THE BOARD OF SUPERVISORS OF THE COUNTY OF STANISLAUS
BOARD ACTION SUMMARY

DEPT: Public Works

BOARD AGENDA:4.C.1
AGENDA DATE: March 6, 2018

SUBJECT:
Approval to Award a Contract for Engineering and Software Development Services to Kittleson & Associates, Inc., of Sacramento, California for the County-Wide Systemic Safety Analysis Report Program

BOARD ACTION AS FOLLOWS: **RESOLUTION NO. 2018-0115**

On motion of Supervisor Withrow , **Seconded by Supervisor** Olsen
and approved by the following vote,
Ayes: Supervisors: Olsen, Chiesa, Withrow, Monteith, and Chairman DeMartini
Noes: Supervisors: None
Excused or Absent: Supervisors: None
Abstaining: Supervisor: None

1) X **Approved as recommended**
2) _____ **Denied**
3) _____ **Approved as amended**
4) _____ **Other:**

MOTION:

ATTEST: **ELIZABETH A. KING, Clerk of the Board of Supervisors** **File No.**

THE BOARD OF SUPERVISORS OF THE COUNTY OF STANISLAUS
AGENDA ITEM

DEPT: Public Works

BOARD AGENDA:4.C.1
AGENDA DATE: March 6, 2018

CONSENT: ☑

CEO CONCURRENCE:

4/5 Vote Required: Yes

SUBJECT:

Approval to Award a Contract for Engineering and Software Development Services to Kittleson & Associates, Inc., of Sacramento, California for the County-Wide Systemic Safety Analysis Report Program

STAFF RECOMMENDATION:

1. Award a Contract for Engineering and Software Development Services to Kittleson & Associates, Inc. of Sacramento, California, for the County-wide Systemic Safety Analysis Report Program (SSARP), State Project Number SSARPL-5938(242).
2. Authorize the Director of Public Works to execute a contract with Kittleson & Associates, Inc. in the amount of $749,995.09 and to sign necessary documents, including any amendments to the agreement not to exceed 10%.
3. Authorize the Chief Executive Officer and Auditor-Controller to make the necessary adjustments as detailed in the attached Budget Journal.

DISCUSSION:

The County road system serves as an essential element of our local infrastructure, with the goal of supporting safe and efficient transportation for all members of the community. With approximately 3.5 million miles driven throughout the County each day, the roadway system can also present a significant liability to the organization when road conditions are not properly addressed. In the last five years, Stanislaus County has received 130 roadway claims that vary from vehicle pothole damage to serious injuries and fatalities that are alleged to have occurred due to the roadway network. CEO Risk Management engaged Public Works and County Counsel to review claim trends and to develop strategies to evaluate the safety of the County road system.

Through this engagement, CEO Risk Management and County Counsel have recommended that Public Works review the overall road network and develop a priority list of projects and strategies to address safety throughout the roadway network. Public Works approach to this task will be to collect data across the entire County roadway network to perform analysis to better understand how roadway characteristics and driver behavior are related in the County. This will help identify locations that pose potentially higher risks and will identify strategies to reduce claim exposure and enhance roadway safety for all members of the community.

In July 2016, Stanislaus County Public Works was awarded a State grant to complete a countywide Systemic Safety Analysis Report as part of the Phase 2 Statewide Systemic Safety Analysis Report Program (SSARP) call for projects. Traditional SSARP reports identify strategies to reduce collision occurrence and severity throughout an agency's roadway network based off of collision history. Stanislaus County's report will build off of these strategies, but will utilize sophisticated tools developed by the project team to identify locations that have higher risk, while not necessarily having collision history.

The County's plan is to utilize this report to identify and prioritize low-cost systemic and spot location improvements. This will improve roadway safety more cost effectively and is a more proactive approach than current resources and funding mechanisms allow.

The proposed Comprehensive Roadway Safety Analysis (CRSA) will evaluate all County roadways (currently 1,510 centerline miles) and prioritize the systemic and spot location needs of the road system. County staff has identified that the current approach of being reactive to incidents is not a sustainable practice and is not as cost-effective as trying to identify locations first, and be proactive in correction.

On February 7, 2017, in support of Public Works' goal to reduce liabilities and injuries on County roads, the Board of Supervisors approved the use of $500,000 of County General Fund for a comprehensive study of the safety of the County's road system, while leveraging State grant funding available to Public Works in Fiscal Year 2016-2017. Due to administrative issues in securing the funds from the State, the project's start was delayed to the 2017-2018 Fiscal Year.

Consultant Selection

On September 8, 2017, the County solicited proposals from consultants for the SSARP.

The scope of design services includes:

- Project Management
- Data Collection and Storage
- Software Application/Tool Development
- Systemic Safety Report Deliverable

On October 6, 2017, four proposals were received, from CH2M Sacramento, Fehr and Peers, Kittleson & Associates, and Michael Baker International. The proposals were evaluated based on qualifications only. Along with the proposals, consultant fees were submitted in a separate, sealed fee envelope and were not part of the evaluation process.

The proposals were evaluated based on the following evaluation criteria:

- Understanding of the work to be done;
- Experience with similar kinds of work;
- Quality of staff for work to be done;
- Capability of developing innovative or advanced techniques;
- Familiarity with State and Federal procedures;
- Financial responsibility; and,
- Demonstrated technical ability.

Public Works staff reviewed the proposals received and ranked them based on the above criteria, in the following order:

Rank	Consultant
1	Kittleson & Associates, Inc.
2	Michael Baker International
3	Fehr and Peers
4	CH2M Sacramento

Per consultant selection procedures described in the Caltrans Local Assistance Procedures Manual, negotiations started with the first ranked consulting firm, Kittleson & Associates, Inc.

Public Works staff recommends awarding a contract in the amount of $749,995.09 to Kittleson & Associates, Inc. of Sacramento, California.

Kittleson & Associates' team will collect roadway attributes for all 1,510 centerline miles of county roadways using advanced, vehicle mounted data collection hardware. The scope of the project includes, but is not limited to:

- Systemic Safety Analysis Report Program Report, meeting all State requirements per the SSARP guidelines dated February 2016;
- All collected data in a usable format, including databases, photo logs, and Geographic Information Systems (GIS) feature sets; and
- A software tool integrating collision, roadway attribute, and GIS information that will utilize the Highway Safety Manual's predictive analysis methods for roadway safety network screening.

Final deliverables per the scope of services including all developed software applications and SSARP report are expected to be delivered by December of 2018.

Project Goals

Kittleson's project team will collect an inventory of roadway geometrics and identify locations where safety can be enhanced to reduce overall risk for the traveling public. From a systemic approach, gathering roadway information is paramount to create driver expectancy, thereby increasing safety. Samples of information for the inventory to be identified are roadway lane widths, horizontal and vertical alignments, and intersection controls and warnings. The report will utilize existing collision data from a variety of sources including the Internet Statewide Integrated Traffic Records System (i-SWITRS) and UC Berkeley Transportation Injury Mapping System (TIMS) datasets.

The consultant team, utilizing the Highway Safety Manual, will develop software that will use collected data to develop a countywide predictive model. The model will normalize the statistics and establish a local calibration factor to accurately reflect local driving behaviors. The model will be able to identify locations that are rarely traveled, but have higher than expected crash rates. This will lead to the most cost-effective solution for spot locations, along with the proposed systemic improvements.

The project team will then use the software to help prioritize projects in a more cost-effective and efficient manner by taking a proactive approach to enhancing safety within the County. The priority list will then be used to determine projects for grant opportunities.

The SSARP will also improve risk management by having an adopted and prioritized list of projects. The list of safety projects shows that we have a program to identify and fix the potential safety problems proactively.

POLICY ISSUE:

Government Code Sections 23005 and 25502.5 requires Board of Supervisors' approval for all contracts exceeding $100,000, and Government Code Section 29120 requires approval by 4/5 vote of the Board of Supervisors for the adjustment of budget appropriations.

FISCAL IMPACT:

The total cost to deliver this project is $824,994.60 and funding is provided as follows:

Total Contract Award:	$749,995.09
SSARP (HSIP) Funding:	$250,000.00
Local Match:	$500,000.00 (Appropriations for Contingencies)
Local Contingency:	$74,994.60 (Public Works Roads & Bridges Budget)

Funding for any future amendments, up to 10% of the agreement, is included in the Public Works Fiscal Year 2017-2018 Adopted Road and Bridge budget.

BOARD OF SUPERVISORS' PRIORITY:

The recommended actions are consistent with the Boards' priority of *Delivering Efficient Public Services and Community Infrastructure* by improving the management and safety of the County's roadway system, and by reducing claims and liability associated with County roads.

STAFFING IMPACT:

Existing Public Works staff is overseeing this project.

CONTACT PERSON:

Matt Machado, Public Works Director Telephone: (209) 525-4153

ATTACHMENT(S):

1. Budget Journal - PW SSARP
2. Contract for Engineering and Software Development Services with Kittleson & Associates, Inc.

Database		FMSDBPRD.CO.STANISLAUS.CA.US.PROD	DO NOT CHANGE
Balance Type		Budget	DO NOT CHANGE
Data Access Set		County of Stanislaus	DO NOT CHANGE
Ledger	* List - Text	County of Stanislaus	DO NOT CHANGE
Budget	List - Text	LEGAL BUDGET	DO NOT CHANGE
Category	* List - Text	Budget - Upload	DO NOT CHANGE
Source	* List - Text	PW LO	
Currency	* List - Text	USD	DO NOT CHANGE
Period	List - Text	JAN-18	ENTER AS MMM-YY (ALL CAPS FOR MMM) EX: NOV-11
Batch Name	Text		
Journal Name	Text		
Journal Description	Text	Transfer appropriations to Public Works	
Journal Reference	Text	BOS Agenda Item	
Organization	List - Text	Stanislaus Budget Org	DO NOT CHANGE
Chart Of Accounts		Accounting Flexfield	DO NOT CHANGE

Upl	Fund (4 char) * List - Text	Org (7 char)	Account (5 char)	GL Project (7 char)	Location (6 char)	Misc. (6 char)	Other (5 char)	Debit incr appropriations decr est revenue * Number	Credit decr appropriations incr est revenue * Number	Line Description Text
O	0100	0016071	89000	0000000	000000	000000	00000		500000	Transfer to County Match
O	0100	0016401	85850	0000000	000000	000000	00000	500000		Transfer to Public Works
O	1102	0040310	46620	0000000	000000	000000	00000		500000	Transfer from County Match
Totals:								500000	1000000	

Tip: This is not the end of the Template. Unprotect the sheet and insert as many rows as needed.

Explanation:

Transfer appropriations from Appropriations for Contingencies to General Fund Contributions to Other Programs for Public Works' Road Study

Requesting Department	CEO	Data Entry	Auditors Office Only	
Letti Ortiz	Tera Chumley			*Janet Davenport*
Prepared by	Supervisor's Approval	Keyed by	Prepared By	Approved By
1/8/2018	1/10/2018			1/9/2018
Date	Date	Date	Date	Date

STANISLAUS COUNTY
PROFESSIONAL DESIGN SERVICES AGREEMENT

This Agreement is made and entered into by and between the County of Stanislaus, a political subdivision of the State of California, hereinafter referred to as "County" and Kittelson & Associates, Inc., hereinafter referred to as "Consultant".

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions contained herein, the parties hereby agree as follows:

1.0 PROFESSIONAL SERVICES TO BE PROVIDED BY CONSULTANT

1.1. Scope of Services: Consultant shall provide the professional services described in the County's Request for Proposal ("RFP") attached hereto as Exhibit "A1" and incorporated herein by reference and Consultant's Response to County's RFP (the "Response"). A copy of said Response is attached hereto as Exhibit "A2" and incorporated herein by this reference.

1.2. Professional Practices: All professional services to be provided by Consultant pursuant to this Agreement shall be provided by personnel experienced in their respective fields and in a manner consistent with the standards of care, diligence and skill ordinarily exercised by professional consultants in similar fields and circumstances in accordance with sound professional practices. Consultant also represents that it is familiar with all laws that may affect its performance of this Agreement and shall advise County of any changes in any laws that may affect Consultant's performance of this Agreement.

1.3. Representations: Consultant represents that it has reviewed the RFP and that in its professional judgment the services to be performed under this Agreement can be performed within the maximum fee set forth herein below and within the time specified in the Project Schedule attached hereto. Consultant represents that it is qualified to perform the professional services required by this Agreement and possesses the necessary licenses and permits required to perform said services. Consultant represents that it has no interest and shall not acquire any interest direct or indirect which conflicts, or has the appearance of conflicting, in any manner or degree with the performance of the work and services under this Agreement.

1.4. Compliance with Laws. Consultant agrees that it shall perform the services required by this Agreement in compliance with all applicable Federal and California laws including, but not limited to, those laws related to minimum hours and wages; occupational health and safety; fair employment and employment practices; workers' compensation insurance and safety in employment; and all other Federal, State and local laws and ordinances applicable to the services required under this Agreement.

1.5. Non-Discrimination. During the performance of this Agreement, Contractor and its officers, employees, agents, representatives or subcontractors shall not unlawfully discriminate in violation of any Federal, State or local law, rule or regulation against any employee, applicant for employment or person receiving services under this Agreement because of race, religious creed, color, national origin, ancestry, physical or mental disability including

perception of disability, medical condition, genetic information, pregnancy related condition, marital status, gender/sex, sexual orientation, gender identity, gender expression, age (over 40), political affiliation or belief, or military and veteran status. Contractor and its officers, employees, agents, representatives or subcontractors shall comply with all applicable Federal, State and local laws and regulations related to non-discrimination and equal opportunity, including without limitation the County's non-discrimination policy; the Fair Employment and Housing Act (Government Code sections 12900 et seq.); California Labor Code sections 1101 and 1102; the Federal Civil Rights Act of 1964 (P.L. 88-352), as amended; and all applicable regulations promulgated in the California Code of Regulations or the Code of Federal Regulations.

1.6. Non-Exclusive Agreement. Consultant acknowledges that County may enter into agreements with other consultants for services similar to the services that are subject to this Agreement or may have its own employees perform services similar to those services contemplated by this Agreement.

1.7. Delegation and Assignment. This is a personal service contract, and the duties set forth herein shall not be delegated or assigned to any person or entity without the prior written consent of County. Consultant may engage a subcontractor(s) as permitted by law and may employ other personnel to perform services contemplated by this Agreement at Consultant's sole cost and expense.

1.8. Covenant Against Contingent Fees. Consultant warrants that he/she has not employed or retained any company or person, other than a bona fide employee working for the consultant; to solicit or secure this agreement; and that he/she has not paid or agreed to pay any company or person other than a bona fide employee, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award, or formation of this agreement. For breach or violation of this warranty, the local agency shall have the right to annul this agreement without liability, or at its discretion; to deduct from the agreement price or consideration, or otherwise recover the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

1.9 Additional Terms and Conditions. Consultant is directed to "Exhibit E" of this agreement for additional Terms and Conditions pertaining to the development of a Software product. The Terms and Conditions found in "Exhibit E" shall only apply the work performed in the development of the Software Product as described in the Detailed Scope of Services in the Response.

2.0 COMPENSATION AND BILLING

2.1. Compensation. Consultant shall be paid in accordance with the fee schedule set forth in Exhibit "C", attached hereto and made a part of this Agreement (the "Fee Schedule"). Consultant's compensation shall in no case exceed Seven Hundred Forty-Nine Thousand Nine Hundred Ninety-Five and 09/100 Dollars ($749,995.09). Consultant will be compensated on a time and materials basis, based on the hours worked by the Consultant's employees or subcontractors at the hourly rates specified in the Fee Schedule. The Fee Schedule rates include direct salary costs, employee benefits, and overhead. The rates stated in the Fee Schedule are not

adjustable during the term of this Agreement. The County may retain ten percent of all periodic or progress payments made to the Consultant until completion and acceptance of all work tasks and County shall have right to withhold payment from Consultant for any unsatisfactory service until such time service is performed satisfactorily.

2.2. Reimbursements. In addition to the aforementioned fees, Consultant will be reimbursed for any expenses specifically set forth in each Project Scope of Work. All such reimbursement amounts are limited to those costs and expenses that are reasonable, necessary and actually incurred by the Consultant in connection with the services provided. The County shall not pay a mark up on any item of reimbursement. The County shall not pay for any item of overhead such as telephone, facsimile, postage, etc. All requests for reimbursement shall be accompanied by a copy of the original invoice.

2.3. Additional Services. Consultant shall not receive compensation for any services provided outside the scope of services specified in Exhibits A and B unless the County or the Project Manager for this Project, prior to Consultant performing the additional services, approves such additional services in writing. It is specifically understood that oral requests and/or approvals of such additional services or additional compensation shall be barred and are unenforceable.

2.4. Method of Billing. Consultant may submit invoices to County's Project Manager for approval on a progress basis, but no more often than once each calendar month. Said invoice shall be based on the total of all Consultants' services that have been completed to County's sole satisfaction. County shall pay Consultant's invoice within forty-five (45) days from the date County receives said invoice. Each invoice shall describe in detail, the services performed and the associated percentage of tasks completed. Any additional services approved and performed pursuant to this Agreement shall be designated as "Additional Services" and shall identify the number of the authorized change order, where applicable, on all invoices.

2.5. Records and Audits. Records of Consultant's services relating to this Agreement shall be maintained in accordance with generally recognized accounting principles and shall be made available to County or its Project Manager for inspection and/or audit at mutually convenient times for a period of three (3) years from the termination of this Agreement.

3.0 TIME OF PERFORMANCE

3.1. Commencement and Completion of Work. The professional services to be performed pursuant to this Agreement shall commence within five (5) days after County delivers its Notice to Proceed. Said services shall be performed in strict compliance with the Project Schedule approved by County as set forth in Exhibit "D", attached hereto and incorporated herein by this reference. The Project Schedule may be amended by mutual agreement of the parties. Failure to commence work in a timely manner and/or diligently pursue work to completion may be grounds for termination of this Agreement.

3.2. Excusable Delays. Neither party shall be responsible for delays or lack of performance resulting from acts beyond the reasonable control of the party or parties. Such acts shall include, but not be limited to, acts of God, fire, strikes, material shortages, compliance with

laws or regulations, riots, acts of war, or any other conditions beyond the reasonable control of a party.

4.0 TERM OF CONTRACT AND TERMINATION

4.1. Term. This Agreement shall commence upon approval by the County's Board of Supervisors and continue until the work required herein is completed, unless previously terminated as provided herein or as otherwise agreed to in writing by the parties.

4.2. Notice of Termination. The County reserves and has the right and privilege of canceling, suspending or abandoning the execution of all or any part of the work contemplated by this Agreement, with or without cause, at any time, by providing written notice to Consultant. The termination of this Agreement shall be deemed effective upon receipt of the notice of termination. In the event of such termination, Consultant shall immediately stop rendering services under this Agreement unless directed otherwise by the County.

4.3. Compensation. In the event of termination, County shall pay Consultant for reasonable costs incurred and professional services satisfactorily performed up to and including the date of County's written notice of termination. Compensation for work in progress shall be prorated as to the percentage of work completed as of the effective date of termination in accordance with the fees set forth in Exhibit "C". In ascertaining the professional services actually rendered hereunder up to the effective date of termination of this Agreement, consideration shall be given to both completed work and work in progress, to complete and incomplete drawings, and to other documents pertaining to the services contemplated herein whether delivered to the County or in the possession of the Consultant.

4.4. Documents. In the event of termination of this Agreement, all documents prepared by Consultant in its performance of this Agreement including, but not limited to, finished or unfinished design, development and construction documents, data studies, drawings, maps and reports, shall be delivered to the County within ten (10) days of delivery of termination notice to Consultant, at no cost to County. Any use of uncompleted documents without specific written authorization from Consultant shall be at County's sole risk and without liability or legal expense to Consultant.

5.0 INSURANCE REQUIREMENTS

Coverage Required: Contractor shall obtain, and maintain at all times during the term of this Agreement, insurance coverage in the amounts and coverage specified in the attached "Exhibit B."

6.0 INDEMNIFICATION

6.1. Indemnification: To the fullest extent allowed by law, Consultant shall defend, indemnify, and hold harmless the County and its officers, directors, officials, agents, employees, volunteers and representatives (collectively, "Indemnitee") from and against any and all claims, suits, actions, losses, injuries, damages or expenses of every name, kind, and description, including litigation costs and reasonable attorney's fees incurred, (collectively, "losses") which

are founded upon, arise out of, pertain to, or relate to, directly or indirectly, in whole or in part, the alleged negligence, recklessness, or willful misconduct of Consultant, its officers, agents, employees, volunteers, representatives, contractors and subcontractors, excluding, however, such liabilities caused in part by the sole negligence, active negligence or willful misconduct of the County, its agents, employees, and representatives. These indemnification obligations shall not be limited by any assertion or finding that (1) the person or entity indemnified is liable by reason of non-delegable duty, or (2) the losses were caused in part by the negligence of, breach of contract by, or violation of law by Indemnitee. Nothing in this Agreement, including the provisions of this paragraph, shall constitute a waiver or limitation of any rights which Indemnitee may have under applicable law, including without limitation, the right to implied indemnity.

6.2. Duty to Defend: The duty of Consultant to indemnify and save harmless as set forth herein, shall include both the duty to indemnify and at Consultant's own cost and expense the duty to defend as set forth in Section 2778 of the California Civil Code and as limited in section 2782.8 of the California Civil Code. This duty to defend arises immediately when such claim is made and shall be independent of any finding of negligence and shall arise regardless of any claim or assertion that Indemnitee caused or contributed to the Losses. Consultant shall provide legal counsel acceptable to the County.

6.3. Duty to Cooperate: Each party shall notify the other party within ten (10) days in writing of any claim or damage related to activities performed under this Agreement. The parties shall cooperate with each other in the investigation and disposition of any claim arising out of the activities under this Agreement. Specifically, Consultant shall take all steps necessary to assist the County in the defense of any claim brought by a contractor hired to construct the Project regarding any errors, flaws, and/or omissions in the plans or specifications of the Project.

6.4. Patent Rights: Consultant represents that professional services provided by Consultant pursuant to this Agreement does not infringe on any other copyrighted work. Consultant shall defend, indemnify and hold harmless the County from all loss, cost, damage, expense, liability or claims, including attorneys' fees, court costs, litigation expenses and expert consultant or witness fees, that may at any time arise for any infringement of the patent rights, copyright, trade secret, trade name, trademark, service mark or any other proprietary right of any person or persons in consequence of the use by the County of any articles or services supplied under this agreement.

6.5. The foregoing provisions shall survive the term and termination of this Agreement.

7.0 GENERAL PROVISIONS

7.1. Entire Agreement: This Agreement constitutes the entire Agreement between the parties with respect to any matter referenced herein and supersedes any and all other prior writings and oral negotiations. This Agreement may be modified only in writing, and signed by the parties in interest at the time of such modification. The terms of this Agreement shall prevail over any inconsistent provision in any other contract document appurtenant hereto, including exhibits to this Agreement.

7.2. Representatives. The Director of the Stanislaus County Department of Public Works, or his designee, shall be the representative of County for purposes of this Agreement and may issue all consents, approvals, directives and agreements on behalf of the County, called for by this Agreement, except as otherwise expressly provided in this Agreement. Consultant shall designate a representative for purposes of this Agreement who shall be authorized to issue all consents, approvals, directives and agreements on behalf of Consultant called for by this Agreement, except as otherwise expressly provided in this Agreement.

7.3. Project Managers. County shall designate a Project Manager to work directly with Consultant in the performance of this Agreement. Consultant shall designate a Project Manager who shall represent it and be its agent in all consultations with County during the term of this Agreement. Consultant or its Project Manager shall attend and assist in all coordination meetings called by County.

7.4. Designated Personnel: A material covenant of this agreement is that the Consultant shall assign the individuals designated below to perform the functions designated so long as they continue in the employ of the Consultant. The designated individuals shall, so long as their performance continues to be acceptable to County, remain in charge of the services for the Project from beginning through completion of services.

a. Project Manager: Erin Ferguson, PE; and
b. Systemic Safety Lead: Jim Bonneson, PhD, PE
c. GIS/Software Lead: Matt Braughton

7.5. Removal of Personnel or Sub-Consultants: If the County, in its sole discretion at any time during the term of this agreement, desires the removal of any person or sub-consultant assigned by Consultant to perform services, then the Consultant shall remove such person or consultant immediately upon receiving notice from the County.

7.6. Notices: Any notices, documents, correspondence or other communications concerning this Agreement or the work hereunder may be provided by personal delivery, facsimile or mail and shall be addressed as set forth below. Such communication shall be deemed served or delivered: a) at the time of delivery if such communication is sent by personal delivery; b) at the time of transmission if such communication is sent by facsimile; and c) 48 hours after deposit in the U.S. Mail as reflected by the official U.S. postmark if such communication is sent through regular United States mail.

If to County: Stanislaus County Public Works
Attn: Andrew Malizia, PE
1716 Morgan Road
Modesto, CA 95358

If to Consultant: Kittelson & Associates, Inc.
Attn: Erin Ferguson, PE
2110 K Street, Suite 22
Sacramento, CA 95816

7.7. Attorneys' Fees: In the event that litigation is brought by any party in connection with this Agreement, the prevailing party shall be entitled to recover from the opposing party all costs and expenses, including reasonable attorneys' fees, incurred by the prevailing party in the exercise of any of its rights or remedies hereunder or the enforcement of any of the terms, conditions, or provisions hereof.

7.8. Governing Law: This Agreement shall be governed by and construed under the laws of the State of California without giving effect to that body of laws pertaining to conflict of laws. In the event of any legal action to enforce or interpret this Agreement, the parties hereto agree that the sole and exclusive venue shall be a court of competent jurisdiction located in Stanislaus County, California.

7.9. Assignment: Consultant shall not voluntarily or by operation of law assign, transfer, sublet or encumber all or any part of Consultant's interest in this Agreement without County's prior written consent. Any attempted assignment, transfer, subletting or encumbrance shall be void and shall constitute a breach of this Agreement and cause for termination of this Agreement. Regardless of County's consent, no subletting or assignment shall release Consultant of Consultant's obligation to perform all other obligations to be performed by Consultant hereunder for the term of this Agreement.

