



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CA08-234**

1. Agenda Item Number:

47

2. Council Meeting Date:
April 24, 2008

TO: MAYOR & COUNCIL

3. Date Prepared: March 25, 2008

THROUGH: CITY MANAGER

4. Requesting Department: Public Works

5. SUBJECT: Award a design services contract to Ritoch-Powell for McQueen Road Improvements (Queen Creek Road to Riggs Road), Project No. ST0810-201, in an amount not to exceed \$1,699,891.

6. RECOMMENDATION: Staff recommends that Council award a design services contract to Ritoch-Powell for McQueen Road Improvements (Queen Creek Road to Riggs Road), Project No. ST0810-201, in an amount not to exceed \$1,699,891.

7. BACKGROUND/DISCUSSION: This project will design improvements to McQueen Road (Queen Creek Road to Riggs Road) to meet the increasing traffic volume demands in this area of south Chandler. Per the Transportation Master Plan, McQueen Road will be improved to six traffic lanes from Queen Creek Road to Chandler Heights Road and improved to four traffic lanes from Chandler Heights Road to Riggs Road. Portions of this roadway segment have been constructed to the half-street section by private developments along McQueen Road. This project will complete the half-street areas to full width major or minor arterial sections and construct the full street section in the areas that are currently two lanes only. This project will also include adding raised medians, bike lanes, turn lanes, sidewalks, curbs, gutters, street lighting, traffic signals, traffic signal interconnects, storm drainage, landscaping, pedestrian path, equestrian path, widening two consolidated canal crossings, right-of-way acquisition and utility relocations. Additionally, this project will include reclaimed water line extensions outside the new roadway and intersection improvements and provide water and sewer laterals to all undeveloped parcels.

The project is slated to start construction in Summer 2009, with the possibility of phasing the construction sequence to accommodate the real estate and utility schedule. The estimated CIP construction budget for this project is \$17.5 million.

8. EVALUATION: The City selection process was developed in accordance with the state law for selecting design services. Fourteen Statements of Qualifications were received from qualified firms on January 4, 2008. The selection committee included the following members:

Paul Young, Senior Engineer
Kurt Krause, Engineer Project Manager
William Fay, Public Works Engineer
Bob Fortier, Construction Project Manager
Tom Goddere, Registered Contractor / Resident

The committee interviewed Ritoch-Powell, Dibble, Ayres Associates and Wood/Patel on February 11, 2008. Ritoch-Powell was selected based on qualifications, design capability, current workload, and experience, and is recommended for approval for this contract.

9. FINANCIAL IMPLICATIONS:

Cost: \$1,699,891
Savings: N/A
Long Term Costs: N/A

Fund Source:

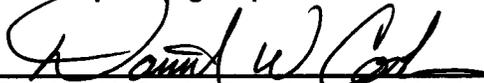
<u>Acct. No.:</u>	<u>Fund Name:</u>	<u>Program Name:</u>	<u>CIP Funded:</u>	<u>Amount:</u>
415.3310.0000.6517.8ST478	Arterial Street Impact Fees	McQueen Road (Queen Creek Rd to Riggs Rd)	FY07/08	\$1,660,012
601.3820.0000.6714.8WA110	Water Bonds	System Upgrades During Street Repairs	FY07/08	\$ 19,940
615.3910.0000.6817.8WW332	Wastewater Operating	Replacement Sewer Mains	FY07/08	\$ 19,939

10. PROPOSED MOTION: Move that Council award a design services contract to Ritoch-Powell for McQueen Road Improvements (Queen Creek Road to Riggs Road), Project No. ST0810-201, in an amount not to exceed \$1,699,891, and authorize the Mayor to sign the contract documents.

ATTACHMENTS: Location Map, Contract

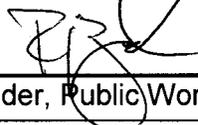
APPROVALS

11. Requesting Department



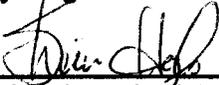
Daniel W. Cook, Deputy Public Works Director

13. Department Head



R.J. Zeder, Public Works Director

12. City Engineer



Sheina Hughes, Assistant Public Works Director/City Engineer

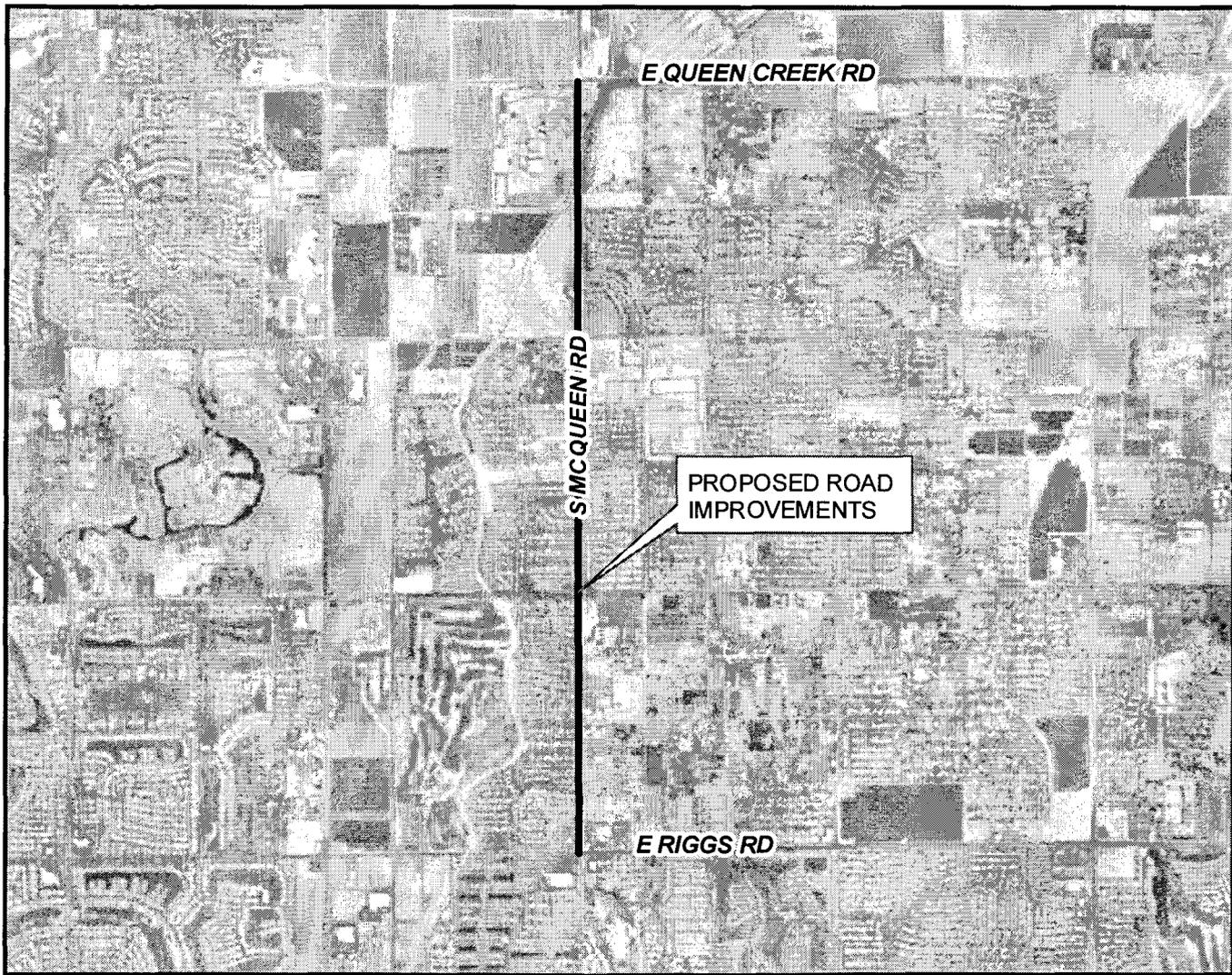
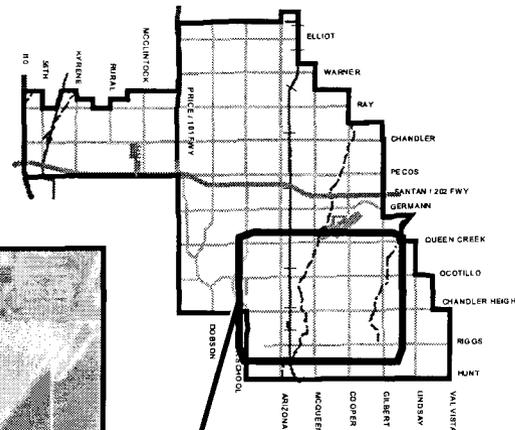
14. City Manager



W. Mark Pentz



MCQUEEN ROAD IMPROVEMENTS (QUEEN CREEK RD TO RIGGS RD) ST0810-201



MEMO NO. CA08-234

Legend

— PROJECT AREA



**CONSTRUCTION MANAGER AT RISK
DESIGN CONSULTANT CONTRACT**

PROJECT TITLE: **McQueen Road Improvements**

PROJECT NO: **ST0810-201**

This Agreement is made and entered into by and between the City of Chandler, Arizona, a municipal Corporation, hereinafter called the CITY, and **RITUCH-POWELL & Associates**, an Arizona corporation hereinafter called DESIGN CONSULTANT.

WHEREAS, DESIGN CONSULTANT represents DESIGN CONSULTANT has the expertise and is qualified to perform the services described in this Agreement; and

WHEREAS, the Mayor and City Council/City Manager of the City of Chandler are authorized and empowered by the provisions of the City Charter to execute Agreements for Professional Services; and

WHEREAS, the Parties intend to have this Project designed and constructed using a Construction Manager at Risk method with DESIGN CONSULTANT being a part of a Design Team; and

NOW THEREFORE, for and in consideration of the mutual covenants and conditions hereinafter contained, it is agreed by and between the CITY and DESIGN CONSULTANT, as follows:

1. **DESCRIPTION OF PROJECT:** The improvements to McQueen Road will consist of widening the roadway to six traffic lanes from Queen Creek Road to Chandler Heights and widening the roadway to four traffic lanes from Chandler Heights to Riggs Road. Work shall also include bike lanes; raised medians; sidewalks; curb and gutter; turn lanes; traffic signal and street light relocations; storm drainage; landscaping; pedestrian path; equestrian path; water; sewer; widening two consolidated canal crossings; right of way acquisition; and utility relocation and coordination. The Project is more specifically described in Exhibit A attached hereto and incorporated herein by reference.
2. **DEFINITIONS: DEFINITIONS:** The CITY's General Conditions for Construction apply to this contract and take priority over any conflicting provisions between the Contract and the General Conditions. Words used in this Agreement which are defined in CITY's General Conditions for Construction Contracts shall have the meaning stated therein. DESIGN CONSULTANT is the Project Designer as defined in said General Conditions.
3. **SCOPE OF WORK:** DESIGN CONSULTANT shall design the Project all as more specifically described in Attachment A attached hereto and incorporated herein by reference.
4. **DESIGN TEAM:** DESIGN CONSULTANT shall be a part of and participate together with the Design Team and shall attend meetings with, provide information to and cooperate with the person retained by CITY to be the Construction Manager at Risk (CM@RISK).
5. **FEE FOR SERVICES:** For services described in paragraph 3 of this Agreement, the CITY shall pay DESIGN CONSULTANT a fee not to exceed the sum of **One Million Six Hundred Ninety Nine Thousand Eight Hundred Ninety One dollars (\$1,699,891)** at the rates shown in and in accordance with the fee schedule attached hereto as Attachment B and made a part hereof by reference. Payment will be made monthly on the basis of progress reports corresponding with the rates and charges listed on the fee schedule and showing the number of hours or other basis to determine the fee earned to that date. An Application and Certification for Payment Sheet must be provided. In addition, the following must also be included with each application for payment: a clear, detailed invoice reflecting items being billed for, reimbursables; a summary sheet showing percentage of work completed to date; amount/percent billed to date; current status of all tasks within a project; and any/all backup documentation supporting the above items. Work schedule updates shall also be included in the monthly progress payment requests.

