

CITY COUNCIL AGENDA

CITY COUNCIL CHAMBERS . 11465 WEST CIVIC CENTER DRIVE . AVONDALE, AZ 85323

REGULAR MEETING
March 8, 2010
7:00 PM

**CALL TO ORDER BY MAYOR ROGERS
PLEDGE OF ALLEGIANCE
MOMENT OF REFLECTION**

1 ROLL CALL AND STATEMENT OF PARTICIPATION BY THE CITY CLERK

2 UNSCHEDULED PUBLIC APPEARANCES

(Limit three minutes per person. Please state your name.)

3 CONSENT AGENDA

Items on the consent agenda are of a routine nature or have been previously studied by the City Council at a work session. They are intended to be acted upon in one motion. Council members may pull items from consent if they would like them considered separately.

a. SPECIAL EVENT LIQUOR LICENSE - MUSIC AND THE ARTS AT ST. THOMAS AQUINAS - VIENNA BOYS CHOIR

City Council will consider a request for a special event liquor license from Mary Ortega on behalf of the Music and the Arts at St. Thomas Aquinas Church, for a concert to be held on March 19, 2010 at 13720 West Thomas Road, Avondale. The Council will take appropriate action.

b. PROFESSIONAL SERVICES AGREEMENT – KIMLEY-HORN & ASSOCIATES FOR THE DESIGN OF SCHOOL CROSSING IMPROVEMENTS

City Council will consider a request to approve a professional services agreement with Kimley-Horn & Associates, Inc. for the design of school crossing improvements at Michael Anderson Elementary, Rancho Santa Fe Elementary, and Garden Lakes Elementary in the amount of \$71,445 and authorize the Mayor or City Manager and City Clerk to execute the necessary documents. The Council will take appropriate action.

c. PROFESSIONAL SERVICES AND EMPLOYMENT AGREEMENT - JUDGE LYNCH

City Council will consider a request to approve a professional services and employment agreement with Richard T. Lynch for a two-year appointment as City Judge and authorize the Mayor, City Manager and City Clerk to execute said document. The Council will take appropriate action.

d. AMENDMENT NO. 1 TO THE PROFESSIONAL SERVICES AGREEMENT WITH CAROLLO ENGINEERS FOR THE VAN BUREN WATERLINE AND WATER QUALITY STATION CONSTRUCTION QUALITY CONTROL SERVICES

City Council will consider a request to approve Amendment No. 1 to the Professional Services Agreement with Carollo Engineers for Quality Control Services related to construction of the Van Buren Waterline and Water Quality Station, in an amount of \$48,737.00 (for a cumulative contract cost of \$98,237.00), and authorize the Mayor or City Manager and City Clerk to execute the necessary documents. The Council will take appropriate action.

e. RESOLUTION 2889-310 - GOHS 2010 GRANT TO FUND DUI ENFORCEMENT AND ELECTRONIC CITATION PROGRAM

City Council will consider a resolution authorizing the submittal and acceptance of a grant through the Governor's Office of Highway Safety Program in the amount of \$440,585.50 for the Avondale Police Department's Driving Under the Influence Enforcement Program and the Avondale City Court's Electronic Citation Program and authorize the Mayor or City Manager, City Attorney and City Clerk to execute the necessary documents. The Council will take appropriate action.

4 INSTALLATION OF JUDGE LYNCH

Mayor Rogers will administer the oath of office to Judge Richard T. Lynch.

5 ACCESS AND INDEMNIFICATION AGREEMENT - CRANE CO. FOR THE PHOENIX GOODYEAR AIRPORT NORTH SUPERFUND SITE

City Council will consider a request to approve an Access and Indemnification Agreement with Crane Co. to install groundwater extraction and injection conveyance piping, one or more groundwater injection well(s) and associated monitoring equipment for the Phoenix-Goodyear Airport-North Superfund Site Remediation Project and authorize the Mayor, or City Manager and City Clerk to execute the necessary documents. The Council will take appropriate action.

6 RESOLUTION 2888-310 - DEFERRED COMPENSATION PLAN AMENDMENT

City Council will consider a resolution approving amendments to the ICMA-RC and Nationwide Retirement Solution deferred compensation plan agreements to permit eligible plan participants the ability to obtain loans from their plan accounts and authorize the Mayor or City Manager and City Clerk to execute the necessary documents. The Council will take appropriate action.

7 PROPOSED NEW WATER CONSERVATION REBATE PROGRAMS

City Council will receive information regarding three new water conservation rebate programs to promote water savings and reduce water waste and misuse. For information, discussion and direction.

8 EXECUTIVE SESSION

a. The Council may hold an executive session pursuant to ARIZ. REV. STAT. § 38-431.03 (A)(4) for discussion or consultation with the City's Attorney in order to consider its position and instruct the City Attorney regarding the Council's position regarding the (i) the SLT Expressway litigation, (ii) potential litigation related to environmental contamination, and (iii) a potential economic development agreement relating to a movie studio.

9 ADJOURNMENT

Respectfully submitted,



Carmen Martinez
City Clerk

Individuals with special accessibility needs, including sight or hearing impaired, large print, or interpreter, should contact the City Clerk at 623-333-1200 or TDD 623-333-0010 at least two business days prior to the Council Meeting.

Personas con necesidades especiales de accesibilidad, incluyendo personas con impedimentos de vista u oído, o con necesidad de impresión grande o interprete, deben comunicarse con la Secretaria de la Ciudad at 623-333-1200 o TDD 623-333-0010 cuando menos dos días hábiles antes de la junta del Concejo.



CITY COUNCIL REPORT

SUBJECT:

Special Event Liquor License - Music and the Arts
at St. Thomas Aquinas - Vienna Boys Choir

MEETING DATE:

March 8, 2010

TO: Mayor and Council
FROM: Carmen Martinez, City Clerk (623) 333-1214
THROUGH: Charlie McClendon, City Manager

PURPOSE:

Staff is requesting that Council consider a request for a special event liquor license from Mary Ortega on behalf of the Music and the Arts at St. Thomas Aquinas Church, for a concert to be held on March 19, 2010 at 13720 West Thomas Road, Avondale.

DISCUSSION:

The City Clerk's Department has received a request from Mrs. Mary Ortega on behalf of Music and the Arts at St. Thomas Aquinas for a special event liquor license to be used in conjunction with the Vienna Boys Choir concert to be held Friday, March 19, 2010 from 6:00 p.m. to 11:30 p.m., at St. Thomas Aquinas Church.

The required fees have been paid. Staff has determined that the applicant is not requesting any city support other than normal city services. The Police and Fire Departments have reviewed the application and are recommending approval. Their comments are attached.

Staff reviewed this application using the 14 factors set forth in Ordinance 1031-04. The findings are as noted below:

1. The event will be open to the public
2. Criminal history of the applicant - A background check of the representative, Mrs. Mary Ortega, revealed no contact with the Avondale Police Department
3. The event is a charitable fundraiser
4. Security measures taken by the applicant - The Police Department has reviewed the security plan and has determined it to be sufficient
5. Beer and wine will be served
6. Beverages will be dispensed in disposable cups and containers
7. The previous event held in March 2008 revealed no neighborhood disturbances
8. Event activities will be confined to the church so there is no potential for problems in the neighborhood in terms of noise, hours and time of the event
9. The event will last five and a half hours
10. Sanitary facilities are available at the church
11. Zoning is appropriate - Zoning is A-1 General Industrial. Planning staff has indicated that the proposed use will not result in incompatible land uses
12. Anticipated total daily attendance is 1800
13. There will not be sound amplification in the area where liquor will be served. Sound amplification will be limited to inside the church.
14. Per the Police Department, traffic control measures will not be necessary

RECOMMENDATION:

Staff is recommending approval of the request for a special event liquor license from Mrs. Mary Ortega on behalf of the Music and the Arts at St. Thomas Aquinas Church to be used in conjunction with the Vienna Boys Choir concert to be held on March 19, 2010 at St. Thomas Aquinas Church located at 13720 West Thomas Road, Avondale, Arizona.

ATTACHMENTS:

Click to download

 [State Application](#)

 [Comments](#)

10. Has the applicant been convicted of a felony in the past five years, or had a liquor license revoked?
 YES NO (attach explanation if yes)
11. This organization has been issued a special event license for 1 days this year, including this event
(not to exceed 10 days per year).
12. Is the organization using the services of a promoter or other person to manage the event? YES NO
If yes, attach a copy of the agreement.
13. List all people and organizations who will receive the proceeds. Account for 100% of the proceeds.
THE ORGANIZATION APPLYING MUST RECEIVE 25% of the gross revenues of Alcoholic Beverage Sales.

<u>Name</u>	<u>Address</u>	<u>Percentage</u>
MUSIC and the Arts at St. Thomas Aquinas	13720 W. Thomas Rd, Avondale, AZ 85323	100%

(Attach additional sheet if necessary)

14. Knowledge of Arizona State Liquor Laws Title 4 is important to prevent liquor law violations. If you have any questions regarding the law or this application, please contact the Arizona State Department of Liquor Licenses and Control for assistance.

NOTE: ALL ALCOHOLIC BEVERAGE SALES MUST BE FOR CONSUMPTION AT THE EVENT SITE ONLY.
"NO ALCOHOLIC BEVERAGES SHALL LEAVE SPECIAL EVENT PREMISES."

15. What security and control measures will you take to prevent violations of state liquor laws at this event?
(List type and number of security/police personnel and type of fencing or control barriers if applicable)

4 # Police Fencing
8 # Security personnel Barriers

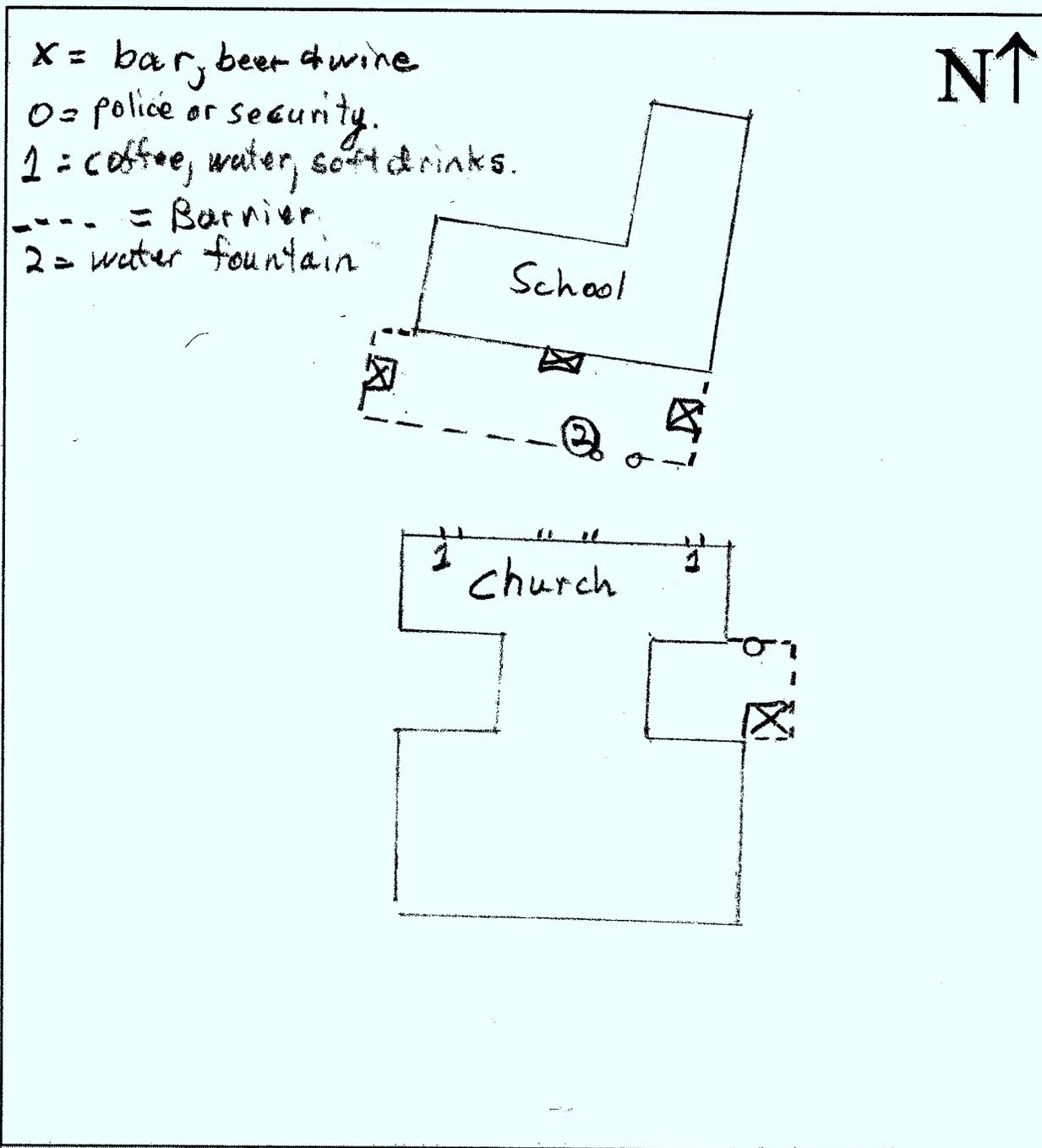
16. Is there an existing liquor license at the location where the special event is being held? YES NO
If yes, does the existing business agree to suspend their liquor license during the time period, and in the area in which the special event license will be in use? YES NO
(ATTACH COPY OF AGREEMENT)

Name of Business () Phone Number

17. Your licensed premises is that area in which you are authorized to sell, dispense, or serve spirituous liquors under the provisions of your license. The following page is to be used to prepare a diagram of your special event licensed premises. Please show dimensions, serving areas, fencing, barricades or other control measures and security positions.

SPECIAL EVENT LICENSED PREMISES DIAGRAM
(This diagram must be completed with this application)

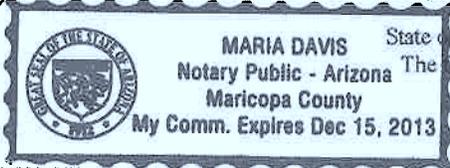
Special Event Diagram: (Show dimensions, serving areas, and label type of enclosure and security positions)
NOTE: Show nearest cross streets, highway, or road if location doesn't have an address.



THIS SECTION TO BE COMPLETED ONLY BY AN OFFICER, DIRECTOR OR CHAIRPERSON OF THE ORGANIZATION NAMED IN QUESTION #1

18. I, Matthew S. Sprinkle, declare that I am an **Officer/Director/Chairperson** appointing the applicant listed in Question 6, to apply on behalf of the foregoing organization for a Special Event Liquor License.

X [Signature] Executive Dir 2-26-10 602.412.8185
(Signature) (Title/Position) (Date) (Phone #)



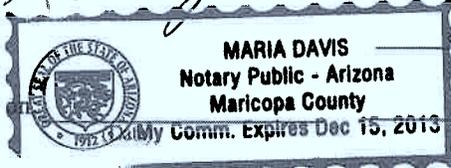
State of ARIZONA County of MARICOPA
The foregoing instrument was acknowledged before me this FEBRUARY 26 2010
Day Month Year

My Commission expires on: 12/15/2013 (Date)
[Signature] (Signature of NOTARY PUBLIC)

THIS SECTION TO BE COMPLETED ONLY BY THE APPLICANT NAMED IN QUESTION #6

19. I, MARY K ORTEGA, declare that I am the APPLICANT filing this application as listed in Question 6. I have read the application and the contents and all statements are true, correct and complete.

X [Signature] State of ARIZONA County of MARICOPA
(Signature) The foregoing instrument was acknowledged before me this



26 FEBRUARY 2010
Day Month Year
[Signature] (Signature of NOTARY PUBLIC)

My commission expires

You must obtain local government approval. City or County MUST recommend event & complete item #20. The local city or county jurisdiction may require additional applications to be completed and additional licensing fees before approval may be granted.

LOCAL GOVERNING BODY APPROVAL SECTION

20. I, _____ hereby recommend this special event application
(Government Official) (Title)
on behalf of _____
(City, Town or County) (Signature of OFFICIAL) (Date)

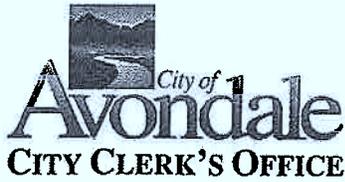
FOR DLLC DEPARTMENT USE ONLY

Department Comment Section:

(Employee) (Date)

APPROVED DISAPPROVED BY: _____

(Title) (Date)



DEPARTMENTAL REVIEW FORM

TYPE OF LICENSE:

SPECIAL EVENT LIQUOR LICENSE

ROUTING:

POLICE DEPARTMENT

FIRE DEPARTMENT

APPLICANT'S NAME: MARY ORTEGA

ORGANIZATIONS NAME: MUSIC & THE ARTS AT ST. THOMAS AQUINAS

EVENT ADDRESS: 13720 WEST THOMAS ROAD

CITY: AVONDALE STATE: AZ ZIP CODE: 85392

PURPOSE OF EVENT: VIENNA BOYS CHOIR

DEPARTMENTAL COMMENTS:

APPROVED

DENIED

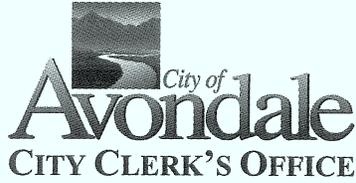
A handwritten signature in black ink, appearing to be "Mary Ortega", written over a horizontal line.

SIGNATURE

3/1/10
DATE

TITLE

**THIS LICENSE IS SCHEDULED FOR THE COUNCIL MEETING OF: MARCH 8, 2010
PLEASE RETURN YOUR COMMENTS TO THE CITY CLERK'S OFFICE BY: FEBRUARY 28, 2010**



DEPARTMENTAL REVIEW FORM

TYPE OF LICENSE:

SPECIAL EVENT LIQUOR LICENSE

ROUTING:

POLICE DEPARTMENT

FIRE DEPARTMENT

APPLICANT'S NAME: MARY ORTEGA

ORGANIZATIONS NAME: MUSIC & THE ARTS AT ST. THOMAS AQUINAS

EVENT ADDRESS: 13720 WEST THOMAS ROAD

CITY: AVONDALE **STATE:** AZ **ZIP CODE:** 85392

PURPOSE OF EVENT: VIENNA BOYS CHOIR

DEPARTMENTAL COMMENTS:

APPROVED
 DENIED



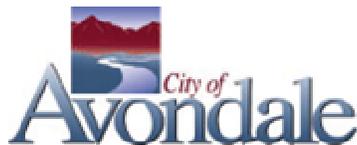
SIGNATURE



DATE

TITLE

THIS LICENSE IS SCHEDULED FOR THE COUNCIL MEETING OF: MARCH 8, 2010
PLEASE RETURN YOUR COMMENTS TO THE CITY CLERK'S OFFICE BY: FEBRUARY 28, 2010



CITY COUNCIL REPORT

SUBJECT:

Professional Services Agreement – Kimley-Horn & Associates for the design of school crossing improvements

MEETING DATE:

March 8, 2010

TO: Mayor and Council

FROM: Sue McDermott, P.E., Director of Development Services & Engineering, 623-333-4211

THROUGH: Charlie McClendon, City Manager

PURPOSE:

Staff is requesting that the City Council approve a professional services agreement with Kimley-Horn & Associates, Inc. for the design of school crossing improvements at Michael Anderson Elementary, Rancho Santa Fe Elementary, and Garden Lakes Elementary in the amount of \$71,445 and authorize the Mayor or City Manager and City Clerk to execute the necessary documents.

BACKGROUND:

The Safe Routes to School (SRTS) Program was created by the U.S. Congress as part of a federal transportation bill called SAFETEA-LU. The primary reason for developing this nationwide program is this country's growing epidemic of childhood obesity and diabetes. One of the causes of the epidemic is children's inability to get physical activity - biking and walking to school - due to the lack of safe and convenient ways to do so. To this end, Safe Routes was created to accomplish three goals: 1) To enable and encourage children, including those with disabilities, to walk and bicycle to school; 2) To make bicycling and walking to school a safer and more appealing transportation alternative; and 3) To facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution near schools.

The Program provides funding for schools and communities to implement infrastructure projects (such as sidewalk improvements, trails, and 'traffic calming') and non-infrastructure programs (such as education campaigns, law enforcement efforts, and prize giveaways). The City of Avondale was awarded \$38,000 for the Safe Routes to School Cycle 1 grant - non-infrastructure program. Funding from this grant was used by the Engineering Department to implement safety at local elementary schools.

DISCUSSION:

The Engineering Department determined that Michael Anderson, Garden Lakes and Rancho Santa Fe elementary schools are in need of improvements to alleviate congested areas during drop-off/pick-up times and on roadways with excessive traffic volumes, high vehicle speeds, high pedestrian volumes, as well as a need for increased pedestrian visibility for the safety of school children. A previous traffic safety study recommended a cross walk project to increase safety, reduce conflicts, and encourage more parents and students to feel comfortable walking and bicycling to school, thereby increasing the number of walkers.

The City of Avondale applied for the Safe Routes to School Cycle 2 grant to support the implementation of the cross walk improvements and was awarded funding in the amount of \$219,746. The SRTS Cycle 2 grant program will be administered by Arizona Department of Transportation (ADOT). On July 20, 2009, Council approved an Intergovernmental Agreement (IGA)

between the City and ADOT allowing the City to work with ADOT on this program. In order for the City to oversee the design portion of this program, staff was required to submit the City's procurement process to ADOT for review and approval. The City has received ADOT's approval and therefore has moved forward with initiating the design program.

Kimley-Horne & Associates Inc., was selected from the City's pre-qualified consultant list based on their qualifications. Staff requested, received, and negotiated a proposal including the scope of work and fees in the amount of \$71,445.

BUDGETARY IMPACT:

This is a reimbursable grant and does not have any matching fund requirements. Funding in the amount of \$71,445 is available in Grant Fund, 209-5925. Staff will submit invoices to ADOT for reimbursement. Any cost overages will come from the Engineering Department's Other Professional Services line item number 101-5900-00-6180.

RECOMMENDATION:

Staff recommends that the City Council approve a professional services agreement with Kimley-Horn & Associates Inc., for the design of school crossing improvements in the amount of \$71,445 and authorize the Mayor or City Manager and City Clerk to execute the necessary documents.

ATTACHMENTS:

Click to download

-  [Professional Services Agreement](#)
-  [Vicinity Map](#)

**PROFESSIONAL SERVICES AGREEMENT
BETWEEN
THE CITY OF AVONDALE
AND
KIMLEY-HORN AND ASSOCIATES, INC.**

THIS PROFESSIONAL SERVICES AGREEMENT (this "Agreement") is made as of March 8, 2010, between the City of Avondale, an Arizona municipal corporation (the "City") and Kimley-Horn and Associates, Inc., a North Carolina corporation (the "Consultant").

RECITALS

A. The City issued a Request for Qualifications, EN 08-017 "Request for Statements of Qualifications for FY 2008/2009 Professional Consultants Selection List" and amended on April 1, 2008 by that certain Addendum No.1 (collectively the "RFQ"), attached hereto as Exhibit A, and incorporated herein by reference, seeking statements of qualifications from vendors for professional consulting services.

B. The Consultant submitted a Statement of Qualifications (the "SOQ") in response to the RFQ, attached hereto as Exhibit B, and incorporated herein by reference, and the City desires to enter into an Agreement with the Consultant for design services for traffic calming measures near Michael Anderson Elementary School, Garden Lakes Elementary School and Rancho Santa Fe Elementary School in Avondale, Arizona (the "Services").

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing recitals, which are incorporated herein by reference, the following mutual covenants and conditions, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the City and the Consultant hereby agree as follows:

1. Term of Agreement. This Agreement shall be effective as of the date first set forth above and shall remain in full force and effect until June 30, 2011.
2. Scope of Work. Consultant shall provide the Services as set forth in the Scope of Work, attached hereto as Exhibit C and incorporated herein by reference.
3. Compensation. The City shall pay Consultant a price not to exceed \$71,445.00 for the Services as set forth in the Fee Proposal, attached hereto as Exhibit C and incorporated herein by reference.
4. Payments. The City shall pay the Consultant monthly, based upon work performed and completed to date, and upon submission and approval of invoices. All invoices shall document and itemize all work completed to date. The invoice statement shall include a record of time expended and work performed in sufficient detail to justify payment.

5. Documents. All documents prepared and submitted to the City pursuant to this Agreement shall be the property of the City.

6. Consultant Personnel. Consultant shall provide adequate, experienced personnel, capable of and devoted to the successful completion of the Services to be performed under this Agreement. Consultant agrees to assign specific individuals to key positions. If deemed qualified, the Consultant is encouraged to hire City residents to fill vacant positions at all levels. Consultant agrees that, upon commencement of the Services to be performed under this Agreement, key personnel shall not be removed or replaced without prior written notice to the City. If key personnel are not available to perform the Services for a continuous period exceeding 30 calendar days, or are expected to devote substantially less effort to the Services than initially anticipated, Consultant shall immediately notify the City of same and shall, subject to the concurrence of the City, replace such personnel with personnel of substantially equal ability and qualifications.

7. Inspection; Acceptance. All work shall be subject to inspection and acceptance by the City at reasonable times during Consultant's performance. The Consultant shall provide and maintain a self-inspection system that is acceptable to the City.

8. Licenses; Materials. Consultant shall maintain in current status all federal, state and local licenses and permits required for the operation of the business conducted by the Consultant. The City has no obligation to provide Consultant, its employees or subcontractors any business registrations or licenses required to perform the specific services set forth in this Agreement. The City has no obligation to provide tools, equipment or material to Consultant.

9. Performance Warranty. Consultant warrants that the Services rendered will conform to the requirements of this Agreement and to the customary professional standards in the field.

10. Indemnification. To the fullest extent permitted by law, the Consultant shall indemnify, defend and hold harmless the City and each council member, officer, employee or agent thereof (the City and any such person being herein called an "Indemnified Party"), for, from and against any and all losses, claims, damages, liabilities, costs and expenses (including, but not limited to, reasonable attorneys' fees, court costs and the costs of appellate proceedings) to which any such Indemnified Party may become subject, under any theory of liability whatsoever ("Claims"), insofar as such Claims (or actions in respect thereof) relate to, arise out of, or are caused by or based upon the negligent acts, intentional misconduct, errors, mistakes or omissions, in connection with the work or services of the Consultant, its officers, employees, agents, or any tier of subcontractor in the performance of this Agreement. The amount and type of insurance coverage requirements set forth below will in no way be construed as limiting the scope of the indemnity in this Section.

11. Insurance.

11.1 General.

a. Insurer Qualifications. Without limiting any obligations or liabilities of Consultant, Consultant shall purchase and maintain, at its own expense, hereinafter stipulated minimum insurance with insurance companies authorized to do business in the State of Arizona pursuant to ARIZ. REV. STAT. § 20-206, as amended, with an AM Best, Inc. rating of A- or above with policies and forms satisfactory to the City. Failure to maintain insurance as specified herein may result in termination of this Agreement at the City's option.

b. No Representation of Coverage Adequacy. By requiring insurance herein, the City does not represent that coverage and limits will be adequate to protect Consultant. The City reserves the right to review any and all of the insurance policies and/or endorsements cited in this Agreement but has no obligation to do so. Failure to demand such evidence of full compliance with the insurance requirements set forth in this Agreement or failure to identify any insurance deficiency shall not relieve Consultant from, nor be construed or deemed a waiver of, its obligation to maintain the required insurance at all times during the performance of this Agreement.

c. Additional Insured. All insurance coverage and self-insured retention or deductible portions, except Workers' Compensation insurance and Professional Liability insurance, if applicable, shall name, to the fullest extent permitted by law for claims arising out of the performance of this Agreement, the City, its agents, representatives, officers, directors, officials and employees as Additional Insured as specified under the respective coverage sections of this Agreement.

d. Coverage Term. All insurance required herein shall be maintained in full force and effect until all work or services required to be performed under the terms of this Agreement are satisfactorily performed, completed and formally accepted by the City, unless specified otherwise in this Agreement.

e. Primary Insurance. Consultant's insurance shall be primary insurance with respect to performance of this Agreement and in the protection of the City as an Additional Insured.

f. Waiver. All policies, except for Professional Liability, including Workers' Compensation insurance, shall contain a waiver of rights of recovery (subrogation) against the City, its agents, representatives, officials, officers and employees for any claims arising out of the work or services of Consultant. Consultant shall arrange to have such subrogation waivers incorporated into each policy via formal written endorsement thereto.

g. Policy Deductibles and/or Self-Insured Retentions. The policies set forth in these requirements may provide coverage that contains deductibles or self-insured retention amounts. Such deductibles or self-insured retention shall not be applicable with respect to the policy limits provided to the City. Consultant shall be solely responsible for any such deductible or self-insured retention amount.

h. Use of Subcontractors. If any work under this Agreement is subcontracted in any way, Consultant shall execute written agreements with its subcontractors containing the indemnification provisions set forth in this Section and insurance requirements set forth herein protecting the City and Consultant. Consultant shall be responsible for executing any agreements with its subcontractors and obtaining certificates of insurance verifying the insurance requirements.

i. Evidence of Insurance. Prior to commencing any work or services under this Agreement, Consultant will provide the City with suitable evidence of insurance in the form of certificates of insurance and a copy of the declaration page(s) of the insurance policies as required by this Agreement, issued by Consultant's insurance insurer(s) as evidence that policies are placed with acceptable insurers as specified herein and provide the required coverages, conditions and limits of coverage specified in this Agreement and that such coverage and provisions are in full force and effect. Confidential information such as the policy premium may be redacted from the declaration page(s) of each insurance policy, provided that such redactions do not alter any of the information required by this Agreement. The City shall reasonably rely upon the certificates of insurance and declaration page(s) of the insurance policies as evidence of coverage but such acceptance and reliance shall not waive or alter in any way the insurance requirements or obligations of this Agreement. In the event any insurance policy required by this Agreement is written on a "claims made" basis, coverage shall extend for two years past completion of the Services and the City's acceptance of the Consultant's work or services and as evidenced by annual certificates of insurance. If any of the policies required by this Agreement expire during the life of this Agreement, it shall be Consultant's responsibility to forward renewal certificates and declaration page(s) to the City 30 days prior to the expiration date. All certificates of insurance and declarations required by this Agreement shall be identified by referencing the RFQ number and title or this Agreement. A \$25.00 administrative fee shall be assessed for all certificates or declarations received without the appropriate RFQ number and title or a reference to this Agreement, as applicable. Additionally, certificates of insurance and declaration page(s) of the insurance policies submitted without referencing the appropriate RFQ number and title or a reference to this Agreement, as applicable, will be subject to rejection and may be returned or discarded. Certificates of insurance and declaration page(s) shall specifically include the following provisions:

(1) The City, its agents, representatives, officers, directors, officials and employees are Additional Insureds as follows:

(a) Commercial General Liability – Under Insurance Services Office, Inc., ("ISO") Form CG 20 10 03 97 or equivalent.

(b) Auto Liability – Under ISO Form CA 20 48 or equivalent.

(c) Excess Liability – Follow Form to underlying insurance.

(2) Consultant's insurance shall be primary insurance as respects performance of the Agreement.

(3) All policies, except for Professional Liability, including Workers' Compensation, waive rights of recovery (subrogation) against City, its agents, representatives, officers, officials and employees for any claims arising out of work or services performed by Consultant under this Agreement.

(4) A 30-day advance notice cancellation provision. If ACORD certificate of insurance form is used, the phrases in the cancellation provision "endeavor to" and "but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives" shall be deleted. Certificate forms other than ACORD form shall have similar restrictive language deleted.

11.2 Required Insurance Coverage.

a. Commercial General Liability. Consultant shall maintain "occurrence" form Commercial General Liability insurance with an unimpaired limit of not less than \$1,000,000 for each occurrence, \$2,000,000 Products and Completed Operations Annual Aggregate and a \$2,000,000 General Aggregate Limit. The policy shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal injury and advertising injury. Coverage under the policy will be at least as broad as ISO policy form CG 00 010 93 or equivalent thereof, including but not limited to, separation of insured's clause. To the fullest extent allowed by law, for claims arising out of the performance of this Agreement, the City, its agents, representatives, officers, officials and employees shall be cited as an Additional Insured under ISO, Commercial General Liability Additional Insured Endorsement form CG 20 10 03 97, or equivalent, which shall read "Who is an Insured (Section II) is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" for that insured by or for you." If any Excess insurance is utilized to fulfill the requirements of this subsection, such Excess insurance shall be "follow form" equal or broader in coverage scope than underlying insurance.

b. Vehicle Liability. Consultant shall maintain Business Automobile Liability insurance with a limit of \$1,000,000 each occurrence on Consultant's owned, hired and non-owned vehicles assigned to or used in the performance of the Consultant's work or services under this Agreement. Coverage will be at least as broad as ISO coverage code "1" "any auto" policy form CA 00 01 12 93 or equivalent thereof. To the fullest extent allowed by law, for claims arising out of the performance of this Agreement, the City, its agents, representatives, officers, directors, officials and employees shall be cited as an Additional Insured under ISO Business Auto policy Designated Insured Endorsement form CA 20 48 or equivalent. If any Excess insurance is utilized to fulfill the requirements of this subsection, such Excess insurance shall be "follow form" equal or broader in coverage scope than underlying insurance.

c. Professional Liability. If this Agreement is the subject of any professional services or work, or if the Consultant engages in any professional services or work adjunct or residual to performing the work under this Agreement, the Consultant shall maintain Professional Liability insurance covering negligent errors and omissions arising out of the

Services performed by the Consultant, or anyone employed by the Consultant, or anyone for whose negligent acts, mistakes, errors and omissions the Consultant is legally liable, with an unimpaired liability insurance limit of \$2,000,000 each claim and \$2,000,000 annual aggregate. In the event the Professional Liability insurance policy is written on a "claims made" basis, coverage shall extend for two years past completion and acceptance of the Services, and the Consultant shall be required to submit certificates of insurance and a copy of the declaration page(s) of the insurance policies evidencing proper coverage is in effect as required above.

d. Workers' Compensation Insurance. Consultant shall maintain Workers' Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction over Consultant's employees engaged in the performance of work or services under this Agreement and shall also maintain Employers Liability Insurance of not less than \$500,000 for each accident, \$500,000 disease for each employee and \$1,000,000 disease policy limit.

11.3 Cancellation and Expiration Notice. Insurance required herein shall not expire, be canceled, or materially change without 30 days' prior written notice to the City.

12. Applicable Law; Venue. In the performance of this Agreement, Consultant shall abide by and conform to any and all laws of the United States, State of Arizona and City of Avondale, including but not limited to, federal and state executive orders providing for equal employment and procurement opportunities, the Federal Occupational Safety and Health Act and any other federal or state laws applicable to this Agreement. This Agreement shall be governed by the laws of the State of Arizona and suit pertaining to this Agreement may be brought only in courts in the State of Arizona.

13. Termination; Cancellation.

13.1 For City's Convenience. This Agreement is for the convenience of the City and, as such, may be terminated without cause after receipt by Consultant of written notice by the City. Upon termination for convenience, Consultant shall be paid for all undisputed services performed to the termination date.

13.2 For Cause. This Agreement may be terminated by either party upon 30 days' written notice should the other party fail to substantially perform in accordance with this Agreement's terms, through no fault of the party initiating the termination. In the event of such termination for cause, payment shall be made by the City to the Consultant for the undisputed portion of its fee due as of the termination date.

13.3 Due to Work Stoppage. This Agreement may be terminated by the City upon 30 days' written notice to Consultant in the event that the Services are permanently abandoned. In the event of such termination due to work stoppage, payment shall be made by the City to the Consultant for the undisputed portion of its fee due as of the termination date.

13.4 Conflict of Interest. This Agreement is subject to the provisions of ARIZ. REV. STAT. § 38-511. The City may cancel this Agreement without penalty or further obligations by the City or any of its departments or agencies if any person significantly involved

in initiating, negotiating, securing, drafting or creating this Agreement on behalf of the City or any of its departments or agencies is, at any time while the Agreement or any extension of the Agreement is in effect, an employee of any other party to the Agreement in any capacity or a consultant to any other party of the Agreement with respect to the subject matter of the Agreement.

13.5 Gratuities. The City may, by written notice to the Consultant, cancel this Agreement if it is found by the City that gratuities, in the form of economic opportunity, future employment, entertainment, gifts or otherwise, were offered or given by the Consultant or any agent or representative of the Consultant to any officer, agent or employee of the City for the purpose of securing this Agreement. In the event this Agreement is cancelled by the City pursuant to this provision, the City shall be entitled, in addition to any other rights and remedies, to recover or withhold from the Consultant an amount equal to 150% of the gratuity.

13.6 Agreement Subject to Appropriation. The provisions of this Agreement for payment of funds by the City shall be effective when funds are appropriated for purposes of this Agreement and are actually available for payment. The City shall be the sole judge and authority in determining the availability of funds under this Agreement and the City shall keep the Consultant fully informed as to the availability of funds for the Agreement. The obligation of the City to make any payment pursuant to this Agreement is a current expense of the City, payable exclusively from such annual appropriations, and is not a general obligation or indebtedness of the City. If the City Council fails to appropriate money sufficient to pay the amounts as set forth in this Agreement during any immediately succeeding fiscal year, this Agreement shall terminate at the end of then-current fiscal year and the City and the Consultant shall be relieved of any subsequent obligation under this Agreement.

14. Miscellaneous.

14.1 Independent Contractor. The Consultant acknowledges and agrees that the Services provided under this Agreement are being provided as an independent contractor, not as an employee or agent of the City. Consultant, its employees and subcontractors are not entitled to workers' compensation benefits from the City. The City does not have the authority to supervise or control the actual work of Consultant, its employees or subcontractors. The Consultant, and not the City, shall determine the time of its performance of the services provided under this Agreement so long as Consultant meets the requirements of its agreed scope of work as set forth in Section 2 above. Consultant is neither prohibited from entering into other contracts nor prohibited from practicing its profession elsewhere. City and Consultant do not intend to nor will they combine business operations under this Agreement.

14.2 Laws and Regulations. The Consultant shall keep fully informed and shall at all times during the performance of its duties under this Agreement ensure that it and any person for whom the Consultant is responsible remains in compliance with all rules, regulations, ordinances, statutes or laws affecting the Services, including the following: (a) existing and future City and County ordinances and regulations, (b) existing and future state and federal laws and (c) existing and future Occupational Safety and Health Administration ("OSHA") standards.

14.3 Amendments. This Agreement may be modified only by a written amendment signed by persons duly authorized to enter into contracts on behalf of the City and the Consultant.

14.4 Provisions Required by Law. Each and every provision of law and any clause required by law to be in the Agreement will be read and enforced as though it were included herein and, if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Agreement will promptly be physically amended to make such insertion or correction.

14.5 Severability. The provisions of this Agreement are severable to the extent that any provision or application held to be invalid by a Court of competent jurisdiction shall not affect any other provision or application of the Agreement which may remain in effect without the invalid provision or application.

14.6 Relationship of the Parties. It is clearly understood that each party will act in its individual capacity and not as an agent, employee, partner, joint venturer, or associate of the other. An employee or agent of one party shall not be deemed or construed to be the employee or agent of the other for any purpose whatsoever. The Consultant is advised that taxes or Social Security payments will not be withheld from any City payments issued hereunder and Consultant agrees to be fully and solely responsible for the payment of such taxes or any other tax applicable to this Agreement.

14.7 Entire Agreement; Interpretation; Parol Evidence. This Agreement represents the entire agreement of the parties with respect to its subject matter, and all previous agreements, whether oral or written, entered into prior to this Agreement are hereby revoked and superseded by this Agreement. No representations, warranties, inducements or oral agreements have been made by any of the parties except as expressly set forth herein, or in any other contemporaneous written agreement executed for the purposes of carrying out the provisions of this Agreement. This Agreement shall be construed and interpreted according to its plain meaning, and no presumption shall be deemed to apply in favor of, or against the party drafting the Agreement. The parties acknowledge and agree that each has had the opportunity to seek and utilize legal counsel in the drafting of, review of, and entry into this Agreement.

14.8 Assignment. No right or interest in this Agreement shall be assigned by Consultant without prior, written permission of the City signed by the City Manager and no delegation of any duty of Consultant shall be made without prior, written permission of the City signed by the City Manager. Any attempted assignment or delegation by Consultant in violation of this provision shall be a breach of this Agreement by Consultant.

14.9 Subcontracts. No subcontract shall be entered into by the Consultant with any other party to furnish any of the material or services specified herein without the prior written approval of the City. The Consultant is responsible for performance under this Agreement whether or not subcontractors are used.

14.10 Rights and Remedies. No provision in this Agreement shall be construed, expressly or by implication, as waiver by the City of any existing or future right and/or remedy

available by law in the event of any claim of default or breach of this Agreement. The failure of the City to insist upon the strict performance of any term or condition of this Agreement or to exercise or delay the exercise of any right or remedy provided in this Agreement, or by law, or the City's acceptance of and payment for services, shall not release the Consultant from any responsibilities or obligations imposed by this Agreement or by law, and shall not be deemed a waiver of any right of the City to insist upon the strict performance of this Agreement.

14.11 Attorneys' Fees. In the event either party brings any action for any relief, declaratory or otherwise, arising out of this Agreement or on account of any breach or default hereof, the prevailing party shall be entitled to receive from the other party reasonable attorneys' fees and reasonable costs and expenses, determined by the court sitting without a jury, which shall be deemed to have accrued on the commencement of such action and shall be enforced whether or not such action is prosecuted through judgment.

14.12 Liens. All materials or services shall be free of all liens and, if the City requests, a formal release of all liens shall be delivered to the City.

14.13 Offset.

a. Offset for Damages. In addition to all other remedies at law or equity, the City may offset from any money due to the Consultant any amounts Consultant owes to the City for damages resulting from breach or deficiencies in performance or breach of any obligation under this Agreement.

b. Offset for Delinquent Fees or Taxes. The City may offset from any money due to the Consultant any amounts Consultant owes to the City for delinquent fees, transaction privilege taxes and property taxes, including any interest or penalties.

14.14 Notices and Requests. Any notice or other communication required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been duly given if (a) delivered to the party at the address set forth below, (b) deposited in the U.S. Mail, registered or certified, return receipt requested, to the address set forth below, (c) given to a recognized and reputable overnight delivery service, to the address set forth below or (d) delivered by facsimile transmission to the number set forth below:

If to the City: City of Avondale
11465 West Civic Center Drive
Avondale, Arizona 85323
Facsimile: (623) 333-0100
Attn: Charles P. McClendon, City Manager

With copy to: GUST ROSENFELD, P.L.C.
201 East Washington Street, Suite 800
Phoenix, Arizona 85004-2327
Facsimile: (602) 340-1538
Attn: Andrew J. McGuire, Esq.

If to Consultant: Kimley-Horn and Associates, Inc.
7878 North 16th Street, Suite 300
Phoenix, Arizona 85020
Facsimile: (602) 906-1173
Attn: John C. Kissinger, P.E.

or at such other address, and to the attention of such other person or officer, as any party may designate in writing by notice duly given pursuant to this subsection. Notices shall be deemed received (a) when delivered to the party, (b) three business days after being placed in the U.S. Mail, properly addressed, with sufficient postage, (c) the following business day after being given to a recognized overnight delivery service, with the person giving the notice paying all required charges and instructing the delivery service to deliver on the following business day, or (d) when received by facsimile transmission during the normal business hours of the recipient. If a copy of a notice is also given to a party's counsel or other recipient, the provisions above governing the date on which a notice is deemed to have been received by a party shall mean and refer to the date on which the party, and not its counsel or other recipient to which a copy of the notice may be sent, is deemed to have received the notice.

14.15 Confidentiality of Records. The Consultant shall establish and maintain procedures and controls that are acceptable to the City for the purpose of ensuring that information contained in its records or obtained from the City or from others in carrying out its obligations under this Agreement shall not be used or disclosed by it, its agents, officers, or employees, except as required to perform Consultant's duties under this Agreement. Persons requesting such information should be referred to the City. Consultant also agrees that any information pertaining to individual persons shall not be divulged other than to employees or officers of Consultant as needed for the performance of duties under this Agreement.

14.16 Records and Audit Rights. Consultant's and its subcontractor's books, records, correspondence, accounting procedures and practices, and any other supporting evidence relating to this Agreement, including the papers of any Consultant and its subcontractors' employees who perform any work or Services pursuant to this Agreement to ensure that the Consultant and its subcontractors are complying with the warranty under subsection 14.17 below (all the foregoing hereinafter referred to as "Records"), shall be open to inspection and subject to audit and/or reproduction during normal working hours by the City, to the extent necessary to adequately permit (a) evaluation and verification of any invoices, payments or claims based on Consultant's and its subcontractors' actual costs (including direct and indirect costs and overhead allocations) incurred, or units expended directly in the performance of work under this Agreement and (b) evaluation of the Consultant's and its subcontractors' compliance with the Arizona employer sanctions laws referenced in subsection 14.17 below. To the extent necessary for the City to audit Records as set forth in this subsection, Consultant and its subcontractors hereby waive any rights to keep such Records confidential. For the purpose of evaluating or verifying such actual or claimed costs or units expended, the City shall have access to said Records, even if located at its subcontractors' facilities, from the effective date of this Agreement for the duration of the work and until three years after the date of final payment by the City to Consultant pursuant to this Agreement. Consultant and its subcontractors shall provide the City with adequate and appropriate workspace so that the City can conduct audits in compliance with the provisions of this subsection. The City shall give

Consultant or its subcontractors reasonable advance notice of intended audits. Consultant shall require its subcontractors to comply with the provisions of this subsection by insertion of the requirements hereof in any subcontract pursuant to this Agreement.

14.17 E-verify Requirements. To the extent applicable under ARIZ. REV. STAT. § 41-4401, the Consultant and its subcontractors warrant compliance with all federal immigration laws and regulations that relate to their employees and compliance with the E-verify requirements under ARIZ. REV. STAT. § 23-214(A). Consultant’s or its subcontractor’s failure to comply with such warranty shall be deemed a material breach of this Agreement and may result in the termination of this Agreement by the City.

14.18 Scrutinized Business Operations. Pursuant to ARIZ. REV. STAT. §§ 35-391.06 and 35-393.06, the Consultant certifies that it does not have scrutinized business operations in Sudan or Iran. For the purpose of this subsection the term “scrutinized business operations” shall have the meanings set forth in ARIZ. REV. STAT. § 35-391 or 35-393, as applicable. If the City determines that the Consultant submitted a false certification, the City may impose remedies as provided by law including terminating this Agreement pursuant to subsection 13.2 above.

14.19 Conflicting Terms. In the event of any inconsistency, conflict or ambiguity among the Agreement, the Scope of Work, the Fee Proposal, the RFQ and the Consultant’s SOQ, the documents shall govern in the order listed herein.

14.20 Non-Exclusive Contract. This Agreement is entered into with the understanding and agreement that it is for the sole convenience of the City. The City reserves the right to obtain like goods and services from another source when necessary.

IN WITNESS WHEREOF, the parties hereto have executed this instrument as of the date and year first set forth above.

“City”

“Consultant”

CITY OF AVONDALE, an Arizona
municipal corporation

KIMLEY-HORN AND ASSOCIATES,
INC., a North Carolina corporation

Charles P. McClendon, City Manager

By:_____

ATTEST:

Name:_____

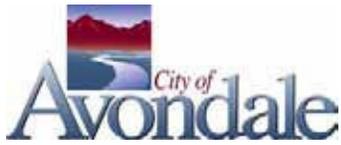
Carmen Martinez, City Clerk

Title:_____

EXHIBIT A
TO
PROFESSIONAL SERVICES AGREEMENT
BETWEEN
THE CITY OF AVONDALE
AND
KIMLEY-HORN AND ASSOCIATES, INC.

[RFQ]

See following pages.



**REQUEST FOR
STATEMENTS OF QUALIFICATIONS
FOR
FY 2008/2009 PROFESSIONAL CONSULTANTS SELECTION LIST**

City of Avondale
11465 West Civic Center Drive
Avondale, Arizona 85323

SOLICITATION INFORMATION AND SELECTION SCHEDULE

Solicitation Number: **EN 08-017**

Solicitation Title: **FY 2008/2009 Professional Consultants Selection List**

Release Date: **March 25, 2008**

Final Date for Inquires and Place to Send Inquiries **April 4, 2008**
Charles Andrews, P.E., Senior Project Manager
City of Avondale Engineering Dept.
11465 West Civic Center Drive, Suite 120
Avondale, Arizona 85323
OR
candrews@avondale.org

SOQs Due Date, Time and Location: **April 16, 2008**
3:00 p.m. (local time, Phoenix, Arizona)
City of Avondale
11465 West Civic Center Drive, Suite 200
Avondale, Arizona 85323-6804

Letters to Final Listed Firms: **June 30, 2008**

City Representatives: **Charles Andrews** candrews@avondale.org
623-333-4200
Mary Rogers mrogers@avondale.org
623-333-2200

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SECTION A

I. INTRODUCTION

1. Purpose. The City of Avondale (the “City”) is seeking Statements of Qualification (“SOQ”) from professional consulting engineering firms (“Vendors”) to be considered for a Professional Consultants Selection List aimed at capital improvement projects during the 2008/2009 and 2009/2010 Fiscal Years. Only Vendors capable of providing the requested discipline category of professional services will receive consideration. Qualified Vendors are invited to submit SOQs.

2. Discipline Categories of Projects. During Fiscal Years 2008/2009 and 2009/2010, the City plans to contract for professional services specific projects within the 16 (sixteen) different discipline categories of projects listed below. The scope of work for these specific projects may include studies, site investigations, planning, preliminary design concepts, and contract document development (preparing detailed plans, schedules, designs, assembly of specifications and reports). Project duties may also involve budget estimating, engineering designs, phasing, recommendations for future infrastructure needs (master plans), improvement district administration and presentations at public meetings. Please note, all projects involving the preparation of design plans and specifications require the design plans and specifications to be sealed by a Professional registered in the State of Arizona.

The Professional Consultants Selection List discipline categories are:

- Water Distribution System – Feasibility studies, wells, distribution systems, pump stations, storage facilities and treatment plants.
- Wastewater Systems – Studies, collection and disposal system designs, treatment plants and lift stations.
- Transportation Engineering – Roadway improvement projects, master plans, transportation planning, traffic calming projects and intersection designs.
- Traffic Engineering – Speed, volume and classification studies, traffic signal warrant studies, other traffic engineering and traffic control studies (such as All-way STOP warrant studies), pedestrian & bicycle studies, Safe Routes to School plans, school crosswalk studies, traffic signal design, traffic control design such as signing and pavement marking, traffic crash analysis, design of safety improvement projects, design of bike lane/transit/crosswalk facilities, street lights, and Intelligent Transportation Systems (ITS such as Traffic Operations Center design, variable message signs, fiber optic and conduit design, and Wireless Advanced Traffic Management Systems).
- Surveying - Including topographic surveys, boundary surveys, construction staking, as-built surveys, right-of-way and easement investigation, ALTA and preparation of legal descriptions.
- Hydrology/Hydraulic Projects – Master plans, hydrology studies and designing storm water drainage facilities.

SECTION A

- Plan Review Services – Includes plan review of subdivision plats, residential and commercial developments, construction plans for water, sewer, paving, drainage, street/traffic lights and grading.
- Landscape Architect – Master plans, conceptual planning, site designs, parks and community facilities, streetscapes, sidewalks, bicycle and pedestrian pathway design, scenery planting and irrigation.
- Hydrogeological Engineering – Provide aquifer impact and well feasibility studies. Ability to provide well abandonment services. Design of wells; provide construction inspection/observation services during the drilling of new or replacement wells.
- GIS Programs – Services to support Geographic Information Systems Programs including: data collection and development, map compilation, transformation and systems integration.
- Geotechnical and Environmental - Geotechnical engineering, pavement design, materials sampling and testing, pavement evaluation, design recommendations and specifications. Environmental site assessments, compliance audits, risk evaluations and recommendations.
- Foundation and Structural Design - To include load calculations and recommendations for construction of retaining walls, steel reinforced concrete structures, small buildings, and vehicular and pedestrian bridges.
- Electrical Design and Supervisory Control and Data Acquisition (SCADA) Programming - Provide design and inspection services for electric power supply, control systems and equipment specifications. Design and programming of local SCADA systems, PLC programming, and telemetry.
- Construction Management – Provide Construction Management at Risk (CMAR) and Design Build process management or construction administration and inspection services, such as estimation, bid document preparation, QA/QC services, shop drawing review, and post design services.
- Architect - Planning, renovation, interior and exterior design and construction management of small public building projects.
- Improvement District Administration – Qualifications will be considered from Vendors who are well established in this field, who are financially responsible and who have the resources and ability to provide the services requested in a professional and timely manner. Improvement District infrastructure improvements include, but are not limited to, roadway, water, wastewater, drainage systems, parks and other types of infrastructure.

SECTION B

II. STATEMENT OF QUALIFICATIONS REQUIREMENTS

1. Preparation/Submission of SOQ. Vendors are invited to participate in the competitive selection process for the Professional Consultants Selection Lists for Fiscal Year 2008/2009 and 2009/2010 outlined in this RFQ. Responding parties shall review their SOQ submissions to ensure the following requirements are met.

a. Interested parties must submit **one (1) original** and **eight (8) copies** (nine (9) total submittals) of the SOQ.

b. The SOQ shall be submitted with a cover letter with an original ink signature by a person authorized to bind the Vendor. Any erasures, interlineations, or other modifications in the SOQ shall be initialed in original ink by the authorized person signing the SOQ.

c. The SOQ shall be a maximum of 15 pages to address the SOQ criteria (excluding résumés and the Vendor Information Form, but including the materials necessary to address project understanding, general information, organizational chart, photos, tables, graphs, and diagrams). Each page side (maximum 8 1/2" x 11") with criteria information shall be counted. However, one page may be substituted with an 11" x 17" sheet of paper, folded to 8 1/2" x 11", showing a proposed project schedule, a discipline category/staffing matrix, or organizational chart and only having criteria information on one side. The cover letter, cover, back, table of contents and tabs may be used and shall not be included in the page count, unless they include additional project-specific information or SOQ criteria responses. The minimum allowable font for the SOQ is **11 pt.**

d. All Vendors shall (i) examine the entire RFQ, (ii) seek clarification of any item or requirement that may not be clear, (iii) check all responses for accuracy before submitting a SOQ and (iv) submit the entire SOQ by the official Due Date and Time. Negligence in preparing a SOQ confers no right of withdrawal after the SOQ Due Date and Time.

e. All SOQs shall be sealed and clearly marked with the SOQ title and number, **FY 2008/2009 Professional Consultants Selection List (EN 08-017)**, on the lower left hand corner of the sealed mailing envelope. A return address must also appear on the outside of the sealed SOQ. The City is not responsible fore the pre-opening of, post-opening of, or the failure to open, any SOQs not properly addressed or identified.

f. All SOQs shall be directed to the following address: City Clerk, 11465 West Civic Center Drive, Suite 200, Avondale, Arizona 85323, or hand-delivered to the City Clerk's office by the time and date indicated on the cover page of this RFQ.

g. Telegraphic (facsimile), electronic (email) or mailgram SOQs will not be considered.

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2. Irregular or Non-responsive SOQ. The City will consider as “irregular” or “non-responsive” and reject any SOQ not prepared and submitted in accordance with this RFQ, or any SOQ lacking sufficient information to enable the City to make a reasonable determination of compliance to the minimum qualifications. Unauthorized conditions, limitations, or provisions shall be cause for rejection.

3. Inquiries. Any question related to the RFQ shall be directed to the City Representative whose name appears on the cover page of this RFQ. Questions shall be submitted in writing by the date indicated on the cover page of this RFQ. Any correspondence related to the RFQ shall refer to the title and number, page and paragraph. However, the Vendor shall not place the RFQ number and title on the outside of any envelope containing questions, because such an envelope may be identified as a sealed SOQ and may not be opened until after the Due Date and Time.

4. Late SOQs. Late SOQs will not be considered, except as provided by the City Procurement Code. A Vendor submitting a late SOQ shall be so notified.

5. Withdrawal of SOQ. At any time prior to the specified Due Date and Time, a Vendor (or designated representative) may withdraw its SOQ. Facsimile, electronic (email) or mailgram SOQ withdrawals will not be considered.

6. Amendment of SOQ. At any time prior to the specified Due Date and Time, a Vendor (or designated representative) may amend its SOQ. Facsimile, electronic (email) or mailgram SOQ amendments will not be considered.

7. Cost of SOQ Preparation. The City does not reimburse the cost of developing, presenting or providing any response to this solicitation. SOQs submitted for consideration should be prepared simply and economically, providing adequate information in a straightforward and concise manner. The Vendor is responsible for all costs incurred in responding to this RFQ. All materials and documents submitted in response to this RFQ become the property of the City and will not be returned.

8. Offer. An SOQ submittal is an offer to contract with the City based upon the terms, conditions and specifications contained in this RFQ and the Vendor’s responsive SOQ, unless any of the terms, conditions, or specifications is modified by a written addendum or agreement amendment. Provided, however, that no contractual relationship shall be established until the Vendor has signed, and the City has approved, a professional services agreement between the City and the Vendor in the form included herein.

9. Public Record. All SOQs shall become the property of the City and shall become a matter of public record available for review, subsequent to the award notification, in accordance with the City’s Procurement Code.

SECTION B

10. Confidential Information.

a. If a Vendor believes that a SOQ or protest contains information that should be withheld from the public record, a statement advising the City Representative of this fact shall accompany the submission and the information shall be identified.

b. The information identified by the Vendor as confidential shall not be disclosed until the City Representative makes a written determination.

c. The City Representative shall review the statement and information and shall determine in writing whether the information shall be withheld.

d. If the City Representative determines to disclose the information, the City Representative shall inform the Vendor in writing of such determination.

11. Vendor Licensing and Registration. Prior to the award of the Agreement, the successful Vendor shall (a) be licensed with the Arizona Corporation Commission to do business in Arizona and (b) have a completed Request for Vendor Number on file with the City Financial Services Department. The Vendor shall provide licensure information with the SOQ.

12. Certification. By submitting a SOQ, the Vendor certifies:

a. The submission of the SOQ did not involve collusion or other anti-competitive practices.

b. It shall not discriminate against any employee or applicant for employment in violation of Federal Executive Order 11456.

c. It 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 City employee, officer or agent in connection with the submitted SOQ. Failure to sign the SOQ, or signing it with a false statement, shall void the submitted SOQ and any resulting Agreement.

d. It (including the firm's employees, representatives, agents, lobbyists, attorneys, and subcontractors) will refrain, under penalty of disqualification, from direct or indirect contact for the purpose of influencing the selection or creating bias in the selection process with any person who may play a part in the selection process, including the Selection Committee, elected officials, the City Manager, Assistant City Managers, Department Heads, and other staff. All contact must be addressed to the City's Procurement Agent, except for questions submitted as set forth in Section 3, Inquiries, above.

e. In addition to reviewing and understanding the submittal requirements, it has reviewed the attached Professional Service Agreement including the Exhibits.

SECTION B

4. Submitted by: Engineering firm or Individual (submitting) include address, contract person and telephone number.
- d. Provide a statement regarding the following:
 1. Your firm's familiarity and intention to comply with City's insurance requirements and contract documents. A sample copy of the City's Professional Services Agreement is attached herein. A copy of the City's "Notice of Request for Proposal" which includes standard contract provisions, terms and conditions is available upon request.
 2. Your firm's design philosophy and approach to developing sound engineering recommendations and your approach to problem resolution.
- e. Vendor Information Form shall be attached as separate appendix and excluded from the page count limitation pursuant to Section II(1)(c).

Section 2: Vendor's relevant experience, availability and capability 50 pts

- a. Provide a brief description of the firm including the number and types of personnel who would serve on projects.
- b. Provide a list of relevant projects in which the firm had a significant contribution with an emphasis on local experience. Include references and telephone numbers of clients familiar with the projects.
- c. Provide a general description of the company that is proposing to provide the required services. Explain the legal organization of the company.
- d. Provide identification information of your firm. Include the legal name, address and legal form of the firm (e.g., partnership, corporation, joint venture, sole proprietorship). If a joint venture, identify the members of the joint venture and provide all of the information required under this section for each member. If the firm is a wholly owned subsidiary of another company, identify the parent company. Provide the name, address and telephone number of the person to contact concerning the SOQ.
- e. Identify the location of the firm's principal office and the local work office, if different.

Section 3: Personnel qualification and pertinent experience 35 pts

- a. Provide the firm's general or specific experience pertaining to the Professional Consultant Selection List discipline category(ies) the firm desires to be considered for.

SECTION B

b. Provide a matrix listing all categories within the discipline for which the firm is qualified to provide services and identify the participating staff/key personnel. Include a matrix listing for all subcontractors.

c. Provide certifications, licenses and memberships in professional associations, societies or boards.

d. Provide a résumé for the personnel who will serve in key positions for projects, including specific experience for each person on relevant projects, the number of years the personnel has been with the present firm and the total years of experience. Résumés shall be limited to two pages per résumé. Résumés shall be attached as an appendix and excluded from the page count limitation pursuant to Section II(1)(c).

Section 4: Disadvantaged Business Enterprise preference

5 pts

It is the policy of the city that disadvantaged business enterprises (DBE) shall have the opportunity to participate to the maximum extent feasible in all required aspects of procurement and contracting in accordance with applicable statutes, regulations, and executive orders (Ord. No. 588, 5-15-95). Qualifying DBE shall indicate their status with a statement in the cover letter.

A "disadvantaged business enterprise (DBE)" is defined as a business at least fifty-one (51%) of which is owned, operated and controlled by minority group members, or in the case of publicly owned businesses, at least fifty-one (51%) percent of the stock of which is owned, operated and controlled by minority group members. "Minority group members" are defined as Blacks, Hispanics, Asian Americans, Native Americans, Alaskan Natives, or women, regardless of race or nationality. A "small business" is defined under Small Business Administration (SBA) section 8(a) rules.

Total Possible Points for SOQ Submittal:

100

IV. AWARD OF AGREEMENT

1. Award of Agreement. The selected Vendor from the Professional Consultants Selection List for each specific project will be required to execute the City's standard Professional Services Agreement in a form acceptable to the City Attorney. A sample of the standard agreement is included with this RFQ. If the City is unsuccessful in negotiating an Agreement with the highest-scoring firm, the City may then negotiate with the second, then third, highest-scoring firm until an Agreement is executed. City Council approval may be required. The City reserves the right to terminate the selection process at any time.

2. Waiver; Rejection; Reissuance. Notwithstanding any other provision of this RFQ, the City expressly reserves the right to: (i) waive any immaterial defect or informality, (ii) reject any or all SOQs or portions thereof and (iii) reissue an RFQ.

SECTION B

V. DISCIPLINE SPECIALTY CHECK LIST
FY 2008/2009 PROFESSIONAL CONSULTANTS SELECTION LIST

Name of Firm _____

Address _____

City _____ State _____ Zip _____

Contact Name: _____

Title: _____

Telephone _____ Fax _____

Please check only those discipline categories for which you are particularly qualified, fully addresses, and desired to be considered.

- _____ Water Distribution System
- _____ Wastewater Systems
- _____ Transportation Engineering
- _____ Traffic Engineering
- _____ Surveying
- _____ Hydrology/Hydraulic Projects
- _____ Plan Review Services
- _____ Landscape Architects
- _____ Hydrogeological Engineering
- _____ GIS Programs
- _____ Geotechnical and Environmental Engineering
- _____ Foundations & Structural Design
- _____ Electrical & SCADA Programming
- _____ Construction Management
- _____ Architects
- _____ Improvement District Administration

SECTION B

VI. VENDOR INFORMATION FORM

By sending a Statement of Qualifications, the submitting firm certifies that it has reviewed the administrative information and draft of the Professional Services Agreement's terms and conditions and, if awarded the Agreement, agrees to be bound thereto.

FIRM SUBMITTING SOQ

FEDERAL TAX ID NUMBER

PRINTED NAME AND TITLE

AUTHORIZED SIGNATURE

ADDRESS

TELEPHONE FAX #

CITY STATE ZIP

DATE

WEB SITE: _____

EMAIL ADDRESS: _____

MINORITY/WOMEN-OWNED SMALL BUSINESSES (check appropriate item):

- _____ Disadvantaged Business Enterprise (DBE)
- _____ Women-Owned Business Enterprise (WBE)
- _____ Minority Business Enterprise (MBE)
- _____ Small Business Enterprise (SBE)

Has your firm been certified by any jurisdiction in Arizona as a minority or woman owned business enterprise?

If yes, please provide details and documentation of the certification.



REQUEST FOR STATEMENTS OF QUALIFICATIONS

FY 2008/2009 Professional Consultants Selection List
EN08-017

Addendum No. 1

Date: April 1, 2008

From: Mary Rogers, Buyer

Subject: Addendum No. 1 to the Request for Statements of Qualifications, FY 2008/2009 Professional Consultants Selection List (EN08-017)

Due Date and Time: **April 16, 2008**, 3:00 p.m. local time, Phoenix, Arizona

SCOPE

This Addendum forms a part of the Contract and clarifies, corrects, or modifies the original Request for Statements of Qualifications documents prepared by the City of Avondale. Acknowledge receipt of this addendum in the space provided on the attached form. This acknowledgement and addendum must accompany the submitted SOQ. Failure to do so may subject the Vendor to disqualification.

This Addendum No. 1 consists of modifications to Section B(III), Request for Statements of Qualifications Format; Scoring.

ADDENDUM

1. Section B(III), Page 5, Section 1: General Factors and Compliance, subsection d(1), is hereby amended to read as follows:
 - d. Provide a statement regarding the following:
 1. Your firm's familiarity and capability of compliance with City's standard insurance requirements and contract documents. A sample copy of the City's Professional Services Agreement is attached herein.

2. Section B(III), Page 5, Section 3: Personnel qualification and pertinent experience, is hereby amended to read as follows:

Section 3: Personnel qualification and pertinent experience **40 pts**

3. Section B(III), Page 6, Section 4: Disadvantaged Business Enterprise preference, is hereby deleted in its entirety.

**CITY OF AVONDALE
ACKNOWLEDGMENT OF ADDENDA RECEIVED
REQUEST FOR STATEMENTS OF QUALIFICATIONS**

FY 2008/2009 Professional Consultants Selection List
EN08-017

Addendum No. 1

_____, affirms that ADDENDUM No. 1 has
(Name of Vendor/Designee)
been received and that the information contained in ADDENDUM No. 1 has been incorporated
in formulating the Vendor's Offer.

_____, _____ 2008
Signed Date

Print Name

Title

Company Name

Address

City, State, Zip Code

END OF ADDENDUM No. 1

EXHIBIT B
TO
PROFESSIONAL SERVICES AGREEMENT
BETWEEN
THE CITY OF AVONDALE
AND
KIMLEY-HORN AND ASSOCIATES, INC.

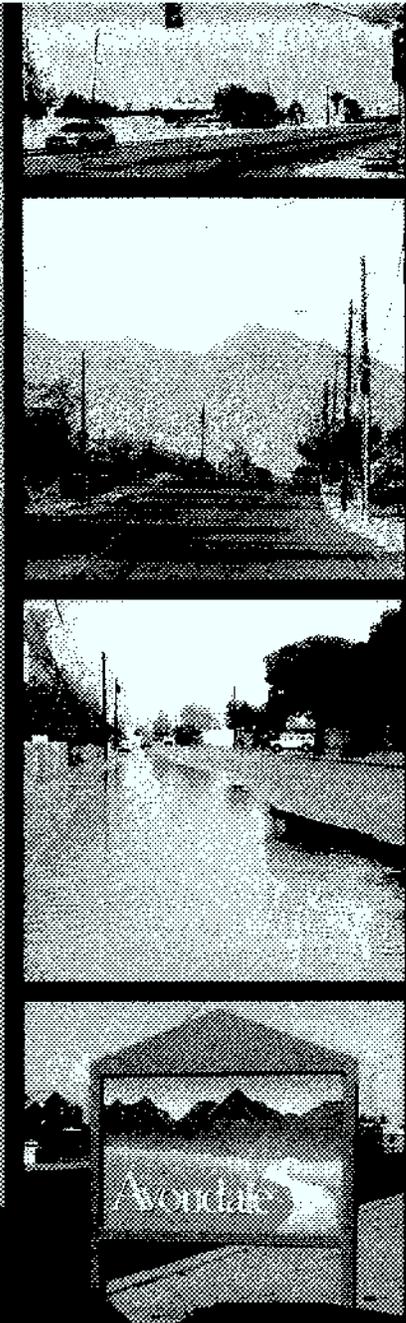
[Consultant's SOQ]

See following pages.

