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

1. Annual Request for Qualifications

a. FIRM (OR BRANCH OFFICE) NAME:	Tetra Tech, Inc. (IMR)
b. FIRM (OR BRANCH OFFICE) STREET:	3822 E. University Drive, Suite 3
c. FIRM (OR BRANCH OFFICE) CITY:	Phoenix
d. FIRM (OR BRANCH OFFICE) STATE:	Arizona
e. FIRM (OR BRANCH OFFICE) ZIP CODE:	85034

f. YEAR ESTABLISHED:	1966

(g1). OWNERSHIP - TYPE:	Corporation
(g2) OWNERSHIP - SMALL BUSINESS STATUS:	N/A

h. POINT OF CONTACT NAME AND TITLE:	Jack Pence, P.E.
i. POINT OF CONTACT TELEPHONE NUMBER:	602-300-9348
j. POINT OF CONTACT E-MAIL ADDRESS:	jack.pence@tetratech.com

k. NAME OF FIRM *(If block 1a is a branch office)*:	Tetra Tech, Inc.

2. EMPLOYEES BY DISCIPLINE

a. Discipline Title	b. Function: Primary (P) or Secondary (S)	c. No. of Employees - Firm	d. No. of Employees - Branch
Civil Engineer	P	764	7
Construction Inspector	P	126	2
Land Surveyor	P	61	1
Other	P	13120	38
Environmental Scientist	P	262	1
CADD Technician	P	167	4
Total		14500	18

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

a. Approximate No. of Projects	b. Experience	c. Revenue Index Number *(see below)*
2	Bridge Design; Bridges	1
19	Commercial Building (Low Rise) Shopping Centers	1
36	Construction Surveying	1
1	Dams (Earth; Rock); Dikes; Levees	1
2	Fisheries; Fish Ladders	1
6	Highways; Streets; Airfield Paving; Parking Lots	1
7	Housing (Residential, Multi-Family: Apartments; Condominiums)	1
6	Infrastructure	1
40	Land Surveying	1
2	Mining & Mineralogy	1
4	Recreation Facilities (Parks, Marinas, Etc.)	1
12	Sewage Collection, Treatment and Disposal	1
11	Surveying; Platting; Mapping; Flood Plain Studies	1
12	Storm Water Handling and Facilities	1
2	Testing & Inspection Services	1
19	Topographic Surveying and Mapping	1
10	Water Supply; Treatment and Distribution	1
6	Water Well Rehabilitation; Water Well Work	1

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

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

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

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
Doug Brimhall, P.E.	Project Manager	1. TOTAL 16	2. WITH CURRENT FIRM 13

d. FIRM NAME AND LOCATION *(City and State)*
Tetra Tech, Inc. (IMR)– Show Low, Arizona

e. EDUCATION *(Degree and Specialization)*	f. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
M.S. in Civil Engineering – Brigham Young University 1997 Emphasis in Transportation B.S. in Civil Engineering – Brigham Young University 1996	Professional Engineer (Civil) – Arizona #36630 Professional Engineer (Civil) – New Mexico #20615

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

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
1)	Alchesay Flat Sewer Extension - Whiteriver, Arizona	2011-2012	Under Construction

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

Mr. Brimhall was one of the Project Engineers for a sewer line project in the community of Whiteriver, Arizona. The project consisted of aerial mapping, topographical survey, construction survey, and the design of approximately 3 miles of 8" sewer main and laterals to existing residences. The existing residents were utilizing septic systems for their sewer disposal services. The project was performed in conjunction with Indian Health Service.

	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2)	Hon Dah Casino RV Park Expansion – Pinetop, Arizona	2011-2012	2011-2012

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

Mr. Brimhall was the Project Manager for an expansion to the Hon Dah Casino RV Park. The work associated with the 100 lot expansion included topographic survey, lot layout, water and sewer main line extensions, water and sewer laterals, power, phone, and cable service design. Construction staking, construction inspection, and contract management were also part of the project. The project included coordination with Indian Health Service, tribal utility, casino utility, Tribal Attorneys, Tribal Chairman, and Tribal Council Members for this $150,000 design project.

	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
3)	NPC White Mountain Campus Parking Lot Reconstruction – Show Low, Arizona	2012	2012

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

This project consisted of design for the reconstruction of existing parking areas as well as the addition of parking areas. The work included utility relocation, subgrade work, site grading, drainage improvements, sidewalk/landscaping improvements, and an ADOT turn lane off of U.S. 60. Mr. Brimhall served as the Project Manager for the civil design, construction staking, and construction management throughout the duration of the project. Cost of engineering services was $115,000.

	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
4)	Zuni Bluebird Housing Development Masterplan – Zuni, New Mexico	2011	N/A

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

The Zuni Bluebird development is an approximately 160 acre master planned development. Mr. Brimhall was the Project Manager for the master drainage, water, and sewer plans for the entire development. Detailed construction plans for the drainage, water and sewer were also prepared for Phase II and III of the development. He was also the Project Manager on a project that provided Record of Surveys for the 20 lots in the two subdivisions.

