



ATTACHMENT I – General Qualifications
ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

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

1. Annual Request for Qualifications

a. FIRM (OR BRANCH OFFICE) NAME:	Van Boerum & Frank Associates, Inc.,
b. FIRM (OR BRANCH OFFICE) STREET:	1602 South Priest Drive, Suite 103
c. FIRM (OR BRANCH OFFICE) CITY:	Tempe
d. FIRM (OR BRANCH OFFICE) STATE:	Arizona
e. FIRM (OR BRANCH OFFICE) ZIP CODE:	85281
f. YEAR ESTABLISHED:	2003 – Branch Office
(g1). OWNERSHIP - TYPE:	Corporation (C Corp)
(g2) OWNERSHIP - SMALL BUSINESS STATUS:	Not a small business
h. POINT OF CONTACT NAME AND TITLE:	Byron Torgersen, P.E. – Director of Operations – Arizona
i. POINT OF CONTACT TELEPHONE NUMBER:	480-889-5075
j. POINT OF CONTACT E-MAIL ADDRESS:	btorgersen@vbfa.com
k. NAME OF FIRM <i>(If block 1a is a branch office):</i>	Van Boerum & Frank Associates, Inc.



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2. EMPLOYEES BY DISCIPLINE

a. Discipline Title	b. Function: Primary (P) or Secondary (S)	c. No. of Employees - Firm	d. No. of Employees - Branch
Mechanical Engineer	P	45	3
Electrical Engineer	P	5	2
Fire Protection Engineer	P	3	0
Other		41	6
Total		94	11



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

c. Approximate No. of Projects	b. Experience	c. Revenue Index Number (see below)
1	Activity Centers	1
1	Barracks: Dormitories	1
2	Child Care/Development Facilities	1
1	Cold Storage: Refrigeration and Fast Freeze	1
2	Commercial Building (Low Rise); Shopping Centers	1
1	Community Facilities	1
1	Computer Facilities	1
10	Dining Halls; Clubs; Restaurants	1
10	Educational Facilities; Classrooms	2
3	Electrical Studies and Design	1
1	Fire Protection	1
2	Garages; Vehicles Maintenance Facilities; Parking	1
1	Gas Systems (propane; Natural, Etc.)	1
76	Heating; Ventilating; Air Conditioning	2
21	Hospitals and Medical Facilities	2
5	Housing (Residential, Multi-Family)	1

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

- | | |
|---|---|
| 1. Less than \$100,000 | 6. \$2 million to less than \$5 million |
| 2. \$100,000 to less than \$250,000 | 7. \$5 million to less than \$10 million |
| 3. \$250,000 to less than \$500,000 | 8. \$10 million to less than \$25 million |
| 4. \$500,000 to less than \$1 million | 9. \$25 million to less than \$50 million |
| 5. \$1 million to less than \$2 million | 10. \$50 million or greater |



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4. PROFILE OF FIRM’S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST YEAR

d. Approximate No. of Projects	b. Experience	c. Revenue Index Number (see below)
1	Hotels	1
6	Industrial Buildings; Manufacturing Plants	1
1	Industrial Waste Treatment	2
2	Judicial and Courtroom Facilities	1
1	Laboratories; Medical Research Facilities	1
1	Libraries; Museums; Galleries	1
55	Lighting (Interior, Display, Theater, Etc.)	1
3	Lighting (Exteriors; Streets; Memorials; Athletic Fields, Etc.)	1
1	Labs – General	1
1	Labs – Research – Dry	1
3	Labs – Research – Wet	1
4	LEED Accredited A/E (VBFA – Engineering)	1
1	Materials Handling Systems; Conveyors; Sorters	1
3	Medical Related	2
8	Modular Systems Design, Fabricated Structures or Components	1
1	Museums	1

