



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CA07-168**

1. Agenda Item Number:

22

2. Council Meeting Date:
January 25, 2007

TO: MAYOR & COUNCIL

3. Date Prepared: January 8, 2007

THROUGH: CITY MANAGER

4. Requesting Department: Public Works

5. SUBJECT: Award an engineering design services contract to Tristar Engineering and Management, Inc. for the Alma School Road and Ray Road Intersection Improvements project, Project No. ST0704-201, in an amount not to exceed \$548,951.

6. RECOMMENDATION: Staff recommends that Council award an engineering design services contract to Tristar Engineering and Management, Inc. for the Alma School Road and Ray Road Intersection Improvements project, Project No. ST0704-201, in an amount not to exceed \$548,951.

7. BACKGROUND/DISCUSSION: There are numerous arterial street intersections within the City, for which peak period traffic demands exceed the volume that can be handled safely and efficiently. This results in a delay for motorists of two or more traffic signal cycles to allow passage through the intersection. This project, when completed, will increase the capacity of the intersection, resulting in reduced traffic delays and improved air quality.

The Alma School Road and Ray Road intersection will be improved by the addition of dual left turn lanes, a third auxiliary through lane, and right turn lanes for all directions of travel, paved concrete medians, street lighting, storm drainage, and landscaping. Construction is scheduled to begin in summer of 2008.

8. EVALUATION: The City selection process was developed in accordance with the state law for selecting design services. Six Statements of Qualifications were received from qualified firms on October 10, 2006. The selection committee included the following members:

- Paul Young, P.E., Senior Engineer
- William Fay, P.E., Public Works Engineer
- Joshua Plumb, Engineer Assistant/Project Manager
- Jeff Kramer, P.E., Assistant Public Works Director/Transportation and Operations
- Bob Carter, Registered Contractor/Resident

The committee conducted interviews with Kirkham Michael, Tristar Engineering and Management, Inc., and Sunrise Engineering. Tristar Engineering and Management, Inc. was selected based on qualifications, design capability, current workload, and experience, and is recommended for approval for this contract.

9. FINANCIAL IMPLICATIONS:

Cost: \$548,951
Savings: N/A
Long Term Costs: N/A

Fund Source:

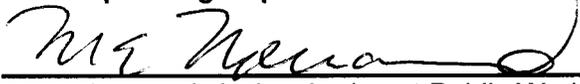
<u>Acct. No.:</u>	<u>Fund Name:</u>	<u>Program Name:</u>	<u>CIP Funded:</u>	<u>Amount:</u>
411.3310.0000.6517.7ST315	GO Bonds-Streets	Alma School/Ray	FY06/07	\$523,892
605.3820.0000.6718.6WA110	Water User Fees	System Upgrades During Street Repairs	FY05/06	\$ 25,059

10. PROPOSED MOTION: Move that Council award an engineering design services contract to Tristar Engineering and Management, Inc. for the Alma School Road and Ray Road Intersection Improvements project, Project No. ST0704-201, in an amount not to exceed \$548,951, and authorize the Mayor to sign the contract documents.

ATTACHMENTS: Location Map

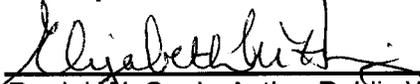
APPROVALS

11. Requesting Department



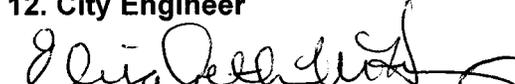
Mike Normand, Acting Assistant Public Works
Director/Transportation and Operations

