



Request for Qualifications
 Solicitation No.
ADSP017-00006796
 Description:
2017 Annual Professional Services List

Arizona Department of
 Administration
State Procurement Office
 100 N 15th Ave., Suite 201
 Phoenix, AZ 85007

Part 4 of the Solicitation Documents:
Offer Forms
 (Attachments)
 Date: [February 7, 2017](#)

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Attachment 1
Offer and Acceptance Form

SUBMISSION OF OFFER: Undersigned hereby offers and agrees to provide qualifications for **2017 Annual Professional Services List** in compliance with the Solicitation indicated above and our Offer indicated by the latest dated version below:

Initial Offer:	1.	2/7/17	DP	
		date	initial	

Michael Baker International, Inc.

Offeror company name

**2929 N. Central Avenue, Suite 800
Phoenix Plaza Tower II**

Address

Phoenix | Arizona | 85012

City | State | ZIP

25-1228638

Federal tax identifier (EIN or SSN)

DP

Signature of person authorized to sign Offer

Initials

Doug Plasencia, Vice President

Printed name and title

Doug Plasencia, Vice President

Contact name and title

dplasencia@mbakerintl.com 602-798-7552

Contact Email Address

Contact phone number

CERTIFICATION: By signature in the above, Offeror certifies that it:

- will not discriminate against any employee or applicant for employment in violation of Federal Executive Order 11246, [Arizona] State Executive Order 2009-9 or A.R.S. §§ 41-1461 through 1465;
- has not given, offered to give, nor intends to give at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with the submitted offer. Failure to provide a valid signature affirming the stipulations required by this clause will result in rejection of the Offer. Signing the Offer with a false statement will void the Offer, any resulting contract, and may be subject to legal penalties under law;
- complies with A.R.S. § 41-3532 when offering electronics or information technology products, services, or maintenance; and
- is not debarred from, or otherwise prohibited from participating in any contract awarded by federal, state, or local government.

ACCEPTANCE OF OFFER: State hereby **accepts the initial Offer**, Revised Offer, or Best and Final Offer identified by number **ADSP017-00006796** at the top of this form, and which was dated February 7, 2017 (the Accepted Offer). Offeror is now bound (as Contractor) to carry out the Work under the attached Contract, of which the Accepted Offer forms a part. Contractor is cautioned not to commence any billable work or to provide any material or perform any service under the Contract until Contractor receives the applicable Order or written notice to proceed from Procurement Officer.

State's Contract No. is: ADSP017-00006796 The effective date of the Contract is: 04/03/17-01/31/18 Contract awarded 04/03/2017

Procurement Officer signature

Gina DeCotiis

Procurement Officer printed name

Contract qualification award can be viewed at <https://spo.az.gov/procurement-services/professional-services>



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Attachment 2-A
Experience and Capacity

STATE MAY DETERMINE YOUR SUBMITTAL IS NON-RESPONSIVE IF YOU DO NOT ANSWER ALL QUESTIONS FULLY.

DEFINITIONS

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

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

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

Firm: Defined in A.R.S § 32-101(B.13.).

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

Structure: How a business is organized to accomplish its objectives (ie, Sole Proprietor, Limited Liability Company, Cooperative, Corporation, Partnership, S Corporation).

1.0 Five (5) Example Projects

List no more than five (5) **ARIZONA PROJECT** Example Projects Which Best Illustrate Firms Qualification for this contract in the chart provided below. Select project where multiple team members worked together, if possible, that demonstrate the team’s capability to perform work similar to that required for this qualifications list contract. (NOTE: The integrity of the chart table columns shall remain unchanged, however the rows for each project may be expanded by the Offeror to accommodate the information).

- a. Title and Locations of project or contract. For an indefinite delivery contract, the location is the geographic scope of the contract.
- b. Enter the year completed of the professional services (such as planning, engineering study, or design), and/or the year completed if construction. If any of the professional services or the construction projects are not complete, leave Year Completed blank and indicate the status in Brief Description of Project and Relevance to This Contract (block f).
- c. Project Owner or user, such as a government agency or installation, an institution, a corporation or private individual.
- d. Provide the original budget or not to exceed dollar amount for the project.
- e. Provide the Total Cost of the Project. If any of the professional services or construction projects is not complete, indicate the percentage complete and whether this project will be on budget, over or under budget.
- f. Brief Description: Indicate scope, size, and length of project, principle elements and special features of the project. Discuss the relevance of the example project to this contract.



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Title and Location of Project	Design Completion Year	Construction Completion Year	Project Owner	Project Original Budget (or not to exceed amount)	Total Cost of the Project	Brief Description of Project
Yuma Border Patrol Sector Headquarters Command and Control (C2) Renovations , Yuma, Arizona	2016		Au Authum Ki, Inc.	\$334,339 (Fee)	\$334,339 (Fee)	Michael Baker provided architecture and engineering services for renovation of the Yuma Border Patrol Sector Command and Control (C2) Facility. Michael Baker designed a modular facility in order to ensure undisturbed operations while the C2 facility was renovated. The C2 Center renovation of the existing space to improve the overall functionality, upgrade the communications and electrical services, and refresh the interior environment to benefit the border patrol agents' well-



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						being. Michael Baker provided mechanical, electrical, and telecommunications design.
Paseo Vista Recreation Area Drainage Site Plan/Improvement, Chandler, Arizona	2016	2016	City of Chandler	\$204,841 (Fee)	\$204,841 (Fee)	Michael Baker completed the drainage analysis and report for controlling stormwater run-off throughout the 64-acre Paseo Vista Recreation Area. Michael Baker developed erosion and drainage control construction plans based on the results of the drainage analysis and a drainage control maintenance plan for the City for use in maintaining newly constructed storm control features.
S.R. 86, Valencia Road to	2015		Arizona Department of	\$4,357,142 (Fee)	\$4,357,142 (Fee)	The Michael Baker Team added two



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<p>Kinney Road, Tucson, Arizona</p>			<p>Transportation</p>			<p>lanes to the existing roadway to create a four-lane divided highway. The design considered the need to transition from the proposed roadway to the existing roadway while maintaining two lanes of traffic at all time during construction.</p> <p>Michael Baker was responsible for ensuring that all communications, closed circuit television (CCTV) cameras, dynamic message signs (DMS), and detection equipment specified in the design were compatible with existing Freeway Management System/Intelligent Transportation System (FMS/ITS) infrastructure. The design included communication</p>
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						<p>on block diagrams, DMS and structure information, CCTV camera mounting details, CCTV and DMS cabinet block diagrams, loop detector system for traffic counting and monitoring, wireless equipment, and fiber optic cable.</p> <p>This project included development of a design memorandum document (DMD); plans, specifications, and estimate (PS and preliminary and detailed design.) The design involved extensive utility relocation along with the construction of 13 major drainage structures and two bridges. Significant realignment and reconstruction</p>
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						<p>n of local access roads were also required to eliminate substantial skew angles and create safer signalized intersections .</p> <p>The Michael Baker team performed all work necessary to provide the client with a design for the intelligent transportation system (ITS) along S.R. 86 from Valencia Road to Kinney Road, including 1,800 feet of sewer line for Pima County Regional Water Reclamation Department (PCRWRD).</p> <p>Water/Sewer: Design, Special provisions and cost estimates were prepared for the extensive relocation of utilities for 12,500 linear feet of</p>
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						<p>waterline for the City of Tucson Water Department. At initial review, several sewer lines appeared to be in conflict with the proposed new roadway work. ADOT requested that all sewer manholes within the project pavement be relocated outside. In order to save costs and have minimal negative impact on the SR 86 traffic flow, Michael Baker was able to negotiate alternative solutions that allowed a portion of the existing system to remain in place. By minimizing the rework and replacement of the existing system, Michael Baker was able to reduce the project</p>
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						<p>construction cost.</p> <p>Added Value: Since the roadway, drainage, and utility relocation were all provided by the same company; Michael Baker was able to harness the expertise of the full design team and approach design issues from a big picture project perspective. This streamlined the design and project coordination efforts and led to a win-win project approach.</p>
Rio de Flag Flood Control and Design Concept Report, Flagstaff, Arizona	2014		City of Flagstaff, Arizona	\$241,488 (Fee)	\$241,488 (Fee)	Baker prepared a Design Concept Report for the City of Flagstaff, incorporating multiple alternatives and a preferred alternative for 100-year flood control facilities for two miles of Rio de Flag and one mile



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						<p>of Clay Avenue Wash through densely populated downtown Flagstaff. The goal of the project was to reduce costs associated with the project by value engineering and through the use of FEMA 100-year discharge rates as an alternative to discharge rates previously calculated for the project. Baker worked with Hunter Contracting to develop construction costs and sequencing, and to value engineer the preferred design to ensure the client realizes the greatest efficiencies. In addition, Baker completed existing conditions floodplain modeling and mapping</p>
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						so that the project can be submitted to FEMA as a CLOMR prior to construction.
S.R. 303L Roadway and Traffic Engineering Design, Glendale and Surprise, Arizona	2015		Arizona Department of Transportation	\$7,398,821 (Fee)	\$7,398,821 (Fee)	<p>Michael Baker provided roadway and traffic engineering for improvements to S.R. 303, including design of a six-lane divided highway with provisions for a future fourth lane and high-occupancy vehicle (HOV) lane in each direction between Glendale Avenue and Peoria Avenue. Michael Baker also provided post-design services and construction support to ensure a successful project.</p> <p>Features included: Structural/Bridge: The project included the design of four overpass structures at</p>



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						<p>Northern Avenue, Olive Avenue, Northern Parkway, and Peoria Avenue, with both stub and full height abutments. Michael Baker analyzed vertical sight distances, bridge clearance calculations, future need for falsework during bridge construction, construction phasing and sequencing, and ROW requirements . The goal of the interchange geometry analysis was to reduce interim construction costs; for example, reducing the number of bridges from twelve to six, while minimizing throw-away construction. Michael Baker analyzed the interim configuration and finalized the horizontal and vertical</p>
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						<p>alignments, ensuring the interim design would be compatible with constructability of the ultimate (future) design.</p> <p>Traffic: The three span Olive Avenue overpass crosses the BNSF. While the ultimate design included a grade separated crossing, the temporary detour route required a new at-grade crossing. Michael Baker's Traffic Group coordinated with BNSF to meet their clearance requirements , designed the new warning gates and signal pre-emption, prepared the signing and marking, traffic control, construction sequencing, and traffic signal designs. Michael</p>
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						<p>Baker also completed traffic control and construction sequencing for the entire project, which included coordination with local City jurisdictions on road closures.</p> <p>Drainage: Michael Baker's Roadway and Drainage Group developed an integrated method of stitching roadway and drainage design together with plan production, thereby reducing errors between design, plans, and quantities.</p> <p>Partnering Efforts: ADOT designed one mile of roadway within the Michael Baker segment of this project. We successfully</p>
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						<p>coordinated with ADOT to integrate plan sheets and design elements into one project document package.</p> <p>The Peoria Avenue overpass was designed by Sherly Paul from ADOT Bridge Group A. We worked closely with Sherly through the course of the design to keep her informed of any and all project developments.</p> <p>The City of Surprise coordinated with ADOT and Michael Baker to discuss aesthetic enhancements, signal equipment, lighting, and ITS facilities along Peoria Avenue. These facilities could only be installed by ADOT for the City of Surprise, if</p>
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						<p>MCDOT and the City of Glendale agree. The timing of completion of the different segments of the SR 303L project dictated transitions at both ends of Michael Baker's segment.</p> <p>Michael Baker also coordinated with the different segments to provide a temporary detour to tie into the adjacent segments.</p>
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Attachment 2-A
Experience and Capacity

STATE MAY DETERMINE YOUR SUBMITTAL IS NON-RESPONSIVE IF YOU DO NOT ANSWER ALL QUESTIONS FULLY.

2.0 EMPLOYEES BY DISCIPLINE

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

Enter requested information in the chart provided below:

- a. Select disciplines from the List of Disciplines. For employees that do not qualify for any of the disciplines, select "Other".
- b. Each person can be counted only twice; once for his/her primary function and once for his/her secondary function. Primary and secondary functions should be indicated by including a "P" or an "S" in column b after the Description Title is given.
- c-d. If the form is completed for a firm (including all branch offices), enter the number of employees by disciplines in column c. If the form is completed for a branch office, enter the number of employees by discipline in column d and for the firm in column c. (NOTE: The Offeror may insert or delete rows in the existing Employees by Discipline chart table on page six (6 as necessary to complete the requirements for Question 2).



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EXAMPLE:

a. Discipline Title	b. Function: Primary (P) or Secondary (S)	c. No. of Employees Firm	d. No. of Employees Branch
Example: Architect	P	138	50-Yuma Branch 50-Tempe Branch 38 – Phoenix Branch
Example: Architect	S	20	5-Yuma Branch 5-Tempe Branch 5 – Phoenix Branch 5- Tucson Branch

a. Discipline Title	b. Function: Primary (P) or Secondary (S)	c. No. of Employees Firm	d. No. of Employees Branch
Archeologist	P	45	
Architect	P	43	5 – Phoenix Branch
Biologist	P	14	
CADD Technician	P	197	7 – Phoenix Branch
Civil Engineer	P	405	15 – Phoenix Branch
Construction Manager	P	103	1 – Phoenix Branch
Construction Inspector	P	235	1 – Phoenix Branch
Cost Engineer/Estimator	P	21	
Ecologist	P	7	
Electrical Engineer	P	20	
Environmental Engineer	P	8	



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Environmental Scientist	P	150	2 – Phoenix Branch
Geodetic Surveyor	P	1	
Geographic Information System	P	161	3 – Phoenix Branch
Geologist	P	23	
Hydrologist	P	3	
Landscape Architect	P	8	
Mechanical Engineer	P	21	
Project Manager	P	76	3 – Phoenix Branch
Soils Engineer	P	17	
Structural Engineer	P	128	1 – Phoenix Branch
Technician/Analyst	P	29	
Transportation Engineer	P	112	4 – Phoenix Branch
Other	P	4,098	44 – Phoenix Branch
Total	P	5,925	86 – Phoenix Branch

3.0 FIRMS EXPERIENCE AND REVENUE

- a. [Firm shall complete the Excel spreadsheet titled “Amendment I Project Experience Number of Projects and Revenue”, using same document title and upload in Excel format as an “Attachment” with firm’s offer in ProcureAZ. \(NOTE: Amendment I version clarifies column instructions and additions of project experience categories\).](#)

4.0 FIRMS SERVICES

- a. [Firm shall complete the Excel spreadsheet titled “2017 Professional Services List of Firms Services” shall be completed and uploaded in Excel format only as an “Attachment” in ProcureAZ at time of offer submission.](#)

Amendment I ADSP017-00006796 Project Experience Number of Projects and Revenue
 ADSP017-00006796 2017 Annual Professional Services Qualifications List
 FIRMS NAME (INSERT NAME): Michael Baker International, Inc.

TYPE OF PROJECT	TOTAL NUMBER OF FIRM PROJECTS (ALL FIRM LOCATIONS) COMPLETED IN LAST THREE YEARS	Using the Revenue Index (Enter 1-10) indicate the approximate revenue the firm has earned over the last three years from ARIZONA ONLY state, municipal, federal etc. government projects only	Using the Revenue Index (Enter 1-10) indicate the approximate revenue the firm has earned over the last three years from ARIZONA ONLY non-government projects only	TYPE OF PROJECT	TOTAL NUMBER OF FIRM PROJECTS (ALL FIRM LOCATIONS) COMPLETED IN LAST THREE YEARS	Using the Revenue Index (Enter 1-10) indicate the approximate revenue the firm has earned over the last three years from ARIZONA ONLY state, municipal, federal etc. government projects only	Using the Revenue Index (Enter 1-10) indicate the approximate revenue the firm has earned over the last three years from ARIZONA ONLY non-government projects only
Acoustics, Noise Abatement	23	0	0	Land Surveying	22	4	0
Activity Centers	5	0	2	Landscape Architecture		0	0
Aerial Photography; Airborne Data and Imagery Collection and Analysis	8	1	0	LEED Accredited A/E	36	5	0
Agricultural Development; Grain Storage; Farm Mechanization	0	0	0	LEED Independent 3rd Party Building Commissioning	33	0	0
Air Pollution Control	13	0	0	Libraries; Museums; Galleries	0	0	0
Airports; Navais; Airport Lighting; Aircraft Fueling	71	0	4	Lighting (Exteriors; Streets; Memorials; Athletic Fields, Etc.)	0	0	1
Airports; Terminals and Hangars; Freight Handling	59	0	4	Lighting (Interior; Display; Theater, Etc.)	18	0	0
Animal Facilities	0	0	0	Lighting (Cave; Cavern)	3	0	0
Anti-Terrorism/Force Protection	6	5	0	Mapping Location/Addressing Systems	0	0	0
Area Master Planning	23	2	4	Materials Handling Systems; Conveyors; Sorters	0	0	0
Auditoriums and Theaters	1	0	0	Materials Testing	0	0	0
Automation; Controls; Instrumentation	1	0	0	Measurement / Verification / Conservation Water Consumption	0	0	0
Barracks; Dormitories	16	5	4	Medical Related	0	0	0
Bridge Design: Bridges	164	0	0	Metallurgy	13	0	0
Cartography	0	0	0	Mining and Mineralogy	0	0	0
Cemeteries (Planning and Relocation)	0	0	0	Modular Systems Design; Pre-Fabricated Structures or Components	3	0	0
Chemical Processing and Storage	0	0	0	Mold Investigation	0	0	0
Child Care/Development Facilities	0	0	0	Museums	0	0	0
Codes; Standards; Ordinances	18	0	1	Nuclear Facilities; Nuclear Shielding	0	0	0
Cold Storage; Refrigeration and Fast Freeze	0	0	0	Office Buildings; Industrial Parks	21	4	2
Commercial Building (Low Rise); Shopping Centers	16	0	0	Outdoor Recreation	41	0	2
Communications Systems; TV; Microwave	5	0	0	Petroleum and Fuel (Storage and Distribution)	4	0	0
Community Facilities	3	0	0	Phase I Environmental	0	0	0
Computer Facilities	19	0	0	Photogrammetry	8	1	0
Conservation and Resource Management	0	0	0	Pipelines (Cross-Country - Liquid and Gas)	41	0	0
Construction Management	91	0	0	Plumbing and Piping Design	25	6	3
Construction Materials Testing	0	0	0	Pneumatic Structures, Air-Support Buildings	0	0	0
Construction Surveying	33	0	0	Power Generation, Transmission, Distribution	4	0	0
Controls and Electronics Engineer	0	0	0	Prisons and Correctional Facilities	1	0	0
Corrosion Control: Cathodic Protection Electrolysis	3	0	0	Product, Machine Equipment Design	0	0	0
Cost Estimating; Cost Engineering and Analysis; Parametric Costing; Forecasting	76	5	4	Public Safety Facilities	3	0	1
Cryogenic Facilities	0	0	0	Radar; Sonar; Radio and Radar Telescopes	0	0	0
Dams (Concrete; Arch)	9	0	0	Radio Frequency Systems and Shieldings	0	0	0
Dams (Earth; Rock); Dikes; Levees	9	0	0	Railroad; Rapid Transit	33	0	0
Desalination (Process and Facilities)	2	0	0	Recreation Facilities (Parks, Marinas, Etc.)	41	0	2
Design & Planning Structured Parking Facilities	31	4	0	Refrigeration Plants/Systems	0	0	0
Design-Build - Preparation of Requests for Proposals	91	6	4	Rehabilitation (Buildings; Structures; Facilities)	21	0	0
Detention Security Systems	11	5	0	Research Facilities	2	0	0
Digital Elevation and Terrain Model Development	8	0	0	Resources Recovery; Recycling	0	0	0
Digital Orthophotography	1	0	0	Rivers; Canals; Waterways; Flood Control	43	1	1
Dining Halls; Clubs; Restaurants	6	0	0	Roof Infrared Imaging to Identify Water Leaks	0	0	0
Disability / Special Needs	18	0	3	Roofing	0	0	0
Dredging Studies and Design	2	0	0	Safety Engineering; Accident Studies; OSHA Studies	8	0	0
Ecological and Archeological Investigations	44	0	0	Security Systems; Intruder and Smoke Detection	11	2	0
Educational Facilities; Classrooms	27	0	0	Seismic Designs and Studies	5	0	0
Electrical Studies and Design	53	6	4	Sewage Collection, Treatment and Disposal	25	1	0
Electronics	0	0	0	Soils and Geologic Studies; Foundations	68	5	1
Elevators; Escalators; People-Movers	3	0	0	Solar Energy Utilization	4	0	0
Energy / Water Auditing Savings	0	0	0	Solid Wastes; Incineration; Landfill	6	0	0
Energy Conservation; New Energy Sources	7	0	0	Special Environments; Clean Rooms, Etc.	0	0	0
Environmental Impact Studies, Assessments or Statements	173	5	4	Specifications Writing	11	0	1
Fallout Shelters; Blast-Resistant Design	1	0	0	Storm Water Handling and Facilities	152	6	1
Fire Protection	27	6	0	Structural Design; Special Structures	78	4	2
Fisheries; Fish Ladders	0	0	0	Surveying; Platting; Mapping; Flood Plain Studies	95	4	2
Forensic Engineering	1	0	0	Sustainable Design	34	6	0
Garages; Vehicles Maintenance Facilities; Parking	31	4	0	Swimming Pools	1	0	0
Gas Systems (Propane; Natural, Etc.)	3	0	0	Testing and Inspection Services	83	0	4
Geodetic Surveying: Ground and Airborne	6	0	0	Topographic Surveying and Mapping	95	4	2
Heating; Ventilating; Air Conditioning	8	0	3	Towers (Self-Supporting and Guyed Systems)	1	0	0
Highways; Streets; Airfield Paving; Parking Lots	232	8	5	Toxicology	3	0	0
Historical Preservation	23	0	0	Traffic and Transportation Engineering	212	8	5
Hospital and Medical Facilities	11	0	0	Traffic Studies	11	2	4
Hotels; Motels	7	0	0	Transportation	129	8	4
Housing (Residential, Multi-Family; Apartments; Condominiums)	48	0	1	Tunnels and Subways	2	0	0
Hydraulics and Pneumatics	6	0	0	Urban Renewals; Community Development	6	0	2
Hydrographic Surveying	2	0	0	Utilities (Gas and Steam)	26	3	1
Industrial Buildings; Manufacturing Plants	12	0	0	Value Analysis; Life-Cycle Costing	3	0	0
Industrial Processes; Quality Control	1	0	0	Warehouse and Depots	7	0	0
Industrial Waste Treatment	1	0	0	Waste Water Treatment Facility	9	0	0
Intelligent Transportation Systems	10	0	0	Water Resources; Hydrology; Ground Water	65	5	0
Infrastructure	0	0	0	Water Supply; Treatment and Distribution	36	2	0
Irrigation; Drainage	51	3	5	Water Well Rehabilitation; Water Well Work	0	0	0
Judicial and Courtroom Facilities	0	0	0	Wind Tunnels; Research/Testing Facilities Design	0	0	0
Laboratories; Medical Research Facilities	2	0	0	Zoning; Land Use Studies	23	1	3
Labs - General	2	0	0				
Labs - Research - Dry	0	0	0				
Labs - Research - Wet	0	0	0				

Professional Services Index Number	Revenue
1.	Less than \$100,000
2.	\$100,000 to less than \$250,000
3.	\$250,000 to less than \$500,000
4.	\$500,000 to less than \$1 Million
5.	\$1 Million to less than \$2 Million
6.	\$2 Million to less than \$5 Million
7.	\$5 Million to less than \$10 Million
8.	\$10 Million to less than \$25 Million
9.	\$25 Million to less than \$50 Million
10.	\$50 Million or greater



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EXPERIENCE REFERENCES:

THE PRIME FIRM SHALL LIST A TOTAL OF THREE (3) CLIENT REFERENCES FOR ANY PROJECTS COMPLETED IN THE LAST YEAR BY THE FIRM (OR A BRANCH LOCATION). REFERENCES MAY BE CONTACTED BY ANY ELIGIBLE AGENCY.

1	Client Company/Address	Contact	Begin Date	End Date
	City of Flagstaff/211 West Aspen Ave., Flagstaff, AZ 86001	James Duvall	1/14/2014	9/1/2014
	Phone Number	Email Address		
	928-213-2678	jduval@flagstaffaz.gov		
	List project name, project location, original design fee, final design fee, construction costs (if applicable), and program facilities. Rio de Flag Flood Control and Design Concept Report, Flagstaff, Arizona, \$241,487 (Fee)			
	Services performed similar to those described in Solicitation Design concert report, hydrology and hydraulic modeling, construction plans, cost estimates, value engineering			
2	Client Company/Address	Contact	Begin Date	End Date
	City of Chandler/PO Box 4008, Chandler, Arizona 85244	Gina Ishida-Raybourn	10/1/2014	2/28/2016
	Phone Number	Email Address		
	480-782-3584	gina.ishida-raybourn@chandleraz.gov		
	List project name, project location, original design fee, final design fee, construction costs (if applicable), and program facilities. Paseo Vista Recreation Area Drainage Site Plan/Improvement, Chandler, Arizona, \$204,841 (Fee)			
	Services performed similar to those described in Solicitation Interim repair plan, conceptual design presentation, preliminary and final design, post-construction repair and maintenance plan, drainage analysis, erosion and drainage control construction plans, drainage control maintenance plan			
3	Client Company/Address	Contact	Begin Date	End Date
	Au Authum Ki, Inc./665 East Morelos Street, Chandler, Arizona 85225	Karl Ahlen	5/1/2015	2/1/2016
	Phone Number	Email Address		
	203-452-3991	karl@authumki.com		
	List project name, project location, original design fee, final design fee, construction costs (if applicable), and program facilities.			



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Yuma Border Patrol Sector Headquarters Command and Control (C2) Renovations, Yuma, Arizona, \$334, 339 (Fee)

Services performed similar to those described in Solicitation

Modular building design, C2 renovations design, architecture, electrical design, mechanical design, telecommunications design

End of Attachment 2-A



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Attachment 2-B
Organization Profile

STATE MAY DETERMINE YOUR PROPOSAL IS NON-RESPONSIVE IF YOU DO NOT ANSWER ALL QUESTIONS FULLY.

ORGANIZATION PROFILE

Firm Name	Michael Baker International, Inc.	Year established	1984	
Principal address (street, city, state)	2929 N. Central Avenue, Suite 800, Phoenix Plaza Tower II, Phoenix, AZ 85012			
Entity type:	Corporation	Structure:	C Corporation	
Branch or Division:	Branch	Parent Company:	Michael Baker International Holdco Corporation	
Years the organization has conducted business in Arizona.			33 years	
Contract Representatives to Contact				
	Name	Title	Telephone Number	E-Mail Address
1.	Doug Plasencia	Vice President	602-798-7552	dplasencia@mbakerintl.com
2.	Marta Gerber	Transportation Dept. Manager	602-798-7599	mgerber@mbakerintl.com
3.	x	x	x	x
Firm Professional Licenses/Certifications (INCLUDE COPY OF DOCUMENT IN OFFER)				
	Description	Issuer	Number	Expiration
1.	Arizona Board of Technical Registration	State of Arizona	11037-1	4/14/17
2.	Firms may submit their transaction privilege tax license or if applicable Arizona Corporate Commission registration number in place of a business license and alter line item in Organization Profile to read accordingly to document firm is submitting.			
3.				

End of Attachment 2-B

PART 4 of the Solicitation Documents:
 Offer Forms (Attachments)

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Attachment 3-A
Method Proposal
(Method of Approach)

RESERVED FOR AWARDED DESIGN PROFESSIONAL UPON SERVICE REQUEST

End of Attachment 3-A



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Attachment 3-B
Key Personnel Proposal

Answer all questions thoroughly in the spaces provided. **Complete this form in full for each one of the key personnel who will participate in this contract.** Insert or attach a separate resume if desired, but any attached resumes are supplemental to this form and **do not substitute resumes for this form.** Offeror shall list any resume filename within the Key Personnel Form resume section and Attach as titled in ProcureAZ with offer. Resumes shall not be listed in Attachment 3-B as Supplements.