7.10. Independent Contractor: Consultant is and shall be acting at all times as an independent contractor and not as an employee of County. Consultant shall secure, at his expense, and be responsible for any and all payment of Income Tax, Social Security, State Disability Insurance Compensation, Unemployment Compensation, and other payroll deductions for Consultant and its officers, agents, and employees, and all business licenses, if any are required, in connection with the services to be performed hereunder. Consultant hereby indemnifies and holds County harmless from any and all claims that may be made against County based upon any contention by any third party that an employer-employee relationship exists by reason of this Agreement.

7.11. Confidentiality: The Consultant agrees to keep confidential all information obtained or learned during the course of furnishing services under this Agreement and to not disclose or reveal such information for any purpose not directly connected with the matter for which services are provided.

7.12. Ownership of Documents: Any interest, including copyright interests, of Consultant or its contractors or subconsultants in studies, reports, memoranda, computational sheets, drawings, plans or any other documents, including electronic data, prepared in connection with the Services, shall be the property of County. To the extent permitted by law, work product produced under this Agreement shall be deemed works for hire and all copyrights in such works shall be the property of the County. In the event that it is ever determined that any works created by Consultant or its subconsultants under this Agreement are not works for hire, Consultant hereby assigns to County all copyrights to such works. With the County's prior written approval, Consultant may retain and use copies of such works for reference and as documentation of experience and capabilities.

7.13. Reuse of Design Documents: Should the County desire to reuse the documents specified above and not use the services of the Consultant, then the County agrees to require the new consultant to assume any and all obligations for the reuse of the documents, and the County releases Consultant and its subconsultants from all liability associated with the reuse of such documents.

7.14. Public Records Act Disclosure: Consultant has been advised and is aware that all reports, documents, information and data including, but not limited to, computer tapes, discs or files furnished or prepared by Consultant, or any of its subcontractors, and provided to County may be subject to public disclosure as required by the California Public Records Act (California Government Code Section 6250 et. seq.). Exceptions to public disclosure may be those documents or information that qualifies as trade secrets, as that term is defined in the California Government Code Section 6254.7, and of which Consultant informs County of such trade secret. The County will endeavor to maintain as confidential all information obtained by it that is designated as a trade secret. The County shall not, in any way, be liable or responsible for the disclosure of any trade secret including, without limitation, those records so marked if disclosure is deemed to be required by law or by order of the Court.

7.15. Responsibility for Errors: Consultant shall be responsible for its work and results under this Agreement. Consultant, when requested, shall furnish clarification and/or explanation as may be required by the County's representative, regarding any services rendered under this Agreement at no additional cost to County. In the event that an error or omission attributable to Consultant occurs, then Consultant shall, at no cost to County, provide all necessary design drawings, estimates and other Consultant professional services necessary to rectify and correct the matter to the sole satisfaction of County and to participate in any meeting required with regard to the correction.

7.16. Order of Precedence: In the event of an inconsistency in this Agreement and any of the attached Exhibits, the terms set forth in this Agreement shall prevail. If, and to the extent this Agreement incorporates by reference any provision of the RFP or the Response, such provision shall be deemed a part of this Agreement. Nevertheless, if there is any conflict among the terms and conditions of this Agreement and those of any such provision or provisions so incorporated by reference, this Agreement shall govern over both the Response and the RFP and the Response shall govern over the RFP.

7.17. Costs: Each party shall bear its own costs and fees incurred in the preparation and negotiation of this Agreement and in the performance of its obligations hereunder except as expressly provided herein.

7.18. No Third Party Beneficiary Rights: This Agreement is entered into for the sole benefit of County and Consultant and no other parties are intended to be direct or incidental beneficiaries of this Agreement and no third party shall have any right in, under or to this Agreement.

7.19. Construction: The parties have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises with respect to this Agreement, this Agreement shall be construed as if drafted jointly by the parties

and in accordance with its fair meaning. There shall be no presumption or burden of proof favoring or disfavoring any party by virtue of the authorship of any of the provisions of this Agreement.

7.20. Amendments: This Agreement may be amend only by a writing executed by the parties hereto or their respective successors and assigns.

7.21. Waiver: The delay or failure of either party at any time to require performance or compliance hy the other of any of its obligations or agreements shall in no way be deemed a waiver of those rights to require such performance or compliance. No waiver of any provision of this Agreement shall be effective unless in writing and signed by a duly authorized representative of the party against whom enforcement of a waiver is sought. The waiver of any right or remedy in respect to any occurrence or event shall not be deemed a waiver of any right or remedy in respect to any other occurrence or event, nor shall any waiver constitute a continuing waiver.

7.22. Severability: If any provision of this Agreement is determined by a court of competent jurisdiction to be unenforceable in any circumstance, such determination shall not affect the validity or enforceability of the remaining terms and provisions hereof or of the offending provision in any other circumstance. Notwithstanding the foregoing, if the value of this Agreement, based upon the substantial benefit of the bargain for any party is materially impaired, which determination as made by the presiding court or arbitrator of competent jurisdiction shall be binding, then both parties agree to substitute such provision(s) through good faith negotiations.

7.23. Counterparts: This Agreement may be executed in one or more counterparts, each of which shall be deemed an original. All counterparts shall be construed together and shall constitute one agreement.

7.24. Corporate Authority: The persons executing this Agreement on behalf of the parties hereto warrant that they are duly authorized to execute this Agreement on behalf of said parties and that by doing so, the parties hereto are formally bound to the provisions of this Agreement.

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(SIGNATURES ON NEXT PAGE)

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by and through their respective authorized officers:

COUNTY OF STANISLAUS

By: _____
Matt Machado, Director
Department of Public Works

KITTELSON & ASSOCIATES, INC.

By: _____
David Mills
Vice President

APPROVED AS TO FORM:
John P. Doering
County Consel

By: _____
Amanda Marie DeHart
Deputy County Counsel

EXHIBIT A1

COUNTY'S REQUEST FOR PROPOSAL

Stanislaus County
Striving to be the Best

DEPARTMENT OF PUBLIC WORKS

Matt Machado, PE, LS
Director, County Surveyor

Chris Brady, PE
Deputy Director - Design/Survey/Fleet Maintenance

Frederic Clark, PE, LS
Deputy Director - Development/Traffic

David Leamon, PE
Deputy Director - Construction Administration/Operations

Letti Ortiz
Senior Business and Finance Manager

www.stancounty.com/publicworks

STANISLAUS COUNTY

DEPARTMENT OF PUBLIC WORKS

REQUEST FOR PROPOSALS FOR:

SYSTEMIC SAFETY ANALYSIS REPORT PROGRAM (SSARP)

ENGINEERING & SOFTWARE DEVELOPMENT SERVICES

Invitation Date:	September 8, 2017
Questions Deadline:	5:00 PM, September 26, 2017
Last Addendum:	5:00 PM, October 2, 2017
Proposal Due Date:	5:00 PM, October 6, 2017

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1. INTRODUCTION

Stanislaus County is a rural and suburban community of 514,453 residents (2010 census) that resides in California's Central Valley. The County comprises of nearly 1 million acres (1,515 square miles) and maintains 232 bridges and 1,510 miles of unincorporated roadways. Agriculture is the County's number one industry.

In 2014, there were 1,372 reported traffic collisions on unincorporated County roads, 443 of which were injury collisions, and 13 which resulted in a fatality. Stanislaus County strives to maintain safe and efficient roadways for all road users on the road network. The County is continuously making strides in an attempt to reduce both the frequency and severity of collisions.

Roadway Safety strategies of the past have been reactive in nature, based on vehicle trends. Through the development of the Highway Safety Manual (HSM) published by AASHTO, among other data sources and tools, new procedures have allowed engineers and planners to correlate collision data with roadway data and have opened the floodgates for data-driven safety analysis. The County's limited resources have been unable to establish County-wide use of these new tools.

2. PROJECT DESCRIPTION

The purpose of the Systemic Safety Analysis Report Program (SSARP) program is to identify safety issues on public highways in unincorporated Stanislaus County. The approach taken by Stanislaus County is to collect roadway data and use the HSM's Predictive Method to identify high risk areas based on the model's predicted collisions vs. actual collisions, and then correlate roadway attributes/geometry to safety performance. The data will be used to identify common features that 1) Effectively reduce collisions below the predicted collision rate, and 2) Identify similar features and countermeasures for features to reduce high rate locations.

A software tool will be developed to implement this dynamic program to various data sets, including: existing, newly collected as part of this project, and future data, which will keep the program up-to-date. Safety project prioritization is intended to be a fluid prioritization plan.

The Consultant will be responsible for collecting data, developing routines to calculate performance, correlate performance with data attributes, and provide the County with various safety reports, including project prioritization and implementation strategies.

3. SCOPE OF WORK

This request for proposal is for a project-specific contract between the County and Consultant for the performance of services and a defined scope of work related to this project. The scope of services will consist of roadway attribute data collection, software development and roadway system analysis for the Systemic Safety Analysis Report Program (SSARP).

This RFP does not identify all required tasks. Tasks that are presented are minimum requirements and should be used as guidelines for additional services. The Consultant must be knowledgeable and experienced in the substantive and procedural requirements applicable to roadway safety engineering (data collection and analysis) and application development.

3.1. PROJECT MANAGEMENT

The scope of comprehensive project management includes, but is not limited to, project management, quality assurance and control, and efficiently managing schedules of any sub-consultants involved in the project. Ultimately, the Consultant will be responsible for completing all requested project tasks in a timely fashion. The Project Manager for the selected consultant will be responsible for the timely delivery of all aspects of the scope of work per the project schedule. Project team should propose the level of effort and availability for this task.

It is expected that the Consultant Project Manager at a minimum, provide weekly updates to the County Project Manager. For the purposes of estimating project fees, assume a total of 12 Project Development Team (PDT) meetings. Project schedule will be strictly enforced. Consultant must notify the County of any issues that cause schedule delays.

3.2. DATA COLLECTION AND STORAGE

Data Collection is an integral part of this project to help identify locations and features for the safety analysis. The HSM identifies and requires various features for the predictive model. The County has produced a "Proof of Concept" for the Predictive Method which utilizes accepted Crash Reduction Factors (CMFs) as additional attributes for the Predictive Model. See RFP "Attachment A-1".

Data will be collected on ALL rural roadways (1,294 centerline miles), and urban roadways not Functionally Classified as a local road as part of the base scope of work (62 centerline miles). The County also expects to receive an add alternative (optional task) to complete the additional and remaining urban local roads (156 centerline miles).

The US Department of Transportation - Federal Highways Administration (FHWA) has published a document titled Model Inventory of Roadway Elements - MIRE, Version 1.0. This document is available as a download online at:

https://safety.fhwa.dot.gov/tools/data_tools/mirereport/mirereport.pdf.

The MIRE document identifies the minimum required elements for HSM safety analysis. The extent to which data is collected should not be based on Functional Classification, rather, data should be collected for the full development of an HSM predictive model. The County would in addition be interested in other elements available by collection, or utilizing Geographic Information System (GIS) elements from the County's ESRI GIS enterprise system, including school vicinity, skew angles, etc...

Please be aware, most rural county roadways have similar features and many of the attributes will be easily defaulted to a single value with minor updates on segments/intersections and require integration with validation rather than collection, for example, the number of lanes.

Although not all roadway elements may be identified in this RFP, the consultant shall demonstrate in their Detailed Scope of Services their understanding of the roadway elements to be collected to complete analysis using the HSM Predictive Method.

Roadway data attributes should be collected and processed in an efficient manner. Demonstrate what methods will be utilized to collect and process roadway attributes, including what kind of hardware (tablets/laptops/mobile LIDAR collection), processing (manual entry/automated routines), and the Quality Control methods.

If LIDAR scans are utilized, it is expected that consultant will provide county with a reasonable estimate of data storage needs for the resolution needed to collect all of the required data. In addition to the storage needs, provide an explanation of how the County will be able to utilize any information collected in excess of the requirements (data that was collected, but not necessarily processed). For example, "The County will be able to integrate the provided LIDAR scans into ESRI GIS to explore the LIDAR point data for additional data sampling and processing in the future" or "The County will be able to import LIDAR scan data into AutoDesk Civil 3D."

Sample Base Data Collection Requirements:

Examples of data needing to be collected and stored are:

- Average Daily Traffic ADT. The County has a dataset of counts and will help fill gaps or estimate roadway counts for locations without counts. Consultant will be responsible for identifying gaps in data for the County to fill. Where gaps are not filled Consultant will not be responsible for collecting such data.
- Roadway Geometrics and Features: Lane Width, Shoulder Widths, Length of Horizontal curves, Radius of curves, Superelevation Variance, Grade %, Driveway Density, etc...
- Intersection Geometrics and Features: Intersection Skew Angle, Number of Lanes, Type of Control, Stop Ahead Presence, Flashing Beacon Presence
- Other Features: Roadway Lighting Type/Presence, Hazard Ratings
- Collision Data. Ideally, Collision Data will be extracted from the County's maintained Crossroads Software Database which is a verified version of the available data from the Internet Statewide Integrated Traffic Records System (i-SWITRS). The available SWITRS data includes Property Damage Only collisions. However, other sources of collision data may be utilized, including utilizing i-SWITRS data directly from the California Highway Patrol website, or extracted data from SafeTREC/UC Berkeley Transportation Mapping.

List of Additional Attributes to be collected, but not required by HSM:

- Pavement Condition (existing data in County Geodatabase). For new data requirements, See Optional tasks below.
- Sidewalk Presence/Width, Curb Presence/Type
- Median Barrier Presence/Type
- Roadside Clear Zone Width
- Terrain Type

- Edgeline and Centerline Presence
- Flashing Beacon Presence (Intersections)
- Intersection Warning Presence (Intersections, ie... Stop Ahead)
- Additional Safety Flags for system utilization, including Potential horizontal or vertical Sight Obstructions.

Optional Tasks:
Consultants shall also propose the following optional tasks:

1. Urban Local Roadway/Intersection Data Collection. Collect base data for remaining urban, local roadways. Treat this task as an add-alternative, in that it will should not require additional setup and mobilization for collection, but will increase the scope length in miles for data collection and processing by 156 centerline miles, approximately 312 lane miles.
2. Collect Pavement Distress Data. Data should be collected with roadway inventory concurrently for efficiency. Demonstrate what technologies or methodology will be utilized to collect this data. The collected distress and condition data shall be collected and stored in a format suitable for import in the most recent version of both MTC Street Saver and PAVER Pavement Management Software Systems. (1,510 Centerline miles). For the purpose of scoping this task, because all 1,510 miles of County roads are to be driven, assume that Optional Task 1 (Urban Local Roadway/Intersection Data Collection) has been selected also.

   NOTE: The County currently utilizes a basic pavement distress approach to Pavement Management. Although the knowledge and ability to import collected data into both StreetSaver and PAVER software is required as part of this optional task, the Consultant's scope, schedule, and fee (sealed envelope) should only reflect exporting into one program. The Consultant may choose to provide both formats to the County, if no additional fees are proposed. The County is currently considering these two software options.

Optional task descriptions within the proposal and Detailed Scope of Services should only describe changes to staffing and schedule on related tasks. Costs for this optional tasks shall only be listed in the sealed Fee Proposal.

3.3. APPLICATION/TOOL DEVELOPMENT

It is expected that the consultant develop a software utility/tool to manage all of the collected data and to use for safety analysis and reporting. The software can generally be created by any means, such as a simple database software with a graphical user interface, web-application server-based tools, etc...

3.4. ACCEPTABLE MODELS

The County will accept various types of application models. The list below is to be used as a general guideline. Consultant shall explain their system's basic and expanded architecture and how it will

integrate with the required datasets and demonstrate it's ability to meet all required features.

- Web-based Application. This would include a database server with server and/or client-side scripting technologies
- ESRI ArcMap "Online" (Intranet only).
    - County Maps ESRI Enterprise Portal is currently under development for potential "Online" mapping.
- ESRI ArcGIS Desktop/ArcPro add-ons
- Other platforms may be accepted if they are demonstrated to include all of the required features and produce the same necessary outputs, and require no additional County infrastructure or licensing

Any tool required to be developed by the Consultant shall be the property of the County of Stanislaus. The Sample Design Services agreement contains Exhibit E, a "Software Development Addendum" discussing the terms of the software development. It will be required by the Consultant to agree to its terms as part of the Professional Design Services Agreement.

Any licensing required for specific technologies or software will be the responsibility of the consultant to procure on behalf of the County in perpetuity.

3.5. SOFTWARE FEATURES

The software should have, at minimum, the following features:

- Input/Import/Modify/Delete Data for use with the HSM Predictive Methods.
    - Roadway and intersection attributes
    - Roadway segments and intersection nodes
    - Crash Modification Factors/Safety Performance Measures
    - Collision information
- Collision Import. Ability to import collisions from various sources, including Crossroads Software, i-SWITRS, and TIMS.
- Automatic Calibration. Automatically calibrate the HSM Predictive Model for each type calculation type based on collected roadway and intersection attributes and actual collision data.
- Calibration Bypass. The additional ability to operate without an actual collision dataset (Calibration Factor = 1; compare predictive output only).
- Utilize existing, applied Crash Modification Factors as Performance Measures as part of the Predictive Method
- High Incident Reporting. Identify locations with high incidence based on total traffic collisions
- High Rate Reporting. Identify locations with high collision rates based on traffic volumes

- Calculate the Predicted Annual collisions based on the HSM predictive method for segments and intersections
- Analysis.
    - Compare the Predicted Annual results with the Actual Annual (minimum 3 year average) to output a comparison rate
    - Analyze dataset to determine common attributes leading to high and low comparison rates.
    - Identify actual performance factors of various geometric attributes and treatments.
    - Ability to log applied treatments with dates to compare before/after for performance.
- Cost-Adjustment Factor. Countermeasure costs shall be able to be modified system-wide and adjusted using the Engineering News Record (ENR) Construction Cost Index.
- Countermeasure Strategies. Input strategies used for a specific set analysis results.
    - I.E... For segments with high rates of run-off roads where an edge line is not present: Suggested CMFs: 1) Install edge line or 2) Widen Shoulder.

3.6. REPORTING

The application should have reporting capabilities and be able to output, in an orderly manner, systemic improvements and potential countermeasures to reduce collision rates. These may be identified by correlated attributes, by published CMF's, or by Safety Performance Factors derived from the County SSARP system.

Program shall be able produce a priority listings for hot spot locations and systemic improvements based on the predictive model results and performance analysis. CMF's should have costs associated with them to determine network level cost estimates. Collision reduction should be utilized to estimate countermeasure benefit.

Reports shall meet all SSARP Reporting Requirements as described in Section 6 of the SSARP Program Guidelines as published by Caltrans, dated February 2016 (Attachment A-5).

3.7. OTHER TASKS

The County's GIS system is operated through a Central IT Department, Strategic Business Technology (SBT). Consultants shall NOT contact SBT directly with questions arising from this Request for Proposals. Any questions regarding the GIS infrastructure shall be submitted directly to Public Works as defined in section 7 of this RFP. Public Works will facilitate all questions and issue responses via addendum.

GIS Coordination. The County Project Manager will facilitate coordination between the Consultant team and SBT to ensure implementation and collaboration takes place effectively.

GIS Support. Consultant will be required to provide Geographic Information Systems (GIS) Support by qualified staff for integration of the collected roadway data into the County's GIS system. This task will vary in scope dependent upon the data storage method.

GIS Integration Plan. The Consultant's Detailed Scope of Services shall provide an integration plan for the integration of the SSARP system with the County GIS. The Integration Plan will provide key tasks required by the Consultant and what will be expected of SBT staff, in both level of effort, and schedule/timing. This may include the installation and initial setup of specific ESRI modules not currently being utilized by Stanislaus County as part of their Enterprise licensing with ESRI.

If the Consultant believes they will need to be directly involved in integration tasks within the existing ESRI Enterprise System, those tasks should be described in detail as to what level of effort and access will be required on the County's GIS Server.

3.8. DELIVERABLES:

- Full raw database in a format compatible with Microsoft Excel or Access with all collected data attributes. Other formats may be accepted, such as SQL, SQL-lite, or other formats compatible with County systems such as ESRI file-geodatabase. This may be mutually agreed upon dependant on the development of the tool.
- A software application/tool developed with, at minimum, all features and outputs per the example scope of work. It is expected that the Detailed Scope of Services will layout features and outputs.
- Consultant is to prepare a detailed priority listing of the top 25 'hot spot' locations based on collision rate and volume and top 10 systemic improvements with suggested alternatives. These project sheets will include initial cost estimates
- Provide the County with One (1) year of technical software support after completion and acceptance of the final release, including support for the implementation or modification of data, use of the program, and provide necessary patches for software bugs.
- Provide the County the option to extend annual technical software support for a fixed annual flat rate beyond the first year for support. (Initial fee to be listed in sealed envelope only).
    - It is expected the Consultant will provide the County technical support on the use of the system and necessary patching for software bugs.
    - Any additional features beyond what is provided in the agreed upon final software deliverable will not be requested under the annual support.

4. SCHEDULE OF WORK

The estimated schedule for the project is as follows:

- Data Collection and Processing: November 2017 – March 2018
- Data Validation and Gap Analysis: November 2017 - April 2018

- Software Development Milestones: November 2017 - October 2018
    - Software Scope and Outline: November 2017
    - Initial Software Storyboard: January 2018
    - Software Releases and Testing/Review:
        - Initial Release: March 2018
        - 2nd Release: May 2018
        - 3rd Release: July 2018
        - Final Release: August 2018
- Report Preparation: August - September 2018
- Finalize Reports: September - October 2018

5. PROPOSAL REQUIREMENTS

Each Proposal (Response) must not exceed 20 pages (double sided is acceptable for a total of 10 physical pages). 11 x 17 sheets are acceptable and will be counted as 1 page, but must contain appropriate content such as exhibits, maps, drawings, flowcharts, etc. Any attachments/appendices (such as Detailed Scope of Services, Project Schedule) will not be counted as part of the 20-page response limit.

Consultant must follow Caltrans Local Agency Procedure Manual (LAPM). The submitted material should focus on technical content that demonstrates experience and understanding in systemic roadway safety analysis and utilization of the Highway Safety Manual's Predictive Method and the availability and commitment of the firm and its team.

Each proposal must include the information described in this section. Failure to include all of the elements specified may be cause for rejection. Additional information may be provided, but should be succinct and relevant to the goals of this RFP. Excessive information will not be considered favorable.

5.1. COVER LETTER

A one page cover letter must be provided with the following information:

- *Title of Project;*
- *Name and mailing address of prime consulting firm;*
- *Contact person, telephone number, fax number, and email address.*

The County will use email to notify your firm of critical development such as interview schedules, notification of selection/non-selection, etc.

5.2. Firm's Qualifications

Describe the firm and provide a statement of the firm's qualifications for performing requested consulting services. Indicate any specialized expertise relevant to roadway safety analysis. Identify the services which would be completed by your firm's staff and those services typically provided by subconsultants. Identify subconsultants proposed to supplement your firm's staff.

5.3. Relevant Experience

Provide a summary of the firm's team's experience with similar projects. The summary should include a minimum of three related projects, including dates and brief descriptions of the projects.

Include references for three of the projects stated in your summary, including contact person and phone number and a brief description of the project that clearly demonstrates your firm's abilities.

Describe your firm's past record on controlling costs, quality of work and established schedules by citing at least three examples of comparable projects. Identify client and project name, estimate, actual project cost, original project schedule and completion time of project.

If available, examples of similar, relevant work cited may be submitted on a CD or USB flash drive, or web links may be provided to online sources.

5.4. Qualifications of Key Personnel

Provide a brief summary of the qualifications/experience of each team member, including length of service with the firm and the qualifications/experience of sub consultant staff on your project team. Include a brief discussion of current project commitments made to other agencies and a table showing the percentage of time key staff members are available during the project schedule.

5.5. Organization Chart

Provide an organization chart showing the structure of the project team and the relationships and relative ranks of the team members.

5.6. Staff Resumes

As an appendix to the proposal, provide resumes for each team member. No more than one page must be used per resume, except for the principals, which may not exceed 2 pages each and no more than 3 principals may be listed (i.e. Project Engineer, Principal in charge, etc.).

5.7. Detailed Scope of Services

The proposal should contain a well organized Detailed Scope of Services that demonstrates the requisite knowledge and experience and addresses anticipated project delivery requirements. It must include all required tasks, as either proposed or optional services, as well as describe the methodology to be used, specific work to be performed, outcomes, and work products. The Detailed Scope of Services must be attached as an appendix at the end of the proposal and must not show any fees. Although no fees are to be listed in the Detailed Scope of Services, where appropriate for specific tasks, describe the level of effort (ie... number of coordination meeting) if it is believed to demonstrate an understanding of the work to be performed in greater detail.

The Detailed Scope of Services should be in an outline format, similar to that of the Caltrans Work Breakdown Structure (WBS).

5.8. Fee Schedule

The method of payment for this contract shall be Actual Cost Plus Fixed Fee. Include with the proposal, in a SEPARATE, SEALED ENVELOPE, your fee. The fee proposal must separate the project into functional tasks and provide the associated costs (not to exceed amount) that define the work to be accomplished. The fee proposal must identify all key employees and/or classifications to be billed. New key employees and/or classifications must be approved by the County before they incur work on the contract or the costs can be questioned or disallowed. Sub-consultant fees must be clearly indicated (if applicable). A "Sample Fee Proposal", Attachment A-3 is attached for reference.

5.9. Schedule

The Consultant will include a project time schedule that encompasses all aspects of the Project. The Consultant will also provide sub-schedules for every major project task, including but not limited to, data collection, data processing, scoping, software development, etc... The Master Project schedule will be used for contractual purposes. The Consultant will be expected to update schedules on regular basis should there be any impacts to schedule. The Consultant will be expected to provide schedules to the County both in PDF format and Microsoft Office format. Per request by County's project manager, the Consultant will provide County with updated schedule.

5.10. Project Scope Change Suggestions

While the County has made an effort to list a number of tasks, features and methods, if a Consultant recognizes a more efficient method of accomplishing specific tasks or items, the Consultant's fees should reflect the Consultant's proposed solution, and the cost increase/savings for the more efficient method should be noted.

6. SELECTION PROCEDURE

The selection process will follow Public Works' procedures for consultant selection, which generally follow Caltrans procedures. Consultants are chosen based on qualifications and the quality of the proposal as shown in Attachment A-4 - Consultant Evaluation Sheet.