Qualifications

FY 2008 2009

PROFESSIONAL
CONSULTANTS
SELECTION LIST
(EN 08-017)



I. GENERAL FACTORS AND COMPLIANCE

April 16, 2008

Mr. Charles Andrews, P.E., Senior Project Manager
City of Avondale Engineering Department
11465 West Civic Center Drive, Suite 120
Avondale, Arizona 85323

Re: RFQ for FY 2008/2009 Professional Consultants Selection List (EN 08-017)

Dear Mr. Andrews and Members of the Selection Committee

With enthusiasm, Kimley-Horn and Associates, Inc. (KHA) submits qualifications for the City of Avondale's Professional Consultant Selection List. Through our experience, KHA knows what on-call projects require: a capable staff that immediately takes ownership of every project and fully understands the development process; a consultant who effectively communicates and coordinates with the client; and a team that produces timely quality deliverables on target with the intent of the project in mind.

Kimley-Horn is that consultant. The KHA team is your consultant of choice because of several key qualities we provide:

Extensive On-Call Experience. Members of our team have provided similar services for numerous on-call contracts in Arizona including Pima County DOT, Arizona DOT, Maricopa County DOT and the West Valley cities of Glendale, El Mirage, and Peoria as well as Phoenix, Gilbert, Marana, and Yuma.

Leadership. As with the Avondale FY 2006-2007 contract, **Raj Christian, P.E.** will serve as the KHA team's contract manager and single point of contact for all projects under this contract. With nearly 20 years of civil engineering experience, Raj brings the necessary management and technical skills to successfully complete every assignment. Under the previous contract, he successfully led our team on the 4th **Street Improvements** and **CDBG Sidewalk and Street Improvements** projects. Raj has established relationships with City staff and knows your preferences. We look forward to providing you the same quality and prompt performance on future projects.

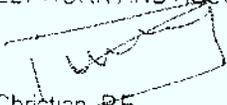
Competent, Available Staff with Long Working History. The team of experienced professionals we have assembled will address the City's needs in a variety of disciplines: roadway design (from major arterials to local collector streets), structural engineering, environmental, transportation and traffic engineering, hydrology/hydraulics, electrical engineering, and water/wastewater systems, landscape architecture, and construction management—to list a few. Team members in each discipline have worked together for years in Arizona and on many large-scale projects, offering you a synergistic, multi-disciplinary approach to any project. As our previous Avondale work reflects, **KHA's consistent responsiveness and available staff sets our team apart.**

Local Presence. To provide the best possible service, KHA serves you from our West Valley office located in Avondale. Our local staff has a proven track record of responsiveness and prompt resolutions.

On behalf of KHA, we thank you for considering the KHA team for the important work under this contract. KHA acknowledges receipt of Addendum #1. Please find the Acknowledgement Form in Appendix A of this qualifications package.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.


Raj Christian, P.E.
Contract Manager


George Fares, P.E.
Principal



SECTION B

V. DISCIPLINE SPECIALTY CHECK LIST
FY 2008/2009 PROFESSIONAL CONSULTANTS SELECTION LIST

Name of Firm Kimley-Horn and Associates, Inc.
Address 125 S. Avondale Boulevard
City Avondale State AZ Zip 85323
Contact Name: Raj Christian
Title: Contract Manager
Telephone (623) 907-1195 Fax (623) 907-3355

Please check only those discipline categories for which you are particularly qualified, fully addresses, and desired to be considered.

- Water Distribution System
- Wastewater Systems
- Transportation Engineering
- Traffic Engineering
- Surveying
- Hydrology/Hydraulic Projects
- Plan Review Services
- Landscape Architects
- Hydrogeological Engineering
- GIS Programs
- Geotechnical and Environmental Engineering
- Foundations & Structural Design
- Electrical & SCADA Programming
- Construction Management
- Architects
- Improvement District Administration

TITLE: STATEMENT OF INTEREST TO PROVIDE PROFESSIONAL SERVICES FOR CAPITAL IMPROVEMENT PROJECTS FOR THE 2008/2009 AND 2009/2010 FISCAL YEARS

SUBMITTED TO: CITY OF AVONDALE CITY CLERK

SUBMITTAL DATE: APRIL 16, 2008 (3:00PM, PHOENIX, ARIZONA)

SUBMITTED BY: KIMLEY-HORN AND ASSOCIATES, INC. (KHA)



**125 S AVONDALE BOULEVARD, SUITE 115
AVONDALE, AZ 85323-5213**

KHA CONTACT: MR. RAJ CHRISTIAN, P.E., (623) 907-1155

Required Statements

Familiarity and Capability of Compliance with City's Standard Insurance Requirements and Contract Documents

On current and past projects, KHA has negotiated a mutually amenable contract with the City of Avondale. Regarding the sample Professional Agreement provided in the RFQ, Page C-5, paragraph 11.2c, Professional Liability: the Agreement lists an "unimpaired" liability insurance limit of \$2M. KHA's insurance is not written on a per project basis. KHA would be glad to give the City higher limits on Professional Liability if selected for this contract.

Design Philosophy and Approach to Developing Sound Engineering Recommendations and Approach to Problem Solving

Our approach is based on extensive review of the project conditions, proactive problem solving, an open and creative attitude, willingness and receptivity to the client and community needs, and strong technical knowledge and expertise in the area of urban infrastructure design with special emphasis on streets, traffic, and drainage.

KHA's former Chairman, Ed Vick, once said "We have no reason to exist except to serve our clients." Simply put, our design philosophy is to provide outstanding service to our clients. This means being available and responsive, developing workable solutions to problems, producing quality project deliverables ahead of schedule and under budget, and exceeding client expectations.

KHA's approach to developing sound engineering recommendations is based on our experience completing numerous successful projects. Our approach to problem resolution is to identify problems as early as possible. By developing a clear understanding, creating open communications, and implementing continuous QC procedures, we are able to identify problems as soon as they occur. Once a problem is identified, we resolve it by openly communicating alternative solutions and arrive at a consensus with the involved stakeholders.

Vendor Information Form

Please refer to **Appendix A**.

KHA has served successfully as the City of Avondale's On-Call consultant for the past two years.

2. RELEVANT EXPERIENCE, AVAILABILITY, AND CAPABILITY

DESCRIPTION OF FIRM AND PERSONNEL

As one of the largest planning, engineering, and environmental consulting firms in the Valley, KHA has provided innovative, high-quality consulting services in Arizona for over 20 years. With three local offices in Avondale, Phoenix, and Mesa, our local technical staff resources to serve on projects include 248 engineers, planners, and technicians. An additional office and staff are located in Tucson. We offer the City specialized engineering knowledge that comes from our full range of services—from traffic engineering and signal system design to water systems and sewer improvements to roadway design projects.

KHA has served as the City of Avondale's On-Call consultant for the past two years, bringing you local knowledge and ongoing relationships with local and state agencies to quickly respond to your specific needs.

As a top engineering firm, KHA's national rankings include 13th in transportation and 10th among "pure design firms" according to Engineering News-Record. Locally, we are the recipient of the **2008 APWA Public Works Project of the Year** and **2006 Grand Award in Engineering Excellence** from ACEC Arizona. We provide full engineering analysis and design services for multidisciplined projects. Our team has built a solid reputation in Arizona for engineering excellence and responsiveness through numerous on-call contracts with the cities of Avondale, Phoenix, Glendale, Apache Junction, and Yuma; Pima County DOT/FCD, Arizona DOT, Maricopa County DOT, Arizona Department of Administration, and the towns of Marana, Chino Valley, and Oro Valley. Our work on these on-call assignments, coupled with our success on many other projects throughout the state, gives us the relevant experience necessary to provide you the full range of services required for this contract.

Relevant Local Projects and References

<p>CLIENT CONTACT: Chris Hamilton City of Avondale (623) 333-4218</p> <ul style="list-style-type: none"> ▪ Project management ▪ Roadway design ▪ Transportation and traffic engineering ▪ Drainage design ▪ Water and sewer design ▪ Utility Coordination ▪ Preparation of final bid documents ▪ Bidding assistance 	<p>4TH STREET IMPROVEMENTS: LOWER BUCKEYE ROAD TO WESTERN AVENUE — AVONDALE</p> <p>As part of the 2006/2007 City of Avondale On-Call, KHA performed services for the 4th Street Improvement project. Improvements consisted of pavement rehabilitation for one mile of 4th Street from Lower Buckeye Road to Western Avenue in the Southern Oldtown area. The local streets in this area were constructed around 1960 and pavement conditions are deteriorating. The structural pavement sections were weak subgrade soils insufficient to support the continuous increase in traffic. There was significant cracking and failures in the pavement at various locations.</p> <p>The purpose of this project was to reconstruct the pavement with an adequate structural section. It also addressed the need to correct cross-slopes and ponding issues. A drainage report was prepared to summarize existing conditions and different alternatives to alleviate drainage issues. The project included reconstruction of curb, gutter, and sidewalks where needed. Drainage improvements included valley gutters and a retention basin. Utility coordination with City utilities, private utilities, and Maricopa County Environmental Services (MCES) were included in this project. KHA also provided traffic signal, signing and pavement marking plans, as well as construction plans, specifications, and cost estimates.</p> <p>KHA also designed waterline and service improvements for approximately 4,700 lf. Improvements included reconnection of existing services, fire hydrants, and services provided for vacant lots. Sewer services were also extended for vacant lots. Currently under construction, the project completion is anticipated by end of May 2008.</p>
<p>CLIENT CONTACT: Chris Hamilton City of Avondale (623) 333-4218</p> <ul style="list-style-type: none"> ▪ Project management ▪ Roadway design ▪ Drainage ▪ Water ▪ Utility coordination ▪ Public meeting ▪ Bid documents and bidding assistance 	<p>SIDEWALK AND STREET IMPROVEMENTS — AVONDALE</p> <p>KHA recently completed final design documents for this streets and sidewalk improvement project within the South Oldtown area. The City will utilize federal funds through the Community Development Block Grant (CDBG) program to construct this project. The project included the area bounded by 4th Street (west) to 7th Street (east) and Main Street (north) to Harrison Drive (south). These streets were constructed around 1960 and exhibited significant pavement distress including cracking and pavement failures at various locations. The project included reconstructing and/or rehabilitating existing pavement with an adequate structural section. The project will also construct new profile grade and cross slopes to alleviate localized ponding. New curb, gutter, sidewalks and ADA compliant handicap ramps have been also included. Several driveways on Dee Steet were re-profiled to alleviate drainage flooding. Installation of new water lines and reconnections of exiting services are proposed. New service connections to vacant lots and fire hydrants are also included.</p> <p>The project included a hydrologic and hydraulics analysis of the existing conditions and proposed roadway improvements as part of a comprehensive drainage report. An alternatives analysis was completed to identify feasible drainage improvements for the projects. The alternatives included the evaluation of a storm drain along 7th Street. The drainage designed increased the hydraulic capacity of Dee Street to protect homes subject to flooding from the 10-year and 100-year storm events.</p> <p>The project required utility coordination with City utilities, private utilities, and Maricopa County Environmental Services (MCES). A public meeting was held to communicate project improvements and schedule with the property owners. KHA prepared final construction plans, specifications, and opinion of cost estimates and assisted City with bidding. The design was completed ahead of schedule, and the project is anticipated to be under construction soon.</p>
<p>CLIENT CONTACT: Dean Svoboda, City of Avondale Long Range Planning Director (623) 333-1035</p> <ul style="list-style-type: none"> ▪ Transportation planning 	<p>AVONDALE CITY CENTER SPECIFIC AREA PLAN — AVONDALE</p> <p>KHA is working with Dyett & Bhatia on the Avondale City Center project, located along Avondale Boulevard, between I-10 and the City Hall campus. This project will result in a detailed land use plan and design standards that promote City's vision for this area. KHA's role in the project is to analyze the infrastructure and transportation systems that will serve the study area. Each land use alternative presented will be evaluated to determine the capacity and needs of the roadway, water, and sewer networks. KHA will provide recommendations for modification of the existing networks to better balance the needs and demands of this evolving core area. This project includes stakeholder interviews, bus tours, and charrettes and workshops with City staff.</p>

Relevant Local Projects and References

<p>CLIENT CONTACT: Ben Wilson City of Peoria (623) 773-7185</p> <ul style="list-style-type: none"> ▪ Roadway design ▪ ITS ▪ Traffic signal design ▪ Environmental 	<p>91ST AVENUE AND OLIVE AVENUE INTERSECTION IMPROVEMENTS — PEORIA</p> <p>KHA is responsible for the preparation of a Design Concept Report (DCR), roadway design, intersection geometric design, traffic signal modification, utility relocation, landscaping design, traffic signal, marking and signing design, ITS considerations, lighting design, right-of-way acquisition, and environmental clearance and permitting activities for improvements at this intersection. Primary responsibilities include preparing technical reports concerning drainage alternatives and drainage design, biological resources, hazardous materials, coordination with ADOT and the City of Peoria, and completion of an environmental document to comply with NEPA and ADOT. The project also involves extensive coordination with numerous utilities and relocation of a major SRP irrigation structure and more than 1700 feet of pipe.</p>
<p>CLIENT CONTACT: Richard Janke, P.E. City of Glendale (602) 930-2940</p> <ul style="list-style-type: none"> ▪ 2007 APWA Project of the Year Award ▪ Roadway design ▪ Constuction administration 	<p>DOWNTOWN PEDESTRIAN ENHANCEMENTS — GLENDALE</p> <p>KHA led the design of a 65 square block area of pedestrian safety and aesthetic enhancements in downtown Glendale. The project consisted of repairing and replacing broken or unsafe sidewalk areas, replacing and adding sidewalk with concrete headers and brick accents, installing new curb ramps and inlayed brick crosswalks, street widening and reconstruction including turn lanes, adding extensive landscaping including trees, shrubs and irrigation. Several utilities were relocated including overhead power, and street furnishings were installed or refurbished such as trash receptacles, benches, newspaper stands, and bike racks. The project also integrated significant public art through out the project. KHA was the prime consultant for civil design and construction administration.</p>
<p>CLIENT CONTACT: Tim Oliver, MCDOT (602) 506-3994</p> <ul style="list-style-type: none"> ▪ Transportation planning ▪ Traffic signal design ▪ Traffic control studies 	<p>ELLIOT ROAD CORRIDOR IMPROVEMENT STUDY — MARICOPA COUNTY</p> <p>The purpose of this study is to develop a consensus-driven vision for improving Elliot Road between Power Road and the CAP canal, identify existing corridor deficiencies and future requirements, establish consistent roadway design and performance criteria, and generate preliminary design plans to meet the established future needs. The recommended corridor improvements will include facility type, number of lanes, roadway cross-section and right-of-way requirements, traffic control, access, drainage, and roadway alignment to safely and efficiently accommodate future travel demands. This study will provide the County and other responsible jurisdictions with a future "footprint" of Elliot Road and the implementation timeframe and phasing of the identified roadway improvements. This study will also develop access management strategies that will include policies and guidelines to ensure the preservation of this regionally significant corridor.</p>
<p>CLIENT CONTACT: Fred Orcutt City Engineer (928) 373-4523</p> <ul style="list-style-type: none"> ▪ Transportation planning ▪ Corridor planning ▪ Traffic operations ▪ Safety analysis ▪ Alternative development 	<p>4TH AVENUE AND 16TH STREET CORRIDORS STUDY — YUMA</p> <p>The City of Yuma selected KHA to evaluate existing and future traffic conditions along multiple corridors representing some of the most congested roadways in Yuma. The purpose of the study was to recommend improvements that provided acceptable and safe traffic operations while also preserving local business access. Public input played a key role in shaping the recommended improvement concepts. An advisory group was formed that consisted of public and private sector transportation planners and engineers as well as study area business owners and at-large citizens. KHA led two public open houses that allowed all interested individuals to provide their input about what recommended improvement concepts would provide good technical solutions that are politically and economically feasible to implement.</p>
<p>CLIENT CONTACT: Fred Orcutt City Engineer (928) 373-4523</p> <ul style="list-style-type: none"> ▪ Traffic study 	<p>GISS PARKWAY/I-8 WESTBOUND RAMPS SIGNAL/ROUNDAABOUT NEEDS STUDY — YUMA</p> <p>The City of Yuma selected KHA to conduct a study to determine if a traffic signal or roundabout is needed now or in the near future at the Giss Parkway/I-8 Westbound Ramps intersection. The study included a review of existing conditions, a delay study, signal warrant analyses, capacity analysis, roundabout analysis, and a benefit-cost comparison between a signal and a roundabout.</p>

Relevant Local Projects and References

<p>CLIENT CONTACT: Fred Orcutt City Engineer (928) 373-4523</p> <ul style="list-style-type: none"> ▪ Traffic study 	<p>ON-CALL REVIEW OF TRAFFIC IMPACT ANALYSIS REPORTS — YUMA</p> <p>As part of our On-Call Traffic Engineering Services contract with the City of Yuma, KHA has assisted the City in reviewing numerous traffic impact analysis (TIA) reports. The purpose of the reviews were to verify that the analysis documented is adequate, given the type and intensity of development being proposed, and that all recommendations appear reasonable, conform to City standards, and are not anticipated to have a negative impact on other projects.</p>
<p>CLIENT CONTACT: Tom Blake Taylor/Woodrow (480) 344-7000</p> <ul style="list-style-type: none"> ▪ Water and sewer design 	<p>TIERRA MONTANA — PHOENIX</p> <p>KHA is providing a full range of engineering services for this 9,000-acre master planned community. From site feasibility through preliminary and final engineering, including all master infrastructure design, our firm is an integral part of Taylor Woodrow's development team. This project includes approximately 24,700 feet of 10-inch to 36-inch gravity sewer line. KHA will design all off-site improvements.</p>
<p>CLIENT CONTACT: Wade Ansell City of Glendale (623) 930-3630</p> <ul style="list-style-type: none"> ▪ Drainage design ▪ 90-inch storm drain ▪ Property owner coordination ▪ Construction support 	<p>STORM DRAIN FOR 59TH AVENUE: BROWN TO OLIVE — GLENDALE</p> <p>KHA has recently completed 60% construction documents for the City of Glendale for the design 4,000 feet of new storm drain along 59th Avenue. The project includes the design of storm drain inlets and other drainage structures. The proposed line will terminate at the intersection of 59th Avenue and Olive Avenue. A 90-inch-diameter storm drain along Olive Avenue conveys stormwater to the west and discharges into the ADOT channel adjacent to SR 101L. New catch basins and catch basin locations will be added as necessary. Currently, low flow storm drain flows along 59th Avenue are diverted to the west at Brown Street to the Sahuaro Ranch Park. The junction structure located at the intersection of 59th Avenue and Brown Street will be reconstructed so low flows flow south in the new storm drain, while high overflows flow west toward Sahuaro Ranch Park.</p> <p>59th Avenue is a main north-south arterial street in Glendale with heavy traffic. Since numerous drives tie directly into 59th Avenue, research and coordination with adjacent properties has been required to ensure access during construction. KHA will also provide construction monitoring during construction of the project.</p>
<p>CLIENT CONTACT: Burton Charron City of Peoria (623) 773-7212</p> <ul style="list-style-type: none"> ▪ ADMP update ▪ Alternatives analysis 	<p>PEORIA DOWNTOWN AREA DRAINAGE MASTER PLAN — PEORIA</p> <p>KHA prepared a drainage master plan update for the Oldtown area in the City of Peoria. The Oldtown area is a five city-block area slated for rezoning and redevelopment. As part of the redevelopment, the City revised set-back requirements for the area to allow zero set-back from property lines. This revision allowed a more intense land use and essentially waived site retention/detention requirements. KHA completed the drainage master plan to evaluate the effects and impacts on local drainage of the zero set-back and waiver of site detention. The project included alternatives analysis and evaluation, and 15% construction plans for a downtown storm drain system to mitigate drainage impacts.</p>
<p>CLIENT CONTACT: Nicholas Mascia, P.E. City of Surprise (623) 583-6025</p> <ul style="list-style-type: none"> ▪ Construction administration ▪ Signal design 	<p>CITY OF SURPRISE VARIOUS SIGNALS</p> <p>KHA provided construction administration, observation and oversight services for the installation of four signalized intersections including intersection widening and construction of additional turn lanes. Activities including administration and observation of installation of conduit and cable, Video Image Detection (VID) systems, emergency vehicle Pre-Emption, calibration, testing and acceptance of these components. Staff responsibilities included pay item documentation, training of observation staff, monthly estimates, change orders, issue resolution, and leading weekly meetings.</p>

Relevant Local Projects and References

<p>CLIENT CONTACT: Joel Havris City of Phoenix (602) 262-4691</p> <ul style="list-style-type: none"> ▪ ITS design and planning ▪ Environmental ▪ Construction support ▪ CM@Risk evaluation 	<p>PHOENIX REGIONAL ITS FIBER OPTIC BACKBONE, PHASES A & B, — PHOENIX</p> <p>KHA provided the City of Phoenix with design plans, special provisions, and construction cost estimates for the construction of the first phase of a 50-mile fiber optic communications backbone for the City's Intelligent Transportation System. This backbone facilitates communication between City of Phoenix facilities as well as the interconnection of numerous traffic signals, CCTV cameras, variable message signs (VMS), and other field devices. KHA developed specifications for all of the equipment necessary to integrate the traffic signal controllers with the central signal system software, including fiber optic transceivers, splice details, interior fiber optic cable routing, and conduit and cable installation methods.</p> <p>KHA's environmental staff provided environmental clearance including PISA, biological review, and invasive species survey. KHA also provided construction support services that included performing contractor submittal reviews, responding to requests for information, redesigning segments of the backbone to adapt to changed conditions, and assisting in project management. KHA also authored a report evaluating the use of the Construction Manager at Risk contract mechanism for the project.</p> <p>KHA was selected to design the second phase of the Phoenix communication backbone which will complete the fiber backbone loop around and enable the City to ultimately connect to hundreds of field devices. Project tasks include a Design Concept Report; Environmental Documentation; PS&E, and Construction Support.</p>
<p>CLIENT CONTACT: Faisal Saleem MCDOT (602) 506-1241</p> <ul style="list-style-type: none"> ▪ ITS design ▪ Concept of operations ▪ Utility coordination ▪ Multi-agency coordination 	<p>BELL ROAD ITS — PHOENIX</p> <p>KHA completed the design of an ITS project on the Bell Road corridor. The design included the installation of 6.5 miles of fiber, four arterial DMS and seven CCTV cameras along Bell Road between Loop 101 and Grand Avenue. In addition to PS&E, other major tasks in this design effort included preparing a concept of operations, identifying communication alternatives, utility conflict coordination, and multi-agency coordination. Because this portion of Bell Road is under the jurisdiction of three agencies, a major focus was ensuring that each jurisdiction has the ability to monitor and/or control to each device along the corridor upon completion of the project.</p> <p>The communications system design included an Ethernet IP-based, Center-2-Center, and Center-2-Field infrastructure for video and data applications.</p>
<p>CLIENT CONTACT: Terry Fawley Town of Queen Creek 480-987-9887</p> <ul style="list-style-type: none"> ▪ Phase 1 Environmental Site Assessment 	<p>RITTENHOUSE ROAD TO HAWES ROAD REALIGNMENT — QUEEN CREEK</p> <p>KHA was selected by the Town of Queen Creek to conduct a Phase I Environmental Site Assessment (ESA) on an approximately two-acre parcel, located north of Germann Road and West of Sossaman Road in Queen Creek, Maricopa County. The purpose of this investigation was to identify the presence or likely presence of any hazardous substances or petroleum products under conditions that indicate an existing release, past release, or a material threat of a release that could impact the property.</p>

GENERAL DESCRIPTION AND LEGAL ORGANIZATION

KHA is a privately held, employee-owned corporation that has been serving a wide variety of public and private clients for over 40 years. Founded in 1967 by transportation engineers, the firm today provides multidisciplinary consulting services. Currently, KHA has over 2,300 employees in 64 offices nationwide.

Kimley-Horn and Associates, Inc. is wholly owned by Associates Group Services, Inc. Associates Group Services, Inc. is wholly owned by APHC, Inc. APHC, Inc. is owned by 238 individual KHA employees. No one individual has 10% or more ownership.

KHA is licensed with the Arizona Corporation Commission (F-028593). Licensure with the Board of Technical Registration (Engineering) Avondale is pending. From our previous work, KHA has a Vendor Number on file with the City Financial Services Department.

**Firm Legal Name/Address
(principal office):**
Kimley-Horn and Associates, Inc.
3001 Weston Parkway
Cary, NC 27513-2301

**Local Work Office & SOQ
Contact:**
125 S Avondale Boulevard
Suite 115
Avondale, AZ 85323-5213
Raj Christian, P.E.

3. PERSONNEL QUALIFICATION AND PERTINENT EXPERIENCE

EXPERIENCE PERTAINING TO DISCIPLINE CATEGORIES

Water Distribution and Wastewater Systems

KHA offers the City a strong design team of professionals whose practice specializes in water and wastewater projects. Our Municipal Water/Wastewater Group's experience in water system design and planning spans the past 30 years in Arizona. Their broad project experience ranges from water master planning to water and wastewater treatment plants to water system supply and water distribution. They have designed miles of water main and transmission lines that vary in size from 6" to 120". Our team provides comprehensive engineering and planning services to successfully complete your anticipated on-call projects, including:

- Water and wastewater master planning
- Water treatment plant design
- Wellhead treatment design
- Water line designs
- Water pump station design
- Membrane treatment systems
- Well design
- Water storage reservoirs
- Water treatment pilot plants
- Water system rehabilitation projects
- Public and private water system design
- Odor and corrosion inspection and control
- Capital improvement planning
- Wastewater treatment plant design
- Construction plans, specifications, & cost estimates
- Trenchless design and construction
- Design and construction inspection of sewage lift stations
- Construction administration services

KHA team members have recently completed water system designs that include transmission lines, pump stations, reservoirs, and the associated planning details. Our key personnel have over 20 years of experience in each water system design. The City of Avondale can be confident our experienced engineers will be involved in all facets of the design and guide each project through completion.

Transportation Engineering

Roadway Design

KHA has proven capabilities for handling major street improvement and streetscape work as well as solving complex design issues—from the study phase through final design. Our design engineers have developed plans and specifications for more than 3,500 miles of roadway including urban arterials, local streets, interstate highways, state highways, highway interchange structures, and rural roads. We are well equipped to address all related aspects of roadway design: intersection geometrics, paving, drainage, signalization, utility relocations, alternatives analysis, access management, right-of-way procurement/coordination, structural/bridge design, and construction services.

Paving and drainage services are often an integral part of our roadway design projects, and our substantial experience in dealing with regulatory and other agencies enables us to secure the necessary permits and approvals for building and upgrading roadway facilities. We have an excellent track record of achieving necessary agency approvals and gaining public support for major projects.

In addition to this broad spectrum of "one-stop" services, KHA also offers the focused expertise gained only through hands-on experience with this exact type of project. We bring a comprehensive ability to integrate our knowledge of the local area into our work. We are familiar with regional and local street requirements and community goals.

Transportation Planning

KHA is a leading consultant in the planning of regional and statewide transportation systems, corridor studies, freeway operational studies, transportation demand management programs, and transportation impact assessments. We have assisted many local and state agencies in developing transportation plans and programs for both short- and long-range improvements—including our current work in Avondale on the City Center Specific Area Plan project. This and other assignments in transportation planning and network analysis, economics, urban and regional planning, and engineering design have positioned KHA as a leader in the constantly evolving transportation field.

With expertise in conditions assessment, demand forecasting, environmental review, alternatives assessment, and cost-benefits analysis, KHA has the experience to progress a project from the inception of a concept through the development and implementation of a plan. We routinely examine alternatives, present those alternatives to the public, facilitate consensus-building, develop preliminary and right-of-way plans, and prepare final engineering and design.

Traffic Engineering

Traffic engineering is a mainstay of KHA's professional practice. We have completed thousands of traffic engineering projects, ranging from single intersection designs and analysis to major area-wide systems involving hundreds of intersections. Throughout Arizona, we provide clients with services in virtually every aspect of traffic engineering:

- Traffic signal design, interconnect, and coordination
- Traffic signal warrant analysis
- PS&E packages
- Traffic control and construction phasing
- Intersection design
- Conceptual designs
- Operational analysis
- Traffic studies/ traffic impact analyses
- Traffic forecasting
- Traffic operations modeling
- Capacity analyses
- Highway and street lighting design
- Intelligent Transportation Systems planning, design, and implementation

Much of KHA's outstanding reputation has been built on the planning, analysis, design, implementation, and operation of traffic signals. From isolated signals to area-wide traffic signal systems, our systems specialists offer unparalleled industry expertise. Our local staff members have designed traffic signal systems of many types and complexities, including timing plans.

In addition to comprehensive master planning and design for traffic signalization, our engineers have designed numerous plans to standardize traffic control systems and provide comprehensive systems communications. Our advanced traffic management projects include citywide signal system designs, transportation control centers, and innovative transit and public transportation systems. We design each of our systems not only to address current needs but also to accommodate future growth and advances in technology. Our systems are based on open architecture concepts, and every signal service is designed to meet the singular needs of each client.

Intelligent Transportation Systems

A leading consultant in ITS in Arizona, KHA has worked on many key ITS planning and design projects in the region such as the MAG ITS Strategic Plan, the nationally recognized Regional Concept of Transportation Operations, Regional Community Network Study and Design, AZTech™ Center-to-Center Needs Assessment and Concept of Operations, Phoenix Regional Fiber Optic Backbone, and Phoenix FMS.

Specific to the West Valley, our work includes numerous ITS design projects in Glendale, event management at PIR (and downtown Phoenix). Traffic Management Center design for the City of Surprise, Bell Road ITS design (six miles/14 intersections), ITS Strategic Plan for the City of Goodyear, and signal coordination timing plans in Avondale. Our local ITS specialists include traffic engineers, planners, software developers, and system engineers whose practice focuses on ITS, traffic engineering, and transportation projects.

Survey & Right-of-Way

KHA has teamed with **Horizon Survey** for this contract and previous projects. Horizon is a full-service, local professional land surveying firm offering a full range of services including Boundary Analysis, Topographic Surveys, GPS Surveys, High-Definition Surveys, Land Title Surveys (ALTA), Mapping, Construction As-Builts, Construction Staking, and Aerial Photogrammetry. Horizon has provided survey and ROW services to federal, state and municipal organizations in Arizona for surveying, staking, water rights, boundary establishment and a variety of other activities required to support projects.

Hydrology/Hydraulic Projects

KHA's professionals have extensive experience directing drainage improvement projects across the country, regionally in the arid Southwest and locally throughout Arizona and Maricopa County. KHA's core group of water resource planners, hydrologists, hydraulic engineers, civil engineers, and environmental scientists are regarded as leading drainage experts in Arizona. Our technical expertise in flood control and stormwater management ranges from watershed hydrology (urban, desert, rural, mountainous), floodplain hydraulics (fluvial/alluvial), sediment transport, dam safety, dam and levee assessments, and bridge scour analysis to two-dimensional flow analysis. With this knowledge and experience, we help our clients anticipate and respond to flooding impacts. Specific areas of flood control and stormwater management expertise include:

- ✦ Planning: watershed master plans, watercourse master plans
- ✦ Design: storm drain, channel, levees, earth dams, bank protection, grade control structures, basins
- ✦ Floodplain delineation and management; floodplain studies
- ✦ Hydrologic and hydraulic modeling
- ✦ Stormwater/drainage master plans
- ✦ CLOMR/LOMR applications
- ✦ Dam safety/dam assessment/rehabilitation
- ✦ Levee assessment/levee rehabilitation/levee Federal Emergency Management Act (FEMA) certification
- ✦ Flood warning systems/emergency action plans
- ✦ Obtaining environmental permits (Section 404, etc.)
- ✦ Utility relocations
- ✦ Nonstructural alternatives
- ✦ Coordination with federal, state and local partners
- ✦ Erosion and sediment control
- ✦ Sediment yield and transport studies
- ✦ Scour studies and investigations/mitigation

Over 40 years, KHA has become a leader in the drainage and flood control consulting industry. Our project managers serve as the trusted primary liaisons to the Flood Control District of Maricopa County, and we will function as an extension of your own engineering staff.

Our team is proficient in HEC 1, HEC-HMS, WMS, HEC 2, HEC RAS, HEC-GEORAS, HEC 6, HEC-6T, TR 20, TR-55, FESWMS 2DH, FLO-2D, STORMPLUS, StormCADD, FlowMaster, WSPRO, BOSS RMS, Hydrain, BOSS SMS (2 dimensional modeling), Dambreak, SITES, and other hydrologic, hydraulic, and general design software. We have extensive capability and support in AutoCAD and MicroStation including advanced capabilities of SOFTDESK and INROADS, linked locally and firmwide through our network system. We also have experience in hydrologic based GIS (ArcView) applications such as BOSS WMS, which is linked with HEC-1, TR 20, and Rational Method.

Landscape Architects

Urban design, streetscape design, and landscape architecture are integral components of roadway and transportation system designs and infrastructure improvements in general. Revitalizing commercial districts, controlling traffic flows, and providing recreational areas and pedestrian and bicycle facilities in increasingly congested areas are some of the solutions designed by our landscape architects. We provide services in feasibility studies, master planning, design, permitting, public participation and consensus building, and construction administration. Understanding the goals of the client, the opportunities and constraints of the site, and the needs of the end-users are all necessary in the production of a successful project.

KHA's landscape architects have extensive public- and private-sector experience, ranging from large-scale master planned communities to municipal streetscapes and roadway improvements. Our staff emphasizes the development of a pleasing visual environment, meaningful theme/branding, distinctive image, and strong sense of place, while being sensitive to the client's budget and long-term maintenance obligation, the end-users, and the environment.

KHA has designed many roadway landscapes and each represents the challenges associated with limited space, water conservation, plant survivability, utility conflicts, and traffic congestion. Our effective use and placement of vertical features on roadway projects results in a landscape treatment that provides optimum safety, attractive aesthetics, and low maintenance.

GIS programs

The main purpose of a GIS is to process spatial information. KHA's in-house GIS specialists use GIS concepts to facilitate the integration and management of spatial data. Global positioning systems (GPS) equipment can also be used to quickly and efficiently capture data for use in a GIS. We have used GIS concepts on previous projects to focus the organization of information and the design of information systems. GIS integrates many diverse areas of information into a single, cohesive decision support system. We use GIS to establish and maintain background databases, perform automated analysis for alternative corridor locations, quantify environmental impacts, assess historical change, and provide advanced support into the preliminary design process.

Our GIS expertise with source data includes aerial photography; engineering drawings; CAD files; plats; surveys; change order records; DEMs; LiDAR; a wide range of tabular, vector, and raster data formats; 3-D; and many others. Our GIS specialists have extensive experience in geospatial data capture, feature extraction and attribution, migration, and conversion general thematic map data of cultural, transportation, hydrographic, vegetation, and other types of features—from diverse sources.

Geotechnical

KHA has teamed with **Speedie & Associates, Inc.** and **Ninyo & Moore** to provide geotechnical services for this contract. Both firms have provided similar services on previous Avondale projects: Speedie on 4th Street Improvements and Avondale Sidewalk and Street Improvements, and Ninyo & Moore on City of Avondale Roadway Rehabilitation.

Speedie & Associates specializes in geotechnical engineering as well as construction monitoring and materials testing. Services include geotechnical investigations and site development reports and full in-house geotechnical and materials laboratory testing. With 10 professional engineers and geologists, the firm has extensive experience in Arizona, operating in Phoenix since 1980. Ninyo & Moore offers services in geotechnical engineering, construction inspection and testing, engineering geology. Its full-service laboratory is accredited by ADOT, AASHTO (AMRL, CCRL) and City of Phoenix, and our technicians are certified by ATI, ACI and ICBO.

Environmental

KHA maintains an experienced team of senior environmental scientists, geologists, hydrogeologists, planners, biologists and field technicians with expertise in a wide range of environmental planning and problem solving services such as permitting, corridor location studies, environmental assessment reports, environmental analyses, and environmental impact studies. The KHA environmental team has conducted Phase I Environmental Site Assessments (ESA) to identify potential contamination concerns. Our team is familiar with and experienced in applying ASTM standard practice (E1527-00) and conducting preliminary Initial Site Assessments (PISAs) to comply with ADOT requirements. Some of the services available are:

KHA has teamed with **Ninyo & Moore** to provide Phase II and III ESA services, compliance audits, risk evaluations and recommendations. Ninyo & Moore's encompasses lender-required studies, pre-acquisition studies, asbestos/lead-based paint/microbial evaluations, remedial studies and cost estimates, remediation and abatement plans and specifications, site remediation and remedial construction, construction monitoring at contaminated sites. The firm's previous work with the City of Avondale supported the clean closure of former wastewater treatment facilities at the Municipal Operations Center. Other ESA and remediation work includes Phoenix and Glendale Environmental On-Call contracts, City of Tempe Revitalization & Redevelopment Development Services, and Valley Metro Light Rail Project.

Foundations & Structural Design

Structural engineering is often integral to full-service civil engineering. KHA has established structural design teams throughout the country, including Arizona. We have five structural engineers in Phoenix specializing in bridge design, parking structures, stormwater and water management structures, viaducts, box culverts, transition structures, retaining walls, mechanically stabilized earth walls, replacement, rehabilitation, scour evaluation and mitigation, and construction administration.

We have designed hundreds of transportation structures and bridges across the United States: bridges; highway interchanges; river, stream, and canal crossings; storm drains; pedestrian walkways; and bridges for bicyclists. Our talented design team integrates structures, roadway alignments, drainage facilities, and aesthetics while minimizing social impacts.

Electrical Design

KHA understands that electrical engineering is often a critical component of designing a project. We are often faced with several design considerations including determining where power is coming from and if the power will need to be metered or unmetered, determining voltage drop calculations and lighting design, and investigating if the power will be shared with existing lighting circuits. We are also intimately familiar with the National Electric Code (NEC) and will bring that expertise to the project team. Many requirements govern the installation of electrical conduit, and our in-house electrical engineers will incorporate those requirements into our designs. Our staff is thoroughly experienced in all of the electrical engineering considerations that may be included in your projects, and we bring a local understanding of the coordination required with local utilities and power service providers.

Construction Management

As an extension of our full-service consulting services in multiple disciplines such as roadway and highway, aviation, traffic engineering, ITS, and communications and others, KHA provides comprehensive construction administration services with experienced inspection staff. We specialize in construction administration services from planning to design and post-design services to construction oversight and post-construction support. We ensure our clients' projects are successful from beginning to end.

Services

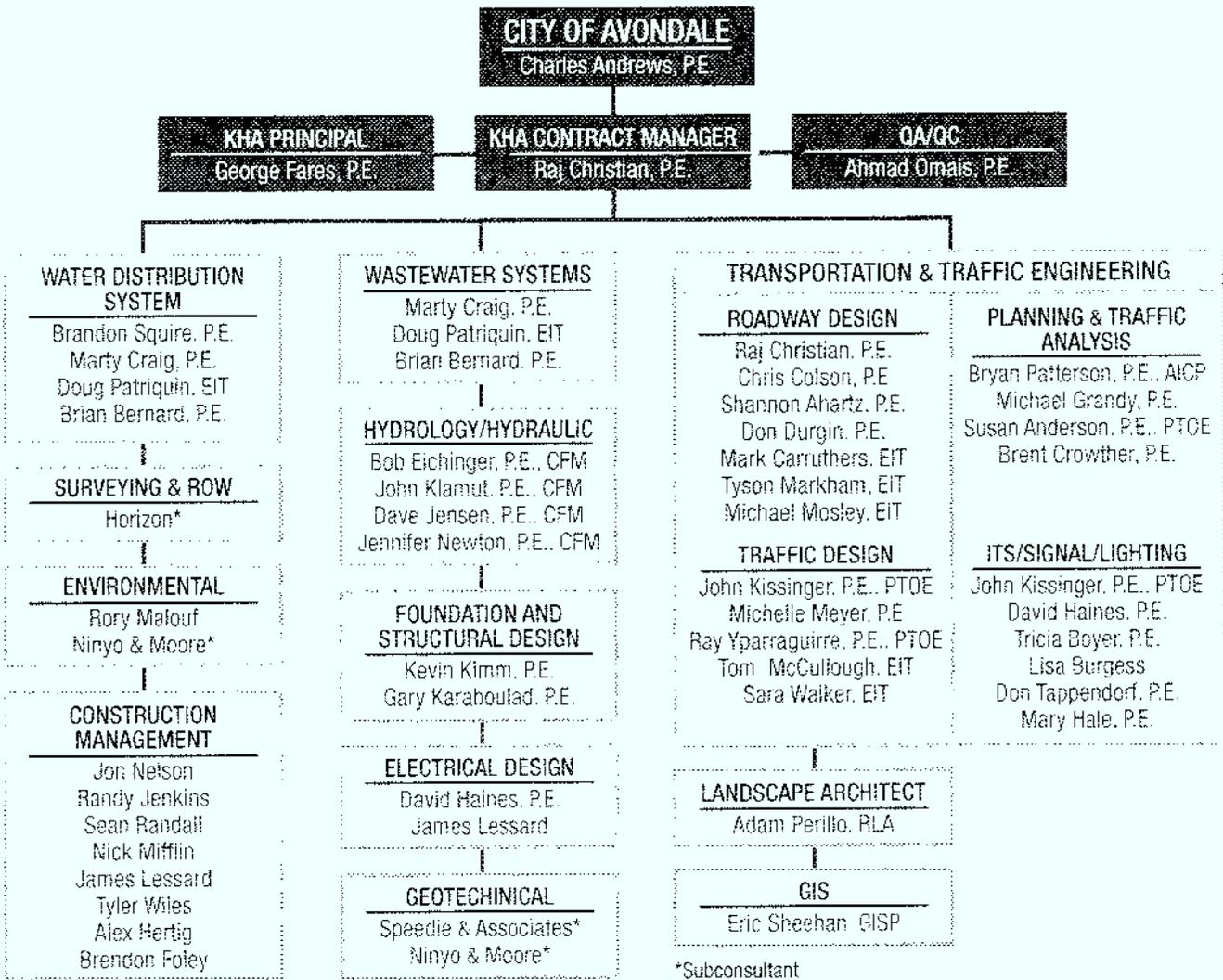
- ✦ ATMS arterial
- ✦ Toll roads
- ✦ ITS feasibility
- ✦ Communication systems
- ✦ Security systems
- ✦ Parking revenue systems
- ✦ Airport taxiways and runways
- ✦ Airport signing and lighting
- ✦ Highway lighting and signing
- ✦ Traffic signals
- ✦ Water and wastewater systems
- ✦ Stormwater systems
- ✦ Traffic management centers
- ✦ Agency specifications
- ✦ Agency certifications
- ✦ Pavement management
- ✦ Construction and testing of its systems
- ✦ ITS deployment on urban and rural roadways
- ✦ Pre-bid services
- ✦ Cost estimating
- ✦ Construction administration and observation

In addition to ensuring that you receive the benefit of our inspectors' experience during construction observation, our construction phase personnel can attend preconstruction conferences and regular project meetings, and provide review and approval of pay estimates and all other activities required to make sure that you achieve well coordinated construction of proposed improvements.

KEY PERSONNEL

KHA is committed to providing Avondale with expedited, high-quality design solutions that will meet your projects objectives. We will do this by providing you with a team of experienced and technically proficient individuals who perform the proposed services on a daily basis and are immediately available to serve you.

We present our **team organization** below and a **matrix** showing discipline categories and respective team members on the next page. We have provided a summary of key team member qualifications on **Page 15** and resumes in **Appendix B**.



Team Members

	Feasibility Studies	Wells	Distribution Systems	Pump Stations	Storage Facility	Treatment Plants	Water Distribution Systems	Transportation Engineering	Traffic Engineering	Hydrology/Hydraulic Projects	Environmental	Foundation/Structural	Construction Management	Electrical Design
	Wells	Distribution Systems	Pump Stations	Storage Facility	Treatment Plants	Water Distribution Systems	Transportation Engineering	Traffic Engineering	Hydrology/Hydraulic Projects	Environmental	Foundation/Structural	Construction Management	Electrical Design	
Brandon Squire, P.E.														
Marty Craig, P.E.														
Doug Patriquin, EIT														
Brian Bernard, P.E.														
Raj Christian, P.E.														
Chris Colson, P.E.														
Shannon Ahartz, P.E.														
Don Durgin, P.E.														
Bryan Patterson, P.E., AICP														
Michael Grandy, P.E.														
Susan Anderson, P.E., PTOE														
Brent Crowther, P.E.														
John Kissinger, P.E., PTOE														
Mark Carruthers, EIT														
Tyson Markham, EIT														
Michael Mosley, EIT														
Michelle Meyer, P.E.														
Tricia Boyer, P.E.														
Ray Yparraguirre, P.E., PTOE														
Lisa Burgess														
Dave Haines, P.E.														
Mary Hale, P.E.														
Don Tappendorf, P.E.														
Tom McCullough, EIT														
Sara Walker, EIT														
Horizon*														
Bob Eichinger, P.E., CFM														
John Klamut, P.E., CFM														
Dave Jensen, P.E., CFM														
Jennifer Newton, P.E., CFM														
Adam Perillo, RLA														
Eric Sheehan, GISP														
Rory Malouf														
Ninyo & Moore*														
Kevin Kimm, P.E.														
Gary Karaboulad, P.E.														
Jon Nelson														
Randy Jenkins														
Sean Randall														
Nick Mifflin														
James Lessard														
Tyler Wiles														
Alex Hertig														
Brendon Foley														
Speedie & Associates*														

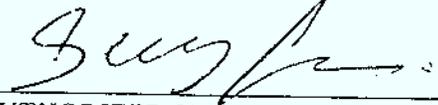
*Subconsultant

Summary of Key Staff Qualifications	
<p>Raj Christian, P.E. 18 Yrs. Experience 4 Yrs. with KHA</p>	<ul style="list-style-type: none"> Project Manager for Avondale projects: 4th Street Improvements, Sidewalk and Street Improvements Specializes in roadway design, traffic design, bid documents, and project management Other projects: 91st Avenue and Olive Avenue Intersection Improvements, 59th Avenue Improvements, El Mirage Intersection Improvements, Yuma - Final Design of 24th Street
<p>Chris Colson, P.E. 13 Yrs. Experience 10 Yrs. with KHA</p>	<ul style="list-style-type: none"> Expertise in roadway, freeway, and utility design Experience includes signing and marking design for literally miles of urban arterials as well as minor roads, school area traffic control, roadside safety analysis and design, traffic control and stage construction plans for both freeways and local roads, and traffic calming design
<p>Marty Craig, P.E. 27 Yrs. Experience 1 Yr. with KHA</p>	<ul style="list-style-type: none"> Manages state-of-the-art water and wastewater projects Project Engineer for water/sewer on Avondale projects Oversees projects from design to construction and through operation startup
<p>Michael Grandy, P.E. 6 Yrs. Experience 6 Yrs. with KHA</p>	<ul style="list-style-type: none"> Currently working on Avondale City Center Specific Area Plan Experience with circulation master plans, corridor studies, signal warrant analyses, design concept reports, pedestrian/safety studies, accident analysis, traffic calming devices, parking, traffic signal design, public outreach, advanced traveler information systems, and ITS communications interconnect design
<p>Bob Eichinger, P.E., CFM 21 Yrs. Experience 12 Yrs. with KHA</p>	<ul style="list-style-type: none"> Over 20 years of water resources planning, stormwater management, drainage and flood control design Extensive experience in the areas of hydrology/hydraulics analysis, evaluation of scour, sediment transport and sediment yield, levee design and bank protection, fluvial geomorphology, hydraulic analysis and sizing of culverts, storm drain systems, detention basins open channels, and hydraulic structures Performed drainage design review on Avondale projects
<p>Adam Perillo, RLA 11 Yrs. Experience 9 Yrs. with KHA</p>	<ul style="list-style-type: none"> Experience in landscape architecture and construction. Specialties include landscape and site design, grading, stormwater drainage, and planting Expertise interpreting zoning ordinances, tree ordinances, and client needs to provide a successful solution Worked on numerous greenway and roadway streetscape projects. Current work: Loop 101 Frontage Rd
<p>Eric Sheehan, GISP 13 Yrs. Experience 2 Yrs. with KHA</p>	<ul style="list-style-type: none"> Certified GIS Professional Experience with GIS application designs, systems programming, user training, and hardware systems Excels in project management, design and programming of applications, global positioning system (GPS) data collection, information conversion, database development, and GIS analysis
<p>Rory Malouf 7 Yrs. Experience 5 Yrs. with KHA</p>	<ul style="list-style-type: none"> Prepared and reviewed over 50 Phase I Environmental Site Assessments; coordinated multiple Phase II Experience in regulatory compliance with Section 404 of the Clean Water Act Prepared jurisdictional delineations and pre-construction notifications for nationwide permits
<p>Gary Karaboulad, P.E. 20 Yrs. Experience 2 Yrs. with KHA</p>	<ul style="list-style-type: none"> Experience in the design and construction of various types of special highway structures, bridges, earth retaining structures, sound walls, and buildings Designed more than 23 multi-span, AASHTO girder, cast-in-place and post-tensioned box girder structures Certified bridge inspector by ADOT and FHWA. Inspected 600 bridges for ADOT and City of Phoenix As former ADOT employee, designed and developed ADOT's Sign Structures and VMS Standards, New Pedestrian Fence Standard, and Updated the Box Culvert Standard
<p>David Haines, P.E. 15 Yrs. Experience 13 Yrs. with KHA</p>	<ul style="list-style-type: none"> Specializes in wide area communications architecture design, communication equipment and ITS equipment technology assessments, wireless/copper/fiber optic cable inside and outside plant design, local area network design, lightning protection design, power distribution design, and roadway lighting design Experienced in specification writing, plans package production, constructability evaluations, software functionality writing, construction support for fiber optic network installations, and troubleshooting/repair of communication equipment
<p>Jon Nelson 30 Yrs. Experience 8 Yrs. with KHA</p>	<ul style="list-style-type: none"> Comprehensive construction inspection expertise in PCC pavement, asphaltic concrete pavement, underground and overhead utilities, major/minor concrete structures, signage, lighting, striping, earthwork, drainage, fiber optic communication systems, highway lighting, traffic signal and electrical systems Projects: Glendale West Area Fiber, Downtown Glendale Pedestrian Enhancements, City of Surprise Various Signals, El Mirage Traffic Signal and Intersection Improvements, 59th Ave ITS

SECTION B

VI. VENDOR INFORMATION FORM

By sending a Statement of Qualifications, the submitting firm certifies that it has reviewed the administrative information and draft of the Professional Services Agreement's terms and conditions and, if awarded the Agreement, agrees to be bound thereto. **

<u>Kimley-Horn and Associates, Inc.</u>	<u>56-0885615</u>
FIRM SUBMITTING SOQ	FEDERAL TAX ID NUMBER
<u>George Fares, P.E., Principal</u>	
PRINTED NAME AND TITLE	AUTHORIZED SIGNATURE
<u>125 S. Avondale Boulevard</u>	<u>(623) 907-1195</u> <u>(623) 907-3355</u>
ADDRESS	TELEPHONE FAX #
<u>Avondale AZ 85323</u>	<u>April 16, 2008</u>
CITY STATE ZIP	DATE
WEB SITE: <u>www.kimley-horn.com</u>	EMAIL ADDRESS: <u>george.fares@kimley-horn.com</u>

MINORITY/WOMEN-OWNED SMALL BUSINESSES (check appropriate item):

- Disadvantaged Business Enterprise (DBE)
- Women-Owned Business Enterprise (WBE)
- Minority Business Enterprise (MBE)
- Small Business Enterprise (SBE)

Has your firm been certified by any jurisdiction in Arizona as a minority or woman owned business enterprise? NO

If yes, please provide details and documentation of the certification.

** As specified in our SOQ, Page 3, statement on Familiarity and Capability of Compliance with City's Standard Insurance Requirements and Contract Documents.

CITY OF AVONDALE
ACKNOWLEDGMENT OF ADDENDA RECEIVED
REQUEST FOR STATEMENTS OF QUALIFICATIONS

FY 2008/2009 Professional Consultants Selection List
EN08-017

Addendum No. 1

Kimley-Horn and Associates, Inc. affirms that ADDENDUM No. 1 has
(Name of Vendor/Designee)
been received and that the information contained in ADDENDUM No. 1 has been incorporated
in formulating the Vendor's Offer.


Signed _____ Date April 16, 2008

Raj Christian
Print Name

Contract Manager
Title

Kimley-Horn and Associates, Inc.
Company Name

125 S Avondale Boulevard, Suite 115
Address

Avondale, AZ 85323
City, State, Zip Code

END OF ADDENDUM No. 1

RAJESH S. CHRISTIAN, P.E.

Professional Credentials

- Bachelor of Science, Civil Engineering, 1985
- Professional Engineer in Arizona (#31673)
- NICET III - Construction Materials Testing (Concrete and Asphalt)
- NICET II - Highway Construction
- Intelligent Transportation Systems (Arizona State University)
- Applied Statistics (Arizona State University)

Special Qualifications

- Experience with construction materials testing, inspection and quality control
- Field inspection experience
- Expertise using computer software including Inroads and MicroStation
- NICET certified in Highway Construction and Materials Testing
- Proficient in CAD, MicroStation, and AutoCAD

Relevant Experience

4th Street Improvements: Lower Buckeye Road to Western Avenue, Avondale, AZ — Project Manager. As part of the 2006/2007 City of Avondale On-Call, KHA performed services for the 4th Street Improvement project. Improvements consist of pavement rehabilitation for one mile of 4th Street between Lower Buckeye Road to Western Avenue in the southern "old town" area. The local streets in this area were constructed around 1960 and pavement conditions are deteriorating. The structural pavement sections and weak subgrade soils are not sufficient to support the continuous increase in traffic. There is significant cracking and failures in the pavement at various locations.

The purpose of this project is to reconstruct the pavement with an adequate structural section. It will also address the need to correct cross-slopes and ponding issues. A brief drainage report is being prepared to summarize existing conditions and different alternatives to alleviate drainage issues. The project will include reconstruction of curb, gutter, and sidewalks where needed. Drainage improvements include valley gutters and a retention basin, installation of new water lines, and new water and sewer stub-outs to vacant parcels. Utility coordination with City utilities, private utilities, and Maricopa County Environmental Services (MCES) will be included in this project. KHA is also providing traffic signing and pavement marking plans, as well as construction plans, specifications, and cost estimates.

Avondale Sidewalk and Street Improvements — Project Manager. KHA recently completed final design documents for this streets and sidewalk improvement project within the South Oldtown area. The City will utilize federal funds through the Community Development Block Grant (CDBG) program to construct this project. The project included the area bounded by 4th Street (west) to 7th Street (east) and Main Street (north) to Harrison Drive (south). These streets were constructed around 1960 and exhibited significant pavement distress including cracking and pavement failures at various locations. The project included reconstructing and/or rehabilitating existing pavement with an adequate structural section. The project also constructed new profile grade and cross slopes to alleviate localized ponding. New curb, gutter, sidewalks and ADA compliant handicap ramps have been also included. Several driveways on Dee Steet were re-profiled to alleviate drainage flooding on to Installation of new water lines and reconnections of exiting services are proposed. New service connections to vacant lots and fire hydrants were also included.

El Mirage Traffic Signal and Intersection Improvements at Dysart & Thunderbird; Dysart & Peoria; Dysart & Cactus; El Mirage & Northern, El Mirage, AZ — Project Manager. KHA was selected to prepare a signal warrant study and final design documents for three intersections in the City of El Mirage. New signals will be constructed at the Dysart / Peoria and at Dysart / Cactus intersections and a full reconstruction of the existing intersection will occur at the Dysart / Thunderbird / Waddell intersection. KHA is evaluating whether additional turn lanes will be required at each of these locations to improve safety and to alleviate traffic congestion. Raised median islands are also being evaluated for better access control. Numerous utilities exist within the project limits and many will have to be relocated.

RAJESH S. CHRISTIAN, P.E.

Relevant Experience, continued

New right-of-way and traffic control easements will be needed. KHA has met with adjacent business and property owners to achieve consensus on the preferred alternative. One major challenge to the redesign of the Dysart /Thunderbird/Waddell intersection is that an existing railroad spur line bisects the intersection diagonally. Gate down timing control and railroad improvements are key steps in the design process.

91st Avenue and Olive Avenue Intersection Improvements, Peoria, AZ — Project Manager. KHA is responsible for the preparation of a Design Concept Report (DCR), roadway design, intersection geometric design, traffic signal modification, utility relocation, landscaping design, marking and signing design, ITS considerations, lighting design, right-of-way acquisition, and environmental clearance and permitting activities for improvements at this intersection. Primary responsibilities include preparation of technical reports concerning biological resources, hazardous materials, coordination with ADOT and the City of Peoria, and completion of an environmental document to comply with NEPA and ADOT

59th Avenue Widening, Olive Avenue to Mountain View Road, Glendale, AZ — Project Engineer. KHA is designing the widening of a one-half mile segment of 59th Avenue in Glendale, funded with federal Congestion Mitigation Clean Air Quality (CMAQ) funds. The widening consists of adding right-turn/merge lanes at the major entrances into Glendale Community College (GCC) and at Olive Avenue. Roadway layout incorporated dual left-turn lanes and future raised median and will accommodate the construction of future extension of a 54-inch storm drain. The project also included extensive coordination with City of Glendale, GCC, and SRP to resolve the challenges imposed by the relocation of City fiber optic lines and the 60" SRP irrigation line in close proximity to the GCC right-of-way. Coordination with GCC was especially important to ensure that the present GCC driveway modifications were incorporated in the 59th Ave. design, minimizing conform rework.

Ironwood Drive/Gantzel Road Improvements, US 60 to Hunt Highway, Pinal County, AZ — Project Engineer. KHA provided preliminary and final design services for 16 miles of Ironwood Drive from US 60 to Ocotillo Road and from Combs Road to Hunt Highway, widening its current two-lane section into a six-lane roadway with sections of raised median, curb and gutter, and sidewalk. The project included a new 3-span AASHTO precast girder bridge to span the Central Arizona Project (CAP). KHA prepared a Design Concept Report (DCR) and Access Management Plan, as well as final design services for the interim four-lane roadway and preliminary design for the ultimate six-lane roadway. Drainage improvements included pavement drainage and culvert design for offsite flows. The project area is developing rapidly, with adjacent commercial and residential developments being planned and constructed. The project involved coordination with developers and numerous agencies. Additional information can be found at www.IronwoodProject.com.

SR 195 ASH, Avenue E 1/2 to Avenue B, Yuma County, AZ — Project Engineer. KHA performed final design for ADOT on Segment 2 of the Area Service Highway from Avenue E 1/2 to Avenue B. The project involved widening the roadway from two lanes to five lanes in one section along County 23rd Street, as well as a new alignment with a divided roadway section for the rest of the project. At Avenue B, the roadway alignment followed the ramp alignments at the diamond traffic interchange to allow for ease of future construction on the mainline. Services included: roadway design, traffic design, signal/lighting design, signing and marking, drainage, utility coordination, and right-of-way requirement determination.

Yuma - Final Design of 24th Street between Avenue 6E and Avenue 9E, Yuma, AZ — Project Engineer. The City of Yuma selected KHA to provide roadway design services for the 24th Street Widening and Improvements project. This three-mile urban arterial roadway project consisted of widening 24th Street to a City standard primary arterial street section. The project was initiated by the City to improve the roadway prior to the opening of Gila Ridge High School and Arizona Western College in summer 2007. The project required project management services, utility coordination and relocation design, right-of-way engineering, public outreach, project coordination with the Yuma Unified School District and Arizona Western College, engineering studies (traffic, drainage, and geotechnical), and preparation of final construction documents including roadway sections, construction layout, grading and drainage, traffic signal, street lighting, and traffic control plans, project special provisions, and construction estimates. The project also involved a new traffic signal design and modifications to three signals.

AHMAD A. OMAIS, P.E.

Professional Credentials

- Bachelor of Science, Civil Engineering, University of Toledo, Ohio, 1984
- Master of Science, Civil Engineering, Marquette University, Wisconsin, 1986
- Professional Civil Engineer in Arizona, 1991, (#24862)
- Professional Civil Engineer in Wisconsin, 1990 (#26926-006)
- National Society of Professional Engineers
- American Society of Civil Engineers

Special Qualifications

- Diversified experience that includes roadway design, construction administration, and contract document management
- Former member of ADOT's internal team that developed the application to the Arizona Quality Award tailored after the Malcolm Baldrige National Quality Award
- Completed five of six levels for certification as a Certified Public Manager

Relevant Experience

El Mirage Traffic Signal and Intersection Improvements at Dysart & Thunderbird; Dysart & Peoria; Dysart & Cactus; El Mirage & Northern, El Mirage, AZ — Principal-in-Charge. KHA was selected to prepare a signal warrant study and final design documents for three intersections in the City of El Mirage. New signals will be constructed at the Dysart / Peoria and at Dysart / Cactus intersections and a full reconstruction of the existing intersection will occur at the Dysart / Thunderbird / Waddell intersection.

KHA is evaluating whether additional turn lanes will be required at each of these locations to improve safety and to alleviate traffic congestion. Raised median islands are also being evaluated for better access control. Numerous utilities exist within the project limits and many will have to be relocated. New right-of-way and traffic control easements will be needed. KHA has met with adjacent business and property owners to achieve consensus on the preferred alternative. One major challenge to the redesign of the Dysart / Thunderbird / Waddell intersection is that an existing railroad spur line bisects the intersection diagonally. Gate down timing control and railroad improvements are key steps in the design process.

51st Avenue Improvements, Glendale, AZ — Team Member. KHA designed over two miles of arterial road along 51st Avenue, including realignment and reconstruction of an existing two-lane roadway to a four-lane roadway with raised medians. The project required developing new intersection geometrics and signalization at Southern Avenue. Related design elements include utility coordination, right-of-way identification, and signing and marking plans.

59th Avenue/Bell Road Intersection Improvements, Glendale, AZ — Project Manager. KHA prepared a DCR and the final design for a right-turn lane and right-turn/bus bay for improving a high volume intersection, including pavement sections, curb and gutter, storm drainage, and pavement marking design. KHA was responsible for developing and preparing the plan and profile, complete design (including drainage) for the intersection, utility coordination and relocation, acquiring right-of-way, and signing and marking plans. The schedule was met.

59th Avenue Widening, Olive Avenue to Mountain View Road, Glendale, AZ — Principal-in-Charge. KHA is developing the preliminary and final design for the widening of a 1/2-mile segment of 59th Avenue in Glendale which is funded with federal Congestion Mitigation Clean Air Quality (CMAQ) funds. The widening consists of adding right-turn/merge lanes at the major entrances into the Glendale Community College (GCC) and at Olive Avenue. Dual left-turn lanes, a raised median (too accommodate a 54-inch storm drain), and landscaping and irrigation design are also key components of the widening. Several existing utilities, including a major SRP irrigation line, will be relocated. The major elements of design include: preparation of a Design Concept Report (DCR), roadway design, intersection geometric design, traffic signal modification, utility relocation and coordination, marking and signing design, and preparation of an environmental document.

AHMAD A. OMAIS, P.E.

Relevant Experience, continued

91st Avenue and Olive Avenue Intersection Improvements, Peoria, AZ — Principal-in-Charge. KHA is responsible for the preparation of a Design Concept Report (DCR), roadway design, intersection geometric design, traffic signal modification, utility relocation, landscaping design, marking and signing design, ITS considerations, lighting design, right-of-way acquisition, and environmental clearance and permitting activities for improvements at this intersection. Primary responsibilities include preparation of technical reports concerning biological resources, hazardous materials, coordination with ADOT and the City of Peoria, and completion of an environmental document to comply with NEPA and ADOT.

Yuma - Final Design of 24th Street between Avenue 6E and Avenue 9E, Yuma, AZ — Project Manager. The City of Yuma selected KHA to provide roadway design services for the 24th Street Widening and Improvements project. This three-mile urban arterial roadway project consisted of widening 24th Street to a City standard primary arterial street section. The project was initiated by the City to improve the roadway prior to the opening of Gila Ridge High School and Arizona Western College in summer 2007. The project required project management services, utility coordination and relocation design, right-of-way engineering, public outreach, project coordination with the Yuma Unified School District and Arizona Western College, engineering studies (traffic, drainage, and geotechnical), and preparation of final construction documents including roadway sections, construction layout, grading and drainage, traffic signal, street lighting, and traffic control plans, project special provisions, and construction estimates. The project also involved a new traffic signal design and modifications to three signals.

ADOT On-Call Services, Phoenix, AZ — Project Manager. KHA has been selected to provide services for miscellaneous projects, including pavement widening, overlays, VMS installations, and pedestrian safety enhancements.

Ironwood Drive/Gantzel Road Improvements, US 60 to Hunt Highway, Pinal County, AZ — Project Manager. KHA provided preliminary and final design services for 16 miles of Ironwood Drive from US 60 to Ocotillo Road and from Combs Road to Hunt Highway, widening its current two-lane section into a six-lane roadway with sections of raised median, curb and gutter, and sidewalk. The project included a new 3-span AASHTO precast girder bridge to span the Central Arizona Project (CAP). KHA prepared a Design Concept Report (DCR) and Access Management Plan, as well as final design services for the interim four-lane roadway and preliminary design for the ultimate six-lane roadway. Drainage improvements included pavement drainage and culvert design for offsite flows. The project area is developing rapidly, with adjacent commercial and residential developments being planned and constructed. The project involved coordination with developers and numerous agencies. Additional information can be found at www.IronwoodProject.com.

McDowell Road Basin and Storm Drain Design, Mesa, AZ — Project Engineer. KHA is preparing full design construction plans for a major storm drain as part of the Maricopa County Flood Control District's Spook Hill Area Drainage Master Plan. The reinforced concrete pipe storm drain is 6,700 feet long and ranges in diameter from 72-inches to 90-inches. The storm drain is located in McDowell Road in the City of Mesa from Sossaman to Hawes Road. The project is being designed for the 100-year storm event and includes a surcharge detention basin to attenuate the flood peak to match downstream constraints.

Rittenhouse Road to Hawes Road Realignment, Queen Creek, AZ — Principal-in-Charge. KHA will design 2.5 miles of 36- and 24-inch sanitary sewer alignment for the project. The project involves crossing of two sets of railroad tracks with a major drainage channel, which will require jack and bore construction. Additional utility crossings include the Kinder Morgan liquid gas line, natural gas lines, communication lines, telephone lines, and overhead power. Ties to the existing line in Rittenhouse Road and Sossaman Roads are being designed to meet upcoming developments that require a fast-track design of Phase I.

BRANDON L. SQUIRE, P.E.

Professional Credentials

- Bachelor of Science, Civil Engineering, University of Arkansas, 1994
- Professional Engineer in Arizona

Special Qualifications

- Twelve years of extensive technical and management experience in water resources engineering, including water production, water distribution, and water storage systems, wastewater collection and treatment systems, water master planning, wastewater master planning, and improvement district projects.
- Expertise and experience in geotechnical engineering/investigations, materials testing, foundation design, environmental assessments, construction inspection, and agency permit processing.

Relevant Experience

Avondale City Center, Avondale, AZ — Project Engineer. KHA is working with Dyett & Bhatia on the Avondale City Center project, located along Avondale Boulevard, between I-10 and the City Hall campus. This project will result in a detailed land use plan and design standards that promote City's vision for this area. KHA's role in the project is to analyze the infrastructure and transportation systems that will serve the study area. Each land use alternative presented will be evaluated to determine the capacity and needs of the roadway, water, and sewer networks. KHA will provide recommendations for modification of the existing networks to better balance the needs and demands of this evolving core area. This project includes stakeholder interviews, bus tours, and charrettes and workshops with City staff.

Buckeye MC 85 Water Group, Buckeye, AZ — Project Manager. KHA completed a water master plan which outlined the water needs for the entire project area and the first phase of the project, which consisted of approximately 3,000 acres in southeastern Buckeye. KHA was also contracted for the detail design for the first phase of the project which consisted of approximately 900 acres. Services included construction plans for two million gallons of water storage, five miles of 24" to 16" water distribution lines, four wells, three miles of well supply lines, and evaluation of water treatment requirements.