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

- | | |
|---|---|
| 1. Less than \$100,000 | 6. \$2 million to less than \$5 million |
| 2. \$100,000 to less than \$250,000 | 7. \$5 million to less than \$10 million |
| 3. \$250,000 to less than \$500,000 | 8. \$10 million to less than \$25 million |
| 4. \$500,000 to less than \$1 million | 9. \$25 million to less than \$50 million |
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PROFILE OF FIRM’S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST YEAR

e. Approximate No. of Projects	b. Experience	c. Revenue Index Number <i>(see below)</i>
1	Nuclear Facilities; Nuclear Shielding	1
13	Office Buildings; Industrial Parks	1
1	Outdoor Recreation	1
40	Plumbing and Piping Design	1
1	Prisons and Correctional Facilities	1
1	Refrigeration Plants / Systems	1
1	Rehabilitations (Buildings; Structures; Facilities	1
1	Research Facilities	1
4	Security Systems; Intruder and Smoke Detection	1
2	Special Environments; Clean Rooms, Etc.	1
2	Swimming Pools	1
80	Specification Writing	1
2	Warehouse and Depots	1

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

- | | |
|---|---|
| 1. Less than \$100,000 | 6. \$2 million to less than \$5 million |
| 2. \$100,000 to less than \$250,000 | 7. \$5 million to less than \$10 million |
| 3. \$250,000 to less than \$500,000 | 8. \$10 million to less than \$25 million |
| 4. \$500,000 to less than \$1 million | 9. \$25 million to less than \$50 million |
| 5. \$1 million to less than \$2 million | 10. \$50 million or greater |



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4. Resumes of Key Personnel Proposed for this Contract (Complete one Section 4 for each key person.)

a. NAME Byron R. Torgersen, P.E.	b. ROLE IN THIS CONTRACT Principal-in-Charge – Mechanical	c. YEARS EXPERIENCE	
		1. TOTAL 26 Years	2. WITH CURRENT FIRM 24 years
d. LOCATION (City and State) Tempe, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) Bachelor of Science, Mechanical Engineering		f. PROFESSIONAL TRAINING - REGISTRATIONS HVAC Design, Cost Estimates, Energy Analysis	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) ASHRAE, ACEC			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Target Financial Cooling Tower Tempe, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012	Construction (if applicable) 2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided mechanical engineering services for the upgrade and replacement of (2) existing cooling towers located at the Target Financial Office Building. This engineering service was provided for (2) separate phases and two separate building systems. The building had to remain in operation during the construction. Estimated Cost: \$950,000.00 (\$475,000.00 each) Role: Byron Torgersen was Project Mechanical Engineer	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION (City and State) State of Arizona Critical Document Building Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided mechanical engineering services associated with the HVAC upgrades at the critical documents facility. The upgrades include replacing old rooftop HVAC equipment with new variable refrigerant (VRV) HVAC systems. The project was a remodel designed to allow continuous operation of the existing building functions. Phasing was important. Size: 16,425 square feet. Estimated Cost: \$350,000.00 Role: Byron Torgersen was Project Mechanical Engineer	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION (City and State) Maricopa County Durango Jail Kitchen Ventilation Upgrades Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2011	Construction (if applicable) 2012
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided the mechanical engineering services associated with the ceiling and HVAC upgrades at the kitchen & dishwashing areas. The project included the addition of new rooftop equipment to ventilate the dishwashing areas and the new kitchen dishwashing equipment. Size: 11,310 sq. ft. Est.cost: \$300,000.00 Role: Byron Torgersen - Project Mechanical Engineer.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION (City and State) CRMC Patient Tower Addition Chandler, Arizona	(2) YEAR COMPLETED	
		Professional Services 2011	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope of work included the mechanical and electrical design of a new 200,000 sq. ft. patient tower addition at an existing hospital. Project included dedicated air handlers, heating hot water converters, exhaust systems and an expansion to the existing central plant. Cost: \$14 million. Role: Byron Torgersen – Project Mechanical Engineer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION (City and State) LDS Gilbert Temple Gilbert, Arizona	(2) YEAR COMPLETED	
		Professional Services 2011	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided the mechanical engineering services for this 85,000 sq. ft. LDS Temple including chillers, cooling tower, pumps and multiple air handlers. Role: Byron Torgersen – Project Mechanical Engineer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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4. Resumes of Key Personnel Proposed for this Contract (Complete one Section 4 for each key person.)