	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
5)	Cibecue Maintenance Building – Cibecue, Arizona	2013	2013

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

This project consisted of the site plan design for a new maintenance building for the White Mountain Apache Housing Authority. Mr. Brimhall served as project manager for this commercial building which included site grading, drainage, parking lot design, and construction staking.

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

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
James C. Dowell, P.E.	Project Manager/Project Engineer	1. TOTAL: 42	2. WITH CURRENT FIRM: 1.5

d. FIRM NAME AND LOCATION (*City and State*)
Tetra Tech, Inc. (IMR) Show Low, AZ

e. EDUCATION (*Degree and Specialization*)	f. CURRENT PROFESSIONAL REGISTRATION (*State and Discipline*)
BS – Environmental Engineering - Leland Stanford Junior University - 1972	Professional Engineer – Arizona

g. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, etc.*)
Past President American Council of Engineering Companies of Arizona, former member of Water Environment Federation and American Water Works Association

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (*City and State*)	(2) YEAR COMPLETED: PROFESSIONAL SERVICES	(2) YEAR COMPLETED: CONSTRUCTION (*If applicable*)
1)	College Avenue Waterlines, Tempe, AZ	Current	

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

Project Engineer for design of 6,300 linear feet of existing water lines. Work includes: Data Collection and Review of utility record drawings (water, sewer and rights-of-way), Aerial Survey and field location of all utilities, Construction Plans And Specifications, Utility Pot-holing, Maricopa County Approval to Construct, Bid Services and Community Meeting with exhibits.
Project is currently in Design. Engineering Cost $158,000 Total Project $1,100,000

	(1) TITLE AND LOCATION (*City and State*)	(2) YEAR COMPLETED: PROFESSIONAL SERVICES	(2) YEAR COMPLETED: CONSTRUCTION (*If applicable*)
2)	ASPC Lewis Production Well, Buckeye, AZ	2013	

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

Project Manager for preparing plans, specifications and providing construction phase services for a new 1,500 gpm production well. Currently awaiting ADEQ Approval of Construction.
Construction Cost - $1,500,000

	(1) TITLE AND LOCATION (*City and State*)	(2) YEAR COMPLETED: PROFESSIONAL SERVICES	(2) YEAR COMPLETED: CONSTRUCTION (*If applicable*)
3)	ASPC Tucson – Wastewater Treatment Plant Closure Plan, Tucson, AZ	2013	

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

Project Manager for preparing Closure Plan for existing WWTP. Currently awaiting ADEQ approval of Clean Closure.
Engineering - $105,000

	(1) TITLE AND LOCATION (*City and State*)	(2) YEAR COMPLETED: PROFESSIONAL SERVICES	(2) YEAR COMPLETED: CONSTRUCTION (*If applicable*)
4)	ASPC Safford, Ft. Grant Unit, Rehabilitate Existing Well, Ft. Grant, AZ	2012	

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

Project Manager for design and providing construction related services for replacing pumping equipment in an existing 200 gpm production well. Project included providing a new electrical service.
Construction Cost - $150,000

	(1) TITLE AND LOCATION (*City and State*)	(2) YEAR COMPLETED: PROFESSIONAL SERVICES	(2) YEAR COMPLETED: CONSTRUCTION (*If applicable*)
5)	ASPC Tucson – Wastewater Pump Station and Force Main, Tucson, AZ	2011	

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

Project Manager for preparing plans and specifications and providing construction phase services for rehabilitating an existing headworks and installing new pumping equipment and 6,800 feet of 10-inch HDPE force main to divert wastewater from the existing prison to Pima County for treatment.
Construction - $285,000

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

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
Reed Flake P.E.	Project Engineer	1. TOTAL 7	2. WITH CURRENT FIRM 7

d. FIRM NAME AND LOCATION *(City and State)*
Tetra Tech, Inc. (IMR) – Show Low, Arizona

e. EDUCATION *(Degree and Specialization)*	f. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
B.S. in Civil Engineering – Northern Arizona University 2006	Professional Engineer (Civil) – Arizona #52497 Land Surveyor In Training – Arizona #11556

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

H. RELEVANT PROJECTS

1)

(1) TITLE AND LOCATION *(City and State)*: Fort Apache Junction Housing - Whiteriver, Arizona

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2011-2012; CONSTRUCTION *(If applicable)* 2011-2012

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

Mr. Flake assisted with the design of this 20 unit housing project on the White Mountain Apache Reservation. The work consisted of roadway design, grading, and drainage/detention calculations and design. Mr. Flake provided storm water pollution prevention design and consulting for the contractor. He also provided inspection services to ensure conformance with specifications on this $80,000 design and construction management project.

