

**Council Meeting: February 26, 2013****SUBJECT: Award of a Contract for Engineering Design and Construction Support Services for Traffic Signal Reconstruction at Four (4) Locations (F13-16)****BACKGROUND**

Approval is requested to award a contract to TJKM Transportation Consultants of Pleasanton in an amount of \$133,998 for engineering design and construction support services for traffic signal reconstruction at four (4) City intersections. Approval is also requested for a 10% design contingency in the amount of \$13,400.

DISCUSSION

The City plans for a lifecycle of approximately 40 years for major traffic signal equipment such as mast arm poles, underground conduits/conductors, and controller cabinets, and has developed a list of which traffic signals may be due for major renovations or full reconstruction based upon age and field conditions. City staff performed physical evaluations of nine locations that could potentially require major renovations. Of the nine intersections identified, two were determined to have acceptable existing conditions; two were identified for minor work to be performed by the City's signal maintenance contractor; one was identified to be reconstructed as part of another capital improvement project; and four were identified for major renovations or full reconstruction.

The four intersections requiring major renovation or full reconstruction as part of this project are:

1. Hollenbeck/Alberta
2. Hollenbeck/Homestead
3. Mathilda/Olive
4. Arques/Oakmead

Intersection geometries will be evaluated for reconfiguration for pedestrian/bicycle/vehicular movements, and brought into compliance with ADA requirements and the latest Caltrans standards. In addition, provisions will be designed in for these intersections to be connected or be set up to connect in the future to the City's traffic management center in City Hall.

Actual construction of this project will occur over two separate fiscal years, with Arques/Oakmead and Hollenbeck/Homestead being constructed first, followed by Mathilda/Olive and Hollenbeck/Alberta the following fiscal year. For efficiency, the design of all four intersections will occur under one contract.

Request for Proposal (RFP) specifications were prepared by Traffic and Transportation, Engineering and Purchasing staff. RFP No. F13-16 was posted to the Onvia DemandStar public procurement network. Twenty-six (26) firms requested RFP documents. Five responsive proposals were received as follows:

DKS Associates, of Oakland	\$133,723
Sandis Civil Engineers, of Sunnyvale	\$97,860
Siemens, of Fremont	\$139,900
Stantec Consulting Services, of San Francisco	\$119,848
TJKM Transportation Consultants, of Pleasanton	\$163,595

Proposals were evaluated and ranked by an evaluation team consisting of Transportation and Traffic and Public Works Engineering staff. Proposals were evaluated on qualifications, experience and project approach. Following consultant interviews of the three highest-rated firms, TJKM Transportation Consultants was unanimously selected by the evaluation team as the highest ranked proposer. Subsequent negotiations with City staff resulted in a reduction of TJKM fees from \$163,595 to \$133,998 with no reduction in project scope.

FISCAL IMPACT

Project costs are as follows:

Project design (including bidding and construction support)	\$133,998
Design contingency (10%)	<u>\$13,400</u>
Total cost	\$147,398

Budgeted funds are available in Capital Project 820190 (Traffic Signal Hardware & Wiring). This project is funded by the Gas Tax Fund.

PUBLIC CONTACT

Public contact was made by posting the Council agenda on the City's official-notice bulletin board outside City Hall, at the Sunnyvale Senior Center, Community Center and Department of Public Safety; and by making the agenda and report available at the Sunnyvale Public Library, the Office of the City Clerk and on the City's Web site.

RECOMMENDATION

It is recommended that Council:

1. Award a contract, in substantially the same form as the attached draft and in the amount of \$133,998 to TJKM Transportation Consultants, and authorize the City Manager to execute the contract when all the necessary conditions have been met; and
2. Approve a 10% design contingency in the amount of \$13,400.

Reviewed by:

Grace K. Leung, Director of Finance
Prepared by: Pete Gonda, Purchasing Officer

Reviewed by:

Kent Steffens, Director, Department of Public Works

Approved by:

Gary M. Luebbers
City Manager

Attachments

- A. Consultant Services Agreement

**Attachment A
DRAFT**

**CONSULTANT SERVICES AGREEMENT BETWEEN CITY OF SUNNYVALE AND
TJKM TRANSPORTATION CONSULTANTS FOR THE DESIGN FOR TRAFFIC
SIGNAL RECONSTRUCTION AT FOUR INTERSECTIONS**

THIS AGREEMENT dated _____ is by and between the CITY OF SUNNYVALE, a municipal corporation ("CITY"), and TJKM TRANSPORTATION CONSULTANTS ("CONSULTANT").

WHEREAS, CITY desires to secure professional services necessary for investigation, analysis, contract specifications, consultation, services during bidding and construction and other services for a project known as Traffic Signal Reconstruction at Four Intersections; and

WHEREAS, CONSULTANT represents that it, and its sub-consultants, if any, possess the professional qualifications and expertise to provide the required services and are licensed by the State of California to practice engineering in the required disciplines;

NOW, THEREFORE, THE PARTIES ENTER INTO THIS AGREEMENT.

1. Services by CONSULTANT

CONSULTANT shall provide services in accordance with Exhibit "A" entitled "Scope of Work." All exhibits referenced in this Agreement are attached hereto and are incorporated herein by reference. To accomplish that end, CONSULTANT agrees to assign Atul Patel, P.E. to this project, to act in the capacity of Project Manager and personally direct the professional services to be provided by CONSULTANT.

Except as specified in this Agreement, CONSULTANT shall furnish all technical and professional services, including labor, material, equipment, transportation, supervision and expertise to perform all operations necessary and required to satisfactorily complete the services required in this Agreement.

2. Notice to Proceed/Completion of Services

- (a) CONSULTANT shall commence services upon receipt of a Notice to Proceed from CITY. Notice shall be deemed to have occurred three (3) calendar days after deposit in the regular course of the United States mail.
- (b) When CITY determines that CONSULTANT has satisfactorily completed the services defined in Exhibit "A," CITY shall give CONSULTANT written Notice of Final Acceptance, and CONSULTANT shall not incur any further costs hereunder. CONSULTANT may request this determination of completion when, in its opinion, it has satisfactorily completed the Scope of Work (Exhibit "A"), and if so requested, CITY shall make this determination within fourteen (14) days of such request.

3. Time for Performance

The term of this Agreement will be for a period from contract execution through completion of project construction, unless otherwise terminated. The project schedule is set forth in the attached Exhibit "A-1". CONSULTANT shall deliver the agreed upon services to CITY as specified in Exhibit "A". Extensions of time may be authorized by the City Manager.

4. Payment of Fees and Expenses

Payments shall be made to CONSULTANT on a monthly basis as set forth in the attached Exhibit "B" entitled "Compensation Schedule." All compensation will be based on monthly billings as provided in Exhibit "B." Compensation will not be due until said detailed billing is submitted to CITY within a reasonable time before payment is expected to allow for normal CITY processing. An estimate of the percent of total completion associated with the various categories of the services shall be furnished by CONSULTANT with said billing. When applicable, copies of pertinent financial records will be included with the submission of billing(s) for all direct reimbursables. Compensation shall not exceed the amounts set forth in Exhibit "B" for each phase. In no event shall the total amount of compensation payable under this agreement exceed the sum of One Hundred Thirty Three Thousand Nine Hundred Ninety Eight and No/100 Dollars (\$133,998.00) unless upon written modification of this Agreement. All invoices, including detailed backup, shall be sent to City of Sunnyvale, attention Accounts Payable, P.O. Box 3707, Sunnyvale, CA 94088-3707.

5. No Assignment of Agreement

CONSULTANT bind themselves, their partners, successors, assigns, executors, and administrators to all covenants of this Agreement. Except as otherwise set forth in this Agreement, no interest in this Agreement or any of the work provided for under this Agreement shall be assigned or transferred, either voluntarily or by operation of law, without the prior written approval of CITY. However, claims for money due to or to become due to CONSULTANT from CITY under this Agreement may be assigned to a bank, trust company or other financial institutions, or to a trustee in bankruptcy, provided that written notice of any such assignment or transfer shall be first furnished to CITY. In case of the death of one or more members of CONSULTANT's firm, the surviving member or members shall complete the services covered by this Agreement. Any such assignment shall not relieve CONSULTANT from any liability under the terms of this Agreement.

6. Consultant is an Independent Contractor

CONSULTANT is not an agent or employee of CITY but is an independent contractor with full rights to manage its employees subject to the requirements of the law. All persons employed by CONSULTANT in connection with this Agreement will be employees of CONSULTANT and not employees of CITY in any respect. CONSULTANT is responsible for obtaining statutory Workers' Compensation coverage for its employees.

7. Consultant's Services to be Approved by a Registered Professional

All reports, costs estimates, plans and other documents which may be submitted or furnished by CONSULTANT shall be approved and signed by a qualified registered professional in the State of California. The title sheet for calculations, specifications and reports, and each sheet of plans, shall bear the professional seal, certificate number, registration classification, expiration date of certificate and signature of the professional responsible for their preparation.

8. Standard of Workmanship

CONSULTANT represents and maintains that it is skilled in the professional calling necessary to perform the services and its duties and obligations, expressed and implied, contained herein, and CITY expressly relies upon CONSULTANT's representations regarding its skills and knowledge. CONSULTANT shall perform such services and duties in conformance to and consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California.

The plans, designs, specifications, estimates, calculations reports and other documents furnished under the Scope of Work (Exhibit "A") shall be of a quality acceptable to CITY. The criteria for acceptance of the work provided under this Agreement shall be a product of neat appearance, well-organized, technically and grammatically correct, checked and having the maker and checker identified. The minimum standard of appearance, organization and content of the drawings shall be that used by CITY for similar projects.