13. Department Head

 ACTING FOR

Daniel W. Cook, Acting Public Works Director

12. City Engineer



Elizabeth M. Huning, Assistant Public Works
Director/City Engineer

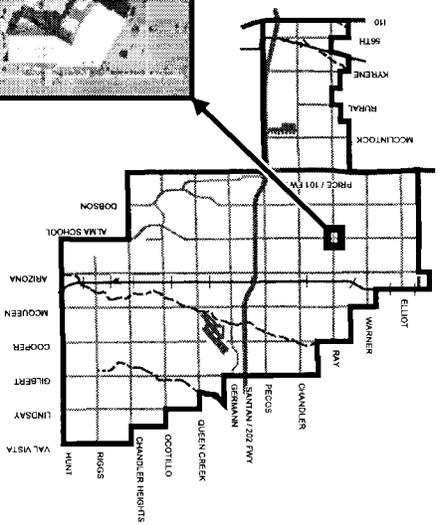
14. City Manager



W. Mark Pentz



ALMA SCHOOL RD. AND RAY RD. IMPROVEMENTS PROJECT NO. ST0704-201



MEMO NO. CA07-168

LEGEND
 INTERSECTION IMPROVEMENTS



AGREEMENT FOR DESIGN CONSULTANT
SERVICES FOR CM@Risk PROJECT

PROJECT TITLE: **Alma School Road and Ray Road Intersection Improvements**

PROJECT NO: **ST0704-201**

This Agreement is made and entered into by and between the City of Chandler, Arizona, a municipal Corporation, hereinafter called the CITY, and **Tristar Engineering and Management, Inc. a Corporation of the State of Arizona**, 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 Project known as the **Alma School Road and Ray Road Intersection Improvements** consists of improving the intersection of Alma School Road and Ray Road to a six-lane roadway, including dual left turn lanes, dedicated right turn lanes, and bus pullouts. Improvements include raised medians; curb and gutter; vertical curb; sidewalk; drainage features; traffic signals; street lighting; irrigation and landscaping; utility relocations; and right of way coordination.

The Project is more specifically described in Exhibit A-1 attached hereto and incorporated herein by reference.

2. **DEFINITIONS:** 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 **Five Hundred Forty Eight Thousand Nine Hundred Fifty One** dollars (**\$548,951**) 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 or bidding within **308** calendar days of the date indicated on the Notice to Proceed.
- B. The Design Services for preparation of design and construction document period will be approximately **308** days. Following the "Notice To Proceed" for construction of the Project, DESIGN CONSULTANT shall perform the construction administration portion of this contract for approximately **270** days.
- C. DESIGN CONSULTANT shall prepare and deliver to CITY record documents within **30** days of the date of receipt of the red line drawings from the CM@Risk.
- D. 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 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. STANDARDS 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 insure 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 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. 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%

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, 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. 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.

16. 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.

17. 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.

18. 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.

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

20. 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.

21. 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 _____, 2007.

CITY OF CHANDLER

DESIGN CONSULTANT

MAYOR Date

By: 
Signature

ADDRESS FOR NOTICE

ADDRESS FOR NOTICE

City of Chandler
P.O. Box 4008, Mail Stop 407
Chandler, AZ 85244-4008
480-782-3307

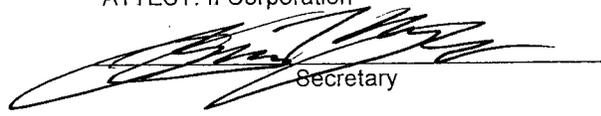
10625 N. 25th Ave, #103
Phoenix, AZ 85029

Phone: (602) 288-5594

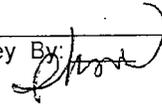
ATTEST:

ATTEST: If Corporation

City Clerk


Secretary

APPROVED AS TO FORM:

City Attorney By: 

SEAL

ATTACHMENT A

DETAILED DESCRIPTION OF THE PROJECT AND DESIGN CONSULTANT SCOPE OF SERVICES

PROJECT TITLE: Alma School Road and Ray Road Intersection Improvements
PROJECT NO.: ST0704-201
Chandler, AZ.