1	Name:	Douglas Plasencia, PE, CFM	How long with company?	12 years
	Current position in company:	Vice President/Office Executive	How long in position?	2 years
	Position for the Services:	Principal-In-Charge	How much of time will be dedicated to the Services?	15 %
	What primary functions will be assigned?	Ensuring the Michael Baker project manager and team is serving client, executing project scope, while meeting financial and quality control metrics.		
	Describe person's experience in performing services like those that are to be assigned:	<p>Mr. Plasencia has been a Michael Baker Senior Manager for nine years and currently manages Michael Baker's Arizona and Nevada architecture, engineering, and geospatial and survey operations. Signature projects include FEMA floodplain mapping and hazard mitigation; tactical infrastructure on the U.S. border; state and municipal projects; and emerging emphasis with traditional private sector environmental, oil and gas permitting, and land development clients. He is a recognized expert in hydrologic-hydraulic engineering, flood control, floodplain management, and policy issues associated with the planning, environmental, and economic aspects of riverine and coastal floodplains. His policy expertise has been called upon by Congress, federal agencies, and the Executive Office of the President, and he has served as a panel member or reviewer of several National Academy of Sciences studies. He currently serves as the President of the ASFPM Foundation and previously was a member of the FEMA Advisory Board, as well as National Chair of ASFPM. Doug is a registered professional engineer in several states and is a certified floodplain manager. He has degrees in Forestry from the University of Minnesota and a Masters in Watershed Management from the University of Arizona.</p>		



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List person's job-related training and education:	<p> M.S., 1988, Watershed Management, University of Arizona B.S., 1982, Forest Resource Management, University of Minnesota Certified Floodplain Manager Professional Engineer: Arizona – 24426; Nevada – 013764; Virginia - 022187 </p>
Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf

2	Name:	Marta Gerber, PE	How long with company?	7 years
	Current position in company:	Transportation Department Manager/Operations Manager	How long in position?	4 years
	Position for the Services:	Transportation Design Manager	How much of time will be dedicated to the Services?	15 %
	What primary functions will be assigned?	Managing project(s), corresponding with client, project design, analysis, overseeing project efforts		



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<p>Describe person's experience in performing services like those that are to be assigned:</p>	<p>Ms. Gerber's experience includes traffic engineering, including signal design, signing and marking design, traffic calming design, intersection geometric improvements analysis and design, transportation planning and modeling, traffic impact studies, access control studies, parking studies and signal coordination. She has successfully completed and served as project manager for studies that started with a modeling and analysis phase and included final reports. In addition, she successfully managed design projects including signal and signing and marking, signal coordination design, future fiber interconnect, and ITS designs all the way to final plans, specifications and estimates (PS&E) documents for all project improvements. Assignments have also included utility coordination, stakeholder meetings, and public meetings for projects completed for various Arizona municipal cities. She routinely coordinates with City, County, State and Federal agencies; and has both attended and made presentations at public hearings, planning and zoning meetings, and city council meetings.</p>
<p>List person's job-related training and education:</p>	<p>B.S.E., 1998, Civil Engineering, Arizona State University Professional Engineer: Arizona - 41369</p>
<p>Resume:</p>	<p>Attachment 3-B Key Personnel Form Supplement Resumes.pdf</p>



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3	Name:	Bruce Preston, RA, PMP, DBIA, LEED AP BD+C	How long with company?	8 years
	Current position in company:	Project Manager/Operations Manager	How long in position?	2 years
	Position for the Services:	Architecture	How much of time will be dedicated to the Services?	25 %
	What primary functions will be assigned?	Architecture, design, CAD support		
	Describe person's experience in performing services like those that are to be assigned:	<p>Mr. Preston has been practicing project management and architecture in various fields for over a decade. His experience ranges from multi-project management, project program and design document preparation, and construction administration. He has provided services to municipal, state and federal agencies, design/build contractors, developers, and individual clients. He has in-depth experience with the following project types: including federal government Department of Defense, mixed use/retail, telecommunications, assisted living, dormitory and military housing, commercial office buildings, hospitality, transportation, child care, and educational facilities. Mr. Preston is integral to the management team for the design, selection, coordination, and detailing of architectural materials and systems and is involved in developing project specifications. He is skilled in Building Information Modeling (BIM), the latest 3D modeling that uses virtual design for project collaboration from design through construction. Mr. Preston participates in the architectural design process and develops alternative solutions for the client or agency. In addition to providing architectural design and BIM support, he has experience providing on-site observation services throughout the construction process, ensuring that the work is consistent with the construction documents and the architectural design intent. His imminent involvement as a design manager allows him to be able to keep the design on schedule and within budget. As a LEED AP BD+C, he is responsible for the execution of LEED during the design process on several projects as well as being the LEED AP and Coordinator for the project scorecards tracking design credits.</p>		



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List person's job-related training and education:	Revit Fundamentals Certificate, 2009 Revit Fundamentals Certificate, 2011 Revit Architecture Certified Professional, 2009 Revit Architecture Certified Professional, 2011 LEED Green Associate, 2009 Design-Build Professional, 2011 LEED Accredited Professional BD+C, 2011 Project Management Professional (PMP), 2015 Registered Architect: Arizona - 62802
Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf

4	Name:	Pawel Paszczuk, RA, LEED	How long with company?	8 years
	Current position in company:	Architect	How long in position?	8 years
	Position for the Services:	Architecture	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned?	Architecture, design, production of documents		
	Describe person's experience in performing services like those that are to be assigned:	Mr. Paszczuk is a highly motivated, creative and versatile Project Architect with several years of experience ranging from schematic design to construction administration as well as the management of CAD production teams on projects ranging from 6,000 to over 500,000 square feet. He has a talent for analyzing problems, developing and simplifying procedures, and finding innovative solutions. He also has extensive knowledge of AutoCAD Architecture, Adobe Photoshop and Google SketchUp. Mr. Paszczuk is an energetic self-starter with excellent analytical and organizational skills		



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List person's job-related
training and education:

B.Arch., 2001, Architecture, Roger Williams University
NCARB, 2008, 107143
LEED Accredited Professional, 2009
Registered Architect: Arizona – 49179; Connecticut – 11653; Alaska - AELA14792

Resume:

[Attachment 3-B Key Personnel Form Supplement Resumes.pdf](#)



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5	Name:	Wayne Frank, AIA	How long with company?	2 years
	Current position in company:	Project Manager	How long in position?	2 years
	Position for the Services:	Architecture	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned?	Architecture, project management		
	Describe person's experience in performing services like those that are to be assigned:	<p>Mr. Frank is an experienced architect with several years experience working with complex and technologically advanced clients such as Kirtland Air Force Base, Sandia National Labs, the Federal Aviation Administration, and many municipalities. He is able work closely with clients, coordinate complicated systems and meet sophisticated design requirements through his experience and communication skills. He has been involved with a varied array of projects such as offices, public and schools, technology labs, museums, and public buildings. Among all of these communication and meeting a client's needs are always his top priority. He is interested in sustainable design and construction and received the LEED Accreditation in 2004. Wayne has won design awards for planning and building design. Wayne is excellent at multi-tasking and delivering an on-time quality project. Wayne has received a Masters in Construction Management and knows how to effectively manage projects. His best qualities are his honesty, integrity, and work dedication. As a Project Architect for Michael Baker International, he will use all of his abilities to successfully execute each project that he is involved with.</p>		
	List person's job-related training and education:	<p>MCM, 2008, Construction Management, University of New Mexico M.Arch., 2004, Architecture, University of New Mexico B.Arch., 2002, Architecture, University of New Mexico Registered Professional Architect: Arizona – 60570; Missouri - 2011025121; California - 34530; New Mexico - 4395; Oklahoma - 6743</p>		



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Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf
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6	Name:	Kevin Kugler, AICP	How long with company?	13 years
	Current position in company:	Technical Manager	How long in position?	5 years
	Position for the Services:	Transportation Planning Manager	How much of time will be dedicated to the Services?	30 %
	What primary functions will be assigned?	Project management and oversight		
	Describe person's experience in performing services like those that are to be assigned:	<p>Mr. Kugler has extensive planning experience that encompass a wide array of planning projects, which includes direct management, oversight, negotiations, leading public meetings and City Council presentations relative to transportation corridor studies and master plans, General Plans, floodplain mitigation, riparian edge design guidelines and rules of development, design concept reports, master planned communities, drafting of General Plans, Specific Area Plans, zoning ordinances, subdivision code updates, land entitlement negotiations and conflict resolution, lead negotiator for sensitive public projects, development agreement negotiations, transportation planning, economic impact studies, watercourse master planning, hillside development guidelines, regional center and commercial site planning, public meeting facilitation, residential subdivision platting, and design guidelines.</p> <p>His Tribal work experiences include five Arizona Tribes having worked particularly close with the White Mountain Apaches and Navajo Nation in establishing the first public transit system in the White Mountain and with the Yavapai-Apache Tribe along with the Town of Camp Verde in a needs assessment and development of a conceptual park master plan.</p> <p>His work experience includes 12 years with the Cities of Phoenix, Show Low and Goodyear, Arizona. Mr. Kugler has planned thousands of acres of residential master planned communities, commercial centers, and business parks while managing a Planning Department in one of Arizona's fastest growing cities.</p>		



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List person's job-related
training and education:

M.E.P., 2003, Urban and Regional Planning, Arizona State University
B.S., 1990, Business Administration, Arizona State University
American Institute of Certified Planners, Arizona, 1997, 12996
AICP - Annual Continuing Education Credits

Resume:

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7	Name:	Michael LoTempio, PE, LEED AP BD+C	How long with company?	3 years
	Current position in company:	Project Manager	How long in position?	3 years
	Position for the Services:	Site Development Manager	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned?	Design, design supervision, overseeing project design, project management and oversight		
	Describe person's experience in performing services like those that are to be assigned:	<p>Mr. LoTempio is a registered professional engineer in the state of Arizona, North Dakota, and New York with a technical background in general civil engineering, land development, infrastructure and construction administration / inspection. For the past 18 years, Mr. LoTempio has been responsible for planning, design and project management of numerous land development, and infrastructure projects. Expertise includes site and roadway layout, site grading and storm drainage design, erosion control/storm water pollution prevention plans, sanitary sewer master planning and network design and water distribution master planning and network design.</p> <p>Professional experience encompasses design and project management on a wide range of civil engineering projects. Experience includes development feasibility and cost analysis studies, preliminary feasibility design, land use entitlements and zoning, construction drawing and document preparation, contractor tendering and construction administration/onsite civil engineering services, project scheduling as well as overseeing and reporting of job progress, and preparing construction cost estimates. Various representative projects are listed below.</p>		



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List person's job-related
training and education:

B.S., 1996, Civil Engineering, The State University of New York at Buffalo
LEED Accredited Professional BD+C, 10356526
Professional Engineer: Arizona – 43727; North Dakota - PE-8755; New York -
082986

Resume:

[Attachment 3-B Key Personnel Form Supplement Resumes.pdf](#)



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8	Name:	Tim Quillman, PE	How long with company?	13 years
	Current position in company:	Operations Manager	How long in position?	4 years
	Position for the Services:	General Civil Design Manager	How much of time will be dedicated to the Services?	25 %
	What primary functions will be assigned?	Project reviews, engineering oversight and guidance, quality control, design lead		
	Describe person's experience in performing services like those that are to be assigned:	<p>Mr. Quillman is a registered professional engineer in the state of Arizona, California, and Texas with a technical background in civil design along with bridge design and inspection.</p> <p>For the past ten plus years, Mr. Quillman has gained a broad range of experience working on both multi-discipline Federal contracts, primarily through the United States Army Corps of Engineers, Fort Worth District (USACE) Engineering and Construction Support Office (ECSO) and local municipal project. Over that time span, USACE ECSO has been contracted to provide Department of Homeland Security, Customs and Border Protection (CBP) assistance in improving their tactical infrastructure (TI) for various Border Patrol Sectors (OBP). With USACE ECSO as a client, Mr. Quillman has had the opportunity to provide Engineering and Project Management services for upgrading CBP TI which includes items such as roads, fence/barriers, drainage control, lighting and bridges as well as participating on Project Development Teams that identify and plan future projects. On the municipal side, Mr. Quillman has worked on a variety of projects some of which include the Rio de Flag flood control project, Crismon and Hawes Road gas line extensions and Paseo Visita Recreation Area drainage improvements.</p> <p>In addition to his project work, Mr. Quillman also currently serves as the operations manager for the Infrastructure group within the Michael Baker Phoenix office. As part of his duties, Mr. Quillman oversees operations of general civil engineering design, transportation/traffic engineering, structural engineering, surface water engineering, water resources engineering and environmental compliance inspections. In leading the operations effort, Mr. Quillman has been involved in balancing project requirements with available resources; project reviews; guiding junior staff in the development of construction plans and specifications; implementation and continued use of design and CAD standards for projects; and, quality assurance audits on project administration and quality control completed by department project managers.</p>		



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List person's job-related training and education:	Master's Certificate, 2006, Project Management, University of Houston, Clear Lake B.S., 1999, Civil Engineering, University of Arizona Professional Engineer - Civil: Arizona – 40857; California - C68643; Texas - 97633
Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf

ATTACHMENT 3-B SUPPLEMENTS:

(For submission of additional Key Personnel qualifications beyond the number of forms provided in the Offer Documents: Offeror shall copy the Key Personnel Form in its entirety and complete in a separate Word Document for submission with the offer, and list file name below or type "None" on first line if not applicable. Offeror shall title Supplement(s) with the same title as named herein and upload with offer.).

	Title	Document Date	No. of pages	Purpose in Offer
1.	Attachment 3-B Key Personnel Form Supplement.pdf	2/16/17	20	Additional Key Personnel Supplement
2.	Attachment 3-B Key Personnel Form Supplement Resumes.pdf	2/16/17	56	Key Personnel Resumes

(NOTE: The Offeror may insert additional rows as required).

Attachment 3-B
Key Personnel Proposal

Answer all questions thoroughly in the spaces provided. **Complete this form in full for each one of the key personnel who will participate in this contract.** Insert or attach a separate resume if desired, but any attached resumes are supplemental to this form and **do not substitute resumes for this form.** Offeror shall list any resume filename within the Key Personnel Form resume section and Attach as titled in ProcureAZ with offer. Resumes shall not be listed in Attachment 3-B as Supplements.

9	Name:	Sam Darghous, PE, PMP	How long with company?	18 years
	Current position in company:	VP & Customs & Border Protection Market National Director/ Technical Manager	How long in position?	14 years
	Position for the Services:	Aviation/Customs and Border Protection	How much of time will be dedicated to the Services?	25 %
	What primary functions will be assigned?	Schedules, budgets, coordination between clients, design,		
	Describe person's experience in performing services like those that are to be assigned:	As vice president and Customs and Border Protection (CBP) market national director, Mr. Darghous is responsible for growing Michael Baker's CBP portfolio within the Homeland Security market. Mr. Darghous has extensive civil engineering, project, and program management experience supporting federal projects. Mr. Darghous has also logged thousands of flight hours as a FAA Certificated Airline Transport Pilot and currently holds a Flight Instructor certificate. His excellent knowledge and experience in Civil Engineering, combined with his aviation and Program Management qualifications makes Mr. Darghous a valued asset to any project or program. His unique background allows him to implement effective engineering solutions that can be practical and cost effective.		
	List person's job-related training and education:	B.E., 1991, Civil Engineering, Youngstown State University Project Management Professional (PMP), Pennsylvania, 2014, 1749566 Professional Engineer: Arizona – 37541; Nevada - 023385		
	Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

10	Name:	Todd Williams	How long with company?	3 years
	Current position in company:	Environmental Services Director	How long in position?	3 years
	Position for the Services:	Water Quality / Stormwater Management/Technical Manager	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned?	Identifying environmental concerns, water quality, stormwater management		
	Describe person's experience in performing services like those that are to be assigned:	Mr. Williams is a program manager with many years of experience leading a wide range of environmental projects, most recently focusing on stormwater management and water quality. He has extensive knowledge in developing and implementing National Pollutant Discharge Elimination System (NPDES) programs on the federal, state, and county levels.		
	List person's job-related training and education:	MSc, 1993, Biology, University of Waterloo BSc, 1989, Biology, University of Toronto NHI NEPA and Transportation Decision Making, 2008		
	Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

11	Name:	Scott Taylor, PE, DWRE, FASCE	How long with company?	33 years
Current position in company:		Senior Vice President/Office Manager/Technical Manager	How long in position?	5 years
Position for the Services:		Water Quality / Stormwater Management	How much of time will be dedicated to the Services?	30 %
What primary functions will be assigned?		Project oversight, water quality, stormwater management		
Describe person's experience in performing services like those that are to be assigned:		<p>Mr. Taylor has extensive experience in stormwater quality investigations having completed projects in support of TMDLs, BMP research, and BMP design. He has completed projects for federal, state, local, and private clients. He also has experience in storm drain master planning and design for development projects with mixed land use and conjunctive use of storm drain infrastructure with recreational elements. He has developed master storm drain plans, runoff management plans, and final plans and specifications for public and privately funded infrastructure. Mr. Taylor has been a part-time lecturer at the University of California, Irvine and California State University, Long Beach, where he instructed undergraduate courses in hydrology and hydraulic design. He is course coordinator and lecturer in a P.E. license review course and has instructed a course in BMP Design through ASCE Continuing Education. He is currently serving on the Board of Directors for the California Stormwater Quality Association (CASQA). Mr. Taylor has developed training courses for stormwater compliance on construction sites for contractors, developers, municipalities, and engineers. He has provided training courses for various aspects of stormwater compliance for various entities and corporations.</p>		
List person's job-related training and education:		<p>M.S., 1990, Civil Engineering, California State University at Long Beach B.S., 1984, Civil and Environmental Engineering, California State Polytechnic University, Pomona Diplomate, Water Resources Engineer, 2010 Certified Inspector of Sediment & Erosion Control, California, 2012, 1069 Construction General Permit Trainer of Record, California, 2013 Professional Engineer – Civil: Washington – 46037; Utah - 7155691-2202; Tennessee – 112121; Oregon - 84501PE; Nevada – 14345; New Mexico – 20418; Hawaii – 16585; California - 43053; Arizona, 2000, 34870; Texas - 124251</p>		
Resume:		Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

12	Name:	Geoffrey Brownell, PE, CFM	How long with company?	8 years
	Current position in company:	Water Resources Department Manager/Technical Manager	How long in position?	4 years
	Position for the Services:	Hydrology / Hydraulics	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned?	Water resources, hydrology, hydraulics, floodplain, qa/qc		
	Describe person's experience in performing services like those that are to be assigned:	<p>Mr. Brownell has experience as a water resources engineer with extensive knowledge of hydrology, hydraulics, floodplain analysis, roadway drainage design, stormwater best management practices (BMP), and fluvial geomorphology. He has a broad range of experience developing hydrologic and hydraulic models for river systems, local and regional watersheds, and urban development. In addition, Mr. Brownell has completed several drainage master plans, designed large storm drain systems, and developed numerous SWPPPs as part of the NPDES program. Mr. Brownell also has extensive experience preparing and reviewing letters of map change (LOMC) submittals, both as a contractor for local cooperating technical partners (CTP) and as a technical study partner for FEMA. Mr. Brownell has managed projects of similar size and scope in Nevada and Arizona and has been active in the floodplain management community in both states.</p>		
	List person's job-related training and education:	<p>B.S., 1999, Geological Engineering, New Mexico State University Professional Engineer – Civil: Arizona – 42317; Nevada – 020306 Flo-2D Modeling Workshop, January 2010 Stream Restoration Design Course, December 2009 Erosion Control Workshop, November 2009 Leadership in Engineering Administration Program, January-July 2007 Advanced HEC-1 Modeling Short Course, 2006 404, Clean Water Act and Section 106 Consultants Workshop, 2004 HEC-RAS Unsteady Flow Module, 2004 WMS Floodplain Mapping, 2003 Floodplain Issues in Transportation Design, 2003 Project Management 2 Seminar, 2003 Marketing Training, 2002 Project Management 1 Seminar, 2002 Advanced HEC-RAS Modeling, 2002 WMS Hydrologic Modeling, 2001 ASCE Storm Water Management, 2001 Geomorphology for Floodplain Managers, 2000 RiverCAD Software Training, 2000</p>		
	Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

13	Name:	Alejandro Riano	How long with company?	1 years
	Current position in company:	Civil Engineer	How long in position?	1 year
	Position for the Services:	Drainage	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned?	Drainage, data collection, hydrology task, hydraulic task, research, technical guidance		
	Describe person's experience in performing services like those that are to be assigned:	<p>Mr. Riano is a water resources engineer with several years of experience in hydrologic and hydraulic modeling, heavy civil engineering work, personnel training and software testing. He has extensive experience in Area Drainage Master Plans, dam breach modeling, and application of the frequency analysis techniques. Mr. Riano is committed to serve the engineering community by actively participating in local engineering associated organizations to educate and improve the skills in engineering and develop water resources infrastructure, policy and management through the application of state of the art modeling, and cost effective management approaches.</p>		
	List person's job-related training and education:	<p>M.S., 2013, Civil and Environmental Engineering, Arizona State University B.S.E., 2008, Civil Engineering, Arizona State University Professional Engineer: Florida – 75130; Arizona - 53023 Certified Floodplain Manager, 2009, US-09-04284</p> <p>IPCPR 4 Training. Florida Floodplain Manager Association. Orlando Florida. April 15, 2015. 4 hours.</p> <p>Regional Statistical Hydrology and Flood Prediction. Urban Watershed Research Institute. Aurora, Colorado. 2011. 16 PDHs/1.6 CEUs/12CEC hours.</p> <p>SWMM5 for Drainage Planning and Design w/ & w/o LID. Urban Watershed Research Institute. Aurora, Colorado. November 17 & 18, 2011. 16 PDHs/1.6 CEUs/12CEC hours.</p>		
	Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

14	Name:	Scott Nelson, RLS	How long with company?	4 years
	Current position in company:	Surveyor Project Manager	How long in position?	4 years
	Position for the Services:	Surveyor / Mapping / GIS	How much of time will be dedicated to the Services?	40 %
	What primary functions will be assigned?	Surveys, mapping, GIS, topographic survey design, right-of-way plans		
	Describe person's experience in performing services like those that are to be assigned:	<p>Mr. Nelson is a registered land surveyor with several years of project and management experience. As the project manager, he emphasizes client focus at the early stages of a project to fully understand the client's needs in detail and then designs survey solutions tailored for the needs of the project by combining the level of detail required with the appropriate technology to save time and money. His expertise includes ALTA and boundary surveys, R/W surveys, topographic surveys, photogrammetric control and QC surveys, records research, legal descriptions and exhibits, construction surveys and as-built surveys. He has worked on many successful projects similar to those being requested in this solicitation. He is very client oriented and committed to delivering high quality professional services. He is responsible for all aspects of multiple survey projects, including survey field and office work, budgeting, technical services, project coordination and client relationships.</p>		
	List person's job-related training and education:	<p>B.S.E., 1984, Surveying, Iowa State University Land Surveyor: Arizona – 21782; Nevada - 8553</p>		
	Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

15	Name:	John Matthews, GISP, CFM	How long with company?	18 years
	Current position in company:	GIS Specialist	How long in position?	11 years
	Position for the Services:	Survey / Mapping / GIS	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned?	Surveys, mapping, GIS, on-site data collection, mapping and data conversion, map production		
	Describe person's experience in performing services like those that are to be assigned:	<p>Mr. Matthews is an experienced geographic information systems (GIS) specialist. He spent one year working on a 3D mapping project for the government of British Columbia, and for more than nine years he performed mapping for the FEMA Flood Mapping program. For five of those years he supported the FEMA Response/Recovery Division Mapping program in the Mapping and Analysis Center (MAC). For three years of his tenure there he was the technical lead in charge of production and training. Mr. Matthews led production/mapping efforts for the terrorist attacks on September 11, the Shuttle Columbia disaster, and Hurricanes Katrina and Rita. Mr. Matthews has also worked for the FEMA Map Modernization Program, supporting the Comprehensive Flood Risk Resources and Response joint venture, which provides updated flood maps to counties affected by tropical Storm Allison. Mr. Matthews has also supported various other GIS projects, including the U.S. Customs and Border Patrol's Primary Fence Construction along the southern border, Fort Huachuca Real Property Master Plan Update, Buckeye FRS Rehabilitation, Canada Del Oro Hydrologic Study, Lackland AFB Preliminary Design Recruit Housing and Training Replacement Program, Maricopa County On-Call Physical Map Revision (PMR), and Alaska Stand Alone Gas pipeline project (ASAP), and the Alaska South Central LNG Project (AKLNG).</p>		
	List person's job-related training and education:	<p>B.A., 1998, Geography, Simon Fraser University Certificate, 1998, Spatial Information, Simon Fraser University Certified Floodplain Manager, 2008, US-08-03393 Certified GIS Professional, 2009, 00060702</p>		
	Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

16	Name:	Jason Carota, PE	How long with company?	10 years
	Current position in company:	Structural Engineer/Civil Engineer	How long in position?	10 years
	Position for the Services:	Structures	How much of time will be dedicated to the Services?	70 %
	What primary functions will be assigned?	Structural design, detailing		
	Describe person's experience in performing services like those that are to be assigned:	<p>Mr. Carota has experience in the design and rehabilitation of bridges and other structures. His experience includes the development of contract drawings, construction cost estimates, and specifications for various types of structures. Mr. Carota's major strength is structural engineering design of bridges. He has designed various types of bridges, including concrete (pre-stressed, post-tensioned, and cast-in-place) and steel structures. Mr. Carota has experience with civil engineering design projects, including retaining walls and culverts. In addition to bridge design, Mr. Carota is also familiar with AASHTO LRFD Bridge Design Specifications and has performed load rating calculations for many different types of bridges for standard vehicles and overweight permit vehicles.</p>		
	List person's job-related training and education:	<p>M.S., 2004, Structural Engineering, Manhattan College B.S., 2002, Civil Engineering, Manhattan College Professional Engineer: New York – 084471; Arizona – 50744; Colorado – 46364; Utah - 9749025-2202 Leadership in Engineering Administration Program (LEAP), American Council of Engineering Companies of Arizona, Phoenix, Arizona, January 2012 to July 2012 LRFD for Highway Bridge Substructures and Bridge Design, FHWA-NHI, Phoenix, Arizona, February 28 to March 2, 2012 Introduction to Safety of In-Service Bridges, National Highway Institute, Web-based course, September 2011 Shallow Foundations, FHWA-NHI, Phoenix, Arizona, March 24-25, 2010 Practical Implementation of LRFD for Geotechnical Engineering Features Webinar - Shallow Foundations for Soil and Rock, ASCE, Phoenix, Arizona, July 24, 2009 Connection Design, Structural Steel Research Council, Phoenix, Arizona, April 2, 2009 End Diaphragms for Skewed Bridges, Structural Steel Research Council, Phoenix, Arizona, April 2, 2009 Metro North Track Safety Training, 2007 Amtrak Track Safety Training, 2007</p>		
	Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

17	Name: Salahuddin Sheikh, PE	How long with company?	29 years
	Current position in company:	How long in position?	5 years
	Position for the Services:	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned? Structural engineering, bridge specifications, structural design		
	Describe person's experience in performing services like those that are to be assigned: <p>Mr. Sheikh has over four decades of experience related to bridges, water resources, public works, transportation, and environmental engineering for public and private sectors. Projects include bridges, flood control channels, water and wastewater treatment plants, reservoirs, pump stations, lift stations, well facilities, culverts and encasements, soundwalls and retaining walls. Mr. Sheikh's experience also includes heavy industrial structures related to steel mills, automobile plants, chemical and petrochemical facilities and refineries, mining and material handling installations, including conveyor galleries, transfer towers, underground mine structures, and ship loading facilities.</p> <p>Mr. Sheikh has extensive experience in the development of project specifications and estimates for bridge and transportation projects. In the past 20 years, he has prepared the bridge special provisions for over 100 bridge projects including seismic retrofits, bridge widenings, bridge rehabilitation, and new or replacement bridges.</p> <p>Mr. Sheikh has also served as the Quality Control Engineer for the majority of these projects, ensuring plans and specifications are consistent, design and quantities have been checked and all items of work are covered in the contract documents. He is also experienced in structural inspection, evaluation, repairs and rehabilitation of water related facilities.</p>		
	List person's job-related training and education: <p>M.S., 1972, Civil Engineering/Structures, University of Michigan at Ann Arbor B.S., 1970, Civil Engineering, University of Karachi Pakistan Professional Engineer – Civil: Arizona - 34539; California - 32677; Nevada - 14418; Ohio - 41224; Utah - 8546772-2202; Guam - 1841</p>		
	Resume: Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

18	Name:	Chad Andrews, PE	How long with company?	11 years
	Current position in company:	Project Manager	How long in position?	11 years
	Position for the Services:	Transportation Engineer	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned?	Roadway engineering, reviewing plans and specs		
	Describe person's experience in performing services like those that are to be assigned:	<p>Mr. Andrews has experience with urban and rural highways throughout Arizona. He served as the deputy project manager on S.R. 303L, Lake Pleasant Parkway to I-17, and managed quality control for S.R. 303L Glendale to Peoria. He is primarily responsible for scope, schedule, and budget compliance. He has managed over 15 projects for ADOT, including S.R. 101 HOV design-build and S.R. 86, Valencia Road to Kinney Road. These projects included extensive coordination with local municipalities and stakeholders, IGA development, complex utility coordination, traffic control, airport coordination, earthwork management, and coordination with ADOT's Roadside Development Section. Chad has also acted as project manager for ADOT's Roadway On-Call and has overseen quality control on S.R. 89A, Viewpoint. He is also skilled in MicroStation and InRoads design packages.</p>		
	List person's job-related training and education:	<p>Coursework, Civil Engineering, Arizona State University A.A., 1990, AutoCAD and Drafting, ITT Technical Institute Professional Engineer – Civil: Arizona – 42821 ACEC LEAP (Leadership in Engineering Administration Program) Program, Phoenix, AZ - August 2007 Inroads Training - January 2007 Projectwise and Iplot Training - September 2007</p>		
	Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

19	Name:	Evan Carbonneau, PE	How long with company?	4 years
	Current position in company:	Civil Engineer	How long in position?	2 years
	Position for the Services:	Transportation Engineer	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned?	Civil engineering, design and modeling support, roadway design		
	Describe person's experience in performing services like those that are to be assigned:	<p>Mr. Carbonneau contributes his extensive knowledge in civil engineering from his involvement in transportation projects. He has completed a variety of projects of varying size and funding for both public and private entities. His design experience includes roadway geometrics, storm drain design, site grading, traffic signal design, traffic control, construction BMPs and fiber optic network design. His knowledge of AASHTO, APWA and Caltran's current design standards facilitates meeting aggressive project schedules and quick approval from reviewing agencies. His experience with construction support includes responding to RFIs, reviewing shop drawings, attending construction meetings, and assisting with cost mitigation, which allows projects to remain on schedule and budget. His other experience includes cost estimating, preparation of special provisions, and utility research and coordination.</p> <p>Mr. Carbonneau has experience using a variety of design software including Microstation, AutoCAD, Inroads, and CAiCE. He also has extensive knowledge of design analysis software including AutoTURN.</p>		
	List person's job-related training and education:	<p>B.S., 2006, Civil Engineering, University of Arizona Professional Engineer – Civil: California – 77009; Arizona -58374</p>		
	Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

20	Name:	Natalie Carrick, PE	How long with company?	7 years
	Current position in company:	Traffic Engineer/Technical Manager	How long in position?	2 years
	Position for the Services:	Traffic Engineer	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned?	Traffic engineering, post design services, analysis, preparation of plans and specs, qa/qc		
	Describe person's experience in performing services like those that are to be assigned:	<p>Ms. Carrick holds a B.S. degree in Civil Engineering and has experience in the Traffic and Transportation fields. Her experience includes performing TIAs, traffic signal warrant evaluations, level-of-service analyses, accident research and analyses, travel time analysis, signal timing and coordination, designing plans for new and modified traffic signals, traffic signal interconnects, and signing and pavement marking. Ms. Carrick has completed more than 100 traffic impact analyses, over 50 miles of signing and marking designs and over 50 traffic signal designs. She has experience with project specifications and estimates and is proficient in Synchro, Traffix, AutoCAD, and MicroStation.</p>		
	List person's job-related training and education:	<p>B.S., 2003, Civil Engineering, Arizona State University Professional Engineer – Civil: Arizona – 49996; Utah - 9299973-2202</p>		
	Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

21	Name:	BriAnne Turpin, PE	How long with company?	9 years
	Current position in company:	Traffic Engineer/Project Manager	How long in position?	2 years
	Position for the Services:	Traffic Engineer	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned?	Traffic engineering, analysis, traffic impact studies, design concept reports, plans and specs		
	Describe person's experience in performing services like those that are to be assigned:	Ms. Turpin has experience with transportation planning, design, and traffic engineering, including the preparation of traffic impact studies, parking studies, design concept reports, and trip generations letters and the design of signing and pavement marking, traffic control, and traffic signal plans. She has experience working with different jurisdictions involving projects of various roadway classifications, different land uses, levels of intensity, and degrees of complexity.		
	List person's job-related training and education:	<p>B.S., 2006, Civil Engineering, Northern Arizona University Professional Engineer – Civil: Arizona -51481 Interactive Highway Safety Design Model (IHSDM) Training, ITE/FHWA, July 2013 Leadership in Engineering Administration Program, ACEC, 2011 Innovative Designs for Improving Intersection Capacity, ITE webinar, November 2009, 1.5 CEU Transportation Safety Fundamentals: Measures to Reduce Roadway Departure Crashes, ITE webinar, May 2009, 1.5 CEU Transportation Safety Fundamentals: Roadway Departure Crashes, ITE webinar, April 2009, 1.5 CEU Intersection Design and Channelization, ASCE webinar, February 21, 2008, 1.5 CEU Signal Timing for Congested Conditions, ITE webinar, April 2008, 1.5 CEU Modern Roundabout as A Traffic Signal Alternative – Part 1, ASCE webinar, May 23, 2008, 1.5 CEU Modern Roundabout as A Traffic Signal Alternative – Part 2, ASCE webinar. June 5, 2008, 1.5 CEU</p>		
	Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

22	Name:	James Ryan Christensen	How long with company?	11 years
	Current position in company:	Technical Manager	How long in position?	4 years
	Position for the Services:	Water Resources / Wastewater Engineer	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned?	Wastewater engineering, water resources, master plans, wastewater flow projections, data research, water demand calculations		
	Describe person's experience in performing services like those that are to be assigned:	Mr. Christensen is experienced in project management, design, planning, and construction management of water/wastewater projects. His background includes planning, engineering, and permitting of pump stations, water mains, sewer mains, wells, lift stations, force mains, water treatment plants, and reservoirs. He is also experienced in hydraulic modeling and master planning of water and wastewater systems. Mr. Christensen has been extensively involved in providing public outreach, and presenting to City councils.		
	List person's job-related training and education:	M.S.C.E., 2001, Civil Engineering (Water Resources), Brigham Young University B.S.C.E., 2000, Civil and Environmental Engineering, Brigham Young University Professional Engineer – Civil: Arizona -41186; California -C65007 LEED Accredited Professional, 2009		
	Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

23	Name: John Nagle, PE	How long with company?	30 years
	Current position in company:	How long in position?	3 years
	Position for the Services:	How much of time will be dedicated to the Services?	30 %
	What primary functions will be assigned? Wastewater engineering, water resources, project management, engineering studies, instrumentation and controls		
	Describe person's experience in performing services like those that are to be assigned: Mr. Nagle has practiced in the field of civil engineering for many years, and he has extensive experience in planning, designing, and providing construction support services for major water and wastewater facilities. He has been responsible for the preparation of numerous construction plans, specifications and cost estimates for water and sewer pipelines, water pumping stations, wastewater lift stations, wells, and reservoirs. He has also prepared master plans for both municipal and private-sector clients for potable water, sanitary sewer, and recycled water systems. Mr. Nagle has used his combination of planning and design experience to prepare capital improvement programs, condition assessment studies, engineering feasibility studies, and connection fee and utility rate studies.		
	List person's job-related training and education: M.S., 1996, Civil Engineering, Loyola Marymount University B.S., 1987, Civil Engineering, Loyola Marymount University Professional Engineer – Civil: California – 46972; Nevada – 14762; Utah - 7214109-2202; Arizona – 49684; Guam - CE 1850 Water Rights Surveyor, Nevada, 2001, 1101		
	Resume: Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

