



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:  
ADSP015-00004729

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

**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.



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- 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.



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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.

List of Disciplines (Function Codes) for Question 2

- |                           |  |                          |
|---------------------------|--|--------------------------|
| 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 3)

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



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Hotels; Motels  
Hydraulics and Pneumatics  
Hydrographic Surveying  
Industrial Buildings; Manufacturing Plants  
Industrial Processes; Quality Control  
Industrial Waste Treatment  
Intelligent Transportation Systems  
Infrastructure  
Irrigation; Drainage  
Judicial and Courtroom Facilities  
Laboratories; Medical Research Facilities  
Land Surveying  
Landscape Architecture  
Libraries; Museums; Galleries  
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 3<sup>rd</sup> 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



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*(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:	Sun Engineering, LLC
b. FIRM (OR BRANCH OFFICE) STREET:	600 W. Hatcher, Suite 200
c. FIRM (OR BRANCH OFFICE) CITY:	Phoenix
d. FIRM (OR BRANCH OFFICE) STATE:	Arizona
e. FIRM (OR BRANCH OFFICE) ZIP CODE:	85021

f. YEAR ESTABLISHED:	2008
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(g1). OWNERSHIP - TYPE:	Corporation
(g2) OWNERSHIP - SMALL BUSINESS STATUS:	Small Business

h. POINT OF CONTACT NAME AND TITLE:	Ken Pratt
i. POINT OF CONTACT TELEPHONE NUMBER:	623-329-205
j. POINT OF CONTACT E-MAIL ADDRESS:	kpratt@sunengineering.us

k. NAME OF FIRM <i>(If block 1a is a branch office):</i>	
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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
Civil Engineer	P	1	
Electrical Engineer	P	2	
Fire Protection Engineer	P	1	
Mechanical Engineer	P	2	
Technician/Analyst	P	5	
Construction Inspector	S	5	
Other	P	3	
<b>Total</b>			



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**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)
2	Auditoriums and Theaters	1
3	Automation; Controls; Instrumentation	1
12	Commercial Building; Shopping Centers	2
5	Community Facilities	1
17	Construction Management	1
5	Design -Build	1
5	Dining Halls; Clubs; Restaurants	1
2	Design & Planning Structured Parking Facilities	1
16	Electrical Studies and Design	2
4	Elevators; Escalators; People Movers	1
2	Energy Conservation; New Energy Sources	1
10	Fire Protection	1
13	Heating; Ventilating; Air Conditioning	1
10	Housing	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 Kenneth Pratt, MBA	b. ROLE IN THIS CONTRACT Principal Project Manager	c. YEARS EXPERIENCE	
		1. TOTAL 23 years	2. WITH CURRENT FIRM 6 years
d. LOCATION <i>(City and State)</i> 600 W. Hatcher, Suite 200, Phoenix, AZ 85021			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> MBA – Technology Management BSEE – Power Systems		f. PROFESSIONAL TRAINING - REGISTRATIONS Program Management: The Process, Lighting Design and Photovoltaic Solar Design	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i> BPI Certified Energy Analyst (CEA) IMSA Certified Traffic Signal Designer			

**H. RELEVANT PROJECTS**

1.	(1) TITLE AND LOCATION <i>(City and State)</i> Arizona Department of Juvenile Corrections: Replacement Back-up Generator, Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Provided electrical drawings for the replacement and relocation of the back-up generator. The project size was small in size; however, the time period to design the new generator system was very short. The client needed the drawings to be completed and submitted to the state in two (2) days. Sun Engineering completed the drawings in the time frame and the drawings were approved by the State Engineer. The cost for the expedited design services was \$20,000.00. Ken Pratt, MBA served as the Project Manager for the project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION <i>(City and State)</i> Southern Arizona Cemetery, Marana, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE This project consists of providing mechanical & plumbing, electrical and fire protection engineering design services for the State of Arizona, Southern Arizona Cemetery, located in Marana, Arizona. Sun Engineering shall design a system that enables the buildings on the campus to be LEED Silver certified. The construction cost for project was \$7,000,000. Ken Pratt, MBA served as the Project Manager for this project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION <i>(City and State)</i> Northern Arizona Cemetery, Bellemont, Arizona	(2) YEAR COMPLETED	
		Professional Services 2013	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE This project consists of providing mechanical & plumbing, electrical and fire protection engineering design services for the State of Arizona, Northern Arizona Cemetery, located in Bellemont, Arizona. Sun Engineering shall design a system that enables the buildings on the campus to be LEED Silver certified. The construction cost for project was \$7,000,000. Ken Pratt, MBA served as the Project Manager.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION <i>(City and State)</i> Arizona Department of Revenue Tenant Improvement (TI), Phoenix, Arizona	(2) YEAR COMPLETED	
		Professional Services 2013	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Designed new break rooms on the 3rd, 4th, 5th, 7th, and 8th floors were designed. The new break rooms included lights, light switches and wall receptacles in the design. The new circuits were added to the existing panels and the new load was calculated at the Service Entrance Section (SES). The construction cost for the project was \$200,000. Ken Pratt, MBA served as the Project Manager for the project.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION <i>(City and State)</i> City of Avondale Information Technology Center Renovation	(2) YEAR COMPLETED	
		Professional Services 2013	Construction (if applicable) 2013
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Sun Engineering provided engineering services to the City of Avondale for design services for the renovation of the city's information technology center. A large part of this project involved an initial assessment and feasibility study of existing facilities. After this, we were able to deliver a design which included new fire alarm devices, additional receptacles and new cooling to accommodate the renovations. The construction cost for the project was \$150,000. Ken Pratt, MBA served as the Project Manager.	<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 Tom Moll, PE	b. ROLE IN THIS CONTRACT Principal Electrical Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 35 years	2. WITH CURRENT FIRM 6 years
d. LOCATION (City and State) 600 W. Hatcher, Suite 200, Phoenix, AZ 85021			
e. EDUCATION (DEGREE AND SPECIALIZATION) BSEE – Power Systems		f. PROFESSIONAL TRAINING - REGISTRATIONS Program Management: The Process, Lighting Design and Photovoltaic Solar Design	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Licensed Professional Electrical Engineer – Arizona			