2)

(1) TITLE AND LOCATION *(City and State)*: Lakeridge Plaza – Show Low, Arizona

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2011-2012; CONSTRUCTION *(If applicable)* 2012

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

Mr. Flake served as project engineer of this four-building commercial office complex. The design included a grading plan and water and sewer main extensions. He worked with City staff and ADEQ personnel to receive approval of the improvements. He assisted with the bid administration, construction administration, and staking coordination.

3)

(1) TITLE AND LOCATION *(City and State)*: AZ 16-76 Whiteriver Four-Plex – Whiteriver, Arizona

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2012; CONSTRUCTION *(If applicable)* In-Progress

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

This project consisted of the site plan design for six new residential four-plex apartment buildings for the White Mountain Apache Housing Authority. Mr. Flake provided storm water pollution prevention plan (SWPPP) design for this site to ensure compliance with Tribal regulations as well as the Environmental Protection Agency (EPA). He also provided drainage analysis for the development.

4)

(1) TITLE AND LOCATION *(City and State)*: Pineridge Roadway Rehabilitation – Pinetop, Arizona

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2010-2011; CONSTRUCTION *(If applicable)* 2011

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

Mr. Flake assisted with the design of approximately 1 mile of residential roadway for this roadway reconstruction project. The reconstruction consisted of milling the existing asphalt, re-compacting the subgrade, placing the base material, and paving. He managed the budget, provided bid administration, provided construction administration, and coordinate construction staking, pay requests, and construction issues.

5)

(1) TITLE AND LOCATION *(City and State)*: West Idaho Street – Elko, Nevada

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2013; CONSTRUCTION *(If applicable)* 2013

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

This project consisted of designing curb, gutter, and sidewalk for one-half mile on an arterial roadway in a commercial district. Mr. Flake was responsible for the drainage design and calculations, plan review, and specifications.

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

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
		1. TOTAL	2. WITH CURRENT FIRM
Will Flake, P.E.	Project Engineer	10	8

d. FIRM NAME AND LOCATION *(City and State)*
Tetra Tech, Inc. (IMR) – Show Low, Arizona

e. EDUCATION *(Degree and Specialization)*	f. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
B.S. in Civil Engineering – Arizona State University 2004	Professional Engineer (Civil) – Arizona #42737 Grade 2 Water Distribution System Operator – Arizona #OPO31527

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

H. RELEVANT PROJECTS

1)

(1) TITLE AND LOCATION *(City and State)*: Show Low High School Ball Fields – Show Low, Arizona

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2010	2010

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

The Show Low Unified School District contracted with Tetra Tech for engineering services for designing ball fields for the high school. Mr. Flake provided grading design for the project as well as drainage calculations along with a HEC-RAS model that was used for determining the existing and proposed 100-year flood limits.

2)

(1) TITLE AND LOCATION *(City and State)*: Little Colorado Sanitary District – Greer, Arizona

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
On-Going	N/A

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

Mr. Flake as part of the Tetra Tech team has served as the On-Call District Engineer for the Little Colorado Sanitary District and is currently serving in this capacity. The responsibilities associated with this contract include plan review for proposed system improvements from outside developers or consultants to verify compliance with District rules, regulations, and design standards.

3)

(1) TITLE AND LOCATION *(City and State)*: Show Low Mountain Ranch – Navajo County, Arizona

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2009-2010	2011

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

Mr. Flake worked on the design of water, sewer, roadways, and drainage facilities for a residential development located in Navajo County, north of Show Low on Bourdon Ranch Road. The project consisted of a water tank and booster station, a sewer lift station and force main, as well as several detention basins and washes for the project

4)

(1) TITLE AND LOCATION *(City and State)*: Town of Snowflake – Snowflake, Arizona

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
On-Going	On-Going

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

As Project Engineer, Mr. Flake has assisted the Town with projects such as design work for the reconstruction of 4th N and 2nd E roadway improvement projects, including all surveying, construction staking, and contract administration; design and construction of a new 250,000 gallon water tank

5)

(1) TITLE AND LOCATION *(City and State)*: Mountain Gate Homes – Lakeside, Arizona

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2006-2007	2007

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

Mr. Flake worked on a townhouse project in Pinetop-Lakeside, Arizona. Project consisted of a 64-unit townhouse subdivision. Water, sewer, roadway designs, as well as drainage were among the required infrastructure requirements

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

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
David K. Hollinger, P.E.	Senior Design Engineer	1. TOTAL 34	2. WITH CURRENT FIRM 3.5

d. FIRM NAME AND LOCATION *(City and State)*
Tetra Tech Inc., (IMR) - Phoenix, AZ

e. EDUCATION *(Degree and Specialization)*	f. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
M.S., Environmental Engineering, Idaho State University, 1999 B.S., Mechanical Engineering, Idaho State University, 1997	Professional Engineer (Civil) – Arizona #43816

g. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
Member Chi Epsilon, Civil Engineering Honor Society, Member Tau Beta Chi, National Honor Society, Member - American Society of Civil Engineers (ASCE), Associate Member - American Academy of Environmental Engineers (AAEE), Member - American Water Works Association (AWWA). MSHA and OSHA Safety and Health Training