24	Name: John Andrew, PLA	How long with company?	28 years
	Current position in company: Landscape Architecture Manager/Technical Manager	How long in position?	5 years
	Position for the Services: Landscape Architecture	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned? Landscape architecture, project oversight, landscape planting and irrigation plans		
	Describe person's experience in performing services like those that are to be assigned: Mr. Andrew is the manager of the landscape architecture design group at Michael Baker. He has been responsible for the management and design of over 200 hundred public works and transportation projects throughout California, Arizona and Nevada. He has completed projects for state, county and city governments involving decorative architectural treatments as well as landscaping and irrigation systems. Projects have been for scenic highway corridors, freeway interchanges, parkways and medians for arterial and public streets, water quality basins and erosion control projects. He has conducted community workshops, made public presentations, prepared conceptual landscape plans and computer generated photo-realistic before and after renderings and completed final landscape and irrigation construction plans. He also prepare the design for decorative architectural improvements of several bridges and walls within the I-5 corridor for the Orange County Transportation Authority as well as final landscape construction plans for a one mile segment of Culver Drive in the City of Irvine.		
	List person's job-related training and education: B.S., 1984, Landscape Architecture, California State Polytechnic University, San Luis Obispo Landscape Architect: California – 3152; Arizona - 33626		
	Resume: Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

25	Name: Matthew Klyszeiko, AICP	How long with company?	13 years
	Current position in company:	How long in position?	4 years
	Position for the Services:	How much of time will be dedicated to the Services?	40 %
	What primary functions will be assigned?	Public outreach, planning, research, project management	
	Describe person's experience in performing services like those that are to be assigned:	<p>Mr. Klyszeiko offers extensive planning experience with an emphasis in land use planning, land entitlement, and public involvement. Mr. Klyszeiko's background includes project management and development of due diligence reports, feasibility reports, site plans, land use plans, design guidelines, and project theming and preparation of planning policy documents, including zoning ordinances, specific plans, and general/comprehensive plans, for both private and public sector clients. Mr. Klyszeiko has been involved in a variety of projects throughout the State of Arizona, from small infill and mixed-use projects to larger, master planned communities, renewable energy facilities, and municipal land use plans</p>	
	List person's job-related training and education:	<p>B.S., 2001, Urban Planning, Arizona State University American Institute of Certified Planners, Arizona - 020529</p>	
	Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf	

26	Name: Patricia Brown, PE	How long with company?	1 years
	Current position in company:	How long in position?	1 years
	Position for the Services:	How much of time will be dedicated to the Services?	40 %
	What primary functions will be assigned? Project management, oversight, coordination		
	Describe person's experience in performing services like those that are to be assigned: <p>Ms. Brown has many years of experience and encompasses both private and public work knowledge in transportation planning, design and managerial experience throughout Arizona. She has progressively responsible experience in scoping studies, final design, and project management. She has also been responsible for both the technical as well as project management duties on regional urban to statewide transportation projects. Her experience includes coordination with a diverse range of public and private agencies from the federal to local level. She is currently working for ADOT as a supplemental services employee in the Project Management Group. In this role, Ms. Brown manages statewide and local projects that utilize federal funds. As a consultant, she recently completed a project for the city of Phoenix to construct storm drain improvements along 16th Place and Violet Drive. In addition to her role as project manager, Ms. Brown provided QA/QC for roadway and drainage plans, as well as utility conflict review for gas, water, and sewer lines located within close proximity to the new storm drain system. She is recognized by clients for her attention to detail and understanding the federal process, for both ADOT projects and local public agency projects. During her several years with Maricopa County Department of Transportation, Ms. Brown served as the branch manager for the Project Management Branch. She was responsible for the oversight of a \$50 million scoping, design, and construction program. While with the Arizona Department of Transportation, she was responsible for management of both urban freeways as well as district-wide, local government projects, and providing oversight of the activities of design consultants.</p>		
	List person's job-related training and education: <p>M.B.A., 2013, Business Administration, University of Phoenix B.S.C.E., 1992, Environmental Engineering, Arizona State University Professional Engineer – Civil: Arizona - 33415</p>		
	Resume: Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

27	Name:	Miles Costanza, PE, LEED AP	How long with company?	1 years
	Current position in company:	Civil Engineer	How long in position?	1 years
	Position for the Services:	Water / Wastewater	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned?	Civil Engineering, water/wastewater		
	Describe person's experience in performing services like those that are to be assigned:	<p>Mr. Costanza has many years of professional engineering experience in water, wastewater treatment and infrastructure condition assessment. He has a proven record of experience in producing detailed designs, plans, specifications, and in construction management in the water and wastewater industry.</p> <p>In previous experience, Mr. Costanza led a cross-functional team consisting of contractors, structural engineers, geotechnical engineers, and corrosion engineers for the condition assessment, rehabilitation design, and construction of steel tank infrastructure improvements. He also designed a chlorination system and control algorithm for a large, complex, and dynamic water storage system.</p>		
	List person's job-related training and education:	<p>B.S., 2006, Civil and Environmental Engineering, Arizona State University Professional Engineer, Arizona -55059 LEED Accredited Professional, 2008</p>		
	Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

28	Name:	Wendy Ledezma-Cons, PE	How long with company?	10 years
	Current position in company:	Civil Engineer	How long in position?	6 years
	Position for the Services:	Plan Review	How much of time will be dedicated to the Services?	50 %
	What primary functions will be assigned?	Civil Engineering, plan review, design, cost estimate, coordination		
	Describe person's experience in performing services like those that are to be assigned:	Ms. Ledezma-Cons has a range of civil engineering capabilities, including drafting, design, hydrology and hydraulic calculations, and review of construction documents. She has extensive experience with the U.S. Army Corps of Engineers, having worked recently on numerous projects in the Southwestern United States and its border with Mexico.		
	List person's job-related training and education:	B.S., 2002, Civil Engineering, Universidad de Sonora Professional Engineer, Arizona -52923		
	Resume:	Attachment 3-B Key Personnel Form Supplement Resumes.pdf		

Douglas J. Plasencia, P.E., CFM

Vice President

General Qualifications

Mr. Plasencia has been a Michael Baker Senior Manager for nine years and currently manages Michael Baker's Arizona and Nevada architecture, engineering, and geospatial and survey operations. Signature projects include FEMA floodplain mapping and hazard mitigation; tactical infrastructure on the U.S. border; state and municipal projects; and emerging emphasis with traditional private sector environmental, oil and gas permitting, and land development clients. He is a recognized expert in hydrologic-hydraulic engineering, flood control, floodplain management, and policy issues associated with the planning, environmental, and economic aspects of riverine and coastal floodplains. His policy expertise has been called upon by Congress, federal agencies, and the Executive Office of the President, and he has served as a panel member or reviewer of several National Academy of Sciences studies. He currently serves as the President of the ASFPM Foundation and previously was a member of the FEMA Advisory Board, as well as National Chair of ASFPM. Doug is a registered professional engineer in several states and is a certified floodplain manager. He has degrees in Forestry from the University of Minnesota and a Masters in Watershed Management from the University of Arizona.

Experience

Rio de Flag Flood Control and Design Concept Report, Flagstaff, Arizona. *City of Flagstaff, Arizona.* Principal-In-Charge. Served as principal in charge. Michael Baker prepared a design concept report incorporating multiple alternatives for 100-year flood control facilities on the Rio de Flag and Clay Avenue Wash. Michael Baker's services included value engineering, floodplain modeling and mapping, channel design, cost estimating, and construction sequencing.

Paseo Vista Recreation Area Drainage Improvements, Chandler, Arizona. *City of Chandler.* Principal-In-Charge. Ensured resources available for project. Provided expert level drainage and erosion control input to Michael Baker team and City of Chandler including field visits, design concept, and recommendations. Michael Baker completed the drainage analysis and report for controlling stormwater run-off throughout the 64-acre Paseo Vista Recreation Area. Michael Baker developed erosion and drainage control construction plans based on the results of the drainage analysis and a drainage control maintenance plan for the City for use in maintaining newly constructed storm control features.

Paseo Vista Recreation Area Drainage Site Plan, Chandler, Arizona. *City of Chandler.* Michael Baker provided engineering services to develop a drainage site plan for the Paseo Vista Recreation Area. Michael Baker's services included the development of interim repair plans, preliminary and final drainage design, and the development of a repair and maintenance plan.

GIS Land Base Data Maintenance Program, Statewide, California and Nevada. *AT&T (Formerly SBC Technology Resources, Inc., Formerly Pacific Bell Telephone Co.).* Principal-In-Charge. Responsible for staffing and delivery of project via Reno production team. Michael Baker is providing geographic information

*Years with Michael Baker: 12
Years with Other Firms: 22*

Degrees

M.S., 1988, Watershed Management, University of Arizona

B.S., 1982, Forest Resource Management, University of Minnesota

Licenses/Certifications

Certified Floodplain Manager

Professional Engineer:

Arizona, 1990, 24426

Nevada, 1999, 013764

Virginia, 1991, 022187

system (GIS) services to support the maintenance and enhancement of the company's digital land base and facilities administration databases covering its national land line and wireless service territories for its GIS street centerline and land base databases. Michael Baker's services include mapping and analysis; the development and hosting of a collaboration portal, ChangingLand.com, for large geospatial datasets; the development of tools to manipulate the data and facilitate collaboration; quality assurance; and acceptance testing.

New River Area Paving Phase 1 and 2, Maricopa County, Arizona. *Maricopa County DOT.* Principal-In-Charge. Responsible for ensuring that resources are available for project, and provided contractual and business oversight. Michael Baker provided engineering services for the paving of seven dirt roads in the New River area. Michael Baker's services included final design, pavement marking, signing, drainage, environmental documentation and clearance, utility coordination, and right-of-way acquisition and coordination.

Countywide Digital Flood Insurance Rate Map Conversion and Floodplain Remapping, Stillwater County, Montana. *Montana Department of Natural Resources and Conservation.* Principal-In-Charge. Responsible for ensuring the Michael Baker project manager and team is serving client, executing project scope, while meeting financial and quality control metrics. Michael Baker provided professional services as needed to complete a Digital Flood Insurance Rate Map (DFIRM) conversion. Michael Baker incorporated existing data studies (including a U.S. Army Corps of Engineers study for the entire reach of the Yellowstone River), converted paper floodplain mapping into a GIS-based digital format, incorporated any Letters of Map Change (LOMC), and re-delineated floodplain boundaries using better topographic data. Michael Baker performed field surveys, reviewed topographic data, and acquired base maps; reviewed hydrologic and hydraulic data for existing data studies; developed floodplain mapping; produced the DFIRM database; developed and distributed preliminary map products; and provided post-processing services, including facilitation of community meetings, as required.

Countywide Digital Flood Insurance Rate Map Conversion and Floodplain Remapping, Sweet Grass County, Montana. *Montana Department of Natural Resources and Conservation.* Principal-In-Charge. Responsible for ensuring Michael Baker PM and team is serving client, executing project scope, while meeting financial and quality control metrics. Michael Baker provided professional services as needed to complete a Digital Flood Insurance Rate Map (DFIRM) conversion. Michael Baker incorporated existing data studies (including a U.S. Army Corps of Engineers study for the entire reach of the Yellowstone River), converted paper floodplain mapping into a GIS-based digital format, incorporated Letters of Map Change (LOMC), and re-delineated floodplain boundaries using better topographic data. Michael Baker performed field surveys, collected and developed topographic data, and acquired base maps; reviewed hydrologic and hydraulic data for existing data studies; developed floodplain mapping; produced the DFIRM database; developed and distributed preliminary map products; and provided post-processing services, including facilitation of community meetings.

Stream Restoration Program, South Central, Texas. *San Antonio River Authority.* Principal-In-Charge. Responsible for ensuring the Michael Baker project manager and team is serving client, executing project scope, while meeting financial and quality control metrics. Michael Baker is assisting with the establishment of a stream restoration program for a four-county region within the San Antonio River watershed. Michael Baker is assisting with key program management elements such as mission statement, policy, funding, planning, project implementation, operations and maintenance, and education. The first year of the program includes the East Salitrillo Creek pilot project, a riparian mitigation bank feasibility study, site concept designs, training workshops, natural channel design guidelines, and regional curves development.

Marta H. Gerber, P.E.

Transportation Department Manager

General Qualifications

Ms. Gerber's experience includes traffic engineering, including signal design, signing and marking design, traffic calming design, intersection geometric improvements analysis and design, transportation planning and modeling, traffic impact studies, access control studies, parking studies and signal coordination. She has successfully completed and served as project manager for studies that started with a modeling and analysis phase and included final reports. In addition, she successfully managed design projects including signal and signing and marking, signal coordination design, future fiber interconnect, and ITS designs all the way to final plans, specifications and estimates (PS&E) documents for all project improvements. Assignments have also included utility coordination, stakeholder meetings, and public meetings for projects completed for various Arizona municipal cities. She routinely coordinates with City, County, State and Federal agencies; and has both attended and made presentations at public hearings, planning and zoning meetings, and city council meetings.

Experience

S.R. 89, Viewpoint Drive Traffic Interchange, Prescott Valley, Arizona. *Arizona Department of Transportation.* Traffic Engineer. Responsible for the design of new signal equipment at the reconfigured/widened intersection, for the design of revisions to the exiting signal at the interchange, and review of lighting plans. Other responsibilities included the design of lighting in the pedestrian underpass. Michael Baker prepared construction plans and reports for the Viewpoint Drive Traffic Interchange (TI) project. The project is located along the north side of Prescott valley within the Prescott District in Yavapai County. It consisted of adding auxiliary lanes between Glassford Hill Road and Viewpoint Drive; completing the Viewpoint Drive TI by constructing a three-span, cast-in-place, concrete structure; constructing a signalized intersection at Robert Road; and widening approximately 2.5 miles of S.R. 89A and Fain Road from two lanes to a four-lane divided highway. Michael Baker also performed a detailed traffic analysis to design the signals and turn lane requirements at both the Robert Road and Viewpoint Drive ramp intersections.

75th Avenue and Thunderbird Road Intersection Improvements, Peoria, Arizona. *City of Peoria, Arizona.* Traffic Engineer. Responsible for traffic analysis using projected traffic volumes for the of 75th Avenue and Thunderbird Road intersection improvements. The study also included the analysis of commercial access control on all four legs of the intersection. During the design phase, responsibilities included overseeing the efforts on the signing, striping and signal design. In addition, leading the ITS design efforts of this project beyond the intersection improvements. Michael Baker provided traffic analysis for intersection improvements at the fifth busiest intersection in the city. Michael Baker compared four alternatives based upon construction costs, right-of-way costs, utility impacts, access control, intersection operation, level of service, and travel time delay. Michael Baker also prepared roadway, drainage, pavement marking/signing, traffic signal, lighting, and signal interconnect plans and provide a layout of fiber communications and conduit. The project also included complex utility relocations for a large irrigation diversion structure that accommodates an 84-inch pipe, a 72-inch pipe, and a 20-duct fiber optic switching cabinet. Michael Baker also developed and coordinated project information materials and resources to deliver project initiatives and construction progress for the widening improvements.

Years with Michael Baker: 7

Years with Other Firms: 12

Degrees

B.S.E., 1998, Civil Engineering,
Arizona State University

Licenses/Certifications

Professional Engineer:

Arizona, 2004, 41369

S.R. 101L Design-Build Plan Review. *Trauner Consulting Services, Inc.* Traffic Engineer. Responsible for the review of all signing and striping plans along with all sign elevation plan sheets. Michael Baker conducted a study to compare the "before" and "after" conditions of S.R. 101L traffic operation associated with the new auxiliary lanes between the Cave Creek Road and S.R. 51 ramps that had recently been installed as part of the S.R. 101L HOV design-build project.

35th Avenue & Dunlap Intersection Improvements. *City of Phoenix, Arizona.* Traffic Engineer. Oversaw the development of base maps, 30% lighting plans, reviewing, and notating the City's plans for submittal to ADOT. Michael Baker provided safety and ADA improvements to the intersection of Dunlap/35th Avenue and the Dunlap Avenue corridor between 43rd and 31st Avenue. Improvements included installation of new traffic signal equipment, new ADA ramps, dual left-turn lanes in the north and southbound directions, and revising current "protected-permissive" left-turn phasing for north- and southbound 35th Avenue to "protected-only" left-turn phasing through changes to the signal timing. Analysis and design was performed to improve illumination, using new LED street lighting for the corridor.

***NOT REFERABLE* S.R. 303L Roadway and Traffic Engineering and Design, Glendale Avenue to Peoria Avenue, Glendale and Surprise, Arizona.** *Arizona Department of Transportation.* Traffic Engineer. Responsible for the design of temporary and new signals along the corridor. Responsible for developing the pre-emption timing for the signal at the temporary intersection of Olive Avenue and S.R. 303L detour and the BNSF RR. Responsible for reviewing all signing and marking plans as well as all sign elevation plans. Responsible for developing specific special Provisions for traffic signal related items along with appropriate cost estimates. Michael Baker provided roadway and traffic engineering for improvements to S.R. 303 from Glendale Avenue to Peoria Avenue. Michael Baker's services included roadway and bridge design, interchange geometry analyses, traffic control infrastructure design, drainage design, partnering, post-design services, and construction services.

S.R. 19B, Railroad Crossing Safety Improvements. *Arizona Department of Transportation.* Transportation Planner. Responsible managing seven railroad crossing studies to determine deficiencies and necessary safety improvements. Michael Baker is currently studying seven interconnected highway-railroad grade crossings on S.R. 19B to determine deficiencies, safety improvements, ADA and MUTCD compliance. Pre-emption signal timing plans will be updated based on recommended intersection geometric improvements. Signing and marking design services were performed for approximately three miles of S.R. 19B, and modifications and recommendations for new signal and railroad equipment were made to the seven signalized intersections. The Michael Baker team has been working closely with the ADOT railroad liaison and the Union Pacific Railroad (UPRR) representative.

Bruce E. Preston, R.A., PMP, DBIA, LEED AP BD+C

Project Manager

General Qualifications

Mr. Preston has been practicing project management and architecture in various fields for over a decade. His experience ranges from multi-project management, project program and design document preparation, and construction administration. He has provided services to municipal, state and federal agencies, design/build contractors, developers, and individual clients. He has in-depth experience with the following project types: including federal government Department of Defense, mixed use/retail, telecommunications, assisted living, dormitory and military housing, commercial office buildings, hospitality, transportation, child care, and educational facilities. Mr. Preston is integral to the management team for the design, selection, coordination, and detailing of architectural materials and systems and is involved in developing project specifications. He is skilled in Building Information Modeling (BIM), the latest 3D modeling that uses virtual design for project collaboration from design through construction. Mr. Preston participates in the architectural design process and develops alternative solutions for the client or agency. In addition to providing architectural design and BIM support, he has experience providing on-site observation services throughout the construction process, ensuring that the work is consistent with the construction documents and the architectural design intent. His imminent involvement as a design manager allows him to be able to keep the design on schedule and within budget. As a LEED AP BD+C, he is responsible for the execution of LEED during the design process on several projects as well as being the LEED AP and Coordinator for the project scorecards tracking design credits.

Experience

French Creek Bachelor Enlisted Quarters, Marine Corps Base Camp LeJeune, North Carolina. *Naval Facilities Engineering Command, Mid-Atlantic.* Subject Matter Expert. Subject Matter Expert (SME) for the BIM and Clash Detection coordination process between the design team and construction team, including key subcontractors. Spearheaded this coordination process for the design team throughout design for full integration with the general contractor and key subcontractors. Assisted general contractor on how to implement the clash detection process with their key subcontractors, to coordinate actual 3D trade field models into the design drawings. Also aided in quality assurance and quality control for the interdisciplinary coordination. Michael Baker was the designer of record on a design-build project to construct a 103,334-square-foot combined multistory facility to serve as bachelor enlisted quarters, a 167,450-square-foot three-story 700-vehicle parking garage, a recreation shelter, and a personal equipment cleaning station. The barracks achieved LEED®-NC gold certification. The team's strategic design approach integrated two barracks into a single structure via enclosed connecting corridors on each floor, optimizing common space. Michael Baker's tasks included planning, structural design, and architectural and building systems design.

*Years with Michael Baker: 8
Years with Other Firms: 8*

Degrees

B.I.S., 2006, Architecture/Fine Arts, Arizona State University

Licenses/Certifications

Revit Fundamentals Certificate, 2009

Registered Architect, Arizona, 2016, 62802

Revit Fundamentals Certificate, 2011

Revit Architecture Certified Professional, 2009

Revit Architecture Certified Professional, 2011

LEED Green Associate, 2009

Design-Build Professional, 2011

LEED Accredited Professional BD+C, 2011

Project Management Professional (PMP), 2015

Fuel Cell and Corrosion Control Hangar Design, Cannon Air Force Base, New Mexico. *U.S. Army Corps of Engineers, Albuquerque District.* Architectural Designer. Provided CAD and architectural design support for the construction documentation of both hangars. Michael Baker provided architectural and engineering design services for two new Special Operations Forces Fuel Cell and Corrosion Control hangars. Michael Baker provided architectural, electrical, structural, and civil design for the facilities and associated site work. Design elements included utilities; storm drainage; plumbing; communications; electrical; heating, ventilation and air conditioning (HVAC); energy management control systems (EMCS); force protection measures; paving; walks; curbs; parking; access roads; exterior lighting; site improvements; grading; and landscaping. The facilities were designed to achieve a Leadership in Energy and Environmental Design (LEED™) Silver Rating.

Temporary Loading Dock and Housing Design, Nogales, Arizona. *General Services Administration.* Architectural Designer. Led the design team in coordinating the construction documentation for a temporary truck dock and temporary trailers as well as provided a complete and coordinated set of construction plans delivered on schedule. Also worked directly with the prime contractor to meet construction budget. Michael Baker served as lead designer to provide architecture, structural, civil and electrical design services for a temporary loading dock, and space planning for temporary housing (modular trailers) at the Mariposa Land Port of Entry (LPOE). Michael Baker provided grading design for the dock and adjacent structures; utility design including sanitary, sewer, water, and electrical; structural design for concrete footings, concrete walls, and slab-on-grade concrete; and layout for electrical equipment and fixtures. Michael Baker also produced 100 percent pre-final design and Issue for Construction (IFC) documents for the temporary loading dock.

Tactical Equipment Maintenance Facility, Fort Hood, Texas. *U.S. Army Corps of Engineers, Fort Worth District.* Architectural Designer. Led clash coordination of all design and engineering disciplines in direct contact with prime contractor. Also aided in quality assurance and quality control for the interdisciplinary coordination. Michael Baker was the designer of record for the fast-track design-build delivery of a tactical equipment maintenance facility (TEMF) complex, consisting of a 56,601-square-foot TEMF, an 8,400-square-foot organizational storage building, an 1,800-square-foot unmanned aerial vehicle storage facility, and ancillary support structures. The TEMF was designed to meet LEED® Silver certification. Michael Baker's tasks included site and civil engineering; building architecture and facility engineering, including structural, mechanical, plumbing, fire protection, electrical, and telecommunications systems design; and LEED® certification administration.

Warriors in Transition Barracks Design, Fort Sill, Oklahoma. *U.S. Army Corps of Engineers, Tulsa District.* Architectural Designer. Assisted in the design effort working directly with the contractor to meet the construction budget. Also coordinated the various design and engineering disciplines to provide a complete and coordinated set of construction plans delivered on schedule. Also, led the BIM coordination for the design team. Michael Baker provided architecture and engineering design for a Warriors in Transition (WT) barracks. The 43,380 -square-foot WT barracks consists of 18 two-bedroom, two-bath apartments and 18 two-bedroom, one-bath apartments for a total of 36 apartment-style living units that can house up to 72 soldiers who have been released from medical facilities and are in recovery status for further evaluation. Michael Baker provided civil, architecture, landscape architecture, interior, electrical, communications, mechanical, plumbing, fire safety, and structural design services. The overall goal was to provide a user-friendly area and a sense of community for WT barracks occupants, instilling in them a sense of pride for their new living quarters, both initially, and for years to come.

Warriors in Transition Complex, Fort Bliss, Texas. *U.S. Army Corps of Engineers, Fort Worth District.* Architectural Designer. Facilitated BIM process and assisted in Design and Construction Documents. Michael Baker served as the designer of record for the design-build Warriors in Transition complex. Michael Baker's services included civil, landscape architecture, architectural, interior design, electrical, communications, mechanical, plumbing, fire protection and structural design for the 139,780 square-foot, three-story Warriors in Transition barracks, which can house 232 injured soldiers.

Pawel Paszczuk, R.A.,

LEED AP

Architect

General Qualifications

Mr. Paszczuk is a highly motivated, creative and versatile Project Architect with several years of experience ranging from schematic design to construction administration as well as the management of CAD production teams on projects ranging from 6,000 to over 500,000 square feet. He has a talent for analyzing problems, developing and simplifying procedures, and finding innovative solutions. He also has extensive knowledge of AutoCAD Architecture, Adobe Photoshop and Google SketchUp. Mr. Paszczuk is an energetic self-starter with excellent analytical and organizational skills.

Experience

Yuma Border Patrol Sector Headquarters Command and Control (C2) Renovations, Yuma, Arizona. *Au Authum Ki, Inc.* Project Architect. Responsible for ensuring the design of the project follows BP requirements and is in compliance with industry codes and guidelines. Additionally, responsible for coordination of other design disciplines to meet the requirements and expectations of other parties involved such as USACE, DHS, OTIA, and others. Michael Baker provided architecture and engineering services for renovation of the Yuma Border Patrol Sector Command and Control (C2) Facility. Michael Baker designed a modular facility in order to ensure undisturbed operations while the C2 facility was renovated. The C2 Center renovation of the existing space to improve the overall functionality, upgrade the communications and electrical services, and refresh the interior environment to benefit the border patrol agents' well-being. Michael Baker provided mechanical, electrical, and telecommunications design.

Data Center Interior and Security System Improvements, Nationwide. *CenturyLink.* Architect. Developed construction documents for re-roofing of an existing building. Michael Baker is providing architectural and engineering services for modifications and interior improvements to 15 data centers. Michael Baker's services include architecture and interior design, security system design, and high-level construction cost estimating. Michael Baker is also providing oversight of mechanical, electrical, and plumbing design and construction services by a subconsultant.

Design-Build Community-Based Outpatient Clinic, Lake Charles, Louisiana. *SDA, Inc.* Architect. As the project architect Pawel was responsible for developing the building layout in support of the Veteran's Affairs new healthcare approach model called PACT (Patient Aligned Care Team). Duties involved building design and coordination with the VA staff, as well as Construction Documents production. Michael Baker provided architecture and engineering services for a new 32,000-square-foot, design-build, community-based outpatient clinic for military veterans. Michael Baker's services included design management; conceptual, preliminary, and final architectural design; structural design; landscape design; interior design; mechanical, electrical, plumbing, and fire protection engineering; and construction administration and inspection.

Maricopa County Northwest Justice Center Renovations, Surprise, Arizona. *Maricopa County Facilities Management Department.* Architect. Provided design and construction administration services for remodel of two conference rooms into small courtrooms. Michael Baker provided design, documentation, and construction administration for the renovation of two existing meeting rooms into Hearing Rooms at the

Years with Michael Baker: 8
Years with Other Firms: 10

Degrees

B.Arch., 2001, Architecture,
Roger Williams University

Licenses/Certifications

NCARB, 2008, 107143

LEED Accredited Professional,
2009

Registered Architect:

Arizona, 2008, 49179

Connecticut, 2008, 11653

Alaska, 2015, AELA14792

Maricopa County Northwest Justice Center. Michael Baker developed floor plans and 3D models; prepared drawings, plans, and specifications; and performed construction administration, observation, and contract administration.

Maricopa County Two-Year Architectural Service Contract. *Maricopa County Facilities Management Department.* Architect. Provided design and construction administration services for remodel of two conference rooms into small courtrooms. Michael Baker provided design, documentation, and construction administration for the proposed Maricopa County Project, Solar Thermal Design for Hot Water heating at the 4th Avenue and Lower Buckeye Jail facilities. Michael Baker was the Designer of Record for the contract. Michael Baker and its subconsultants were responsible for providing design services related to architecture, structural, mechanical, and electrical engineering. Due to federal funding, Michael Baker also provided monitoring for Davis-Bacon wage rate compliance during construction.

National Network Data Center, Chicago, Illinois. *CenturyLink.* Architectural Designer. Developed construction documents. Upgrades included a security command center, mantrap vestibules, and card reader and biometric systems.

West 76th Street Public Art Design A/E Design Services. *Detroit Shoreway Community Development Organization.* Architect. Created construction documents based on the artist's design. Cold Front is a public art project on the site of the West 76th Street Pedestrian Tunnel, an initial phase of the ODOT Lakefront West program. Michael Baker coordinated with LAND Studio and Mark Reigelman, the project artist, to design a structural addition to the existing 100-year old retaining wall at the pedestrian tunnel portal. Cost estimating was a major focus of this project as multiple design iterations were undertaken until a final design was fit to the available budget.

San Miguel Forward Operating Base (FOB) Command and Control Facility, Cochise County, Arizona. *Au Authum Ki, Inc.* Architect of Record. Responsible for development of a modular building design and coordination of MEP systems within the limits of modular building transportation. Michael Baker provided architectural and engineering design for the San Miguel Command and Control (C2) facility. The facility is located at the southwest corner of the property just south of the existing dormitory building. The west edge of the proposed modular C2 facility has been aligned with the west edge of the existing dormitory building. Minimal site work was needed, and a 5-foot-wide aggregate walkway was provided from the entrance of the new facility to the existing dormitory walkway. Michael Baker provided designed the modular building to support six workstations, a break room, unisex restroom, NOC/SOC office, a supervisor's office, and a LAN server room.

Historic District Gateway Arch, Avondale, Arizona. *City of Avondale, Arizona.* Architect. Responsible for production of construction documents based on preapproved design. Michael Baker recently won a Street Transportation on-call contract with the City of Avondale, located 15 miles to the West of Phoenix. This project is the first task order from that contract, and will involve the design of a gateway arch which clear spans across Western Avenue as it enters the historic district of downtown Avondale. The design will evoke the historic aesthetic of Avondale and will draw upon locally available materials and appropriate vernacular. Also notable is the fact that this project will serve as one of the first examples of cross-practice project delivery for the Phoenix office, involving civil, transportation, planning, structural engineering, and architecture.

Wayne T. Frank, PMP,

LEED AP, A.I.A.

Project Manager

General Qualifications

Mr. Frank is an experienced architect with several years experience working with complex and technologically advanced clients such as Kirtland Air Force Base, Sandia National Labs, the Federal Aviation Administration, and many municipalities. He is able work closely with clients, coordinate complicated systems and meet sophisticated design requirements through his experience and communication skills. He has been involved with a varied array of projects such as offices, public and schools, technology labs, museums, and public buildings. Among all of these communication and meeting a client's needs are always his top priority. He is interested in sustainable design and construction and received the LEED Accreditation in 2004. Wayne has won design awards for planning and building design. Wayne is excellent at multi-tasking and delivering an on-time quality project. Wayne has received a Masters in Construction Management and knows how to effectively manage projects. His best qualities are his honesty, integrity, and work dedication. As a Project Architect for Michael Baker International, he will use all of his abilities to successfully execute each project that he is involved with.

Experience

Yuma Border Patrol Sector Headquarters Command and Control (C2) Renovations, Yuma, Arizona. *Au Authum Ki, Inc.* Project Manager. Responsible for overseeing design and construction document production of the in-house team. Also worked with Design-Build contractor during construction for administrative support. Michael Baker provided architecture and engineering services for renovation of the Yuma Border Patrol Sector Command and Control (C2) Facility. Michael Baker designed a modular facility in order to ensure undisturbed operations while the C2 facility was renovated. The C2 Center renovation of the existing space to improve the overall functionality, upgrade the communications and electrical services, and refresh the interior environment to benefit the border patrol agents' well-being. Michael Baker provided mechanical, electrical, and telecommunications design.

Design-Build Alternate Mission Equipment Storage Facility, Nellis Air Force Base, Nevada. *U.S. Army Corps of Engineers, Los Angeles District.* Architect. Responsibilities included construction administration duties such as; submittal review, as-built documentation, redlines, and project closeout. Michael Baker was the designer of record for the design-build, 24,124-gross-square-foot alternate mission equipment storage facilities, which consist of two one-story buildings: the F-35A maintenance and storage facility, Building #449, and legacy storage facility, Building #450. Michael Baker's services included project and design management; architecture; civil, structural, mechanical, electrical, and plumbing engineering; structural interior design; security, life safety, fire protection, and telecommunications design; and construction administration.

Design-Build F-35A Aircraft Parts Storage Building, Nellis Air Force Base (LSV), Clark County, Nevada. *Sybrant Construction.* Architect. Responsible for LEED certification process during construction.