A. BACKGROUND

A 1.0 The Alma School Road and Ray Road Intersection Improvement will use the Construction Manager at Risk (CM@R) method of delivery and includes:

- Improvement of the intersection to six (6) thru lanes, dual left turn lanes, and dedicated right turn lanes.
- Storm water drainage
- Curb and gutter
- Sidewalks
- Traffic signal & street light relocations
- Utility coordination
- Investigation of the condition of existing water and sewer lines

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
 - 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 specifically identify utility conflicts, with input from utility companies, which might affect alignment or grade and recommend alignment alternatives.
5. Prior to the 30% plan submittal, DESIGN CONSULTANT shall submit title reports for affected properties to SRP Water Users and SRP Power.
6. 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 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 bid documents.
7. 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.

8. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. DESIGN CONSULTANT shall review all utility plans for constructability within the project limits.
15. 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 schedule 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, including Action Items to be reviewed and updated at each Progress Meeting.

B 5.0 PUBLIC MEETINGS

1. DESIGN CONSULTANT shall prepare for and participate in three (3) 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.
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 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 progress reports; perform regular budget and schedule monitoring; coordinate with utilities, CITY representatives and other project stakeholders; and manage sub-consultants.

B 8.0 DESIGN SURVEY

DESIGN CONSULTANT shall perform all project survey as detailed below:

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 perform a full topographic survey of all existing features including but not limited to curb and gutter, median curb, catch basins, scuppers, 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. The survey limits on Alma School Road shall be 1500 feet north and south of the Ray Road centerline.
4. The survey limits of Ray Road shall be 1500 feet east and west of the Alma School Road centerline.
5. DESIGN CONSULTANT shall take pavement elevations at the centerline of Ray Road at 50 foot intervals for 1500 feet east and west of Alma School Road.
6. DESIGN CONSULTANT shall take pavement elevations at the centerline of Alma School Road at 50 foot intervals for 1500 feet north and south of Ray Road.
7. 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 foot intervals beyond the edge of pavement or back of curb to a distance 100 feet from the centerline of Ray Road and Alma School Road.
8. DESIGN CONSULTANT shall take elevations along the centerline and edges of each driveway beginning at the gutter flow line for a distance of 20 feet. DESIGN CONSULTANT shall take ground shots at all grade breaks along each driveway centerline and edges.
9. DESIGN CONSULTANT shall take elevations at the inverts of all catch basins, manholes, pipes and all water valve nuts within the project limits.

10. DESIGN CONSULTANT shall establish benchmarks at 500 feet intervals along Ray Road and Alma School Road for the length of the project.
11. DESIGN CONSULTANT shall provide a sketch showing each benchmark with a minimum of 3 ties to features that will not be disturbed by construction.
12. 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.

B 9.0 RIGHT-OF-WAY SURVEY

1. At 30% 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 Alma School Road and Ray Road within the project limits. The right-of-way strip map is for the purpose of identifying property boundaries to prepare legal descriptions and exhibits for property acquisition, permanent drainage easements, temporary construction 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 the acquisition of new right-of-way, temporary construction easements, drainage tracts, and drainage easements. 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 fifty (50) written legal descriptions and exhibits, or as many as needed, for the acquisition of permanent right of way. If more than 50 legal descriptions are necessary for right of way acquisition, the cost for such additional work will be paid from the allowance included in the Contract Price.
 - b. The preparation of five (5) written legal descriptions and exhibits, or as many as needed for permanent drainage easements. If more than 5 legal descriptions are necessary for drainage easements, the cost for such additional work will be paid from the allowance included in the Contract Price. Legal descriptions and exhibits shall be accompanied by volumetric calculations, and shall define that portion of the retention which is required to be retained by the subject property and that portion which is retained for adjacent properties.
 - c. The preparation of written legal descriptions and exhibits, as needed, for temporary construction easements. The cost for such work will be paid from the allowance included in the Contract Price.

- d. The preparation of written legal descriptions and exhibits, as needed, for utility easements. The cost for such 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, 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 twice, at the direction of the CITY's Project Manager.