H. RELEVANT PROJECTS

1)

(1) TITLE AND LOCATION *(City and State)*
College Avenue Water Line Replacement, Tempe, AZ

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
In Progress	

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

Tetra Tech was awarded a contract to design the replacement of approximately 6,300 linear feet of existing water lines. Work includes: Data Collection and Review of utility record drawings (water, sewer and rights-of-way), Aerial Survey and field location of all utilities, Construction Plans And Specifications, Utility Pot-holing, and Maricopa County Approval to Construct, Bid Services and Community Meeting with exhibits. Role is Project Engineer. Project is currently in Design. Engineering Cost $158,000 Total Project $1,100,000

2)

(1) TITLE AND LOCATION *(City and State)*
Coeur Rochester Public Water System, Lovelock, NV

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
In Progress/2013	QA/2013

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

On-site Resident Engineering and Quality Assurance during Construction and Commissioning for additions to a potable water storage and distribution system. Includes a new raw water well, new potable (treated water) tank, 3,600 LF of tank fill and distribution pipeline systems, structural concrete, general mechanical, interconnections to existing potable systems, electrical and I&C. Engineering Cost - $175,000 Total Project $1,000,000

3)

(1) TITLE AND LOCATION *(City and State)*
Shaft 3 Industrial Water, McArthur River Mine, Saskatchewan, CA

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2013	QA/2013

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

Senior Project Manager for plans and specifications for a new 60,000 gal fresh water storage tank, 2,500 LF of 6" dia HDPE interconnection pipelines, and three tie-in locations to active mine infrastructure and the existing treatment plant raw water feed. Engineering cost CA$295,000, Total Project CA$1,750,000

4)

(1) TITLE AND LOCATION *(City and State)*
Firewater Line Replacement, McArthur River Mine, Saskatchewan, CA

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2013	QA/2014

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

Senior Project Manager for plans and specifications for in-kind replacement of 6,700 LF of 8" and 6" HDPE Firewater service pipeline. Engineering Cost CA$35,000, Total Project CA$750,000

(1) TITLE AND LOCATION *(City and State)*
Boomerang Lake Discharge Upgrade, McArthur River Mine, Saskatchewan, CA

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2013	QA/2014

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

Senior Project Manager for plans, specifications and permitting for a 550 ft. long conveyance channel to route treated mine effluent through critical wetlands. Engineering Cost CA$125,000, Total Project CA$2,125,000

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

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
		1. TOTAL	2. WITH CURRENT FIRM
Joseph A. (Jack) Pence, P.E.	Project Manager	37	4.5

d. FIRM NAME AND LOCATION *(City and State)*
Tetra Tech Inc., (IMR) - Phoenix, AZ

e. EDUCATION *(Degree and Specialization)*	f. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
B.S., Civil Engineering, University of Kentucky 12 Hours Post Graduate Studies, University of Pittsburgh	Professional Engineer (Civil): Arizona No. 39568 Kentucky No. 11287; Indiana No. 18394 New Mexico No. 20565; Nevada No. 22023

g. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
MSHA and OSHA Safety and Health Training, Water Rights Surveyor-State of Nevada Division of Water Resources
American Society of Civil Engineers

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
1)	College Avenue Water Line Replacement, Tempe, AZ	In Progress	
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm		
	Tetra Tech was awarded a contract to design the replacement of approximately 6,300 linear feet of existing water lines. Work includes: Data Collection and Review of utility record drawings (water, sewer and rights-of-way), Aerial Survey and field location of all utilities, Construction Plans And Specifications, Utility Pot-holing, Maricopa County Approval to Construct, Bid Services and Community Meeting with exhibits. Project is currently in Design. Engineering Cost $158,000 Total Project $1,100,000		
	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2)	Coeur Rochester Water System, Lovelock, NV	In Progress/2013	QA/2013
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm		
	Engineering Report, Well System Design and Permitting, WaterCad Model, Contract Documents, Quality Assurance during Construction and Commissioning. Engineering Cost - $175,000 Total Project $1,000,000		
	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
3)	Barrick Bazza Mine, Carlin, NV	2013	QA
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm		
	Plans and Specifications for Deep Mine Infrastructure. Work included Earthwork, Structural Concrete, Ore Containment pad with synthetic liner, Truck Shop and Quality Assurance. Engineering cost $150,000 Total Cost $2,000,000		
	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
4)	Water Treatment Plant for African Barrick Gold in North Mara, Tanzania, Africa.	2012	2012
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm		
	Responsible for final commissioning of the MF and RO systems, punchlist items, design and installation of a permanent pumping station. Engineering cost $2,000,000 Total Project $16,000,000		
	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
5)	Upper Rio Grande Levee Rehabilitation Program for the International Boundary and Waterway Commission (IBWC), Rio Grande, Texas	2012	2012
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm		
	Three levee projects in West Texas and Southwestern New Mexico - Mesilla Phase One (32 miles/$26,100,000), Mesilla Phase Two (19.6 miles/$13,700,000) and Sunland Park (12.2 miles/$9,200,000). Responsibilities included request for Information (RFI), submittal review, daily reports, weekly construction meetings and monthly reports. Engineering Cost $350,000		