Years with Michael Baker: 2
Years with Other Firms: 16

Degrees

MCM, 2008, Construction Management, University of New Mexico

M.Arch., 2004, Architecture, University of New Mexico

B.Arch., 2002, Architecture, University of New Mexico

Licenses/Certifications

Project Management Professional (PMP), Worldwide, 2010, 133400

LEED Accredited Professional BD+C, USA and Canada, 2004, 55506

Registered Professional Architect:

Arizona, 2015, 60570

Missouri, 2011, 2011025121

California, 2013, 34530

New Mexico, 2007, 4395

Oklahoma, 2015, 6743

Also provided construction administration services such as; submittal review, as-built documentation, redlines, and project closeout. Michael Baker is providing architectural and engineering design services for a new, 24,994-square-foot, design-build aircraft parts storage building to support the F-35A aircraft. Michael Baker's services include project and design management; architecture; preliminary and final design; civil, structural, mechanical, electrical, and plumbing engineering; structural interior design; life safety, security system, and telecommunications design; energy modeling; sustainable design to achieve Leadership in Energy and Environmental Design Silver certification; and construction administration. Project has achieved LEED Gold Certification.

Design-Build Upgrade of the Building 913 Hangar, Luke Air Force Base, Maricopa County, Arizona. *U.S. Army Corps of Engineers, Los Angeles District.* Architect. Responsibilities included submittal review, as-built documentation, redlines, and project closeout. Michael Baker provided architectural and engineering services for the design-build upgrade of the Building 913 hangar to support the maintenance of F-35 aircraft. Michael Baker's services included project and design management; surveying and mapping; architecture; civil, structural, life safety, mechanical, electrical, plumbing, security, and telecommunications engineering; and construction-phase services.

JMA-Skye Visitor 5.20.2014. *Ninety Five Management LLC.* Architect. Responsibilities included construction administration duties such as; submittal review, as-built documentation, redlines, and project closeout.

Las Vegas Central - Main Transmission Facility, Las Vegas, Nevada. *Cox Communications.* Architect of Record. Responsibilities included being architect of record for re-roofing project. This new facility will provide multi-media delivery to the majority of the Las Vegas Strip, and will be the largest project to date with this repeat client. The design of this data center will be a site adaptation of a prototypical design by Michael Baker, earlier deployed on 2 sites in Arizona. The last site-adapt of this prototypical design was hailed as a complete success by the client.

Skye Fitness Center. *Ninety Five Management LLC.* Architect. Responsibilities included construction administration duties such as; submittal review, as-built documentation, redlines, and project closeout.

San Diego Veterans Administration Medical Center, Fourth Floor Renovation, San Diego, California. *U.S. Army Corps of Engineers, Los Angeles District.* Architect. Responsibilities included construction administration duties such as; submittal review, as-built documentation, redlines, and project closeout. Under a design-build contract, Michael Baker provided full service architectural and engineering design for the complete renovation and build-out of the fourth floor of the San Diego Veterans Administration Medical Campus. The project involved the creation of a 30-unit community living center that includes patient beds, toilet/shower rooms, and core areas. Core areas include clean and soiled utility areas and nurse stations. Being located in California, the project involved close coordination with State of California Title 24 Building Code and California Office of Statewide Health Planning and Development (OSHPD) requirements.

Cold Storage Central Kitchen, Las Vegas, Nevada. *Clark County School District.* Architect. Responsibilities included submittal review, as-built documentation, redlines, and project closeout. JMA Architects, Inc. (d/b/a JMA Architecture Studios), a variable interest entity of Michael Baker International, provided architecture and planning services for a 34,040-square-foot bakery and a 5,490-square-foot office addition to an existing freezer and dry storage building. The proposed work also included interior modifications of approximately 5,200 square feet of existing kitchen space and conversion of 10,234 square feet to dry storage space. The project never went into construction due to client changes; however, 100% construction documents were produced.

Kevin J. Kugler, AICP

Technical Manager

General Qualifications

Mr. Kugler has extensive planning experience that encompass a wide array of planning projects, which includes direct management, oversight, negotiations, leading public meetings and City Council presentations relative to transportation corridor studies and master plans, General Plans, floodplain mitigation, riparian edge design guidelines and rules of development, design concept reports, master planned communities, drafting of General Plans, Specific Area Plans, zoning ordinances, subdivision code updates, land entitlement negotiations and conflict resolution, lead negotiator for sensitive public projects, development agreement negotiations, transportation planning, economic impact studies, watercourse master planning, hillside development guidelines, regional center and commercial site planning, public meeting facilitation, residential subdivision platting, and design guidelines.

His Tribal work experiences include five Arizona Tribes having worked particularly close with the White Mountain Apaches and Navajo Nation in establishing the first public transit system in the White Mountain and with the Yavapai-Apache Tribe along with the Town of Camp Verde in a needs assessment and development of a conceptual park master plan.

His work experience includes 12 years with the Cities of Phoenix, Show Low and Goodyear, Arizona. Mr. Kugler has planned thousands of acres of residential master planned communities, commercial centers, and business parks while managing a Planning Department in one of Arizona's fastest growing cities.

Experience

Drainage Ordinance, Pinal County, Arizona. *Pinal County Public Works Department.* Project Manager. Project Director. Responsible for the overall project management, stakeholder and public engagement and technical compilation of an updated Drainage Ordinance for Pinal County. Michael Baker is collaborating with Pinal County Flood Control District staff to update its antiquated ordinance with modern terminology, administrative processes and enforcement actions. The project includes introducing a new drainage waiver provision, establishing a Drainage Review board for the first time and coordinating extensive stakeholder and public engagement to gain consensus on updated ordinance provisions over a broad geography with multiple users and interested parties.

General Plan Update, Surprise, Arizona. *Surprise, City of.* Principal-In-Charge. Responsible for project oversight. Michael Baker developed a general plan amendment that updated six key elements of the city's general plan. Michael Baker's services included the update and authoring of the land-use, circulation, housing, economic development, growth areas, and implementation elements; extensive coordination with staff and others in the update of other plan elements; development of geographic information system files; and facilitation of community open houses and workshops.

Loop 303 Corridor / Land Use Study, Peoria, Arizona. *Arizona Department of Transportation.* Task Manager. Responsible for overseeing the land use planning and parks/open spaces programming for the study area. Michael Baker completed a study to set specific land use and connection goals related to the development of the new Loop 303 Highway. In addition, the plan set the framework for the first example of revenue sharing in the valley, as Peoria and Phoenix agreed to share revenue related to development in the

Years with Michael Baker: 13
Years with Other Firms: 11

Degrees

M.E.P., 2003, Urban and Regional Planning, Arizona State University

B.S., 1990, Business Administration, Arizona State University

Licenses/Certifications

American Institute of Certified Planners, Arizona, 1997, 12996

area. The study examined land use economics, absorption, specific locations, and connections across the new Loop 303, and made recommendations that allowed for the orderly development of North Peoria and Phoenix.

On-Call Public Involvement, Partnering and Outreach Services, Arizona. *Arizona Department of Transportation.* Project Manager. Responsible for ADOT and is qualified to lead the preparation of reports and studies relating to transportation planning and analysis, traffic and transportation data analysis, transportation and sustainability, bicycle and pedestrian planning and air quality for various ADOT projects. Currently or has served as the PM for four ADOT studies. Michael Baker provided on-demand public involvement and outreach services for the Arizona Department of Transportation in two categories. In the first category, Michael Baker's community planners provided public involvement opportunities and meeting facilitation for construction projects and in support of legally defensible National Environmental Policy Act (NEPA) documents. In the second category, Michael Baker provided visual communication services, public relations, advertising, outreach and public involvement training, and surveys designed to foster a spirit of trust, confidence, and openness. Michael Baker also provide media relations, video production, web-based activities, and translation services.

Rio Rico Walk and Bike Study, Santa Cruz County, Arizona. *Arizona Department of Transportation.* Project Manager. Responsible for project management. Michael Baker conducted a study to identify improvements to pedestrian and bicycle facilities to improve accessibility, safety, connectivity, and comfort. Michael Baker's services included planning, public and stakeholder outreach, a gap analysis, design guidelines development, and funding source identification.

I-15 Virgin River Bridges Public Involvement, Arizona Strip, Arizona. *Arizona Department of Transportation.* Project Manager. Responsible for all aspects of the public and stakeholder engagement for this project. Michael Baker provided public involvement, agency coordination, and National Environmental Policy Act outreach and documentation for the rehabilitation of the I-15 Virgin River Bridges. Michael Baker led a variety of public involvement and outreach tasks, including the preparation, distribution, and documentation of press releases; project newsletters; social media messaging; agency coordination; and media coordination. This project included the broad dissemination, receipt, and comment aggregation of more than 44,000 project newsletters. Michael Baker also served as the point of contact and comment repository for multiple project partners, government agencies, social media messaging, and elected official briefings.

Adopt-a-Highway Best Practices, Arizona. *Arizona Department of Transportation.* Project Manager. Responsible for project management. Michael Baker provided extensive analysis of the current Adopt-a-Highway program, nationwide benchmarking, and best practices assessment of various program elements. The project included an extensive electronic and phone survey of all 50 states to ascertain the organizational, operational, volunteer, safety, and liability components of the program and compare them to the existing program characteristics. The process also included one-on-one phone interviews with select client employees to gain their perspectives on what aspects of the program function well and identify areas for improvement. The final report identified shortcomings of the existing program, highlighted best practices of others, and provided a series of recommendations and implementation measures to enhance the current program.

Broadway/Rural Drainage Master Plan and Flood Mitigation Alternatives, Tempe, Arizona. *The Flood Control District of Maricopa County (FCDMC).* Project Manager. Responsible for project management. Michael Baker provided public outreach and involvement support by developing and illustrating various flood mitigation alternatives for three candidate mitigation areas. Michael Baker conveyed FLO-2D modeling results in a graphic and presentation-friendly manner for public consumption and to solicit input from thousands of area property owners.

Michael E. LoTempio, P.E., LEED AP BD+C

Project Manager

General Qualifications

Mr. LoTempio is a registered professional engineer in the state of Arizona, North Dakota, and New York with a technical background in general civil engineering, land development, infrastructure and construction administration/inspection. For the past 18 years, Mr. LoTempio has been responsible for planning, design and project management of numerous land development, and infrastructure projects. Expertise includes site and roadway layout, site grading and storm drainage design, erosion control/storm water pollution prevention plans, sanitary sewer master planning and network design and water distribution master planning and network design.

Professional experience encompasses design and project management on a wide range of civil engineering projects. Experience includes development feasibility and cost analysis studies, preliminary feasibility design, land use entitlements and zoning, construction drawing and document preparation, contractor tendering and construction administration/onsite civil engineering services, project scheduling as well as overseeing and reporting of job progress, and preparing construction cost estimates. Various representative projects are listed below.

Experience

Paseo Vista Recreation Area Drainage Site Plan, Chandler, Arizona. *City of Chandler.* Senior Civil Engineer. Lead Civil Engineer responsible for preparation and oversight of design and drawing production for drainage repairs. Also prepared costs estimates, bid schedules, specifications and bid documents. Michael Baker provided engineering services to develop a drainage site plan for the Paseo Vista Recreation Area. Michael Baker's services included the development of interim repair plans, preliminary and final drainage design, and the development of a repair and maintenance plan.

Austin Ranch Planned Area Development, Surprise, Arizona. *Courtland Homes, Inc.* Project Manager. Responsible for overseeing design of project, coordination with client, approval entities and other stakeholders. Also responsible for ensuring the highest level of deliverable quality while meeting the project budget and schedule. Michael Baker provided engineering services for the Austin Ranch East and Austin Ranch North planned area development, located at the corner of Deer Valley Road and Grand Avenue. The 850-acre community includes a mixture of single-family residential densities, neighborhood shopping centers, pocket parks, city park, elementary school site, natural open spaces, improved common open spaces, trails, and a remote waste water treatment plant. Michael Baker provided preliminary and final plats; infrastructure, subdivision, and drainage plans; master wastewater reports; and stormwater pollution prevention and water management plans. Michael Baker also prepared a conditional letter of map revision (CLOMR) for floodplain modification to be provided to the Federal Emergency Management Agency (FEMA).

Design-Build Upgrade of the Building 913 Hangar, Luke Air Force Base, Maricopa County, Arizona. *U.S. Army Corps of Engineers, Los Angeles District.* Senior Civil Engineer. Civil Discipline lead responsible for management and execution of site/civil design for the project. Specific tasks included site layout, site grading and drainage design, water and sewer utility layout and design and preparation the SWPPP. Project deliverables included construction plans, specifications and design reports. Post design responsibilities

*Years with Michael Baker: 3
Years with Other Firms: 19*

Degrees

B.S., 1996, Civil Engineering,
The State University of New
York at Buffalo

Licenses/Certifications

Professional Engineer:

Arizona, 43727

North Dakota, 2013, PE-8755

New York, 082986

LEED Accredited Professional
BD+C, 10356526

included contractor submittal review and RFI response. Michael Baker provided architectural and engineering services for the design-build upgrade of the Building 913 hangar to support the maintenance of F-35 aircraft. Michael Baker's services included project and design management; surveying and mapping; architecture; civil, structural, life safety, mechanical, electrical, plumbing, security, and telecommunications engineering; and construction-phase services.

Hawes Road Gas Line Extension, Mesa, Arizona. *City of Mesa, Arizona.* Senior Civil Engineer. Responsible for preparation and oversight of design and drawing production. Also coordinated with client and utility companies throughout the design process to address design comments and utility conflicts. Michael Baker provided engineering services for a proposed gas regulator station and 4-inch high-pressure gas line extension of approximately 2,700 feet along Hawes Road from Hermosa Vista Drive to McKellips Road. Michael Baker's services included project management, surveying and mapping, utility potholing, and preliminary and final design.

Facility Improvement Surveying and Mapping, Maricopa, Arizona. *CenturyLink.* Senior Civil Engineer. Civil Discipline lead responsible for management and execution of site/civil design for the project. Specific tasks included site layout as well as site grading and drainage design. Project deliverables included construction plans, specifications and design reports. Michael Baker provided surveying services for improvements to the facility located at 45030 West Edwards Avenue. Michael Baker's services included land title surveying, topographic surveying, digital terrain modeling, and base mapping.

Morningstar at Arrowhead Senior Living, Glendale, Arizona. *MC-RCS Arrowhead LLC.* Project Manager. Responsible for the site/civil design of a 67,000 square foot assisted and memory care facility located on 75th Avenue in the City of Glendale, Arizona. Michael Baker provide site/civil design for a 67,000-square-foot assisted and memory care facility located on 75th Avenue. The five-acre development consists of one three-story building and one single-story building as well as necessary parking, open space, and drives. Offsite improvements included street lighting, signage, and pavement striping. Civil work included site design and layout; site grading and design of accessible pathways around the site; and utility infrastructure, including sewer, domestic water, and fire water. A comprehensive stormwater management system was also designed, including a stormwater pollution protection plan (SWPPP). Post design services included periodic site observation inspections, submittal review, contractor RFI responses, and a final punch list.

Bullard Avenue Low Flow Crossing, Goodyear, Arizona. *City of Goodyear, AZ.* Senior Civil Engineer. Lead engineer responsible for preparation and oversight of design and drawing production. Michael Baker is providing engineering services for the replacement of the Bullard Avenue low flow crossing south of the Riggs Road intersection. Michael Baker's services include field survey and mapping, drainage analysis and design, and development of 90 percent and 100 percent construction plans.

San Miguel Forward Operating Base (FOB) Command and Control Facility, Cochise County, Arizona. *Au Authum Ki, Inc.* Senior Civil Engineer. Civil Discipline lead responsible for management and execution of site/civil design for the project. Specific tasks included site layout, site grading and drainage design, water and sewer utility layout and design and preparation the SWPPP. Project deliverables included construction plans, specifications and design reports. Post design responsibilities included contractor submittal review and RFI response. Michael Baker provided architectural and engineering design for the San Miguel Command and Control (C2) facility. The facility is located at the southwest corner of the property just south of the existing dormitory building. The west edge of the proposed modular C2 facility has been aligned with the west edge of the existing dormitory building. Minimal site work was needed, and a 5-foot-wide aggregate walkway was provided from the entrance of the new facility to the existing dormitory walkway. Michael Baker provided designed the modular building to support six workstations, a break room, unisex restroom, NOC/SOC office, a supervisor's office, and a LAN server room.

Timothy E. Quillman, P.E.

Operations Manager

General Qualifications

Mr. Quillman is a registered professional engineer in the state of Arizona, California, and Texas with a technical background in civil design along with bridge design and inspection.

For the past ten plus years, Mr. Quillman has gained a broad range of experience working on both multi-discipline Federal contracts, primarily through the United States Army Corps of Engineers, Fort Worth District (USACE) Engineering and Construction Support Office (ECSO) and local municipal project. Over that time span, USACE ECSO has been contracted to provide Department of Homeland Security, Customs and Border Protection (CBP) assistance in improving their tactical infrastructure (TI) for various Border Patrol Sectors (OBP). With USACE ECSO as a client, Mr. Quillman has had the opportunity to provide Engineering and Project Management services for upgrading CBP TI which includes items such as roads, fence/barriers, drainage control, lighting and bridges as well as participating on Project Development Teams that identify and plan future projects. On the municipal side, Mr. Quillman has worked on a variety of projects some of which include the Rio de Flag flood control project, Crismon and Hawes Road gas line extensions and Paseo Visita Recreation Area drainage improvements

In addition to his project work, Mr. Quillman also currently serves as the operations manager for the Infrastructure group within the Michael Baker Phoenix office. As part of his duties, Mr. Quillman oversees operations of general civil engineering design, transportation/traffic engineering, structural engineering, surface water engineering, water resources engineering and environmental compliance inspections. In leading the operations effort, Mr. Quillman has been involved in balancing project requirements with available resources; project reviews; guiding junior staff in the development of construction plans and specifications; implementation and continued use of design and CAD standards for projects; and, quality assurance audits on project administration and quality control completed by department project managers.

Experience

Rio de Flag Flood Control Bridge Design, Flagstaff, Arizona. *City of Flagstaff, Arizona.* Project Manager. Responsible for coordinating the design internally, with the City of Flagstaff and with the Corps of Engineers. Michael Baker completed two bridge designs and one project assessment required as part of a flood control project. Michael Baker completed calculations and construction plans and specifications for two two-barrel super box-culverts. The required study was completed where the Rio de Flag crossed historic Route 66, and the project assessment was completed for planning the funding for new construction in the future. Additionally, Michael Baker participated in a value engineering (VE) workshop that resulted in the project team reducing the structure crossings from 11 down to two by implementing closed-channel flow at strategic locations within the upper reach.

Rio de Flag Flood Control and Design Concept Report, Flagstaff, Arizona. *City of Flagstaff, Arizona.* Operations Manager. Responsibilities include client management, project reviews, quality control, and oversight in coordination with the project manager. Coordination efforts with the PM included providing resources, assessing procedures and performance results, and introduce lessons learned from other similar projects. Michael Baker prepared a design concept report incorporating multiple alternatives for 100-year flood control facilities on the Rio de Flag and Clay Avenue Wash. Michael Baker's services included value

Years with Michael Baker: 13
Years with Other Firms: 6

Degrees

Master's Certificate, 2006,
Project Management, University
of Houston, Clear Lake

B.S., 1999, Civil Engineering,
University of Arizona

Licenses/Certifications

Professional Engineer – Civil:
Arizona, 2004, 40857

California, 2005, C68643

Texas, 2006, 97633

engineering, floodplain modeling and mapping, channel design, cost estimating, and construction sequencing.

Paseo Vista Recreation Area Drainage Improvements, Chandler, Arizona. *City of Chandler.* Operations Manager. Responsibilities included project reviews, quality control, and oversight in coordination with the project manager. Coordination efforts with the PM included providing and assessing procedures and performance results as well as introducing lessons learned from other similar projects. Michael Baker completed the drainage analysis and report for controlling stormwater run-off throughout the 64-acre Paseo Vista Recreation Area. Michael Baker developed erosion and drainage control construction plans based on the results of the drainage analysis and a drainage control maintenance plan for the City for use in maintaining newly constructed storm control features.

Paseo Vista Recreation Area Drainage Site Plan, Chandler, Arizona. *City of Chandler.* Project Manager. Responsible for monitoring project budget and schedule, meeting scope requirements, client and stakeholder coordination, client project review meetings and reviewing deliverables with design staff. These responsibilities were accomplished by meeting with the civil engineer lead on a regular basis to discuss design approach and regular communication with the client. Michael Baker provided engineering services to develop a drainage site plan for the Paseo Vista Recreation Area. Michael Baker's services included the development of interim repair plans, preliminary and final drainage design, and the development of a repair and maintenance plan.

Reclaimed Water Alignment Study and Conceptual Design, Buckeye, Arizona. *City of Buckeye.* Operations Manager. Responsibilities included project reviews, quality control, and oversight in coordination with the project manager. Coordination efforts with the PM included providing and assessing procedures and performance results as well as introduce lessons learned from other similar projects. Michael Baker prepared an alignment study and master plan for the City of Buckeye's future effluent system. This project included the identification of potential effluent users, demand projections, evaluation of various alignments for the City's proposed reclaimed water transmission main, hydraulic calculations, water mass balance, and a preliminary design of pump station improvements. This project also included a mass balance study to determine reclaimed water production as compared to future reclaimed demands. In addition, options for recharge and long-term storage credits were evaluated and discussed. This project also included preparing cost estimates for recommended improvements.

NOGALES Zone 20 (D-5) All-Weather Roadway Design, Nogales, Arizona. *U.S. Army Corps of Engineers, Fort Worth District.* Operations Manager. Responsibilities included project reviews, quality control and oversight in coordination with the project manager. Coordination efforts with the PM included providing resources, procedures and performance results, and introduce lessons learned from other similar projects within the southwest border program. Michael Baker is providing design services to develop analysis and construction documents for construction of all-weather roadway and 45 low-water crossings beginning five miles west of the Mariposa Land Port of Entry and continuing six miles west through the Coronado National Forest. Michael Baker will provide drainage analysis, geotechnical investigation, conceptual design report, and draft (60 percent) and final (100 percent) construction documents; and will develop the bill of materials package for military deployment.

Sam S. Darghous, P.E., PMP

VP & Customs & Border Protection Market Nat'l
Dir.

General Qualifications

As vice president and Customs and Border Protection (CBP) market national director, Mr. Darghous is responsible for growing Michael Baker's CBP portfolio within the Homeland Security market. Mr. Darghous has extensive civil engineering, project, and program management experience supporting federal projects. Mr. Darghous has also logged thousands of flight hours as a FAA Certificated Airline Transport Pilot and currently holds a Flight Instructor certificate. His excellent knowledge and experience in Civil Engineering, combined with his aviation and Program Management qualifications makes Mr. Darghous a valued asset to any project or program. His unique background allows him to implement effective engineering solutions that can be practical and cost effective.

Experience

Baboquivari Road DCFSR, Baboquivari Mountains, Arizona. *U.S. Army Corps of Engineers, Fort Worth District.* Principal-In-Charge. Oversaw contract negotiations and final contract execution. Participated in project progress meetings. Led client satisfaction and performance feedback surveys/meetings. Provided feedback and led Michael Baker execution team. Michael Baker provided a design concept feasibility study and report (DCFSR) for repairing and improving existing Customs and Border Protection (CBP) access road(s) by widening and/or expanding to be able to allow maintenance vehicles to access the Baboquivari Mountains. The DCFSR developed evaluation factors used to catalog 9.6 miles of an existing two-track road in terms of current conditions and corresponding level of effort required to allow better access along the roadway. Factors considered included stormwater management requirements, complexity of design and/or construction means and methods, real estate requirements, environmental impacts, use of military construction to execute the proposed construction, phasing of construction over a multi-year timeline and, and rough order of magnitude costs for construction and maintenance. The design utilized topographical and geotechnical data from readily available sources. Project deliverables included DCFSR evaluation and design criteria and draft and final DCFSR reports.

Zone 20 Border Road Phase 3 Engineering Support, Nogales, Arizona. *U.S. Army Corps of Engineers, Fort Worth District.* Principal-In-Charge. Oversaw contract negotiations and final contract execution. Participated in project progress meetings. Led client satisfaction and performance feedback surveys/meetings. Michael Baker provided civil engineering support to three military units deployed to assist the Tucson Sector Office of Border Patrol in the construction of, and improvements to, the Zone 20 border road to help the Border Patrol more efficiently perform its duty within the project area and access other nearby areas. The first two deployments' work was based on Michael Baker's construction drawings, while the third deployment was based on a revised design completed by the 555th Battalion. Michael Baker provided field oversight and engineering support, formal request-for-information resolution; survey support; and geotechnical engineering, inspection, and materials testing. Michael Baker also provided the necessary design and engineering support to complete the 555th Battalion construction drawing.

Years with Michael Baker: 18
Years with Other Firms: 8

Degrees

B.E., 1991, Civil Engineering,
Youngstown State University

Licenses/Certifications

Project Management
Professional (PMP),
Pennsylvania, 2014, 1749566

Professional Engineer:

Arizona, 2002, 37541

Nevada, 2015, 023385

65_NGL RVSS RFI Construction Support, Nogales, Arizona. *U.S. Army Corps of Engineers, Fort Worth District.* Principal-In-Charge. Oversaw contract negotiations and final contract execution. Participated in project progress meetings. Led client satisfaction and performance feedback surveys/meetings. Provided feedback and lead Michael Baker execution team. This Task Order provided Contractor RFP bidder inquiry support and design support during construction of the Nogales, AZ Towers Remote Video Surveillance Systems (RVSS). The design RFP for the Nogales RVSS Towers was developed under a previous Task Order by Michael Baker. Specific services under this Task Order included response to RFI's, coordination with USACE PM, site visits to observe Contractor compliance with the plans and submittal reviews.

Water Treatment Plant and Camp 8 Surveys, El Paso and Hudspeth Counties, Texas. *U.S. Army Corps of Engineers, Fort Worth District.* Principal-In-Charge. Oversaw contract negotiations and final contract execution. Participated in project progress meetings. Led client satisfaction and performance feedback surveys/meetings. Provided feedback and led Michael Baker execution team. Michael Baker provided metes and bounds surveys, legal deed descriptions, and other requested deliverables for the El Paso Water Treatment Plant (WTP) and Camp 8 Crossing. Michael Baker identified planimetric information (buildings, mobile homes, roads, parking areas and surfacing, sidewalks, fence lines, structures, drainage, etc.); easements (roads, rights-of-way, water courses, drains, and utilities); evidence of possession; encroachments; and cemeteries. Michael Baker recorded identifying titles of all recorded plats, filed maps, right-of-way maps, and similar documents represented by the survey with their appropriate recording data; filing dates and map numbers; and lot, block, and section numbers or letters. Additionally, Michael Baker monumented the new tract/parcel taking lines in the areas to be acquired in order to identify their location on the ground.

Master Plan Development, Texas. *U.S. Army Corps of Engineers, Fort Worth District.* Principal-In-Charge. Oversaw contract negotiations and final contract execution. Participated in project progress meetings. Led client satisfaction and performance feedback surveys/meetings. Michael Baker developed a comprehensive master plan that outlines existing conditions, current and future needs, and the financial and operational impacts of prospective projects for sites within the U.S. Customs and Border Protection (CBP) Rio Grande Valley Sector. Michael Baker's tasks included project management plan development, existing information review, on-site facility condition assessment review, indicative condition assessment, operational interviews, facility space requirement shortfall report preparation, current assessment report preparation, facility needs workshop coordination, alternatives development, cost estimate development, CBP stakeholder planning workshop coordination and concept brief development, and document management and progress reporting.

Remote Video Surveillance Systems (RVSS) Upgrade Program New Tower Construction, Southwest United States. *U.S. Army Corps of Engineers, Fort Worth District.* Principal-In-Charge. Oversaw contract negotiations and final contract execution. Participated in project progress meetings. Led client satisfaction and performance feedback surveys/meetings. Michael Baker provided design services in support of the U.S. Customs and Border Protection (CBP) Facilities Management and Engineering (FM&E) Border Patrol Facilities and Tactical Infrastructure (BPFTI) Program Management Office (PMO), which manages the Office of Technology Innovation and Acquisition (OTIA) Remote Video Surveillance Systems (RVSS) Upgrade Program, New Tower Construction for the Tucson and Yuma Sectors in Arizona. Michael Baker produced 35-percent concept design for 26 tower sites, including tower foundation, tower primary and backup power and equipment, parking, and related access roads and 95-percent and 100-percent designs for 20 of the 26 final approved tower sites, including tower foundations, tower primary and backup power lines and equipment, parking, and related access roads. Following the completion of the 100-percent design, a total of three requests for proposals (RFP) were completed.

Todd G. Williams

Environmental Services Director

General Qualifications

Mr. Williams is a program manager with many years of experience leading a wide range of environmental projects, most recently focusing on stormwater management and water quality. He has extensive knowledge in developing and implementing National Pollutant Discharge Elimination System (NPDES) programs on the federal, state, and county levels.

Experience

Stormwater Program, Salt Lake City, Utah. *Utah Department of Transportation.* Assistant Project Manager. Responsible for coordinating the development of the Stormwater Pollution Prevention Plans for over 100 maintenance facilities, coordinating comments with UDOT staff, assisting with providing recommendations for the modifications to UDOT's statewide stormwater permit and assisting the Project Manager on an as needed basis. Michael Baker is assisting in updating the client's stormwater program to respond to a U.S. Environmental Protection Agency (USEPA) audit and a new stormwater Utah Pollutant Discharge Elimination System (UPDES) Permit. Michael Baker is generating facility pollution prevention plans (FPPP), developing the client's design guide for treatment best management practices (BMP), reviewing and updating the client's illicit discharge detection and elimination (IDDE) program, developing a wet weather monitoring plan, and developing a training program for maintenance crews to implement the FPPPs.

Stormwater Program Compliance Assistance, Peoria, Arizona. *City of Peoria, Arizona.* Project Manager. Responsible for the renewal and update to Peoria's Phase II municipal stormwater permit. Tasks include: Updating the City's Stormwater Management Plan, Locating and verifying existing and new infrastructure as required by the expanded permit area, Review and revise legal authority as necessary, Provide recommendations on resources and partnerships to supplement the City's program and Provide estimates of probable annual costs to comply with the MS4 permit requirements Michael Baker is currently assisting city in complying with the renewed Phase II municipal separate storm sewer system (MS4) permit, including development of a stormwater management program (SWMP). This includes identifying necessary changes to the city's current SWMP to meet the minimum requirements of the renewed MS4 permit, assisting in locating and/or verifying the locations of existing stormwater infrastructure, and identifying potential resources and/or partnerships to complement the city's program.

Chinle Street Lighting, Chinle, Arizona. *Arizona Department of Transportation.* Environmental Specialist. Responsible for identifying possible environmental concerns associated with the prescoping process for the Planning Area for Rural Areas (PARA) grant to the Chinle Chapter of the Navajo Nation. Michael Baker assisted the Chinle Chapter of the Navajo Nation with investigating the engineering and environmental requirements of possibly installing solar street lighting and two crosswalks with solar warning lighting along a 1.8-mile section of Navajo Route 7 from its intersection with U.S. 191 to the Navajo Route 27 intersection. The objective was to identify project development and delivery (capital and O&M) tasks and barriers/deficiencies to more accurately develop an accurate construction scope and fee estimate for future funding requests and project construction.

Years with Michael Baker: 3

Years with Other Firms: 27

Degrees

MSc, 1993, Biology, University of Waterloo

BSc, 1989, Biology, University of Toronto

Licenses/Certifications

NHI NEPA and Transportation Decision Making, 2008

Stormwater Audit Support and General Stormwater Services, Pinal County, Arizona. *Pinal County Public Works Department.* Project Manager. Responsible for assisting Pinal County with the audit of their stormwater permit conducted by ADEQ. Services include: providing stormwater audit support, documenting observations of the audit, assisting with the response to the audit, coordinating efforts in response to the audit conclusions and providing general stormwater management services in response to the audit and the new proposed stormwater permit on an on-call basis. Michael Baker is currently assisting Pinal County with an audit of their stormwater permit conducted by the Arizona Department of Environmental Quality (ADEQ). Services include providing stormwater audit support, documenting observations of the audit, assisting with the response to the audit, coordinating efforts in response to the audit conclusions, and providing general stormwater management services in response to the audit and the new proposed stormwater permit on an on-call basis.