a. NAME Gary Nelson, P.E.	b. ROLE IN THIS CONTRACT Project Engineer - Mechanical	c. YEARS EXPERIENCE	
		1. TOTAL 40 years	2. WITH CURRENT FIRM 8 months
d. LOCATION (City and State) Tempe, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) Bachelor of Science, Mechanical Engineering		f. PROFESSIONAL TRAINING - REGISTRATIONS High Performance Building Design	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) ASHRAE, ACEC			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) HRMC Pet & CT Scan Facility	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Renovated an existing medical office building to support a new PET & CT facility. New HVAC systems were designed for the building. Cost: \$180,000.00 Role: Gary Nelson was Project Engineer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION (City and State) Tucson VA Medical Center Mental Health Expansion Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided the mechanical design for the expanded mental health facility. Provided new air handlers, chiller, pumps, steam convertors for the project Cost = \$1.25 million. Role: Gary Nelson was Project Engineer for this project..	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION (City and State) CRMC CT Scan Upgrades Chandler, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014 (design only)	Construction (if applicable) N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided the HVAC upgrades to support the new CT equipment being installed at the existing building. Cost: \$65,000.00. Role: Gary Nelson was Project Engineer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION (City and State) Aerium Townhomes Phoenix, AZ	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided the mechanical design for a new townhome / residential facility. Provided stand alone equipment for each townhouse. Cost: \$6.0 million Role: Gary Nelson was Project Engineer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION (City and State) Pima County Wireless Emergency Operations Center Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012	Construction (if applicable) 2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided the mechanical, plumbing and fire protection design for the emergency operations center with data center and call center. Central water cooled chiller plant with backup air cooled chiller and back up air handling units. Role: Gary Nelson was Project Engineer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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4. Resumes of Key Personnel Proposed for this Contract (Complete one Section 4 for each key person.)

a. NAME Ryan Goettl	b. ROLE IN THIS CONTRACT Design Engineer - Mechanical	c. YEARS EXPERIENCE	
		1. TOTAL 8 years	2. WITH CURRENT FIRM 8 years
d. LOCATION (City and State) Tempe, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) Bachelor of Science, Mechanical Engineering		f. PROFESSIONAL TRAINING - REGISTRATIONS HVAC Design, Revit CADD, Load Calculations	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) ASHRAE			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) LDS Temple HVAC Upgrades – Phase I Mesa, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Replacement of existing basement and upgrades to existing ductwork systems. Cost: \$800,000.00 Role: Ryan Goettl was Mechanical Engineer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION (City and State) LDS Central Chapel HVAC Upgrades Mesa, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope of work included replacement of the existing building's air handlers with new units. Cost: \$125,000.00 Role: Ryan Goettl was Mechanical Engineer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION (City and State) Arizona Nutritional Supplements Bulk Facility Chandler, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope of work consisted of the complete mechanical design for a new 85,000 square foot manufacturing facility. Project also included a central plant. Cost: \$2.5 million Role: Ryan Goettl was Mechanical Engineer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION (City and State) CRMC Patient Tower Addition Chandler, AZ	(2) YEAR COMPLETED 2014	
		Professional Services 2011	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope of work included the mechanical design of a new 200,000 sq. ft. patient tower addition at an existing hospital. Project included the expansion to the existing central plant. Cost: \$14 million. Role: Ryan Goettl was Mechanical Engineer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION (City and State) San Tan Charter Academy Multi-Purpose and Classroom Buildings Gilbert, AZ	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope of work included the mechanical design of a new 36,000 sq. ft. charter school and 14,500 sq. ft. Gymnasium. Role: Ryan Goettl was Mechanical Engineer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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4. Resumes of Key Personnel Proposed for this Contract (Complete one Section 4 for each key person.)