Calasera Off-site Sewer Interceptor for Desert Ridge Super Block 2, Phoenix, AZ — Project Engineer. KHA is currently designing 1.1 miles of 36-inch sanitary sewer interceptor paralleling the north right-of-way of the ADOT Pima Freeway and 0.37 mile of 18-inch sanitary sewer in 64th Street from the Pima Freeway north to Deer Valley Drive. The crossing of an existing 42-inch water main that was not able to be vertically relocated involves a unique solution of splitting flow from the 36-inch sanitary sewer into a triple 18-inch pipe crossing under the 42-inch water main. In solving this problem, KHA met with key City of Phoenix Water Services Department personnel to understand and incorporate their design concerns and parameters for accomplishing a successful design.

Douglas Ranch Master Planned Community, Maricopa County, AZ — Project Engineer. Douglas Ranch, a 34,000-acre community, is the largest master planned community within Maricopa County. KHA prepared master water, wastewater and drainage plans which supported the Community Master Plan and annexation process. During this process, development policies were established which will be utilized throughout the buildout of this community.

56th Street Water Transmission Main, Phoenix, AZ — Project Manager. This project consists of approximately 2,800 lf of ductile iron water main within the 56th Street alignment. The project starts north of the Loop 101 and continues to 200 feet north of the Deer Valley Rd intersection. This water transmission design includes a hot-tap design (24"x20") of an existing City of Phoenix water transmission main. The project also encounters numerous below- and above-grade utilities through a rapidly developing area. Several major water transmission mains exist at the Deer Valley and 56th Street intersection (42" and 24" water transmission mains).

In addition, several electric manholes exist in close proximity to the proposed new transmission main alignment. This pipeline is connected in the middle to the existing pressure Zone 5A and extends north and south from this point (south is a 24" DI line, north is a 36" DI line). The ends of this project terminate with City of Phoenix large diameter butterfly-valve assemblies

BRANDON L. SQUIRE, P.E.

Relevant Experience, continued

Surprise Foothills, Surprise, AZ — Project Engineer. KHA is currently providing infrastructure design of a water campus, water distribution lines, and two well equipping plans for a conglomeration of developments in Surprise, Arizona. The project includes a 1.2 MG welded steel water reservoir with a second 1.2 MG tank planned for Phase Two of the developments and associated booster station. KHA is designing approximately seven miles of 10- to 24-inch water distribution lines and approximately 5.5 miles of 12- to 24-inch water transmission lines. The design includes all associated valving, appurtenances, pump selection, on-site piping, grading, drainage improvements, site wall, and chlorination facilities. Other services provided are site plans, permitting, construction specifications, and bidding documents.

Copper Basin Road Design - Phase 1, Prescott, AZ — Project Engineer. KHA recently completed planning and final design services for two miles of Copper Basin Road. This segment includes urban roadway design, intersection design, accommodation of nearly 200 driveways adjacent to the roadway, sidewalk and retaining wall design, water and sewer design for entire segment including new services to properties, storm drain design, and extensive utility relocation coordination including relocation of 69KV and 12KV power, gas main with services, and communication relocations. Intense public involvement is an ongoing element of this project.

Desert Ridge - Super Block 10, Phoenix, AZ — Project Engineer. KHA performed preliminary density analysis for all of Desert Ridge-Super Block 10 for Standard Pacific Homes and Elliott Homes prior to the State Land Department's auction of the property. The services included developing an understanding of the Desert Ridge Design Guidelines, open space requirements, existing drainage reports, off-site requirements, and infrastructure master plans for the site and surrounding area. KHA produced a layout sensitive to these requirements and guidelines, that included various product types of the two builders, that ultimately provided them with a "ball park" total density to establish their maximum bid for the property.

Granite Dells, Prescott, AZ — Project Engineer. This large and complex property, consisting of more than 20,000 acres, is being planned to include single- and multi-family residential, commercial/ retail, and other community amenities critical to a master-planned development of this scale. KHA is providing services including master-planning, drainage, water and wastewater, circulation and access, and environmental permitting strategies. In particular, a preliminary master drainage study was prepared to assess existing condition hydrology and present calculations to support that the master plan will meet local city and county drainage standards and guidelines. Hydrologic methodology was based on local county and ADOT criteria. Calculations were performed utilizing the Watershed Modeling System (WMS) to take advantage of up-to-date GIS-based data and allow for more efficient analyses of various scenarios during subsequent stages of the planning process including distinct land use plans, varying watershed conditions, different hydrologic methodologies and multiple storm events.

Williamson Valley Road Widening - Sidewinder Road to Pioneer Parkway, Yavapai County, AZ — Project Engineer. This project will widen approximately 2.5 miles of roadway and involve 60 adjacent landowners. The project involves reconstructing an existing two-lane rural roadway to a five-lane urban section for a one mile segment, and a five-lane rural arterial section for the remaining length. The design entails performing environmental studies and roadway design, including the accommodation of 23 driveways and 14 side roads. The design also includes drainage and storm drain design, water and sewer design, utility relocations, rock blasting, retaining wall design, and traffic control, and construction phasing. Extensive public involvement is also a major element of this project.

MARTY J. CRAIG, P.E.

Professional Credentials

- Bachelor of Science, Civil Engineering, Northern Arizona University, 1979
- Registered Professional Engineer, Arizona, 1985
- Member, American Public Works Association
- Member, American Water Works Association
- Member, Arizona Water Pollution Control Association
- Member, International Desalting Association
- Member, Water Environment Federation
- Member, Water Reuse Association
- President, Papago Toastmasters
- Scholarship Committee Chairman, Arizona Water Pollution Control Association

Special Qualifications

- Twenty-seven years of experience managing state-of-the-art water and wastewater projects
- Project Manager for three sewer relief projects in the last three years
- Manages projects from design to construction and through operation startup

Relevant Experience

Avondale 4th Street Water and Sewer Improvements, Avondale, AZ — Project Engineer. KHA, in combination with roadway improvements, designed water line and service improvements for approximately 4,700 lf. Improvements also included reconnection of existing services, fire hydrants, and services provided for vacant lots. Sewer services were also extended for vacant lots. The project relied on extensive utility investigation due to the age of the area and lack of as-builts. Plans also abandoned the existing water line.

Granite Dells, Prescott, AZ — Project Engineer. Responsible for wastewater master plan and treatment evaluation. This large and complex property, consisting of more than 20,000 acres, is being planned to include single- and multi-family residential, commercial/ retail, and other community amenities critical to a master-planned development of this scale. KHA is providing services including master-planning, drainage, water and wastewater, circulation and access, and environmental permitting strategies.

Rittenhouse Road to Hawes Road Realignment, Queen Creek, AZ — Project Engineer. KHA will design 2.5 miles of 36- and 24-inch sanitary sewer alignment for the project. The project involves crossing of two sets of railroad tracks with a major drainage channel, which will require jack and bore construction. Additional utility crossings include the Kinder Morgan liquid gas line, natural gas lines, communication lines, telephone lines, and overhead power. Ties to the existing line in Rittenhouse Road and Sossaman Roads are being designed to meet upcoming developments that require a fast-track design of Phase I.

Relevant Experience Prior to Joining Kimley-Horn

1 MGD Design/Build Wastewater Treatment Plant, Williams, AZ — Mr. Craig served as project manager for the design of a new 1 MGD wastewater treatment plant. The plant included a headworks with screening and grit removal, influent pump station, an oxidation ditch, UV disinfection, RAS/WAS pump station, and a belt filter press. Ancillary facilities included the administration building, site improvements, standby generator, and access roadways.

Design/Build Wellhead Arsenic Treatment, Apache Junction, AZ — Mr. Craig served as project manager and designed a 1 MGD coagulation/filtration arsenic treatment system. The well was tested at 75 ppb of arsenic and the project reduced this to lower than 5 ppb. Mr. Craig was the Project Manager for the design of the project and led the field review for the City.

Arrowhead Manor Pump Station, Glendale, AZ — Mr. Craig served as Project Manager for the rehabilitation of a potable water pump station included replacing the existing pumps, piping modifications, and electrical and control modifications.

MARTY J. CRAIG, P.E.

Relevant Experience Prior to Joining Kimley-Horn, continued

Water System Master Plan and Arsenic Treatment Study, GRIC, AZ — Mr. Craig served as project manager on this project. The GRIC provides groundwater to its community from 23 wells in a disconnected system. The wells are high in total dissolved solids (TDS) and arsenic, and will not meet the January 2006 Arsenic Rule implementation. CDM performed a master plan and arsenic study for GRIC. As part of this work, low pressure reverse osmosis (RO) membranes were piloted to treat the community's future water supply. The pilot tests demonstrated that the membranes achieved excellent water qualities. The master plan work included the siting and preliminary planning for the RO treatment plant and residuals disposal. Additionally, the entire water system was hydraulically modeled to provide one integrated system. As project manager, Mr. Craig coordinated the project with the GRIC Public Works Department, which will lead to the design of a future water treatment plant.

Water and Sewer System Improvements, Douglas, AZ — Mr. Craig served as project manager to inspect with CCTV existing sewer lines and provide rehabilitation designs for specified lines. The CCTV tapes were evaluated and a matrix provided of the evaluation to rate the severity of the repairs. Slip-lining of specified lines and removal and replacement projects were designed and constructed. Water system improvements to improve system redundancy were designed and constructed. As Project Manager he also led the design of a new SCADA system for the water system.

56th Street Storm Drain, Chandler, AZ — Mr. Craig served as project manager and designed 2/3 of a mile of 27-inch storm drain with catch basins to tie to the ADOT storm channel on 56th Street. Mr. Craig served as Project Manager and managed the planning, study and design of the storm drain. Repaving of the street, replacement of traffic loops, and bus bay pads were included with the design.

Thunderbird Park Reservoir Evaluation, Glendale, AZ — Mr. Craig served as Project Manager for the structural review of a 5-MG reservoir. DWR reviewed the reservoir and directed that the City have a structural review of the reservoir. The reservoir was inspected and a report detailing minor improvements provided to the City. A report was given to DWR with recommendations and the evaluation.

Wastewater Treatment Plant Expansion, Buckeye, AZ — Mr. Craig served as senior project engineer to provide design services to expand the Town of Buckeye's wastewater treatment plant from 0.95 million gallons per day (mgd) to four mgd. The project included improvements to the headworks, secondary treatment, effluent discharge and solids handling facilities of the 17-year-old facility. Secondary treatment is being expanded to provide NdeN and filtration.

Wastewater Treatment Plant and Reuse System, Surprise, AZ — Mr. Craig designed a 0.3-MGD treatment plant, including all ancillary facilities that include headworks with screening and grit removal, influent pump station, chlorination/de-chlorination basin, and effluent storage reservoir. The reclaim system included a pump station with approximately two miles of distribution lines. This design master planned the future expansion of the plant as the area developed.

Downtown Sewer Rehabilitation Project, Gilbert, AZ — Mr. Craig served as Project Manager to design and provide construction services for the Town of Gilbert's downtown sewer system improvements project. The combined system includes 19,000 lf of sewer, 80 manholes, appurtenances, and house connections. This project was constructed through historic downtown Gilbert and its business district. Utilities were over 100 years old with little or no as-builts, so utility research was extensive. PR included personal contact with businesses on a daily basis to relate schedule and progress. Construction included a jack and bore under a live business.

Sewer Line Investigation and Rehabilitation Glendale, AZ — Mr. Craig served as project manager hired to evaluate three 24-inch ductile iron pipes that cross under the Grand Canal with two junction structures. This resulted in an emergency repair of the downstream junction structure and the design and replacement of the three pipes and two junction structures. Mr. Craig coordinated the fast track schedule to meet the Bethany Home Outfall Channel schedule. The project included jack and boring the three pipes while bypass pumping 23 mgd of live sewer flows.

BRIAN BERNARD, P.E.

Professional Credentials

- Bachelor of Science, Civil Engineering, University of Nevada, 1994
- Professional Engineer in Arizona and Nevada

Special Qualifications

- Possesses over 10 years of experience in land development consulting.
- Expertise includes large-scale residential development and masterplanned projects throughout Arizona and Nevada. His technical expertise is in hydrology, grading and drainage, wet utilities, and roadway design.
- Highly experienced in working with clients to analyze and navigate a wide variety of impact issues, including zoning, air quality, water quality, traffic, and other community impacts.

Relevant Experience

Broadstone Ranch, Maricopa County, AZ — Project Engineer. This offsite improvements project is related to an Elliot Homes master-planned community near Surprise. Broadstone sewer consists of over 36,000 lf of gravity sanitary sewer, ranging in size from 18- to 30-inches. Major design-related issues include existing water, telecommunications, overhead power, ADOT right-of-way, wash crossings and drainage culverts. At one point in the project, the sewer must be installed below four existing 60-inch CMP drainage culverts. Because washes on either side of this location are 404 designated areas, a jack and bore operation is being designed to pass these culverts without disruption to the existing washes or drainage. This jack and bore will be approximately 100 feet in length.

Hodges Court, Buckeye, AZ — Project Manager. KHA was hired by AGO Investments to provide preliminary engineering services for this 236-acre subdivision in Buckeye, AZ. Proposed development includes 20 acres for commercial uses and 216 acres for single-family units. The scope of services include topo/boundary survey, preliminary plats, a preliminary master drainage study, preliminary sewer and water design, and a traffic impact analysis.

Surprise Foothills, Surprise, AZ — Project Manager. KHA is currently providing infrastructure design of a water campus, water distribution lines, and two well equipping plans for a conglomeration of developments in Surprise, Arizona. The project includes a 1.2 MG welded steel water reservoir with a second 1.2 MG tank planned for Phase Two of the developments and associated booster station. KHA is designing approximately seven miles of 10- to 24-inch water distribution lines and approximately 5.5 miles of 12- to 24-inch water transmission lines. The design includes all associated valving, appurtenances, pump selection, on-site piping, grading, drainage improvements, site wall, and chlorination facilities. Other services provided are site plans, permitting, construction specifications, and bidding documents.

Surprise Foothills East -- Preliminary Engineering, Surprise, AZ — Project Manager. KHA is currently providing infrastructure design of a water campus, water distribution lines, and two well equipping plans for a conglomeration of developments in Surprise, Arizona. The project includes a 600,000-gallon welded steel water reservoir with a second 600,000-gallon tank planned for Phase Two of the developments and associated booster station. KHA is designing approximately 3.5 miles of 12- to 24-inch water distribution lines and two miles of 12-inch water transmission lines. The design includes all associated valving, appurtenances, pump selection, on-site piping, grading, drainage improvements, site wall, and chlorination facilities. Other services provided are site plans, permitting, construction specifications, and bidding documents.

Waddell Property, Surprise, AZ — Project Manager. KHA was hired by Rick Burton to provide preliminary site civil and traffic engineering services for this 30-acre, 120-unit residential subdivision.

CHRISTOPHER G. COLSON, P.E.

Professional Credentials

- Bachelor of Science, Civil Engineering, Arizona State University, 1995
- Master of Science, Civil Engineering, Arizona State University, 1996
- Registered Civil Engineer, California (#59964)
- Associate of the American Society of Civil Engineers

Special Qualifications

- Main areas of expertise have focused on roadway design, including horizontal and vertical alignments, development of construction, grading, drainage, and signage/stripping plans
- Proficient in AutoCAD v.14 and SoftDesk
- Responsibilities have included utility coordination, and various water, sanitary, and storm sewer designs

Relevant Experience

4th Street Improvements: Lower Buckeye Road to Western Avenue, Avondale, AZ — Project Engineer. As part of the 2006/2007 City of Avondale On-Call, KHA performed services for the 4th Street Improvement project. Improvements consist of pavement rehabilitation for one mile of 4th Street between Lower Buckeye Road to Western Avenue in the southern "old town" area. The local streets in this area were constructed around 1960 and pavement conditions are deteriorating. The structural pavement sections and weak subgrade soils are not sufficient to support the continuous increase in traffic. There is significant cracking and failures in the pavement at various locations. The purpose of this project is to reconstruct the pavement with an adequate structural section. It will also address the need to correct cross-slopes and ponding issues. A brief drainage report is being prepared to summarize existing conditions and different alternatives to alleviate drainage issues. The project will include reconstruction of curb, gutter, and sidewalks where needed. Drainage improvements include valley gutters and a retention basin, installation of new water lines, and new water and sewer stub-outs to vacant parcels. Utility coordination with City utilities, private utilities, and Maricopa County Environmental Services (MCES) will be included in this project. KHA is also providing traffic signing and pavement marking plans, as well as construction plans, specifications, and cost estimates.

Downtown Glendale Pedestrian Enhancements, Glendale, AZ — Project Engineer. KHA is leading the design of a 65 square block area of pedestrian safety and aesthetic enhancements in downtown Glendale. The project consists of repairing and replacing broken or unsafe sidewalk areas, replacing and adding sidewalk with concrete headers and brick accents, installing new curb ramps and inlaid brick crosswalks, street widening and reconstruction including turn lanes, adding extensive landscaping including trees, shrubs and irrigation. Several utilities will be relocated including overhead power. In addition several street furnishings will be installed or refurbished such as trash receptacles, benches, newspaper stands, and bike racks. The project also includes integrating significant public art through out the project. KHA is the prime consultant on the project and is leading the civil design and construction administration.

Yuma - Final Design of 24th Street between Avenue 6E and Avenue 9E, Yuma, AZ — Project Engineer. The City of Yuma selected KHA to provide roadway design services for the 24th Street Widening and Improvements project. This three-mile urban arterial roadway project consisted of widening 24th Street to a City standard primary arterial street section. The project was initiated by the City to improve the roadway prior to the opening of Gila Ridge High School and Arizona Western College in summer 2007. The project required project management services, utility coordination and relocation design, right-of-way engineering, public outreach, project coordination with the Yuma Unified School District and Arizona Western College, engineering studies (traffic, drainage, and geotechnical), and preparation of final construction documents including roadway sections, construction layout, grading and drainage, traffic signal, street lighting, and traffic control plans, project special provisions, and construction estimates. The project also involved a new traffic signal design and modifications to three signals.

Hohokam Drive: Doe Street to Calle Sonora, Nogales, AZ — Project Engineer. KHA is preparing roadway plans for this one-mile section of roadway. The construction plans included typical sections, pavement sections, roadway geometrics, pavement marking plans, and stormwater pollution prevention plans.

CHRISTOPHER G. COLSON, P.E.

Relevant Experience, continued

Civic Center Area Roadway Improvement Project, Rocklin, CA — Project Manager. KHA provided civil and traffic engineering services to the City of Rocklin for the Civic Center area roadway improvements. Currently, the City is constructing a new City Civic Center including a Town Hall, police station, and other governmental buildings. The area surrounding the site lacks sufficient pedestrian facilities. The City is widening the roads to provide a Class II bike lane and adding separated pedestrian routes. KHA services included roadway design, drainage design, signings and markings, street lighting design, and erosion control plans. Now in the construction phase, the project was completed in the winter of 2004-05.

Downtown 6th and F Street Parking Lot Reconstruction, Lincoln, CA — Project Engineer. KHA is providing civil engineering services for reconstruction of 6th and F Street Parking Lot for the City of Lincoln. KHA has generated parking lot conceptual layouts maximizing the parking stalls based on the existing parking lot area, and is preparing the subsequent construction documents. The project included the addition of raised landscaped islands, ADA provisions, including curb ramps and accessible parking layout, drainage improvements, pavement overlay, streetlight layout and signing and marking improvements.

Hickey Boulevard and Hilton Avenue Widening, South San Francisco, CA — Project Engineer. KHA provided civil, traffic and structural engineering services for the widening of Hickey Boulevard at Hilton Avenue. The project included widening of Hickey Boulevard, installation of two traffic signals, construction of retaining wall on Hilton Avenue to accommodate the widening, drainage improvements, removal of a pedestrian bridge structure, and signing and striping improvements. KHA's scope of services include surveying, conceptual plan development, preparation of contract documents, and attendance at a public meeting to discuss the project with the property owners.

Hickory Avenue Widening, Sacramento County, Sacramento County, CA — Former Project Manager. KHA provided civil, traffic, and electrical engineering services to Sacramento County for the Hickory Avenue Bike Lane project. The project included roadway widening for approximately 1.5 miles of Hickory Avenue between Greenback Lane and Oak Avenue. This project included preparing the PS&E for the roadway widening, drainage improvements, and signal modification. KHA was responsible for coordinating the project with utility companies, including any relocation of existing facilities in the project area. In addition, KHA worked directly with the community to identify critical issues.

Highway 12/121 and 8th Street East Intersection Improvements, Sonoma County, CA — Project Manager. KHA provided civil, traffic, electrical and survey services to Sonoma County for the improvements of Highway 12/121 and 8th Street East. The project included: widening both Highway 12/121 and 8th Street East for a left turn lane, and signaling the intersection. The widening required extensions of two existing double barrel box culverts, relocation of several minor drainage crossings, utility pole relocations and the relocation and signal coordination of existing railroad crossing gates. KHA coordinated the project with Caltrans, the utility companies and the Northwestern Pacific Railroad.

Holly Drive Reconstruction - Eleventh Street to Grant Line Road, Tracy, CA — Project Engineer. KHA was responsible for preparing a set of construction plans for the reconstruction of approximately one mile of collector roadway. The project included full reconstruction of the existing pavement section and replacement of curb, gutter and sidewalk, which was evaluated as sub-standard. The project also included relocating existing water and sewer lines through the project limits, as well as replacement/addition of a storm drain line through approximately ¾ mile.

North San Pedro Road and Civic Center Drive Intersection Improvements, San Rafael, CA — Project Manager. KHA has completed final design for the widening of North San Pedro Road at Civic Center Drive in order to address the traffic congestion issues near the Frank Lloyd Wright design Marin County Civic Center. The project included a traffic analysis of the intersection, development of intersection alternatives and presenting the design alternative to the public at several public meetings. KHA prepared the PS&E for the project, which included roadway widening, median modifications to add an additional left turn lane, curb extensions, drainage improvements, signal installation, street lighting installation and construction phasing for the busy intersection.

SHANNON R. AHARTZ, P.E.

Professional Credentials

- Bachelor of Science, Civil Engineering, South Dakota State University, 1991
- Registered Professional Engineer in Arizona and South Dakota
- Project Management
- Business Development/Marketing
- Team Leader/Personnel Supervision
- MicroStation, AutoCAD, GeoPak, Excel, Word
- General Civil Engineering
- Transportation Engineering
- President, Arizona Society of Professional Engineers
- Member, Arizona Public Works Association

Special Qualifications

- Over 16 years of experience in roadway design, including the preparation of preliminary and final designs of urban reconstruction and widening projects, rural expressways, and freeway interchange designs.
- Specializes in the horizontal and vertical designs of roadways, agency coordination, construction phasing, and construction administration.
- Served in many capacities on projects including project designer, project manager and team leader of a roadway design group
- Has led community meetings and public information workshops as related to projects

Relevant Experience

Downtown Glendale Pedestrian Enhancements, Glendale, AZ — Project Manager. Responsible for extensive coordination with all City departments and utilities for enhancement of 65-square block area of downtown. Responsible for roadway and sidewalk design and utility relocations. Responsible for incorporating extensive Public Art and landscaping amenities. Will also manage construction administration. KHA led the design of a 65-square block area of pedestrian safety and aesthetic enhancements in downtown Glendale.

This \$16M project consisted of repairing and replacing broken or unsafe sidewalk areas; replacing and adding sidewalk with concrete headers and brick accents; installing new curb ramps and inlaid brick crosswalks; street widening and reconstruction including turn lanes; and adding extensive landscaping including trees, shrubs, and irrigation. Several utilities were relocated including overhead power. In addition, several street furnishings were installed or refurbished such as trash receptacles, benches, newspaper stands, and bike racks. The project also involved integrating significant public art throughout the project area. KHA was the prime consultant, leading the civil design, electrical design, and construction administration. Construction was completed in October 2007.

59th Avenue Widening, Olive Avenue to Mountain View Road, Glendale, AZ — Project Manager. KHA is designing the widening of a one-half mile segment of 59th Avenue in Glendale, funded with federal Congestion Mitigation Clean Air Quality (CMAQ) funds. The widening consists of adding right-turn/merge lanes at the major entrances into Glendale Community College (GCC) and at Olive Avenue. Roadway layout incorporated dual left-turn lanes and future raised median and will accommodate the construction of future extension of a 54-inch storm drain. The project also included extensive coordination with City of Glendale, GCC, and SRP to resolve the challenges imposed by the relocation of City fiber optic lines and the 60" SRP irrigation line in close proximity to the GCC right-of-way. Coordination with GCC was especially important to ensure that the present GCC driveway modifications were incorporated in the 59th Ave. design, minimizing conform rework.

SHANNON R. AHARTZ, P.E.

Relevant Experience, continued

Catlin Court Alleyway Transportation Enhancement, Glendale, AZ — Project Manager. KHA is currently working with the Sherman Group to develop plans for improvements to the Alleyways in the Historic Catlin Court District in Glendale. The project involves developing alignments and features that reduce vehicular traffic and encourage pedestrian and bicycle traffic through the alleyways. KHA is responsible for coordinating the design and relocation of all utilities within the project, as well as developing the grading and staking plans for the improvements. KHA will also perform the Construction Administration of the utility relocation work during the construction phase.

Glendale Community College - 59th Ave Widening and Entrance Improvements, Glendale, AZ — Project Manager. KHA is providing roadway and intersection design services to two intersections/entrances and approximately 600 feet of roadway to improve Vogel and Via Gaucho streets in conjunction with the City of Glendale improvements to 59th Avenue. The design includes adding an additional lane to the south side of Vogel Avenue to accommodate an ultimate five-lane configuration at the intersection with 59th Avenue. The additional lane also requires relocating a large existing Salt River Project (SRP) irrigation structure, and modifications to the traffic signals, and marking and signing. The improvements to Via Gaucho Avenue include relocating the existing entrance onto 59th Avenue to the north which will straighten the horizontal alignment of Via Gaucho. The existing Via Gaucho roadway will be removed and re-graded back to a natural state. Design services include roadway and intersection design, drainage design, utility coordination, Traffic signal modification design, signing and marking design.

Copper Basin Road Design - Phase 1, Prescott, AZ — Project Engineer. KHA recently completed planning and final design services for two miles of Copper Basin Road. This segment includes urban roadway design, intersection design, accommodation of nearly 200 driveways adjacent to the roadway, sidewalk and retaining wall design, water and sewer design for entire segment including new services to properties, storm drain design, and extensive utility relocation coordination including relocation of 69KV and 12KV power, gas main with services, and communication relocations. Intense public involvement is an ongoing element of this project.

Loop 101 Frontage Road, Peoria, AZ — Project Manager. KHA was selected to provide preliminary and final design services for the new construction of this 1.2-mile frontage road. The project is located adjacent to southbound Loop 101 between Northern Avenue and Olive Avenue within the City of Peoria. KHA prepared a Project Assessment (PA), as well as final design services for the new construction of a two-lane roadway and modifications of the existing southbound Northern Avenue off-ramp and realignment of the southbound Olive Avenue on-ramp. Project tasks include traffic and environmental studies, roadway and drainage design, traffic signal, street lighting, landscaping, sanitary sewer, soundwall, and FMS relocation. The project is part of a mixed retail/commercial/residential development and required intensive coordination between ADOT, City of Peoria, developers, and utility companies.

Park Avenue Road Design, Prescott, AZ — Project Engineer. Responsible for reconstruction of one-mile segment of collector street. Location in historical district required extensive coordination with historical society and special design considerations. Also involved in close coordination with adjacent elementary school and residents in historical district. KHA is providing final design services for a 3/4-mile major collector street. The design accommodates the needs of a historical district, an elementary school and a large Presbyterian church which are all present along the corridor. Elements of the design include: urban roadway design, intersection design, traffic calming design, water and sewer design for entire corridor, utility relocations, and an extensive public involvement process.

Rittenhouse Road to Hawes Road Realignment, Queen Creek, AZ — Project Manager. KHA will design 2.5 miles of 36- and 24-inch sanitary sewer alignment for the project. The project involves crossing of two sets of railroad tracks with a major drainage channel, which will require jack and bore construction. Additional utility crossings include the Kinder Morgan liquid gas line, natural gas lines, communication lines, telephone lines, and overhead power. Ties to the existing line in Rittenhouse Road and Sossaman Road are being designed to meet upcoming developments that require a fast-track design of Phase I.

DONALD M. DURGIN, P.E.

Professional Credentials

- Bachelor of Science, Civil Engineering, University of Nevada, Las Vegas, 2000
- Master of Science, Civil Engineering, University of Nevada, Las Vegas, 2004
- Professional Engineer in Nevada and Texas

Special Qualifications

- Experience in a variety of transportation related projects.
- Assisted in the preparation of project plans, specifications and estimates for several roadway design projects including freeways and interchanges, urban and rural collectors, and preliminary transit corridor studies.
- Performed geometric design calculations and developed roadway plans, profiles, typical sections, quantities, and earthwork

Relevant Experience

Bonanza Trail, Las Vegas, NV — Analyst. Mr. Durgin's responsibilities include research of design standards and project specific criteria, alignment design, typical sections, coordination and assignment of design staff work packages, and quantities and estimates. KHA prepared a feasibility study to determine the recommended alignment and typical cross-sections of the Bonanza Trail and has just designed the trail. The study included reviewing the existing and proposed conditions of US 95 and determining the available space for trail improvements. This project includes two structural grade crossings (bridge overpass and tunnel underpass) that will be provided to separate the trail from major roadways. The trail corridor includes a 12-foot-wide paved surface and lighting. This project utilizes Southern Nevada Public Lands Management Act funds. This project included extensive coordination with the Nevada Department of Transportation, Nevada Power, Bureau of Land Management, and numerous adjacent traffic.

Nevada DOT, Freeway and Arterial System of Transportation (FAST) Stages I and II, Las Vegas, NV — Analyst. KHA provided system manager services to NDOT that included program management, schedule review, construction support and TMC design. The project employed open system concepts and comprises a Windows-based, client/server architecture that utilizes state-of-the-art Pentium processor technology. System elements include fiber-optic and wireless radio-based communications designed to accommodate advanced traffic flow detection sensors (radar, video image and inductive loop based detection), CCTVs, ramp meters, dynamic message signs, highway advisory radio (HAR) and trailblazers covering a 17 mile Las Vegas Valley freeway corridor. The central system features automated incident detection and management, a video display wall, an advanced traveler information system (ATIS) component, and an archived data user service (ADUS) component.

North Las Vegas Traffic Capacity and Safety (7th, 8th, 9th, 10th, 12th, 14th & 16th Year), North Las Vegas, NV — Analyst. Assisted with preparation of plans, specifications, and estimates for several traffic signals, installation of fiber optic cable, and minor roadway improvements. Traffic signal and intelligent transportation system design are important elements to nearly all roadway design projects. KHA has provided traffic signal and ITS design for the City of North Las Vegas over the last 10 years.

KHA was the design consultant for the North Las Vegas Traffic Capacity and Safety Improvements Projects for 7th year, 8th year, 10th year, 12th year, 14th year and 16th year. These projects included traffic signal warrant analyses, intersection geometric layout, traffic capacity analysis, signing and striping, median modifications, traffic signal design and power and communication design for over 20 intersections. In addition, over four miles of traffic signal interconnect was designed. KHA also provided bid phase and construction phase services for these projects.

Turnberry Town Square Elevated Left-Turn, Clark County, NV — Analyst. KHA has completed the design and construction documents for the grade-separated access to the Town Square Development in Clark County, Nevada. The grade-separated access provides an elevated left-turn heading north on Las Vegas Blvd into the Town Square Development. The structure consists of a three span (120'-180'-120') cast-in-place post-tensioned concrete box. The structure is located on an alignment with a 205' radius horizontal curve and therefore has provided some unique design challenges. KHA is also responsible for the roadway work approaching the grade-separated access. The construction of the project is just getting underway.

DONALD M. DURGIN, P.E.

Relevant Experience, continued

TxDOT Austin SH 71 / US 183 Interchange, Austin, TX — Project Engineer. KHA is preparing plans, specifications and estimate for this \$400 million four-level, fully directional interchange adjacent to Austin's Bergstrom International Airport. We revised the schematic to convert the five-level layout to four levels with the same capacity that resulted in major construction cost savings. The project includes eight direct connectors, two mainlane branches, collector-distributor roads, and frontage roads. Other elements incorporated into the design are drainage, including detention ponds; signing and pavement markings; signals; ITS; TCPs; right-of-way mapping; geotechnical; surveying; electronic toll collection; illumination; retaining walls; landscaping; and streetscaping. The project requires coordination with two adjacent consultants and a TxDOT Area Office for tie-in to three adjacent sections.

US 95 Widening, Project 2 and 4, Las Vegas, NV — Team Member. Mr. Durgin assisted with work zone and traffic control drawings. He was also responsible for grading and excavation quantities, and assisted with other roadway quantity calculations. KHA was selected for the reconstruction of 2.2 miles of US-95 and three interchanges. Services included provided engineering design of mainline freeway, ramps, detours and temporary pavement.

Wetlands Park Scenic Route, Clark County, NV — Analyst. KHA prepared design plans for a five-mile scenic corridor through the Clark County Wetlands Park. The scenic corridor included a two-lane roadway, an equestrian trail, and a shared-use path that ties into the River Mountains Loop Trail. A section of the scenic road serves as the levy for four ponds currently designed by Ducks Unlimited. The alignment for the corridor was placed to create a unique experience for visitors and to calm traffic. Scenic pull-outs will be provided at multiple locations along the route. Specific attention was placed on soil stability within the Wetlands Park as well as minimizing the impacts of water that will overtop certain sections of the roadway. KHA also prepared a 404 Permit for the roadway, trails, interpretive center, and habitat restoration components.

BRYAN D. PATTERSON, P.E., AICP, CPM

Professional Credentials

- Master of Public Administration, Arizona State University, 1981
- Master of Science, Civil Engineering (Partial completion), Arizona State University, 1985
- Bachelor of Science, Urban Planning, Iowa State University, 1975
- Registered Professional Civil Engineer in Arizona
- Certified Public Manager in Arizona
- Member, American Institute of Certified Planners (AICP)
- Member, Institute of Transportation Engineers (ITE), Arizona Section
- Member, American Association of Public Works

Special Qualifications

- Over 30 years of planning, design, and construction management experience in Iowa and Arizona.
- Responsibilities have included professional services solicitation, contract negotiation, contract management, project scheduling, and dispute resolution for private sector services to design and build transportation infrastructure, utility systems, and airport facilities.
- Work experiences have involved every aspect of planning, design, and construction, including conceptual studies, master planning, project design, land acquisition and subdivision, utility coordination, construction management and inspection, budgeting, and staffing. Types of construction have included freeways, bridges, residential streets, water lines, sewer lines, storm drains, utilities, airport facilities, and buildings.
- Thirteen years of municipal public works administration and engineering experience as former Public Works Director and City Engineer for the City of Chandler.
- Thirteen years' experience as Capital Program Manager and Resident Construction Engineer for Arizona Department of Transportation.

Relevant Experience

Casa Grande General Plan Update, Casa Grande, AZ — Project Manager. KHA is preparing the transportation, drainage, natural resources, environmental, water, and wastewater elements for the Casa Grande General Plan Update. This planning effort will extend the General Plan horizon year from 2010 to the year of 2020. EDAW, Inc. is the lead consultant with assistance from KHA, Elliot Pollack @ Company (economic analyses), and AKROS (historic preservation). The project commenced in February, 2008 and a draft update for public comment will be published in late 2008.

Downtown Phoenix Urban Form Project, Phoenix, AZ — Project Engineer. KHA is working with Dyett & Bhatia on the high-profile Downtown Phoenix Urban Form project. This project will result in revised zoning ordinances and design standards that promote the creation of a dynamic downtown where people want to live, work, and play. KHA's role in the project is to develop a circulation master plan that defines how to modify the existing transportation network to better balance the needs of pedestrians, bicyclists, transit, and cars as downtown grows and evolves into a more urban environment. KHA is also preparing on-street and off-street parking strategies for the downtown area. This project includes several rounds of stakeholder interviews, charrettes with City staff, and community workshops to obtain input from stakeholders, staff, and the public.

Elliot Road Corridor Improvement Study, Maricopa County, AZ — Project Manager. The purpose of this study is to develop a consensus-driven vision for improving Elliot Road between Power Road and the CAP canal, identify existing corridor deficiencies and future requirements, establish consistent roadway design and performance criteria, and generate preliminary design plans to meet the established future needs. The recommended corridor improvements will include facility type, number of lanes, roadway cross-section and right-of-way requirements, traffic control, access, drainage, and roadway alignment to safely and efficiently accommodate future travel demands. This study will provide the County and other responsible jurisdictions with a future "footprint" of Elliot Road and the implementation time frame and phasing of the identified roadway improvements. This study will also develop access management strategies that will include policies and guidelines to ensure the preservation of this regionally significant corridor.

BRYAN D. PATTERSON, P.E., AICP, CPM

Relevant Experience, continued

Richmond Transit Village Parking Garage Final Design, Richmond, CA — Project Engineer. KHA was engaged by the Richmond Community Redevelopment Agency (RCRA) to provide project management and final design services for a new 750-space parking facility at the Richmond Intermodal BART Station in Richmond, California. A critical element of the Richmond Transit Village, the parking garage will increase total parking supply at the Richmond Intermodal BART Station by approximately 170 spaces and consolidate all BART parking in one location. This will effectively clear the east side of the BART Station site, now occupied by surface parking, for development of over 100 additional units of housing and access/circulation provisions for BART patrons. This new 750-space parking garage will then be owned, operated, and maintained by BART.

Relevant Experience Prior to Joining Kimley-Horn

Arizona Avenue Reconstruction Project, Chandler, AZ — Prior to joining KHA, Mr. Patterson negotiated an intergovernmental agreement with ADOT to finance \$11.5 M in roadway improvements in exchange for city acceptance of SR 87 as a city street. He also managed the design, utility relocation, right-of-way acquisition, and construction inspection for the project.

Arizona Avenue/Chandler Boulevard Intersection Reconstruction Project, Chandler, AZ — Prior to joining KHA, Mr. Patterson provided engineering and management oversight for the \$10M intersection reconstruction project using the Construction Manager at Risk contracting process. Project included storm drain installations, water and sewer line upgrades, and substantial landscape enhancements. This was one of the first projects in the Phoenix metro area completed as part of the Proposition 400 Regional Transportation Plan.

Germann Road Improvement Project, Chandler, AZ — Prior to joining KHA, Mr. Patterson provided engineering and management oversight for the \$20M roadway widening and relocation project using the construction manager at risk contracting process. Project included several miles of water and reclaimed water transmission mains. This project was recognized with a management innovation award from the American Public Works Association.

Kyrene Road, Dobson Road, McQueen Road, and Gilbert Road Improvement Projects, Chandler, AZ — Prior to joining KHA, Mr. Patterson provided engineering and management oversight on this series of projects needed in conjunction with the ADOT Loop 202 Santan Freeway project. These projects involved major water, sewer, storm drain, and private utility relocation work and a number of intergovernmental agreements with Maricopa County and the ADOT.

Ray Road and Warner Road Intersection Reconstruction Projects, Chandler, AZ — Prior to joining KHA, Mr. Patterson provided engineering and management oversight for these intersection improvements. These were the first two arterial street intersections in the Phoenix metro area to incorporate "queue jumpers" for future bus rapid transit service to be funded as part of the Proposition 400 Regional Transportation Plan.

Red Mountain Freeway Project, AZ — Prior to joining KHA, Mr. Patterson served as resident construction engineer on a \$40 M freeway construction project. Services included interchanges, freeway mainline, utility relocations, and environmental remediation. The project involved in-house inspection, survey, and materials testing.

MICHAEL L. GRANDY, P.E.

Professional Credentials

- Bachelor of Science, Civil Engineering, Brigham Young University, 2001
- Master of Science, Civil Engineering, Brigham Young University, 2002
- Registered Professional Engineer in Arizona (#43294; issued 9/27/05) and California (#66504, issued 1/30/04)
- Institute of Transportation Engineers (ITE)
- American Planning Association (APA)
- Intelligent Transportation Society of America (ITS America)

Special Qualifications

- Experience includes circulation master plans, corridor studies, signal warrant analyses, design concept reports, pedestrian/safety studies, accident analysis, traffic calming devices, parking, traffic signal design, public outreach, advanced traveler information systems, ITS communications interconnect design, and various other transportation related projects
- Proficient in the use of Synchro, ArcGIS, SIDRA, and AutoCAD software packages

Relevant Experience

Avondale City Center Specific Area Plan, Avondale, AZ — Project Engineer. KHA is working with Dyett & Bhatia on the Avondale City Center project, located along Avondale Boulevard, between I-10 and the City Hall campus. This project will result in a detailed land use plan and design standards that promote City's vision for this area. KHA's role in the project is to analyze the infrastructure and transportation systems that will serve the study area. Each land use alternative presented will be evaluated to determine the capacity and needs of the roadway, water, and sewer networks. KHA will provide recommendations for modification of the existing networks to better balance the needs and demands of this evolving core area. This project includes stakeholder interviews, bus tours, and charrettes and workshops with City staff.

Downtown Phoenix Urban Form Project, Phoenix, AZ — Project Manager. KHA is working with Dyett & Bhatia on the high-profile Downtown Phoenix Urban Form project. This project will result in revised zoning ordinances and design standards that promote the creation of a dynamic downtown where people want to live, work, and play. KHA's role in the project is to develop a circulation master plan that defines how to modify the existing transportation network to better balance the needs of pedestrians, bicyclists, transit, and cars as downtown grows and evolves into a more urban environment. KHA is also preparing on-street and off-street parking strategies for the downtown area. This project includes several rounds of stakeholder interviews, charrettes with City staff, and community workshops to obtain input from stakeholders, staff, and the public.

Elliot Road Corridor Improvement Study, Maricopa County, AZ — Deputy Project Manager. The purpose of this study is to develop a consensus-driven vision for improving Elliot Road between Power Road and the CAP canal, identify existing corridor deficiencies and future requirements, establish consistent roadway design and performance criteria, and generate preliminary design plans to meet the established future needs. The recommended corridor improvements will include facility type, number of lanes, roadway cross-section and right-of-way requirements, traffic control, access, drainage, and roadway alignment to safely and efficiently accommodate future travel demands.

Phoenix BioMedical Campus Comprehensive Development Plan Transportation Study, Phoenix, AZ — Project Manager. KHA is providing traffic engineering services to address transportation and parking issues related to the proposed Medical Education Building and Arizona Biomedical Collaborative II as part of the Comprehensive Development Plan for the 28-acre Phoenix Biomedical Campus in downtown Phoenix. The transportation study includes analyzing siting schemes, conducting a parking study, and performing traffic and cost analyses.

Giss Parkway/I-8 Westbound Ramps Signal/Roundabout Needs Study, Yuma, AZ — Senior Engineer. The City of Yuma selected KHA to conduct a study to determine if a traffic signal or roundabout is needed now or in the near future at the Giss Parkway/I-8 Westbound Ramps intersection. The study included a review of existing conditions, a delay study, signal warrant analyses, capacity analysis, roundabout analysis, and a benefit-cost comparison between a signal and a roundabout.

MICHAEL L. GRANDY, P.E.

Relevant Experience, continued

Casa Grande General Plan Update, Casa Grande, AZ — Project Engineer. KHA is preparing the transportation, drainage, natural resources, environmental, water, and wastewater elements for the Casa Grande General Plan Update. This planning effort will extend the General Plan horizon year from 2010 to the year of 2020. EDAW, Inc. is the lead consultant with assistance from KHA, Elliot Pollack, and AKROS.

4th Avenue and 16th Street Corridors Study, Yuma, AZ — Deputy Project Manager. The City of Yuma selected KHA to evaluate existing and future traffic conditions along multiple corridors representing some of the most congested roadways in Yuma. The purpose of the study was to recommend improvements that provide acceptable and safe traffic operations while also preserving local business access. The KHA team submitted the Final Report in May 2007 and the recommended improvements were incorporated into the City's capital improvement program.

On-Call Review of Traffic Impact Analysis Reports, Yuma, AZ — Project Engineer. As part of its On-Call Traffic Engineering Services contract with the City of Yuma, KHA has assisted the City in reviewing numerous traffic impact analysis (TIA) reports. The purpose of the review is to verify that the analysis documented is adequate, given the type and intensity of development being proposed, and that all recommendations appear reasonable, conform to City standards, and are not anticipated to have a negative impact on other projects.

Phoenix Sky Harbor International Airport Automated Train (aka Automated People Mover), Phoenix, AZ — Project Engineer. KHA is providing planning and design services for the Automated Train (AT) project at Sky Harbor Airport. As part of that project, an East Ground Transportation Center (GTC) is proposed at the corner of Washington Street and SR-153 (44th Street) to provide access via the AT to the airport terminals, the AT Maintenance facility, and the nearby light-rail station. As part of the GTC master planning effort, KHA conducted an analysis of the projected traffic demand and capacity and evaluated the impacts on circulation of various proposed GTC layouts.

Expressway Needs Analysis, Yuma, AZ — Project Manager. The purpose of the needs analysis is to develop criteria for evaluating the need for expressways in Yuma and then to evaluate the City's TransCAD travel demand model to determine if the need is demonstrated for expressways in the foreseeable future.

Area B Neighborhood Through-Street Assignment Study, Yuma, AZ — Deputy Project Manager. KHA evaluated the existing right-of-way assignments in a 0.75 square mile residential area of Yuma known as Area B and recommended changes to intersection traffic control to improve traffic operations and promote safety. The study included compiling an inventory of existing traffic control devices, observing existing conditions, performing signal warrant and capacity analyses, conducting crash analyses, and evaluating speed mitigation alternatives.

Yuma Union High School 4th Street Abandonment, Yuma, AZ — Project Engineer. KHA performed a traffic analysis for the potential abandonment of 4th Street between 7th Avenue and 8th Avenue adjacent to Yuma Union High School. The analysis included delay studies, capacity analysis, and evaluation of pedestrian routes and crosswalk usage.

Salt Lake Downtown ATIS Concept Report, Salt Lake City, UT — Project Engineer. KHA was selected by UDOT to develop a comprehensive plan for providing traveler information for motorists leaving the downtown Salt Lake City area. Project tasks include a scanning tour of existing advanced traveler information systems (ATIS) in Phoenix and Las Vegas, an inventory of existing ATIS devices, review of ATIS technology alternatives, a stakeholder workshop, and the preparation of a concept report that includes locations of proposed devices, communications strategies, planning-level cost estimates, and implementation phasing.

I-80/Ashby Roundabout Interchange, Emeryville, CA — Analyst. Responsible for performing the capacity analysis of the roundabouts and recommended design changes to mitigate potential traffic and safety issues. KHA completed a traffic study for the replacement of the existing I-80/Ashby interchange. The interchange connects to streets in Emeryville and Berkeley but did not provide a full range of traffic movements and lacked the capacity for future increases in traffic. KHA analyzed whether to replace the interchange with a roundabout interchange.

Phoenix Regional ITS Fiber Optic Backbone – Phase A & B, Phoenix, AZ — Deputy Project Manager. KHA provided the City of Phoenix with design plans, special provisions, and construction cost estimates for the construction of the first phase of a 50-mile fiber optic communications backbone for the City's Intelligent Transportation System. This backbone will facilitate communication between City facilities as well as the interconnection of numerous traffic signals, CCTV cameras, variable message signs (VMS), and other field devices.

SUSAN E. ANDERSON, P.E., PTOE

Professional Credentials

- Master of Science, Transportation Engineering, University of Texas, Austin, 1994
- Bachelor of Science, Civil Engineering, University of Arizona, 1991
- Professional Engineer in Arizona
- Professional Traffic Operations Engineer
- Institute of Transportation Engineers (ITE)
- American Society of Civil Engineers (ASCE)
- Women's Transportation Seminar

Special Qualifications

- Timing Traffic Signal Using TEPAC, PASSER, TRANSYT, and NETSIM; University of Wisconsin-Madison, January 1997.
- Advanced TEPAC Application Techniques, University of Wisconsin-Madison, January, 1997.
- FHWA Older Driver Highway Design Handbook Workshop, Solutions for Safety and Mobility Conference, May 1999.

Relevant Experience

Avondale City Center Specific Area Plan, Avondale, AZ — Project Manager. KHA is working with Dyett & Bhatia on the Avondale City Center project, located along Avondale Boulevard, between I-10 and the City Hall campus. This project will result in a detailed land use plan and design standards that promote City's vision for this area. KHA's role in the project is to analyze the infrastructure and transportation systems that will serve the study area. Each land use alternative presented will be evaluated to determine the capacity and needs of the roadway, water, and sewer networks. KHA will provide recommendations for modification of the existing networks to better balance the needs and demands of this evolving core area. This project includes stakeholder interviews, bus tours, and charrettes and workshops with City staff.

Avondale Gateway Traffic Impact Analysis, Avondale, AZ — Project Manager. KHA is currently preparing a traffic impact analysis report for the Avondale Gateway mixed-use development, located on the southeast corner of I-10 and Avondale Boulevard in Avondale, AZ. The site includes office, retail and hotel land uses on 45 acres. The report includes analysis at the I-10 and Avondale Boulevard interchange, as well as a signal warrant analysis at the intersection of Avondale Boulevard and Roosevelt Street.

Yuma Expressway Access Study, Yuma, AZ — Project Engineer. The City of Yuma selected KHA in 2006 to develop concepts that illustrate how traffic and access will be accommodated on the five expressways called for in the City's Major Roadways Plan. KHA evaluated various at-grade and grade-separated potential solutions to determine what type of intersection will likely be needed to accommodate projected traffic volumes and future access needs at each location where the proposed expressways will intersect with a principal or minor arterial street. To provide staff and the advisory group with visual representations of the proposed concepts, preliminary concept design drawings were then developed for one of the expressways – 32nd Street – that graphically showed the characteristics of the roadway and how access to each adjacent property would be managed. Based on the findings of the analysis, indirect left-turns (also known as Michigan left-turns) were proposed as the appropriate way to accommodate both the traffic and access needs on 32nd Street if the roadway is to operate as an expressway.

Ironwood Drive/Gantzel Road Improvements, US 60 to Hunt Highway, Pinal County, AZ — Project Engineer. KHA provided preliminary and final design services for 16 miles of Ironwood Drive from US 60 to Ocotillo Road and from Combs Road to Hunt Highway, widening its current two-lane section into a six-lane roadway with sections of raised median, curb and gutter, and sidewalk. The project included a new 3-span AASHTO precast girder bridge to span the Central Arizona Project (CAP). KHA prepared a Design Concept Report (DCR) and Access Management Plan, as well as final design services for the interim four-lane roadway and preliminary design for the ultimate six-lane roadway. Drainage improvements included pavement drainage and culvert design for offsite flows. The project area is developing rapidly, with adjacent commercial and residential developments being planned and constructed. The project involved coordination with developers and numerous agencies. Additional information can be found at www.IronwoodProject.com.

SUSAN E. ANDERSON, P.E., PTOE

Relevant Experience, continued

Aviara Residential Development, Phoenix, AZ — Project Engineer. KHA performed traffic engineering services for the proposed Aviara residential development located on the northwest corner of 24th Street and Southern Avenue in Phoenix, Arizona. The purpose of the traffic analysis was to assess the need for a traffic signal at the intersection of 22nd Street and Southern Avenue, which will serve as a main entrance into the Aviara development. The proposed development will consist of 315 single-family and 470 multi-family dwelling units on approximately 106 acres. The purpose of the traffic study was to determine the trip generation for the site, assign the site-generated trips to the site access points, and conduct a peak hour signal warrant evaluation for the intersection of 22nd Street and Southern Avenue.

Cave Creek School District 56th Street and Jomax Road Complex, Cave Creek, AZ — Project Engineer. The Cave Creek School District proposed to develop a four campus school complex at the intersection of 56th Street and Jomax Road in the City of Phoenix. KHA staff directed the preparation of the traffic analysis and Master Street Plan to define the necessary improvements to adequately accommodate the projected student population for the campus. The project required coordination between multiple review agencies including the Cities of Phoenix and Scottsdale as well as the State Land Department.

Del Rio Ranch Traffic Impact Analysis, Maricopa County, AZ — Project Manager. KHA prepared a traffic impact analysis for the Del Rio Ranch master planned development located on the north side of Lower Buckeye Road between 115th Avenue and the Agua Fria River in Maricopa County, Arizona. The proposed development consists of 1,447 single-family homes and two commercial parcels on approximately 410 acres. The traffic report documented the traffic impacts of the proposed development on the surrounding street network. A total of 16 intersections were evaluated to determine the appropriate traffic control required upon buildout of the site in 2006, as well as for future 2020 traffic conditions. Peak hour signal warrant criteria was evaluated for the horizon years for the "with" and "without" site scenarios. Signalization was recommended at 11 intersections by year 2020.

Scottsdale 101 Parking Management Study, Phoenix, AZ — Project Manager. Prepared a parking study for the proposed Scottsdale 101 commercial/retail center proposed on the southwest corner of Scottsdale Road and Loop 101 freeway in Phoenix, Arizona. Parking analysis was conducted according to the City of Phoenix guidelines to ensure that adequate parking is available within reasonable walking distance of each land use. The study addresses the parking provided at the site, the required parking per City code, and available parking within reasonable walking distance. Two analyses were performed: one considering the entire site as a retail shopping center, and another considering the peaking characteristics of the site and the various land uses.

Desert Canyon Middle School and Elementary School Complex, Scottsdale, AZ — Project Engineer. KHA managed the development of extensive modifications to the circulation system serving the Desert Canyon school complex in the Scottsdale School district. The proposed addition of new city facilities adjacent to and sharing access to the school site required extensive analysis and development of alternative circulation concepts to facilitate the existing school activities and proposed recreation uses. This project included an extensive outreach and public presentation process.

BRENT C. CROWTHER, P.E.

Professional Credentials

- Master of Science, Civil Engineering, Virginia Polytechnic Institute and State University, 2001
- Bachelor of Science, Civil Engineering, Brigham Young University, 1999
- Registered Professional Engineer in Arizona, Utah, and California

Special Qualifications

- Transportation planning experience includes bicycle and pedestrian planning, corridor studies, public involvement, and developing and analyzing alternative concepts for both arterial and freeway corridors.
- Traffic engineering experience includes traffic signal interconnect design, freeway management system design, developing coordinated timing plans on multi-signal corridors, evaluating alternative improvements analysis, and developing operational concepts.
- ITS design experience includes the freeway management system in Albuquerque, NM, the City of Peoria, Arizona signal interconnect, and the City of San Jose, California signal interconnect
- Regional ITS planning experience includes the Statewide Joint Operations Center for Nebraska

Relevant Experience

Arizona DOT, Statewide Bicycle/Pedestrian Plan, Phoenix, AZ — Project Engineer. Responsible for data analysis of roadway data used to develop a Bicycle Suitability score of ADOT roadways; development of a Bicycle User Map; and website enhancements that provided general information on bicycling and walking to the public. KHA was selected to provide a long-term plan for a statewide system of shared roadways and bicycle/pedestrian facilities that will guide ADOT transportation decisions relating to bicycle and pedestrian travel, planning, and facility development for state, regional, and local jurisdictions. This project also included stakeholder involvement with public agency representatives from throughout the state. Many differing opinions were strategically balanced to reach agreement on what was appropriate to improve bicycling and walking statewide. KHA was also selected for Phase 2 of the Statewide Bicycle and Pedestrian Plan. The project included the development of a Pedestrian Plan and Design Guidelines, a Bicycle User Map, a Statewide Bicycle and Pedestrian Education Program Plan, a Statewide "Share the Road" Guide, website enhancements, a funding plan, and a Maintenance and Facility Request System.

Pima County Safe Routes to School, Pima County, AZ — KHA was recently selected to develop and implement Safe Routes to School programs at seven pilot schools in the Tucson Metropolitan Area. This pilot program includes the development of a pedestrian safety program geared towards second graders, a bicycle safety program geared towards fourth graders, the identification of existing walking and biking routes and any deficiencies associated with them, and a series of minor engineering improvements that can be made at each school.

Regional Concept of Transportation Operations, Maricopa County, AZ — Analyst. KHA developed a Regional Concept of Transportation Operations (RCTO) for the Phoenix metropolitan region. The need for developing a comprehensive RCTO was recognized during the development of the MAG Intelligent Transportation Systems (ITS) Strategic Plan Update, April 2001, for which KHA was the consultant.

Pinal County Corridors Definition Study, Pinal County, AZ — Project Engineer. KHA was selected by ADOT Transportation Planning Division to perform this large study effort. The principal purpose of the Pinal County Corridors Definition Study is to perform a transportation planning study to further define the corridor recommendations for the East Valley and Apache Junction/Coolidge corridors. The successful completion of the Pinal County Corridors Definition Study required that technical recommendations and investment criteria be established so ADOT and the State Transportation Board (STB) can determine whether the two candidate corridors should be added to the State Highway System. In addition, this study included sufficient detail to provide a basis for the future establishment of geometric roadway alignments and corridor design concepts, the preservation of right-of-way, and the identification of required environmental studies. This information, along with acceptance into the State Highway System, will provide a clear road map for the programming, design, and construction of the East Valley and Apache Junction/Coolidge Corridors.

BRENT C. CROWTHER, P.E.

Relevant Experience, continued

Coolidge/Florence Regional Transportation Study, Coolidge/Florence, AZ — Project Engineer. KHA serves as a major subconsultant to Lima & Associates for the Florence/Coolidge Small Area Transportation Study (SATS). The purpose of the SATS is to develop short-, mid-, and long-range multimodal transportation plans for the combined planning areas of Florence and Coolidge as well as plans for each jurisdiction. SATS will include coordination with jurisdiction staff, elected officials, and the general public and will produce implementation plans and funding strategies for implementation of future transportation improvements.

Southeast Arizona Regional Transportation Profile, Cochise, Santa Cruz, and Pima, AZ — Project Engineer. Responsible for compiling and documenting existing conditions information. Contributed to identification of projects based upon needs analysis. As a major subcontractor to CSI, Inc., KHA is primarily responsible for project management support, traffic analysis, and development of preliminary roadway design concepts for 700+ miles of state highway in southeastern Arizona. As part of this project, KHA is compiling available data on existing roadway conditions, travel data, crash history, traffic operations, access management, multi-modal and alternative mode activities, and Title VI analysis so that near-term route needs and deficiencies can be identified. KHA will also review programmed/planned roadway improvements, available travel demand volumes, traffic operations, access management, and multi-modal and alternative mode needs for 2030.

Evaluation of Traffic Signal Coordination between ADOT, City of Phoenix, and City of Chandler (Before/After Study), Maricopa County, AZ — Project Engineer. Under our MAG On-Call contract, KHA evaluated the impact and assessed the benefits of traffic signal timing plans that were implemented on Ray Road and Chandler Boulevard. These corridors pass through the jurisdictions of Phoenix, Chandler, and ADOT. KHA performed a before and after travel time and delay study on these corridors. Travel time and delay data were collected prior to implementation of new signal timing plans (before study). A second travel time and delay data collection effort occurred after the timing plans were implemented (after study). Travel time data collection efforts included the utilization of 'floating car technique' equipped with Global Positioning System. Intersection delay data collection and analysis was performed using the HCM methodology for field measurement of intersection control delay.

FHWA - RCTO for Pima Association of Governments (PAG), Pima County, AZ — Project Engineer. The Pima Association of Governments and its member agencies are developing a plan for coordinated transportation operations—that is, mapping out specific strategies of how transportation agencies, public safety, emergency services, transit, and others can work better together to get the most benefit out of the region's existing systems and transportation resources. The RCTO will establish goals for transportation operations over a three to 10-year period and identify the relationships, procedures, activities, and resource arrangements required to achieve the goals. The RCTO serves three important purposes: a) Presents a vision for future transportation systems management based on a holistic view of the region; b) Garner's commitment from agencies and jurisdictions for a common regional approach to transportation management and operations; c) Strengthens the linkage between regional planners and traffic operations managers by providing a coherent strategy for consideration in the planning process. This project is funded by the FHWA which selected Pima Association of Governments as one of four demonstration sites for the Regional Transportation Operations Coordination and Collaboration Demonstration Initiative. KHA wrote the competitive proposal to FHWA for PAG.

Carefree Highway, I-17 to Scottsdale Road, Access Control and Corridor Improvement Study, Phoenix, AZ — Project Engineer. The purpose of this study is to develop a consensus driven vision for the Carefree Highway Corridor, identify corridor deficiencies and requirements, establish consistent roadway design and performance criteria, and generate technically feasible alternatives designed to meet the established needs. The recommended alternative will address the facility type, number of lanes, roadway cross-section and right-of-way requirements, traffic control, access, cross drainage, and centerline alignment along the Carefree Highway corridor that will eventually be required to safely and satisfactorily accommodate future travel demands within the corridor. This study will provide the County and other jurisdictions with a future "footprint" of the Carefree Highway and the implementation time frame and phasing of the identified roadway improvements. This study will also develop a detailed Access Management Strategy and Implementation Plan that will include strategies and guidelines to ensure the preservation of this regionally significant corridor. By implementing a high level of access management in conjunction with other transportation improvements, the corridor's functionality should remain intact thus mitigating the degradation process.

JOHN C. KISSINGER, P.E., PTOE

Professional Credentials

- Bachelor of Science, Civil and Environmental Engineering, University of Wisconsin, Madison, 1986
- Professional Civil Engineer in Arizona, California, Iowa, Kansas, Missouri, Nevada, Utah, and Wisconsin
- Registered Professional Traffic Operations Engineer
- Institute of Transportation Engineers
- ITS Arizona
- American Society of Civil Engineers

Special Qualifications

- Has over 20 years of traffic and transportation engineering experience, including traffic signal and signal system design, fiber optic communication design, traffic operations, signing and marking plans preparation, and traffic control plans
- Experience in planning and design of regional ITS projects involving incident management strategies and advanced public transportation systems

Relevant Experience

59th Avenue ITS Project, Glendale, AZ — Project Engineer. Under KHA's Glendale On-Call ITS contract, KHA provided construction administration and oversight services for the installation of approximately 100,000 linear feet of fiber optic cable and the construction of the traffic management center in the City of Glendale. Activities including observation of installation of conduit and cable, Video Image Detection (VID) systems, CCTV cameras, calibration, testing and acceptance of these components. Staff responsibilities included pay item documentation, training of fellow inspectors, monthly estimates, change orders, issue resolution, and leading weekly meetings.

Arizona DOT Statewide On-Call Traffic Engineering Services, Statewide, AZ — Project Engineer. KHA is responsible for an on-call contract to provide various traffic engineering services in support of Arizona Department of Transportation studies and construction projects throughout the state. Services have included intersection analysis, signing and marking specifications, safety studies, and interchange analysis.

59th Avenue Widening, Olive Avenue to Mountain View Road, Glendale, AZ — Project Engineer. KHA is developing the preliminary and final design for the widening of a 1/2-mile segment of 59th Avenue in Glendale which is funded with federal Congestion Mitigation Clean Air Quality (CMAQ) funds. The widening consists of adding right-turn/merge lanes at the major entrances into the Glendale Community College (GCC) and at Olive Avenue. Dual left-turn lanes, a raised median (too accommodate a 54-inch storm drain), and landscaping and irrigation design are also key components of the widening. Several existing utilities, including a major SRP irrigation line, will be relocated. The major elements of design include: preparation of a Design Concept Report (DCR), roadway design, intersection geometric design, traffic signal modification, utility relocation and coordination, marking and signing design, and preparation of an environmental document.

ADOT Traffic On-Call Sedona SR 89A Traffic Signal Coordination Project, Sedona, AZ — Project Manager. This project developed time-based coordination for nine traffic signals in the City of Sedona. The project included three traffic signals located in a heavily congested commercial tourist area with significant pedestrian traffic. The remaining traffic signals are located along Sedona's main traffic thoroughfare. The consultant's activities included conducting before and after delay studies; generating AM, Midday, PM and Saturday traffic and pedestrian counts and developing coordinated timing plans for each analysis period using the Synchro 5.0 software. Time of day plans were developed based on 24-hour weekday and weekend machine counts generated along the 89A corridor. Existing clearance timing parameters and existing phasing, were used for the analysis. The project also included on-site fine-tuning of the timings after the installation of the timing.

Surprise Design Standards for Signals, Signing, and Pavement Markings, Surprise, AZ — Project Manager. KHA is currently providing standard development services to the City of Surprise. These standards will cover traffic signals, intersection signing and marking, and general construction notes. Creating such standards will allow the City to receive consistent traffic signal and roadway improvement design plans from developers and consultants.

JOHN C. KISSINGER, P.E., PTOE

Relevant Experience, continued

Bell Road ITS Design, Phoenix, AZ — Project Manager. KHA completed the design of an ITS project on the Bell Road corridor. The project included installation of 6.5 miles of fiber with leased telecommunications services for communications back to the MCDOT TMC and Peoria and Surprise TMCs; four arterial DMSs; and seven CCTV cameras along Bell Road, between Loop 101 and Grand Avenue in Phoenix. In addition to PS&E, other major tasks in this design effort included preparing a concept of operations, identifying communication alternatives, coordinating utility conflicts, and coordinating with multiple agencies. Because this portion of Bell Road is under the jurisdiction of three agencies, a major focus was ensuring that each jurisdiction had the ability to monitor and/or control each device along the corridor upon completion of the project.

Gilbert - Various Traffic Signals Design Services, Gilbert, AZ — Project Manager. KHA has provided traffic signal design services to the Town of Gilbert for the past two and a half years. During this time, we have completed the design of 25 traffic signals. Many of these project locations required coordination with developers of adjacent parcels to identify construction phasing and incorporate future improvement considerations. In addition, KHA provided final record drawings of the Contractor redlines. Signal locations include: Higley/Ray; Higley/Germann; Higley/Queen Creek; Ranch House/Queen Creek; Power/Haven Crest; and a Fire Station Signal at 172nd/Warner.

MCDOT Traffic On-Call, Maricopa County, AZ — Project Engineer. This on-call contract involved the design of several traffic signals and the development of PS&E for the MCDOT signal system expansion, which involved controller assembly modifications and upgrades and wireless communications. While under this contract, KHA also determined alternatives for local traffic control (barriers, blank-out signs) and wide-area traffic management (dynamic message signs, CCTV cameras, road closure and incident management strategies) and evaluated the capital and operating costs of alternatives.

Operation Greenlight - Traffic Signal Controller Upgrade Design Consultants, Kansas City, KS — Project Manager. KHA has been retained by the Mid-America Regional Council (MARC) to prepare detailed construction documents for the replacement of 59 electromechanical controllers throughout the Kansas City area. The project includes preparing a needs analysis summarizing particular requirements for each project intersection, providing construction documents, and providing construction support. This project has already produced several design challenges including designing within a limited amount of right-of-way, redirecting existing direct-bury cables into a common location so they can be connected to the new controller, addressing sensitive streetscape issues, and working with several agencies to successfully meet the goals of the project. This is a federally-funded project and as such we are working with both Kansas and Missouri DOT's and the FHWA to obtain all necessary clearances, exclusions, and documentation for project approval.

Peoria Traffic Signal Interconnection Project, Peoria, AZ — Project Manager. KHA provided a traffic signal system design for approximately 70 existing traffic signals. The project involved extensive coordination with ADOT, MCDOT, and the neighboring City of Glendale, who all own and maintain traffic signals in and around Peoria. KHA evaluated multiple signal system alternatives, including time-based coordination (no signal system), closed loop, distributed, and centralized systems; and multiple communication alternatives, including twisted-pair wire, fiber-optic, microwave, and spread spectrum. We also evaluated Peoria's involvement in AZTech, the Intelligent Transportation System Model Deployment Initiative for the Phoenix Metropolitan area. KHA's environmental staff provided environmental clearance including PISA, biological review, and invasive species survey.

MICHELLE L. MEYER, P.E.

Professional Credentials

- Bachelor of Science, Civil Engineering, University of Wisconsin, 2000
- Registered Professional Engineer in Arizona

Special Qualifications

- Experienced in trip generation comparisons, circulation plans, traffic impact studies, signing and marking plans, and signal design plans.
- Worked on a variety of projects for both public and private clients ranging in size from small commercial developments to large mixed-use developments that span several square miles.
- Has also prepared circulation master plans and traffic impact analysis for several large master planned communities in Town of Buckeye and City of Surprise including Tartesso West, Sun Valley South, and Prasada.