Scott M. Taylor, P.E., D.WRE, F.ASCE

Senior Vice President/Office Manager

General Qualifications

Mr. Taylor has extensive experience in stormwater quality investigations having completed projects in support of TMDLs, BMP research, and BMP design. He has completed projects for federal, state, local, and private clients. He also has experience in storm drain master planning and design for development projects with mixed land use and conjunctive use of storm drain infrastructure with recreational elements. He has developed master storm drain plans, runoff management plans, and final plans and specifications for public and privately funded infrastructure. Mr. Taylor has been a part-time lecturer at the University of California, Irvine and California State University, Long Beach, where he instructed undergraduate courses in hydrology and hydraulic design. He is course coordinator and lecturer in a P.E. license review course and has instructed a course in BMP Design through ASCE Continuing Education. He is currently serving on the Board of Directors for the California Stormwater Quality Association (CASQA). Mr. Taylor has developed training courses for stormwater compliance on construction sites for contractors, developers, municipalities, and engineers. He has provided training courses for various aspects of stormwater compliance for various entities and corporations.

Experience

2016-2017 Offsite Storm Water Alternative Compliance Program, San Diego, California. *City of San Diego, Transportation and Storm Water Department.* Project Manager. Responsible for project oversight. Michael Baker is assisting with development of the Phase 2 Offsite Storm Water Alternative Compliance Program framework in 2017. A draft credit program standards document for structural best management practices (BMP) and a separate draft credit program standards document for natural system management practices (NSMP) are being developed based on the credit system work plan. In addition, a draft in-lieu fee program standards document based on the in-lieu fee work plan will be developed.

Drainage Appurtenances Structural Analysis, Statewide, California. *CALTRANS.* Principal-In-Charge. Responsible for contract management and client relations. Michael Baker developed structural calculations for various drainage appurtenances commonly used by the client, working collaboratively to substantiate standard designs according to AASHTO Load Resistance Factor Design (LRFD) requirements and economize where possible. To ensure the results targeted expectations, Michael Baker identified and corrected pitfalls in methodology at the beginning and during the design. Michael Baker reached out to contractors and those in industry for the state of practice. Structural analysis followed AASHTO LRFD Bridge Design Specifications, 2012 (Sixth Edition) with California Amendments.

*Years with Michael Baker: 33
Years with Other Firms: 0*

Degrees

M.S., 1990, Civil Engineering,
California State University at
Long Beach

B.S., 1984, Civil and
Environmental Engineering,
California State Polytechnic
University, Pomona

Licenses/Certifications

Diplomate, Water Resources
Engineer, 2010

Certified Inspector of Sediment &
Erosion Control, California,
2012, 1069

Construction General Permit
Trainer of Record, California,
2013

Professional Engineer – Civil:
Washington, 2009, 46037

Utah, 2008, 7155691-2202

Tennessee, 2008, 112121

Oregon, 84501PE

Nevada, 2000, 14345

New Mexico, 2010, 20418

Hawaii, 2016, 16585

California, 1987, 43053

Arizona, 2000, 34870

Texas, 2016, 124251

Low Impact Design (LID) Standards Development, Stormwater Quality Design Manual Update and BMP Sizing Tool Enhancement, Sacramento, California. *City of Sacramento.* Project Manager. Responsible for managing the project. Michael Baker was retained by the City of Sacramento to provide consulting services for Low Impact Design (LID) Standards Development, Stormwater Quality Design Manual Update and BMP Sizing Tool Enhancement. Michael Baker developed LID strategies emphasizing conservation to mimic pre-project hydrologic conditions, updated technical guidance for the LID standards and Hydromodification Management Plan (HMP) requirements. Michael Baker's scope of work included LID standards development for new development and redevelopment, updating of the Stormwater Quality Design Manual, developing/enhancing BMP Design tools for LID, treatment and hydromodification management compliance, and public workshops development and presentations. Work efforts also included creation of software and a spreadsheet computational tool for use by the design practitioners to demonstrate compliance with updated water quality standards. A public education and outreach phase was included to solicit industry feedback during creation of the manual, and to instruct design practitioners on appropriate use of the final manual and accompanying products.

Caltrans On-Call Technical and Professional Stormwater Services (Contract Nos. 43A0182, 43A0286 and 43A0316), Statewide, California. *Caltrans.* Task Manager. Responsibilities included overall project oversight. Michael Baker under three separate, three-year contracts with the State of California, Department of Transportation (Caltrans), provided on-call statewide storm water services. Work under three contracts was related to continued development and refinement of Caltrans' statewide Storm Water Management Program, whose goal is to integrate appropriate storm water control activities into ongoing activities and thus make control of storm water pollution a part of Caltrans' normal business practices.

Storm Drain Master Plan, South San Francisco, California. *City of South San Francisco.* Principal-In-Charge. Responsible for project oversight. Michael Baker assisted the city in completing a comprehensive storm drain master plan to upgrade deficient systems and meet the requirements of the Municipal Regional Permit. Michael Baker worked in close coordination with city staff to refine and prioritize objectives, analyze available information supplemented by carefully planned field work, develop a comprehensive hydraulic/hydrologic model, and combine data with criteria and constraints to provide the foundation for a capital improvement program.

NPDES Phase II Stormwater Regulation (Caltrans Contract No. 43A0307), Southern California, California. *CALTRANS.* Principal-In-Charge. Supported the City of Peoria's implementation of a Phase II Storm Water NPDES Permit as prescribed by the Clean Water Act. Services include: review of existing City and neighboring city and agency storm water practices; establish storm water priorities; develop a Storm Water Management Plan (SWMP) for the City (developed strategies for control measures, public education/outreach and public involvement programs, construction site and post construction run off controls, IC/ID Program, pollution prevention / good housekeeping, interviews with City staff and staff training, develop controls for industrial facilities and for construction projects, inspections); and preparation of NPDES Phase II permitting (developed status report for six minimum control measures, assess effectiveness of and recommend changes to the SWMP, review new technologies, develop budget for program implementation). The objective of the Storm Drain System Inventory (SDSI) was to identify and describe existing major surface water bodies in areas subject to the Municipal Separate Storm Sewer System (MS4) permit using ArcView Geographic Information System (GIS) and mobile GPS units. All Caltrans properties and facilities located within the Phase II, MS4 urban areas of Southern California were included in the inventory.

Geoffrey S. Brownell, P.E., CFM

Water Resources Department Manager

General Qualifications

Mr. Brownell has experience as a water resources engineer with extensive knowledge of hydrology, hydraulics, floodplain analysis, roadway drainage design, stormwater best management practices (BMP), and fluvial geomorphology. He has a broad range of experience developing hydrologic and hydraulic models for river systems, local and regional watersheds, and urban development. In addition, Mr. Brownell has completed several drainage master plans, designed large storm drain systems, and developed numerous SWPPPs as part of the NPDES program. Mr. Brownell also has extensive experience preparing and reviewing letters of map change (LOMC) submittals, both as a contractor for local cooperating technical partners (CTP) and as a technical study partner for FEMA. Mr. Brownell has managed projects of similar size and scope in Nevada and Arizona and has been active in the floodplain management community in both states.

Experience

Rio de Flag Flood Control and Design Concept Report, Flagstaff, Arizona. *City of Flagstaff, Arizona.* Project Manager. Managed DCR to determine cost of building a flood control project for the Rio de Flag River in Flagstaff, AZ. Michael Baker prepared a design concept report incorporating multiple alternatives for 100-year flood control facilities on the Rio de Flag and Clay Avenue Wash. Michael Baker's services included value engineering, floodplain modeling and mapping, channel design, cost estimating, and construction sequencing.

Paseo Vista Recreation Area Drainage Site Plan, Chandler, Arizona. *City of Chandler.* QA/QC. Provided QA/QC oversight to drainage design. Michael Baker provided engineering services to develop a drainage site plan for the Paseo Vista Recreation Area. Michael Baker's services included the development of interim repair plans, preliminary and final drainage design, and the development of a repair and maintenance plan.

Citywide 100-Year Flood Risk Assessment, Phoenix, Arizona. *Federal Emergency Management Agency (FEMA).* Program Manager. Managed the Pit River PAL project (Modoc, California) and the Apache Junction RiskMAP project. Michael Baker is performing an enhanced 100-year flood risk analysis for the city. Michael Baker's services include data collection and analysis, risk modeling, geographic information system analysis, and mapping and graphics development.

Golden Valley Zone A Study, Phases 1 & 2, Mohave County, Arizona. *Mohave County Flood Control District.* Project Manager. Managed a large Zone A floodplain study in Golden Valley, Mohave County, AZ. The study was submitted to FEMA for incorporation into the Mohave County DFIRM. Michael Baker completed a large Zone A floodplain re-delineation study in the Golden Valley area. The overall watershed in this area is 470 square miles, and 432 square miles were provided with detailed depth and velocity data to help manage flood risk. The study also resulted in hundreds of miles of updated Zone A delineation to be submitted to FEMA for incorporation into the County DFIRM.

Apache Junction Flood Risk Project, Apache Junction, Arizona. *FEMA.* Project Manager. Managed the Pit River PAL project (Modoc, California) and the Apache Junction RiskMAP project. Michael Baker prepared a flood risk report and flood risk map to help define flooding risks in the communities. As part of

Years with Michael Baker: 8
Years with Other Firms: 10

Degrees

B.S., 1999, Geological Engineering, New Mexico State University

Licenses/Certifications

Professional Engineer – Civil:
Arizona, 2005, 42317

Nevada, 2009, 020306

these efforts, a working group and planning group were formed to help inform the process. The working group consisted of city staff directly affected by the plan, while the planning group was made up of various community stakeholders. The result was a comprehensive plan that detailed next steps for the city to mitigate its flooding risks.

ASAP Pipeline Waterways Work Plan, North Slope to South Central, Alaska. *Alaska Gasline Development Corporation (AGDC).* Technical Advisor. Performed technical oversight during the preparation of project waterways documents and led field assessment of stream crossings for access roads. Michael Baker defined procedures for stream crossing classifications using best available data, revised crossing classifications, and established procedures for pipeline and access road design at stream crossings, including scour depth determination, channel migration assessment, mitigative action, and construction mode determination.

Mohave County DFIRM Outreach, Mohave County, Arizona. *Mohave County Flood Control District.* Project Manager. Managed public outreach in support of new FEMA DFIRM maps for three areas in Mohave County. Michael Baker managed public outreach in support of new Federal Emergency Management Agency (FEMA) Digital Flood Insurance Rate Maps (DFIRM) for three areas in Mohave County. Public meetings were conducted in several strategic locations and during different phases in the map adoption process. Michael Baker's team spearheaded meeting organization and the preparation of meeting material to help inform the public of the pending map changes.

Floodplain Management and Hazard Mitigation Planning Services, Statewide, Missouri. *Missouri Emergency Management Agency.* Department Manager. Provided QA/QC oversight for Zone A floodplain delineation and additional project coordination. Michael Baker is providing a wide range of professional consulting services for floodplain management, hazard mitigation planning, and emergency management. Michael Baker's services include project management, floodplain studies, topographic surveys and mapping, floodplain mapping, development of flood insurance rate maps, hazard mitigation planning, grant administration support, floodplain construction permit reviews, website development, staff training, agency coordination, stakeholder coordination, and community outreach.

Downtown Tempe FLO-2D Analysis, Tempe, Arizona. *City of Tempe, Arizona.* Department Manager. Provided QA/QC oversight for 2D hydraulic analyses. Michael Baker developed a FLO-2D model integrated with EPA-SWMM to provide a platform for determining flood depths; indicating existing flooding potential; and aiding with review for new development, light rail completion, and Arizona State University expansion within downtown Tempe. The analysis provided key flood depth information for the city's review and the model serves as a starting point to evaluate the existing flooding potential; establishes a framework for future studies, analyses, and enhancements; and serves as a tool for evaluating future development within the ARCA.

Design of Loop 303, Lake Pleasant Parkway to I-17, Peoria, Arizona. *Arizona Department of Transportation.* Water Resources Engineer. Completed Letter of Map Revision application for submittal to FEMA. Michael Baker completed the first of many projects to design Loop 303: a brand new interim four-lane divided expressway constructed from Lake Pleasant Parkway to I-17. This project includes the final design and preparation of construction plans, specifications and estimate (PS&E) for constructing the interim SR 303L from Lake Pleasant Parkway to I-17. This design will also accommodate the future freeway to freeway connection to SR74, service interchanges to local streets as well as the SR 303L/I-17 system interchange.

Alejandro Riano, P.E., CFM

Civil Engineer

General Qualifications

Mr. Riano is a water resources engineer with several years of experience in hydrologic and hydraulic modeling, heavy civil engineering work, personnel training and software testing. He has extensive experience in Area Drainage Master Plans, dam breach modeling, and application of the frequency analysis techniques. Mr. Riano is committed to serve the engineering community by actively participating in local engineering associated organizations to educate and improve the skills in engineering and develop water resources infrastructure, policy and management through the application of state of the art modeling, and cost effective management approaches.

Experience

Douglas/Agua Prieta Flood Hazard Mitigation Study, Douglas, Arizona and Agua Prieta, Mexico. *Border Environment Cooperation Commission.* Water Resources Engineer. Performed data collection, research, and technical guidance.

Golden Valley Zone A Study, Phases 1 & 2, Mohave County, Arizona. *Mohave County Flood Control District.* Technical Lead. Provided guidance and management of the development of the H&H analyses. The H&H analyses provide the ground work to perform risk assessment to include floodplain mapping and non-regulatory flood risk products that mitigate the impact the flood hazards to life and property. The analyses consist of an integrated hydrology and hydraulics 2D that models extending through an area of about 470 square miles with a proposed floodplain delineation of 272 linear miles of FEMA Zone A washes. The resulting multi-frequency depths and velocity maps are an improved and more detail product that would benefit current residents and help regulate future development. Michael Baker completed a large Zone A floodplain re-delineation study in the Golden Valley area. The overall watershed in this area is 470 square miles, and 432 square miles were provided with detailed depth and velocity data to help manage flood risk. The study also resulted in hundreds of miles of updated Zone A delineation to be submitted to FEMA for incorporation into the County DFIRM.

Naco Fence Replacement, Naco, Arizona. *U.S. Army Corps of Engineers, Fort Worth District.* Civil Engineer. Responsible for performing the hydrology task and hydraulic modeling oversight for the low water crossings in the design-build of 14 linear miles of fence along the international border. Assembled the drainage report that included the hydrologic analysis using the TR-55 modeling approach for a watershed, the hydraulic analysis that modeled the impacts of the fence along 23 low water crossings using HEC-RAS 5.0. The report also included scour and riprap design and analysis for each crossing.

Non-Michael Baker Project Experience

Peralta Canyon, Pueblo Cochiti, New Mexico. *U.S. Army Corps of Engineers.* Modeler. Developed a hydrologic 2-Dimensional model to assess the structural capacity of a levee protecting the town of Cochiti. 2015

Years with Michael Baker: 1
Years with Other Firms: 14

Degrees

M.S., 2013, Civil and Environmental Engineering, Arizona State University

B.S.E., 2008, Civil Engineering, Arizona State University

Licenses/Certifications

Professional Engineer:

Florida, 2012, 75130

Arizona, 2011, 53023

Certified Floodplain Manager, 2009, US-09-04284

Northwest El Paso Hydroglogy, El Paso, Texas. *International Boundary & Water Commission.* Modeler. Developed a hydrologic 2-Dimensional model, simulating design storms ranging from 2 through 500 years, including 43 arroyo hydraulic structures, 3 Rio Grande Bridges, 1-D channels. 2015

Franklin-Brown-Sudden-Barranca, County of Ventura, California. *County of Ventura.* Modeler. Developed the FLO-2D model including stormdrains for a multi design storm analysis. 2014.

Broadway Rural Drainage Master Study, Phoenix Arizona (8 square miles). *FCDMC.* Technical Lead. Provided technical assistance in the development of the hydrologic and hydraulic analysis to identify flooding prone areas based on design storms. The model performed hydrologic and hydraulic analysis on the 2-dimentional surface and was used to identify flooding prone areas based on design storms. The project is currently in the phase of master planning based on the results of the Master study. Study proceeded from July 2008 through December 2009.

Hohokam Area Drainage Master Study, Phoenix Arizona (28 square miles). Technical Lead. Developed a FLO2D model that incorporated simplistic storm drain model that helped identified flooding prone zones. The model also included hydrologic analyses for various design storm durations and return period. This model considered existing and future conditions. The model was verified using spatially distributed rainfall from Gage Adjusted Radar Rainfall. The project is currently under the phase of determining regional solutions based on the FLO2D analyses. 2010-2012

Gillespie Area Drainage Master Study, Arizona (148 square miles). *Maricopa County.* Technical Assistance. Performed a frequency analysis on the Rainbow Wash Watershed and compared results with FLO2D model to determine appropriate modeling parameters. The study is currently on its ending phase. 2011-2012.

Scott A. Nelson, R.L.S.

Surveyor Manager

General Qualifications

Mr. Nelson is a registered land surveyor with several years of project and management experience. As the project manager, he emphasizes client focus at the early stages of a project to fully understand the client's needs in detail and then designs survey solutions tailored for the needs of the project by combining the level of detail required with the appropriate technology to save time and money. His expertise includes ALTA and boundary surveys, R/W surveys, topographic surveys, photogrammetric control and QC surveys, records research, legal descriptions and exhibits, construction surveys and as-built surveys. He has worked on many successful projects similar to those being requested in this solicitation. He is very client oriented and committed to delivering high quality professional services. He is responsible for all aspects of multiple survey projects, including survey field and office work, budgeting, technical services, project coordination and client relationships.

Experience

S.R. 86/Ajo Way-Valencia to Kinney Road. *Arizona Department of Transportation.* Project Manager. Responsible for Final R/W Plans, a supplemental survey, and R/W Staking for appraisals on a 1.5-mile portion of I-19 for improvements to the Ajo Way interchange. Approximately 20-25 parcels are affected by new right-of-way or easements. Michael Baker initiated a FLO-2D model for hydraulic modeling and design of on-site and offsite storm drain management systems, drainage quantity estimates, drainage structure reports, and scour protection.

S.R. 86 Valencia Road to Kinney Road Roadway Improvement, Tucson, Pima County, Arizona. *Arizona Department of Transportation.* Survey Manager. Responsible for providing legal descriptions and exhibits for sewer lines and water lines through state land parcels. Michael Baker provided engineering services for improvements to S.R. 86 from Valencia Road to Kinney Road, including 13 major drainage structures, two bridges, the realignment and reconstruction of local roads, intelligent transportation system, and extensive utility relocation. Michael Baker's services included development of a design memorandum and preliminary and final design.

TO18_SR303 Camelback-Olive. *Arizona Department of Transportation.* Project Manager. Responsible for preparing survey. Under ADOT On-Call Contract 2013-003.02, Michael Baker was tasked with the Final R/W Monumentation Survey for the Camelback Road - Olive Avenue segment of State Route 303L (Bob Stump Memorial Parkway) located in the Phoenix metropolitan area. A total of 136 monuments were set in accordance with the current Arizona Boundary Survey Minimum Standards and the current ADOT R/W Plans Section Right of Way Monumentation Procedures & Standards. Upon on completion of setting the monuments, a total of five R/W Staking Plan sheets were prepared in accordance with the current ADOT CADD standards to illustrate the type and kind of monuments set, point number and coordinate information, and station & offset information for all monuments that were set.

San Miguel Forward Operating Base (FOB) Command and Control Facility, Cochise County, Arizona. *Au Authum Ki, Inc.* Survey Manager. Prepared a topographic survey for design of a modular building site in the southwest corner of the San Miguel Command and Control (C2) facility. Michael Baker provided architectural and engineering design for the San Miguel Command and Control (C2) facility. The facility is located at the southwest corner of the property just south of the existing dormitory building. The west edge of

Years with Michael Baker: 4

Years with Other Firms: 28

Degrees

B.S.E., 1984, Surveying, Iowa State University

Licenses/Certifications

Land Surveyor:

Arizona, 1988, 21782

Nevada, 1989, 8553

the proposed modular C2 facility has been aligned with the west edge of the existing dormitory building. Minimal site work was needed, and a 5-foot-wide aggregate walkway was provided from the entrance of the new facility to the existing dormitory walkway. Michael Baker provided designed the modular building to support six workstations, a break room, unisex restroom, NOC/SOC office, a supervisor's office, and a LAN server room.

Bullard Avenue Low Flow Crossing, Goodyear, Arizona. *City of Goodyear, AZ.* Survey Manager. Located on Bullard Avenue south of the Riggs Road intersection, prepared construction plans to replace the prior existing roadway culvert crossing with a new low flow culverts crossing in order to maintain drainage conveyance under the roadway. Surveying services for this project included establishment of horizontal and vertical control, a topographic survey for design, utility as-built research and preparation of utility base mapping, construction staking for the project and post-construction as-built survey and certification. Michael Baker is providing engineering services for the replacement of the Bullard Avenue low flow crossing south of the Riggs Road intersection. Michael Baker's services include field survey and mapping, drainage analysis and design, and development of 90 percent and 100 percent construction plans.

Camino de La Tierra Pump Station Rehabilitation, Tucson, Pima County, Arizona. *Pima County.* Survey Manager. Responsible for preparing survey. Michael Baker designed 3,400 feet of 8-inch gravity sewer line to bypass the existing La Tierra Lift Station and convey flows to the existing sewer collection system and designed the decommissioning of the existing sewer lift station. The project will reduce Pima County's operation and maintenance costs associated with the existing lift station. Michael Baker also performed a topographic survey and coordinated permitting.

Traffic Signal and Intersection Improvements, Paradise Valley, Arizona. *Town of Paradise Valley.* Survey Manager. Responsible for determining existing right-of-way and field survey of topographic features at 11 intersections for traffic signal design. Michael Baker provided engineering services for improvements to the town's 12 signalized intersections. Michael Baker's services included needs assessments; development of signal timing and coordination plans; recommendations for improvements; preparation of final plans, specifications, and estimates for improvements; post-design services; and utility coordination.

Vekol Wash LiDAR, Maricopa County, Arizona. *The Flood Control District of Maricopa County (FCDMC).* Project Manager. Responsible for preparing survey. Michael Baker provided surveying services consisting of cross section surveys of Vekol Wash and checkpoint (quality control) surveys of the approximate 49 square miles covering the Vekol Wash LiDAR Floodplain Mapping Project. The roject covered approximately 15,200 acres. A total of 13 cross sections of Vekol Wash at approximately one-mile intervals were surveyed along with checkpoint surveys consisting of approximately one checkpoint per one square mile within the project limits. Survey deliverables included a survey report signed by an Arizona Registered Land Surveyor.

Grand Avenue Floodplain Mapping, Maricopa County, Arizona. *The Flood Control District of Maricopa County (FCDMC).* Project Manager. Responsible for preparing survey. Michael Baker provided surveying and photogrammetric services for the production of 1:2400, 2-foot topographical information and major planimetric detail floodplain mapping of the approximate 1,365 acres covering the Peoria Area Delineations: Grand Avenue Aerial Mapping Project. Survey services included the establishment of survey control, aerial ground control, and final survey report. Field surveying established a GPS survey control network, ground control for 15 primary aerial control panels on the project site, and quality control within the project areas for aerial mapping checks. Survey deliverables included panel coordinates submitted to the photogrammetrist and a survey report and certification for the mapping sealed and signed by an Arizona Registered Land Surveyor.

John G. Matthews, GISP, CFM

GIS Specialist

General Qualifications

Mr. Matthews is an experienced geographic information systems (GIS) specialist. He spent one year working on a 3D mapping project for the government of British Columbia, and for more than nine years he performed mapping for the FEMA Flood Mapping program. For five of those years he supported the FEMA Response/Recovery Division Mapping program in the Mapping and Analysis Center (MAC). For three years of his tenure there he was the technical lead in charge of production and training. Mr. Matthews led production/mapping efforts for the terrorist attacks on September 11, the Shuttle Columbia disaster, and Hurricanes Katrina and Rita. Mr. Matthews has also worked for the FEMA Map Modernization Program, supporting the Comprehensive Flood Risk Resources and Response joint venture, which provides updated flood maps to counties affected by tropical Storm Allison. Mr. Matthews has also supported various other GIS projects, including the U.S. Customs and Border Patrol's Primary Fence Construction along the southern border, Fort Huachuca Real Property Master Plan Update, Buckeye FRS Rehabilitation, Canada Del Oro Hydrologic Study, Lackland AFB Preliminary Design Recruit Housing and Training Replacement Program, Maricopa County On-Call Physical Map Revision (PMR), and Alaska Stand Alone Gas pipeline project (ASAP), and the Alaska South Central LNG Project (AKLNG).

Experience

Meridian Road Corridor Study, Pinal County, Arizona. *Arizona Department of Transportation.* GIS Specialist. Responsible for geospatial data management, spatial analysis, and GIS map production. Michael Baker produced the feasibility study report to support the continuing development and growth occurring and anticipated in the East Mesa, West Apache Junction, and within Pinal County. The purpose of the Meridian Road Corridor Study was to document conditions along the existing roadway and to develop alternatives to increase the safety and future level of service (LOS) of Meridian Road. The study also established a roadway footprint and developed the ultimate right-of-way requirement for the corridor. Michael Baker provided traffic analysis, preliminary utility coordination, drainage analysis, and public outreach.

S.R. 86 Valencia Road to Kinney Road Roadway Improvement, Tucson, Pima County, Arizona. *Arizona Department of Transportation.* GIS Specialist. Duties included data conversion in and out of CAD and GIS environments and mapping support. Michael Baker provided engineering services for improvements to S.R. 86 from Valencia Road to Kinney Road, including 13 major drainage structures, two bridges, the realignment and reconstruction of local roads, intelligent transportation system, and extensive utility relocation. Michael Baker's services included development of a design memorandum and preliminary and final design.

101L HOV Lane Design and Environmental Studies, Maricopa County, Arizona. *Arizona Department of Transportation.* GIS Specialist. Responsible for drainage report exhibit creation. Michael Baker provided engineering design and environmental documentation services for the incorporation of high occupancy vehicle (HOV) lanes to a 30-mile portion of SR 101L (Loop 101) between I-10 and Tatum Boulevard and three miles of additional general purpose (GP) lanes between 31st and 15th Avenues. Michael Baker prepared initial and final design concept reports for the addition of GP lanes, HOV lanes, and connector ramps; analyzed traffic impacts of the GP lanes; showed bridge lay-outs for the ramp connections; identified potential stormwater drainage issues; and developed alternatives for analysis. In addition, Michael Baker conducted

Years with Michael Baker: 18
Years with Other Firms: 1

Degrees

B.A., 1998, Geography, Simon Fraser University

Certificate, 1998, Spatial Information, Simon Fraser University

Licenses/Certifications

Certified Floodplain Manager, 2008, US-08-03393

Certified GIS Professional, 2009, 00060702

environmental studies per the National Environmental Policy Act (NEPA) to identify impacts from the project, compare alternatives, and address any potential fatal flaws. Throughout the process, Michael Baker facilitated public involvement and agency coordination efforts to build consensus among local communities and affected agencies.

Civil Engineering for Transportation Enhancement Projects, Various Locations, Arizona. *Arizona Department of Transportation.* GIS Specialist. Duties included data conversion in and out of CAD and GIS environments, field GPS unit preparation, and mapping support. Michael Baker is providing civil engineering services for a variety of transportation enhancement projects, including pedestrian and shared-use pathways, curbs, gutters, and sidewalks. Michael Baker is preparing Americans with Disability Act-compliant conceptual plans, evaluating locations and materials, developing drainage plans, and providing utility coordination.

U.S. 290, Manor Expressway Design-Build Services, Travis County, Texas. *Central Texas Regional Mobility Authority.* GIS Specialist. Duties include data conversion in and out of CAD & GIS environments and mapping support. As part of a design-build team, Michael Baker is leading engineering services for the Manor Expressway (U.S. 290 East), a fully controlled-access, six-mile-long toll highway that is being constructed in the median of U.S. 290, between U.S. 183 and Parmer Lane to east of S.H. 130. The Manor Expressway will alleviate congestion and safety concerns and support the regional transportation network. Michael Baker is developing designs for the new highway, bridges, and frontage roads, including drainage systems and traffic control.

Hazard Elimination, Pavement Preservation, and Rest Area Rehabilitation Services, Yavapai County, Arizona. *Arizona Department of Transportation.* GIS Specialist. Duties included data conversion in and out of CAD and GIS environments, database administration, and mapping support. Michael Baker provided design engineering, project coordination, and construction documents for hazard elimination and safety improvements to approximately seven miles of the southbound lanes of I-17 and rehabilitation of the Sunset Point Rest Area parking lot. Michael Baker prepared roadway design plans and profile sheets, quantity calculations, and cost estimates; designed roadside elements; reviewed engineering reports, plans, and specifications; studied super-elevation issues, excavation/fill, and erosion control plans; developed barrier and culvert plans; and provided post-design services.

Show Low Transit and Trails Connectivity Study, Show Low, Arizona. *Arizona Department of Transportation.* GIS Specialist. Responsible for report exhibit creation, Census Bureau data acquisition, GIS data analysis, and GIS Data management. Michael Baker performed a study in this rural community to review and make recommendations for future improvements to the transit and trail systems. Michael Baker's services included project management, transit planning, sidewalk and trail planning, financial planning, and public involvement.

Civil Engineering for Shared Use Path, San Carlos, Arizona. *Arizona Department of Transportation.* GIS Specialist. Duties included data conversion in and out of CAD and GIS environments, field GPS unit preparation, and mapping support. Michael Baker is preparing the civil engineering portion of a project assessment scoping document for the U.S. 70 MP 291 Shared Use Path and East Entrance Monument. Michael Baker will prepare Americans with Disability Act-compliant conceptual plans, prepare drainage plans, and provide utility coordination.

Jason Carota, P.E.

Structural Engineer

General Qualifications

Mr. Carota has experience in the design and rehabilitation of bridges and other structures. His experience includes the development of contract drawings, construction cost estimates, and specifications for various types of structures.

Mr. Carota's major strength is structural engineering design of bridges. He has designed various types of bridges, including concrete (pre-stressed, post-tensioned, and cast-in-place) and steel structures. Mr. Carota has experience with civil engineering design projects, including retaining walls and culverts. In addition to bridge design, Mr. Carota is also familiar with AASHTO LRFD Bridge Design Specifications and has performed load rating calculations for many different types of bridges for standard vehicles and overweight permit vehicles.

Experience

Rio de Flag Flood Control Bridge Design, Flagstaff, Arizona. *City of Flagstaff, Arizona.* Structural Engineer. Responsible for performing the structural design and detailing of the box culverts. Michael Baker completed two bridge designs and one project assessment required as part of a flood control project. Michael Baker completed calculations and construction plans and specifications for two two-barrel super box-culverts. The required study was completed where the Rio de Flag crossed historic Route 66, and the project assessment was completed for planning the funding for new construction in the future. Additionally, Michael Baker participated in a value engineering (VE) workshop that resulted in the project team reducing the structure crossings from 11 down to two by implementing closed-channel flow at strategic locations within the upper reach.

S.R. 86 Valencia Road to Kinney Road Roadway Improvement, Tucson, Pima County, Arizona. *Arizona Department of Transportation.* Structural Designer. Responsible for developing the new precast box culvert transition details to the existing box culverts. Assisted with other miscellaneous structural detailing required for the drainage items. Michael Baker provided engineering services for improvements to S.R. 86 from Valencia Road to Kinney Road, including 13 major drainage structures, two bridges, the realignment and reconstruction of local roads, intelligent transportation system, and extensive utility relocation. Michael Baker's services included development of a design memorandum and preliminary and final design.

S.R. 88 Apache Trail Project Assessment Report and Final Design for Safety and Corridor Improvements, Phoenix, Arizona. *Arizona Department of Transportation.* Structural Engineer. Responsible for determining extent of repair/replacement necessary of the existing concrete ford. Conducted site visit to perform hands on inspection which included a chain drag of the concrete deck. Prepared report summarizing existing conditions and recommendations for remediation. Performed final design and detailing of the structural work required at the ford. This work included a partial reconstruction of the ford as well as spall and crack repairs. Also assisted in preparing maintenance of traffic recommendations at this area. Michael Baker prepared conceptual design plans and a project assessment report to address improvements proposed by a state safety evaluation to Apache Trail (S.R. 88), a historic and scenic highway leading out of the Phoenix metropolitan area into the canyons and lakes of the Salt River within the Tonto National Forest. The revised design addresses safety aspects of the road through improved roadway geometry while maintaining a consistent appearance and adhering to context sensitive design goals with

Years with Michael Baker: 10
Years with Other Firms: 5

Degrees

M.S., 2004, Structural Engineering, Manhattan College

B.S., 2002, Civil Engineering, Manhattan College

Licenses/Certifications

Professional Engineer:

New York, 2007, 084471

Arizona, 2010, 50744

Colorado, 2012, 46364

Utah, 2016, 9749025-2202

minimal impacts to the national forest. The result will be a safer road that maintains its historic and scenic characteristics.