The County will select the Consultant based on the following procedure:

1. Receive and evaluate the proposal and develop a short list (if necessary).
2. If necessary, select and notify consultants to be interviewed.
3. Develop final ranking of Consultants.
4. Notify Consultants of the results.
5. Conduct project-scoping meeting with top ranked Consultant.
6. Negotiate Contract with top ranked Consultant. If an agreement on the scope of services and compensation cannot be reached, negotiations with the top ranked Consultant will be closed, and negotiations with the next-highest ranked Consultant will be opened. The process is repeated until a contract is successfully negotiated.

7. PROPOSAL SUBMITTAL

If you wish to be considered for the Systemic Safety Analysis Program Report, submit three (3) hard copies, and one (1) electronic copy of your proposal by 5:00 P.M., on October 6, 2017 to:

ATTN: Andrew Malizia, PE
Stanislaus County Public Works
1716 Morgan Road
Modesto, CA 95358

The electronic copy of your proposal (not including contents inside sealed Fee Schedule envelope) should be provided in PDF format on a CD/DVD or a USB flash drive.

The successful firm is required to enter into a Professional Design Services Agreement, including a Software Development Addendum with Stanislaus County for the work to be performed. A Sample Agreements is included with this Request for Proposal. The Consultant must state in the submitted proposal that the firm has reviewed the Sample Professional Design Services Agreement (Attachment A-2), will meet all of the terms and conditions if selected by the County for the requested services, and be able to sign the agreement as-is with no changes.

If the Consultant is unwilling to sign the agreement due to additional Terms and Conditions in Exhibit E "Software Development Addendum" of the Agreement, the Consultant shall state in their proposal which portions of the addendum are objected to and shall provide in their Response, the proposed language changes to the Addendum. These requests for changes may only be requested to Exhibit E of the Sample Agreement. The proposed language changes will not be counted as part of the 20-page response limit.

A copy of this Request for Proposal is available for viewing and download on the Modesto Reprographics website at www.modestoplanroom.com. Please contact Modesto Reprographics at (209) 544-2400 for assistance using the website if needed.

All questions regarding the RFP must be submitted in writing submitted via email to Andrew Malizia at maliziaa@stancounty.com. Questions must be received no later than 5:00PM on September 26, 2017. Addendums, if necessary, will be posted on the Modesto Reprographics website.

8. LIST OF ATTACHMENTS

Preliminary Proof of Concept for Predictive Model A-1
Sample Professional Design Services Agreement A-2
Sample Fee Proposal A-3
Sample Consultant Evaluation Sheet A-4
SSARP Guidelines A-5

Attachment A-1

Predictive Model: Preliminary Proof of Concept

Type of Intersection: Rural 4 Leg Signal

Calibration Factor: 0.5285 Control Type: 4SG Setting: Rural Submit

Calculated factor = 1.000

Major	Minor	ADT Major	ADT Minor	All-Way	Lighting	Stop Ahead	LTL	RTL	Skew Angle	Beacons	Collisions	Actual Rate	Expected Rate	Act-Exp
		14599	3658	No	Yes	Yes	4	2	0°	No	24	6	1.88	4.12
		12495	11004	No	Yes	Yes	4	1	0°	No	20	5	2.22	2.78
		10459	4450	No	Yes	Yes	0	0	5°	No	14	3.5	3.86	-0.36
		10048	6974	No	Yes	Yes	0	0	0°	No	13	3.25	4.12	-0.87
		7913	4150	No	Yes	Yes	0	0	10°	No	9	2.25	3.22	-0.97
		10770	2754	No	Yes	Yes	0	0	0°	No	10	2.5	3.57	-1.07
		5757	14599	No	Yes	Yes	0	0	0°	No	8	2	3.42	-1.42
		13203	6018	No	Yes	Yes	0	0	0°	No	10	2.5	4.71	-2.21

27.000/27.004 = 1.000

Type of Intersection: Rural 3-way Stop

Calibration Factor: 1.383 Control Type: 3ST Setting: Rural Submit

Calculated factor = 1.000

Major	Minor	ADT Major	ADT Minor	All-Way	Lighting	Stop Ahead	LTL	RTL	Skew Angle	Beacons	Collisions	Actual Rate	Expected Rate	Act-Exp
		13114	4406	No	No	Yes	1	0	0°	No	20	5	3.05	1.95
		10066	8141	No	No	Yes	2	0	0°	No	14	3.5	1.85	1.65
		3188	134	Yes	No	Yes	0	0	0°	No	7	1.75	0.17	1.58
		1691	313	No	No	Yes	0	0	0°	No	7	1.75	0.30	1.45
		10744	2397	No	No	Yes	1	0	10°	No	13	3.25	2.01	1.24
		1005	3516	No	No	Yes	0	0	0°	No	6	1.5	0.64	0.86
		5567	2645	Yes	Yes	Yes	0	0	0°	No	6	1.5	1.01	0.49
		3943	2119	No	No	Yes	0	0	0°	No	7	1.75	1.47	0.28
		13203	340	No	No	No	0	1	0°	No	7	1.75	1.95	-0.20
		10764	2734	No	No	Yes	0	0	0°	No	11	2.75	3.69	-0.94
		10453	6097	Yes	No	Yes	0	0	5°	No	7	1.75	2.83	-1.08
		12511	3838	No	No	Yes	1	1	60°	No	6	1.5	3.00	-1.50
		6097	5889	No	No	Yes	0	0	0°	No	7	1.75	3.43	-1.68
		10764	4206	No	Yes	Yes	0	0	0°	No	9	2.25	4.10	-1.85
		8614	4641	No	No	Yes	0	0	0°	No	7	1.75	4.01	-2.26

33.500/33.510 = 1.000

Safety Analyzer Back Reports Input admin

Type of Intersection: Rural 4-way Stop

Calibration Factor: 1.128 Control Type: 4ST Setting: Rural Submit

Calculated factor = 1.000

Major	Minor	ADT Major	ADT Minor	All-Way	Lighting	Stop Ahead	LTL	RTL	Skew Angle	Beacons	Collisions	Actual Rate	Expected Rate	Act-Exp
		6393	616	No	No	Yes	0	0	0°	No	18	4.5	1.44	3.06
		8141	1353	Yes	No	Yes	0	0	0°	Yes	13	3.25	1.33	1.92
		4395	368	No	No	Yes	0	0	0°	No	9	2.25	0.84	1.41
		1694	526	No	No	Yes	0	0	0°	No	8	2	0.59	1.41
		6895	604	No	No	Yes	2	1	0°	No	8	2	0.67	1.33
		1835	604	No	No	Yes	0	0	0°	No	8	2	0.67	1.33
		12936	8982	Yes	No	Yes	0	0	0°	No	28	7	5.86	1.14
		9074	656	No	Yes	Yes	2	0	0°	No	8	2	0.87	1.13
		4522	1108	No	No	Yes	0	0	10°	No	13	3.25	2.13	1.12
		2031	491	No	No	Yes	0	0	0°	No	7	1.75	0.63	1.12
		1843	686	No	No	Yes	0	0	0°	No	7	1.75	0.73	1.02
		2121	617	No	No	Yes	0	0	0°	No	7	1.75	0.74	1.01
		5645	1312	Yes	No	Yes	0	0	0°	Yes	8	2	1.07	0.93
		8884	1433	Yes	Yes	Yes	0	0	0°	No	9	2.25	1.39	0.86
		3681	283	No	No	Yes	0	0	0°	No	6	1.5	0.64	0.86
		1817	916	No	No	No	0	0	0°	No	8	2	1.25	0.75
		5073	821	No	No	Yes	0	0	10°	No	10	2.5	1.90	0.60
		7042	288	No	No	Yes	0	0	0°	No	6	1.5	0.96	0.54
		6703	1865	Yes	Yes	Yes	0	0	0°	Yes	7	1.75	1.31	0.44
		8843	2735	Yes	No	Yes	0	0	0°	Yes	10	2.5	2.15	0.35

SAMPLE

Attachment A-2

Sample Professional Design Services Agreement

SAMPLE

STANISLAUS COUNTY
PROFESSIONAL DESIGN SERVICES AGREEMENT

This Agreement is made and entered into by and between the County of Stanislaus, a political subdivision of the State of California, hereinafter referred to as "County" and [Consultant Firm], hereinafter referred to as "Consultant".

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions contained herein, the parties hereby agree as follows:

1.0 PROFESSIONAL SERVICES TO BE PROVIDED BY CONSULTANT

1.1. Scope of Services: Consultant shall provide the professional services described in the County's Request for Proposal ("RFP") attached hereto as Exhibit "A1" and incorporated herein by reference and Consultant's Response to County's RFP (the "Response"). A copy of said Response is attached hereto as Exhibit "A2" and incorporated herein by this reference.

1.2. Professional Practices: All professional services to be provided by Consultant pursuant to this Agreement shall be provided by personnel experienced in their respective fields and in a manner consistent with the standards of care, diligence and skill ordinarily exercised by professional consultants in similar fields and circumstances in accordance with sound professional practices. Consultant also represents that it is familiar with all laws that may affect its performance of this Agreement and shall advise County of any changes in any laws that may affect Consultant's performance of this Agreement.

1.3. Representations: Consultant represents that it has reviewed the RFP and that in its professional judgment the services to be performed under this Agreement can be performed within the maximum fee set forth herein below and within the time specified in the Project Schedule attached hereto. Consultant represents that it is qualified to perform the professional services required by this Agreement and possesses the necessary licenses and permits required to perform said services. Consultant represents that it has no interest and shall not acquire any interest direct or indirect which conflicts, or has the appearance of conflicting, in any manner or degree with the performance of the work and services under this Agreement.

1.4. Compliance with Laws. Consultant agrees that it shall perform the services required by this Agreement in compliance with all applicable Federal and California laws including, but not limited to, those laws related to minimum hours and wages; occupational health and safety; fair employment and employment practices; workers' compensation insurance and safety in employment; and all other Federal, State and local laws and ordinances applicable to the services required under this Agreement.

1.5. Non-Discrimination. During the performance of this Agreement, Contractor and its officers, employees, agents, representatives or subcontractors shall not unlawfully discriminate in violation of any Federal, State or local law, rule or regulation against any employee, applicant for employment or person receiving services under this Agreement because

SAMPLE

of race, religious creed, color, national origin, ancestry, physical or mental disability including perception of disability, medical condition, genetic information, pregnancy related condition, marital status, gender/sex, sexual orientation, gender identity, gender expression, age (over 40), political affiliation or belief, or military and veteran status. Contractor and its officers, employees, agents, representatives or subcontractors shall comply with all applicable Federal, State and local laws and regulations related to non-discrimination and equal opportunity, including without limitation the County's non-discrimination policy; the Fair Employment and Housing Act (Government Code sections 12900 et seq.); California Labor Code sections 1101 and 1102; the Federal Civil Rights Act of 1964 (P.L. 88-352), as amended; and all applicable regulations promulgated in the California Code of Regulations or the Code of Federal Regulations.

1.6. Non-Exclusive Agreement. Consultant acknowledges that County may enter into agreements with other consultants for services similar to the services that are subject to this Agreement or may have its own employees perform services similar to those services contemplated by this Agreement.

1.7. Delegation and Assignment. This is a personal service contract, and the duties set forth herein shall not be delegated or assigned to any person or entity without the prior written consent of County. Consultant may engage a subcontractor(s) as permitted by law and may employ other personnel to perform services contemplated by this Agreement at Consultant's sole cost and expense.

1.8. Covenant Against Contingent Fees. Consultant warrants that he/she has not employed or retained any company or person, other than a bona fide employee working for the consultant; to solicit or secure this agreement; and that he/she has not paid or agreed to pay any company or person other than a bona fide employee, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award, or formation of this agreement. For breach or violation of this warranty, the local agency shall have the right to annul this agreement without liability, or at its discretion; to deduct from the agreement price or consideration, or otherwise recover the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

1.9 Additional Terms and Conditions. Consultant is directed to "Exhibit E" of this agreement for additional Terms and Conditions pertaining to the development of a Software product. The Terms and Conditions found in "Exhibit E" shall only apply the work performed in the development of the Software Product as described in the Detailed Scope of Services in the Response.

2.0 COMPENSATION AND BILLING

2.1. Compensation. Consultant shall be paid in accordance with the fee schedule set forth in Exhibit "C", attached hereto and made a part of this Agreement (the "Fee Schedule"). Consultant's compensation shall in no case exceed [redacted]. Consultant will be compensated on a time and materials basis, based on the hours worked by the Consultant's employees or subcontractors at the hourly rates specified in the Fee Schedule. The Fee Schedule

SAMPLE

rates include direct salary costs, employee benefits, and overhead. The rates stated in the Fee Schedule are not adjustable during the term of this Agreement. The County may retain ten percent of all periodic or progress payments made to the Consultant until completion and acceptance of all work tasks and County shall have right to withhold payment from Consultant for any unsatisfactory service until such time service is performed satisfactorily.

2.2. Reimbursements. In addition to the aforementioned fees, Consultant will be reimbursed for any expenses specifically set forth in each Project Scope of Work. All such reimbursement amounts are limited to those costs and expenses that are reasonable, necessary and actually incurred by the Consultant in connection with the services provided. The County shall not pay a mark up on any item of reimbursement. The County shall not pay for any item of overhead such as telephone, facsimile, postage, etc. All requests for reimbursement shall be accompanied by a copy of the original invoice.

2.3. Additional Services. Consultant shall not receive compensation for any services provided outside the scope of services specified in Exhibits A and B unless the County or the Project Manager for this Project, prior to Consultant performing the additional services, approves such additional services in writing. It is specifically understood that oral requests and/or approvals of such additional services or additional compensation shall be barred and are unenforceable.

2.4. Method of Billing. Consultant may submit invoices to County's Project Manager for approval on a progress basis, but no more often than once each calendar month. Said invoice shall be based on the total of all Consultants' services that have been completed to County's sole satisfaction. County shall pay Consultant's invoice within forty-five (45) days from the date County receives said invoice. Each invoice shall describe in detail, the services performed and the associated percentage of tasks completed. Any additional services approved and performed pursuant to this Agreement shall be designated as "Additional Services" and shall identify the number of the authorized change order, where applicable, on all invoices.

2.5. Records and Audits. Records of Consultant's services relating to this Agreement shall be maintained in accordance with generally recognized accounting principles and shall be made available to County or its Project Manager for inspection and/or audit at mutually convenient times for a period of three (3) years from the termination of this Agreement.

3.0 TIME OF PERFORMANCE

3.1. Commencement and Completion of Work. The professional services to be performed pursuant to this Agreement shall commence within five (5) days after County delivers its Notice to Proceed. Said services shall be performed in strict compliance with the Project Schedule approved by County as set forth in Exhibit "D" attached hereto and incorporated herein by this reference. The Project Schedule may be amended by mutual agreement of the parties. Failure to commence work in a timely manner and/or diligently pursue work to completion may be grounds for termination of this Agreement.

SAMPLE

3.2. Excusable Delays. Neither party shall be responsible for delays or lack of performance resulting from acts beyond the reasonable control of the party or parties. Such acts shall include, but not be limited to, acts of God, fire, strikes, material shortages, compliance with laws or regulations, riots, acts of war, or any other conditions beyond the reasonable control of a party.

4.0 TERM OF CONTRACT AND TERMINATION

4.1. Term. This Agreement shall commence upon approval by the County's Board of Supervisors and continue until the work required herein is completed, unless previously terminated as provided herein or as otherwise agreed to in writing by the parties.

4.2. Notice of Termination. The County reserves and has the right and privilege of canceling, suspending or abandoning the execution of all or any part of the work contemplated by this Agreement, with or without cause, at any time, by providing written notice to Consultant. The termination of this Agreement shall be deemed effective upon receipt of the notice of termination. In the event of such termination, Consultant shall immediately stop rendering services under this Agreement unless directed otherwise by the County.

4.3. Compensation. In the event of termination, County shall pay Consultant for reasonable costs incurred and professional services satisfactorily performed up to and including the date of County's written notice of termination. Compensation for work in progress shall be prorated as to the percentage of work completed as of the effective date of termination in accordance with the fees set forth in Exhibit "C." In ascertaining the professional services actually rendered hereunder up to the effective date of termination of this Agreement, consideration shall be given to both completed work and work in progress, to complete and incomplete drawings, and to other documents pertaining to the services contemplated herein whether delivered to the County or in the possession of the Consultant.

4.4. Documents. In the event of termination of this Agreement, all documents prepared by Consultant in its performance of this Agreement including, but not limited to, finished or unfinished design, development and construction documents, data studies, drawings, maps and reports, shall be delivered to the County within ten (10) days of delivery of termination notice to Consultant, at no cost to County. Any use of uncompleted documents without specific written authorization from Consultant shall be at County's sole risk and without liability or legal expense to Consultant.

5.0 INSURANCE REQUIREMENTS

Coverage Required: Contractor shall obtain, and maintain at all times during the term of this Agreement, insurance coverage in the amounts and coverage specified in the attached "Exhibit B."

SAMPLE

6.0 INDEMNIFICATION

6.1. Indemnification: To the fullest extent allowed by law, Consultant shall defend, indemnify, and hold harmless the County and its officers, directors, officials, agents, employees, volunteers and representatives (collectively, "Indemnitee") from and against any and all claims, suits, actions, losses, injuries, damages or expenses of every name, kind, and description, including litigation costs and reasonable attorney's fees incurred, (collectively, "losses") which are founded upon, arise out of, pertain to, or relate to, directly or indirectly, in whole or in part, the alleged negligence, recklessness, or willful misconduct of Consultant, its officers, agents, employees, volunteers, representatives, contractors and subcontractors, excluding, however, such liabilities caused in part by the sole negligence, active negligence or willful misconduct of the County, its agents, employees, and representatives. These indemnification obligations shall not be limited by any assertion or finding that (1) the person or entity indemnified is liable by reason of non-delegable duty, or (2) the losses were caused in part by the negligence of, breach of contract by, or violation of law by Indemnitee. Nothing in this Agreement, including the provisions of this paragraph, shall constitute a waiver or limitation of any rights which Indemnitee may have under applicable law, including without limitation, the right to implied indemnity.

6.2. Duty to Defend: The duty of Consultant to indemnify and save harmless as set forth herein, shall include both the duty to indemnify and at Consultant's own cost and expense the duty to defend as set forth in Section 2778 of the California Civil Code and as limited in section 2782.8 of the California Civil Code. This duty to defend arises immediately when such claim is made and shall be independent of any finding of negligence and shall arise regardless of any claim or assertion that Indemnitee caused or contributed to the Losses. Consultant shall provide legal counsel acceptable to the County.

6.3. Duty to Cooperate: Each party shall notify the other party within ten (10) days in writing of any claim or damage related to activities performed under this Agreement. The parties shall cooperate with each other in the investigation and disposition of any claim arising out of the activities under this Agreement. Specifically, Consultant shall take all steps necessary to assist the County in the defense of any claim brought by a contractor hired to construct the Project regarding any errors, flaws, and/or omissions in the plans or specifications of the Project.

6.4. Patent Rights: Consultant represents that professional services provided by Consultant pursuant to this Agreement does not infringe on any other copyrighted work. Consultant shall defend, indemnify and hold harmless the County from all loss, cost, damage, expense, liability or claims, including attorneys' fees, court costs, litigation expenses and expert consultant or witness fees, that may at any time arise for any infringement of the patent rights, copyright, trade secret, trade name, trademark, service mark or any other proprietary right of any person or persons in consequence of the use by the County of any articles or services supplied under this agreement.

6.5. The foregoing provisions shall survive the term and termination of this Agreement.

SAMPLE

7.0 GENERAL PROVISIONS

7.1. Entire Agreement: This Agreement constitutes the entire Agreement between the parties with respect to any matter referenced herein and supersedes any and all other prior writings and oral negotiations. This Agreement may be modified only in writing, and signed by the parties in interest at the time of such modification. The terms of this Agreement shall prevail over any inconsistent provision in any other contract document appurtenant hereto, including exhibits to this Agreement.

7.2. Representatives. The Director of the Stanislaus County Department of Public Works, or his designee, shall be the representative of County for purposes of this Agreement and may issue all consents, approvals, directives and agreements on behalf of the County, called for by this Agreement, except as otherwise expressly provided in this Agreement. Consultant shall designate a representative for purposes of this Agreement who shall be authorized to issue all consents, approvals, directives and agreements on behalf of Consultant called for by this Agreement, except as otherwise expressly provided in this Agreement.

7.3. Project Managers. County shall designate a Project Manager to work directly with Consultant in the performance of this Agreement. Consultant shall designate a Project Manager who shall represent it and be its agent in all consultations with County during the term of this Agreement. Consultant or its Project Manager shall attend and assist in all coordination meetings called by County.

7.4. Designated Personnel: A material covenant of this agreement is that the Consultant shall assign the individuals designated below to perform the functions designated so long as they continue in the employ of the Consultant. The designated individuals shall, so long as their performance continues to be acceptable to County, remain in charge of the services for the Project from beginning through completion of services.

a. Project Manager: [Name] and
b. Lead/Manager: _____N/A_____

7.5. Removal of Personnel or Sub-Consultants: If the County, in its sole discretion at any time during the term of this agreement, desires the removal of any person or sub-consultant assigned by Consultant to perform services, then the Consultant shall remove such person or consultant immediately upon receiving notice from the County.

7.6. Notices: Any notices, documents, correspondence or other communications concerning this Agreement or the work hereunder may be provided by personal delivery, facsimile or mail and shall be addressed as set forth below. Such communication shall be deemed served or delivered: a) at the time of delivery if such communication is sent by personal delivery; b) at the time of transmission if such communication is sent by facsimile; and c) 48 hours after deposit in the U.S. Mail as reflected by the official U.S. postmark if such communication is sent through regular United States mail.

If to County: **If to Consultant:**

SAMPLE

Stanislaus County
Department of
Attn: [name]
Project Manager
[department contact info]

[Consultant contact person info]

7.7. Attorneys' Fees: In the event that litigation is brought by any party in connection with this Agreement, the prevailing party shall be entitled to recover from the opposing party all costs and expenses, including reasonable attorneys' fees, incurred by the prevailing party in the exercise of any of its rights or remedies hereunder or the enforcement of any of the terms, conditions, or provisions hereof.

7.8. Governing Law: This Agreement shall be governed by and construed under the laws of the State of California without giving effect to that body of laws pertaining to conflict of laws. In the event of any legal action to enforce or interpret this Agreement, the parties hereto agree that the sole and exclusive venue shall be a court of competent jurisdiction located in Stanislaus County, California.

7.9. Assignment: Consultant shall not voluntarily or by operation of law assign, transfer, sublet or encumber all or any part of Consultant's interest in this Agreement without County's prior written consent. Any attempted assignment, transfer, subletting or encumbrance shall be void and shall constitute a breach of this Agreement and cause for termination of this Agreement. Regardless of County's consent, no subletting or assignment shall release Consultant of Consultant's obligation to perform all other obligations to be performed by Consultant hereunder for the term of this Agreement.

7.10. Independent Contractor: Consultant is and shall be acting at all times as an independent contractor and not as an employee of County. Consultant shall secure, at his expense, and be responsible for any and all payment of Income Tax, Social Security, State Disability Insurance Compensation, Unemployment Compensation, and other payroll deductions for Consultant and its officers, agents, and employees, and all business licenses, if any are required, in connection with the services to be performed hereunder. Consultant hereby indemnifies and holds County harmless from any and all claims that may be made against County based upon any contention by any third party that an employer-employee relationship exists by reason of this Agreement.

7.11. Confidentiality: The Consultant agrees to keep confidential all information obtained or learned during the course of furnishing services under this Agreement and to not disclose or reveal such information for any purpose not directly connected with the matter for which services are provided.

7.12. Ownership of Documents: Any interest, including copyright interests, of Consultant or its contractors or subconsultants in studies, reports, memoranda, computational sheets, drawings, plans or any other documents, including electronic data, prepared in connection with the Services, shall be the property of County. To the extent permitted by law, work product produced under this Agreement shall be deemed works for hire and all copyrights in such works shall be the property of the County. In the event that it is ever determined that any works created

SAMPLE

by Consultant or its subconsultants under this Agreement are not works for hire, Consultant hereby assigns to County all copyrights to such works. With the County's prior written approval, Consultant may retain and use copies of such works for reference and as documentation of experience and capabilities.

7.13. Reuse of Design Documents: Should the County desire to reuse the documents specified above and not use the services of the Consultant, then the County agrees to require the new consultant to assume any and all obligations for the reuse of the documents, and the County releases Consultant and its subconsultants from all liability associated with the reuse of such documents.

7.14. Public Records Act Disclosure: Consultant has been advised and is aware that all reports, documents, information and data including, but not limited to, computer tapes, discs or files furnished or prepared by Consultant, or any of its subcontractors, and provided to County may be subject to public disclosure as required by the California Public Records Act (California Government Code Section 6250 et. seq.). Exceptions to public disclosure may be those documents or information that qualifies as trade secrets, as that term is defined in the California Government Code Section 6254.7, and of which Consultant informs County of such trade secret. The County will endeavor to maintain as confidential all information obtained by it that is designated as a trade secret. The County shall not, in any way, be liable or responsible for the disclosure of any trade secret including, without limitation, those records so marked if disclosure is deemed to be required by law or by order of the Court.

7.15. Responsibility for Errors: Consultant shall be responsible for its work and results under this Agreement. Consultant, when requested, shall furnish clarification and/or explanation as may be required by the County's representative, regarding any services rendered under this Agreement at no additional cost to County. In the event that an error or omission attributable to Consultant occurs, then Consultant shall, at no cost to County, provide all necessary design drawings, estimates and other Consultant professional services necessary to rectify and correct the matter to the sole satisfaction of County and to participate in any meeting required with regard to the correction.

7.16. Order of Precedence: In the event of an inconsistency in this Agreement and any of the attached Exhibits, the terms set forth in this Agreement shall prevail, except that "Exhibit E" shall prevail over this agreement. If, and to the extent this Agreement incorporates by reference any provision of the RFP or the Response, such provision shall be deemed a part of this Agreement. Nevertheless, if there is any conflict among the terms and conditions of this Agreement and those of any such provision or provisions so incorporated by reference, this Agreement shall govern over both the Response and the RFP and the Response shall govern over the RFP.