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
 - Standard Sections Sheet
 - Paving Plans/Profiles (1"=20'H/1"=2' V) – See Task 11 for additional information
 - Drainage Plans – See Task 12 for additional information
 - Striping and Signing Plans (1"=40') – See Task 13 for additional information
 - Traffic Signal Plans – See Task 14 for additional information
 - Lighting Plans – See Task 15 for additional information
 - Utility Relocation Plans (if required, by others)
 - Landscape and Irrigation Plans – See Task 16 for additional information
 - Storm Water Pollution Plans – see Task 17 for additional information
 - Waterline Plans (1"=20' H/1"=2' V) – See Task 19 for additional information (contingency)
 - Sewer Plans (1"=20' H/1"=2' V) – See Task 19 for additional information (contingency)
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 cost estimates 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 redline comments with each 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 and Paving Plan & Profile Sheets using design right-of-way needs for a major arterial (City of Chandler Standard Detail C-203.)
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.

B 12.0 DRAINAGE PLANS

1. DESIGN CONSULTANT shall prepare a drainage analysis to define the new runoff expected as a result of the Alma School Road and Ray Road construction and recommend the drainage improvements required in accordance with City Standards.
2. DESIGN CONSULTANT shall prepare drainage calculations for all undeveloped areas adjacent to the project within the project limits.
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.
4. DESIGN CONSULTANT shall verify that the existing basins constructed along Alma School Road and Ray Road within the project limits 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.

5. DESIGN CONSULTANT shall incorporate comments received from the Draft Drainage Report into a Final Drainage Report between the 30% and 60% plan submittals.
6. DESIGN CONSULTANT shall develop drainage plans to include plan, profile and detail sheets. DESIGN CONSULTANT shall prepare drainage special provisions as needed for this project.
7. DESIGN CONSULTANT shall provide volumetric calculations for drainage easements required for this project. Volumetric calculations shall accompany the drainage easement legal descriptions and exhibits.

B 13.0 TRAFFIC STUDY

1. DESIGN CONSULTANT shall perform a traffic analysis of the Alma School Road / Ray Road intersection to determine the appropriate roadway configuration.
2. DESIGN CONSULTANT shall perform analyses for up to three intersection configurations.
3. DESIGN CONSULTANT shall prepare a written report, complete with tables and graphics that summarize the methodology, findings and conclusions of the analysis.

B 14.0 TRAFFIC SIGNAL PLANS

4. 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.
5. DESIGN CONSULTANT shall coordinate traffic signal design with Salt River Project (SRP) to define a power source to serve the new traffic signals.
6. DESIGN CONSULTANT shall modify the traffic signal at the intersection of Alma School Road and Ray Road in accordance with applicable City of Chandler Traffic Signal Standards and Specifications.
7. DESIGN CONSULTANT shall design the layout of the signal pole and controller locations for intersection described above at the 30% plan stage. DESIGN CONSULTANT shall finalize the traffic signal plans at the 60% plan stage. The Signal Design Plans shall be produced at a 1" = 20' scale and include the following sheets:
 - a. General Signal Layout Sheet
 - b. Signal Interconnect/Fiber Optic Layout Plan Sheet
 - c. Traffic Signal Quantity and Detail Sheet including Phasing Diagram, Cameras and Wiring Diagram
8. DESIGN CONSULTANT shall design the missing sections or extensions of fiber interconnect within the project limits along Alma School Road and Ray Road.

B 14.0 STRIPING AND SIGNING PLANS

1. DESIGN CONSULTANT shall develop preliminary traffic signing and striping plans for this project at the 30% plan stage. 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 and shall include the following sheets:
 - a. General Striping Notes sheet (including a striping quantities)
 - b. General Signing Summary and Notes
 - c. Striping and Signing plan sheets