**H. RELEVANT PROJECTS**

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	Arizona Department of Juvenile Corrections: Replacement Back-up Generator, Phoenix, Arizona	2014	2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Provided electrical drawings for the replacement and relocation of the back-up generator. The project size was small in size; however, the time period to design the new generator system was very short. The client needed the drawings to be completed and submitted to the state in two (2) days. Sun Engineering completed the drawings in the time frame and the drawings were approved by the State Engineer. The cost for the expedited design services was \$20,000.00. Tom Moll, PE served as the registered electrical engineer for the project.		<input checked="" type="checkbox"/> Check if project performed with current firm
2.	Southern Arizona Cemetery, Marana, Arizona	2014	2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE This project consists of providing mechanical & plumbing, electrical and fire protection engineering design services for the State of Arizona, Southern Arizona Cemetery, located in Marana, Arizona. Sun Engineering shall design a system that enables the buildings on the campus to be LEED Silver certified. The construction cost for project was \$7,000,000. Tom Moll, PE served as the registered electrical engineer for this project.		<input checked="" type="checkbox"/> Check if project performed with current firm
3.	Northern Arizona Cemetery, Bellemont, Arizona	2013	2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE This project consists of providing mechanical & plumbing, electrical and fire protection engineering design services for the State of Arizona, Northern Arizona Cemetery, located in Bellemont, Arizona. Sun Engineering shall design a system that enables the buildings on the campus to be LEED Silver certified. The construction cost for project was \$7,000,000. Tom Moll, PE served as the registered electrical engineer for this project.		<input checked="" type="checkbox"/> Check if project performed with current firm
4.	Arizona Department of Revenue Tenant Improvement (TI), Phoenix, Arizona	2013	2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Designed new break rooms on the 3rd, 4th, 5th, 7th, and 8th floors were designed. The new break rooms included lights, light switches and wall receptacles in the design. The new circuits were added to the existing panels and the new load was calculated at the Service Entrance Section (SES). The construction cost for the project was \$200,000. Tom Moll served as the registered electrical engineer for the project.		<input checked="" type="checkbox"/> Check if project performed with current firm
5.	City of Avondale Information Technology Center Renovation	2013	2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE A large part of this project involved an initial assessment and feasibility study of existing facilities. After this, we were able to deliver a design which included new fire alarm devices, additional receptacles and new cooling to accommodate the renovations. The construction cost for the project was \$150,000. Tom Moll, PE served as the registered electrical 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.)

b. NAME Miro Grbic, PE	b. ROLE IN THIS CONTRACT Principal Mechanical Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 27 years	2. WITH CURRENT FIRM 6 years
d. LOCATION (City and State) 600 W. Hatcher, Suite 200, Phoenix, AZ 85021			
e. EDUCATION (DEGREE AND SPECIALIZATION) BSME – HVAC Systems		f. PROFESSIONAL TRAINING - REGISTRATIONS HVAC Design, HVAC Commissioning, Sprinkler Design, FM Gas Design	
g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) Licensed Professional Mechanical Engineer – Arizona Licensed Professional Fire Protection Engineer – Arizona			

**H. RELEVANT PROJECTS**

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	Northern Arizona Cemetery, Belmont, Arizona	2014	2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE This <input checked="" type="checkbox"/> Check if project performed with current firm project consists of providing mechanical & plumbing, electrical and fire protection engineering design services for the State of Arizona, Northern Arizona Cemetery, located in Belmont Arizona. Sun Engineering designed a system that enables the buildings on the campus to be LEED Silver certified. The construction cost for project was \$6,500,000. Miro Grbic, PE served as the registered mechanical engineer for the project.		
2.	Southern Arizona Cemetery, Marana, Arizona	2014	2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm This project consists of providing mechanical & plumbing, electrical and fire protection engineering design services for the State of Arizona, Southern Arizona Cemetery, located in Marana, Arizona. Sun Engineering shall design a system that enables the buildings on the campus to be LEED Silver certified. The construction cost for project was \$7,000,000. Miro Grbic, PE served as the registered mechanical engineer for the project.		
3.	State of Arizona Senate Building - Cooling Coil Replacement	2014	2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm This project consists of providing mechanical & plumbing engineering design services for the State of Arizona. New cooling coils were sized and specified to meet the current cooling needs for Senate building. The appropriate water lines and drains were designed to support the new cooling coil. Miro Grbic, PE served as the registered mechanical engineer for this project.		
4.	Arizona Department of Revenue Tenant Improvement (TI), Phoenix, Arizona	2013	2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Designed new break rooms on the 3rd, 4th, 5th, 7th, and 8th floors were designed. The new break rooms included providing HVAC ducts into the new break room area and determining if the size of the existing AC units were sufficient enough to support additional load. The construction cost for the project was \$200,000. Miro Grbic, PE served as the registered mechanical engineer for the project.		
5.	City of Avondale Information Technology Center Renovation	2013	2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm A large part of this project involved an initial assessment and feasibility study of existing facilities. After this, we were able to deliver a design which included new fire alarm devices, additional receptacles and new cooling to accommodate the renovations. The construction cost for the project was \$150,000. Miro Grbic, PE served as the registered mechanical and fire protection engineer for this project.		

