



Burns & McDonnell Engineering Company, Inc. Qualifications Package in Response to

*RFQ# ADSPO14-00003465 –
Annual Request for Qualifications and Experience*

REVISED – Attachment I – General Qualifications

Due Date: December 12, 2013

December 10, 2013



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

1. REVISED ADSPO13-00003465: Annual Request for Qualifications

1. SOLICITATION NUMBER: Annual Request for Qualifications

2a.	FIRM NAME:	Burns & McDonnell Engineering Company, Inc.
2b.	FIRM STREET:	9400 Ward Parkway
2c.	FIRM CITY:	Kansas City
2d.	FIRM STATE:	Missouri
2e.	FIRM ZIP CODE:	64114

3.	YEAR ESTABLISHED:	1898
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2a.	BRANCH OFFICE NAME:	Burns & McDonnell Engineering Company, Inc.
2b.	BRANCH OFFICE STREET:	2600 N. Central Avenue, Suite 1500
2c.	BRANCH OFFICE CITY:	Phoenix
2d.	BRANCH OFFICE STATE:	Arizona
2e.	BRANCH OFFICE ZIP CODE:	85004

3.	YEAR ESTABLISHED (for Branch Location):	1998
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4a.	OWNERSHIP - TYPE:	S-Corporation
4b.	OWNERSHIP - SMALL BUSINESS STATUS:	N/A

5a.	POINT OF CONTACT NAME AND TITLE:	Ms. Tanya Martella
5b.	POINT OF CONTACT TELEPHONE NUMBER:	480-337-6502 (office) 602-717-7748 (cell)
5c.	POINT OF CONTACT E-MAIL ADDRESS:	tmartella@burnsmcd.com

6.	NAME OF FIRM (If block 2a is a branch office):	
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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	Activity Centers	4
10	Air Pollution Control	5
15	Airports; Nav aids; Airport Lighting; Aircraft Fueling	7
12	Airports; Terminals and Hangars; Freight Handling	9
2	Animal Facilities	4
9	Anti-Terrorism / Force Protection	8
4	Automation; Controls; Instrumentation	4
2	Barracks; Dormitories	1
8	Bridge Design	7
4	Cartography	4
4	Chemical Processing & Storage	7
3	Child Care / Development Facilities	4
8	Codes; Standards; Ordinances	5
2	Cold Storage; Refrigeration and Fast Freeze	3
3	Commercial Building (low rise) Shopping Centers	4
1	Community Facilities	4
6	Communications Systems; TV; Microwave	5
4	Computer Facilities	5
10	Conservation and Resource Management	5
4	Construction Management	9
3	Controls and Electronics Engineer	5
20	Cost Estimating; Cost Engineering and Analysis	7
2	Desalinization (Process & Facilities)	5
1	Design & Planning Structured Parking Facilities	3
20	Design-Build Preparation of Request for Proposals	6
2	Detention Security Systems	4
2	Dining Halls; Clubs; Restaurants	4



2	Disability / Special Needs	3
6	Ecological & Archaeological Investigations	5
3	Educational Facilities; Classrooms	5
8	Electrical Studies & Design	5
0	Elevators; Escalators; People-Movers	0
4	Energy / Water Auditing Savings	3
10	Energy Conservation; New energy Sources	7
10	Environmental Impact Studies; Assessments	6
4	Fallout Shelters; Blast-Resistant Design	5
10	Fire Protection	5
2	Garages; Vehicles Maintenance Facilities; Parking	6
10	Heating; Ventilating; Air Conditioning	5
8	Highways; Streets; Airfield Paving; Parking Lots	7
2	Hospitals & Medical Facilities	6
0	Housing (Residential, Multi-Family; Apartments)	0
4	Industrial Buildings; Manufacturing Plants	7
4	Industrial Processes; Quality Control	7
3	Industrial Waste Treatment	5
8	Infrastructure	6
1	Judicial & Courtroom Facilities	5
2	Laboratories; Medical Research Facilities	6
1	Labs - General	5
1	Labs – Research – Dry	5
0	Labs Research – Wet	6
10	Landscape Architecture	6
50	LEED Accredited A/E	10
1	Libraries; Museums; Galleries	4
10	Lighting (Exteriors; Streets; Memorials; Athletic)	4
5	Lighting (Interior; Display; Theater, etc.)	3
0	Materials Handling Systems; Conveyors; Sorters	0



4	Measurement / Verification / Conservation Water	4
1	Medical Related	3
1	Mining & Mineralogy	3
1	Modular Systems Design; Pre-Fabricated Structures	3
2	Nuclear Facilities; Nuclear Shielding	5
1	Office Buildings; Industrial Parks	4
20	Petroleum and Fuel (Storage & Distribution)	8
2	Pipelines (Cross-Country Liquid & Gas)	7
10	Plumbing & Piping Design	5
30	Power Generation, Transmission, Distribution	10
2	Public Safety Facilities	6
4	Refrigeration Plants / Systems	6
6	Rehabilitation (Buildings; Structures; Facilities)	6
2	Research Facilities	6
0	Resources Recovery; Recycling	0
4	Seismic Designs & Studies	5
6	Sewage Collection, Treatment and Disposal	7
6	Solar Energy Utilization	7
2	Special Environments; Clean Rooms, Etc.	5
20	Specifications Writing	5
5	Storm Water Handling & Facilities	6
5	Structural Design; Special Structures	6
50	Sustainable Design	10
15	Transportation	7
4	Utilities (Gas and Steam)	6
20	Value Analysis; Life-Cycle Costing	7
2	Warehouses & Depots	5
10	Waste Water Treatment Facility	7
5	Water Resources; Hydrology; Ground Water	6
4	Water Supply, treatment & Distribution	7



2	Water Well Rehabilitation; Water Well Work	4
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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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**RFQ# ADSP014-00003465, Annual Request for Qualifications and Experience
REVISED - Attachment I – General Qualifications**

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

a. NAME Justin Isner	b. ROLE IN THIS CONTRACT Civil Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 13	2. WITH CURRENT FIRM 3
d. FIRM NAME AND LOCATION (City and State) Burns & McDonnell Engineering Company, Inc. Phoenix, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) <ul style="list-style-type: none"> Bachelor of Science, Civil Engineering – West Virginia University, 2000 		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) <ul style="list-style-type: none"> Professional Engineer – Arizona (Civil) #45637 Construction Quality Control Manager, NAVFAC/COE 	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Society of American Military Engineers (Young Member), Phoenix Post			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State) Papago Park Readiness Center – Arizona ARNG Phoenix, Arizona	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) Ongoing
1)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Isner is currently the Civil Engineer on a 66,200 SF Readiness Center Design-Build project for the Arizona Army National Guard located in Phoenix, AZ. The facility will provide the necessary administrative, supply, classroom, locker, showers and rest rooms, vehicle maintenance bays, training, assembly hall, family support offices, recruiting office, and kitchen/dining areas required to train and support assigned personnel, as well as providing for family members and the public in shared spaces. Mr. Isner was responsible for the full civil site design as well as working with the contractor to obtain required permits for construction activities.		
	(1) TITLE AND LOCATION (City and State) Florence Readiness Center – Florence Military Reservation Florence, Arizona	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) 2012
2)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Isner was responsible for providing preliminary drainage studies, traffic impact studies, grading and drainage plans, water, sewer, paving and SWPPP plans, concept landscape plans, signing and striping, drainage reports, preparation of 404 Permit Application, and coordination with and meetings with City staff, local school district staff, Street Light Improvement District staff, fire department, city water & sewer departments, and engineering. The housing development is sited on 11 acres and will eventually contain 85-100 single-family homes with an average size of 2,200 SF in two stories.		
	(1) TITLE AND LOCATION (City and State) Academic Training Center – Luke Air Force Base Glendale, Arizona	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) Ongoing
3)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Isner was responsible for design quality review on the civil engineering design during the development of construction documents. Mr. Isner was also responsible for construction administration services for the United States Army Corps of Engineers during the construction of the facility. He is responsible for attending monthly construction meetings, coordination on requests for information and doing inspections of construction work.		
	(1) TITLE AND LOCATION (City and State) Squadron Operations Facility – Luke Air Force Base Glendale, Arizona	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) Ongoing
4)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Isner was responsible for design quality review on the civil engineering design during the development of construction documents. Mr. Isner was also responsible for construction administration services for the United States Army Corps of Engineers during the construction of the facility. He is responsible for attending monthly construction meetings, coordination on requests for information and doing inspections of construction work.		



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	(1) TITLE AND LOCATION <i>(City and State)</i> Mesquite Solar West Maricopa County, Arizona	(2) Year Completed	
		Professional Services 2013	Construction <i>(if applicable)</i> Ongoing
5)	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Isner provided assistance to the design team to revise a Special Use Permit (SUP) to include the western phase of the construction of the solar power plant located in western Maricopa County. The plans were updated to reflect the electrical and civil infrastructure to support the western phase of the Mesquite Solar Power Plant. Mr. Isner was responsible for roadway layout, pavement design and grading for storm drainage controls on the project site.		



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

a. NAME Scott Mitchell	b. ROLE IN THIS CONTRACT Architect	c. YEARS EXPERIENCE	
		1. TOTAL 16	2. WITH CURRENT FIRM 2
d. FIRM NAME AND LOCATION (City and State) Burns & McDonnell Engineering Company, Inc. Phoenix, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) <ul style="list-style-type: none"> B.A.S., Computer Aided Design – University of Advancing Technology, 1997 		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) <ul style="list-style-type: none"> Registered Architect – Arizona Registered Architect – California LEED Green Associate 	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) N/A			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION (City and State) Papago Park Readiness Center – Arizona ARNG Phoenix, Arizona	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) On-going
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Mitchell served as Project Architect for the new Design/Build 61,734 SF Readiness Center, in support of the Arizona Army National Guard. He was responsible for design, production, and quality assurance of architectural construction drawings and specifications. Facility features include private and open office administrative spaces; a Sensitive Compartmented Information Facility (SCIF) with raised access flooring; assembly area; simulator training space; classrooms; individual and group equipment storage; secure arms vault; and restroom/locker room support spaces. The facility is designed to meet the USGBC LEED® Silver certification requirements.		
2)	(1) TITLE AND LOCATION (City and State) Florence Readiness Center – Florence Military Reservation Florence, Arizona	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) 2012
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Mitchell served as Quality Assurance Architect for the A/E services and construction administration for this new Design/Build 76,710 SF Readiness Center, in support of the Arizona Army National Guard. He was responsible for quality assurance reviews of architectural construction drawings and specifications. He provided construction administration services, including shop drawing review, site inspections, and final punch approval. Facility features include open office and private administrative spaces; assembly areas; training and education spaces; individual and group equipment storage; two storage vaults; and vehicle maintenance shop. The project is currently under review by USGBC to meet LEED® Gold certification requirements.		
3)	(1) TITLE AND LOCATION (City and State) Northrop Grumman Plant 42 Palmdale, California	(2) Year Completed	
		Professional Services 2013	Construction (if applicable) Ongoing
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Mitchell served as Project Architect for the design and construction administration services for a new 80,000 SF office structure within existing hangar B-401 at the Northrop Grumman Corporation (NGC) Palmdale, California site. The new structure will consist of two office floors located adjacent to an existing office area within the hangar. Each floor consists of a number of enclosed office spaces, conference rooms, open-office areas for modular workstations, break areas, huddle rooms, and restrooms. Interior spaces are defined by strategic use of various colors, materials, and textures such as wood slat paneling, butt-glazed storefront, and a combination of exposed and suspended acoustical tile ceilings to place emphasis on work groups or special areas.		
4)	(1) TITLE AND LOCATION (City and State) Storm Restoration and Upgrades Wichita, KS	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) Ongoing



<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm</p> <p>Mr. Mitchell was the Architect for a project involving aerospace manufacturing facility restoration and upgrades following a tornado event in Wichita, Kansas. The client's manufacturing and administration facilities, consisting of more than 2 million square feet in over 180 buildings, sustained varying levels of damage, requiring anything from minor repairs to complete demolition and re-construction. Mr. Mitchell relocated to the project site for 3 months to assist in the design-build restoration efforts, providing construction documentation and construction administration of renovation and repair operations. Many of the buildings in the complex were of World War II-era construction, requiring significant structural and code-compliance upgrades. Facilities involved included industrial manufacturing space; private and open office areas; clean rooms; warehousing spaces; a document library; and a dining facility.</p>					
<p>(1) TITLE AND LOCATION <i>(City and State)</i></p> <p>Security Forces Facility Addition <i>Moffett Federal Airfield, Mountain View, CA</i></p>	<p align="center">(2) Year Completed</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Professional Services</td> <td style="width:50%; text-align: center;">Construction <i>(if applicable)</i></td> </tr> <tr> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">TBD</td> </tr> </table>	Professional Services	Construction <i>(if applicable)</i>	Ongoing	TBD
Professional Services	Construction <i>(if applicable)</i>				
Ongoing	TBD				
<p>5) (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm</p> <p>Mr. Mitchell currently serves as Project Architect for an addition and renovations to the existing Building 653 at Moffett Federal Airfield, in support of the California Air National Guard. Administrative spaces and functions will be consolidated from their current disbursement among 3 different facilities at the project site, into the newly renovated Security Forces Facility. The additional facility square footage will house the Security Forces Squadron's (SFS) Combat Arms Training Simulator and Combat Arms Training Maintenance operations. Interior renovations include selective demolition; construction of new walls and doors; replacement of plumbing fixtures; upgrades to mechanical systems; and freshening of finishes throughout. Construction is anticipated to commence in 2014.</p>					