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

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
		1. TOTAL	2. WITH CURRENT FIRM
Forrest L. Switzer, PE, P.L.S.	Project Manager	38	18

d. FIRM NAME AND LOCATION *(City and State)*
Tetra Tech, (IMR) - Payson, Arizona

e. EDUCATION *(Degree and Specialization)*	f. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
California State University of Los Angeles B.S. Civil Engineering, 1972	Professional Engineer (Civil) - Arizona #31879 California # C25089,(includes Surveying) Washington # 30679

g. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
The Society of American Military Engineers (Life Membership)
The American Society of Civil Engineers

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
1)	C.C. Cragin Treated Water Line Design – Lines "B", "D", & "E", Payson, Arizona	2012	2013

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

Project Manager – Survey, design, specifications and bid documents for a Water Infrastructure Finance Authority (WIFA) funded Aquifer Storage and Recovery Project including: Line "B" – Installation of 5,200 L.F. of 18" DIP water line. Construction Cost - $958,848.00; Line "D" – Installation of 164 L.F. of 8" DIP and 3,395 L.F. of 8" PVC Pipe water line, including a Pressure Management Station. Construction Cost - $253,267.00; Line "E" – Installation of 1,446 L.F. of 12" PVC water line. Construction Cost - $194,476.00

	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2)	C.C. Cragin Treated Water Line Design – Line "H, Payson, Arizona	2013	2013

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

Project Manager – Survey, design, specifications and bid documents for a WIFA funded Aquifer Storage and Recovery Project including approximately 11,000 lineal feet of 18-inch DIP Water Line and 9,620 lineal feet of 8" HDPE Water Line and two Pressure Management Stations. Construction Cost - $1,765,446.00

	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
3)	Tyler Surface-Water Line, Payson, Arizona	2013	2013

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

Project Manager – Design, specifications and bid documents Installation of approximately 8,700 lineal feet of 8" High Density Polyethylene Water Line (HDPE) and appurtenances. Construction Cost - $284,085.00

	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
4)	C.C. Cragin Treated Water Line – Lines "B", "D", "E", & "H" Construction Management, Payson, Arizona	2012	2013

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

Project Manager for the construction management services to coordinate for and confirm to the Town of Payson that construction performed by the Contractor conforms to the approved Construction Drawings and Specifications. Coordinated Federal Davis-Bacon interviews, certified, payrolls.
Lines "B", "D", & "E" – Fee $242,943.00; Line "H" – Fee $155,410.00

	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
5)	Grand Canyon South Rim & Desert View for Xanterra (Grand Canyon National Park Lodges, Grand Canyon, Arizona	2013	2013

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

Grand Hotel – Project Manager – New drainage and repaving of parking lots. 720 L.F. Storm Drain, 10,850 SY R&R Asphalt, Trench Drain and Conc. – Construction Cost - $356,300.00; Trailer Village – Project Manager - Grading and repaving plans for South Rim Grand Canyon RV parking area. 18,050 SY R&R Asphalt – Construction Cost - $660,000.00

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

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
Tiffany Thomas, Ph.D.	Geochemist	1. TOTAL: 16	2. WITH CURRENT FIRM: 7

d. FIRM NAME AND LOCATION (*City and State*): Tetra Tech, Inc. (IMR) - Phoenix, AZ

e. EDUCATION (*Degree and Specialization*): Ph.D., Inorganic Chemistry, Univ. of California - Davis, Davis, CA, 2004: B.S., A.C.S. Certified Environmental Chemistry, Summa Cum Laude, Honors College, NAU, Flagstaff, AZ, 2000

f. CURRENT PROFESSIONAL REGISTRATION (*State and Discipline*):

g. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, etc.*): Member SME and Mensa, 5 journal publications, multiple international conference presentations, MSHA and HAZWOPER certified.