**B. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**



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**ADSP015-00004729**

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

*Complete one Section A for each key person. See Instructions above.*

1. NAME Tom Fledderjohn	2. ROLE IN THIS CONTRACT Sr. Mechanical Engineer	3. YEARS EXPERIENCE	
		a. TOTAL 30 years	b. WITH CURRENT FIRM 4 years
4. LOCATION ( <i>City and State</i> ) 600 W. Hatcher, Suite 200, Phoenix, Arizona, 85021			
5. EDUCATION ( <i>DEGREE AND SPECIALIZATION</i> ) BSME – HVAC Systems		6. PROFESSIONAL TRAINING Energy Commissioning      HVAC Design Plumbing Design              Controls Design	
7. OTHER PROFESSIONAL QUALIFICATIONS ( <i>Organizations, Awards, etc.</i> ) Licensed Professional Mechanical Engineer – Arizona Licensed Professional Controls Engineer – Arizona			

**8. RELEVANT PROJECTS**

a.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Northern Arizona Cemetery, Flagstaff, Arizona	(2) YEAR COMPLETED 2014
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE This project consists of providing mechanical & plumbing, electrical and fire protection engineering design services for the State of Arizona, Northern Arizona Cemetery, located in Flagstaff, Arizona. Sun Engineering shall design a system that enables the buildings on the campus to be LEED Silver certified. The construction cost for project was \$6,500,000. Tom Fledderjohn, PE served as the Sr. Mechanical Engineer.	<input checked="" type="checkbox"/> Check if project performed with current firm
b.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Parker Aerospace CF6 Project, Glendale, Arizona	(2) YEAR COMPLETED 2014
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE Sun Engineering provided design drawings that showed the installation of new electrical equipment, new HVAC, and new plumbing systems. The construction cost of the project was \$50000. Tom Fledderjohn, PE served as the Sr. Mechanical Engineer.	<input checked="" type="checkbox"/> Check if project performed with current firm
c.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Capital Mall – 1300 W. Washington Elevator Modernization	(2) YEAR COMPLETED 2014
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE Sun Engineering modernize two (2) hydraulic located at 1300 W. Washington Street in Phoenix, Arizona. The modernization includes a modification to the existing HVAC in the machine room. A damper with controls had to be installed in the machine room so that the cooling could be controlled in the room per the elevator code. The construction cost was \$450,000. Tom Fledderjohn, PE served as the Sr. Mechanical Engineer.	<input checked="" type="checkbox"/> Check if project performed with current firm
d.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Arizona State Senate Building Cooling Coil Replacement	(2) YEAR COMPLETED 2014
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE Sun Engineering replaced the cooling coils with similar cooling coils of approximate overall physical dimensions. In addition, new hydronic balancing valves and linear scale temperature gauges were installed on the outlet of each cooling. Tom Fledderjohn, PE served as the Sr. Mechanical Engineer.	<input checked="" type="checkbox"/> Check if project performed with current firm
e.	(1) TITLE AND LOCATION ( <i>City and State</i> ) City of Avondale Computer Room Upgrade	(2) YEAR COMPLETED 2013
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE Sun Engineering provided design services for upgrade to the City of Avondale computer room. Sun Engineering delivered a modern efficient data storage room and created a more efficient office space for the Information Technology Department. Work was coordinated so that all Municipal data storage remained online. The construction cost estimate was \$150,000. Tom Fledderjohn, PE served as the Sr. Mechanical Engineer.	<input checked="" type="checkbox"/> Check if project performed with current firm



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**B. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*Complete one Section A for each key person. See Instructions above.*

1. NAME Jose Mattei, CEM	2. ROLE IN THIS CONTRACT Sr. Project Manager/Energy Manager	3. YEARS EXPERIENCE	
		a. TOTAL 28 years	b. WITH CURRENT FIRM 6 years
4. LOCATION ( <i>City and State</i> ) 600 W. Hatcher, Suite 200, Phoenix, Arizona, 85021			
5. EDUCATION ( <i>DEGREE AND SPECIALIZATION</i> ) BSEE – Energy Management		6. PROFESSIONAL TRAINING Lighting Design Energy Management	
7. OTHER PROFESSIONAL QUALIFICATIONS ( <i>Organizations, Awards, etc.</i> ) Licensed Energy Engineer – Arizona			