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

a. NAME Peter Johnston	b. ROLE IN THIS CONTRACT Project Manager, Solar	c. YEARS EXPERIENCE	
		1. TOTAL 38	2. WITH CURRENT FIRM 5
d. FIRM NAME AND LOCATION <i>(City and State)</i> Burns & McDonnell Engineering Company, Inc. Phoenix, Arizona			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> <ul style="list-style-type: none"> • PhD in Plasma Physics – University of Sheffield, England • M. Engineering Plasma Physics – University of Sheffield, England • B.S. Honors in Telecommunications & Physical Electronics – University of Leeds, England 		f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> <ul style="list-style-type: none"> • UK Institution of Engineering and Technology – Member • State Energy Advisory Board – Special Government Employee • International Solar Energy Society – Member • Arizona Solar Energy Center – Advisor • Solar Electric Power Association – Board Member • Common Ground Alliance – Member R&D committee 	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i> <ul style="list-style-type: none"> • Protective Devices for (N)EMP. Paper presented to the IEE, 1982 • British Patent 8207272 Triggered Vacuum Gap Device, 1982 • EEV Publication, 1981 • A Triggered Cold Cathode High Repetition Switch for Laser Firing, 1981 • A High Voltage Power Supply for Channel Electron Multipliers, 1973 			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION <i>(City and State)</i> 392 MWAC Ivanpah Solar Thermal Power Plant Ivanpah, California	(2) Year Completed	
		Professional Services 2013	Construction (if applicable) 2013
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.) AND SPECIFIC ROLE</i> <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Johnston served as Project Manager. Burns & McDonnell is serving as Owner's Engineer for the client providing engineering assistance and oversight at both field and office levels for this concentrating, triple solar power tower project.		
2)	(1) TITLE AND LOCATION <i>(City and State)</i> FAA VALE Grant Solar Feasibility Study, Sky Harbor International Airport Phoenix, Arizona	(2) Year Completed	
		Professional Services 2013	Construction (if applicable) N/A
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.) AND SPECIFIC ROLE</i> <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Johnston led the effort for Burns & McDonnell when retained by the City of Phoenix (COP) to perform a solar system feasibility study in support of an application to the FAA for a VALE grant. The study included the identification of a suitable project site, a conceptual design and layout and the development of materials to support a VALE grant application. Services Provided: Technology Analysis, Conceptual Design, Output Analysis, Interconnection Review, and FAA VALE grant application support.		
3)	(1) TITLE AND LOCATION <i>(City and State)</i> Herbert Farm 5.5MWac Solar PV Project, South Maryland Electric Cooperative (SMECO) and National Renewable Cooperative Organization (NRCO) Hughesville, Maryland	(2) Year Completed	
		Professional Services 2013	Construction (if applicable) 2013
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.) AND SPECIFIC ROLE</i> <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Johnson was the Project Manager while Burns & McDonnell served as Owner's Engineer during the development and construction of the Herbert Farm 5.5MWac Solar PV Project.		
4)	(1) TITLE AND LOCATION <i>(City and State)</i> 600 kW Rooftop Solar System, Green Hub Advisors for USAA Phoenix, Arizona	(2) Year Completed	
		Professional Services 2013	Construction (if applicable) 2013



	<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE</p> <p>Mr. Johnson was the Project Manager while Burns & McDonnell served as Owner's Engineer during the development and construction of 600kW rooftop solar system.</p>	<p><input checked="" type="checkbox"/> Check if project performed with current firm</p>		
	<p>(1) TITLE AND LOCATION <i>(City and State)</i></p> <p>Gila Bend 32MW Solar Power Plant, Arizona Public Service Gila Bend, Arizona</p>	<p>(2) Year Completed</p> <table border="1"> <tr> <td data-bbox="967 331 1252 401">Professional Services 2013</td> <td data-bbox="1252 331 1557 401">Construction <i>(if applicable)</i> Ongoing</td> </tr> </table>	Professional Services 2013	Construction <i>(if applicable)</i> Ongoing
Professional Services 2013	Construction <i>(if applicable)</i> Ongoing			
5)	<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE</p> <p>Mr. Johnson is the Project Manager while Burns & McDonnell served as Owner's Engineer during the development and construction of the Gila Bend 32MW Solar Power Plant.</p>	<p><input checked="" type="checkbox"/> Check if project performed with current firm</p>		



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

a. NAME Keith Koprowski	b. ROLE IN THIS CONTRACT Project Manager	c. YEARS EXPERIENCE	
		1. TOTAL 13	2. WITH CURRENT FIRM 2
d. FIRM NAME AND LOCATION (City and State) Burns & McDonnell Engineering Company, Inc. Phoenix, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) • B.S.E. Civil Engineering, Arizona State University		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) • Professional Engineer – Arizona (Civil)	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) N/A			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) Year Completed	
		Professional Services	Construction (if applicable)
1)	Papago Park Readiness Center – Arizona ARNG Phoenix, Arizona	2012	Ongoing
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Koprowski was the Project Manager for the new Design/Build 61,734 SF Readiness Center, in support of the Arizona Army National Guard. He was responsible for space planning, design, production, and quality assurance of architectural construction drawings and specifications. Facility features include private and open office administrative spaces; a Sensitive Compartmented Information Facility (SCIF) with raised access flooring; assembly area; classrooms; simulator training space; individual and group equipment storage; secure arms vault; and restroom/locker room support spaces. The facility is designed to meet the USGBC LEED® Silver certification requirements.		
2)	Florence Readiness Center – Florence Military Reservation Florence, Arizona	2012	2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Koprowski was the Project Manager for the A/E services and construction administration for this new Design/Build 76,710 SF Readiness Center, in support of the Arizona Army National Guard. He was responsible for direction and supervision of professional, technical, and administrative staff during the design of the new facilities as well as served as the main point of contact between the Design/Build Contractor, the State of Arizona Department of Emergency and Military Affairs, and the National Guard Bureau. Facility features includes open office and private administrative spaces; assembly areas; training and education spaces; individual and group equipment storage; two storage vaults; and vehicle maintenance shop. Building systems are designed to include life-cycle-cost effective energy conservation mechanical and electrical equipment; pre-wired work stations; and an emergency back-up power generator. The project is currently under review by USGBC to meet LEED® Gold certification requirements.		
3)	Yuma MCAS MILCON P447A, Aircraft Maintenance Hangar Modifications Yuma, Arizona	2012	2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Burns & McDonnell was selected to provide A/E design services for a facility modification to an existing legacy aircraft hangar. Total project consisted of 52,500 sq. ft. of modifications and additions to accommodate the facility requirements of the new Joint Strike Fighter (JSF) aircraft. The facility will provide hangar bay, maintenance shops, and administrative and operations offices for the new JSF Mission at MCAS Yuma. The facility shall implement and meet LEED 2.2 criteria credits to obtain LEED Silver certification with options to meet LEED Gold. Mr. Koprowski served as Design Project Manager responsible for overall design production and client coordination.		
4)	Squadron Operations Facility Glendale, Arizona	2012	Ongoing
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm		



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	<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE</p> <p>Mr. Koprowski provided design oversight for a new 22,000 SF modern and functional facility which will house the first of the five squadrons slotted for Luke. For security requirements, the facility is to have limited secure access and thus, nearly half of the facility is a SAPF space. It contains a secure pilot briefing area with individual flight briefing rooms and a larger briefing room along with Mission Planning, Weapons/Tactical Training, Intel/Weaponing, and TAC Plans.</p>	<p><input checked="" type="checkbox"/> Check if project performed with current firm</p>		
	<p>(1) TITLE AND LOCATION <i>(City and State)</i></p> <p>Addition and Alteration (ADAL) Aircraft Maintenance Unit (AMU) Glendale, Arizona</p>	<p>(2) Year Completed</p> <table border="1"> <tr> <td data-bbox="966 394 1252 457">Professional Services 2012</td> <td data-bbox="1252 394 1557 457">Construction <i>(if applicable)</i> Ongoing</td> </tr> </table>	Professional Services 2012	Construction <i>(if applicable)</i> Ongoing
Professional Services 2012	Construction <i>(if applicable)</i> Ongoing			
5)	<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE</p> <p>Mr. Koprowski provided design oversight for the renovation of the existing Building 460 AMU facility which will provide approximately 15,600 square-feet (9,600 square-foot existing facility 460 will be renovated and two additions equaling approximately 6,000 square-feet will be constructed on the north and south ends of the existing building) for the first F-35 squadron at Luke.</p>	<p><input checked="" type="checkbox"/> Check if project performed with current firm</p>		



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

a. NAME Ken Ekström	b. ROLE IN THIS CONTRACT Project Manager / Mechanical Engineer, Solar	c. YEARS EXPERIENCE	
		1. TOTAL 30	2. WITH CURRENT FIRM 3
d. FIRM NAME AND LOCATION (City and State) Burns & McDonnell Engineering Company, Inc. Phoenix, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION)		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)	
<ul style="list-style-type: none"> Bachelor of Science in Engineering and Applied Science – California Institute of Technology, 1978 		<ul style="list-style-type: none"> Professional Engineer – Arizona (Mechanical) Professional Engineer – Arizona (Electrical) 	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)			
<ul style="list-style-type: none"> NABCEP Certified Solar PV InstallerTM 			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION (City and State) 392 MWAC Ivanpah Solar Thermal Power Plant Ivanpah, California	(2) Year Completed	
		Professional Services 2013	Construction (if applicable) 2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Ekström has assisted with reviews for relocating a gas pipeline as well as with reviews of field reports and contractor responses regarding mirror alignment issues. Burns & McDonnell is serving as Owner's Engineer for the client providing engineering assistance and oversight at both field and office levels for this concentrating, triple solar power tower project.		
2)	(1) TITLE AND LOCATION (City and State) 150 MWAC Copper Mountain Solar 2 Photovoltaic Power Plant, Sempra Generation Boulder City, Nevada	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable) 2012 – Phase I
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Ekström is serving as Owner's Project Engineer for Burns & McDonnell's client. Copper Mountain Solar 2 is a 150MWAC photovoltaic power plant being constructed in two-phases and is a sister plant to the existing Copper Mountain Solar 1. Mr. Ekström previously assisted the client in an Owner's Engineering role during the contract negotiations with the EPC contractor. Burns & McDonnell is also responsible for the detailed design of the associated project substation and transmission lines, including interconnection into an existing utility substation.		
3)	(1) TITLE AND LOCATION (City and State) 26 MWAC Solar Photovoltaic Project, NRG Borrego Springs, California	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable) Ongoing
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Ekström is leading Burns & McDonnell's technical support of NRG in the development and design of a 26 MWAC PV, tracker-based power plant in Borrego Springs. To date this effort has included the technical and cost assessment of competing PV technologies (module type and fixed vs. tracking), technical evaluation of four utility-scale inverter options, overall equipment layout and BOP design, equipment listing and permitting support, and field inspections for listing and code compliance.		
4)	(1) TITLE AND LOCATION (City and State) RFP Preparation for a 20 MW PV Plant at Nellis Air Force Base, NV Energy Nevada	(2) Year Completed	
		Professional Services 2013	Construction (if applicable) N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Ekström led the effort for Burns & McDonnell's assistance in preparing an RFP package for a 20MW Photovoltaic Solar Power Plant project on Nellis Air Force Base, for NV Energy.		
5)	(1) TITLE AND LOCATION (City and State) 19.5 MWt Solar Thermal System Integration into Existing Power Plant, TEP	(2) Year Completed	
		Professional Services	Construction (if applicable)



<i>Tucson, AZ</i>	Ongoing	Ongoing
<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm</p> <p>Mr. Ekström is assisting with the review of mechanical design and performance testing procedures of the Fresnel-lens based solar thermal addition to an existing fossil fuel power plant. Burns & McDonnell is conducting preliminary design services for the client.</p>		



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

a. NAME Curtis Horton	b. ROLE IN THIS CONTRACT Civil Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 24	2. WITH CURRENT FIRM 3
d. FIRM NAME AND LOCATION (City and State) Burns & McDonnell Engineering Company, Inc. Phoenix, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION)		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)	
<ul style="list-style-type: none"> BS Civil Engineering – University of Wyoming, 1989 		<ul style="list-style-type: none"> Professional Engineer – Arizona (Civil) # 30078 Professional Engineer – Colorado (Civil) # 28765 Professional Engineer – Nevada (Civil) # 10669 Professional Engineer – Wyoming (Civil) # 6541 	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)			
<ul style="list-style-type: none"> ASCE UNLV College of Engineering Board 			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION (City and State) Southern Reinforcement Project and Underground Transmission Initiative - Program Management Piscataway, New Jersey	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) 2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Horton served as Assistant Project Manager responsible for assisting in developing the Program Management Plan, Quality Control/Quality Assurance Plan and Materials Management Plan for the approximately 1 billion dollar overhead and underground electrical transmission line program. Other duties included preparation of the monthly progress report along with working with multiple project managers to assist and guide them on managing projects and consultants. Also responsible for managing the build out of approximately 12,000 square feet of new office space for the joint owner and consultant program office.		
2)	(1) TITLE AND LOCATION (City and State) Ivanpah Units 1, 2 & 3, NRG Energy Nipton (Ivanpah Valley)	(2) Year Completed	
		Professional Services 2011	Construction (if applicable) 2012
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Owner Provided Materials Receiving Clerk responsible for development of receiving procedures and performing receipt and inspection of over 10,000 items of owner provided materials and equipment needed to construct three solar receiving boilers placed at the top of three separate 500 foot towers. The Sun's rays are focused by mirrors (heliostats) toward the boiler at the top of each tower to generate steam that is used to turn the turbines within each power block. The project will generate approximately 400 megawatts of solar power.		
3)	(1) TITLE AND LOCATION (City and State) Engineering Services Provider Contract, Arizona Public Service Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable) N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Horton was selected to act as the Assistant Program Manager for the Arizona Public Service Engineering Services Provider Contract. Burns & McDonnell was selected in late 2013 as the ESP moving forward for the next three years. Mr. Horton is responsible for management of all projects, client feedback, etc.		
4)	(1) TITLE AND LOCATION (City and State) NV Energy Tracy Unit 10 Enclosure Study Sparks, Nevada	(2) Year Completed	
		Professional Services 2013	Construction (if applicable) N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Horton was the Civil Lead in an effort to determine options for the plant to modify the roof of the Unit 10 Turbine Enclosure for roof removal for maintenance activities.		
5)	(1) TITLE AND LOCATION (City and State) NV Energy Tracy Unit 10 Enclosure Replacement	(2) Year Completed	
		Professional Services	Construction (if applicable)



<i>Sparks, Nevada</i>	2013	Ongoing
<p>(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm</p> <p>Mr. Horton was the Lead Civil Engineer on the project, replacing the existing enclosure on the Unit 10 Turbine Enclosure.</p>		



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

a. NAME Jason Hope	b. ROLE IN THIS CONTRACT Structural Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 12	2. WITH CURRENT FIRM 6
d. FIRM NAME AND LOCATION (City and State) Burns & McDonnell Engineering Company, Inc. Phoenix, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) <ul style="list-style-type: none"> B.S.D. (Architecture) – Arizona State University, 2000 M.S. Structural Engineering – Arizona State University, 2003 		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) <ul style="list-style-type: none"> Professional Engineer – Arizona (Structural) # 43898 	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) <ul style="list-style-type: none"> American Institute of Architects 			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) Year Completed	
1)	Papago Park Readiness Center – Arizona ARNG Phoenix, Arizona	Professional Services	Construction (if applicable)
		2013	N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Hope is serving as the Lead Structural Engineer for this 61,734 SF Readiness Center. He is responsible for design and detailing of the structural system, coordination with architectural, mechanical, and civil disciplines, and for construction administration.		
2)	Florence Readiness Center – Florence Military Reservation Florence, Arizona	Professional Services	Construction (if applicable)
		2012	2012
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Hope served as the Lead Structural Engineer for this 82,412 SF Readiness Center. He was responsible for design and detailing of the structural system, coordination with architectural, mechanical, and civil disciplines, and for construction administration.		
3)	Northrop B401 Office Expansion Palmdale, California	Professional Services	Construction (if applicable)
		2013	2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Hope is serving as Project Structural Engineer for this 115,000 SF Office expansion. He is responsible for design and detailing the lateral force resisting system for conformance to AISC 341 seismic provisions, preparation of the design drawings and specifications, and construction administration.		
4)	NV Energy Tracy Unit 10 Enclosure Study Sparks, Nevada	Professional Services	Construction (if applicable)
		2013	N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Hope was the Project Manager and Lead Structural in an effort to determine options for the plant to modify the roof of the Unit 10 Turbine Enclosure for roof removal for maintenance activities.		
5)	NV Energy Tracy Unit 10 Enclosure Replacement Sparks, Nevada	Professional Services	Construction (if applicable)
		2013	Ongoing
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Hope is the Project Manager and Lead Structural to replace the existing enclosure on the Unit 10 Turbine Enclosure.		