a. NAME Mike Olson	b. ROLE IN THIS CONTRACT Plumbing Designer	c. YEARS EXPERIENCE	
		1. TOTAL 20 years	2. WITH CURRENT FIRM 8 years
d. LOCATION (City and State) Tempe, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) Bachelor of Science, Aeronautical Science		f. PROFESSIONAL TRAINING - REGISTRATIONS CPD Certification, Plumbing Design, Gas Piping	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) ASHRAE			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Arizona Nutritional Supplements Bulk Facility Chandler, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope of work consisted of the complete mechanical design for a new 85,000 square foot manufacturing facility. Project also included a central plant. Cost: \$2.5 million Role: Mike Olson was the Plumbing Designer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION (City and State) CRMC Patient Tower Addition Chandler, Arizona	(2) YEAR COMPLETED	
		Professional Services 2011	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided the complete plumbing design for a new 200,000 square foot patient tower addition at an existing hospital. New water softeners and hot water heaters were provided. Cost: \$14 million Role: Mike Olson was the Plumbing Designer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION (City and State) Arizona Nutritional Supplements Powder Facility Chandler, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012	Construction (if applicable) 2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided the complete plumbing design for a new vitamin supplement facility. Cost: \$2 million Role: Mike Olson was the Plumbing Designer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION (City and State) Durango Jail Chilled Water Revisions Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided mechanical upgrades to the existing campus chilled water system and plant. Provided new chilled water pumps and waterside economizer. Cost: \$1.1 million Role: Mike Olson was the Project Designer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION (City and State) Tucson VA Medical Center Mental Health Expansion Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services 2013	Construction (if applicable) 2013 - 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided the plumbing design for the expanded mental health facility. Provided new plumbing equipment and fixtures for the project Cost - \$1.25 million. Role: Michael Olson was the Plumbing Designer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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4. Resumes of Key Personnel Proposed for this Contract (Complete one Section 4 for each key person.)

a. NAME Barry Hulet, P.E.	b. ROLE IN THIS CONTRACT Principal-in-Charge - Electrical	c. YEARS EXPERIENCE	
		1. TOTAL 40 years	2. WITH CURRENT FIRM 6 years
d. LOCATION (City and State) Tempe, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) Masters of Engineering, Electrical		f. PROFESSIONAL TRAINING - REGISTRATIONS Generator Applications, Lighting, Power, Energy Code	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Member, National Council of Examiners for Engineering & Surveying (NCEES)			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Target Financial Cooling Tower Tempe, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012	Construction (if applicable) 2012
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided electrical engineering services for the upgrade and replacement of (2) existing cooling towers located at their office building. This was provided for (2) separate phases and two separate building systems. The building had to remain in operation during construction. Temporary and permanent power had to be installed to meet the HVAC demand. Estimated Cost: \$950,000.00 (\$475,000.00 each) Role: Barry Hulet was Project Electrical Engineer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION (City and State) State of Arizona Critical Document Building Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided electrical engineering services for the HVAC upgrades at the facility. The upgrades included replacing old rooftop HVAC equipment with new variable refrigerant (VRV) HVAC systems. The project was a remodel designed to allow continuous operation of the existing building functions. Phasing was important. Size: 16,425 sq. ft.. Estimated Cost: \$350,000.00 Role: Barry Hulet was Project Electrical Engineer.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION (City and State) Maricopa County Durango Jail Kitchen Ventilation Upgrades Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012	Construction (if applicable) 2012
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided the electrical engineering services associated with the ceiling and HVAC upgrades at the kitchen & dishwashing areas at the jail. The project included the addition of new rooftop equipment to ventilate the dishwashing areas and to ventilate the new kitchen dishwashing equipment. Size: 11,310 square feet. Estimated cost: \$300,000.00 Role: Barry Hulet was Project Electrical Engineer.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION (City and State) Maricopa County Star Call Center Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012	Construction (if applicable) 2012
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE A new HVAC system was designed for this 16,000 sf call center. The electrical system was redesigned to power the new equipment. The center had to remain operational during the remodel, so the work was designed to be installed in phases. Role: Barry Hulet was Project Electrical Engineer	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION (City and State) Maricopa County Durango Jail Boiler Replacement Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2010	Construction (if applicable) 2010
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE The domestic hot water boilers and pump system were out-of-date and had maintenance issues. The County hired VBFA to redesign the system with new equipment. Role: Barry Hulet was the Project Electrical Engineer on the project responsible for designing the necessary electrical changes for the project.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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4. Resumes of Key Personnel Proposed for this Contract (Complete one Section 4 for each key person.)