**8. RELEVANT PROJECTS**

a.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Replacement and Relocation of the Back-up Generator, Phoenix, Arizona	(2) YEAR COMPLETED 2014
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE Provided electrical drawings for the replacement and relocation of the back-up generator. The project size was small in size; however, the time period to design the new generator system was very short. The client needed the drawings to be completed and submitted to the state in two (2) days. Sun Engineering completed the drawings in the time frame and the drawings were approved by the State Engineer. The cost for the expedited design services was \$20,000.00. Jose Mattei, CEM served as the Energy Engineer for the project.	<input checked="" type="checkbox"/> Check if project performed with current firm
b.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Southern Arizona Cemetery, Marana, Arizona	(2) YEAR COMPLETED 2014
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE This project consists of providing mechanical & plumbing, electrical and fire protection engineering design services for the State of Arizona, Southern Arizona Cemetery, located in Marana, Arizona. Sun Engineering shall design a system that enables the buildings on the campus to be LEED Silver certified. The construction cost for project was \$7,000,000. Jose Mattei, CEM served as the Energy Engineer.	<input checked="" type="checkbox"/> Check if project performed with current firm
c.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Arizona Department of Revenue Tenant Improvement (TI), Phoenix, Arizona	(2) YEAR COMPLETED 2013
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE Designed new break rooms on the 3rd, 4th, 5th, 7th, and 8th floors were designed. The new break rooms included lights, light switches and wall receptacles in the design. The new circuits were added to the existing panels and the new load was calculated at the Service Entrance Section (SES). The construction cost for the project was \$200,000. Jose Mattei, CEM served as the Energy Engineer for the project.	<input checked="" type="checkbox"/> Check if project performed with current firm
d.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Canvass Corner Project, Phoenix, Arizona	(2) YEAR COMPLETED 2013
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE Sun Engineering provided engineering services for the award winning “Canvass Corner” project, located on the northeast corner of E. Roosevelt and 3rd Street, in Phoenix, AZ. The graffiti covered building had been vacant for years; .The design included new lights, power to new kitchen equipment and exterior lighting and power. The construction cost for the project was \$250,000. Jose Mattei, CEM served as the Energy Engineer for the project.	<input checked="" type="checkbox"/> Check if project performed with current firm
e.	(1) TITLE AND LOCATION ( <i>City and State</i> ) City of Avondale Information Technology Center Renovation	(2) YEAR COMPLETED 2013
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE Sun Engineering provided engineering services to the City of Avondale for design services for the renovation of the city’s information technology center. A large part of this project involved an initial assessment and feasibility study of existing facilities. After this, we were able to deliver a design which included new fire alarm devices, additional receptacles and new cooling to accommodate the renovations. The construction cost for the project was \$150,000. Jose Mattei, CEM served as the Principal Electrical Engineer for the project.	<input checked="" type="checkbox"/> Check if project performed with current firm



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**B. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*Complete one Section A for each key person. See Instructions above.*

1. NAME Jason Borum, PE	2. ROLE IN THIS CONTRACT Mechanical Engineer	3. YEARS EXPERIENCE	
		a. TOTAL 22 years	b. WITH CURRENT FIRM 5 years
4. LOCATION ( <i>City and State</i> ) 600 W. Hatcher, Suite 200, Phoenix, Arizona, 85021			
5. EDUCATION ( <i>DEGREE AND SPECIALIZATION</i> )		6. PROFESSIONAL TRAINING HVAC Design          Plumbing Design	
7. OTHER PROFESSIONAL QUALIFICATIONS ( <i>Organizations, Awards, etc.</i> ) Licensed Mechanical Engineer			

**8. RELEVANT PROJECTS**

a.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Northern Arizona Cemetery, Flagstaff, Arizona	(2) YEAR COMPLETED 2014
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE This project consists of providing mechanical & plumbing, electrical and fire protection engineering design services for the State of Arizona, Northern Arizona Cemetery, located in Flagstaff, Arizona. Sun Engineering shall design a system that enables the buildings on the campus to be LEED Silver certified. The construction cost for project was \$6,500,000. Jason Borum, PE served as the mechanical engineer.	<input checked="" type="checkbox"/> Check if project performed with current firm
b.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Southern Arizona Cemetery, Marana, Arizona	(2) YEAR COMPLETED 2014
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE This project consists of providing mechanical & plumbing, electrical and fire protection engineering design services for the State of Arizona, Southern Arizona Cemetery, located in Marana, Arizona. Sun Engineering shall design a system that enables the buildings on the campus to be LEED Silver certified. The construction cost for project was \$7,000,000. Jason Borum, PE served as the Mechanical Engineer.	<input checked="" type="checkbox"/> Check if project performed with current firm
c.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Capital Mall – 1300 W. Washington Elevator Modernization	(2) YEAR COMPLETED 2014
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE Sun Engineering modernize two (2) hydraulic located at 1300 W. Washington Street in Phoenix, Arizona. The modernization includes a modification to the existing HVAC in the machine room. A damper with controls had to be installed in the machine room so that the cooling could be controlled in the room per the elevator code. The construction cost was \$450,000. Jason Borum, PE served as the Mechanical Engineer.	<input checked="" type="checkbox"/> Check if project performed with current firm
d.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Arizona State Senate Building Cooling Coil Replacement	(2) YEAR COMPLETED 2014
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE Sun Engineering replaced the cooling coils with similar cooling coils of approximate overall physical dimensions. In addition, new hydronic balancing valves and linear scale temperature gauges were installed on the outlet of each cooling. Jason Borum, PE served as the Mechanical Engineer.	<input checked="" type="checkbox"/> Check if project performed with current firm
e.	(1) TITLE AND LOCATION ( <i>City and State</i> ) City of Avondale Computer Room Upgrade	(2) YEAR COMPLETED 2013
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE Sun Engineering provided design services for upgrade to the City of Avondale computer room. Sun Engineering delivered a modern efficient data storage room and created a more efficient office space for the Information Technology Department. Work was coordinated so that all Municipal data storage remained online. The construction cost estimate was \$150,000. Jason Borum, PE served as the Mechanical Engineer.	<input checked="" type="checkbox"/> Check if project performed with current firm