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

a. NAME Steve Peterson	b. ROLE IN THIS CONTRACT Mechanical Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 27	2. WITH CURRENT FIRM 3
d. FIRM NAME AND LOCATION (City and State) Burns & McDonnell Engineering Company, Inc. Phoenix, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION)		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)	
<ul style="list-style-type: none"> Bachelor of Science in Mechanical Engineering – University of California at Berkeley, 1983 		<ul style="list-style-type: none"> Professional Engineer – Arizona (Mechanical) # 26377 Professional Engineer – Nevada (Mechanical) # 021038 	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)			
<ul style="list-style-type: none"> LEED Accredited Professional 			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION (City and State) Ivanpah Units 1, 2 & 3, NRG Energy Nipton (Ivanpah Valley)	(2) Year Completed	
		Professional Services 2011	Construction (if applicable) 2012
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Peterson served as Mechanical Engineering for the Project. Owner Provided Materials Receiving Clerk responsible for development of receiving procedures and performing receipt and inspection of over 10,000 items of owner provided materials and equipment needed to construct three solar receiving boilers placed at the top of three separate 500 foot towers. The Sun's rays are focused by mirrors (heliostats) toward the boiler at the top of each tower to generate steam that is used to turn the turbines within each power block. The project will generate approximately 400 megawatts of solar power.		
2)	(1) TITLE AND LOCATION (City and State) Sempra Energy Mesquite Phoenix, Arizona	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) 2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Peterson acted as Owner's Engineer Project Manager to develop Sempra Energy's Mesquite 170 MW photovoltaic (PV) power plant in western Phoenix Arizona. Project utilized Suntech's new Pluto PV technology and liquid cooled inverters. Energy modeling with PVSyst. Assisted in selecting successful bidder, reviewing design, monitoring construction, and providing over-sight for the plant's commissioning and performance testing. Plant was completed in February, 2013.		
3)	(1) TITLE AND LOCATION (City and State) Florence Readiness Center – Florence Military Reservation Florence, Arizona	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) 2012
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Peterson served as the Lead Mechanical Engineer for this 82,412 SF Readiness Center. He was responsible for design and detailing of the electrical system, coordination with architectural, mechanical, and civil disciplines, and for construction administration.		
4)	(1) TITLE AND LOCATION (City and State) Topaz Solar Farm - 550 MW Photovoltaic Owner's Engineering Carrizo Plain, California	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable) 2014
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Peterson currently serves as Project Manager for MidAmerican Energy's 550 MW Topaz Solar Energy Plant, and 580 MW Solar Star plant in California. Services provided: Due Diligence, Schedule Review, Submittal Review, Technical Review, Construction Monitoring, Substation Test Monitoring, and Performance Testing Support.		
5)	(1) TITLE AND LOCATION (City and State) RFP Preparation for a 20 MW PV Plant at Nellis Air Force Base, NV Energy	(2) Year Completed	
		Professional Services	Construction (if applicable)



Nevada	2013	N/A
<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm</p> <p>Mr. Peterson assisted the effort for Burns & McDonnell's preparing of an RFP package for a 20MW Photovoltaic Solar Power Plant project on Nellis Air Force Base, for NV Energy.</p>		



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

a. NAME Andy Hornick	b. ROLE IN THIS CONTRACT Structural Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 12	2. WITH CURRENT FIRM 12
d. FIRM NAME AND LOCATION <i>(City and State)</i> Burns & McDonnell Engineering Company, Inc. Phoenix, Arizona			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i>		f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i>	
<ul style="list-style-type: none"> Associate in Architectural Engineering Technology – Pennsylvania State University, 1998 B.S. Structural Design and Construction Engineering Technology – Pennsylvania State University, 2000 		<ul style="list-style-type: none"> Professional Engineer – Arizona (Structural) Professional Engineer – Pennsylvania (Structural) Professional Engineer – Oklahoma (Structural) Professional Engineer – Montana (Structural) 	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i>			
<ul style="list-style-type: none"> NCEES Record Holder 			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION <i>(City and State)</i> Bottom Ash Hopper Roof, Arizona Public Service Farmington, New Mexico	(2) Year Completed	
		Professional Services 2012	Construction <i>(if applicable)</i> 2012
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Hornick recently completed a site visit to verify record drawing compliance for modifications and replacement of monorails in Bottom Ash Hoppers of Units 4 and 5 for Arizona Power Service, Farmington, New Mexico facility.		
2)	(1) TITLE AND LOCATION <i>(City and State)</i> Steam Turbine Generator Foundation, Brazos Electric Power Coop. Bridgeport, Texas	(2) Year Completed	
		Professional Services 2012	Construction <i>(if applicable)</i> 2012
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Hornick recently completed a condition study and evaluation for a warranty claim as Owner's Engineer against the general contractor for damage to structural steel platform and foundations around steam turbine generator Unit 2 due to differential settlement at the Brazos Electric Power Cooperative, Inc., Bridgeport Texas. The site had seen over 4-inches of settlement at one end of the generator foundation which caused deformation to some of the structural steel members. Temporary modifications were implemented to the structural steel platform to provide safe access for the plant operators until the foundation settlement can be resolved.		
3)	(1) TITLE AND LOCATION <i>(City and State)</i> Cooling Tower Survey, Mesquite Power Buckeye, Arizona	(2) Year Completed	
		Professional Services 2012	Construction <i>(if applicable)</i> 2012
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Hornick completed a condition survey of two reinforced concrete cooling tower basins for Mesquite Power, Buckeye, Arizona. Mr. Hornick performed a visual inspection of two 580 feet X 48 feet concrete cooling tower basins constructed 2003. Primary responsibilities include evaluation and assessment of concrete distress and recommend repairs that would reduce further deterioration of the concrete.		
4)	(1) TITLE AND LOCATION <i>(City and State)</i> Tracy Water System, NV Energy Sparks, Nevada	(2) Year Completed	
		Professional Services 2013	Construction <i>(if applicable)</i> N/A



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(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Hornick is currently designing the reinforced concrete basin foundation for a new cooling tower at the Tracy Power Generating Facility. The design also includes the analysis of the existing pipe support structures to accommodate the additional system piping, concrete foundations for new electrical, chemical and heat exchanger enclosures.				
(1) TITLE AND LOCATION <i>(City and State)</i> Electrical Reliability, Invista Bloomington, Texas	(2) Year Completed			
	<table border="1"> <tr> <td>Professional Services</td> <td>Construction <i>(if applicable)</i></td> </tr> <tr> <td align="center">2013</td> <td align="center">N/A</td> </tr> </table>	Professional Services	Construction <i>(if applicable)</i>	2013
Professional Services	Construction <i>(if applicable)</i>			
2013	N/A			
5)	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Hornick has just completed the preliminary engineering for the project cost estimate including the modifications to over 7,800 feet of existing pipe racks that will support new cable trays throughout the plant. Mr. Hornick will lead the civil/structural design efforts through final construction of the project. The project also involves design for miscellaneous foundations for electrical equipment.			

* While not listed above due to the completion date of project being older (2010), Burns & McDonnell wants to draw your attention to the fact that Mr. Hornick also worked on the Sanitary Sewer System Expansion Project for the Town of Cave Creek, Arizona, from 2009-2010. Project Description is enclosed.



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

a. NAME Nathan Thompson	b. ROLE IN THIS CONTRACT Civil Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 10	2. WITH CURRENT FIRM 5
d. FIRM NAME AND LOCATION (City and State) Burns & McDonnell Engineering Company, Inc. Phoenix, Arizona			
e. EDUCATION (DEGREE AND SPECIALIZATION) <ul style="list-style-type: none"> • M.S., Civil & Environmental Engineering – Brigham Young University, 2003 • B.S., Civil & Environmental Engineering – Brigham Young University, 2002 		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) <ul style="list-style-type: none"> • Professional Engineer – Arizona (Civil) # 45667 • Certified Floodplain Manager (CFM) – Arizona # US-07-03055 	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) <ul style="list-style-type: none"> • Association of State Floodplain Managers (ASFPM) • Arizona Floodplain Management Association (AFMA) 			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION (City and State) Sun Valley North Solar Project, Capital Power Maricopa County, Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable) Ongoing
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Thompson is assigned as civil engineer to support a Special Use Permit (zoning/land use related permit) and County Variance. This is a 3.3-square mile, 330 MW solar energy (PV) project. Mr. Thompson is responsible for the Drainage Report, and to assist with the civil designs and cost estimates. Mr. Thompson wrote the SUP draft narrative. Mr. Thompson used HEC-1 and the County's program, DDMSW for detailed hydrologic analyses. He used ArcGIS, Version 10 to research land uses, zoning, etc., to calculated hydrologic parameters, and to make the maps used in the drainage report and SUP narrative.		
2)	(1) TITLE AND LOCATION (City and State) Confidential Solar Project, Confidential Client Southwest U.S.	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable) Ongoing
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Thompson is assigned as civil engineer to produce the Master Drainage Study and to assist in producing plans for on-site utilities, conceptual grading and drainage, and 3 miles of waterline and road improvements. This is a 2-square mile, 250 MW solar energy (PV) project. Mr. Thompson used HEC-HMS and ArcView GIS Version 10 for detailed hydrologic analyses. He researched and applied the local methodologies for the hydrologic modeling.		
3)	(1) TITLE AND LOCATION (City and State) Antelope Valley Solar Project, MidAmerica Kern County, Nevada	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable) Ongoing
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Thompson is responsible to model the 500-year flood using FLO-2D and document the results for insurance purposes. This is a 7.5-square mile, 650 MW solar energy (PV) project. Mr. Thompson modified the FLO-2D and HEC-HMS 100-year flood models which were previously produced by others. The FLO-2D model covers 100 square miles extending into two counties. Mr. Thompson inputted the revised data into HEC-HMS and FLO-2D and produced maps using FLO-2D Mapper and ArcGIS showing the 500-year maximum flow depths and velocities.		
4)	(1) TITLE AND LOCATION (City and State) Mesquite Solar, Sempra Generation Maricopa County, Arizona	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable) Ongoing
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Thompson is assigned as civil engineer to support a Special Use Permit (zoning/land use related permit) and County Variance. This is a 3.3-square mile, 330 MW solar energy (PV) project. Mr. Thompson is responsible for the Drainage Report, and to assist with the civil designs and cost estimates. Mr. Thompson wrote the SUP draft narrative. Mr. Thompson used HEC-1 and the County's program, DDMSW for detailed hydrologic analyses. He used ArcGIS, Version 10 to research land uses, zoning, etc., to calculated hydrologic parameters, and to make the maps used in the drainage report and SUP narrative.		



<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm</p> <p>Mr. Thompson was assigned as civil engineer to support a Special Use Permit (zoning/land use related permit), County Variance, permitting for substation related work, and to obtain three FEMA approvals to revise two regulatory floodplains through the Conditional Letter of Map Revision applications (CLOMR; CLOMR-F; LOMR). This is a 4-square mile, 400 MW solar energy (PV) project. The first construction phase (150 MW) is currently under construction. The CLOMR and LOMR have been approved / issued by FEMA; the CLOMR-F is nearly approved. These included HEC-1 and HEC-RAS modeling and a detailed report in compliance with State Standards (Technical Data Notebook). Mr. Thompson was responsible for the Drainage Report, conceptual plans, and civil narrative in support of the Special Use Permit (SUP). He was instrumental in the detailed civil infrastructure design plans for bidding, which became the basis of the construction plans. Mr. Thompson led the client in obtaining a Variance from a County drainage regulation which maximized the developable land. He supported a second variance from FCD – variance from a stipulation to raise equipment foundations above the regulatory floodplain. He supported obtaining the flood plain use permits. He was assigned as civil reviewer of the construction permit drawings and drainage reports. Mr. Thompson performed the appropriate research, analyses, calculations, and designs to meet the high level of detail requisite for the SUP. Research particulars included local drainage standards, the area National Flood Insurance Program studies (area flood studies by the Flood Control District). Design elements included: FEMA flood fringe development; detailed surface hydrologic and hydraulic modeling (HEC-1 and HEC-RAS); and detailed design and modeling of new channels and other drainage facilities. Designs accounted for construction phasing. The HEC-1 modeling consisted of numerous square miles of off-site and on-site drainage areas, pre and post development models, sub-basin and channel routings, and retention basin routings. Mr. Thompson designed the channel / embankment linings based on most current products available, and local materials & experience. He developed cost estimations to evaluate design concepts.</p>					
<p>(1) TITLE AND LOCATION <i>(City and State)</i></p> <p>Papago Readiness Center – Arizona Department of Emergency & Military Affairs Phoenix, Arizona</p>	<p>(2) Year Completed</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Professional Services</td> <td style="width:50%;">Construction <i>(if applicable)</i></td> </tr> <tr> <td align="center">2012</td> <td align="center">2012</td> </tr> </table>	Professional Services	Construction <i>(if applicable)</i>	2012	2012
Professional Services	Construction <i>(if applicable)</i>				
2012	2012				
<p>5) (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm</p> <p>Mr. Thompson served as a civil engineer for inspecting the construction of the civil infrastructure for this \$12 million project. The 90,110 ft facility is made up of a bi-level Readiness Center with unit storage and vehicle maintenance included in a single separate facility. All of these facilities are designed to support 421 National Guard personnel. The project is located at the Phoenix, Arizona Papago Park Military Reservation located at 52nd Street and McDowell and backs up to the Oak Street on the Northern boundary of the reservation site.</p>					

* While not listed above due to the completion date of project being older (2010), Burns & McDonnell wants to draw your attention to the fact that Mr. Thompson also worked on the Sanitary Sewer System Expansion Project for the Town of Cave Creek, Arizona, from 2009-2010. Project Description is enclosed.