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (*City and State*)	(2) YEAR COMPLETED: PROFESSIONAL SERVICES	(2) YEAR COMPLETED: CONSTRUCTION (*If applicable*)
1)	Effluent Infiltration Study, Municipal Wastewater Treatment Plant, Sedona, Arizona	2013	N/A
	(3) BRIEF DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE — ☒ Check if project performed with current firm Dr. Thomas designed & implemented a sampling scheme to determine the causes of reduced wastewater effluent infiltration as observed in the area of Sedona, Arizona. She collected & analyzed multiple soil samples and concluded that the reduced infiltration was due to the formation of calcite and other carbonate phases in the soil matrix		
2)	(1) TITLE AND LOCATION (*City and State*) Heap Detoxification Column Testing Design and Waste Characterization, Victoria Gold Mine, Canada.	2013	N/A
	(3) BRIEF DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE — ☒ Check if project performed with current firm Dr. Thomas designed column testing procedures for cyanide detoxification of the heap and kinetic oxidation studies.		
3)	(1) TITLE AND LOCATION (*City and State*) National Research Council on Remediation of Recovered Chemical Warfare Material from Burial Sites, National Academy of Sciences	2013	N/A
	(3) BRIEF DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE — ☒ Check if project performed with current firm Dr. Thomas was asked to participate on a National Research Council (NRC), at the request of the Board on Army Science and Technology. The NRC was assembled to review current chemical warfare material recovery and disposal technologies as well as operational protocols for the Non-Stockpile Chemical Material Project, and make recommendations for future administrative and technical improvements		
4)	(1) TITLE AND LOCATION (*City and State*) Remediation Specialist, Iowa Army Ammunition Plant.	2012	N/A
	(3) BRIEF DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE — ☒ Check if project performed with current firm Dr. Thomas analyzed & interpreted site data to determine the active degradation pathways, including biotic & abiotic degradation. Using various statistical techniques, including one developed specifically for this project utilizing principal components analyses, she determined the functional correlations between RDX and various geochemical parameters. Her results will be used to determine the statistically relevant analysts and reduce overall sampling costs. She has designed and implemented a bench-to-pilot scale demonstration of a novel RDX remediation technology designed for aquifers not conducive to biodegradation techniques. She has also drafted multiple reports and technical memoranda regarding work at the off-site plume.		
5)	(1) TITLE AND LOCATION (*City and State*) ADEQ Expedited Aquifer Protection Permit Assistance, Marana, Arizona	2008	N/A
	(3) BRIEF DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE — ☒ Check if project performed with current firm Researched and calculated site-specific groundwater protection levels (GPLs) for hexavalent chromium (Cr (VI)) at a contaminated compressor station near Marana, AZ, after thoroughly reviewing existing data for completeness. GPL calculations included considerations for aquifer characteristics, soil type, and chemical behavior / toxicity of Cr (VI). Using an evaluation of reasonable aquifer water quality standards (AWQS) established in other states, a GPL was calculated. The results of this effort were presented in a report to ADEQ, and included all pertinent site information and chromium chemical characteristics.		

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

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

a. TITLE AND LOCATION *(City and State)*	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
College Avenue Water Line Replacement, City of Tempe, Arizona	2013	N/A

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .DOLLAR AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
City of Tempe	$158K	$1.1M

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

The City of Tempe has experience numerous pipeline breaks in the College Avenue neighborhood. Tetra Tech was awarded a contract to design the replacement of approximately 6,300 linear feet of existing water lines. Work includes:

- Data collection and review of utility record drawings (water, sewer and rights-of-way),
- Aerial Survey and field location of all utilities,
- Construction plans and specifications,
- Utility pot-holing,
- Maricopa County approval to construct,
- Bid services,
- And community meetings with exhibits.

Project is currently in Design.

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

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

a. TITLE AND LOCATION *(City and State)*	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
C.C. Cragin Treated Water Line Project, Town of Payson, Arizona	2012	present

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .DOLLAR AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Town of Payson	$500K	$3.2M

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

The C.C. Cragin project includes three main projects by Tetra Tech. The first two projects involved analysis of recharge capabilities of the Town of Payson's wells and improvement of those wells. Tetra Tech served as the Town Agent during those projects in providing the design then bidding and paying contractors for the performance of well testing and improvements. These projects were funded through WIFA loans to the town and Tetra Tech provided oversight of Davis-Bacon, certified payroll, and payment applications.

A separate part of the C.C. Cragin project includes a master plan of the water delivery system. Tetra Tech is responsible for design work on the treated water system both inside the town and delivery to the town. Tetra Tech provided a detailed model of the existing water system based on well source. C.C. Cragin was then designed to feed the existing distribution and storage infrastructure allowing aquifer recharge.

Tetra Tech design a combination of new transmission mains, pressure reduction stations, and new connection points allowing well recharge of the existing aquifer. The new delivery system includes 27,875 L.F. of 18" D.I.P., 2,184 L.F. 12" P.V.C. and 3,395 L.F. of 8" P.V.C. Tetra Tech authored the specifications, managed the bidding and provided the construction inspection of these elements.

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

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

a. TITLE AND LOCATION *(City and State)*	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Hon-Dah RV Park Expansion, Pinetop, Arizona	2009-2013	2010-2013

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .DOLLAR AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
White Mountain Apache Tribe	$150K	$1.4M

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

This project was a multiple phase expansion to the Hon Dah Casino RV Park. The work associated with the 100 lot expansion included topographic survey, lot layout, water and sewer main line extensions, water and sewer laterals, power, phone, and cable service design. Tetra Tech provided construction staking, construction inspection, and contract management. The project included coordination with Indian Health Service, tribal utility, casino utility, Tribal Attorneys, Tribal Chairman, and Tribal Council Members.