7.17. Costs: Each party shall bear its own costs and fees incurred in the preparation and negotiation of this Agreement and in the performance of its obligations hereunder except as expressly provided herein.

7.18. No Third Party Beneficiary Rights: This Agreement is entered into for the sole benefit of County and Consultant and no other parties are intended to be direct or incidental

SAMPLE

beneficiaries of this Agreement and no third party shall have any right in, under or to this Agreement.

7.19. Construction: The parties have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises with respect to this Agreement, this Agreement shall be construed as if drafted jointly by the parties and in accordance with its fair meaning. There shall be no presumption or burden of proof favoring or disfavoring any party by virtue of the authorship of any of the provisions of this Agreement.

7.20. Amendments: This Agreement may be amend only by a writing executed by the parties hereto or their respective successors and assigns.

7.21. Waiver: The delay or failure of either party at any time to require performance or compliance by the other of any of its obligations or agreements shall in no way be deemed a waiver of those rights to require such performance or compliance. No waiver of any provision of this Agreement shall be effective unless in writing and signed by a duly authorized representative of the party against whom enforcement of a waiver is sought. The waiver of any right or remedy in respect to any occurrence or event shall not be deemed a waiver of any right or remedy in respect to any other occurrence or event, nor shall any waiver constitute a continuing waiver.

7.22. Severability: If any provision of this Agreement is determined by a court of competent jurisdiction to be unenforceable in any circumstance, such determination shall not affect the validity or enforceability of the remaining terms and provisions hereof or of the offending provision in any other circumstance. Notwithstanding the foregoing, if the value of this Agreement, based upon the substantial benefit of the bargain for any party is materially impaired, which determination as made by the presiding court or arbitrator of competent jurisdiction shall be binding, then both parties agree to substitute such provision(s) through good faith negotiations.

7.23. Counterparts: This Agreement may be executed in one or more counterparts, each of which shall be deemed an original. All counterparts shall be construed together and shall constitute one agreement.

7.24. Corporate Authority: The persons executing this Agreement on behalf of the parties hereto warrant that they are duly authorized to execute this Agreement on behalf of said parties and that by doing so, the parties hereto are formally bound to the provisions of this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by and through their respective authorized officers:

COUNTY OF STANISLAUS	DESIGN PROFESSIONAL
By: _____	By: _____

SAMPLE

[name], [title]
Department of

[name]

Corporate Title: [title]

APPROVED AS TO FORM:

John P. Doering
County Counsel

By: _____
Amanda Marie DeHart
Deputy County Counsel

SAMPLE

EXHIBIT A1

COUNTY'S REQUEST FOR PROPOSAL

SAMPLE

EXHIBIT A2

CONSULTANT'S RESPONSE TO COUNTY'S REQUEST FOR PROPOSAL

SAMPLE

EXHIBIT B

INSURANCE REQUIREMENTS

EXHIBIT B

Insurance Requirements for Professional Services

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 hereunder by the Consultant, its agents, representatives, or employees.

MINIMUM SCOPE AND LIMIT OF INSURANCE

Coverage shall be at least as broad as:

1. **Commercial General Liability** (CGL): Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal & advertising injury with limits no less than $1,000,000 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (ISO CG 25 03 or 25 04) or the general aggregate limit shall be twice the required occurrence limit.
2. **Automobile Liability**: If the Consultant or the Consultant's officers, employees, agents, representatives or subcontractors utilize a motor vehicle in performing any of the work or services under the Agreement Insurance Services Office Form Number CA 0001 covering, Code 1 (any auto), or if Consultant has no owned autos, Code 8 (hired) and 9 (non-owned), with limit no less than $1,000,000 per accident for bodily injury and property damage.
3. **Workers' Compensation** insurance as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than $1,000,000 per accident for bodily injury or disease.
   (Not required if consultant provides written verification it has no employees)
4. **Professional Liability** (Errors and Omissions) Insurance appropriates to the Consultant's profession, with limits not less than $2,000,000 per occurrence or claim, $4,000,000 aggregate.

If the Consultant maintains broader coverage and/or higher limits than the minimums shown above, the County requires and shall be entitled to the broader coverage and/or higher limits maintained by the Consultant. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the County.

Application of Excess Liability Coverage

Consultants may use a combination of primary, and excess insurance policies which provide coverage as broad as ("follow form" over) the underlying primary policies, to satisfy the Required Insurance provisions.

Other Insurance Provisions

The insurance policies are to contain, or be endorsed to contain, the following provisions:

Claims Made Policies

If any of the required policies provide coverage on a claims-made basis:

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 (5) years after completion of the contract of 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 "extended reporting" coverage for a minimum of five (5) years after completion of contract work.

Verification of Coverage

Consultant shall furnish the County with a copy of the policy declaration and endorsement page(s), original certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All **certificates and endorsements are to be received and approved by the County before work commences.** However, failure to obtain the required documents prior to the work beginning shall not waive the Consultant's obligation to provide them. The County reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

Subcontractors

Consultant shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and Consultant shall ensure that County is an additional insured on insurance required from subcontractors.

Special Risks or Circumstances

County reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

Insurance Limits

The limits of insurance described herein shall not limit the liability of the Consultant and Consultant's officers, employees, agents, representatives or subcontractors. Consultant's obligation to defend, indemnify and hold the County, its officers, officials, employees, agents and volunteers harmless under the provisions of this paragraph is not limited to or restricted by any requirement in the Agreement for Consultant to procure and maintain a policy of insurance.

[SIGNATURES SET FORTH ON THE FOLLOWING PAGE]

SAMPLE

EXHIBIT C

CONSULTANTS FEE SCHEDULE

SAMPLE

EXHIBIT D

PROJECT SCHEDULE

SAMPLE

EXHIBIT E

SOFTWARE DEVELOPMENT ADDENDUM TO THE PROFESSIONAL DESIGN SERVICES AGREEMENT

"EXHIBIT E"

SOFTWARE DEVELOPMENT ADDENDUM TO THE PROFESSIONAL DESIGN SERVICES AGREEMNT

RECITALS

WHEREAS, County desires to engage Consultant (Developer) to develop, create, test and deliver as a work made for hire a certain computer program and printed material for the Systemic Safety Analysis Reporting Program (the "System"); and

WHEREAS, the Developer is specially trained, experienced and competent to perform and has agreed to provide such services;

NOW, THEREFORE, County and Developer, intending to be legally bound, hereby agree as follows:

TERMS AND CONDITIONS

1. DEFINITIONS

When used in this Agreement and in the Scope of Work made a part of this Agreement, the terms listed below shall have the following meanings:

1.1 Code - shall mean computer programming code. If not otherwise specified, Code shall include both Object Code and Source Code. Code shall include any Maintenance Modifications or Basic Enhancements thereto created by Developer from time to time, and shall include Major Enhancements thereto when added to the Code in connection with the Scope of Work or any other agreement and scope of work between the parties.

(a) Object Code - shall mean the machine-readable form of the Code.

(b) Source Code - shall mean the human-readable form of the Code and related system documentation, including all comments and any Code required in the operation of the system.

1.2 Deliverables - shall mean the deliverables as defined in applicable contract documents, including without limitation, the project Request for Proposal ("RFP"), the Developer's proposal or scope of work, and any successive documents, including all Code, Documentation and other materials developed for or delivered to County by Developer under this Agreement.

1.3 Derivative Work - shall mean a work which is based upon one or more preexisting works, such as a revision, modification, translation, abridgement, condensation, expansion, or any other form in which such preexisting works may be recast, transformed, or adapted, and which, if prepared without authorization of the owner of the copyright in such preexisting work, would constitute a copyright infringement. For purposes

hereof, a Derivative Work shall also include any compilation that incorporates such a preexisting work,

1.4 Documentation - shall mean user documentation, whether hard copy of electronic, and other materials that relate to particular Code, including materials useful for design (for example, logic manuals, flow charts, and principles of operation), Documentation shall include any Maintenance Modifications or Basic Enhancements thereto created by Developer from time to time, and shall include Major Enhancements thereto when added to the Documentation in connection with the Scope of Work or any other agreement and scope of work between the parties,

1.5 Enhancements - shall mean changes or additions, other than Maintenance Modifications, to Code and related Documentation, including all new releases, that improve functions, add new functions, or significantly improve performance by changes in system design or coding,

(a) Basic Enhancements - shall mean any Enhancement that is not a Major Enhancement.

(b) Major Enhancements - shall mean changes or additions to Code and related Documentation that (1) have a value and utility separate from the use of the Code and Documentation, (2) as a practical matter, may be priced and offered separately from the Code and Documentation, and (3) are not made available to any of Developer's customers without separate charge,

1.6 Error - shall mean any error, problem, or defect resulting from (1) an incorrect functioning of Code, or (2) an incorrect or incomplete statement or diagram in Documentation, if such error, problem or defect renders the Code inoperable, causes the Code to fail to meet the specifications thereof, causes the Documentation to be inaccurate or incomplete in any material respect, causes incorrect results, or causes incorrect functions to occur when any such materials are used,

1.7 Maintenance Modifications - shall mean any modifications or revisions, other than Enhancements, to Code or Documentation that correct Errors, support new releases of the operating systems with which the Code is designed to operate, support new input/output *(I/O)* devices, or provide other incidental updates and corrections,

1.8 Project Schedule - shall mean the project schedule, which is attached to this Agreement and which may be revised from time to time upon submittal by the Developer and approval by the County,

1.9 Scope of Work - shall mean and collectively include (a) Exhibit A2: Consultant's Response including a Detail Scope of Services, (b) the most recent Project Schedule submitted by the Developer and approved by the County, and (c) any change requests approved by the parties in accordance with the provisions of this Agreement; all of which are incorporated into this Agreement by this reference.

1.10 Project Manager - shall mean the person designated by each respective party who shall be primarily responsible for all administrative matters related to this Agreement for that party.

2. SOFTWARE DEVELOPMENT

2.1 Delivery and Acceptance. Developer shall deliver all Deliverables, upon completion, to County's Project Manager for testing and acceptance. For each individual Deliverable or group of linked Deliverables identified by tasks, the County shall determine if the deliverable conforms to the specifications and performance standards set forth in the Scope of Work or has any Errors. The Developer shall use reasonable

effort to correct any such nonconformance and redeliver the Deliverable to the County as soon as feasible. Upon delivery and acceptance of the final individual Deliverable, acceptance testing shall be performed on the System as a whole in order to determine whether the integration of the Deliverables and any necessary equipment meets the specifications for the system set forth in the RFP, scope of work, or proposal accepted by the County, and operates with internal consistency. Upon satisfactory completion of acceptance testing after delivery of the Deliverables in final form, the County shall issue to Developer written notice of acceptance pertaining to such Deliverables. The Deliverables shall be deemed to have been accepted by the County if the County does not notify the Developer within 30 days after delivery of the Deliverables in final form that the Deliverables do not conform to the specifications and performance standards set forth in the Scope of Work or has any Errors.

3. REPORTS

3.1 Task Reporting. Developer agrees to provide to County at least monthly a written report of the progress of the work required under Scope of Work, any anticipated problems (resolved or unresolved), and any indication of delay in fixed or tentative schedules. As these reports may be needed from time to time on a weekly basis, Developer further agrees to provide weekly reports to the County upon request.

3.2 Bug / Issue Reporting. Developer agrees to provide to County at least monthly an electronic export of all bugs and issues generated by the SSARP project in a mutually agreed upon format.

4. OWNERSHIP AND RIGHTS

4.1 Ownership of Work Product by County. All items contributing to and involved in the Deliverables (i.e., the design, source code and all documentation) shall be owned by County and shall be considered a work made for hire by Developer for County. County shall own all United States and international copyrights in the Deliverables, including the intellectual property rights; provided however, the County shall not have any ownership rights to source code of pre-existing works or software that are independently developed by the Developer or others, but the County shall have a perpetual license for use of such pre-existing work as part of the Deliverables. Developer agrees to assign to the County all Deliverables developed under this contract.

As used in this section, software design does not include ideas, processes or functions, including method of operation, that are part of common use, obvious and pre-determined by the environment, or dictated by the idea itself. The County does not have or retain intellectual property rights in non-application specific libraries or routines incorporated in the software design.

4.2 Pre-existing Works. The parties intend to protect the intellectual property rights of the Developer or others in pre-existing works that are integrated with the Deliverables, and to protect the County's intellectual property rights in the Deliverables that may include pre-existing works integrated with the Deliverable. In accordance with that intent, the parties agree to all of the following provisions.

(a) Prior to integration of any pre-existing work in any Deliverable, the Developer shall notify the County in writing of the Developer's intent to use pre-existing works developed by the Developer or others independently of work performed for the County.

(b) The Developer shall obtain for the benefit of the County, the right and license to use, execute, display, perform, and distribute internally or externally, the pre-existing work as an integral part of the Deliverables. The county recognizes that Deliverables may include open source and freeware software, which has its own

license that makes it freely available. (c) The County may convey, license, sell or otherwise transfer its intellectual property rights in the Deliverables, but any such transfer shall not include any rights to pre-existing works integrated with the Deliverable for any commercial purpose except upon prior written approval from or agreement with the Developer or other person or entity that holds intellectual property rights for such pre-existing work. For purposes of this section, a "commercial purpose" does not include the conveyance, license, sale or other type of transfer by the County to another governmental organization or entity for its own use, whether or not such transfer includes consideration of any kind, including money.

(d) The Developer may convey, license, sell or otherwise transfer its intellectual property rights in any pre-existing work that is integrated with the Deliverables, provided such transfer does not interfere or adversely affect the County's right to use the pre-existing work as an integral part of the Deliverables.

4.3 Patent License. In addition, and except as limited by Section 6.2 herein, Developer hereby grants to County, and its successors and assigns, the royaltyfree, nonexclusive right and license under any patents owned by Developer, or with respect to which Developer has a right to grant such rights and licenses, to the extent required by County to exploit the Deliverables and to exercise its full rights in the Deliverables, including (without limitation) the right to make, use and sell products and services based on or incorporating such Deliverables.

4.4 Avoidance of Infringement. In performing services under this Agreement, Developer agrees to avoid designing or developing any items that infringe one or more patents or other intellectual property rights of any third party. If Developer becomes aware of any such possible infringement in the course of performing work under this Agreement, Developer shall immediately notify County in writing.

5. REPRESENTATIONS AND WARRANTIES

Developer makes the following representations and warranties for the benefit of County, as a present and ongoing affirmation of facts in existence at all times when this Agreement is in effect:

5.1 No Conflict. Developer represents and warrants that it has no interest and shall not acquire any interest direct or indirect which would conflict or interfere in any manner or degree with the performance of the work and services under this Agreement.

5.2 Ownership Rights. Developer represents and warrants that (a) except as provided in Section 6 hereof with respect to certain identified preexisting works licensed to County, it has and will have full and sufficient right to assign or grant the rights and/or licenses granted in the Deliverables pursuant to this Agreement, and (b) all Deliverables, including all any preexisting works addressed in Section 6 hereof, do not and will not infringe any patent, copyright, trademark or other intellectual property rights (including trade secrets), privacy or similar rights of any third party, nor has any claim (whether or not embodied in an action, past or present) of such infringement been threatened or asserted, or is such a claim pending, against Developer (or, insofar as Developer is aware, any entity from which Developer has obtained such rights).

5.3 Conformity, Performance and Compliance. Developer represents and warrants (a) that all Deliverables shall be prepared in a workmanlike manner and with professional diligence and skill; (b) that all Deliverables will function on the machines and with operating systems for which they are designed; (c) that all Deliverables will conform to the specifications and functions set forth in the Scope of Work, and to the performance standards set forth in the RFP, if any; and (d) that Developer will perform all work under this Agreement in compliance with applicable law.

5.4 Anti-Virus. Developer represents and warrants that (a) to the best of Developer's knowledge there is no virus, worm or other degenerative computer program in the Developer's computer system used to develop the software and Deliverables under this Agreement; (b) Developer has used its best efforts through its quality assurance procedures to ensure there are no such viruses; (c) none of the Deliverables, nor the System, shall contain any embedded device or code, such as a time bomb, that intentionally or unintentionally obstructs or prevents the County from using the software, Deliverables, or the System, nor will the Developer disable through remote access or otherwise, the County's use of such software, Deliverables or the System.

5.5 Reasonable Efforts. The parties agree to use commercially reasonable effort to perform the tasks assigned and to complete the work specified in the Scope of Work. All services will be rendered in a workmanlike manner by personnel having a level of skill commensurate with their responsibilities.

5.6 Limited Warranty. After acceptance of the Deliverables, Developer warrants for a period of one business cycle (operational or reporting) for each Deliverable, not to exceed one year but not less than 90-days, that the Deliverables, when integrated with the System and operated on the County's computer network, will perform substantially in accordance with the detailed design specifications established for the Deliverables in a Scope of Work. Developer does not warrant that the Deliverables will be error free in all circumstances. In the event of any defect or error covered by such warranty, County agrees to provide Developer with sufficient detail to allow Developer to reproduce the defect or error. If Developer is notified within the warranty period of any defect or error in the Deliverables covered by such warranty, Developer will correct such error or defect at the contract rate. However, Developer is not responsible for any defect or error not reported during the warranty period or for any defect or error in Deliverables that County has altered, misused, or damaged. Developer is not responsible for any defect or error in Deliverables except as delivered for use with internal County SSARP system. Specifically, developer is not responsible for any defect or error in Deliverables used for any non- County use, any commercial purpose, or any use involving conveyance, license, sale or other type of transfer of Deliverables by the County to another governmental organization or entity for its own use, whether or not such transfer includes consideration of any kind, including money. FOLLOWING EXPIRATION OF THE WARRANTY PERIOD, DEVELOPER SHALL HAVE NO LIABILITY FOR THE DELIVERABLES OR ANY SERVICES PROVIDED, INCLUDING ANY LIABILITY FOR NEGLIGENCE; AND, EXCEPT AS PROVIDED IN THIS SECTION, DEVELOPER SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

6. LIABILITY

6.1 Indemnity. Except as otherwise specified or limited in this Agreement, Developer shall indemnify, hold harmless and defend the County and its agents, officers and employees from and against all claims, damages, losses, judgments, liabilities, expenses and other costs, including litigation costs and attorneys' fees, arising out of, resulting from, or in connection with the performance of this Agreement by the Developer or Developer's officers, employees, agents, representatives or subcontractors and resulting in or attributable to personal injury, death, or damage or destruction to tangible or intangible property, including the loss of use. Notwithstanding the foregoing, Developer's obligation to indemnify the County and its agents, officers and employees for any judgment, decree or arbitration award shall extend only to the percentage of negligence or responsibility of the Developer in contributing to such claim, damage, loss and

expense, and only for uses involving internal County SSARP systems.

6.2 Infringement of Intellectual Property Rights. If a third party claims that the Deliverables infringe any patent, copyright, or trade secret, Developer will defend County against that claim at Developer's expense and pay all damages that a court finally awards. If such a claim is made or appears possible, Developer may, at its option, secure for County the right to continue to use the Deliverables, modify or replace them so they are non-infringing, or, if neither of the foregoing options is available in Developer's judgment, require County to return the Modifications for a credit equal to charges paid for the design and development of the Modifications. However, Developer shall have no obligation to defend the County, or to pay any such costs, damages, and attorney fees for any claim based upon the combination, operation, or use of Deliverables with any programs or data not supplied by Developer if such infringement would have been avoided by the combination, operation, or use of Deliverables without such particular programs or data. Developer shall have no obligation to defend the County, or to pay any such costs, damages, and attorney fees for any claim based upon the use of Deliverables other than on internal County SSARP systems.

THIS SECTION 6.2 STATES DEVELOPER'S ENTIRE OBLIGATION TO COUNTY WITH RESPECT TO ANY CLAIM OF INFRINGEMENT.

6.3 Breach of Developer Warranties. Developer hereby agrees to indemnify and defend the County against any claims relating to any material breach of Developer warranties under Section 8 of this Agreement, or based on material failure by Developer to perform its maintenance and support obligations under this Agreement, and Developer shall pay all costs, damages, and attorney fees arising from or in connection with any such claim; provided however, Developer's liability related to a single incident shall not exceed the amount of insurance required under Section 10.5 of this Agreement. THIS SECTION 10.3 STATES DEVELOPER'S ENTIRE OBLIGATION TO COUNTY WITH RESPECT TO ANY CLAIM OF FOR BREACH OF DEVELOPER'S WARRANTIES.

6.4 Conditions to Indemnification. The foregoing indemnities are conditioned on (1) prompt written notice of any claim or proceeding subject to indemnity; (2) reasonable cooperation by the indemnified party in the defense and settlement of such claim at the expense of the indemnifying party; and (3) prior written approval by the indemnifying party of any settlement, which approval shall not be unreasonably withheld.

7. DISPUTES AND CLAIMS FOR ADDITIONAL COMPENSATION.

7.1 General Dispute. All disputes, except for claims related to compensation and except as otherwise provided in this Agreement, shall be decided by the County's Project Manager, which decision shall be final and conclusive unless, within fourteen (14) calendar days from the date of receipt of such copy, the Developer mails or otherwise delivers a written appeal to the County Chief Information Officer ("CIO") who shall issue a written decision and mail or otherwise furnish a copy thereof to the Developer. The decision of the CIO shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence.

7.2 Compensation Disputes. The Developer shall not be entitled to the payment of any additional compensation for any act, or failure to act, by the Developer or the County, unless the Developer has given to the County due written notice of claim. It is the intention of this provision that differences between the parties

arising under and by virtue of this Agreement be brought to the attention of the County at the earliest possible time in order that such matters be settled, if possible, or other appropriate action promptly taken.

The written notice of claim shall be submitted to the Project Manager within fourteen (14) calendar days after the happening of the event, thing, occurrence, or other cause, giving rise to the potential claim, and shall set forth the reasons for which the Developer believes additional compensation will or may be due and the nature of the costs involved. Claims filed by the Developer shall be in sufficient detail to enable the County to ascertain the basis and amount of said claims. Failure to submit such information and details to the County will be sufficient cause for denying the claim.

The written notice of claim, and all records and information submitted in support of such claim, shall be submitted under the California False Claims Act (Gov. Code, §§ 12650 -12655), and shall certify under penalty of perjury that the claim for the additional compensation and time, if any, is a true statement of the actual costs incurred and time sought, and is fully documented and supported or capable of being fully documented and supported under the Agreement between the parties. Failure to submit the notarized certificate will be sufficient cause for denying the claim.

8. MISCELLANEOUS

8.1 Waiver. Waiver of any default by either party to this Agreement shall not be deemed to be waiver of any subsequent default. Waiver or breach of any provision of this Agreement shall not be deemed to be a waiver of any other or subsequent breach, and shall not be construed to be a modification of the terms of this Agreement unless this Agreement is modified as provided below.

8.2 Advice of Attorney. Each party warrants and represents that in executing this Agreement, it has received independent legal advice from its attorneys or the opportunity to seek such advice.

SAMPLE

Attachment A-3

Sample Fee Proposal

SAMPLE FEE PROPOSAL

DISCLOSURE: This is only a "sample" for consultant's fees. The tasks shown below are for example purposes only. Consultant shall determine actual scope required to deliver this project based on the professional experience and per RFP requirements.

		Name of Prime Consultant								Subconsultant-1			Subconsultant-2			Optional Services						
		Name & Title	Name & Title	Name & Title	Name & Title	Total Hours	Direct Costs	Total Hours	Total Cost	Total Hours	Direct Costs	Total Cost for Subconsultant-1	Total Hours	Direct Costs	Total Cost for Subconsultant-2	Total Hours	Direct Costs	Total Cost for Optional Services	Grand Total Hours	Grand Total Other Direct Costs	GRAND TOTAL COST	GRAND TOTAL COST WITH OPTIONAL SERVICES
No.	Task Description	$/hr	$/hr	$/hr	$/hr																	
1	Project Management																					
1.1																						
1.2																						
2	Topographic Survey																					
2.1																						
2.2																						
3	Geotechnical Investigation:																					
3.1																						
3.2																						
4	Environmental & Permitting:																					
4.1																						
4.2																						
5	Public Outreach:																					
5.1																						
5.2																						
6	Right-of-Way:																					
6.1																						
6.2																						
7	PS&E:																					
7.1																						
7.2																						
8	Construction Support:																					
8.1																						
8.2																						
	TOTAL HOURS																					
	TOTAL COST																					

SAMPLE

SAMPLE

Attachment A-4

Sample Consultant Evaluation Sheet

EXHIBIT 10-B SUGGESTED CONSULTANT EVALUATION SHEET *

SAMPLE

CONSULTANT/FIRM NAME:		
Criteria	Max Points	Rating
Understanding of the work to be done	25	
Experience with similar kinds of work	20	
Quality of staff for work to be done	15	
Capability of developing innovative or advanced techniques	10	
Familiarity with state and federal procedures	10	
Financial responsibility	10	
Demonstrated Technical Ability	10	
Total	100	0

Evaluator

Print Name: _____

Signature: _____

Date: _____

Contract Office

Initials: _____

Date: _____

*Notes:

1. To maintain the integrity of a competitive negotiation/qualifications based selection procurement, the total of all allowable non-qualifications based evaluation criterion (such as local presence or DBE participation) cannot exceed ten (10) percent of the total evaluation criteria. The ten percent limitation applies only to non-qualifications based evaluation criterion and should not be considered as a limitation for specific DBE contract goals established by a contracting agency in accordance with its approved DBE program. (see http://www.fhwa.dot.gov/programadmin/172qa_07.cfm).
2. For projects other than "Architectural & Engineering" services, as defined in Section 10.1, cost is one of the criteria, or may be the sole criterion. DBE participation by the consultant shall not be used as one of the criteria listed above.
3. The evaluation criteria and suggested maximum points shown above are not mandatory, but are recommended in the interest of maintaining consistency among the hundreds of agencies utilizing federal or state funds.
4. The evaluation criteria and weighted values must be identified in the RFP. If the RFP has different evaluation criteria or weighted values then the information above would have to be changed to match. The Contract Office is to initial and date in the space provided to verify that the criteria and weighted values used in the evaluation sheet are appropriate and that the sheet has been completed correctly.
5. Caltrans participation on the interview panel does not relieve the local agency of its responsibility to ensure that proper procurement procedures are followed and requirements are met.