a. NAME James Johnson	b. ROLE IN THIS CONTRACT Electrical Designer	c. YEARS EXPERIENCE	
		1. TOTAL 16 years	2. WITH CURRENT FIRM 5 years 11 months
d. LOCATION (City and State) Tempe, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) Associates Degree in Applied Science		f. PROFESSIONAL TRAINING - REGISTRATIONS Electrical Engineering class from ASU, MCC	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Registered Electrical Engineer-in-Training in State of Arizona			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) 1818 Vital Records HVAC Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided electrical power to new HVAC System and demolition of old HVAC System. Estimated cost \$950,000.00; 16,425 square feet. Role: James Johnson was Electrical Designer for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION (City and State) Maricopa County OET Downtown Study Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2013	Construction (if applicable) 2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Performed site investigation of I.T. rooms to evaluate existing conditions and recommend upgrades. 17 buildings. Cost = \$65,000.00 (study only). Role: James Johnson was Electrical Project Manager for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION (City and State) Maricopa County Durango Jail Kitchen Ventilation Upgrades Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2011	Construction (if applicable) 2011
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Revised drawings to provide power for new HVAC and humidity controls. 11,310 square feet. Cost= \$300,000.00 (estimated). Role: James Johnson was Electrical Project Manager for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION (City and State) Target Financial Cooling Tower Tempe, Arizona	(2) YEAR COMPLETED	
		Professional Services 2012	Construction (if applicable) 2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided electrical engineering services for the upgrade and replacement of (2) existing cooling towers located at their Office Building. Services were for (2) separate phases and (2) separate building systems. The building had to remain operational during the construction. Temporary/ permanent power was installed to meet the HVAC demand. Estimated Cost: \$950,000.00 Role: James Johnson was Electrical Project Manager for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION (City and State) CRMC Patient Tower Addition Chandler, Arizona	(2) YEAR COMPLETED	
		Professional Services 2011	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope of work included the electrical design of a new 200,000 sq. ft. patient tower addition at an existing hospital. Project included the expansion to the existing central plant. Cost: \$14 million. Role: James Johnson was the Electrical Project Manager for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm



ATTACHMENT I – General Qualifications

**ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729**

**STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007**

4. Resumes of Key Personnel Proposed for this Contract (Complete one Section 4 for each key person.)

a. NAME Eli Valdez	b. ROLE IN THIS CONTRACT Electrical Designer	c. YEARS EXPERIENCE	
		1. TOTAL 16 years	2. WITH CURRENT FIRM 2 years
d. LOCATION (City and State) Tempe, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) BSEE, Electronic Engineering		f. PROFESSIONAL TRAINING - REGISTRATIONS Generator Systems, Lighting, Grounding	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) N/A			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) SE Juvenile Detention Central Plant Heating System Upgrade Mesa, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Electrical design in support of the replacement of two hot water boilers and the expansion of the existing building BMS System. Estimated cost \$55,000.00 Role: Eli Valdez was the Electrical Designer.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION (City and State) Durango Jail Chilled Water Revisions Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope of work included electrical design support in four separate facility buildings. Replacement of chilled water pumps. Estimated cost \$1.1 million. Role: Eli Valdez was the Electrical Designer.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION (City and State) ASU Physical Science Process Chilled Water Tempe, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Electrical design in support of a new process chilled water system replacing the existing system in the physical science building. Estimated cost \$200,000.00 Role: Eli Valdez was the Electrical Designer	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION (City and State) Wells Fargo Consumer Credit Group Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Electrical design in support of new rooftop air-to-air energy recovery ventilators and adjustments to existing fans. Estimated cost: \$410,000.00 Role: Eli Valdez was the Electrical Designer.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION (City and State) Banner Health Boswell Sun City, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Electrical design in support of new medical building to include linear accelerator and computerized tomography scanner. Estimated cost: \$600,000.00 Role: Eli Valdez was the Electrical Designer.	<input checked="" type="checkbox"/>	Check if project performed with current firm



ATTACHMENT I – General Qualifications
ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
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4. Resumes of Key Personnel Proposed for this Contract (Complete one Section 4 for each key person.)

a. NAME Hiram Todd	b. ROLE IN THIS CONTRACT Drafter - Electrical	c. YEARS EXPERIENCE	
		1. TOTAL 6 years	2. WITH CURRENT FIRM 2 years 11 months
d. LOCATION (City and State) Tempe, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) A.A.S., Drafting and Design		f. PROFESSIONAL TRAINING - REGISTRATIONS N/A	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) N/A			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (City and State) Durango Jail Kitchen Ventilation Phoenix, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Produced plans for the upgrade in jail's kitchen area at approximately 11,310 square feet. Estimated cost: \$50,000.00 Role: Hiram Todd was the drafter for this project.	Professional Services 2011	Construction (if applicable) 2011
		<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION (City and State) Maricopa County Star Call Center Phoenix, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Produced plans for Maricopa County's Forensics Sciences Facility renovation at approximately 13,628 square feet. Estimated cost: \$350,000.00. Role: Hiram Todd was the drafter for this project.	Professional Services 2011	Construction (if applicable) 2011
		<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION (City and State) Target Financial Interiors Group Office Tempe, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Produced plans for Target's Interior Group Office renovation at approximately 1,327 square feet. Estimate cost: \$18,000.00 Role: Hiram Todd was the drafter for this project.	Professional Services 2012	Construction (if applicable) 2012
		<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION (City and State) State of Arizona Critical Document Building Phoenix, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Produced plans for HVAC replacement in the State's vital records department at approximately 16,425 square feet. Estimate cost: \$350,000.00 Role: Hiram Todd was the drafter for this project.	Professional Services 2013	Construction (if applicable) 2014
		<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION (City and State) CRMC CT Scan Upgrades Chandler, Arizona	(2) YEAR COMPLETED	
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided the HVAC upgrades to support the new CT equipment being installed at the existing building. Cost: \$65,000.00. Role: Hiram Todd was the drafter for this project.	Professional Services 2014	Construction (if applicable) 2014
		<input checked="" type="checkbox"/>	Check if project performed with current firm



ATTACHMENT I – General Qualifications

**ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729**

**STATE PROCUREMENT OFFICE
Department of Administration
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5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION <i>(City and State)</i> Target Financial Cooling Tower Replacement	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2012	CONSTRUCTION <i>(If applicable)</i> 2012**

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER Target Financial	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$950,000.00	e. TOTAL COST OF PROJECT Estimated Cost: \$950,000.00
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

Van Boerum & Frank Associates provided the mechanical and electrical engineering services associated with the upgrade and replacement of (2) existing cooling towers located at the Target Financial Office Building. This engineering service was provided for (2) separate phases and two separate building systems. The cooled water is used to provide condensing water for the water cooled heat pumps.

