

CONSULTING SERVICES AGREEMENT  
BETWEEN THE  
**VENTURA COUNTY TRANSPORTATION COMMISSION**  
**AND**  
**ITERIS, INC.**

**CONTRACT NO.** \_\_\_\_\_

THIS AGREEMENT for consulting services is made by and between the Ventura County Transportation Commission ("VCTC") and Iteris, Inc. ("Consultant") (together sometimes referred to as the "Parties") as of January 10, 2025.

**Section 1. SERVICES.** Subject to the terms and conditions set forth in this Agreement, Consultant shall provide to VCTC the services described in the Scope of Work attached hereto and incorporated herein as Exhibit A, at the time and place and in the manner specified therein. In the event of a conflict in or inconsistency between the terms of this Agreement and Exhibit A, the Agreement shall prevail.

- 1.1 **Term of Services.** The term of this Agreement shall begin on the Effective Date and shall end on April 1, 2029, with two one-year options to extend, and Consultant shall complete the work described in Exhibit A on or before that date, unless the term of the Agreement is otherwise terminated or extended, as provided for in Section 8. The time provided to Consultant to complete the services required by this Agreement shall not affect VCTC's right to terminate the Agreement, as provided for in Section 8.
- 1.2 **Standard of Performance.** Consultant shall perform all work required by this Agreement in accordance with that degree of care, skill and diligence ordinarily exercised by professionals providing similar services in the same or similar locale and under circumstances to that of Consultant under this Agreement.
- 1.3 **Assignment of Personnel.** Consultant shall assign only competent personnel to perform services pursuant to this Agreement. In the event that VCTC, in its sole discretion, at any time during the term of this Agreement, desires the reassignment of any such persons, Consultant shall, immediately upon receiving notice from VCTC of such desire of VCTC, reassign such person or persons.
- 1.4 **Time.** Consultant shall devote such time to the performance of services pursuant to this Agreement as may be reasonably necessary to meet the standard of performance provided in Sections 1.1 and 1.2 above and to satisfy Consultant's obligations hereunder.

**Section 2. COMPENSATION.**

VCTC hereby agrees to pay Consultant a sum not to exceed \$370,910 notwithstanding any contrary indications that may be contained in Consultant's proposal, for services to be performed and reimbursable costs incurred under this Agreement. In the event of a conflict between this Agreement and Consultant's proposal, attached as Exhibit B, regarding the amount of compensation, the Agreement shall prevail. VCTC shall pay Consultant for services rendered pursuant to this Agreement at the time and in the manner set forth herein. The payments specified below shall be the only payments from VCTC to Consultant for services rendered pursuant to this

Agreement. Consultant shall submit all invoices to VCTC in the manner specified herein. Except as specifically authorized by VCTC in writing, Consultant shall not bill VCTC for duplicate services performed by more than one person.

Consultant and VCTC acknowledge and agree that compensation paid by VCTC to Consultant under this Agreement is based upon Consultant's estimated costs of providing the services required hereunder, including salaries and benefits of employees and subcontractors of Consultant. Consequently, the Parties further agree that compensation hereunder is intended to include the costs of contributions to any pensions and/or annuities to which Consultant and its employees, agents, and subcontractors may be eligible. VCTC therefore has no responsibility for such contributions beyond compensation required under this Agreement.

2.1 **Invoices.** Consultant shall submit invoices, not more often than once per month during the term of this Agreement, based on the cost for all services performed and reimbursable costs incurred prior to the invoice date. Invoices shall contain all the following information:

- Serial identifications of progress bills (i.e., Progress Bill No. 1 for the first invoice, etc.);
- The beginning and ending dates of the billing period;
- A task summary containing the original contract amount, the amount of prior billings, the total due this period, the balance available under the Agreement, and the percentage of completion;
- At VCTC's option, for each work item in each task, a copy of the applicable time entries or time sheets shall be submitted showing the name of the person doing the work, the hours spent by each person, a brief description of the work, and each reimbursable expense;
- The total number of hours of work performed under the Agreement by each employee, agent, and subcontractor of Consultant performing services hereunder;
- Consultant shall give separate notice to VCTC when the total number of hours worked by Consultant and any individual employee, agent, or subcontractor of Consultant reaches or exceeds eight hundred (800) hours within a twelve (12)-month period under this Agreement and any other agreement between Consultant and VCTC. Such notice shall include an estimate of the time necessary to complete work described in Exhibit A and the estimate of time necessary to complete work under any other agreement between Consultant and VCTC, if applicable.
- The amount and purpose of actual expenditures for which reimbursement is sought;
- The Consultant's signature.

2.2 **Monthly Payment.** VCTC shall make monthly payments, based on invoices received, for services satisfactorily performed, and for authorized reimbursable costs incurred. VCTC shall have thirty (30) days from the receipt of an invoice that complies with all of the requirements above to pay Consultant. Each invoice shall include all expenses and activities performed during the invoice period for which Consultant expects to receive payment.

