. He has provided solutions to design and maintenance problems in numerous industries including water/wastewater, aluminum extrusion and forge, steel slitting & processing, commercial printing, bottling, packaging, and wire and cable manufacturing. Mr. Gorman has completed over 50 design projects in his 12 years at DeltaSE.

H. RELEVANT PROJECTS

(1) TITLE AND LOCATION (City and State)	(2) Year Completed	
	Professional Services	Construction (if applicable)
1) Gilbert 3MG and 4MG Reservoirs and Pump Stations Telemetry Gilbert, Arizona	Ongoing	Ongoing
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The 4MG Lindsay Road Reservoir and Pump Station was a fast-track design build project completed on-time and on-budget. The 3MG Turner Ranch Reservoir, Well and Pump Station is also a design-build project and is currently under construction. Services provided by DeltaSE for these projects have included electrical, instrumentation and control systems design, procurement, design review, construction services, programming and start-up services. Programming was provided for reservoir and well-site RTUs, PLCs and Operator Interface Terminals (OITs). SCADA Master modifications were also completed per the Town's specifications. Work for which firm was responsible: \$152K.. Role: Engineering Manager		
2) Jomax Water Reclamation Facility Peoria, Arizona	2003	2004
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm DeltaSE provided the electrical and I&C design for the Phase I and II construction of a new \$14.3 million water reclamation facility for the Shea Homes Pleasant Point development, in Peoria, Arizona. The plant's 12,470-volt primary power distribution system consists of loop fed distribution switches connected to dual 12,470/480 transformer substations, with main-tie-main switchgear for redundancy, feeding 480-volt motor control centers and load centers. A 12,470-volt generator provides standby power through a transfer switch connected to the main service entrance equipment. We designed the plant control systems for unattended operation. Packaged systems and Modicon Quantum PLCs communicating to an Intellution iFIX SCADA system control the processes. The main plant process areas consist of the headworks influent pump station, screening and grit removal, intermittent cycle reactor, aeration blowers, RAS/WAS pump station, solids handling facility with belt filter presses, traveling bridge filters, UV disinfection, and effluent pump station. Broadband wide-area network connections allow the City to remotely monitor the facility over their SCADA system. DeltaSE also provided system integration programming services during construction, along with shop drawing review, construction observations, and plant startup services. Work for which firm was responsible: \$755K. Role: Engineering Manager		
3) Sundance Water Reclamation Facility Valve Vaults, Buckeye, Arizona	2002	2002
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm		

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(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm This project required the installation of four remote valve vaults controlling the distribution of wastewater effluent from the Sundance Water Reclamation Facility. The DeltaSE scope included the design of electrical, instrumentation, and radio communication required to control and monitor the remote valves from the WRF. Based on information provided by the client, Mr. Gorman developed P&IDs, single line diagrams, panel schedules, RTU schematics, RTU panel layout, and electrical equipment and conduit layouts. He wrote specifications defining the requirements for electrical equipment and instrumentation to be supplied for this project. Using the SoftWright LLC Terrain Analysis Package, a radio survey was conducted to determine the reliability of all radio paths from the remote sites to the WRF. Work for which firm was responsible: \$18K. Role: Engineering Manager					
(1) TITLE AND LOCATION <i>(City and State)</i> Sundance Reservoir, Booster Station, and Wells 1, 2 and 4, Buckeye, Arizona	(2) Year Completed <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Professional Services</td> <td style="width: 50%; padding: 2px;">Construction <i>(if applicable)</i></td> </tr> <tr> <td style="text-align: center; padding: 2px;">Ongoing</td> <td style="text-align: center; padding: 2px;">Ongoing</td> </tr> </table>	Professional Services	Construction <i>(if applicable)</i>	Ongoing	Ongoing
Professional Services	Construction <i>(if applicable)</i>				
Ongoing	Ongoing				
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The facility consists of a 1 million gallon reservoir, and dual booster stations, each pumping to separate pressure zones with dedicated hydropneumatic surge tanks. DeltaSE was responsible for the instrumentation, control system, and SCADA system design on this project. Our services included PLC programming of the reservoir level controls, and the two booster station pressure control systems. The control system consists of an Allen-Bradley ControlLogix 5550, and a MicroLogix 1500 for backup pump control. We also configured and programmed a Xycom industrial computer with touch-screen operator interface terminal, running Wonderware Intouch for the human-machine interface. The SCADA system is designed to communicate via radio telemetry with several remote well sites that pump directly to the reservoir. Additionally, a wireless I/O device remotely controls a valve at the golf course irrigation pump station, where potable water can be used to fill the golf course lake. DeltaSE also designed the electrical, instrumentation, and control systems for wells 1, 2, and 4 in the Sundance development, in Buckeye. We programmed Allen Bradley PLCs to control and monitor the wells remotely from the Sundance Reservoir and Booster Station via radio telemetry. The wells can be monitored for run status and alarms. Alarms include the diesel standby generator status. The instrumentation and control system design included flowmetering, which is used to monitor performance of the well pumps. Work for which firm was responsible: \$175K. Role: Engineering Manager					
(1) TITLE AND LOCATION <i>(City and State)</i> SCADA and System Integration, Statewide, Arizona	(2) Year Completed <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Professional Services</td> <td style="width: 50%; padding: 2px;">Construction <i>(if applicable)</i></td> </tr> <tr> <td style="text-align: center; padding: 2px;">Ongoing</td> <td style="text-align: center; padding: 2px;">Ongoing</td> </tr> </table>	Professional Services	Construction <i>(if applicable)</i>	Ongoing	Ongoing
Professional Services	Construction <i>(if applicable)</i>				
Ongoing	Ongoing				
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm DeltaSE was selected in 1999 as Arizona-American Water's (AAW) SCADA system integrator. We have provided nearly \$3 Million worth of programming, engineering, and material procurement services on over 100 projects for AAW in Arizona. Nearly half of the projects we have completed were under direct contract with AAW, with the remainder completed by DeltaSE as a subconsultant to other firms that provided engineering and construction management services to AAW. Our scope of work has included radio telemetry system design, conducting radio path surveys, SCADA system programming of PLCs and HMI software, design and procurement of control panels for in-plant and remote telemetry systems, plant network design, and electrical design of plant power distribution systems. Approximate cost of projects: \$2,900K. Work for which firm was responsible: \$2,900K. Role: Engineering Manager					

4. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT *(Complete one Section 4 for each key person.)*

a. NAME Heber Torres, PE	b. ROLE IN THIS CONTRACT Engineering Project Manager	c. YEARS EXPERIENCE <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">1. TOTAL</td> <td style="width: 50%; padding: 2px;">2. WITH CURRENT FIRM</td> </tr> <tr> <td style="text-align: center; padding: 2px;">15</td> <td style="text-align: center; padding: 2px;">4</td> </tr> </table>		1. TOTAL	2. WITH CURRENT FIRM	15	4
1. TOTAL	2. WITH CURRENT FIRM						
15	4						
d. FIRM NAME AND LOCATION <i>(City and State)</i> Delta Systems Engineering, Inc. Phoenix, Arizona							
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> B.S. Electrical Engineering, University of Texas, Austin		f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> Professional Engineer, Electrical Engineering in AZ & CA ADEQ Grade II Water Dist. Operator ETAP User (Certified)					
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i> Heber Torres has 15 years of professional electrical/instrumentation & controls experience. As a designer, Heber has							

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extensive water/wastewater project experience specifying equipment and instrumentation, preparing design plans, creating panel schedules, and performing calculations. Prior to coming to work for Delta Systems Engineering (DeltaSE), Mr. Torres worked as a SCADA operator for the City of Phoenix and served in the United States Navy as a nuclear-trained mechanic.

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION <i>(City and State)</i>	(2) Year Completed	
		Professional Services	Construction <i>(if applicable)</i>
	Heber WTP 2MG-6MG Expansion Treatment, Heber, Arizona	2010	2011
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm This project which consisted of developing the electrical design associated with the expansion of the existing Water Treatment Plant from 2MGD to 6MGD. This design accommodated the installation of the following new equipment: 1) Flow Meter and Polymer Metering Pump at Basin #1 inlet, Raw Water Pump Station with three (3) 40Hp VFD controlled pumps, two (2) new packaged US Filter Treatment Units including design for wiring between associated field devices and control panel, Finish Water Pump Station with two (2) 40Hp VFD controlled pumps, Ultrasonic Level Transducer/Transmitter on existing 1.7MG Reservoir, High Services Booster Station with three (3) 150Hp VFD controlled pumps and relocation of existing Backwash Pumps. Design also included lighting and convenience power for new shade structures installed for Polymer Metering Pump at basin #1, Raw Water Pump Station, new Treatment Units, new and existing Finish Water Pump Stations. Capacity of existing Power Distribution and Standby Power Generation Systems was evaluated and necessary changes were made to ensure the system can support future expansion of plant capacity to 8MGD. Role: Engineering Manager		
	Scottsdale RWDS Evaluation and Conceptual Design Scottsdale, Arizona	2012	2012
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm 2) The goal of this project is to provide a detailed analysis of the Raw Water Distribution System primary pump stations and generate a preferred design alternative to serve as the basis for a Phased Conceptual Design. The RWDS system is composed of four primary Booster Pump Stations that are connected in series and includes 14.3 Miles of primary transmission main. The electrical analysis for this project includes existing Remote Telemetry Unit and network communication system architecture assessment, field testing of instrumentation, power distribution switchgear upgrade assessment, electrical equipment efficiency assessment, and conceptual level drawings associated with improvement alternatives. Role: Project Manager		
	CAP Water Treatment Plant Expansion Design, Scottsdale, Arizona	2009	2009
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm 3) The project consisted of designing the electrical, instrumentation, and control systems for the expansion. The project was completed in two phases. Phase One consisted of evaluating the existing conditions of the facilities and preparing a conceptual design report. Phase Two consisted of providing the design package for the expansion. DeltaSE was responsible for a portion of the work in the plant and for 100% of the off-site work for facilities tied to the plant. The off-site facilities include the raw water pump station serving the plant and the new reservoir and pumps being served by the plant. Role: Engineering Manager		
	Gilbert Design-Build WTP SCADA Change-Out Gilbert, Arizona	2007	2007

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(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm During the expansion of the Town's Water Treatment Plant, DeltaSE was selected to complete a change-out of the existing WTP control system as a sub-contractor. The water treatment plant facility is currently being expanded to process 45MGD. Design services included preparation of electrical plans, detailed fabrication drawings, and bill of materials for preparing the Guaranteed Maximum Price (GMP) for the Phase 2 Construction Contract. During the construction phase, DeltaSE also completed a conversion from Wonderware InTouch version 7.1 to Wonderware InTouch version 9.5 and implemented Wonderware's Industrial Application Server (IAS). Role: Engineering Manager					
(1) TITLE AND LOCATION <i>(City and State)</i> Jomax Water Reclamation Facility Peoria, Arizona	(2) Year Completed <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 2px;">Professional Services</td> <td style="width:50%; padding: 2px;">Construction <i>(if applicable)</i></td> </tr> <tr> <td style="text-align:center; padding: 2px;">2003</td> <td style="text-align:center; padding: 2px;">2004</td> </tr> </table>	Professional Services	Construction <i>(if applicable)</i>	2003	2004
Professional Services	Construction <i>(if applicable)</i>				
2003	2004				
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm DeltaSE provided the electrical and I&C design for the Phase I and II construction of a new \$14.3 million water reclamation facility for the Shea Homes Pleasant Point development, in Peoria, Arizona. The plant's 12,470-volt primary power distribution system consists of loop fed distribution switches connected to dual 12,470/480 transformer substations, with main-tie-main switchgear for redundancy, feeding 480-volt motor control centers and load centers. A 12,470-volt generator provides standby power through a transfer switch connected to the main service entrance equipment. We designed the plant control systems for unattended operation. Packaged systems and Modicon Quantum PLCs communicating to an Intellution iFIX SCADA system control the processes. The main plant process areas consist of the headworks influent pump station, screening and grit removal, intermittent cycle reactor, aeration blowers, RAS/WAS pump station, solids handling facility with belt filter presses, traveling bridge filters, UV disinfection, and effluent pump station. Broadband wide-area network connections allow the City to remotely monitor the facility over their SCADA system. DeltaSE also provided system integration programming services during construction, along with shop drawing review, construction observations, and plant startup services. Work for which firm was responsible: \$755K. Role: Engineering Manager					

4. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT *(Complete one Section 4 for each key person.)*

a. NAME Delbert (Dee) L. Nichols, III, EIT	b. ROLE IN THIS CONTRACT Engineering Project Manager	c. YEARS EXPERIENCE <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 2px;">1. TOTAL</td> <td style="width:50%; padding: 2px;">2. WITH CURRENT FIRM</td> </tr> <tr> <td style="text-align:center; padding: 2px;">13</td> <td style="text-align:center; padding: 2px;">9</td> </tr> </table>		1. TOTAL	2. WITH CURRENT FIRM	13	9
1. TOTAL	2. WITH CURRENT FIRM						
13	9						
d. FIRM NAME AND LOCATION <i>(City and State)</i> Delta Systems Engineering, Inc. Phoenix, Arizona							
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> B.S. Electrical Engineering, Northern Arizona University, Flagstaff, Arizona		f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> Engineer-In-Training (E.I.T.) , Arizona					
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i> From a design standpoint, Mr. Nichols has created a number of design packages. He has experience generating P&ID's, ISA logic diagrams, Loop diagrams, Schematic/Wiring diagrams, One and Three-line diagrams, Control cabinet layouts, Systems Communications Diagrams, and cable and conduit schedules for projects ranging from stand-alone packaging systems to Water treatment and Production facilities. From a Programming/Controls standpoint, Mr. Nichols has experience with the following Hardware and Software products: Wonderware InTouch; Allen Bradley PLC's (Logix-5000, PLC-5(E), SLC-500 and Micro-1000/1500), OIT's (Panelview 550 and 900), VFD's (discrete and network controlled), Servo drives and Power monitoring (1403 Powermonitor II); Rockwell Software's RSLogix 5/500/5000, RSView, RSEnergy, RSPower, RSNetworkx; Indramat Servo Drives; Siemens' Simatic S7. He is also versed in Ethernet, DeviceNet, Data-Highway Plus, Remote I/O, RS-232/485, and Modbus RTU communication systems.							
H. RELEVANT PROJECTS							
(1) TITLE AND LOCATION <i>(City and State)</i> City of Banning Wastewater Pump Station, Banning, California	(2) Year Completed <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 2px;">Professional Services</td> <td style="width:50%; padding: 2px;">Construction <i>(if applicable)</i></td> </tr> <tr> <td style="text-align:center; padding: 2px;">2007</td> <td style="text-align:center; padding: 2px;">2007</td> </tr> </table>			Professional Services	Construction <i>(if applicable)</i>	2007	2007
Professional Services	Construction <i>(if applicable)</i>						
2007	2007						

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(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm DeltaSE provided design services associated with the electrical, instrumentation, and control systems for the City of Banning Wastewater Pump Station project. Services included the following: Design of the site electrical distribution system (including sizing and incorporation of a standby generator and associated automatic transfer switch), design of site grounding and lighting systems, development of a schematic design for duplex pump control panel, incorporation of an autodialer for remote annunciation of site alarms, integration of process instrumentation (float switches in wetwell and moisture/thermal switches for motors) and an odor control unit. Role: Project Manager		
(1) TITLE AND LOCATION (<i>City and State</i>) Avondale Water SCADA Five Year Master Plan Avondale, Arizona	(2) Year Completed	
	Professional Services 2009	Construction (<i>if applicable</i>) 2009
(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm 2) This project consisted of providing consultant services for a preliminary design study and report for the City of Avondale Water Master SCADA Five Year Plan to accomplish full monitoring and controls of the City's water system. The existing City of Avondale Water Master SCADA consisted of a radio communication system. The infrastructure of the Master SCADA system is mostly in place. The focus of the preliminary design study and report included recommendations on how best to utilize the Master SCADA system; define the requirements to achieve SCADA optimization; provide budgetary cost estimates for implementation; and preparation of a recommended implementation schedule. This project included several workshops to define and prioritize requirements; provide recommendations for implementation of Wonderware InSQL software; develop standard specifications for SCADA related equipment, and provide program documentation of existing RTU controllers. Role: Engineer		
(1) TITLE AND LOCATION (<i>City and State</i>) Heber WTP 2MG-6MG Expansion Treatment, Heber, Arizona	(2) Year Completed	
	Professional Services 2010	Construction (<i>if applicable</i>) 2011
(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm 3) This project which consisted of developing the electrical design associated with the expansion of the existing Water Treatment Plant from 2MGD to 6MGD. This design accommodated the installation of the following new equipment: Flow Meter and Polymer Metering Pump at Basin #1 inlet, Raw Water Pump Station with three (3) 40Hp VFD controlled pumps, two (2) new packaged US Filter Treatment Units including design for wiring between associated field devices and control panel, Finish Water Pump Station with two (2) 40Hp VFD controlled pumps, Ultrasonic Level Transducer/Transmitter on existing 1.7MG Reservoir, High Services Booster Station with three (3) 150Hp VFD controlled pumps and relocation of existing Backwash Pumps. Design also included lighting and convenience power for new shade structures installed for Polymer Metering Pump at basin #1, Raw Water Pump Station, new Treatment Units, new and existing Finish Water Pump Stations. Capacity of existing Power Distribution and Standby Power Generation Systems was evaluated and necessary changes were made to ensure the system can support future expansion of plant capacity to 8MGD. Role: Engineering Manager Role: Project Manager		
(1) TITLE AND LOCATION (<i>City and State</i>) Gilbert Design-Build WTP SCADA Change-Out Gilbert, Arizona	(2) Year Completed	
	Professional Services 2007	Construction (<i>if applicable</i>) 2007
(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm 4) During the expansion of the Town's Water Treatment Plant, DeltaSE was selected to complete a change-out of the existing WTP control system as a sub-contractor. The water treatment plant facility is currently being expanded to process 45MGD. Design services included preparation of electrical plans, detailed fabrication drawings, and bill of materials for preparing the Guaranteed Maximum Price (GMP) for the Phase 2 Construction Contract. During the construction phase, DeltaSE also completed a conversion from Wonderware InTouch version 7.1 to Wonderware InTouch version 9.5 and implemented Wonderware's Industrial Application Server (IAS). Role: Engineer		
(1) TITLE AND LOCATION (<i>City and State</i>) White Tanks Water System SCADA Design, Phoenix, Arizona	(2) Year Completed	
	Professional Services 2008	Construction (<i>if applicable</i>) 2008
(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm 5)		