6. PERIOD OF SERVICE:

- A. Following receipt of a "Notice to Proceed" with the design work, DESIGN CONSULTANT shall complete the design and have all documents ready for construction within Four Hundred Fifty (450) calendar days of the date indicated on the Notice to Proceed.
- B. DESIGN CONSULTANT shall prepare and deliver to CITY record documents within Forty Five (45) days of the date of receipt of the red line drawings from the CM@Risk.
- C. DESIGN CONSULTANT shall complete all services specified herein in accordance with the Production Schedule and progress milestones included in Exhibit A and as discussed with the CM@Risk for meeting schedule attached herein. In the event delays are experienced beyond the control of DESIGN CONSULTANT, the completion date may be extended as mutually agreed upon by CITY and DESIGN CONSULTANT.

7. OPINIONS OF PROBABLE COSTS (ESTIMATES): Any opinions of probable project cost or probable construction cost provided by DESIGN CONSULTANT are made on the basis of information available to DESIGN CONSULTANT and on the basis of DESIGN CONSULTANT's experience and qualifications, and represents its best judgement as an experienced, licensed and qualified professional. However, since DESIGN CONSULTANT has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractor(s) methods of determining prices, or over competitive bidding or market conditions, DESIGN CONSULTANT does not guarantee that proposals, bids or actual project or construction cost will not vary from opinions of probable cost DESIGN CONSULTANT prepares. The DESIGN CONSULTANT is responsible for advising and consulting with the City on cost. DESIGN CONSULTANT is not responsible for providing for formal estimates, this is the CM@Risk responsibility.

8. REPORTS & APPROVALS: All work shall be subject to the approval by CITY and each phase of the work will be submitted to CITY in accordance with schedule included in Exhibit A and in the format prescribed by CITY. When requested by CITY, DESIGN CONSULTANT will attend Council meetings and provide finished documents including correspondence for Council action, supporting charts, graphs, drawings and colored slides of same.

9. STANDARD OF PERFORMANCE:

- A. This design contract has been awarded to DESIGN CONSULTANT based on their proposal that those personnel and consultants listed in Exhibit A attached hereto will perform the portions of the work listed on said Exhibit A. DESIGN CONSULTANT shall not deviate nor substitute any of these team members without prior written approval by CITY.
- B. DESIGN CONSULTANT shall be responsible for the technical accuracy of its services and documents resulting therefrom, and CITY shall not be responsible for discovering deficiencies therein. DESIGN CONSULTANT shall correct any such deficiencies without additional compensation or cost to CITY, except to the extent any such deficiency is directly attributable to deficiencies in CITY-furnished information.
- C. DESIGN CONSULTANT shall be familiar with CITY's Standard Details and Specifications and other relevant CITY regulations. DESIGN CONSULTANT shall ensure there are no conflicts among the Contract Documents including, but not limited to, the CITY's General and Supplementary Conditions for Construction Contracts, the plans and specifications prepared by DESIGN CONSULTANT, any standard details or specifications incorporated therein by reference, and the Construction Contract. The DESIGN CONSULTANT is responsible, along with his designers, for attesting to the design correctness and scaling the design documents.
- D. DESIGN CONSULTANT shall be responsible for the completeness and accuracy of his/her work prepared or compiled under obligation for this project and shall correct, at his/her expense, all errors or omissions therein, which may be disclosed. Correction of errors disclosed and determined to exist during any construction of the project on architectural or engineering drawings and specifications shall be accomplished by the DESIGN CONSULTANT. The cost of the design necessary to correct those errors attributable to the DESIGN CONSULTANT and any damage incurred by the City as a result of additional construction costs caused by

such engineering and/or architectural errors shall be chargeable to the DESIGN CONSULTANT. The fact that the City has reviewed or approved the DESIGN CONSULTANT's work shall in no way relieve the DESIGN CONSULTANT of any of DESIGN CONSULTANT's responsibilities.

10. INDEMNIFICATION

A. For Professional Liability:

To the fullest extent permitted by law, DESIGN CONSULTANT shall defend, indemnify and hold harmless the City of Chandler, its agents, representatives, officers, directors, officials and employees, individually and collectively, (hereinafter CoC) from and against all losses, claims, damages, suits, actions, payments, judgments, demands, expenses, and costs, including but not limited to, attorney's fees, defense costs, court costs, and the cost of appellate proceedings, or actions of any kind and nature related to, arising out of, or alleged to have resulted from the errors, mistakes or omissions relating to professional services by DESIGN CONSULTANT, its employees, agents, or any tier of subcontractors in the performance of this Contract or of any other person for whose errors, mistakes or omissions DESIGN CONSULTANT may be legally liable. This indemnity shall not be construed to include losses, claims, damages, suits, or actions of any kind and nature, to the extent arising from or alleged to have resulted from the errors, mistakes or omissions of CoC (other than DESIGN CONSULTANT, its employees, agents, or any tier of subcontractors). The provisions of this paragraph shall survive termination of this Contract.

B. For all Other Liabilities, Hazards and Exposures:

To the fullest extent permitted by law, DESIGN CONSULTANT shall defend, indemnify and hold harmless the City of Chandler, its agents, representatives, officers, directors, officials and employees, individually and collectively, (hereinafter CoC) from and against all losses, claims, damages, suits, actions, payments, judgments, demands, expenses, and costs, including but not limited to, attorney's fees, defense costs, court costs, and the cost of appellate proceedings, or actions of any kind and nature, wages or overtime compensation due employees in rendering service under this Contract and whether to any person or property, including natural resources and any claim made under the Fair Labor Standards Act or any other federal or state laws, related to, arising out of, or alleged to have resulted from the actions of DESIGN CONSULTANT and alleged to have been caused in whole or in part by any act or omission of DESIGN CONSULTANT, anyone directly or indirectly employed by them or anyone for whose acts DESIGN CONSULTANT may be legally liable, and from any claims or amounts arising or recovered under Workers' Compensation laws or any other law, bylaw, or ordinance, order or decree or any failure on the part of DESIGN CONSULTANT, its agents, employees or representatives to fulfill DESIGN CONSULTANT's obligations under this Contract. This indemnity shall not be construed to include losses, claims, damages, suits, or actions of any kind and nature, to the extent arising from or alleged to have resulted from the errors, mistakes or omissions of CoC, (other than DESIGN CONSULTANT, its employees, agents, or any tier of subcontractors). The provisions of this paragraph shall survive termination of this Contract.

C. Consequential Damages:

The parties intend that damages and/or costs and all other terms implying an amount tied to liability shall include consequential damages and loss of productivity limited to the total value of this contract in dollars as payable by the City of Chandler or twice the amount of aggregate insurance required by this Contract, whichever is greater.

D. Insurance does not limit liability:

The amount and type of insurance coverage requirements set forth herein will in no way be construed as limiting the scope of the indemnity in this paragraph.

11. INSURANCE REQUIREMENTS:

11.1 General Requirements:

- A. DESIGN CONSULTANT, at its own expense, shall purchase and maintain insurance of the types and amounts required in this section, with companies possessing a current A.M. Best, Inc. rating of B++6, or better and legally authorized to do business in the State of Arizona with policies and forms satisfactory to CITY.

- B. With the exception of professional liability policies, policies written on a "Claims made" basis are not acceptable without written permission from the City's Risk Manager
- C. 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 is satisfactorily completed and formally accepted. Failure to do so may, at the sole discretion of CITY, constitute a material breach of this Agreement and may result in termination of this contract.
- D. If any of the insurance policies are not renewed prior to expiration, payments to the DESIGN CONSULTANT may be withheld until these requirements have been met, or at the option of the City, the City may pay the Renewal Premium and withhold such payments from any monies due the DESIGN CONSULTANT.
- E. All insurance policies, except Workers' Compensation and Professional Liability required by this Agreement, and self-insured retention or deductible portions, shall name, to the fullest extent permitted by law for claims arising out of the performance of this contract, the City of Chandler, its agents, representatives, officers, directors, officials and employees as Additional Insureds.
- F. DESIGN CONSULTANT's insurance shall be primary insurance over any insurance available to the CITY and as to any claims resulting from this contract, it being the intention of the parties that the insurance policies so effected shall protect both parties and be primary coverage for any and all losses covered by the described insurance.
- G. The insurance policies, except Workers' Compensation and Professional Liability, shall contain a waiver of transfer rights of recovery (subrogation) against CITY, its agents, representatives, officers, directors, officials and employees for any claims arising out of DESIGN CONSULTANT's acts, errors, mistakes, omissions, work or service.
- H. The insurance policies may provide coverage which contain deductibles or self-insured retentions. Such deductible and/or self-insured retentions shall be assumed by and be for the account of, and at the sole risk of DESIGN CONSULTANT. DESIGN CONSULTANT shall be solely responsible for the deductible and/or self-insured retention. The amounts of any self-insured retentions shall be noted on the Certificate of Insurance. CITY, at its option, may require DESIGN CONSULTANT to secure payment of such deductibles or self-insured retentions by a Surety Bond or an irrevocable and unconditional letter of credit. Self-insured retentions (SIR) in excess of \$25,000 will not be accepted except with permission of the Management Services Director/designee.
- I. All policies and certificates shall contain an endorsement providing that the coverage afforded under such policies shall not be reduced, canceled or allowed to expire until at least thirty (30) days prior written notice has been given to CITY.
- J. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the DESIGN CONSULTANT with reasonable promptness in accordance with the DESIGN CONSULTANT's information and belief.
- K. In the event that claims in excess of the insured amounts provided herein, are filed by reason of any operations under this contract, the amount of excess of such claims, or any portion thereof, may be withheld from payment due or to become due the DESIGN CONSULTANT until such time as the DESIGN CONSULTANT shall furnish such additional security covering such claims as may be determined by the CITY.

11.2 Proof of Insurance - Certificates of Insurance

- A. Prior to commencing work or services under this Agreement, DESIGN CONSULTANT shall furnish to CITY Certificates of Insurance, issued by DESIGN CONSULTANT's insurer(s), as evidence that policies providing the required coverages, conditions and limits required by this Agreement are in full force and effect and obtain from the City's Risk Management Division approval of such Certificates.

- B. If a policy does expire during the life of this Agreement, a renewal certificate must be sent to the City of Chandler five (5) days prior to the expiration date.
- C. All Certificates of Insurance shall identify the policies in effect on behalf of DESIGN CONSULTANT, their policy period(s), and limits of liability. Each Certificate shall include the job site and project number and title. Coverage shown on the Certificate of Insurance must coincide with the requirements in the text of the contract documents. Information required to be on the certificate of Insurance may be typed on the reverse of the Certificate and countersigned by an authorized representative of the insurance company.
- D. CITY reserves the right to request and to receive, within 10 working days, certified copies of any or all of the herein required insurance policies and/or endorsements. CITY shall not be obligated, however, to review same or to advise DESIGN CONSULTANT of any deficiencies in such policies and endorsements, and such receipt shall not relieve DESIGN CONSULTANT from, or be deemed a waiver of CITY's right to insist on, strict fulfillment of DESIGN CONSULTANT's obligations under this Agreement.

11.3 Required Coverage

Such insurance shall protect DESIGN CONSULTANT from claims set forth below which may arise out of or result from the operations of DESIGN CONSULTANT under this Contract and for which DESIGN CONSULTANT may be legally liable, whether such operations be by the DESIGN CONSULTANT or by a Sub-consultant or subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. Coverage under the policy will be at least as broad as Insurance Services Office, Inc., policy form CG00011093 or equivalent thereof, including but not limited to severability of interest and waiver of subrogation clauses.