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**B. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*Complete one Section A for each key person. See Instructions above.*

1. NAME Denevia Thomas	2. ROLE IN THIS CONTRACT Administrative Support/Marketing	3. YEARS EXPERIENCE	
		a. TOTAL 3 years	b. WITH CURRENT FIRM 3 years
4. LOCATION ( <i>City and State</i> ) 600 W. Hatcher, Suite 200, Phoenix, Arizona, 85021			
5. EDUCATION ( <i>DEGREE AND SPECIALIZATION</i> ) BA – English		6. PROFESSIONAL TRAINING Successful Proposals Marketing Strategies	
7. OTHER PROFESSIONAL QUALIFICATIONS ( <i>Organizations, Awards, etc.</i> )			

**8. RELEVANT PROJECTS**

a.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Northern Arizona Cemetery, Flagstaff, Arizona	(2) YEAR COMPLETED 2014
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE This project consists of providing mechanical & plumbing, electrical and fire protection engineering design services for the State of Arizona, Northern Arizona Cemetery, located in Flagstaff, Arizona. Sun Engineering shall design a system that enables the buildings on the campus to be LEED Silver certified. The construction cost for project was \$6.5,000,000. Denevia Thomas served as Administrative Support.	<input checked="" type="checkbox"/> Check if project performed with current firm
b.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Southern Arizona Cemetery, Marana, Arizona	(2) YEAR COMPLETED 2014
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE This project consists of providing mechanical & plumbing, electrical and fire protection engineering design services for the State of Arizona, Southern Arizona Cemetery, located in Marana, Arizona. Sun Engineering shall design a system that enables the buildings on the campus to be LEED Silver certified. The construction cost for project was \$7,000,000. Denevia Thomas served as Administrative Support.	<input checked="" type="checkbox"/> Check if project performed with current firm
c.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Capital Mall – 1300 W. Washington Elevator Modernization	(2) YEAR COMPLETED 2014
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE Sun Engineering modernize two (2) hydraulic located at 1300 W. Washington Street in Phoenix, Arizona. The modernization include replacing pumps, controllers, disconnects and other components in the machine room. In the pit, additional lighting was added, new GFCI receptacles were installed as well. The construction cost was \$450,000. Denevia Thomas served as Administrative Support.	<input checked="" type="checkbox"/> Check if project performed with current firm
d.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Arizona State Senate Building Cooling Coil Replacement	(2) YEAR COMPLETED 2014
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE Sun Engineering replaced the cooling coils with similar cooling coils of approximate overall physical dimensions. In addition, new hydronic balancing valves and linear scale temperature gauges were installed on the outlet of each cooling. The construction cost for the project was \$50,000. Denevia Thomas served as Administrative Support.	<input checked="" type="checkbox"/> Check if project performed with current firm
e.	(1) TITLE AND LOCATION ( <i>City and State</i> ) Estrella Youth Sports Ball Fields, Goodyear, Arizona	(2) YEAR COMPLETED 2014
	(3) BRIEF DESCRIPTION ( <i>Brief scope, size, cost, etc.</i> ) AND SPECIFIC ROLE Sun Engineering provided design services for six (6) baseball fields, eight (8) soccer/football fields, two (2) outdoor volley ball courts, two (2) outdoor batting cages, eight (8) restrooms and clubhouse. The construction cost estimate was \$6,000,000 Denevia Thomas served as Administrative Support.	<input checked="" type="checkbox"/> Check if project performed with current firm



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Department of Administration  
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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.)

a. TITLE AND LOCATION (City and State) Northern Arizona Cemetery	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2014	CONSTRUCTION (If applicable) Ongoing

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER Arizona Department of Administration	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$7,000,000.00	e. TOTAL COST OF PROJECT \$7,000,000.00
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

MECHANICAL SYSTEM

The Northern Arizona Cemetery buildings mechanical systems will consist of two (2) independent systems for each building. The Administrative building will consist of one (1) 5 Ton split system heat pump with indoor unit located in mechanical room. The outdoor unit location is going to be determined in coordination with the architect. The split heat pump system is going to be used for both cooling & heating. The Maintenance building will consist of one (1) 2.5 Ton split system heat pump with indoor and outdoor units. The split heat pump system is going to be used for both cooling & heating. The Maintenance Building Service Bay area will consist of an evaporative cooling system (2 evap. coolers) located on the roof. To heat the area, wall mounted electric heaters are going to be used. Each of the HVAC systems mentioned above will be controlled by local controls in each of the buildings.

ELECTRICAL & LIGHTING SYSTEM

The electrical system utilized by the cemetery will be a 208/120 volt 3-phase, 4-wire, solidly grounded system. All feeders from APS between the Administration building, Maintenance building and the Committal shelter will be buried to conserve the peacefulness of the cemetery. APS will provide 208/120 volt power from its distribution system to an 800 amp Service Entrance Section (SES) located on the exterior wall adjacent to the Administration building electrical room. The 800 amp SES will distribute electrical power to the Administration building, Maintenance building, Committal Shelter and miscellaneous areas (irrigation controllers, card readers, etc.) at the cemetery. The electrical system will also be composed of a 208 volt to 480 volt step up transformer to support a well pump on the site. The 208/120 volt system will feed the step up transformer and the transformer will feed the pump with 480/277 volt in order that the pump will have enough power to push the water from the depth that it is located.