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(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Check if project performed with current firm
 DeltaSE provided electrical design associated with interfacing the White Tanks sites to the SCADA system designed and constructed under the original Casa Grande/Coolidge SCADA system development project. This consisted of developing fabrication drawings for four RTU panels (each cabinet was designed around the Modicon Momentum PLC, 10.4" Magelis Color Touchscreen OIT and MDS INET II Ethernet radio), reflecting modifications required to existing "Blue Horizons" RTU cabinet and interfacing and/or adding hardware and instrumentation. The design incorporated a PC based monitoring station at the Well 7/Warehouse site; this PC communicates with the Casa Grande Master Station via the existing DSL connection. Work for which firm was responsible: \$140K. Role: Project Manager

4. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section 4 for each key person.)

a. NAME Brian Day		b. ROLE IN THIS CONTRACT Integration Project Manager		c. YEARS EXPERIENCE	
				1. TOTAL 25	2. WITH CURRENT FIRM 4
d. FIRM NAME AND LOCATION (City and State) Delta Systems Engineering, Inc. Phoenix, Arizona					
e. EDUCATION (DEGREE AND SPECIALIZATION)			f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)		
Associate Degree, Electronics Technology, Glendale Community College, Glendale, Arizona Certified Public Manager's Program, Arizona State University, Tempe, Arizona-Certificate			Water Plant Operator (Grade 4) Wastewater Treatment Plant Operator (Grade 2) Water Distribution Operator (Grade 2)		
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)					
AWWA – American Works Association, AWPCA – Arizona Water and Pollution Controls Association, Instrument Society of America Brian has over 25 years of experience in water and wastewater treatment plant operations and maintenance. He worked for over fourteen years as an instrument technician for the City of Glendale, Arizona and for over thirteen years as a plant maintenance supervisor for the City of Mesa, Arizona. Brian holds current Arizona licenses as a Grade 4 Water Plant Operator, Grade 2 Wastewater Treatment Plant Operator, and Grade 2 Water Distribution Operator. He is a member of the Instrument Society of America, the American Water Works Association and the Arizona Water and Pollution Controls Association.					

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) Year Completed	
		Professional Services	Construction (if applicable)
1)	City of Phoenix Computer Control System Conversion Project Management Assistance, Phoenix, Arizona	2010	2010
		(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm DeltaSE is providing project management assistance to upgrade the existing computer control systems at the City of Phoenix Water and Wastewater facilities. DeltaSE will perform a pre-installation review of the software, assist in installation planning, provide installation inspection services, and oversee post installation validation of the new computer control systems. Mr. Day's responsibilities as Project Manager include bi-weekly status meetings, Functional Requirements Documents, Maintenance of Plant Operation (MOPO) Documents, and on-site coordination during commissioning. Contract amount: \$1.8M; Role: Project Manager	
2)	Scottsdale RWDS Evaluation and Conceptual Design Scottsdale, Arizona	2012	2012
		(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm	