- A. Claims under workers' compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed;
- B. Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- C. Claims for damages because of bodily injury, sickness or disease, or death of any person other than the DESIGN CONSULTANT's employees;
- D. Claims for damages insured by usual personal injury liability coverage;
- E. Claims for damages, other than to Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- F. Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; Coverage will be at least as broad as Insurance Service Office, Inc., coverage Code "I" "any auto" policy form CA00011293 or equivalent thereof.
- G. Claims for bodily injury or property damage arising out of completed operations;
- H. Claims involving contractual liability insurance applicable to the Contractor's obligations under the Indemnification Agreement;
- I. Claims for injury or damages in connection with one's professional services;
- J. Claims involving construction projects while they are in progress. Such insurance shall include coverage for loading and off loading hazards. If any hazardous material, as defined by any local, state or federal authorities are to be transported, MCS 90 endorsement shall be included;

11.3.1 Commercial General Liability - Minimum Coverage Limits:

The Commercial General Liability insurance required herein shall be written for not less than \$1,000,000 limits of liability or ten percent (10%) of the Contract Price, whichever coverage is greater. Any combination between general liability and excess general liability alone amounting to a minimum of \$1,000,000 per occurrence (or 10%

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per occurrence) and an aggregate of \$2,000,000 (or 20% whichever is greater) in coverage will be acceptable. The Commercial General Liability additional insured endorsement shall be as broad as the Insurance Services, Inc's (ISO) Additional Insured, Form B, CG 20101001, and shall include coverage for DESIGN CONSULTANT's operations and products, and completed operations.

11.3.2 General Liability - Minimum Coverage Limits

- A. The General Liability insurance required herein, including, Comprehensive Form, Premises-Operations, Explosion and Collapse, Underground Hazard, Products/Completed Operations, Contractual Insurance, Broad Form Property Damage, Independent Contractors, and Personal Injury shall be written for Bodily Injury and Property Damage Combined shall be written for not less than \$1,000,000 or 10% of the contract cost and with a \$2,000,000 aggregate.
- B. Automobile Liability: DESIGN CONSULTANT shall maintain Commercial/Business Automobile Liability insurance with a combined single limit for bodily injury and property damage of not less than \$1,000,000 each occurrence with respect to any owned, hired, and non-owned vehicles assigned to or used in performance of the DESIGN CONSULTANT's work. Coverage shall be at least as broad as coverage code 1, "any auto", (Insurance Service Office, Inc. Policy Form CA 00011293, or any replacements thereof). Such insurance shall include coverage for loading and off loading hazards if hazardous substances, materials or wastes are to be transported and a MCS 90 endorsement shall be included with coverage limits of \$5,000,000 per accident for bodily injury and property damage.

11.3.3 Worker's Compensation and Employer's Liability:

DESIGN CONSULTANT shall maintain Workers' Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction over DESIGN CONSULTANT's employees engaged in the performance of the work or services; and, Employer's Liability insurance of not less than \$1,000,000 for each accident, \$1,000,000 disease coverage for each employee, and \$1,000,000 disease policy limit. In case any work is subcontracted, DESIGN CONSULTANT will require the Subcontractor to provide Workers' Compensation and Employer's Liability to at least the same extent as required of DESIGN CONSULTANT.

11.3.4 Professional Liability:

DESIGN CONSULTANT shall maintain Professional Liability insurance covering acts, errors, mistakes and omissions arising out of the work or services performed by DESIGN CONSULTANT, or any person employed by DESIGN CONSULTANT, with a claims made policy limit of not less than \$1,000,000.

12. DISPUTE RESOLUTION:

- A. Disputed Invoices. In the event of a disputed or contested invoice, only that portion so contested may be withheld from payment, and the undisputed portion will be paid.
- B. Disputed Items. CITY may temporarily delete any disputed items contained in DESIGN CONSULTANT's invoice, including items disputed due to lack of supporting documentation, and pay the remaining amount of the invoice. CITY shall promptly notify DESIGN CONSULTANT of the dispute and request clarification and/or remedial action. CITY may withhold payment on all disputed items until the issues are resolved. After any dispute has been settled, DESIGN CONSULTANT shall include the disputed item on a subsequent regularly scheduled invoice or on a special invoice for the disputed item only.
- C. Good Faith Negotiation. CITY and DESIGN CONSULTANT agree to negotiate all disputes between them in good faith prior to exercising their rights under law.
- D. Binding Special Arbitration. All claims, disputes and other matters in question between CITY and DESIGN CONSULTANT arising out of, or relating to this Agreement, or the breach thereof (except for claims which have been resolved pursuant to paragraphs 9 or 12 A, B and C herein) above shall be decided by binding, unappealable special arbitration, as described below, if the claim for compensation, costs or expenses, damages or reimbursement is equal to or less than \$50,000. Claims over \$50,000 shall have non-binding mediation as the first step to settling the dispute or claim.

E. Special Arbitration. All arbitration of claims shall be conducted in Chandler, Arizona, in accordance with the following rules:

1) Any time after the parties have attempted in good faith but without success to resolve one or more disputes, a party may notify the other in writing that they are at impasse (Notice of Impasse) and request immediate arbitration in accordance with the terms herein.

2) Within ten (10) days after the date of such Notice of Impasse, each party shall select an impartial intermediary, who shall, together, agree upon a third impartial person who will be the arbitrator. To be considered impartial an intermediary or arbitrator shall not have any previous or current relationship which would be considered a conflict of interest with either party, including, but not limited to, current or previous employment or contractual relationship, indebtedness or ownership interest.

3) The parties shall immediately cooperate with each other to draft together a short summary of the facts and a list of questions or issues to be resolved by the arbitrator. If the facts are in dispute, such disputed facts shall be listed as contentions by the party asserting them. In the event the parties are unable to agree upon a summary of the facts or a list of questions or issues, each party shall instead include a statement of facts and list of issues in that party's Position Paper submitted to the arbitrator. Such summary of facts and list of questions or issues shall be completed by the parties and submitted to the arbitrator within twenty (20) days of the date of the Notice of Impasse.

4) The parties shall cooperate to gather any documents and exhibits necessary to resolve the issues and provide them jointly to the arbitrator. In the event of a dispute between the parties regarding whether a document should be provided, the disputed document shall be submitted to the impartial intermediaries who will determine its appropriateness for submittal. Correspondence between the parties which discusses settlement or resolution of the issues shall be submitted. All such evidence shall be submitted to the arbitrator within twenty (20) days of the date of the Notice of Impasse.

5) Each party may submit a written Position Paper of no more than ten (10) pages, supporting or explaining that party's position and providing citations to relevant law. Any such Position Paper shall be submitted to the arbitrator within thirty (30) days of the date of the Notice of Impasse.

6) There shall be no hearing, no witnesses, no argument nor contact by the parties or their representatives with the arbitrator except for the joint submittals and each party's Position Paper.

7) The arbitrator may request additional information and may make any other orders necessary to resolve the entire matter.

8) The arbitrator shall issue a written decision resolving all the submitted issues within 30 days after receiving the Position Papers.

F. Nothing herein contained shall be so construed as to preclude DESIGN CONSULTANT or CITY from commencing a legal action in relation to claims in excess of \$50,000, but the sole legal remedy in relation to claims of \$50,000 or less shall be binding, unappealable special arbitration as described above.

13. **AMENDMENTS:** Whenever a change in the Scope of Work contemplated in this Agreement is determined to be necessary, the work will be performed in accordance with this Agreement provided, however, that BEFORE such work is started, an Amendment shall be executed by CITY and DESIGN CONSULTANT. Additions to, modifications of, or deletions from the project provided herein may be made and the compensation to be paid to DESIGN CONSULTANT may be adjusted accordingly by mutual agreement of the contracting parties. It is agreed that no claim for extra work by DESIGN CONSULTANT will be allowed by CITY except as provided herein, nor shall DESIGN CONSULTANT do any work not covered by this Agreement unless such work is authorized through an executed amendment.

14. **TERMINATION WITHOUT CAUSE:** CITY may at any time and for any or no reason, at its convenience, terminate this Agreement or any part of the services to be rendered pursuant thereto by ten (10) day written notice to DESIGN CONSULTANT specifying the termination date. Immediately after receiving such notice,

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DESIGN CONSULTANT shall discontinue advancing the work under this Agreement and shall deliver to CITY all drawings, notes, calculations, sketches and other materials entirely or partially completed, together with all unused materials supplied by CITY.

DESIGN CONSULTANT shall receive as compensation in full for services performed to date of such termination, a fee for the percentage of work actually completed. This fee shall be a percentage of DESIGN CONSULTANT(S) fee described in this Agreement under paragraph 4 and shall be in an amount to be agreed mutually by DESIGN CONSULTANT and CITY. CITY shall make this final payment within sixty (60) days after DESIGN CONSULTANT has delivered the last of the partially completed items.

15. TERMINATION WITH CAUSE

This Agreement may be terminated by CITY for cause should the DESIGN CONSULTANT fail to perform any provision of this Agreement, including without limitation, for any of the following reasons:

- (a) DESIGN CONSULTANT abandons Work;
- (b) DESIGN CONSULTANT assigns or attempts to assign its rights or obligations under this Agreement or any part thereof to any third-party (without the prior written consent of CITY);
- (c) DESIGN CONSULTANT is adjudged bankrupt or insolvent, makes a general assignment for the benefit of creditors, has a trustee or receiver appointed for its property, or files a petition to take advantage of any debtor's act;
- (d) DESIGN CONSULTANT fails or refuses to perform any obligation under the Agreement, or fails to remedy such nonperformance within seven (7) days after its occurrence;
- (e) DESIGN CONSULTANT fails to comply with any applicable Laws and fails to remedy such nonperformance within seven (7) days after its occurrence;
- (f) DESIGN CONSULTANT fails to achieve the required dates for performance required pursuant to the Agreement.

The CITY'S right of termination for cause as set forth herein shall be in addition to, and not a limitation of, any and all other remedies available to CITY at law, in equity, or under the terms and provisions of this Agreement.

- 16. OWNERSHIP OF DOCUMENTS: All documents, including, but not limited to, preliminary designs, tracings, drawings, original mylars, estimates, field notes, investigations, design analysis, communications (e-mail, minutes, telephone, memos, etc.) and studies which are prepared in the performance of this Agreement are to be, and shall remain the property of CITY. DESIGN CONSULTANT shall furnish CITY, upon its request, originals or reproducible copies of technical specifications and copies of all other documents listed above. DESIGN CONSULTANT shall endorse, by his professional seal, all plans and engineering data furnished by it.
- 17. RE-USE OF DOCUMENTS: The parties agree the documents, drawings, specifications and designs, although the property of CITY, are prepared for this specific project and are not intended nor represented by DESIGN CONSULTANT to be suitable for re-use for any other project. Any reuse without written verification or adaptation by DESIGN CONSULTANT for the specific purpose intended will be at CITY's sole risk and without liability or legal exposure to DESIGN CONSULTANT.
- 18. NO KICK-BACK CERTIFICATION: DESIGN CONSULTANT warrants that no person has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage or contingent fee; and that no member of the City Council or any employee of the CITY has any interest, financially or otherwise, in the DESIGN CONSULTANT firm.

For breach or violation of this warranty, CITY shall have the right to annul this Agreement without liability, or at its discretion to deduct from the Agreement Price or consideration, the full amount of such commission, percentage, brokerage, or contingent fee.

- 19. CONFLICT OF INTEREST: DESIGN CONSULTANT stipulates that its officers and employees do not now have a conflict of interest and it further agrees for itself, its officers and its employees that it will not contract for or accept employment for the performance of any work or services with any individual business, corporation or government unit that would create a conflict of interest in the performance of its obligations pursuant to this Agreement.

Pursuant to A.R.S. Section 38-511, CITY may cancel this Agreement within three (3) years after its execution, without penalty or further obligation by CITY if any person significantly involved in initiating, negotiating, securing, drafting or creating this Agreement on behalf of CITY is, at any time while this Agreement is in effect, an employee of any other party to this Agreement in any capacity, or a consultant to any other party of this Agreement with respect to the subject matter of this Agreement.

20. CONTROLLING LAW: The laws of the State of Arizona shall govern this agreement.

21. NO ASSIGNMENT: DESIGN CONSULTANT shall not assign, transfer, convey or subcontract this Agreement or the services to be rendered pursuant thereto without the prior written consent of CITY.

22. NOTICES: Any notice required under this Agreement shall be in writing, addressed to the appropriate party at its address on the signature page and given personally or by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.

IN WITNESS WHEREOF, the parties have hereunto subscribed their names this _____ day of _____, 2008.