9. Responsibility of CONSULTANT

CONSULTANT shall be responsible for the professional quality, technical accuracy and the coordination of the services furnished by it under this Agreement. Neither CITY's review, acceptance nor payment for any of the services required under this Agreement shall be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement and CONSULTANT shall be and remain liable to CITY in accordance with applicable law for all damages to CITY caused by CONSULTANT's negligent performance of any of the services furnished under this Agreement.

Any acceptance by CITY of plans, specifications, calculations, construction contract documents, reports, diagrams, maps and other material prepared by CONSULTANT shall not, in any respect, absolve CONSULTANT for the responsibility CONSULTANT has in accordance with customary standards of good engineering practice in compliance with applicable Federal, State, County and/or municipal laws, ordinances, regulations, rules and orders.

10. Right of CITY to Inspect Records of CONSULTANT

CITY, through its authorized employees, representatives, or agents, shall have the right, at any and all reasonable times, to audit the books and records including, but not limited to, invoices, vouchers, canceled checks, time cards of CONSULTANT for the purpose of verifying any and all charges made by CONSULTANT in connection with this Agreement. CONSULTANT shall maintain for a minimum period of three (3) years from the date of final payment to CONSULTANT or for any longer period required by law, sufficient books and records in accordance with generally accepted accounting practices to establish the correctness of all charges submitted to CITY by CONSULTANT. Any expenses not so recorded shall be disallowed by CITY.

11. Confidentiality of Material

All ideas, memoranda, specifications, plans, calculations, manufacturing procedures, data, drawings, descriptions, documents, discussions or other information developed or received by or for CONSULTANT and all other written information submitted to CONSULTANT in connection with the performance of this Agreement shall be held confidential by CONSULTANT and shall not, without the prior written consent of CITY be used for any purposes other than the performance of the Project services, nor be disclosed to an entity not connected with the performance of the Project services. Nothing furnished to CONSULTANT which is otherwise known to CONSULTANT or is or becomes generally known to the related industry shall be deemed confidential. CONSULTANT shall not use CITY's name, insignia or distribute exploitative publicity pertaining to the services rendered under this Agreement in any magazine, trade paper, newspaper or other medium without the express written consent of CITY.

12. No Pledging of CITY's Credit

Under no circumstances shall CONSULTANT have the authority or power to pledge the credit of CITY or incur any obligation in the name of CITY.

13. Ownership of Material

All material, including information developed on computer(s), which shall include, but not be limited to, data, sketches, tracings, drawings, plans, diagrams, quantities, estimates, specifications, proposals, tests, maps, calculations, photographs, reports and other material developed, collected, prepared or caused to be prepared, under this Agreement shall be the property of CITY, but CONSULTANT may retain and use copies thereof.

CITY shall not be limited, in any way, in its use of said material, at any time, for work associated with Project. However, CONSULTANT shall not be responsible for damages resulting from the use of said material for work other than Project, including, but not limited to the release of this material to third parties for work other than on Project.

14. Hold Harmless/Indemnification

To the extent permitted by law (including, without limitation, California Civil Code section 2782.8), CONSULTANT agrees to indemnify, defend and hold harmless CITY, its officers and employees from any and all claims, demands, actions, causes of action, losses, damages, liabilities, known or unknown, and all costs and expenses, including reasonable attorneys' fees in connection with any injury or damage to persons or property to the extent arising out of any negligence, recklessness or willful misconduct of CONSULTANT, its officers, employees, agents, contractor, subcontractors or any officer, agent or employee thereof in relation to CONSULTANT's performance under this Agreement. Such defense and indemnification shall not apply in any instance of and to the extent caused by the sole negligence, recklessness or willful misconduct of CITY, its officers, employees, agents or representatives.

15. Insurance Requirements

CONSULTANT shall take out and maintain during the life of this Agreement policies of insurance as specified in Exhibit "C" attached and incorporated by reference, and shall provide all certificates and/or endorsements as specified in Exhibit "C."

16. No Third Party Beneficiary

This Agreement shall not be construed or deemed to be an agreement for the benefit of any third party or parties and no third party or parties shall have any claim or right of action hereunder for any cause whatsoever.

17. Notices

All notices required by this Agreement, other than invoices for payment which shall be sent directly to Accounts Payable, shall be in writing, and shall be personally delivered, sent by first class with postage prepaid, or sent by commercial courier, addressed as follows:

To CITY: Jennifer Ng, Senior Engineer
Department of Public Works
CITY OF SUNNYVALE
P. O. Box 3707
Sunnyvale, CA 94088-3707

To CONSULTANT: TJKM TRANSPORTATION CONSULTANTS
Attn: Atul Patel, P.E.
4305 Hacienda Drive, Suite 550
Pleasanton, CA 94588

Nothing in this provision shall be construed to prohibit communication by more expedient means, such as by telephone or facsimile transmission, to accomplish timely communication. However, to constitute effective notice, written confirmation of a telephone conversation or an original of a facsimile transmission must be sent by first class mail, by commercial carrier, or hand-delivered. Each party may change the address by written notice in accordance with this paragraph. Notices delivered personally shall be deemed communicated as of actual receipt; mailed notices shall be deemed communicated as of three days after mailing, unless such date is a date on which there is no mail service. In that event communication is deemed to occur on the next mail service day.

18. Waiver

CONSULTANT agrees that waiver by CITY of any one or more of the conditions of performance under this Agreement shall not be construed as waiver(s) of any other condition of performance under this Agreement.

19. Amendments

No alterations or changes to the terms of this Agreement shall be valid unless made in writing and signed by both parties.

20. Integrated Agreement

This Agreement embodies the agreement between CITY and CONSULTANT and its terms and conditions. No verbal agreements or conversation with any officer, agent or employee of CITY prior to execution of this Agreement shall affect or modify any of the terms or obligations contained in any documents comprising this Agreement. Any such verbal agreement shall be considered as unofficial information and in no way binding upon CITY.

21. Conflict of Interest

No officer of CITY shall have any interest, direct or indirect, in this Agreement or in the proceeds thereof. During the term of this Agreement CONSULTANT shall not accept employment or an obligation which is inconsistent or incompatible with CONSULTANT'S obligations under this Agreement.

22. California Agreement

This Agreement has been entered into in the State of California and this Agreement shall be governed by California law.

23. Records, Reports and Documentation

CONSULTANT shall maintain complete and accurate records of its operation, including any and all additional records required by CITY in writing. CONSULTANT shall submit to CITY any and all reports concerning its performance under this Agreement that may be requested by CITY in writing. CONSULTANT agrees to assist CITY in meeting CITY's reporting requirements to the state and other agencies with respect to CONSULTANT's work hereunder. All records, reports and documentation relating to the work performed under this Agreement shall be made available to City during the term of this Agreement.

24. Termination of Agreement

If CONSULTANT defaults in the performance of this Agreement, or materially breaches any of its provisions, CITY at its option may terminate this Agreement by giving written notice to CONSULTANT. If CITY fails to pay CONSULTANT, CONSULTANT at its option may terminate this Agreement if the failure is not remedied by CITY within thirty (30) days after written notification of failure to pay.

Without limitation to such rights or remedies as CITY shall otherwise have by law, CITY also shall have the right to terminate this Agreement for any reason upon ten (10) days' written notice to CONSULTANT. CONSULTANT shall have 10 days from the receipt of notice of termination to remedy the elements of the default identified by CITY in the notice of termination, and if so remedied, will no longer be deemed in default. In the event of such termination, CONSULTANT shall be compensated in proportion to the percentage of services performed or materials furnished (in relation to the total which would have been performed or furnished) through the date of receipt of notification from CITY to terminate. CONSULTANT shall present CITY with any work product completed at that point in time.

25. Subcontracting

None of the services covered by this Agreement shall be subcontracted without the prior written consent of CITY. Such consent may be issued with notice to proceed if subcontract consultants are listed in the project work plan.

26. Fair Employment

CONSULTANT shall not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, condition of physical handicap, religion, ethnic background or marital status, in violation of state or federal law.

27. Changes

CITY or CONSULTANT may, from time to time, request changes in the terms and conditions of this Agreement. Such changes, which are mutually agreed upon by CITY and CONSULTANT, shall be incorporated in amendments to this Agreement.

28. Other Agreements

This Agreement shall not prevent either Party from entering into similar agreements with others.

29. Severability Clause

In case any one or more of the provisions contained herein shall, for any reason, be held invalid, illegal or unenforceable in any respect, it shall not affect the validity of the other provisions which shall remain in full force and effect.

30. Captions

The captions of the various sections, paragraphs and subparagraphs, of the contract are for convenience only and shall not be considered nor referred to for resolving questions of interpretation.

31. Entire Agreement; Amendment

This writing constitutes the entire agreement between the parties relating to the services to be performed or materials to be furnished hereunder. No modification of this Agreement shall be effective unless and until such modification is evidenced by writing signed by all parties.

32. Miscellaneous

Time shall be of the essence in this Agreement. Failure on the part of either party to enforce any provision of this Agreement shall not be construed as a waiver of the right to compel enforcement of such provision or any other provision. This Agreement shall be governed and construed in accordance with the laws of the State of California.

IN WITNESS WHEREOF, the parties have executed this Agreement.

ATTEST:

CITY OF SUNNYVALE ("CITY")

By _____
City Clerk

By _____
City Manager

TJKM TRANSPORTATION CONSULTANTS
("CONSULTANT")

By _____

APPROVED AS TO FORM:

Name/Title

City Attorney

By _____

Name/Title

Exhibit "A"
(Scope of Work)

**Scope of Services for Design of the
Traffic Signal Reconstruction at Four Locations
TR-11/08-12**

1. General

The City of Sunnyvale is seeking proposals from licensed Engineering firms to provide professional services for design and preparation of bid documents for the Traffic Signal Reconstruction at Four Locations. The scope of work includes: detailed design, preparation of bid documents for Public Works competitive bidding, construction cost estimates, time schedules, and compliance with all applicable rules, regulations, code and law. Related work includes, but is not necessarily limited to compliance with accessibility requirements and guidelines of the Americans with Disabilities Act (ADA), applicable building code, California Environmental Quality Act and obtaining or preparing all necessary permits ready for use by the construction general contractor.