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(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The goal of this project is to provide a detailed analysis of the Raw Water Distribution System primary pump stations and generate a preferred design alternative to serve as the basis for a Phased Conceptual Design. The RWDS system is composed of four primary Booster Pump Stations that are connected in series and includes 14.3 Miles of primary transmission main. The electrical analysis for this project includes existing Remote Telemetry Unit and network communication system architecture assessment, field testing of instrumentation, power distribution switchgear upgrade assessment, electrical equipment efficiency assessment, and conceptual level drawings associated with improvement alternatives. Role: Instrumentation & Controls						
(1) TITLE AND LOCATION <i>(City and State)</i> CAP Water Treatment Plant Mesa, Arizona	(2) Year Completed <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 2px;">Professional Services</td> <td style="width:50%; padding: 2px;">Construction <i>(if applicable)</i></td> </tr> <tr> <td style="text-align: center; padding: 2px;">2008</td> <td style="text-align: center; padding: 2px;">N/A</td> </tr> </table>		Professional Services	Construction <i>(if applicable)</i>	2008	N/A
Professional Services	Construction <i>(if applicable)</i>					
2008	N/A					
3) (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Mr. Day was previously employed by the City of Mesa as a Water Plant Maintenance Supervisor for the CAP Water Treatment Plant. He was responsible for direct improvement projects for the plant, specifying variable frequency drives and writing RFQs and RFPs. Mr. Day was directly involved in the design and construction of a 24 MGD expansion. His other responsibilities included establishing and maintaining a direct computerized maintenance management program for all plant equipment. Mr. Day was a key player in the asset management program to establish critical components in the process for planned replacement with the City's Financial Division.						
(1) TITLE AND LOCATION <i>(City and State)</i> City of Glendale Utilities Department, Glendale, Arizona	(2) Year Completed <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 2px;">Professional Services</td> <td style="width:50%; padding: 2px;">Construction <i>(if applicable)</i></td> </tr> <tr> <td style="text-align: center; padding: 2px;">2008</td> <td style="text-align: center; padding: 2px;">N/A</td> </tr> </table>		Professional Services	Construction <i>(if applicable)</i>	2008	N/A
Professional Services	Construction <i>(if applicable)</i>					
2008	N/A					
4) (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Day was previously employed by the City of Glendale as a Water Plant Instrumentation Technician. He maintained electrical and instrumentation systems at 2 water treatment plants, 1 wastewater treatment plant, 15 wells, and 3 sewage lift stations, along with the telemetry system to all above sites. Mr. Day was also responsible for programming and maintaining the supervisory and data acquisition systems (SCADA) for the plants and telemetry system. He upgraded the systems to newer software at all plants. Mr. Day was involved in the design review and construction of SCADA, telemetry and instrumentation at the plants and several of the remote sites. He supervised an assistant instrumentation technician and guided new instrumentation technicians through learning the systems at their hire.						

4. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT *(Complete one Section 4 for each key person.)*

a. NAME Dr. Arunkumar Ramamoorthy, PhD	b. ROLE IN THIS CONTRACT Integration Manager	c. YEARS EXPERIENCE <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 2px;">1. TOTAL</td> <td style="width:50%; padding: 2px;">2. WITH CURRENT FIRM</td> </tr> <tr> <td style="text-align: center; padding: 2px;">5</td> <td style="text-align: center; padding: 2px;">4</td> </tr> </table>		1. TOTAL	2. WITH CURRENT FIRM	5	4
1. TOTAL	2. WITH CURRENT FIRM						
5	4						
d. FIRM NAME AND LOCATION <i>(City and State)</i> Delta Systems Engineering, Inc. Phoenix, Arizona							
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> Doctor of Electrical Engineering, Arizona State University, Tempe, Arizona M.S. Electrical Engineering, Arizona State University, Tempe, Arizona		f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> Wonderware App Server 3.1					
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i> Arun has been involved in programming and development of many major water and wastewater SCADA system. Arun's six years of expertise covers function block programming in Modicon PLC, design and development of SCADA systems based on Wonderware, radio path studies, as well as setup and maintenance of radio networking for SCADA for water and wastewater systems. His expertise also encompasses programming operator interface terminals (OIT-Magelis/Magellan/PanelMate) and configuring Ethernet and serial radios. Arun has created and used Derived Function Block (DFB) and Derived Data Type's (DDT) in Unity. His programming experience also includes Sequential function code (SFC) and Ladder Diagram (LD). Arun has created and used DFBs in Concept PLC software (made by Schneider Electric							

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who also made Unity) since 2007. Arun has a PhD and a Masters degree in Electrical Engineering and is Wonderware certified. Role: As Project Manager, Arun will be the day-to-day contact and will work closely with City personnel and the DeltaSE Team to ensure the project is completed on time and within budget. Arun will lend his programming experience as-needed on this project, to assist the team with the City's PLC and HMI programming.

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION <i>(City and State)</i>	(2) Year Completed	
		Professional Services	Construction <i>(if applicable)</i>
1)	SCADA and System Integration Arizona (statewide)	Ongoing	Ongoing
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm DeltaSE was selected in 1999 as Arizona-American Water's (AAW) SCADA system integrator. We have provided over \$2 Million worth of programming, engineering, and material procurement services on over 80 projects for AAW in Arizona. Nearly half of the projects we have completed were under direct contract with AAW, with the remainder completed by Delta Systems Engineering as a subconsultant to other firms that provided engineering and construction management services to AAW. Our scope of work has included radio telemetry system design, conducting radio path surveys, SCADA system programming of PLCs and HMI software, design and procurement of control panels for in-plant and remote telemetry systems, plant network design, and electrical design of plant power distribution systems. Role: Project Manager		
2)	Phase II Upgrade of Michelson Water Recycling Plant, Irvine Ranch Water District, California	2012	2012
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm DeltaSE is in the process of delivering a global plant control system for a 30 MGD advance wastewater treatment plant. MBR, UV and high rate clarification along with the refurbishment of multiple existing processes are integrated at both PLC and SCADA level by the DeltaSE team. Expansion of District control systems standards along with complete code development is a two year long project currently entering commissioning phase. Role: Senior Integrator		
3)	Peoria SCADA Network Upgrade Peoria, AZ	2012	2012
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Phase I included a detailed inventory of 62 water and wastewater sites, as well as the development of Transition Plans, describing work and materials necessary to upgrade from serial to Ethernet radios, and re-configuration of the network paths to the new Cluster configuration. Phase II comprised of modification to each of the existing RTU's PLC programs to accommodate a new Ethernet radio, overseeing the relocation of I/O cards to accommodate the PLC's Ethernet module, and the reconfiguration of former repeater sites. Programming also included configuration of the Ethernet radios. Programming Services on-site installation is comprised of testing and verification of connectivity including the modification of existing PLC programs, overseeing of contractor's work to include participation in field startup testing, and verification of correct data communication from RTUs to the SCADA. HMI programming consists of all modifications needed to show added information and verification of correct communication of data from existing RTUs to the SCADA. The end result of this project was the reduction of polling times from 7 min. to 5 seconds. Role: Senior Integrator		
4)	Casa Grande/Coolidge Water System SCADA Design-Build Casa Grande, Arizona	Ongoing	Ongoing
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm (This section is blank in the original image)		