Relevant Experience

Del Rio Ranch Traffic Impact Analysis, Maricopa County, AZ — Analyst. KHA prepared a traffic impact analysis for the Del Rio Ranch master planned development located on the north side of Lower Buckeye Road between 115th Avenue and the Agua Fria River in Maricopa County. The proposed development consists of 1,447 single-family homes and two commercial parcels on approximately 410 acres. The traffic report documented the traffic impacts of the proposed development on the surrounding street network. A total of 16 intersections were evaluated to determine the appropriate traffic control required upon buildout of the site in 2006, as well as for future 2020 traffic conditions.

Parke West, Peoria, AZ — For this 80-acre mixed-use development, KHA provided full-phase site development, civil engineering, traffic engineering, transportation planning, and roadway engineering. Parke West is located at the NWC of Northern Ave. and the Loop 101 freeway, just minutes from the new sports complex.

KHA has worked tirelessly to make this dream a reality. A project of this scale, with multiple developers, contractors, and other consultants, including Archicon as the lead architect, has required KHA to coordinate closely with the team, the City, and other agencies to meet an aggressive project schedule.

Tartesso West, Buckeye, AZ — Analyst. KHA was selected to provide transportation planning and circulation plans for the Tartesso West Master-planned Community, a proposed 5,000-acre mixed-use development that will consist of residential, commercial, and office uses as well as schools, parks, and open space.

Waddell Property, Surprise, AZ — Analyst. KHA provided preliminary site civil and traffic engineering services for this 30-acre, 120-unit residential subdivision.

Wal-Mart Supercenter - Apache Junction, AZ, Apache Junction, AZ — Analyst. KHA provided comprehensive consulting services.

RAY YPARRAGUIRRE, P.E.

Professional Credentials

- Bachelor of Science, Civil Engineering, Arizona State University, 1995
- Professional Engineer in Arizona

Special Qualifications

- Over 10 years of transportation design experience
- Specializes in design of Intelligent Transportation Systems, construction phasing, traffic control, signing, pavement marking, lighting, and traffic signals
- Completed 100+ traffic projects involving construction phasing, constructability reviews, utility, right-of-way, and PS&E
- Project Manager for ADOT Statewide Traffic On-Call

Relevant Experience

Mesa Traffic Signal Conversion, Mesa, AZ — Project Manager. The City of Mesa selected KHA to help implement Phases II and III of its ITS Master Plan. Phase II will provide connection to existing fiber optic communications and establish a second connection back to the TMC and City Hall. Phase III will provide connection to the future Central Phoenix/East Valley Light Rail Project and the ITS West Project. This fiber optic communications project spans 10 miles and involves 34 signalized intersections. The project includes traffic signal controller upgrades to operate within the ICONS system and connections to CCTV and video detection stations.

US 60, Crismon Road to Mountainview Road Sign Rehabilitation, Mesa, AZ — Project Manager. Developed sign location plans, format sheets, and sign elevation sheets to current ADOT and MUTCD standards for this seven-mile sign rehabilitation project.

Arizona DOT Statewide On-Call Traffic Engineering Services, Statewide, AZ — Project Engineer. Has completed over 100 projects under this contract. KHA was selected for an on-call contract to provide various traffic engineering services in support of Arizona Department of Transportation studies and construction projects throughout the state. Services have included pavement marking, signing, traffic control, traffic signal, electrical distribution and control circuit plans, highway and sign lighting, traffic operations and safety evaluations. Projects include traffic signal design with roadway improvements to 24 miles of sign rehabilitation on urban freeways. Due to KHA's responsiveness and innovative approach, ADOT has repeatedly selected KHA for this contract since 1995.

ADOT FMS Phases 9, 10, and 11, Phoenix, AZ — Deputy Project Manager. Developed plans, special provisions, and probable cost estimate. KHA is currently designing ADOT FMS Phases 10 and 11. The proposed FMS field equipment installation project is located in Maricopa County on Loop 101, beginning at I-10 and extending north to 19th Avenue. The project limits also include I-10, from Loop 101 to 59th Avenue. The proposed work includes the installation of conduit and fiber optic cables, CCTV cameras, a dynamic message sign, and passive acoustic detectors. This segment of the FMS is scheduled to be complete prior to the 2008 Super Bowl.

SR 87/SR 587/Hunt Road Intersection, Chandler, AZ — Project Engineer. Developed traffic control, signing, and pavement marking plans for the reconstruction of an existing "flying Y" intersection. Our services included survey and mapping, and plans for roadway, culvert extension, traffic control, marking and signing, signal warrant analysis, signal and lighting plans, utility coordination and clearance, and project specifications.

Willow Creek Road IIIA and IIIB, Prescott, AZ — Project Engineer. Responsible for traffic. KHA designed the widening of a two-mile segment of Willow Creek Road from two to five lanes. Work included roadway design, drainage, utilities, waterline and sewerline design, traffic engineering, lighting, signal design, signing and marking, and preparation of construction documents. We performed hydrology modeling and hydraulic design, which included consideration of all weather crossing, floodplain encroachments, environmental permitting, and other related issues. The design included evaluating eight existing cross culverts to be extended, and designing curb inlets and storm drains along the entire two-mile section. KHA handled all construction-related issues including utility conflicts, erosion control, and associated tasks.

RAY YPARRAGUIRRE, P.E.

Relevant Experience, continued

Yuma - Final Design of 24th Street between Avenue 6E and Avenue 9E, Yuma, AZ — Project Engineer. Responsible for traffic control. This three-mile urban arterial roadway project consisted of widening 24th Street to a City standard primary arterial street section. The project required project management services, utility coordination and relocation design, right-of-way engineering, public outreach, project coordination with the Yuma Unified School District and Arizona Western College, engineering studies (traffic, drainage, and geotechnical), and preparation of final construction documents including roadway sections, construction layout, grading and drainage, traffic signal, street lighting, and traffic control plans, project special provisions, and construction estimates. The project also involved a new traffic signal design and modifications to three signals.

Avenue E DCR and Final Design, County 23rd Street to International Port of Entry, Yuma County, AZ — Designer. KHA prepared a DCR to reconstruct Avenue E as an interim three-lane facility that can be expanded to the desired Yuma County four- to six-lane section in the future. The proposed roadway begins at County 23rd Street (SR 195) and extends south approximately 2.3 miles to the International Port of Entry. The concept included the design of intersecting roadways at 1/2-mile intervals. Frontage roads were considered for properties adjacent to Avenue E between the proposed intersecting roadways. Alignments were evaluated based on right-of-way, storm water management, cost, and access control. Extensive coordination with developers and utility companies, and new right-of-way acquisition was also included.

Bell Road ITS Design, Phoenix, AZ — Project Engineer. The design includes the installation of 6.5 miles of fiber, four arterial DMS and seven CCTV cameras along Bell Road between Loop 101 and Grand Avenue. In addition to PS&E, other major tasks in this design effort included preparing a concept of operations, identifying communication alternatives, utility conflict coordination, and multi-agency coordination. Because this portion of Bell Road is under the jurisdiction of three agencies, a major focus was ensuring that each jurisdiction has the ability to monitor and/or control to each device along the corridor upon completion of the project.

Phoenix International Raceway ITS, Phoenix, AZ — Project Manager. As part of the Maricopa County DOT ITS On-Call contract, KHA developed a design for the use of portable blank out signs (BOS) and variable message signs (VMS) to improve traffic flow and support better traveler information during PIR event ingress and egress. The BOS/VMS supplements the existing event Traffic Management Plan on event days by providing lane designations and directional messages to race patrons. Tasks included summarizing the existing event traffic management process and/or procedures; developing the preliminary design for permanent BOS/VMS installation locations; evaluating alternatives for communication to the BOS and VMS; and preparing a cost estimate for the installation.

Surprise Traffic Signal Design @ 5 Intersections, Surprise, AZ — Project Engineer. The City of Surprise selected KHA to design five intersection improvements. Each of the 5 intersections required varying degrees of roadway improvements and drainage design from the construction of a single leg to an entire intersection widening. Each intersection design included extensive utility coordination, coordination with adjacent development projects, right of way coordination, traffic signal design and signing and striping design.

DAVID S. HAINES, P.E.

Professional Credentials

- Bachelor of Science, Electrical Engineering with Honors, Florida Atlantic University, 1995
- Professional Electrical Engineer in AZ, CA, ID, KS, MI, MO, NE, NM, NV, OR, TX, UT, and VA
- Member, Institute of Electrical and Electronic Engineers (IEEE)

Special Qualifications

- Specializes in wide area communications architecture design, communication equipment and ITS equipment technology assessments, wireless/copper/fiber optic cable inside and outside plant design, local area network design, security systems planning and design, lightning protection design, power distribution design, and roadway lighting design
- Experienced in specification writing, plans package production, constructibility evaluations, software functionality writing, construction support for fiber optic network installations, and troubleshooting/repair of communication equipment.

Relevant Experience

Consolidated Rental Car Facility at Sky Harbor Airport, Phoenix, AZ — Design Team Task Manager responsible for the inside and outside plant video, voice, and data telecommunications and security system infrastructure. KHA was part of a Phoenix Sky Harbor International Airport Rental Car Center design team responsible for the inside and outside plant video, voice, and data telecommunications and security system infrastructure. The infrastructure included both fiber optic and copper transmission media used to extend network and telephone services from Sky Harbor International Airport to the new rental car facility. In addition to the voice and data network systems, the design included an access control system, device monitoring system, CCTV system, a flight information display system, and extensions of the HVAC and fire alarm system to the primary nodes off the rental car center grounds. The inside and outside plant telecommunications pathways and spaces were designed based on BiCSi and ANSI TIA/EIA standards as well as Phoenix ITD standards.

ITS Fiber Optic Backbone, Phoenix, AZ — Systems Engineer. Responsible for developing user requirements that will define the operational and functional requirements of the communication backbone, preparing system performance requirements, providing recommendations on upgrades and/or replacements of existing systems, identifying and evaluating backbone communication network alternatives, specifying the communication infrastructure and equipment that is to be included in the initial phase, identifying communication elements that should be considered in future phases, and preparing plans, specifications, and estimate for the initial phase. KHA provided the City of Phoenix with design plans, special provisions, and construction cost estimates for the construction of the first phase of a 50-mile fiber optic communications backbone for the City's Intelligent Transportation System. This backbone will facilitate communication between City of Phoenix facilities as well as the interconnection of numerous traffic signals, CCTV cameras, variable message signs.

DCR for Phase I Regional Community Network (RCN), Phoenix Metro Area, AZ — Project Manager. Responsible for conducting an inventory of the stakeholder's existing infrastructure assets that could be used for the RCN; coordinating with the various transportation and information technology stakeholders within each jurisdiction to identify potential locations for housing regional and metropolitan hub equipment; identifying the hub facility selection considerations that need to be considered when identifying a facility that will house the hub equipment; identifying existing infrastructure gaps that need to be filled to complete the various network connection; developing an overall implementation plan for interconnecting eight regional hub facilities and eight metropolitan hub facilities; developing a programming cost estimate for the construction of the new infrastructure segments needed; and building regional consensus on the approach that should be taken to build the initial deployment phase of the RCN. In 2003, ADOT and its AZTech partners adopted the RCN concept recommended by MAGTAG and MAG ITS committees and selected KHA to develop a Design Concept Report (DCR) for the initial deployment phase of the RCN.

MAG ITS Strategic Plan Update, Maricopa County, AZ — Project Engineer. Responsible for developing the telecommunications plan that included an overview of the various communications methods and technologies available for ITS type applications, identifying spare capacity within the existing communication infrastructure throughout the Valley that has been deployed or is currently programmed to be deployed by the various transportation agencies within Maricopa County, and developing near/mid/long term plans for MAG to expand this existing/programmed infrastructure base in order to migrate off leased communication links and establish an ITS center-to-center wide area network for over 30 agencies within Maricopa County. In 2001, KHA was responsible for updating the 1995 ITS Strategic Plan.

DAVID S. HAINES, P.E.

Relevant Experience, continued

Bell Road ITS Design, Phoenix, AZ — Project Engineer. KHA completed the design of an ITS project on the Bell Road corridor. The project included installation of 6.5 miles of fiber with leased telecommunications services for communications back to the MCDOT TMC and Peoria and Surprise TMCs; four arterial DMSs; and seven CCTV cameras along Bell Road, between Loop 101 and Grand Avenue in Phoenix. In addition to PS&E, other major tasks in this design effort included preparing a concept of operations, identifying communication alternatives, coordinating utility conflicts, and coordinating with multiple agencies. Because this portion of Bell Road is under the jurisdiction of three agencies, a major focus was ensuring that each jurisdiction had the ability to monitor and/or control each device along the corridor upon completion of the project.

Surprise TMC Design Services, Surprise, AZ — Project Engineer responsible for Communications Design. KHA is providing advisory consultation and engineering design services for the development of the City's TMC. Planning tasks include development of a Concept of Operations. Design tasks include reviewing the design plans for the Public Safety Building and providing input on the design of cabling ducts, electrical service points, and access to the TMC as well as providing anticipated electrical load needs for the TMC.

Regional Community Wide-Area Network Study, Maricopa County, AZ — Project Manager. KHA was retained by the MAG for this study, the first phase of an integrated Regional Community WAN project. The study and network implementation plan produced the guidelines and standards to direct the future phased design and implementation of the network with the input and support of the public sector, private sector, and telecommunications providers.

51st Avenue Improvements, Glendale, AZ — Systems Engineer. Responsible for performing photometric calculations to determine the quantity, locations, and mounting heights required to achieve the desired illumination levels of the roadways within one square block around a commercial facility. Kimley-Horn designed over two miles of arterial road along 51st Avenue, including realignment and reconstruction of an existing two-lane roadway to a four-lane roadway with raised medians. The project required developing new intersection geometrics and signalization at Southern Avenue. Related design elements include drainage improvements, utility coordination, right-of-way identification, and signing and marking plans.

83rd Avenue and Union Hills Drive Offsite Improvements for The Marlin Group, Inc., Glendale, AZ — Project Engineer. Responsible for performing photometric calculations to determine the quantity, locations, and mounting heights required to achieve the desired illumination levels of the intersection and its four approaches. Responsible for the production of the Lighting Plan Sheets, details, and specifications. Kimley-Horn was responsible for the design of 83rd Avenue from Loop 101 North to Union Hills Drive in the City of Glendale. Widening improvements included new roadway alignment, super elevation cross slopes, and new roadway profile.

I-10 and I-17 Freeway Lighting, Phoenix, AZ — Systems Engineer. Responsible for designing approximately 20 miles of freeway lighting and power distribution systems. The design included evaluating existing load center locations for necessary modifications and coordinating with the utility company to increase service load capacity, designing the conduit infrastructure and distribution cable plant, performing photometric calculations for the existing partial lighting system as well as the proposed continuous freeway lighting elements, generating a report documenting industry and local standards compliance of the existing conditions and proposed improvements of the lighting and power system elements, supervising/managing the Plans, Special Provisions, and Estimate (PS&E) production efforts and performing quality control and assurance measures within the development of the PS&E packages.

SR 87/SR 587/Hunt Highway Intersection, Chandler, AZ — Systems Engineer, Project Engineer. Responsible for performing photometric calculations to determine the quantity, locations, and mounting heights required to achieve the desired illumination levels of the roadway lighting system around the SR87 and SR587 junction and its approaches. As part of the Arizona DOT Statewide HES Design On-Call contract, Kimley-Horn prepared scoping documents and final design documents for this fast-track intersection improvement project. Existing intersection geometry was sub-standard, confusing and accident prone. Due to an increasing number of accidents at this intersection, ADOT needed to come up with a quick solution to alleviate the existing conditions. Kimley-Horn suggested alternatives and recommended a preferred alternative with multi-agency concurrence.

TRICIA BOYER, P.E.

Professional Credentials

- Bachelor of Science, Civil Engineering, Michigan State University, 2000
- Registered Professional Engineer in AZ
- Member, ITE, ITS Arizona

Special Qualifications

- Six years of traffic engineering/operations and ITS planning and design experience.
- Experience ranges from developing concepts of operations and operations plans, signal system design to conducting studies and preparing models in order to develop optimum corridor traffic signal timing plans.
- Proficient in Synchro 7.0 Software

Relevant Experience

Buckeye Road / Avondale Boulevard Signal Timing, Maricopa County, AZ — Project Engineer. Under our Maricopa Association of Governments (MAG) Traffic Engineering On-Call contract, KHA was retained to provide traffic signal coordination timing plans for ten signals along Buckeye Road and Avondale Boulevard. The project intersections included signals under the jurisdiction of ADOT, MCDOT and the City of Avondale. Tasks associated with this project included field review of existing conditions; development of a Synchro 5.0 model; and coordination timing plan development for the AM, Midday, PM, and Saturday peaks.

Bell Road ITS Corridor Development and Implementation, AZ – Task Manager and Project Manager. This project marks a unique approach to multi-agency ITS arterial implementation, and included extensive stakeholder coordination to agree on operational concepts and responsibilities. It identified priority operational roles under different scenarios, device maintenance needs, future expansion needs, and operational contact lists. Ms. Boyer led the Concept of Operations and Bell Road ITS Design, which included 6.5 miles of fiber, four arterial DMS and seven CCTV cameras. Supported development of communication alternatives for the ITS enhancements. Also developed a multi-agency operations plan for Bell Road, which includes City of Surprise, Maricopa County and Peoria jurisdiction.

Surprise Design Standards for Signals, Signing, and Pavement Markings, Surprise, AZ — Project Engineer. KHA provided standard development services to the City of Surprise. These standards cover traffic signals, intersection signing and marking, and general construction notes. Creating such standards allow the City to receive consistent traffic signal and roadway improvement design plans from developers and consultants.

Glendale Design for North Area ITS, AZ — Project Engineer. KHA provided design services for the installation of new fiber optic cable that will extend the City's existing fiber backbone and connect to 23 signalized intersections. Tasks include DCR preparation; environmental clearance which includes agency and public scoping, biological and cultural resources, hazardous materials, and socioeconomic; utility coordination; right-of-way coordination; and construction document preparation which include plans, estimate and special provisions.

City of Peoria Traffic Signal Interconnect Design, Peoria, AZ — Task Manager. Responsible for utility coordination for the conduit system that will create approximately six miles of the City of Peoria's backbone fiber optic network for wireline communications in support of the future centralized traffic signal system and 28 controller assembly replacements. Other assignments also included bidding support for the advertised PS&E and the development of a citywide SYNCHRO 5.0 model for the development of traffic signal coordination plans.

Surprise Traffic Signal Design @ 5 Intersections, Surprise, AZ — Project Manager. AZ Each of the five intersections listed required varying degrees of roadway improvements and drainage design from the construction of a single leg to an entire intersection widening. Each intersection design included extensive utility coordination, coordination with adjacent development projects, right of way coordination, traffic signal design and signing and striping design. The intersections are: Greenway Road and West Point Parkway; Reems Road at Paradise Lane; Waddell Road at Bullard Avenue; Cactus Road at Bullard Avenue ; and Cactus Road at Litchfield Road.

TRICIA BOYER, P.E.

Relevant Experience, continued

Surprise TMC Design Services, AZ — Project Manager. KHA has been selected by the City of Surprise to provide advisory consultation and engineering design services for the development of the City's TMC, which will be located within a newly constructed Public Safety Building. Planning tasks include development of a Concept of Operations that addresses the needs assessment and functional requirements as well as staffing, operations, security, and access.

Yuma On-Call Traffic Operations Engineering Services, Avenue 3E Corridor Study, Yuma, AZ — Analyst. KHA provided On-Call Traffic Engineering Services which included corridor studies, intersection analyses, traffic operations, and geometric alignment studies. Task Manager for detailed analysis of current and future traffic conditions within the corridor study area, which consists of 27 existing intersections, one existing freeway interchange, and three future intersections. Development of an improvement concept alternative for each design year that included schematics and preliminary cost estimates for each of the recommended improvements.

Traffic Engineering Services On-Call Contract (2002), Pima County, AZ — Analyst. Responsible for developing morning, noon, evening, and off-peak coordination timing plans for most of the County's 75 signalized intersections. Included in this task was a significant amount of field fine-tuning activities. Additional activities include: assisting with the change out of all existing controllers to new TS-2 Type 2 controllers; assisting in developing plans and specifications to install a fiber optic interconnect; evaluating alternative means for Center to Center communication including wireless and T-1 options; developing criteria for installing lighting at various isolated intersections; and providing coordination with the electrical utility companies to install the lighting systems. KHA was selected for an as-needed traffic engineering services contract for the Pima Department of Transportation. Project assignments included General ITS Services.

Traffic Signal Optimization Program Timing Project (MAG ITS/TE On-Call), Maricopa County, AZ — Project Engineer. KHA provides traffic signal coordination timing plans for various corridors throughout the Valley. Project corridors consist of multi-agency arterials and have included MC 85/Buckeye Road, Bell Road, Olive Avenue, Power Road and Riggs Road. Tasks include field review of existing conditions; development of a Synchro model; and coordination timing plan development for the AM, Midday, PM, and Saturday peaks.

Town of Marana On-Call Traffic Engineering 2002, 2003, 2004, Marana, AZ — Task Manager. Responsible for performing various Traffic Engineering tasks as assigned by the Town and preparing and presenting a one-day training session on the SYNCHRO 5.0 software for Town employees. Other tasks included preparing Traffic Signal Design Standards, developing traffic signal timing plans for isolated intersections and coordinated systems, developing emergency vehicle timing plans, reviewing construction traffic control plans, preparing an update for Marana's input into the Pima County ITS Strategic Plan, conducting traffic signal warrant analyses, preparing traffic signal design and modification plans, preparing striping and signing plans, leading community meetings, and advising the Town on operational traffic issues.

MCDOT Traffic On-Call - Signals, Maricopa County, AZ — Project Engineer. This on-call contract involved the design of several traffic signals and the development of PS&E for the MCDOT signal system expansion, which involved controller assembly modifications and upgrades and wireless communications. As part of our MCDOT On-Call contract, KHA prepared developed PS&E for traffic signal modification plans to provide upgrades at four intersections in Sun City. Improvements included in this project were new TS-2 controllers/cabinets, vehicle detection upgrades, CCTV installation, installation of battery back-up systems and emergency preemption, as well as communication with the MCDOT TMC.

MCDOT SMART Corridors Phase III, Maricopa County, AZ — Project Engineer. The MCDOT Smart Corridors project is an ITS design project for locations in the City of Mesa and the City of Glendale. The project scope includes the preparation of plans, specifications, and estimates of probable cost (PS&E) for the installation of four miles of conduit along Power Road between Thomas Road and Baseline Road and one mile of conduit and fiber optic cable on Camelback Road between 99th Avenue and 91st Avenue. Also included in this PS&E package are seven video cameras (CCTV) and three dynamic message signs (DMS) locations.

LISA M. BURGESS

Professional Credentials

- Bachelor of Arts, English and History, Arizona State University, 1991
- Member, Transportation Research Board Regional Transportation Systems Management and Operations Committee (AHB10)
- Member, ITS Arizona

Special Qualifications

- ITS planner who contributes to a wide range of engineering and planning projects, including Intelligent Transportation System deployment plans, system architecture development, public involvement programs, and technical specifications.

Relevant Experience

Goodyear ITS Strategic Plan, Goodyear, AZ — Project Manager. Kimley-Horn was selected to develop an ITS Plan for the City of Goodyear that will map out transportation technology priorities, key locations, timeframes, and opportunities to coordinate technology deployments with other capital roadway improvements. For this plan, our team is coordinating with stakeholders throughout the City as well as neighboring jurisdictions (including Buckeye, Avondale, Maricopa County DOT, and Arizona DOT) to identify multi-jurisdictional corridor operations requirements, and information exchanges between agencies for traffic and incident management. The Plan will provide the City with a comprehensive road map for project programming and implementation timeframes. Key issues include high concentration of retail/commercial development on key corridors, agency-to-agency information sharing, and City Center development considerations (including special event traffic management). Interfacing with ADOT for the upcoming I-10 widening is also an important factor guiding the development of priority recommendations.

Surprise TMC Design Services, Surprise, AZ — Project Planner. Responsible for Space Planning and Concept of Operations. Kimley-Horn has been selected by the City of Surprise to provide advisory consultation and engineering design services for the development of the City's TMC, which will be located within a newly constructed Public Safety Building. Planning tasks include development of a Concept of Operations that addresses the needs assessment and functional requirements as well as staffing, operations, security, and access. A technical memorandum will address space planning issues such as distinct functional areas, adjacency analysis, and space allocation. Design tasks include reviewing the design plans for the Public Safety Building and providing input on the design of cabling ducts, electrical service points, and access to the TMC as well as providing anticipated electrical load needs for the TMC. A communications Equipment Layout Design task includes design of the video wall, operator console components, cabling, equipment room layout, and rack layouts.

ITS Strategic Plan Update, Maricopa Association of Governments, AZ — Task leader for professional capacity building/training and stakeholder coordination and outreach for this 2001 update to the 1995 ITS Strategic Plan for MAG. Key contributor/planner to other tasks, including regional needs assessment, regional system architecture and 20-year ITS deployment plan. The Strategic Plan Update includes such components as a Stakeholder Involvement Plan, inventory of existing and planned systems, regional architecture, Project Implementation Plan, Telecommunications Plan, Evaluation Plan, and a Training and Capacity Plan.

MAG Regional Concept of Transportation Operations, AZ — Project Planner. KHA developed a Regional Concept of Transportation Operations (RCTO) for the Phoenix metropolitan region. The RCTO included a review of existing infrastructure, resources, policies and practices in surface transportation operations in the Metropolitan Area. The project led to the establishment of a framework and institutional agreements that will lead to a higher level of integration and coordination among agencies responsible for transportation operations in the region. This project is recognized at a national level for being a benchmark regional operations planning program.

AZTech Program Support, Phoenix, AZ — Project manager for a range of program management and procurement support for AZTech™, including strategic planning, traveler information program and partnerships, long-range planning for Maricopa County's TMC. Supported outreach and promotion efforts for AZTech. Developed a process and guidelines for AZTech's E-mail Traffic Alert system. Ms. Burgess is also a member of the AZTech ATIS Working Group.

Technical Advisor for: Mesa ITS Strategic Plan, Arizona; Grand and Superior Region Architectures, Michigan; and Jackson and Clarksville Regional ITS Architectures, Tennessee.

LISA M. BURGESS

Relevant Experience, cont.

TxDOT Regional ITS Architectures and Deployment Plans, Statewide, TX — Regional Team Leader. KHA developed 10 regional ITS architectures and deployment plans for the state of Texas. Ms. Burgess served as lead planner for ITS architectures and deployment plans for the Amarillo, Childress, Beaumont, Wichita Falls, Lubbock and Lufkin Regions. Included coordinating with stakeholders from throughout the regions, including Texas DOT, regional and metropolitan planning organizations, county, city, emergency services, private entities and others.

Idaho Statewide ITS Strategic Plan Update and Regional ITS Architectures and Deployment Plans, Statewide, ID — QC/Tech Advisor. The Idaho Transportation Department (ITD) selected KHA to update the Idaho Statewide ITS Strategic Plan. As part of this project, KHA developed regional ITS architectures and deployment plans for five ITD districts throughout the state as required by the FHWA Final Rule.

Tennessee Statewide ITS Architecture, Statewide, TN — Project Manager. KHA developed a statewide ITS architecture for Tennessee to comply with FHWA Final Rule requirements. This ITS architecture focused on those areas of the state not covered in the metropolitan regional ITS architectures and documented statewide as well as inter-regional ITS needs and interfaces. Key issues that emerged during the architecture development include: expanding the regional TMCs; TMC center-to-center communications; coordination with neighboring states; coordination among emergency and transportation management agencies; and traveler information. KHA worked with a multi-agency steering committee to develop a 15-year vision for ITS deployment and integration in Tennessee.

Silicon Valley ITS Strategic Plan, San Jose, CA — Project planner for a comprehensive strategic plan to guide regional ITS planning and deployment efforts in Silicon Valley, California. Responsible for developing strategies for the City of San Jose to increase awareness of ITS among political stakeholders as well as regional leaders.

DONALD L. TAPPENDORF, P.E.

Professional Credentials

- Master of Science, Civil Engineering, University of Illinois, 1984
- Bachelor of Science, Civil Engineering, University of Illinois, 1983
- Registered Professional Engineer in Arizona, Nebraska, Nevada, and New Mexico
- Institute of Transportation Engineers

Special Qualifications

- Over 20 years of ITS experience, Mr. Tappendorf leads and participates in many of the firm's ITS, communication design, and construction-phase projects
- Regional ITS experience includes the Freeway Management Systems in Phoenix, AZ, Hampton Roads, VA, Las Vegas, NV, Albuquerque, NM, and Tucson, AZ
- Regional ITS planning experience includes the Statewide Joint Operations Center for Nebraska, and the metropolitan areas of Phoenix, AZ, Las Vegas, NV, and Albuquerque, NM
- Local ITS, communications design and IT services for the City of Phoenix, Sky Harbor International Airport, City of Peoria, City of Glendale, and Maricopa County

Relevant Experience

ADOT FMS Phases 9, 10, and 11 Phoenix, AZ — Project Manager. KHA served as system manager for the initial phases of ADOT's FMS in metropolitan Phoenix, a \$120-million, 140-mile surveillance and control system on area freeways which includes VMS, CCTV, ramp metering, fiber-optic communications, incident detection systems, pump station monitoring, and a tunnel management system. As part of the implementation of the FMS, KHA completed the system design for the central software housed at the ADOT Traffic Operations Center. KHA is currently designing ADOT FMS Phases 10 and 11. The proposed FMS field equipment installation project is located in Maricopa County on Loop 101, beginning at I-10 and extending north to 19th Avenue. The project limits also include I-10, from Loop 101 to 59th Avenue. The proposed work includes the installation of conduit and fiber optic cables, CCTV cameras, a dynamic message sign, and passive acoustic detectors. This segment of the FMS is scheduled to be complete prior to the 2008 Super Bowl.

Phoenix Regional ITS Fiber Optic Backbone - Phase B Design, Phoenix, AZ — Project Manager. KHA was selected to design the 84 miles of the Phoenix communication backbone in two phases which will complete the fiber backbone loop around the city as well as make connection to the neighboring city of Scottsdale. Project tasks include a Design Concept Report; Environmental Documentation; and Plans, Specifications, and Estimates.

Phoenix Sky Harbor Communications Network and Infrastructure Design, Phoenix, AZ — Senior Project Engineer and Designer of Record. Responsible for the design of outside plant conduit and fiber cable network. The project design included assessment of existing conduit and cable infrastructure, design of new conduit duct banks to complete connectivity requirements, and development of project design plans and specifications for the conduit and cable infrastructure. During construction of this project utilizing a Construction Manager at Risk process, Don has served as the primary point of contact for all outside plant conduit and cable construction including review of shop drawings, submittals, responding to requests for information, preparing client initiated design changes, attending weekly construction meetings, and providing the requested technical support.

KHA was selected by the City of Phoenix Aviation Department for a Communication Network and Infrastructure Design project designed to improve the IT infrastructure at Phoenix Sky Harbor Airport. The basic elements of this communications network and infrastructure design are the creation of a new premises distribution system (PDS), the design of a computer and network support area, and the design of a cable and network management system. The PDS system is being designed to migrate all existing network needs including video, data and voice, CCTV, security, as well as future needs, onto a redundant communications backbone serving the entire airport campus.

DONALD L. TAPPENDORF, P.E.

Relevant Experience, continued

WIM and AVI Systems, Statewide, AZ — Project Engineer. Responsible for PS&E production responsibilities. KHA served as prime consultant to Arizona DOT to prepare PS&E for the installation and testing of Weigh-in-motion (WIM) and Automatic Vehicle Identification (AVI) equipment for six sites on I-10. Two of the sites were at ports-of-entry on the California and New Mexico State lines. Three of the sites were at unattended intermediate locations on the mainlanes of I-10 using piezometric WIM. The fourth unattended site was near downtown Phoenix and used bending-plate WIM due to high traffic volumes. At two of the sites, the AVI and WIM equipment perform a sorting function to identify "pre-cleared" vehicles. Light-emitting DMS and LCS, also designed by the firm, direct pre-cleared vehicles to bypass the inspection and/or static scales. At all the sites, dial-up telephone interface was provided to allow the WIM and AVI data to be automatically uploaded to a central computer. Individual plans for all six sites were delivered to ADOT ahead of schedule.

US 93 Port of Entry, Kingman, AZ — Project Manager. KHA developed alternatives for the POE and the interchange of US 93 and SR 68 near Kingman. Responsible for development of plans, specifications and estimates for new port of entry facility including WIM, AVI, CCTV, LCS, VMS and detectors. Project involves coordination of all port of entry facilities with the design of new traffic interchange from US 93 to SR 68.

ADOT Overheight Vehicle Detection and Warning System, Maricopa County, AZ — Project Engineer. Responsible for preparing PS&E for project. KHA conducted a study to determine effective means to detect overheight vehicles and warn drivers of bridges with low clearance. Static and dynamic signing techniques and infrared sensing systems will be included.

Phoenix Sky Harbor International Airport Parking Revenue Control System (PRCS), Phoenix, AZ — Project Manager. Responsible for the design, specifications, and construction oversight and implementation of this system. KHA was selected for system analysis and preparation of design plans and functional specifications for the Sky Harbor Airport integrated parking revenue control / license plate recognition system. The system included the implementation of a SONET OC-12 system designed to integrate the video, data, and voice needs for an integrated system that includes five distinct parking areas at the airport, as well as CCTV security camera installation at key locations including entry and exit plazas.

ADOT Variable Message Sign (VMS) Retrofit, Statewide, AZ — Project Manager. As part of our ITS On-Call Design contract with ADOT, KHA was responsible for originating an idea for a fall arrest system that could be implemented on three types of variable message sign structures including a monotube sign structure, a truss bridge structure, and signs attached to overpass bridges.

Tucson Freeway Management System, Tucson, AZ — Project Engineer. KHA planned and designed Phase 1 of the Tucson FMS. The project location included approximately 12 miles of I-10 between Ina Road to the north and I-19 to the south. The design included a dedicated conduit and fiber optic system for communications. The FMS provided a communications link between ADOT, the City of Tucson, DPS and emergency service providers. Future expansion of the FMS incorporated all regional freeways and was planned to integrate portions of Tucson's arterial street network into the System.

Nevada DOT, Freeway and Arterial System of Transportation (FAST) Stages I and II, Las Vegas, NV — Project Engineer. Responsible for ITS planning, functional design, pilot corridor selection, DMS early deployment design, and field element layout for the first phase of design. KHA developed the freeway management component of FAST for the entire Las Vegas Valley and integrating it with the existing arterial management component of FAST. This project included extensive stakeholder involvement to build consensus regarding the best technical and procedural approach to implementing a valley-wide freeway management system (FMS) among all agencies in the Las Vegas Valley. The first phase of this project included preparing a high-level system design report for a 110-mile FMS that provided the framework for FAST to be designed and constructed in phases over several years. The initial phase of FAST is being implemented on a two-stage, 17-mile pilot corridor.

MARY A. HALE, P.E.

Professional Credentials

- Bachelor of Science, Electrical Engineering, University of Florida, 1989
- Professional Engineer in Arizona, Florida, Texas, and Wyoming
- Institute of Electrical and Electronics Engineers, Inc.
- National Fire Protection Association (NFPA)
- ITS Arizona

Special Qualifications

- Over 15 years of experience in the computer and telecommunications industries
- Ten years of experience in ITS design and acceptance testing
- Strong background in hardware testing, design, and technical problem solving in both product development and system deployment
- Significant experience in system documentation
- Specializes in ITS and telecommunications systems design and testing
- Specializes in wide area communications architecture design, communication equipment and ITS equipment technology assessments, wireless/copper/fiber optic cable inside and outside plant design, local area network design, lightning protection design, power distribution design, and roadway lighting design
- Experienced in specification writing, plans package production, constructability evaluations, software functionality definition, Graphical User interface screen design, and construction support for ITS and communication systems installations

Relevant Experience

Downtown Glendale Pedestrian Enhancements, Glendale, AZ — Electrical Engineer. Responsible for street lighting design in conformance with IESNA Standards for the placement design of over 300 pedestrian light pole fixtures and over 500 outdoor convenience power receptacles. Also responsible for the power distribution systems. KHA led the design of a 65-square block area of pedestrian safety and aesthetic enhancements in downtown Glendale. This \$16M project consisted of repairing and replacing broken or unsafe sidewalk areas; replacing and adding sidewalk with concrete headers and brick accents; installing new curb ramps and inlaid brick crosswalks; street widening and reconstruction including turn lanes; and adding extensive landscaping including trees, shrubs, and irrigation. Several utilities were relocated including overhead power.

Falcon Gateway Wal-Mart, Mesa, AZ — Team Member. Responsible for lighting design and power distribution, performing photometric calculations to determine the quantity, locations, and mounting heights required to achieve the desired illumination levels of three bordering roadways and three intersections.

I-10 and I-17 Freeway Lighting, Phoenix, AZ — Team Member. Served as a technical resource. KHA designed a new mainline lighting system with upgrades to the existing lighting systems within the project limits on I-10. The freeway currently has only partial mainline and gore lighting along the corridor from 27th Avenue to 91st Avenue. The design will provide a continuous lighting system that meets the specified illumination levels for the freeway travel lanes. The mainline lighting will be based on and consistent with the existing lighting systems within the project area to the extent possible. New ramp lighting systems and upgrades to existing ramp lighting systems will also be designed. Ramp lighting systems will address all entrance and exit ramps to within 75 feet of the crossroads. On I-17, our responsibilities include designing mainline median and ramp lighting from south of Peoria Avenue to north of Bell Road. Our design responsibilities for both freeways include lighting calculations for up to three different luminaire types and manufacturers, and a complete upgrade of the power distribution system to support the new and upgraded lighting. This power system design will eliminate outdated and unnecessary power service drops along the corridor.

MARY A. HALE, P.E.

Relevant Experience, continued

Yuma - Final Design of 24th Street between Avenue 6E and Avenue 9E, Yuma, AZ — Project Engineer. Responsible for lighting design, performing photometric calculations to determine the quantity and locations required to achieve the desired illumination levels of over three miles of roadway, including major intersections, and producing the lighting construction documents (plans, specifications, and estimates). This three-mile urban arterial roadway project consisted of widening 24th Street to a City standard primary arterial street section.

ADOT FMS Phases 9, 10, and 11, Phoenix, AZ — Project Engineer. KHA served as system manager for the initial phases of ADOT's FMS in metropolitan Phoenix. That project was a \$120-million, 140-mile surveillance and control system on Phoenix area freeways. Recently, KHA completed the design for ADOT FMS Phases 10/11, and this project is under construction. This 25-mile FMS field equipment installation project is located in Maricopa County on Loop 101, beginning at I-10 and extending north to I-17. The project limits also include I-10, from Loop 101 to 59th Avenue. The proposed work includes the installation of conduit and fiber optic cables, CCTV cameras, and four dynamic message signs. This segment of the FMS was completed prior to the 2008 Super Bowl. Phase 9, a five-mile segment on Loop 101 from Guadalupe Road to Loop 202 began construction in June 2007.

ITS Fiber Optic Backbone, Phoenix, AZ — Team Member. Contributed to the design plans and special provisions of communication plant for the first phase of a 50-mile fiber optic communications backbone for the City's Intelligent Transportation System (ITS) and Information Technology Department (ITD) video, voice, and data networks. KHA provided the City of Phoenix with design plans, special provisions, and construction cost estimates for the construction of the first phase of a 50-mile fiber optic communications backbone for the City's Intelligent Transportation System (ITS). This backbone will facilitate communication between City of Phoenix facilities as well as the interconnection of numerous traffic signals, CCTV cameras, variable message signs (VMS), and other field devices. KHA developed specifications for all of the equipment necessary to integrate the traffic signal controllers with the central signal system software, including fiber optic transceivers, splice details, interior fiber optic cable routing, and conduit and cable installation methods. KHA's environmental staff provided environmental clearance including PISA, biological review, and invasive species survey.

Phoenix Sky Harbor Communications Network and Infrastructure Design, Phoenix, AZ — Team Member. Technical resource for communications plant design and performed quality reviews. KHA was selected by the City of Phoenix Aviation Department for a Communication Network and Infrastructure Design project designed to improve the information technology (IT) infrastructure at Phoenix Sky Harbor Airport. The basic elements of this communications network and infrastructure design were the creation of a new premises distribution system (PDS), the design of a computer and network support area, and the design of a cable and network management system. The PDS system was designed to migrate all existing network needs including video, data and voice, CCTV, security, as well as future needs, onto a redundant communications backbone serving the entire airport campus.

Regional Community Wide-Area Network Study (RCN), Maricopa County, AZ — Team Member. KHA has been retained by the Maricopa County Association of Governments (MAG) to develop the MAG Regional Community Wide Area Network Study which is the first phase of an integrated MAG Regional Community WAN project. The study and network implementation plan being prepared by KHA will produce the guidelines and standards to direct the future phased design and implementation of the network with the input and support of the public sector, private sector, and telecommunications providers.

RALPH E. POGUE JR., R.L.S., CFEDS (HORIZON SURVEY)

Mr. Pogue has been a licensed land surveyor in Arizona since 2002. He has over 30 years experience in the field of land surveying and has held various positions from rodman/chainman to survey manager. Mr. Pogue has served as President of the Central Chapter of the Arizona Professional Land Surveyors. His experience includes supervision of multiple survey crews and managing teams of office technicians. He is also skilled in project management and coordination, global positioning systems, primary control, boundary analysis, topographic surveys, ALTA/ACSM surveys, construction staking, and route & right-of-way determination. Some of the projects he has been involved with in the Phoenix area include:

DMB:

- DC Ranch– Scottsdale, AZ; Marley Park – Surprise, AZ; Verrado – Buckeye, AZ

Brown Family Homes:

- Glen River – Goodyear, AZ; Travis Park – Goodyear, AZ

Tri-Mark:

- Fairway Villas – Phoenix, AZ; Sierra Boulders – Scottsdale, AZ

Maricopa County Flood Control District:

- FCD OCN No. 343.01.31 – Wickenburg, AZ; PCN No. 350.01.01-Cave Creek, AZ

Westranch Partners LLC:

- Chauncey Ranch-Scottsdale/Phoenix, AZ

Suncor Development Co.:

- Stoneridge –Prescott, AZ

ROBERT A. EICHINGER, P.E., CFM

Professional Credentials

- Master of Science, Civil Engineering/Water Resources, Arizona State University, 1987
- Bachelor of Science, Civil Engineering, Arizona State University, 1984
- Professional Civil Engineer in Arizona (#24767), California, and Nevada
- Certified Floodplain Manager
- Sediment Engineering (HEC-6 and HEC-6T)
- River Analysis Systems (HEC-RAS - steady and unsteady flow)
- Fluvial Geomorphology for Engineers
- NPDES Stormwater Permit Compliance
- Member, American Society of Civil Engineers
- Central Region Representative, Arizona Floodplain Managers Association

Special Qualifications

- Over 32 years of civil engineering, water resources planning, stormwater management, drainage and flood control design, and management experience in the Southwest
- Extensive experience in the areas of hydrology/hydraulics analysis, evaluation of scour, sediment transport and sediment yield, river mechanics, levee design and bank protection, fluvial geomorphology, hydraulic analysis and sizing of culverts, storm drain systems, detention basins open channels, dam safety, embankment dams, and hydraulic structures
- Has directed engineering and inspection activities, interpreted construction plans and specifications, directed contractor activities, and conducted meetings with city, county, state, and federal representatives

Relevant Experience

Storm Drain for 59th Avenue - Brown to Olive, Glendale, AZ — Project Manager. The City of Glendale selected KHA to design 4,000 feet of new storm drain along 59th Avenue between Brown Street and Olive Avenue in Glendale, Arizona. The project includes the design of storm drain inlets and other drainage structures as needed. The proposed line will terminate at the intersection of 59th Avenue and Olive Avenue. A 90-inch-diameter storm drain along Olive Avenue conveys stormwater to the west and discharges into the ADOT channel adjacent to SR 101L. New catch basins and catch basin locations will be added as necessary. Currently, low flow storm drain flows along 59th Avenue are diverted to the west at Brown Street to the Sahuaro Ranch Park. The junction structure located at the intersection of 59th Avenue and Brown Street will be reconstructed so low flows flow south in the new storm drain, while high overflows flow west toward Sahuaro Ranch Park.

The need for this project was first identified in the Glendale Peoria Area Drainage Master Plan. 59th Avenue is a main north-south arterial street in Glendale and is thus heavily trafficked. Since numerous drives tie directly into 59th Avenue, research and coordination with adjacent properties will be required to ensure access during construction. The project will require coordination with several City entities: the Glendale Fire Department, the Parks and Recreation Department, the Library, Glendale Community College, and the Glendale Traffic Management Center. The project will be designed so that access to all of these entities is maintained during construction. KHA will also provide construction monitoring during construction of the project.

SR 89A, Glassford Hill Segment - Final Design, Prescott, AZ — Project Engineer. KHA designed interim improvements on SR 89A for a six-mile segment that had two sections. The first section was a divided freeway with a traffic interchange and bridges at Glassford Hill Road. The second section was the two-lane northbound of the ultimate freeway. Traffic signal design was performed at three grade-separated interchanges. KHA implemented effective cost-saving ideas to maximize funding, such as earth berms versus retaining walls. Also, the corridor accommodated utilities to keep utility relocation costs down, as related to prior rights. KHA met all milestones. Despite ADOT stopping the project for two months due to funding, we still met the original deadline. Further, although the survey was performed three months late, we kept our commitment to the original contract. This project was recognized at the Arizona Roads & Streets Conference as a recipient of the National Partnership for Highway Quality "Making a Difference" Award. The project will be Arizona's nomination for the national award.

ROBERT A. EICHINGER, P.E., CFM

Relevant Experience, continued

Ironwood Drive/Gantzel Road Improvements, US 60 to Hunt Highway, Pinal County, AZ — Project Engineer. Senior Drainage Engineer. Responsible for conducting offsite hydrology for 50-year and 100-year peak discharges to 16-mile roadway project. Evaluated drainage alternatives for conveying offsite drainage under/over roadway within design criteria. KHA worked closely with the Arizona State Land Department (AZSLD), private land owners, and developers to design innovative drainage alternatives that improved flood protection for the roadway, reduced costs for the project, and appealed to stakeholders. AZSLD requires all road improvements that need state land right-of-way to meet the 100-year storm water design criteria, while the County wanted to meet the 25-year design criteria. The difference in cost was significant and included a higher profile, additional right-of-way, and potential liability associated with inconsistent design criteria being used throughout the County. KHA was able to justify the use of the 50-year design criteria, which maintained the original road profile while reducing the amount of additional right-of-way. In working with developers in an area where the alignment had to be shifted off the Section Line and required the developer on the west side of the road to dedicate more right-of-way than the developers on the east side of the road, KHA designed a storm drain system that reduced the pavement drainage runoff that the west side developer had to retain and transferred the additional retention requirement to the east side developer who benefited from the reduced right-of-way dedication. Better yet, the developers were so pleased with the solution that they paid for the storm drain costs, which provided a 'no cost' solution for the County while maintaining positive relationships with the stakeholders.

51st Avenue Improvements, Glendale, AZ — Project Engineer. KHA designed over two miles of arterial road along 51st Avenue, including realignment and reconstruction of an existing two-lane roadway to a four-lane roadway with raised medians. The project required developing new intersection geometrics and signalization at Southern Avenue. Related design elements include drainage improvements, utility coordination, right-of-way identification, and signing and marking plans.

McDowell Road Basin and Storm Drain Design, Mesa, AZ — Project Manager. KHA prepared full design construction plans for a major storm drain as part of the Flood Control District of Maricopa County's Spook Hill Area Drainage Master Plan. The storm drain is 6,700 feet long and ranges in diameter from 78 inches to 114 inches. The storm drain is located in McDowell Road in the City of Mesa from Sossaman to Hawes Road. The project was designed for the 100-year storm event and includes a flow splitter and a surcharge detention basin to attenuate the flood peak to match downstream constraints. This project included revision of the Spookhill Area Drainage Master Plan hydrology to determine runoff contributing directly to the storm drain. It also included an integrated context sensitive design approach to incorporate landscape aesthetics to the local detention basin designed as part of the project.

87th Avenue Drainage Improvement, Maricopa County, AZ — Project Manager. 87th Avenue from Deer Valley Road to Williams Road near Peoria, Arizona is subject to significant drainage impacts. Utilizing the Glendale-Peoria ADMS and the 91st Avenue storm drain ADMP, concept level drainage designs were developed.

48th Street Drainage Channel Design Improvements, Yuma County, AZ — Principal-in-Charge. KHA conducted this drainage design for Yuma County Flood Control District. The scope included a review of existing hydrology studies, and development of hydraulic models of an urban drainage channel. The channel experienced problems at a ninety degree bend and a culvert crossing. KHA conducted an alternatives analysis to develop possible solutions to the existing drainage issues. Alternatives included installing a box culvert at the bend, and adjusting the roadway profile, providing a parallel channel to reduce flows to the bend, and capturing/diverting flows upstream of the bend. The culvert crossing is downstream of the bend. Alternatives for that crossing included channel revisions upstream and downstream to reduce the overtopping of the culvert, and adding a parallel culvert. After the alternative analysis task was completed, KHA prepared full drainage construction plans, specifications, and cost estimate for the recommended plan alternative at the request of the Flood Control District.

Copper Basin Road Design - Phase 1, Prescott, AZ — Project Engineer. KHA recently completed planning and final design services for two miles of Copper Basin Road. This segment includes urban roadway design, intersection design, accommodation of nearly 200 driveways adjacent to the roadway, sidewalk and retaining wall design, water and sewer design for entire segment including new services to properties, storm drain design, and extensive utility relocation coordination including relocation of 69KV and 12KV power, gas main with services, and communication relocations. Intense public involvement is an ongoing element of this project.

JOHN R. KLAMUT, P.E., CFM

Professional Credentials

- Bachelor of Science, Natural Resources and Forest Engineering (Civil Engineering), State University of New York, 1998
- Master of Science, Civil Engineering (Water Resources), San Jose State University, CA, 2002
- Professional Registered Engineer in Arizona (#41945)
- Site Civil Earthwork and Grading Design
- Storm Drain Design
- Hydrology/Hydraulics
- Drainage/ Channel/ Culvert Design
- Earthen Embankment Dam Design
- HDPE Lined Ponds and Detention Basins
- Wetland Design
- Landfill Design
- Stormwater, Reservoir and Groundwater Monitoring
- Member, American Society of Civil Engineers

Special Qualifications

- Possesses over eight years of experience in drainage, stormwater management, flood control, and pollutant containment projects in Arizona, California, and Nevada.
- Provides project management experience on civil design and construction management projects. Experience includes preparing construction drawings, specifications, hydrologic and hydraulic calculations, planning and designing lined impoundments, earthen embankments, landfills, wetlands, channels, culverts, storm drains, wellheads, and erosion protection measures.

Relevant Experience

Sidewalk and Street Improvements, Avondale, AZ — Drainage Engineer. The purpose of this project was to provide street improvements for approximately 8,000 feet of roadway along 6th Street, 7th Street, Corral Street, Agua Fria Lane, Doris Street, Dee Street, Randy Street, and Harison Drive. The project included a hydrologic and hydraulics analysis of the existing conditions and proposed roadway improvements as part of a comprehensive drainage report. An alternatives analysis was completed to identify feasible drainage improvements for the projects. The alternatives included the evaluation of a storm drain along 7th Street. Drainage designed for the project will increase the hydraulic capacity of Dee Street to protect homes subject to flooding from the 10-year and 100-year storm events.

4th Street Improvements: Lower Buckeye Road to Western Avenue, Avondale, AZ — Drainage Engineer. Part of the 2006/2007 City of Avondale On-Call. The purpose of this project was to provide new water lines, reconstruct the pavement, and provide drainage solutions to improve the roadway. The project included a hydrologic analysis of the contributing offsite watershed and a hydraulic analysis of the existing and proposed roadway. An alternatives analysis was performed to evaluate potential drainage solutions including drywells, detention basins, re-grading the roadway, and constructing storm drains. The drainage analysis included modeling existing storm drains in the area to evaluate the potential to tie into the surrounding drainage infrastructure. A drainage report, construction drawings, and cost estimate were prepared for the proposed storm drain.

Loop 101 Frontage Road, Peoria, AZ — Drainage Engineer. KHA is preparing the design of a frontage road between Northern Avenue and Olive Avenue in Peoria, AZ. The drainage component included an alternatives analysis and ultimately the design of approximately 6,500 feet of storm drain. The proposed storm drain was designed to tie into an existing storm drain system that discharges to ADOT Loop 101 drainage channel. The existing storm drain was analyzed using as-built drawings and StormCad software (Haestad Methods, Inc.) to confirm the proposed storm drain could be tied into the existing system and meet ADOT's hydraulic criteria.

JOHN R. KLAMUT, P.E., CFM

Relevant Experience, continued

52nd Street Storm Drain Realignment, Phoenix AZ — Project Manager. KHA provided preliminary and final design services for the realignment of the 52nd Street Storm Drain System. The project is located at the CityNorth Development in the Desert Ridge Commercial Core. The project involved the design of 1,400 feet of 10' by 6' box culvert and 4,600 feet of 30-to 48-inch RGRCP to convey offsite flows through the property. An alternatives analysis was performed to identify the ideal storm drain alignment. The project drainage report and construction drawings were prepared in accordance with City of Phoenix Storm Water Policies and Standards Manual. The hydraulic analysis included the design of split flows to ensure proper flow distribution to downstream 404 washes. In addition, the project included a sediment transport analysis of the proposed storm drains to ensure through flow of sediment. KHA coordinated with the Corps and numerous agencies to obtain design approval and is currently providing construction administration services on the project.

Puerto Canyon Wash Conditional Letter of Map Revision (CLOMR), Tubac, AZ — Project Engineer. KHA has prepared a technical data notebook in support of a Conditional Letter of Map Revision (CLOMR) for Puerto Canyon Wash in the Tubac Vistas Development at Sopori Ranch. The project involved preparing a hydraulic analysis of the wash using the HEC-RAS River Analysis System Version 3.1.3. The detailed study identified the base flood elevations and floodway for the wash. As part of the study a flow split was identified and included in the floodplain mapping. The flow split was quantified utilizing the lateral weir optimization routine in HEC-RAS. The study included analysis of potential levee configurations to develop the overbank and maintain the existing condition flow patterns at the property boundaries.

Sopori Ranch Drainage Master Plan, Tubac, AZ — Project Engineer. KHA was selected to create a preliminary drainage master plan for this 6,000 acre development site. The project involved a hydrologic evaluation of the site and identifying drainage corridors, erosion setbacks, and potential floodplain encroachments for the future development. KHA has also provided the water, wastewater and reclaimed water master plans for the community.

Surprise Foothills East -- Preliminary Engineering, Surprise, AZ — Project Engineer. KHA is preparing a Conditional Letter of Map Revision (CLOMR) for the 1,120 acre Surprise Foothills Master Planned Community located in the western portion of Surprise, Arizona. The project includes developing floodplain maps for five Federal Emergency Management Agency (FEMA) washes which cross the site: Wash 1, Wash 2, Wash 3, 5 WestWash, and by an unnamed wash. All of the washes are designated by FEMA as Zone A floodplains. The CLOMR application involves preparing Zone AE floodplain maps based on new topographic information, updated hydrology, and the grading plan for the Surprise Foothills project. The study utilizes hydrology in the Wittmann Area Drainage Master Study (ADMS), which was developed by the Maricopa County Flood Control District. The CLOMR includes the preliminary design and modeling of 1 bridge crossing, 6 culvert crossings, 1,000 ft of wash channelization, and a split flow analysis.

Lake Havasu City Drainage Master Plan, Lake Havasu City, AZ — Deputy Project Manager. KHA is preparing a 50-square mile drainage master plan for Lake Havasu City, located on the Colorado River in western Arizona. With topography of interrelated ridges and washes, the City was developed primarily on ridgetops above Lake Havasu. Twenty-six earthen levees characterize the City's north and east perimeter. KHA is preparing hydrologic models to evaluate existing and future land use conditions and to examine the hydrology, assuming that none of City's perimeter earth levees are in place. This sans-levee hydrology will indicate the downstream benefits of existing perimeter levees. Hydrology for 10- and 100-year storm events is being prepared for a 149-square mile watershed. KHA also is conducting a drainage facility inventory, preparing a hydraulic analysis for the existing drainage facilities (culvert crossings, ephemeral washes, and split flow analysis), and developing alternative drainage improvements. Other services include preparing a drainage design manual, drafting a City floodplain ordinance, preparing operation and maintenance guidelines for improved ephemeral washes, researching potential sources of construction funding for drainage improvements, and developing best management practices for stormwater quality as part of the Phase II NPDES program.

DAVID E. JENSEN, P.E., CFM

Professional Credentials

- Master of Science, Civil Engineering, Brigham Young University, 1998
- Bachelor of Science, Civil and Environmental Engineering, Brigham Young University, 1996
- Professional Engineer in Arizona (#36852)
- Certified Floodplain Manager
- Earthquake Engineering for Dam Safety, 2002
- Roller Compacted Concrete Structures, 2001
- Flo-2D Modeling System, 1999
- ArcView GIS and Spatial Analyst, On-line ESRI Courses, 1999
- Watershed Modeling Using GIS and the Watershed Modeling System, 1999
- Association of State Dam Safety Officials, 2002
- Arizona Floodplain Managers Association, 1999
- ASCE, Associate Member, 1996

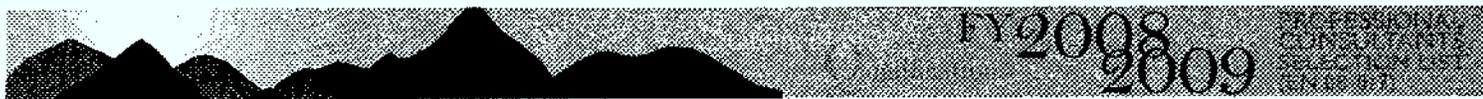
Special Qualifications

- **Hydraulics** — Experience with hydraulic modeling, analysis, design, and evaluation on various water resources projects involving floodplain management and delineation, watercourse master planning, scour analysis, erosion protection, bank stabilization, stormwater runoff, dams and reservoirs, spillways, outlet works, diversion structures, pipelines, tunnels, and other dam appurtenant works. Completed hydraulic analysis on rivers, streams, and washes with one and two-dimensional numerical modeling computer programs.
- **Hydrology** — Hydrologic design and analysis experience includes watershed delineation, flood routing, watershed and reservoir modeling with the HEC-1 and with the Watershed Modeling System (WMS). Experience with storm water management, drainage, and urban hydrology.
- **Construction Management/Materials Testing** — Experience in soils and materials testing. Conducted soil sampling, soil testing, and concrete quality control testing. Experience in field inspection of soils, embankment and foundation soils placement, concrete construction, excavation, and foundation preparation. Experience in scheduling for tracking the progress of contractor's work.
- **Hydrology/Hydraulics** — HEC-RAS, HEC-2, HEC-1, FLDWAV, BOSS RMS, WMS (with HEC-1, TR-20, TR-55, NFF), SMS (FastTABS-HIVEL-2D, RMA2, SED-2D and FESWMS and WSPRO).
- **Geographic Information Systems** — Familiar with ArcView GIS, and ArcView Spatial Analyst.
- **Design** — Basic AutoCAD, LDD, and MicroStation.

Relevant Experience

Storm Drain for 59th Avenue - Brown to Olive, Glendale, AZ — Project Engineer. The City of Glendale selected KHA to design 4,000 feet of new storm drain along 59th Avenue between Brown Street and Olive Avenue in Glendale, Arizona. The project includes the design of storm drain inlets and other drainage structures as needed. The proposed line will terminate at the intersection of 59th Avenue and Olive Avenue. A 90-inch-diameter storm drain along Olive Avenue conveys stormwater to the west and discharges into the ADOT channel adjacent to SR 101L. New catch basins and catch basin locations will be added as necessary. Currently, low flow storm drain flows along 59th Avenue are diverted to the west at Brown Street to the Sahuaro Ranch Park. The junction structure located at the intersection of 59th Avenue and Brown Street will be reconstructed so low flows flow south in the new storm drain, while high overflows flow west toward Sahuaro Ranch Park.

McDowell Road Basin and Storm Drain Design, Mesa, AZ — Project Engineer. KHA prepared full design construction plans for a major storm drain as part of the Flood Control District of Maricopa County's Spook Hill Area Drainage Master Plan. The storm drain is 6,700 feet long and ranges in diameter from 78 inches to 114 inches. The storm drain is located in McDowell Road in the City of Mesa from Sossaman to Hawes Road. The project was designed for the 100-year storm event and includes a flow splitter and a surcharge detention basin to attenuate the flood peak to match downstream constraints. This project included revision of the Spookhill Area Drainage Master Plan hydrology to determine runoff contributing directly to the storm drain. It also included an integrated context sensitive design approach to incorporate landscape aesthetics to the local detention basin designed as part of the project.



DAVID E. JENSEN, P.E., CFM

Relevant Experience, continued

Jomax Road Alignment Study, I-17 to 33rd Avenue, Phoenix, AZ — Project Engineer. Responsible for drainage and scour analysis. KHA provided preliminary design services (DCR and Bridge Selection Report) to the City of Phoenix for the proposed Jomax Road extension from I-17 to 33rd Avenue. The new road will require structures over Skunk Creek and the Buchanan Wash. Through the DCR phase, KHA developed five alignment alternatives that would meet the City's needs. These alternatives were then reviewed in more detail to determine the desired alternative. KHA coordinated with ADOT Valley Management and their design consultant along with the Maricopa County Flood Control District and affected private homeowners.

Ironwood Drive/Gantzel Road Improvements, US 60 to Hunt Highway, Pinal County, AZ — Project Engineer. KHA provided preliminary and final design services for 16 miles of Ironwood Drive from US 60 to Ocotillo Road and from Combs Road to Hunt Highway, widening its current two-lane section into a six-lane roadway with sections of raised median, curb and gutter, and sidewalk. The project included a new 3-span AASHTO precast girder bridge to span the Central Arizona Project (CAP). KHA prepared a Design Concept Report (DCR) and Access Management Plan, as well as final design services for the interim four-lane roadway and preliminary design for the ultimate six-lane roadway. Drainage improvements included pavement drainage and culvert design for offsite flows. The project area is developing rapidly, with adjacent commercial and residential developments being planned and constructed. The project involved coordination with developers and numerous agencies. Additional information can be found at www.IronwoodProject.com.

8th Avenue Bridge Replacement, Graham County, AZ — Task Manager. As part of the preliminary design, KHA is conducting a complete geomorphic analysis of the Gila River as well as hydraulic and scour investigations. The hydraulic study includes evaluation of the river under existing conditions and with the proposed bridge. KHA is conducting a three-level analysis using ADWR State Standards for the geomorphic study of the river. KHA is preparing erosion control plans for the bridge abutments, approach roads, and spur/wing dikes to prevent erosion. The KHA environmental team is providing environmental clearance by preparing a Non-Programmatic Categorical Exclusion per ADOT and FHWA guidelines. We are coordinating with ADOT's Environmental & Enhancement Group (EEG), FHWA, Graham County, and the U.S. Fish and Wildlife Service to conduct threatened and endangered species surveys and Section 7 Consultation. We are also completing Section 106 consultation with the State Historic Preservation Office. This project entails coordination with the U.S. Army Corps of Engineers to complete Section 404 requirements under the Clean Water Act.

48th Street Drainage Channel Design Improvements, Yuma County, AZ — Project Engineer. KHA conducted this drainage design for Yuma County Flood Control District. The scope included a review of existing hydrology studies, and development of hydraulic models of an urban drainage channel. The channel experienced problems at a ninety degree bend and a culvert crossing. KHA conducted an alternatives analysis to develop possible solutions to the existing drainage issues. Alternatives included installing a box culvert at the bend, and adjusting the roadway profile, providing a parallel channel to reduce flows to the bend, and capturing/diverting flows upstream of the bend. The culvert crossing is downstream of the bend. Alternatives for that crossing included channel revisions upstream and downstream to reduce the overtopping of the culvert, and adding a parallel culvert. After the alternative analysis task was completed, KHA prepared full drainage construction plans, specifications, and cost estimate for the recommended plan alternative at the request of the Flood Control District.

Elliot Road Corridor Improvement Study, Maricopa County, AZ — Project Engineer. KHA is conducting a corridor study for Elliot Road. The study will establish the facility type, number of lanes, right-of-way needs, and general alignment for Elliot Road that will be required to accommodate projected traffic growth and enhance safety. In cooperation with the City of Apache Junction, the City of Mesa, and Pinal County, the study will also develop access management guidelines and a plan for the implementation of those guidelines. As part of the study, KHA is preparing a Conceptual Drainage Report for the Elliot Road Corridor using field reviews, existing mapping, and other data as may be available.

JENNIFER S. NEWTON, P.E., CFM

Professional Credentials

- Master of Civil Engineering, Civil Engineering, North Carolina State University, 2001
- Bachelor of Science, Biosystems Engineering, Clemson University, 1998
- Professional Engineer in Arizona (#45926) and North Carolina
- Certified Floodplain Manager
- Member, Arizona Floodplain Management Association

Special Qualifications

- Possesses over six years of experience working with architects, contractors, government agency officials, and others to coordinate, design, and manage civil engineering projects.
- Experience includes providing hydrologic and hydraulic analysis, site and stormwater design, roadway design, sanitary sewer design and utility coordination, permitting, and drafting services.
- Experienced with software including Autocad 2007, Hydraflow 2004 and 2002, HEC-HMS v2.1, GIS-ArcView 3.2/ArcGIS 9, HEC-1, HEC-RAS, Interconnected Pond Routing (ICPR), Flowmaster, StormCAD, TRSS, Microsoft Project, MicroStation, GEOPAK, HY8, and CulvertMaster.

Relevant Experience

Williamson Valley Road Widening - Sidewinder Road to Pioneer Parkway, Yavapai County, AZ — Project Engineer. Drainage Task Manager responsible for hydrologic analysis and hydraulic design for roadway segment. Prepared drainage reports and exhibits to present design progress and calculations. Prepared workplans, schedule, and managed budget. Completed site visits and coordinated with roadway designers to provide best drainage design. Prepared for and represented KHA at public meeting. Prepared cost estimates for proposed drainage facilities. This project widened approximately 2.5 miles of roadway and involve 60 adjacent landowners. The project involved reconstructing an existing two-lane rural roadway to a five-lane urban section for a one mile segment, and a five-lane rural arterial section for the remaining length. The design entailed performing environmental studies and roadway design, including the accommodation of 23 driveways and 14 side roads. The design also included drainage and storm drain design, water and sewer design, utility relocations, rock blasting, retaining wall design, and traffic control, and construction phasing. Extensive public involvement was also a major element of this project.

US 95 DCR/EA and US 195 Ash Extension DCR/ES, AZ — Project Engineer. Drainage Task Manager responsible for hydrologic analysis and hydraulic design for roadway segment. Prepared drainage reports and exhibits to present design progress and calculations. Prepared workplans, schedule, and managed budget. Worked with roadway team to prepare profile and alignment and determine roadway alternatives. Prepared for and represented KHA at public meeting and prepared cost estimates for proposed drainage facilities.

Carefree Highway, I-17 to Scottsdale Road, Access Control and Corridor Improvement Study, Phoenix, AZ — Project Engineer. Researched and analyzed hydrology along the corridor, coordinated existing culvert capacity calculations, prepared recommendations for new culverts and drainage facilities, prepared drainage technical memo for stakeholders, and represented KHA at stakeholder meeting to discuss recommendations and existing conditions. Also prepared cost estimate for proposed drainage recommendations. KHA was selected to manage this study that involved developing a consensus-driven vision for improving the Carefree Highway Corridor between I-17 and Scottsdale Road, identifying corridor deficiencies and requirements, establishing consistent roadway design and performance criteria, and generating technically feasible alternatives designed to meet the established needs. The recommended alternative addressed the facility type, number of lanes, roadway cross-section and right-of-way requirements, traffic control, access, cross drainage, and centerline alignment along the Carefree Highway corridor that will eventually be required to safely and satisfactorily accommodate future travel demands within the corridor. This study provided the County and other jurisdictions with a future "footprint" of the Carefree Highway and the implementation timeframe and phasing of the identified roadway improvements. KHA also developed a detailed Access Management Strategy and Implementation Plan to ensure the preservation of this regionally significant corridor.