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

a. NAME Bill Schweitzer	b. ROLE IN THIS CONTRACT Project Manager	c. YEARS EXPERIENCE	
		1. TOTAL 21	2. WITH CURRENT FIRM 4
d. FIRM NAME AND LOCATION <i>(City and State)</i> Burns & McDonnell Engineering Company, Inc. Minneapolis-St. Paul			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i>		f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i>	
<ul style="list-style-type: none"> Bachelor Electrical Engineering – South Dakota State University 		<ul style="list-style-type: none"> Leadership in Energy & Environmental Design Certified – Minnesota Professional Engineer – Arizona (Electrical) Professional Engineer – California (Electrical) Professional Engineer – Florida (Electrical) Professional Engineer – Louisiana (Electrical) Professional Engineer – Minnesota (Electrical) Professional Engineer – New Mexico (Electrical) Professional Engineer – Nevada (Electrical) Professional Engineer – Oregon (Electrical) Professional Engineer – South Dakota (Electrical) Professional Engineer – Texas (Electrical) Registered Communications Dist. Designer 	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i>			
<ul style="list-style-type: none"> Building Industry Consulting Services International National Council of Examiners For Engineering and Surveying 			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION <i>(City and State)</i> Papago Readiness Center – Arizona Department of Emergency & Military Affairs Phoenix, Arizona	(2) Year Completed	
		Professional Services 2012	Construction <i>(if applicable)</i> Ongoing
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Schweitzer served as Electrical Engineer for the new Design/Build 61,734 SF Readiness Center, in support of the Arizona Army National Guard. He was responsible for construction drawings and specifications for both electrical and communications. Facility features include private and open office administrative spaces; a Sensitive Compartmented Information Facility (SCIF) with raised access flooring; assembly area; classrooms; simulator training space; individual and group equipment storage; secure arms vault; and restroom/locker room support spaces. The facility is designed to meet the USGBC LEED® Silver certification requirements.		
2)	(1) TITLE AND LOCATION <i>(City and State)</i> Florence Readiness Center – Florence Military Reservation Florence, Arizona	(2) Year Completed	
		Professional Services 2012	Construction <i>(if applicable)</i> 2012
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Schweitzer served as Electrical Engineer for the A/E services and construction administration for this new Design/Build 76,710 SF Readiness Center, in support of the Arizona Army National Guard. He was responsible for the electrical and communications design of the new facilities. Facility features includes open office and private administrative spaces; assembly areas; training and education spaces; individual and group equipment storage; two storage vaults; and vehicle maintenance shop. Building systems are designed to include life-cycle-cost effective energy conservation mechanical and electrical equipment; pre-wired work stations; and an emergency back-up power generator. The project is currently under review by USGBC to meet LEED® Gold certification requirements.		
3)	(1) TITLE AND LOCATION <i>(City and State)</i> Yuma MCAS MILCON P447A, Aircraft Maintenance Hangar Modifications Yuma, Arizona	(2) Year Completed	
		Professional Services 2012	Construction <i>(if applicable)</i> 2013



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

	<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE</p> <p>Mr. Schweitzer served as MEP Project Manager, Lead Electrical Engineer, and Lead Communication Designer. Burns & McDonnell was selected to provide A/E design services for a facility modification to an existing legacy aircraft hangar. Total project consisted of 52,500 sq. ft. of modifications and additions to accommodate the facility requirements of the new Joint Strike Fighter (JSF) aircraft. The facility will provide hangar bay, maintenance shops, and administrative and operations offices for the new JSF Mission at MCAS Yuma. The facility shall implement and meet LEED 2.2 criteria credits to obtain LEED Silver certification with options to meet LEED Gold.</p>	<p align="right"><input checked="" type="checkbox"/> Check if project performed with current firm</p>				
	<p>(1) TITLE AND LOCATION <i>(City and State)</i></p> <p>Yuma MCAS MILCON P460, JSF Aircraft Maintenance Hangar Yuma, Arizona</p>	<p align="center">(2) Year Completed</p> <table border="1"> <tr> <td>Professional Services</td> <td>Construction <i>(if applicable)</i></td> </tr> <tr> <td align="center">2012</td> <td align="center">2013</td> </tr> </table>	Professional Services	Construction <i>(if applicable)</i>	2012	2013
Professional Services	Construction <i>(if applicable)</i>					
2012	2013					
4)	<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE</p> <p>Mr. Schweitzer served as MEP Project Manager, Lead Electrical Engineer, and Lead Communication Designer. Burns & McDonnell was selected to provide A/E design services for a 52,500 Joint Strike Fighter (JSF) aircraft hangar. The facility will provide hangar bay, maintenance shops, and administrative and operations offices for two additional JSF fleet squadrons to be assigned at MCAS Yuma. The facility shall implement and meet LEED 2.2 criteria credits to obtain LEED Silver certification with options to meet LEED Gold.</p>	<p align="right"><input checked="" type="checkbox"/> Check if project performed with current firm</p>				
	<p>(1) TITLE AND LOCATION <i>(City and State)</i></p> <p>Yuma MCAS MILCON P583, Communications Infrastructure Upgrade Yuma, Arizona</p>	<p align="center">(2) Year Completed</p> <table border="1"> <tr> <td>Professional Services</td> <td>Construction <i>(if applicable)</i></td> </tr> <tr> <td align="center">2011</td> <td align="center">2013</td> </tr> </table>	Professional Services	Construction <i>(if applicable)</i>	2011	2013
Professional Services	Construction <i>(if applicable)</i>					
2011	2013					
5)	<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE</p> <p>Mr. Schweitzer provided Electrical Communication Design support for the project. Burns & McDonnell was selected to provide A/E design services for a 38,700 Communication Squadron Support Facility. The facility provides a secure facility housing the operations functions of the Communications Squadron and server equipment to support the proposed Joint Strike Fighter installation at MCAS Yuma. The facility will also house fiber and copper cable connections and distributions to telephone, NIPR, and SIPR networks along with the administrative and technical services necessary to support them. The design of the communications outside plant fiber and copper infrastructure throughout MCAS Yuma included over 8 miles of new ductbanks, over 90 new manholes, new handholes, new single mode fiber optic cables, new multi-pair copper cables, and supporting devices. The project shall implement and meet LEED 2.2 criteria credits to obtain LEED Silver certification.</p>	<p align="right"><input checked="" type="checkbox"/> Check if project performed with current firm</p>				



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

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

a. NAME Erin Allen	b. ROLE IN THIS CONTRACT Staff Interior Designer / Space Planner	c. YEARS EXPERIENCE	
		1. TOTAL 7	2. WITH CURRENT FIRM 7
d. FIRM NAME AND LOCATION (City and State) Burns & McDonnell Engineering Company, Inc. Kansas City, Missouri			
e. EDUCATION (DEGREE AND SPECIALIZATION) • B.A., College of Human Ecology, Interior Design – Kansas State University, 2003		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) • NCIDQ	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) N/A			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) Year Completed	
		Professional Services	Construction (if applicable)
1)	Papago Park Readiness Center – Arizona ARNG Phoenix, Arizona	2012	Ongoing
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Ms. Allen served as Interior Designer on a 66,200 SF Readiness Center Design-Build project for the Arizona Army National Guard located in Phoenix, AZ.		
2)	Florence Readiness Center – Florence Military Reservation Florence, Arizona	2012	2012
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Ms. Allen served as Interior Designer for Florence Readiness Center Design-Build project for the Arizona Army National Guard located in Phoenix, AZ.		
3)	Mesquite Solar West Maricopa County, Arizona	2013	Ongoing
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Ms. Allen served as Interior Designer for the solar power plant located in western Maricopa County.		
4)	Squadron Operations Facility – Luke Air Force Base Glendale, Arizona	2012	Ongoing
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Ms. Allen served as Interior Designer for the Squadron Operations Facility at Luke Air Force Base, located in Glendale, Arizona.		
5)	Academic Training Center – Luke Air Force Base Glendale, Arizona	2012	Ongoing
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Ms. Allen served as Interior Designer for the Academic Training Center at Luke Air Force Base, in Glendale, Arizona.		



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

a. NAME Scott Clark	b. ROLE IN THIS CONTRACT Mechanical Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 26	2. WITH CURRENT FIRM 3
d. FIRM NAME AND LOCATION (City and State) Burns & McDonnell Engineering Company, Inc. Dallas Forth-Worth			
e. EDUCATION (DEGREE AND SPECIALIZATION) <ul style="list-style-type: none"> • B.S., Mechanical Engineering – Texas Tech University, 1987 		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) <ul style="list-style-type: none"> • Professional Engineer – Texas (Mechanical) • Certified Energy Manager (AEE) • Certified Sustainable Development Professional (AEE) 	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) <ul style="list-style-type: none"> • International District Energy Association – Board Member 			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State) Combined Heat & Power Chilled Water Facility Medical Center Company Cleveland, Ohio	(2) Year Completed	
		Professional Services 2013	Construction (if applicable) 2013
1)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Clark served as Principal-in-Charge for the first phase of this effort which includes evaluating potential facility sites, technologies, and sizes of traditional natural gas and combined heat and power (CHP) infrastructure. A thorough assessment of the efficiency, emissions and economic viability will determine the best solution for Medical Center Company (MCCo) and its members. MCCo is determined to continue to deliver over 40MW, 20,000 tons of cooling, and 250MMBtu of heat to their members with greater reliability, reduced emissions, and at a lower cost.		
	(1) TITLE AND LOCATION (City and State) Texas A&M Utilities & Energy Master Plan College Station, Texas	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) 2012
2)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Clark served as Principal-in-Charge of utility master plans (2005 and 2012) for utility upgrade projects including chilled water, steam, heating hot water, power generation, electrical distribution, and civil utilities. Analysis included near term and long term projections and analysis to develop most economic, reliable, and flexible production and distribution systems for the University. 2012 update recommended thermal energy storage, heat pump chillers, and \$170MM in capital projects over 30 years that result in \$33MM in life cycle savings. Burns & McDonnell provided design services for implementation of the 2012 upgrades.		
	(1) TITLE AND LOCATION (City and State) Harvard University Utility Delivery Systems Phase 1 Design Services Cambridge, Massachusetts	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) 2012
3)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Clark served as Principal-in-Charge for the design of a Combined Heat and Power (CHP) facility to be constructed in the basement of Harvard's new Harvard Allston Science Complex. Developed thermal models, drawings and specifications for two Solar Centaur 50 gas turbines, one to be paired with a Heat Recovery Steam Generator (HRSG) and one to be run simple cycle. The facility also included 4,500 tons of chilled water generation. Cost: \$3 Million		
	(1) TITLE AND LOCATION (City and State) New Parkland Hospital Central Utility Plant Dallas, Texas	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) 2012
4)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Clark served as Principal-in-Charge for master planning and design of central utility plant providing chilled water, steam, and standby electricity to a 2.5M sq. ft. hospital campus. Central utility plant consists of 13,500 tons of variable speed driven chilled water production, 197,000 lbs/hr of steam production, 17.5 MW electrical generation capacity, 1,000 tons of heat pump chiller, 36 hours of water and fuel storage, domestic water, softened water, instrument air, condensate, and fire protection systems.		



5)	(1) TITLE AND LOCATION <i>(City and State)</i> Entergy Boiler Plant, LSU Medical Center <i>New Orleans, Louisiana</i>	(2) Year Completed	
		Professional Services	Construction <i>(if applicable)</i>
		2012	2012
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Clark served as Principal-in-Charge of a steam plant design that will deliver 210,000 pph of 225 psig saturated steam to the New Orleans BioMedical District. The new plant will include provisions to supply all of the steam loads to the district loop and to eventually include chilled water capacity to supplement an existing chilled water production facility. This plant will replace an existing 120,000 pph boiler plant.		