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(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm DeltaSE provided master planning and electrical engineering design for SCADA system upgrades for Arizona Water Company for their facilities in Casa Grande and Coolidge, Arizona. We performed field investigations to determine existing conditions and inventory existing equipment and conducted a radio path survey to ensure proper antenna height and functional communication links between sites. The sites included in this project for Casa Grande are the Well 19 Arsenic Treatment Plant and Cottonwood Lane Arsenic Treatment Plant. In Coolidge, the sites include the Vacuum Tank Booster Pump Site with Wells 9 and 10 and the nitrate removal plant, the Warehouse Tank and Booster Pump Station with two ground storage tanks, and Well 7 with three booster pumps pumping to one elevated water tank. Role: Project Manager					
(1) TITLE AND LOCATION <i>(City and State)</i> Jomax Water Reclamation Facility Peoria, Arizona	(2) Year Completed <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 2px;">Professional Services</td> <td style="width:50%; padding: 2px;">Construction <i>(if applicable)</i></td> </tr> <tr> <td style="text-align:center; padding: 2px;">2003</td> <td style="text-align:center; padding: 2px;">2004</td> </tr> </table>	Professional Services	Construction <i>(if applicable)</i>	2003	2004
Professional Services	Construction <i>(if applicable)</i>				
2003	2004				
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm DeltaSE provided the electrical and I&C design for the Phase I and II construction of a new \$14.3 million water reclamation facility for the Shea Homes Pleasant Point development, in Peoria, Arizona. The plant's 12,470-volt primary power distribution system consists of loop fed distribution switches connected to dual 12,470/480 transformer substations, with main-tie-main switchgear for redundancy, feeding 480-volt motor control centers and load centers. A 12,470-volt generator provides standby power through a transfer switch connected to the main service entrance equipment. We designed the plant control systems for unattended operation. Packaged systems and Modicon Quantum PLCs communicating to an Intellution iFIX SCADA system control the processes. The main plant process areas consist of the headworks influent pump station, screening and grit removal, intermittent cycle reactor, aeration blowers, RAS/WAS pump station, solids handling facility with belt filter presses, traveling bridge filters, UV disinfection, and effluent pump station. Broadband wide-area network connections allow the City to remotely monitor the facility over their SCADA system. DeltaSE also provided system integration programming services during construction, along with shop drawing review, construction observations, and plant startup services. Work for which firm was responsible: \$755K. Role: Integrator					

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present no more than five (5) projects. Complete one Section 5 for each project.)</i>						
a. TITLE AND LOCATION <i>(City and State)</i> City of Phoenix - Computer Control System Phoenix, Arizona	b. YEAR COMPLETED <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 2px;">PROFESSIONAL SERVICES</td> <td style="width:50%; padding: 2px;">CONSTRUCTION <i>(If applicable)</i></td> </tr> <tr> <td style="text-align:center; padding: 2px;">On-going</td> <td style="text-align:center; padding: 2px;">On-going</td> </tr> </table>		PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>	On-going	On-going
PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>					
On-going	On-going					
23. PROJECT OWNER'S INFORMATION						
c. PROJECT OWNER City of Phoenix	d. DOLLAR AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT				

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

Computer Control System Conversion Project

DeltaSE, has provided a number of engineering and SCADA consulting services as a prime to the City of Phoenix since 2001. Services have included P&ID drawing research and re-drafting to incorporate several water treatment plant expansions and upgrades. Most recently since 2004, DeltaSE has been providing project management assistance and support to the Water Services Department. DeltaSE managed the SCADA conversion at the Val Vista WTP; developed the functional description document and the Maintenance of Plant Operations (MOPO) documents for the existing Solids Handling Facility at Deer Valley WTP; and developed the initial requirements for the programming at the City's SCADA Water Distribution Center. Conversions were complete for 23rd Avenue WRP and 24th Street WTP. Results/Benefits: On-going project management and support has allowed the City's conversion project to continue in an efficient and consistent manner ultimately saving the City money. Work for which firm is responsible: \$2,580,000.

Control System Design & Integration Projects

Cave Creek WRP Projects – Prime firm - Provided E, I&C design and construction services for implementation of an 8-MGD WRF. In addition, we provided programming services on the GE/Parsons System as a sub-consultant. This project incorporated virtually all aspects of engineering requested by this RFQ.

Process Control Systems Miscellaneous Programming Support - Participated in the development of the Water Services Department standards for the implementation of a new process control system at the water/wastewater facilities as part of the Process Control System Standards Study in 2002. DeltaSE served as a prime firm providing programming services from 2002 through 2008.

Squaw Peak WTP DCS and Security Upgrade - Completed the design to implement a new distributed control system (DCS) for the 150-mgd Squaw Peak WTP. Provided construction management and configuration services for the new computerized control system.

Results/Benefits: As a result of our services, we combined several different engineering firms' P&IDs to form one cohesive set to reflect all work to-date for the plant's process and instrumentation systems.

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		
<i>(Present no more than five (5) projects. Complete one Section 5 for each project.)</i>		
a. TITLE AND LOCATION <i>(City and State)</i>	b. YEAR COMPLETED	
Avondale Water SCADA Five Year Master Plan Avondale, Arizona	PROFESSIONAL SERVICES 2009	CONSTRUCTION <i>(If applicable)</i> N/A
23. PROJECT OWNER'S INFORMATION		
c. PROJECT OWNER City of Avondale	d. DOLLAR AMOUNT OF PROJECT \$75,000	e. TOTAL COST OF PROJECT

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)
As a prime, DeltaSE served as a master plan design consultant for a preliminary design study and report for the Water SCADA Five Year Master Plan to accomplish full monitoring and controls of the City's water system. Results/Benefits: The preliminary design study and report included recommendations on how best to utilize the Master SCADA system; define the requirements to achieve SCADA optimization; provide budgetary cost estimates for implementation; and preparation of a recommended implementation schedule. This project included several workshops to define and prioritize requirements; provide recommendations for implementation of Wonderware InSQL software; develop standard specifications for SCADA related equipment, and provide program documentation of existing RTU controllers.