CITY OF CHANDLER

DESIGN CONSULTANT

MAYOR Date

By: _____
Signature *President*

ADDRESS FOR NOTICE
City of Chandler
P.O. Box 4008, Mail Stop 407
Chandler, AZ 85244-4008
Phone: 480-782-3307
FAX: 480-782-3355

ADDRESS FOR NOTICE
RITTOCH-POWELL & Associates
3800 N. Central Ave., Ste. 605
Phoenix, AZ 85012
Phone: 602.263.1177
FAX: 602.277.6286

ATTEST:

City Clerk

ATTEST: If Corporation
Frank Henderson
Secretary
PROJECT MANAGER

APPROVED AS TO FORM:

City Attorney By: *[Signature]*

SEAL

**EXHIBIT A
SCOPE OF WORK**

A. BACKGROUND

CITY of Chandler's Project No. ST0810-201 will widen two miles of McQueen Road to six travel lanes to match the CITY's Standard Detail C-203 from Queen Creek Road to Chandler Heights Road. One additional mile of McQueen Road will be widened to four travel lanes utilizing the CITY's Standard Detail C-205 between Chandler Heights Road and Riggs Road. Queen Creek Road will be widened to match the CITY's Standard Detail C-203 from McQueen Road to the east side of Airport Boulevard. Ocotillo Road intersection will be improved to provide the full street improvements to match CITY of Chandler Standard Detail C-223. Chandler Heights Road intersection will be improved and widened to match the CITY's Standard Detail C-223. Riggs Road intersection improvements include only the north east corner to match the existing lane configurations on the west leg. The project includes adding raised median, bike lanes, turn lanes, sidewalks, curbs, gutters, street lighting, traffic signals, traffic signal interconnect, storm drainage and landscaping, pedestrian path, equestrian path, identifying right of way requirements, preparing legal descriptions for new right-of-way, assisting the CITY with right-of-way acquisition and coordinating all utility relocations necessary to accommodate the roadway widening. The existing McQueen Road structure across the Consolidated Canal and the Queen Creek Road structure across the Consolidated Canal will be widened and improved for the widened street improvements. Portions of this roadway segment have been constructed to the half street section by private developments along McQueen Rd. This project will complete the half street areas to full width major or minor arterial section and construct the full street section in the areas that are currently two lanes only. Project improvements include reclaim water line extensions to outside the new roadway and intersection improvements. Water line and sewer line stubs will be included to outside the roadway improvements to undeveloped parcels.

B. GENERAL TASKS

B 1.0 GENERAL REQUIREMENTS – The design and all work shall conform to the latest edition and amendments of the following:

- CITY of Chandler Standard Details and Specifications
- CITY of Chandler Technical Design Manual #1: Water System Design
- CITY of Chandler Technical Design Manual #2: Wastewater and Reclaimed Water System Design
- CITY of Chandler Technical Design Manual # 3: Storm Drainage System Design
- CITY of Chandler Technical Design Manual #4: Street Design and Access Control
- CITY of Chandler Technical Design Manual #5: Traffic Signal Design
- CITY of Chandler Technical Design Manual #6: Street Light Design
- CITY of Chandler Technical Design Manual #7: Traffic Barricade Design
- CITY of Chandler Technical Design Manual #8: Landscape and Irrigation Design of Right Of Ways, Retention Basins and Parks
- MAG Uniform Standard Specifications and Details
- Manual of Uniform Traffic control Devices for Streets and Highways (MUTCD)
- AASHTO Policy on Geometric Design of Highways and Streets
- The Code of the CITY of Chandler

B 2.0 DATA COLLECTION

1. CITY shall provide at no cost to DESIGN CONSULTANT the following existing information as available, not necessarily limited to, as-built drawings, related design

studies and reports, geotechnical investigations, traffic data and projections, maintenance records, and drawings of developments planned within the project area.

2. DESIGN CONSULTANT shall keep a log of all documents and information provided by CITY staff and related stakeholders.

B 3.0 PUBLIC UTILITY COORDINATION

1. DESIGN CONSULTANT shall coordinate with utility companies, private development, 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.) DESIGN CONSULTANT shall show all existing and proposed utilities on the paving plan and profile sheets.
2. DESIGN CONSULTANT 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.
3. DESIGN CONSULTANT shall work with the CITY's Utility Coordinator to coordinate the early determination of facilities that may be abandoned or deactivated.
4. DESIGN CONSULTANT shall be responsible for field verifying the horizontal locations of all utilities within the project limits prior to the Preliminary (15%) design submittal. DESIGN CONSULTANT shall prepare base maps detailing all existing utility data and transmit them to the utility companies for verification and comment concerning the utility locations. DESIGN CONSULTANT shall incorporate the utility company comments into the base maps.
5. DESIGN CONSULTANT shall specifically identify utility conflicts, with input from utility companies, which might affect alignment or grade and recommend alignment alternatives.
6. Prior to the 30% plan submittal, DESIGN CONSULTANT shall submit title reports for affected properties to SRP Water Users and SRP Power.
7. DESIGN CONSULTANT shall send a letter to each utility company notifying them of the project and defining the project scope and timeline, and shall also send one set 15% plans and two sets each 30%, 60%, 95%, and Final plans 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 roadway improvements. DESIGN CONSULTANT shall incorporate the utility company and private developer construction requirements into the plan set.
8. DESIGN CONSULTANT 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. DESIGN CONSULTANT shall coordinate with the utilities to facilitate the design to relocate their facilities. DESIGN CONSULTANT shall request a letter from each utility impacted by the planned roadway improvement identifying a time line for relocating their facilities.
9. Prior to 30% plan submittal, DESIGN CONSULTANT shall develop preliminary alignments of any utilities requiring relocation for which the CITY's Utility Coordinator has requested an alignment design. DESIGN CONSULTANT shall submit preliminary locations to each utility for review along with a request for written response from each utility. DESIGN CONSULTANT shall make joint trenching recommendations for

underground utilities, and submit those recommendations to the CITY's Utility Coordinator for approval.

10. DESIGN CONSULTANT shall identify utility easements and provide legal descriptions to the CITY, between the 30% and 60% design completion, to facilitate land acquisition during the design phase.
11. At the 30% design submittal, DESIGN CONSULTANT shall develop a utility strip map showing all existing and proposed utilities, and existing and proposed easements for each utility, to include parcel numbers and addresses, at a scale of 1"=20' H.
12. For each submittal to the utility companies, DESIGN CONSULTANT shall provide the CITY's Project Manager and Utility Coordinator each with a written record of receipt.
13. DESIGN CONSULTANT shall work with the CITY's Utility Coordinator to facilitate utility coordination meetings upon notice to proceed and at each submittal (30%, 60%, 95%) and provide a strip map showing proposed CITY and private installations, and existing and proposed easements.
14. DESIGN CONSULTANT shall work with the CITY's Utility Coordinator to facilitate utility land coordination meetings upon notice to proceed and at each submittal (30%, 60%, 95%) and provide a strip map showing proposed CITY and private installations.
15. DESIGN CONSULTANT shall review all utility plans for constructability within the project limits.
16. Prior to submittal of Final (100%) construction documents, DESIGN CONSULTANT shall be responsible for ensuring all utility relocations have been designed and coordinated with proposed CITY and private installations, and that such relocations will not impact the proposed construction schedule of the CITY's project.

B 4.0 PROGRESS MEETINGS

1. DESIGN CONSULTANT shall hold the following progress meetings at the CITY of Chandler offices or project site.
 - a. Bi-Weekly Progress Meetings shall be held up to the 60% plan submittal and shall be held every four (4) weeks or as needed after the 60% plan submittal.
 - b. Comment Resolution Meetings shall be held, in lieu of the scheduled Bi-Weekly Progress Meetings, no later than two weeks after redlines are returned to DESIGN CONSULTANT at each plan submittal.
 - c. Utility Coordination Meetings shall be held at project kickoff, at each plan submittal, and as needed.
2. DESIGN CONSULTANT shall prepare and distribute meeting minutes for each Progress Meeting, Comment Resolution Meeting and Utility Coordination Meeting including Action Items to be reviewed and updated at each subsequent meeting.

B 5.0 PUBLIC MEETINGS

2. DESIGN CONSULTANT shall prepare for and participate in four (4) Public Information Meetings. DESIGN CONSULTANT shall prepare display boards that feature the horizontal alignment and depict both existing and proposed right-of-way from the most recent plan submittal, and also a display board depicting the proposed typical roadway section.
3. DESIGN CONSULTANT shall be responsible for the following:
 - a. Develop and setup display boards
 - b. Prepare a meeting sign-in sheet
 - c. Give a brief presentation and answer questions as needed
 - d. Prepare and make available a public comment sheet at each meeting
 - e. Provide snack foods and beverages for each public meeting
3. CITY shall be responsible for the following:
 - a. Secure a location and time for each public meeting
 - b. Prepare and distribute mailers/flyers to those residents within and adjacent to the project corridor, if required
 - c. Prepare newspaper notice of meeting, if required

B 6.0 STAKEHOLDER MEETINGS

1. DESIGN CONSULTANT shall prepare for and participate in monthly Stakeholder Meetings for the duration of the project. DESIGN CONSULTANT shall prepare display boards that feature the horizontal alignment and depict both existing and proposed right-of-way, and also a display board depicting the proposed typical roadway section.
2. DESIGN CONSULTANT shall be responsible for the following:
 - a. Develop and setup display boards
 - b. Prepare a meeting sign-in sheet
 - c. Give a brief presentation and answer questions as needed
 - d. Prepare distribute meeting minutes, including Action Items to be reviewed and updated at each Stakeholder Meeting
3. CITY shall be responsible for the following:
 - a. Secure a location and time for each Stakeholder Meeting
 - b. Send invitations to stakeholders

B 7.0 PROJECT MANAGEMENT

1. DESIGN CONSULTANT shall prepare regular monthly progress reports, perform monthly budget and schedule monitoring, coordinate with utilities, coordinate CITY representatives and other project stakeholders and manage sub-consultants.

B 8.0 DESIGN SURVEY

1. DESIGN CONSULTANT shall perform ground survey to establish horizontal and vertical control throughout the project limits based on the datum specified by the CITY. Survey control for the project shall be in accordance with CITY requirements. The horizontal survey data used for the project shall be presented in State Plane Coordinates, North American Datum of 1983 (NAD 83) 1992 epoch, and Arizona Central Zone, International Foot. Vertical datum shall be referenced to the North American Vertical Datum of 1988 (NAVD 88), International Foot. Existing roadway centerline shall be established through Maricopa County Recorder's maps and land surveys in conjunction with existing street monuments.
2. DESIGN CONSULTANT shall set panels and perform a full topographic survey of all existing features including but not limited to curb and gutter, median curb, catch basins, scuppers, culverts, box culverts, water meter boxes, water and gas valves, manholes, utility poles and guy wires, traffic signal poles, utility boxes, fences, trees, mailboxes, public and private irrigation, plants and shrubs.
3. DESIGN CONSULTANT survey and design limits are:
 - a. McQueen Road – 750' north of Queen Creek intersection to 750' south of Riggs Road intersection.
 - b. Queen Creek Road – 2000' east of McQueen Road intersection to 750' west of McQueen Road intersection.
 - c. Ocotillo Road – Survey limits are from 750' east of McQueen Road intersection to 750' west of McQueen Road intersection. Design limits are from 750' east of McQueen Road intersection to curb return returns west of McQueen Road intersection (approximately 200') except striping plans.
 - d. Chandler Heights Road – 1500' east of McQueen Road intersection to 1000' west of McQueen Road intersection.
 - e. Riggs Road – 750' east of McQueen Road intersection to 750' west of McQueen Road intersection.
4. DESIGN CONSULTANT shall take pavement elevations at the centerline of McQueen Road, Queen Creek Road, Ocotillo road, Chandler Heights Road and Riggs Road at 50 feet intervals within the survey limits stated in Item B8.3 above. In addition, DESIGN CONSULTANT shall take elevations at the gutter flow line and top of curb for all existing curb and gutter, at the pavement adjacent to median curb, at the outside edge of pavement where there is no curb and at existing ground at 10 ft intervals beyond the edge of pavement or back of curb to a distance of 20 feet beyond the new right-of-way lines.
5. DESIGN CONSULTANT shall take elevations along the centerline and/or edges of each driveway at 20' intervals beginning at the gutter flow line to a distance of 20' beyond the new right-of-way. DESIGN CONSULTANT shall take ground elevations shots at all grade breaks along each driveway centerline and edges.
6. DESIGN CONSULTANT shall take elevations at the inverts of all catch basins, manholes, pipes and all water valve nuts within the project limits. DESIGN CONSULTANT shall establish benchmarks at 500 feet intervals along McQueen Road for the length of the project.
7. DESIGN CONSULTANT shall provide a sketch showing each benchmark with a minimum of 3 ties to features that will not be disturbed by construction.
8. DESIGN CONSULTANT shall provide a digital photo log of the project. The photos shall be taken looking upstation at no less than 50-foot increments along the proposed curb line. The

photos shall also include intersections at all cross/intersecting streets, driveways, curb ramps, existing above-ground utilities, existing obstructions, drainage features, ditches, railroads, roadway signage, private signage, existing landscaping, streetlights, existing miscellaneous structures, walls and any other features that may impact the design of the project. The photo log shall provide station, offset and/or direction of the picture, or other identifying description, for each picture. DESIGN CONSULTANT shall provide the CITY two CDs of the photo log.