The Consultant shall also provide support during bidding and construction. After construction the Consultant shall prepare "as-built" record drawings, based upon plans marked up by the Contractor, and the Consultant's field visits. The Design shall comply with all applicable rules, regulations, code, law and good practice, for public facilities. The Consultant shall incorporate "green" building/construction practices, sustainability, energy efficiency, and low operational and maintenance costs into the recommendations and design. The intent of the design documents is for construction to be complete, in place, and suitable for its intended use.

2. Project Description, Location, and Existing Conditions

This project is comprised of four currently signalized intersections at which signal modifications or full reconstruction is to be performed. A description of each site is included. The City has performed an initial evaluation at each location, and has noted specific concerns within each location's description. The Consultant will be responsible for performing detailed evaluation and making additional recommendations as appropriate for incorporation into the design.

In general, each intersection design shall include the following components:

- Fully actuated, multiple phase, vehicle and accessible pedestrian signals
- Loop or video detection for both vehicles and bicycles (where a striped bicycle lane currently exists)
- Delineation and signing
- Emergency vehicle preemption
- Ethernet or spread spectrum wireless connectivity, conduit system and related equipment for fiber optic cable interconnection/communication system to adjacent intersections in either direction and to the existing Traffic Management Center (TMC).

- Disabled access compliance, including push buttons and curb ramps
- Energy efficient LED safety lights and internally illuminated street name signs
- Full compliance with the latest Caltrans Standard Plans and Specifications, California Manual on Uniform Traffic Control Devices (CA-MUTCD) and California Highway Design Manual (HDM) standards.
- No additional right of way is needed for any of the locations.
- Plans and specifications shall indicate reconstruction in such a manner that the existing traffic signal operations remain fully functioning until the electrical switch-over.
- Consultant shall prepare signal timing plans for City's review.

The four locations for which traffic signal design work is to be performed are listed below.

Homestead/Hollenbeck: This location is in the southwest quadrant of the City, and is surrounded by commercial uses. A major modification or full reconstruction is anticipated for this location. City will evaluate Consultant's recommendations at the preliminary design stage.

- Geometrics for the intersection shall be revised.
 - The pork-chop islands allowing free right turns on the north leg of the intersection shall be removed, and the curb return radiuses reduced.
 - Existing lane configuration shall be modified to have shared through/right turns on the north leg with the removal of the pork-chop islands.
- The controller cabinet at this location has had a history of knock-downs, and within the past year was relocated close to the right of way line. Given this history, and with the intersection geometry changes, consultant shall evaluate the current location, and if appropriate, propose an ultimate location for the controller cabinet.
- The pole at the north-west corner was recently hit by a vehicle and has not yet been replaced in its ultimate location due to conflicts with underground utilities. Existing fiber optic and PG&E underground conflicts have been an issue in locating signal equipment at this intersection.
- Extend signal interconnect to Homestead/Alberta to the north. Employ trenchless technology.
- Although the southerly half of the intersection is located within the City of Cupertino jurisdiction, the signal is fully maintained by the City of Sunnyvale. The consultant shall coordinate with the City of Cupertino regarding the design and prepare documentation for the contractor to procure necessary encroachment permits.

Hollenbeck/Alberta: This T-intersection is located in the southwest quadrant of the City and is surrounded by residential, commercial, and park uses. A major modification or full reconstruction is anticipated for this location. City will evaluate Consultant's recommendations at the preliminary design stage.

- Provide a high-visibility east-west directional crosswalk on the south leg of this

intersection per the recommendations in the City's Pedestrian Safety and Opportunities Study, dated November 2007 and approved by City Council in December of 2007.

- Pedestrian indications shall be installed for the new crosswalk and for the north-south crosswalk location (not currently existing).
- Handicap ramps shall be installed for the new crossing.
- Pole locations shall be evaluated for relocation to facilitate installation of handicap ramp.
- Safety lighting shall be evaluated for the intersection. One solution may be to upgrade the pole at the north-west corner to a Type 15TS to accommodate safety lighting.
- The southern half of the intersection has recently been repaved. Employ trenchless technology for new conduits crossing Hollenbeck.
- Extend signal interconnect to Homestead/Cascade to the north. Employ trenchless technology.

Arques/Oakmead: This intersection is located in the northeast quadrant of the City and is surrounded by non-residential uses. A major modification or full reconstruction is anticipated for this location. City will evaluate Consultant's recommendations at the preliminary design stage.

- Bike detection is non-existent for Oakmead and required to be in the project design. Consultant shall evaluate this location for possible inclusion of video detection technology for both bicycles and vehicles.
- New conduit and conductors shall be installed throughout the intersection. Existing conduits are over 85% full.
- A new controller cabinet and controller equipment shall be designed into this project.
- The design of the intersection lighting shall be modified to have safety lighting (LED technology) atop traffic signal poles.
- Median island pedestrian "refuge" and push buttons shall be eliminated. Evaluate signal timing for pedestrian movements.
- Signal interconnect is to be trenchless technology, extending to Arques/Lakeside to the west.

Mathilda/Olive: This intersection is located in the City's Downtown area, and shall follow downtown specifications, including decorative poles. The intersection is surrounded by commercial and government uses. The pole at the south-west corner was recently replaced with the Downtown decorative pole standard.

- This intersection shall be evaluated for reconfiguration in the east-west direction. Currently, the geometry is shared through/left turn, and dedicated right turn lanes. Consider geometry which will allow for protected left turns within the existing right of way.
- Remove the pole within the median island on the north leg and pull back the median island nose to not obstruct pedestrians.
- Provide pedestrian indications for the north-south movement on both sides of the intersection.

- Evaluate options for handicap ramp locations at the south-east corner.
- Video detection shall be utilized at this location.
- New conduit and conductors shall be installed throughout the intersection. Existing conduits are full and will not accommodate the additional ones needed to implement pedestrian signal indications and push buttons for the north-south movements.

3. Consultant Services

Consultant services shall include, but are not necessarily limited to the following:

- **Preliminary Design**
- **Design Development**
- **Bid Package**
- **Bidding Services**
- **Construction Support Services**

Preliminary Design – 30% Submittal

Consultant shall perform field investigation to confirm existing conditions and shall also be responsible for contacting utility companies, regulatory agencies, adjacent City, and other stakeholders. Consultant shall review recommendations with City staff prior to design and coordinate all applicable City standards into plans and specifications.

Consultant shall obtain the services of a professional surveyor in order to perform a complete survey of the four intersection sites. Consultant shall provide electronic copies (ACAD format) of each survey location to the City for record. Due to anticipated underground conflicts, potholing to a depth of 5' shall be included as an item to be performed during the design phase of the project.

30% Submittal

- Preliminary plans
- Preliminary details
- Preliminary reports and/or technical memoranda which lead to basis of design
- Cut sheets for equipment/appurtenances
- Project schedule
- Preliminary construction schedule
- 30% cost estimates.
- Provide a list of any facilities belonging to PG&E, AT&T, Comcast Cable, and other utility facilities that will need to be adjusted as a result of the proposed construction.
- Make recommendation to the City for packaging this project for optimal bidding.
- Survey information (AutoCad format)

Design Development

Consultant shall be the Engineer of Record and be responsible for design and preparation of complete plans, technical specifications, and recommended revisions to the City's special provisions for the project during the design phase. Consultant shall clearly provide all details necessary for contractor to construct the project complete for use as intended by the design, including preparation of or procurement of, permits.

All design stages shall include submittal of five hard copies and one digital copy.

60% Submittal:

- Plans
 - Cover Sheet – Title, Sheet Index, Vicinity Map, Location Maps, Notes, Brief Description of contractor's scope of work, horizontal and vertical control, graphical scale, other information
 - Utility Sheets
 - Traffic Signal Plans
 - Interconnect and Communications Plan
 - Signing and Striping
 - Layout of new facilities
 - Details
- Specifications
 - Technical Specifications
 - Description of each item on bid schedule with requirements
 - Recommended revisions to Special Provisions
 - Bid Schedule
- Engineer's Construction Cost Estimate
- Responses to City's review comments, along with return of mark-ups
- Project Schedule

90% Design

- Plans
 - Cover Sheet – Title, Sheet Index, Vicinity Map, Location Maps, Notes, Brief Description of contractor's scope of work, horizontal and vertical control, graphical scale, other information
 - Layout of new facilities
 - Details
- Specifications
 - Technical Specifications
 - Description of each item on bid schedule with requirements
 - Recommended revisions to Special Provisions
 - Bid Schedule
 - Recommendation for allowed construction time period.
- Engineer's Construction Cost Estimate
- Responses to City's review comments, along with return of mark-ups

- Signal timing sheets for each location
- Project schedule

100% Final Design

- Complete revised Special Provisions and reviewed Supplemental General Provisions, and bid instructions
 - Final Bid Schedule
 - Final Engineer's Construction Cost Estimate in the form of the Bid Schedule, (along with supporting documents not part of the Bid Package)
 - Final List of Submittals
 - Final List of Information Available to Bidders with disclaimer
- Based on City comments from the 90% design review, input received during the public meeting as interpreted by the City, and the Consultant's design judgment and peer review, Consultant shall prepare the 100% plans for submittal to the City.
- A peer review by another licensed professional in the consultant's firm other than the designer of record is required for overall constructability, coordination, and reasonable reduction in errors and omissions is to be accomplished as part of the 100% submittal.
- One hard copy of signed and sealed, by discipline, plans, special provisions, and specifications.
- In review with City, revise plans and specifications based upon Peer Review. The professional shall sign, date and seal the following Certification of Peer Review on a letterhead document with the transmittal of the final plans and specifications:

"The undersigned hereby certifies that a professional peer review of these plans and the required designs was conducted by me, a professional engineer with expertise and experience in the appropriate fields of engineering equal to or greater than the Engineer of Record, and that appropriate corrections have been made."
- The Assistant Director of Public Works/City Engineer statement on the plans shall be on the title sheet of the project plans:

"The City of Sunnyvale hereby accepts these plans for construction, as being in general compliance with plans preparation requirements of this agency. Responsibility for the completeness and accuracy of the plans and related designs resides with the Engineer and Engineering Firm of Record."