Each of the buildings (Administrative Building, Maintenance Building and Committal Shelter) at the cemetery shall utilize LED lighting in order to minimize the energy usage. The lights will be controlled in each building separately.

SECURITY SYSTEM

The Security System equipment will be located and monitored in the Administration Building. The Security System will include monitoring of the Maintenance building and maintenance yard via a hard link buried in the same trench with the power feeder from the Administration building. A telephone link will be incorporated within the Security System to notify a third party (whether it is the police or a security monitoring company) that the Security System has been activated and to send assistance. Doors to mechanical /electrical / maintenance areas will have security cameras monitoring them. Security cameras will also be located in strategic locations to monitor activities at all locations of the maintenance yard. The Administration building entrances & exits, interior spaces and parking lots, shall be monitored. The Maintenance building will have the same type coverage but will include the service bays and lot area.

COMMUNICATION

Century Link will connect to the nearest pedestal at Camp Navaho and establish a pedestal at the cemetery location to bring in telephone and internet (communication & data). Telephone and internet will be available for the Administration building and the Maintenance building.



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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> Southern Arizona Cemetery	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2014	CONSTRUCTION <i>(If applicable)</i> Ongoing

**23. PROJECT OWNER'S INFORMATION**

c. PROJECT OWNER Arizona Department of Administration	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$7,000,000.00	e. TOTAL COST OF PROJECT \$7,000,000.00
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g. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

**MECHANICAL SYSTEM**

Administrative building consists of one (1) Carrier, 5 Ton split system heat pump. AHU (indoor unit) is located in mechanical room. Condensing (outdoor) unit is placed on minimum 6” concrete pad and located in coordination with an architect as shown on updated floor plan. HVAC ductwork system covers entire building and is going to be used for both: cooling and heating regimes. The ductwork system consists of supply plenum routed through ceiling space and partially underground (in waiting room) as shown on mechanical plan. Furthermore, the system consists of return ducted plenums, supply and return grilles. HVAC system is going to be thermostat controlled. Three exhaust fans, for each restroom respectively shall be used.

Maintenance building (office areas) consists of one (1) 3 Ton split system heat pump. AHU (indoor unit) is located in mechanical room. Condensing (outdoor) unit is placed on minimum 6” concrete pad and located in coordination with an architect as shown on updated floor plan. HVAC ductwork system covers office part of the building and is going to be used for both: cooling and heating regimes. The ductwork system consists of supply and return plenums routed through ceiling space as shown on mechanical plan. HVAC system is going to be thermostat controlled. Three exhaust fans, for each restroom and locker room respectively shall be used. Furthermore, the flammable storage room has been air exhausted with one exhaust fan.

**ELECTRICAL & LIGHTING SYSTEM**

The electrical system utilized by the cemetery will be a 208/120 volt 3-phase, 4-wire, solidly grounded system. The local utility shall provide distribution power (13.8KV) from its system to a step-down transformer which will be located at a strategic location on the site. This step-down transformer will transform the 13.8KV voltage to a more usable 208/120 voltage 600 amp SES. The Administration Building Electrical Room will contain a 208/120 volt, 200 Amp, 42 circuit, 3-Phase, 4-wire panelboard with a main circuit breaker. This panelboard will fed all the electrical loads in the Administration Building such as the HVAC, receptacle loads, security/fire alarm systems, appliances, offices, etc. The Maintenance building will receive power from the 600 amp SES. This feeder will terminate in a 208/120 volt, 400amp, 42 circuit, 3-Phase, 4-Wire panelboard with a main circuit breaker. This electrical equipment is to be located in the Maintenance building electrical room. This panelboard will fed all the electrical loads in the Maintenance building as well as the electrical loads in the service bay area. The Maintenance building 208/120 volt panelboard also feeds the Committal Shelter. The Committal Shelter is fed with 208/120 volt power which terminates in a 208/120 volt, 100 amp, 24 circuits, 3-Phase, 4-Wire panelboard. This 208/120 Volt panelboard will feed all 208 and 120 volt loads such as receptacle loads, Public Address System (PA), security/fire alarm systems, etc.

**SECURITY SYSTEM**

The Security System equipment will be located and monitored in the Administration Building. The Security System will include monitoring of the Maintenance building and maintenance yard via a hard link buried in the same trench with the power feeder from the Administration building. A telephone link will be incorporated within the Security System to notify a third party (whether it is the police or a security monitoring company) that the Security System has been activated and to send assistance. Doors to mechanical /electrical / maintenance areas will have security cameras monitoring them. Security cameras will also be located in strategic locations to monitor activities at all locations of the maintenance yard. The Administration building entrances & exits, interior spaces and parking lots, shall be monitored. The Maintenance building will have the same type coverage but will include the service bays and lot area.