9. DESIGN CONSULTANT shall provide photogrammetric services and aerial mapping of McQueen Road, Ocotillo road, Chandler Heights Road and Riggs Road along the full limits of the topographic survey described in Item B8.3. The result will provide planimetric detail, including pavement striping, one-foot contours and DTM of the project limits described above. DESIGN CONSULTANT shall provide digital orthophoto with a pixel resolution of 0.15 on a CD ROM.

B 9.0 RIGHT-OF-WAY SURVEY

1. At Preliminary (15%) Design, DESIGN CONSULTANT shall prepare a right-of-way strip map overlain on an aerial photograph of the project limits, showing existing property rights for right-of-way, easements and utilities on McQueen Road, Queen Creek Road, Chandler Heights Road and Riggs Road stated in Item B8.3. The right-of-way strip map is for the purpose of identifying property boundaries to prepare legal descriptions and exhibits for new property acquisitions for road right of way, future bus bays, drainage easements, temporary construction easements, sight vision easements and utility easements and shall include a list of identified properties and property rights. DESIGN CONSULTANT shall obtain litigation reports for the parcels where property acquisition is needed.
2. DESIGN CONSULTANT shall provide legal descriptions and exhibits for new property acquisitions for road right of way, future bus bays, drainage easements, temporary construction easements, sight vision easements and utility easements. CITY shall provide title search documents with Schedule "B" attachments for each parcel requiring right of way or easement legal description. DESIGN CONSULTANT shall provide right-of-way research and a survey to define the boundaries of adjacent properties where new right-of-way or easements are anticipated. DESIGN CONSULTANT shall provide closure data for all written legal descriptions and exhibits. The scope of work includes, but is not limited to:
 - a. The preparation of written legal description and exhibits for up to twenty five (25) parcels. Legal descriptions and exhibits for each parcel shall include new right-of-way, drainage easements, temporary construction easements, sight vision easements and utility easements. If more than 25 parcels require one or more of these legal descriptions, the cost for such additional work will be paid from the allowance included in the Contract Price.
3. DESIGN CONSULTANT shall submit final right-of-way documents to the CITY between 30% and 60% design completion. These documents shall include legal descriptions, exhibits, parcel maps, right-of-way strip maps, a draft drainage report and 30% design plans for all acquisitions and easements.
4. DESIGN CONSULTANT shall field stake right-of-way once per the direction of the CITY. Right of way staking will be provided at changes in alignment and angle points and will not provide stakes at each parcel property line affected by the new right of way.

B 10.0 PLANS, SPECIFICATIONS AND ESTIMATES

1. DESIGN CONSULTANT shall prepare plans, specifications and estimates for the project in accordance with CITY standards. The plans shall include, but not be limited to:

- Cover Sheet
 - General Notes Sheets
 - Design Data and Index of Sheets
 - Paving Plans/Profiles (1"=20'H/1"=2' V) – See Item B 11.0 for additional information
 - Drainage Plans (1"=20'H/1"=2'V) – See Item 12.0 for additional information
 - Structure Plans (Scale varies) – See Item 13.0 for additional information
 - Traffic Signal Plans – See Item 15.0 for additional information
 - Striping and Signing Plans (1"=40') – See Item 16.0 for additional information
 - Street Light Plans – See Item 17.0 for additional information
 - Landscape and Irrigation Plans – See Item 18.0 for additional information
 - Erosion and Sediment Control Plans and Storm Water Pollution Prevention Plans – see Item 19.0 for additional information
 - Waterline, Sanitary Sewer and Reclaimed Waterline Plans (1"=20' H/1"=2' V) – See Item 20.0 for additional information.
 - Utility Relocation Plans (if required, by others)
2. DESIGN CONSULTANT shall submit plans at the 30%, 60%, 95% and 100% stages. The plan submittals will follow the checklists provided by the CITY.
 3. At the 30%, 60% and 95% plan submittals, DESIGN CONSULTANT shall submit a CD containing complete improvement base files in AutoCAD .DWG format, and AutoCAD .DWF (Design Web Format) exports of each plan sheet or scanned .TIF images of each plan sheet.
 4. At the completion of the design, DESIGN CONSULTANT shall submit a CD containing complete improvement base files in AutoCAD .DWG format and scanned .TIF images of each plan sheet (signature set.)
 5. Specifications will be in accordance with the MAG Standard Specifications and CITY of Chandler Standard Specifications. DESIGN CONSULTANT shall supply special provisions for all items not adequately covered by the standard specifications.
 6. DESIGN CONSULTANT shall prepare cross sections and earthwork quantities determined, with the intent to provide a balanced earthwork project.
 7. DESIGN CONSULTANT shall prepare opinions of probable cost for all pay items per the standard specifications and special provisions, except that volumetric measurements will not be used for pay items.
 8. Following each review, DESIGN CONSULTANT shall review the CITY's comments and complete the comment resolution forms provided by the CITY. DESIGN CONSULTANT will provide a matrix that summarizes the comments and indicates whether the comment was incorporated or provides justification for not implementing the change noted in the plan review comments. DESIGN CONSULTANT shall provide the comment matrix to the CITY one week prior to the Comment Resolution Meeting. All comments will be incorporated unless otherwise authorized by the CITY.
 9. DESIGN CONSULTANT shall return all redline plans, review comments and review comments checklists received from CITY for each plan submittal with subsequent plan submittal.
 10. DESIGN CONSULTANT shall be responsible for delivering to the CITY a complete set of constructible plans and shall be responsible for ensuring constructability of such plans, including, but not limited to, completion of right-of-way, TCE, and drainage easement acquisitions, and completion of utility relocation design.

B 11.0 PAVING PLAN/PROFILES

1. DESIGN CONSULTANT shall perform work necessary to create Typical Roadway Sections, Geometric Layout, Paving Plan & Profile Sheets and Cross Sections at 50' intervals within the project limits stated in Item B8.3 using design and right-of-way needs for a major arterial (CITY of Chandler Standard Detail C-203) for McQueen Road from Queen Creek to Chandler Heights, Queen Creek Road from McQueen Road to the east side of Airport Boulevard, Chandler Heights Road and Ocotillo Road. DESIGN CONSULTANT shall perform work necessary to create Typical Roadway Sections, Geometric Layout and Paving Plan & Profile Sheets within the project limits stated in Item B8.3 using design and right-of-way needs for a minor arterial (CITY of Chandler Standard Detail C-205) for McQueen Road between Chandler Heights Road and Riggs Road and Riggs Road.
2. DESIGN CONSULTANT shall prepare paving and profile plans at a scale of 1"=20' horizontal and 1"=2' vertical, to include base sheet preparation including survey control, topographic mapping, centerline stationing, curb and gutter, sidewalk, handicap ramps, driveways, turn lanes, intersecting streets, utilities, existing right-of-way, proposed right-of-way, existing utilities, construction notes, etc. Profiles shall show centerline stationing, existing ground, proposed curb and gutter grades, benchmarks and underground utilities.
3. DESIGN CONSULTANT shall prepare calculations, plans, specifications, quantity determinations and opinion of probable costs. Submittals shall be made for 30%, 60%, 95%, Pre-Final 100% and the Final PS&E package.

B 12.0 DRAINAGE REPORT & PLANS/PROFILES

1. DESIGN CONSULTANT shall prepare a drainage analysis to define the new runoff expected as a result of the McQueen Road construction and recommend the drainage improvements required.
2. DESIGN CONSULTANT shall prepare drainage calculations for all undeveloped areas adjacent to McQueen Road. The project stretch has been partially constructed by private developers constructing the half street improvements adjacent to their developments.
3. DESIGN CONSULTANT shall perform drainage calculations and incorporate them into a Draft Drainage Report to accompany the 30% plan submittal. The limits of analysis shall be to existing improvements. DESIGN CONSULTANT shall verify that the existing basins constructed along McQueen Road, Queen Creek Road, Ocotillo Road, Chandler Heights Road and Riggs Road within the project limits stated in Item B8.3 match the as-built plans. The Draft Drainage Report shall identify proposed retention basins and any required drainage easements. This report shall document all calculations certifying that the proposed design meets the design criteria.
4. DESIGN CONSULTANT shall incorporate comments received from the Draft Drainage Report into a Final Drainage Report between the 30% and 60% plan submittals.
5. DESIGN CONSULTANT shall submit legal descriptions and exhibits for drainage easements, including volumetric calculations, to the CITY between 30% and 60% plan submittals.
6. DESIGN CONSULTANT shall prepare calculations, plans, specifications, quantity determinations and opinion of probable costs. Submittals shall be made for 30%, 60%, 95%, Pre-Final 100% and the Final PS&E package.

B 13.0 STRUCTURE PLANS

1. DESIGN CONSULTANT shall prepare an Alternatives Analysis Memorandum to widen the existing structures across the Consolidated Canal at McQueen Road and Queen Creek Road.

Alternatives Analysis shall include a description of existing roadway and structure geometrics, a discussion of geotechnical aspects, existing structure condition and the various alternatives investigated including structure type, construction phasing, traffic control and costs.

- a. DESIGN CONSULTANT shall field review existing site conditions for each structure and gather record drawings.
 - b. DESIGN CONSULTANT shall meet with Salt River Project to discuss dry up schedule and identify constraints that influence feasibility, time and cost to widen the existing structures.
 - c. DESIGN CONSULTANT shall investigate two widening alternatives (extend box culverts and precast slabs on drilled shafts) including construction phasing, traffic control and cost.
 - d. DESIGN CONSULTANT shall prepare schematic plan sheet for each alternative for each structure showing the plan, elevation and typical section.
2. DESIGN CONSULTANT shall prepare calculations, final plans, specifications, quantity determinations and opinion of probable costs for the selected alternative for each structure. Submittals shall be made for 30%, 60%, 95%, Pre-Final 100% and the Final PS&E package.
 3. DESIGN CONSULTANT shall submit plans to SRP for review, incorporate comments and obtain all necessary SRP construction approval for two structure extensions over Consolidated Canal at Queen Creek Road and McQueen Road.

B 14.0 TRAFFIC ANALYSIS

1. DESIGN CONSULTANT shall conduct traffic analysis of the McQueen Road intersection with Chandler Heights Road to determine the appropriate roadway configuration. The analysis will be performed using MAG 2003 growth projection factors. The growth factor shall be applied to existing traffic counts to calculate 2003 traffic volumes. Existing weekday peak hour turning movement counts will be collected to establish turning movement percentages to be applied to the future traffic volumes.
2. DESIGN CONSULTANT shall perform analyses for up to three intersection configurations (alternatives). A summary matrix shall be submitted to the CITY for review and evaluation.
3. DESIGN CONSULTANT shall meet with the CITY to discuss the analysis results.
4. DESIGN CONSULTANT shall prepare a written report with tables and graphics that summarizes the methodology, findings and conclusions. Initial report shall be submitted within 6 weeks following Notice to Proceed (NTP). Final report shall incorporate review comments and be submitted with 30% submittal.
5. DESIGN CONSULTANT shall prepare calculations, plans, specifications, quantity determinations and opinion of probable costs. Submittals shall be made for 30%, 60%, 95%, Pre-Final 100% and the Final PS&E package.