B 16.0 STREET LIGHT PLANS

1. DESIGN CONSULTANT shall design street lighting along Alma School Road and Ray Road within the project limits in accordance with applicable City of Chandler Street Light Standards and Specifications.
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.
3. DESIGN CONSULTANT shall coordinate lighting design with Salt River Project (SRP) to verify the power source to serve the lighting system.
4. DESIGN CONSULTANT shall provide a computer generated point-to-point foot-candle grid for Alma School Road and Ray Road and submit documents to CITY for approval.
5. DESIGN CONSULTANT shall prepare a plan view with new pole locations only at the 30% plan stage. DESIGN CONSULTANT shall finalize the pole locations prior to the right-of-way submittal (between the 30% and 60% plan stages) to facilitate the right-of-way acquisition process.
6. DESIGN CONSULTANT shall prepare complete street lighting plans including new and relocated pole locations, service locations, and circuiting, at the 60% 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. DESIGN CONSULTANT shall include digital photos of existing streetlights in the photo log.
7. DESIGN CONSULTANT shall provide detail drawings for the following:
 - a. Pole details (Pole illustration, pole schedule and general notes)
 - b. Foundation details
 - c. Miscellaneous details (Pole grounding, connectors)
 - d. SRP designed electrical details (Control center, wiring schematic, cable schedule) shall be included in the plan submittal(s).

B 17.0 LANDSCAPE & IRRIGATION PLANS

1. DESIGN CONSULTANT shall inventory existing trees, locate 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. DESIGN CONSULTANT shall provide an existing tree inventory and salvage plan for the CITY'S review and approval.
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 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 90% plan submittal.
5. 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. If available, reclaimed water will be used for irrigation.
6. 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.
7. DESIGN CONSULTANT shall identify individual shrubs and develop irrigation laterals for the 60% plan submittal.
8. DESIGN CONSULTANT shall generate Landscape and Irrigation specifications at the 60% plan stage.
9. 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.
10. Bioassay testing, archeology, soil fertility, and other tests to determine plant viability in existing conditions are not considered part of this scope of work.

B 18.0 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) and regulations 40 CFR 121, to secure a cost for the Arizona Pollutant Discharge Elimination System (AZPDES) permit and to ensure that the contractor is held responsible for this effort.

B 19.0 WATERLINE AND SANITARY SEWER PLANS

1. If it is deemed necessary from the results of the visual inspection, DESIGN CONSULTANT shall prepare water and sewer plans/profiles for water lines and sewer lines that need rehabilitation or replacement within the project limits. These will be incorporated into the roadway plan set. (contingency)

B 20.0 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 shall establish test locations in the field and arrange for the mark-out of underground utilities through Arizona Blue Stake.
3. 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.
4. DESIGN CONSULTANT shall drill eight (8) hollow-stem auger borings, two on each leg of the intersection, using a truck-mounted two-wheel drive drill rig. These borings will be located within the existing roadway or in the shoulder whichever is more appropriate and will extend up to 20 feet deep. DESIGN CONSULTANT shall collect ring samples and bulk samples for laboratory testing and will be responsible for preparation of field boring logs.
5. DESIGN CONSULTANT shall perform laboratory testing to evaluate the index, compressibility, expansion and chemical characteristics of the subsurface soils encountered.
6. 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.
7. DESIGN CONSULTANT shall incorporate comments received on the draft geotechnical report into a final geotechnical report to accompany the 60% submittal.

B 21.0 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 to the CITY's project manager no more than forty-five (45) calendar days after the 30% plan submittal. Phase I ESA reports will document findings and provide opinions and recommendations regarding possible environmental impacts at the sites. DESIGN CONSULTANT shall provide color photographs and figures in each report.
2. Following review by the CITY's Environmental Program Specialist, DESIGN CONSULTANT shall review the CITY's comments and address those comments in a final Phase I ESA.
3. DESIGN CONSULTANT shall review lease records for the sites, to evaluate probable past site uses and their possible impact on the current environmental status of the sites.
4. DESIGN CONSULTANT shall review readily available maps and reports pertaining to the sites.
5. DESIGN CONSULTANT shall obtain a chain-of-title report for ownership back to 1940 or earlier for each property to be acquired.
6. DESIGN CONSULTANT shall conduct interviews with the property representatives regarding the environmental status of the sites.
7. DESIGN CONSULTANT shall 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 (PCBs), and possible risks of contamination from activities at the sites and adjacent properties.
8. DESIGN CONSULTANT shall review readily available local regulatory agency files for the sites and shall make requests to the County Environmental Services Department and the local Fire and Building Departments.
9. DESIGN CONSULTANT shall review available regulatory agency databases for the sites and for properties located within a specified radius of the sites 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, and facilities that use, store or dispose of hazardous materials.
10. DESIGN CONSULTANT shall review readily available historical documents, 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.
11. DESIGN CONSULTANT shall review Arizona Department of Environmental Quality databases for deed restrictions such as Declaration of Environmental Use Restrictions and Voluntary Environmental Mitigation Use Restrictions.