Distribution: Local Agency Project Files

Attachment A-5

SSARP Guidelines

Systemic Safety Analysis Report Program (SSARP) Guidelines

February 2016

Division of Local Assistance
California Department of Transportation

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1 INTRODUCTION

These guidelines describe the policy and procedures for implementing the Systemic Safety Analysis Report Program (SSARP). The guidelines were developed in consultation with the California Local Highway Safety Improvement Program (HSIP) Advisory Committee which includes representatives from:

- Federal Highway Administration (FHWA)
- California Department of Transportation (Caltrans)
- California Transportation Cooperative Committee
- California State Association of Counties
- League of California Cities
- Regional Transportation Planning Agency
- Metropolitan Planning Organization
- Rural County Task Force

1.1 BACKGROUND

Systemic analysis is a proactive safety approach that focuses on evaluating an entire roadway network using a defined set of criteria. It looks at crash history on an aggregate basis to identify high-risk roadway characteristics, rather than looking at high-collision concentration locations through site analysis. Systemic analysis acknowledges that crashes alone are not always sufficient to prioritize countermeasures across a system. This is particularly true for many local streets and highways in rural areas with low volumes where crash densities tend to be low and there are few high crash locations, and in urban areas where vehicles interact with vulnerable road users (pedestrians, bicyclists, and motorcycles).

The following are examples of infrastructure improvement countermeasures identified through the systemic analysis approach:

Signalized Intersection Countermeasures

- Improve signal hardware: lenses, retro-reflective back-plates, mounting, size, and number
- Provide protected left turn phase (left turn lane already exists)
- Install flashing beacons as advance warning
- Create directional median openings to allow (and restrict) left-turns and U-turns
- Install pedestrian countdown signal heads
- Install advance stop bar before crosswalk (Bicycle Box)

Non-Signalized Intersection Countermeasures

- Add intersection lighting
- Install/upgrade larger or additional stop signs or other intersection warning/regulatory signs
- Install flashing beacons as advance warning
- Create directional median openings to allow (and restrict) left-turns and U-turns
- Install raised medians/refuge islands (Pedestrian/Bike only)
- Install enhanced pedestrian crossing features, e.g. signs/markings, rapid rectangular flashing beacon or curb extensions, etc.

Roadway Segment Countermeasures

- Road diet (striping only)
- High friction surface treatment
- Upgrade signing through Roadway Safety Signing Audit
- Upgrade pavement markings through Roadway Safety Pavement Marking Audit
- Install delineators, reflectors and/or object markers
- Install guardrail and impact attenuators
- Install bike lanes
- Install centerline rumble strips/stripes
- Install edge line rumble strips/stripes

Additional information on the systemic approach for roadway safety analysis can be found on the Federal Highway Administration's "Systemic Approach to Safety" webpage.

1.2 Program Goal

The goal of the SSARP is to help local agencies identify safety projects to submit for HSIP funding consideration. Through the funding of Systemic Safety Analysis Reports (SSAR), local agencies will be encouraged to evaluate their roadway networks with an approach that has been effective for addressing safety issues.

Although not a prerequisite to applying for HSIP funds, the use of results documented in their SSAR will identify high benefit-cost ratio safety projects that have been found to be competitive in previous HSIP cycles.

1.3 Program Schedule

The SSARP will be implemented in two phases to facilitate outreach with the Strategic Highway Safety Plan (SHSP) Regional Summits. The following is a tentative schedule of major milestones for the SSARP:

Milestones	Phase 1	Phase 2
Call for Applications	February 2016	June 2016
Applications Due Date	March 2016	July 2016
Awarded Applications Posted	April 2016	August 2016

*Strategic Highway Safety Plan (SHSP) Regional Summits: February and April 2016.

2 Funding

2.1 Source

$10 million of the California HSIP was set-aside and exchanged for state funds from the State Highway Account to fund the SSARP. The use of state funds is to increase the participation of underserved local agencies unfamiliar with federal administrative requirements.

2.2 Matching Requirement

A local match of ten (10) percent of the total project cost is required for SSARP projects.

2.3 Reimbursement

The SSARP is a reimbursement program for eligible costs incurred. Reimbursement is requested through the invoice process detailed in Chapter 5, Invoicing, of the Local Assistance Procedures Manual (LAPM). Costs incurred prior to funding allocation are not eligible for reimbursement.

2.4 Timely Use of Funds

The project sponsor must complete the study and the SSAR report within thirty-six (36) months of the funding allocation. The Final Report of Expenditures and the final invoice must be submitted within six (6) months of the report completion. If these requirements are not met, the project sponsor must pay back the state funds expended.

3 Eligibility

3.1 Applicants

Cities and counties in California that are able to comply with all the laws, regulations, policies and procedures required to enter into a State-only Funds Master Agreement are eligible to apply for SSARP funding. Refer to Chapter 4, Agreements, of the LAPM for guidance and procedures on Master Agreements.

3.2 Location of Study Area

Funds are eligible for the systemic safety analysis of any roadways publically owned or on tribal lands.

4 Application and Selection Process

4.1 Project Application

Section 1.3 provides a tentative program schedule. Actual calls-for-applications will be announced online at the Division of Local Assistance (DLA) HSIP website. The Application Form, its instructions and other documents related to SSARP are also available at this website. The completed applications are submitted to the District Local Assistance Engineer (DLAE).

Funding for proposed study areas may only be requested once (i.e. funding requests for a study area cannot be requested in multiple applications).

4.1.1 Maximum Fund Request

Each local agency may submit only one application requesting a maximum of $250,000 SSARP funds, in either Phase 1 or Phase 2 call for applications. Alternatively two or more local agencies may choose to

submit a joint application through partnership. A maximum of $500,000 of SSARP funds can be requested per joint application.

Additional funds beyond the maximum amount will need justification and approval by the Office of Bridge, Bond, and Safety Programs (OBBSP) in the DLA.

4.1.2 Award Phases

Funds will be awarded in two phases to facilitate outreach with the Strategic Highway Safety Plan (SHSP) Regional Summits. Refer to the Section 1.3, Program Schedule, for dates of award.

4.2 Selection Process

If requests exceed available SSARP funding, priority will be given to applications from local agencies that

- Have the highest numbers of fatality and severe injury (F+SI) (based on the most recent / available data from California Highway Patrol (CHP) Statewide Integrated Traffic Records System (SWITRS));
- Have the highest crash rates of F+SI per 100 Million Vehicle Miles Traveled (MVMT) ;
- Have never submitted applications in Cycle 5 through Cycle 7 HSIP calls-for-projects; or
- Have submitted applications but have had no projects selected for federal funding in Cycle 5 through Cycle 7 HSIP calls-for-projects.

There are no order or priority associated with the above selection criteria. When necessary, the Local HSIP Advisory Committee may review the priority ranking of the applications and approve for funding.

4.3 Application Award

The OBBSP will post the list of awarded applications on the DLA HSIP website. A notification letter will be sent to the sponsor of each successful application.

5 Implementation

In addition to the applicable provisions of the LAPM, local agencies will need to follow the implementation steps in this section. Any work done prior to the funding allocation is at the cost of the project sponsor and will not be eligible for reimbursement.

1. When ready to proceed with their study, the project sponsor submits the following documents to their DLAE to request an allocation of funds:
    a. A letter of request for SSARP Funding Allocation
    b. Finance Letter
    c. Copy of the SSARP Application
    d. Copy of the award notification letter from Caltrans DLA

    Templates of the above (a) and (b) are available for downloading at the DLA HSIP website.

    As an SSARP project utilizes state funds for a study only and no right-of-way or construction is involved, the allocation will be under Preliminary Engineering (PE) phase. No right-of-way or environmental documents are required for the allocation request.

The amount of state funds requested should not exceed the amount of funds awarded. Additional funds shall not be allocated without the written approval from the OBBSP.

2. The DLAE reviews the allocation request package for consistency with the application, assigns project numbers and Advantage IDs, and forwards the request to the DLA HQ Area Engineer for allocation. An allocation request will be rejected if the scope or request amount does not match the application. Any change to the scope of work needs to be approved by the OBBSP in advance of the allocation.
3. After receipt of a complete request package, the DLA HQ Area Engineer will:
    a. Prepare an allocation letter which will serve as the authorizing document for the project sponsor to begin reimbursable work. A copy of the allocation letter and Finance Letter will be distributed to the project sponsor, DLAE, the OBBSP, and Local Programs Accounting (LPA). Note that any work performed prior to the effective date of the allocation letter is not eligible for reimbursement.
    b. Prepare a Program Supplement Agreement (PSA) and send it to the local agency for execution. If a local agency does not have a "State-only Funds Master Agreement" on file with Caltrans, one will need to be executed in conjunction with the PSA.
4. The project sponsor invoices Caltrans (Refer to LAPM Chapter 5 and Exhibit 5-C). In order for the project to remain active, the project sponsor must submit invoices to Caltrans at least every six (6) months after funds are allocated.
5. The analysis and the SSAR report must be completed within thirty-six (36) months of allocation. The project sponsor must submit the final report (refer to Section 6, Reporting Requirements) to the DLAE. The DLAE reviews and verifies that the report has been completed in accordance with the approved scope and the program guidelines, and then forward a copy of the report to the DLA OBBSP.
6. The project sponsor must submit the Final Invoice (LAPM Exhibit 5-C) and the Final Report of Expenditures (LAPM Exhibit 17-M) to the DLAE within six (6) months of the report completion. The DLAE reviews the submittals for compliance and then forward the package to Local Programs Accounting (LPA) for processing.
7. The LPA and the DLA close out the project.

6 Reporting Requirements

To be eligible for final reimbursement, the SSAR must identify and prioritize future safety projects. If no safety projects are identified, reasons must be documented within the SSAR. The following sections and discussions must also be included in the final report.

6.1 Executive Summary

This section should include the applicant's objectives and focus for the SSAR and a brief summary of the major results. Include discussion on what methodologies were used to limit the data analysis and studies to stay within the funding limits. Other high-level discussions may include crash trends, corridors identified, countermeasures considered, conceptual projects identified, benefit-cost ratios for the projects, etc.

6.2 Engineer's Seal

Chapter 7; Article 3; Section 6735 of the Professional Engineer's Act of the State of California requires engineering calculation(s) or report(s) be either prepared by or under the responsible charge of a licensed civil engineer. Analysis must be completed under this provision and the SSAR must be signed by the local agency transportation manager and signed/stamped by a licensed civil engineer.

The engineer's signature must be accompanied by a statement similar to the following:

> *By signing and stamping this Systemic Safety Analysis Report, the engineer is attesting to this report's technical information and engineering data upon which local agency's recommendations, conclusions, and decisions are made.*

6.3 Statement of Protection of Data from Discovery and Admissions

It is recommended that applicants include the following language in the SSAR which is from Section 148 of Title 23, United States Code [23 U.S.C. §148(h) (4)] about reports prepared under State's Strategic Highway Safety Plan and HSIP:

> *REPORTS DISCOVERY AND ADMISSION INTO EVIDENCE OF CERTAIN REPORTS, SURVEYS, AND INFORMATION—Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section, shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.*

6.4 Safety Data Utilized (Crash, Volume, Roadway)

Applicants are required to analyze at least three (3) years of the most current crash data. Crash data from their own crash database, the California I-SWITRS database, or UC Berkeley Transportation Injury Mapping (TIMS) are recommended.

Applicants should consider the guidance in Section 2 of the Local Roadway Safety Manual (LRSM) to complete this section of the SSAR.

6.5 Data Analysis Techniques and Results

Crash trends and crash concentrations should be analyzed based on overall numbers, identifying the leading causes of fatalities and severe injuries. In addition, applicants are encouraged to identify crashes on a 'rate' basis and compare the results of numbers vs. rates.

Applicants are not expected to analyze all of the individual crashes, crash locations, and/or crash types. The following are examples of how local agencies can focus the scope of the SSAR:

- Counties with a large percentage of High Risk Rural Road (HR3) eligible roadways may choose to focus on identifying and prioritizing future HR3 eligible safety projects.
- Cities and counties with primarily urban roadways may choose to identify and prioritize future urban Highway Safety Improvement Program projects for motorized and/or non-motorized users.

- Cities and counties with a wide mixture of roadways may choose to focus on only rural or urban roadways or a mix of roadway and user types at a limited number of locations.

Applicants should consider the guidance in Section 3 of the LRSM to complete this section of the SSAR.

6.6 Highest Occurring Crash Types

Applicants can focus on their top 3 to 10 crash types responsible for the fatalities and severe injuries occurring on their roadway network. If an applicant chooses to focus on specific "high-risk corridors and intersections," they are still expected to briefly review and discuss their top crash types occurring on the overall network.

Applicants should consider the guidonce in Section 3 of the LRSM to complete this portion of the SSAR.

6.7 High-risk Corridors and Intersections (Crash History and Roadway Characteristics)

Applicants can choose to focus on their top 3 to 10 high-risk corridors and top 5 to 20 intersections responsible for fatalities and severe injuries occurring on their roadway network. If an applicant chooses to focus on specific crash types, they are still expected to briefly review and discuss their high-risk corridors and intersections on the overall network.

Applicants should consider the guidance in Section 3 of the LRSM to complete this portion of the SSAR.

6.8 Countermeasures Identified to Address the Safety Issues

Applicants are required to use crash reduction factors provided in the LRSM to identify potential low-cost systemic countermeasures that mitigate the local agencies' primary crash type trends. In addition, applicants should use their crash concentrations (system-wide, corridors, and spot locations) to identify the countermeasures with a high likelihood of addressing the crashes that are appropriate for the characteristics of the roadway.

Applicants should consider the guidance in Section 4 of the LRSM to complete this section of the SSAR.

6.9 Viable Project Scopes and Prioritized List of Safety Projects

Once the crash areas, trends, and corresponding systemic countermeasures have been identified, local agencies need to create preliminary safety project scopes. It is recommended that the applicant focus on finding the ideal balance between collision analyses on a systemic basis while also addressing high-crash locations. For the lowest cost improvements, like signing and striping, it may be an appropriate goal to have the entire roadway network eventually upgraded to a minimum level.

In contrast, the costlier systemic countermeasures may only be feasible to install at higher crash locations/characteristics on a corridor-by-corridor basis. Estimating total-project costs and calculating Benefit/Cost (B/C) ratio are the next steps in prioritizing the list of safety projects. Cost estimates may be based on individual construction items or lump sum project costs per mile or per location. For calculating the B/C ratio of a project, the TIMS B/C Calculation Tool from the University of California, Berkeley Safe Transportation Research and Education Center website should be used. This tool relies on existing crashes to calculate a project's expected benefit.

Applicants should consider the guidance in Section 5 of the LRSM to complete this section of the SSAR.

6.10 Attachments and Supporting Documentation

Attach and reference supporting documents as appropriate to meet their long-term intended use for the report.

7 Resources

SSARP Funding Application: http://www.dot.ca.gov/hq/LocalPrograms/HSIP/apply_now.htm

Caltrans Local Roadway Safety Manual (LRSM): http://www.dot.ca.gov/hq/LocalPrograms/HSIP/CA-LRSM.pdf

Local Assistance Procedures Manual (LAPM): http://www.dot.ca.gov/hq/LocalPrograms/lam/lapm.htm

California Strategic Highway Safety Plan (SHSP): http://www.dot.ca.gov/hq/traffops/shsp/

California I-SWITRS: http://iswitrs.chp.ca.gov/Reports/jsp/CollisionReports.jsp

UC Berkeley Transportation Mapping (TIMS): http://tims.berkeley.edu

FHWA – A Systemic Approach to Safety: http://safety.fhwa.dot.gov/systemic/index.htm

FHWA Local and Rural Road Safety Program: http://safety.fhwa.dot.gov/local_rural/

FHWA Systemic Project Selection Tool: http://safety.fhwa.dot.gov/systemic/fhwasa13019/

FHWA Road Diets Informational Guide: http://safety.fhwa.dot.gov/road_diets/info_guide/

EXHIBIT A2

CONSULTANT'S RESPONSE TO COUNTY'S REQUEST FOR PROPOSAL

SCOPE OF SERVICES

TASK 1 PROJECT MANAGEMENT

Purpose: Facilitate routine and regular communication between the County Project Manager (PM) and our team's project manager to ensure the project stays on schedule and on budget and exceeds the County's needs and expectations.

Subtask 1.1 Maintain Schedule and Monthly Progress Reports

We will establish a detailed project schedule at the beginning of the project. That schedule will be reviewed at the project kick-off meeting with the County and finalized based on input at that meeting. Once the schedule is finalized, we will maintain disciplined adherence to it and alert the County PM's to any potential issues, in advance, that could create delays. This sub task will also include monthly progress reports reschedule schedule, project activities, and budget.

Subtask 1.2 Bi-Weekly Check In Conference Calls

To maintain open, consistent, and transparent lines of communication, we will conduct bi-weekly conference calls with the County's PM. We have found routine, established communication enables the team to make steady forward progress and discuss, in advance, any potential issues that need to be resolved. It also creates the opportunity for timely collaboration and input from the County into deliverables and analysis in-progress creating draft deliverables that are more likely to meet or exceed expectations.

Subtask 1.3 Project Development Team (PDT) Meetings

We will work with the County to identify and establish the PDT membership. Pending County PM's approval, we will take on the responsibility of coordinating meetings and communications with the PDT. We will prepare for and conduct up to 12 PDT meetings. The County will have an opportunity to review and approve PDT agendas and draft materials prior to each meeting. The proposed schedule identifies the planned timing of each PDT meeting.

Deliverables:

- Maintain project schedule and monthly progress reports
- Bi-weekly conference calls for duration of project
- Up to twelve (12) PDT Meetings

TASK 2 DATA COLLECTION AND STORAGE

Purpose: Establish a robust and accurate database that includes crash, traffic volume, and roadway characteristic data enabling systemic analysis and crash prediction using the models from the Highway Safety Manual (HSM).

Subtask 2.1 Crash Data and Volume Data

We will compile the most recent five years of collision data available from the I-SWITRS database and UC Berkeley's Transportation Injury Mapping System (TIMS). To the extent there are also local crash databases or resources (e.g., Crossroads Database), we will also pull crash data from those sources to be able to compile the most complete crash database for the area that is feasible to assemble. We will develop a collision database in GIS format to enable us to map the crashes across the County and ultimately integrate into the software tool developed in Task 3. We will also compile the crash data for the entire County into a comprehensive spreadsheet database to use for analysis of County-wide crash trends and patterns.

Finally, we will integrate the existing traffic volume count data the County has available (and any related speed data) into the database. Based on the volume data available, we will identify critical gaps that need to be addressed. We will

then work with the County to develop reasonable estimates for those gaps or consider options for obtaining those volumes. Through our extensive work in develop crash prediction models as well as applying them, we are well-versed at creating reasonable volume estimates.

Subtask 2.2 Roadway Characteristic Data

Our data collection plan builds upon years of transportation industry experience and best practices to ensure that the project is completed on-time, on-budget and to your satisfaction. Optimal QA/QC methods have been developed over thousands of centerline miles of roadway element data collection projects. This subtask will be led by Quality Counts in close collaboration with SEMIC; our project manager, Erin Ferguson, will guide and oversee the work to ensure it is appropriately informing the database and ultimate analysis needs.

Our approach here is organized into three activities: (1) Data gathering; (2) Data processing; and (3) Health and safety plan for the data collection activities.

The following table contains a detailed list of all the roadway characteristics that are planned for data collection.

Roadway Characteristic Data Collection Elements

	No. Element, Description, Page (MIRE)	Data Origin	Collectors	Technology	HPMS	HSM / IHSDM	Safety Analyst
I. ROADWAY SEGMENT DESCRIPTORS							
I.a. Segment Location / Linkage Elements							
	001. County Name, 15	Existing Data	DPW	Request DPW Data	Full extent	Required	Required Conditionally
	002. County Code, 15	Existing Data	DPW	Request DPW Data	Full extent		
	003. Highway District, 15	Existing Data	DPW	Request DPW Data			Optional
	004. Type of Governmental Ownership, 16	Existing Data	DPW	Request DPW Data	Full extent		
	005. Specific Governmental Ownership, 17	Existing Data	DPW	Request DPW Data			
	006. City/Local Jurisdiction Name, 17	Existing Data	DPW	Request DPW Data	Full extent		Optional
	007. City/Local Jurisdiction Urban Code, 17	Existing Data	DPW	Request DPW Data	Full extent		
	008. Route Number, 18	Existing Data	DPW	Request DPW Data	Full extent	Required	Required
	009. Route/Street Name, 18	Existing Data	DPW	Request DPW Data	Full extent		Required Conditionally
	010. Begin Point Segment Descriptor, 18	Existing Data	DPW	Request DPW Data	Full extent	Required	Required
	011. End point Segment Descriptor, 19	Existing Data	DPW	Request DPW Data	Full extent	Required	Required
	012. Segment Identifier, 19	Existing Data	DPW	Request DPW Data	Full extent	Required	Required
	013. Segment Length, 19	Existing Data	DPW	GPS	Full extent	Required	Required
	014. Route Signing, 20	Field and Existing Data	SEMIC, QC	Images	Full extent		Required

No. Element, Description, Page (MIRE)	Data Origin	Collectors	Technology	HPMS	HSM / IHSDM	Safety Analyst
015. Route Signing Qualifier, 20	Existing Data	SEMIC, QC	Images	Full extent		
016. Coinciding Route Indicator, 21	Existing Data	SEMIC, QC	Images + Mapping			
017. Coinciding Route - Minor Route Information, 21	Existing Data	SEMIC, QC	Images + Mapping			
018. Direction of Inventory, 22	Existing Data	SEMIC, QC	Blog		Required	Required Conditionally
I.b. Segment Classification						
019. Functional Class, 23	Existing Data	DPW	Request DPW Data	Full Extent and Ramps		
020. Rural/Urban Designation, 23	Existing Data	DPW	Request DPW Data	Full Extent and Ramps		
021. Federal Aid/ Route Type, 24	Existing Data	DPW	Request DPW Data	Full Extent and Ramps		
022. Access Control, 25	Field and Existing Data	DPW	Images	Full Extent and Ramps*, Sample *		
I.c. Segment Cross Section						
I.c.1. Surface Descriptors						
023. Surface Type, 26	Field	DPW	Images + Request DPW Data	Sample	Required	
024. Total Paved Surface Width, 26	Field	SEMIC, QC	Images			
025. Surface Friction, 27	Field	--	Not Collected			
026. Surface Friction Date, 27	Field	--	Not Collected			
027. Pavement Roughness/Condition, 27	Field	SEMIC, QC	LCMS	Full Extent and Ramps*, Sample *		
028 Pavement Roughness Date, 28	Field	SEMIC, QC	LCMS	Full Extent and Ramps*, Sample *		
029. Pavement Condition (Present Serviceability Rating), 29	Field	SEMIC, QC	LCMS + Pavement Images	Sample		
030. Pavement Condition (PSR) Date, 30	Field	SEMIC, QC	LCMS + Pavement Images	Sample		
I.c.2. Lane Descriptors						
031. Number of Through Lanes, 31	Field	SEMIC, QC	Images	Full Extent and Ramps	Required	Required
032. Outside Through Lane Width, 31	Field	SEMIC, QC	Images		Required	Optional
033. Inside Through Lane Width, 32	Field	SEMIC, QC	Images		Required	Optional
034. Cross Slope, 36	Field	SEMIC, QC	Inclinometer		Required	
035. Auxiliary Lane Presence/Type, 36	Field	SEMIC, QC	Images		Required	Required
036. Auxiliary Lane Length, 36	Field	SEMIC, QC	Images		Required	
037. HOV Lane Presence/Type, 37	Field	SEMIC, QC	Images	Ful Extent		
038. HOV Lanes, 37	Field	SEMIC, QC	Images	Ful Extent		
039. Reversible Lanes, 37	Field	SEMIC, QC	Images			
040. Presence/Type of Bicycle Facility, 38	Field	SEMIC, QC	Images			Optional

	No. Element, Description, Page (MIRE)	Data Origin	Collectors	Technology	HPMS	HSM / IHSDM	Safety Analyst
	041. Width of Bicycle Facility, 40	Field	SEMIC, QC	Images			
	042. Number of Peak Period Through Lanes, 40	Field	SEMIC, QC	Images + Request DPW Data	Sample		
I.c.3. Shoulder Descriptors							
	043. Right Shoulder Type, 41	Field	SEMIC, QC	Images	Sample	Required	Optional
	044. Right Shoulder Total Width, 41	Field	SEMIC, QC	Images	Sample	Required	Optional
	045. Right Paved Shoulder Width, 42	Field	SEMIC, QC	Images		Required	
	046. Right Shoulder Rumble Strip Presence/Type, 42	Field	SEMIC, QC	Images			
	047. Left Shoulder Type, 43	Field	SEMIC, QC	Images		Required	Optional
	048. Left Shoulder Total Width, 43	Field	SEMIC, QC	Images	Sample	Required	Optional
	049. Left Paved Shoulder Width, 44	Field	SEMIC, QC	Images		Required	
	050. Left Shoulder Rumble Strip Presence/Type, 44	Field	SEMIC, QC	Images			
	051. Sidewalk Presence, 45	Field	SEMIC, QC	Images			
	052. Curb Presence, 45	Field	SEMIC, QC	Images			
	053. Curb Type, 46	Field	SEMIC, QC	Images			
I.c.4. Median Descriptors							
	054. Median Type, 47	Field	SEMIC, QC	Images	Sample	Required	Required
	055. Median Width, 47	Field	SEMIC, QC	Images	Sample	Required	Optional
	056. Median Barrier Presence/Type, 48	Field	SEMIC, QC	Images	Sample		
	057. Median (Inner) Paved Shoulder Width, 48	Field	SEMIC, QC	Images			Optional
	058. Median Shoulder Rumble Strip Presence/Type, 49	Field	SEMIC, QC	Images			
	059. Median Sideslope, 49	Field	—	Not Collected			
	060. Median Sideslope Width, 50	Field	—	Not Collected			
	061. Median Crossover/Left Turn Lane Type, 50	Field	SEMIC, QC	Images			
I.d. Segment Roadside Descriptors							
	062. Roadside Clearzone Width, 52	Field	SEMIC, QC	Images			
	063. Right Sideslope, 52	Field	SEMIC, QC	Images		Required	
	064. Right Sideslope Width, 53	Field	SEMIC, QC	Images			
	065. Left Sideslope, 53	Field	SEMIC, QC	Images		Required	
	066. Left Sideslope Width, 54	Field	SEMIC, QC	Images			
	067. Roadside Rating, 55	Field	SEMIC, QC	Images		Required	Optional
	068. Major Commercial Driveway Count, 59	Field	SEMIC, QC	Images		Required	Optional
	069. Minor Commercial Driveway Count, 59	Field	SEMIC, QC	Images		Required	Optional
	070. Major Residential Driveway Count, 59	Field	SEMIC, QC	Images		Required	Optional
	071. Minor Residential Driveway Count, 60	Field	SEMIC, QC	Images		Required	Optional
	072. Major Industrial/Institutional Driveway Count, 60	Field	SEMIC, QC	Images		Required	Optional
	073. Minor Industrial/Institutional Driveway Count, 60	Field	SEMIC, QC	Images		Required	Optional
	074. Other Driveway Count, 61	Field	SEMIC, QC	Images		Required	Optional
I.e. Other Segment Descriptors							
	075. Terrain Type, 62	Field	SEMIC, QC	GPS	Sample		Optional
	076. Number of Signalized Intersections in Segment, 62	Field	SEMIC, QC	Images	Sample		