Final Bid Package

- Coordinate plans and technical specifications with the City's (front end) bid instructions, standard provisions, and revised special provisions ready for Public Works bidding.

Submittals at Bid Package level:

- Complete set of Plans, stamped and signed on each sheet by the Engineer of Record

- Complete Special Provisions, Technical Specifications stamped and signed on the table-of-contents sheet by the Engineer of Record. If there are more than one Engineer of Record, stamp and sign the table of contents sheet for only that/those section(s) that applies to each engineering discipline.
 - The headers and footers of the Technical Specifications shall be formatted per the example provided by the Project Administration Section and include the Invitation for Bids number provided by Purchasing. The final version of the Technical Specifications shall be submitted as a PDF.
- Reviewed City's Standard Construction Contract with completion of blanks that are determined by the work (time of construction)
- Certification of Peer Review signed that the entire Bid Package was reviewed and is recommended for Public Works bidding.
- Digital copy of all work products and supporting work.

Bidding Services

Respond to all Requests for Information, attend pre-bid meeting, and prepare addenda as necessary and provide information to Purchasing to inform plan-holders of significant responses to Requests for Information. All communications shall be directed through the City (Purchasing Officer).

Submittals at Bidding Services:

- Prompt response to all Requests for Information
- Addenda as necessary

If addenda are extensive on bid documents, Conformed Documents will be prepared by the Consultant at no expense to the City. Contractor must sign off on Conformed Documents as part of the Conformed Document process. City will provide reproduction services.

Construction Support Services

City's Public Works staff will have primary responsibility for construction management and inspection. The Consultant's point of contact shall be the City, not the contractor.

- Respond to Request for Information (RFIs), clarifying the plans and specifications where appropriate, or providing revisions or additional detail where necessary.
- Review and respond to all submittals.
- Attend pre-construction meeting, periodic construction meetings upon request, and field inspection for final completion. All other required on-site meetings shall be considered necessary and based on the competency and adequacy of the contract documents and therefore the responsibility of the consultant.
- Prepare As-Built Drawings based upon red-lines provided by contractor and field review.
- Review proposed substitutions for conformance to drawings and technical specifications, if any.
- Review and make recommendations on proposed changes to the contract (Request for Quotation/Contract Change Order).
- Participate in the final inspection and development of the punch lists.

Submittals at Construction Services:

- Prompt responses to all requests for information (RFIs)
- Prompt responses to all submittals
- As-Built Drawings submitted as AutoCAD and PDF files

Schedule

Consultant shall provide a complete schedule in a Gantt Chart format, including two weeks for each City review. After execution of the consultant services contract, and notice to proceed, the City expects this project to be complete and ready for bidding within the timeframe set by the Consultant. An updated schedule shall be provided at each review stage.

4. Format

The City's standard plan format shall be used. The specifications shall be in CSI format. Plans shall be organized in logical layers, including but not necessarily limited to: existing underground, surface and overhead conditions; proposed underground by utility, proposed surfacing, proposed pavement markings, proposed overhead, etc.

Hard copy submittals shall be three full-sized (24" x 36") sets, and two reduced (11" x 17") sets. Digital Submittals shall be in: AutoCAD and PDF for plans; MS Word (.doc) and PDF for specifications or reports; MS Excel (.xls) and PDF for Cost Estimates or spread-sheets, and MS Project and PDF for time schedules. Files over 5 MB should be broken up into smaller files, submitted on CD or DVD, or made available for download through consultant's FTP site.

5. Proposal

Consultants' proposals shall be segregated by task item, indicating personnel, hourly rate, and hours associated with each task item. The cost proposal must follow the task item listing above. Subconsultant services, if needed, shall be identified and included within each task item.

Optional task item for preparation of additional package for construction bidding shall be included.

Proposals may identify additional work or task(s) for the City's consideration. If so, the benefits to the City should be articulated, and the Consultant's cost proposal shall specifically identify costs associated with the additional recommended work. Some adjustments to the Consultant's scope of work and deliverables may be made during the contract negotiation process.

A preliminary schedule shall be included within the proposal.

6. Project Management

The Consultant shall manage the efforts of the project team and any subconsultants to achieve satisfactory completion of the scope of work within budget and in a timely

manner. The Consultant's project manager shall communicate frequently with the City's designated representative throughout the project, and provide progress reports with each invoice that summarize work performed over the invoice period.

Monthly invoices shall be accompanied with a description of the work accomplished during the invoice period, a spreadsheet summary of task budgets and an update of the project schedule. The schedule shall include milestones set on baseline schedules, critical reviews and decision meetings with the City.

Consultant shall provide a complete schedule in a Gantt chart format, including two weeks for each City review. Schedule shall be submitted in MS Project format. After execution of the Consultant services contract, and notice to proceed, the City expects the Consultant to perform in a timely fashion as shown on the project schedule. Delays caused by the City, beyond the project schedule shall cause an adjustment to the project schedule. Schedule updates shall include a description of all changes to the schedule, reasons for the change and mitigation measures, when necessary, to bring the project back to the baseline schedule. The Consultant shall provide a list of all "deliverable" items in the contract along with target dates for delivery of each item. The Consultant shall respond to all comments, edits, or mark-ups from the City to resolve the final product.

Consultant is responsible to meet with the City and other agencies as required by the work to complete the design. The meetings include design kickoff, design presentation, and progress meetings

The Consultant shall consider presenting to the City "Optional" tasks which go above and beyond those items listed in the proposal scope of work that improve or enhance the project. These optional tasks shall have a separate line item with their associated fees.

7. Available Documents

The City does not guarantee the accuracy or completeness of record drawings. Consultant shall verify all information to their professional satisfaction.

1. Aerial photo of the intersections at 1"=100' scale from 2001.
2. As-built traffic signal plans in print for all project intersections with existing traffic signal equipment.
 - a. Homestead/Hollenbeck: PDF files available for proposing. CAD files will be made available to the selected consultant.
 - b. Mathilda/Olive: PDF files available for proposing. CAD files will be made available to the selected consultant.
 - c. Arques/Oakmead: PDF files available
 - d. Hollenbeck/Albert: PDF files available
3. Utility maps: storm sewer, sanitary sewer, domestic water



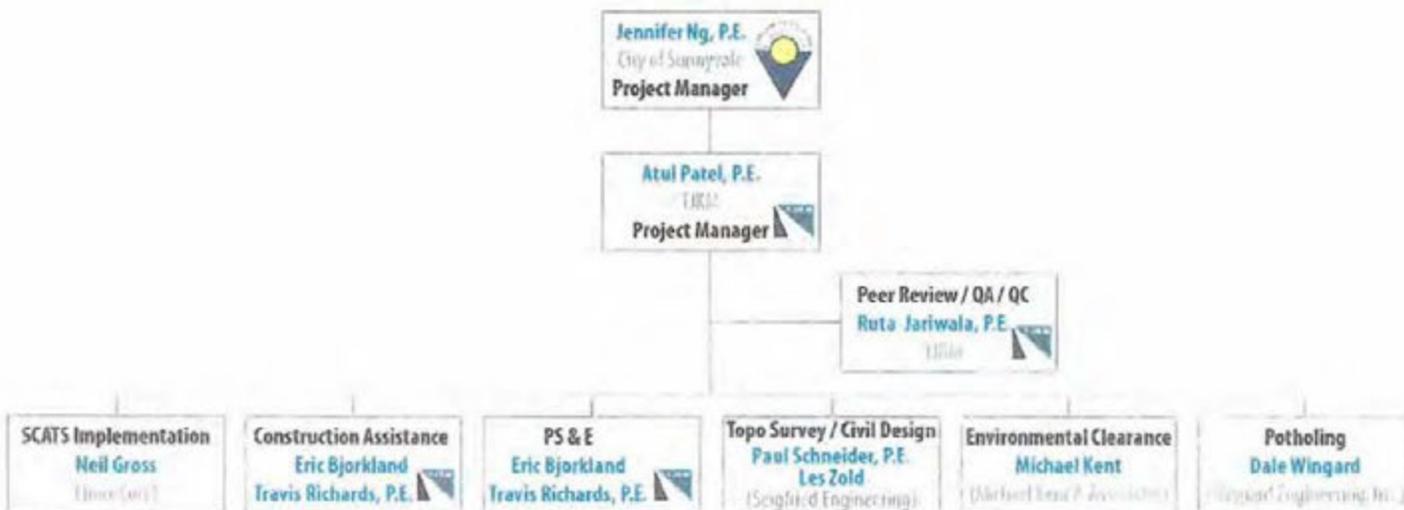
4. Proposed Project Team

TJKM has assembled a very skilled and talented group of engineers to prepare PS&E for the City of Sunnyvale's proposed signal design projects. Our design staff has worked as a team preparing Plans, Specifications and Estimates (PS&E) for numerous design projects, and we are confident in our teams' ability to provide high quality deliverables in a timely manner to the City of Sunnyvale.