12. DESIGN CONSULTANT shall discuss site observations as they relate to the possible presence of asbestos-containing materials. DESIGN CONSULTANT is not required to collect asbestos samples within this scope of work.
13. Visual observations made by DESIGN CONSULTANT shall be limited to the surface area of the property and contiguous sites. Subsurface explorations, soil sampling, surface and groundwater sampling, and chemical analyses are not included in this proposal. The reports will be based solely on information gained from direct observation, personal interviews, and examinations of regulatory records.
14. DESIGN CONSULTANT shall update the Phase I ESA reports if the properties are not acquired within six months of the date of the assessment.

B 22.0 UTILITY LOCATING SERVICES (POT-HOLING)

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 provide thirty (30) potholes. If more than 30 potholes are necessary to adequately identify underground utilities, the cost for such additional work will be paid from the allowance included in the Contract Price.
5. 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.
6. 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.
7. 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

C 1.0 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
Face Sheet	P		F	F	S
Design Sheet/Index			P	F	S
Special Detail Drawings			P	F	S
Typical Roadway Sections	P		F	F	S
Geometric Configuration	P		F	F	S
Paving Plan & Profile Sheets	P		F	F	S
Drainage Plans & Details	P		F	F	S
Intersection Plans & Details	P		F	F	S
Utility Plan/Profile/Details	P		F	F	S
Traffic Signal Plans & Details	P		P	F	S
Signing and Pavement Marking Plans & Details	P		P	F	S
Lighting Plans & Details	P		P	F	S
Landscape Plans & Details			P	F	S
Roadway Cross Sections	P		F	F	S
Quantity & Cost Estimate	P		P	F	F
Special Provisions	P		P	F	S
Drainage Report	P	F	S		
Geotechnical Report	P		F	S	
Environmental Site Assessment Report		S			
Right of Way Legal Descriptions		S			
Right of Way Strip Map	F	F	F	F	F
Utility Strip Map	P	P	F	F	F

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

C 2.0 PRELIMINARY (30%) PLANS

- DESIGN CONSULANT shall submit the following to the CITY:

Item	Number Of Copies
Full Size Sets of Construction Plans	8
Half Size Sets of Construction Plans	8
Draft Drainage Report	5
Draft Geotechnical Report	5
"Test hole Data Summary Sheet"	2
Construction Cost Estimate	10

Outline Special Provisions	10
Right-of-Way Strip Map	2
Utility Strip Map	2
Plan Checklists	1

DESIGN CONSULTANT shall submit the following to affected utility companies:

Item	Number Of Copies
Full Size Sets of Construction Plans	2
"Test hole Data Summary Sheet"	2

- DESIGN CONSULTANT shall submit a CD containing complete improvement base files in AutoCAD .dwg format and AutoCAD .dwt format of each plan sheet or scanned .tif images of each plan sheet

C 3.0 RIGHT-OF-WAY SUBMITTAL

- DESIGN CONSULTANT shall submit the following to the CITY:

Item	Number Of Copies
Final Drainage Report	5
Final Legal Descriptions for Acquisitions, Drainage Easements, Utility Easements, TCEs	1
Right-of-Way Strip map	2
Utility Strip Map	2
Draft Phase I ESA	1

C 4.0 PRELIMINARY (60%) PLANS

- DESIGN CONSULANT shall incorporate any changes, corrections and/or additions as a result of the 30% plan review.
- DESIGN CONSULANT shall submit the following to the CITY:

Item	Number Of Copies
30% Redline Plans	Originals
30% Plan Comments & Annotated Comment Sheet	10
Full Size Sets of Construction Plans	8
Half Size Sets of Construction Plans	8
Sealed Drainage Report	1
Final Geotechnical Report	5
Construction Cost Estimate	6
Technical Special Provisions	6

Plan checklist	1
Right-of-Way Strip Map	1
Utility Strip Map	2
Final Phase I ESA	3

3. DESIGN CONSULTANT shall submit the following to affected utility companies:

Item	Number Of Copies
Full Size Sets of Construction Plans	2
Conflict Letters	1

4. DESIGN CONSULTANT shall submit a CD containing complete improvement base files in AutoCAD .dwg format and AutoCAD .dwt format of each plan sheet or scanned .tiff 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 60% plan review.
2. DESIGN CONSULTANT shall submit the following to the CITY:

Item	Number Of Copies
60% Redline Plans	Originals
60% Plan Comments & Annotated Comment Sheet	10
Full Size Sets of Construction Plans	8
Half Size Sets of Construction Plans	8
Construction Cost Estimate	6
Final Technical Special Provisions	6
Plan checklist	1
Final Right-of-Way Strip Map	1
Utility Strip Map	2
Final Phase I ESA	3

3. DESIGN CONSULTANT shall submit the following to affected utility companies:

Item	Number Of Copies
Full Size Sets of Construction Plans	2
Conflict Letters	1

4. DESIGN CONSULTANT shall submit a CD containing complete improvement base files in AutoCAD .dwg format and AutoCAD .dwt format of each plan sheet or scanned .tif images of each plan sheet

C 6.0 FINAL (100%) CONSTRUCTION DOCUMENTS

1. DESIGN CONSULTANT shall incorporate any changes, corrections and/or additions as a result of the 95% plan review.
2. DESIGN CONSULTANT shall submit the following to the CITY:

Item	Number Of Copies
95% Redline Plans	Originals
95% Plan Comments & Annotated Comment Sheet	10
Sealed Full Size Sets of Construction Plans on 4 mil Mylar	1
Final Construction Cost Estimate	1
Bid Schedule	1
Sealed Technical Special Provisions	1
Final Utility Strip Map	2

3. DESIGN CONSULTANT shall submit a CD containing complete improvement base files in AutoCAD .dwg format and AutoCAD .dwt format of each plan sheet or scanned .tiff images of each plan sheet

D. POST DESIGN SERVICES

1. DESIGN CONSULTANT shall attend and actively participate in a pre-bid meeting. DESIGN CONSULTANT shall give a brief overview of the project and address questions related to the construction documents. DESIGN CONSULTANT shall prepare and deliver to CITY to issue any necessary Addenda for clarification or correction of the construction documents.
2. DESIGN CONSULTANT shall assist the CITY during construction by answering RFIs.
3. Construction management or observation / inspection, or participation in construction meetings are not included in this scope of work.
4. DESIGN CONSULTANT shall prepare as-built drawings from redlined plans provided by the CITY after the construction is complete.

E. QUALITY CONTROL

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

Allowances for work in excess of amount identified in the Scope of Work

The following shall be paid by unit price when the quantity specified in the Scope of Work is exceeded.

- | | | |
|----|---------------------------------|---------------|
| 1. | Legal Descriptions and Exhibits | \$250.00 each |
| 2. | Potholes | \$600.00 each |

**EXHIBIT A-1
PRODUCTION 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.

Event	Time Frame
Notice to Proceed	NTP + 0
Data Collection	NTP + 4 weeks
Draft Traffic Report Submittal	NTP + 6 weeks
30% Plan Submittal	NTP + 16 weeks
Public Meeting #1	NTP + 20 weeks
Submit ROW Acquisition Documents	NTP + 24 weeks
Submit 60% Plans	NTP + 26 weeks
Submit 95% Plans	NTP + 36 weeks
Public Meeting #2	NTP + 38 weeks
Submit Final Plans	NTP + 40 weeks (9 months)
Bidding	NTP + 44 weeks
Public Meeting #3	Before Construction Begins

- 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.