No. Element, Description, Page (MIRE)	Data Origin	Collectors	Technology	HPMS	HSM / IHSDM	Safety Analyst
077. Number of Stop-Controlled Intersections in Segment, 63	Field	SEMIC, QC	Images	Sample		
078. Number of Uncontrolled/Other Intersections, 63	Field	SEMIC, QC	Images	Sample		
I.f. segment Traffic Flow Data						
079. Annual Average Daily Traffic (AADT), 64	Existing Data	DPW	Request DPW Data	Full Extent and Ramps	Required	Required
080. AADT Year, 64	Existing Data	DPW	Request DPW Data	Full Extent and Ramps	Required	Required
081. AADT Annual Escalation Percentage, 65	Existing Data	DPW	Request DPW Data			Optional
082. Percent Single Unit Trucks or Single Truck AADT, 65	Existing Data	DPW	Request DPW Data	Full Extent and Ramps*, Sample *		
083. Percent Combination Trucks or Combination Truck AADT, 65	Existing Data	DPW	Request DPW Data	Full Extent and Ramps*, Sample *		
084. Percentage Trucks or Truck AADT, 66	Existing Data	DPW	Request DPW Data			Optional
085. Total Daily Two-Way Pedestrian Count/Exposure, 66	Existing Data	DPW	Request DPW Data			
086. Bicycle Count/Exposure, 66	Existing Data	DPW	Request DPW Data			
087. Motorcycle Count or Percentage, 67	Existing Data	DPW	Request DPW Data	Full Extent		
088. Hourly Traffic Volumes (or Peak and Offpeak AADT), 67	Existing Data	DPW	Request DPW Data			Optional
089. K-Factor, 67	Existing Data	DPW	Request DPW Data	Sample		
090. Directional Factor, 68	Existing Data	DPW	Request DPW Data	Sample		
I.g. Segment Traffic Operations / Control Data						
091. One/Two-Way Operations, 69	Field	SEMIC, QC	Images	Full Extent and Ramps	Required	Required
092. Speed Limit, 69	Field	SEMIC, QC	Images	Sample	Required	Optional
093. Truck Speed Limit, 70	Field	SEMIC, QC	Images			
094. Nighttime Speed Limit, 70	Field	SEMIC, QC	Images			
095. 85th Percentile Speed, 70	Existing Data	DPW	Request DPW Data			
096. Mean Speed, 71	Existing Data	DPW	Request DPW Data.			
097. School Zone Indicator, 71	Field	SEMIC, QC	Images			
098. On-Street Parking Presence, 71	Field	SEMIC, QC	Images		Required	
099. On-Street Parking Type, 72	Field	SEMIC, QC	Images	Sample	Required	
100. Roadway Lighting, 72	Field	SEMIC, QC	Images		Required	
101. Toll Facility, 73	Field	SEMIC, QC	Pavement Images	Full Extent		
102. Edgeline Presence, 73	Field	SEMIC, QC	Pavement Images			
103. Centerline Presence/Width, 74	Field	SEMIC, QC	Pavement Images			

No. Element, Description, Page (MIRE)	Data Origin	Collectors	Technology	HPMS	HSM / IHSDM	Safety Analyst
104. Centerline Rumble Strip Presence/Type, 74	Field	SEMIC, QC	Pavement Images		Required	
105 Passing Zone Percentage, 75	Field	SEMIC, QC	Images + Pavement Images		Required	
I.h. Other Supplemental Segment Descriptors						
106. Bridge Numbers for Bridges in Segment, 76	Field	SEMIC, QC	Images			
II. Roadway Alignment Descriptors						
II.a. Horizontal Curve Data						
107. Curve Identifiers and Linkage Elements, 78	Field	SEMIC, QC	GPS		Required	
108. Curve Feature Type, 78	Field	SEMIC, QC	GPS		Required	
109. Horizontal Curve Degree or Radius, 80	Field	SEMIC, QC	GPS	Sample*	Required	
110. Horizontal Curve Length, 80	Field	SEMIC, QC	GPS		Required	
111. Curve Superelevation, 80	Field	SEMIC, QC	Inclinometer		Required	
112. Horizontal Transition/Spiral Curve Presence, 81	Field	SEMIC, QC	GPS		Required	
113. Horizontal Curve Intersection/Deflection Angle, 81	Field	SEMIC, QC	GPS			
114. Horizontal Curve Direction, 81	Field	SEMIC, QC	GPS			
II.b. Vertical Grade Data						
115. Grade Identifiers and Linkage Elements, 82	Field	SEMIC, QC	GPS		Required	
116. Vertical Alignment Feature Type, 82	Field	SEMIC, QC	GPS		Required	
117. Percent of Gradient, 83	Field	SEMIC, QC	GPS	Sample *	Required	
118. Grade Length, 83	Field	SEMIC, QC	GPS		Required	
119. Vertical Curve Length, 83	Field	SEMIC, QC	GPS			
III. Roadway Junction Descriptors						
III.a. at Grade Intersection / Junction						
III.a.1. General Descriptors						
120 Unique Junction Identifier, 88	Existing Data	DPW	Request DPW Data		Required	Required
121. Type of Intersection/Junction, 88	Field	SEMIC, QC	Images		Required	Required
122. Location Identifier for Road 1 Crossing Point, 89	Field	SEMIC, QC	GPS + Mapping		Required	Required
123 Location Identifier for Road 2 Crossing Point, 89	Field	SEMIC, QC	GPS + Mapping		Required	Required Conditionally
124. Location Identifier for Additional Road Crossing Points, 90	Field	SEMIC, QC	GPS + Mapping		Required	Required Conditionally
125. Intersection/Junction Number of Legs, 90	Field	SEMIC, QC	Images		Required	
126. Intersection/Junction Geometry, 91	Field	SEMIC, QC	Images + Mapping		Required	Required
127. School Zone Indicator, 93	Field	SEMIC, QC	Images			
128. Railroad Crossing Number, 93	Field	SEMIC, QC	Images			
129. Intersecting Angle, 94	Field	SEMIC, QC	Mapping		Required	
130. Intersection/Junction Offset Distance, 95	Field	SEMIC, QC	Mapping			Optional
131. Intersection/Junction Traffic Control, 96	Field	SEMIC, QC	Images		Required	Required
132. Signalization Presence/Type, 96	Existing Data	DPW	Request DPW Data			Required
133. Intersection/Junction Lighting, 97	Field	SEMIC, QC	Images		Required	

	No. Element, Description, Page (MIRE)	Data Origin	Collectors	Technology	HPMS	HSM / IHSDM	Safety Analyst
	134. Circular Intersection - Number of Circulatory Lanes, 97	Field	SEMIC, QC	Images			
	135. Circular Intersection - Circulatory Lane Width, 97	Field	SEMIC, QC	Images			
	136. Circular Intersection - Inscribed Diameter, 98	Field	SEMIC, QC	Mapping			
	137. Circular Intersection - Bicycle Facility, 100	Field	SEMIC, QC	Images			
III.a.2. At Grade Intersections / Junction Descriptors (Each Approach)							
	138. Intersection Identifier for this Approach, 102	Existing Data	DPW	Request DPW Data		Required	
	139. Unique Approach Identifier, 102	Existing Data	DPW	Request DPW Data		Required	Required
	140. Approach AADT, 102	Existing Data	DPW	Request DPW Data		Required	Required Conditionally
	141. Approach AADT Year, 103	Existing Data	DPW	Request DPW Data		Required	Required Conditionally
	142. Approach Mode, 103	Field	SEMIC, QC	Images			
	143. Approach Directional Flow, 103	Field	SEMIC, QC	Images		Required	Optional
	144. Number of Approach Through Lanes, 104	Field	SEMIC, QC	Images		Required	Optional
	145. Left Turn Lane Type, 104	Field	SEMIC, QC	Images			
	146. Number of Exclusive Left Turn Lanes, 107	Field	SEMIC, QC	Images		Required	Optional
	147. Amount of Left turn Lane Offset, 107	Field	SEMIC, QC	Images + Mapping			
	148. Right Turn Channelization, 109	Field	SEMIC, QC	Images		Required	
	149. Traffic Control of Exclusive Right Turn Lanes, 109	Field	SEMIC, QC	Images			
	150. Number of Exclusive Right Turn Lanes, 109	Field	SEMIC, QC	Images		Required	Optional
	151. Length of Exclusive Left Turn Lanes, 110	Field	SEMIC, QC	Images + Mapping			
	152. Length of Exclusive Right Turn Lanes, 111	Field	SEMIC, QC	Images + Mapping			
	153. Median Type at Intersection, 112	Field	SEMIC, QC	Images			Optional
	154. Approach Traffic Control, 112	Field	SEMIC, QC	Images			
	155. Approach Left Turn Protection, 113	Existing Data	DPW	Request DPW Data		Required	Required
	156. Signal Progression, 113	Existing Data	DPW	Request DPW Data			
	157. Crosswalk Presence/Type, 114	Field	SEMIC, QC	Images			
	158. Pedestrian Signalization Type, 114	Field	SEMIC, QC	Images			
	159. Pedestrian Signal Special Features, 115	Field	DPW	Request DPW Data			
	160. Crossing Pedestrian Count/Exposure, 115	Field	DPW	Request DPW Data			
	161. Left/Right Turn Prohibitions, 116	Field	SEMIC, QC	Images			Optional
	162. Right Turn-On-Red Prohibitions, 116	Field	SEMIC, QC	Images		Required	
	163. Left Turn Counts/Percent, 117	Field	DPW	Request DPW Data			Optional
	164. Year of Left Turn Counts/Percent, 117	Field	DPW	Request DPW Data			Required
	165. Right Turn Counts/Percent, 117	Field	DPW	Request DPW Data			Optional
	166. Year of Right Turn Counts/Percent, 118	Field	DPW	Request DPW Data			Required

	No. Element, Description, Page (MIRE)	Data Origin	Collectors	Technology	HPMS	HSM / IHSDM	Safety Analyst
	167. Transverse Rumble Strip Presence, 118	Field	SEMIC, QC	Images			
	168. Circular Intersection - Entry Width, 118	Field	SEMIC, QC	Images			
	169. Circular Intersection - Number of Entry lanes, 119	Field	SEMIC, QC	Images			
	170. Circular Intersection – Presence/Type of Exclusive Right Turn Lane, 121	Field	SEMIC, QC	Images			
	171. Circular Intersection - Entry Radius, 123	Existing Data	SEMIC, QC	Mapping			
	172. Circular Intersection - Exit Width, 123	Field	SEMIC, QC	Images			
	173. Circular Intersection - Number of Exit lanes, 123	Field	SEMIC, QC	Images			
	174. Circular Intersection - Exit Radius, 124	Existing Data	SEMIC, QC	Mapping			
	175. Circular Intersection - Pedestrian Facility, 124	Field	SEMIC, QC	Images			
	176. Circular Intersection - Crosswalk Location, 125	Existing Data	SEMIC, QC	Mapping			
	177. Circular Intersection - Island Width, 125	Existing Data	SEMIC, QC	Mapping			
III.b. Interchange and Ramp Descriptors							
III.b.1. General Interchange Descriptors							
	178. Unique Interchange Identifier, 126	Existing Data	SEMIC, QC	Mapping			
	179. Location Identifier for Road 1 Crossing Point, 126	Field	SEMIC, QC	GPS			
	180. Location Identifier for Road 2 Crossing Point, 127	Field	SEMIC, QC	GPS			
	181. Location Identifier for Additional Road Crossing Points, 129	Field	SEMIC, QC	GPS			
	182. Interchange Type, 129	Existing Data	SEMIC, QC	Images + Mapping			Required
	183. Interchange Lighting, 131	Field	SEMIC, QC	Images			
	184. Interchange Entering Volume, 131	Existing Data	DPW	Request DPW Data			
III.b.2. Interchange Ramp Descriptors							
	185. Interchange Identifier for this Ramp, 132	Existing Data	DPW	Request DPW Data			
	186. Unique Ramp Identifier, 132	Existing Data	DPW	Request DPW Data			Required
	187. Ramp Length, 133	Existing Data	SEMIC, QC	Mapping			Required
	188. Ramp Acceleration Lane Length, 134	Existing Data	SEMIC, QC	Mapping			
	189. Ramp Deceleration Lane Length, 135	Existing Data	SEMIC, QC	Mapping			
	190. Ramp Number of Lanes, 136	Existing Data	SEMIC, QC	Mapping			Optional
	191. Ramp AADT, 136	Existing Data	DPW	Request DPW Data			Required
	192. Year of Ramp AADT, 136	Existing Data	DPW	Request DPW Data			Required
	193. Ramp Metering, 137	Existing Data	SEMIC, QC	Images			
	194. Ramp Advisory Speed Limit, 137	Existing Data	SEMIC, QC	Images			
	195. Roadway Type at Beginning Ramp Terminal, 138	Field	SEMIC, QC	Images + Mapping			Required
	196. Roadway Feature at Beginning Ramp Terminal, 138	Field	SEMIC, QC	Images + Mapping			Required
	197. Location Identifier for Roadway at Beginning Ramp Terminal, 139	Field	SEMIC, QC	Images + Mapping			Required
	198. Location of Beginning Ramp Terminal Relative to Mainline Flow, 139	Field	SEMIC, QC	Images + Mapping			

	No. Element, Description, Page (MIRE)	Data Origin	Collectors	Technology	HPMS	HSM / HSDM	Safety Analyst
	199. Roadway Type at Ending Ramp Terminal, 141	Field	SEMIC, QC	Images + Mapping			Required
	200. Roadway Feature at Ending Ramp Terminal, 141	Field	SEMIC, QC	Images + Mapping			Required
	201. Location Identifier for Roadway at Ending Ramp Terminal, 142	Field	SEMIC, QC	Images + Mapping			Required Conditionally
	202. Location of Ending Ramp Terminal Relative to Mainline Flow, 142	Field	SEMIC, QC	Images + Mapping			
IV. List of Additional Roadway Attributes							
	A1. Sidewalk Width	On-field	SEMIC	Images + Mapping			
	A2. Flashing Beacon Presence	On-field	SEMIC	Images			
	A3. Intersection Warning Presence	On-field	SEMIC	Images			
	A4. Horizontal or Vertical Sight Obstructions	On-field	SEMIC	GPS			

Notes:

- DPW is the Stanislaus County Department of Public Works. Data elements indicated as DPW in the table will be requested from DPW prior to data collection.
- MIRE elements 025, 026, 059, and 060 will not be collected. Any existing DPW data on these elements may be included in the database of roadway characteristics if desired.
- We need clarification on whether the centerline miles totals provided in the RFP include interchange ramps and whether it is necessary to collect data on the set of interchange ramp descriptors.

Data Gathering

A specific note regarding weather conditions: The pavement measurements cannot be taken on wet surfaces. This consideration is built into the project schedule assuming that the winter is somewhat normal and not unseasonably wet. Excessive rain may create delays for the data collection. The team will troubleshoot this issue if it arises.

For each roadway, we will record the following:

- Begin Point Segment Descriptor
- End Point Segment Descriptor
- Date
- Time

The complete raw data product for this project will be approximately 50 Terabytes in size. This includes all LCMS data, 360 images, panoramic images, pavement images, GPS data, and blog data.

We use a pre-log book that contains available geographic coordinates. This pre-log book contains specific information regarding the project, such as the elevation of the roadways and the number of towns the road serves.

The pre-identification of these points is important, as they establish a link between the data on cross section elements of the roadway and the pre-existing referenced cartography and segment descriptors.

The GPS survey includes a register of all landmarks and milestones that the team encounters during the journey.

At the end of the survey of each lane, data will be backed-up by duplicate and a copy will be sent to SEMIC

headquarters for processing.

From the survey and with the help of GPS, coordinates will be documented in a similar format to the one shown in Table 1 on the following page.

Vehicle Inspection

Before every survey, our vehicles are inspected to ensure the lights, tires and safety equipment are all working properly. A tire pressure check is also completed and if required, an adjustment in pressure will be made (accounting for weather and temperature, as suggested by the tire manufacturer). This task is performed before starting the survey every day, and it takes no more than five minutes.

DMI Verification

Inspection and calibration procedures will be performed according to internal policies and DMI manufacturer's recommendations, in order to ensure the expected quality of the measurements. It is SEMIC's current practice to perform a calibration with a given frequency, so that the required time is fully known.

The distance sensor must be calibrated every 1,000 km, at a minimum. In order to provide the maximum degree of confidence the following will be performed before surveying each road:

The vehicle travels along a given and known distance on a straight stretch of road of about 1,000 meters. An arithmetic mean will be obtained.

Each of the measurements performed with the DMI will be compared to the arithmetic mean. If the difference of each of the measurements is equal or less than 0.025%, the arithmetic mean is established as the reference value. Otherwise, the procedure has to be repeated until the condition is met.

Once the reference length is set, the vehicle travels the stretch of road registering the traveled length. If such length is consistent with the reference value within a range of 0.1%, the calibration factor is confirmed and prevails. Otherwise, the equipment automatically stores and processes the data to redefine the calibration distance factor (CDF).

In most cases, the variations to the CDF can be usually attributed to the tire pressure and tire wear. Therefore, tire wear and tire pressure are always checked and adjusted before data collection proceeds.

This is performed before starting the survey every day and it takes no more than 25 minutes.

GPS Verification and Calibration

Prior to the survey, all GPS devices will be verified for accuracy. To perform this verification test, the geographic coordinates of a set of points in the recorded GPS data will be compared with the coordinates of a known set of predetermined points. The accuracy of the GPS data for a given point is rechecked every 30 minutes throughout the data collection period.

Panoramic Roadway Imagery

Once the DMIs are calibrated, an initial test is performed on the panoramic camera used to collect roadway imagery. Over a trial length of 100m, image files are checked to confirm that the expected number of images was gathered according to the given surveyed distance.

As data collection proceeds, a technician continually evaluates the sharpness of the all roadway imagery; and contrast and brightness are adjusted, as necessary, using the camera's software. SEMIC personnel also verify the relevant directories or folders where the recorded image files will be saved.

Each photograph is labeled with an identification code using the relevant linear referencing system. This identification code insures accurate spatial information is associated with all roadway element data that is extracted from the panoramic imagery.

Test Run of Data Collection

Our team will work with Stanislaus County to conduct a test run or trial-calibration data collection run to be able to identify and problem-solve any issues prior to collecting data on a County-wide basis. The specifics of the trial-calibration data collection will be established with input from the County. The trial-calibration data collection run would include the data collection, data processing, and delivery of that data in raw and synthesized form.

Data Processing

GPS Data and Linear Referencing

An LRS is not necessary for data collection. However, it is necessary to have a system for identifying all segments, segment lengths, and interchanges included in the road network for the project. We would like the County to provide this at the outset of the project, since it is convenient for data collection planning purposes. If available at the time the project needs to initiate data collection, the team could work within the framework of the statewide LRS the County mentioned Caltrans was in the process of establishing.

All data processed will include the point or site, date, time, latitude, longitude, elevation and the geo-reference data in the digital cartography. Once the databases are available, they will be checked against the starting and ending points, so the data gathered shows congruence.

Once this issue has been technically approved, the series of coordinates are transformed to the Universal Transverse Mercator (UTM) coordinate system, so the series is expressed in a Cartesian coordinate system. After this transformation, the GPS data is incorporated into the roadway elements database with the formation of a correspondence between the GPS coordinates and the linear referencing system. This GPS-KM database (DB) is used with a series of commands to determine the layout of a parallel axis on roadway segments.

Analysis of Panoramic Roadway Imagery

For each road segment in the database, the data on recorded survey distances is compared the number of associated images, to ensure the sufficiency of imagery for the entire road network.

We have developed software which associates all images with a measurement grid. This allows the calculation of horizontal and vertical lengths of the various roadway elements depicted in the imagery. The process is diagrammed in the figure below.

The panoramic images are then grouped by photographed area: front, rear or nearside. The database is structured to establish the spatial relations between the images. A single data base is built for each road. Database records include fields for required MIRE elements and correspond to data gathered for each given segment. For each record, there will be a link for the frontal, rear and nearside images with their corresponding milepost location.

Web-Based Application for Analysis of Roadway Elements

The working basis for the web-based application is given by the databases for each of the roads. The coding process involves the analysis of 202 elements known to have a direct influence on road safety. This analysis will be performed using a tailored software designed by SEMIC.

Database Specifications

The databases are designed in a Microsoft Access *.mdb file format. All files are WinDPWs compatible and manage a number of programming languages. Every database contains data automatically inputted from sensors deployed in the field, as well as data that have are entered during post-processing by a Safety Analyst. The database contains fields for all required items according to the Model Inventory of Roadway Elements (MIRE).

Programming Language Description

The WinDPWs-Operating system software uses an objective-oriented programming language. It is fully supported and adaptable to improvements and updates. The language is an elemental part of the whole inspection software and fulfills the interphase between user and software in both ways. This is capable of allowing a bi-directional interaction with the

required data in order to generate the needed export file.

Characteristics of the GPS-KM Database

Fast access and digital imaging control: Due to its well-structured database and programming, the system is capable of providing fast access and an efficient management for the user with an image viewer, an accessible data entry form, and a user interface with digitally rendered measuring devices.

Adaptability: The system allows the user to easily add new attributes without interfering with the database structure. Adjustments and corrections are able to be made without the need for changing the database, although there are some exceptions.

Stability: SEMIC's software is powerful and at the same time nimble enough to handle changes.

Database Integrity: Programming has been designed so the data integrity is enforced in the database. In any given time, the database can be rescued, modified or replaced without any problem at all.

User-Friendly: Both, the user interface and the database were developed under intuitive principles, so it is user-friendly and easy to interpret the data, systems controls, and commands.

These characteristics enable the GPS-KM database and software to be efficient and flexible – users are able to export data to .txt or .csv files. In addition, this software can be run remotely and accessed online anywhere in the world.

Deliverable Formats

Back-up hard drives will be provided with all imagery and sensor data. All roadway element data in the GPS-KM database will be available in Microsoft Access and ESRI shapefile formats.

Optional – Data Storage Server

At the direction of County staff, our team can provide a server for the County to use to store the data collected and provide by our team.

Health and Safety Plan

In conducting this work, safety and health are paramount. Because of this, we have developed and implemented strict safety procedures that all personnel are required to abide by when conducting work.

Proper mechanical care of our vehicles is of the utmost importance. SEMIC keeps a log book for each and ensures that all maintenance tasks have a written record. We follow all vehicle manufacturers' recommendations regarding the maintenance upkeep and repairs. We prefer to be redundant in safety and verify the health of all our vehicles, including their steering and suspension systems, tires and even lights, windscreen wipers and defrost systems. The entire well-being of our vehicles is indispensable to ensuring the safety of our personnel and the traveling public.

In addition, all our vehicles are equipped with a first-aid toolkit, fire extinguishers and retro-reflective triangles. When working on-site, SEMIC personnel always wear a high-visibility jacket or vest.

Deliverables:

- Memorandum summarizing the organization of the database and the data within it
- County-wide GIS-based database with crash, traffic volume, and roadway characteristic data
- Raw data obtained from field data collection

[illegible]

Purpose: Develop a tool that will facilitate County-wide road safety analysis using systemic safety analysis approach as well as HSM crash prediction models.

The tool developed in Task 3 will be used to conduct the analysis in Task 4. The results from the tool will inform the documentation put together in Task 5 and also inform the locations and projects developed in Task 6.

Subtask 3.1 Objectives and Functionality Meeting

We will lead a discussion with key County staff to brainstorm and discuss the goals and objectives for the safety analysis tool, potential frameworks that the tool could be implemented in, as well as desired functionality to be included as part of the tool's scope. This meeting will serve to kick-off the tool development process and help clarify the initial scope and desired outline of the tool. The meeting will serve as an opportunity for County staff to share how their data is currently organized and any constraints in how data would be accessed by the tool. Key to this meeting will be determining the system's architecture as a web-based application, an ESRI ArcGIS Online Application for internal use, or a plug-in tool to ArcGIS Desktop/Pro. Following the meeting, we will circulate meeting notes documenting the scope and key functionalities for the tool.

Deliverables:

- One (1) meeting with the County
- Meeting Notes

Subtask 3.2 Scope and Outline of the Tool

Following the meeting, we will finalize the desired architecture for the County's safety analysis tool with the County Project Manager and PDT. Kittelson has developed and implemented similar tools in a variety of formats and is comfortable developing in a variety of formats, from web-based applications with "dashboards" for quickly evaluating, summarizing, and tracking the analysis to developing add-on "toolboxes" for ArcGIS Desktop that rely solely on GIS databases or interact with outside databases. Kittelson developed and updated the HiSafe companion software to Part C of the Highway Safety Manual to implement the Predictive Method to calculate expected average number of crashes per year at individual locations. We have further refined and augmented the HiSafe software package for use by Utah DOT to integrate Part D Crash Modification Factor analysis as well as a benefit cost to assess the cost-effectiveness of various safety improvement scenarios.