**COMMUNICATION**

Century Link will connect to the nearest pedestal at Camp Navaho and establish a pedestal at the cemetery location to bring in telephone and internet (communication & data). Telephone and internet will be available for the Administration building and the Maintenance building



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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 (City and State)	b. YEAR COMPLETED	
Arizona State Senate Building Cooling Coil Replacement	PROFESSIONAL SERVICES 2014	CONSTRUCTION (If applicable) 2014

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Arizona Department of Administration	\$50,000.00	\$50,000.00

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

**MECHANICAL SYSTEM**

Based on the field visit/site assessment, it was determined that the cooling coils are original to the air handler unit and were installed in year 1958. There are eight (8) cooling coils installed in the air handler unit (AHU) in three (3) tiers of two (2) cooling coils across. The approximate total air flow across all eight (8) cooling coils is 40,000 cfm in accordance with original design documents.

There is a section of the cooling coil that has failed and is leaking. It appears that a fix to stop the leaking was attempted by partially closing off the leak with the application of an exterior elastomeric patch with a draw tight screw clamp.

Based on the field visit/site assessment, Sun Engineering recommend the replacement of all eight (8) cooling coils with similar cooling coils of approximate overall physical dimensions. The new cooling coils will be similar to the existing cooling coils with copper tubes and stainless steel support frames for ease of replacement. In addition, new hydronic balancing valves and linear scale temperature gauges shall be installed on the outlet of each cooling coil and the outlet nozzles shall be connected to the existing 4 inch diameter chilled water supply and return manifold risers with 1 1/2 inch stainless steel braided flexible connectors. Sun Engineering also recommends that the two (2) rusted spots on the ceiling of the supply air fan plenum be patched and repaired. Also, a new stainless steel condensate drain pan with a block-out pocket for conduit is needed for supply air fan.



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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 (City and State)	b. YEAR COMPLETED	
Arizona Department of Juvenile Corrections: Replacement Back-up Generator	PROFESSIONAL SERVICES 2013	CONSTRUCTION (If applicable) 2014

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Arizona Department of Administration	\$150,000.00	\$150,000.00

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

**ELECTRICAL SYSTEM**

Sun Engineering, provided engineering services for the design of a new ATS, and a new panel for the generator block heater & battery charger along with modifications to the existing panel. The design shall include drawings and specifications for the new automatic transfer switch (ATS) and panel. Sun Engineering also provided services for the bidding and construction administration. The following work tasks were as follow:

Sun Engineering provided a preliminary set of drawings (schematic design) for the owner to review and provide comments. The drawings for this phase were comprised of a site plan, power and a preliminary technical specification.

Also, Sun Engineering prepared the necessary construction drawings (CDs) for submission to the State Engineer. The CD set included the finalized site plan, power plans with one-line diagram and calculations, panel schedules and other pertinent design data. The drawings were stamped by a licensed electrical engineer from Arizona.

Sun Engineering attended the pre-bid meeting and addressed all of the technical questions asked.

Once a contractor was selected, Sun Engineering attended the pre-construction meeting with the selected contractor. During the construction, Sun Engineering reviewed submittals, responded to rfi's, perform site inspections submitted completion (substantial & final) documents.



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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.)

a. TITLE AND LOCATION (City and State)	b. YEAR COMPLETED	
1300 W. Washington Elevator Modernization	PROFESSIONAL SERVICES 2013	CONSTRUCTION (If applicable) 2013

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Arizona Department of Administration	\$7,000,000.00	\$7,000,000.00

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

**ELECTRICAL SYSTEM**

Based on the condition of the elevators, their overall performance and wear on the elevator components, we would recommend a modernization that would include the following:

The installation of two (2) new hydraulic elevators which included replacing the existing hydraulic pump units, controllers, mainline disconnects and other components in the machine room. In the hoistway, the door operator, landing system, door clutch and other components were replaced. In the pit, the ladder was replaced, additional lighting was added, new GFCI receptacles were installed and other items were addressed as well.

Sun Engineering also provided engineering services which included a complete set of construction drawings (CDs). The CDs set included the floor plan, interior elevations, finish information, door information, lighting & power plans, mechanical & plumbing plans, fire protection plans, one-line diagram with calculations and panel schedules and other pertinent design data.