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

a. NAME Jon Schwartz	b. ROLE IN THIS CONTRACT Energy Planning Manager	c. YEARS EXPERIENCE	
		1. TOTAL 19	2. WITH CURRENT FIRM 3
d. FIRM NAME AND LOCATION (City and State) Burns & McDonnell Engineering Company, Inc. Dallas Fort-Worth			
e. EDUCATION (DEGREE AND SPECIALIZATION)		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)	
<ul style="list-style-type: none"> B.S., Mechanical Engineering – University of Michigan, 1994 		<ul style="list-style-type: none"> Professional Engineer – Texas (Mechanical) Professional Engineer – Oklahoma (Mechanical) LEED® Accredited Professional Certified Energy Manager Certified Green Building Engineer Certified Sustainable Development Professional 	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)			
<ul style="list-style-type: none"> ASHRAE Member AEE Member 			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION (City and State) Purdue University Comprehensive Energy Master Plan / Combined Heat & Power Study West Lafayette, Indiana	(2) Year Completed	
		Professional Services 2013	Construction (if applicable) 2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Schwartz served as Lead Utility Master Planner for the campus energy master plan. Initial phase is an evaluation of opportunities for CHP and thermal energy storage. Second phase is a comprehensive utility master plan reviewing production, distribution, and consumption of utilities on campus.		
2)	(1) TITLE AND LOCATION (City and State) Texas A&M Utilities & Energy Master Plan College Station, Texas	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) 2012
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Schwartz served as Project Manager of utility master plans (2005 and 2012) for utility upgrade projects including chilled water, steam, heating hot water, power generation, electrical distribution, and civil utilities. Analysis included near term and long term projections and analysis to develop most economic, reliable, and flexible production and distribution systems for the University. 2012 update recommended thermal energy storage, heat pump chillers, plant optimization, and \$170MM in capital projects over 30 years that result in \$33MM in life cycle savings.		
3)	(1) TITLE AND LOCATION (City and State) University of Texas at San Antonio Utility Master Plan San Antonio, Texas	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) 2012
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Schwartz served as Project Manager on utility master plan for utility upgrade projects including chilled water, steam, heating hot water, power generation, electrical distribution, and civil utilities. Analysis included near term and long term projections and analysis to develop most economic, reliable, and flexible production and distribution systems for the University. Recommendations for the 300% campus growth included new capacity, plant optimization, demand response program, heat pump chillers, and \$152MM in capital projects over 25 years that result in \$15MM in life cycle savings.		
4)	(1) TITLE AND LOCATION (City and State) New Parkland Hospital Central Utility Plant Dallas, Texas	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) 2012



	<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE</p> <p>Mr. Schwartz served as Project Manager for master planning and design of central utility plant providing chilled water, steam, and standby electricity to a 2.5M sq. ft. hospital campus. Central utility plant to consist of 13,750 tons of chilled water production, 200,000 lbs/hr of steam production, 17.5 MW electrical generation capacity, domestic water, softened water, o consist of 13,750 tons instrument air, condensate, and fire protection systems. Project initiated with extensive utility planning for the entire campus and CUP with significant interface with campus and individual facility architects and design leads.</p>	<p><input checked="" type="checkbox"/> Check if project performed with current firm</p>				
	<p>(1) TITLE AND LOCATION <i>(City and State)</i></p> <p>Princeton University Plant Modifications <i>Princeton, New Jersey</i></p>	<p>(2) Year Completed</p> <table border="1"> <tr> <td data-bbox="966 430 1250 493">Professional Services</td> <td data-bbox="1250 430 1557 493">Construction <i>(if applicable)</i></td> </tr> <tr> <td data-bbox="966 451 1250 493">2012</td> <td data-bbox="1250 451 1557 493">2012</td> </tr> </table>	Professional Services	Construction <i>(if applicable)</i>	2012	2012
Professional Services	Construction <i>(if applicable)</i>					
2012	2012					
5)	<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE</p> <p>Mr. Schwartz served as Project Director of the project which provided engineering design and construction administration services for several energy-saving modifications to the Energy Plant. The project included replacement of constant speed boiler feed and condenser water pumps with new variable speed driven pumps, a new closed-loop auxiliary cooling system, and the addition of a variable speed drive for the gas turbine enclosure ventilation system. The estimated construction cost of this work is \$2.3 million and completion of this work should occur in 2013. The implementation of this project is projected to reduce greenhouse gas emissions by approximately 1,700 metric tons of carbon equivalent per year.</p>	<p><input checked="" type="checkbox"/> Check if project performed with current firm</p>				



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

a. NAME Brian Lindstrom	b. ROLE IN THIS CONTRACT Commissioning Specialist	c. YEARS EXPERIENCE	
		1. TOTAL 14	2. WITH CURRENT FIRM 1
d. FIRM NAME AND LOCATION (City and State) Burns & McDonnell Engineering Company, Inc. Chicago, Illinois			
e. EDUCATION (DEGREE AND SPECIALIZATION) <ul style="list-style-type: none"> • B.S., Mechanical Engineering – Kansas State University, 1997 		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) <ul style="list-style-type: none"> • Professional Engineer – Kansas (Mechanical) • Professional Engineer – Missouri (Mechanical) • Department of Energy – Data Center Energy Practitioner • Refrigeration Service Engineers Society – EPA Sect 608 Certification, Universal 	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Brian is one of the first mission critical professionals in the world to earn the Data Center Energy Practitioner credential by the U.S. Department of Energy and is also a member of 7x24 Exchange and The Green Grid.			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State) Houston Airport System Retro-Commissioning Houston, Texas	(2) Year Completed	
		Professional Services 2013	Construction (if applicable) N/A
1)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Lindstrom served as Retro-Commissioning Principal-in-Charge for George Bush Intercontinental Airport (IAH), William P. Hobby Airport (HOU) and the HAS consolidated rental car facility encompassing over 4.6 million square feet of building space. Systems include HVAC, electrical power and distribution, building envelope, roofing, conveyance, baggage handling, passenger boarding bridges, ground power, preconditioned air, potable water, domestic water, sanitary sewer, fire protection, building automation controls, IT, and automated access controls (AOA and non-AOA).		
	(1) TITLE AND LOCATION (City and State) Confidential Client Data Center Expansion Confidential Location, SC	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) N/A
2)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Mr. Lindstrom served as Principal in Charge for the commissioning program management of a multi-phase, 30MW expansion to this existing modular data center campus. Provided management of the owner provided commissioning team for functional testing, integrated systems testing, deficiency resolution, and record documentation. Professional Services: \$360,000. Responsible for sales pursuit, proposal, and negotiation.		
	(1) TITLE AND LOCATION (City and State) GSA Region 3, NOAA Remote Backup Facility (RBU) Fairmount, VA	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) 2013
3)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Mr. Lindstrom served as Principal in Charge and Mission Critical Subject Matter Expert for the Construction Management and Commissioning Oversight of an 18,000 sq ft, 2.5 MW data center with Tier I and Tier III topology. The facility duplicates and consolidates the critical functionality of 2 other critical data centers that operate Geostationary Operational Environmental Satellites (GOES). The GOES continuously collect meteorological and space environment data that help to protect life and property across the United States. Commissioning services include serving as commissioning subject matter to the GSA and NOAA, oversight of a 3rd Party LEED Commissioning firm and performance of mission critical commissioning. Services also include review and approval of all commissioning strategies, planning, test procedure development, factory witness testing, functional testing, integrated systems testing and commissioning documentation. Professional Services: \$260,000. Responsible for sales pursuit, proposal, presentation and negotiation.		



	(1) TITLE AND LOCATION <i>(City and State)</i> GSA Region 3, Social Security Administration (SSA), National Support Center Woodlawn, MD	(2) Year Completed	
		Professional Services 2012	Construction <i>(if applicable)</i> N/A
4)	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Mr. Lindstrom served as Principal in Charge for commissioning and construction management oversight and inspection related to the replacement of SSA's 30 year old data center. The new NSC is a 350,000 sq. ft., \$500 million certified Uptime Institute Tier III Data Center that employs 2N and N+1 levels of redundancy. Consisting of a data center, energy center, and office building, this campus is also seeking a LEED Gold certification based on aggressive energy savings measures. Services include whole building commissioning to meet LEED Enhanced requirements, development and execution of a Commissioning Plan, development of commissioning specifications, design review, submittal review installation verification, functional performance testing, integrated systems testing, development of a systems manual, advanced metering consultation, measurement and verification, systems integration and Construction Management Inspection. Commissioned systems include Building Envelope, Life Safety, Plumbing, HVAC, Electrical, Communication, Security, Heat Recovery, Renewable Energy and Sustainable systems. Professional Services: \$2.7 million. Responsible for sales pursuit, proposal, presentation, and negotiation.		
	(1) TITLE AND LOCATION <i>(City and State)</i> University of Chicago New Kenwood Data Center Chicago, IL	(2) Year Completed	
		Professional Services 2012	Construction <i>(if applicable)</i> N/A
5)	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Mr. Lindstrom served as Commissioning Director for the commissioning services of a new, 6,700 SF Tier II data center, which supports the Networking Services and Information Technologies (NSIT) group. Responsibilities included serving as a subject matter expert on commissioning of critical facilities to the University and leading a commissioning peer review team for the following services: review of the design builder's commissioning plan, pre-functional tests, functional tests, integrated systems tests, startup, testing adjusting and balancing, pre-functional testing, functional testing, integrated systems testing and final report. Professional Services: \$55,000 Responsible for sales pursuit, proposal, negotiation, and additional services.		



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

a. NAME Amy Clement	b. ROLE IN THIS CONTRACT Mechanical Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 17	2. WITH CURRENT FIRM 13
d. FIRM NAME AND LOCATION (City and State) Burns & McDonnell Engineering Company, Inc. Kansas City, Missouri			
e. EDUCATION (DEGREE AND SPECIALIZATION)		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)	
<ul style="list-style-type: none"> B.S., Architectural Engineering – Kansas State University, 1993 		<ul style="list-style-type: none"> Professional Engineer – Michigan (Mechanical) # 44407 Professional Engineer – Missouri (Mechanical) # 2006012367 LEED AP BD+C 	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)			
<ul style="list-style-type: none"> ASHRAE 			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION (City and State) Joint Strike Fighter Fuel Cell Maintenance Hangar D/B RFP Eglin Air Force Base, Florida	(2) Year Completed	
		Professional Services Ongoing	Construction (if applicable) 2012
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Ms. Clement is serving as the Project Manager for the development of this Design-Build Request for Proposal. Her responsibilities include leading the design charrette and review meetings, assuring efficiency and focus of the project team, gathering information from the CES for the property and existing facility to be demolished, managing client expectations, managing LEED requirements, ensuring all end user requirements are defined in the RFP, and maintaining the design schedule and project deliverables.		
2)	(1) TITLE AND LOCATION (City and State) Student Barracks Design-Build RFP Fort Bragg, North Carolina	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) 2012
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Ms. Clement is serving as the project manager for the development of a Design-Build RFP for this \$17.5M five-story 69,840 SF 180-man barracks at Ft Bragg. The Burns & McDonnell team is using the Corps of Engineers' MT Wizard program to develop the RFP for this non-standard barracks facility based on the CoS UEPH design standard. The facility design deviates from the standard as it will provide transient student housing and is part of a recently constructed complex. The facility required multi-story construction and includes approximately 69,840 sf of for 180 barracks with private bedrooms and a shared kitchen/dining and bath areas for every two students.		
3)	(1) TITLE AND LOCATION (City and State) Armed Forces Reserve Center (Addition/Alteration) Camden, Arkansas	(2) Year Completed	
		Professional Services Type C - Ongoing	Construction (if applicable) Type C - Ongoing
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Ms. Clement is currently serving as the project manager for this addition and alteration project to an existing 18,000SF armory. Tasks include managing subconsultants, validating project requirements for ARNG and USAR units, designing energy management systems to interface with state-wide monitoring programs, designing to LEED Silver, working with local Commissioning agent, and providing a design solution to minimize alterations while maintaining addition size below the threshold that would require additional ATRP upgrades to existing facility.		
4)	(1) TITLE AND LOCATION (City and State) Papago Park Readiness Center – Arizona ARNG Phoenix, Arizona	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) Ongoing



	<p>(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Ms. Clement served as Energy Advisor on a 66,200 SF Readiness Center Design-Build project for the Arizona Army National Guard located in Phoenix, AZ. The facility will provide the necessary administrative, supply, classroom, locker, showers and rest rooms, vehicle maintenance bays, training, assembly hall, family support offices, recruiting office, and kitchen/dining areas required to train and support assigned personnel, as well as providing for family members and the public in shared spaces.</p>				
	<table border="1"> <tr> <td data-bbox="129 338 967 457"> <p>(1) TITLE AND LOCATION (<i>City and State</i>) KC-46 Flight Training Center (FTC) Altus AFB, Oklahoma</p> </td> <td data-bbox="967 338 1557 457"> <p align="center">(2) Year Completed</p> <table border="1"> <tr> <td data-bbox="967 394 1260 457">Professional Services Ongoing</td> <td data-bbox="1260 394 1557 457">Construction (<i>if applicable</i>) Ongoing</td> </tr> </table> </td> </tr> </table>	<p>(1) TITLE AND LOCATION (<i>City and State</i>) KC-46 Flight Training Center (FTC) Altus AFB, Oklahoma</p>	<p align="center">(2) Year Completed</p> <table border="1"> <tr> <td data-bbox="967 394 1260 457">Professional Services Ongoing</td> <td data-bbox="1260 394 1557 457">Construction (<i>if applicable</i>) Ongoing</td> </tr> </table>	Professional Services Ongoing	Construction (<i>if applicable</i>) Ongoing
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Professional Services Ongoing	Construction (<i>if applicable</i>) Ongoing				
5)	<p>(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Ms. Clement is currently serving as Project Manager. The project team is currently performing the concurrent design for this 29,903 SF, two-story building housing two WST simulators and two BOT simulators. Other training and support areas include a PTT training room, computer room, simulator maintenance and parts storage room, briefing rooms, classrooms, mission planning areas, offices and administrative areas, learning center and engineering and courseware development offices. The facility will support 48 full-time students and is designed for future expansion. This project is currently under design and scheduled for completion in January 2014. Construction cost is estimated at \$12.4M.</p>				



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

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

a. NAME Darin Brickman	b. ROLE IN THIS CONTRACT Civil / Environmental Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 20	2. WITH CURRENT FIRM 16
d. FIRM NAME AND LOCATION (City and State) Burns & McDonnell Engineering Company, Inc. Denver, Colorado			
e. EDUCATION (DEGREE AND SPECIALIZATION)		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)	
<ul style="list-style-type: none"> B.S., Civil Engineering – South Dakota State University, 1991 M.S., Environmental Engineering – South Dakota State University, 1993 		<ul style="list-style-type: none"> Professional Engineer – Colorado # 31639 Professional Engineer – Wyoming # 8869 Professional Engineer – South Dakota #9193 	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)			
<ul style="list-style-type: none"> American Water Works Association Water Environment Federation Design-Build Institute of America Chi Epsilon Tau Beta Pi South Dakota School of Mines & Technology Professional Advisory Board 			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION (City and State) Broomfield North Area Lift Station and Force Mains (Design – Build), City and County of Broomfield Broomfield, Colorado	(2) Year Completed	
		Professional Services 2013	Construction (if applicable) 2013
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Brickman served as Project Director for the Broomfield North Area Lift Station and Force Mains project. The first phase of this fast-track progressive design-build project includes design and construction of the lift station, including all concrete work and wet wells, as well as force mains and other support utilities. Future phases of the development will include additional pumps and appurtenances as the lift station peak capacity will be expanded from 2.0 MGD up to approximately 9.6 MGD. The first phase work includes the installation of 450 HP of pumping with back-up power and an oxygenation system to reduced hydrogen sulfide generation in the force mains. The initial phase of the force main includes 8,000 feet of 12-inch diameter fusible PVC. Sections of the future force mains will also be constructed, including 2,500 feet of 14-inch diameter fusible PVC and 5,000 feet of 18-inch diameter fusible PVC. Other supporting pipelines include in the first phase of the project include 4,200 feet of 24-inch diameter gravity interceptor and 3,100 feet of 12-inch diameter potable water main. Construction initiated in January 2013 and is scheduled to be complete in late November 2013. The project is being completed using a Guaranteed Maximum Price with Shared Savings approach. The design-build team is also assisting Broomfield with planning, routing, preliminary design, and budgeting of additional wastewater facilities located in the northern portions of the service area.		
2)	(1) TITLE AND LOCATION (City and State) Wastewater Reuse Feasibility Study for the Gillette Wastewater Treatment Plant Gillette, Wyoming	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) 2012
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Brickman served as Project Director for the feasibility and financial impact of using reuse water from the Gillette Wastewater Treatment Plant. The City of Gillette is preparing to construct a large athletic complex with an excess of 100 acres of turf grass. In order to provide irrigation water to the facility, the City is exploring the option of reuse water. The study evaluated the regulatory requirements, water quality requirements, and treatment requirements for the proposed system. In addition, a cost comparison was generated to evaluate the economic feasibility of providing reuse irrigation water compared to using the potable water supply.		
3)	(1) TITLE AND LOCATION (City and State) Boxelder Wastewater Treatment Plant (3.0 MGD) (Design/Contract – Build), Boxelder Sanitation District Fort Collins, Colorado	(2) Year Completed	
		Professional Services 2012	Construction (if applicable) 2012