Kittelson has also worked with a variety of jurisdictions from state departments of transportation and regional agencies to city and county agencies to develop custom roadway safety management analysis processes and tools to fit their unique context and capabilities. For Clark County, Washington, we built a suite of analysis tools including an ArcGIS-based Toolbox to conduct safety performance evaluations using the HSM Part B Roadway Safety Management Process' network screening methodologies. From this tool, a series of spreadsheet-based tools were developed for the County to calculate the HSM predictive method and then develop cost-effective countermeasure packages using reliable crash modification factors (CMFs) and planning level costs to prioritize safety improvement projects for their high priority locations. We are currently providing on-going support for their program to ensure that the tool remains useful over time with changes to datasets as well as helping the County better integrate their safety analysis into their overall transportation improvement program project evaluation process.

Following the determination of the County's desired framework for the analysis tool, we will develop a draft scope and initial outline of the tools functionality, interface, and data connections. This scope and outline of the tool will form the basis for the tool's development and will lay out:

Tool Features:

- Roadway and Collision Data Entry/Modification/Deletion
- Countermeasure Crash Modification Factors or Safety Performance Functions
- Predictive Analysis and Calibration
- Safety Performance Network Screening
- Benefit-Cost Countermeasure Scenario Analysis
- Reporting

Tool Organization:

- Relationships between input datasets and the tool
- Required inputs
- Tabs or stages of the tool
- Optional aspects of the tool (e.g., calibration, cost-adjustments, etc.)

The outline of the tool will detail the requirements and operational details for each stage of the safety analysis tool including:

- Data inputs
- Analysis methods
- Calculated variables
- Output format
- Error-checking

To the extent possible, the outline of the tool will be summarized as a process flow diagram to demonstrate the relationships between the input data, the analysis procedures, and outputs from the tool.

Kittelson will document the tool scope and outline in a draft memorandum for review by the County PDT and key staff. We will respond to two (2) rounds of comments on the scope and outline before finalizing the scope and outline.

Deliverables:

- Draft #1 of Tool Scope and Outline Memorandum
- Draft #2 of Tool Scope and Outline Memorandum
- Final Tool Scope and Outline Memorandum

[illegible] Software Storyboard

Using the final Tool Scope and Outline Memorandum, Kittelson will develop a graphical storyboard illustrating the concept for the analysis software. This storyboard process will provide graphical representations of the various screens and functions associated with the various aspects of the tool. Accompanying each storyboard graphic will be a narrative explaining the purpose and goal of the current board as well as expected inputs, user interactions, and outcomes. Additionally, KAI will develop process flow diagrams indicating how each board relates to each other within the overall tool development process as well as the calculations and background processes associated with each storyboard.

Following the development of the draft software storyboard, Kittelson will organize a meeting with the County Project Manager, PDT, and key County staff to review the storyboard concepts and discuss desired adjustments or changes to the tool layouts. We will document the comments from the meeting and provide them back to the County and PDT for more detailed review of the concept. Based on one consolidated set of comments, Kittelson will develop final storyboards and tool process flow diagrams to be used to guide the software development process.

Deliverables:

- Draft Tool Storyboard and Process Flow Diagrams
- One (1) Storyboard Review Meeting
- Final Tool Storyboard and Process Flow Diagrams

[illegible] Development

Building off the storyboards and process flow diagrams developed in Subtask 3.3, we will begin development of the safety analysis tool. Kittelson will develop a subset of the input dataset to use as a testing environment as the software's various functionalities are developed. The software development process will adhere to the narrative, graphical components, and functionalities documented in the tool scope and storyboard. Should any variations arrive during the

software development and testing, Kittelson will communicate any potential changes to the County Project Manager to ensure the adjustment is consistent with the intent and goals of the safety analysis tool.

The safety analysis tool development assumes four software releases to the County for their review and testing of the functionality beyond the Kittelson teams internal development releases and builds. These four releases will consist of:

- **Initial Release:** the first release for testing by County staff and/or the PDT;
- **Beta Release:** incorporating changes from the initial release to identify any continuing usability or functionality defects;
- **Release Candidate:** incorporating changes from the beta release to identify final bugs or defects; and,
- **Final Release:** the stable tool with all known bugs resolved.

The final release of the tool will provide the basis upon which the safety analysis and reporting in Task 4 and Task 5 will be developed.

Subtask 3.5 Technical Software Support

Kittelson will provide one (1) year of technical support after the completion and acceptance of the final release for the implementation or modification of the data or the program to correct errors or software bugs. The County will have the option to extend this annual technical support for a fixed annual rate beyond the first year for technical support on the use of the system and necessary patching for software bugs. Additional features or modifications to the Final Release will not be covered under the annual support but could be implemented on a time and material basis after establishing any modification or extension scope for the tool.

Deliverables:

- Memorandum with scope and outline for the tool
- Storyboard of the software tool to be developed
- Phased releases of the software tool
- Written guidance regarding how to use and maintain the software tool

TASK 4 SYSTEMIC SAFETY ANALYSIS AND COUNTERMEASURES

Purpose: Identify high-priority locations and countermeasures for reducing crashes and crash risk on County roads.

Subtask 4.1 Systemic Analysis

We will analyze the County-wide crash data using two complementary approaches:

Descriptive Crash Statistics. Using cross-tabulations, graphs, and summary charts of crash severities, types, and primary contributing factors, we will develop descriptive statistics for the County. Results would indicate the degree to which the dominant crash characteristics overlap with the state's SHSP challenge or focus areas, and provide a clear picture for County staff of overarching safety performance.

Spatial Network Analysis. Using a GIS-based software tool KAI has developed through similar systemic safety projects and will have expanded in Task 3 for the County, we will map the reported crashes and their associated attributes (e.g., severity, primary contributing factors). We will then analyze the crash data and physical characteristics of the intersections and roadway segments along those corridors to identify potential risk factors.

Given the County's interest in using the HSM and willingness to invest in extensive data collection in Task 2, we will be able to further enhance this analysis by using the HSM crash prediction models to understand which intersections and segments are performing better or worse than expected based on their respective operational and geometric characteristics. This will provide the County with greater certainty as to which locations would benefit the most from safety investments.

Subtask 4.2 Countermeasures and Priority Locations

Using the approach described in Subtask 4.1, we will identify the top 25 locations (i.e., intersections or roadway segments) that have the greatest potential for crash reduction. At each of these locations, we will identify countermeasures, the potential crash reduction or benefit from those countermeasures, and planning-level cost estimates for the improvements. We will use the HSM crash prediction models, FHWA's CMF Clearinghouse, and Caltrans Local Road Safety Manual to identify the potential crash reduction due to the countermeasures. This information will be summarized in a way that is easy for the County to work from for assembling grant applications or incorporating into the County's CIP.

Using the approach described in Subtask 4.1, we will identify the top 25 locations (i.e., intersections or roadway segments) that have the greatest potential for crash reduction. At each of these locations, we will identify countermeasures, the potential crash reduction or benefit from those countermeasures, and planning-level cost estimates for the improvements. We will use the HSM crash prediction models, FHWA's CMF Clearinghouse, and Caltrans Local Road Safety Manual to identify the potential crash reduction due to the countermeasures. This information will be summarized in a way that is easy for the County to work from for assembling grant applications or incorporating into the County's CIP.

In addition to the location specific countermeasures, we will identify the top ten systemic treatments based on County-wide crash trends. The systemic treatments will be organized into a toolbox type format to clearly communicate what the treatment is, where it is most useful to install, approximate cost for implementation, and other key considerations related to its use.

Deliverables:

- Memorandum summarizing the systemic analysis findings
- Summary of top 25 locations and recommended countermeasures
- Toolbox of top 10 systemic treatments

TASK 5 DRAFT AND FINAL REPORT

Purpose: Prepare the County's SSAR that adheres to the Caltrans SSARP Guidelines.

Subtask 5.1 Draft Report

We will create the Draft SSAR following the Caltrans SSARP Guidelines as outlined in the RFP. Our project manager, Erin Ferguson, PE, will serve as the engineer of record. For the highest priority locations identified, we will include in the report a vicinity map; crash characteristics, patterns, and trends; data gathering and data used; data analysis; countermeasures considered and selected; benefit summary; benefit/cost ratio calculations and methodology; and recommended safety projects including funding sources for those projects.

Subtask 5.2 Final Report

Based on the comments received from the County and PDT, we will revise the final report and provide a final version to the County PM.

Deliverables:

- Draft Report for County and PDT Review
- Final Report

TASK 6 PROJECT SCOPES AND COST ESTIMATES

Purpose: Prepare project scopes and cost estimates for the highest priority locations and improvements to facilitate grant applications and incorporating the findings into the County's CIP.

Subtask 6.1 Draft Scopes and Estimates

Based on the locations and top systemic treatments identified in Task 4, we will prepare specific project scopes and cost estimates. These will be summarized on project summary sheets with key information and images to help the County apply for and secure funding. A draft set of these will be provided to the County and PDT for review and input.

Subtask 6.2 Final Scopes and Estimates

We will revise the project scopes and estimates based on the comments and input we received from the County and PDT.

Deliverables:

- Project scopes and cost estimates for up to 25 locations

EXHIBIT B

INSURANCE REQUIREMENTS

EXHIBIT B

Insurance Requirements for Professional Services

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 hereunder by the Consultant, its agents, representatives, or employees.

MINIMUM SCOPE AND LIMIT OF INSURANCE

Coverage shall be at least as broad as:

1. **Commercial General Liability** (CGL): Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal & advertising injury with limits no less than $1,000,000 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (ISO CG 25 03 or 25 04) or the general aggregate limit shall be twice the required occurrence limit.
2. **Automobile Liability**: If the Consultant or the Consultant's officers, employees, agents, representatives or subcontractors utilize a motor vehicle in performing any of the work or services under the Agreement Insurance Services Office Form Number CA 0001 covering, Code 1 (any auto), or if Consultant has no owned autos, Code 8 (hired) and 9 (non-owned), with limit no less than $1,000,000 per accident for bodily injury and property damage.
3. **Workers' Compensation** insurance as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than $1,000,000 per accident for bodily injury or disease.
   (Not required if consultant provides written verification it has no employees)
4. **Professional Liability** (Errors and Omissions) Insurance appropriates to the Consultant's profession, with limits not less than $2,000,000 per occurrence or claim, $4,000,000 aggregate.

If the Consultant maintains broader coverage and/or higher limits than the minimums shown above, the County requires and shall be entitled to the broader coverage and/or higher limits maintained by the Consultant. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the County.

Application of Excess Liability Coverage

Consultants may use a combination of primary, and excess insurance policies which provide coverage as broad as ("follow form" over) the underlying primary policies, to satisfy the Required Insurance provisions.

Other Insurance Provisions

The insurance policies are to contain, or be endorsed to contain, the following provisions:

Additional Insured Status
The County, its officers, officials, employees, agents and volunteers are to be covered as additional insureds on the CGL and the Auto policy with respect to liability arising out of work or operations performed by or on behalf of the Consultant including materials, parts, or equipment furnished in connection with such work or operations. General liability and Auto Liability coverage can be provided in the form of an endorsement to the Consultant's insurance (**at least** as broad as ISO Form CG 20 10 11 85 or **both** CG 20 10, CG 20 26, CG 20 33, or CG 20 38; **and** CG 20 37 forms if later revisions used).

Primary Coverage
For any claims related to this contract, the **Consultant's insurance coverage shall be primary** insurance primary coverage **at least** as broad as ISO CG 20 01 04 13 as respects the County, its officers, officials, employees, agents and volunteers. Any insurance or self-insurance maintained by the County, its officers, officials, employees, agents or volunteers shall be excess of the Consultant's insurance and shall not contribute with it.

Reporting: Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the County or its officers, officials, employee's, agents or volunteers.

Notice of Cancellation
Each insurance policy required above shall state that **coverage shall not be canceled, except with notice to the County.**

Waiver of Subrogation
Consultant hereby grants to County a waiver of any right to subrogation (except for Professional Liability) which any insurer of said Consultant may acquire against the County by virtue of the payment of any loss under such insurance. Consultant agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the County has received a waiver of subrogation endorsement from the insurer.

Self-Insured Retentions
Self-insured retentions must be declared to and approved by the County. The County may require the Consultant to provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or County.

Acceptability of Insurers
Insurance is to be placed with California admitted insurers (licensed to do business in California) with a current A.M. Best's rating of no less than A-VII, however, if no California admitted insurance company provides the required insurance, it is acceptable to provide the required insurance through a United States domiciled carrier that meets the required Best's rating and that is listed on the current List of Approved Surplus Line Insurers (LASLI) maintained by the California Department of Insurance.

Claims Made Policies

If any of the required policies provide coverage on a claims-made basis:

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 (5) years after completion of the contract of 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 "extended reporting" coverage for a minimum of five (5) years after completion of contract work.

Verification of Coverage

Consultant shall furnish the County with a copy of the policy declaration and endorsement page(s), original certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All **certificates and endorsements are to be received and approved by the County before work commences**. However, failure to obtain the required documents prior to the work beginning shall not waive the Consultant's obligation to provide them. The County reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

Subcontractors

Consultant shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and Consultant shall ensure that County is an additional insured on insurance required from subcontractors.

Special Risks or Circumstances

County reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

Insurance Limits

The limits of insurance described herein shall not limit the liability of the Consultant and Consultant's officers, employees, agents, representatives or subcontractors. Consultant's obligation to defend, indemnify and hold the County, its officers, officials, employees, agents and volunteers harmless under the provisions of this paragraph is not limited to or restricted by any requirement in the Agreement for Consultant to procure and maintain a policy of insurance.

[SIGNATURES SET FORTH ON THE FOLLOWING PAGE]

_____ Exempt from Auto – I will not utilize a vehicle in the performance of my work with the County.

_____ Exempt from WC – I am exempt from providing workers' compensation coverage as required under section 1861 and 3700 of the California Labor Code.

I acknowledge the insurance requirements listed above.

Print Name: DAVID L. MILLS Date: 12/14/17

Signature: [signature] Date: 12/14/17

Vendor Name: Kitelson + Associates, Inc.

For CEO-Risk Management Division use only

Exception: _____

Approved by CEO-Risk Management Division: _____ Date: _____

EXHIBIT C

CONSULTANTS FEE SCHEDULE

	Kittelson & Associates, Inc.															
	Staff Name and or Classification	Erin Ferguson, PE, Project Manager	Brian Ray, PE, Principal-In-Charge	Matt Braughton, Deputy Project Manager	Mike Alston, Analyst	Jim Bonneson, PhD, PE	Andrew Butsick, Analyst	Ian Cameron, Sr. Programmer	Nick Foster, AICP, Sr. Planner	Anusha Musunuru, PhD, Analyst	Lake Trask, PhD, Programme	Hours Subtotal	Labor Costs	OH + Fringe 211.26%	Profit 10%	Total Cost
	Actual Base Hourly Rate	$ 53.42	$ 74.48	$ 38.87	$ 32.77	$ 70.24	$ 35.97	$ 48.65	$ 46.62	$ 32.02	$ 30.58					
Task 1 Project Management																
1.1 Maintain Schedule & Monthly Progress Reports	Hours	16	8	12								36	$ 1,917.00	$ 4,049.85	$ 596.69	$ 6,563.54
1.2 Bi-Weekly Conference Calls	Hours	24	8	8								40	$ 2,188.88	$ 4,624.23	$ 681.31	$ 7,494.42
1.3 Project Development Team Meetings	Hours	40	40	40								120	$ 6,670.80	$ 14,092.73	$ 2,076.35	$ 22,839.89
Task 1 Subtotal		80	56	60	0	0	0	0	0	0	0	196	$ 10,776.68	$ 22,766.81	$ 3,354.35	$ 36,897.84
Task 2 Data Collection & Storage																
2.1 Crash Data & Volume Data	Hours	16	8	36					40			100	$ 4,714.68	$ 9,960.23	$ 1,467.49	$ 16,142.40
2.2 Roadway Characteristic Data	Hours	24	8	20					30			82	$ 4,053.92	$ 8,564.31	$ 1,261.82	$ 13,880.05
Task 2 Subtotal		40	16	56	0	0	0	0	70	0	0	182	$ 8,768.60	$ 18,524.54	$ 2,729.31	$ 30,022.46
Task 3 Tool Development																
3.1 Objectives and Functionality Meeting	Hours	16	4	16		16		8			8	68	$ 3,532.24	$ 7,462.21	$ 1,099.45	$ 12,093.90
3.2 Scope and Outline of Tool	Hours	16	4	24	32	24		24			40	164	$ 7,210.72	$ 15,233.37	$ 2,244.41	$ 24,688.50
3.3 Software Storyboard	Hours	17	4	24	32	24		16			40	157	$ 6,874.94	$ 14,524.00	$ 2,139.89	$ 23,538.83
3.4 Development	Hours	24	4	120	120	80		240			120	708	$ 31,141.60	$ 65,789.74	$ 9,693.13	$ 106,624.48
3.5 Technical Software Support	Hours							100			100	200	$ 7,923.00	$ 16,738.13	$ 2,466.11	$ 27,127.24
Task 3 Subtotal		73	16	184	184	144	0	388	0	0	308	1297	$ 56,682.50	$ 119,747.45	$ 17,642.99	$ 194,072.94
Task 4 Systemic Safety Analysis & Countermeasures																
4.1 Systemic Analysis	Hours	32	22	16	60		32		60	120		342	$ 13,726.76	$ 28,999.15	$ 4,272.59	$ 46,998.50
4.2 Countermeasures to Address Priority Locations	Hours	40	20	16	50		24		50	120		320	$ 12,923.50	$ 27,302.19	$ 4,022.57	$ 44,248.25
Task 4		72	42	32	110	0	56	0	110	240	0	662	$ 26,650.26	$ 56,301.34	$ 8,295.16	$ 91,246.76
Task 5 Draft & Final Report																
5.1 Draft Report	Hours	32	16	8	40				30	60		186	$ 7,842.68	$ 16,568.45	$ 2,441.11	$ 26,852.24
5.2 Final Report	Hours	20	12	8	32				24	24		120	$ 5,209.12	$ 11,004.79	$ 1,621.39	$ 17,835.30
Task 5 Subtotal		52	28	16	72	0	0	0	54	84	0	306	$ 13,051.80	$ 27,573.23	$ 4,062.50	$ 44,687.54
Task 6 Project Scopes & Cost Estimates																
6.1 Draft Project Scopes and Estimates	Hours	80	50	16	110		24		24	110		414	$ 17,728.58	$ 37,453.40	$ 5,518.20	$ 60,700.18
6.2 Final Project Scopes and Estimates	Hours	40	24	12	80		24		16	80		276	$ 11,183.16	$ 23,625.54	$ 3,480.87	$ 38,289.57
Task 6 Subtotal		120	74	28	190	0	48	0	40	190	0	690	$ 28,911.74	$ 61,078.94	$ 8,999.07	$ 98,989.75
Total		437	232	376	556	144	104	388	274	514	308	196	$ 144,841.58	$ 305,992.32	$ 45,083.39	$ 495,917.29
Other Direct Costs - Subtask 2.2 Roadway Data Collection																$ 254,077.80
Grand Total																**$ 749,995.09**

Optional Direct Costs - Subtask 2.2 Roadway Data Collection	
Data Storage Server	$ 16,200.00
Total for Optional Direct Costs	**$16,200**
Grand Total with Optional Direct Costs	**$ 766,195.09**

Itemized List of Direct Costs for Subtask 2.2*:	**Unit Price**	**Quantity**	**Total**
Quality Counts Road Inventory Survey Data Collection	$ 52.82	1356	$ 71,623.92
SEMIC Road Inventory Survey Data Collection	$ 102.40	1356	$ 138,854.40
Test Run of Data Collection (Quality Counts)	$ 3,600.00	1	$ 3,600.00
Test Run of Data Collection (SEMIC)	$ 13,800.00	1	$ 13,800.00
Quality Counts Optional Task 1 Additional Road Inventory Survey Data Collection	$ 51.05	156	$ 7,963.80
SEMIC Optional Task 1 Additional Road Inventory Survey Data Collection	$ 88.40	156	$ 13,790.40
Quality Counts Optional Task 2 Additional Pavement Distress Data Collection	$ 1.33	1512	$ 2,010.96
SEMIC Optional Task 2 Additional Pavement Distress Data Collection	$ 1.61	1512	$ 2,434.32
Total			**$ 254,077.80**

Itemized List of Direct Costs for Optional Items	**Unit Price**	**Quantity**	**Total**
Optional Data Storage Server (SEMIC)	$ 16,200.00	1	$ 16,200.00
Total for Optional Direct Costs			**$ 16,200.00**

*See attached for further detail of data collection costs.

last updated: 05/2014

CONTRACTOR Name: Kittelson & Associates, Inc. Date: 11/21/2017
Project Name: Systemic Safety Analysis Report Project
Project #: RFP 9627 Systemic Safety Analysis Report Program

Fringe Benefit %	+	*Overhead %	=	Combined %
94.82%		116.44%		211.26%

Profit %: 10.00%
[Actual Base Hourly Rate Paid to Employee + (Actual Base Hourly Rate Paid to Employee x Combined %)] = A
A x Profit % = B A + B = Actual Fully Loaded Hourly Rate

Key Staff	Prevailing Wage	Classification	Name	Actual Base Hourly Rate Paid to Employee For Reference Only (Does not include any Fringe or OH)	Actual Fully Loaded Hourly Rate For Reference Only (Includes Fringe, OH & Profit)	Approved Flat Hourly Billing Rate
X		Senior Principal Engineer / Planner	Brian Ray, PE, Principal-In-Charge	$74.48	$255.01	$255.01
X		Associate Engineer / Planner	Erin Ferguson, PE, Project Manager	$53.42	$182.90	$182.90
X		Senior Engineer / Planner	Matt Braughton, Deputy Project Manager	$38.87	$133.09	$133.09
X		Transportation Analyst	Mike Alston, Analyst	$32.77	$112.20	$112.20
X		Senior Principal Engineer / Planner	Jim Bolnieson, PhD, PE	$70.24	$240.49	$240.49
X		Transportation Analyst	Andrew Bulsick, Analyst	$35.97	$123.16	$123.16
X		Associate Technician	Ian Cameron, Sr. Programmer	$48.65	$166.57	$166.57
X		Senior Planner	Nick Foster, AICP, Sr. Planner	$46.62	$159.62	$159.62
X		Transportation Analyst	Antuane Musururu, PhD, Analyst	$32.02	$109.63	$109.63
X		Transportation Analyst	Lake Trask, PhD, Programmer	$30.58	$104.70	$104.70

Total Other Direct Costs (ODC)	Estimated Total ODC Amount Shall Be Conservatively (Cumulative)	Description	Rate	Units	Total
		Quality Counts Road Inventory Survey Data Collection	52.62	1356	$71,623.92
		Quality Counts Optional Task 1 Additional Road Inventory Survey Data Collection	51.06	156	$7,963.80
		Quality Counts Optional Task 2 Additional Pavement Distress Data Collection	1.33	1512	$2,010.96
		SEMIC Road Inventory Survey Data Collection	102.8	1356	$139,354.40
		SEMIC Optional Task 1 Additional Road Inventory Survey Data Collection	88.4	156	$13,790.40
		SEMIC Optional Task 2 Additional Pavement Distress Data Collection	1.61	1512	$2,434.32
		Test Run of Data Collection (Quality Counts)	3600	1	$3,600.00
		Test Run of Data Collection (SEMIC)	13800	1	$13,800.00
		Optional Data Storage Server (SEMIC)	16200	1	$16,200.00
				Estimated Total ODC Amount	$270,277.80

1. List all Professional and Supervisory staff by Classification and Name. For staff not listed by name, a current payroll document identifying their actual base hourly rate shall be provided with every invoice that they are billing time to. The approved flat hourly billing rates for all employees will be calculated and reimbursed based on their actual base hourly rates per the date noted above. Unless CITY Project Manager assigns a fair and reasonable flat hourly billing rate for selected employees. Approved flat hourly billing rates for new employees hired after the date of this cost proposal will not exceed (or shall be in line with) the rates of similar personnel with similar experience listed on this cost proposal. The approved flat hourly billing rate shall be all-inclusive, including all mark-ups, fringe, and overhead expenses and profit.
2. Key Staff shall be determined by CITY Project Manager. (i.e. Project Manger, a specific Principal Engineer, a specific Structural Engineer, etc. Note Key staff with an "X" in the Key Staff column.
3. The employees' actual base hourly rates used to negotiate the flat hourly billing rates in this 10-H Form are the rates that were effective per the date noted above. Addition of new staff or addition of a SUBCONTRACTOR not previously listed on the approved 10-H Form(s) shall require an executed Supplement Agreement. No work shall commence until the Supplemental Agreement is executed and written notification has been provided by CITY Project Manager. New staff shall be paid at the same or lower approved flat hourly billing rate of the previously approved or similar classification. In addition, if the substitution involves Key Staff, CONTRACTOR must request and justify the need for the substitution and obtain approval from CITY Project Manager. Substituted Key Staff shall be as qualified as the original. The executed Supplemental Agreement shall include updated 10-H Forms for CONTRACTOR and SUBCONTRACTOR(S).
4. Approved flat hourly billing rates include all standard equipment including laptop, camera, cell phone, truck, standard personal safety equipment. CITY Project Manager shall approve any other direct costs.
5. Note employees/classifications that are subject to prevailing wage requirements with an "X" in the Prevailing Wage column. Prevailing Wage specified is based on current Department of Industrial Relations (DIR) determination. CONTRACTOR shall be responsible for any future adjustments to the prevailing wage, including but not limited to, base hourly rates and employer payments as determined by the DIR. CONTRACTOR is responsible for paying the appropriate rate, including escalations that take place during the term of the Agreement. CONTRACTOR shall be reimbursed at the above listed approved flat hourly billing rates.
6. Overtime may be reimbursed to classifications where it is required by their union contracts (Prevailing Wage classifications). Overtime will not be charged unless prior written approval is received by CITY Project Manager. CITY shall pay CONTRACTOR at the approved overtime rates noted above. CONTRACTOR shall pay prevailing wage employees per prevailing wage guidelines. For more information on applicable prevailing wages, please visit the following website: https://www.dir.ca.gov/OPRL/PWD/
7. Parking, tolls and local transportation costs resulting from commuting to and from the employee's residence to the job site are not reimbursable.
8. The Project will not reimburse CONTRACTOR for costs to relocate its staff to the geographic area of the contract. The Project will not reimburse CONTRACTOR for any per diem.
9. ODC items are to be in compliance with Code of Federal Regulations, Title 48 Part 31 [Federal Acquisition Regulations (FAR) cost principles] and the firm's company-wide allocation policies and charging practices with all clients including federal government, state government, local agencies and private clients.