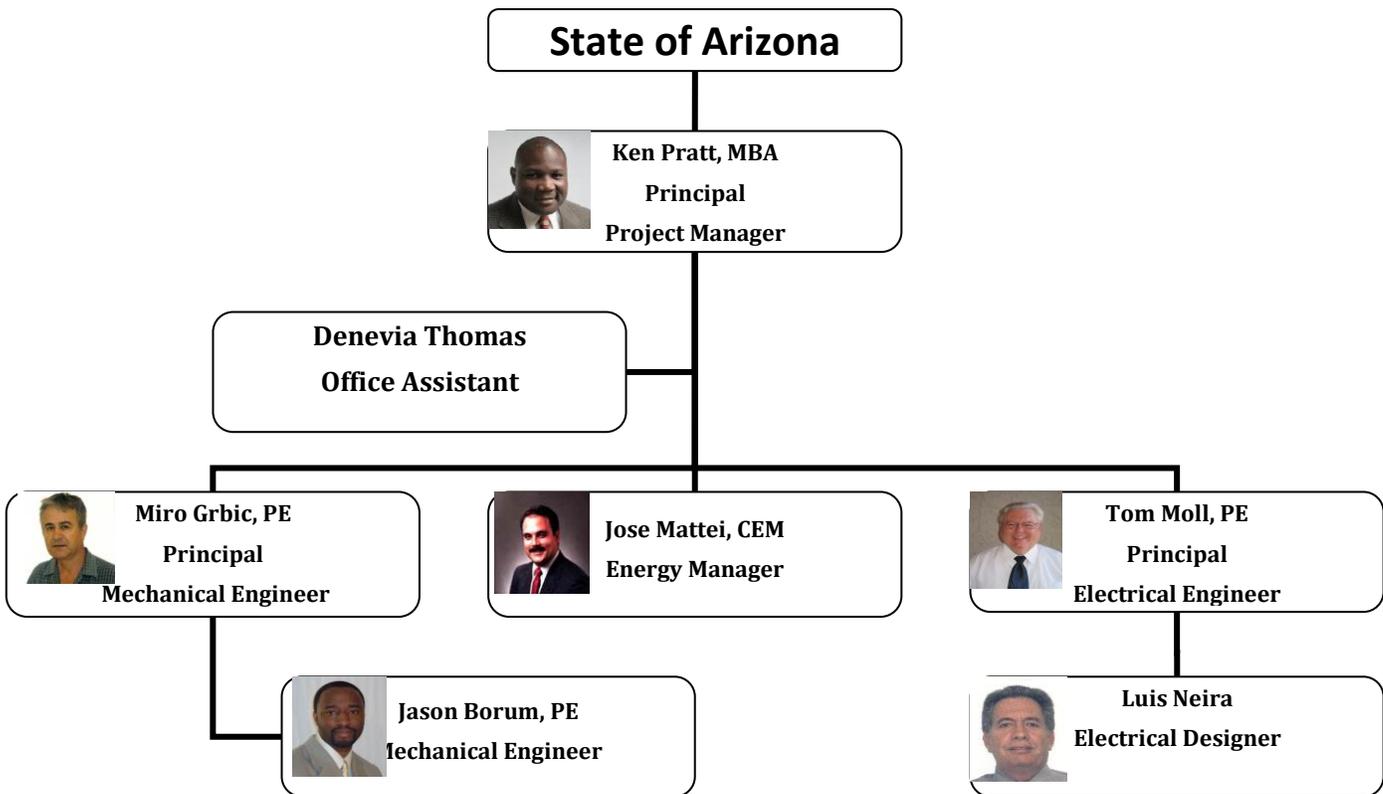
Upon completion of the approved CDs, Sun Engineering attended the pre-bid meeting to address questions. We also assisted the owner once a contractor was selected for the project. We attended the pre-construction meeting with the selected contractor to discuss the project and addressed questions before the construction started. During the construction, Sun Engineering reviewed submittals, respond to rfi's, perform site inspections, prepare inspection reports & punch list and submitted completion (substantial & final) documents



6. ADDITIONAL INFORMATION

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

Organization Chart





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## **Project Approach**

At Sun Engineering, our approach is the same for every project. We work closely with the client from kick-off through construction to prioritize and meet their needs. Our development process focuses on providing value at every stage:

### **Project Initiation Phase**

1. The design project team (electrical, mechanical & plumbing) is assembled.
2. The team meets with the client to discuss and clarify the project's scope, budget and schedule.
3. The team establishes project reporting procedures and decision-making processes.
4. The team reviews plans such as previous renovations, mechanical and electrical system and client standards and guidelines.
5. The team then creates a detailed work plan.

### **Design Development Phase**

1. Design development floor plans and system schematics to identify equipment locations, utility distribution routing, systems zoning and project phasing are prepared.
2. The first draft of technical specifications for systems materials and installation requirements are prepared.
3. Design development estimates of probable construction costs are developed.
4. Previous needs assessments are reviewed, schematic phase needs are confirmed and client design concerns are addressed.
5. The team participates in the design development review meeting to review value engineering options, assess systems design, finalize implementation and packaging of contract documents, and refine the project schedule. Design development plans and technical specifications are prepared for review and approval by the client.

### **Contract Documents Phase**

1. Contract documents are prepared for competitive bidding based on approved design development documents.
2. If necessary, separate bid packages are prepared according to accommodate project scheduling.
3. Estimates of probable construction costs are prepared based on refinement of project scope and adjustment to contingencies.

### **Bidding Phase**

1. Team members attend pre-bid conferences and walk-throughs with contractors/suppliers.
2. Addenda required for clarifications to the bidding documents are submitted.
3. The team reviews bids and makes recommendations to the client regarding award of contracts.

### **Construction Phase**

1. The team reviews shop drawing submittals, schedule of values and the contractor's installation schedule.
2. Project managers attend scheduled project meetings and prepare meeting minutes.
3. Team members conduct periodic pre-approved site visits to review work progress and progress payment applications, and verify installation conformance to contract documents.
4. On-site systems start-up training sessions are scheduled with contractors, suppliers and owner representatives.
5. The team conducts final site observation inspection and completion of documentation.



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**Systems Commissioning Phase**

1. M/E recommends that we be retained to provide commissioning for your mechanical and electrical building systems in order to confirm that these systems are installed and performing to the standards for which they were designed.
2. The commissioning process involves ongoing interaction with the client and the installing contractors during the construction phase of a project. The process involves installation verification, operational performance testing, functional performance testing, owner training and preparation of a final commissioning report, i.e., documentation compiled during the commissioning process.

**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:	70
b. Percentage of Total Work Attributable to Non-Government Work:	30

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

Signature: \_\_\_\_\_ Date: 12/15/2014

Name: Kenneth Pratt Title: Principal