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

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

a. TITLE AND LOCATION *(City and State)*	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Pineridge Roadway Reconstruction, Pinetop, Arizona	2010-2011	2011

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .DOLLAR AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Pineridge Community Association	$80K	$500K

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

Tetra Tech provided the design of approximately 1 mile of residential roadway for this roadway reconstruction project. The reconstruction consisted of milling the existing asphalt, recomposing the subgrade, placing the base material, and paving. Tetra Tech provided a full range of services on the project from inception to completion. Services included topographic survey, plan and specification preparation, bid administration, construction inspection, construction staking, contractor payment, and project closeout.

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

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

a. TITLE AND LOCATION *(City and State)*	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
White Mountain Campus Parking Lot Reconstruction, Show Low, Arizona	2012	2012

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .DOLLAR AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Northland Pioneer College	$115K	$2.M

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

This project consisted of design for the reconstruction of existing parking areas as well as the addition of new parking areas. The project resulted in going from approximately 300 parking spaces to approximately 600 parking spaces at Northland Pioneer College's White Mountain Campus. The work included utility relocation, subgrade work, site grading, drainage improvements, sidewalk/landscaping improvements, and an ADOT turn lane off of U.S. 60. Construction plans were prepared to be constructed in three separate phases in order to allow for parking access at the site to be available at all times. ADA requirements were critical in the design process to allow access to all of the existing buildings throughout the campus. Tetra Tech's role in the project was to provide the civil design, construction staking, and construction management throughout the duration of the project. This project was designed in approximately two months and constructed in approximately six months.

6. ADDITIONAL INFORMATION

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

Tetra Tech IMR
Engineering & Consulting Services

Tetra Tech Inter-Mountain Region (IMR) is a full-service engineering group. IMR provides complete infrastructure services and design for Water, Wastewater, Electrical/SCADA, Construction Management and General Civil Engineering. Tetra Tech IMR serves municipal, utility, and commercial clients. Listed below is detailed information:

Water Tetra Tech is dedicated to providing solutions to the challenges faced by those who manage water around the world. With client input, we can address the entire water cycle – from precipitation to evaporation – ensuring the protection of valuable water sources and the reliability and quality of delivered water. The goal is to help find better ways to deliver the safest water possible and to practice sustainable design.

- Storage
- Transmission and Distribution
- Wells
- Pumping
- Treatment
- Source Protection / Development Infrastructure
- Master Planning
- Watershed Management and Source Protection
- Membrane Treatment
- Reservoirs and Storage

Tetra Tech maintains up-to-date knowledge of drinking water regulations and assists clients in evaluating facilities for regulatory compliance.

Tetra Tech's water treatment plant expertise spans feasibility and design through plant startup and ongoing operation and maintenance. Tetra Tech understands process control strategies, chemical feeding and handling, pumping, and all treatment processes and equipment selection for surface water and groundwater treatment. Tetra Tech has designed processes to resolve groundwater issues with: iron and manganese, radioactivity, organics, inorganics, corrosivity, and hardness; and surface water problems involving: varying turbiity, corrosivity, taste and odor, color, and colloidal particles. Engineers and consultants are well-versed in computer simulation modeling of water systems and have designed both gravity-flow and pumped-flow installations, as well as pump intake systems for both lake and river applications.

Membrane Technology: Our experience with the planning and design of membrane technologies for advanced water treatment includes micro- and ultrafiltration systems, such as nanofiltration and reverse osmosis. Our expertise involves pilot testing programs, evaluation studies, preliminary design, final design, permitting, system integration, and start-up activities. We have also developed close working relationships with numerous manufacturers and specialists familiar with the rapidly changing state-of-the-art water treatment technologies. Thus, we offer highly skilled engineers and technical specialists with extensive knowledge in the design of diverse treatment systems and components that will ensure a water quality that meets or exceeds State/Federal standards.

Arsenic Removal: Tetra Tech has extensive experience implementing treatment technologies for arsenic removal. Our staff is experienced in removing arsenic from water for drinking water purposes and wastewater discharge needs. Tetra Tech has designed arsenic removal systems with the following treatment technologies:

- Granular ferric hydroxide (GFH) adsorption
- Ion exchange
- Coagulation/filtration/sedimentation
- Reverse osmosis

Wastewater Systems: Tetra Tech offers comprehensive services in wastewater collection, treatment, reuse, disposal, and solids handling, treatment, and disposal. One specialized focus of practice includes upgrade, expansion, and retrofit of existing facilities.

The Tetra Tech team has learned that it takes special knowledge and careful attention to work in and around existing facilities, and its experience demonstrates the importance of properly integrating all facility components, old and new.

Tetra Tech's approach to the design of wastewater facilities involves maximizing the use of clients' existing facilities where feasible. Tetra Tech utilizes two important approaches to facility design. First, evaluate the existing facilities in a comprehensive manner, but with specific detail utilizing process and microbiology experts. For clients, Tetra Tech often finds excess capacity available in some processes and specific limitations in others. This allows clients to increase plant capacities with limited

expenditures. Second, Tetra Tech utilizes sustainability and life cycle analysis approaches to determine what is best for a specific situation, resulting in custom solutions unique to the client.