Pantano Intercept Chemical Dosing Station, Tucson, Arizona. *Pima County.* Structural Engineer. Performed structural design and detailing of concrete slab on grade for tank. Michael Baker prepared design plans for the dosing station for Wastewater Reclamation Department (RWRD), including a magnesium hydroxide (Thioguard) storage and chemical feed system to provide odor control and corrosion protection to the existing sewer collection system. Michael Baker designed a 6,000-gallon chemical storage tank and mixing system, chemical feed system, chemical containment pad, connection to existing sewer system, pump shelter, site layout, electrical improvements, structural improvements, and supervisory control and data acquisition (SCADA) integration.

101L HOV Lane Design and Environmental Studies, Maricopa County, Arizona. *Arizona Department of Transportation.* Structural Engineer. Responsible for structural report write up and associated cost estimates for the Design Concept Report. Structural work in the report included the widening of several existing bridges and multiple new intersection options. Michael Baker provided engineering design and environmental documentation services for the incorporation of high occupancy vehicle (HOV) lanes to a 30-mile portion of SR 101L (Loop 101) between I-10 and Tatum Boulevard and three miles of additional general purpose (GP) lanes between 31st and 15th Avenues. Michael Baker prepared initial and final design concept reports for the addition of GP lanes, HOV lanes, and connector ramps; analyzed traffic impacts of the GP lanes; showed bridge lay-outs for the ramp connections; identified potential stormwater drainage issues; and developed alternatives for analysis. In addition, Michael Baker conducted environmental studies per the National Environmental Policy Act (NEPA) to identify impacts from the project, compare alternatives, and address any potential fatal flaws. Throughout the process, Michael Baker facilitated public involvement and agency coordination efforts to build consensus among local communities and affected agencies.

I-15 Design-Build Widening, Payson, Utah. *Utah Department of Transportation, Region 3.* Bridge Engineer. Responsible for the design of one pair of the bridge widenings. The superstructure consisted of a single-span plate girder with cantilevered end spans. The substructure consisted of wall-style bents supported on driven pipe piles filled with concrete. Michael Baker served as the lead designer for a design-build project entailing roadway widening and reconstruction of seven miles of I-15 from the South Payson Interchange to the Spanish Fork River. The project consisted of roadway widening to the median, bridge widening of eight structures, and noise wall installation between 800 South to Main Street. Design elements also included signing, striping, signals, lighting, advanced traffic management systems (ATMS), and drainage.

Loop 1604 Schematic Development for Critical Habitat Unit 16, Bexar County, Texas. *Texas Department of Transportation.* Bridge Engineer. Responsible for checking the preliminary plans for the bridges at Military Drive and Wiseman Blvd. The bridges were three spans with prestressed concrete girders. The foundations consisted of concrete bent cap supported on round columns and drilled shafts. Michael Baker developed a study to identify a state, FHWA, and USFWS acceptable solution for adding capacity to Loop 1604 in the vicinity of CHU #16. In the study, Michael Baker provided schematic-level preliminary engineering for three roadway alternatives specific to CHU #16 located adjacent to Loop 1604. The three roadway alternatives included 1) bridging (elevated); 2) at-grade on fill; and 3) an alternative that avoids any effects to the CHU, which consisted of roadway realignment. This study also included drainage analysis, cost and impact analysis, coordination and input from USFWS and FHWA, and ultimate identification of the preferred alternative specific to CHU #16.

Salahuddin M. Sheikh, P.E.

Technical Manager

General Qualifications

Mr. Sheikh has over four decades of experience related to bridges, water resources, public works, transportation, and environmental engineering for public and private sectors. Projects include bridges, flood control channels, water and wastewater treatment plants, reservoirs, pump stations, lift stations, well facilities, culverts and encasements, soundwalls and retaining walls. Mr. Sheikh's experience also includes heavy industrial structures related to steel mills, automobile plants, chemical and petrochemical facilities and refineries, mining and material handling installations, including conveyor galleries, transfer towers, underground mine structures, and ship loading facilities.

Mr. Sheikh has extensive experience in the development of project specifications and estimates for bridge and transportation projects. In the past 20 years, he has prepared the bridge special provisions for over 100 bridge projects including seismic retrofits, bridge widenings, bridge rehabilitation, and new or replacement bridges.

Mr. Sheikh has also served as the Quality Control Engineer for the majority of these projects, ensuring plans and specifications are consistent, design and quantities have been checked and all items of work are covered in the contract documents. He is also experienced in structural inspection, evaluation, repairs and rehabilitation of water related facilities.

Experience

Interstate 880 Operational and Safety Improvements, Oakland, California. *Alameda County Transportation Commission.* Structural Engineer. Responsible for structural engineering. Michael Baker provided engineering, environmental, and surveying and mapping services for a project to improve the mobility and traffic safety through the I-880 corridor, in the vicinity of 29th Avenue and 23rd Avenue. The project included removal and reconstruction of two freeway overcrossings, reconstruction of on-ramps and off-ramps, reconfiguration of local circulation patterns, and incorporation of a new roundabout at the 29th Avenue entrance ramp. Michael Baker provided right-of-way mapping services, boundary surveys, and aerial topographic surveys and prepared a joint CEQA/NEPA document. Michael Baker also provided type selection and final PS&E for mechanically stabilized embankment (MSE) retaining walls and pile-supported and conventional spread footing CIP concrete retaining walls, sound walls, and expanded polystyrene (EPS) block fill embankment and associated load distribution slab.

Avenue 50 and 52 Crossing/Eastside Dike Levee Evaluation, Coachella Valley, California. *PSAV, LLC.* Structural Engineer. Responsible for structural engineering. Michael Baker prepared regional hydrology, hydraulic, and sedimentation analyses for the 51-square-mile watershed tributary to the Eastside Dike Levee along the Coachella Canal. The project evaluated the condition of the existing levee and identified options for two roadway crossing encroachments across the levee system. Regional hydrology was prepared for this arid region using the HEC-1 program. Flood routing and maximum water surface profiles along the dike were prepared using FLO-2D. The analysis evaluated the dispersion of flows along the dike from the 10 major drainage systems which are tributary to the system.

Years with Michael Baker: 29
Years with Other Firms: 14

Degrees

M.S., 1972, Civil
Engineering/Structures,
University of Michigan at Ann
Arbor

B.S., 1970, Civil Engineering,
University of Karachi Pakistan

Licenses/Certifications

Professional Engineer – Civil:
Arizona, 2000, 34539

California, 1981, 32677

Nevada, 2000, 14418

Ohio, 1976, 41224

Utah, 2013, 8546772-2202

Guam, 2015, 1841

La Entrada Drainage and Hydrology Studies, Coachella, California. *PSAV, LLC.* Structural Engineer. Responsible for structural engineering. The project site includes seven regional conveyances and coalescing alluvial fans tributary to the Eastside Dike along the Coachella Canal. Michael Baker completed regional hydrology studies for the 50.6 square mile watershed, and 1- and 2-dimensional flood routing analyses to support the technical studies and identified the recommended improvements and project mitigation measures for the project site development. Michael Baker identified a whole fan flood hazard management program and developed the alignment and conceptual design for seven regional channels through the site.

Laguna Canyon Creek Erosion Protection and Habitat Restoration Project, Laguna Beach, California. *City of Laguna Beach.* Structural Engineer. Responsible for structural engineering. Michael Baker is providing planning, design, and permitting for the construction of a long-term erosion protection and habitat restoration within Laguna Canyon Creek that traverses a City owned parcel along Laguna Canyon Road. The site houses the City Animal Shelter and the Pacific Marine Mammal Center. The erosion of the creek banks are threatening the animal shelter facility and undermining the parking lot. The erosion protection project will protect the facilities, improve the flow characteristics of the creek, enhance and restore habitat, and reduce flooding potential without negatively affecting upstream or downstream properties.

Interstate 5 / Jamboree Road Interchange Improvement, Irvine, California. *City of Irvine.* Structural Engineer. Responsible for structural engineering. Michael Baker prepared a Permit Engineering Evaluation Report (PEER) for the I-405/Jamboree Road Interchange southbound exit ramp widening. The intersection experiences congestion from the high volume of vehicles on Jamboree Road and turning volumes at the southbound I-405 ramp intersection. The proposed improvements include left-turn lane and retaining wall construction, overhead sign structure reconstruction, traffic signal modification, minor drainage improvements, and utility coordination. Michael Baker prepared new aerial topographic mapping, a traffic analysis, preliminary improvement plans, cost estimates, and environmental technical studies in support of a CEQA Categorical Exemption.

Central Park Bicycle, Pedestrian, and Circulation Study, Santa Clara, California. *City of Santa Clara.* Structural Engineer. Responsible for structural engineering. Michael Baker provided planning and engineering services to improve pedestrian and bicycle access to and inside Central Park, a regional park in the City of Santa Clara. The study includes evaluation of ADA access, recommended improvement and enhancements, directional signage, safety and other modifications to encourage non-motorized travel. The project will close gaps and improve access for modes other than vehicles, specifically for the surrounding residential neighborhoods, and will promote walking and cycling to the park. A multi-discipline team of experts will plan and design the features required to improve park access. Work on the project has involved transportation planning, traffic engineering, transportation design, GIS, public outreach, and structural engineering capabilities.

I-15 Design-Build Widening, Payson, Utah. *Utah Department of Transportation, Region 3.* Structural Engineer. Responsible for structural engineering. Michael Baker served as the lead designer for a design-build project entailing roadway widening and reconstruction of seven miles of I-15 from the South Payson Interchange to the Spanish Fork River. The project consisted of roadway widening to the median, bridge widening of eight structures, and noise wall installation between 800 South to Main Street. Design elements also included signing, striping, signals, lighting, advanced traffic management systems (ATMS), and drainage.

Interstate 215/Ramona Expressway Interchange, Perris, California. *City of Perris.* Structural Engineer. Responsible for structural engineering. Michael Baker provided engineering services for improvements to the I-215/Ramona Expressway Interchange. Michael Baker's services included survey data compilation; preparation of right-of-way documents; roadway, drainage, structure, and landscape design; and the preparation of final plans, specifications, and cost estimates.

Chad H. Andrews, P.E.

Project Manager

General Qualifications

Mr. Andrews has experience with urban and rural highways throughout Arizona. He served as the deputy project manager on S.R. 303L, Lake Pleasant Parkway to I-17, and managed quality control for S.R. 303L Glendale to Peoria. He is primarily responsible for scope, schedule, and budget compliance. He has managed over 15 projects for ADOT, including S.R. 101 HOV design-build and S.R. 86, Valencia Road to Kinney Road. These projects included extensive coordination with local municipalities and stakeholders, IGA development, complex utility coordination, traffic control, airport coordination, earthwork management, and coordination with ADOT's Roadside Development Section. Chad has also acted as project manager for ADOT's Roadway On-Call and has overseen quality control on S.R. 89A, Viewpoint. He is also skilled in MicroStation and InRoads design packages.

Experience

S.R. 86 Valencia Road to Kinney Road Roadway Improvement, Tucson, Pima County, Arizona. *Arizona Department of Transportation.* Project Manager. Served as the lead consultant. Michael Baker provided engineering services for improvements to S.R. 86 from Valencia Road to Kinney Road, including 13 major drainage structures, two bridges, the realignment and reconstruction of local roads, intelligent transportation system, and extensive utility relocation. Michael Baker's services included development of a design memorandum and preliminary and final design.

Miller Road, Tonopah-Salome Highway to One Mile North, Buckeye, Arizona. *Maricopa County DOT.* Engineer. Assisted in project setup and attended early progress and kickoff meetings. Michael Baker worked on a scoping assessment report and prepared plans, specifications, and estimates (PS&E) and the project advertisement for a one-mile stretch of Miller Road from Yuma Road to the Army National Guard Facility. The purpose was to pave the dirt road and thereby suppress the amount of dust generated by vehicular traffic. Multiple design issues were addressed, including right-of-way acquisition, overhead utility relocation, mitigation of potential environmental impacts, drainage control, and accommodation of the existing FCDMC Buckeye Flood Retarding Structure (FRS) #2.

S.R. 88 Apache Trail Project Assessment Report and Final Design for Safety and Corridor Improvements, Phoenix, Arizona. *Arizona Department of Transportation.* Engineer. Assisted in developing the project schedule. Michael Baker prepared conceptual design plans and a project assessment report to address improvements proposed by a state safety evaluation to Apache Trail (S.R. 88), a historic and scenic highway leading out of the Phoenix metropolitan area into the canyons and lakes of the Salt River within the Tonto National Forest. The revised design addresses safety aspects of the road through improved roadway geometry while maintaining a consistent appearance and adhering to context sensitive design goals with minimal impacts to the national forest. The result will be a safer road that maintains its historic and scenic characteristics.

Swanson Avenue Improvements, Lake Havasu City, Arizona. *Arizona Department of Transportation.* Project Manager. Responsible for providing final design for this local street project. Design elements include roadway, drainage, signing/markings, and traffic signal design. Coordination is required for geotechnical investigation, utility coordination, environmental documentation, and between the client and city. Michael Baker is developing engineering final design for improvements to Swanson Avenue from Acoma

Years with Michael Baker: 11
Years with Other Firms: 15

Degrees

Coursework, Civil Engineering,
Arizona State University

A.A., 1990, AutoCAD and
Drafting, ITT Technical Institute

Licenses/Certifications

Professional Engineer – Civil:
Arizona, 2005, 42821

Boulevard to Smoketree Avenue. The project will provide a bicycle lane in the westbound direction and a new multi-use path along Swanson Avenue by reducing travel lane width and eliminating a two-way left-turn lane. Michael Baker is preparing final roadway, drainage, and traffic plans; cost estimate; and special provisions. Additionally, Michael Baker will coordinate the proposed improvements with utility companies and obtain all necessary clearances (utility, environmental, right-of-way).

U.S. 191 Improvements Design, Safford, Arizona. *Arizona Department of Transportation.* Engineer. Assisted in developing the project schedule. Michael Baker developed civil and traffic engineering final design for improvements to U.S. 191 from milepost 120.5 to its junction with U.S. 70. Baker prepared final roadway and drainage plans, including typical sections and pavement structural sections, intersection staking diagrams, and project details; developed final pavement marking plans, traffic control plans, cost estimate, and special provisions; and prepared plans for traffic signal removal and new installation. Additionally, Michael Baker assisted in coordinating the proposed improvements with utility companies, supported and assisted at public meetings through preparation of materials and attendance, and prepared a collection of documents consisting of pertinent project data to aid the resident engineer in the administration of the construction contract.

New River Area Paving Phase 1 and 2, Maricopa County, Arizona. *Maricopa County DOT.* Project Manager. Responsible for team coordination with the client, including roadway, drainage, right-of-way, traffic, utilities, and environmental documentation. Michael Baker provided engineering services for the paving of seven dirt roads in the New River area. Michael Baker's services included final design, pavement marking, signing, drainage, environmental documentation and clearance, utility coordination, and right-of-way acquisition and coordination.

MCDOT On-Call 2012-2014, Maricopa County, Arizona. *Maricopa County DOT.* Project Engineer. Project engineer overseeing roadway, drainage, traffic design, and utility coordination. Michael Baker is currently working under MCDOT Contract No. 2012-051 On-Call Professional Engineering and Design Services. A major focus of this contract is to produce Scoping Documents according to the current MCDOT Project Development Manual. Michael Baker and its subconsultants are providing all of the typical design services associated with roadway infrastructure projects. Currently, Michael Baker is working on Scoping Assessment Report for Task Order TT338 Miller Road. This project is a one-mile stretch of Miller Road from Yuma Road to the Army National Guard Facility. The purpose of the project is to pave the dirt road and therefore suppress the amount of dust generated by vehicular traffic. Multiple design issues will be addressed with this project, including Right-of-way acquisition, overhead utility relocation, mitigation of potential environmental impacts, drainage control, and accommodation of the existing FCDMC Flood retarding Structure Buckeye FRS #2.

Chinle Street Lighting, Chinle, Arizona. *Arizona Department of Transportation.* Project Manager. Responsible for leading a kickoff meeting and field review meeting, including preparing meeting notes. Responsible for preparing a pre-scoping report so the Chinle chapter of the Navajo Nation can add this project to the TIP. Michael Baker assisted the Chinle Chapter of the Navajo Nation with investigating the engineering and environmental requirements of possibly installing solar street lighting and two crosswalks with solar warning lighting along a 1.8-mile section of Navajo Route 7 from its intersection with U.S. 191 to the Navajo Route 27 intersection. The objective was to identify project development and delivery (capital and O&M) tasks and barriers/deficiencies to more accurately develop an accurate construction scope and fee estimate for future funding requests and project construction.

I-17 Black Canyon Hill Southbound, Maricopa County, Arizona. *Arizona Department of Transportation.* QA/QC Engineer. Responsible for reviewing final Plans, Specs, & Estimates prior to construction bid advertisement. The I-17 Black Canyon Hill Southbound project was a combination of pavement preservation and safety. It received funding from both the Pavement Preservation Program and the Hazard Elimination and Safety (HES) program. The project is located on the southbound lanes of I-17 from Milepost 245 to Milepost 255 and at the Sunset Point Rest Area.

Evan P. Carbonneau, P.E.

Civil Engineer

General Qualifications

Mr. Carbonneau contributes his extensive knowledge in civil engineering from his involvement in transportation projects. He has completed a variety of projects of varying size and funding for both public and private entities. His design experience includes roadway geometrics, storm drain design, site grading, traffic signal design, traffic control, construction BMPs and fiber optic network design. His knowledge of AASHTO, APWA and Caltran's current design standards facilitates meeting aggressive project schedules and quick approval from reviewing agencies. His experience with construction support includes responding to RFIs, reviewing shop drawings, attending construction meetings, and assisting with cost mitigation, which allows projects to remain on schedule and budget. His other experience includes cost estimating, preparation of special provisions, and utility research and coordination.

Mr. Carbonneau has experience using a variety of design software including MicroStation, AutoCAD, Inroads, and CAiCE. He also has extensive knowledge of design analysis software including AutoTURN.

Experience

S.R. 86 Valencia Road to Kinney Road Roadway Improvement, Tucson, Pima County, Arizona. *Arizona Department of Transportation.* Highway Engineer. As designer, responsible for establishing final earthwork model. Assisted drainage team with modeling proposed drainage features and ensuring design met drainage criteria. Michael Baker provided engineering services for improvements to S.R. 86 from Valencia Road to Kinney Road, including 13 major drainage structures, two bridges, the realignment and reconstruction of local roads, intelligent transportation system, and extensive utility relocation. Michael Baker's services included development of a design memorandum and preliminary and final design.

Miller Road, Tonopah-Salome Highway to One Mile North, Buckeye, Arizona. *Maricopa County DOT.* Engineer. Roadway Engineer. Responsible for assisting with the roadway design, establishing final earthwork model, and coordinating with other groups to meet overall project goals. Michael Baker worked on a scoping assessment report and prepared plans, specifications, and estimates (PS&E) and the project advertisement for a one-mile stretch of Miller Road from Yuma Road to the Army National Guard Facility. The purpose was to pave the dirt road and thereby suppress the amount of dust generated by vehicular traffic. Multiple design issues were addressed, including right-of-way acquisition, overhead utility relocation, mitigation of potential environmental impacts, drainage control, and accommodation of the existing FCDMC Buckeye Flood Retarding Structure (FRS) #2.

S.R. 88 Apache Trail Project Assessment Report and Final Design for Safety and Corridor Improvements, Phoenix, Arizona. *Arizona Department of Transportation.* Highway Engineer. As designer, responsible for assisting with modeling of proposed overlay as well as full design for spot improvement sites. Established cut/fill lines along entire corridor, determined existing paved and unpaved pullouts and identified candidate locations to be paved, and performed existing guardrail inventory and height evaluation. Michael Baker prepared conceptual design plans and a project assessment report to address improvements proposed by a state safety evaluation to Apache Trail (S.R. 88), a historic and scenic highway leading out of the Phoenix metropolitan area into the canyons and lakes of the Salt River within the Tonto National Forest. The revised design addresses safety aspects of the road through improved roadway geometry while maintaining a

Years with Michael Baker: 4

Years with Other Firms: 7

Degrees

B.S., 2006, Civil Engineering,
University of Arizona

Licenses/Certifications

Professional Engineer – Civil:
California, 2010, 77009

Arizona, 2014, 58374

consistent appearance and adhering to context sensitive design goals with minimal impacts to the national forest. The result will be a safer road that maintains its historic and scenic characteristics.

Project Assessment Report for Apache Trail Improvements, Maricopa County, Arizona. *Arizona Department of Transportation.* Highway Engineer. Responsible for assisting with final project assessment preparation. Michael Baker prepared a project assessment report to address improvements proposed by a state safety evaluation to Apache Trail (S.R. 88), an historic and scenic highway leading out of the Phoenix metropolitan area into the canyons and lakes of the Salt River. The project is located within Tonto National Forest. The proposed improvements for six of the nine identified curves include modifying the geometry to change the driving characteristics. Michael Baker prepared 15- and 30-percent conceptual design plans that included typical sections, roadway plans and corresponding profile sheets, preliminary drainage plans for area drains and pipe culverts, and pavement markings and signing plan view sheets. Michael Baker also developed construction sequencing concepts and traffic control plans, added preliminary cross sections, provided a summary of final earthwork calculations, calculated quantities, developed a detailed cost estimate, and established preliminary right-of-way requirements.

MAG I-10-Dean Road Study. *Maricopa Association of Governments (MAG).* Design Engineer. Responsible for establishing three alternatives for the proposed traffic interchange, including a full diamond, partial diamond, and half clover design. Determined horizontal and vertical alignments for each alternative and assisted in determining comprehensive cost estimates for all three alternatives. The City of Buckeye anticipates significant commercial development at this future interchange location. Maricopa Association of Governments (MAG), on behalf of Buckeye, contracted with Michael Baker to identify, analyze and evaluate alternative interchange configurations. Traffic operations analysis was key to evaluate and size auxiliary and merging lanes, which determined the length of structures to carry Dean Road across I-10. The analysis also included detailed cost estimates and ROW requirements, as well as recommendations for possible funding sources. Buckeye will use the study results to negotiate developer funded improvements and ROW dedications, as well as the basis for future change of access application for the new interchange.

MCDOT On-Call 2012-2014, Maricopa County, Arizona. *Maricopa County DOT.* Design Engineer. Responsible for assisting with roadway design, including horizontal and vertical controls, roadway modeling and coordinating with drainage team to ensure design met drainage requirements, providing quantities for engineer's estimate. Michael Baker is currently working under MCDOT Contract No. 2012-051 On-Call Professional Engineering and Design Services. A major focus of this contract is to produce Scoping Documents according to the current MCDOT Project Development Manual. Michael Baker and its subconsultants are providing all of the typical design services associated with roadway infrastructure projects. Currently, Michael Baker is working on Scoping Assessment Report for Task Order TT338 Miller Road. This project is a one-mile stretch of Miller Road from Yuma Road to the Army National Guard Facility. The purpose of the project is to pave the dirt road and therefore suppress the amount of dust generated by vehicular traffic. Multiple design issues will be addressed with this project, including Right-of-way acquisition, overhead utility relocation, mitigation of potential environmental impacts, drainage control, and accommodation of the existing FCDMC Flood retarding Structure Buckeye FRS #2.

New River Area Paving Phase 1 and 2, Maricopa County, Arizona. *Maricopa County DOT.* Design Engineer. As lead designer, established horizontal and vertical controls, evaluated sight distance and super elevation requirements, performed roadway modeling, determined right of way requirements, coordinated with drainage team to ensure design met drainage requirements, and provided estimated roadway quantities. Michael Baker provided engineering services for the paving of seven dirt roads in the New River area. Michael Baker's services included final design, pavement marking, signing, drainage, environmental documentation and clearance, utility coordination, and right-of-way acquisition and coordination.

Natalie F. Carrick, P.E.

Traffic Engineer

General Qualifications

Ms. Carrick holds a B.S. degree in Civil Engineering and has experience in the Traffic and Transportation fields. Her experience includes performing TIAs, traffic signal warrant evaluations, level-of-service analyses, accident research and analyses, travel time analysis, signal timing and coordination, designing plans for new and modified traffic signals, traffic signal interconnects, and signing and pavement marking. Ms. Carrick has completed more than 100 traffic impact analyses, over 50 miles of signing and marking designs and over 50 traffic signal designs. She has experience with project specifications and estimates and is proficient in Synchro, Traffix, AutoCAD and MicroStation.

Experience

Meridian Road Corridor Study, Pinal County, Arizona. *Arizona Department of Transportation.* Traffic Engineer. Responsible for traffic engineering analysis and oversight. Michael Baker produced the feasibility study report to support the continuing development and growth occurring and anticipated in the East Mesa, West Apache Junction, and within Pinal County. The purpose of the Meridian Road Corridor Study was to document conditions along the existing roadway and to develop alternatives to increase the safety and future level of service (LOS) of Meridian Road. The study also established a roadway footprint and developed the ultimate right-of-way requirement for the corridor. Michael Baker provided traffic analysis, preliminary utility coordination, drainage analysis, and public outreach.

S.R. 88 Apache Trail Project Assessment Report and Final Design for Safety and Corridor Improvements, Phoenix, Arizona. *Arizona Department of Transportation.* Traffic Engineer. Responsible for the design of the dynamic message sign and associated equipment. Michael Baker prepared conceptual design plans and a project assessment report to address improvements proposed by a state safety evaluation to Apache Trail (S.R. 88), a historic and scenic highway leading out of the Phoenix metropolitan area into the canyons and lakes of the Salt River within the Tonto National Forest. The revised design addresses safety aspects of the road through improved roadway geometry while maintaining a consistent appearance and adhering to context sensitive design goals with minimal impacts to the national forest. The result will be a safer road that maintains its historic and scenic characteristics.

Swanson Avenue Improvements, Lake Havasu City, Arizona. *Arizona Department of Transportation.* Traffic Engineer. Responsible for managing the traffic engineering tasks. Michael Baker is developing engineering final design for improvements to Swanson Avenue from Acoma Boulevard to Smoketree Avenue. The project will provide a bicycle lane in the westbound direction and a new multi-use path along Swanson Avenue by reducing travel lane width and eliminating a two-way left-turn lane. Michael Baker is preparing final roadway, drainage, and traffic plans; cost estimate; and special provisions. Additionally, Michael Baker will coordinate the proposed improvements with utility companies and obtain all necessary clearances (utility, environmental, right-of-way).

Strategic Transportation Safety Plan, Avondale, Arizona. *Avondale, City of.* Project Manager. Responsible for managing the development of the Strategic Transportation Safety Plan. Provided updates to the MAG Transportation safety committee and gave presentations during stakeholder meetings. Michael Baker developed a comprehensive Strategic Transportation Safety Plan (STSP) that establishes city-wide vision, goals, objectives, strategies, countermeasures, and performance measures for

Years with Michael Baker: 7

Years with Other Firms: 7

Degrees

B.S., 2003, Civil Engineering,
Arizona State University

Licenses/Certifications

Professional Engineer – Civil:
Arizona, 2009, 49996

Utah, 2015, 9299973-2202

transportation safety. Michael Baker reviewed current road safety and programs; assisted in establishing the vision, goals, and strategies; recommended action areas, potential strategies, and relevant safety performance measures; generated intersection crash risk rankings; and developed an implementation plan describing the approach for improving road safety over the 10-year span.

Third Street and Van Buren Street Bicycle and Pedestrian Improvements, Phoenix, Arizona. *City of Phoenix, Arizona.* Traffic Engineer. Responsible for QA/QC. Michael Baker performed a pre-design study and developed preferred alternatives for the implementation of bicycle and pedestrian improvements within the Third Street and Van Buren Street corridors in order to add other transportation modes, increase connectivity, and preserve vehicle access. Michael Baker collected and reviewed pertinent existing data; performed traffic and crash analyses; developed conceptual design alternatives for each corridor that included combinations of bike lanes, narrow lanes, reduced or eliminated vehicle travel lanes, sidewalks; developed performance criteria for comparison; and prepared conceptual level estimates of probable cost. The evaluations and comparisons were then used to select preferred alternatives for each corridor.

U.S. 191 Improvements Design, Safford, Arizona. *Arizona Department of Transportation.* Task Manager. Responsible for managing the traffic engineering task including signing and marking plans, traffic signal plans, traffic control plans, quantities, and specifications. Michael Baker developed civil and traffic engineering final design for improvements to U.S. 191 from milepost 120.5 to its junction with U.S. 70. Baker prepared final roadway and drainage plans, including typical sections and pavement structural sections, intersection staking diagrams, and project details; developed final pavement marking plans, traffic control plans, cost estimate, and special provisions; and prepared plans for traffic signal removal and new installation. Additionally, Michael Baker assisted in coordinating the proposed improvements with utility companies, supported and assisted at public meetings through preparation of materials and attendance, and prepared a collection of documents consisting of pertinent project data to aid the resident engineer in the administration of the construction contract.

New River Area Paving Phase 1 and 2, Maricopa County, Arizona. *Maricopa County DOT.* Traffic Engineer. Responsible for leading the traffic engineering task for signing and marking plans for the project. Michael Baker provided engineering services for the paving of seven dirt roads in the New River area. Michael Baker's services included final design, pavement marking, signing, drainage, environmental documentation and clearance, utility coordination, and right-of-way acquisition and coordination.

Intersection Improvement Studies, Peoria, Arizona. *City of Peoria, Arizona.* Project Manager. Responsible for managing all project components and client needs. Michael Baker conducted a study of four intersections located within city limits that were being considered for improvements. The purpose was to identify what, if any, improvements would be needed to maximize the safety and level of service to the intersections and analyze the cost effectiveness of any recommended improvements. The intersections are 89th Avenue and Northern Avenue, 83rd Avenue and the driveway just south of Bell Road, West Wing/83rd Avenue and Jomax, and 100th Avenue and Happy Valley Road. Michael Baker evaluated level of service (LOS); performed signal warrant analyses; analyzed crash data; and developed and analyzed alternatives, including traffic signals, raised medians, high-intensity activated crosswalk (HAWK), and others. Cost estimates were provided for improvements, utility relocations, and any right-of-way acquisition. Michael Baker also coordinated with stakeholders, including the County, the City of Glendale, the school district and the school administration, business owners, the local community, and the City (client).

Traffic Signal and Intersection Improvements, Paradise Valley, Arizona. *Town of Paradise Valley.* Project Manager. Responsible for scope, schedule and budget for the project. Managing team members and subconsultants. Michael Baker provided engineering services for improvements to the town's 12 signalized intersections. Michael Baker's services included needs assessments; development of signal timing and coordination plans; recommendations for improvements; preparation of final plans, specifications, and estimates for improvements; post-design services; and utility coordination.

BriAnne M. Turpin, P.E.

Traffic Engineer

General Qualifications

Ms. Turpin has experience with transportation planning, design, and traffic engineering, including the preparation of traffic impact studies, parking studies, design concept reports, and trip generations letters and the design of signing and pavement marking, traffic control, and traffic signal plans. She has experience working with different jurisdictions involving projects of various roadway classifications, different land uses, levels of intensity, and degrees of complexity.

Experience

Rio de Flag Flood Control Bridge Design, Flagstaff, Arizona. *City of Flagstaff, Arizona.* Engineering Technician. Responsibilities included preparing scope and fee for the traffic team's portion of the project. Michael Baker completed two bridge designs and one project assessment required as part of a flood control project. Michael Baker completed calculations and construction plans and specifications for two two-barrel super box-culverts. The required study was completed where the Rio de Flag crossed historic Route 66, and the project assessment was completed for planning the funding for new construction in the future. Additionally, Michael Baker participated in a value engineering (VE) workshop that resulted in the project team reducing the structure crossings from 11 down to two by implementing closed-channel flow at strategic locations within the upper reach.

Meridian Road Corridor Study, Pinal County, Arizona. *Arizona Department of Transportation.* Traffic Engineer. Responsible for documenting conditions along the existing roadway and the development of alternatives that will increase the safety and future level of service (LOS) of Meridian Road from McDowell Boulevard to Germann Road. Responsibilities included conducting a field review to document existing conditions of the corridor; reviewing related plans, reports and studies completed during the last 10 years to document pertinent information of the corridor; and analysis of existing and future operation of Meridian Road utilizing Highway Capacity Manual and the Florida Department of Transportation's (FDOT) "Table 4-1, Generalized Annual Average Daily Volumes for Florida's Urbanized Areas (Freeway & State Two-Way Arterial Facilities)". Michael Baker produced the feasibility study report to support the continuing development and growth occurring and anticipated in the East Mesa, West Apache Junction, and within Pinal County. The purpose of the Meridian Road Corridor Study was to document conditions along the existing roadway and to develop alternatives to increase the safety and future level of service (LOS) of Meridian Road. The study also established a roadway footprint and developed the ultimate right-of-way requirement for the corridor. Michael Baker provided traffic analysis, preliminary utility coordination, drainage analysis, and public outreach.