B 15.0 TRAFFIC SIGNAL PLANS

1. DESIGN CONSULTANT shall prepare traffic signal plans to modify the traffic signal at the intersection of McQueen Road and Queen Creek Road in accordance with applicable CITY of Chandler Traffic Signal Standards and Specifications.

2. DESIGN CONSULTANT shall prepare traffic signal plans for new traffic signals at the intersection of McQueen Road and Chandler Heights and the intersection of Queen Creek and Airport Boulevard in accordance with applicable CITY of Chandler Traffic Signal Standards and Specifications.
3. DESIGN CONSULTANT shall perform a site visit and document to the extent possible the equipment and conditions related to the existing traffic signals, traffic control equipment, existing underground conduit, etc.
4. DESIGN CONSULTANT shall coordinate traffic signal design with Salt River Project (SRP) to verify current power sources at Queen Creek Road, Ocotillo Road, Chandler Heights Road and Riggs Road intersections can accommodate traffic signal modifications.
5. DESIGN CONSULTANT shall coordinate traffic signal design with Salt River Project (SRP) to define a new power source for the new traffic signal at Queen Creek Road intersection with Airport Boulevard and the future traffic signal at Chandler Fire Station No. 10.
6. DESIGN CONSULTANT shall design the layout of the signal pole and controller locations for the three intersections described above at the 30% plan stage. The Signal Design Plans shall be produced at a 1" = 20' scale and include the following sheets:
 1. Index Sheet
 2. General Signal Layout Sheet with pole locations, conduit runs and pull boxes
 3. Pole Schedule with pole type, mast arm length, signal heads, mounts pedestrian heads, luminaire type and pedestrian push buttons
 4. Conductor Schedule with wire size, conduit size and phasing
 5. Signal Interconnect/Fiber Optic Layout Plan Sheet
 6. Traffic Signal Quantity and Detail Sheet including Phasing Diagram, Cameras and Wiring Diagram
7. DESIGN CONSULTANT shall prepare traffic signal interconnect plans (double stacked) at a scale of 1" = 40' for McQueen Road, Queen Creek Road, Ocotillo Road, Chandler Heights Road and Riggs Road within the project limits stated in Item B8.3. Plan sheets will show conduit run and pull boxes. Plans will show conduit and pull box layouts for future signal for new Fire Station No. 10 on McQueen Road south of Chandler Heights Road.
8. DESIGN CONSULTANT shall prepare calculations, plans, specifications, quantity determinations and opinion of probable costs. Submittals shall be made for 30%, 60%, 95%, Pre-Final 100% and the Final PS&E package.

B 16.0 STRIPING AND SIGNING PLANS

1. DESIGN CONSULTANT shall develop preliminary traffic signing and striping plans within the project limits stated in Item B8.3 at the 30% plan stage in accordance with applicable CITY of Chandler Standards and Specifications. DESIGN CONSULTANT shall finalize the traffic signing and striping plans at the 60% plan stage. The Signing and Striping Design Plans shall be produced at 1"= 40' scale (double stacked) and shall include the following sheets:
 1. Index Sheet
 2. General Striping Notes Sheet (including striping quantities)
 3. General Signing Summary and Notes
 4. General Detail Sheet
 5. Striping and Signing Plan Sheets

2. DESIGN CONSULTANT shall prepare calculations, plans, specifications, quantity determinations and opinion of probable costs. Submittals shall be made for 30%, 60%, 95%, Pre-Final 100% and the Final PS&E package.

17 STREET LIGHT PLANS

1. DESIGN CONSULTANT shall develop a recommended street light pole layout and design street lighting within the project limits stated in Item B8.3 in accordance with applicable CITY of Chandler Street Light Standards and Specifications. Layout and design will incorporate existing street light poles.
2. DESIGN CONSULTANT shall perform a site visit and document to the extent possible the equipment and conditions related to the existing street lighting, the existing lighting control equipment, existing underground conduit and conductor routes. DESIGN CONSULTANT shall include digital photos of existing streetlights in the photo log.
3. DESIGN CONSULTANT shall coordinate electrical wiring system design for the street lights with Salt River Project (SRP) to define power source(s) to serve the street light system.
4. DESIGN CONSULTANT shall provide a computer generated point-to-point foot-candle grid for recommended street light pole layout within the project limits stated in Item B8.3 and submit documents to CITY for approval. Initial technical memorandum summarizing the analysis will be prepared and submitted with 60% submittal. Final memorandum will be submitted with the final plans.
5. DESIGN CONSULTANT shall prepare complete street lighting plans within the project limits stated in Item B8.3 including new pole locations, relocated pole locations, service locations and circuiting, at the 30% plan stage. The street light design shall match the existing streetlights. The first existing streetlight on each side of the roadway beyond the limit of the paving shall be shown on the plans.
6. DESIGN CONSULTANT shall provide plan sheets for the following:
 - a. Index Sheet
 - b. Plan Sheets (double stacked) @ scale 1" =40' with pole locations, conduit runs and pull boxes
 - c. Pole details (Pole illustration, pole schedule and general notes)
 - d. Electrical details (Control center, wiring schematic, cable schedule)
 - e. Foundation details
 - f. Miscellaneous details (Pole grounding, connectors)
7. DESIGN CONSULTANT shall prepare calculations, plans, specifications, quantity determinations and opinion of probable costs. Submittals shall be made for 30%, 60%, 95%, Pre-Final 100% and the Final PS&E package.

B 18.0 LANDSCAPE & IRRIGATION PLANS

1. DESIGN CONSULTANT shall inventory existing trees, located via GPS survey and catalogue to determine if they are to remain in place, be salvaged for reuse, or demolished. DESIGN CONSULTANT shall identify the tree species, record the caliper, ascertain the general health, and record the viability for transplant. CITY shall provide an existing tree inventory and salvage plan.
2. DESIGN CONSULTANT shall review existing irrigation water meters, valves, mainline, controllers, and other major irrigation infrastructure locations to determine potential for salvage.

Locations shall be derived from as-built and design plans provided by the CITY. DESIGN CONSULTANT shall overlay the existing irrigation location on the paving plan sheets.

3. DESIGN CONSULTANT shall coordinate with the CITY's Landscape Architect to determine the desired types of plant material and irrigation equipment.
4. DESIGN CONSULTANT shall complete electrical distribution system design, calculate power requirements, coordinate service connection point with SRP and prepare plans for up-lighting median landscape features on each leg of Airport Boulevard, Queen Creek, Ocotillo, Chandler Heights and Riggs Road intersections.
5. DESIGN CONSULTANT shall develop 30% Landscape plans showing location and species of proposed new trees, existing trees to remain, and salvaged and relocated trees. Shrub massing shall be shown. Specific shrub species shall be shown at the 60% plan submittal. Plant schedule, landscape notes, and CITY of Chandler standard landscape details shall be shown. Plant quantities shall be shown at the 60% plan submittal.
6. DESIGN CONSULTANT shall develop 30% Irrigation plans showing locations of existing infrastructure to remain in place and new locations of water meter(s), mainline, and valves. Reclaimed water will be used for irrigation.
7. DESIGN CONSULTANT shall provide a table of contents identifying the specifications that shall be used at the 30% plan submittal, and develop an opinion of probable cost for each plan submittal.
8. DESIGN CONSULTANT shall identify individual shrubs and develop irrigation laterals for the 60% plan submittal.
9. DESIGN CONSULTANT shall generate Landscape and Irrigation specifications at the 60% plan stage.
10. DESIGN CONSULTANT shall show the water taps for irrigation equipment on the utility plans or roadway plans, as appropriate. DESIGN CONSULTANT shall provide the complete design and all necessary details for these water taps and power for the irrigation controllers.
11. Bioassay testing, archeology, soil fertility, and other tests to determine plant viability in existing conditions are not considered part of this scope of work.
12. DESIGN CONSULTANT shall prepare calculations, final plans, specifications, quantity determinations and opinion of probable costs. Submittals shall be made for 30%, 60%, 95%, Pre-Final 100% and the Final PS&E package.

B 19.0 STORMWATER POLLUTION PREVENTION PLANS

1. DESIGN CONSULTANT shall develop a Storm Water Pollution Prevention Plan (SWPPP), as required on all projects that will or have the potential to impact any adjacent drainage system, under the provisions of section 402(p) of the Clean Water Act (CWA). The SWPPP shall meet all requirements outlined in the most current Arizona Pollutant Discharge Elimination System (AZPDES) General Permit for Discharge from Construction Activities to Waters of the United States. The SWPPP shall include a completed checklist (<http://www.azdeg.gov/environ/water/permits/download/cswppp.pdf>) that identifies the location of the required SWPPP components outlined in the Construction General Permit. Erosion and Sediment Control Plans meeting the requirements of the CITY shall also be developed and submitted. A copy of the SWPPP and Erosions and Sediment Control Plans shall be provided to the CITY and the Contractor.

2. DESIGN CONSULTANT shall prepare calculations, final plans, specifications, quantity determinations and opinion of probable costs. Submittals shall be made for 60%, 95%, Pre-Final 100% and the Final PS&E package.

B 20.0 WATERLINE, SANITARY SEWER & RECLAIMED WATERLINE PLANS

1. DESIGN CONSULTANT shall design an 8" sanitary sewer lateral, 8" water line and 8" reclaimed water line from the main line to the property line of each undeveloped parcel along McQueen Road within the project limits stated in Item B8.3.
2. DESIGN CONSULTANT shall design reclaimed water line extensions from existing stub outs at the half section and section lines (7 total) to outside the new back of sidewalk along McQueen Road within the project limits stated in Item B8.3.
3. DESIGN CONSULTANT shall include plan sheets, details and specifications for prepare sewer manhole rehabilitation within the project limits stated in Item B8.3. CITY shall complete investigation and analysis to identify manholes to be included and provide locations, details and specifications to DESIGN CONSULTANT for inclusion in the construction documents.
4. DESIGN CONSULTANT shall design new water transmission main in Ocotillo Road alignment within project limits stated in Item B8.3. Design and plans shall be coordinated with CITY's Ocotillo Road Improvement project and design team. Separate plan sheets will be prepared for section of transmission main within Ocotillo Road improvement project designed under separate CITY contract.
5. DESIGN CONSULTANT shall design new effluent reuse transmission main (24") in Chandler Heights Road alignment within project limits stated in Item B8.3.
6. DESIGN CONSULTANT shall prepare and submit Maricopa County Environmental Services (MCESD) permit applications.
7. DESIGN CONSULTANT shall prepare calculations, plans, specifications, quantity determinations and opinion of probable costs. Submittals shall be made for 30%, 60%, 95%, Pre-Final 100% and the Final PS&E package.

B 21.0 GEOTECHNICAL

1. DESIGN CONSULTANT shall conduct a visual geologic reconnaissance of the project area and review available geologic literature and aerial photographs of the project site and shall conduct a visual pavement reconnaissance of the roadway segment in question.
2. DESIGN CONSULTANT obtain CITY of Chandler and Maricopa County right-of-way permits to conduct field work.
3. DESIGN CONSULTANT shall arrange for off-duty police officer, as needed, to be on site during fieldwork.
4. DESIGN CONSULTANT shall establish test locations in the field and arrange for the mark-out of underground utilities through Arizona Blue Stake.
5. DESIGN CONSULTANT shall core the existing pavement of the roadway segment in question at up to four (4) locations to determine the existing structural (asphalt and aggregate base) section.
6. DESIGN CONSULTANT shall drill up to twenty nine (29) hollow-stem auger borings using a truck-mounted two-wheel drive drill rig. Twenty five (25) of the borings will be located within the existing traveling lane or shoulder and will extend up to 10 feet deep. Four (4) of the borings will

be located within the bridge widening areas and will extend up to 40 feet deep. DESIGN CONSULTANT shall collect ring samples and bulk samples for laboratory testing and will be responsible for preparation of field boring logs.