JENNIFER S. NEWTON, P.E., CFM

Relevant Experience, continued

Elliot Road Corridor Improvement Study, Maricopa County, AZ — Project Engineer. Researched and analyzed hydrology along the corridor, coordinated existing culvert capacity calculations, prepared recommendations for new culverts and drainage facilities, and prepared drainage technical memo for stakeholders. Also represented KHA at stakeholder meeting to discuss recommendations and existing conditions. The purpose of this study is to develop a consensus-driven vision for improving Elliot Road between Power Road and the CAP canal, identify existing corridor deficiencies and future requirements, establish consistent roadway design and performance criteria, and generate preliminary design plans to meet the established future needs. The recommended corridor improvements will include facility type, number of lanes, roadway cross-section and right-of-way requirements, traffic control, access, drainage, and roadway alignment to safely and efficiently accommodate future travel demands. This study will provide the County and other responsible jurisdictions with a future "footprint" of Elliot Road and the implementation timeframe and phasing of the identified roadway improvements. This study will also develop access management strategies that will include policies and guidelines to ensure the preservation of this regionally significant corridor.

San Luis Area Drainage Study — Project Engineer. Responsible for hydrology. KHA is preparing an area drainage master study for San Luis, Arizona. As part of this study, our team is preparing a drainage facility inventory and a hydrologic analysis, and the condition and capacity of the existing drainage facilities will also be assessed. KHA will make recommendations for the necessary level of flood protection and drainage improvements to mitigate the existing flooding issues in the watershed. Preliminary concept plans for the drainage improvements and a drainage report for the watershed will also be provided. The final results will be presented to the Yuma County Board of Directors and the City of San Luis.

Peoria Downtown Area Drainage Master Plan Update, Peoria, AZ — Project Engineer. Project Engineer and Task Manager. Coordinated with utility officials to determine right-of-way for proposed storm drains. Helped prepare for and participated in status meetings with client. Also prepared workplan and schedule for project. KHA prepared a drainage master plan update for the Oldtown area in the City of Peoria. The Oldtown area is a five city-block area slated for rezoning and redevelopment. As part of the redevelopment, the City revised setback requirements for the area to allow zero setbacks from property lines. This revision allows a more intense land use and essentially waives site retention/detention requirements. KHA conducted the master plan update to evaluate the effects and impacts on local drainage of the zero setback and waiver of site detention. We examined the increase in stormwater runoff from the more intense land use on existing drainage facilities and prepared alternative drainage solutions to accommodate the increase in stormwater runoff. The project included data collection, hydrologic analysis, formulation of drainage alternatives, and preparation of a design concept report. The report included 15 percent conceptual plans for the recommended drainage solution and master plan for the Oldtown area.

Lake Havasu City Drainage Master Plan, Lake Havasu City, AZ — Project Engineer. Researched and prepared the Best Management Practices Report (as Task Manager) and Stormwater Policies Manual (as Project Engineer). KHA is preparing a 50-square mile drainage master plan for Lake Havasu City, located on the Colorado River in western Arizona. With topography of interrelated ridges and washes, the City was developed primarily on ridgetops above Lake Havasu. Twenty-six earthen levees characterize the City's north and east perimeter. KHA is preparing hydrologic models to evaluate existing and future land use conditions and to examine the hydrology, assuming that none of City's perimeter earth levees are in place. This sans-levee hydrology will indicate the downstream benefits of existing perimeter levees. Hydrology for 10- and 100-year storm events is being prepared for a 149-square mile watershed. KHA also is conducting a drainage facility inventory, preparing a hydraulic analysis for the existing drainage facilities (culvert crossings, ephemeral washes, and split flow analysis), and developing alternative drainage improvements. Other services include preparing a drainage design manual, drafting a City floodplain ordinance, preparing operation and maintenance guidelines for improved ephemeral washes, researching potential sources of construction funding for drainage improvements, and developing best management practices for stormwater quality as part of the Phase II NPDES program.

ADAM C. PERILLO, RLA

Professional Credentials

- Bachelor of Science, Landscape Architecture. Purdue University, 1997
- Registered Landscape Architect in North Carolina and South Carolina (pending in Arizona and Nevada)

Special Qualifications

- 10 years of experience in landscape architecture and construction. Specialties include landscape and site design, grading, stormwater drainage, and planting
- Accomplished in public involvement and design consensus building, site design, and stormwater drainage design

Relevant Experience

Loop 101 Frontage Road, Peoria, AZ — Landscape Architect. KHA was selected to provide preliminary and final design services for the new construction of this 1.2-mile frontage road. The project is located adjacent to southbound Loop 101 between Northern Avenue and Olive Avenue within the City of Peoria. KHA prepared a Project Assessment (PA), as well as final design services for the new construction of a two-lane roadway and modifications of the existing southbound Northern Avenue off-ramp and realignment of the southbound Olive Avenue on-ramp. Project tasks include traffic and environmental studies, roadway and drainage design, traffic signal, street lighting, landscaping, sanitary sewer, soundwall, and FMS relocation. The project is part of a mixed retail/commercial/residential development and required intensive coordination between ADOT, City of Peoria, developers, and utility companies.

Sheffield Tarrington/Edwards Branch Management and Restoration Project, Charlotte, NC — Team Member. KHA's Phoenix and Charlotte staff worked together on provided planning, permitting, public involvement, and design services to the City of Charlotte Stormwater Management Services for mitigating stormwater problems in the upper reaches of Edwards Branch. Within this study reach, Edwards Branch is a degraded, urban stream. In the lower reaches, it appears that the channel was relocated to allow for the encroachment of homes into the historic floodplain and river channel. To address both flooding and water quality, KHA redesigned three culverts to convey the 25-year storm event and designed 5,500 linear feet of channel restoration. KHA used the City of Charlotte hydrology and hydraulic standards, in addition to the U.S. Army Corps of Engineers models HEC-1 and HECRAS, and STORMCAD. KHA also led the public meetings and easement coordination efforts with approximately 70 affected property owners.

City of Charlotte, Central Avenue Streetscape, Charlotte, NC — Project Manager. The Central Avenue at Eastland Mall Streetscape project represents a crucial step in the City of Charlotte's Eastside Strategy Plan to encourage economic development and revitalization. KHA was selected to provide pedestrian enhancements to the Central Avenue corridor from Sharon Amity Road to Reddman Road. Amenities included bike lanes, landscaped medians, widened sidewalks, and planting strips. The project design was closely coordinated with the design of the future CATS Eastland Community Transit Center.

City of Charlotte, South Boulevard/Woodlawn Road Intersection Improvement, Charlotte, NC — Landscape Architect. The objective of this project was to improve the operational efficiency of the South Boulevard/Woodlawn Road intersection, which ranked among the City's most congested and hazardous. The design involved the addition of a northbound left-turn lane from South Boulevard onto Woodlawn Road as well as a separate right-turn lane from eastbound Woodlawn onto South. Pedestrian-friendly design features included wider sidewalks, planting strips, islands, and raised planted medians.

City of Charlotte, The Plaza Pedestrian Refuge Median, Charlotte, NC — Landscape Architect. Responsible for design of planted medians added to an existing 5 lane street to provide pedestrian refuge in this increasingly urban area. These medians reduced access to existing property owners which created the need for many public meetings to reach consensus prior to construction.

Rosa Parks Community Transit Center (CTC), Charlotte, NC — Project Manager. This project was done at the same time and for the same client the one above. KHA served the same role and performed the same services on this project. This was a 1.8 million dollar 1.5 acre project. This project has 6 custom passenger shelters on two platforms and an 1100 square foot diver comfort building. Sub surface infrastructure including LED sign's, emergency blue phones, pedestrian lighting, and a 13 camera surveillance system were included in this facility.

ADAM C. PERILLO, RLA

Relevant Experience, continued

Eastland Community Transit Center (CTC), Charlotte, NC — Project Manager. The first in a series of transit centers planned by the Charlotte Area Transit System, the Eastland Community Transit Center (CTC) was designed to improve access to public transit, spur economic growth, and reflect the community's roots and character through public art. KHA's services included project management/prime consultant, landscape architecture, site civil engineering, roadway design, structural engineering, community outreach, and collaboration with a public artist as well as the Architect and MEP. We took this project from corridor study and site evaluations through construction documents and permitting, and did all construction phase service's and closeout document's. This was a 2.8 million dollar 2 acre facility with a 850 square foot driver comfort building, 8 custom passenger shelters on two platforms, and a large pedestrian plaza. This site had significant challenges including 25 feet of elevation change, sub surface water conditions and the coordination of the sub surface infrastructure including LED sign's, emergency blue phones, pedestrian lighting, a 16 camera surveillance system, vendor outdoor receptacles, and the irrigation system.

Commonwealth/The Plaza Streetscape, Charlotte, NC — Project Manager. The City of Charlotte has retained KHA to implement the recommendations of a pedscape plan developed for the City's Central Avenue at The Plaza area onto 1,600 feet of roadway. This plan was based on the results of a study of existing laneage, parking, curb cuts, sidewalks, bike lanes, and general functionality of the roads. The final plan incorporated the opportunities and constraints identified by area residents and business owners and made recommendations to better accommodate their needs. Urban in character and built out, the project area includes several infrastructure challenges, including a general parking deficiency. KHA is providing public involvement services and coordination with numerous private businesses. We also will provide construction documents and oversight.

Farmpond Neighborhood Improvement Project, Charlotte, NC – Project Manager. The main objectives of the Neighborhood Improvement Program (NIP) are to maintain, stabilize and revitalize the neighborhood through comprehensive infrastructure improvements, which act to strengthen the neighborhood and surrounding community. In so doing, these improvements will address important health, safety, and appearance-related infrastructure needs. KHA was selected to implement this program to the 685 acre Farmpond area. This area had development dating back to the 1950's through active construction sites today. KHA did an extensive existing conditions evaluation of this area identifying as many opportunities and constraints as we could find. We then held a series of public meetings to become better informed of the area and build censuses on which items should be addressed with the 1.1 million dollar budget. This effort required us to produce 30% design drawings so that we could prepare an opinion of probable construction costs for the varying issue's. Currently we have completed the planning report and are scoping the agreement with the City of Charlotte to prepare construction documents.

Mecklenburg County Greenway Trails System, Charlotte, NC — Project Manager. As a subconsultant to Clark Nexsen Architecture and Engineering, KHA assisted in the development of 1.2 miles of urban trail system. This new segment of trail is part of a revitalized downtown Charlotte, KHA was responsible for concept design and construction documentation of the trail, including landscape architectural services (planting, path location and construction, site furniture, lighting, etc.) and civil engineering services (drainage, agency coordination, construction details, etc.)

Mecklenburg County, Seversville Neighborhood Park Phase I, Charlotte, NC — Project Manager. This project involved the development of a 7-acre Mecklenburg County Park and Recreation project, including conversion of a railroad corridor to a pedestrian greenway. KHA's services included community workshop organization, site planning and design, construction document preparation, and construction administration.

UNC-Charlotte, Friday-Barnhardt Campus Walkway, Charlotte, NC — Team Member. This project involved designing a cross-campus pedestrian axis linking the Friday Building to the Barnhardt Activity Center. Significant constraints included delivery and access requirements, 15- to 20-foot grade changes, existing utilities, and demand for an aesthetically pleasing pedestrian experience. KHA worked closely with campus staff to design this project to meet a tight budget.

ERIC SHEEHAN, GISP

Professional Credentials

- Master of Arts, Geography and Water Resources, University of Iowa, 1995
- Bachelor of Science, Recreation Education, University of Iowa, 1987
- Certified GIS Professional

Special Qualifications

- Possesses over 12 years of experience in engineering, planning and research uses of Geographic Information Systems (GIS).
- Expertise includes GIS applications design, systems programming, user training, and hardware systems management.
- Developed the management and communication skills necessary for implementation of geographic information and mapping systems for federal, state, county, municipal, and private entities.

Relevant Experience

Lake Havasu City Drainage Master Plan, Lake Havasu City, AZ — GIS Specialist. Kimley-Horn is preparing a 50-square mile drainage master plan for Lake Havasu City, located on the Colorado River in western Arizona. Kimley-Horn team members spent six days in Lake Havasu City conducting a field inventory of existing drainage facilities. Prior to the field exercise, Kimley-Horn engineers collected and reviewed as-built drainage plans, collected drainage reports, and reviewed the City's GIS system for utility layouts to familiarize themselves with the existing drainage system. The Kimley-Horn team developed an inventory facility layout map prior to the field data collection to locate facilities based on as-built plans and existing data. Our team located existing drainage facilities in the field using GPS data collectors and collected data according to location, type of facility, size, and condition. These observations were supplemented with photographs of the drainage facility. Back in the office, the GPS data collectors were downloaded into the GIS database. The GIS was populated with GIS shapefiles and mapping locations of the drainage facilities. Other services include preparing a drainage design manual, drafting a City floodplain ordinance, preparing operation and maintenance guidelines for improved ephemeral washes, researching potential sources of construction funding for drainage improvements, and developing best management practices for stormwater quality as part of the Phase II NPDES program.

Downtown Glendale Pedestrian Enhancements, Glendale, AZ — GIS Specialist. Kimley-Horn is leading the design of a 65 square block area of pedestrian safety and aesthetic enhancements in downtown Glendale. The project consists of repairing and replacing broken or unsafe sidewalk areas, replacing and adding sidewalk with concrete headers and brick accents, installing new curb ramps and inlaid brick crosswalks, street widening and reconstruction including turn lanes, adding extensive landscaping including trees, shrubs and irrigation. Several utilities will be relocated including overhead power. In addition several street furnishings will be installed or refurbished such as trash receptacles, benches, newspaper stands, and bike racks. The project also includes integrating significant public art through out the project. Kimley-Horn is the prime consultant on the project and is leading the civil design and construction administration.

Lower Painted Rock Watershed Zone A Floodplain Delineation, Maricopa County, AZ — GIS Specialist. Kimley-Horn is conducting Zone A approximate floodplain delineations for over 235 miles of washes in western Maricopa County. Kimley-Horn developed regional hydrology for the 100-year storm for a 400-square mile watershed and used the HEC-RAS model to prepare approximate Zone A floodplain delineations. The floodplain delineations are being prepared with a Technical Data Notebook to be submitted to FEMA. The project is part of Flood Control District of Maricopa County's floodplain management strategy to precede urban development.

8th Avenue Bridge Replacement, Graham County, AZ — GIS Specialist. Graham County selected Kimley-Horn to provide a full range of engineering and environmental services for a new bridge over the Gila River in Graham County, including final plans, construction specifications, and construction cost estimates. The scope of the project is to replace the existing 8th Avenue Bridge with a new structure capable of carrying the current and projected traffic volumes along with pedestrians and bicyclists over the Gila River. Classified as functionally obsolete with a rating of 48.10, the existing bridge has a curb-to-curb width of only 22 feet with substandard barrier rails and no accommodations for pedestrians or bicycles. The proposed bridge is a 1200-foot-long, four-lane AASHTO pre-cast concrete girder bridge that will span the Gila River main channel at 8th Avenue. The DCR included evaluations of different bridge types, span arrangements, and typical sections to determine the correct alternative to meet the County's needs and construction budget.

ERIC SHEEHAN, GISP

Relevant Experience, continued

Festival Ranch Master Planned Community, Buckeye, AZ — GIS Specialist. A 10,105-acre master planned community located in the Town of Buckeye. Kimley-Horn has been providing full civil and environmental services to the project for over five years. The services include master planning of the drainage, water and wastewater systems, property ownership analysis, modeling of the transportation circulation system, and environmental/Section 404 service. These services were an integral part of the successful accomplishment of an Area Plan in 1997 and CMP in 2000 for the entire project. We prepared cost estimates and timeline schedules for the first phase of actual construction, and coordinated bridge/roadway improvements over the CAP with the various agencies. Kimley-Horn's environmental scientists performed biological assessments, a Section 404 jurisdictional delineation of the entire parcel, and prepared Section 404 individual permit application.

Oro Valley Townwide Drainage Master Plan, Oro Valley, AZ — GIS Specialist. Kimley-Horn prepared a Master Drainage Plan Report for the Town of Oro Valley identifying immediate, near-term, and long-term program and policy needs for the management of floodplain and drainage resources. In addition, a Drainage Criteria Manual was developed for the Town of Oro Valley. This manual established specific standards and practices for drainage related activities in the town.

Surprise Foothills, Surprise, AZ — GIS Specialist. Kimley-Horn was hired to provide a full range of engineering planning services for Surprise Foothills, a 1,089-acre site located in Surprise, AZ. This proposed master planned community is anticipated to include 2,900 single-family homes and approximately 35 acres of retail development. Kimley-Horn is preparing entitlements for a full rezone and is designing preliminary master plans for water, sewer, roadways, and traffic. We also conducted a hydrological analysis to address major floodplain issues, as well as 404 permitting services including providing a NEPA document, Alternative Analysis Report, and a Conservation Mitigation and Monitoring Plan.

Yavapai County Fairgrounds Relocation and Infrastructure Planning/Design, Prescott, AZ — GIS Specialist. Kimley-Horn completed analysis and design for the drainage system serving the fairgrounds and racetrack. Designed system (including on-site retention) and performed hydraulic and hydrologic studies which included a multi-channel pipe system and detention basins. Kimley-Horn also developed drainage study and design for the development of the new fairgrounds site. Project involved preparation of a preliminary plan for relocating the Yavapai County Fairgrounds from the existing 60-acre site to a new 210-acre site. Improvements included parking, roadway access, horse track, and other related buildings. Facilities to be relocated included all exhibition buildings, concessions, a 5/8-mile horse racetrack, a full professional rodeo arena with grandstands (capacity 2,000), stables, parking, access, and related infrastructure.

RORY M. MALOUF

Professional Credentials

- Bachelor of Science, Biology, Texas Tech University, 2001
- Cactus Ferruginous Pygmy-Owl Surveyor Training, 2004
- Completed 3-day ASTM Phase I and Phase II Environmental Site Assessment Processes training course

Special Qualifications

- Experienced in performing Phase I Environmental Assessments
- Experience in regulatory compliance issues for both the private and public sector
- Experienced field biologist
- Experienced in performing jurisdictional delineations and pre-construction notifications

Relevant Experience

Broadstone Ranch, Maricopa County, AZ — Field Representative. In early 2005, Elliott Homes hired KHA to provide master planning site civil engineering services for 880 acres located within a 3,000-acre proposed master-planned community in Maricopa County, near the City of Surprise. Our team's services will include due diligence, site analysis and reports, conceptual infrastructure planning, drainage analysis and planning, environmental analysis and 404 permitting, NEPA documentation, EISs and EIRs, transportation planning and traffic impact studies, and program management.

Carefree and 7th Street Candidate Assessment Report (CAR), Maricopa County, AZ — Environmental Scientist. KHA was retained by a private developer to prepare a Candidate Assessment Report (CAR) to define possible alternatives to mitigate existing floodplain and floodway zones associated with a property in Maricopa County. The project site consists of approximately 17 acres in unincorporated Maricopa County between 7th Street and 10th Street on the northern side of Carefree Highway.

Gila River Indian Community District 3 Master Drainage Plan, Sacaton, AZ — Environmental Scientist. Assisted in the performance of a Biological Review for the Gila River Indian Community District 3 Master Drainage Plan. KHA prepared a Master Drainage Plan for District #3 that included developing a 10-year and 100-year hydrologic model for a 49-square mile watershed for existing and future land use conditions. KHA also conducted a potential overtopping analysis of the Southside Canal Levee to evaluate whether upstream ponding would overtop this important irrigation canal. As part of the engineering analysis for the Master Plan, KHA conducted a sediment yield analysis for four subwatersheds to estimate the annual sediment delivery to four siphon crossings of the Southside Canal. KHA identified drainage issues and flooding problems within District #3 and the Town of Sacaton. We developed stormwater drainage facility alternatives that consisted of improved storm water channels, storm drains, and regional detention basins to alleviate flooding problems. The stormwater facility alternatives were evaluated to formulate a preferred stormwater master plan. The individual master plan projects were classified and prioritized as being either Class I, II, or III master plan projects for purposes of implementation. Class I projects are projects that need to be constructed within an immediate planning horizon. KHA prepared 30% level construction plans for each of the Class I projects in order to provide a greater level of detail for construction costs. The Master Plan project included an environmental evaluation of project impacts, right-of-way identification, utility inventory, identification of required permits and approvals, and cultural impacts.

As part of this project, KHA environmental scientists prepared a contamination evaluation which document facilities that are potential contamination concerns within the project area. The environmental portion of this project also included an evaluation of sensitive natural resources areas which included potential endangered species habitat and an evaluation of potential environmental permitting requirements associated with the Master Drainage Plan.

Harding County Single Runway Airport EA, Harding County, NM — Team Member. KHA prepared an Environmental assessment (EA) for a proposed new general aviation airport in northeast New Mexico. The EA addresses constructing an initial runway, aircraft parking apron, a connecting runway to apron taxiway, parking lot, access road to the airport, and utility corridors. The FAA issued the FONSI in March

RORY M. MALOUF

Relevant Experience, continued

HES On-Call, Phoenix, AZ — Environmental Scientist. Assessed jurisdictional areas; coordinated sensitive species information with U.S. Fish and Wildlife Service; and assisted in Section 404 permitting application preparation. KHA was selected twice by ADOT for this on-call contract that involves designing roadway projects from the pre-design stage through the final design. Projects range in nature from intersection improvements, passing lanes, truck escape ramps, and other safety improvement projects.

Natural and Cultural Resources On-Call, Phoenix, AZ — Analyst. KHA was an on-call consultant for the City of Phoenix. Under this contract, KHA performed work related to Section 404 of the Clean Water Act, NEPA evaluation, and protected species evaluation for City of Phoenix projects.

Peoria Place (83rd & Grand) Mixed Use, Peoria, AZ — Environmental Scientist. Responsible for preparing a Phase I Environmental Site Assessment (ESA) and coordinating the preparation of a Phase II ESA and site remediation as part of the due diligence for a private development. This work was performed to satisfy the Client's purchase agreement obligations. As a result of the Phase I ESA, it was recommended that a Phase II ESA and asbestos survey be conducted prior to close of escrow. KHA is doing street and utility infrastructure work on this 127-acre site located at the southeast corner of 83rd Avenue and Monroe Street in Peoria, Arizona. The development will be a mixed use site consisting of single family and multi-family residential, commercial, and office space.

Regional Park at White Tank Mountain 404 Permitting, Maricopa County, AZ — Analyst. KHA was selected by the Arizona State Land Department to complete a large-scale Jurisdictional Delineation (JD) to identify waters of the U.S. for roughly 12,740 acres (19.9 square miles) of state trust land located just west of the White Tank Mountains Regional Park in an unincorporated area of Maricopa County just east of the Town of Buckeye. The scope of the JD report includes identifying type and location of past and present land disturbance activities, such as buildings, trails, roads, and other infrastructure. It also includes review of CWA Section 404 permits and available JD reports for lands adjacent or near the White Tanks Project. It will include discussions of the flow regime, geomorphic features, surface flow, and other indicators.

Rittenhouse Road to Hawes Road Realignment, Queen Creek, AZ — Team Member. KHA was selected by the Town of Queen Creek to conduct a Phase I Environmental Site Assessment (ESA) on an approximately two-acre parcel, located north of Germann Road and West of Sossaman Road in Queen Creek, Maricopa County. The purpose of this investigation was to identify the presence or likely presence of any hazardous substances or petroleum products under conditions that indicate an existing release, past release, or a material threat of a release that could impact the property.

Tatum Sewer Section 404 Permit, Phoenix, AZ — Environmental Scientist. KHA was contracted by Hess-Roundtree, Inc. to evaluate areas considered jurisdictional under Section 404 of the Clean Water Act and to prepare a Section 404 permit application for a City of Phoenix sewer line installation project. The project also involves the assessment of habitat for the cactus ferruginous pygmy-owl.

Wal-Mart Retail Sites, AZ, NV, and Texas — Environmental Scientist. Assessed the subject properties in Nevada and Arizona for jurisdictional areas under Section 404 of the Clean Water Act. Performed and aided in the performance of Phase I Environmental Site Assessments on properties in Arizona and preliminary site assessments on properties in Nevada and Arizona. KHA prepares and/or supervises the preparation of due diligence studies for parcels in Arizona, Nevada and Texas that have been identified as potential sites for Wal-Mart retail outlets. The due diligence included Phase I Environmental Site Assessments, biological assessments and identification of potential Section 404 jurisdictional areas. Few sites required Phase II contamination site sampling. Select sites included the preparation of required permit applications and coordination of natural resource regulatory compliance issues.

West Towne Court, (83rd Ave & Thomas) Multi-Family Residential Community, Phoenix, AZ — Task Manager. Mr. Malouf was responsible for conducting a Phase I Environmental Site Assessment (ESA), which was performed to satisfy the Client's purchase agreement obligations. As a result of the Phase I ESA, it was recommended that a Phase II ESA and asbestos survey be conducted prior to close of escrow. Mr. Malouf also coordinated the preparation of the Phase II ESA and site remediation as part of the due diligence for this private development. This 17-acre site is located at the northwest corner of 83rd Avenue and Virginia Avenue in Phoenix, Arizona. The site is planned to be developed as a multi-family residential community.

DWIGHT H. CLARK, CHMM, CET (NINYO & MOORE)

EDUCATION

Bachelor of Science, Environmental Engineering, Kennedy Western University, Cheyenne, Wyoming

REGISTRATIONS AND CERTIFICATIONS

- Certified Hazardous Materials Manager (CHMM), No. 11284
- Certified Environmental Trainer (CET), No. 22-035
- Arizona Department of Health Services Multi-media Sampling Techniques
- Arizona Department of Health Services Laboratory Quality Assurance/Quality Control
- EPA Training on Characterization of Closed, Transferred, and Transferring Ranges
- International Air Transport Association and Department of Transportation Hazardous Materials Shipping
- Interstate Regulatory Technology Commission UXO Characterization
- OSHA 40-Hour 1910.120 HAZWOPER, HAZWOPER Supervisor, and Trainer
- National Fire Academy Firefighter, Emergency Responder, Incident Commander

PROFESSIONAL EXPERIENCE AND RESPONSIBILITIES

Mr. Dwight Clark has over 20 years of experience in the environmental field performing and managing various health, safety, and environmental compliance including field activities with progressive management experience. He has provided environmental regulatory compliance support services to commercial clients representing a broad range of industrial sectors. His professional experiences range from development and execution of corporate-wide multi-media auditing, EMS, and environmental risk/liability assessment programs, to preparing permit applications and Right-to-Know (RTK) reports, to the development of contingency/emergency response plans such as Spill Prevention Control and Countermeasures (SPCC), Storm Water Pollution Prevention (SWPP), Facility Response Plans, and RCRA Contingency Plans. Mr. Clark has performed multi-media environmental compliance audits and/or due diligence assessments at over one hundred facilities/properties in the continental U.S.A., with extensive experience and competency in not only federal environmental statutes and regulations, but also environmental statutes, regulations and programs in over 15 different states. Mr. Clark is experienced in the planning, field operations, and technical document preparation for RCRA, CWA, CAA, CERCLA, EPCRA, NEPA, Safety, and Emergency Planning programs. Mr. Clark's recent project experience includes:

- Environmental Technical Emergency Response Team Leader: Phoenix, Arizona: Assigned as the Team Leader for development of Technical Emergency Response Strike Teams for Ninyo & Moore. The Strike Teams operated under contract to the City of Phoenix and Valley Metro Light Rail performing hundreds of initial site evaluations. The goal of the Strike Teams was to rapidly assess the environmental and public health hazards from unknown concerns discovered during construction or that were a result of construction operations. Responses included projects ranging from large Spills of Petroleum Products from operations resulting in the removal of over 3,000 tons of impacted soils to excavation and evaluation of stained soils. Notable projects include Polychlorinated Biphenyl's (PCBs), Hydrocarbons, Chlorinated Solvents, Heavy Metals, Sewage Treatment units, Oil-Water Separators, burn pits and landfills.
- Expedited Aquifer Protection Permit Program – Compliance Conformance Services, Superior, Arizona: Performed expedited evaluation and assessment of compliance conformance documents associated with the permittee's Area-wide Aquifer Protection Permit (APP) the Arizona program analogous to the National Pollution Discharge Elimination System (NPDES). Tasks included review and assessment of environmental and geologic compliance documents relative to submittal requirements set forth in the APP as well as pertinent soil and groundwater regulations.
- Aquifer Protection Permit Applications, Various Locations: Prepared Aquifer Protection Permit (APP) Applications for wastewater treatment facilities and Class V injection wells located throughout Arizona.
- Air Permitting: Developed complete inventory of all emissions sources and regulatory approach to permitting as Title V source with ADEQ for a large federal client with multiple operations. Developed compliance database to implement recordkeeping requirements of Title V of the CAA. Permitted Various Non-Title V sources.

DWIGHT H. CLARK, CHMM, CET (NINYO & MOORE)

- Closure of RCRA interim status units: Achieved "complete closure" for one facility from Arizona Department of Environmental Quality. Established investigation and closure plans for past and present Solid Waste Management Units (SWMUs) of two OB/OD areas at YPG. Developed closure plan for recently discovered surface unit involving subsurface unexploded ordnance and OB/OD on ground. Negotiated a Corrective Measure Study on a 600-acre explosives contaminated site, saving the client over \$1,000,000 from original scope proposed by the agency.
- Internal Audit Program: Developed complete internal audit program as metrics for assessment of compliance to all relevant regulatory requirements. The audit program was designed to be ISO 14000
- compliant and to utilize environmental management system (EMS) strategies.
- RCRA Site Assessment: Conducted initial evaluation of several munitions sites at YPG, containing several vastly different sources of contamination from burial, burning, open dumping, and open detonation. Developed plans to complete evaluation of site activities and potential exposure pathways. Used site evaluation data and operational data to determine contaminants of potential concern. Physical site evaluations documented particulate explosives on the surface, and movement of the contaminants in the surface water courses.
- Permitting RCRA TSDF: Supervised and provided technical direction for the permitting of a RCRA TSDF for the OB/OD of waste explosives. Successfully negotiated permit conditions that allowed flexible operations in support of the client's research and development business plan. Developed innovative treatment options for munitions items to meet treatment goals and improve the environmental protection.
- Site Assessments: Project Manager for numerous site assessments for the removal of USTs, and subsequent extent of contamination studies. Project duties included the development of subsurface investigation work plans; the direction of field personnel; the selection of on site contractors; development of work plans including pilot studies for soil vapor extraction and groundwater pump-and treat; and the procurement of state reimbursement funds
- Environmental Regulatory Planning: Provided assistance in environmental regulatory planning activities for municipal and industrial facilities. Projects included analysis, preparation, organization, and production of the following types of regulatory documents: waste stream analysis, hazardous material inventory statement and management plan, stormwater management plan, container management plan, workplace hazard assessment, training plan, drywell inventory and best management practice evaluation, Subpart CC air emissions inventory, acquisition and consolidation of EPA ID numbers, slug control plan, and emergency response plan.
- Spill Prevention Control and Countermeasure (SPCC) Plan: Evaluated facility operations and authored SPCC Plan to meet regulatory and local requirements for various federal, municipal, and industrial facilities with as many as 19 satellite agencies.
- Stormwater Pollution Prevention Plan (SWPPP): Developed SWPPPs to meet NPDES permit requirements for various industrial facilities. Facilities varied in size up to 300-acres with as many as 20 outfalls. SWPPPs were developed by identifying potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility, describing and ensuring the implementation of Best Management Practices (BMPs) which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility ensuring compliance with the terms and conditions of the permit.
- UST Closure: Performed UST closures across the continental United States. Closure services included: obtaining UST closure permits; scheduling a certified UST removal contractor; performing oversight during excavation, removal, and disposal / destruction of the USTs; monitoring the lower explosive limit and oxygen levels in the USTs prior to removal; collecting soil samples following removal of the USTs; coordination of an certified laboratory for analytical testing; interpretation of the analytical data; and assisted with the preparation of the UST Closure report.

PROFESSIONAL AFFILIATIONS

- Academy of Hazardous Materials Managers
- Arizona Emergency Response Association
- Environmental Professionals of Arizona
- Thunderbird Chapter of ACHMM (Vice-President, Board of Directors 2007)
- Society of American Military Engineers
- Arizona Association of Industries, Waste and Remediation Subcommittee

STEVEN D. NOWACZYK, P.E. (NINYO & MOORE)

Professional Credentials

- Masters of Science, Geotechnical Engineering, 1995, University of Michigan, Ann Arbor, Michigan
- Bachelor of Science, Civil Engineering, 1990, Michigan State University, East Lansing, Michigan
- Registered Professional Engineer, Arizona, PE 34866
- Registered Professional Engineer, Michigan, PE 42103

Special Qualifications

- Mr. Nowaczyk has over 16 years of geotechnical engineering experience including performing and coordinating geotechnical investigations, monitoring field construction testing activities, performing oversight services for geo-dynamic and geo-investigation projects, providing field quality control support for construction projects, conducting laboratory testing, and reviewing reports. Mr. Nowaczyk has provided these services for a variety of project types including commercial and industrial developments, automobile plants, airports, sports complexes, hospitals, educational facilities, highways, bridges, and tunnels. As Senior Project Engineer for Ninyo & Moore's Phoenix office, Mr. Nowaczyk conducts geotechnical investigations and analyses; prepares and reviews soil and foundation reports and specifications; reviews and provides technical support to engineers, technicians, and construction personnel; coordinates engineering research and development activities; performs engineering calculations and prepares geotechnical reports; and assists in project management.

Ray Road Improvements, From Dobson Road to Bull Moose Drive & Arrowhead Drive to Alma School, Chandler, Arizona: Project Manager during a geotechnical evaluation for the design of the roadway improvement to Ray Road from Dobson Road to Bull Moose Drive and from Arrowhead Drive and Alma School Road in Chandler, Arizona. Responsibilities included coordination of field activities including the acquisition of drilling and traffic control vendors; assigned appropriate laboratory testing; reviewed the laboratory test results; performed engineering analysis; and prepared a detailed geotechnical report outlining our recommendations rated to the excavation characteristics of the on-site soils, suitability of excavated material for re-use as fill, subgrade preparation, and pavement thickness.

Chuparosa, Pequeno, La Paloma, Folley, and Vegabond Parks, Chandler, Arizona: Project Manager during a geotechnical evaluation for the design of the several residential parks in the City of Chandler, Arizona. The residential parks included Chuparosa, Pequeno, La Paloma, Folley, and Vegabond Park. Responsibilities included coordination of field activities including the acquisition of drilling vendor; assigned appropriate laboratory testing; reviewed the laboratory test results; performed engineering analysis; and prepared a detailed geotechnical report outlining our recommendations rated to the excavation characteristics of the on-site soils, suitability of excavated material for re-use as fill, subgrade preparation, foundation support and pavement thickness.

Intersection Improvements, Ray Road and McClintock Drive and Ray Road and Rural Road, Chandler, Arizona: Project Manager during a geotechnical evaluation for the design of intersection improvements at Ray Road and McClintock Drive and Ray Road and Rural Road in Chandler, Arizona. Was responsible for coordination of field activities including the acquisition of drilling and traffic control vendors, adequate right-of-way permits, arranged for off-duty police officer support, assigned appropriate laboratory testing, reviewed the laboratory test results, performed engineering analysis and prepared a detailed geotechnical report outlining our recommendations rated to the excavation characteristics of the on-site soils, suitability of excavated material for re-use as fill, subgrade preparation, and pavement thickness.

ADOT Design/Build Project, State Route 51 HOV Lanes, Phoenix, Arizona: Senior Project Engineer for the geotechnical evaluation for the final design of a transition between Interstate 10 and State Route 51. The project included the construction of five bridges, 30-foot high embankments with mechanically stabilized earth (MSE) walls, re-construction of noise walls, underpinning of an existing bridge, and slope stabilization with soil nails. Directed field and laboratory testing and analyses.

US Route 60, Design-Build Project, Maricopa County, Arizona: Project Engineer responsible for developing project work, managing field and laboratory testing program and assembled the final data report, which was made available to prospective design-build teams. The project consisted of the widening of US Route 60 from approximately I-10 to Val Vista Road, including the widening of several bridge structures, realignment of on/off ramps and the construction of several miles of retaining walls.

GREGG A. CREASER, P.E., R.L.S. (SPEEDIE & ASSOCIATES)

Professional Credentials

- Registered Professional Engineer (Civil) – Arizona #14388, New Mexico #14003
- Registered Land Surveyor - Arizona #17161
- B.S.C.E., Civil Engineer, Arizona State University, 1975
- Member, American Concrete Institute, (ACI)
- Member, American Society Civil Engineers, (ASCE)
- Member, Valley Paving Association
- Member, Arizona Consulting Engineers Association, (ACEA)

Special Qualifications

- Mr. Creaser is company President and geotechnical-engineering specialist providing consulting engineering services for clients in both private sector and municipal agencies statewide. He offers 27 years of civil and geotechnical engineering experience in the Arizona market and is a founding member in Speedie & Associates' Phoenix operation. Mr. Creaser is directly responsible for managing the company wide geotechnical department operations with the aid of a professional staff of ten engineers/geologists plus support personnel. Mr. Creaser personally conducts investigations and analyses for projects, directs and guides geotechnical engineers and technicians in compiling and analyzing data, provides Principal supervision on all investigations, authors and reviews geotechnical reports, provides technical guidance and support to the professional staff, and prepares and reviews soil and foundation reports and specifications. Mr. Creaser prides himself on working closely with project stakeholders in providing sound, economical design solutions for foundations and site development.

Relevant Experience

El Mirage Street Improvements, El Mirage, Arizona. Paving and intersection improvements along El Mirage Road between Olive and Northern Avenues and Olive Avenue between Dysart and El Mirage Road. (26 projects in all.) Construction involved recycling of existing pavement and construction of new pavement. Services provided: Geotechnical Investigation, Pavement Analysis and Design

Valley Utilities Maryland Avenue Booster Station Reservoir, El Mirage, Arizona. Construction of 1,000,000 gallon steel at grade water tank. Services Provided: Geotechnical Investigation

El Mirage Water Tanks, El Mirage, Arizona. Project included two different lots in close proximity for 36 & 38 foot high water tanks. Services provided: Geotechnical Investigation

Avondale Reservoir, Avondale, Arizona. Water storage tank founded on a mat foundation approximately 25' below existing grade, pump and tank buildings founded at 25' below existing grade and at grade control building chlorination room. Services Provided: Geotechnical Investigation

24th Street WTP Rehabilitation Project, Phoenix, Arizona. Proposed pump station for an existing 140 MGD, conventional water treatment plant to alleviate extremely stressed water quality in the service area. Services Provided: Geotechnical Investigation

Happy Valley Road DCR, Peoria, Arizona. DCR for Happy Valley Road from Lake Pleasant Road to 67th Ave. Services Provided: Geotechnical Investigation

Lake Pleasant Water Line Transmission Main Study, Phoenix, Arizona. Corridor study for 78-inch, 9.25 mile water transmission line from the proposed Lake Pleasant WTP to 27th Ave. Services Provided: Geotechnical Investigation

Glendale WRP-Pipeline Alignment, Glendale, Arizona. Pipeline alignment between plant site located south of Glendale Airport and recharge area located near Luke Air force Base and Agua Fria River. Development of the plant site includes surface buildings/structures and below grade tanks and/or ponds and associated infrastructure. Services Provided: Geotechnical Investigation, Construction Materials Testing

GREGG A. CREASER, P.E., R.L.S. (SPEEDIE & ASSOCIATES)*Relevant Experience, continued*

Greenway Drainage Channel Improvements, Phoenix, Arizona. Design to lower the existing channel bottom by 6 feet, tapering back to the original flow line at each end. Services Provided: Geotechnical Investigation

South Mountain Sewer Line, Phoenix, Arizona. Approximately 26 miles of proposed sanitary sewer line along the south side of South Mountain. Involved review of available soil information along proposed routes and evaluation of anticipated conditions. Services provided: Geotechnical Investigation

Val Vista WTP, Mesa, Arizona. Major expansion of existing plant, slope stability investigation of return water pump station, 80 MGD Expansion. Services provided: Geotechnical Investigation, Construction Materials Testing

Estrella Parkway Widening and Pavement Design, Goodyear, Arizona. Widening of Estrella Parkway from an existing two-lane roadway to a four-lane roadway with raised median (Yuma Road to ¼ mile North of McDowell Road). Services provided: Geotechnical Investigation, Pavement Design

KEVIN J. KIMM, P.E.

Professional Credentials

- Bachelor of Science, Civil Engineering, Montana State University, 2000
- Professional Engineer in Arizona (#043306) and North Carolina (#030483)
- ACI Certification for Concrete Field Testing
- Member, American Society of Civil Engineers

Special Qualifications

- Structural design experience in AASHTO girder bridges, steel girder bridges, steel box girder bridges, and cast-in-place T-beam bridges
- Specialized structural design experience in precast and cast-in-place post-tensioned parking structures
- Miscellaneous highway structure design experience includes box culverts, retaining walls, sound walls, and sign structures
- Worked on numerous projects ranging from ropeway transportation to trolley transportation
- Experienced in construction administration for projects ranging from ropeway transportation systems to parking decks
- Accomplished in structural design and functional layout of parking decks

Relevant Experience

8th Avenue Bridge Replacement, Graham County, AZ — Project Manager/Project Engineer for a 9-span, 1,200 foot long AASHTO Type VI-S girder bridge. Involved in coordination with multiple stakeholders on the project including Graham County, ADOT, FHWA and Fish and Wildlife. Graham County selected KHA to provide a full range of engineering and environmental services for a new bridge over the Gila River including final plans, construction specifications, and construction cost estimates. The scope of the project is to replace the existing 8th Avenue Bridge with a new structure capable of carrying the current and projected traffic volumes along with pedestrians and bicyclists over the Gila River. Classified as functionally obsolete with a rating of 48.10, the existing bridge has a curb-to-curb width of only 22 feet with substandard barrier rails and no accommodations for pedestrians or bicycles. The DCR included evaluations of different bridge types, span arrangements, and typical sections to determine the correct alternative to meet the County's needs and construction budget.

I-40, Walnut Canyon, Flagstaff, AZ — Project Engineer. KHA recently prepared stage IV (95%) PS&E for this project located on I-40, five miles east of Flagstaff. Three separate segments on westbound I-40 will be reconstructed to flatten vertical curves and grades in order to reduce deceleration of trucks and improve safety. KHA's services for this project included roadway design, drainage design, traffic design, project management, environmental, and utility and ROW coordination. The project also involved re-profiling vertical curves on WB I-40 mainline, earthwork, false cuts, guard rail, culvert extensions, Cosnino Road TI ramps' reconstruction, median crossover detours, emergency pull outs, traffic control, signing, striping, and lighting design.

Ironwood Drive/Gantzel Road Improvements, US 60 to Hunt Highway, Pinal County, AZ — Project Engineer. Responsible for completing design and structural detailing review of a three-span (75'-140'-75') AASHTO girder bridge over the Central Arizona Project Canal. KHA provided preliminary and final design services for 16 miles of Ironwood Drive from US 60 to Ocotillo Road and from Combs Road to Hunt Highway, widening its current two-lane section into a six-lane roadway with sections of raised median, curb and gutter, and sidewalk. The project included a new 3-span AASHTO precast girder bridge to span the Central Arizona Project (CAP). KHA prepared a DCR and Access Management Plan, as well as final design services for the interim four-lane roadway and preliminary design for the ultimate six-lane roadway. Drainage improvements included pavement drainage and culvert design for offsite flows.

Ruger Ranch - Bridge Design, Prescott, AZ — Project Manager/Project Engineer for a single span 125' long AASHTO Type VI girder bridge over the BNSF Railroad. The project is for a private developer, and KHA is completing the final coordination with BNSF to get approval on the final structural plans. This project involves providing access to proposed home sites in a private development without requiring an at-grade crossing of the railroad.

KEVIN J. KIMM, P.E.

Relevant Experience, continued

SR 87 Roadway Widening, Payson, AZ — Project Engineer. KHA is currently providing design services (Stage V) for the widening of two one-mile segments of SR 87 in mountainous terrain north of Payson from MP 254 to MP 267. Environmental, drainage, and coordination with the Tonto National Forest are critical aspects of the partnering required for this project. The project involves high rock-cut areas, data collection for archaeological sites, and an extensive effort to balance earthwork. In addition, KHA's innovative design of an energy dissipater eliminated the need to acquire private right-of-way, which would have delayed the project by 12 months.

The Promenade at Casa Grande, Casa Grande, AZ — Project Engineer. KHA is currently widening a 3/4-mile stretch of Florence Blvd. Design includes improving a traffic interchange which will widen all ramps and intersections over two existing structures over I-10 and a drainage canal. Services include a new curb, gutter, sidewalks, raised median, islands, constructing a new box culvert, traffic signals, lighting and landscaping.

Westerly Drive Improvements District, Town of Payson, AZ — Project Engineer. The project consisted of providing a single span bridge over the American Gulch. The bridge is comprised of a steel girder superstructure on short seat abutments with spread footing foundations. The profile of the road and bridge was set to pass the 100 year flood event. Project consisted of design alternatives, final design, fabricator coordination, shop drawing review, and construction RFI's.

GARY KARABOULAD, P.E.

Professional Credentials

- Bachelor of Science, Civil Engineering, Damascus University, Syria, 1983
- Master of Science, Civil Engineering, South Dakota State University, 1992
- Professional Registered Engineer in Arizona (#39501)
- Certified Inspector for Safety Inspection of In-service Bridges

Special Qualifications

- More than 18 years of professional experience in the design and construction of various types of special highway structures, bridges, earth retaining structures, sound walls, and buildings.
- Involved in the design of more than 23 multi-span, AASHTO girder, cast-in-place and post-tensioned box girder structures.
- Former ADOT employee, experience includes eight years in the Bridge Group and 1-1/2 years in the Phoenix Construction District. Designed and developed ADOT's Sign Structures and VMS Standards, New Pedestrian Fence Standard, and Updated the Box Culvert Standard.
- Attended all ADOT Project Management Training and Primavera training seminars and is familiar with most ADOT Bridge Group and Phoenix Construction District computer programs.

Relevant Experience

8th Avenue Bridge Replacement, Graham County, AZ — Project Engineer. Graham County selected KHA to provide a full range of engineering and environmental services for a new bridge over the Gila River including final plans, construction specifications, and construction cost estimates. The scope of the project is to replace the existing 8th Avenue Bridge with a new structure capable of carrying the current and projected traffic volumes along with pedestrians and bicyclists over the Gila River. Classified as functionally obsolete with a rating of 48.10, the existing bridge has a curb-to-curb width of only 22 feet with substandard barrier rails and no accommodations for pedestrians or bicycles. The proposed bridge is a 1200-foot-long, four-lane AASHTO pre-cast concrete girder bridge that will span the Gila River main channel at 8th Avenue. The DCR included evaluations of different bridge types, span arrangements, and typical sections to determine the correct alternative to meet the County's needs and construction budget.

I-40, Walnut Canyon, Flagstaff, AZ — Project Engineer. KHA recently prepared stage IV (95%) PS&E for this project located on I-40, five miles east of Flagstaff. Three separate segments on westbound I-40 will be reconstructed to flatten vertical curves and grades in order to reduce deceleration of trucks and improve safety. KHA's services for this project included roadway design, drainage design, traffic design, project management, environmental, and utility and ROW coordination. The project also involved re-profiling vertical curves on WB I-40 mainline, earthwork, false cuts, guard rail, culvert extensions, Cosnino Road TI ramps' reconstruction, median crossover detours, emergency pull outs, traffic control, signing, striping, and lighting design.

Ironwood Drive/Gantzel Road Improvements, US 60 to Hunt Highway, Pinal County, AZ — Project Engineer. KHA provided preliminary and final design services for 16 miles of Ironwood Drive from US 60 to Ocotillo Road and from Combs Road to Hunt Highway, widening its current two-lane section into a six-lane roadway with sections of raised median, curb and gutter, and sidewalk. The project included a new 3-span AASHTO precast girder bridge to span the Central Arizona Project (CAP). KHA prepared a DCR and Access Management Plan, as well as final design services for the interim four-lane roadway and preliminary design for the ultimate six-lane roadway.

SR 87 Roadway Widening, Payson, AZ — Project Engineer. KHA is currently providing design services (Stage V) for the widening of two one-mile segments of SR 87 in mountainous terrain north of Payson from MP 254 to MP 267. Environmental, drainage, and coordination with the Tonto National Forest are critical aspects of the partnering required for this project. The project involves high rock-cut areas, data collection for archaeological sites, and an extensive effort to balance earthwork. In addition, KHA's innovative design of an energy dissipater eliminated the need to acquire private right-of-way, which would have delayed the project by 12 months.

GARY KARABOULAD, P.E.

Relevant Experience, continued

The Promenade at Casa Grande, Casa Grande, AZ — Project Engineer. KHA is currently widening a 3/4-mile stretch of Florence Blvd. Design includes improving a traffic interchange which will widen all ramps and intersections over two existing structures over I-10 and a drainage canal. Services include a new curb, gutter, sidewalks, raised median, islands, constructing a new box culvert, traffic signals, lighting and landscaping.

Turnberry Town Square Elevated Left-Turn, Clark County, NV — Project Engineer. KHA has completed the design and construction documents for the grade-separated access to the Town Square Development. The grade-separated access provides an elevated left-turn heading north on Las Vegas Blvd. The structure consists of a three span (120'-180'-120') cast-in-place post-tensioned concrete box. The structure is located on an alignment with a 205' radius horizontal curve and therefore has provided some unique design challenges. KHA is also responsible for the roadway work approaching the grade-separated access. The construction of the project is just getting underway.

US 95 DCR/EA (MP 42 to Cibola Lake Road), Yuma County, AZ — Project Engineer. KHA is completing a DCR to improve 40 miles of US 95 from the southern boundary of the Yuma Proving Ground (MP 42) to Cibola Lake Road (MP 82). The project involves the development of four roadway alternatives for improving the existing two-lane highway to a four-lane divided highway from MP 42 to MP 70 and pavement preservation from MP 70 to MP 82. The project also consists of widening the existing roadway, reconstructing the existing roadway profile to eliminate at-grade drainage crossings and improve vertical curve stopping sight distances, passing lanes, intersection improvements, drainage improvements, and providing wildlife crossings and wildlife-friendly fencing.

Prior to Joining KHA:

- Developed the first ADOT Standard Drawings for sound walls, sign structure and variable message sign structure.
- Sound wall design, Price Freeway in Chandler, AZ, ADOT
- Sound wall design, SANTAN Freeway, Kyrene to McClintock, Chandler, AZ, ADOT
- Retaining wall and sound wall design, SANTAN Freeway, Dobson to Arizona Ave., Chandler, AZ, ADOT
- Retaining wall design, Pedestrian underpass at the Biltmore, City of Phoenix, AZ
- Pump station Structural Design, SANTAN Freeway at I-10
- Prestressed and Post-Tensioned Pedestrian bridge at McClintock over the US 60, ADOT
- Design the sub-structure for prefabricated bridge at Sells Wash, Why Highway, ADOT
- Design Fry Road Bridge (2 spans Post tensioned Concrete box girder), Loop 101, Chandler, AZ, ADOT
- Design 90th Street Bridge (single span Post tensioned Concrete box girder), Loop 101, Scottsdale, AZ, ADOT
- Design NW Ramp Bridge (9 spans Post tensioned Concrete box girder), Loop 202 and I-10, ADOT
- Design Preacher Canyon Bridge ,(6 spans Prestressed Concrete AASHTO Girder), US 260, ADOT
- Design Verde River Bridge ,(6 spans Prestressed Concrete AASHTO Girder), Cottonwood, ADOT
- Design Gila River Bridge NB ,(28 spans Prestressed Concrete AASHTO Girder), US 85, ADOT
- Design Deer Valley Road Bridge at the new river ,(3 spans Prestressed Concrete AASHTO Girder), Maricopa County.
- Design Cactus Road Bridge (3 spans Concrete slab), Cactus Road, Scottsdale, AZ

JAMES C. LESSARD

Professional Credentials

- Bachelor of Science, Electrical Engineering, Ohio University, Athens, 2006
- Associate of Science, Engineering, Washington State Community College, 2003

Relevant Experience

24th Street Water Treatment Plant Security Improvements, Phoenix, AZ — Analyst. Responsible for power design voltage drop calculations, conduit percent fill calculations, updating power design plans in AutoCAD, portion of the power design, quality control and revision of power design, and field verification of existing conditions. The 24th Street Water Treatment Plant is a conventional water treatment plant with a capacity of 140 MGD. KHA will plan and design a five-layer security system for the 70-acre water treatment plant site. The design elements of the project include: site perimeter and interior fencing; site perimeter and building intrusion detection system; site CCTV system; site perimeter and interior lighting system; security entrance doors with electronic card access system; and electronic hardware and software to integrate the CCTV, perimeter detection system, and card access system into a fully, integrated functioning security system that can be monitored both locally and remotely. The project includes a new manned guardhouse, gates, and access roadway improvements.

91st Avenue and Olive Avenue Intersection Improvements, Peoria, AZ — Analyst. Responsible for designing the conduit layout for street lighting loads within the limits of the project, performing photometric analysis for the placement of street lighting and intersection street lighting, updating electrical plan set in AutoCAD, and developing Specifications for electrical design. KHA is responsible for the preparation of a Design Concept Report (DCR), roadway design, intersection geometric design, traffic signal modification, utility relocation, landscaping design, marking and signing design, ITS considerations, lighting design, right-of-way acquisition, and environmental clearance and permitting activities for improvements at this intersection. Primary responsibilities include preparing technical reports concerning drainage alternatives and drainage design, biological resources, hazardous materials, coordination with ADOT and the City of Peoria, and completion of an environmental document to comply with NEPA and ADOT.

Downtown Glendale Pedestrian Enhancements, Glendale, AZ — Analyst. Responsible for designing the power distribution system for various electrical loads within the 65-square block project area; performing photometric analysis for the placement of street and pedestrian lighting; power design voltage drop calculations, conduit percent fill calculations, field verification of existing conditions, developing electrical plan set in AutoCAD, coordination between client and contractor during construction phase, site inspection of installed electrical improvements, addressing RFIs from the electrical contractor, and documentation of contractor-preformed work. KHA led the design of a 65-square block area of pedestrian safety and aesthetic enhancements in downtown Glendale. The project consisted of repairing and replacing broken or unsafe sidewalk areas, replacing and adding sidewalk with concrete headers and brick accents, installing new curb ramps and inlaid brick crosswalks, street widening and reconstruction including turn lanes, adding extensive landscaping including trees, shrubs, and irrigation. Several utilities were relocated including overhead power. KHA was the prime consultant, leading the civil design, electrical design, and construction administration. Construction will be completed in October 2007.

El Mirage Traffic Signal and Intersection Improvements at Dysart & Thunderbird; Dysart & Peoria; Dysart & Cactus; El Mirage & Northern, El Mirage, AZ — Construction Administrator. Responsible for construction field observation of intersection improvements and documenting contractor-preformed work. KHA was selected to prepare a signal warrant study and final design documents and to provide Construction Phase Services for three intersections in the City of El Mirage. New signals will be constructed at the Dysart/Peoria and Dysart/Cactus intersections, and a full reconstruction of the existing intersection will occur at the Dysart/Thunderbird/Waddell intersection. KHA is preparing final design documents including roadway, drainage, traffic signing, marking, and signal design, traffic control and construction phasing, landscaping, utility relocations, and right-of-way for those intersections.

At the intersection of Dysart/Thunderbird/Waddell, KHA has prepared interim construction plans and provided Construction Phase Services. The interim plans include: widening the intersection to include turn bays, modifying existing signal controller phasing and timing cycles, relocating railroad stop gates, raising medians, shoulder widening, and asphalt paving and striping. The interim construction was completed September 2007.

JAMES C. LESSARD

Relevant Experience, continued

Ironwood Drive/Gantzel Road Improvements, US 60 to Hunt Highway, Pinal County, AZ — Analyst. Responsible for performing photometric analysis for the placement of intersection street lighting and deriving alternatives to provide adequate lighting. KHA provided preliminary and final design services for 16 miles of Ironwood Drive from US 60 to Ocotillo Road and from Combs Road to Hunt Highway, widening its current two-lane section into a six-lane roadway with sections of raised median, curb and gutter, and sidewalk. The project included a new 3-span AASHTO precast girder bridge to span the Central Arizona Project (CAP). KHA prepared a Design Concept Report (DCR) and Access Management Plan, as well as final design services for the interim four-lane roadway and preliminary design for the ultimate six-lane roadway. Drainage improvements included pavement drainage and culvert design for offsite flows. The project area is developing rapidly, with adjacent commercial and residential developments being planned and constructed. The project involved coordination with developers and numerous agencies. Additional information can be found at www.IronwoodProject.com.

Rittenhouse Road to Hawes Road Realignment, Queen Creek, AZ — Analyst. Responsible for designing the conduit layout for street lighting loads within the three-mile limits of the project, performing photometric analysis for the placement of street lighting, developing electrical plan set in AutoCAD, and developing specifications for electrical design. KHA will design 2.5 miles of 36- and 24-inch sanitary sewer alignment for the project. The project involves crossing of two sets of railroad tracks with a major drainage channel, which will require jack and bore construction. Additional utility crossings include the Kinder Morgan liquid gas line, natural gas lines, communication lines, telephone lines, and overhead power. Ties to the existing line in Rittenhouse Road and Sossaman Road are being designed to meet upcoming developments that require a fast-track design of Phase I.

Yuma - Final Design of 24th Street between Avenue 6E and Avenue 9E, Yuma, AZ — Analyst. Responsible for designing conduit layout for street lighting loads within the three-mile limits of the project, performing photometric analysis for the placement of street lighting, developing electrical plan set in AutoCAD, and field verification of existing conditions. The City of Yuma selected KHA to provide roadway design services for the 24th Street Widening and Improvements project. This three-mile urban arterial roadway project consisted of widening 24th Street to a City standard primary arterial street section. The project was initiated by the City to improve the roadway prior to the opening of Gila Ridge High School and Arizona Western College in summer 2007. The project required project management services, utility coordination and relocation design, right-of-way engineering, public outreach, project coordination with the Yuma Unified School District and Arizona Western College, engineering studies (traffic, drainage, and geotechnical), and preparation of final construction documents including roadway sections, construction layout, grading and drainage, traffic signal, street lighting, and traffic control plans, project special provisions, and construction estimates. The project also involved a new traffic signal design and modifications to three signals.

JON R. NELSON

Professional Credentials

- Bachelor of Science, Botany, Arizona State University, 1983
- American Concrete Institute, Field Technician Level I
- Arizona Technical Institute, Material Testing Technician Level I
- NICET Highway Construction Level II
- IMSA Traffic Signal Inspector
- Federal Highway Administration, Certified Noise Abatement and Barrier Technician
- Intelligent Transportation Systems of Arizona
- International Who's Who of Professional Management

Special Qualifications

- Over 30 years of supervisory and management experience on a variety of projects. He has excellent analytical and communication skills and has a proven ability to resolve issues by working with the contractor and project proponent to develop and institute innovative solutions.
- Comprehensive construction inspection expertise, including fiber optic communication systems, highway lighting, traffic signal and electrical systems, Portland cement concrete pavement, asphaltic concrete pavement, underground and overhead utilities, major and minor concrete structures, signage, lighting, striping, earthwork, and drainage.

Relevant Experience

Downtown Glendale Pedestrian Enhancements, Glendale, AZ — Construction Administrator. KHA led the design of a 65-square block area of pedestrian safety and aesthetic enhancements in downtown Glendale. The project consisted of repairing and replacing broken or unsafe sidewalk areas, replacing and adding sidewalk with concrete headers and brick accents, installing new curb ramps and inlaid brick crosswalks, street widening and reconstruction including turn lanes, adding extensive landscaping including trees, shrubs, and irrigation. Several utilities will be relocated including overhead power. KHA was the prime consultant on the project and led the civil design and construction administration. Construction will be completed in October 2007.

Ironwood Drive/Gantzel Road Improvements, US 60 to Hunt Highway, Pinal County, AZ — Team Member. KHA provided preliminary and final design services for 16 miles of Ironwood Drive from US 60 to Ocotillo Road and from Combs Road to Hunt Highway, widening its current two-lane section into a six-lane roadway with sections of raised median, curb and gutter, and sidewalk. The project included a new 3-span AASHTO precast girder bridge to span the Central Arizona Project (CAP). KHA prepared a Design Concept Report (DCR) and Access Management Plan, as well as final design services for the interim four-lane roadway and preliminary design for the ultimate six-lane roadway.

Yuma - Final Design of 24th Street between Avenue 6E and Avenue 9E, Yuma, AZ — Construction Administrator. Responsible for construction administration. This three-mile urban arterial roadway project consisted of widening 24th Street to a City standard primary arterial street section. The project required project management services, utility coordination and relocation design, right-of-way engineering, public outreach, project coordination with the Yuma Unified School District and Arizona Western College, engineering studies (traffic, drainage, and geotechnical), and preparation of final construction documents including roadway sections, construction layout, grading and drainage, traffic signal, street lighting, and traffic control plans, project special provisions, and construction estimates. The project also involved a new traffic signal design and modifications to three signals.

Surprise Various Traffic Signals, Surprise, AZ — Project Manager. KHA provided construction administration and oversight services for the installation of four signalized intersections including intersection widening and construction of additional turn lanes. Activities including administration and observation of installation of conduit and cable, Video Image Detection (VID) systems, emergency vehicle pre-emption, calibration, testing and acceptance of these components. Staff responsibilities included pay item documentation, training of observation staff, monthly estimates, change orders, issue resolution, and leading weekly meetings.

JON R. NELSON

Relevant Experience, continued

Glendale West Area Fiber, Glendale, AZ — Project Manager. KHA provided construction administration and oversight services for the installation of approximately 35,000 linear feet of fiber optic cable, conduit and communication equipment to connect various City facilities to the City fiber backbone and to the traffic management center in the City of Glendale. Activities included administration and observation of installation of conduit, SMFO cable, Data modems, communication equipment and calibration, testing and acceptance of these components. Staff responsibilities included pay item documentation, training of consultant observers and city staff, monthly estimates, change orders, issue resolution, and leading weekly meetings.

Glendale Traffic Signal Interconnect, Glendale, AZ — Project Manager. KHA provided construction administration and oversight services for the installation of approximately 30,000 linear feet of fiber optic cable, conduit and communication equipment to connect various City facilities and six signalized intersections to the City fiber backbone and to the traffic management center in the City of Glendale. Activities included observation of installation of conduit, SMFO cable, Data modems, communication equipment and calibration, testing and acceptance of these components. Staff responsibilities included pay item documentation, training of fellow inspectors, monthly estimates, change orders, issue resolution, and leading weekly meetings.

59th Avenue ITS Project, Glendale, AZ — Project Manager. Under KHA's Glendale On-Call ITS contract, KHA provided construction administration and oversight services for the installation of approximately 100,000 linear feet of fiber optic cable and the construction of the traffic management center in the City of Glendale. Activities included observation of installation of conduit and cable, Video Image Detection (VID) systems, CCTV cameras, calibration, testing and acceptance of these components. Staff responsibilities included pay item documentation, training of fellow inspectors, monthly estimates, change orders, issue resolution, and leading weekly meetings.

Glendale ITS On-Call, Glendale, AZ — Construction Administrator. KHA provided Construction Administration Services to extend the City's fiber optic backbone to the Glendale Arena and to construct the City's Traffic Operations Center. Activities including observation of installation of Single Mode Fiber Optic cables, CCTV cameras, video and data modems, integration of these components into the existing fiber backbone, calibration, testing and acceptance of these components. Staff responsibilities included daily construction observation, pay item documentation, processing monthly estimates, change orders, issue resolution, and leading scheduled and periodic meetings.

Glendale Traffic Management Center (TMC), Glendale, AZ — Project Manager. KHA provided construction administration and observation services and recording for construction of the City's TMC. Glendale's TMC supports day-to-day traffic management, incident management, and special event traffic management and coordination. Work includes demolition, remodeling, creation of operators' work stations, installation of a video wall, and integration of camera control operating software, testing, and acceptance. Staff was also responsible for daily construction observation, pay item documentation, inspector training, monthly estimates, change orders, issue resolution, and leading weekly meetings.

Premise Distribution System Construction Administration, Phoenix, AZ — Construction Administrator. Responsible for post design construction services support and construction observation. Responsible for observing, documenting, and reporting to management on the installation and testing of an Outside Plant fiber cable system to upgrade the communication system (premise distribution system). KHA is providing post design construction services support and construction observation. KHA is responsible for observing, documenting, and reporting to management on the installation and testing of an Outside Plant fiber cable system to upgrade the communication system (premise distribution system).

RICHARD R. JENKINS

Professional Credentials

- Associate of Arts, Civil Engineering, Phoenix College
- Associate of Arts, Civil Engineering, Glendale Community College
- NICET Level III Highway Construction
- NICET Level II Highway Survey
- Crouse-Hinds Airport Lighting Maintenance and Troubleshooting Workshop
- Intelligent Transportation Systems of America
- Intelligent Transportation Systems of Arizona

Special Qualifications

- More than 22 years of experience in construction inspection and extensive knowledge of construction industry standards and practices.
- Areas of construction inspection expertise include PCC paving, asphaltic concrete paving, underground utilities, major and minor concrete structures, traffic control, signing and striping, earthwork, and basic survey.

Relevant Experience

Phoenix Sky Harbor Taxiways D and E Reconstruction, Phoenix, AZ — Construction Administrator and Inspection. KHA provided construction administration and inspection services for Taxiway D and E reconstruction projects, consisting of GMP area Nos. 1 and 2. This CM @ Risk project consists of the reconstruction of portions of Taxiways D and E by removing existing asphalt concrete and replacing with 19.5 inches of PCCP, as well as reconstruction/construction of existing and proposed Taxiway D to Taxiway E connectors with PCCP. The project also included reconstruction of existing bituminous acute angled taxiway connectors between Taxiway D and Runway 7L-25R with PCC pavement, implementation and construction of associated drainage facilities, reconfiguration of the existing edge lighting circuits and edge light locations, installation of taxiway centerline lighting, and replacement and relocation of existing guidance signs.

Williams Gateway Airport - Cargo Apron and Parallel Taxiway A and B Construction, Mesa, AZ — Construction Administrator. KHA provided design services for the construction of a 56,000 SY air cargo apron and 2,000 foot reconstruction of Taxiway A and construction of a new segment of Taxiway B. This project included demolition of existing pavement, site grading, and earthwork, and upgrade to the electrical service "home-run". New paving consisted of 15.5-inch PCC pavements with asphalt shoulders to accommodate Boeing 747 aircraft (ADG IV). The project also included new storm drain improvements and modified existing storm drainage patterns in conformance with the Drainage Master Plan for the airport. Standard pavement markings/stripping, and medium intensity edge lighting and taxiway guidance signage, and apron area lighting were also included in this project. KHA worked closely with the owner to allow them to install the edge lights and signage facilities, resulting in a significant cost savings.

ADOT Freeway Management System/AZTech Model Deployment Initiative, Phoenix, AZ — Construction Administrator. Participated in the design of the relocation of the ADOT FMS on I-10 and Ramp Metering on I-17. The project involved coordination with ADOT Project Management and Maintenance staff to determine the preferred re-routing on the main communication "home run" duct banks pull boxes and manholes to allow expansion of lanes on the freeway. The project also involved the relocation of ramp metering and CCTV. The system was upgraded to Passive Acoustical Detectors, requiring development of special mounting details and strategic placement. KHA has partnered with ADOT since 1988 on the first five phases of one of the nation's most sophisticated advanced traffic management and traveler information systems. The Phoenix FMS is a \$105-million traffic surveillance and control system and multimodal traveler information system serving the area's metropolitan freeways. The FMS is serving as the basis for the AZTech Model Deployment Initiative, one of the federal-grant sponsored regional ATIS showcase projects in the nation.