	<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Brickman served as Project Director for the Boxelder Sanitation District's new mechanical wastewater treatment plant. The project is being completed using the design/contract-build project delivery format and includes a new treatment facility on an existing site. The Boxelder Wastewater Treatment Facility includes a new headworks (i.e., screening and grit removal), a new influent pump station, biological nutrient removal (i.e., nitrogen and phosphorus) using continuous loop reactor (i.e., oxidation ditch) secondary treatment, UV light disinfection, effluent pumping, and biosolids storage. The new mechanical plant will replace an aerated lagoon treatment system. Additional facility components include a laboratory upgrade and full site development including influent piping, electric, communications, and storm water management. The oxidation ditch system was procured prior to the final design phase allowing optimization of the design and minimization of overall project costs. The scope of services included all design aspects of the project including facility planning, preliminary design, process and ancillary equipment design, preparation of contract documents, coordination with local building and fire departments and other state and local government agencies, and general contractor selection assistance.</p>			
	<p>(1) TITLE AND LOCATION <i>(City and State)</i> Riverton Wastewater Treatment Plant Solids Dewatering Facility Upgrade Project (Design-Build), City of Riverton Riverton, Wyoming</p>	<p align="center">(2) Year Completed</p> <table border="1"> <tr> <td>Professional Services 2012</td> <td>Construction <i>(if applicable)</i> 2012</td> </tr> </table>	Professional Services 2012	Construction <i>(if applicable)</i> 2012
Professional Services 2012	Construction <i>(if applicable)</i> 2012			
<p>4)</p>	<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Brickman served as Project Manager for the planning and design of a new Solids Dewatering Facility for the Riverton Wastewater Treatment Plant. The project was completed using the design-build project delivery format (i.e., Guaranteed Maximum Price with Shared Savings) and was the first wastewater design-build project in the state of Wyoming. The project included centrifuge prepurchase and the design of all supporting facilities. The new mechanical dewatering system replaced the existing sludge drying beds and significantly enhances the City's composting operation. The new structure was designed to facilitate large implement (e.g., front-end loader, Brown Bear, etc.) parking. The project also included a comprehensive headworks equipment replacement with replacement of the mechanically-cleaned bar screen, addition of a screening washer/compactor, replacement of the grit classifier, and a new belt conveyor for handling of grit and screenings.</p>			
	<p>(1) TITLE AND LOCATION <i>(City and State)</i> Gillette Wastewater Treatment Plant (5.1 MGD) Improvements Project, City of Gillette Gillette, Wyoming</p>	<p align="center">(2) Year Completed</p> <table border="1"> <tr> <td>Professional Services 2012</td> <td>Construction <i>(if applicable)</i> 2012</td> </tr> </table>	Professional Services 2012	Construction <i>(if applicable)</i> 2012
Professional Services 2012	Construction <i>(if applicable)</i> 2012			
<p>5)</p>	<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Brickman served as Project Manager for improvements to the City of Gillette Wastewater Treatment Plant. The project included facilities necessary to expand the plant from 3.85 MGD to 5.12 MGD. The major facility improvements included construction of new primary clarifier dome covers, expansion and rehabilitation of the secondary treatment system, replacing the existing gas chlorine disinfection system with a UV light disinfection system, construction of a high-solids centrifuge mechanical dewatering facility, incorporation of iron salt addition for anaerobic digester gas cleaning (hydrogen sulfide removal), upgrading the existing telemetry and control system, construction of a new on-site lift station, and constructing a new maintenance/vehicle storage facility. The project's construction contract amount was approximately \$13,400,000 and was funded by a State of Wyoming SRF loan. The pre-purchased equipment had a total contract value of \$490,000.</p>			



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

a. NAME Drew Overmiller	b. ROLE IN THIS CONTRACT Mechanical Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 12	2. WITH CURRENT FIRM 5
d. FIRM NAME AND LOCATION <i>(City and State)</i> Burns & McDonnell Engineering Company, Inc. Kansas City, Missouri			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> <ul style="list-style-type: none"> B.S., Architectural Engineering – Kansas State University, 2001 		f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> <ul style="list-style-type: none"> Professional Engineer – Texas (Mechanical) Professional Engineer – North Carolina (Mechanical) LEED® AP BD+C Certified Energy Manager 	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i> <ul style="list-style-type: none"> ASHRAE Member 			

H. RELEVANT PROJECTS

1)	(1) TITLE AND LOCATION <i>(City and State)</i> City of Mesa - Chilled Water Study Mesa, Arizona	(2) Year Completed	
		Professional Services 2012	Construction <i>(if applicable)</i> 2012
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Overmiller served as Project Manager and mechanical engineer providing chilled water analysis for the downtown chilled water system. Flow issues experienced by the city were creating problems keeping some buildings cool. The city initially believed the problems were related to flow constraints. The modeling and report indicated there were some constraints, but the majority of the issues were related to excessive pumping and hydraulic issues due to pump controls and sizing. The report recommended several measures and since those have been implemented the City has not experienced any flow limits and are currently able to serve all loads		
2)	(1) TITLE AND LOCATION <i>(City and State)</i> Purdue University - Comprehensive Energy Master Plan West Lafayette, Indiana	(2) Year Completed	
		Professional Services Ongoing	Construction <i>(if applicable)</i> Ongoing
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Overmiller served as Associate Mechanical Engineer responsible for supervising the development of the utility modeling for the campus. The work included site assessments, modeling of the chilled water and steam systems, and analysis of options for resolving distribution constraints with recommendations.		
3)	(1) TITLE AND LOCATION <i>(City and State)</i> Chicago Airport Authority - O'Hare Heating & Cooling Plant Master Plan Chicago, Illinois	(2) Year Completed	
		Professional Services 2012	Construction <i>(if applicable)</i> 2012
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Overmiller served as Associate Mechanical Engineer responsible for evaluating the existing systems, supervising the development of the utility modeling, and analysis of those systems with recommendations for improvements and expansion options. The work included assessments of the existing facilities, modeling of the chilled water and high temp hot water systems, evaluation of the various production options and dispatch strategies resulting in recommendations and planning for the airport on energy improvement options and new distribution capacity needs.		
4)	(1) TITLE AND LOCATION <i>(City and State)</i> Denver International Airport - Hydraulic Analysis Denver, Colorado	(2) Year Completed	
		Professional Services 2012	Construction <i>(if applicable)</i> 2012



	<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE</p> <p>Mr. Overmiller served as Senior Mechanical Engineer responsible for the development of the chilled water and hot water hydraulic models for the entire airport facility, including terminals. These models were used to evaluate system optimization strategies and piping modifications which resulted in the removal of over 200 system pumps and eliminated the need for a future chilled water and heating hot water plant expansion with the upcoming airport expansion projects.</p>	<p><input checked="" type="checkbox"/> Check if project performed with current firm</p>		
	<p>(1) TITLE AND LOCATION <i>(City and State)</i></p> <p>University of Nebraska - Omaha - Utility Master Plan Omaha, Nebraska</p>	<p>(2) Year Completed</p> <table border="1"> <tr> <td data-bbox="966 417 1252 485">Professional Services 2012</td> <td data-bbox="1252 417 1550 485">Construction <i>(if applicable)</i> 2012</td> </tr> </table>	Professional Services 2012	Construction <i>(if applicable)</i> 2012
Professional Services 2012	Construction <i>(if applicable)</i> 2012			
5)	<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE</p> <p>Mr. Overmiller served as Associate Mechanical Engineer responsible for supervising the development of the utility modeling and analysis. The work included assessments of the existing facilities, modeling of the chilled water and steam systems, evaluation of the various production options and dispatch strategies resulting in recommendations and planning for the University on energy improvement options and new capacity needs.</p>	<p><input checked="" type="checkbox"/> Check if project performed with current firm</p>		

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>		b. YEAR COMPLETED	
Papago Park Readiness Center – Phase II Phoenix, Arizona		PROFESSIONAL SERVICES 2014	CONSTRUCTION <i>(If applicable)</i> 2014
23. PROJECT OWNER'S INFORMATION			
c. PROJECT OWNER Arizona Army National Guard	d. DOLLAR AMOUNT OF PROJECT \$16.3 Million	e. TOTAL COST OF PROJECT \$16.3 Million	

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

Project Summary: Building on our success with Phase I of this Readiness Center complex, Burns & McDonnell is serving as Designer of Record for this new Design-Build 62,000 SF Readiness Center, in support of the Arizona Army National Guard's 158th Maneuver Enhancement Brigade (MEB). Burns & McDonnell is responsible for all design development and charrettes; design review meetings with the owner and contract document drawings and specifications; submittal and shop drawing review; periodic site inspection; RFI review; and punchlist and closeout activities.

Design Requirements: Because the Design-Build RFP did not adequately capture the operational requirements of the unit, Burns & McDonnell collaborated with the Guard to revise the floor plan and re-site the building. Our knowledge of ARNG criteria allowed us to provide a much more functional facility with consideration for future growth and changing mission requirements.

The facility includes open office and private administrative spaces; classrooms; combat simulation room; assembly hall; secure communications space; secure arms vault; kitchen; private and unit gear storage areas; locker and shower areas; training and education spaces; individual and group equipment storage; and a weapons vault. The new facility also has approximately 2000 SF SCIF meeting all ICD/ICS 705 standards.

Site Development: Sitework included clearing, site preparation, roadways, access roads, parking areas, walkways, and utilities. Flexible pavement is used for the roadways and permanent parking areas. Supporting facilities include military and private vehicle parking areas; security fencing and lighting; anti-terrorism force protection measures; and a telecommunications system incorporating Mass Notification in accordance with AT/FP criteria. Burns & McDonnell designed the project to meet all requirements of UFC 4-010-01, Antiterrorism Standards for Buildings, including site standoff distances and blast resistant window assemblies.



Sustainable Design: The new facility is designed to LEED Gold standards and provides cost effective energy conserving mechanical and

electrical equipment, pre-wired workstations and emergency power generator back-up. An on-site renewable photovoltaic system is estimated to generate 60,000 kwh of electricity, exceeding the State of Arizona Executive Order 2005-05 requirement to provide at least 10% of energy from a renewable resource.

Energy savings are projected at a 40% improvement over the ASHRAE 90.1-2007 baseline. Water efficiency sustainable features include using established landscaping, eliminating the need for a permanent irrigation system. Water savings are projected to exceed 50% over baseline calculations.

Strategies to promote good indoor air quality include a no smoking policy and outside air ventilation rates above ASHRAE 62.1-2007 minimums with automatic controls and reduction of indoor pollutants. IAQ management during construction and before occupancy will reduce air quality problems resulting from the construction process. Pollutant source control, increased air filtration, and the use of low-emitting adhesives, sealants, paints, coatings, flooring, carpeting and composite wood products will contribute to a healthier indoor environment. Occupant comfort will be maintained through efficient system design and verification, with the greatest number of individual temperature controls possible. Natural daylighting will reduce lighting loads and improve the interior environment, and task lighting at the workstation controls will allow light levels based on individual needs.

Budget Adherence: As design progressed from concept to interim and then to final, Burns & McDonnell worked closely with the Design-Build Contractor and subcontractors to maintain design and costs within budget. These efforts included selection of cost effective, durable materials for the facility and working with local and county officials on utility and road construction requirements.



Building Information Modeling (BIM): The design team utilized BIM tools such as Autodesk Revit and Navisworks to integrate individual discipline design models for near real-time coordination between the design team, the Design-Build Contractor and subcontractors.

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> Florence Readiness Center Florence, Arizona	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2012	CONSTRUCTION <i>(If applicable)</i> 2012

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER Arizona Army National Guard	d. DOLLAR AMOUNT OF PROJECT \$15,252,000	e. TOTAL COST OF PROJECT \$15,252,000
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(include scope, size, and length of project)*
Project Summary: Burns & McDonnell provided A/E services and construction administration for this new Design/Build 76,710 SF Readiness Center, in support of the Arizona Army National Guard. The facility includes open office and private administrative spaces; assembly areas; training and education spaces; individual and group equipment storage; a vehicle maintenance shop; and a weapons vault. Construction consists of a structural steel frame with decorative concrete block façade; sealed and stained concrete floors; and a combination of standing seam metal and membrane roofing systems. Building systems are designed to include life-cycle-cost effective energy conservation mechanical and electrical equipment; pre-wired work stations; and an emergency back-up power generator. Supporting facilities include military and private vehicle parking areas; security fencing and lighting; anti-terrorism force protection measures; and a telecommunications system incorporating Mass Notification in accordance with AT/FP criteria.

Burns & McDonnell designed the project to meet all requirements of UFC 4-010-01, Antiterrorism Standards for Buildings, including site standoff distances and blast resistant window assemblies.

The project was under review by USGBC to meet LEED® Gold certification requirements. As a part of this process, the facility underwent enhanced commissioning by a third party provider, to insure that all building systems are operating optimally. During construction, measures were taken to protect and relocate the native Saguaro cactus on the site, helping to maximize water efficient landscaping and eliminate reliance on potable water for irrigation purposes. Potable water use is further reduced through the use of low-flow plumbing fixtures throughout the facility.