7. DESIGN CONSULTANT shall conduct three field percolation tests at planned retention basin locations. The percolation tests will extend about 3 feet deep and will be conducted in accordance with CITY of Chandler guidelines.
8. DESIGN CONSULTANT shall perform laboratory testing to evaluate the index, compressibility, expansion and chemical characteristics of the subsurface soils encountered.
9. DESIGN CONSULTANT shall prepare a draft geotechnical report, to accompany the 30% submittal, which will contain the results of the field and laboratory analyses, with presentations of the engineering parameters for design of the new pavement and recommendations for construction. In addition, the reports will contain vicinity maps depicting the project limits, plans showing the boring locations, narrative descriptions of the surface and subsurface conditions, laboratory test results and geotechnical recommendations related to excavation characteristics, bedding material, backfilling guidelines, subgrade support for new pavements, pavement design recommendations, pavement rehabilitation recommendations, and the re-use of on-site soils for engineered fill.
10. DESIGN CONSULTANT shall prepare a bridge widening foundation report that will contain the results of the field and laboratory analyses, with presentations of the engineering parameters for design of the bridge widening and recommendations for construction. In addition, the reports will contain vicinity maps depicting the project limits, plans showing the boring locations, narrative descriptions of the surface and subsurface conditions, laboratory test results and geotechnical recommendations related to excavation characteristics, foundation alternatives, bearing pressures, lateral loads soil parameters, and construction considerations.
11. DESIGN CONSULTANT shall incorporate comments received on the draft geotechnical and bridge foundation reports into final geotechnical and bridge foundation reports to accompany the 60% submittal.

B 22.0 PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)

1. DESIGN CONSULTANT shall conduct a Phase I Environmental Site Assessment (ESA) in accordance with ASTM-1527-05 and submit a draft Phase I ESA report inclusive of each property requiring new right-of-way on 25 parcels to the CITY's project manager no more than forty five (45) calendar days after the 30% plan submittal. The objective of this assessment is to evaluate whether past or current activities have resulted in "recognized environmental conditions" as defined in ASTM E 1527-05.
2. DESIGN CONSULTANT shall conduct physical review of site facilities and practices as follows:
 - a. Review readily available maps and reports pertaining to the site. The CITY of Chandler is requested to provide copies of documents in its possession, if applicable.
 - b. Conduct interviews with the property owner and the tenant(s) regarding the environmental status of the site.
 - c. Perform a site reconnaissance to visually identify areas of possibly contaminated surficial soil or surface water, improperly stored hazardous materials, possible sources of polychlorinated biphenyls, and possible risks of contamination from activities at the site and adjacent properties.
 - d. Obtain and review on-site regulatory records (e.g., chemical inventory, permits, waste records, etc.).
 - e. Note utility connections at the site.

3. DESIGN CONSULTANT shall conduct assessment of past and present site usage as follows:

- a. Obtain and review a 50-year chain-of-title report for each parcel to evaluate probable past site uses and their possible impact on the current environmental status of each site.
- b. Review owner information provided by the CITY of Chandler, including ASTM user questionnaire.
- c. Identify previous and existing on-site uses of the site.
- d. Review readily available historical documents dating back to 1940 or first developed use including aerial photographs (site and adjacent properties), Sanborn Insurance Maps (site and available adjacent properties), Building Department Records (site only), and Reverse CITY Directories (site and available adjacent properties), as appropriate.
- e. Review readily available local regulatory agency files for the site. Requests will be made to the County Environmental Services Department, the local Air Pollution Control District, and the local Fire and Building Departments.
- f. Review available regulatory agency databases for the site and for properties located within a specified radius of the site. The purpose of this review is to evaluate the possible environmental impact to the site. Databases will identify locations of known hazardous waste sites, landfills, and leaking underground storage tanks, permitted facilities that utilize underground storage tanks (USTs), and facilities that use, store or dispose of hazardous materials, as well as Declaration of Environmental Uses Restrictions and Voluntary Environmental Mitigation Use Restrictions.
- g. Conduct interviews with current and past owner(s) and tenant(s) of the site (i.e., knowledgeable persons). Interview efforts will include phone contact and/or correspondence if knowledgeable persons are not readily available for personal interviews.

4. DESIGN CONSULTANT shall conduct evaluation of site characteristics as follows:

- a. Review available topographic, soil, geologic, and hydrologic information, including depth to groundwater for indications of surface and subsurface characteristics of the property.
- b. Review wetlands and flood zone information pertaining to the site.
- c. Document manmade features, including USTs, aboveground storage tanks, sumps, surface impoundments, septic tanks, oil/water separators, transformers, water wells, dry wells, and storm drains.
- d. Observe surface drainage, cracking in concrete slabs and foundations, staining, and identify areas of chemical or hazardous material storage.
- e. Discuss site observations as they relate to the possible presence of asbestos-containing materials. Collection of asbestos samples is not included within this scope of work.

5. DESIGN CONSULTANT shall conduct adjacent property evaluation as follows:

- a. Evaluate adjacent properties for the potential to contaminate the subject property. If during the course of the evaluation adjacent properties appear to have the potential to contaminate the subject property, DESIGN CONSULTANT will notify the CITY for approval to perform Tasks 2, 3 and 4 on the subject property.
- b. Conduct interviews with adjacent property owners, if readily available

6. DESIGN CONSULTANT shall prepare Phase 1 ESA Report as follows:

- a. Prepare a Phase I ESA report documenting findings and providing opinions and recommendations regarding possible environmental impacts at the site. Color

photographs and a site diagram will be provided in the report. If archaeological sites are found on the property, the report will evaluate if historic development on the property may have impacted such sites. The report will be initially be submitted in draft form. Following review and comment, three hard copies and an electronic copy (on CD-ROM) of the final Phase I ESA report will be submitted.

7. DESIGN CONSULTANT shall complete Phase 1 ESA updates as follows:

- a. Prepare and submit up to three Phase I ESA Updates (ESAUs) if the subject properties are not acquired within six months of the date of the initial assessment. According to the AAI rule codified in Code of Federal Regulations (40 CFR Part 312), the following components of the all appropriate inquiry must be updated within 180 days prior to the date on which the property is acquired:
 - i. Interviews with past and present owners, operators, and occupants (§312.23);
 - ii. Searches for recorded environmental cleanup liens (§ 312.25);
 - iii. Reviews of federal, tribal, state, and local government records (§ 312.26);
 - iv. Visual inspections of subject properties and of adjoining properties (§ 312.27); and
 - v. The declaration by the environmental professional (§312.21(d)).
- b. DESIGN CONSULTANT shall conduct the following tasks to update the AAI-compliance Phase I ESA conducted on the 25 parcels referenced above:
 - i. Conduct a site visit at each site and attempt to interview past owners and/or occupants of each property. Since past owner/occupants may be unavailable for interview, DESIGN CONSULTANT will attempt to interview current owners or occupants of neighboring properties (knowledgeable persons), regarding the environmental status of each vacant property during the site visit. Interview efforts will include phone contact and/or correspondence if knowledgeable persons are not readily available for personal interviews.
 - ii. Review applicable federal, tribal (if appropriate), state, and local government records.
 - iii. Conduct a search for recorded environmental cleanup liens.
 - iv. Prepare a brief letter report summarizing our findings and recommendations regarding possible environmental impacts at the site. The summary report will include a current declaration by the environmental professional conducting the Phase I ESAU and will be submitted in accordance with the CITY of Chandler prescribed format. Prepare a Phase I ESA report documenting findings and providing opinions and recommendations regarding possible environmental impacts at the site. Color photographs and a site diagram will be provided in the report. If archaeological sites are found on the property, the report will evaluate if historic development on the property may have impacted such sites. The report will be initially be submitted in draft form. Following review and comment, three hard copies and an electronic copy (on CD-ROM) of the final Phase I ESA report will be submitted.

B 23.0 UTILITY LOCATING SERVICES (POTHOLING)

1. DESIGN CONSULTANT shall conduct Subsurface Utility Engineering (SUE) per ASCE publication CI/ASCE 38-02 "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data" at a "Quality Level C".

2. During the 30% design phase, DESIGN CONSULTANT shall develop a suggested pothole list that identifies stationing and offset. DESIGN CONSULTANT will provide the list to utility companies affected by the project, and facilitate coordination of a master pothole list.
3. Prior to completion of the 30% plans, DESIGN CONSULTANT shall provide vacuum excavation potholes (testholes) on existing subsurface utilities at locations identified on the master pothole list. Pertinent pothole data will be presented in spreadsheet format on a standard "Testhole Data Summary" form that includes the depth, horizontal and vertical location, size and material composition of the utility line exposed.
4. DESIGN CONSULTANT shall be responsible for field survey to initially stake the pothole location in white paint or white flagging for Blue Stake notification and as a reference point for the surveyed location of each pothole. DESIGN CONSULTANT shall identify the pothole number, northing, easting and elevation of the staked location. DESIGN CONSULTANT shall measure and record adjustments from the surveyed location to the steel reference pin set above the centerline of each exposed utility.
5. Vacuum excavation potholing will include mobilization, set-up, traffic control (excluding uniformed police officer, special barricading, permit fees or inspections required by any governmental agencies), pavement cut and removal (if any), pavement patch as specified in Streetcut Permit (if any), excavation, backfill and compaction, all information requested, and clean up. DESIGN CONSULTANT shall apply for and obtain CITY of Chandler permit for potholing.
6. For identified water and sewer lines, while the pothole is excavated, representatives from the CITY's Water and Sewer Department and DESIGN CONSULTANT will perform visual inspection of the condition of the lines. Formal recommendations for potential rehabilitation or replacement will be developed by the CITY's Water and Sewer representatives and DESIGN CONSULTANT and provided to the CITY's project manager in memorandum form.

C. CONSTRUCTION DOCUMENTS

DESIGN CONSULTANT shall prepare the construction documents for each design submittal listed in the table below.

Construction Document	30% Stage	RO W	60% Stage	95% Stage	100% Stage	Final PS&E
Face Sheet	P		F	F	S	S
Design Sheet/Index			P	F	S	S
Special Detail Drawings			P	F	S	S
Typical Roadway Sections	P		F	F	S	S
Geometric Configuration	P		F	F	S	S
Paving Plan & Profile Sheets	P		F	F	S	S
Drainage Plans & Details	P		F	F	S	S
Erosion and Sediment Control Plans & Details	P		F	F	S	S
Intersection Plans & Details	P		F	F	S	S
Utility Plan/Profile/Details	P		F	F	S	S
Traffic Signal Plans & Details	P		P	F	S	S
Signing and Pavement Marking Plans & Details	P		P	F	S	S
Lighting Plans & Details	P		P	F	S	S
Landscape Plans & Details	P		P	F	S	S
Roadway Cross Sections	P		F	F	S	S

Quantity & Opinion of probable cost	P		P	F	F	F
Special Provisions	P		P	F	S	S
Drainage Report	P	F	S			
Geotechnical Report	S					
Stormwater Pollution Prevention Plan					F	F
Environmental Site Assessment Report		S				
Right-of-Way Legal Descriptions		S				
Right-of-Way Strip Map	F	F	F	F	F	F
Utility Strip Map	P	P	F	F	F	F

P – Denotes Preliminary, F – Denotes Final, S – Denotes Sealed

C 1.0 ALIGNMENT (15%) PLANS

- DESIGN CONSULTANT shall submit to the CITY three (3) full size sets of alignment plans and three (3) copies of the right-of-way strip map. In addition, DESIGN CONSULTANT shall send one (1) full size set of alignment plans, along with a matrix detailing all identified utility conflicts to each utility company affected by the project.