EXHIBIT B

FEE SCHEDULE - NOT TO EXCEED – HOURLY RATE

PROJECT TITLE: **Alma School Road and Ray Road Intersection Improvements**
PROJECT NO. **ST0704-201**
Chandler, AZ.

For services described in paragraph 3 of this Agreement, the CITY shall pay DESIGN CONSULTANT a fee not to exceed the sum of **Five Hundred Forty Eight Thousand Nine Hundred Fifty One** dollars (**\$548,951**) in accordance with the schedule set forth in exhibits B-1 attached hereto and incorporated herein by reference.

1. **PAYMENT SCHEDULE:** Payments to Design Consultant will based on the hourly rates and expense costs shown on the fee schedule attached as Exhibit B-1.
2. The not to exceed fee listed above is the total authorized fee and includes "reimbursables".
3. Payment will be made monthly on the basis of time and costs expended as reported in progress reports and deliverables. Work schedule updates will be included in the monthly progress payment requests.
4. An application and certification for payment must be provided by Design Consultant. Such application must provide a clear, detailed invoice reflecting all items billed for. The summary sheet will show, in addition to hours, rates and costs, the percentage of work completed to date, previous payment invoiced/received and current fee requested.
5. Such application shall also include any/all backup documentation (i.e.: receipts, invoices, logs, etc) supporting reimbursable expenses and consultant fees.

**EXHIBIT B-1
DESIGN TEAM HOURLY RATES AND OTHER CHARGES**

CLASSIFICATION	MAN HOURS	AVG. HOURLY RATE	LABOR COSTS
Project Principal	0	\$ 182.33	\$ -
Project Manager/Engineer	788	\$ 134.84	\$106,251.04
Project Designer	897	\$ 98.43	\$ 88,289.42
CADD Technician	788	\$ 81.57	\$ 64,276.69
Clerical	46	\$ 42.08	\$ 1,935.45
Total Hours	2519		
SUB-TOTAL DIRECT LABOR			\$ 260,758.00

DIRECT EXPENSES

	COST
Mileage	\$ 1,154.30
Photos	\$ 40.00
Submittals	\$ 5,472.50
SUB-TOTAL EXPENSES	\$ 6,667.00

OUTSIDE SERVICES

	COST
CEI (Survey)	\$ 56,485.00
SW Traffic Engineering (Signs, Signals, Lighting)	\$ 51,451.90
Jeffers & Associates (Drainage)	\$ 42,100.00
SWCA (Environmental Site Assessment)	\$ 5,695.00
J2 (Landscaping)	\$ 66,835.00
Ninyo & Moore (Geotechnical)	\$ 15,900.00
TBE (30 potholes @ \$600/ea)	\$ 18,000.00
SUB-TOTAL OUTSIDE SERVICES	\$ 256,467.00

SUMMARY

ROADWAY DESIGN COST	\$ 523,892.00
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Water and Sewer Line Design (Allowance)

CLASSIFICATION	MAN HOURS	AVG. HOURLY RATE	LABOR COSTS
Project Principal	0	\$ 182.33	\$-
Project Manager/Engineer	20	\$ 134.84	\$ 2,696.73
Project Designer	74	\$ 98.43	\$ 7,283.63
CADD Technician	156	\$ 81.57	\$ 12,724.83
Clerical	0	\$ 42.08	\$-
Total Hours	250		
SUB-TOTAL DIRECT LABOR			\$ 22,706.00

DIRECT EXPENSES		
	COST	
Mileage	\$-	
Photos	\$-	
Submittals	\$ 2,352.50	
SUB-TOTAL EXPENSES		\$ 2,353.00
OUTSIDE SERVICES		
	COST	
	\$-	
SUB-TOTAL OUTSIDE SERVICES		\$-
ALLOWANCE		
WATERLINE AND SEWERLINE COST		\$25,059
TOTAL DESIGN COST		\$ 548,951.00