Challenges:

The buildings had to remain in operation during the construction phase of the project. To accomplish this, temporary and permanent power had to be installed to meet the HVAC demand. In addition, a trailer mounted cooling tower had to be temporarily installed to cover the time each old tower was being demolished and the new tower was being installed.

The client's expectation of a more efficient, dependable cooling tower was met. The cooling system stayed in operation with the temporary equipment and power systems. The buildings remained in service during the change of the towers.



ATTACHMENT I – General Qualifications

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ADSP015-00004729**

**STATE PROCUREMENT OFFICE
Department of Administration
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5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

b. TITLE AND LOCATION <i>(City and State)</i>	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
State of Arizona Critical Documents Facility HVAC Replacement Phoenix, Arizona	2014	2014

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
State of Arizona	\$300,000.000	Estimated Cost: \$350,000.00

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

Van Boerum & Frank Associates provided the mechanical and electrical engineering services associated with the HVAC upgrades at the critical documents facility. The upgrades included replacing old rooftop HVAC equipment with new variable refrigerant (VRV) HVAC systems. The project was a remodel effort designed to allow the continuous operation of the existing building functions. The electrical system had to be evaluated and power obtained to provide for the new HVAC equipment.

The new equipment worked effectively and efficiently, and the change out caused very little inconvenience to the building employees. Thus, the client's objectives were met.

Size: 16,425 square feet



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
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Phoenix, Arizona 85007

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

c. TITLE AND LOCATION (City and State)	b. YEAR COMPLETED	
Maricopa County Durango Jail Kitchen Ventilation Upgrades Phoenix, Arizona	PROFESSIONAL SERVICES 2011	CONSTRUCTION (If applicable) 2011

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Maricopa County	\$300,000.00	Estimated Cost: \$300,000.00

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

Van Boerum & Frank Associates provided the mechanical and electrical engineering services associated with the HVAC and electrical upgrades at the kitchen & dishwashing areas at the Durango Jail. The project included the addition of new rooftop equipment to ventilate the dishwashing areas and to ventilate the new kitchen dishwashing equipment as well. New switching equipment and electrical feeder modifications were required to upgrade the overall electrical system. A speedy changeover was required to keep the kitchen downtime to a minimum.

Challenges:

Some challenges were encountered during the removal of some of the old ceiling. Despite the unforeseen setback, the project was completed on time and the client had a substantial reduction in the kitchen water vapor which as a great success.

Size: 11,310 square feet



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

d. TITLE AND LOCATION <i>(City and State)</i> Maricopa County Star Call Center Phoenix, Arizona	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2012	CONSTRUCTION <i>(If applicable)</i> 2013

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER Maricopa County	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$750,000.00	e. TOTAL COST OF PROJECT \$780,000.00
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i. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

The existing HVAC system at the 16,000 square foot call center consisted of 10 direct expansion (DX) heat pumps. The system was unsuitable for the space with various units heating and cooling the space at the same time resulting in the units "fighting" with each other. Despite the client's efforts the space was often uncomfortable for some employees.

The system was replaced in four phases with a new air cooled chiller and multiple fan coil units with electrical heating elements.

Challenges:

As mentioned above, the challenging part of the design and construction was to phase the design and construction work so that the call center could stay in operation during the remodel and be completed in four months. This required close cooperation between the mechanical and electrical designs. A new air-cooled chiller was installed together with fan coil units at appropriate points throughout the call center.



ATTACHMENT I – General Qualifications

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ADSP015-00004729**

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5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

e. TITLE AND LOCATION <i>(City and State)</i>	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
Mesa LDS Temple HVAC Upgrades – Phase I Mesa, Arizona	2014	2014

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Church of Jesus Christ of Latter-Day Saints	Estimated Cost (First 3 air handler Replacements): \$800,000.00	\$800,000.00

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

The seven major air handlers in the basement of the building were over 40 years old. They were not functioning well and were inefficient compared to the newer equipment. In addition, spare parts were unavailable. The owner requested that the project be designed such that the removal and replacement of the units be phased so that no construction phase would exceed approximately three weeks.