The TJKM team will be led by Atul Patel, PE. Atul will oversee team task assignments, monitor budget and schedule compliance, and serve as the primary point of contact for City of Sunnyvale staff. Ms. Ruta Jariwala, PE, will be in charge of QA/QC and peer review of all deliverables submitted to the City. Our lead designer, Erik Bjorklund, and Transportation Engineer, Travis Richards, PE, will have primary responsibility for providing construction assistance and preparing AutoCAD plans for this project. Paul Schneider, PE, and Les Zold of Siegfried Engineering will provide topographic surveying and civil engineering design. Michael Kent of Michael Kent and Associates will provide environmental clearance services. Dale Wingard of Wingard Engineering, Inc. will provide potholing services at each intersection. Neil Gross of Transcore will provide SCATS Implementation services at Olive Avenue and Mathilda Avenue.

Our Project Organization Chart, shown below, illustrates our proven "chain of command" used on similar contracts. Mr. Patel will be responsible for overall coordination of the contract, maintaining the effectiveness and efficiency of the work, coordinating cost and schedule reporting, and ensuring the City's satisfaction. We anticipate working closely with the City staff to ensure understanding and satisfaction of project objectives from start to project completion.

The proposed members of the TJKM Team are the most qualified professionals in their respective areas of specialization. Subcontractor qualifications and project references are included in Section 5; TJKM Staff qualifications and detailed project references are included in Section 7 of this proposal.





8. Project Overview

TJKM understands the issues associated with each intersection. We have conducted our initial field reconnaissance and have described some of the issues and recommendations below.

West Homestead Road at Hollenbeck Avenue



This intersection is predominately surrounded by retail and commercial uses. There is a Safeway Shopping Center on the northwest corner of the intersection, a Speedee Oil Change & Tune Up on the northeast corner, a McDonalds and retail shopping center on the southeast corner, and a chiropractic and physical therapy business on the southwest corner of the intersection. The intersection is used by students walking to and from the High School, west of Homestead Road. The curb ramps at all the corners of the intersection are ADA compliant with detectable warning surfaces.

The controller cabinet is a Type 332 cabinet with a Model 170 controller with a Type III-AF service cabinet on the northeast corner of the intersection adjacent to the retaining curb. The intersection has existing spread spectrum radio communication back to City Hall. The City is interested in using fiber optic signal interconnect communication between this intersection and the

intersection at Hollenbeck Avenue and Alberta Avenue.

According to the RFP, the controller cabinet was relocated further back from the face of curb due to being knocked down. Another possible location is either further downstream on the sidewalk on the same corner of



the intersection, maintaining the 4' ADA clearance adjacent to the cabinet, or on the northwest corner of the intersection, which also has a wide sidewalk area to comply with the ADA clearance requirements. Given that the free right turn lane is being removed in this project, the controller cabinet location would be further away from the right turn movement wheel paths and less likely to be knocked down again.

There are existing 8" signal heads side mounted on the traffic signal pole standards signal and also on some of the near side Type 1-b poles that would need to be replaced with 12" signal heads.

The City is interested in removing the pork chop islands on the north leg of the intersection. Observing the traffic operation at the intersection, the southbound through traffic queue blocked the left turn pocket. The next cycle indicated that the left turn queue blocked the through traffic lane. The reconfiguration of the lane geometry may affect the signal timing operation and should be evaluated.

The existing trees on the east and west side of Hollenbeck Avenue may impede wireless communication to the controller cabinet at Hollenbeck Avenue/Alberta Avenue. A wireline communication system, such as twisted pair copper signal interconnect cable or fiber optic cable interconnect system would be an appropriate alternative. The safety lighting at the intersection is High Pressure Sodium lighting fixtures, which the City would like replaced with LED fixtures.





Hollenbeck Avenue at Alberta Avenue



This intersection is a T-intersection located north of the intersection of Hollenbeck Avenue and West Homestead Road. It is primarily residential land uses at the intersection and the west side of the intersection has a sidewalk trail leading into Serra Park and the tennis courts. The City is interested in adding a new high visibility crosswalk on the southern leg of the intersection along with ADA ramps at each end of the crosswalk. Along with the new high visibility crosswalk, LED pedestrian countdown signal heads will be installed for both the new crosswalk and the existing north-south crosswalk crossing Alberta Avenue.

The traffic signal heads are all 8" lenses, which would need to be replaced with 12" lenses. The existing curb ramps are non-ADA compliant, except for the southeast corner curb ramp. The safety lighting at the intersection is High Pressure Sodium lighting fixtures, which the City would like replaced with LED fixtures. This intersection would be interconnected to the controller cabinet at Hollenbeck Avenue and West Homestead Road.



The existing controller cabinet is a Type 332 cabinet with a Model 170 controller, with a Type II service meter mounted on the existing utility pole on the west side of Hollenbeck Avenue. The existing 1-b pole for the Alberta Avenue approach is blocking the entrance into the park sidewalk connection. The signal modification design would show a relocation of the 1-b pole out of the entrance way.

The addition of the ADA curb ramp on the southeast corner would need to avoid the existing PacBell/AT&T manhole that is in the sidewalk. We would evaluate different curb ramp designs to avoid this utility conflict.

Parking is permitted on-street on Alberta Avenue on either side of the intersection. The City may want to consider red striping the approach for approximately 50 to 60 feet to allow vehicles turning right from Alberta to sneak around the left turn vehicle queue if there is a parked vehicle adjacent to the corner property.

The traffic signal will be interconnected with the traffic signal north of the intersection at Hollenbeck Avenue and Cascade.





East Arques Avenue at Oakmead Parkway



This intersection is predominately surrounding by office buildings. Fujitsu has a pedestrian sidewalk entrance leading from their parking lot to the curb ramp at the intersection. The safety lighting at the intersection are all in the medians for each direction and are shoebox fixtures. The City is interested in modifying the safety lighting to LED lighting fixtures and relocating the safety lights to the signal pole standards. The signal pole and mast arm standards will need to be upgraded for each corner to taller pole standards with luminaire arms.

All the existing curb ramps are non-ADA compliant and all the pedestrian push buttons are also non-ADA compliant. The existing signal heads side mounted on the street lighting poles would be relocated onto the new mast arm and pole standards at each corner of the intersection and the street lighting poles will be removed.



The existing controller cabinet is a Type 332 cabinet with a Model 170 controller and with a Battery Backup System attached. There also is an existing Type III service cabinet nearby on the same northwest corner of the intersection. The City is interested in replacing the controller cabinet and controller equipment at this location.

The traffic signal will be interconnected to the traffic signal west of the intersection at Arques/Lakeside Drive. These two traffic signals are currently not connected back to the City's TMC.

The median nose on the west leg of the intersection is partially into the existing north-south crosswalk crossing Arques. The modification plan would show this bullet nose to be pulled back out of the crosswalk lines.

The City is interested in installing a video detection system at this intersection and adding bicycle detection zones for bicyclists on Oakmead Parkway, which currently does not have bicycle detection loops. The City may want to consider the Intersector Detection System, http://www.mssedco.com/intersector_sensor.htm, which has been installed in the City of Pleasanton citywide, for differentiating between vehicles and bicyclists and adding green time for that approach so that bicyclists can safely cross the intersection.





South Mathilda Avenue at West Olive Avenue

This intersection is located in downtown Sunnyvale and is surrounded by government buildings and commercial uses. The southwest corner is the only corner of the intersection with the City's Downtown decorative pole standard for the signal mast arm. There is audible pedestrian signal push buttons at each corner of the intersection. All the curb ramps at this location are non-ADA compliant.

There is an existing Type 332 cabinet with a Model 2070L controller on the southwest corner of the intersection. There is an existing Type III service cabinet on the northeast corner of the intersection. The intersection is currently running SCATS adaptive signal operation and has communication back to the City's TMC. The north leg has the median nose encroaching into the east west crosswalk crossing Mathilda. The design would pull the median nose back out of the crosswalk area.

The City is interested in adding video detection at this intersection, removing the safety lighting and signal poles in the medians on Mathilda Avenue, and relocating the signal heads to the new signal pole and mast arm standards for the northbound and southbound approaches. We would determine the optimal locations for each of the new traffic signal poles.



The City is also interested in reconfiguring the lanes for the east-west directions so that there is a separate left turn lane and shared through-right turn lane. In order to achieve this, there would need to be parking restrictions on the far sides of the intersection to shift the traffic back to the lane closest to the centerline of Olive Avenue. We would evaluate how many parking

spaces would be displaced as a result of the lane configuration and try to minimize the amount of parking spaces displaced in each direction. The SCATS signal operation personality configuration will need to be revised to accommodate the revised lane geometry.



The signal indications for Olive Avenue are 8" lens signal heads, which would need to be upgraded to 12" lenses.

A proposed exhibit illustrating the layout of the proposed traffic signal and intersection improvements at each location are illustrated in the following four pages.



9. Project Approach

Design

TJKM will serve as the prime consultant for this project, and we have teamed with local subconsultants Siegfried Engineering, for assistance with topographic survey, civil improvement and ADA curb ramp design; Michael Kent and Associates for CEQA environmental clearance documentation; Wingard Engineering for potholing services; and TransCore for SCATS implementation services.

TJKM and Siegfried Engineering have teamed on previous projects and recently completed Final PS&E, which have been approved by the City of Stockton, for signal modifications and safety improvements on Airport Way. The design included traffic analysis of the three intersections and design for sidewalk improvements for ADA compliance.

We will prepare the revised signal timing for the modified traffic signal at South Mathilda Avenue and West Olive Avenue for SCATS operation and will review the modified lane configuration with the City staff. We will revise the timing for the other traffic signal modification intersections, based on the reconstruction of the geometry at each intersection.