RICHARD R. JENKINS

Relevant Experience, continued

McDowell Road Basin and Storm Drain Design, Phoenix, AZ — Team Member. KHA is preparing full design construction plans for a major storm drain as part of the Maricopa County Flood Control District's Spook Hill Area Drainage Master Plan. The reinforced concrete pipe storm drain is 6,700 feet long and ranges in diameter from 72-inches to 90-inches. The storm drain is located in McDowell Road in the City of Mesa from Sossaman to Hawes Road. The project is being designed for the 100-year storm event and includes a surcharge detention basin to attenuate the flood peak to match downstream constraints. The storm drain project is being coordinated with regional drainage master planning efforts from the District and the City of Mesa.

Mesa Falcon Field Airport Design, Mesa, AZ — Construction Administrator. KHA was selected by the City of Mesa to complete preliminary project management, FAA coordination and design for runway safety areas, signage modifications and airfield perimeter access control. KHA worked in close partnership with the City of Mesa and the FAA to identify, scope, and design the projects on a fast-track schedule. KHA proposed a two-step approach to the projects including a project definition and feasibility phase as well as a more traditional design phase. Because of the approach and partnership between KHA, the City, and the FAA, the City has been able to better leverage available project funding, maintain or enhance the relationship with the FAA, and ensure available funds are most effectively used on the projects identified. Specific examples and results of our combined efforts include: a diffused concern over airfield signage; increased effort, flexibility and potential to address non-standard runway safety areas; increased funding and eligibility related to types of perimeter fencing.

Phoenix Sky Harbor International Airport Center Runway (7L-25R) Reconstruction, Phoenix, AZ — Construction Administrator. Construction Design Reviewer responsible for the reconstruction and overlay of the 150-foot x 10,300-foot Center Runway 7L-25R, 1,700-foot of taxiways preceding runway, and parallel Taxiways D and E. Randy is providing constructibility reviews of the construction documents including plans and specification. Phoenix Sky Harbor International Airport retained KHA's services for the design and reconstruction of Runway 7L-25R; Taxiways D and E; and portions of F. Specifically, the project included assessing the condition of existing facilities; design for the reconstruction of Runway 7L-25R and Taxiways D and E. Design upgrades and the extension of the existing airfield lighting system to include taxiway centerline and edge lighting also were included, as well as design for the upgrade of existing Navigational Aids, including localizers and Precision Approach Path Indicators.

Phoenix Sky Harbor International Airport East Taxiway C Design, Phoenix, AZ — Construction Administrator. The project included the removal of existing asphalt pavement and placement with 19" of PCC pavements for a 2,000' section of Taxiway C, reconstruction of connecting Taxiway B10 and new construction of new connecting Taxiway B11. Also included new edge lighting, electrical vault structures, storm drainage, marking, and striping. Construction was scheduled mostly at night to avoid severely impacting operations for N2, N3, and N4 concourses for Terminal 4. A taxiway rental system was employed to assess penalties for late morning closures, late phase closures, and project completion. KHA provided full design and construction administration services as well as detailed construction phasing and barricade plans.

Phoenix Sky Harbor International Airport West Taxiway "C" Reconstruction / Construction Services, Phoenix, AZ — Construction Administrator. Senior Lead Inspector responsible for verifying contract compliance, document daily obstructions, project quantities and coordinate quality assurance material testing and provide quality assurance field survey services. Project involves NAVAIDS, PCC overlay, transitions to connector taxiways, portions of parallel taxiway, drainage improvements, taxiway lighting/markings. The project included grading, drainage, pavement removal, excavation, subgrade preparation, aggregate base course placement, PCCP placement, Asphaltic concrete shoulder placement, paint marking, edge lighting and signage for the reconstruction of 4,200' off West Taxiway C. The project also included the removal of over 170,000 square yards of existing asphalt pavement and the placement of over 88,000 square yards of 20" thick PCC pavements, as well as the reconstruction of connecting Taxiways B4, B5, B6, B7, and B8 with new PCC pavements. Grading and paving extensions for Delta KHA provided full-time, on-site construction administration services.

SEAN P. RANDALL

Professional Credentials

- OSHA Construction Industry Standard (32 hours)
- American Concrete Institute, Field Testing Technician Grade I
- Arizona Technical Institute Full Asphalt Technician
- Arizona Technical Institute Field Technician
- Troxler, Nuclear Gauge Operator

Relevant Experience

City of Surprise Various Signals, Surprise, AZ — Construction Administrator. Responsible for the observation and tracking of materials for the construction administrator. KHA provided construction administration, observation and oversight services for the installation of four signalized intersections including intersection widening and construction of additional turn lanes. Activities including administration and observation of installation of conduit and cable, Video Image Detection (VID) systems, emergency vehicle Pre-Emption, calibration, testing and acceptance of these components. Staff responsibilities included pay item documentation, training of observation staff, monthly estimates, change orders, issue resolution, and leading weekly meetings.

Downtown Glendale Pedestrian Enhancements, Glendale, AZ — Construction Administrator. Responsible for the observation and tracking of materials for the construction administrator. KHA led the design of a 65-square block area of pedestrian safety and aesthetic enhancements in downtown Glendale. The project consisted of repairing and replacing broken or unsafe sidewalk areas, replacing and adding sidewalk with concrete headers and brick accents, installing new curb ramps and inlaid brick crosswalks, street widening and reconstruction including turn lanes, adding extensive landscaping including trees, shrubs, and irrigation. Several utilities were relocated including overhead power

59th Avenue Widening, Olive Avenue to Mountain View Road, Glendale, AZ — Construction Administrator. Responsible for the observation and tracking of materials for the construction administrator. The widening consisted of adding right-turn/merge lanes at the major entrances into the Glendale Community College (GCC) and at Olive Avenue. Dual left-turn lanes, a raised median (to accommodate a 54-inch storm drain), and landscaping and irrigation design were also key components of the widening. Several existing utilities, including a major SRP irrigation line, were relocated.

Glendale ITS On-Call, Glendale, AZ — Glendale Arena Fiber Project — As part of our City of Glendale ITS On-Call contract, KHA provided construction administration services to extend the City's fiber optic backbone to the Arena and to construct the City's TOC. Field activities include observation of installation of Single Mode Fiber Optic cables, CCTV cameras, video and data modems; integration of these components into existing fiber backbone; and calibration, testing, and acceptance of components.

Glendale West Area Fiber, Glendale, AZ — Construction Administrator. Responsible for the observation and tracking of materials for the construction administrator. KHA provided construction administration and oversight services for the installation of approximately 35,000 linear feet of fiber optic cable, conduit, and communication equipment to connect various city facilities to the city fiber backbone and the Traffic Management Center in the City of Glendale. Activities included administration and observation of installation of conduit, SMFO cable, data modems, communication equipment and calibration, and testing and acceptance of these components. Staff responsibilities included pay item documentation, training of consultant observers and City staff, monthly estimates, change orders, issue resolution, and leading weekly meetings.

Union Hills Water Treatment Plant Security Improvements Project, Phoenix, AZ — Construction Administration. Project included integrated security system installation, fence, wall and gate demolition, concrete block wall installation, minor building modifications and associated electrical and communications. Responsibilities included pay item documentation, submittal reviews, change order, issue resolution and attending weekly meetings.

SEAN P. RANDALL

Relevant Experience, continued

Flagstaff Pulliam Airport - Airport Design and CA, Flagstaff, AZ — Construction Administrator. This project includes extending the existing runway and taxiway system 1,801 feet to the northeast with Asphalt Concrete pavements and a PFC surface course, as well as extending the Runway Safety Area (RSA) an additional 1,000 feet. The project required extensive cuts and fills with over 800,000 cubic yards of excavation. Limestone rock of over 600,000 cubic yards will be primarily blasted prior to excavating. All associated lighting, signage, NAVAIDS (including a FAA-owned ILS endfire glide slope and an offset localizer), PAPI, and MALSR approach lighting was relocated or installed as new. An existing utility corridor and drainage channel, which is the main feed to the terminal area and critical and essential to the airport, conflicts with the proposed embankment for the runway/taxiway extension portion and was therefore relocated. Design services included pre-design planning, design, contract documents (plans and specification, quantities, and estimated construction costs), environmental permitting, on-site resident engineering observation and inspections, and testing. Grading and drainage, geometric designs, signage, and electrical engineering (edge lighting, approach lighting, roadway lighting and NAVAIDS) plans will be developed.

Phoenix Goodyear Airport New Electrical Vault Building, Goodyear, AZ — Construction Administrator. This project involved the construction of a new single story slab on grade building for housing new airfield electrical equipment. Responsibilities included observation and inspections, monthly estimates, change orders, issue resolution, and attending weekly meetings

Phoenix Sky Harbor Taxiways D and E Reconstruction, Phoenix, AZ — Construction Administrator. Responsible for the observation and tracking of materials for the construction administrator. KHA provided construction administration and inspection services for Taxiway D and E reconstruction projects, consisting of GMP area Nos. 1 and 2. These two projects consisted of over 77,000 square yards of PCCP; 54,000 cubic yards of excavation; more than 84,000 square yards of pavement removal; over 2-1/2 miles of electrical conduit installation; and over 4-1/2 miles of electrical conductor installation.

Elko Regional Airport Parallel Taxiway Relocation Phase II, Elko, NV — Construction Administrator. Phase II of the project involved constructing Taxiway A from the Terminal Ramp to Taxiway H and reconstructing cross Taxiways H and F. The Project consisted of: Paving approximately 50,000 square yards of full strength Asphalt Concrete Pavement. Also, the project included grinding the existing taxiway asphalt Concrete Pavement and placing the grindings in the infield area between the new taxiway and Runway 5/23, new edge lighting and signage and new drainage improvements.

NICHOLAS S. MIFFLIN

Professional Credentials

- Bachelor of Science, Civil Engineering, Northern Arizona University, 2007
- IMSA Traffic Signal Inspector (pending)

Special Qualifications

- In-depth understanding of design and construction administration of traffic and ITS systems and roadway improvements
- Experience includes signing and striping, quantity estimates, utility coordination, traffic signal and electrical systems design, fiber optic and communication systems design, asphaltic concrete pavements, minor concrete structures, drainage, field inspections, and coordination between designers, contractors, subcontractors, and municipalities.

Relevant Experience

Gilbert - Various Traffic Signals Design Services, Gilbert, AZ — Analyst. KHA has provided traffic signal design services to the Town of Gilbert for the past two years. During this time we have completed the design of 25 traffic signals. Many of these project locations require coordination with developers of adjacent parcels to identify construction phasing and incorporate future improvement considerations. Services include: traffic signal design, field review, base file development, utility conflict resolution, communication design, signing and striping, and final PS&E.

ADOT FMS Operations Training, AZ — Technician. Trained with ADOT in how the FMS system operations and maintenance. Technical areas included fiber and copper cable pulls and splicing; network trouble-shooting; software monitoring to identify problem areas; DMS maintenance; signal pole installations for freeway on-ramp traffic control, and signal controller programming with vehicle detection.

El Mirage Traffic Signal and Intersection Improvements at Dysart & Thunderbird; Dysart & Peoria; Dysart & Cactus; El Mirage & Northern, El Mirage, AZ — Construction Administrator. Provided construction observation and administration services for road widening at Dysart/Thunderbird intersection. Coordinated with Burlington Northern Santa Fe (BNSF) and Baniki Construction. Services included saw cut and removal of asphalt within BNSF right-of-way; moving curb lines; add raised medians to north and west approaches; coordination with BNSF to install new railroad safety equipment; evaluate signal lead visibility for all four approaches; and recommend relocations to the City. KHA was selected to prepare a signal warrant study and final design documents and to provide Construction Phase Services for three intersections in the City of El Mirage

Glendale ITS On-Call, Glendale, AZ — Construction Observer. This on-call project began in 2003. KHA's first assignment was to work with a portable DMS vendor to develop a wireless communication system between the portable DMS and the City's Traffic Operations Building and Public Safety Center. Related to this project, KHA is providing Construction Administration Services to extend the City's fiber optic backbone to the Arena and to construct the City's Traffic Operations Center. Activities including observation of installation of Single Mode Fiber Optic cables, CCTV cameras, video and data modems, integration of these components into the existing fiber backbone, calibration, testing and acceptance of these components. Staff responsibilities included daily construction observation, pay item documentation, processing monthly estimates, change orders, issue resolution, and leading scheduled and periodic meetings.

Downtown Glendale Pedestrian Enhancements, Glendale, AZ — Construction Observer. Served as Electrical Inspection Lead responsible for construction observation of electrical conduits, wiring, load centers, pedestrian lights, street lights, receptacle outlets, traffic signals (coordination with utility company, directional boring, controller cabinet installation, pole, and mast arm installation, signal lead and luminaire placement and testing). KHA led the design of a 65-square block area of pedestrian safety and aesthetic enhancements in downtown Glendale. The project consisted of repairing/replacing sidewalk, replacing/adding sidewalk with concrete headers and brick accents, installing new curb ramps and inlaid brick crosswalks, street widening and reconstruction including turn lanes, and adding extensive landscaping. Several utilities were relocated including overhead power. Street furnishings were installed or refurbished. KHA was the prime consultant, leading the civil design, electrical design, and construction administration. Construction was completed October 2007.

NICHOLAS S. MIFFLIN

Relevant Experience, continued

DCR for Phase I Regional Community Network (RCN), Phoenix Metro Area, AZ — Analyst. In 2003, ADOT and its AZTech partners adopted the RCN concept recommended by MAGTAG and MAG ITS committees and selected KHA to develop a Design Concept Report (DCR) for the initial deployment phase of the RCN. KHA is currently working with representatives of all stakeholders to identify key regional and metropolitan hub facilities and conduit/fiber infrastructure assets within each jurisdiction that will ultimately become key components of the overall RCN structure. KHA is currently developing an overall implementation plan for interconnecting eight regional hub facilities and eight metropolitan hub facilities; developing a programming cost estimate for the construction of the new infrastructure segments needed; and building regional consensus on the approach that should be taken to build the initial deployment phase of the RCN.

ADOT FMS Phases 9, 10, and 11, Phoenix, AZ — Analyst. KHA served as system manager for the initial phases of ADOT's FMS in metropolitan Phoenix and recently completed the design for ADOT FMS Phases 10/11, which is under construction. This 25-mile FMS field equipment installation project is located in Maricopa County on Loop 101, beginning at I-10 and extending north to I-17. The project limits also include I-10, from Loop 101 to 59th Avenue. The proposed work includes the installation of conduit and fiber optic cables, CCTV cameras, and four dynamic message signs. This segment of the FMS is scheduled to be complete prior to the 2008 Super Bowl. Phase 9, a five-mile segment on Loop 101 from Guadalupe Road to Loop 202 began construction in June 2007.

City of Surprise Various Signals, Surprise, AZ — Construction Observer. KHA provided construction administration, observation and oversight services for the installation of four signalized intersections including intersection widening and construction of additional turn lanes. Activities including administration and observation of installation of conduit and cable, Video Image Detection (VID) systems, emergency vehicle Pre-Emption, calibration, testing and acceptance of these components. Staff responsibilities included pay item documentation, training of observation staff, monthly estimates, change orders, issue resolution, and leading weekly meetings.

Consolidated Rental Car Facility at Sky Harbor Airport, Phoenix, AZ — Analyst. KHA was part of a Phoenix Sky Harbor International Airport Rental Car Center design team responsible for the inside and outside plant video, voice, and data telecommunications and security system infrastructure. The infrastructure included both fiber optic and copper transmission media used to extend network and telephone services from Sky Harbor International Airport to the new rental car facility. In addition to the voice and data network systems, the design included an access control system, device monitoring system, CCTV system, a flight information display system, and extensions of the HVAC and fire alarm system to the primary nodes off the rental car center grounds.

The inside and outside plant telecommunications pathways and spaces were designed based on BiCSi and ANSI TIA/EIA standards as well as Phoenix ITD standards. The project also included design of various MDF, BDF, IDF, and general purpose communications rooms and associated support equipment. KHA coordinated with other project trade groups to insure that the communications infrastructure had the appropriate electrical and environmental conditions to support the active electronics.

24th Street Water Treatment Plant Security Improvements, Phoenix, AZ — Analyst/Construction Observer. The 24th Street Water Treatment Plant is a conventional water treatment plant with a capacity of 140 MGD. KHA will plan and design a five-layer security system for the 70-acre water treatment plant site. The design elements of the project include: site perimeter and interior fencing; site perimeter and building intrusion detection system; site CCTV system; site perimeter and interior lighting system; security entrance doors with electronic card access system; and electronic hardware and software to integrate the CCTV, perimeter detection system, and card access system into a fully, integrated functioning security system that can be monitored both locally and remotely. The project includes a new manned guardhouse, gates, and access roadway improvements.

TYLER C. WILES

Professional Credentials

- Bachelor of Science, Civil Engineering, Iowa State University
- President, ISU Chi Epsilon Honor Society
- Special Events Chair, ISU American Society of Civil Engineers
- Member, ISU Steel Bridge
- Member, Habitat for Humanity

Special Qualifications

- Proficient in MicroStation, GeoPak, AutoDesk, and AutoCAD.
- Familiar with Synchro/SimTraffic Signal Optimization Software.

Relevant Experience

24th Street Extension / Avenue 3 1/2 E - Avenue 3E to 56th Street Final Design, Yuma, AZ — Analyst. Responsible for assisting in the design of the traffic signals and associated signal innerduct. The City of Yuma has retained KHA to provide engineering services to design improvements and prepare PS&E for the 24th Street Extension – Avenue 3½E Improvement project between Avenue 3E and 40th Street, and a DCR level design of Avenue 3½E between 56th Street and 40th Street. Improvements will include: Bicycle lanes; curb, gutter, and sidewalk; landscaped medians; new traffic signal at 40th Street; modified traffic signals at 32nd Street and Avenue 3E; street lights; and underground storm drain and retention basins. KHA will be responsible for project management; geotechnical investigations; Phase I environmental studies; drainage studies; landscape architecture; preliminary and final engineering for preparation of PS&E; right-of-way engineering; stakeholder/utility coordination; and public outreach.

Downtown Glendale Pedestrian Enhancements, Glendale, AZ — Analyst. Responsible for construction administration and field observation of electrical conduits, wiring, load centers, pedestrian lights, street lights, receptacle outlets, traffic signals (coordination with utility company, directional boring, controller cabinet installation, pole, and mast arm installation, signal lead and luminaire placement and testing). In addition, provided final record drawings of the Contractor redlines.

KHA led the design of a 65-square block area of pedestrian safety and aesthetic enhancements in downtown Glendale. The project consisted of repairing and replacing broken or unsafe sidewalk areas, replacing and adding sidewalk with concrete headers and brick accents, installing new curb ramps and inlaid brick crosswalks, street widening and reconstruction including turn lanes, adding extensive landscaping including trees, shrubs, and irrigation. Several utilities were relocated including overhead power. In addition, several street furnishings were installed or refurbished such as trash receptacles, benches, newspaper stands, and bike racks. The project included integrating significant public art through out the project. KHA was the prime consultant, leading the civil design, electrical design, and construction administration. Construction will be completed in October 2007.

Gilbert Annual Traffic Signals - 2006-2007, Gilbert, AZ — Analyst. Responsible for assisting in the design of the traffic signals and associated signal innerduct. KHA has provided traffic signal design services to the Town of Gilbert for the past two and a half years. During this time, we have completed the design of 25 traffic signals. Many of these project locations required coordination with developers of adjacent parcels to identify construction phasing and incorporate future improvement considerations. In addition, KHA provided final record drawings of the Contractor redlines. Services include: traffic signal design, field review, base file development, utility conflict resolution, communication design, signing and striping, and final PS&E.

EXHIBIT C
TO
PROFESSIONAL SERVICES AGREEMENT
BETWEEN
THE CITY OF AVONDALE
AND
KIMLEY-HORN AND ASSOCIATES, INC.

[Scope of Work and Fee Proposal]

See following pages.

**DESIGN SERVICES FOR
CYCLE 2 SAFE ROUTES TO SCHOOL INSTALLATIONS
IN THE CITY OF AVONDALE
JANUARY 28, 2010**

**ARTICLE 1
SCOPE OF SERVICES**

OVERVIEW

The scope of this project is to provide design services to meet the federal requirements of funding to provide three Safe Routes to School (SRTS) installations. The project will be administered by Avondale and coordinated through the ADOT Transportation Enhancements & Scenic Roads Section. The SRTS installations will be at the following locations:

- 3rd Avenue between Western Avenue and Holly Lane; near Michael Anderson Elementary School – Proposed Speed Table/Raised Cross Walk with Bulb-outs
- Garden Lakes Parkway between 109th Avenue and 107th Avenue; near Garden Lakes Elementary School – Proposed Speed Table
- Rancho Santa Fe Boulevard between Encanto Boulevard and Sheridan Street; near Rancho Santa Fe Elementary School – Proposed Median Island

SPEED TABLES

The anticipated construction activities for installation of Speed Tables include milling the existing roadway per Avondale Standard Detail A1061, applying tack to the newly milled surface, constructing the speed table with an approved D ½ Course Hot Asphalt Mix per Avondale standards and installing thermoplastic chevrons on the new speed table. Also included in the work is the removal of sidewalk for and installation of a mid-block ramp per Avondale Standard Detail A1237-1 including the 4' wide x 16' long landing pad adjacent to the ramp.

BULB-OUTS AND MEDIAN ISLANDS

The anticipated construction activities for installation of Bulb-Outs and Median Island include sawcutting and removing existing pavement and granular base course, constructing new curb and gutter for bulb-outs and curb for median island, patching of roadway asphalt, installation of striping and signage, and installation of median treatments including brick pavers, fencing, or landscaping.

Task 1.0 Preparation of Scoping Document

KHA will prepare a scoping document that meets ADOT requirements for federal funding for Safe Routes for School installations. KHA assumes the following content will be included in the scoping document:

- Purpose and Need for Project
- Description of Project
 - Existing conditions
 - Utilities
 - Right of Way
 - Environmental Considerations
 - Drainage
- Project Scope
 - Design Criteria
 - Proposed Improvements
- Preliminary cost Estimate
- Recommendations
- Vicinity Map
- Schedule

KHA will submit eight (8) hardcopies of an initial scoping document and respond to comments that will be incorporated into a final scoping document. KHA will submit eight (8) hardcopies of the final scoping document. KHA assumes no additional submittals of the scoping document will be required.

Task 1 Deliverables:

- Initial Scoping Document
- Final Scoping Document

Task 2.0 Environmental Documentation

KHA will prepare a draft Condensed Clearance Memorandum environmental document per ADOT – Environmental Planning Group (EPG) guidance. The document will include project information provided by the City of Avondale and findings from additional evaluations conducted during this phase of the project.

The project involves SRTS installations at three locations as stated in the Overview of this scope. It is our understanding that the project will include all three locations. Based on this understanding, it is assumed that the three locations may be cleared through the completion of one Condensed Clearance Memorandum document. Should the project be split apart, additional Condensed Clearance Memorandum documents may need to be completed and will be considered additional services.

The effort in this task is divided into the following subtasks:

Task 2.1 – Initial Evaluation and Field Reconnaissance

KHA will perform an initial field reconnaissance of the project area. The field reconnaissance will focus on gathering information regarding biological resources, land use, and potential contamination concerns within the project area. KHA will document the field reconnaissance through ground photography and field notes. This task also includes one meeting with ADOT's EPG staff.

Task 2.2 – Biological Review

KHA will prepare an Urban Project Biological Evaluation (UPBE) for the project area. The UPBE will incorporate observations from field reconnaissance and the results of correspondence with the AGFD and USFWS. A draft UPBE will be submitted to ADOT EPG. Following ADOT EPG review, comments will be incorporated and a final UPBE will be submitted to ADOT EPG.

ADOT EPG has indicated on previous projects of a similar nature that a biological review is sufficient to satisfy the biological component. If ADOT EPG determines that a biological review or non-urban project biological evaluation is needed for the proposed project it will be considered an additional service.

Task 2.3 – Preliminary Initial Site Assessment

KHA will prepare a Preliminary Initial Site Assessment (PISA) to identify contamination concerns within the project area. The PISA documentation will include observations from field reconnaissance and from a search of Environmental Protection Agency and Arizona Department of Environmental Quality databases that are available online. Due to the overall length of the project and its non-contiguous nature, the Consultant will utilize Environmental Database Resources, Inc (EDR) to prepare a third party database search of federal, state, and local regulatory databases. This task assumes that a Phase I Environmental Site Assessment will not be necessary. If ADOT EPG determines that a Phase I Environmental Site Assessment is needed, it will be considered an additional service.

A draft PISA report summarizing the findings will be submitted to ADOT EPG. Following ADOT EPG review, comments will be incorporated and a final PISA report will be submitted to ADOT.

Task 2.4 – Cultural Resources Report

Archeological Consultant Services (ACS) will complete the work in this task as a sub consultant to KHA.

Background Research. A site file check covering the three Areas of Potential Effect (APEs) and a 0.5 mile buffer around each APE will be conducted to determine if portions of the project area have been previously surveyed and to provide information on the types of sites likely to occur within 0.5 miles of the APEs. GIS shapefiles plotting the location of recorded sites and previous projects will be requested from AZSITE. It is assumed due to the nature and location of the project (minimal ground disturbance and located in developed areas) that ADOT/FHWA will accept the 0.5 mile buffer rather than the typical 1.0

mile buffer used on most projects. If ADOT/FHWA requires an expansion of the buffer area from 0.5 to 1.0 miles it will be considered an additional service.

Fieldwork. A field reconnaissance of the three APEs will be conducted by an archaeologist. Photographs will be taken to document prior disturbance and the lack of ground surface visibility. No Class III cultural resources survey will be undertaken.

Letter Report. Because the project impacts will be minimal, it is assumed that ADOT/FHWA will only require a cultural resources letter report. The letter report will include a summary of previous research, photographs of the APEs from the field reconnaissance, and recommendations regarding the need for further archaeological work.

Copies of the draft letter report will be provided for the appropriate review agency. Any comments arising from the agency review will be incorporated into a final letter report.

Task 2.5 – Prepare Draft Condensed Clearance Memorandum

KHA will perform an environmental evaluation in the form of ADOT's Condensed Clearance Memorandum and will include an objective review of the proposed project and its potential environmental issues or potential changes to the environment.

The results of the evaluation will be documented in the Draft Condensed Clearance Memorandum that will be submitted to the City of Avondale for review. Following this review, the Draft Condensed Clearance Memorandum will be submitted to the ADOT Local Government NEPA Planner.

Task 2.6 – Prepare Final Condensed Clearance Memorandum

This task consists of responding to ADOT comments on the Draft Condensed Clearance Memorandum and incorporating the comments into the final Condensed Clearance Memorandum. One meeting with the ADOT Local Government NEPA planner to discuss comments is included.

Additional Environmental Documentation Services:

The following environmental documentation services are not included in the scope and fee for this project but can be provided if authorized by the City of Avondale. Compensation for additional services will be agreed upon prior to their performance.

- Section 404 Jurisdictional Delineation or Permit Application;
- Species Specific Surveys;
- Phase I Environmental Site Assessment;
- Non-Urban Project Biological Evaluation;
- Environmental Assessment or Environmental Impact documents;
- Additional Cultural Resources Field Survey, Monitoring, or Testing;
- Air Quality Analysis; and
- Noise Analysis.

Task 2 Deliverables:

- Urban Project Biological Evaluation
- PISA
- Cultural Resources Letter Report
- Draft Condensed Clearance Memorandum
- Final Condensed Clearance Memorandum

Task 3.0 Geotechnical Materials Report

KHA understands that ADOT will require a materials memo stating the materials that are used by the City of Avondale for the three SRTS installations. KHA will produce this memo based on the understanding that the City of Avondale will require installation of speed tables per Avondale Standard A1061-Speed Table and Median Islands per design plans that include removal of existing roadway up to 12" depth for curbing. Median construction will also include new asphalt as patch for pavement areas that were removed for construction of the median. KHA will submit an initial Materials Report and incorporate comments into a final Geotechnical Materials Report.

KHA assumes no input is required from a Geotechnical Engineer. If ADOT or the City requires more technical information thereby requiring the services of a Geotechnical Engineer, this will be considered additional services.

Task 3 Deliverables:

- Initial Geotechnical Materials Report
- Final Geotechnical Materials Report

Task 4.0 Topographical Survey

Survey is required for this project, and is included in this scope and fee with services to be performed by Horizon Consultants of Arizona. This survey includes 400' x ~85' of topographical survey at each of the three locations that includes utilities from as-built maps, roadway features, grade breaks, walls, driveways, surface evidence of utilities, drainage structures, signs, poles, streetlights, pavement markings, trees, and other pertinent improvements.

To gain information for the drainage spread calculation memo, four (4) additional survey shots outside of the survey area described above will be taken, one at each curb inlet catch basin surrounding the proposed location of each of the three SRTS installations (for a total of twelve (12) additional survey shots). If additional survey shall become necessary, this will be considered additional services.

Task 4 Deliverables:

- Base Map in AutoCAD using Avondale CADD Standards

Task 5.0 Design (60%, 90%, and Final Plans, Specifications & Estimate)

KHA will develop the construction plans based on the following assumptions:

- KHA assumes there will not be a 30% submittal. Plans, Special Provisions, and Estimate will be submitted at 60%, 90% and Final (100%) design stages. If additional submittals are required or become necessary, this will be considered additional services.
- KHA will prepare technical specifications for all elements of the work using MAG specifications with Avondale Supplement as a basis, unless otherwise agreed upon in the project kick off meeting. Construction quantities will be tabulated in ADOT bid schedule format.
- KHA will prepare the Estimate of Probable Construction Cost using the items of work in the bid schedule. Unit prices will be determined from recent unit bid prices on bid tabulations for locally comparable construction projects.
- KHA will plan, attend, and facilitate comment review meetings after the 60%, and 90% submittals.

KHA will prepare detailed design for the project, and produce the construction drawings, technical special provisions, and estimate of probable construction costs for the contract documents. The Plans, Specifications and Estimate (PS&E) will be prepared in accordance with the criteria established in the 60% PS&E and the City's policies, procedures, manuals, and standards and the ADOT Transportation Enhancements requirements.

We will prepare the technical special provisions (if any), to be incorporated into the City's general specifications.

The specifications and estimates will coincide with the separate projects broken out during the preliminary engineering phase.

Submittals will be made to the City and ADOT at 60%, 90%, and 100% completion phases. The KHA team will facilitate the review and revision of the PS&E package. Each submittal will include eight (8) sets (five half-size (11"x17") sets of drawings, three (3) full size (22"x34") and the "red lined" set of plans with written responses to the City's and ADOT's comments from the previous submittal. The KHA team will submit a final complete reproducible set of PS&E and the CAD files. Final (100%) plan sheets will be on reversible Mylar. The Final (100%) PS&E project electronic files will be provided to the City of Avondale via CD. These project files will be provided in their original format (e.g., AutoCAD, Word, Excel) as well as in PDF format.

KHA is responsible to deliver a finalized PS&E package. Omission of any activities or tasks within this scope of services that are required as part of the finalized PS&E package will be the responsibility of KHA and may result in the request for additional submittals to correct the omissions at no additional cost to the City.

An estimated sheet break down per submittal is as follows, based on a design scale of 1"=20'.

Sheet Description	60%	90%	100% (Final)
Cover sheet	1	1	1
Key Map / Design Sheet	1	1	1
Typical Sections	0	1	1
Quantity Summary Sheet	0	1	1
Detail Sheets	0	1	1
Roadway Plan Sheets	3	3	3
Speed Table Detail & Staking Sheets	0	3	3
Signing & Striping (on Roadway Plans)	-	-	-
Estimated total number of sheets	5	11	11

- If additional sheets are required, this will be considered additional services.

Cover Sheet – 1 sheet

The title sheet will be provided by the City and may include:

- Project Name
- Index of Sheets
- Vicinity and Location Maps
- Utility contacts and telephone numbers
- Signature blocks (as needed)
- Street names

Key Map / Design Sheet / Typical Sections – 2 sheets

A project key map will be prepared at a scale of 1"=100' for the project and will include:

- Graphical representations of the location and limits of each sheet
- Roadway centerline and stationing
- Roadway centerline control (Basis of Bearing / Project Benchmark)
- Street monument locations
- Street names

Roadway typical sections will include:

- Roadway dimensions (based on the roadway centerline) including:
 - Edge of pavement
 - Traffic lanes
 - Right-of-Way
- Pavement structural section
- Limits or location of typical section

Roadway, Signage and Striping Layout (Plan and Profile) – 3 sheets

Plan and profile sheets will be prepared at a scale of 1"= 20' (horizontal) and 1"=2' (vertical), based on the City-approved base plans. The plans will include:

- Roadway centerline stationing
- Right-of-way and adjacent properties identified by parcel number and property owner
- Limits of improvements/construction/grading
- Construction notes and callouts
- Street names
- Horizontal control (curve tables, station/offset labels on all horizontal angle points, etc.)
- Roadway centerline profile grade (slopes, vertical curves, spot elevations every 50-feet and at critical locations (i.e., high/low points, grade breaks, etc.))
- Intersection Detail and Staking Diagrams
- Utility locations and label utilities requiring relocation
- Signing notes and callouts
- Lane dimensions
- Location of roadside signs and designation

Speed Table and Median Detail Sheets – 3 sheets

- Staking and other detailed geometric information will be prepared at a scale of 1"= 10' (horizontal).
- Milling details, striping details and other data needed to install both the median and/or the speed tables.

Task 5.1 – 60% PS&E

Upon approval of the scoping report and after obtaining environmental clearance from ADOT; roadway plans, profile, and detail sheets will be prepared for the 60% submittal. These plans will include all details necessary to construct the speed tables and medians, including grading, pavement, etc. Plans will include a summary of construction quantities and an estimate of cost.

Comments from this submittal will be incorporated into the 90% Plans.

Task 5.2 – 90% PS&E

Upon approval of the 60% plans; roadway plans, profile, and detail sheets will be prepared for the 90% submittal. These plans will include all details necessary to construct the speed tables and medians, including grading, signage, striping, etc. Plans will include draft technical special provisions, a summary of construction quantities and an estimate of cost.

Comments from this submittal will be incorporated into the 100% Plans.

Task 5.3 – 100% FINAL PS&E

After review of the 90% plans, all comments will be incorporated into the 100% FINAL PS&E.

Task 5 Deliverables:

- 60% PS&E (8 copies)
- 90% PS&E (8 copies)
- 100% FINAL PS&E (8 copies)
- CD of Final Project Files (1 copy)

Task 6.0 Right-of-Way and Utility Clearances

Task 6.1 – Right-of-Way Clearance

Right-of-way is not anticipated on this project. KHA will prepare the right-of-way clearance letter and submit for ADOT approval.

Legal descriptions are not part of this contact, but can be performed as additional services. Any survey necessary to write legal descriptions would also be additional services to this contract.

Task 6.2 – Utility Coordination & Clearance

KHA shall coordinate with utility companies, private development, other agencies and the City to incorporate existing and proposed utilities into the construction plans, in accordance with the latest version of the Arizona Utility Coordinating Committee “Public Improvement Project Guide” (PIPG). KHA shall show all known existing and proposed utilities on the plans. The City will provide KHA with any available list of utility contacts for public projects by the City.

KHA shall coordinate with each utility company to determine if the utilities have any need to upgrade their facilities before or during the project’s construction.

KHA shall work with the City’s Project Manager and City staff to coordinate the early determination of facilities that may be abandoned or deactivated.

KHA shall be responsible for field verifying the horizontal locations of all utilities within the project limits, based on correlation of field observations and utility company mapping, prior to the 60% design submittal. KHA shall prepare base maps detailing all existing utility data and transmit them to the utility companies for verification and comment concerning the utility locations. KHA shall incorporate the utility company comments into the base maps.

KHA shall specifically identify utility conflicts, with input from utility companies, which might affect placement of the SRTS installations and recommend alignment alternatives if necessary. Utility conflicts may include, but are not limited to, overhead and subsurface which may affect equipment or materials installation.

At the 60% plan submittal stage, KHA should review the records and Title Reports obtained by the City, as needed, and prepare necessary documents and advise City and utilities of any need for new easements.

KHA shall send a letter to each utility company notifying them of the project and defining the project scope and timeline, and shall also send the appropriate amount of half-size or full size sets at the 60%, 90%, and Final (100%) plan

stages to each utility company for their review along with a request for written response from each company to determine the disposition of their utility as it relates to the planned SRTS installations. KHA shall incorporate the utility company and private developer construction requirements into the bid documents.

KHA shall provide the utility companies with electronic base files or other pertinent information necessary for the utility companies to design the relocation of their facilities, if necessary. KHA shall coordinate with the utilities to facilitate the design to relocate their facilities. KHA shall request a letter from each utility impacted by the planned roadway improvement identifying a timeline for relocating their facilities.

For each submittal to the utility companies, KHA shall provide the City's Project Manager and Utility Coordinator, each with a written record of receipt.

KHA shall work with the City's Project Manager and City Staff to facilitate utility coordination meetings at each submittal (60%, 90%, and Final (100%)) and provide plans showing proposed City and utility/private installations, and existing and proposed easements.

Prior to submittal of 90% construction documents, KHA shall obtain ADOT style Utility Clearance letters from each utility stakeholder for the project.

Prior to submittal of Final (100%) construction documents, KHA shall coordinate project design with any proposed private development improvements proposed adjacent to the project sites to insure inclusion of proposed features and to identify and mitigate any conflicts between proposed projects.

KHA shall coordinate with nearby projects/stakeholders as necessary.

KHA will prepare the utility clearance letter and submit to ADOT for approval. KHA will also include utility information in the Special Provisions.

If potholing of any utilities shall become necessary, this will be considered additional services.

Task 6 Deliverables:

- Right-of-Way Clearance Letter
- Utility Clearance Letter

Task 7.0 Drainage Analysis

Research of drainage reports for each of the roadways near the proposed speed tables will be reviewed to determine the area drainage patterns. The City will provide the drainage reports.

Spread calculations will be performed at each of the three locations to determine the potential impact the addition of the speed tables and medians may cause. Assumptions during this task include:

- Spread calculations will be based on Flood Control District criteria, which indicate that there must remain 12' dry lanes in both directions during the flood event, and that no overtopping of curb is allowed.

- If no drainage reports are found that specifically state otherwise, the catch basin upstream from the new improvement will be assumed to receive all upstream runoff.
- Pre- and Post-installation calculations will be included in the memo.

Results will be summarized in a brief draft drainage analysis memo. Comments from the City will be incorporated in a final drainage analysis memo. Design of additional facilities for drainage improvements is not part of the scope of this project and is considered additional services.

Task 7 Deliverables:

- Draft Drainage Memo
- Final Drainage Memo

Task 8.0 Meetings and Project Management

KHA will establish and maintain a project schedule and budget control for the project and will be responsive to input from the City and ADOT.

KHA will attend one project kickoff meeting at a time and date agreeable to all parties. KHA assumes up to five additional project coordination meetings will be required. Two of these will be after the 60% & 90% plan submittals to discuss comments and three will be with school/district administrators to inform them of the project progress and objectives. If additional meetings are required or become necessary, these will be considered additional services.

Project administration, as well as project status, will be closely coordinated with the City and ADOT. KHA will communicate and coordinate project issues with the City and ADOT through means of e-mail and phone conversations throughout the duration of the project. KHA will provide and distribute notes and conversation records to the City and ADOT for significant project related conversations.

KHA will invoice the City of Avondale using Avondale’s template (to be provided by the City).

Task 8 Deliverables:

- Project Meetings
- Project Schedule
- Project Notes related to the project meetings and project-related conversations
- Invoices in Avondale’s requested format

ADDITIONAL SERVICES

The project scope does not include the following services, but they can be added using KHA’s then current hourly rates or as otherwise agreed upon in writing:

- Bidding support
- Construction support services
- Potholing
- Traffic studies
- Additional meetings with ADOT, the City, school officials, or others
- Public meetings or presentations
- JPAs
- Legal descriptions

ARTICLE 2
SCHEDULE OF COMPLETION OF SERVICES

KHA will provide the services as expeditiously as practicable to meet the agreed upon schedule. It is anticipated that the project will take twelve to fifteen (12-15) months to complete (from issuance of Notice to Proceed to submittal of the Final Plan Set), depending on the time when environmental clearance is obtained. An initial schedule is attached as Exhibit A.

The schedule is made in anticipation of conditions permitting continuous and orderly progress through completion of the services. Times for performance shall be extended as necessary for delays or suspensions due to circumstances that KHA does not control.

KHA shall not have liability for or be deemed in breach because of delays caused by any factor outside of KHA's reasonable control, including but not limited to natural disasters, adverse weather, or acts of the City, third parties, or other governmental agencies.

KHA shall commence work immediately upon issuance of the Notice to Proceed.

Proposed contract time: 460 Calendar Days.

ARTICLE 3
LUMP SUM FEE

A total lump sum cost for completing the project as identified in Article 1 is detailed in the attached Derivation of Cost Proposal (Exhibit B).

January 28, 2010

DERIVATION OF COST PROPOSAL

(Figures Rounded To The Nearest \$1)

ESTIMATED DIRECT LABOR

<u>CLASSIFICATION</u>	<u>PERSON HOURS</u>	<u>BILLING RATE/HOUR</u>	<u>TOTAL</u>
Project Principal	2	\$ 210.02	\$ 420
Project Manager	86	\$ 172.45	\$ 14,831
Project Engineer	73	\$ 152.03	\$ 11,098
Engineer/Designer	167	\$ 121.63	\$ 20,313
Tech/Draftsman	117	\$ 87.94	\$ 10,289
Administrative	8	\$ 94.11	\$ 753
Clerical	37	\$ 63.74	\$ 2,359
	<u>490</u> Hours		
Estimated Labor Cost			<u>\$ 60,063</u>

ESTIMATED DIRECT EXPENSES

Travel	\$ -	
Computer CAD Time & Plotting	\$ 2,514	
Miscellaneous Expenses	\$ -	
Total Estimated Expenses		<u>\$ 2,514</u>

ESTIMATED OUTSIDE SERVICES AND CONSULTANTS

<u>Firm</u>	<u>Cost</u>	<u>Compensation Method</u>
Horizon	\$ 4,500	LSUM
ACS	\$ 1,886	
EDR Database	\$ 200	

Total Estimated Outside Services \$ 6,586

TOTAL ESTIMATED COST TO CONSULTANT \$ 9,100

Allocation @ 3.8% of Total Labor \$ 2,282

TOTAL LUMP SUM FEE \$ 71,445

CONTRACT TIME 460 Calendar Days

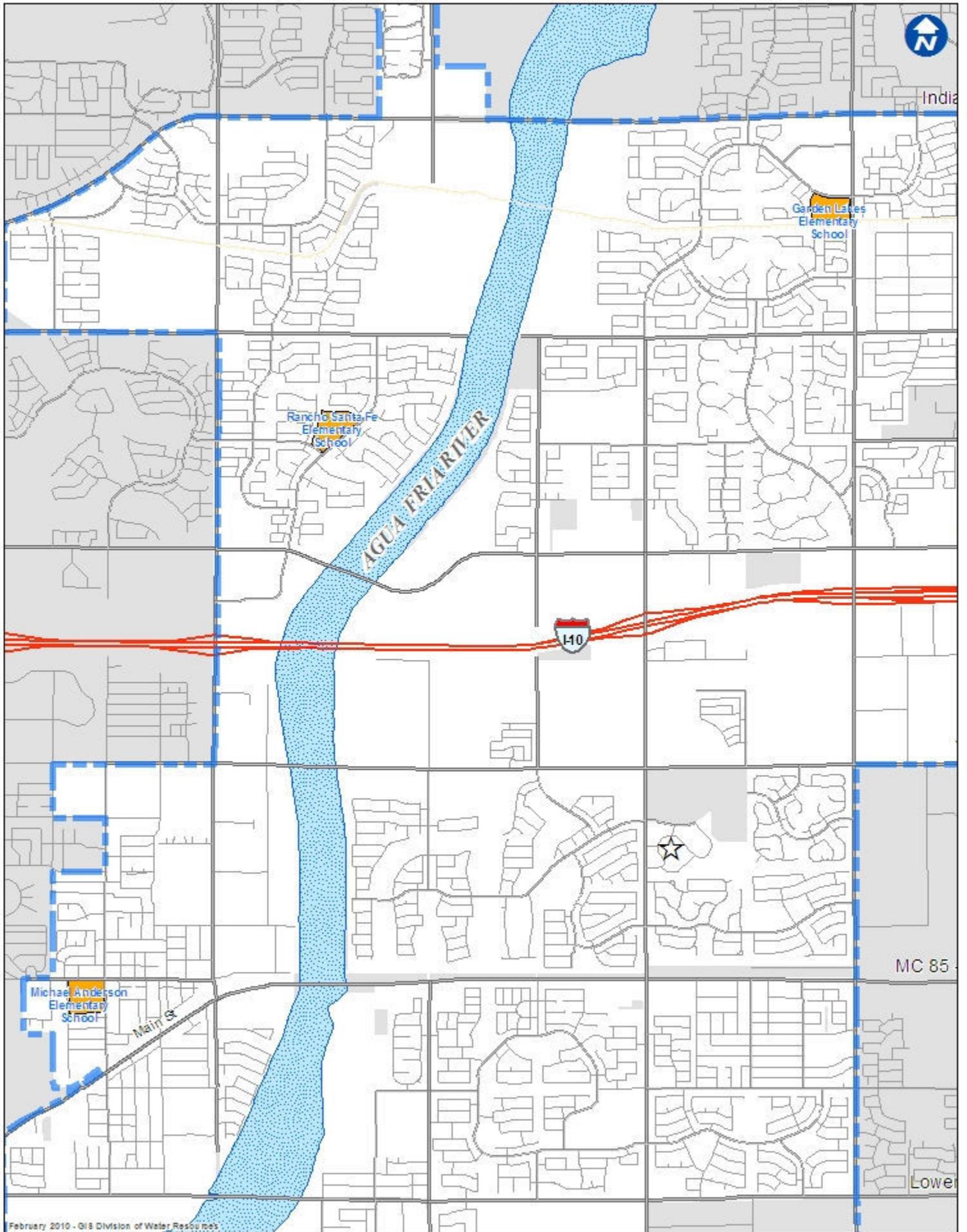
Consultant Firm Signature

Date

ESTIMATED STAFF HOUR SUMMARY

SCOPE SECTION / TASK	Proj Prin	Proj Mgr	Proj Eng	Eng/Des	Tech/ Draft	Admin	Clerical	Total
1 - Preparation of Scoping Document	-	3	13	24	-	-	2	42
2 - Environmental Documentation	-	14	-	39	60	-	3	116
3 - Geotechnical Materials Report	-	3	2	7	-	-	2	14
4 - Topographical Survey	-	-	4	-	-	-	-	4
5 - Design (60%,90%, Final PS&E)	-	18	22	35	57	-	7	139
6 - Right-of-Way, Utility Clearance	-	16	30	28	-	-	18	92
7 - Drainage Analysis	-	2	-	12	-	2	2	18
8 - Meetings and Project Management	2	30	2	22	-	6	3	65
Totals	2	86	73	167	117	8	37	490
Percentages	0.00%	18.00%	15.00%	34.00%	23.00%	2.00%	8.00%	100%

VICINITY MAP



February 2010 - GIS Division of Water Resources

CITY OF AVONDALE
School Location Map



CITY COUNCIL REPORT

SUBJECT:

Professional Services and Employment Agreement
- Judge Lynch

MEETING DATE:

March 8, 2010

TO: Mayor and Council

FROM: Rogene Hill, Assistant City Manager (623)333-1012

THROUGH: Charlie McClendon, City Manager

PURPOSE:

Staff is requesting that the City Council approve the attached employment agreement for Mr. Richard T. Lynch for a two-year appointment as City Judge.

BACKGROUND:

Over the past two-years, Mr. Lynch has provided excellent professional services and presided over an ever increasing volume of case filings, collections and other judicial hearings. Mr. Lynch continues to be available evenings and weekends through the video arraignment system. He has worked through the challenges of implementing the photo red light and photo speed systems, which has greatly increased the workload of the court.

Council reviewed Mr. Lynch's performance and accomplishments in Executive Session on March 1, 2010.

DISCUSSION:

The employment agreement with Mr. Lynch covers the period from April 1, 2010 through March 31, 2012. Mr. Lynch shall be paid a base salary of \$147,000 for the period from April 1, 2010 to March 31, 2012. In addition to any amounts contributed by Employee; the City shall contribute the following amounts into his existing Nationwide Retirement Solution 457 Plan, \$3,990 for the period from April 1, 2010 to March 31, 2012. Any catch-up amounts permitted by the 457 Plan can be made separately by Mr. Lynch. Mr. Lynch's salary cannot be adjusted up or down during the agreement period.

RECOMMENDATION:

Staff recommends approval of the employment agreement with Mr. Richard T. Lynch, City Judge.

ATTACHMENTS:

Click to download

 [Professional Services and Employment Agreement](#)

**PROFESSIONAL SERVICES AND EMPLOYMENT AGREEMENT
BETWEEN
THE CITY OF AVONDALE
AND
RICHARD T. LYNCH**

Amended and Restated March 8, 2010

THIS PROFESSIONAL SERVICES AGREEMENT (this "Agreement") is entered into on March 8, 2010, by and between the City of Avondale, an Arizona municipal corporation (the "City") and Mr. Richard T. Lynch ("Employee").

RECITALS

A. The City and Employee desire to enter into this Agreement for employment by the City of Employee for the position of Presiding Judge of the Avondale City Court (the "City Court").

B. This Agreement is based on the Arizona Constitution's requirement of separation of powers and the necessity of judicial independence to preserve and protect that separation. This Agreement shall set forth the parameters, guidelines, duties, rules of conduct and compensation during the term of this Agreement.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing recitals, which are incorporated herein by reference, the following mutual covenants and conditions, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the City and Employee hereby agree as follows:

1. Term. This Agreement shall be effective on April 1, 2010 and shall remain in full force and effect through March 31, 2012, unless sooner terminated for cause as set forth in Section 5 below.

2. Compensation.

a. Base Salary. Employee shall be paid, in bi-weekly installments \$147,000.00 for the period from April 1, 2010 to March 31, 2012.

b. Employee Benefits. Employee shall accrue and exercise benefits at the rate of a department head under Chapter 6 of the City of Avondale Personnel Policies and Procedures Manual (the "Policy Manual").

c. Deferred Compensation. In addition to any amounts contributed by Employee, the City shall contribute the \$3,990.00 into his existing Nationwide Retirement Solution 457 Plan (the “457 Plan”) account. Such contribution shall be in paid into Employee’s 457 Plan account in 26 equal bi-monthly installments. Any catch-up amounts permitted by the 457 Plan shall be made separately by Employee. The City further agrees to transfer ownership of Employee’s 457 Plan to any succeeding employer in the event of Employee’s termination from the City, for any reason.

3. Duties. Employee shall perform the duties of Presiding Judge of the City Court (“Presiding Judge”) pursuant to all laws, ordinances, and rules of the State of Arizona, the City of Avondale and the Arizona Supreme Court.

4. Conditions of Employment.

a. Work Hours. Employee shall maintain reasonable work hours Monday through Friday except for legal holidays, and shall be available as necessary during weekends and legal holidays to conduct initial appearances as required by law; provided, that all time worked during a calendar week shall not be less than 40 hours, including any leave taken or holidays occurring during such time period.

b. Case Adjudication. Employee shall preside as Judge over all assigned court calendar dockets in a timely fashion and shall, if necessary secure the services of a Judge Pro Tem or hearing officer to facilitate the timely adjudication of cases in the City Court.

c. Judicial Conduct. Employee shall at all times ensure that his conduct as Presiding Judge does not violate Arizona Supreme Court Administrative Orders No. 93-30, the Code of Judicial Conduct, Rule 45 of Rules of the Arizona Supreme Court and any other Rule or law governing the conduct of judges during the term of this Agreement.

d. Court Administration. Employee shall, through the Court Administrator, act as the Chief Administrative Officer over the City Court and shall abide by the Rules and Regulations of the City, including the Policy Manual, in the conduct thereof. Employee shall, through the Court Administrator, be responsible for administering the budget of the City Court and for preparing and submitting for approval an annual budget in accordance with established City procedures.

5. Termination. During the term of this Agreement, Employee may be removed from office by the City Council for cause, including violation of this Agreement. Notice of removal of office shall be delivered in writing to Employee and Employee shall have the right to request a hearing before the City Council. Employee may terminate this Agreement and resign his appointment as Presiding Judge upon 30 days written notice to the City Manager.

6 Records and Audit Rights. Employee’s books, records, correspondence, accounting procedures and practices, and any other supporting evidence relating to this Agreement (all the foregoing hereinafter referred to as “Records”), to ensure that Employee is complying with the warranty under section 7 below, shall be open to inspection and subject to

audit and/or reproduction during normal working hours by the City, to the extent necessary to adequately permit (a) evaluation and verification of any invoices, payments or claims based on Employee's actual costs (including direct and indirect costs and overhead allocations) incurred, or units expended directly in the performance of work under this Agreement and (b) evaluation of the Employee's compliance with the Arizona employer sanctions laws referenced in section 7 below. To the extent necessary for the City to audit Records as set forth in this subsection, Employee hereby waives any rights to keep such Records confidential. For the purpose of evaluating or verifying such actual or claimed costs or units expended, the City shall have access to said Records from the effective date of this Agreement for the duration of the work and until three years after the date of final payment by the City to Employee pursuant to this Agreement. Employee shall provide the City with adequate and appropriate workspace so that the City can conduct audits in compliance with the provisions of this section. The City shall give Employee reasonable advance notice of intended audits.

7. E-verify Requirements. To the extent applicable under ARIZ. REV. STAT. § 41-4401, the Employee and its subcontractors warrant compliance with all federal immigration laws and regulations that relate to their employees and compliance with the E-verify requirements under ARIZ. REV. STAT. § 23-214(A). Employee's or its subcontractor's failure to comply with such warranty shall be deemed a material breach of this Agreement and may result in the termination of this Agreement by the City.

8. Scrutinized Business Operations. Pursuant to ARIZ. REV. STAT. §§ 35-391.06 and 35-393.06, Employee certifies that it does not have scrutinized business operations in Sudan or Iran. For the purpose of this subsection the term "scrutinized business operations" shall have the meanings set forth in ARIZ. REV. STAT. § 35-391 or 35-393, as applicable. If the City determines that the Employee submitted a false certification, the City may impose remedies as provided by law including terminating this Agreement pursuant to section 5 above.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the parties have executed this Agreement on the date first set forth above.

EMPLOYEE:

CITY:

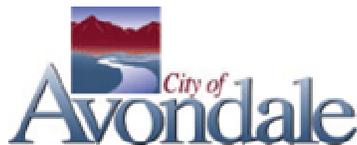
CITY OF AVONDALE, an Arizona
municipal corporation

Richard T. Lynch

Marie Lopez Rogers, Mayor

ATTEST:

Carmen Martinez, City Clerk



CITY COUNCIL REPORT

SUBJECT:

Amendment No. 1 to the Professional Services Agreement with Carollo Engineers for the Van Buren Waterline and Water Quality Station Construction Quality Control Services

MEETING DATE:

March 8, 2010

TO: Mayor and Council

FROM: Wayne Janis, P.E., Public Works Director, (623) 333-4444

THROUGH: Charlie McClendon, City Manager

PURPOSE:

Staff is requesting that the City Council approve Amendment No. 1 to the Professional Services Agreement (Contract No. 12796) with Carollo Engineers for Quality Control Services related to construction of the Van Buren Waterline and Water Quality Station, in an amount of \$48,737.00 (for a cumulative contract cost of \$98,237.00), and authorize the Mayor or City Manager and City Clerk to execute the necessary documents.

BACKGROUND:

At the 18-Dec-06 meeting, City Council awarded Contract No. 12303 to Carollo Engineers for design of a 16-inch water line under Van Buren Street between 101st and 105th Avenues. A separate contract (No. 12314) was awarded to Carollo by the City Manager's office in Jan-07 for design of a below-ground real time water quality monitoring station (WQMS) to be constructed in conjunction with the water line project, the first of five stations planned for the City's water distribution system.

Design of both the water line and the WQMS were completed in late 2008, and the construction project was awarded to BluCor Contracting on 05-Jan-09. City staff was tasked with providing construction management services. Because this was the first WQMS designed and constructed by the City, and the first WQMS constructed by BluCor, staff anticipated many questions and issues regarding the design, construction, inspection, and approval of the WQMS plans and technical specifications.

Using the City's Pre-Qualified Engineering Services list, staff selected Carollo to provide a scope of work and fee to address these issues. Council awarded Contract No. 12796 to Carollo on 06-Apr-09, not to exceed \$49,500, to provide project Quality Control Services specific to the WQMS component including: 1) attendance at pre-construction and construction progress meetings, 2) WQMS on-site quality control reviews, and 3) coordination with vendors regarding programming of WQMS components.

DISCUSSION:

During scoping of Contract 12796 for Quality Control Services, staff acknowledged the future need for WQMS start-up and other support, but deferred the scoping and contracting of those services until now, through this amendment.

This amendment includes important work tasks required to complete the start-up of the WQMS. Tasks include Factory Acceptance Testing (FAT) for the Programmable Logic Card (PLC), as-built record drawing review, O&M manual preparation, start-up support and staff training, and Approval of

Construction (AOC) Certificate assistance. These tasks will require an amendment of \$48,737.00, for a total contract value not to exceed \$98,237.00.

BUDGETARY IMPACT:

Funding for this amendment is available in the Water Capital Improvement Fund 514-1205-00-8520 (Van Buren Waterline, 101st to 105th).

RECOMMENDATION:

Staff recommends that the City Council approve Amendment No. 1 to the Professional Services Agreement (Contract No. 12796) with Carollo Engineers for Quality Control Services related to construction of the Van Buren Waterline and Water Quality Station, in an amount of \$48,737.00 (for a cumulative contract cost of \$98,237.00), and authorize the Mayor or City Manager and City Clerk to execute the necessary documents.

ATTACHMENTS:

Click to download

📄 [PSA Amendment 1](#)

**FIRST AMENDMENT
TO
PROFESSIONAL SERVICES AGREEMENT
BETWEEN
THE CITY OF AVONDALE
AND
CAROLLO ENGINEERS, A PROFESSIONAL CORPORATION**

THIS FIRST AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT (this "First Amendment") is made as of February 11, 2010, between the City of Avondale, an Arizona municipal corporation (the "City"), and Carollo Engineers, A Professional Corporation, an Arizona professional corporation (the "Consultant").

RECITALS

A. The City and Consultant entered into a Professional Services Agreement dated April 6, 2009 (the "Agreement") to provide quality control services related to the Van Buren waterline improvements project.

B. The City has determined that additional services are needed with respect to the project (the "Additional Services") and that the term of the Agreement should be extended.

C. The City and the Consultant desire to amend the Agreement to provide for the Consultant's performance of the Additional Services and to extend the term of the Agreement.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing recitals, which are incorporated herein by reference, the following mutual covenants and conditions, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the City and the Consultant hereby agree as follows:

1. Scope of Work. The Consultant shall provide the Additional Services as set forth in the Amended Scope of Work, attached hereto as Exhibit 1 and incorporated herein by reference.

2. Compensation. The Consultant's total compensation under the Agreement shall be increased by no more than \$48,737.00 from \$49,500.00 to a price not to exceed \$98,237.00 as consideration for the Additional Services as more particularly set forth in the Fee Proposal, attached hereto as Exhibit 2 and incorporated herein by reference.

3. Term of the Agreement. The term of the Agreement is hereby extended from September 30, 2009 to May 31, 2010.

4. Effect of Amendment. In all other respects, the Agreement is affirmed and ratified and, except as expressly modified herein, all terms and conditions of the Agreement shall remain in full force and effect.

5. Non-Default. By executing this First Amendment, the Consultant affirmatively asserts that the City is not currently in default, nor has been in default at any time prior to this First Amendment, under any of the terms or conditions of the Agreement.

6. Conflict of Interest. This First Amendment may be cancelled pursuant to ARIZ. REV. STAT. § 38-511.

IN WITNESS WHEREOF, the parties hereto have executed this instrument as of the date and year first set forth above.

“City”

CITY OF AVONDALE, an Arizona
municipal corporation

Charles P. McClendon, City Manager

ATTEST:

Carmen Martinez, City Clerk

“Consultant”

CAROLLO ENGINEERS, A
PROFESSIONAL CORPORATION, an
Arizona professional corporation

By:  2/18/10

Name: DAVID A. SIEBERT

Title: PARTNER

(ACKNOWLEDGEMENTS)

STATE OF ARIZONA)
) SS.
COUNTY OF MARICOPA)

This instrument was acknowledged before me on _____, 2010, by Charles P. McClendon, the City Manager of the CITY OF AVONDALE, an Arizona municipal corporation, on behalf of the City of Avondale.

Notary Public in and for the State of Arizona

My Commission Expires:

STATE OF ARIZONA)
) SS.
COUNTY OF MARICOPA)

This instrument was acknowledged before me on FEBRUARY 18, 2010, by DAVID SIEBERT as A PARTNER of CAROLLO ENGINEERS, A PROFESSIONAL CORPORATION, an Arizona professional corporation, on behalf of such corporation.

Barbara J. Hall
Notary Public in and for the State of Arizona

My Commission Expires:

MAY 22, 2012

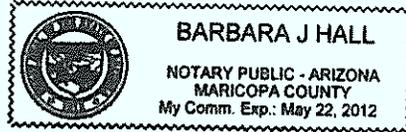
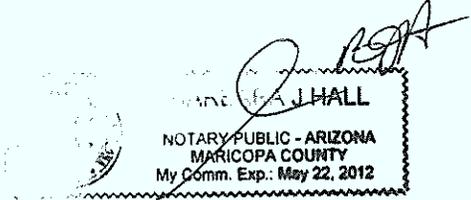


EXHIBIT 1
TO
FIRST AMENDMENT
TO
PROFESSIONAL SERVICES AGREEMENT
BETWEEN
THE CITY OF AVONDALE
AND
CAROLLO ENGINEERS, A PROFESSIONAL CORPORATION

[Amended Scope of Work]

INTRODUCTION

The following Amended Scope of Work sets forth the Additional Services to be performed by the Consultant with respect to the Water Quality Monitoring Station ("WQMS"), which is part of the Van Buren Street Waterline and Related Improvements Project ("Project").

ADDITIONAL SERVICES

The Consultant will perform the following Additional Services:

- 1. Utility Coordination, Easement/Right-of-Way Issues**
Coordinate with power and telephone utilities to accommodate utility easement requirements for providing power and phone service to the WQMS, including coordination with the Salt River Project to identify the location and requirements of the utility easement for the meter pedestal.
- 2. Additional Submittal Review**
Increase the number of submittal reviews, from an average of 1 1/2 reviews for each submittal (1st review for each and 2nd review for half of submittals) as outlined in the Scope of Work attached to the Agreement as Exhibit C, to a number of submittal reviews that meets the requirements of the City as determined in its sole discretion.
- 3. FAT Testing**
Coordinate and participate in factory acceptance testing ("FAT") for the WQMS programmable logic controller ("PLC"), including:
 - Reviewing the contractor's FAT test procedure for the PLC's interaction with the WQMS instrumentation prior to testing;
 - Providing comments to the contractor to confirm a complete testing protocol;
 - Witnessing the FAT testing at the contractor's local facility to ensure that equipment is functioning properly prior to actual installation; and
 - Producing a FAT test report summarizing the results and indentifying action items to address deficiencies.

4. As-built Record Drawings Review

Per the City's requirements, the contractor is responsible to produce red-lined as-built record drawings and provide them to the City for review and comment. The Consultant will assist the City to review the as-builts and provide comments to the contractor.

5. Facility O&M Manual Preparation

The Consultant will develop an Operation & Maintenance ("O&M") Manual for the WQMS. This manual shall incorporate manufacturer-provided instrument and equipment O&M manuals. The WQMS O&M shall summarize the overall purpose and intent of the WQMS, and document individual elements, typical operational procedures, controls, maintenance & calibration schedules, and emergency (power outage) operation measures. The O&M shall not address response measures to a water quality event as such measures should be part of a future update to the City's Emergency Response Plan.

Deliverables: Two (2) hard-copy binders of the O&M and one electronic copy (pdf) on CD shall be provided to the City. One hard copy shall be provided to the Maricopa County Environmental Services Department ("MCESD") for purposes of obtaining the Approval of Construction ("AOC") Certificate.

6. Operations Staff Training Support

The Consultant will review training material and will participate in the training provided by the Water Quality Monitoring Equipment manufacturer to help ensure quality training and to address any issues related to the overall operation of the facility. The Consultant will support overall facility training provided by the contractor.

7. Facility Start-Up Support

The Consultant will provide start-up support during the contractor's start-up activities, as required by Specification 01756, including:

- Review the contractor's Start-Up Plan;
- Review Start-Up/Testing logs submitted by the contractor to document equipment operation;
- Witness and Support Functional & Acceptance Testing of key equipment; and
- Support Facility Operational Testing (several-day test of entire facility conducted by the contractor to prove proper operation over an extended period of time) and assist with resolution of issues.

8. Approval of Construction Certificate Assistance

The Consultant shall assist the City with submittal of final project information to MCESD for obtaining the AOC Certificate. This effort will consist of providing a certification letter, completing the required application documents, providing record drawings (see As-Built Record Drawing Review task above) and a copy of the O&M Manual.

Deliverables: AOC application and related documentation, one (1) hard-copy of O&M Manual and one (1) bond set of record drawings

9. Project Administration

The Consultant will perform project administration throughout the phase of Additional Services, including, but not limited to, preparing invoice documentation, meeting agendas and meeting notes.

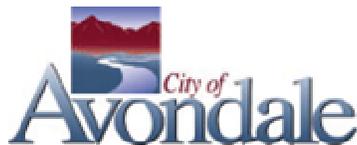
10. Project Meetings

The Consultant will attend up to four (4) project meetings during the Additional Services Phase.

EXHIBIT 2
TO
FIRST AMENDMENT
TO
PROFESSIONAL SERVICES AGREEMENT
BETWEEN
THE CITY OF AVONDALE
AND
CAROLLO ENGINEERS, A PROFESSIONAL CORPORATION

[Fee proposal]

TASKS	Man-Hours				Word Proc./Clerical	Total Man-Hours Per Task
	Project Manager	Project Engineer	QC Field Staff	CSG Staff		
Additional Services						
1. Utility Coordination, Easement/ROW Issues		8				8
2. Additional Submittal Review		26		6		32
3. FAT Testing		17				17
Subtotal Hours	0	51	0	6	0	57
Subtotal Cost	\$0	\$8,517	\$0	\$624	\$0	\$9,141
4. As-Built Record Drawing Review		14				14
5. Facility O&M Manual Development	12	80		4	12	108
6. Operation Staff Training Support		16		2		18
7. Facility Start Up Support		34	24			58
8. Assist with AOC submittal		24			4	28
9. Project Administration	2	6				8
10. Project Meetings	2	10				12
Subtotal Hours	16	184	24	6	16	246
Subtotal Cost	\$3,424	\$30,728	\$2,880	\$624	\$1,440	\$39,096
Total Estimated Man-Hours	16	235	24	12	16	303
Hourly Rates	\$214	\$167	\$120	\$104	\$90	
Total Lump Sum Labor Costs	\$3,424	\$39,245	\$2,880	\$1,248	\$1,440	\$48,237
Other Direct Costs						
Mileage						\$250
Document Printing						\$250
Subtotal Allowances						\$500
TOTAL (LUMP SUM + ALLOWANCES)						\$48,737



CITY COUNCIL REPORT

SUBJECT:

Resolution 2889-310 - GOHS 2010 Grant to fund
DUI Enforcement and Electronic Citation Program

MEETING DATE:

March 8, 2010

TO: Mayor and Council

FROM: Janeen Gaskins, Grants Administrator (623)333-1025

THROUGH: Charlie McClendon, City Manager

PURPOSE:

Staff is requesting that the City Council adopt a resolution authorizing the submittal and acceptance of a grant in the amount of \$440,585.50 through the Governor's Office of Highway Safety Program. Avondale Police Department's Driving Under the Influence Enforcement Program is requesting \$60,750.00 for overtime and \$379,835.50 for the Avondale City Court's Electronic Citation Program.