The first three units were removed and replaced in three weeks which included the disassembly of the three old units and assembly of a new larger unit in the basement. Duct work and electrical work was accomplished in the same time frame. The owner is pleased with the new air handler and its operation.

The remaining four units will be replaced in future phases.

If the state has similar HVAC and electrical issues, we have the relevant experience.



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6. ADDITIONAL INFORMATION

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

VBFA was founded in 1972 and has grown to be a respected mechanical and plumbing, electrical and fire protection engineering firm. With 105 employees spread between three Utah offices and an Arizona office, VBFA has set itself apart with innovative, award-winning designs. VBFA prides itself in employing graduate and licensed engineers with programs that encourage creativity and total quality management on all projects. Our highly trained staff ensures that professional service is applied to each and every VBFA project.

VBFA Arizona Branch Office

VBFA Tempe, Arizona opened in 2003. Under Byron Torgersen’s direction, VBFA has provided engineering services for a multitude of successful projects and types throughout Arizona. Our talented mechanical and electrical engineers are committed to providing satisfaction for the State of Arizona and they have the full support of our Utah engineers and staff (of 95) to achieve project goals and timelines.

Mechanical Engineering

VBFA is pleased to be the recipient of the Best of State winner in Utah for Mechanical Engineering from 2009 to 2013. The firm’s mechanical expertise includes energy conservation studies, audits and retrofitting projects and the design and supervision of the installation of commercial and industrial mechanical systems, including boiler plants, building heating, ventilating, air conditioning plumbing, and fire protection systems, cogeneration systems, utility distribution systems and ice facilities.

Electrical Engineering

VBFA’s electrical expertise includes the design of an array of electrical systems including electrical power systems, emergency power, interior and exterior lighting, structured cabling, audio/video, security and fire alarm systems and renewable energy projects.

LEED / Sustainable Design Expertise

Energy conservation (“green building design”) has been and continues to be a driving force for VBFA’s engineers. These dedicated LEED Accredited Professionals have been involved in the design of high-performance, sustainable buildings – including many buildings that have achieved up to LEED Double Platinum and others that are under construction and seeking LEED Silver or higher certification. VBFA’s engineers are experienced at providing MEP consulting services for state and local agencies. They are familiar with the unique design requirements for these types of facilities.

On-Call Contracts

VBFA has been involved with on-call term contracts for clients including Arizona State University’s College of Engineering, Maricopa County, Salt Lake City International Airport Authority, Washington County School District (Utah), Salt Lake City Engineering Department, Davis County School District (Utah) and Weber State University (Utah). For these clients and other repeat clients, we have been providing consulting engineering services for many years.

Project Management/Capacity

VBFA utilizes the project management system software, Ajera. This system allows us to load each individual on the team separately so that their workload does not exceed their available hours. As each project is put in to the system, the number of each team member’s hours is also put in to the system along with the design and construction time frames, thereby, allowing each member’s schedule to be kept up-to-date. If a team member’s assigned hours approach their capacity the next project is assigned to another team member. With eight (8) specific team members assigned to this work the work flow is managed appropriately to meet project deadlines.

Experienced team members are assigned to each project based on the estimated hours for the project and the time frame required. More team members are assigned depending on the project size and complexity in order to meet the intermediate goals of the project. If an intermediate goal is approaching and the percent complete is lagging, additional help of the required type is injected to stay on schedule.

Accuracy and quality are ensured by regular oversight by the engineer, daily for many projects, and following guidelines and checklists that are provided for the specific project. Training is also key and is ongoing both at our weekly training sessions, and in special sessions such as our recent one on standby electrical generators.



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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:	50%
b. Percentage of Total Work Attributable to Non-Government Work:	50%

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

Signature: *Byron Torgersen*

Date: December 17, 2014

Name: Byron R. Torgersen, P.E.

Title: Director of Operations - Arizona