TJKM will obtain record copies from utility companies and service districts to locate existing electrical, gas, telephone, fiber optic, and cable television services. Research will be verified by field investigations. We will coordinate with the utility companies to resolve utility issues and eliminate conflicts.

Our initial field review indicates that the existing curb ramps at all the intersections, except the intersection of Hollenbeck Avenue and West Homestead Road, may not meet ADA guidelines for the curb ramp side slopes. Truncated domes would be installed to conform to ADA guidelines. We are teamed with Siegfried Engineers who will complete the topographic survey and civil detail design for the ADA curb ramps at the four corners.

The modification designs will include Ethernet or spread spectrum wireless connectivity, conduit system and related equipment for fiber optic cable interconnection/communication system to the adjacent traffic signal controller and the existing TMC. TJKM will discuss with the City whether the design modifications will include Pan Tilt Zoom (PTZ) camera or similar surveillance system equipment for connection to the existing TMC.

TJKM will schedule a kick-off meeting with the City staff within one week of the Notice to Proceed (NTP). At the kick-off meeting, TJKM will discuss project coordination, pedestrian and traffic safety, improvements for SCATS operation, project impacts, goals, schedule, and format of drawings and specifications. TJKM will present and discuss with the City staff the conceptual designs that we have prepared, which are included with this proposal.

The Preliminary Design (30% PS&E) submittal will be completed and submitted to the City within five (5) weeks of the Notice to Proceed. After receiving City review comments, the 60% design review PS&E will be submitted within three (3) weeks. After receiving City review comments for the 60% submittal, the 90% design review PS&E will be submitted within three (3) weeks. After receiving City review comments for the 90% submittal, the 100% design review PS&E will be submitted within two (2) weeks. After receiving City review comments for the 100% submittal, the Bid package will be submitted within two (2) weeks.

Environmental Clearance

The proposed project is subject to California Environmental Quality Act (CEQA) review. The City of Sunnyvale is the project proponent and will be the CEQA lead agency. The scope of CEQA documentation that would be necessary has not been determined. The scope of CEQA documentation, including the potential for a CEQA exemption and Notice of Exemption, should be explored early in the project design process. Our understanding is that the traffic signal reconstruction at four locations project will likely qualify as categorically exempt.

The environmental clearance items of work are broken down into the three steps below.

- 1) Determination of Appropriate CEQA/NEPA Documents.
- 2) Preparation of CEQA Categorical Exemption.
- 3) Preparation of NEPA Categorical Exclusion.



Optional studies are not included in this scope should they be required for CEQA environmental clearance. The optional studies accounts for the possibility that an Initial Study (IS)/Mitigated Negative Declaration (MND) may be needed to satisfy CEQA requirements for the project. This proposal assumes that the project will not result in major adverse environmental effects that might require an MND or an Environmental Impact Report (EIR). The Administrative Draft IS/MND would be an optional task with a scope and budget to be determined at that time. In the event that the project is highly controversial and an EIR is required, additional scope and budget will be needed.

SCATS Installation Support

The City has SCATS adaptive operation on Mathilda Avenue and is interested in reconfiguring the east-west approaches at West Olive Avenue. We are teamed with TransCore to provide the signal controller and Traffic Management Center (TMC) configuration for SCATS operation for this project and have teamed with TransCore on the recent traffic signal design underway at the intersection of Remington Drive and Bernardo Avenue.

For the signal design at Remington Drive and Bernardo Avenue, TransCore teamed with TJKM for setting the personalities at the intersection and to provide input on the design such that SCATS will fit seamlessly into the City's traffic signal operations system.

Recently, TJKM completed design for fiber optic communications for Foothill Boulevard and Mission Boulevard in Hayward. The project is in construction, and TJKM is assisting the City with completing its TMC. TransCore is providing the SCATS implementation for the City. We are collaborating with TransCore and providing design support for coordinating installation of the traffic signal systems and the installation of SCATS operation for both streets to the TMC at City Hall.

Task Summary

TJKM's Scope of Work specifically includes:

- Perform Topographic survey for traffic signal modifications and intersection reconstruction and ADA curb ramp improvements. We will prepare an AutoCAD base plan from the topographic survey for the traffic signal modifications and intersection reconstructions and ADA curb ramp improvements.
- Provide Civil detailed design for ADA curb ramp improvements for the existing sidewalk.
- Conduct research and show utilities on the drawings; research the existing street right-of-way.
- Conduct environmental clearance in accordance with CEQA requirements for categorical exemption.
- Coordinate with all utilities to resolve any utility issues and to eliminate conflicts encountered during construction.
- Design civil roadway improvements, including signing and striping modifications for the signalized intersection.
- Prepare PS&E for signal interconnect to the adjacent traffic signal controller.
- Prepare photometric analysis for intersection lighting.
- Prepare revised signal timing plans for each intersection for review.
- Prepare PG&E application for disconnect/reconnect of electrical power service for the traffic signal modifications requiring upgraded PG&E service cabinets and coordinate with PG&E.
- Prepare City of Sunnyvale and City of Cupertino encroachment permit applications
- Prepare PS&E for the traffic signal modifications at the four locations.
 - The traffic signal modifications could include battery backup for operation of the signal system, if needed. The most recent Tesco Type 3 service cabinets are designed with battery back-up capability built into the service cabinet. Most new traffic signal system installations use the service cabinet with built in battery back-up capability.
 - The signal modifications will consider audible pedestrian signals; however, consideration must also be given to the noise. At the Hollenbeck/Alberta intersection, the neighborhood is residential and the audible signals must not be too loud for the nearby homes.
 - PTZ real time traffic monitoring camera to be considered at each project intersection.
- Prepare record drawings from City/Contractor redline as-builts, after the completion of construction.



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- ▶ The project design plan set will include a cover sheet, civil improvement plans, civil details, traffic signal modification plans, signing/stripping, interconnect/communication conduit plans, and appropriate notes and details.
- ▶ Provide five hard copies and one digital copy for each PS&E design review submittal.
- ▶ Provide Specifications in CSI format. Specifications shall include requirements for the contractor for hazardous materials handling for yellow striping containing lead.
- ▶ TJKM will provide design support for construction as detailed in the Work Plan that follows.
- ▶ TJKM will provide plans, specifications, notes, memorandum, and related project documents to the City upon completion of the project, which shall become the property of the City of Sunnyvale.

Work Plan

Based on our initial field review of the project sites and knowledge of the area, we will carry out all of the tasks required for this project.

Task 1 – Preliminary Design 30% PS&E

Task 1.1 – Memorandum for Basis of Design

For each intersection, TJKM will prepare a brief memorandum summarizing the conceptual signal modification design, discuss the options considered for the new curbline placement, controller cabinet location, and signal interconnect communication equipment required and also make a recommendation to the City for packaging this project for optimal bidding.

Deliverables

- ✓ *Memorandum for Basis of Design*

Task 1.3 – Design Plans and Specifications

We will prepare functional design drawings for the traffic design and intersection improvements. The plans will provide the layout of the traffic signal equipment, including locations of the new signal controller/cabinet, poles, pedestrian countdown signals, emergency vehicle pre-emption, traffic markings, striping and signage design, intersection safety lighting, etc. Designs will be in accordance with Caltrans design standards, CA MUTCD guidelines, and the City of Sunnyvale's current design standards.

TJKM will prepare application for National Pollutant Discharge Elimination System (NPDES) permit.

The TJKM team will complete the topographic survey and AutoCAD base for design of the project intersections. The drawings will show the street right-of-way and existing utility information. We will research and verify the public records to determine street right-of-ways. The TJKM team will obtain record copies from utility companies and service districts to locate existing electrical, gas, telephone, fiber optic, and cable television services. Utilities for sanitary and storm sewers, water mains, and fire hydrants will be researched, and "A" letters will be prepared, as necessary. Research will be verified by field investigations. We will coordinate with all utilities to resolve any utility issues and to eliminate conflicts encountered during construction. TJKM will provide the City with a list of any facilities belonging to the utility companies that will need to be adjusted as a result of the proposed construction.

Topographic survey data and mapping shall include, but is not limited to the following:

- ▶ Vertical and horizontal control tied to the City of Sunnyvale Horizontal and Vertical System;
- ▶ All existing topography, within the designated intersections, including all existing utility facilities that are visible or that are available from utility companies and record drawings;
- ▶ Existing sidewalk face of curb approximately 100 feet for each approach;
- ▶ Height of overhead utility lines within the intersection; and
- ▶ If right-of-way dedications are required for any stage of the project work, Siegfried Engineering shall rely on the City to provide the required title reports.



TJKM will also provide an updated project schedule, prepare a preliminary construction schedule, and 30% Engineer's probable construction cost estimate, and provide cut sheets of equipment/appurtenances that are planned for the project.

Deliverables

- ✓ *Five sets of the preliminary PS&E*
- ✓ *Preliminary details, topographic survey in AutoCAD format, project schedule, preliminary construction schedule, 30% cost estimate, equipment cut sheets, list of utility facilities requiring adjustment*

Task 1.4 – Environmental

We will prepare a preliminary CEQA analysis. TJKM is teamed with Michael Kent and Associates to prepare the necessary CEQA documentation. The City of Sunnyvale is the project proponent and will be the CEQA lead agency.

Because the project is funded through federal Highway Safety Improvement Program Funds (HSIP), it would be subject to the National Environmental Policy Act (NEPA) as well as CEQA.

The scope of CEQA and NEPA documentation that would be necessary has not been determined. Our understanding is that the project will likely qualify for a Categorical Exemption under CEQA and a Categorical Exclusion under NEPA.

Michael Kent and Associates will provide review for the potential for use of a CEQA Categorical Exemption and NEPA Categorical Exclusion for the project in consultation with the City and environmental staff.