BACKGROUND:

In 2009, the Avondale Police Department investigated 1,375 collisions, 46 were alcohol related, one of which was fatal. During the same time period, the Avondale Police Department arrested approximately 275 drivers for DUI related offenses. The Avondale Police Department is committed to keeping Avondale residents safe and has no tolerance for impaired driving and will strive to remove those impaired drivers from the road. Throughout the 2009 year, the Avondale Police Department has written over 5,800 paper citations. According to data from Advanced Public Safety, Inc. (APS), a worldwide vendor of public safety automation software; an Officer can write an electronic citation in ½ the time it takes to write a paper citation. It takes a Court Clerk and a Police Records Clerk 5 minutes or more to enter each paper citation into the respective computer system, (this does not account for additional processing such as scanning, filing, logging etc.). Electronic Citations will eliminate 85% of citation processing time.

DISCUSSION:

Without further funding Avondale Police Officers will be extremely limited in the amount of dedicated enforcement that can be conducted for the next fiscal year. This Grant Funding will be used to help support the need for dedicated enforcement during D.U.I. Enforcement activities. The Avondale Police Department was awarded \$90,000 in DUI Grant Funds from ACJC and GOHS in the 2009-2010 fiscal year, these funds will be depleted and requested Grant Funding is needed to continue the overtime services that will take place for the following year. The Avondale City Court has a history with the Electronic Citation Program; through a previous endeavor; eight handheld units were purchased and are in use by Motor Officers. Therefore, the required Information Technology Interfaces have previously been established. Initial programming rules and parameters are already built in as well as necessary violation codes and street name tables. As a result no additional funding will be needed to implement the program.

BUDGETARY IMPACT:

City staff is requesting authorization for the submission and acceptance of Grant Funds for \$440,585.50 to provide for DUI Enforcement and the Electronic Citation Program. There are no match requirements for this Grant. There is annual maintenance fee for the E-citation Devices, the first year is built into the grant and subsequent years as well as replacement will be paid from cost savings derived by using the handhelds. This grant requires staff time associated with the Police

Department, City Court, Finance Department, Information Technology Department and the Grants Administrator. The staff time from the Police Department and City Court is far outweighed by the time savings the program offers.

RECOMMENDATION:

Staff recommends that the City Council adopt a resolution authorizing the submittal and acceptance of a grant in the amount of \$440,585.50, for the Avondale Police Department's Driving Under the Influence Enforcement and Electronic Citation Program through the Governor's Office of Highway Safety Grant Program.

ATTACHMENTS:

Click to download

 [Resolution 2889-310](#)

RESOLUTION NO. 2889-310

A RESOLUTION OF THE COUNCIL OF THE CITY OF AVONDALE, ARIZONA, AUTHORIZING THE SUBMISSION OF PROJECTS FOR CONSIDERATION IN ARIZONA'S 2011 GOVERNOR'S OFFICE OF HIGHWAY SAFETY PLAN.

WHEREAS, the Governor's Office of Highway Safety (the "GOHS") is seeking proposals from state and local agencies relating to all aspects of highway safety; and

WHEREAS, the Council of the City of Avondale (the "City Council") desires to submit projects to be considered by the GOHS for funding in the form of reimbursable grants.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF AVONDALE as follows:

SECTION 1. That the recitals set forth above are hereby incorporated as if fully set forth herein.

SECTION 2. That the City Council hereby approves the submission of projects to the GOHS for consideration in Arizona's 2011 Governor's Office Highway Safety Plan (the "Grant Applications").

SECTION 3. That the Mayor, the City Manager, the City Clerk and the City Attorney are hereby authorized and directed to execute and submit all documents and any other necessary or desirable instruments in connection with the Grant Applications and any resulting grants and to take all steps necessary to carry out the purpose and intent of this Resolution.

[SIGNATURES ON FOLLOWING PAGE]

PASSED AND ADOPTED by the Council of the City of Avondale, March 8, 2010.

Marie Lopez Rogers, Mayor

ATTEST:

Carmen Martinez, City Clerk

APPROVED AS TO FORM:

Andrew J. McGuire, City Attorney



CITY COUNCIL REPORT

SUBJECT:
Installation of Judge Lynch

MEETING DATE:
March 8, 2010

TO: Mayor and Council
FROM: Carmen Martinez
THROUGH: Charlie McClendon, City Manager

ATTACHMENTS:

[Click to download](#)

No Attachments Available



CITY COUNCIL REPORT

SUBJECT:

Access and Indemnification Agreement - Crane Co.
for the Phoenix Goodyear Airport North Superfund
Site

MEETING DATE:

March 8, 2010

TO: Mayor and Council

FROM: Sue McDermott, P.E., Director of Development Services & Engineering, 623-333-4211

THROUGH: Charlie McClendon, City Manager

PURPOSE:

Staff is requesting that the City Council approve an Access and Indemnification Agreement with Crane Co. to install groundwater extraction and injection conveyance piping, one or more groundwater injection well(s) and associated monitoring equipment for the Phoenix-Goodyear Airport-North Superfund Site Remediation Project and authorize the Mayor, or City Manager and City Clerk to execute the necessary documents.

BACKGROUND:

In an effort to address groundwater contamination originating from the Phoenix-Goodyear Airport-North Superfund Site, Crane Co. will be expanding their groundwater treatment system. The groundwater conveyance infrastructure will include groundwater extraction and injection conveyance piping, one or more groundwater injection well(s) and associated monitoring equipment.

DISCUSSION:

As part of the Phoenix-Goodyear Airport-North Superfund Site (PGA-North) groundwater treatment expansion, HDPE pipeline will be located within a portion of Dysart Road between Thomas Road and McDowell Road. The injection well(s) will be located within the median of Dysart Road. The locations of the injection and extraction wells have been strategically placed to protect the City of Avondale's wells from future contamination. This system is vital to the control of the contamination plume from the PGA-North site.

In order to properly operate and maintain the injection well(s) and monitoring equipment, periodic access on City Property (portions of Thomas Road, Dysart Road and the Fulton Estates Roads) will be required. The City and Crane Co. have agreed to an Access and Indemnification Agreement (attached) whereby the City is willing to allow access to Crane Co. and its contractors and consultants as necessary, to conduct the work subject to the terms and conditions in the Agreement. In addition, in accordance with the Agreement, the City will also grant Crane Co. a non-exclusive license to enter and use City Property (portions of Thomas Road, Dysart Road and the Fulton Estates Roads) for the purpose of conducting the work. This license shall be valid until (i) Crane Co. completes its obligations under the Consent Decree to the satisfaction of EPA unless, prior to that time, Crane Co. and EPA agree in writing that the injection well(s), conveyance piping and monitoring equipment are no longer necessary or (ii) July 1, 2020.

Crane Co. will be conducting this work pursuant to the terms and conditions of the Partial Consent Decree effective on July 31, 2006. The scope of work includes installation of injection and extraction conveyance piping, installation of injection well(s) and maintenance.

SCHEDULE:

A tentative schedule is as follows:

Design:

Complete - February 2010

Construction:

Begin Construction - March 2010

End Construction - April 2010

BUDGETARY IMPACT:

There is no budgetary impact with this project.

RECOMMENDATION:

Staff recommends that the City Council approve an Access and Indemnification Agreement with Crane Co. to install groundwater extraction and injection conveyance piping, one or more groundwater injection well(s) and associated monitoring equipment for the Phoenix-Goodyear Airport-North Superfund Site Remediation Project and authorize the Mayor, or City Manager and City Clerk to execute the necessary documents.

ATTACHMENTS:

Click to download

- 📄 [Access and Indemnification Agreement](#)
- 📄 [Vicinity Map](#)
- 📄 [Plume Map](#)

ACCESS AND INDEMNIFICATION AGREEMENT

THIS ACCESS AND INDEMNIFICATION AGREEMENT (this "Agreement") is entered into February ___, 2010, between the City of Avondale, an Arizona municipal corporation (the "City") and Crane Co., a Delaware corporation ("Crane").

RECITALS:

A. The City owns certain real property consisting of those portions of Dysart Road, Thomas Road, 135th Avenue, 136th Avenue, 137th Avenue, Catalina Drive and Pinchot Avenue located within the City limits (135th Avenue, 136th Avenue, 137th Avenue, Catalina Drive and Pinchot Avenue are collectively referred to as "Fulton Estates Roads").

B. Crane wishes to access a portion of Dysart Road as described and depicted in Exhibit A1 and Thomas Road and the Fulton Estates Roads as described and depicted in Exhibit A2 (the portions of Thomas Road, Dysart Road and the Fulton Estates Roads to be accessed are collectively referred to herein as the "Property") in order to install groundwater extraction and injection conveyance piping (the "Conveyance Piping"), one or more groundwater injection well(s) (the "Injection Well(s)") and associated monitoring equipment (the "Monitoring Equipment"). Crane, thereafter, will pump groundwater from extraction wells (not subject to this Agreement) and treat the water for subsequent discharge into the Injection Well(s) to be located within the median of Dysart Road in the location shown on Exhibit A1. Periodic access to the Property will be required to operate and maintain the Injection Well(s) and Monitoring Equipment. Upon termination of this Agreement, the Injection Well(s), Conveyance Piping, and Monitoring Equipment will be abandoned as provided herein. These installation, operation, maintenance and abandonment activities are collectively referred to herein as the "Work."

C. Crane is conducting the Work pursuant to the terms and conditions of the Partial Consent Decree executed between Crane and the United States of America, entered in Case No. CIV-04-1400 PHX ROS in the United States District Court for the District of Arizona, that became effective on July 31, 2006 (the "Consent Decree").

D. The City is willing to allow access to Crane and its contractors and consultants (hereinafter referred to as "Representatives") as necessary to conduct the Work subject to the terms and conditions set forth herein.

AGREEMENT:

NOW, THEREFORE, in consideration of the foregoing recitals, which are incorporated herein by reference, the following mutual covenants and conditions, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the City and Crane hereby agree as follows:

1. License Granted. The City grants to Crane and its Representatives a non-exclusive license to enter and use the Property for the purpose of conducting the Work.

2. License Duration. The license created by this Agreement shall extend until the earlier to occur of (i) Crane completing its obligations under the Consent Decree to the satisfaction of United States Environmental Protection Agency (the “EPA”) unless, prior to that time, Crane and EPA agree in writing that the Injection Well(s), Conveyance Piping and Monitoring Equipment are no longer necessary (either, a “Termination Event”) or (ii) July 1, 2020.

3. Conducting the Work.

3.1 Standard of Care. Crane and its representatives shall use reasonable care in performing the Work in and around the City’s Property.

3.2 Blue Stake Requirements. Crane or its representatives shall comply with the “underground facilities” requirements as set forth in Arizona Revised Statutes Title 40, Chapter 2, Article 6.3 (A.R.S. § 40-360.21 *et seq.*) including, but not limited to, those requirements applicable to “underground facilities operators” as that term is defined therein at A.R.S. § 40-360.21(21).

4. Exclusive Use. Crane and its representatives shall have exclusive use, operation and control over the Injection Well(s), Monitoring Equipment, Conveyance Piping and any associated equipment or fixtures installed on the Property in connection with the Work; provided, however, that this Agreement shall not grant Crane any right, title or interest in the Property nor any right to exclusive use of the Property, subject only to the provisions herein relating to interference with Crane’s operation of the Injection Wells, Monitoring Equipment, Conveyance Piping or associated equipment and fixtures.

5. City Interference. The City shall not unreasonably interfere with the performance of the Work by Crane or its representatives and shall exercise reasonable care with regard to the Injection Well(s), Monitoring Equipment, Conveyance Piping and associated equipment and fixtures.

6. Indemnification. Crane shall defend, indemnify and hold harmless the City, its employees, elected officials and consultants for, from and against any and all claims, demands, liens, causes of action, losses, damages, liabilities, costs and expenses (including reasonable attorneys’ fees and costs) arising from the acts or omissions of Crane or its representatives in the performance of the Work. The City shall promptly notify Crane of any claims or alleged liabilities received or incurred by the City that are subject to this indemnification. This paragraph 6 shall survive termination of this Agreement.

7. City Damage to Equipment. In the event the Injection Well(s), Monitoring Equipment, Conveyance Piping or associated equipment and fixtures are damaged as a result of work performed on the Property by the City or its contractors, agents or licensees, the City shall be solely responsible for any and all costs required to repair any such damage.

8. Insurance.

8.1 General.

A. Insurer Qualifications. Without limiting any obligations or liabilities of Crane, Crane shall purchase and maintain, at its own expense, hereinafter stipulated minimum insurance with insurance companies authorized to do business in the State of Arizona pursuant to A.R.S. § 20-206, as amended, with an AM Best, Inc. rating of A- or above with policies and forms satisfactory to the City. Failure to maintain insurance as specified herein may result in termination of this Agreement at the City's option.

B. No Representation of Coverage Adequacy. By requiring insurance herein, the City does not represent that coverage and limits will be adequate to protect Crane. The City reserves the right to review any and all of the insurance policies and/or endorsements cited in this Agreement but has no obligation to do so. Failure to demand such evidence of full compliance with the insurance requirements set forth in this Agreement or failure to identify any insurance deficiency shall not relieve Crane from, nor be construed or deemed a waiver of, its obligation to maintain the required insurance at all times during the performance of this Agreement.

C. Additional Insured. All insurance coverage and self-insured retention or deductible portions, except Workers' Compensation insurance and Professional Liability insurance, if applicable, shall name, to the fullest extent permitted by law for claims arising out of the performance of this Agreement, the City, its agents, representatives, officers, directors, officials and employees as Additional Insured as specified under the respective coverage sections of this Agreement.

D. Coverage Term. All insurance required herein shall be maintained in full force and effect until all Work is completed.

E. Primary Insurance. Crane's insurance shall be primary insurance with respect to performance of this Agreement and in the protection of the City as an Additional Insured.

F. Waiver. All policies, except for Professional Liability, including Workers' Compensation insurance, shall contain a waiver of rights of recovery (subrogation) against the City, its agents, representatives, officials, officers and employees for any claims arising out of the Work by Crane. Crane shall arrange to have such subrogation waivers incorporated into each policy via formal written endorsement thereto.

G. Policy Deductibles and/or Self-Insured Retentions. The policies set forth in these requirements may provide coverage that contains deductibles or self-insured retention amounts. Such deductibles or self-insured retention shall not be applicable with respect to the policy limits provided to the City. Crane shall be solely responsible for any such deductible or self-insured retention amount.

H. Use of Subcontractors. If any Work under this Agreement is subcontracted in any way, Crane shall execute written agreements with its subcontractors

containing the indemnification provisions set forth in this Section and insurance requirements set forth herein protecting the City and Crane. Crane shall be responsible for executing any agreements with its subcontractors and obtaining certificates of insurance verifying the insurance requirements.

I. Evidence of Insurance. Prior to commencing any work or services under this Agreement, Crane will provide the City with suitable evidence of insurance in the form of certificates of insurance and a copy of the declaration page(s) of the insurance policies as required by this Agreement, issued by Crane's insurance insurer(s) as evidence that policies are placed with acceptable insurers as specified herein and provide the required coverages, conditions and limits of coverage specified in this Agreement and that such coverage and provisions are in full force and effect. Confidential information such as the policy premium may be redacted from the declaration page(s) of each insurance policy, provided that such redactions do not alter any of the information required by this Agreement. The City shall reasonably rely upon the certificates of insurance and declaration page(s) of the insurance policies as evidence of coverage but such acceptance and reliance shall not waive or alter in any way the insurance requirements or obligations of this Agreement. In the event any insurance policy required by this Agreement is written on a "claims made" basis, coverage shall extend for two years past completion of the Services and the City's acceptance of the Crane's work or services and as evidenced by annual certificates of insurance. If any of the policies required by this Agreement expire during the life of this Agreement, it shall be Crane's responsibility to forward renewal certificates and declaration page(s) to the City 30 days prior to the expiration date. All certificates of insurance and declarations required by this Agreement shall be identified by referencing this Agreement. A \$25.00 administrative fee shall be assessed for all certificates or declarations received without the appropriate reference to this Agreement, as applicable. Additionally, certificates of insurance and declaration page(s) of the insurance policies submitted without referencing the appropriate reference to this Agreement, as applicable, will be subject to rejection and may be returned or discarded. Certificates of insurance and declaration page(s) shall specifically include the following provisions:

(1) The City, its agents, representatives, officers, directors, officials and employees are Additional Insureds as follows:

(a) Commercial General Liability – Under Insurance Services Office, Inc., ("ISO") Form CG 20 10 03 97 or equivalent.

(b) Auto Liability – Under ISO Form CA 20 48 or equivalent.

(c) Excess Liability – Follow Form to underlying insurance.

(2) Crane's insurance shall be primary insurance as respects performance of the Agreement.

(3) All policies, except for Professional Liability, including Workers' Compensation, waive rights of recovery (subrogation) against City, its agents,

representatives, officers, officials and employees for any claims arising out of work or services performed by Crane under this Agreement.

(4) A 30-day advance notice cancellation provision. If ACORD certificate of insurance form is used, the phrases in the cancellation provision “endeavor to” and “but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives” shall be deleted. Certificate forms other than ACORD form shall have similar restrictive language deleted.

8.2 Required Insurance Coverage.

A. Commercial General Liability. Crane shall maintain “occurrence” form Commercial General Liability insurance with an unimpaired limit of not less than \$1,000,000 for each occurrence, \$2,000,000 Products and Completed Operations Annual Aggregate and a \$2,000,000 General Aggregate Limit. The policy shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal injury and advertising injury. Coverage under the policy will be at least as broad as ISO policy form CG 00 010 93 or equivalent thereof, including but not limited to, separation of insured’s clause. To the fullest extent allowed by law, for claims arising out of the performance of this Agreement, the City, its agents, representatives, officers, officials and employees shall be cited as an Additional Insured under ISO, Commercial General Liability Additional Insured Endorsement form CG 20 10 03 97, or equivalent, which shall read “Who is an Insured (Section II) is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of “your work” for that insured by or for you.” If any Excess insurance is utilized to fulfill the requirements of this subsection, such Excess insurance shall be “follow form” equal or broader in coverage scope than underlying insurance.

B. Vehicle Liability. Crane shall maintain Business Automobile Liability insurance with a limit of \$1,000,000 each occurrence on Crane’s owned, hired and non-owned vehicles assigned to or used in the performance of the Crane’s work or services under this Agreement. Coverage will be at least as broad as ISO coverage code “1” “any auto” policy form CA 00 01 12 93 or equivalent thereof. To the fullest extent allowed by law, for claims arising out of the performance of this Agreement, the City, its agents, representatives, officers, directors, officials and employees shall be cited as an Additional Insured under ISO Business Auto policy Designated Insured Endorsement form CA 20 48 or equivalent. If any Excess insurance is utilized to fulfill the requirements of this subsection, such Excess insurance shall be “follow form” equal or broader in coverage scope than underlying insurance.

C. Professional Liability. If this Agreement is the subject of any professional services or work, or if Crane engages in any professional services or work adjunct or residual to performing the work under this Agreement, Crane shall maintain Professional Liability insurance covering negligent errors and omissions arising out of the Services performed by Crane, or anyone employed by Crane, or anyone for whose negligent acts, mistakes, errors and omissions Crane is legally liable, with an unimpaired liability insurance limit of \$2,000,000 each claim and \$2,000,000 annual aggregate. In the event the Professional Liability insurance policy is written on a “claims made” basis, coverage shall extend for two years past completion

and acceptance of the Services, and Crane shall be required to submit certificates of insurance and a copy of the declaration page(s) of the insurance policies evidencing proper coverage is in effect as required above.

D. Workers' Compensation Insurance. Crane shall maintain Workers' Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction over Crane's employees engaged in the performance of the Work under this Agreement and shall also maintain Employers Liability Insurance of not less than \$500,000 for each accident, \$500,000 disease for each employee and \$1,000,000 disease policy limit.

8.3 Cancellation and Expiration Notice. Insurance required herein shall not expire, be canceled, or materially change without 30 days' prior written notice to the City.

9. Abandonment. Upon the occurrence of a Termination Event or the natural expiration of this Agreement, Crane shall abandon the Injection Well(s) and Conveyance Piping in accordance with all applicable laws and regulations, remove the Monitoring Equipment and restore the Property as closely as reasonably practicable to its condition prior to entry pursuant to this Agreement. Crane shall seal all underground pipes it installs on the Property. Upon abandonment, all wells and underground pipes shall be in a condition that does not interfere with pedestrian or vehicular traffic on, or the City's use of, the Property. All abandoned wells and sealed underground pipes shall become the property of the City. Owner shall have no right to compensation for or to demand the removal of the wells or pipes.

10. Miscellaneous.

10.1 Independent Contractor. Crane acknowledges and agrees that the Work described in this Agreement is being completed by Crane as an independent contractor, not as an employee or agent of the City. Crane, its employees and subcontractors are not entitled to workers' compensation benefits from the City. The City does not have the authority to supervise or control the actual work of Crane, its employees or subcontractors. Crane, and not the City, shall determine the time of its performance of the services provided under this Agreement so long as Crane meets the requirements of this Agreement. Crane is neither prohibited from entering into other contracts nor prohibited from practicing its profession elsewhere. City and Crane do not intend to nor will they combine business operations under this Agreement.

10.2 Laws and Regulations. Crane shall keep fully informed and shall at all times during the performance of its duties under this Agreement ensure that it and any person for whom Crane is responsible remains in compliance with all rules, regulations, ordinances, statutes or laws affecting the Work, including the following: (A) existing and future City and County ordinances and regulations, (B) existing and future state and federal laws and (C) existing and future Occupational Safety and Health Administration ("OSHA") standards.

10.3 Amendments. This Agreement may be modified only by a written amendment signed by persons duly authorized to enter into contracts on behalf of the City and Crane.

10.4 Provisions Required by Law. Each and every provision of law and any clause required by law to be in the Agreement will be read and enforced as though it were

included herein and, if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Agreement will promptly be physically amended to make such insertion or correction.

10.5 Severability. The provisions of this Agreement are severable to the extent that any provision or application held to be invalid by a Court of competent jurisdiction shall not affect any other provision or application of the Agreement which may remain in effect without the invalid provision or application.

10.6 Relationship of the Parties. It is clearly understood that each party will act in its individual capacity and not as an agent, employee, partner, joint venturer, or associate of the other. An employee or agent of one party shall not be deemed or construed to be the employee or agent of the other for any purpose whatsoever.

10.7 Entire Agreement; Interpretation; Parol Evidence. This Agreement represents the entire agreement of the parties with respect to its subject matter, and all previous agreements, whether oral or written, entered into prior to this Agreement are hereby revoked and superseded by this Agreement. No representations, warranties, inducements or oral agreements have been made by any of the parties except as expressly set forth herein, or in any other contemporaneous written agreement executed for the purposes of carrying out the provisions of this Agreement. This Agreement shall be construed and interpreted according to its plain meaning, and no presumption shall be deemed to apply in favor of, or against the party drafting the Agreement. The parties acknowledge and agree that each has had the opportunity to seek and utilize legal counsel in the drafting of, review of, and entry into this Agreement.

10.8 Assignment. No right or interest in this Agreement shall be assigned by Crane without prior, written permission of the City signed by the City Manager and no delegation of any duty of Crane shall be made without prior, written permission of the City signed by the City Manager. Any attempted assignment or delegation by Crane in violation of this provision shall be a breach of this Agreement by Crane.

10.9 Rights and Remedies. No provision in this Agreement shall be construed, expressly or by implication, as waiver by the City of any existing or future right and/or remedy available by law in the event of any claim of default or breach of this Agreement. The failure of the City to insist upon the strict performance of any term or condition of this Agreement or to exercise or delay the exercise of any right or remedy provided in this Agreement, or by law.

10.10 Attorneys' Fees. In the event either party brings any action for any relief, declaratory or otherwise, arising out of this Agreement or on account of any breach or default hereof, the prevailing party shall be entitled to receive from the other party reasonable attorneys' fees and reasonable costs and expenses, determined by the court sitting without a jury, which shall be deemed to have accrued on the commencement of such action and shall be enforced whether or not such action is prosecuted through judgment.

10.11 Notices and Requests. Any notice or other communication required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been duly given if (A) delivered to the party at the address set forth below, (B) deposited in the U.S.

Mail, registered or certified, return receipt requested, to the address set forth below, (C) given to a recognized and reputable overnight delivery service, to the address set forth below or (D) delivered by facsimile transmission to the number set forth below:

If to the City: City of Avondale
11465 West Civic Center Drive
Avondale, Arizona 85323
Facsimile: (623) 333-0100
Attn: Charles P. McClendon, City Manager

With copy to: GUST ROSENFELD, P.L.C.
201 East Washington Street, Suite 800
Phoenix, Arizona 85004-2327
Facsimile: (602) 340-1538
Attn: Andrew J. McGuire, Esq.

If to Crane: Crane Co.
100 First Stamford Place
Stamford, CT 06902
Facsimile: _____
Attn: Anthony D. Pantaleoni, Ph. D.
Vice President of Environment, Health & Safety

With Copy to: Quarles & Brady LLP
One Renaissance Square
Two N. Central Avenue
Phoenix, AZ 85004-2391
Facsimile: _____
Attn: Joseph A. Drazek

or at such other address, and to the attention of such other person or officer, as any party may designate in writing by notice duly given pursuant to this subsection. Notices shall be deemed received (A) when delivered to the party, (B) three business days after being placed in the U.S. Mail, properly addressed, with sufficient postage, (C) the following business day after being given to a recognized overnight delivery service, with the person giving the notice paying all required charges and instructing the delivery service to deliver on the following business day, or (D) when received by facsimile transmission during the normal business hours of the recipient. If a copy of a notice is also given to a party's counsel or other recipient, the provisions above governing the date on which a notice is deemed to have been received by a party shall mean and refer to the date on which the party, and not its counsel or other recipient to which a copy of the notice may be sent, is deemed to have received the notice.

10.12 Dispute Resolution. Any dispute, controversy, claim or cause of action arising out of or related to this Agreement shall be governed by Arizona law and may, but in no event need, be settled by submission with the consent of both parties to binding arbitration in accordance with the rules of the American Arbitration Association and the Arizona Uniform Arbitration Act, A.R.S. § 12-1501, *et seq.*, and judgment upon any award rendered by the

arbitrators may be entered in the Superior Court of Maricopa County, or any such dispute, controversy, claim or cause of action may be litigated in a court of competent jurisdiction. The venue for any such dispute shall be Maricopa County, Arizona, and each party waives the right to object to venue in Maricopa County for any reason.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

CITY OF AVONDALE,
an Arizona municipal corporation

CRANE CO., a Delaware corporation,

Charlie McClendon, City Manager

Anthony D. Pantaleoni, Vice President
Environment, Health & Safety

ATTEST:

Carmen Martinez, City Clerk

EXHIBIT A1
TO
ACCESS AND INDEMNIFICATION AGREEMENT
BETWEEN
THE CITY OF AVONDALE
AND
CRANE CO.

[Dysart Road Legal Description and Maps]

See following pages.

EASEMENT DESCRIPTION PGA NORTH PIPELINE

Job No. 012009014

February 9, 2010

That portion of the following described property lying within the City of Avondale right of way for Dysart Road;

Those portions of Sections 34 and 35 Township 2 North, Range 1 West of the Gila and Salt River Meridian, Maricopa County, Arizona, being strip of land 12 feet wide lying 6.00 feet on each side of the following described line:

Commencing at Maricopa County Department of Transportation brass cap in hand hole accepted as the Northeast corner of said Section 34, from which a Maricopa County Department of Transportation brass cap in hand hole accepted as the east quarter corner of said Section 34 bears South 00°16'15" West, 2642.24 feet;
Thence South 00°16'15" West, along the east line of the northeast quarter of said Section 34, 103.50 feet;
Thence departing said east line, North 89°43'45" West, 48.50 feet to a point on the West annexation boundary line of the City of Avondale per Dkt 97-0465587, MCR also being the **Point of Beginning** of the herein described centerline;
Thence South 44°43'45" East a distance of 47.26 feet;
Thence South 00°16'15" West along a line parallel with and 15.08 feet West of the East line of the Northeast Quarter of said Section 34, a distance of 387.76 feet to a point herein referred to as Point "A";
Thence continuing South 00°16'15" West along a line parallel with and 15.08 feet West of the East line of the Northeast Quarter of said Section 34, a distance of 1190.00 feet to a point herein referred to as Point "B";
Thence continuing South 00°16'15" West along a line parallel with and 15.08 feet West of the East line of the Northeast Quarter of said Section 34, a distance of 904.44 feet to a point herein referred to as Point "C";
Thence continuing South 00°15'54" West along a line parallel with and 15.08 feet West of the East line of the Southeast Quarter of said Section 34, a distance of 1320.56 feet to a point herein referred to as Point "D", and being the **Terminus** of the herein described line;

Also, **Beginning** at said Point "A";
Thence South 89°43'45" East, Distance of 22.52 feet to the **Terminus** of said line;

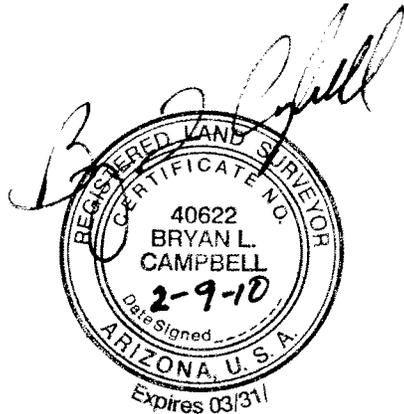
Also, **Beginning** at said Point "B";
Thence South 89°43'45" East, Distance of 22.49 feet to the **Terminus** of said line;

Also, **Beginning** at said Point "C";
Thence North 89°43'45" West, Distance of 33.41 feet to the **Terminus** of said line at
said West annexation boundary line;

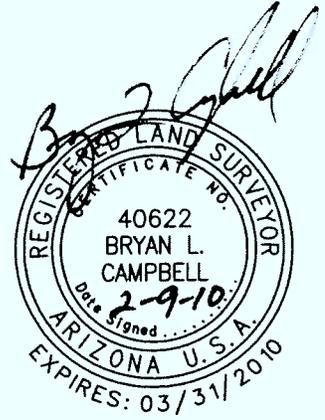
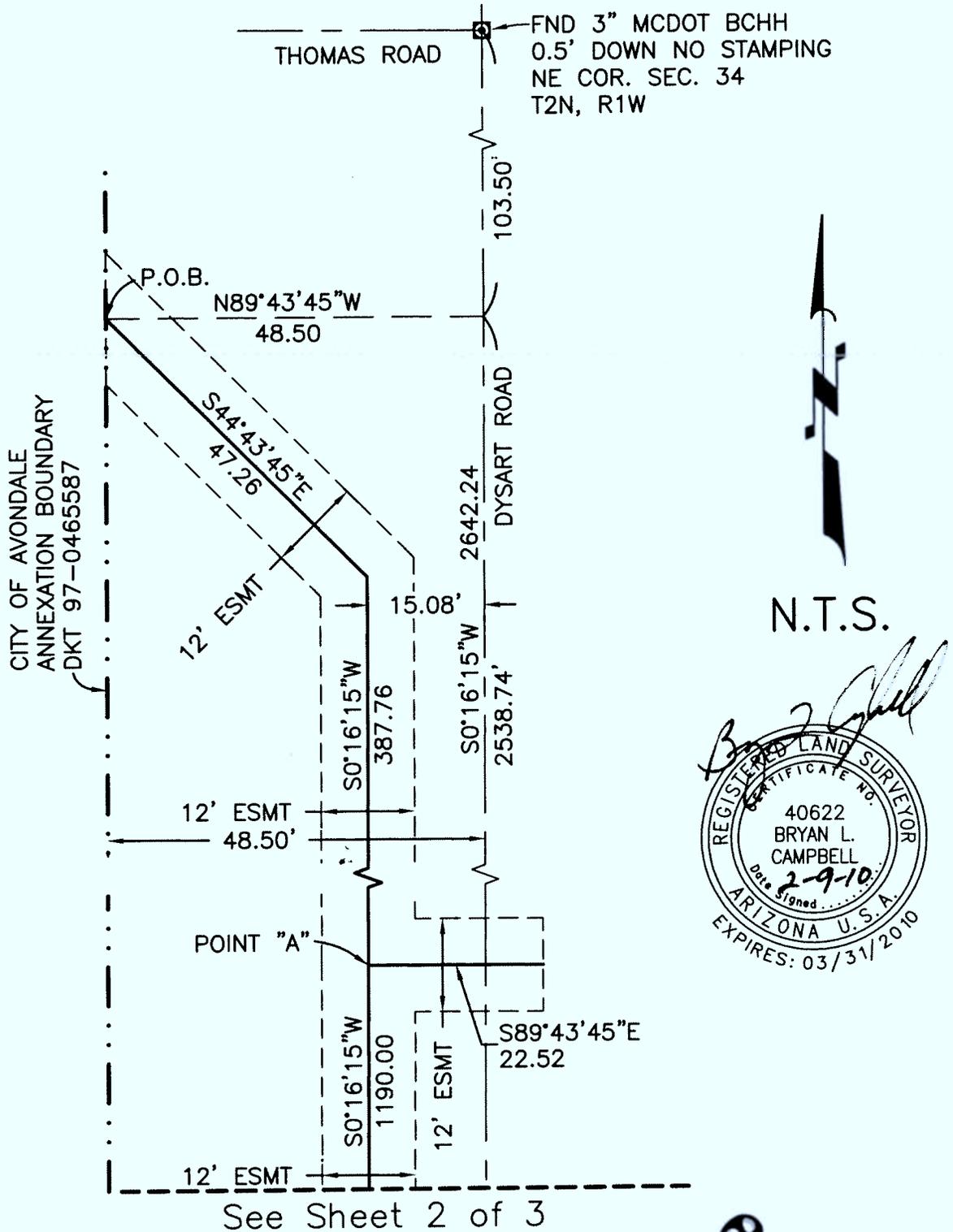
Also, **Beginning** at said Point "D";
Thence South 89°44'06" East, Distance of 22.41 feet to the **Terminus** of said line;

Also, **Beginning** at said Point "D";
Thence North 89°44'06" West, Distance of 33.42 feet to the **Terminus** of said line at
said West annexation boundary line;

The sidelines of this easement description shall be so shortened or lengthened so as
to meet at angle points.



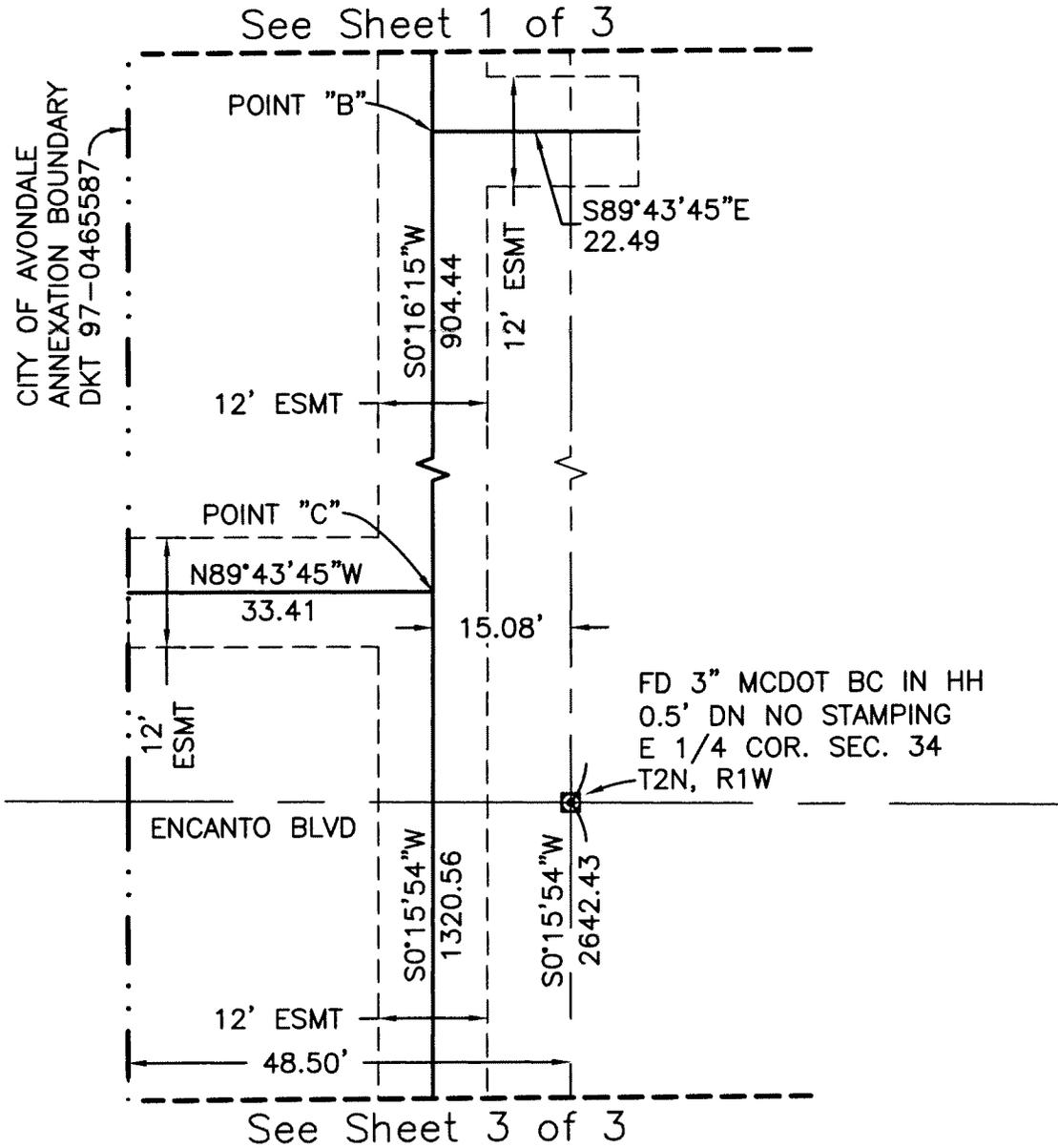
EASEMENT EXHIBIT



amec E & E, Inc.

EXHIBIT DESCRIPTION
WATERLINE EASEMENT
CITY OF AVONDALE
JOB # 01-2009-014

EASEMENT EXHIBIT

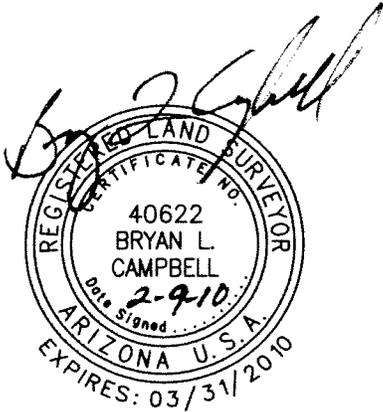
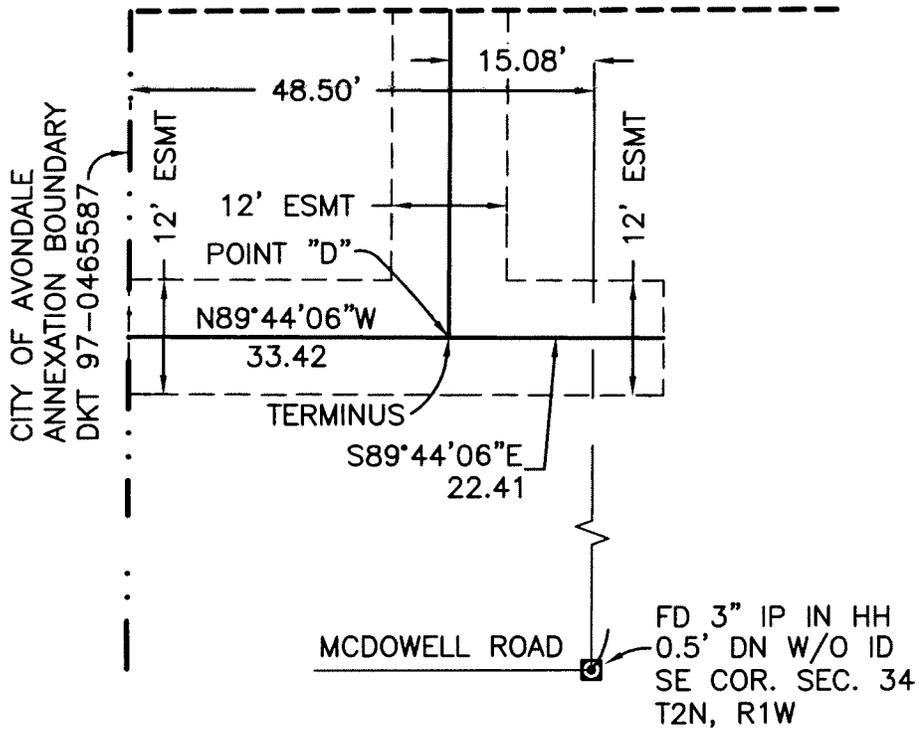


amec E & E, Inc.

**EXHIBIT DESCRIPTION
WATERLINE EASEMENT
CITY OF AVONDALE
JOB # 01-2009-014**

EASEMENT EXHIBIT

See Sheet 2 of 3



amec E & E, Inc.

**EXHIBIT DESCRIPTION
WATERLINE EASEMENT
CITY OF AVONDALE
JOB # 01-2009-014**

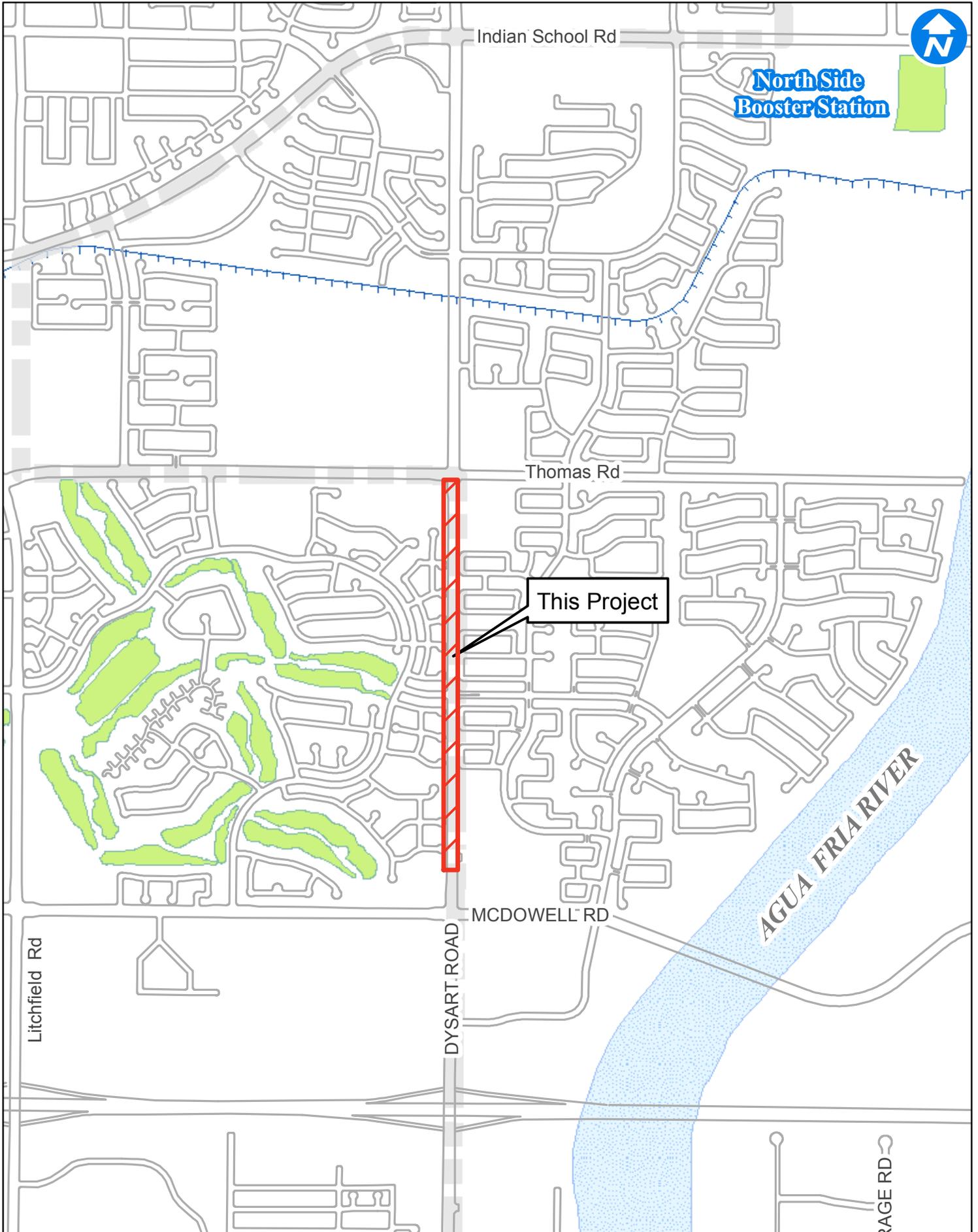
EXHIBIT A2
TO
ACCESS AND INDEMNIFICATION AGREEMENT
BETWEEN
THE CITY OF AVONDALE
AND
CRANE CO.

[Fulton Estates Roads Legal Description and Maps]

See following pages.

To be inserted when agreed to by the City and Crane.

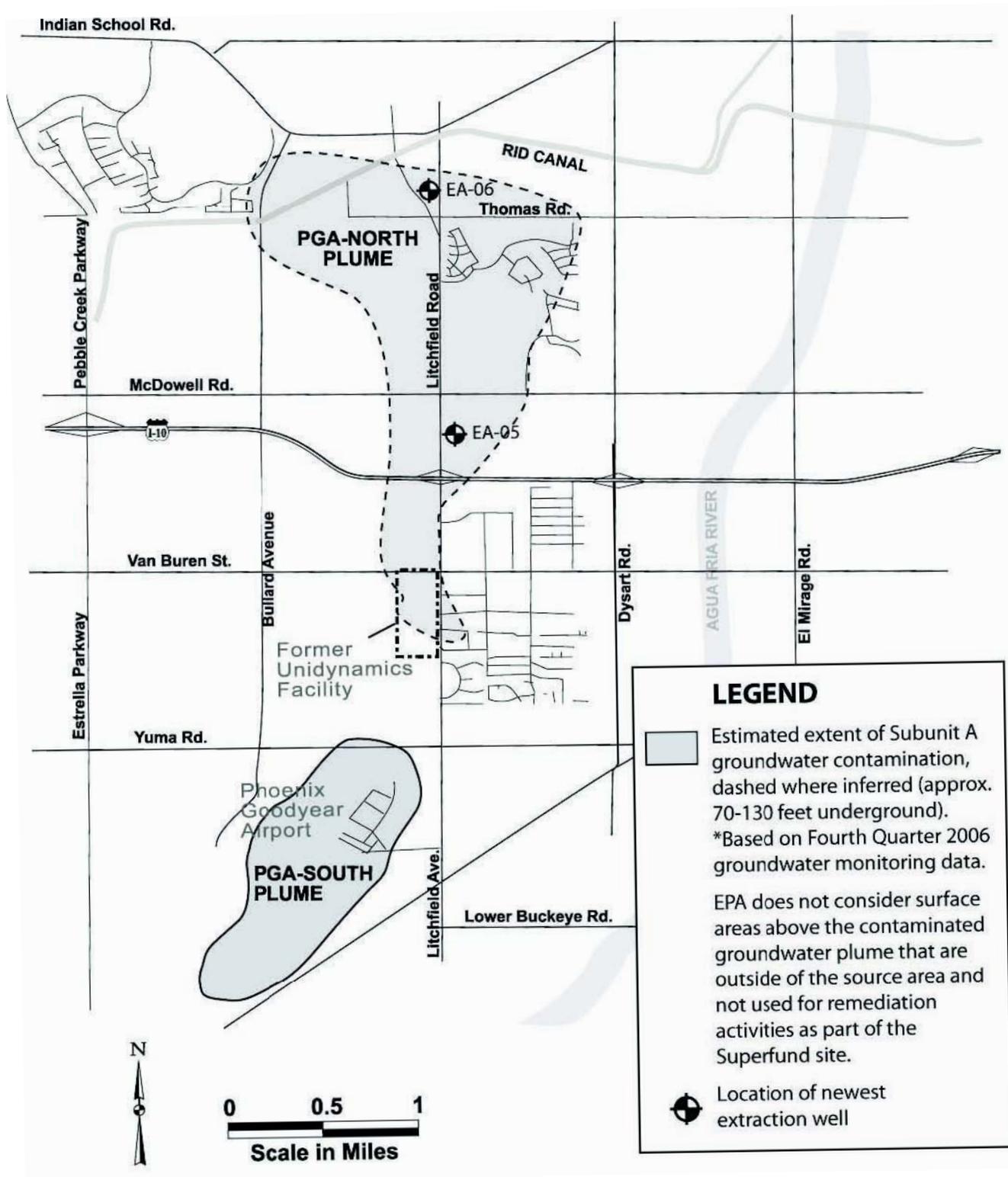
VICINITY MAP



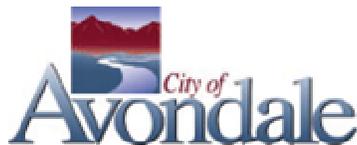
City of Avondale

Map Produced by Avondale Water Resources/GIS Division

Phoenix Goodyear Airport North Superfund Site Agreement



Phoenix-Goodyear Airport Superfund Site



CITY COUNCIL REPORT

SUBJECT:

Resolution 2888-310 - Deferred Compensation
Plan Amendment

MEETING DATE:

March 8, 2010

TO: Mayor and Council
FROM: Paul Adams, Fire Chief (623)333-6100
THROUGH: Charlie McClendon, City Manager

PURPOSE:

Staff is requesting that the Mayor and City Council adopt a Resolution approving an amendment to the ICMA-RC and Nationwide Retirement Solutions deferred compensation plans.

BACKGROUND:

The City currently makes available two deferred compensation plans to employees, one offered by ICMA-RC which was adopted in 1993 and the other by Nationwide Retirement Solutions, formerly PEBSCO, approved in 1994. Participation in either plan by employees is entirely voluntary and comes by way of payroll deduction. Both deferred compensation companies have an available option that would allow an employee to take out a loan against their deferred compensation contributions but that option is not currently available in either Avondale plan.

DISCUSSION:

The Fire Chief has worked with Human Resources staff to research this issue and this report is being submitted by the Chief on behalf of HR. It should be made clear that the loan option is not just a fire department issue but would be available to all employees who participate in the deferred compensation plans offered by the City of Avondale.

A loan option has become a standard feature in the deferred compensation plans of most valley cities including Surprise, Chandler, Goodyear, Glendale, Tempe and Peoria. While this feature was not included when the Avondale plans were originally established the option can be added to both plans through approval of a fairly simple plan amendment. In recent conversations both plan representatives have indicated that this option is being requested more and more frequently by Avondale employees as an option to help them through this difficult economy.

The loan provision is very similar for both plans and allows an employee to obtain a loan for up to ½ of their account balance or \$50,000, whichever is less. The interest rate is .5% (ICMA) or 1% (Nationwide) above prime and the loan is repaid through direct deduction from the employee's checking account. There are minimal application (\$50-\$65) and annual management fees (\$35) but the interest amount is repaid to the employee's 457 account since the employee has essentially loaned the funds to themselves. The repayment term is 5 years or less but can be extended for a longer period if the funds are being used to purchase a primary residence. The funds are not considered a withdrawal and there are no tax implications unless the individual defaults on the loan, at which point the remaining balance is considered a taxable withdrawal by the IRS.

The loan process is handled directly by the employee with their respective plan and can be done online, by phone or by faxed application and can generally be completed from start to finish within 7-10 days. The City is not responsible for any part of the application or repayment process nor is there

any cost to the City to make this option available to employees. The loan provision provides an additional benefit to plan participants in difficult financial times and, while taking a loan against retirement funds may not be the best option, it may be the only option available to an employee and is a preferred alternative to the hardship withdrawal provision currently included in the plans.

BUDGETARY IMPACT:

There is no fiscal impact to the city.

RECOMMENDATION:

Staff recommends that the Mayor and City Council adopt a Resolution approving an amendment to the ICMA-RC and Nationwide Retirement Solutions deferred compensation plans.

ATTACHMENTS:

Click to download

 [Resolution 2888-310](#)

RESOLUTION NO. 2888-310

A RESOLUTION OF THE COUNCIL OF THE CITY OF AVONDALE, ARIZONA, APPROVING AMENDMENTS TO THE CITY OF AVONDALE ICMA-RC AND 457 DEFERRED COMPENSATION PLAN AGREEMENTS TO PERMIT ELIGIBLE PLAN PARTICIPANTS THE ABILITY TO OBTAIN LOANS FROM THEIR PLAN ACCOUNTS.

WHEREAS, the Council of the City of Avondale (the “City Council”) adopted Resolution No. 1212 and Resolution No. 1282-94 authorizing agreements relating to the City of Avondale ICMA-RC and 457 Deferred Compensation Plans (collectively, the “Plans”); and

WHEREAS, the City of Avondale (the “City”) established the Plans for eligible employees which serves the interest of the City by (i) enabling it to provide reasonable retirement security for its employees, (ii) providing increased flexibility in its personnel management system and (iii) assisting in the attraction and retention of competent personnel; and

WHEREAS, the City has determined that permitting eligible participants to obtain loans from their Plans accounts will serve these objectives; and

WHEREAS, the City Council desires to authorize amendments to the Plans to permit such loans (the “Amendments”).

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF AVONDALE as follows:

SECTION 1. The recitals set forth above are hereby incorporated as if fully set forth herein.

SECTION 2. The Amendments are hereby approved substantially in the form attached hereto as Exhibit A and incorporated herein by reference.

SECTION 3. The Mayor, the City Manager, the City Clerk and the City Attorney are hereby authorized and directed to cause the execution of the Amendments and to take all steps necessary to carry out the purpose and intent of this Resolution.

[SIGNATURES ON FOLLOWING PAGE]

PASSED AND ADOPTED by the Council of the City of Avondale, March 8, 2010.

Marie Lopez Rogers, Mayor

ATTEST:

Carmen Martinez, City Clerk

APPROVED AS TO FORM:

Andrew J. McGuire, City Attorney

EXHIBIT A
TO
RESOLUTION NO. 2888-310

[Amendments]

See following pages.

401/457 PLAN LOAN PROGRAM IMPLEMENTATION PACKET FOR EMPLOYERS



This packet includes:

- A Guide to Implementing a Loan Program
- Loan Guidelines Agreement for a Retirement Plan
- Suggested Resolution for a Legislative Body Relating to Amending a Retirement Plan to Permit Loans
- Loan Administration Agreement for Section 457 Deferred Compensation Plans
- Amendment to Adoption Agreement for Section 401 Plans

LOAN PROGRAM IMPLEMENTATION AT-A-GLANCE

In this Loan Program Implementation Package, you will find:

- *A Guide to Implementing a Loan Program* – This brochure details the issues you should consider in designing your loan program.
- *Loan Guidelines Agreement for a Retirement Plan* – These guidelines must be completed before loans can be made from your retirement plan. This document enables you to establish the features of your loan program.
- *Suggested Resolution for a Legislative Body Relating to Amending a Retirement Plan to Permit Loans* – We have included one version that can be used for any plan type – Section 457 Deferred Compensation plans, Section 401 Money Purchase plans, and Section 401 Profit-Sharing plans. If your governing body requires that a resolution be passed when amendments are made to the plan, we have included a suggested resolution for your use. If your governing body does not require that a resolution be passed, please disregard the suggested resolution.
- *Loan Administration Agreement for 457 Plans* – This document applies only to 457 plans where more than one provider is involved in loan administration. If you have adopted a single 457 plan document under which ICMA-RC and one or more other providers must operate, you may ultimately have to self-administer your loan program unless you agree to the requirements specified in this Agreement.
- *Amendment to 401 Plan Adoption Agreement* – This document applies to 401 plans only and amends your current plan to allow loans.

Steps to Implement a Loan Program for your ICMA-RC Retirement Plan:

- (1) Carefully read *A Guide to Implementing a Loan Program*.
- (2) Complete the *Loan Guidelines Agreement*.
- (3) Using the Suggested Resolution as a guide, obtain a resolution from your governing body to adopt the loan provision (if required).
- (4) Execute the *Loan Administration Agreement* (457 plans only) or the *Amendment to Adoption Agreement* (401 plans only).
- (5) Return the completed *Loan Guidelines Agreement*, a copy of the resolution (if required by your entity), and either the *Loan Administration Agreement* (457 plans) or the *Amendment to Adoption Agreement* (401 plans) to:

ICMA-RC
Attention: New Business Analyst
777 North Capitol Street NE
Washington, DC 20002-4240

Please allow 10 business days to set up your plan to allow loans.

Please contact our Client Services Team at 1-800-326-7272 if you have any questions about implementing your Retirement Plan Loan Program.

**A GUIDE TO
IMPLEMENTING
A LOAN PROGRAM**



A loan program in your retirement plan provides eligible plan participants the ability to borrow funds from their plan account balance. Adding loans to your retirement plan is a big step. As the administrator of your loan program, ICMA-RC will attempt to minimize the amount of resources you need to devote to the program.

However, there are administrative and fiduciary responsibilities associated with offering loans which, as a practical matter, cannot be delegated to ICMA-RC. For this reason, before you design a program that is right for you and your employees, there are several issues you may wish to consider. And the decisions you make in designing your loan program will determine the resources you, as the plan sponsor, will have to commit to that program.

This brochure details the issues you should consider in designing your retirement plan loan program.

LOAN GUIDELINES

In order to offer loans from a retirement plan, the Internal Revenue Code (the Code) requires that you establish written guidelines that govern the granting of loans. Included in this packet is the Loan Guidelines Agreement that you must complete and formally adopt to establish your loan program.

Along with completing the *Loan Guidelines Agreement*, you must amend your plan document to allow loans. You will need to send to ICMA-RC a statement executed by a designated official or resolution approved by your governing body, as applicable to your plan. In addition, if you are adding a loan provision to a 401 plan, the adoption agreement applying to that plan must be amended. A sample resolution and an adoption agreement amendment form are included in this package. If you have any questions about amending your plan document to allow for loans, please call our Client Services Team toll-free at 1-800-326-7272.

The Code provides you with some flexibility when establishing your Loan Guidelines as long as the guidelines are consistent with the plan document provisions on loans and with section 72(p) of the Code.

1. Eligibility (Section II in Loan Guidelines Agreement)

You may allow a loan to be taken from (1) vested employer contributions and/or (2) participant account balances. You may designate whether or not a loan may be taken

- (A) for all purposes or
- (B) only in the case of hardship or other certain specified financial situations.

401 Plans: Under the Code, only employers can authorize a hardship for loan purposes. Upon request, ICMA-RC will provide an opinion to you concerning the likely compliance of the hardship within the requirements of the Code and regulations. Normally, for loan purposes, hardship and other specified situations include, but are not limited to: unreimbursed medical expenses, buying or rehabilitating the participant's principal residence, and paying for college education for the participant or his/her dependents. Car loan, car repairs, and the purchase or repair of a vacation or rental property would not be included in the hardship definition.

The option you choose to define "loan purpose" in the Eligibility section will have a significant impact on the number of loans made from your plan. Obviously, if you choose "for all purposes," more of your employees will request loans than if you select "hardship or other specified financial situations only."

457 Plans: Loans must be coordinated with unforeseeable emergency withdrawals. The emergency withdrawal regulations under Section 457 of the Code require that an emergency withdrawal be a resource of the "last resort." If the participant is able to take a loan from your ICMA-RC 457 plan or any other plan you sponsor, the participant has resources available to meet, or partially meet, the financial need. Therefore, a participant will be required to take a loan before taking an emergency withdrawal.

Many emergency withdrawals are not approved because the financial need, while serious, may not meet the conditions itemized in the 457 regulations. The ability to take a loan will allow participants access to money that is not otherwise available. And the repayment provisions for loans ensures that participants replenish their accounts, thereby preserving their retirement savings.

2. Frequency of Loans (Section III in Loan Guidelines Agreement)

Participants may receive only one loan per calendar year. However, you may elect to allow participants to have either

- (A) only one loan outstanding at a time or
- (B) no more than five loans outstanding at one time.

The option you choose under Frequency of Loans will have an impact on the number of loans made from your plan. It may also have a direct impact on your payroll system if you select Payroll Deduction as a repayment option for your participants. *Each loan repayment for each pay period must be accounted for separately.* Repayments of multiple loans are a much larger burden on your payroll system (and personnel) than a repayment of a single loan.

3. **Length of Loan (Section V in Loan Guidelines Agreement)**

Generally, all loans must be repaid within five years from the date the loan is made. There is an exception for loans used to buy, but not to improve or repair, a principal residence. In the case of a loan for buying a principal residence, you may specify the number of years, not to exceed 30, over which the loan must be repaid.

In determining the maximum repayment period for residential loans, you should be mindful that the loan term may extend beyond the period the participant is employed by you. If you allow employees to continue to pay their loans after they separate from service (see Acceleration of Loan Repayment on the next page), repayments would continue by the participant, through you, for the entire term of the loan (e.g., 30 years). Every payroll period, the participant (former employee) will be required to give you a check for the periodic loan repayment amount. You then include this amount with your next contribution submittal to ICMA-RC. *Loan repayments may not be made directly to ICMA-RC by the participant, unless you choose ACH debit as a repayment option.*

4. **Loan Repayment Process (Section VI in Loan Guidelines Agreement)**

All loans must be repaid either through payroll deduction or through ACH debit as long as the employee is actively employed by you. For payroll deducted payments, ICMA-RC's media used for remitting contribution detail (e.g. EZLink, magnetic tape, or diskette) allow for the inclusion of loan repayment detail. Participants may pay off their loans early by requesting that you submit a larger repayment amount from their pay on their regularly scheduled repayment dates through your contribution submittals to ICMA-RC. Please note that no payment date may be "skipped" even if the employee has made a large payment or submitted multiple payments.

The enclosed Loan Guidelines Agreement form allows your plan to offer a participant the option of making loan repayments via direct debit of the employee's bank account. Direct debit is authorized by the participant and allows ICMA-RC to debit loan repayments from the participant's bank account via Automated Clearing House (ACH). With this feature, you are free of the burden of establishing and monitoring payroll deduction and submitting of repayments to ICMA-RC.

Please note that you will not be notified directly when a participant's bank account has insufficient funds for a complete loan repayment. The EZLink loan reports that will be available to you online will provide this information. It is possible that participant loans may default more often for lack of repayment when participants choose ACH repayment rather than payroll deduction. You may

choose to restrict certain participants to payroll deduction for this reason.

In implementing a loan program you should be aware that some employers who offer loans through their retirement plan have had to contend with the inability of some participants to repay their loan(s). You should be aware that you may *not* stop taking loan repayments from the employee's paycheck – even if the employee asks that repayments be stopped. Failure to payroll-deduct loan repayments on schedule could both jeopardize the eligibility or qualification of the entire plan as well as create a taxable event for the participant.

Likewise, if an employee is repaying the loan through ACH debit of his/her bank account, and the employee fails to make payments, this could jeopardize the eligibility of your retirement plan. Employers are ultimately responsible for ensuring that loans are repaid according to the loan terms. ICMA-RC assists you by notifying both you and the employee if a payment has not been received.

Your plan may allow terminated employees to continue to repay their loans either through ACH debit of their bank account, or by giving/sending you a check each repayment period (refer to Acceleration of Loan Repayment section on page three). If you adopt this latter repayment method, you will include the repayment amount given to you by the former employee in your next regular employee contribution remittance to ICMA-RC.

If a participant has more than one loan outstanding at any one time, then each loan repayment must be separately reported to ICMA-RC.

5. **Loan Application Procedures (Section VIII in Loan Guidelines Agreement)**

(A) Active Employees Only – Loans are available only to active employees. Former employees, beneficiaries, and alternate payees may not take a loan.

(B) Request Submittal – Loan requests may be submitted by participants through the Direct Application (written form) or on Account Access, ICMA-RC's online account program. To offer these features, the employer pre-authorizes ICMA-RC to approve loan requests. Otherwise, all loan requests must be in writing, signed by the participant, and approved by you, the employer.

Under the Code, the amount of the loan may not exceed a maximum amount. *The amount available for a loan is affected by all other loans the participant may have outstanding or has recently paid off from your ICMA-RC retirement plan, and any other retirement plans you sponsor.* Please refer to page 7 for a worksheet illustrating how maximum loan amounts are calculated. The loan modeling program in Account Access incorporates this calculation automatically.

(C) Check Issuance – Unless you select Direct Application or online (Account Access) application, the participant is required to sign acceptance of a promissory note evidencing the loan and a disclosure statement, which includes an amortization schedule. Upon receipt of an approved loan application, ICMA-RC will prepare these loan documents and send them, along with the loan check. The loan check may not be given to the participant until all of these loan documents have been signed by the participant. Once the loan documents are signed, you return them to ICMA-RC. Because the promissory note is considered a plan asset, all loan documents must be complete and preserved by ICMA-RC for at least the life of the loan.

With online loans or Direct Application, ICMA-RC sends loan documents with the check to the participant. When the participant endorses the check, that signifies acceptance of terms.

For payroll-deducted loan repayments, once a loan is issued, your payroll department must ensure that loan repayments are withheld from the employee's paycheck each pay period, in the amount specified or the amortization schedule, until the loan is repaid in full. It is essential that the amortization schedule coincide with your payroll cycle. ICMA-RC can help you determine the first pay date on which you should withhold loan repayments.

6. Acceleration of Loan Repayment (Section X in Loan Guidelines Agreement)

You have three options for determining how outstanding loans are accelerated:

- A. All loans are due and payable in full upon the employee's separation from service. The employee may not continue to pay off his/her loan once he or she separates from service.
- B. After separation from service, all loans are due and payable in full as soon as the participant takes a withdrawal of any amount from the plan.
- C. After separation from service, all loans are due and payable in full only when the participant withdraws his/her entire account balance.

You should consider these options carefully, since each provision could result in a taxable event for the participant. If a participant does not repay the outstanding loan amount at the time it is due, the loan is "foreclosed." This means that the outstanding loan amount must be reported by the plan administrator (ICMA-RC) as a taxable distribution in the year of the foreclosure.

On the other hand, given the burdens associated with collecting loan repayments from former employees, you may

not wish to maintain a **potentially** long term "relationship" with former employees (especially in the case of **residential loans**).

You should carefully consider the level of responsibility each option entails.

7. Deemed Distribution of Delinquent Loans (Section XIV in Loan Guidelines Agreement)

Internal Revenue Service (IRS) regulations governing participant loans issued after December 31, 2001, have provided clarification on requirements for loan processing. The regulations have always established loan criteria such as term and borrowing limitations. However, the regulations now specifically illustrate how plan sponsors should treat delinquent loans, which violate the special rules allowing loans to be made from retirement plan assets.

A loan typically becomes a deemed distribution when scheduled payments are not made in adherence with the granted "cure period." The maximum allowable cure period is the end of the calendar quarter following the calendar quarter in which the payment was due. For example, if a participant's loan payment is due February 1st, the maximum cure period for the repayment is June 30th. If the total amount of all delinquent payments is not received by the end of the cure period, the loan is deemed a distribution. The principal balance, in addition to any accrued interest, is reported as a distribution to the IRS. However, the taxable distribution is not the only event in conjunction with a deemed distribution. The following negative consequences occur as a result of deemed distribution.

- The deemed distribution is a taxable event. However, it is not an actual distribution and therefore remains an asset of the participant's account. The outstanding loan balance and accrued interest are reported on the participant's account statement.
- Repayment of a deemed distribution will not change or reverse the taxable event.
- The loan continues to be considered outstanding until it is repaid or "offset" using the participant's account balance. An offset can occur only if the participant is eligible to receive a distribution from the plan as outlined in your plan document.
- ICMA-RC requires participants to repay any outstanding deemed distributed loan before they can become eligible for a new loan. The deemed distributed loan and any interest accrued since the date it became a taxable event is taken into account when determining the maximum amount available for a new loan.
- A recent IRS ruling requires that a participant who has had a prior deemed distribution must make repayments

to a new loan through payroll deduction, or provide proof of adequate security.

Employers, as plan sponsors and fiduciaries, have an obligation to comply with plan document and loan guideline requirements applicable to participant loans. In this regard, loan payments must be made in accordance with the plan document, plan loan guidelines, and as reflected in the promissory note signed by the participant. Employers retain this obligation if there is a loan program associated with their retirement plan, even if participants apply for loans online, and regardless of the method of repayment - whether participants are repaying their loans through ACH debit or payroll deduction.