By signing here, you agree to the terms above, and attest that all information is accurate and true.

CONTRACTOR/SUBCONTRACTOR Project Manager's Signature

(type/print name here) Erin M. Ferguson

Estimate

Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

Estimate Date: 11/14/2017

Order Date: 11/14/2017

Bill To: Kittelson & Associates, Inc.
155 Grand Ave, Suite 900
Oakland, CA 94612
(510) 839-1742

ORDER NO	ORDER DATE	PROJECT NAME	PAYMENT TERMS	ORDER BY
145243	11/14/2017	Stanislaus County Systemic Safety Analysis Report Program	Net 30 Days	Erin Ferguson

QTY	DESCRIPTION		TOTAL
1356	Required Task 1: 1356 Centerline Miles of Road Inventory Survey	52.82	71623.92
	Urban and Rural Roadway Location(s) in Stanislaus County, CA		
	- Field Data Collection rate $38.38 per centerline mile		
	- Project Management rate $14.44 per centerline mile		
156	Optional Task 1: 156 Additional Centerline Miles of Road Inventory Survey	51.05	7963.80
	Urban Roadway Location(s) in Stanislaus County, CA		
	- Field Data Collection rate $33.79 per centerline mile		
	- Project Management rate $17.26 per centerline mile		
1512	Optional Task 2: Additional Pavement Distress Data Collection	1.33	2010.96
	Urban and Rural Roadway Location(s) in Stanislaus County, CA		
	- Field Data Collection rate $0.67 per centerline mile - Project Management rate $0.66 per centerline mile		
1	Optional Task 3: Test Run of Data Collection - Trial Calibration of Data Collection and Data Processing	3600.00	3600.00
		TOTAL	**85,198.68**

Balances unpaid by end of Payment Term (listed above) will be charged 1.5% interest per month

Quality Counts, LLC
7409 SW Tech Center Dr, STE 150
Tigard, OR 97223
(877) 580-2212
qualitycounts.net

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November 13th, 2017
COT/SEMIC/86v2_17
Subject: Data Collection Stanislaus

ERIN FERGUSON
Kittelson and Associates

Present

Regarding the quotation for the Base Data Collection in the RFP *"SYSTEMIC SAFETY ANALYSIS REPORT PROGRAM (SSARP)"* at Stanislaus County, CA., please find the following quoted scope:

Data Collection

SEMIC will be in charge of the following points according to the RFP "*3.2 DATA COLLECTION AND STORAGE*":

1. **Sample Base Data Collection Requirements:**
    a. **Roadway Geometrics and Features**: Lane Width, Shoulder Widths, Length of Horizontal curves, Radius of curves, Superelevation Variance, Grade %, Driveway Density, etc... according to the elements classified as REQUIRED in the MIRE Report.
    b. **Intersection Geometrics and Features**: Intersection Skew Angle, Number of Lanes, Type of Control, Stop Ahead Presence, Flashing Beacon Presence.
    c. **Other Features**: Roadway Lighting Type/Presence, Hazard Ratings.
    d. **Pavement Condition** (existing data in County Geodatabase)
    e. Sidewalk Presence/Width, Curb Presence/Type.
    f. Median Barrier Presence/Type.
    g. Roadside Clear Zone Width.

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h. Terrain Type.
i. Edgeline and Centerline Presence.
j. Flashing Beacon Presence (Intersections).
k. Intersection Warning Presence (Intersections, ie... Stop Ahead).
l. Additional Safety Flags for system utilization, including Potential horizontal or vertical Sight Obstructions.

2. **Optional Tasks 1:** Urban Local Roadway/Intersection Data Collection. Collect base data for remaining urban, local roadways. (156 centerline miles, approximately 312 lane miles).

3. **Optional Task 2:** Collect Pavement Distress Data. Data will be collected with roadway inventory concurrently for efficiency (1,510 Centerline miles), with a Laser Crack Measurement System (LCMS).

4. According to the **MIRE Report**, the only elements that SEMIC will not be responsible of the collection of the element 25 "Surface Friction". Due to for the collection of these values another equipment is required and also it is catalogued as not REQUIRED in the summary.

Deliveries to Quality Counts

Data bases as a result of data collection and coding of the elements/features mentioned on the MIRE Report as REQUIRED. These data bases will be in format of: SHAPE, KML or/and CSV.

Special request tasks

If needed, a physical server for storage of all the raw data collected will be offered to the Department of Public Works of Stanislaus. This server will have a special tool to view the images collected. The technical specifications of the

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server are the following:

Synology Disk Station DS3018xs - NAS server
Specifications

GENERAL	
Max Supported Capacity	60 TB
Manufacturer	Synology

EXPANSION / CONNECTIVITY	
Interfaces	3 x USB 3.0
	4 x Ethernet 1000Base-T - RJ-45

POWER DEVICE	
Nominal Voltage	AC 120/230 V
Frequency Required	50/60 Hz

STORAGE	
Max Supported Capacity	60 TB
Network Storage Type	NAS server
iSCSI support	iSCSI

PROCESSOR / MEMORY	
Processors Installed	1 x Intel Pentium D1508 2.2 GHz
RAM Installed	8 GB (installed) / 32 GB (supported) - DDR4
Max Supported Qty	1
Number of Cores	Dual-Core

STORAGE CONTROLLER	
RAID Level	JBOD, RAID 0, RAID 1, RAID 10, RAID 5, RAID 6, RAID F1
Interface Type	Serial ATA-600

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NETWORKING	
Remote Management Protocol	SNMP, SSH, Telnet
Network / Transport Protocol	FTP, L2TP, NFS, PPTP, SMB
Features	FTP server, VPN Server, hardware encryption, wake on LAN (WOL)
Data Link Protocol	Ethernet, Fast Ethernet, Gigabit Ethernet
Host Connectivity (for SD)	Gigabit Ethernet
Network Services Compatibility	Apple File Protocol (AFP), Calendaring Extensions to WebDAV (CalDAV), Web-based Distributed Authoring and Versioning (WebDAV)

PROCESSOR	
Type	Pentium
Installed Qty	1
Clock Speed	2.2 GHz
Number of Cores	Dual-Core
Processor Number	D1508
Manufacturer	Intel
Max Turbo Speed	2.6 GHz

RAM	
Installed Size	8 GB
Max Supported Size	32 GB
Technology	DDR4 SDRAM

DIMENSIONS & WEIGHT	
Width	11.1 in
Depth	9.6 in
Height	6.5 in
Weight	11.46 lbs

Also, a road test of data collection and data processing will be offered by SEMIC which consider one week of road data collection and the time of data processing

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to present a sample of special attributes collected.

Price

The price for this scope of the project will be separated in the following points:

#	Activity	Unit	Quantity	Unit Price	Total
1	Sample Base Data Collection Requirements	Mile*	1356	$102.4	$138,854.4
2	Optional Task 1	Mile*	156	$88.4	$13,790.4
3	Optional Task 2	Mile*	1510	$1.61	$2,431.1
4	Physical server	Pack	1	$16,200.0	$16,200.0
5	Road test of data collection	(week sample)	1	$13,800.00	$13,800.0

*Centerline miles

Deliver Time

Starting from the date of data collection of information shared with SEMIC, the delivery time of the results of the data collection will be of 5 months, from January 2018 – June 2018, according to the RFP.

Payment Conditions.

The payment schedule is desirable to be attached to the Contract times and conditions.

Sincerely,

SEMIC, S.A. de C.V

Ing. Raúl Orozco Montero

EXHIBIT D

PROJECT SCHEDULE

	2018 - Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1.0	**Project Management**												
1.1	Maintain Schedule and Monthly Progress Reports												
1.2	Bi-Weekly Check-in Conference Calls												
1.3	Project Development Team Meetings												
2.0	**Data Collection and Storage**												
2.1	Crash Data and Volume Data												
2.2	Roadway Characteristic Data												
2.2A	- Equipment and Crew Transportation												
2.2B	- Calibration and Testing												
2.2C	- Data Collection												
2.2D	- Processing												
2.01	- Optional Task 1: Urban Local Roadway Data Collection and Processing												
2.02	- Optional Task 2: Pavement Distress Data Processing												
3.0	**Tool Development**												
3.1	Objectives and Functionality Meeting												
3.2	Scope and Outline of the Tool												
3.3	Software Storyboard												
3.4	Development												
3.5	Technical Software Support*										Technical Support Through September 2018		
4.0	**Safety Analysis**												
4.1	Systemic Analysis												
4.2	Countermeasures and Priority Locations												
5.0	**Draft and Final Report**												
5.1	Draft Report												
5.2	Final Report												
6.0	**Project Scopes and Cost Estimates**												
6.1	Draft Scopes and Estimates												
6.2	Final Scopes and Estimates												

* Technical software support will be provided for one-year beyond the completion of the final release of the tool

Task Activity

Consultant Team Activity

*Technical Support

Optional Tasks

PDT Meeting

Software Development Team Meeting

Draft Deliverable

Final Deliverable

Draft Software Release

Final Software Release

EXHIBIT E

SOFTWARE DEVELOPMENT ADDENDUM
TO THE PROFESSIONAL DESIGN SERVICES AGREEMENT

"EXHIBIT E"

SOFTWARE DEVELOPMENT ADDENDUM TO THE PROFESSIONAL DESIGN SERVICES AGREEMNT

RECITALS

WHEREAS, County desires to engage Consultant (Developer) to develop, create, test and deliver as a work made for hire a certain computer program and printed material for the Systemic Safety Analysis Reporting Program (the "System"); and

WHEREAS, the Developer is specially trained, experienced and competent to perform and has agreed to provide such services;

NOW, THEREFORE, County and Developer, intending to be legally bound, hereby agree as follows:

TERMS AND CONDITIONS

1. DEFINITIONS

When used in this Agreement and in the Scope of Work made a part of this Agreement, the terms listed below shall have the following meanings:

1.1 Code - shall mean computer programming code. If not otherwise specified, Code shall include both Object Code and Source Code. Code shall include any Maintenance Modifications or Basic Enhancements thereto created by Developer from time to time, and shall include Major Enhancements thereto when added to the Code in connection with the Scope of Work or any other agreement and scope of work between the parties.

(a) Object Code - shall mean the machine-readable form of the Code.

(b) Source Code - shall mean the human-readable form of the Code and related system documentation, including all comments and any Code required in the operation of the system.

1.2 Deliverables - shall mean the deliverables as defined in applicable contract documents, including without limitation, the project Request for Proposal ("RFP"), the Developer's proposal or scope of work, and any successive documents, including all Code, Documentation and other materials developed for or delivered to County by Developer under this Agreement.

1.3 Derivative Work - shall mean a work which is based upon one or more preexisting works, such as a revision, modification, translation, abridgement, condensation, expansion, or any other form in which such preexisting works may be recast, transformed, or adapted, and which, if prepared without authorization of the owner of the copyright in such preexisting work, would constitute a copyright infringement. For purposes

hereof, a Derivative Work shall also include any compilation that incorporates such a preexisting work,

1.4 Documentation - shall mean user documentation, whether hard copy of electronic, and other materials that relate to particular Code, including materials useful for design (for example, logic manuals, flow charts, and principles of operation), Documentation shall include any Maintenance Modifications or Basic Enhancements thereto created by Developer from time to time, and shall include Major Enhancements thereto when added to the Documentation in connection with the Scope of Work or any other agreement and scope of work between the parties,

1.5 Enhancements - shall mean changes or additions, other than Maintenance Modifications, to Code and related Documentation, including all new releases, that improve functions, add new functions, or significantly improve performance by changes in system design or coding,

(a) Basic Enhancements - shall mean any Enhancement that is not a Major Enhancement.

(b) Major Enhancements - shall mean changes or additions to Code and related Documentation that (1) have a value and utility separate from the use of the Code and Documentation, (2) as a practical matter, may be priced and offered separately from the Code and Documentation, and (3) are not made available to any of Developer's customers without separate charge,

1.6 Error - shall mean any error, problem, or defect resulting from (1) an incorrect functioning of Code, or (2) an incorrect or incomplete statement or diagram in Documentation, if such error, problem or defect renders the Code inoperable, causes the Code to fail to meet the specifications thereof, causes the Documentation to be inaccurate or incomplete in any material respect, causes incorrect results, or causes incorrect functions to occur when any such materials are used,

1.7 Maintenance Modifications - shall mean any modifications or revisions, other than Enhancements, to Code or Documentation that correct Errors, support new releases of the operating systems with which the Code is designed to operate, support new input/output *(I/O)* devices, or provide other incidental updates and corrections,

1.8 Project Schedule - shall mean the project schedule, which is attached to this Agreement and which may be revised from time to time upon submittal by the Developer and approval by the County,

1.9 Scope of Work - shall mean and collectively include (a) Exhibit A2: Consultant's Response including a Detail Scope of Services, (b) the most recent Project Schedule submitted by the Developer and approved by the County, and (c) any change requests approved by the parties in accordance with the provisions of this Agreement; all of which are incorporated into this Agreement by this reference.

1.10 Project Manager - shall mean the person designated by each respective party who shall be primarily responsible for all administrative matters related to this Agreement for that party.

2. SOFTWARE DEVELOPMENT

2.1 Delivery and Acceptance. Developer shall deliver all Deliverables, upon completion, to County's Project Manager for testing and acceptance. For each individual Deliverable or group of linked Deliverables identified by tasks, the County shall determine if the deliverable conforms to the specifications and performance standards set forth in the Scope of Work or has any Errors. The Developer shall use reasonable

effort to correct any such nonconformance and redeliver the Deliverable to the County as soon as feasible. Upon delivery and acceptance of the final individual Deliverable, acceptance testing shall be performed on the System as a whole in order to determine whether the integration of the Deliverables and any necessary equipment meets the specifications for the system set forth in the RFP, scope of work, or proposal accepted by the County, and operates with internal consistency. Upon satisfactory completion of acceptance testing after delivery of the Deliverables in final form, the County shall issue to Developer written notice of acceptance pertaining to such Deliverables. The Deliverables shall be deemed to have been accepted by the County if the County does not notify the Developer within 30 days after delivery of the Deliverables in final form that the Deliverables do not conform to the specifications and performance standards set forth in the Scope of Work or has any Errors.

3. REPORTS

3.1 Task Reporting. Developer agrees to provide to County at least monthly a written report of the progress of the work required under Scope of Work, any anticipated problems (resolved or unresolved), and any indication of delay in fixed or tentative schedules. As these reports may be needed from time to time on a weekly basis, Developer further agrees to provide weekly reports to the County upon request.

3.2 Bug / Issue Reporting. Developer agrees to provide to County at least monthly an electronic export of all bugs and issues generated by the SSARP project in a mutually agreed upon format.

4. OWNERSHIP AND RIGHTS

4.1 Ownership of Work Product by County. All items contributing to and involved in the Deliverables (i.e., the design, source code and all documentation) shall be owned by County and shall be considered a work made for hire by Developer for County. County shall own all United States and international copyrights in the Deliverables, including the intellectual property rights; provided however, the County shall not have any ownership rights to source code of pre-existing works or software that are independently developed by the Developer or others, but the County shall have a perpetual license for use of such pre-existing work as part of the Deliverables. Developer agrees to assign to the County all Deliverables developed under this contract.

As used in this section, software design does not include ideas, processes or functions, including method of operation, that are part of common use, obvious and pre-determined by the environment, or dictated by the idea itself. The County does not have or retain intellectual property rights in non-application specific libraries or routines incorporated in the software design.

4.2 Pre-existing Works. The parties intend to protect the intellectual property rights of the Developer or others in pre-existing works that are integrated with the Deliverables, and to protect the County's intellectual property rights in the Deliverables that may include pre-existing works integrated with the Deliverable. In accordance with that intent, the parties agree to all of the following provisions.

(a) Prior to integration of any pre-existing work in any Deliverable, the Developer shall notify the County in writing of the Developer's intent to use pre-existing works developed by the Developer or others independently of work performed for the County.

(b) The Developer shall obtain for the benefit of the County, the right and license to use, execute, display, perform, and distribute internally or externally, the pre-existing work as an integral part of the Deliverables. The county recognizes that Deliverables may include open source and freeware software, which has its own

license that makes it freely available. (c) The County may convey, license, sell or otherwise transfer its intellectual property rights in the Deliverables, but any such transfer shall not include any rights to pre-existing works integrated with the Deliverable for any commercial purpose except upon prior written approval from or agreement with the Developer or other person or entity that holds intellectual property rights for such pre-existing work. For purposes of this section, a "commercial purpose" does not include the conveyance, license, sale or other type of transfer by the County to another governmental organization or entity for its own use, whether or not such transfer includes consideration of any kind, including money.

(d) The Developer may convey, license, sell or otherwise transfer its intellectual property rights in any pre-existing work that is integrated with the Deliverables, provided such transfer does not interfere or adversely affect the County's right to use the pre-existing work as an integral part of the Deliverables.

4.3 Patent License. In addition, and except as limited by Section 6.2 herein, Developer hereby grants to County, and its successors and assigns, the royaltyfree, nonexclusive right and license under any patents owned by Developer, or with respect to which Developer has a right to grant such rights and licenses, to the extent required by County to exploit the Deliverables and to exercise its full rights in the Deliverables, including (without limitation) the right to make, use and sell products and services based on or incorporating such Deliverables.

4.4 Avoidance of Infringement. In performing services under this Agreement, Developer agrees to avoid designing or developing any items that infringe one or more patents or other intellectual property rights of any third party. If Developer becomes aware of any such possible infringement in the course of performing work under this Agreement, Developer shall immediately notify County in writing.

5. REPRESENTATIONS AND WARRANTIES

Developer makes the following representations and warranties for the benefit of County, as a present and ongoing affirmation of facts in existence at all times when this Agreement is in effect:

5.1 No Conflict. Developer represents and warrants that it has no interest and shall not acquire any interest direct or indirect which would conflict or interfere in any manner or degree with the performance of the work and services under this Agreement.

5.2 Ownership Rights. Developer represents and warrants that (a) except as provided in Section 6 hereof with respect to certain identified preexisting works licensed to County, it has and will have full and sufficient right to assign or grant the rights and/or licenses granted in the Deliverables pursuant to this Agreement, and (b) all Deliverables, including all any preexisting works addressed in Section 6 hereof, do not and will not infringe any patent, copyright, trademark or other intellectual property rights (including trade secrets), privacy or similar rights of any third party, nor has any claim (whether or not embodied in an action, past or present) of such infringement been threatened or asserted, or is such a claim pending, against Developer (or, insofar as Developer is aware, any entity from which Developer has obtained such rights).

5.3 Conformity, Performance and Compliance. Developer represents and warrants (a) that all Deliverables shall be prepared in a workmanlike manner and with professional diligence and skill; (b) that all Deliverables will function on the machines and with operating systems for which they are designed; (c) that all Deliverables will conform to the specifications and functions set forth in the Scope of Work, and to the performance standards set forth in the RFP, if any; and (d) that Developer will perform all work under this Agreement in compliance with applicable law.

5.4 Anti-Virus. Developer represents and warrants that (a) to the best of Developer's knowledge there is no virus, worm or other degenerative computer program in the Developer's computer system used to develop the software and Deliverables under this Agreement; (b) Developer has used its best efforts through its quality assurance procedures to ensure there are no such viruses; (c) none of the Deliverables, nor the System, shall contain any embedded device or code, such as a time bomb, that intentionally or unintentionally obstructs or prevents the County from using the software, Deliverables, or the System, nor will the Developer disable through remote access or otherwise, the County's use of such software, Deliverables or the System.

5.5 Reasonable Efforts. The parties agree to use commercially reasonable effort to perform the tasks assigned and to complete the work specified in the Scope of Work. All services will be rendered in a workmanlike manner by personnel having a level of skill commensurate with their responsibilities.

5.6 Limited Warranty. After acceptance of the Deliverables, Developer warrants for a period of one business cycle (operational or reporting) for each Deliverable, not to exceed one year but not less than 90-days, that the Deliverables, when integrated with the System and operated on the County's computer network, will perform substantially in accordance with the detailed design specifications established for the Deliverables in a Scope of Work. Developer does not warrant that the Deliverables will be error free in all circumstances. In the event of any defect or error covered by such warranty, County agrees to provide Developer with sufficient detail to allow Developer to reproduce the defect or error. If Developer is notified within the warranty period of any defect or error in the Deliverables covered by such warranty, Developer will correct such error or defect at the contract rate. However, Developer is not responsible for any defect or error not reported during the warranty period or for any defect or error in Deliverables that County has altered, misused, or damaged. Developer is not responsible for any defect or error in Deliverables except as delivered for use with internal County SSARP system. Specifically, developer is not responsible for any defect or error in Deliverables used for any non- County use, any commercial purpose, or any use involving conveyance, license, sale or other type of transfer of Deliverables by the County to another governmental organization or entity for its own use, whether or not such transfer includes consideration of any kind, including money. FOLLOWING EXPIRATION OF THE WARRANTY PERIOD, DEVELOPER SHALL HAVE NO LIABILITY FOR THE DELIVERABLES OR ANY SERVICES PROVIDED, INCLUDING ANY LIABILITY FOR NEGLIGENCE; AND, EXCEPT AS PROVIDED IN THIS SECTION, DEVELOPER SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

6. LIABILITY

6.1 Indemnity. Except as otherwise specified or limited in this Agreement, Developer shall indemnify, hold harmless and defend the County and its agents, officers and employees from and against all claims, damages, losses, judgments, liabilities, expenses and other costs, including litigation costs and attorneys' fees, arising out of, resulting from, or in connection with the performance of this Agreement by the Developer or Developer's officers, employees, agents, representatives or subcontractors and resulting in or attributable to personal injury, death, or damage or destruction to tangible or intangible property, including the loss of use. Notwithstanding the foregoing, Developer's obligation to indemnify the County and its agents, officers and employees for any judgment, decree or arbitration award shall extend only to the percentage of negligence or responsibility of the Developer in contributing to such claim, damage, loss and

expense, and only for uses involving internal County SSARP systems

6.2 Infringement of Intellectual Property Rights. If a third party claims that the Deliverables infringe any patent, copyright, or trade secret, Developer will defend County against that claim at Developer's expense and pay all damages that a court finally awards. If such a claim is made or appears possible, Developer may, at its option, secure for County the right to continue to use the Deliverables, modify or replace them so they are non-infringing, or, if neither of the foregoing options is available in Developer's judgment, require County to return the Modifications for a credit equal to charges paid for the design and development of the Modifications. However, Developer shall have no obligation to defend the County, or to pay any such costs, damages, and attorney fees for any claim based upon the combination, operation, or use of Deliverables with any programs or data not supplied by Developer if such infringement would have been avoided by the combination, operation, or use of Deliverables without such particular programs or data. Developer shall have no obligation to defend the County, or to pay any such costs, damages, and attorney fees for any claim based upon the use of Deliverables other than on internal County SSARP systems.

THIS SECTION 6.2 STATES DEVELOPER'S ENTIRE OBLIGATION TO COUNTY WITH RESPECT TO ANY CLAIM OF INFRINGEMENT.

6.3 Breach of Developer Warranties. Developer hereby agrees to indemnify and defend the County against any claims relating to any material breach of Developer warranties under Section 8 of this Agreement, or based on material failure by Developer to perform its maintenance and support obligations under this Agreement, and Developer shall pay all costs, damages, and attorney fees arising from or in connection with any such claim; provided however, Developer's liability related to a single incident shall not exceed the amount of insurance required in Exhibit B of this Agreement.

THIS SECTION 6.3 STATES DEVELOPER'S ENTIRE OBLIGATION TO COUNTY WITH RESPECT TO ANY CLAIM OF FOR BREACH OF DEVELOPER'S WARRANTIES.

6.4 Conditions to Indemnification: The foregoing indemnities are conditioned on (1) prompt written notice of any claim or proceeding subject to indemnity; (2) reasonable cooperation by the indemnified party in the defense and settlement of such claim at the expense of the indemnifying party; and (3) prior written approval by the indemnifying party of any settlement, which approval shall not be unreasonably withheld.

7. DISPUTES AND CLAIMS FOR ADDITIONAL COMPENSATION.

7.1 General Dispute. All disputes, except for claims related to compensation and except as otherwise provided in this Agreement, shall be decided by the County's Project Manager, which decision shall be final and conclusive unless, within fourteen (14) calendar days from the date of receipt of such copy, the Developer mails or otherwise delivers a written appeal to the County Chief Information Officer ("CIO") who shall issue a written decision and mail or otherwise furnish a copy thereof to the Developer. The decision of the CIO shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence.

7.2 Compensation Disputes. The Developer shall not be entitled to the payment of any additional compensation for any act, or failure to act, by the Developer or the County, unless the Developer has given to

the County due written notice of claim. It is the intention of this provision that differences between the parties arising under and by virtue of this Agreement be brought to the attention of the County at the earliest possible time in order that such matters be settled, if possible, or other appropriate action promptly taken.

The written notice of claim shall be submitted to the Project Manager within fourteen (14) calendar days after the happening of the event, thing, occurrence, or other cause, giving rise to the potential claim, and shall set forth the reasons for which the Developer believes additional compensation will or may be due and the nature of the costs involved. Claims filed by the Developer shall be in sufficient detail to enable the County to ascertain the basis and amount of said claims. Failure to submit such information and details to the County will be sufficient cause for denying the claim.

The written notice of claim, and all records and information submitted in support of such claim, shall be submitted under the California False Claims Act (Gov. Code, §§ 12650 -12655), and shall certify under penalty of perjury that the claim for the additional compensation and time, if any, is a true statement of the actual costs incurred and time sought, and is fully documented and supported or capable of being fully documented and supported under the Agreement between the parties. Failure to submit the notarized certificate will be sufficient cause for denying the claim.

8. MISCELLANEOUS

8.1 Waiver. Waiver of any default by either party to this Agreement shall not be deemed to be waiver of any subsequent default. Waiver or breach of any provision of this Agreement shall not be deemed to be a waiver of any other or subsequent breach, and shall not be construed to be a modification of the terms of this Agreement unless this Agreement is modified as provided below.

8.2 Advice of Attorney. Each party warrants and represents that in executing this Agreement, it has received independent legal advice from its attorneys or the opportunity to seek such advice.