Step 1 - We will review the potential for use of a CEQA Categorical Exemption and NEPA Categorical Exclusion for the project in consultation with the City and environmental staff. The conclusions of this review, with a determination of the appropriate form of CEQA and NEPA documentation, will be summarized in a letter to the City.

Step 2 - We will prepare a draft Categorical Exemption (CE) and draft Notice of Exemption (NOE), in compliance with the CEQA Guidelines. Upon receipt of the City's comments on the draft CE and NOE, we will prepare the final CE and NOE. We assume the City will file the Notice of exemption.

As an optional task, if a CEQA Initial Study/Negative Declaration and/or a NEPA Environmental Assessment is required, the TJKM team will prepare a CEQA Initial Study/Negative Declaration and/or NEPA Environmental Assessment. These items would be an optional task and optional scope and a scope and budget would be determined at that time for City approval.

Deliverables

- ✓ *Environmental documents*

Task 2 – 60% Submittal Plans, Specifications, and Estimate (PS&E)

TJKM will receive one set of non-conflicting comments from the City on the conceptual plans and incorporate them into the 60% PS&E. In this stage of the design submittal to the bid package, TJKM will prepare the project plans for each intersection, which will include the following sheets:

- *Cover Sheet*
- *General Note Sheet*
- *Utility Sheets*
- *Demolition Plan*
- *Construction Layout Sheet*
- *Grading and Drainage Sheet*



- ▶ Traffic Signal Removal Plan
- ▶ Traffic Signal Modification Plans
- ▶ Interconnect and Communications Plans
- ▶ Signing and Striping
- ▶ Civil Detail Sheets
- ▶ Electrical Detail Sheets

Our design approach entails the following design tasks:

- ▶ TJKM will prepare 60% design plans for detailed traffic design in AutoCAD format.
- ▶ Siegfried Engineering will prepare civil design detail plan sheets for all the civil intersection improvements, the ADA curb ramp improvements, including construction details with elevations, grades, and curb geometry.
- ▶ TJKM will prepare an Engineer's construction cost estimate and technical special provisions describing each item on the bid schedule and their requirements, and verify that construction costs are within the existing City budget. The Engineer's construction cost estimate will be prepared in Excel electronic format. Any revisions to the technical special provisions will be recommended to the City.
- ▶ Prepare a bid schedule
- ▶ Prepare a preliminary construction schedule.
- ▶ Each PS&E review submittal set will also address any comments or revisions required from the City in the previous plan check submittal. Responses to comments will be documented and included with the submittal.
- ▶ TJKM will meet with City staff, as needed, to review comments and recommendations. A comment matrix will be prepared showing how TJKM addressed each review comment. The original red-line markup of the previous submittal will be returned back to the City with the next submittal round.

Deliverables

- ✓ Five sets of the 60% plans
- ✓ Technical Specifications and cost estimate
- ✓ Review comment matrix
- ✓ Redline markup from previous round

Task 3 – 90% Final Design (PS&E)

TJKM will receive one set of non-conflicting comments from the City on the 60% plans and coordinate and review the comments with City staff and revise based on comments and discussions. The plans at this stage will be finalizing details and almost ready for bidding. TJKM will also coordinate with the City with the approval of the new pole locations. Once the locations are finalized by the City, TJKM will coordinate with our potholing subconsultant to pothole the proposed locations at a depth of 5 feet maximum to determine if there are any underground conflicts. We have budgeted 4 potholes per intersection for this project. Additional potholing can be conducted with an amendment to the contract.

TJKM will:

- ▶ Prepare 90% construction drawings, contract specifications, and a detailed Engineer's construction cost estimate and submit for review by the City staff.
- ▶ Prepare a bid schedule and/or schedule of values.
- ▶ Recommend any revisions to the special provisions
- ▶ Recommend the allowed construction time period
- ▶ Prepare the revised signal-timing plans for each location based on our Synchro files from the intersection capacity analysis.
- ▶ Prepare an updated project schedule
- ▶ Prepare a comment matrix showing how TJKM addressed each review comment. The original red-line markup of the previous submittal will be returned back to the City with the next submittal round.



Deliverables:

- ✓ Five sets of the 90% plans
- ✓ Specifications and construction cost estimate
- ✓ Review comment matrix
- ✓ Redline markup from previous round
- ✓ Potholing information

Task 4 – 100% Final Design Submittal (PS&E)

At this stage, the plans and special specifications will be ready for bidding for construction. The cost estimate will be refined based on any comments received from the City and the front end boilerplate specifications, such as insurance forms, and supplemental general provisions, from the City will be incorporated into one complete specification package.

In addition, a peer review by another licensed professional at TJKM other than the designer of record will be conducted to review the overall constructability, coordination, and reasonable reduction in errors and omissions at this stage of the submittal round. The peer review professional will sign and date the Certification of Peer Review on a letterhead document with the transmittal of the final plans and specifications. The wording on the certification shall be as stated in the RFP, dated October 24, 2012.

TJKM will:

- Coordinate and review the approved 90% PS&E with City staff and revise based on comments and discussions.
- Prepare final construction drawings, contract specifications, and a final construction cost estimate (Excel format). These documents shall be construction ready.
- Prepare bid package, including a bid schedule and list of submittals.
- Submit final plans and specifications, and disk with the electronic files to City staff. Final plans will be provided in electronic file in AutoCAD format and in PDF format. Hardcopies will be in 24"x36" size.
- Provide Certification of Peer Review, as required by the City.
- Provide one set of reproducible drawings, signed and sealed, by discipline, by the registered civil engineer, in accordance with California State Law.

Deliverables

- ✓ One set of 24x36 original reproducible drawings, signed and sealed by discipline, by the registered civil engineer, project specifications, construction cost estimate, and an electronic version of the plans, specifications, and estimate

Task 5 – Bid Package

At this stage, the contract documents are ready for bidding. TJKM will coordinate the plans and technical specifications with the City's front end bid instructions, standard provisions, and revised special provisions ready for the City to bid for construction.

TJKM will:

- Coordinate with City staff for review of bid package.
- Review the approved bid package documents with City staff and revise based on comments and discussions.
- Prepare bid package, including a bid schedule and list of submittals.
- Submit final plans and specifications, and disk with the electronic files to City staff. Final plans will be provided in electronic file in AutoCAD format and in PDF format. Hardcopies will be in 24"x36" size. Each plan sheet will be stamped and signed by the Engineer of Record registered civil engineer, in accordance with California State Law.
- Prepare complete special provisions, technical specifications stamped and signed on the table of contents sheet by the Engineer of Record. If there are more than one Engineer of Record, the engineer



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will stamp and sign the table of contents for only that/those section(s) that applies to each engineering discipline.

- Provide Certification of Peer Review, as required by the City.
- Digital copy of all work products and supporting work

Deliverables

- ✓ Bid Package as required and approved by the City.

Task 6 - Bidding Support Phase

During the bid process, TJKM will answer bidder's questions and provide clarifications to the bid questions. We will respond to Requests for Information (RFIs) and attend the pre-bid meeting. We will prepare addenda, as necessary. We will prepare conformed documents, as necessary.

Deliverables

- ✓ Addendum(s), Clarifications, Conformed Documents, as necessary.

Task 7 - Construction Support Phase

During construction, TJKM and Siegfried Engineering will assist City staff as follows:

- Attend the pre-construction meeting.
- Prepare responses to contractors' RFIs during the construction phase, as needed.
- Review contractor submittals and assist the City inspector with specific design issues during construction.
- Attend meetings to answer design questions and clarify design elements when requested by the City staff.
- Assist with the issuance and negotiation of change orders.
- Participate in the final inspection and development of the punch lists.
- Attend signal turn actuation, if requested by the City. Provide field assistance, as necessary, during signal startup and initial operational testing.
- Prepare record drawings from Contractor redline as-builts in AutoCAD format and .pdf format

Deliverables

- ✓ Record Drawings, Clarifications, Response to Submittals

Exceptions to the Scope of Services

Please note that the following are not included in the Work Plan detailed above:

- Hazardous waste testing, monitoring and contingency plan for both site and building demolition work.
- Geotechnical monitoring.
- Construction management, inspection, supervision and scheduling.
- Gas, electric and telephone service plans.
- Record Survey Maps, Tentative Maps, Parcel Maps, Final Maps and legal descriptions and sketches.
- Construction staking.



10. Demonstrated Project Timeliness

The TJKM Team is an experienced design team with specific strengths in each of the areas represented in Sunnyvale's needs. TJKM has prepared Plans, Specifications and Estimates for hundreds of new and modified traffic signals throughout California. Our design personnel have experience and training in field construction practices and approach the design from a very practical standpoint. As a result, construction challenges are resolved expeditiously. Our design department has a proven track record of successful design projects and is dedicated to providing high-quality and accurate PS&E. TJKM's staff routinely provides construction assistance for our design projects, including traffic calming devices and traffic signal systems.

With our available resources and experience, TJKM is equipped to provide the level of responsiveness required by the City of Sunnyvale, all while providing professional and quality services. We have developed an individualized approach for each location that, combined with an active project management and team-oriented approach, will ensure the delivery of timely, high-quality services.

The personnel listed in our organization chart will be made available to the City as needed for the duration of the project. The table below illustrates our team's availability to meet the needs of the City. Our proposed staff has the availability to accept and complete any given task order as a part of this project on time.

Staff	Project Role	Location	Project Allocation
Atul Patel, PE	Project Manager	Pleasanton	70%
Ruta Jariwala, TE, PE	QA/QC	Pleasanton	40%
Erik Bjorklund	Construction Assistance/PS&E/CAD	Pleasanton	40%
Travis Richards, PE	Construction Assistance/PS&E/CAD	Pleasanton	40%
Neil Gross	Project Engineer	Lansing	30%
Les Zold, PLS	Project Engineer	San Jose	30%
Paul Schneider, PE	Project Engineer	Stockton	30%
Dale Wingard	Project Engineer	Pleasanton	30%
Michael Kent	Project Engineer	Pleasanton	30%

Upon Notice to Proceed (NTP) from the City of Sunnyvale, TJKM will perform design services for the Traffic Signal Reconstruction Projects in accordance with the schedule shown in the following page.