C 2.0 PRELIMINARY (30%) PLANS

- DESIGN CONSULTANT shall submit to the CITY eight (8) full size sets of construction plans, eight (8) half size sets of construction plans, five (5) copies of the draft drainage report, five (5) copies of the draft geotechnical report, two (2) copies of the "Testhole Data Summary Sheet", five (5) copies of the construction opinion of probable cost, eight (8) copies of the outline special provisions, two (2) copies of the final right-of-way strip map, two (2) copies of the utility strip map, and plan checklists. In addition, DESIGN CONSULTANT shall send two (2) full size sets of construction plans, along with conflict letters and a copy of the "Testhole Data Summary Sheet" to each utility company affected by the project.
- DESIGN CONSULTANT shall submit a CD containing complete improvement base files in AutoCAD .DWG format, and AutoCAD .DWF (Design Web Format) exports of each plan sheet or scanned .TIF images of each plan sheet.

C 3.0 RIGHT-OF-WAY SUBMITTAL

- DESIGN CONSULTANT shall submit two (2) copies of the final drainage reports, the final legal descriptions for acquisitions, drainage easements, sight vision easements, utility easements, and TCEs, two (2) copies of the final right-of-way strip map, two (2) copies of the utility strip map, and one (1) copy of the draft Phase I Environmental Assessment.

C 4.0 PRELIMINARY (60%) PLANS

- DESIGN CONSULTANT shall incorporate any changes, corrections and/or additions as a result of the preliminary plan review. DESIGN CONSULTANT shall submit to the CITY 30% redlines, eight (8) copies of 30% plan comments and annotated comment sheet, eight (8) full size sets of construction plans, eight (8) half-size sets of construction plans, four (4) copies of the sealed drainage report, five (5) copies of the final geotechnical report, five (5) copies of the construction opinion of probable cost, six (6) copies of the technical special provisions, plan checklists, one (1) copy of the final right-of-way strip map, two (2) copies of the utility strip map, and two (2) copies of the final Phase I ESA. In addition, DESIGN CONSULTANT shall send two (2) full size sets of construction plans, along with conflict letters to each utility company affected by the project.

2. DESIGN CONSULTANT shall submit a CD containing complete improvement base files in AutoCAD .DWG format, and AutoCAD .DWF (Design Web Format) exports of each plan sheet or scanned .TIF images of each plan sheet.

C 5.0 PRE-FINAL (95%) PLANS

1. DESIGN CONSULTANT shall incorporate any changes, corrections and/or additions as a result of the preliminary plan review. DESIGN CONSULTANT shall submit to the CITY 60% redlines, eight (8) copies of 60% plan comments and annotated comment sheets, eight (8) full size sets of construction plans, eight (8) half size sets of construction plans, five (5) copies of the construction opinion of probable cost, six (6) copies of the final technical special provisions, plan checklists, one (1) copy of the final right-of-way strip map, and two (2) copies of the utility strip map. In addition, DESIGN CONSULTANT shall send two (2) full size sets of construction plans, along with conflict letters to each utility company affected by the project.
2. DESIGN CONSULTANT shall submit a CD containing complete improvement base files in AutoCAD .DWG format, and AutoCAD .DWF (Design Web Format) exports of each plan sheet or scanned .TIF images of each plan sheet.

C 6.0 PRE-FINAL (100%) CONSTRUCTION DOCUMENTS

1. DESIGN CONSULTANT shall incorporate any changes, corrections and/or additions as a result of the pre-final plan review. DESIGN CONSULTANT shall submit to the CITY 95% redlines, one (1) copy of 95% plan comments and annotated comment sheets, one (1) sealed set of specifications including technical special provisions, one (1) full size set of sealed construction plans on reproducible 4 mil Mylar with cover sheet signed by ADEQ or Maricopa Environmental Services, if applicable, one (1) copy of the final construction opinion of probable cost and bid schedule, one (1) copy of the final right-of-way strip map, and two (2) copies of the final utility strip map.
2. DESIGN CONSULTANT shall submit a CD containing complete improvement base files in AutoCAD .DWG format, and AutoCAD .DWF (Design Web Format) exports of each plan sheet or scanned .TIF images of each plan sheet.

C 7.0 FINAL PS&E CONSTRUCTION DOCUMENTS

1. DESIGN CONSULTANT shall incorporate any changes, corrections and/or additions as a result of the pre-final plan review. DESIGN CONSULTANT shall submit to the CITY 100% redlines, one (1) copy of 100% plan comments and annotated comment sheets, one (1) sealed set of specifications including technical special provisions, one (1) full size set of sealed construction plans on reproducible 4 mil Mylar with cover sheet signed by ADEQ or Maricopa Environmental Services, if applicable, one (1) copy of the final construction opinion of probable cost and bid schedule, one (1) copy of the final right-of-way strip map, and two (2) copies of the final utility strip map.
2. DESIGN CONSULTANT shall submit a CD containing complete improvement base files in AutoCAD .DWG format, and AutoCAD .DWF (Design Web Format) exports of each plan sheet or scanned .TIF images of each plan sheet.

D. POST DESIGN SERVICES

1. DESIGN CONSULTANT shall actively participate in GMP negotiations between CITY and CMAR contractor after 95%. DESIGN CONSULTANT participation shall include opinions

regarding unit cost. DESIGN CONSULTANT shall give a brief overview of the project and address constructability review comments made by CMAR related to the construction documents. DESIGN CONSULTANT shall attend up to three meetings during the GMP negotiations as requested by the CITY.

2. DESIGN CONSULTANT shall assist the CITY during construction by performing shop drawing reviews, responding to answering CMAR Requests for Information (RFIs) and attending construction meeting (as required). Construction meeting attendance is anticipated to be each weekly meeting for the first six months, then every other week for the next three months and then once each month for the final 3 months of construction schedule.
3. Construction management and full time observation / inspection are not included in this scope of work. DESIGN CONSULTANT scope includes construction project review and observation for the remaining part of the work day to become familiar with construction progress, techniques, conformance to plans and redline progress.
4. DESIGN CONSULTANT shall prepare as-built drawings from CMAR redlined plans after the construction is complete.

E. PROJECT SCHEDULE

The following schedule was developed based on past experience and is indexed to the notice to proceed date. It has been assumed that all agencies have a three week review period.

Notice to Proceed	0
Data Collection	NTP + 6 weeks
Public Meeting #1	NTP + 6 weeks
Submit H&V (15%) for Council Approval	NTP + 8 weeks
Submit 30% Plans	NTP + 20 weeks
Public Meeting #2	NTP + 22 weeks
Submit ROW Acquisition Documents	NTP + 24 weeks
Submit 60% Plans	NTP + 30 weeks
Public Meeting #3	NTP + 32 weeks
Submit 95% Plans	NTP + 52 weeks
Submit Final Plans (100%)	NTP + 60 weeks
Submit PS&E	NTP + 64 weeks
Public Meeting #4	NTP + 66 weeks

1. DESIGN CONSULTANT shall adhere to the production schedule established for the project and such schedule may not be modified or deviated from without written consent by the CITY. DESIGN CONSULTANT shall revise and submit for review an updated schedule whenever completion of the project design, or any of the partial completion points listed in the schedule are delayed by one week or more. Such adjusted schedule shall include a written explanation stating the reasons for the schedule change and a plan for getting back on schedule. DESIGN CONSULTANT shall take all reasonable action necessary to get the project back on schedule and CITY shall cooperate to assist DESIGN CONSULTANT.

F. QUALITY CONTROL

DESIGN CONSULTANT shall institute and comply with the DESIGN CONSULTANT'S Quality Control Plan established for the project.

**EXHIBIT A-2
DESIGN TEAM AND THEIR ASSIGNMENTS**

Design Consultant's design team and their assignments are as follows:

Civil Engineering

Ritoch-Powell & Associates
Contact: Frank Henderson

Landscape Design Services

J2 Engineering & Environmental Design
Contact: Jeffrey Engelmann

Geotechnical Investigation and Environmental Site Assessments

Ninyo & Moore
Contact: Steven Nowaczyk

Structural Engineer

TYLIN International
Contact: Daniel Heller

Roadway Lighting and Traffic Signal

SWTE (Southwest Traffic Engineering)
Contact: John Willett

Aerial mapping

Cooper Aerial
Contact: Chris Seck

**EXHIBIT B
FEE SCHEDULE & HOURLY RATES**

TRANSPORTATION				
<u>CLASSIFICATION</u>	<u>MAN HOURS</u>	<u>LABOR RATES</u>	<u>BILLABLE RATES</u>	<u>LABOR COSTS</u>
Project Principal	32	\$77.00	\$204.13	\$2,464.00
Project Manager	855	\$56.00	\$148.46	\$47,880.00
Senior PE/RLS	2,159	\$43.00	\$113.99	\$92,837.00
Design Engineer	2,525	\$30.00	\$79.53	\$75,750.00
CADD Designer	3,606	\$25.00	\$66.28	\$90,150.00
Survey Crew	300	\$59.00	\$156.41	\$17,700.00
Clerical	96	\$21.00	\$55.67	\$2,016.00
Total Hours	9,573			
			Total Direct Labor	\$328,797.00
Overhead Rate	141%		Total Labor with Overhead	\$463,604.00
			Net Fee (Subtotal Labor X 10% Fixed Fee)	\$79,240.00
			Subtotal Transportation	\$871,641.00

MUNICIPAL UTILITIES				
<u>CLASSIFICATION</u>	<u>MAN HOURS</u>	<u>LABOR RATES</u>	<u>BILLABLE RATES</u>	<u>LABOR COSTS</u>
Project Principal	0	\$77.00	\$204.13	\$0.00
Project Manager	17	\$56.00	\$148.46	\$952.00
Senior PE/RLS	57	\$43.00	\$113.99	\$2,451.00
Design Engineer	188	\$30.00	\$79.53	\$5,640.00
CADD Designer	240	\$25.00	\$66.28	\$6,000.00
Survey Crew	0	\$59.00	\$156.41	\$0.00
Clerical	0	\$21.00	\$55.67	\$0.00
Total Hours	502			
			Total Direct Labor	\$15,043.00
Overhead Rate	141%		Total Labor with Overhead	\$21,211.00
			Net Fee (Subtotal Labor X 10% Fixed Fee)	\$3,625.00
			Subtotal Municipal Utilities	\$39,879.00

DIRECT AND OUTSIDE EXPENSES:

<u>Description</u>	<u>Unit</u>	<u>Unit Rate</u>	<u>Quantity</u>	<u>Total</u>
Vehicle Mileage	Miles	\$0.48	3,465	\$1,663.00
Survey Vehicle Mileage	Miles	\$0.48	825	\$396.00
Copying (8-1/2" x 11")	Each	\$0.06	18,000	\$1,080.00
Copying (12" x 18")	Each	\$0.18	21,184	\$3,813.12
Copying (24" x 36")	Each	\$0.36	21,184	\$7,626.24
Printing (12" x 18")	Each	\$0.52	1,864	\$969.28
Printing (24" x 36") bond	Each	\$6.00	1,864	\$11,184.00
Printing (24" x 36") mylar	Each	\$18.00	466	\$8,388.00
Deliveries/Postage	Each	\$3.00	30	\$90.00
GPS Rental	Each/Day	\$250.00	15	\$3,750.00
Subtotal Direct and Outside Expenses				\$38,959.64

Fee			Subtotal Transportation Labor	\$871,641.00
Subconsultant	Task	Fee	Subtotal Municipal Utilities Labor	\$39,879.00
Cooper Aerial	Aerial Survey	\$15,950.00		
J2 Engineering & Environ.	Landscaping	\$181,880.00	Subtotal Expenses	\$38,959.64
Ninyo & Moore	Environmental	\$56,600.00		
Ninyo & Moore	Geotechnical	\$48,420.00	Subtotal Subconsultants	\$659,661.00
Southwest Traffic Eng.	Traffic	\$183,718.00		
TBE	Potholing	\$20,000.00		
TYLIN	Structural	\$153,093.00		
Subtotal Subconsultants \$659,661.00			Subtotal Fee	\$1,610,140.64

ALLOWANCES				
<u>Description</u>	<u>Unit</u>	<u>Unit Rate</u>	<u>Quantity</u>	<u>Total</u>
Parcel Legal Descriptions	Each	\$1,100.00	10	\$11,000.00
Potholing	Each	\$525.00	150	\$78,750.00
Subtotal Allowances				\$ 89,750.00

TOTAL FEE + ALLOWANCES \$ 1,699,891.00