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		
<i>(Present no more than five (5) projects. Complete one Section 5 for each project.)</i>		
a. TITLE AND LOCATION <i>(City and State)</i>	b. YEAR COMPLETED	
Sundance Reservoir, Booster Station, and Wells 1, 2 and 4 Buckeye, Arizona	PROFESSIONAL SERVICES On-going	CONSTRUCTION <i>(If applicable)</i> On-going
23. PROJECT OWNER'S INFORMATION		
c. PROJECT OWNER Town of Buckeye	d. DOLLAR AMOUNT OF PROJECT \$175,000	e. TOTAL COST OF PROJECT

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)
The facility consists of a 1 million gallon reservoir, and dual booster stations, each pumping to separate pressure

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zones with dedicated hydropneumatic surge tanks. DeltaSE was responsible for the instrumentation, control system, and SCADA system design on this project. Our services included PLC programming of the reservoir level controls, and the two booster station pressure control systems. The control system consists of an Allen-Bradley ControlLogix 5550, and a MicroLogix 1500 for backup pump control. We also configured and programmed a Xycom industrial computer with touch-screen operator interface terminal, running Wonderware InTouch for the human-machine interface. The SCADA system is designed to communicate via radio telemetry with several remote well sites that pump directly to the reservoir. Additionally, a wireless I/O device remotely controls a valve at the golf course irrigation pump station, where potable water can be used to fill the golf course lake. DeltaSE also designed the electrical, instrumentation, and control systems for wells 1, 2, and 4 in the Sundance development, in Buckeye. We programmed Allen Bradley PLCs to control and monitor the wells remotely from the Sundance Reservoir and Booster Station via radio telemetry. The wells can be monitored for run status and alarms. Alarms include the diesel standby generator status. The instrumentation and control system design included flow metering, which is used to monitor performance of the well pumps.

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		
<i>(Present no more than five (5) projects. Complete one Section 5 for each project.)</i>		
a. TITLE AND LOCATION <i>(City and State)</i>	b. YEAR COMPLETED	
SCADA and System Integration Statewide, Arizona	PROFESSIONAL SERVICES On-going	CONSTRUCTION <i>(If applicable)</i> On-going
23. PROJECT OWNER'S INFORMATION		
c. PROJECT OWNER Arizona-American Water Company	d. DOLLAR AMOUNT OF PROJECT \$3,000	e. TOTAL COST OF PROJECT \$3,000,000

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(include scope, size, and length of project)*
DeltaSE was selected in 1999 as Arizona-American Water's (AAW) SCADA system integrator. We have provided nearly \$3 Million worth of programming, engineering, and material procurement services on over 100 projects for AAW in Arizona. Nearly half of the projects we have completed were under direct contract with AAW, with the remainder completed by DeltaSE as a sub-consultant to other firms that provided engineering and construction management services to AAW. Our scope of work has included radio telemetry system design, conducting radio path surveys, SCADA system programming of PLCs and HMI software, design and procurement of control panels for in-plant and remote telemetry systems, plant network design, and electrical design of plant power distribution systems.

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		
<i>(Present no more than five (5) projects. Complete one Section 5 for each project.)</i>		
a. TITLE AND LOCATION <i>(City and State)</i>	b. YEAR COMPLETED	
Gilbert Design-Build Water Treatment Plant SCADA Change-Out, Gilbert, Arizona	PROFESSIONAL SERVICES 2007	CONSTRUCTION <i>(If applicable)</i> 2007
23. PROJECT OWNER'S INFORMATION		
c. PROJECT OWNER Town of Gilbert	d. DOLLAR AMOUNT OF PROJECT \$1,584,000	e. TOTAL COST OF PROJECT

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(include scope, size, and length of project)*
During the expansion of the Town's WTP, DeltaSE (fka: DLT&V) was selected to complete a change-out of the existing WTP control system as a sub-contractor. The WTP facility was expanded from 30MGD to 45MGD production capacity.

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The plant was controlled by Siemens TI Series 555 PLCs that were nearing end-of-life. DeltaSE designed a replacement program to remove the Siemens PLCs and replace them with Allen Bradley Control Logic PLCs. DeltaSE engineers and system integrators managed the construction and PLC hardware replacement, as well as writing all new control logic and add-on instructions for the new PLCs. All work was completed on schedule after an eight-week planned plant shutdown. Start-up and commissioning of the new process control logic proceeded smoothly and was completed on time for plant production start-up.

Results/Benefits: Design services included preparation of electrical plans, detailed fabrication drawings, and bill of materials for preparing the Guaranteed Maximum Price (GMP) for the Phase 2 Construction Contract. During the construction phase, DeltaSE also completed a conversion from Wonderware InTouch version 7.1 to Wonderware InTouch version 9.5 and implemented Wonderware's Industrial Application Server (IAS).

6. ADDITIONAL INFORMATION

a. PROVIDE ANY ADDITIONAL INFORMATION YOU FEEL MAY BE NECESSARY TO DESCRIBE YOUR FIRMS QUALIFICATIONS. (ATTACH ADDITIONAL SHEETS AS NEEDED.)

Delta Systems Engineering, Inc. (DeltaSE) is a Veteran-owned firm that is certified by the US Small Business Administration (SBA) as a Small Business Enterprise (SBE). DeltaSE is an electrical engineering and systems integration firm with operations in Arizona, California, and Nevada. We specialize in industrial facility electrical/instrumentation & control systems (E/I&C) design and system integration. The company was founded in 1997, and have grown to become one of the largest and most successful firms in the southwest.