EXHIBIT "A-1"

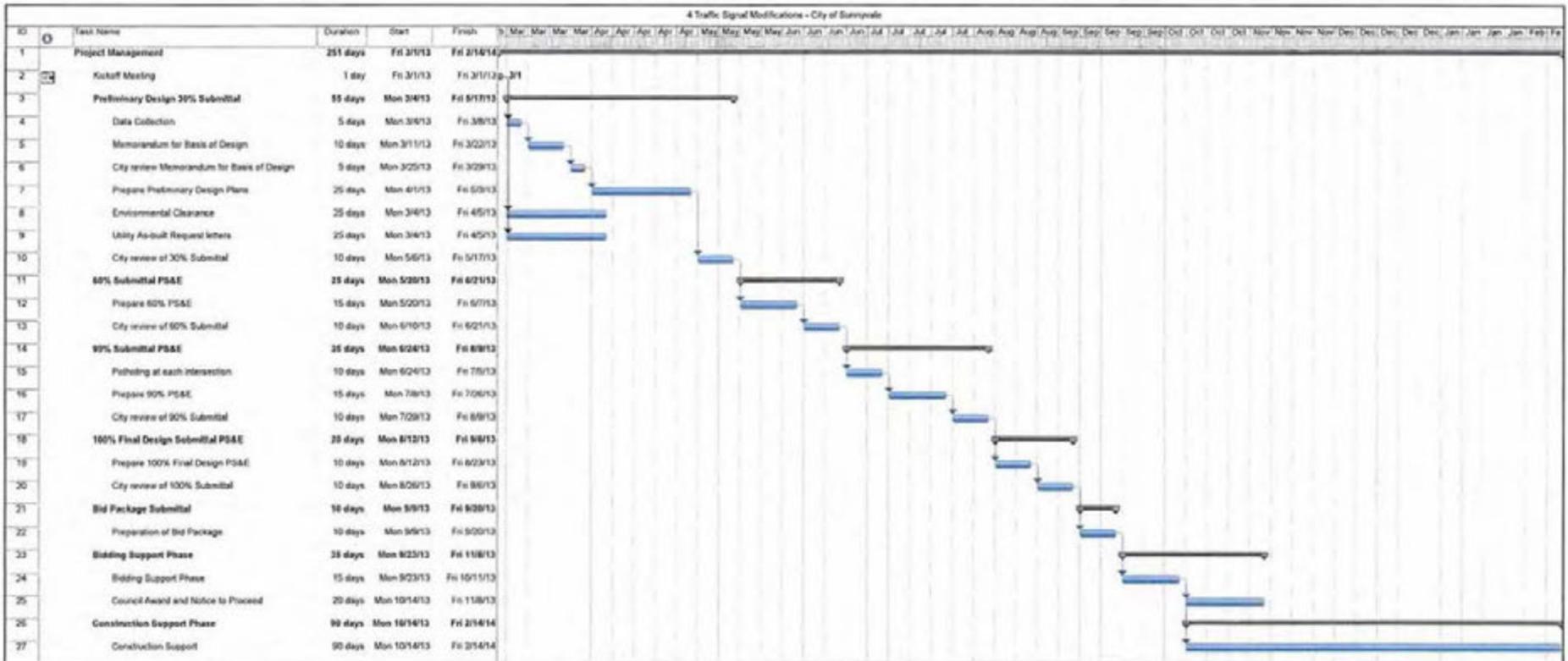


Exhibit "B"
(Compensation)

Tasks		Labor					Subconsultants					OCDs	Total	
Task #	Task Description	Project Manager	Principal/ QA	Lead Designer	Project Engineer	Total Hours	Total Labor Costs	Environmental Clearance	Survey	Civil & Larch	Soil boring	SCATS Implementation	Other Direct Costs	Total Fee
		Atul Patel	Rita Jarwala	Erik Bjorkland	Travis Richards			Michael Kent & Assoc	Seigfried	Seigfried	Bestest Labs	Transcore		
		\$200	\$200	\$125	\$105			Fee/Hr or LS	Fee/Hr or LS	Fee/Hr or LS	Fee/Hr or LS	Fee/Hr or LS		
1	Project Management	40				40	\$8,000						\$ 500	\$ 8,500
2.1	Pre-design Study and basis of Design (list all 4 separately)													\$ -
2.1	Hollenbeck/Hornstead	1			12	13	\$1,460						\$ 400	\$ 1,860
2.1	Hollenbeck/Alberta	1			8	9	\$1,040							\$ 1,040
2.1	Arques/Oakmead	1			8	9	\$1,040							\$ 1,040
2.1	Mahilda/Olive	1			8	9	\$1,040							\$ 1,040
2.2	Preliminary Design (0%)	4		24	55	83	\$9,575			\$ 4,300				\$ 13,875
2.2	Surveying				7	7	\$735		\$ 12,325					\$ 13,060
2.3	Environmental				0	0	\$0	\$ -						\$ -
2.3	Permitting and Regulatory Requirements				2	2	\$210							\$ 210
3	60% Design	12	1	70	110	193	\$22,900			\$ 4,000			\$ 200	\$ 27,100
4	Soil boring				24	24	\$2,520				\$ 8,040		\$ 200	\$ 10,760
4	90% Design	10	1	50	80	141	\$16,850			\$ 3,000			\$ 200	\$ 20,050
5	100% Final Design	4	1	24	54	83	\$9,670			\$ 2,960			\$ 200	\$ 12,830
6	Bid Package	1	4	8	27	40	\$4,835			\$ 1,600			\$ 200	\$ 6,635
7	Bidding Support Phase	1		4	12	17	\$1,960			\$ 1,400				\$ 3,360
8	Construction Support Phase	2		20	30	52	\$6,050			\$ 1,400		\$ 638	\$ 500	\$ 8,588
	Proposal Subtotal	78	7	200	437	722	\$88,885	\$0	\$12,325	\$18,660	\$8,040	\$638	\$2,400	\$ 129,948

original proposal \$ 163,595.00
original total difference \$ 33,647.50

Optional Services													Total	
A	Preparation of one additional package for construction bidding	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B	Environmental Clearance		-	-	2	2	\$210	\$3,840	-	-				\$4,050
C		-	-	-	-	0	\$0	-	-	-				
D		-	-	-	-	0	\$0	-	-	-				
E		-	-	-	-	0	\$0	-	-	-				
	Total Optional Services	0	0	0	2	2	\$210	\$3,840	\$0	\$0	\$0	\$0	\$0	\$4,050
	Total Including Optional Services	78	7	200	439	724	\$89,095	\$3,840	\$12,325	\$18,660	\$8,040	\$638	\$2,400	\$133,998
Notes:														
1														
2														
3														
4														

Exhibit "C"

INSURANCE REQUIREMENTS FOR CONSULTANTS

Consultant shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work by the Consultant, his agents, representatives, or employees.

Minimum Scope and Limits of Insurance: Consultant shall maintain limits no less than:

1. **Commercial General Liability:** \$1,000,000 per occurrence and \$2,000,000 aggregate for bodily injury, personal injury and property damage. ISO Occurrence Form CG 0001 is required.
2. **Automobile Liability:** \$1,000,000 per accident for bodily injury and property damage. ISO Form CA 0001 is required.
3. **Workers' Compensation** and **Employer's Liability:** \$1,000,000 per accident for bodily injury or disease.
4. **Errors and Omissions** Liability Insurance appropriate to the Consultants Profession: \$1,000,000 per occurrence and \$2,000,000 aggregate.

Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared and approved by the City of Sunnyvale. The consultant shall guarantee payment of any losses and related investigations, claim administration and defense expenses within the deductible or self-insured retention.

Other Insurance Provisions

The **general liability** and **automobile liability** policies are to contain, or be endorsed to contain, the following provisions:

1. The City of Sunnyvale, its officials, employees, agents and volunteers are to be covered as additional insureds with respects to liability arising out of activities performed by or on behalf of the Consultant; products and completed operations of the Consultant; premises owned, occupied or used by the Consultant; or automobiles owned, leased, hired or borrowed by the Consultant. The coverage shall contain no special limitations on the scope of protection afforded to the City of Sunnyvale, its officers, employees, agents or volunteers.
2. For any claims related to this project, the Consultant's insurance shall be primary. Any insurance or self-insurance maintained by the City of Sunnyvale, its officers, officials, employees, agents and volunteers shall be excess of the Consultant's insurance and shall not contribute with it.
3. Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to the City of Sunnyvale, its officers, officials, employees, agents or volunteers.
4. The Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

5. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, cancelled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the City of Sunnyvale.

Claims Made Coverage

If the General Liability and/or Errors & Omissions coverages are written on a claims-made form:

1. The retroactive date must be shown, and must be before the date of the contract or the beginning of contract work.
2. Insurance must be maintained and evidence of insurance must be provided for at least five years after completion of the contract work.
3. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a retroactive date prior to the contract effective date, the Consultant must purchase an extended period coverage for a minimum of five years after completion of contract work.
4. A copy of the claims reporting requirements must be submitted to the City of Sunnyvale for review.

Acceptability of Insurers

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII, unless otherwise acceptable to the City of Sunnyvale.

Verification of Coverage

Consultant shall furnish the City of Sunnyvale with original a Certificate of Insurance effecting the coverage required. The certificates are to be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates are to be received and approved by the City of Sunnyvale prior to commencement of work.