Employers who do not ensure proper loan repayment practices in their retirement loan programs risk not only having individual participant loans being deemed distributions, but also potentially jeopardize the tax-favored status of the entire plan. In the extreme, plans with mismanaged loan programs - a high occurrence of deemed distributed loans, and/or program participants in default, for example - may be disqualified (in the case of 401 plans) or classified as ineligible (for 457 plans) by the IRS. Disqualification results in the loss of tax-deferred status for all contributions and a possible increase in the taxable income for participating employees.

It is a plan sponsor's and plan administrator's fiduciary obligation to properly manage the retirement plan and its benefits. Mismanagement of a loan program may be considered failure to meet this fiduciary obligation and may expose a plan sponsor to litigation, in addition to being in violation of applicable laws and regulations.

To assist plan sponsors whose plan options include loans, ICMA-RC will provide reports of participants with payments delinquent by 30 to 89 days, 90 or more days but not yet deemed, and those whose loans have been deemed distributed. ICMA-RC is committed to supporting employers who request assistance with their loan programs in order to reduce the number of delinquent loans and decrease the occurrence of deemed distributions.

SPECIAL CIRCUMSTANCES

If you have more than one retirement plan, ICMA-RC will administer your loan program, but you will have to perform some loan verification activities. You will also have to perform these activities if loans are available to your employees from several like retirement plans, such as two different qualified plans, or if you have different types of retirement plans (e.g. Section 457 deferred compensation and section 401 qualified plan). The degree of your involvement will depend on your situation.

1. Multiple Plans

If you offer *several retirement plans*, each with its own plan document and provisions unique to each administrator, ICMA-RC and your other administrators should be able to administer loans because these are distinct plans and the loan provision applies at the *plan* level. However, the Code sets a maximum on the aggregate of all loans from all retirement plans in which the employee participates. No provider will be able to calculate, by itself, the maximum amount that a participant may borrow at any point in time. Since only you, the employer, can determine the current outstanding loan balance and the highest outstanding loan balance in the past 12 months from all loans from any retirement plans, you will have to calculate the maximum amount that may be borrowed. This will involve obtaining all loan amounts currently outstanding and repaid in the last 12 months. For your convenience, ICMA-RC has developed a worksheet to illustrate the maximum loan amount available. [See Page 7, "Calculating the Amount Available for a Loan."]

If you elect online loans, participants are asked to input all outstanding loan balances in their online worksheet so that the program can properly calculate the maximum amount. Participants are on the "honor system" when they enter other loan amounts; ICMA-RC is unable to verify any loan amounts associated with plans administered by other providers. However, if there are any outstanding loans in other plans administered by ICMA-RC, our online program will take them into account.

2. Single Retirement Plan/Multiple Providers

If you have adopted a single retirement plan with one master plan document under which ICMA-RC and your other administrator(s) must operate, then you may ultimately have to self-administer your loan program, *unless* you require:

- that the maximum that may be borrowed from any provider is 50 percent of the balance with that provider and
- that the loan must be repaid only to the provider from which the loan was made.

If you do not impose these requirements, you may have to self-administer your loan program. This is because of:

- Problems calculating the loan amount.

The amount available for a loan is based, in part, on the total account balance in *the plan*. Since employees *may* have balances with more than one of the administrators, only you, the employer, can determine the actual account balance by aggregating the balance for each administrator.

The Code sets a maximum on the aggregate of *all* loans from all retirement plans in which the participant participates. Since only you can determine the current outstanding loan balance and the highest outstanding loan balance in the past 12 months from all loans from any retirement plans, you will have to calculate the maximum amount that may be borrowed. This will involve obtaining *all* loan amounts currently outstanding and repaid in the last 12 months. For your convenience, ICMA-RC has developed a worksheet to illustrate the maximum loan amount available. [See Page 7, “Calculating the Amount Available for a Loan.”]

- Problems preparing loan documents.

Each loan has terms and conditions that are reflected in the promissory note, disclosure statement and amortization schedule for the loan. Other providers may be able to prepare these documents if given all the pertinent information about the loan by you. However, the other provider may be reluctant to provide documents for a loan to which it is not a party. And it may be difficult for the other provider’s system to provide documents for a loan in an amount that exceeds what its system shows is available.

- Problems keeping accurate loan records.

Since loans are generally made and recordkept on a plan level basis, theoretically, a participant could take a loan in the amount of his/her entire balance with one administrator because the loan is collateralized by the balance with another administrator. And the participant may elect to allocate loan repayments either between administrators or to an administrator other than the administrator who made the loan. Unless a loan is unique to one of the administrators, both in amount and repayment terms, only you, the employer, will be able to track loan repayments, especially if repayments are being made to more than one administrator.

3. Multiple Types of Retirement Plans/Multiple Providers

If you make loans available to your employees from all of your retirement plans (e.g. Section 457 deferred compensation plan and Section 401 qualified plan), each plan administrator should be able to administer loans because these are distinct plans and the loan provision applies at the plan level. However, no administrator will be able to calculate, by itself, the maximum amount that a partici-

pant may borrow at any point in time. This is because the Code sets a maximum on the aggregate of all loans from all 401 and 457 plans in which the participant participates. Since only you, the employer, can determine the current outstanding loan balance and the highest outstanding loan balance in the past 12 months from all loans from any 401 or 457 plans, you will have to calculate the maximum amount that may be borrowed. This will involve obtaining all loan amounts currently outstanding and repaid in the last 12 months. For your convenience, RC has developed a worksheet to illustrate the maximum loan amount available. [See Page 7, “Calculating the Amount Available for a Loan.”]

Many 457 plans are what are referred to as “co-administered” plans. There are actually two different types of arrangement both of which are referred to as co-administered or co-provider plans:

- (1) multiple 457 plans offered by an employer through two or more administrators, each administrator having its own plan document and features.
- (2) a single 457 plan with multiple administrators providing essentially different investment options.

In both of these situations, it will be difficult for an administrator to correctly administer a loan provision across multiple plans. It will also be difficult for you to correctly administer a loan’s provisions in situations where you make loans available to employees from your 457 plan(s) and another retirement plan (e.g. Section 401 money purchase or profit sharing plan).

CONCLUSION

You may be able to minimize your involvement in administering a loan program under either a single plan/multiple provider arrangement or a multiple plan arrangement. However, you cannot avoid having to determine whether each loan amount requested is consistent with the aggregate maximum.

The above information is intended to provide an overview of the issues and complexities of establishing and maintaining a loan program under the most common types of retirement plan arrangements. It is not intended to be all inclusive. Other issues may arise and some issues may be mitigated by a plan’s individual design. Special situations and/or solutions not discussed above will have to be analyzed on a case-by-case basis. Please contact ICMA-RC’s Client Services Team at 1-800-326-7272 with any questions related to these issues.

LOAN GUIDELINES AGREEMENT FOR A RETIREMENT PLAN



INSTRUCTIONS

(Please refer to the previous section, "A Guide to Implementing a Loan Program")

These Loan Guidelines must be completed before loans can be made from your retirement plan. You should consider each option carefully before making your selections because your selections will apply to all loans made while the selection is in effect. If you later change any provision, the changes will apply only to loans made after the change is adopted. Loans in existence at the time of any future changes will continue to operate under the guidelines that were in effect at the time the loan was originally made.

Note: If loans are available to your employees from other plans (e.g. other Section 457 deferred compensation plans or other Section 401 plans), calculation of the maximum loan amount must consider the aggregate of all loans from all 401 and 457 plans in which the employee participates. See the Maximum Loan Amount Worksheet on page 7 of *A Guide to Implementing a Loan Program*, found in this packet.

Name of Plan (please state the Employer's complete name, including state): _____

Plan Type: 401(a) Money Purchase Plan 401 Profit-Sharing Plan 457 Deferred Compensation Plan

ICMA-RC Plan Number: _____

I. Purpose

The purpose of these guidelines is to establish the terms and conditions under which the Employer will grant loans to participants. This is the only official Loan Provision Document of the above named Plan.

II. Eligibility

Loans are available to all active employees. Loans will not be granted to participants who have an existing loan in default. Loans will be pro-rated among all the funds in which the participant is invested at the time the loan is made.

For 401 plans only:

Loans are available from the following sources: [select one or both]

- Employer Contribution Account (vested balances only)
- Participant Contribution Accounts (pre- and post-tax, if applicable, including Employee Mandatory, Employee Voluntary, Employer Rollover, and Portable Benefits Accounts, but excluding the Deductible Employee Contribution/Qualified Voluntary Employee Contribution Account)

For all plan types:

Loans are available for the following purposes: [select one]

- All purposes
- Loans shall only be granted in the event of a participant's hardship or for the purpose of enabling a participant to meet certain specified financial situations. The employer shall approve the participant's loan application after determining, based on all relevant facts and circumstances, that the amount of the loan is not in excess of the amount required to relieve the financial need. For this purpose, financial need shall include, but not be limited to: unreimbursed medical expenses of the participant or members of the participant's immediate family, establishing or substantially rehabilitating the principal residence of the participant, or paying for a college education (including graduate studies) for the participant or his/her dependents.

III. Frequency of loans [select one]

- Participants may receive one loan per calendar year. Moreover, participants may have only one (1) outstanding loan at a time.
- Participants may receive one loan per calendar year. Moreover, no participant may have more than five (5) loans outstanding at one time.

IV. Loan amount

The minimum loan amount is \$1,000.

The maximum amount of all loans to the participant from the plan and all other plans sponsored by the Employer that are qualified employer plans under section 72(p)(4) of the Code is the *lesser* of:

- (1) \$50,000, reduced by the highest outstanding balance of all loans from any 401 or 457 plans for that participant during the one-year period ending on the day before the date a loan is to be made, or
- (2) one half of the participant’s vested account balance, reduced by the current outstanding balance of all 401 and 457 loans from all plans for that participant.

If a participant has any loans outstanding at the time a new loan is requested, the new loan will be limited to the maximum amount calculated above reduced by the total of the outstanding loans.

A loan cannot be issued for more than the above amount. The participant’s requested loan amount is subject to downward adjustment without notice due to market fluctuation between the time of application and the time the loan is made.

V. Length of loan

A loan must be repaid in substantially equal installments of principal and interest, at least monthly, over a period that does not exceed five (5) years.

Loans for a principal residence must be repaid in substantially equal installments of principal and interest, at least monthly, over a period that does not exceed _____ [state number of years] years (maximum 30 years).

VI. Loan repayment process

Loan repayments for active employees must be through (**choose one**):

- Payroll deduction only.
PL642(2) = 2
- ACH debit only.
PL642(2) = 0
- Employee may choose either payroll deduction or ACH debit.
PL642(2) = 1

If payroll deduction repayment is allowed, and the employee wishes to use this method, the employee must notify the Employer so that the Employer can ensure that repayment will begin as soon as practicable on a date determined by the Employer’s payroll cycle. Failure to begin payroll deduction in a timely way could lead to the employee’s loan entering delinquency status. Payroll deduction should begin within two payroll cycles following the employee’s receipt of the loan.

Repayments through payroll deduction will be sent via check or wire by the Employer to ICMA-RC on the following cycle (**choose one**):

- Weekly (52 per year)
- Bi-weekly (26 per year)
- Semi-monthly (24 per year)
- Monthly (12 per year)

If ACH debit repayment is allowed, debits from the employee’s designated bank account will begin approximately one month following the date the employee’s signed ACH authorization form is received and processed by ICMA-RC, or, in the case of online loans, approximately one month following the date the loan check has been cleared for payment. Debits will normally be made on a monthly basis.

Loans outstanding for former employees or employees on a leave of absence must be repaid on the same schedule as if payroll deductions were still being made unless they reamortize their loans and establish a new repayment schedule that provides that substantially equal payments are made at least monthly over the remaining period of the loan.

Loan payments, including loan payments from former employees, are allocated to the participant's current election of investment options on file with ICMA-RC.

The participant may pay off all or a portion of the principal and interest early without penalty or additional fee. Extra payments are applied forward to both principal and interest as specified in the original repayment schedule, unless the additional payment is for the balance due.

VII. Loan interest rate

The rate of interest for loans of five (5) years or less will be based on prime plus 0.5%.

The rate of interest for loans for a principal residence will be based on the FHA/VA rate.

Interest rates are determined on the last business day of the month preceding the month the loan is disbursed. The interest rate is locked in at the time a loan is approved and remains constant throughout the life of the loan.

The prime interest rate is determined on the last business day of each month using www.nfsn.com as the source. The FHA/VA interest rate is also determined on the last business day of each month using www.bankofamerica.com as the source.

Loan interest rates for new loans taken in different months may fluctuate upward or downward monthly, depending on the movement of the prime and FHA/VA interest rates.

The employer may modify the manner in which loan interest rates will be determined, but only with respect to future loans.

VIII. Loan application procedure

Loans must be requested using the following method (**check one**):

- Online only:** All loans must be requested online by employees through ICMA-RC's Account Access site at www.icmarc.org, with Employer pre-authorization as outlined in italics below.

If an employee is married at the time of application, and spousal consent is required by the Plan for the loan, the employee's spouse must consent, in writing, to the loan and the consent must be witnessed by a plan representative or notary public. Such consent must be received in writing by ICMA-RC no more than ninety (90) days before the loan request is submitted through Account Access.

The promissory note, truth-in-lending rescission notice and disclosure statement are presented to the employee online through Account Access at the time the employee submits the loan request. The employee confirms receipt and acceptance of these documents by clicking on the affirmative buttons on the Account Access program.

The employer hereby authorizes all future loans requested through the online process via Account Access, as well as any requests that employees submit on paper forms, pending review of the application by ICMA-RC. Notice of loan issuance will be provided to the Employer via reports posted on the EZLink site.

The loan amount will generally be redeemed from the employee's account on the same day as the employee's successful submission of the loan request through Account Access, if it is submitted prior to 4:00 p.m. ET on a business day. If not, the loan amount will be redeemed on the next business day following submission. The loan check is generally issued on the next business day following redemption, and will be mailed directly to the employee. The employee's presentation of the loan check for payment constitutes an acknowledgment that the employee has received and read the loan disclosure information provided by ICMA-RC and agrees to the terms therein.

Loan repayment will begin as soon as practicable following the employee's presentation of the loan check for payment.

- **Online and through Direct Loan application:** All loans must be requested either online by employees through ICMA-RC's Account Access site at www.icmarc.org, or through the Direct Loan application, both of which require pre-authorization by the Employer as outlined in italics below.

If an employee is married at the time of application, and spousal consent is required by the Plan for the loan, the employee's spouse must consent, in writing, to the loan and the consent must be witnessed by a plan representative or notary public. Such consent must be received in writing by ICMA-RC no more than ninety (90) days before the loan request is submitted through Account Access. In the case of the Direct Loan Application, spousal consent should be sent along with the application.

The promissory note, truth-in-lending rescission notice and disclosure statement are mailed to the employee along with the issued loan check. The employee confirms receipt and acceptance of these documents and terms at the time the endorsed check is presented for payment.

The Employer hereby authorizes all future loans requested through the online process via Account Access, as well as any requests that employees submit on paper forms, pending review of the application by ICMA-RC. Notice of loan issuance will be provided to the Employer via reports posted on the EZLink site.

The loan amount will generally be redeemed from the employee's account on the same day as either ICMA-RC's receipt of a loan application (complete and in good order), or the employee's successful submission of the loan request through Account Access, if it is submitted prior to 4:00 p.m. ET on a business day. If not, the loan amount will be redeemed on the next business day following submission. The loan check is generally issued on the next business day following redemption, and will be mailed directly to the employee. The employee's presentment of the loan check for payment constitutes an acknowledgment that the employee has received and read the loan disclosure information provided by ICMA-RC and agrees to the terms therein.

Loan repayment will begin as soon as practicable following the employee's presentment of the loan check for payment.

- **Direct Loan application only:** All loans must be requested through the Direct Loan application, which requires pre-authorization by the Employer as outlined in italics below.

If an employee is married at the time of application, and spousal consent is required by the Plan for the loan, the employee's spouse must consent, in writing, to the loan and the consent must be witnessed by a plan representative or notary public. Such consent must be received in writing by ICMA-RC along with the Direct Loan Application.

The promissory note, truth-in-lending rescission notice and disclosure statement are mailed to the employee along with the issued loan check. The employee confirms receipt and acceptance of these documents at the time the endorsed check is presented for payment.

The employer hereby authorizes all future loans requested on paper forms, pending review of the application by ICMA-RC. Notice of loan issuance will be provided to the Employer via reports posted on the EZLink site.

The loan amount will generally be redeemed from the employee's account on the same day as ICMA-RC's receipt of a loan application (complete and in good order).

The loan check will generally be issued from the employee's account on the next business day following redemption. The loan check will be mailed directly to the employee. The employee's presentment of the loan check for payment constitutes an acknowledgment that the employee has received and read the loan disclosure information provided by ICMA-RC and agrees to the terms therein.

Loan repayment will begin as soon as practicable following the employee's presentment of the loan check for payment.

- **Loan application through the Employer:** All loans must be requested in writing on an application approved by the plan administrator. The application must be signed by the participant. The Employer must review and approve each participant's application.

The participant will be required to sign a promissory note evidencing the loan and a disclosure statement that includes an amortization schedule prior to receiving a loan check. Loan checks will generally be issued on the next business day following ICMA-RC's receipt of a complete loan application. The loan check, promissory note, disclosure statement and truth-in-lending rescission notice will be sent to the employer, who will obtain the necessary signatures and deliver the check to the participant. All executed documents must be returned to ICMA-RC within 10 calendar days from the date the check is issued.

IX. Security/Collateral

That portion of a participant's account balance that is equal to the amount of the loan is used as collateral for the loan. The collateral amount may not exceed 50 percent of the participant's account balance at the time the loan is taken. Only the portion of the account-balance that corresponds to the amount of the outstanding loan balance is used as collateral.

X. Acceleration [select one]

- All loans are due and payable in full upon separation from service.
- All loans are due and payable when a participant receives a distribution of **all** of his/her account balance after separation from service. The amount of the outstanding loan balance will be reported as a distribution in addition to the amount of cash distributed from the plan.
- All loans are due and payable when a participant receives a distribution of **part** of his/her account balance after separation from service. The amount of the outstanding loan balance will be reported as a distribution in addition to the amount of cash distributed from the plan.

XI. Reamortization

Any outstanding loan may be reamortized. Reamortization means changing the terms of a loan, such as length of repayment period, interest rate, and frequency of repayments. A loan may not be reamortized to extend the length of the loan repayment period to more than five (5) years from the date the loan was originally made, or in the case of a loan to secure a principal residence, beyond the number of years specified by the employer in Section V above.

A participant must request the reamortization of a loan in writing on a reamortization application acceptable to the plan administrator. Upon processing the request, a new disclosure statement will be sent to the employer for endorsement by the participant and approval by the employer. The executed disclosure statement must be returned to the plan administrator within 10 calendar days from the date it is signed. The new disclosure statement is considered an amendment to the original promissory note, therefore a new promissory note will not be required.

A reamortization will not be considered a new loan for purposes of calculating the number of loans outstanding or the one loan per calendar year limit.

XII. Refinancing existing loans

If a participant has one outstanding loan, that loan may be refinanced. If a participant has more than one outstanding loan, no loans may be refinanced. Refinancing means concurrently repaying an existing loan and borrowing an additional amount through a new loan. Refinancing includes any situation in which one loan replaces another loan and the term of the replacement loan does not exceed the latest permissible term of the replaced loan.

In order to refinance an existing loan, a participant must request this in writing on an application approved by the plan administrator. Such request must be made at a time when the participant is eligible to obtain a loan as defined by the employer in Section III above. The amount of the additional loan amount requested for the purpose of refinancing is subject to the loan limits specified in Section IV above.

Because a refinancing is considered a new loan, only active employees may refinance an outstanding loan.

XIII. Reduction of Loan

If a participant dies prior to full repayment of the outstanding loan(s), the outstanding loan balance(s) will be deducted from the account prior to distribution to the beneficiary(ies). The unpaid loan amount is a taxable distribution and may be subject to early withdrawal penalties. The participant's estate is responsible for taxes or penalties on the unpaid loan amount, if any. A beneficiary is responsible for taxes due on the amount he or she receives. A Form 1099 will be issued to both the beneficiary and the estate for these purposes.

XIV. Deemed Distribution

Loan repayments must be made in accordance with the plan document, plan loan guidelines, and as reflected in the promissory note signed by the participant. If a scheduled payment is not paid within 30, 60, and/or 90 days of the due date, a notice will be sent to both the employee and the employer.

A loan will be deemed distributed when a scheduled payment is still unpaid at the end of the calendar quarter following the calendar quarter in which the payment was due. If the total amount of any delinquent payment is not received by ICMA-RC by the end of the calendar quarter following the calendar quarter in which the payment was due, the loan is considered a taxable distribution, and the principal balance, in addition to any accrued interest, is reported as a distribution to the IRS. However, no money is paid in this distribution, because the participant already has the loan proceeds.

The loan is deemed distributed for tax purposes, but it is not an actual distribution and therefore remains an asset of the participant's account. Interest continues to accrue. The outstanding loan balance and accrued interest are reported on the participant's account statement.

Repayment of a deemed distribution will not change or reverse the taxable event.

The loan continues to be outstanding, and to accrue interest, until it is repaid or offset using the participant's account balance. An offset can occur only if the participant is eligible to receive a distribution from the plan as outlined in the plan document.

Participants are required to repay any outstanding loan which has been deemed distributed before they can be eligible for a new loan. The deemed distribution and any interest accrued since the date it became a taxable event is taken into account when determining the maximum amount available for a new loan. New loans must be repaid through payroll deduction.

The employer is obligated by federal regulation to comply with the loan guideline requirements applicable to participant loans, and to ensure against deemed distribution by monitoring loan repayments, regardless of the method of repayment, and by advising employees if loans are in danger of being deemed distributed. The tax-qualified status or eligibility of the entire plan may be revoked in cases of frequent repayment delinquency or deemed distribution.

XV. Fees

Fees may be charged for various services associated with the application for and issuance of loans. All applicable fees will be debited from the participant's account balance and/or from the participant's loan repayments prior to crediting the repayment of principal and interest to the participant's account. A schedule of fees applicable to this plan is specified in ICMA-RC's current publication of *Making Sound Investment Decisions: A Retirement Investment Guide*.

XVI. Other

The employer has the right to set other terms and conditions as it deems necessary for loans from the plan in order to comply with any legal requirements. All terms and conditions will be administered in a uniform and non-discriminatory manner.

In Witness Whereof, the employer hereby caused these Guidelines to be executed this _____ day of _____, 20 _____.

EMPLOYER

Accepted: ICMA RETIREMENT CORPORATION

By: _____

By: _____

Title: _____

Title: _____

Attest: _____

Attest: _____

SUGGESTED RESOLUTION



**SUGGESTED RESOLUTION FOR A LEGISLATIVE BODY
RELATING TO AMENDING A RETIREMENT PLAN TO PERMIT LOANS**

Section 401 Money Purchase Plan or
Section 401 Profit-Sharing Plan
ICMA-RC Plan # 10 _____

Section 457 Deferred Compensation Plan
ICMA-RC Plan # 30 _____

Name of Employer: _____ State: _____

Resolution of the above named Employer ("Employer")

WHEREAS, the Employer has employees rendering valuable services; and

WHEREAS, the Employer has established a retirement plan (the "Plan") for such employees which serves the interest of the Employer by enabling it to provide reasonable retirement security for its employees, by providing increased flexibility in its personnel management system, and by assisting in the attraction and retention of competent personnel; and

WHEREAS, the Employer has determined that permitting participants in the retirement plan to take loans from the Plan will serve these objectives;

NOW THEREFORE BE IT RESOLVED that the Plan will permit loans.

I, _____, Clerk of the (City, County, etc.) of _____, do hereby certify that the foregoing resolution, proposed by (Council Member, Trustee, etc.) _____, was duly passed and adopted in the (Council, Board, etc.) of the (City, County, etc.) of _____ at a regular meeting thereof assembled this _____ day of _____, 20____, by the following vote:

AYES:

NAYS:

ABSENT:

(seal)

Clerk of the (City, County, etc.)

This resolution should be returned to:

New Business Analyst
ICMA Retirement Corporation
777 N. Capitol St., NE
Washington, DC 20002-4240
Phone 1-800-326-7272

**LOAN ADMINISTRATION AGREEMENT
FOR SECTION 457 DEFERRED
COMPENSATION PLANS**



ICMA-RC 457 LOAN ADMINISTRATION AGREEMENT

This Agreement is not required if you have 1) only one 457 plan provider or 2) more than one plan provider each with its own plan document and provisions unique to each provider. **The Agreement only applies if you have adopted a single 457 plan document under which ICMA-RC and one or more other provider(s) must operate.** Please refer to pages 5-6 of *A Guide to Implementing a Loan Program* for more details.

This Agreement shall serve as an Addendum to the Loan Guidelines established by the Employer identified below as an Addendum to the Administrative Services Agreement (ASA) made by and between the ICMA Retirement Corporation (ICMA-RC) and the Employer.

The Employer currently sponsors a section 457 deferred compensation plan administered by two or more providers (co-provider plan). In order to ensure the efficient administration of the loan program established by the Employer, the Employer hereby agrees and declares that

- (1) For purposes of issuing loans from the plan, that portion of the plan's assets administered by ICMA-RC will be treated as though it were a separate and distinct plan.
- (2) The Employer shall calculate the amount a participant may borrow from the ICMA-RC administered portion of the plan. No loan amount may exceed the lesser of (a) the maximum loan amount specified in Internal Revenue Code section 72(p)(2)(A) or (b) 50% of the participant's ICMA-RC-administered account balance.
- (3) All loan repayments must be made to the participant's ICMA-RC-administered account for the life of the loan.

AGREED as of the _____ day of _____, 20_____:

Name of Employer: _____

Authorized Official - Print Name

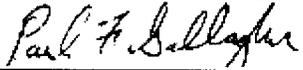
State: _____

Employer Plan Number

3	0				
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Signature of Authorized Official

ICMA RETIREMENT CORPORATION



Paul F. Gallagher
Corporate Secretary

Mail this Agreement and the completed 457 Plan Loan Guidelines to:

ICMA-RC

Attention: New Business Analyst

777 North Capitol Street, NE

Washington, DC 20002-4240

AMENDMENT TO ADOPTION AGREEMENT FOR SECTION 401 PLANS



AMENDMENT

ICMA-RC Plan #: 1 0 _____

ICMA RETIREMENT CORPORATION
GOVERNMENTAL SECTION 401 PLAN & TRUST
ADOPTION AGREEMENT

Below is an amendment to an existing defined contribution 401 qualified plan.

_____ Yes _____ No

If yes, please specify the name of the plan to which this amendment applies:

I. Employer: _____

II. Loans are permitted under the plan, as provided in Article XIII of the Adoption Agreement and in the executed Loan Guidelines Agreement:

_____ Yes _____ No

In Witness Whereof, the Employer hereby causes this Agreement to be executed on this _____ day of _____, 20 _____.

EMPLOYER

By: _____

Title: _____

Attest: _____

ICMA RETIREMENT CORPORATION

By: Paul F. Gallagher

Name: Paul F. Gallagher

Title: Corporate Secretary



Building Retirement Security

ICMA RETIREMENT CORPORATION

777 NORTH CAPITOL STREET, NE

WASHINGTON, DC 20002-4240

1-800-669-7400

WWW.ICMARC.ORG

PKT5010-006-200609-489

**THE UNITED STATES CONFERENCE OF MAYORS
DEFERRED COMPENSATION PROGRAM**

THE DEFERRED COMPENSATION PLAN FOR PUBLIC EMPLOYEES

LOANS TO PARTICIPANTS AMENDMENT TO PLAN DOCUMENT

WHEREAS, PLAN SPONSOR executed the above referenced Plan Document, as amended: and

WHEREAS, effective _____, PLAN SPONSOR now desires to further amend the plan document.

The following Section 8.06 is hereby added:

8.06 Loans to PARTICIPANTS

- (a) PLAN SPONSOR has elected to make loans available to PARTICIPANTS and has delegated certain administrative duties regarding loans from the PLAN to the ADMINISTRATOR.
- (b) Any loan by the PLAN to a PARTICIPANT under this Section shall be subject to the loan administrative procedures established by the ADMINISTRATOR as well as the following requirements:
 - (i) Loan Eligibility. Any PARTICIPANT may apply for a loan from the PLAN. A PARTICIPANT who has defaulted on a previous loan from the PLAN shall not be eligible for another loan from the PLAN until all defaulted loans are repaid in full, including accrued interest and fees.
 - (ii) Loan Application and Loan Agreement. A PARTICIPANT must complete and return to ADMINISTRATOR a loan application. A non-refundable application fee established by ADMINISTRATOR will be deducted from the PARTICIPANT'S ACCOUNT(s) at the time of loan origination. Before a loan is issued, the PARTICIPANT must enter into a legally enforceable loan agreement as provided for by the ADMINISTRATOR.
 - (iii) Loan Repayment. The PARTICIPANT receiving a loan shall be required to furnish to ADMINISTRATOR any information and authorization necessary to effectuate repayment of the loan prior to the commencement of a loan. In the event that a payment cannot be processed because of lack of sufficient funds, the ADMINISTRATOR shall assess an insufficient funds charge, which will be deducted from the PARTICIPANT'S ACCOUNT(s).

- (iv) **Loan Term and Interest Rate.** The maximum term over which a loan may be repaid is five (5) years (fifteen (15) years if the PLAN SPONSOR permits loans for the purchase of a PARTICIPANT'S principal residence). Each loan shall be amortized in substantially equal payments consisting of principal and interest during the term of the loan, except that the amount of the final payment may be higher or lower. The ADMINISTRATOR shall establish the interest rate for any loan.
- (v) **Loan Frequency.** Each Participant may have only one (1) PLAN loan outstanding at any given time. A PLAN loan which is in default, even if the defaulted loan was treated as a "deemed distribution" under federal regulations, shall be treated as an outstanding loan until such PARTICIPANT'S account balance is offset by the amount of principal and accrued interest under the loan. A PARTICIPANT will be granted a loan no more frequently than two (2) times in any twelve (12) month period.
- (vi) **Default.** The PARTICIPANT must pay the full amount of each loan payment (principal and interest) on the date that it is due. Failure to make such a payment by the due date, or within any cure period established by the ADMINISTRATOR, shall cause the PARTICIPANT to be in default for the entire amount of the loan, including any accrued interest. A loan will also be in default if the PARTICIPANT either refuses to execute, revoke, or rescind any agreement necessary to comply with the provisions of this Section or the loan administrative procedures established by the ADMINISTRATOR, commences or has commenced against PARTICIPANT a bankruptcy case, or upon the death of the PARTICIPANT.
- (vii) **Loan Security.** By accepting a loan, the PARTICIPANT is giving a security interest in their vested PLAN balance as of the loan process date, together with all additions thereof, to the PLAN that shall at all times be equal to 100% of the unpaid principal balance of the loan together with accrued interest.
- (viii) **Loan Amount.** The maximum amount of any loan permitted under the PLAN is the lesser of (i) 50% of the PARTICIPANT'S vested account balance less any outstanding loan balances under the PLAN or (ii) \$50,000 less the highest outstanding loan balance during the preceding one-year period. The ADMINISTRATOR shall establish the minimum loan amount. The PARTICIPANT and not the ADMINISTRATOR shall at all times remain responsible for ensuring

that any loan received under the PLAN is in accordance with these limits with regard to any other loans received by the PARTICIPANT under any other plans of the PARTICIPANT's employer.

- (ix) Loan Maintenance Fee. Until a loan is repaid in full, an annual loan maintenance fee established by ADMINISTRATOR will be deducted from the PARTICIPANT'S ACCOUNT(s).
- (x) Loan Default Fee. At the time when a default occurs, a loan default fee established by ADMINISTRATOR will be deducted from the PARTICIPANT'S ACCOUNT(s).

(c) The ADMINISTRATOR shall fix such other terms and conditions necessary to the administrative maintenance of the provisions of this Section and as necessary to comply with the IRC and regulations there under.

IN WITNESS WHEREOF, the undersigned has executed this Amendment this _____ day of _____, 20__.

(Name of PLAN SPONSOR)

By:

THE UNITED STATES CONFERENCE OF MAYORS DEFERRED COMPENSATION PROGRAM

PARTICIPANT LOAN ADMINISTRATIVE PROCEDURES

Nationwide Retirement Solutions, Inc. ("NRS"), as Third Party Administrator of the United States Conference of Mayors Deferred Compensation Program, administers your Deferred Compensation Plan for Public Employees ("Plan"). Recently issued proposed regulations under Internal Revenue Code Section 457 provide that eligible governmental 457(b) plans may permit loans to Participants. NRS recommends that you, as Plan Sponsor and/or Employer (hereinafter collectively referred to as "Plan Sponsor"), consult with your own legal advisor in determining whether you wish to add this optional feature to your Plan.

In the event that you decide to offer loans from your Plan to Participants, you will need to return to NRS at **Nationwide Retirement Solutions, PO Box 182797, Columbus, OH 43272-8450 Attn: Loans Administrator** a fully executed original of this document and a fully executed original of the enclosed Plan Document Amendment. NRS cannot begin processing Participant loans from your Plan until it receives fully executed originals of both of these documents.

NRS may need from time-to-time to make changes to the administrative procedures set forth herein and in the Plan Document Amendment. In such a case, NRS will provide you with timely notice of such changes as they become necessary.

The following administrative procedures shall govern the making of loans from your Plan:

1. **Loan Administration.** Plan Sponsor delegates to NRS certain administrative duties regarding the administration of loans from the Plan, which are set forth herein and which may be modified by NRS upon timely notice to Plan Sponsor.
2. **Loan Eligibility.** Any Participant in the Plan is eligible to receive a loan from the Plan. Each Participant is entitled to one (1) loan at any time. In addition, a Participant who has defaulted on a previous loan shall not be eligible for another loan from the Plan until all defaulted loans are repaid in full, including accrued interest and fees.
3. **Loan Application and Loan Agreement.** In order to receive a loan from the Plan, an eligible Participant must complete a loan application and return it to NRS. A loan application fee of \$50.00* will be deducted from the Participant's account(s). Before a loan is issued, the Participant must enter into a legally enforceable loan agreement as provided by NRS. If the Plan Sponsor permits loans for the purchase of the Participant's principal residence, the Participant will be required to sign a Primary Residence Certificate form and provide NRS with a copy of the contract or other documents relating to the acquisition of the dwelling unit. If the source for a single loan includes both the Participant's Deferred Compensation and Eligible Rollover Accounts, the Participant will be required to complete a loan application and loan agreement for each account which will be treated as separate and distinct for all purposes herein except that they will be considered a single loan for purposes of Sections 2, 6 and 10 herein.
4. **Loan Repayment/Maximum Loan Term.** Repayment of any loan made to a Participant shall be made in a manner and pursuant to the terms set forth in the loan agreement. The Participant receiving a loan shall be required to furnish the information and authorization necessary to effectuate the foregoing payments prior to the commencement of a loan. The maximum term over which a loan may be repaid is five (5) years (fifteen (15) years if the Plan Sponsor permits loans for the purchase of the Participant's principal residence).

*These fees, rates, and minimums are subject to change by NRS upon reasonable notice to Plan Sponsor. Loan fees will appear as administrative charges on Participant Statements.

In the event that a Participant elects to receive a distribution from the Plan (other than a distribution due to an unforeseeable emergency or other in-service withdrawal) at a time when such person has a Plan loan outstanding, the principal and any accrued interest with respect to such loan shall be taxable.

5. **Loan Amortization.** Each loan shall be amortized in substantially equal payments consisting of principal and interest during the term of the loan. Payments of principal and interest shall be made in a manner and pursuant to the terms set forth in the loan agreement on a monthly basis in equal amounts, except that the amount of the final payment may be higher or lower. Before the loan is made, the Participant will be notified of the date on which the first payment will be deducted and the dates on which subsequent payments are due.

6. **Loan Frequency/Renegotiations.** Each Participant may have only one (1) Plan loan outstanding at any given time. A Plan loan which is in default, even if the defaulted loan was treated as a "deemed distribution" under federal regulations, shall be treated as an outstanding loan until such Participant's account balance is offset by the amount of principal and accrued interest under the loan. A Participant will be granted a loan no more frequently than two (2) times in any twelve (12) month period. Under no circumstances may loan terms be renegotiated. A new loan shall not be granted prior to the repayment of an outstanding loan.

7. **Default.** The Participant must pay the full amount of each payment (principal and interest) on the date that it is due by having sufficient funds in the account designated for loan payments through the ACH process. If NRS is unable to process a payment on the date due because the Participant fails to have sufficient funds in the account on that date, NRS will assess a fee of \$25.00 that will be deducted from Participant account(s) and will send written notification to the Participant. The Participant shall be in default for the entire amount of the loan UNLESS the Participant does each of the following: 1) contacts NRS at the Deferred Compensation Service Center, 2) mutually agrees with NRS on a date, which is within 30 days of the missed payment on which funds sufficient to cover the missed payment will be in the account and; 3) actually pays the missed payments. Failure to make such a payment through mutually agreeable terms shall cause the Participant to be in default for the entire amount of the loan. The loan also shall be defaulted upon the death of the Participant or if the Participant commences or has commenced against Participant a bankruptcy case. No additional loans shall be made to a Participant who has defaulted on a Plan loan and who has not repaid all defaulted loans in full, including accrued interest and fees.

8. **Loan Prepayment.** The entire amount of a loan, including outstanding principal and any accrued interest, may be paid without penalty prior to the end of the term of the loan in the manner prescribed by NRS. However, payments made that are less than the remaining principal amount of the loan and any accrued interest with respect to the loan, or which are not paid in the form prescribed by NRS, are not permitted.

9. **Loan Security.** By accepting a loan, the Participant is giving a security interest in his or her vested Plan balance as of the date of the Loan Process Date, together with all additions thereof, to the Plan that shall at all times be equal to 100% of the unpaid principal balance of the loan together with accrued interest.

10. **Maximum/Minimum Loan Amount.** The maximum amount of any loan permitted under the Plan is the lesser of (i) 50% of the Participant's vested account balance (not including any value attributable to applicable life insurance or deemed IRA account) less any outstanding loan balances under the Plan or (ii) \$50,000 less the highest outstanding loan balance during the preceding one-year period. The minimum loan amount permitted is \$1,000.00*. Loans shall be made in accordance with these limits and those limits imposed under federal regulations without regard to any other loans received by the Participant from any other investment provider under the Plan or any other plans of the employer. The Participant and not NRS shall remain at all times responsible for ensuring that any loan received under the Plan is in accordance with these limits with regard to any other loans received by the Participant under any other plans of the

*These fees, rates, and minimums are subject to change by NRS upon reasonable notice to Plan Sponsor. Loan fees will appear as administrative charges on Participant Statements.

Participant's employer. Any tax reporting required as a result of the receipt by a Participant of a loan that exceeds the limits imposed by federal regulations shall not be the responsibility of NRS, unless it is determined that such limits were exceeded solely as a result of a loan made through NRS as service provider. Consequently, NRS shall not be required to account for loans made pursuant to a plan other than this Plan or loans made under this Plan that are made by an investment provider other than Nationwide Life Insurance Company.

11. **Suspension of Loan Payments.** NRS may suspend a Participant's obligation to repay any loan under the Plan during the period in which the Participant is performing service in the uniformed services as may be required by law. At the expiration of any suspension of loan payments period, the outstanding loan balance, including any accrued interest and fees, will be re-amortized and the Participant will be required to execute an amended Loan Agreement.

12. **Loan Interest Rate.** The interest rate for any loan shall be established by NRS. These interest rates shall commensurate with interest rates being charged by entities in the business of lending money under similar circumstances. Generally, the rate assumed will be Prime Rate + 1.00%*. The Prime Rate shall be the prime rate published by the Wall Street Journal two weeks prior to the end of the most recent calendar-year quarter. NRS may adjust the loan interest rate for loans to Participants entering active duty in the military services as may be required by law.

13. **Annual Loan Maintenance and Asset Fees.** An annual loan maintenance fee of \$50.00* will also be deducted from the Participant's account until the loan is repaid in full. The amount of the outstanding loan balance will be subject to the maximum Variable Account Annual Expense Fee applicable under the Plan at the time the loan is issued.

14. **Loan Default Fee.** At the time when a default occurs, a \$50.00* loan default fee will be deducted from the Participant's account. This charge will only affect Participants who fail to make a required loan payment.

15. **Loans for the Purchase of a Principal Residence.** All loans issued by the Plan will be general loans to be repaid in five (5) years unless the Plan Sponsor affirmatively elects to offer loans for the purchase of the Participant's principal residence, which may be repaid in fifteen (15) years. Such loans shall be solely secured by the Participant's vested account balance. All administrative procedures set forth herein shall apply to such loans.

If the Plan Sponsor elects to permit loans for the purchase of the Participant's principal residence, please check this box.

The undersigned Plan Sponsor hereby adopts these Participant Loan Administrative Procedures, effective for loans issued on or after the effective date set forth in the Loans to Participants Amendment to Plan Document, and instructs NRS to administer loans made to Plan Participants in accordance with these terms.

The Plan Sponsor acknowledges the following: (i) that the Plan Sponsor has decided to offer loans under the Plan and is instructing NRS to administer loans under the Plan; (ii) that it understands that, as a result of offering loans under the Plan, the Plan Sponsor, its Participants, and/or the Plan could be subject to adverse tax consequences; (iii) that the Plan Sponsor has independently weighed this risk and has determined that offering loans under the Plan is in the best interest of the Plan Sponsor, its Participants, and the Plan; and (iv) NRS shall not be liable for any adverse tax consequences described in (ii), except as specifically stated under paragraph 10 herein, resulting from the Plan Sponsor's decision to offer loans under the Plan.

*These fees, rates, and minimums are subject to change by NRS upon reasonable notice to Plan Sponsor. Loan fees will appear as administrative charges on Participant Statements.

Plan Sponsor
or Employer: _____

Street Address: _____

City, State, Zip Code: _____

Plan Name: _____

Entity No.: _____

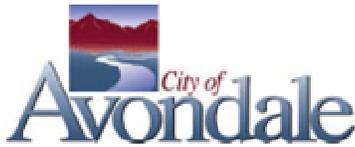
By: _____

Title: _____

E-mail Address: _____

Date: _____

*These fees, rates, and minimums are subject to change by NRS upon reasonable notice to Plan Sponsor. Loan fees will appear as administrative charges on Participant Statements.



CITY COUNCIL REPORT

SUBJECT:
Proposed New Water Conservation Rebate
Programs

MEETING DATE:
March 8, 2010

TO: Mayor and Council
FROM: Wayne Janis, P.E., Public Works Director, 623-333-4444
THROUGH: Charlie McClendon, City Manager

PURPOSE:

Staff will present to the City Council three additional water conservation rebate programs to promote water savings and to address water waste and misuse. The three programs are: Landscape Conversions for Non-Residential Water Users, "Smart" Irrigation Controllers for Non-Residential Water Users and a High-Efficiency Clothes Washers for residential customers. This item is for discussion and possible direction from City Council. No action is required.

BACKGROUND:

In November of 2004, the Avondale City Council approved a resolution adopting an Irrigation Controller/Timer Rebate Program, a Xeriscape Landscaping Rebate Program and a Plumbing Fixture Rebate Program for City of Avondale water customers. The current programs include rebates up to; 1) \$200 for installation of, or conversion to, Xeriscape landscaping, 2) \$5 and/or \$75 for purchase and installation of a low-flow showerhead and/or low-flush toilet, respectively, and 3) \$50 for purchase and installation of an Automated Programmable Irrigation Controller/Timer. To date, forty-two rebates have been issued; twenty Xeriscape conversions totaling \$5,000; ten Irrigation Controller rebates totaling \$800 and twelve Plumbing Fixture rebates totaling \$900.

DISCUSSION:

City staff proposes three additional rebates to augment the existing rebate program. The water conservation rebate program encourages a permanent reduction in water use by establishing financial incentives to customers. To date, the primary focus of this program has been on residential water users. However, in recent months non-residential water users have approached city staff to help them find ways to reduce their water consumption.

Two areas that are likely to yield large water savings are: (1) converting large turfing areas to Xeriscape landscaping, (2) installing weather based controllers that adjust to site conditions (such as soil moisture, rain, wind, slope, soil, and plant type) and applying the right amount of water to the landscape based on those factors. Two of the three proposed rebate programs will realize water savings in these areas. The third proposed rebate program is targeted towards residential customers and the replacement of their conventional clothes washers with high-efficiency washers (HEW), which use 40% less water than conventional washers. Based on data collected from neighboring municipalities, first year participation is expected to be from two to five non-residential water customers per year and a high of approximately 150 customers to a low of approximately 20 customers for clothes washers. Subsequent years typically see participation drop by about 50 percent. While monitoring individual water and cost savings is difficult, generalizations can be made based on water conservation studies completed in other large western cities and using current rate structures we can estimate the following savings:

Landscape Conversions for Non-Residential Water Users Rebate Amount

- \$200 per 1,000 sq. ft. up to \$3,000

Potential Water Savings

- Up to 20,000 gallons/1000 sq. ft./year on turf overseeded
- Up to 11,000 gallons/1000 sq. ft./year on turf not overseeded

Potential Cost Savings on Water Bill

- Turf Conversion Savings (annual) Up to \$29.37 / 1,000 sq. ft. - overseeded
- Turf Conversion Savings (annual) Up to \$19.00 / 1,000 sq. ft. - not overseeded

Criteria

- Participate in water budget
- Conversion area must have 50% low water use plants
- Before and after photos
- Drawings of converted area

“Smart” Irrigation Controllers for Non-Residential Water Users

Rebate Amount

- \$200 per controller up to a maximum of 5 controllers

Controller Costs

- Cost ranges from \$600 - \$1,200

Potential Water Savings

- Up to 30 percent of annual water use

Potential Cost Savings on Water Bill

- Up to 30 percent of annual water costs

Criteria

- Each controller must irrigate at least 5,000 sq. ft. of turf
- Participate in free training
- Commit to two-year subscription (where applicable)
- Allow City to use results for education

High Efficiency Clothes Washers for Residential Customers Conventional residential clothes washers use approximately 39 gallons of water per load (gpl) while high efficiency washers, or front-loading washers, use as little as 16 (gpl). These washers save an average of 7,000 gallons of water per household annually. By using less water, residents can save money on water bills and water heating costs throughout the year. In addition, high efficiency clothes washers use less detergent and may also result in reduced drying time. This program offers a \$100 financial incentive for Avondale residential water customers who choose to purchase a high-efficiency clothes washer (HEW) in place of a standard top-loading model. **Rebate Amount**

- \$100

Potential Water Savings

- Maximum potential savings are estimated to be 7,693 gallons per unit annually.

Potential Energy Savings

- 341 kWh/yr savings

Criteria

- Purchase and install an approved high-efficiency front-loading clothes washer. Washer must have received an Energy Star High-Efficiency Rating and also have a water factor (WF) of 6 or less as established by the Consortium of Energy Efficiency. A listing of washers meeting these requirements is available at <http://www.cee1.org/>, or a copy is available from the Avondale Water Conservation Office.
- The high-efficiency clothes washer rebate must be used to replace an existing clothes washer already in use at the property address.

Customers will also be eligible for the Arizona Department of Commerce Appliance rebates scheduled to be available March 2010. Rebates in this program cover clothes washers, dishwashers and water heaters. More information on this program can be found at <http://www.azcommerce.com/Energy/Rebate.htm>

A detailed description of each Rebate Program, including the required procedures for application and reimbursement, is attached to this Council Report. The attached rebate programs have been discussed with the Environmental Affairs Commission at their January 13, 2010 meeting and they recommend to Mayor and Council their approval of the proposed rebate programs.

BUDGETARY IMPACT:

The Water Resources Department budget for FY 09/10 currently includes a total of \$24,000 for approved customer rebates (Operating Fund - Water Conservation Supplies line, 501-9112-00-7991). To date, a total of \$675 has been distributed leaving \$23,325 for the remainder of the fiscal year. There should be sufficient funding to accommodate rebates requested through the new programs. Rebates will be available on a first come, first served basis. Should available funds be exhausted, applicants will be placed on a waiting list for the following fiscal year.

RECOMMENDATION:

City Council will discuss and provide direction as appropriate regarding proposed Landscape Conversions for Non-Residential Water Users, "Smart" Irrigation Controllers for Non-Residential Water Users and a High-Efficiency Clothes Washers Rebate Program for residential water customers. In a future meeting Council will consider a resolution to implement these additions to the Water Conservation Rebate Program.

ATTACHMENTS:

Click to download

- ▢ [Draft Rebate Resolution](#)
- ▢ [Smart Controller Rebate Program Application and Description](#)
- ▢ [Non-Residential Landscape Conversion Rebate Program Application and Description](#)
- ▢ [High Efficiency Clothes Washer Rebate Program Application and Description](#)

RESOLUTION NO. _____

A RESOLUTION OF THE COUNCIL OF THE CITY OF AVONDALE, ARIZONA, ADOPTING A LANDSCAPE CONVERSION REBATE PROGRAM FOR NON-RESIDENTIAL WATER USERS, A “SMART” IRRIGATION CONTROLLERS REBATE PROGRAM FOR NON-RESIDENTIAL WATER USERS, AND A HIGH-EFFICIENCY CLOTHES WASHERS REBATE PROGRAM.

WHEREAS, the Council of the City of Avondale, Arizona (the “City Council”) desires to conserve and protect the City of Avondale’s limited water resources and ensure compliance with the Arizona Department of Water Resources “gallons per capita per day” use requirement; and

WHEREAS, the City of Avondale (the “City”) has implemented a multi-faceted Water Conservation Program to address water waste and misuse; and

WHEREAS, to further the City’s water conservation efforts, the City Council desires to adopt (i) a landscape conversion rebate program for non-residential water users, (ii) a “Smart” irrigation controller rebate program for non-residential water users, and (iii) a high-efficiency clothes washer rebate program for residential users, to encourage a permanent reduction in water use by establishing financial incentives for the City’s customers.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF AVONDALE as follows:

SECTION 1. That the Landscape Conversion Rebate Program for Non-Residential Water Users is hereby adopted in the form attached hereto as Exhibit A and incorporated herein by this reference.

SECTION 2. That the “ Smart” Irrigation Controller Rebate Program for Non-Residential Water Users Rebate Program is hereby adopted in the form attached hereto as Exhibit B and incorporated herein by this reference.

SECTION 3. That the High-Efficiency Clothes Washer Rebate Program for residential users is hereby adopted in the form attached hereto as Exhibit C and incorporated herein by this reference.

SECTION 4. That the Mayor, the City Manager, the City Clerk and the City Attorney are hereby authorized and directed to take all steps necessary to carry out the purpose and intent of this Resolution.

[SIGNATURES ON FOLLOWING PAGE]

PASSED AND ADOPTED by the Council of the City of Avondale, March 15, 2010.

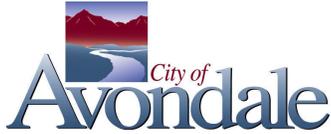
Marie Lopez Rogers, Mayor

ATTEST:

Carmen Martinez, City Clerk

APPROVED AS TO FORM:

Andrew J. McGuire, City Attorney



“Smart” Irrigation Controller/Timer Rebate Program for Non-Residential Water Users

PURPOSE AND DESCRIPTION

Rebates of \$200 are available to Homeowner Association (HOA), commercial and schools that install Smart Irrigation Controllers, also known as weather-based or Evapotranspiration (ET) controllers. Smart Irrigation Controllers provide the appropriate watering schedule for the landscape automatically making adjustments up to 365 times per year. These irrigation controllers use current weather data and information about site conditions (such as soil moisture, rain, wind, slope, soil, plant type, and more), and apply the right amount of water to the landscape based on those factors. Studies show most landscape water use can be reduced by as much as 30 percent with the use of a smart controller. However, this technology does not compensate for a poorly designed irrigation system or one that is inefficient. Therefore, the irrigation system should be in good working order.

WHO IS ELIGIBLE

Homeowner Associations, commercial and school properties that are Avondale utility customers who use potable water to irrigate common area landscaping on a continual basis and meet the program requirements stated below. Applicant must be duly authorized by the HOA Board and be the Property Manager or Homeowner Association President.

REQUIREMENTS

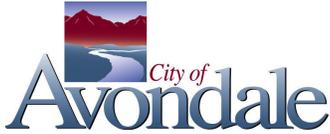
1. Total turf area irrigated by one controller must exceed 5,000 square feet. This excludes granite landscaped sections. The 5,000 square feet of turf does not need to be contiguous.
2. Smart Controllers must utilize one of the following technologies:
 - a. Historical ET information programmed into the controller and accompanied with an active rain shut off and temperature sensor, or
 - b. On-site weather station connected directly to the controller, or
 - c. Controller capable of receiving ET data from regional weather stations through satellite feeds.
3. The irrigation system should be in excellent condition, free from leaks, malfunctioning valves or emitters. Issues with water pressure, poor design, soil compaction, slopes and basins, or mixed sprinkler heads, etc., will influence irrigation efficiency. A water audit is recommended for turf areas if one has not been performed within the last two years.
4. The landscape contractor and/or HOA Board agrees to participate in training to operate the controller.
5. The HOA Board agrees to allow the City to use water consumption data for educational purposes.
6. An HOA property is eligible to receive a maximum of up to five (5) Smart Irrigation Controller rebates. One controller per application. Rebate(s) will be issued upon final installation and inspection of Smart Irrigation Controller(s).
7. If the HOA Board chooses a controller using regional weather stations through satellite feeds, it must purchase a two-year subscription for the monthly service needed to supply each controller with daily weather data.
8. Conversions must have occurred on or after July 1, 2009.
9. Rebate application must be completed and submitted by applicant.
10. An inspection must be completed after installation of the controller to determine if it meets the requirements of this policy. Contact a Water Conservation Staff member at (623) 333-4422 to schedule an appointment for inspection.
11. A copy of the dated sales receipt of purchase for the controller must be submitted.
12. Two to three weeks after installation and inspection of “Smart” Irrigation Controllers, a check will be issued and mailed via U.S. Post to the address on your application form.

NOTE

The number of rebates awarded each year will depend on availability of funds. Rebates are awarded in the order the applications are received (from the date that the complete application is received) on a first come, first served basis. Program rules may be changed at any time.

QUESTIONS

If you have further questions regarding the “Smart” Irrigation Controller/Timer Rebate Program e-mail the Water Conservation Office at eavila@avondale.org or call (623) 333-4422 for more information.



"Smart" Irrigation Controller/Timer Rebate Program Application for Non-Residential Water Users

IMPORTANT!!

Please review the "Smart" Irrigation Controller/Timer Rebate Program information sheets for program eligibility and rebate requirements before making your purchase!

PLEASE RETURN COMPLETED APPLICATION TO:

WATER CONSERVATION REBATES
CITY OF AVONDALE WATER RESOURCES DEPARTMENT
399 E. LOWER BUCKEYE RD, STE 100, AVONDALE, AZ 85323
PHONE (623) 333-4422 FAX (623) 333-0440

TAX ID.
SOCIAL SECURITY NO. _____

CUSTOMER NAME: _____ WATER SERVICES ACCOUNT No.: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

TELEPHONE NUMBER (HOME): _____ OTHER NUMBER: _____

ADDRESS OF PROPERTY (IF NOT THE SAME AS ABOVE): _____

PLEASE CHECK OR RESPOND AS APPROPRIATE:

⇒ The Water Conservation Office will review your application for eligibility and contact you to arrange a site visit.

_____ (Y or N) Does the total turf area irrigated by one controller exceed 5,000 square feet?
Square ft. turf _____ Square ft. granite _____

_____ Brand of ET Controller

|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_| ET Controller Model Number

_____ (1,2,or 3) Smart Controllers must utilize one of the following technologies: (please indicate which one)
1. Historical ET information programmed into the controller and accompanied with an active rain shut off and temperature sensor, or
2. On-site weather station connected directly to the controller or
3. Controller capable of receiving ET data from regional weather stations through satellite feeds

_____ (Y or N) Was the timer purchased AFTER July 1, 2009?

_____ (Y or N) Is your DATED sales receipt attached? Dated sales receipt must accompany this application.

_____ (Y or N) Has applicant received approval from Homeowner's Association? (Attach letter of approval from HOA Board)

_____ (Y or N) Will the HOA Board agree to allow the City to use water consumption data for educational purposes.

WHAT HAPPENS NEXT?

⇒ Two to three weeks after installation and inspection of "Smart" Irrigation Controller(s), a check will be issued and mailed via U.S. Post to the address on your application form.

I ACKNOWLEDGE THAT THE TIMER IS INSTALLED AT THE STATED PROPERTY ADDRESS AND IS OPERATIONAL:

SIGNATURE OF HOA PROPERTY MANAGER OR PROPERTY OWNER DESIGNEE DATE

FOR OFFICE USE ONLY

ACCOUNT NUMBER: _____

APPLICATION RECEIVED

DATE

INITIALS

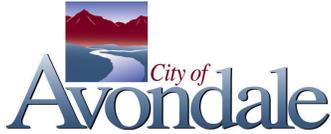
INSPECTION REQUIRED/NOT REQUIRED (CIRCLE ONE) _____

(IF INSPECTION REQUIRED) INSPECTION COMPLETED _____

APPROVED/NOT APPROVED (CIRCLE ONE) _____

REBATE AMOUNT: _____

REBATE ISSUED _____



Landscape Conversion Rebate Program for Non-Residential Water Users

PURPOSE AND DESCRIPTION

This program offers rebates starting at \$200 per 1,000 square feet of turf converted to low-water use landscape up to a maximum of \$3,000. This Rebate Program encourages installation of low-water-use, drought-tolerant plants (Xeriscape), thereby creating a reduction in the amount of water applied to landscapes. Free low-water use landscaping booklets and an interactive CD are available to assist with conversion to Xeriscape. Request these by calling (623) 333-4422, or by email request at eavila@avondale.org.

WHO IS ELIGIBLE

Homeowner Association (HOA), schools, and commercial properties that are Avondale utility customers who use potable water to irrigate turf areas on a continual basis and meet the program qualifications and requirements stated below. If the applicant is an HOA, it must be authorized by the HOA Board and the applicant must be the Property Manager or Homeowner Association President.

Getting Started

1. Call the Water Conservation Office at (623) 333-4422 to set up a preliminary site inspection.
2. Submit a "before" photo of established turf area and "after" photo of landscape conversion.
3. You can begin the project after verification of eligibility by the Water Conservation Staff member.
4. The City of Avondale may reject applications it deems out of compliance with Xeriscape principles.
5. **Revised landscape plans shall be submitted to the City of Avondale Planning & Development Office for approval.**

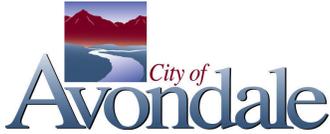
REQUIREMENTS

1. The property must have a minimum of 1,000 square feet of established turf area in the landscape that will be removed and converted to low-water use landscaping.
2. Landscapable area of the property must exceed 1,000 square feet. This area excludes buildings, driveways, and pools, etc. Patio or decking is included in landscapable area.
3. The HOA common area landscape conversion must be completed on or after July 1, 2009.
4. Rebate application must be completed and submitted by applicant.
5. A preliminary site inspection to confirm eligibility is required before starting the conversion.
6. The HOA organization applying for the rebate must participate in a free water budgeting program offered by the City of Avondale Water Conservation Office.
7. The application must include existing turf measurements.
8. A final inspection is required after completion of the landscape renovation.
9. Exposed soil in conversion areas must be landscaped. Bare soil is not acceptable.
10. No fountains are allowed in conversion areas unless they are recirculating and comply with Avondale's City Code.
11. After conversion, a minimum 75% of the total landscapable area must be in non-grass with only plants from the Phoenix AMA Low-Water Use Plant List and include inorganic or organic top dressing. The Phoenix AMA Low-Water Use Plant List can be found on the City's website at www.avondale.org/water. Inorganic top dressing may include gravel, river rock, and decomposed granite. Organic top dressing includes bark, shredded bark or mulch.
12. Include dated sales receipts to verify conversion expenditures must be submitted.
13. Two to three weeks after completion of landscape conversion and inspection, a rebate check will be issued and mailed via U.S. Post to the address on the application form.

An HOA property is permitted only one application per year. The number of rebates awarded each year depends upon availability of funds. Rebates are awarded in the order applications are received (from the date that the complete application is received) on a first come, first served basis. The rebate is not retroactive and does not apply to work completed before July 1, 2009. Program rules may be changed at any time.

QUESTIONS:

If you have further questions regarding the Landscape Conversion Rebate Program e-mail the Water Conservation Office at eavila@avondale.org or call (623) 333-4422.



Landscape Conversion Rebate Program Application for the Non-Residential Water Users

PLEASE RETURN COMPLETED APPLICATION TO:
WATER CONSERVATION REBATES
CITY OF AVONDALE WATER RESOURCES DEPARTMENT
399 E. LOWER BUCKEYE RD, STE 100, AVONDALE, AZ 85323
PHONE (623) 333-4422 FAX (623) 333-0440

TAX ID.
SOCIAL SECURITY NO. _____

CUSTOMER NAME: _____ WATER SERVICES ACCOUNT NO.: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

TELEPHONE NUMBER (HOME): _____ OTHER NUMBER: _____

ADDRESS OF PROPERTY (IF NOT THE SAME AS ABOVE): _____

GETTING STARTED:

- ⇒ The Water Conservation Office will review your application for eligibility. It is recommended that you call the Office at (623) 333-4422 to set up an initial inspection to ensure your landscape will meet the program requirements.
- ⇒ Once approved, you'll have one year to begin the landscape conversion in accordance with the approved site plan.

PLEASE CHECK OR RESPOND AS APPROPRIATE:

- _____ (Y or N) Has landscape plan been submitted and approved by the City of Avondale Planning & Development Office?
- _____ (Y or N) Will the conversion/installation cover at least 1,000 square feet and at least 70% of the overall landscapable area?
- _____ (Y or N) At maturity, will the plants and other features cover 75% of the landscaped area?
- _____ (Y or N) Was the landscape conversion installed **AFTER** July 1, 2009?
- _____ (Y or N) Will your conversion/installation meet the requirements of your HOA? (Attach letter of approval from HOA Board)
- _____ (Y or N) Is your DATED sales receipt attached? REMEMBER! Your dated sales receipt must accompany this application to verify conversion expenditures.

IN ADDITION TO THIS APPLICATION, PLEASE PROVIDE THE WATER CONSERVATION OFFICE WITH THE FOLLOWING:

1. LANDSCAPE SITE PLAN
2. PLANT LIST (PLANTS MUST BE SELECTED FROM THE PHOENIX AMA LOW WATER USE PLANT LIST)
3. PHOTOS OF AREA PRIOR TO THE NEW LANDSCAPE INSTALLATION (MINIMUM OF TWO)

WHAT HAPPENS NEXT?

- ⇒ Contact the Water Conservation Office once your conversion/installation is complete.
- ⇒ Two to three weeks after the Water Conservation Staff has conducted the site visit and approved the landscape conversion, a check will be issued and mailed via U.S. Post to the address on your application form.

I ACKNOWLEDGE THAT ALL REQUIREMENTS WERE FULFILLED AND CONVERSION COMPLETED AT THE STATED PROPERTY ADDRESS

SIGNATURE OF HOMEOWNER ASSOCIATION REPRESENTATIVE/PROPERTY MANAGER DATE

FOR OFFICE USE ONLY DATE INITIALS

ACCOUNT NUMBER: _____

APPLICATION RECEIVED _____

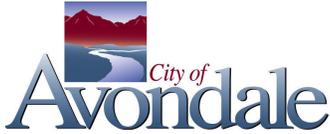
INSPECTION REQUIRED/NOT REQUIRED (CIRCLE ONE) _____

(IF INSPECTION REQUIRED) INSPECTION COMPLETED _____

APPROVED/NOT APPROVED (CIRCLE ONE) _____

REBATE AMOUNT: _____

REBATE ISSUED _____



High Efficiency Clothes Washer Rebate Program

PURPOSE AND DESCRIPTION

This program offers a \$100 financial incentive for Avondale residential water customers who choose to purchase a high-efficiency clothes washer (HEW) in place of a standard top-loading model. Conventional residential clothes washers use approximately 39 gallons of water per load (gpl) while high efficiency washers, or front-loading washers, use as little as 16 (gpl). These washers save an average of 7,000 gallons of water per household annually. By using less water, you can save money on water bills and water heating costs throughout the year. In addition, high efficiency clothes washers use less detergent and may also result in reduced drying time.

Who is Eligible

City of Avondale water customers who meet the program qualifications and requirements stated below. Commercial laundromats are not eligible.

REQUIREMENTS

1. Purchase and install an **approved** high-efficiency front-loading clothes washer. Washer must have received an Energy Star High-Efficiency Rating and also have a **water factor (WF) of 6 or less as established by the Consortium of Energy Efficiency**. A listing of washers meeting these requirements is available at <http://www.cee1.org/>, or a copy is available from the Avondale Water Conservation Office.
2. The high-efficiency clothes washer rebate must be used to replace an existing clothes washer already in use at the property address.
3. Purchases must have occurred on or after July 1, 2009. Purchases made prior to this date are not retroactive.
4. Rebate application must be filled out by applicant and submitted within one year of purchase date.
5. Submit a legible copy of the sales receipt for the new clothes washer. Sales receipt must include purchase date, purchase price, brand and model number.
6. Agree to a post-installation inspection prior to receiving the rebate.
7. The clothes washer must be installed before inspection.
8. An Avondale Water Conservation Staff member will schedule an appointment with the applicant for an on-site inspection.
9. Rebates are limited to one per applicant or installation address. Repeat purchases are not eligible for additional rebates.
10. The City of Avondale does not endorse or recommend specific brands, products or dealers.
11. Two to three weeks after approval of your application, and inspection of installed clothes washer, a \$100 check will be issued to you and mailed via U.S. Post to the address on your application form.

PLEASE NOTE:

Applicants must be City of Avondale water customers. Sewer and trash-only customers are not eligible. The High Efficiency Clothes Washer rebate application must be submitted within one year of purchase and installation. Not all high-efficiency clothes washers qualify for a rebate. Check the listing for models with a water factor of 6 or less available at <http://www.cee1.org/> or call the Avondale Water Conservation Office.

The number of rebates awarded each year will depend on availability of funds. Rebates are awarded in the order the applications are received (from the date that the complete application is received) on a first come, first served basis. Program rules may be changed at any time.

How to Recycle Your Old Clothes Washer

Many local charitable groups accept reusable clothes washers. Recycling provides job training and self-sufficiency programs for people with disabilities and families in need. You also can also include it in your bulk trash collection. Call the City of Avondale Field Operations Department for more details at (623) 333-4700.

QUESTIONS: If you have further questions regarding the High Efficiency Clothes Washer Rebate Program e-mail the Avondale Water Conservation Office at eavila@avondale.org or call (623) 333-4422 for more information.

FOR OFFICE USE ONLY

DATE

INITIALS

ACCOUNT NUMBER: _____

APPLICATION RECEIVED

INSPECTION REQUIRED/NOT REQUIRED (CIRCLE ONE) _____

(IF INSPECTION REQUIRED) INSPECTION COMPLETED _____

APPROVED/NOT APPROVED (CIRCLE ONE) _____

REBATE AMOUNT: _____

REBATE ISSUED

PURCHASE DATE _____

PURCHASE PRICE _____

RECEIPT NO. _____

WATER FACTOR _____

TIER _____



CITY COUNCIL REPORT

SUBJECT:
EXECUTIVE SESSION

MEETING DATE:
March 8, 2010

TO: Mayor and Council
FROM: Carmen Martinez, City Clerk (623) 333-1214
THROUGH: Charlie McClendon, City Manager

PURPOSE:

The Council may hold an executive session pursuant to ARIZ. REV. STAT. § 38-431.03 (A)(4) for discussion or consultation with the City's Attorney in order to consider its position and instruct the City Attorney regarding the Council's position regarding the (i) the SLT Expressway litigation, (ii) potential litigation related to environmental contamination, and (iii) a potential economic development agreement relating to a movie studio.

ATTACHMENTS:

[Click to download](#)

No Attachments Available