We have completed over 1,500 projects throughout the Southwest, ranging from brief letter reports to large multi-million dollar design and SCADA system integration projects. Our team possesses the knowledge, training and hands-on experience (see Table 1) required to meet your E/I&C needs. Our engineers and programmers come from varied backgrounds. They learned their craft from years in the field where they worked as electricians, instrument technicians, and programmers. We are capable of handling almost any electrical engineering, controls, programming, or support services task.

Our core competencies include extensive experience in E/I&C design, construction observation and inspection, instrument testing and calibration, programming and integration, start-up assistance and commissioning services.

DeltaSE has the in-house ability to provide the following services, which reflect each of these factors.

Engineering Services

- Power distribution system design
- Control panel fabrication design
- Power system analysis
- Emergency and standby power systems design
- Report preparation and cost estimating
- Control system network design
- SCADA system master planning, design, and configuration
- Wireless network studies and design
- Arc flash, short circuit, load floor, coordination studies
- Energy use assessment and management
- Lighting system design
- Personal protective equipment and hazard labeling

- maintenance manual preparation
- Material procurement and equipment purchasing management
- UL508A control panel design and fabrication
- Instrumentation services; process control loop drawings, calibration reports, and loop testing

Integration and Support Services

- Programmable Logic Controller (PLC) programming
- Operator Interface Terminal (OIT) programming
- Human-machine Interface (HMI) software configuration
- System field start-up and commissioning
- Troubleshooting electrical control systems
- On-call SCADA support services
- O&M staff training
- Customized preventative maintenance and annual support service plans
- Network and communication integration

Construction Management Services

- Bid assistance
- Construction management
- On-site observations
- Shop drawing review
- Record drawing and operation and

UL 508A Listed Panel Shop

Our local Las Vegas office is registered to provide panels and subpanels that are UL 508A listed. This value-added service allows us to provide control panels with our traditional wrap around services of engineering, programming and field startup services to give our clients a more cost effective low risk solution for their instrument, electrical and controls projects. Additional services are complete panel design, loop drawings, instrument specification, purchasing and calibration, panel



acceptance testing and field installation and modification services.

Arc Flash Hazard Analysis Services

DeltaSE understands what is required for arc flash analysis, coordination studies, safety training and electrical system design. We work with clients to provide the safety information required to protect their workers and facilities. Safety is an important factor to DeltaSE. All electrical work practices must comply with the Occupational Safety and Health Administration (OSHA), National Fire Protection Association (NFPA), National Electrical Code, National Electrical Safety Code, and State adopted electrical codes. Only qualified personnel may work on electrical circuits and equipment. Our team will conduct a jobsite daily briefing to insure proper safety measures are conducted.

System Integration Services

Creating effective control system solutions requires a clear understanding of available technologies, a plant's processes, and the regulations under which it operates. DeltaSE draws on its experience in all of these areas to develop highly effective solutions to fit your needs. DeltaSE programmers are trained and certified to program a variety of PLC, HMI, SCADA and business intelligence software. We've developed a library of tried and tested program elements for controlling a wide variety of control systems. Our library of logic allows us to create programs more efficiently, and then test them in our offices before we deploy them in the field. This combination of program building blocks and simulation testing before deployment helps us to dramatically reduce the startup and debugging time in the field. It also helps to ensure that your project starts up on time, and your systems will be dependable.

DeltaSE stays on the leading edge of technology and have formed strategic partnerships with software providers. These include: Wonderware (Endorsed Systems Integrator level); ETAP (System Integrators level); Rockwell Automation; Mtelligence; and Schneider Electric (Modicon software). Our Teams' expertise is diverse and they possess the knowledge, training, and hands-on experience required to meet our clients' needs.

DeltaSE understands not only that quality results are expected, but that they must be delivered on or ahead of schedule and on or under-budget. That is why maintaining appropriate schedule and cost controls is a major focus and priority of our Project Managers.



Because our firm regularly provides design, construction management, and programming services for turn-key projects, we have an excellent perspective from which to provide cost estimates for all phases of a project. We are capable of handling almost any electrical engineering, controls or programming task. Our approach is to work in close liaison with our clients by listening carefully to their needs. We have a singular ability to listen carefully, interpret accurately, and translate the information we gain into accurate designs. DeltaSE is committed to providing solutions that balance innovation with common sense. We are committed to providing the best design value. That means more quality and fewer change orders.

DeltaSE understands the important role that key operations and maintenance staff, preferably team leaders have on projects. They are respected and looked up to by their subordinates, and incentivizing them to volunteer and participate in the planning of major projects is critical. This approach is very important and may avoid problems with employees feeling they may not have a stake in the future of the system. After all, the people that operate and maintain the instruments, process equipment, reservoirs, pump stations, treatment plants, and pipelines may know better than anyone else where the critical needs are. Involving your field staff in the process will improve the quality of a system and its successful implementation.

We seek feedback to make sure that we are meeting your needs. We have in place appropriate Quality Assurance/Quality Control processes to ensure that our work for you is successful. You will find that our team has the skill, knowledge and experience in design, construction and programming of electrical, instrumentation & control, SCADA systems and related applications to deliver your projects with the highest quality. The technical expertise, service and support we provide to our clients has helped establish DeltaSE as one of the largest and most sought after electrical engineering firms in the Southwest.

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7. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

a. Percentage of Total Work Attributable to State, Federal and Municipal Government Work:	1
b. Percentage of Total Work Attributable to Non-Government Work:	7

8. AUTHORIZED REPRESENTATIVE. The foregoing is a statement of facts.

Signature: 

Date: 11/10/13

Name: Brian Downing, PE

Title: President & CEO