Significant energy saving measures have also been incorporated into the facility design. These include: EPA energy reduction of 42.7%; energy cost savings of 32.1%, equating to 11 LEED® credit points; and on-site energy production of 16.5%, which equates to 7 LEED® credit points. These reductions are accomplished through the use of high efficiency HVAC and electrical equipment, increased building thermal performance, and photovoltaic electrical power production.



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

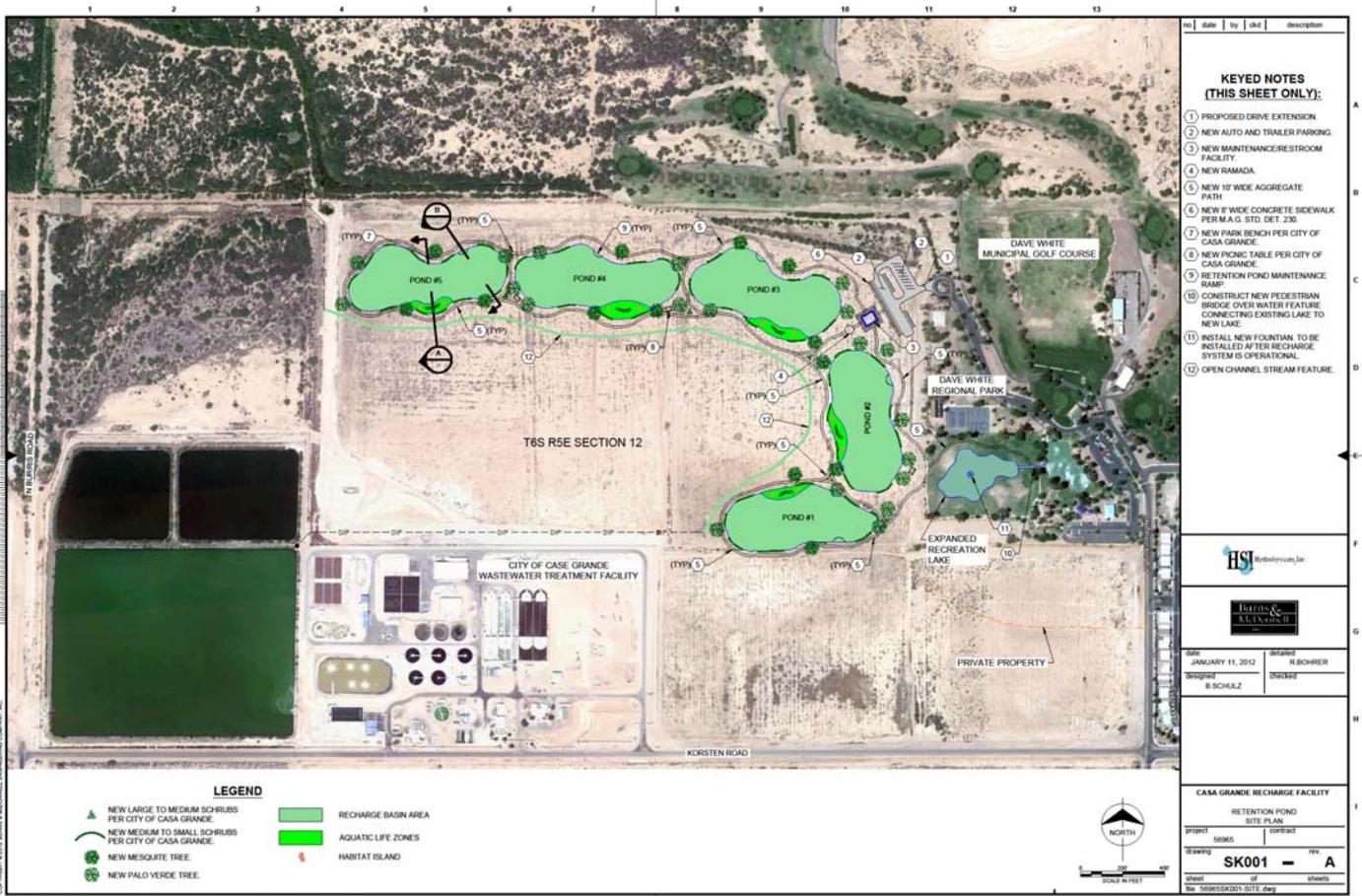
(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION (City and State) Reclaimed Water Recharge Reservoirs Casa Grande, Arizona		b. YEAR COMPLETED	
		PROFESSIONAL SERVICES 2012	CONSTRUCTION (If applicable) 2012
23. PROJECT OWNER'S INFORMATION			
c. PROJECT OWNER City of Casa Grande, Arizona	d. DOLLAR AMOUNT OF PROJECT \$3 Million	e. TOTAL COST OF PROJECT \$3 Million	

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

Project Summary: Burns & McDonnell is working with the City of Casa Grande to develop, design and construct a series of basins that will serve as both a recharge facility and a public park amenity. The primary purpose for the basins is to recharge the reclaimed water coming from the City's water reclamation facility. This valuable resource will be recharged into the local aquifer where it can be withdrawn at some later date for beneficial reuse. With the construction of basins, a public park amenity will also be included. Wide walking paths, benches and native landscaping will provide a backdrop for the basins. The facility is connected to an existing City park providing access to the public.

Services Provided: Studies, Preliminary Design, Detailed Design, Bidding Assistance, Construction Inspection, Special Inspections, Site Development, Permitting, and Public Participation.



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) Sanitary Sewer System Expansion Project Cave Creek, Arizona	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2009	CONSTRUCTION (If applicable) 2010

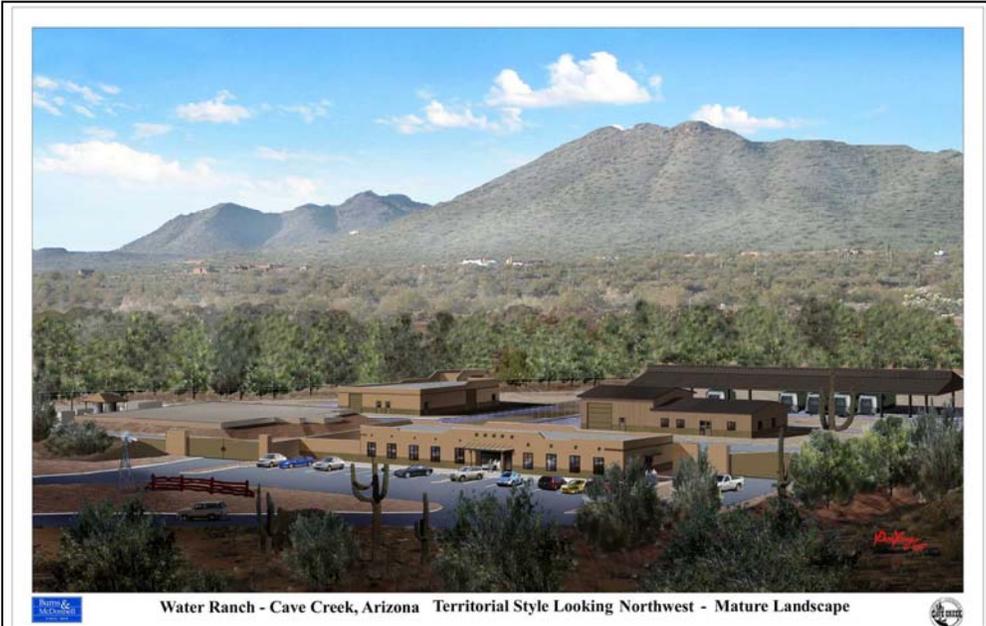
23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER Town of Cave Creek	d. DOLLAR AMOUNT OF PROJECT \$13.2 Million	e. TOTAL COST OF PROJECT \$13.2 Million
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

Project Summary: Burns & McDonnell was selected to provide comprehensive planning, programming and A/E design services as the designer of a design/build project team. The project provides for a new 0.66 mgd wastewater treatment facility to replace the existing plant. Sewage is conveyed from the existing treatment plant site to a new site. The new site water reclamation facility provides an influent pump station to get the raw wastewater into the reclamation facility, screening with a rotary drum screen and vortex grit removal prior to biological treatment with the sequencing batch reactor process. The SBR system consists of two treatment basins and a post-equalization basin. The final treatment process is cloth disc filtration followed by disinfection with hypochlorite in the chlorine contact basin and de-chlorination with sodium metabisulfite. Treated effluent will be pumped back to the old plant site for discharge to golf course irrigation ponds. Solids are pumped from the SBR basins to a sludge holding tank. From the sludge holding tank the solids are pumped to a belt filter press, dewatered and disposed at a local landfill. Chemical odor control will be provided for the treatment facilities. The facility meets all regulatory property set back criteria. The site can provide for expanded treatment capacity of 2.25 mgd. An Aquifer Protection Permit was obtained for the treatment process and will include provisions for reuse of the Class A+ effluent for golf course irrigation. A new Arizona Pollution Discharge Elimination System permit was obtained to allow for discharge to two separate locations, giving the Town maximum flexibility. The design/build team is responsible for transferring operations to the new reclamation facility from the existing plant site without interruption of service. The D/B team is responsible for decommissioning of the existing facilities and meeting ADEQ closure criteria. This project represents the largest public works infrastructure project undertaken by the Town.

Project Services: Design/Build, Site Development, Permitting, Conveyance, Treatment, Reclamation, Project Observation, and close-out.



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) Houston Airport System Retro-Commissioning and Condition Assessment Houston, Texas		b. YEAR COMPLETED	
		PROFESSIONAL SERVICES 2013	CONSTRUCTION (If applicable) Ongoing
23. PROJECT OWNER'S INFORMATION			
c. PROJECT OWNER Houston Airport System	d. DOLLAR AMOUNT OF PROJECT TBD	e. TOTAL COST OF PROJECT TBD	

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

Project Scope and Description: HAS (Houston Airport System) selected Burns & McDonnell to perform condition assessment and retro-commissioning for over 6 million square feet of aging airport infrastructure at George Bush Intercontinental Airport (IAH), William P. Hobby Airport (HOU) and the HAS consolidated rental car facility.

Systems include HVAC, electrical power and distribution, building envelope, roofing, conveyance, baggage handling, passenger boarding bridges, ground power, pre-conditioned air, potable water, domestic water, sanitary sewer, fire protection, building automation controls, IT, and automated access controls (AOA and non-AOA).

The overall objectives of the project include collecting information and assessing physical and operating condition of assets; determining the ability of asset systems to meet customer and stakeholder needs; defining the effective remaining service life of asset systems; developing a capital replacement plan; and reducing the existing energy footprint through optimization and tuning of systems.

This comprehensive effort involves review of design and record documents; interviews with HAS staff to gain customer and stakeholder input; hands-on operational inspections, assessments, systems testing and adjustments; and integrating data into an existing asset management system.

Field data is captured electronically via tablet computers using a custom Facility Assessment Data Collection Tool (FADCT) that uses a combination of mobile computing, photographic, GIS, and database technologies. The FADCT enables data to be collected, analyzed and integrated into the HAS enterprise asset management system (Infor EAM), efficiently, accurately and with minimal effort.

The two phase effort involves a Phase 1 pilot study of select assets across trial areas to refine process and identify candidate systems for retro-commissioning. Phase 2 involves condition assessment of all assets and retro-commissioning of systems not slated for near-term replacement.





6. ADDITIONAL INFORMATION

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

Burns & McDonnell Firm Information

Company Overview: The Burns & McDonnell Phoenix office has been in the Valley since 1998. We have a staff of 72 people providing architecture, engineering, project controls, program management and construction management. The key market sectors served from this office are state and municipal facilities, water, energy services, solar technology, transportation, process and industrial, aviation, and commercial facilities.

Founded in 1898, our company, Burns & McDonnell Engineering Company, Inc. is an internationally recognized architectural, engineering and construction firm that has been making its clients successful for over 115 years. The company's multidisciplinary staff of more than 4,000 employee-owners includes engineers, architects, contractors, planners, estimators, economists, technicians and scientists, representing virtually all design disciplines. We make our clients successful in a broad cross-section of markets that touch lives in many ways, from electricity to drinking water, from roads and airports to manufacturing facilities.

Burns & McDonnell (BMCD) is 100% employee-owned by each and every one of our employees. Each of us has a vested interest in the success of every client and every project. This vested interest drives our 4,000+ employee-owners to be more engaged and more responsive than competing firms, resulting in increased value to our clients. With employee turnover less than 1%, Burns & McDonnell has created a network of highly experienced and efficient teams capable of providing the greatest overall value to our clients. This value is recognized by our repeat clients who account for over 80% of our business. Our service driven culture is also recognized throughout the industry, demonstrated by the awards and recognition we receive on a yearly basis.

Supplier Diversity and Development: Although Burns & McDonnell can self-perform the majority of the work on our projects, we are committed to supporting the local community and providing opportunities for minority and small businesses. The key to success on many of our projects can be attributed to the work that our small businesses perform. We seek to mentor our small business partners and in turn find that we are often learning many valuable best practices from them, in our mutual goal of making our clients successful. Through our supplier diversity program, we have expanded our markets and provided value to our clients. To meet our goals, Burns & McDonnell is constantly looking for businesses that meet at least one of the following classifications:

- Minority-Owned Business
- Woman-Owned Business
- Small Business
- Small Woman-Owned Business
- Small Disadvantaged Business
- Small Veteran-Owned Business
- Small Service-Disabled Veteran-Owned Business
- HUB Zone Certified Small Business
- Historically Black College or University (HBCU) or Minority Institution (MI)

Awards & Recognition: We have been honored to receive a number of awards that speak to our commitment to client satisfaction and our commitment to our employees.

Professional Services Management Journal 2012 Premier Award for Client Satisfaction

Burns & McDonnell has received the prestigious Premier Award for Client Satisfaction from the Professional Services Management Journal (PSMJ). In an independent survey of A/E/C clients by PSMJ, Burns & McDonnell received award-winning ratings in every service category. For the third straight year, we were the only firm in Engineering News-Record's Top 100 to be accorded this recognition.