S.R. 86 Valencia Road to Kinney Road Roadway Improvement, Tucson, Pima County, Arizona. *Arizona Department of Transportation.* Civil Engineer. Responsibilities included the development of the construction sequencing plans and coordination with the client's traffic during the development of the traffic control plans. Michael Baker provided engineering services for improvements to S.R. 86 from Valencia Road to Kinney Road, including 13 major drainage structures, two bridges, the realignment and reconstruction of local roads, intelligent transportation system, and extensive utility relocation. Michael Baker's services included development of a design memorandum and preliminary and final design.

Years with Michael Baker: 9

Years with Other Firms: 2

Degrees

B.S., 2006, Civil Engineering,
Northern Arizona University

Licenses/Certifications

Professional Engineer – Civil:
Arizona, 2010, 51481

U.S. 191 Improvements Design, Safford, Arizona. *Arizona Department of Transportation.* Traffic Engineer. Responsibilities included preparation of signing and marking design plans and estimates for 30% submittal. Michael Baker developed civil and traffic engineering final design for improvements to U.S. 191 from milepost 120.5 to its junction with U.S. 70. Baker prepared final roadway and drainage plans, including typical sections and pavement structural sections, intersection staking diagrams, and project details; developed final pavement marking plans, traffic control plans, cost estimate, and special provisions; and prepared plans for traffic signal removal and new installation. Additionally, Michael Baker assisted in coordinating the proposed improvements with utility companies, supported and assisted at public meetings through preparation of materials and attendance, and prepared a collection of documents consisting of pertinent project data to aid the resident engineer in the administration of the construction contract.

Traffic Signal and Intersection Improvements, Paradise Valley, Arizona. *Town of Paradise Valley.* Traffic Engineer. Responsibilities included the development of final plans, specifications and estimates to improve the signal equipment and recommended ramp improvements at the 12 signalized intersections in the Town of Paradise Valley. New traffic signal design plans indicated new equipment to replace any old or damaged equipment. Michael Baker provided engineering services for improvements to the town's 12 signalized intersections. Michael Baker's services included needs assessments; development of signal timing and coordination plans; recommendations for improvements; preparation of final plans, specifications, and estimates for improvements; post-design services; and utility coordination.

101L HOV Lane Design and Environmental Studies, Maricopa County, Arizona. *Arizona Department of Transportation.* Civil Associate. Responsibilities included documenting the existing and future corridor characteristics for the "Traffic and Accident Data" chapter of the Design Concept Report (DCR). BriAnne was also responsible for the SR 101L and I-17 Ramp Operation Study which included the analysis of the SR 101L freeway and ramps between 35th Avenue and 7th Street with the new High Occupancy Vehicle lane and the addition of a third general purpose lane in the vicinity of the Interstate 17 as purposed in the DCR. Multiple recommended alternatives were developed to improve the operation of the SR 101L and I-17. Interchange Highway Capacity Software, CORSIM, capacity checks, and two-lane ramp length recommendations were used to compare alternatives. BriAnne's responsibilities also included utilizing Synchro 7 and existing signal timing provided by the City of Phoenix to analyze what the effects of closing the Eastbound 19th Avenue On-Ramp would have on the 15th Avenue and SR 101L frontage road and 7th Avenue and Eastbound SR 101L On-Ramp intersections. Michael Baker provided engineering design and environmental documentation services for the incorporation of high occupancy vehicle (HOV) lanes to a 30-mile portion of SR 101L (Loop 101) between I-10 and Tatum Boulevard and three miles of additional general purpose (GP) lanes between 31st and 15th Avenues. Michael Baker prepared initial and final design concept reports for the addition of GP lanes, HOV lanes, and connector ramps; analyzed traffic impacts of the GP lanes; showed bridge layouts for the ramp connections; identified potential stormwater drainage issues; and developed alternatives for analysis. In addition, Michael Baker conducted environmental studies per the National Environmental Policy Act (NEPA) to identify impacts from the project, compare alternatives, and address any potential fatal flaws. Throughout the process, Michael Baker facilitated public involvement and agency coordination efforts to build consensus among local communities and affected agencies.

U.S. 290, Manor Expressway Design-Build Services, Travis County, Texas. *Central Texas Regional Mobility Authority.* Civil Engineer. Responsibilities included the coordination with the Texas and Utah offices during the preparation of the sign schematic and design of the temporary signals. As part of a design-build team, Michael Baker is leading engineering services for the Manor Expressway (U.S. 290 East), a fully controlled-access, six-mile-long toll highway that is being constructed in the median of U.S. 290, between U.S. 183 and Parmer Lane to east of S.H. 130. The Manor Expressway will alleviate congestion and safety concerns and support the regional transportation network. Michael Baker is developing designs for the new highway, bridges, and frontage roads, including drainage systems and traffic control.

James R. Christensen, P.E.,

LEED AP

Technical Manager

General Qualifications

Mr. Christensen is experienced in project management, design, planning, and construction management of water/wastewater projects. His background includes planning, engineering, and permitting of pump stations, water mains, sewer mains, wells, lift stations, force mains, water treatment plants, and reservoirs. He is also experienced in hydraulic modeling and master planning of water and wastewater systems. Mr. Christensen has been extensively involved in providing public outreach, and presenting to City councils.

Experience

S.R. 86 Valencia Road to Kinney Road Roadway Improvement, Tucson, Pima County, Arizona. *Arizona Department of Transportation.* Technical Manager. Responsible for the design of the realignment of a 42-inch diameter transmission main. Michael Baker provided engineering services for improvements to S.R. 86 from Valencia Road to Kinney Road, including 13 major drainage structures, two bridges, the realignment and reconstruction of local roads, intelligent transportation system, and extensive utility relocation. Michael Baker's services included development of a design memorandum and preliminary and final design.

Austin Ranch Planned Area Development, Surprise, Arizona. *Courtland Homes, Inc.* Water Resources Engineer. Prepared the design of a 12-inch diameter water line with La Tierra Grande. Michael Baker provided engineering services for the Austin Ranch East and Austin Ranch North planned area development, located at the corner of Deer Valley Road and Grand Avenue. The 850-acre community includes a mixture of single-family residential densities, neighborhood shopping centers, pocket parks, city park, elementary school site, natural open spaces, improved common open spaces, trails, and a remote waste water treatment plant. Michael Baker provided preliminary and final plats; infrastructure, subdivision, and drainage plans; master wastewater reports; and stormwater pollution prevention and water management plans. Michael Baker also prepared a conditional letter of map revision (CLOMR) for floodplain modification to be provided to the Federal Emergency Management Agency (FEMA).

Gila/Agua Fria Lake Suitability Assessment, Maricopa County, Arizona. *The Flood Control District of Maricopa County (FCDMC).* Water Resources Engineer. Responsible for data research and evaluation to determine existing ground water wells, ground water rights, surface water rights, water infrastructure, and water usage within the project area. Michael Baker evaluated the physical, regulatory, environmental, and economic feasibility and potential development of a recreational use lake and flood control facility of the Buckeye Water Conservation and Drainage District. The study assessed the potential for project delivery and stakeholder support and partnerships for potential multiple use opportunities on the existing site and adjacent parcels.

On-Call Water Main Replacements, Phoenix, Arizona. *City of Phoenix, Arizona.* Project Manager. Served as the project manager for the design of a water main replacement project within the area bounded by Glendale Ave., 12th Street, 16th Street, and Orangewood Ave. This project included water main design, utility coordination, and permitting. Michael Baker has supported the City by providing on-call engineering

Years with Michael Baker: 13
Years with Other Firms: 3

Degrees

M.S.C.E., 2001, Civil Engineering (Water Resources), Brigham Young University

B.S.C.E., 2000, Civil and Environmental Engineering, Brigham Young University

Licenses/Certifications

Professional Engineer – Civil: Arizona, 2004, 41186

California, 2003, C65007

LEED Accredited Professional, 2009

services for the Water Main Replacement Program. Michael Baker has provided surveying services for several projects covering over 59,000 linear feet of city roadways. Tasks included establishment of horizontal and vertical control, records research, right-of-way mapping, topographic surveys for design, preparation of digital terrain models (DTM), and compilation of utility as-built drawings and other records for utility base mapping. City project experience includes water main replacement designs up to 27,000 linear feet, cut and plug details to abandon existing substandard mains, and water services from 50 to 800 connections.

Paradise Resort RV Lift Station Replacement, Peoria, Arizona. *EPCOR Water Arizona, Inc.* Project Manager. Served as the Project Manager for the feasibility analysis of the decommissioning of an existing lift station and the design of the recommended improvement. Michael Baker provided survey services and prepared design plans, specifications, and estimates (PS&E) to decommission an existing sanitary sewer lift station and install a gravity sewer line from the Paradise Resort RV Lift Station to the Coyote Lakes Lift Station. The project included preparing a hydraulic model to analyze the existing collection system; calibrating the model based on sewer flow monitoring results; preparing construction documents; and providing utility coordination, permitting, and bid and construction phase services.

Wastewater Conveyance On-Call Engineering Services, Pima County, Arizona. *Pima County.* Project Manager. Responsible for preparation of the design plans for a chemical feed station for odor control. Responsibilities included design plan preparation, permitting, bid phase services, shop drawing review, construction inspection and project closeout. As part of an on-call contract, Michael Baker completed a feasibility analysis for an approximate 3.5-mile sewer line to service the Pima County Fairgrounds. The study included technical memos on population forecasting and future service demand, analysis of two conceptual alignments, development of conceptual infrastructure plans, probable costs, hydraulic analysis, permitting and clearances, and identification of schedule impacts. The project required additional coordination with state and federal agencies because the sewer lines crossed state land as well as many Section 404 jurisdictional washes. Due to Michael Baker's exceptional performance, the project scope was expanded to determine the phasing of the Fairgrounds' existing seepage ponds to a gravity sewer system with equalization ponds.

Stormwater Program Compliance Assistance, Peoria, Arizona. *City of Peoria, Arizona.* Water Resources Engineer. Responsible for assisting with stormwater management program development, staffing requirements, and BMP selection. Michael Baker is currently assisting city in complying with the renewed Phase II municipal separate storm sewer system (MS4) permit, including development of a stormwater management program (SWMP). This includes identifying necessary changes to the city's current SWMP to meet the minimum requirements of the renewed MS4 permit, assisting in locating and/or verifying the locations of existing stormwater infrastructure, and identifying potential resources and/or partnerships to complement the city's program.

City of Goodyear Plan Review, Goodyear, Arizona. *City of Goodyear, AZ.* Technical Manager. Performed plan review services for the city, including the review of construction documents and master plans. Michael Baker was selected to perform planning and civil review of development and construction document submittals. Work assignments included assisting the City of Goodyear in reviewing development plans, including but not limited to, drainage reports, utility and street construction plans, traffic studies, drainage reports, preliminary and final plats, and site plans. Michael Baker utilized Goodyear's electronic plan review software and provided a customer interface on an as-needed basis.

Village Center Master Plan, Carefree, Arizona. *Town of Carefree.* Water Resources Engineer. Responsible for providing review of sewer rates and sewer flow calculation methods. Michael Baker provided architecture, planning, and engineering services to develop a master plan for the town's Village Center district. Michael Baker's services included architectural concept development, transportation analysis, parking analysis, market analysis, water resources review, stakeholder involvement, and community outreach.

John Nagle, P.E.

Vice President

General Qualifications

Mr. Nagle has practiced in the field of civil engineering for many years, and he has extensive experience in planning, designing, and providing construction support services for major water and wastewater facilities. He has been responsible for the preparation of numerous construction plans, specifications and cost estimates for water and sewer pipelines, water pumping stations, wastewater lift stations, wells, and reservoirs. He has also prepared master plans for both municipal and private-sector clients for potable water, sanitary sewer, and recycled water systems. Mr. Nagle has used his combination of planning and design experience to prepare capital improvement programs, condition assessment studies, engineering feasibility studies, and connection fee and utility rate studies.

Experience

Clean Water Factory Environmental Impact Statement and Environmental Impact Report, San Bernardino, California. *City of San Bernardino.* Task Manager. Responsible for engineering studies.

Michael Baker is preparing and processing a joint environmental impact statement and environmental impact report for the Clean Water Factory, a treated wastewater diversion facility. Key issues include potential impacts to endangered species, impacts on groundwater quality, and potential construction-related impacts associated with the construction of the pipeline conveyance system.

Import Stations Meter Replacement Project, Costa Mesa, California. *Mesa Water District.* Project Manager. Responsible for instrumentation and controls. Michael Baker provided design engineering for the replacement of flow meters and piping in Turnout Nos. TO-2, TO-4, and TO-5. Work under this project also included rehabilitating the existing Cla-Val control valves in each vault, and electrical design to integrate the improvements with Mesa Water's SCADA system. Work also included replacing an isolation valve in the Santa Ana Vault, OC-44 Pressure Reducing Station.

La Pata and Camino Del Rio Transportation Project, Orange County, California. *County of Orange.* Senior Civil Engineer. Responsible for Vice President and Senior Engineer duties. Michael Baker was retained to support OC Survey with pre-project biological survey for the La Pata Avenue Extension project. The project consisted of two phases, monitoring while OC Survey staked the project site disturbance limits and biological monitoring during vegetation removal prior to the bird nesting season. Michael Baker led the initial effort which was to document the placement of survey lath for the future vegetation clearing. The work effort included review of on-site surveyed / staking areas implemented by OC Survey. The purpose of the monitoring is to ensure consistency between on-the-ground staking and environmental clearances.

Monterey Bay Regional Desalination Project (Formerly Coastal Water Project), Monterey, California. *California American Water.* Engineer. Performed extensive analysis for alignment and potential alternative alignments for 24 miles of pipeline in connection with the CWP. Michael Baker provided environmental and engineering support services for the Coastal Water Project. California American Water (CalAm) was required to replace a major portion of its supply of water pumped from alluvial wells on the Carmel River and from wells in the Seaside ground water basin. To accomplish this, CalAm developed a plan that included seawater desalination and aquifer storage and recovery (ASR). Michael Baker prepared the proponent's environmental assessment (PEA), which evaluated several alternative project configurations and included a comprehensive

Years with Michael Baker: 30
Years with Other Firms: 0

Degrees

M.S., 1996, Civil Engineering,
Loyola Marymount University

B.S., 1987, Civil Engineering,
Loyola Marymount University

Licenses/Certifications

Professional Engineer – Civil:
California, 1991, 46972

Nevada, 2001, 14762

Utah, 2009, 7214109-2202

Arizona, 2009, 49684

Guam, 2015, CE 1850

Water Rights Surveyor, Nevada,
2001, 1101

range of engineering and technical studies. The PEA also included an extensive community involvement process with over 50 public meetings. Michael Baker also prepared an environmental impact report (EIR) and the issuance of a Certificate of Public Convenience and Necessity (CPCN) by the California Public Utilities Commission (CPUC). The project includes a 10-million-gallons-per-day (mgd) seawater desalination facility and desalinated water pump station in North Marina, an ASR system designed for a long term average of 2,000 acre-feet per year, a six-million-gallon reservoir, an 8.5-mgd ASR pump station, and approximately 20 miles of conveyance pipelines. Michael Baker also provided seawater pilot plant program management; coordination with California Department of Public Health (CDPH) of study plans, protocols, and sampling and analysis programs for pilot plant and watershed sanitary survey programs; design, construction, and operation of a corrosion control pilot plant; coordination of water quality requirements for water to be received by Cal Am from the regional desalination plant; and modeling studies for purposes of flow and pressure integration of the desalinated water into the existing CalAm system.

Starlight Reservoir Feasibility Study, Whittier, California. *City of Whittier.* Project Manager. Responsible for project management. Michael Baker prepared a preliminary siting study which included a geotechnical investigation and conceptual grading plans for three alternative tank configurations. The alternative tank configurations considered both above-grade, welded steel tanks and partially-buried, pre-stressed concrete tanks. The geotechnical analysis identified evidence of historical landslides near the site and recommended that the tank foundations maintain a 50-foot setback from the landslide slip plane identified in the geotechnical report. The preliminary recommendation to the City was to construct a partially-buried, pre-stressed concrete tank with a nominal storage volume of 921,000 gallons. This alternative leaves open the option of keeping the existing tank in service should the City decide to do so. Michael Baker is continuing to work with the City to develop recommendations for distribution and storage facilities in the City's lower distribution system pressure zones.

Whittier Pumping Plant No. 2 Replacement Project, Pico Rivera, California. *City of Whittier.* Project Manager. Responsible for project management. Michael Baker provided design engineering services and construction phase support, including full-time construction management and inspection services, for the Whittier Utility Authority's (WUA) Pumping Plant No. 2, which was originally constructed in the 1930s. Michael Baker identified off-site improvements to increase operational capability of existing facilities; evaluated pump station and control schemes; provided hydraulic analysis; and performed structural and electrical engineering, surveying, and mapping. Michael Baker also provided final plans, specifications, and estimates (PS&E); CEQA compliance (notice of exemption); and construction management and inspection.

Seismic Assessment of Steel Reservoirs, Orange County, California. *Moulton Niguel Water District.* QA/QC. Responsible for QA/QC. Moulton Niguel Water District selected Michael Baker to conduct a seismic, structural, mechanical, and safety assessment of 42 steel reservoirs. Evaluations and analysis were conducted for each tank by structural, civil/mechanical, and electrical engineering experts. The analyses included review and evaluation in the following categories: ring footing deficiency, freeboard deficiency, inlet/outlet piping, sample ports, safety, coating, cathodic protection, tank appurtenances, internal dive inspections, and geotechnical investigations. The final report included details of the findings and recommendations for improvements which was incorporated into a 20-year capital improvement program.

Santa Margarita Water District (SMWD) Middle Chiquita Canyon Water Facilities, Orange County, California. *Santa Margarita Water District.* Project Manager. Responsible for project management. Michael Baker provided preliminary and final design services for approximately 23,000 LF (combined) of domestic and recycled water transmission mains, two 2.0 MG domestic water reservoirs and one 4.0 MG of recycled water reservoir. The project also included: alternative pipeline alignment analysis for routes through environmentally sensitive areas and agricultural areas; grading phasing analysis; and coordination with the Rancho Mission Viejo Company, California Department of Public Health, San Diego Gas and Electric, and the California Department of Fish and Wildlife.

John Andrew, P.L.A.

Landscape Architecture Manager

General Qualifications

Mr. Andrew is the manager of the landscape architecture design group at Michael Baker. He has been responsible for the management and design of over 200 hundred public works and transportation projects throughout California, Arizona and Nevada. He has completed projects for state, county and city governments involving decorative architectural treatments as well as landscaping and irrigation systems. Projects have been for scenic highway corridors, freeway interchanges, parkways and medians for arterial and public streets, water quality basins and erosion control projects. He has conducted community workshops, made public presentations, prepared conceptual landscape plans and computer generated photo-realistic before and after renderings and completed final landscape and irrigation construction plans. He also prepare the design for decorative architectural improvements of several bridges and walls within the I-5 corridor for the Orange County Transportation Authority as well as final landscape construction plans for a one mile segment of Culver Drive in the City of Irvine.

Experience

Alessandro Boulevard Median (Indian Street to Perris Boulevard), Moreno Valley, California. *City of Moreno Valley.* Project Director. Responsibilities included overall project oversight. Michael Baker provided environmental clearance, final design, and construction support services for Alessandro Boulevard Median improvements. The project was funded under federal Highway Safety Improvement Program (HSIP) as a Local Assistance project overseen by Caltrans. The safety improvement project addressed traffic and pedestrian safety issues. Work items included design of raised median, turn pockets, traffic signal modifications, striping and signage, landscaping, new lane configurations, Americans with Disabilities Act (ADA) compliance, and environmental CEQA and NEPA documents.

Interstate 10/Jefferson Street Interchange Improvements, Indio, California. *County of Riverside.* Project Director. Responsibilities included overall project oversight. Michael Baker performed environmental and engineering services for the preparation of the project report (PR), modified access report (MAR), and plans, specifications, and estimate for I-10/Jefferson Street interchange improvements. This project will balance several complex geometric constraints to eliminate the discontinuity of the arterial street through movements within the interchange. The interchange is included in the I-10 Corridor Plan, prepared by the Coachella Valley Association of Governments (CVAG), which requires specific architectural and landscape treatments to the improved or new interchanges located within the plan. The modifications included replacement and relocation of the Jefferson Street/I-10 overcrossing, additional loop on-ramps, and realignment of Varner Road and Jefferson Street. Michael Baker was responsible for alternatives analysis and design, environmental investigations, roadway design, traffic studies, drainage studies, and structure advance-planning studies. Working closely with Caltrans and the City of Indio, Michael Baker provided a wide range of environmental consulting services. Michael Baker prepared the following studies in support of a joint initial study-environmental assessment (IS/EA): Visual impact analysis (VIA); noise impact report, per TNAP; initial site assessment; natural environment study; report-biological assessment, HPSR/ASR/AER; air quality report and CO2 hotspot analysis; Section 7 consultation; and Section 106 compliance. In addition, Michael Baker developed the final plans, specifications, and estimates. Preparation of construction plans included roadway layouts and profiles, bridge plans, retaining walls, grading, drainage, utilities, signing and striping, traffic signal, lighting, and staged construction.

Years with Michael Baker: 28
Years with Other Firms: 6

Degrees

B.S., 1984, Landscape Architecture, California State Polytechnic University, San Luis Obispo

Licenses/Certifications

Landscape Architect:
California, 1989, 3152
Arizona, 1999, 33626

Oso Creek Multi-Use Trail, Laguna Niguel, California. *City of Laguna Niguel.* Landscape Architect. Landscape Architecture Manager. Michael Baker prepared final plans, specifications, and estimates for a multi-use trail along the western edge of Forbes Road, between its terminus at the Three Flags Commercial Center to the north and the Metrolink Commuter Rail Transit Station to the south. The multi-use trail includes a 12-foot wide pervious asphalt section adjacent to a 10-foot wide DG section. The AC trail serves as the Orange County Flood Control District's maintenance road for the Oso Creek Channel. The project funding source requires that the project implement water quality features within the project limits. As such, the project includes a bio-retention parkway approximately 650 feet long by 15 feet wide. Additional improvements include hardscape enhancements, such as boulders and cobble stone, decorative crosswalk designs, street furniture and related bike and equestrian amenities, decorative fencing, and street/trail way-finding and interpretive signage.

Laguna Canyon Road Mitigation, Orange County, California. *County of Orange.* Project Director. Responsibilities included overall project oversight. Michael Baker prepared three habitat mitigation and monitoring plans for mitigation sites associated with the Laguna Canyon Road Segments 1-3, multi-use trails, and drainage system projects, located in the Cities of Laguna Beach and Irvine, and unincorporated County of Orange, California. Michael Baker, in coordination with OC Public Works and OC Parks, conducted multiple site visits to identify potential mitigation sites within the project area.

John Wayne Perimeter Road Improvements, Costa Mesa, California. *John Wayne Airport.* Project Director. Responsibilities included overall project oversight. Michael Baker provided engineering and design services for the perimeter service road, which included the reconstruction of approximately 4,000 linear feet of a 24-foot-wide asphalt concrete bi-directional roadway. Key to design development was providing continued access through the work site while maintaining security, access control, and monitoring. Phase I had evaluated, by use of a feasibility study, construction of a new parallel perimeter service road system along the western property limit between the fuel farm and the northwest gate at Airport Loop Road. Phase II design included preparation of the final plans, specifications, and estimates (PS&E) documents for the service road, including the new parallel roadway, if determined to be feasible, based on the results of the Phase I study.

Calleguas Creek Bike Trail - Phase 2, Camarillo, California. *City of Camarillo.* Landscape Architect. Landscape Architecture Manager. Michael Baker provided the City of Camarillo with engineering design and surveying services for the preparation of plans, specifications, and estimates for the Calleguas Creek Bike Trail improvement project, a Class 1 bike trail along Calleguas Creek and the undercrossing of the U.S. Highway 101. Michael Baker provided planning and engineering designs that met the needs of the City, Caltrans, and Ventura County Watershed Protection District. Services also included drainage improvements in areas along the existing Phase 1 portion of the trail.

City of Yorba Linda Parks and Recreation Master Plan Update, Yorba Linda, California. *City of Yorba Linda.* Project Director. Responsibilities included overall project oversight. As part of the City's comprehensive General Plan update, Michael Baker in conjunction with Public Enterprise, is updating the City's Parks and Recreation Master Plan. The Parks and Recreation Master Plan is a strategic document that studies existing parks and recreation programs and provides a framework for the future parks and recreation system in the City. The City's current Master Plan of Parks dates back to 1982. The updated Master Plan will provide direction for enhancement and expansion of Yorba Linda's parks and recreation programs, services and facilities. The updated Master Plan includes a parkland inventory, program inventory, needs assessment, policy recommendations, and implementation strategies.

Prepare Grading and Infrastructure Plans for Phase 1, Irvine, California. *Irvine Community Development Company.* Project Director. Responsibilities included overall project oversight. Michael Baker contracted with the Irvine Company to prepare the grading and infrastructure plans for Phase 1 of the Irvine Apartment Community project, Planning Area 39. The project will provide approximately 1,750 apartment units, with parks and trails to serve the community.

Matthew C. Klyszeiko, AICP

Senior Planner

General Qualifications

Mr. Klyszeiko offers extensive planning experience with an emphasis in land use planning, land entitlement, and public involvement. Mr. Klyszeiko's background includes project management and development of due diligence reports, feasibility reports, site plans, land use plans, design guidelines, and project theming and preparation of planning policy documents, including zoning ordinances, specific plans, and general/comprehensive plans, for both private and public sector clients. Mr. Klyszeiko has been involved in a variety of projects throughout the State of Arizona, from small infill and mixed-use projects to larger, master planned communities, renewable energy facilities, and municipal land use plans.

Experience

75th Avenue and Thunderbird Road Intersection Improvements, Peoria, Arizona. *City of Peoria, Arizona.* Planner. Responsible for planning. Michael Baker provided traffic analysis for intersection improvements at the fifth busiest intersection in the city. Michael Baker compared four alternatives based upon construction costs, right-of-way costs, utility impacts, access control, intersection operation, level of service, and travel time delay. Michael Baker also prepared roadway, drainage, pavement marking/signing, traffic signal, lighting, and signal interconnect plans and provide a layout of fiber communications and conduit. The project also included complex utility relocations for a large irrigation diversion structure that accommodates an 84-inch pipe, a 72-inch pipe, and a 20-duct fiber optic switching cabinet. Michael Baker also developed and coordinated project information materials and resources to deliver project initiatives and construction progress for the widening improvements.

Comprehensive Transportation Plan (2013), Somerton, Arizona. *Arizona Department of Transportation.* Project Manager. Responsible for project management. As a subconsultant, Michael Baker provided the travel demand model calibration and modeling, existing and future conditions data collection and analysis, and bicycle/ shared use path planning. Somerton is primarily an agricultural community that has experienced rapid growth due to its proximity to Yuma. The study evaluates all modes of transportation in the context of the regional network and local circulation. The study also incorporates special transportation service recommendations to enhance the overall transportation system. The shared use path component envisions a series of walking/biking loops that provide varying degrees of exercise and recreation while also supporting commuter mode alternatives to the vehicle. Trail amenities like trash receptacles, benches, trail markers, and exercise stations enhance the shared use path system and the user experience.

Harquahala Valley Water Improvement Project, Phoenix, Arizona. *CV Harquahala, LLC.* Planner. Responsible for planning. Michael Baker provided design services for the first phase of a multi-year project to move up to 100,000 acre/feet of water per year from the Harquahala Valley into the Phoenix Metro Area. The project included more than 15 miles of 96-inch water mains and associated pump stations and well improvements.

Rio Rico Walk and Bike Study, Santa Cruz County, Arizona. *Arizona Department of Transportation.* Planner. Responsible for project management. Michael Baker conducted a study to identify improvements to pedestrian and bicycle facilities to improve accessibility, safety, connectivity, and comfort. Michael Baker's services included planning, public and stakeholder outreach, a gap analysis, design guidelines development, and funding source identification.

Years with Michael Baker: 13
Years with Other Firms: 4

Degrees

B.S., 2001, Urban Planning,
Arizona State University

Licenses/Certifications

American Institute of Certified
Planners, Arizona, 2005, 020529

Zoning Codes and Subdivision Regulations, Somerton, Arizona. *City of Somerton.* Project Manager. Responsible for project management. Michael Baker is currently finalizing a comprehensive update to the Somerton Zoning Code and Subdivision Ordinance. Tasks included reorganizing existing zoning code provisions; introducing new uses and definitions; assembling dimensional and development standards into tables and graphically illustrating them; adding new provisions to implement State mandates; simplifying permitting procedures; and reformatting the document to improve readability. In addition, this project required the implementation of a broad city review and public involvement process that included monthly staff roundtable discussions, technical advisory committee meetings, joint commission and council workshops, and community meetings.

Traffic Signal Removal Study, Surprise, Arizona. *City of Surprise.* Public Involvement Coordinator. Responsible for public involvement management. Michael Baker completed a comprehensive traffic signal removal study for the intersection of Bell Road and 168th Drive based on current traffic conditions to determine if the existing traffic signal was no longer warranted with the existing traffic volumes, the proximity to adjacent signalized intersections, and the current and alternative roadway network. Michael Baker managed the collection of existing traffic count data, conducted a field inventory of the study intersection and other intersections in the vicinity, analyzed crash data, and completed a capacity analysis. Michael Baker analyzed the existing conditions according to the signal warrants described in the 2003 Manual on Uniform Traffic Control Devices (MUTCD), reviewed current signal coordination plans in Synchro to determine the effects of removing the signal, and completed difference cost analysis comparing the continued signal operation costs versus a one-time signal removal cost. Michael Baker formulated a recommendation as to whether or not the removal of the existing traffic signal was justified. Additionally, Michael Baker provided public involvement services including development of a mailing list, door-to-door business outreach, facilitation of a public open house, and coordination of a project hot line.

Casa Grande Regional Shopping Center, Casa Grande, Arizona. *Insight Holdings.* Planner. Responsible for the entitlement and final land use design of this mixed-use development. Michael Baker provided planning services for over 600-acres of highly visible property devoted to residential, commercial, office, and medical land uses. Services included the development of a land use plan that incorporated the existing Promenade Shopping Center with the projects proposed multi-dealership automall, 400-bed regional hospital, retail shopping centers, and over 1,500 residential units. In addition, Michael Baker assisted in facilitating infrastructure and site design for Phase One of the project.

Riverside Park, Goodyear, Arizona. *Goodyear 142, LLC.* Project Manager. Responsible for the completion of a General Plan Amendment. Michael Baker prepared a general plan amendment for 142-acres of land located within Goodyear, Arizona. In response to the new opportunities resulting from the recent establishment of the proposed S.R. 801 freeway alignment, this amendment established a refined comprehensive land-use plan that contemplates the future character of the surrounding area. The final land use program employed a design that provided a balanced range of complementary land uses that, when considered in aggregate, defined a land-use corridor that matched the desired intensity of this future transportation corridor.

Data Center Interior and Security System Improvements, Nationwide. *CenturyLink.* Planner. Responsible for entitlement review. Michael Baker is providing architectural and engineering services for modifications and interior improvements to 15 data centers. Michael Baker's services include architecture and interior design, security system design, and high-level construction cost estimating. Michael Baker is also providing oversight of mechanical, electrical, and plumbing design and construction services by a subconsultant.

Patricia L. Brown, P.E.

Senior Project Manager

General Qualifications

Ms. Brown has many years of experience and encompasses both private and public work knowledge in transportation planning, design and managerial experience throughout Arizona. She has progressively responsible experience in scoping studies, final design, and project management. She has also been responsible for both the technical as well as project management duties on regional urban to statewide transportation projects. Her experience includes coordination with a diverse range of public and private agencies from the federal to local level. She is currently working for ADOT as a supplemental services employee in the Project Management Group. In this role, Ms. Brown manages statewide and local projects that utilize federal funds. As a consultant, she recently completed a project for the city of Phoenix to construct storm drain improvements along 16th Place and Violet Drive. In addition to her role as project manager, Ms. Brown provided QA/QC for roadway and drainage plans, as well as utility conflict review for gas, water, and sewer lines located within close proximity to the new storm drain system. She is recognized by clients for her attention to detail and understanding the federal process, for both ADOT projects and local public agency projects. During her several years with Maricopa County Department of Transportation, Ms. Brown served as the branch manager for the Project Management Branch. She was responsible for the oversight of a \$50 million scoping, design, and construction program. While with the Arizona Department of Transportation, she was responsible for management of both urban freeways as well as district-wide, local government projects, and providing oversight of the activities of design consultants.