2.3 **Reserved.**

- 2.4 **Total Payment.** VCTC shall pay for the services to be rendered by Consultant pursuant to this Agreement. VCTC shall not pay any additional sum for any expense or cost whatsoever incurred by Consultant in rendering services pursuant to this Agreement. VCTC shall make no payment for any extra, further, or additional service pursuant to this Agreement. In no event shall Consultant submit any invoice for an amount in excess of the maximum amount of compensation provided above either for a task or for the entire Agreement, unless the Agreement is modified prior to the submission of such an invoice by a properly executed written change order or amendment.
- 2.5 **Hourly Fees.** Fees for work performed by Consultant on an hourly basis shall not exceed the amounts shown on the compensation schedule attached hereto and incorporated herein as Exhibit C.
- 2.6 **Payment of Taxes.** Consultant is solely responsible for the payment of employment taxes incurred under this Agreement and any similar federal or state taxes. Consultant represents and warrants that Consultant is a resident of the State of California in accordance with California Revenue & Taxation Code Section 18662, as it may be amended, and is exempt from withholding. Consultant accepts sole responsibility for verifying the residency status of any subcontractors and withhold taxes from non-California subcontractors.
- 2.7 **Payment upon Termination.** In the event that VCTC or Consultant terminates this Agreement pursuant to Section 8, VCTC shall compensate the Consultant for all outstanding costs and reimbursable expenses incurred for work satisfactorily completed as of the date of written notice of termination. Consultant shall maintain adequate logs and timesheets to verify costs incurred to that date.
- 2.8 **Authorization to Perform Services.** The Consultant is not authorized to perform any services or incur any costs whatsoever under the terms of this Agreement until receipt of authorization from the Contract Administrator.
- 2.9 **False Claims Act.** Presenting a false or fraudulent claim for payment, including a change order, is a violation of the California False Claims Act and may result in treble damages and a fine of five thousand (\$5,000) to ten thousand dollars (\$10,000) per violation.

**Section 3. FACILITIES AND EQUIPMENT.** Except as set forth herein, Consultant shall, at its sole cost and expense, provide all facilities and equipment that may be necessary to perform the services required by this Agreement. VCTC shall make available to Consultant only the facilities and equipment listed in this section, and only under the terms and conditions set forth herein.

VCTC shall furnish physical facilities such as desks, filing cabinets, and conference space, as may be reasonably necessary for Consultant's use while consulting with VCTC employees and reviewing records and the information in possession of VCTC. The location, quantity, and time of furnishing those facilities shall be in the sole discretion of VCTC. In no event shall VCTC be obligated to furnish any facility that may involve incurring any direct expense, including but not

limited to computer, long-distance telephone or other communication charges, vehicles, and reproduction facilities.

**Section 4. INSURANCE REQUIREMENTS.** Before beginning any work under this Agreement, Consultant, at its own cost and expense, unless otherwise specified below, shall procure the types and amounts of insurance listed below against claims for injuries to persons or damages to property that may arise from or in connection with the performance of the work hereunder by the Consultant and its agents, representatives, employees, and subcontractors. Consistent with the following provisions, Consultant shall provide proof satisfactory to VCTC of such insurance that meets the requirements of this section and under forms of insurance satisfactory in all respects, and that such insurance is in effect prior to beginning work to VCTC. Consultant shall maintain the insurance policies required by this section throughout the term of this Agreement. The cost of such insurance shall be included in the Consultant's bid. Consultant shall not allow any subcontractor to commence work on any subcontract until Consultant has obtained all insurance required herein for the subcontractor(s). Consultant shall maintain all required insurance listed herein for the duration of this Agreement.

**4.1 Workers' Compensation.** Consultant shall, at its sole cost and expense, maintain Statutory Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed by Consultant limits of not less than **\$1,000,000** per accident. In the alternative, Consultant may rely on a self-insurance program to meet those requirements, but only if the program of self-insurance complies fully with the provisions of the California Labor Code. Determination of whether a self-insurance program meets the standards of the Labor Code shall be solely in the discretion of the Contract Administrator, as defined in Section 10.9. The insurer, if insurance is provided, or the Consultant, if a program of self-insurance is provided, shall waive all rights of subrogation against VCTC and its officers, officials, employees, and volunteers for loss arising from work performed under this Agreement.

**4.2 Commercial General and Automobile Liability Insurance.**

**4.2.1 General requirements.** Consultant, at its own cost and expense, shall maintain commercial general, automobile, and professional liability insurance for the term of this Agreement for risks associated with the work contemplated by this Agreement. No endorsement shall be attached limiting the coverage.

**4.2.2 Minimum scope of coverage.**

- a. 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 professional and advertising injury with limits no less than \$2,000,000 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.

- b. Automobile Liability: 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.