Industry Rankings

Burns & McDonnell ranks in the top 5 % (#20) of Engineering News-Record's 2013 Top 500 Design Firms and is an industry leader in categories including: #20 in Top 500 Design Firms, #21 in Top 100 Design-Build Firms, #21 in Top 50 Program Management Firms, #23 in

Top Green Design Firms, #47 in Top 200 Environmental Firms.

Best Places to Work in the Valley 2013

The Burns & McDonnell Phoenix office was just named an honoree on the Best Places to Work in the Valley list for 2013. Rankings are released mid-December 2013.

FORTUNE 100 Best Companies to Work For

Burns & McDonnell ranks moved up to 18th from 26th in FORTUNE's 2013 list of 100 Best Companies to Work For. This is the third time the firm has made the list since its 2009 debut.

Commitment to Quality: We strive to provide the highest quality on every job we do – no matter how large or small. The quality of the services we provide on our design and construction projects is evident by the amount of repeat business that Burns & McDonnell achieves...*over 80% of our business is executed with repeat clients.*

Quality Control: In order to achieve a high level of quality, we use a detailed 6-step quality review process for engineering work with all project work. Our process has been developed and refined internally and has been vetted for use on our federal government projects and all other project work. The Quality Review steps include:



Q1 Review

Preliminary Project Review. Prior to commencing the Project, the Project Team presents to an independent review team the overall Project Plan and Team Members to ensure we are kicking off the project in the correct mode for success. Both the independent review team and management evaluate the project team members for qualifications, establish ongoing project review processes, and establish the proper management team for issue resolution.

Q2 Review

Intermediate Project Review. Once key project documents are developed and before vetting these documents with the Owner, the Project Team gets together with an independent review team to review these documents and confirm that the project is on the right track towards success: meeting the Owner's goals and objectives.

Q3 Review

Review of Final Project Design Documents. Prior to being issued to the Owner, design documents are verified by the design team, checking their own design including code interpretation and adherence to design basis

Q4 Review

Independent Review of Design Documents. Prior to being issued to the Owner and after the Q3 internal project team review, the design documents are handed over to an independent review team for verification. The Q4 process first looks at overall methodology to ensure the

design engineer used his/her professional judgment correctly in outlining the process. Then the Q4 reviewer performs a review of the design documents to form an opinion as to the correctness and completeness of the design.

Q5 Review

Review of Contractual/Legal Front End Documents and draft project specifications. This step is performed to review compliance with Owner contracts and to review compliance with Owner desires regarding front end documents to be issued to equipment suppliers or construction entities.

Q6 Review

Review of Design and Construction Packages. This review step is to verify integration between disciplines and integration with legal, procurement, and construction to ensure the completeness of the issued packages. Upon acceptance at the Q6 level, the design documents are issued to the Owner for their review.

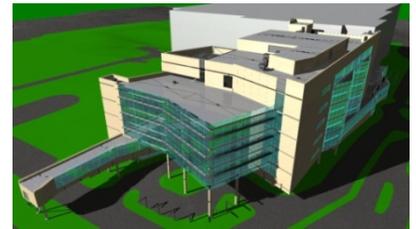
Audit Program

At the completion of each regimented quality review step, the quality review manager for the Project is required to fill out a form and submit to the corporate quality review management. In essence, this procedure is a real time audit for each of the Projects, ensuring that the policies and procedures established are followed for each of our assignments.

BIM: At Burns & McDonnell, our comprehensive BIM experience increases design collaboration and coordination for which our Multi-disciplinary teams have long been known. Burns & McDonnell's experience with the use of BIM models has been recognized by Autodesk by placing the East Chiller Building for Thermal Energy Corporation on the cover of the AutoCAD MEP 2012 software product (see image to the left.) In addition, integrated design tools such as Autodesk Revit are utilized across all disciplines to ensure real time model coordination as the design progresses.



Integrated Engineering and Design: We leverage the building information models with our engineering analysis models such as AutoPIPE and RISA 3D. This decreases the probability of errors and enables the design team to quickly evaluate design alternatives and impact from potential design changes.



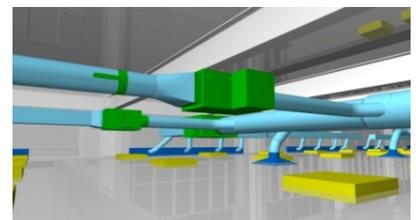
Clash Detection: Interdisciplinary collaboration is improved with our ability to automatically detect clashes in 3D using tools such as Navisworks



Rendering Visualization: The creation of a 3D integrated building model allows Burns & McDonnell to quickly produce renderings and walkthroughs that provide our clients and partners with a deeper understanding of the facility design.



Building Information: Material and building system data built into the model during design enables our designers to evaluate the cost impact of changes during the design phase resulting in a value engineered process throughout, rather than only at the end of design.



Standard BIM Software Platforms	
Architectural Model	Revit Architecture, Sketchup/Podium, NavisWorks
Civil Model	AutoDesk Civil 3D
Structural Model	Revit Structure, NavisWorks
Plumbing Model	Revit MEP 2012, NavisWorks
HVAC Model	Revit MEP 2012, NavisWorks
Electrical Model	Revit MEP 2012, NavisWorks

BIM practices are currently the Burns & McDonnell standard project design authoring method



used. We begin the BIM process by assigning a BIM Manager to the project who has the resources and training to ensure that a smooth BIM workflow is achieved. This person helps to facilitate coordination between disciplines and ensure BIM model integrity. As a practice, we utilize the industry standard Project Execution Plan (PxP) developed by Penn State and USACE to ensure that the project team understands the project goals and deliverables. All disciplines utilize BIM software.

LEED: Burns & McDonnell personnel maintain current knowledge of Federal mandates, Executive Orders, Issued UFCs and ECBs, Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings, ASHRAE Standard 90.1 and ASHRAE 189.1 regarding requirements including energy efficiency, renewable energy, life-cycle cost analysis, performance measurement, water use reduction, use of environmentally preferable and bio-based products and waste management at all times.

We understand that integrated design with strong, consistent representation from all stake-holders throughout the project is the key to success in achieving a high performance building and to fully realize increase savings potential while reducing the total cost of ownership. We strive for building designs that balance life-cycle costs, energy efficiency, energy security, and occupant benefits within the project's budget and agency's mission.

Our approach to energy efficiency is to first question established energy assumptions, and to improve the building envelope. Second we look for "free energy" opportunities to reduce load, such as integrating artificial lighting controls with daylight photo sensors. Third, we look for opportunities to capture waste heat for power and improve the efficiencies of all lighting, service hot water and HVAC equipment beyond the ASHRAE/IESNA baseline standard. Fourth, we look at feasibility to integrate renewable energy for a portion of the project's energy needs. Last, we employ commissioning practices, using an experienced commissioning provider, appropriate to the size and complexity of the building and its system components in order to verify performance and ensure that the owner's project requirements are met. Building metering of energy systems further enables future ongoing performance measurement.

Using IES Virtual Environment building performance software early in design we are able to explore envelope, orientation, daylighting and building systems options quickly during design for relative impact on performance. Then using whole-building energy modeling software we document the energy efficiency for certification compliance once design decisions are made. At each step we evaluate initial and operational costs and benefits through life cycle cost analysis to enable informed decision-making by the owner.

Most of our projects employ LED and high efficiency fluorescent lighting, energy recovery from exhaust heat, daylighting with integrated photo sensors, extensive use of occupancy sensors and timers on lighting, in addition to high efficiency HVAC equipment. Examples of recent projects employing energy efficiency measures and renewable energy systems include the following:

- For proposed Building 194 at Fort Leavenworth, Kansas, we questioned the Army requirement for 50 foot candles in the office areas, suggesting a more appropriate ambient lighting level of 30 foot candles, amplified by task lighting at the work areas.
- For Readiness Centers at Cumming, Atlanta and Macon, Georgia, life cycle cost analyses were performed to study the feasibility of photovoltaic panels on the roofs or at covered parking structures. Since the study showed that payback was within a twenty year period, we added these elements to the projects as alternate bid items. When bids were received, the owners chose not to accept these features, which would have exceeded the project budget.
- The Delaware Army National Guard Regional Training Institute in Bethany Beach, Delaware is utilizing a geothermal heat exchange system, which meets the government's definition of renewable energy, to meet its energy efficiency goals.

Selection and design of building materials and products focuses on meeting requirements of the Guiding Principles, Comprehensive Procurement Guidelines and the DoD Green Procurement Policy including Environmentally Preferable, Bio-Based, Energy Star and FEMP Energy Efficient Products, Water Conserving and Recycled products. We base product specifications on durable, appearance-retaining products with longevity that have a reduced impact on human health and the environment, considering product life-cycle compared to competing products serving the same purpose. Our specifications direct the Contractor to optimize use of materials from within 500 miles of the project site or closer; to give preference to materials made with recycled content; and to procure wood products from sustainably managed forests or from rapidly renewable resources. The results are that many of our projects have achieved over 30% recycled content materials, 30% local/regional materials and over 80% certified wood.

We design buildings to include collection and storage of recyclables for the occupants. We also write specifications to require Contractors to provide a Waste Management Plan to demonstrate how they plan to achieve a minimum of 75% demolition/construction waste diversion (exceeding the 50% requirement). During construction we hold regularly scheduled calls with the contractors to discuss questions and achievement status. The Contractors on most of our projects exceed the 75% diversion goal and typically achieve 80 to 95% diversion rates.

Additional Relevant Burns & McDonnell Projects

Ivanpah Units 1, 2 & 3 – Owner’s Engineer 392 MW Solar Thermal Power Tower, NRG Energy

Ivanpah, California

Project Summary: Burns & McDonnell was retained to provide Owner’s Engineering services throughout the design and construction of the Ivanpah project. Burns & McDonnell’s scope included a due diligence review, design reviews, submittal reviews, construction administration, resident engineering, and quality assurance auditing. The scope of the project includes the installation of three solar thermal power blocks.

Project Features:

- Total capacity of 392 MW (gross)
- 357,000 heliostats encompassing nearly 3 square miles
- Low-impact environmental design
- 400 foot tall power towers
- Direct steam generation
- Air-cooled condenser



Project Background and Description: When BrightSource Energy sought an investment partner for their Ivanpah project development, NRG became the majority investor in the project. As the majority investor, NRG retained Burns & McDonnell as their Owner’s Engineer to perform design reviews and assist with construction management.

Over 357,000 heliostats (tracking assemblies upon which mirrors are mounted), covering nearly a square mile per unit, which focus sunlight onto a solar steam generator mounted nearly 400 feet above the desert. The heat from the sun boils water to create steam, which is then piped to a steam turbine coupled to a conventional generator. The project utilizes an air-cooled condenser to minimize water usage in the desert environment.

The Ivanpah project was the recipient of \$1.6 Billion in Department of Energy loan guarantees, the largest of such awards to date. When the Ivanpah project is complete, it will double the world’s existing solar thermal capacity.

Frito Lay Biomass Project, Frito Lay Corporation

Topeka, Kansas

Project Summary: Burns & McDonnell, a longtime partner with Frito Lay, was retained to help develop an energy center in Topeka, Kansas, beginning with the initial feasibility study. A report was provided to Frito Lay describing technologies that had been researched that could provide the most cost effective and efficient energy reduction and reuse. After the decision was made to install a biomass boiler, Burns & McDonnell provided full services for this innovative demonstration project, including detailed design, procurement, and construction.

Burns & McDonnell pursued a grant from the U.S. Department of Energy for demonstration of a renewable energy boiler project that would offset 100% of the natural gas consumed in the food manufacturing industry. Burns & McDonnell secured the grant and brought that funding to the project. Burns & McDonnell continues to fulfill grant administration and reporting requirements.

Energy Specific Portion of Project, including Energy Savings Features and Technologies

The Frito Lay Biomass Energy Center project demonstrates that a renewable fuel, sourced from wood waste, can be a cost effective alternative to dependence on natural gas for generating steam, which is a key heating medium used in food industry processes. The project also demonstrates that emissions from such biomass boilers can be successfully controlled.

Emissions are below levels required by U.S. Environmental Protection Agency (EPA) regulations, and they meet strict regulatory standards set by the State of Kansas. At design capacity, the energy center burns approximately 17,000 pounds per hour of wood waste—material that would otherwise be sent to a landfill. It achieves approximately 70% efficiency in converting the wood waste to 450 degrees F steam at 78.3 MMBTU per hour. The 17,000 pounds per hour of waste wood is reduced to 520 pounds per hour of fly ash.



The Frito Lay Biomass Energy Center broke new ground in renewable energy for the food manufacturing industry by providing a cost effective biomass to energy prototype that offsets 100% of the natural gas used for process steam at the Frito Lay plant in Topeka, Kansas. Waste wood destined for landfills is instead being used to offset the use of natural gas, while also meeting established emissions limitations. The project was designed using modular construction (where applicable) to allow cost effective replication at numerous facilities.

This project laid the groundwork for ongoing research to assess alternative renewable fuel sources, particularly on site food processing waste streams, alternate feedstock combustibility, boiler sizing, and controls and process system integration issues. The ultimate goal of research made possible through this project is a large reduction in natural gas consumption throughout the food manufacturing industry.

FAA VALE Grant Solar Feasibility Study

City of Phoenix, AZ

Project Summary: Burns & McDonnell (BMcD) was retained by the City of Phoenix (COP) to perform a solar system feasibility study in support of an application to the FAA for a VALE grant. The study included the identification of a suitable project site, a conceptual design and layout and the development of materials to support a VALE grant application.

Services Provided:

- Technology Analysis
- Conceptual Design
- Output Analysis
- Interconnection Review
- FAA VALE grant application support

Project Background and Description: The objective of the study was to identify suitable site locations for a solar project at the Sky Harbor International Airport and assist COP prepare an application for FAA VALE grant funding to support the construction of a project. BMcD used site visits and aerial images to identify potential solar project sites. The sites were evaluated for their solar access, potential solar project size, and ease of interconnection into the airport electrical power system. Conceptual project layouts were developed using different solar technologies for each identified site and estimates of the annual electrical generation and installation cost prepared for each site. BMcD teamed with Harris Miller Miller & Hanson Inc. (HMMH) to assess the results of the study and make a recommendation to COP as to which site should be selected for further analysis and inclusion in a VALE grant application. BMcD and HMMH then worked with COP personnel to complete an ultimately successful grant application. Project completed on time and on budget.



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

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

Signature: _____

Date: December 10, 2013

Name: Ms. Tanya Martella

Title: Business Development Manager