Experience

Temporary Part-Time Supplemental Service Project Delivery Manager, Arizona. *Arizona Department of Transportation.* Project Manager. Responsible for providing project management to the Arizona Department of Transportation (ADOT) for statewide and local public agency projects. Responsible for oversight of project scope, schedule, and budgets, as well as the project team in order to ensure complete and accurate delivery of products to review team. In the second half of fiscal year 2016, responsible for delivering seven projects for advertisement for construction. All seven projects were successfully advertised. Challenges to this position were coordinating between ADOT in-house design projects and consultant-led projects, which each require specific attention to communication, sharing of information, and details in the project deliverables. Knowledge of federal funding processes is also necessary for this position and requires a complete understanding of the ADOT Financial system and the Federal Highway Administration (FHWA) processes and requirements. Michael Baker provided a part-time supplemental Project Delivery Manager for various statewide and local public agency projects. The manager served as an extension of client staff and was responsible for oversight of project scope, schedule, budgets, and the project team in order to ensure complete and accurate delivery of products to the client review team. The manager facilitated communication of information, led field and office reviews, led comment resolution meetings, and provided various other project delivery activities. In the second half of fiscal year 2016, seven projects were delivered for advertisement for construction. All seven projects were successfully advertised.

City of Phoenix Storm Drain Improvements on 16th Place and Violet Drive; 5th Street extension, Casa Grande, Arizona. *ADOT Multimodal Planning Division US 93 / US 60 Corridor Profile Study.* Project

Years with Michael Baker: 1

Years with Other Firms: 24

Degrees

M.B.A., 2013, Business Administration, University of Phoenix

B.S.C.E., 1992, Environmental Engineering, Arizona State University

Licenses/Certifications

Professional Engineer – Civil: Arizona, 1999, 33415

manager. Responsible for part-time work for ADOT Project Management as a supplemental services staff member managing projects throughout the state of Arizona and for Local Public Agencies. Additionally, responsible for development of a business plan for transportation design projects, track projects, as well as researching and writing proposals for potential work.

Loop 202 South Mountain Freeway, Design Concept Report and Environmental Impact Statement, Phoenix, Arizona. *Arizona Department of Transportation, ADOT Management Consultant.* Engineering Design Lead. Responsible for the scoping and study of alternatives for the ultimate South Mountain Freeway from Interstate 10 (Maricopa Freeway) to Interstate 10 (Papago Freeway). Specific tasks included coordination with FHWA, ADOT, MAG, Gila River Indian Community, and the city of Phoenix, leading the design team to prepare exhibits and plans showing numerous alternatives at interchange locations for roadway, drainage, traffic, and bridge design; traffic analyses, organizing, leading and documenting study team meetings, preparation of draft and final reports, conceptual right-of-way layouts, construction implementation, access control limits, and construction costs. Study team consisted of multi-disciplinary and multi-agency stakeholders, including the Federal Highway Administration, ADOT Valley Project Management, Maricopa Association of Governments, City of Phoenix, and the Gila River Indian Community.

Arizona Department of Transportation, ADOT Management Consultant, Interstate 10 (Papago Freeway), Freeway to Parkway Interchange, Tempe, Arizona. Project Manager. Responsible for developing templates for generic interchange layouts connecting a freeway to an Arizona parkway. Specific tasks included traffic analysis, conceptual design, organizing, leading and documenting study team meetings, preparation of Draft and Final Reports, conceptual right-of-way layouts, implementation, access control limits, and construction costs. Study team consisted of multi-disciplinary and multi-agency stakeholders, including the Federal Highway Administration, ADOT Valley Project Management, Maricopa County Department of Transportation, Pinal County, Maricopa Association of Governments, Town of Buckeye, City of Glendale, City of Goodyear, City of Phoenix, and City of Surprise.

Town of Prescott Valley, Bison Lane Multi-Use Pathway, Prescott Valley, Arizona. Project Manager. Responsible for coordination between the Town of Prescott Valley and ADOT Statewide Local Governments and oversight of final design plans for approximately 2 miles of multi-use pathway. Prepared Special Provisions and cost estimates for the final design and coordinated with ADOT Contracts and Specifications to complete the bid package for advertisement.

Arizona Department of Transportation, US 191, State Route 266 to Artesia Design Concept Report and Environmental Assessment, Safford, Arizona. Project Manager. Responsible for preparation of a Design Concept Report and Environmental Assessment for approximately 20 miles of roadway widening. Responsibilities included coordinating and facilitating monthly progress meetings, discussions with stakeholders, development and evaluation of alternatives, and coordination with local property owners and developers. Public involvement included participation and presentation at Public Information Meetings and individual property owner meetings.

Arizona Department of Transportation, State Route 260, Segment 1A Final Design. Project Manager. Responsible for preparation of final design drawings, cost estimates, and Special provisions for State Route 260 between Western Drive and Thousand Trails. The project included retaining walls, drainage design, public involvement for the Access Management Plan, coordination with ADOT's Bridge Group for crossings at Wilbur Canyon and Black Canyon, traffic control plans, traffic signals, and signing and striping plans. Utility and right-of-way clearances were coordinated with ADOT. Specific utility coordination took place with Arizona Public Service and Qwest Communications.

Miles W. Costanza, P.E.,

LEED AP

Civil Engineer

General Qualifications

Mr. Costanza has many years of professional engineering experience in water, wastewater treatment and infrastructure condition assessment. He has a proven record of experience in producing detailed designs, plans, specifications, and in construction management in the water and wastewater industry.

In previous experience, Mr. Costanza led a cross-functional team consisting of contractors, structural engineers, geotechnical engineers, and corrosion engineers for the condition assessment, rehabilitation design, and construction of steel tank infrastructure improvements. He also designed a chlorination system and control algorithm for a large, complex, and dynamic water storage system.

Experience

Zone 1, 1A, and 2 Water Infrastructure Improvements, Phoenix, Arizona. *City of Phoenix.* Project Engineer. Responsible for construction phase services of water infrastructure improvements including submittal review, response to RFIs, site inspections, and review of construction documents. Improvements included a 20 million gallon vertical turbine booster pump station and the installation of 1,000 linear feet of new 36-, 48-, and 60-inch steel water mains.

South Mountain Reservoir 1-ES3 Pipe Line Modifications, Phoenix, Arizona. *City of Phoenix.* Project Engineer. Responsibilities included construction administration services including submittal review, response to RFIs, and review of construction documents during the construction phase of the new pipeline project. This project provided a new 48-inch inlet pipe, installed by boring beneath an existing jurisdictional dam. The inlet carrier pipe was placed in a steel casing pipe and filled with cellular concrete to meet the requirements of Arizona Department of Water Resources Dam Safety Program. Also included in the project was design and construction of a 60-inch connection to Zone 1 pressure transmission main into the South Mountain reservoir and a new discharge structure inside the reservoir including modifications to the existing membrane liner to accommodate the new penetration. The tie-in connection to the existing 60-inch Zone 1 pressure transmission main included 48- and 60-inch isolation butterfly valves and valve vaults.

Water Line Relocation for I-17/SR 69 Cordes Junction Traffic Interchange, Cordes Junction, Arizona. *Arizona Department of Transportation.* Project Engineer. Responsibilities included the development of plans and specifications for the water line relocation necessary to facilitate the new roadway design. This project reconfigured the traffic interchange to improve safety and the operational characteristics of the interchange. To accommodate these changes, existing water lines were relocated to avoid construction conflicts with the road, and to relocate the water utilities in an accessible area once the roadway improvements were complete.

Western Canal Water Main Improvements, Gilbert, Arizona. *Town of Gilbert.* Design Engineer. Responsible for the preliminary design, alignment evaluation and coordination, design oversight, and construction administration. This project included 5000 feet of new 20-inch water transmission line, isolation valves, air release valves, combination air vacuum and air release valves, and appurtenances. The project was located along an existing canal, within a recreational park, and beneath high-voltage overhead wires.

Years with Michael Baker: 1
Years with Other Firms: 9

Degrees

B.S., 2006, Civil and Environmental Engineering, Arizona State University

Licenses/Certifications

Professional Engineer:

Arizona, 2013, 55059

LEED Accredited Professional, 2008

City of Mesa, Brown Road Water Treatment Plant Improvements, Mesa, Arizona. *City of Mesa.* Project Engineer. Responsible for technology evaluations, conceptual design report, design implementation, and final design of improvements at the Brown Road Water Treatment Plant. This project included the evaluation and recommendation of algae mitigation technologies, evaluation and recommendations for pump check valve replacement options, and installation of surge mitigation improvements identified in a previous analysis for the finished water pump stations. The surge mitigation improvements included a hydro-pneumatic surge tank, a relief tank, silent check valve installation, and associated site piping improvements.

Steel Tank Rehabilitation Program, Phoenix, Arizona. *City of Phoenix.* Technical Lead. Responsibilities included design leadership, design team management, project scheduling and client coordination. This project focused on condition assessment, rehabilitation, and maintenance of 38 welded steel, above ground, potable water storage tanks and supporting infrastructure, including site piping, valves and safety equipment. This program included site piping design, coating evaluations, structural design elements, geotechnical design elements, cathodic protection, and overall tank performance. A strategic master plan and maintenance schedule was created and managed to minimize the costs associated with maintaining the storage tanks.

Airport Water Reclamation Facility Expansion, Chandler, Arizona. *City of Chandler.* Design Engineer. Responsibilities included design documents, engineering calculations, construction administration and commissioning. Five-million gallons per day (MGD) expansion of an existing 10 MGD municipal wastewater reclamation facility producing Class A+ reclaimed water using extended aeration, anaerobic pre-treatment, filtration, disinfection and advanced solids handling facilities. Project improvements included grading and roadways, a new solids handling building, new hydraulic structures (including aeration basins, clarifiers, filters, contact chambers and reservoirs), installation of new equipment (including screens, blowers, dewatering filter presses, chemical injection pumps and odor control units) and multiple site pipelines. Site piping included Ductile iron, PVC, and steel pipe materials to convey multiple types of water – ranging from raw influent to finished reclaimed water – and chemical process piping.

1-ES1 Chlorination and Recirculation Improvements, Phoenix, Arizona. *City of Phoenix.* Project Engineer. Responsibilities included conceptual study and design, design documents, construction administration and commissioning. This project provided state-of-the-art, automated chlorination and mixing system for a large, 90-million gallon, reservoir complex. The system allowed the City to optimize chlorine dosing, reduce operating costs, and reduce THM formation. Prior to these improvements, the chlorination system was an exclusively manually operated system. The system was based on a CFD analysis and a large historical dataset that included multiple scenarios, requiring justifiable assumptions and selection of the appropriate design conditions based on a high level of uncertainty with changing conditions. Project improvements included 1,000+ feet of small diameter chlorine solution piping, mixing systems, and retrofitting of existing chlorination equipment. The project was successfully executed and is currently operating and maintaining EPA-regulated residual disinfection for stored potable water.

Wastewater Pump Back Pipeline and Wet Well Rehabilitation, Scottsdale, Arizona. *City of Scottsdale.* Project Engineer. Responsibilities included conceptual design, construction administration, inspection, and field investigation. This project included the repair and rehabilitation of a section of deteriorated sewer force-main pipeline and coating failures in a wastewater pump station wet well. Job-Order-Contract design services including pipe material selection, piping alignment, and coating recommendations for the wet well interior were provided.

Wendy A. Ledezma-Cons, P.E.

Civil Engineer

General Qualifications

Ms. Ledezma-Cons has a range of civil engineering capabilities, including drafting, design, hydrology and hydraulic calculations, and review of construction documents. She has extensive experience with the U.S. Army Corps of Engineers, having worked recently on numerous projects in the Southwestern United States and its border with Mexico.

Experience

Baboquivari Road DCFSR, Baboquivari Mountains, Arizona. *U.S. Army Corps of Engineers, Fort Worth District.* Civil Engineer. Responsible for gathering all data needed to perform site visit with the client. At the site visit, responsible for providing answers to the questions. Michael Baker provided a design concept feasibility study and report (DCFSR) for repairing and improving existing Customs and Border Protection (CBP) access road(s) by widening and/or expanding to be able to allow maintenance vehicles to access the Baboquivari Mountains. The DCFSR developed evaluation factors used to catalog 9.6 miles of an existing two-track road in terms of current conditions and corresponding level of effort required to allow better access along the roadway. Factors considered included stormwater management requirements, complexity of design and/or construction means and methods, real estate requirements, environmental impacts, use of military construction to execute the proposed construction, phasing of construction over a multi-year timeline and, and rough order of magnitude costs for construction and maintenance. The design utilized topographical and geotechnical data from readily available sources. Project deliverables included DCFSR evaluation and design criteria and draft and final DCFSR reports.

City of Goodyear Plan Review, Goodyear, Arizona. *City of Goodyear, AZ.* Engineer. Responsible for the review of the engineering portion of planning permits submitted to the City of Goodyear. Michael Baker was selected to perform planning and civil review of development and construction document submittals. Work assignments included assisting the City of Goodyear in reviewing development plans, including but not limited to, drainage reports, utility and street construction plans, traffic studies, drainage reports, preliminary and final plats, and site plans. Michael Baker utilized Goodyear's electronic plan review software and provided a customer interface on an as-needed basis.

Arizona Border Check Point Design, Tucson Sector, Arizona. *U.S. Army Corps of Engineers, Fort Worth District.* Civil Engineer. Helped with coordination with other disciplines and supported the civil part of the project. Michael Baker provided final design and environmental studies required for three interim Tucson Sector Border Patrol checkpoints and conceptual design and environmental studies required for one permanent Tucson Sector Border Patrol checkpoint located on state and interstate highways. The interim checkpoints required large canopies to be installed along with temporary Border Patrol facilities needed to support operations adjacent to the existing state or interstate highways. In order to allow traffic to access the canopy, Michael Baker re-aligning the existing highway traffic lanes, designed the necessary traffic control, and coordinated with the Arizona Department of Transportation to acquire permits for construction. Design of the interim checkpoint sites required placement of temporary facilities, parking, inspection lanes, and lighting. To support bidding of the interim checkpoints, Michael Baker provided final specifications, request for proposals, and construction cost estimates along with bidder inquiry support. Michael Baker's work on the conceptual design of the permanent I-19 checkpoint included nine building/structures, eight inspection lanes, four canopies, on-site utilities, on-site drainage control, and a construction cost estimate.

Years with Michael Baker: 10
Years with Other Firms: 4

Degrees

B.S., 2002, Civil Engineering,
Universidad de Sonora

Licenses/Certifications

Professional Engineer:
Arizona, 2011, 52923

Engineering Design for El Centro Sector West Desert All Weather Road, Calexico, California. *U.S. Army Corps of Engineers, Fort Worth District.* Civil Engineer. Responsible for design and construction documents. Coordinated with geotechnical and drainage to incorporate design criteria into the project. Michael Baker provided engineering design services in support of Customs and Border Protection's Border Patrol Facilities and Tactical Infrastructure Program Management Office for the West Desert All Weather Road Improvements, Phases A & B project. Michael Baker designed improvements to bring the existing road to all-weather status and designed the addition of a drag road. Michael Baker also designed a new 1/3-mile-long, 16-foot-wide access road to the top of BP Hill. Improvements included grading, subgrade preparation, compacted aggregate surface course, drainage improvements, and installation of traffic warning signs and traffic barriers.

NOGALES Zone 20 (D-5) All-Weather Roadway Design, Nogales, Arizona. *U.S. Army Corps of Engineers, Fort Worth District.* Civil Engineer. Responsible for developing construction documents for an all-weather roadway and reviewing and addressing drainage. Michael Baker is providing design services to develop analysis and construction documents for construction of all-weather roadway and 45 low-water crossings beginning five miles west of the Mariposa Land Port of Entry and continuing six miles west through the Coronado National Forest. Michael Baker will provide drainage analysis, geotechnical investigation, conceptual design report, and draft (60 percent) and final (100 percent) construction documents; and will develop the bill of materials package for military deployment.

DY-70 West Desert Road Construction Management Services, California. *U.S. Army Corps of Engineers, Fort Worth District.* Civil Engineer. Responsibilities included providing support to on-going construction. Addressed and explained design questions raised in the field and reviewed and verified changes made in the field. This Task Order provided support to USACE and the Customs & Border Protection (CBP) in El Centro Sector located in the Yuha Desert, west of Calexico, California. Support included survey support, construction oversight, and material testing for scheduled military construction unit deployments sourced by Joint Task Force- North (JTF -N). Construction units of JTF-N were deployed to construct all-weather road and drainage improvements to a deteriorated stretch of border road. All-weather roads provide a necessary component of USBP infrastructure, allowing operational access to the border area during inclement weather. These roads allow agents to respond to law enforcement situations appropriately, increase officer safety by reducing accidents, and improve the time-distance ratio for interdicting incursions. Low-water crossings allow agents to drive through washes, while still protecting environmentally sensitive areas from erosion or damage. Under this task order Michael Baker provided USACE and CBP day-to-day oversight of construction progress and the necessary survey and testing to assist JTF-N in reaching the construction intent. Final deliverables included daily construction reports, construction staking, materials testing reports, final completion report and as-built plans.

Romeo Road Repair DCR, Nogales, Arizona. *U.S. Army Corps of Engineers, Fort Worth District.* Civil Engineer. Responsible for design and construction documents. Coordinated with drainage and geotechnical and applied design criteria to project. Coordinated with utility companies in the area to gather as-builts. Performed site visit and provided a cost estimate. This Task Order provided the USACE a study package (DCFSR) for repairing and improving existing Customs & Border Protection (CBP) access road(s) by widening and/or expanding to be able to allow maintenance vehicles to pass to Remote Video Surveillance System (RVSS) site at the top of Mount Benedict located in Nogales, AZ. The DCFSR was required to plan how to best prevent further deterioration from heavy equipment trucks, steep grades, and drainage erosion. The DCFSR is intended to serve as the basis for the development of design drawings and a Request for Proposal as well as the proposed construction solutions. Construction solutions provided CBP with estimated construction and life cycle costs for repairing and improving existing roads with an option for (1) an optimal solution and (2) a passable solution. The design completed to support the construction needs were survey/mapping, Geotechnical testing and recommendations, drainage analysis and recommendations, horizontal and vertical design of the access road, best management practices, life cycle cost analysis, and draft/final DCFSR.



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End of Attachment 3-B

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Available online at: Procure.AZ.gov



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Attachment 3-C
Proposed Subcontractors

RESERVED FOR AWARDED DESIGN PROFESSIONAL UPON SERVICE REQUEST

Check "NO" if you WILL NOT subcontract any portion of the Work and will therefore be carrying out all of the Work with your own personnel.

NO, the Offeror will not subcontract any portion of the Work.

If you WILL subcontract any portion of the Work, check "YES" below and list name of persons or companies you propose to use as subconsultants.

1. Fill in the information in the chart below for every proposed subcontractor – indicate the role and services work the subconsultant may provide in performing any of the services as outlined in the Requirements Document in the solicitation.
2. Offeror shall complete an Attachment 3-B Key Personnel Form in its entirety for each proposed subcontractor and submit with offer. The term "Subconsultant" shall be annotated in parenthesis after each subcontractor key personnel name typed in the "Name" section of the 3-B form.
3. State may demand additional information about proposed subcontractors as a precondition of award.

YES, the Offeror will use the Subcontractors listed below:

	Subcontractor Key Personnel Name; Subcontractor Firm Name and Contact Information	List Proposed Subcontractor Role(s) and Services	Capacity % Dedicated to Perform the Proposed Role/Service For Any Project Under This Contract
1.	Name		
2.	Name		
3.	Name		
4.	Name		
5.	Name		
6.	Name		
7.	Name		
8.	Name		
9.	Name		
10.	Name		



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ATTACHMENT 3-C SUPPLEMENTS:

(Offeror to insert as required and list here or type "None" on first line. Offeror shall title any Supplement(s) with the same title as named herein and upload with offer.)

	Title	Document Date	No. of pages	Purpose in Offer
1.	Enter or type "None for Sub #1"	x	x	x
2.	Enter or type "None for Sub #2"	x	x	x
3.	Enter or type "None for Sub #3"	x	x	x
4.	Enter or type "None for Sub #4"	x	x	x
5.	Enter or type "None for Sub #5"	x	x	x
6.	Enter or type "None for Sub #6"	x	x	x
7.	Enter or type "None for Sub #7"	x	x	x
8.	Enter or type "None for Sub #8"	x	x	x
9.	Enter or type "None for Sub #9"	x	x	x
10.	Enter or type "None for Sub #10"	x	x	x

End of Attachment 3-C



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Attachment 3-D
Performance Guarantee

RESERVED FOR AWARDED DESIGN PROFESSIONAL UPON SERVICE REQUEST

End of Attachment 3-D

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Attachment 4
Pricing Sheet

RESERVED FOR AWARDED DESIGN PROFESSIONAL SERVICE ORDER CONTRACT

End of Attachment 4

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Attachment 5-A
Confidential Information Designation

All materials submitted as part of a response to a solicitation are subject to Arizona public records law and will be disclosed if there is an appropriate public records request at the time of or after the award of the contract. Recognizing there may be materials included in a solicitation response that are proprietary or a trade secret, a process is set out in A.A.C. R2-7-103 (copy attached) that will allow qualifying materials to be designated as confidential and excluded from disclosure. For purposes of this process the definition of "trade secret" will be the same as that set out in A.A.C. R2-7-101(52).

Complete this form return it with your Offer along with the appropriate supporting information to assist State in making its determination as to whether any of the materials submitted as part of your Offer should be designated confidential because the material is proprietary or a trade secret and therefore not subject to disclosure.

STATE WILL NOT CONSIDER ANY MATERIAL IN YOUR OFFER "CONFIDENTIAL" UNLESS DESIGNATED ON THIS FORM.

Check one of the following – if neither is checked, State will assume that as equivalent to "DOES NOT":

<input checked="" type="radio"/>	<p>This response DOES NOT contain proprietary or trade secret information. I understand that my entire response will become public record in accordance with A.A.C. R2-7-C317.</p>
<input type="checkbox"/>	<p>This response DOES contain trade secret information because it contains information that:</p> <ol style="list-style-type: none"> 1. Is a formula, pattern, compilation, program, device, method, technique or process, AND 2. Derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use; AND 3. Is the subject of efforts by myself or my organization that are reasonable under the circumstances to maintain its secrecy.

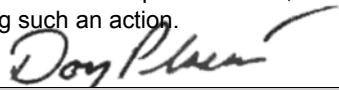
NOTE: Failure to attach an explanation may result in a determination that the information does not meet the statutory trade secret definition. All information that does not meet the definition of trade secret as defined by A.A.C. R2-7-101(52) will become public in accordance with A.A.C. R2-7-C317. State may make its own determination on materials in accordance with A.A.C. R2-7-103.

If State agrees with Offeror's designation of trade secret or confidentiality and the determination is challenged, the undersigned hereby agrees to cooperate and support the defense of the determination with all interested parties, including legal counsel or other necessary assistance.

By submitting this response, Offeror agrees that the entire Offer, including confidential, trade secret and proprietary information may be shared with an evaluation committee and technical advisors during the evaluation process. Offeror agrees to indemnify and hold State, its agents and employees, harmless from any claims or causes of action relating to State's withholding of information based upon reliance on the above representations, including the payment of all costs and attorney fees incurred by State in defending such an action.

Michael Baker International, Inc.

Offeror Company Name
2929 N. Central Ave., Ste. 800 Phoenix Plaza Tower II
Address
Phoenix, AZ 85012



Signature of Authorized Person
Doug Plasencia, PE, CFM
Printed Name
Vice President

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City	State	Zip	Title
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ATTACHMENT 5-A SUPPLEMENTS:

(Offeror to insert as required and list here or type "None" on first line. Offeror shall title any Supplement(s) with the same title as named herein and upload with offer.)

	Title	Document Date	No. of pages	Purpose in Offer
1.	None			

End of Attachment 5-A



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***Copy of A.A.C. R2-7-103 [Confidential Information]
as was current at time of Solicitation issuance***

PROVIDED FOR REFERENCE ONLY

- A. *If a person wants to assert that a person's offer, specification, or protest contains a trade secret or other proprietary information, a person shall include with the submission a statement supporting this assertion. A person shall clearly designate any trade secret and other proprietary information, using the term "confidential". Contract terms and conditions, pricing, and information generally available to the public are not considered confidential information under this Section.*
- B. *Until a final determination is made under subsection (C), an agency chief procurement officer shall not disclose information designated as confidential under subsection (A) except to those individuals deemed by an agency chief procurement officer to have a legitimate state interest.*
- C. *Upon receipt of a submission, an agency chief procurement officer shall make one of the following written determinations:*
- 1. The designated information is confidential and the agency chief procurement officer shall not disclose the information except to those individuals deemed by the agency chief procurement officer to have a legitimate state interest;*
 - 2. The designated information is not confidential; or*
 - 3. Additional information is required before a final confidentiality determination can be made.*
- D. *If an agency chief procurement officer determines that information submitted is not confidential, a person who made the submission shall be notified in writing. The notice shall include a time period for requesting a review of the determination by the state procurement administrator.*
- E. *An agency chief procurement officer may release information designated as confidential under subsection (A) if:*
- 1. A request for review is not received by the state procurement administrator within the time period specified in the notice; or*
 - 2. The state procurement administrator, after review, makes a written determination that the designated information is not confidential.*



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Attachment 5-B
Conformance Statements

STATE WILL NOT CONSIDER ANY EXCEPTIONS UNLESS DESIGNATED ON THIS FORM.

READ THE INSTRUCTIONS TO OFFERORS BEFORE TAKING ANY EXCEPTIONS – TAKING EXCEPTIONS CAN BE
 GROUNDS FOR STATE REJECTING YOUR OFFER IN EVALUATION.

CONFORMANCE TO THE INSTRUCTIONS:
 (PART 1 OF THE SOLICITATION)

Check one of the following – if neither is checked, State will assume that as equivalent to “YES”:

- YES – Offeror acknowledges that it has read and understands the Solicitation Summary in Section 1-A of the Solicitation Documents and the Instructions to Offerors in Section 1-B of the Solicitation Documents and the and attests that its Offer complies with both.
- NO – Offeror acknowledges that it has read and understands the Solicitation Summary in Section 1-A of the Solicitation Documents and the Instructions to Offerors in Section 1-B of the Solicitation Documents, and attests that its Offer complies with both EXCEPT FOR the exceptions listed in **Attachment 5-B Supplement 1**.

CONFORMANCE TO THE CONTRACT TERMS AND CONDITIONS:
 (PART 2 OF THE SOLICITATION)

Check one of the following – if neither is checked, State will assume that as equivalent to “YES”:

- YES – Offeror acknowledges that it has read and understands the [AIA Documents \(for state agencies only\)](#), [and Special Terms and Conditions and the Uniform Terms and Conditions, along with their respective Exhibits and Appendices, in Part 2 of the Solicitation Documents](#) and attests that its Offer complies with both.
- NO – Offeror acknowledges that it has read and understands the [AIA Documents \(for state agencies only\)](#), [and Special Terms and Conditions and the Uniform Terms and Conditions, along with their respective Exhibits and Appendices](#) in Part 2 of the Solicitation Documents and attests that its Offer complies with both EXCEPT FOR the exceptions listed in **Attachment 5-B Supplement 2**.

CONFORMANCE TO THE TECHNICAL DOCUMENTS:
 (PART 3 OF THE SOLICITATION)

Check one of the following – if neither is checked, State will assume that as equivalent to “YES”:

- YES – Offeror acknowledges that it has read and understands the [Requirements Document and the Compensation Document](#) in Part 3 of the Solicitation Documents and attests that its Offer complies with both.

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- NO – Offeror acknowledges that it has read and understands the [Requirements Document and the Compensation Document](#), in Part 3 of the Solicitation Documents and attests that its Offer complies with both EXCEPT FOR the exceptions listed in **Attachment 5-B Supplement 3**.

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ATTACHMENT 5-B Supplement No. 1:

Exceptions to Instructions

Article / Paragraph or Exhibit Reference	Proposed Changes / Alternate Language	Rationale for Proposed Change
Section 1-A: Solicitation Summary		
x	x	x
x	x	x
x	x	x
Section 1-B: Instructions to Offerors		
x	x	x
x	x	x
x	x	x

Michael Baker International, Inc.

Company Name



Signature of Person Authorized to Sign



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ATTACHMENT 5-B Supplement No. 2:
Exceptions to Contract Terms & Conditions

Article/ Paragraph or Exhibit Reference	Proposed Changes / Alternate Language	Rationale for Proposed Change
Section 2-A: Special Terms & Conditions		
x	x	x
x	x	x
x	x	x
x	x	x
x	x	x
Article/ Paragraph or Appendix Reference	Proposed Changes / Alternate Language	Rationale for Proposed Change
Section 2-B: Uniform Terms & Conditions		
x	x	x
x	x	x
x	x	x
Article/ Paragraph or Appendix Reference	Proposed Changes / Alternate Language	Rationale for Proposed Change
Section 2-C: AIA Documents with AZ Modifications		
x	x	x
x	x	x
x	x	x

Michael Baker International, Inc.

Company Name

Signature of Person Authorized to Sign

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ATTACHMENT 5-B Supplement No. 3:
Exceptions to Technical and Commercial

Article / Paragraph or Exhibit Reference	Proposed Changes / Alternate Language	Rationale for Proposed Change
Section 2-A Scope of Work (Requirements Document)		
x	x	x
x	x	x
x	x	x
x	x	x
x	x	x
Section 2-B: Compensation Document		
x	x	x
x	x	x
x	x	x
x	x	x
x	X	x

Michael Baker International, Inc.

Company Name



Signature of Person Authorized to Sign

End of Attachment 5-B



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Attachment 5-C
Insurance Evidence

RESERVED FOR AWARDED DESIGN PROFESSIONAL UPON SERVICE REQUEST

End of Attachment 5-C



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Attachment 5-D
Offer Checklist

STATE MAY DETERMINE YOUR PROPOSAL IS NON-RESPONSIVE IF YOU DO NOT SUBMIT ALL ATTACHMENTS.

	DOCUMENT	SUBMITTED
1.	Attachment 1: Offer and Acceptance Form	<input checked="" type="checkbox"/> YES <input type="checkbox"/> no
2.	Attachment 2-A: Experience and Capacity	<input checked="" type="checkbox"/> YES <input type="checkbox"/> no
3.	Attachment 2-A: References	<input checked="" type="checkbox"/> YES <input type="checkbox"/> no
4.	Attachment 2-B: Organization Profile	<input checked="" type="checkbox"/> YES <input type="checkbox"/> no
5.	Attachment 3-A: Method Proposal – RESERVED FOR AWARD	<input type="checkbox"/> YES <input checked="" type="checkbox"/> no
6.	Attachment 3-B: Key Personnel Proposal	<input checked="" type="checkbox"/> YES <input type="checkbox"/> no
7.	Attachment 3-C: Proposed Subcontractors – RESERVED FOR AWARD	<input type="checkbox"/> YES <input checked="" type="checkbox"/> no
8.	Attachment 3-D: Performance Guarantee – RESERVED FOR AWARD	<input type="checkbox"/> YES <input checked="" type="checkbox"/> no
9.	Attachment 3-E: Israel Boycott Form	<input checked="" type="checkbox"/> YES <input type="checkbox"/> no
10.	Attachment 4: Pricing Sheet – RESERVED FOR AWARD	<input type="checkbox"/> YES, <input checked="" type="checkbox"/> no
11.	Attachment 5-A: Confidential Information Designation	<input checked="" type="checkbox"/> YES <input type="checkbox"/> no
12.	Attachment 5-B: Conformance Statements	<input checked="" type="checkbox"/> YES <input type="checkbox"/> no
13.	Attachment 5-C: Insurance Evidence – RESERVED FOR AWARD	<input type="checkbox"/> YES <input checked="" type="checkbox"/> no
14.	Attachment 5-D: Offer Checklist	<input checked="" type="checkbox"/> YES <input type="checkbox"/> no
15.	Excel File: Project Experience Number of Projects and Revenue	<input checked="" type="checkbox"/> YES <input type="checkbox"/> no
16.	Excel File: 2017 Professional Services List of Firms Services	<input checked="" type="checkbox"/> YES <input type="checkbox"/> no

End of Attachment 5-D

End of Part 4

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