Tetra Tech treatment expertise includes advanced wastewater processes, effluent reuse and biosolids processing, as well as laboratory-, pilot-, and full-scale process development and testing for difficult-to-treat wastes. Treatment plant designs have entailed:

- Single basin nitrogen removal process developed by Tetra Tech
- Conventional and extended-air activated sludge plants
- Oxidation/anoxic ditches with effluent filtration
- Aerated lagoons
- All biosolids processing: thickening, dewatering, digestion, composting, land application and reuse
- Odor control facilities for liquid and solid processing
- Trickling filter, rotating biological contactor, and microfiltration plants
- Associated piping, pumping, and lift stations
- Reuse and reclaimed water piping, pumping and other facilities

Tetra Tech has designed plant upgrades and expansions to resolve problems involving: inadequate capacity, corrosion, operating failures, discharge permit violations, and excessive odor.

For collection systems, Tetra Tech provides hydraulic analysis, design, and construction engineering services that range from simple gravity sewer-line extensions to force mains with pump station complexes. These systems are designed for varying site conditions: high groundwater, shallow bedrock, very cold climates, corrosive soils, and stream and highway crossings.

Electrical Engineering / SCADA: Tetra Tech electrical engineers are well versed in power distribution, standby power generation, instrumentation and controls, communication and alarm systems, and interior and exterior lighting for public and private facilities.
Our services entail energy analysis and management via in-plant energy auditing and value engineering for energy efficiency. Our staff also provides as-needed field I & C services for a number of water and wastewater plants. Tetra Tech offers Process Control Auditing, providing information on existing control limitations and solutions to improve the plant process.

Tetra Tech offers extensive SCADA, DCS, PLC, redundant and backup control, and telemetry system design and programming services, coupled with a sound understanding of water and wastewater process control. We have implemented control logic for processes, such as plant influent monitoring and control, automated chemical-feed control, analytic data acquisition and laboratory monitoring, blower and aeration control, and level control. Our engineers have implemented strategies from very simple manual loops to highly complex multivariable control.

- Standby Power
- Communication & Alarm Systems
- Interior & Exterior Lighting
- Redundant and backup controls
- Telemetry System Design & Programming.

General Civil Engineering: Tetra Tech personnel work for developers, local and state government agencies to help facilitate negotiations. We work directly with municipalities to establish standards for review of developer-designed projects. Tetra Tech provides ongoing consulting and design to municipalities and special districts on ownership and maintenance, capital improvement programs, budgeting, and system evaluations for replacement reserves. Projects range from simple plant and plan reviews to complex treatment plant upgrades. Our engineers also direct diverse site development projects for education facilities, residential subdivisions, municipal and industrial plants, resorts, and commercial developments involving:

- Permitting & Entitlement
- Residential
- Commercial
- Industrial
- Gravel Mining
- Agricultural
- Master Planning
- Mixed Use
- Base Realignment and Closure (BRAC)
- Site Design
- Public Sector Planning
- Comprehensive Planning
- Development Review
- Develop Land Use
- Regulations, Roadways & Site Layouts — easement acquisitions, grading, parking lots, geometric and pavement design, intersections, lighting.

Construction Management: Tetra Tech's experience with construction management runs the gamut of projects from those constructed by the client's own forces, to projects involving coordinating multiple contractors selected by competitive bids, to projects requiring a specialized level of staffing expertise in project coordination, planning, and scheduling of the various construction activities. Tetra Tech provides varying levels of engineering services during construction. Equipped with innovative management practices, field operations, and technology tools, project execution is streamlined through startup-driven scheduling,

constructability expertise, and jobsite management presence. Tetra Tech has successfully conquered the challenges of construction in shallow bedrock and high groundwater tables at altitudes from sea level to more than 10,000 feet.

- Cost Estimates
- Inspections
- Claim Identification, Documentation, and Opinions
- Specification Writing, Evaluation, and Review
- Expert Testimony
- Subcontract and/or Direct-hire Construction
- Construction Support Services
- Quality Management Services
- Construction Technology
- Constructability Expertise
- Expediting and Field Procurement
- Resident Engineering Representation
- Pre-commissioning Testing

Engineering services during construction involve office engineering and field engineering by personnel who understand the intricacies of the construction process and who have the experience to solve complex construction problems. The level of services Tetra Tech provides depends on many factors that include project size and complexity, the selected contractor's experience level and reputation, and budget considerations.

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

a.	Percentage of Total Work Attributable to State, Federal and Municipal Government Work:	95
b.	Percentage of Total Work Attributable to Non-Government Work:	5

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

Signature: _____ Date: December 15, 2014

Name: Jack Rence, P.E. Title: Office Manager