**4.2.3 Additional Requirements.** Each of the following shall be included in the insurance coverage or added as a certified endorsement to the policy:

- a. The insurance shall cover on an occurrence or an accident basis and not on a claims-made basis.
- b. Any failure of Consultant to comply with reporting provisions of the policy shall not affect coverage provided to VCTC and its officers, employees, agents, and volunteers.

**4.3 Professional Liability Insurance.**

**4.3.1 General requirements.** Consultant, at its own cost and expense, shall maintain for the period covered by this Agreement professional liability insurance for professionals performing work pursuant to this Agreement in an amount not less than **\$2,000,000** covering the licensed professionals' errors and omissions. Any deductible or self-insured retention shall not exceed one hundred fifty thousand dollars (\$150,000) per claim.

**4.3.2 Claims-made limitations.** The following provisions shall apply if the professional liability coverage is written on a claims-made form:

- a. The retroactive date of the policy must be shown and must be before the date of the Agreement.
- b. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the Agreement or the work, so long as commercially available at reasonable rates.
- c. If coverage is canceled or not renewed and it is not replaced with another claims- made policy form with a retroactive date that precedes the date of this Agreement, Consultant shall purchase an extended period coverage for a minimum of five (5) years after completion of work under this Agreement or the work. VCTC shall have the right to exercise, at the Consultant's sole cost and expense, any extended reporting provisions of the policy, if the

Consultant cancels or does not renew the coverage.

- d. A copy of the claim reporting requirements must be submitted to VCTC for review prior to the commencement of any work under this Agreement.

#### **4.4 Cyber Risk and Privacy Insurance.**

- 4.4.1 Cyber Liability Insurance**, with limits not less than **\$2,000,000** per occurrence or claim, **\$2,000,000** aggregate. Coverage shall be sufficiently broad to respond to the duties and obligations as is undertaken by Vendor in this agreement and shall include, but not be limited to, claims involving security breach, system failure, data recovery, business interruption, cyber extortion, social engineering, infringement of intellectual property, including but not limited to infringement of copyright, trademark, trade dress, invasion of privacy violations, information theft, damage to or destruction of electronic information, release of private information, and alteration of electronic information. The policy shall provide coverage for breach response costs, regulatory fines and penalties as well as credit monitoring expenses.

#### **4.5 All Policies Requirements.**

- 4.5.1 Acceptability of insurers.** All insurance required by this section is to be placed with insurers with a Bests' rating of no less than A:VII.
- 4.5.2 Verification of coverage.** Prior to beginning any work under this Agreement, Consultant shall furnish VCTC with complete copies of all policies delivered to Consultant by the insurer, including complete copies of all endorsements attached to those policies. All copies of policies and endorsements shall show the signature of a person authorized by that insurer to bind coverage on its behalf. If VCTC does not receive the required insurance documents prior to the Consultant beginning work, this shall not waive the Consultant's obligation to provide them. VCTC reserves the right to require complete copies of all required insurance policies at any time.
- 4.5.3 Notice of Reduction in or Cancellation of Coverage.** An endorsement shall be attached to all insurance obtained pursuant to this Agreement stating that coverage shall not be suspended, voided, canceled by either party, or reduced in coverage or in limits, except after thirty (30) days' prior written notice by US mail, return receipt requested, has been given to VCTC. In the event that any coverage required by this section is reduced, limited, cancelled, or materially affected in any other manner, Consultant shall provide written notice to VCTC at Consultant's earliest possible opportunity and in no case later than ten (10) working days after Consultant is notified of the change in coverage.

**4.5.4 Additional insured; primary insurance.** VCTC and its officers, employees, agents, and volunteers, and Southern California Association of Governments (SCAG), its officials, employees, and volunteers, shall be covered as additional insureds as to Consultant's Commercial General and Automobile Liability Insurance with respect to each of the following: liability arising out of activities performed by or on behalf of Consultant, including that under VCTC's general supervision of Consultant; products and completed operations of Consultant, as applicable; premises owned, occupied, or used by Consultant; and automobiles owned, leased, or used by the Consultant in the course of providing services pursuant to this Agreement. The coverage shall contain no special limitations on the scope of protection afforded to VCTC or its officers, employees, agents, or volunteers.

An endorsement must be attached to all policies stating that coverage is primary insurance with respect to VCTC and its officers, officials, employees and volunteers, and SCAG and its officers, officials, employees and volunteers, and that no insurance or self-insurance maintained by VCTC shall be called upon to contribute to a loss under the coverage.

**4.5.5 Deductibles and Self-Insured Retentions.** Consultant shall disclose to and obtain the approval of VCTC for the self-insured retentions and deductibles before beginning any of the services or work called for by any term of this Agreement. Further, if the Consultant's insurance policy includes a self-insured retention that must be paid by a named insured as a precondition of the insurer's liability, or which has the effect of providing that payments of the self-insured retention by others, including additional insureds or insurers do not serve to satisfy the self-insured retention, such provisions must be modified by special endorsement so as to not apply to the additional insured coverage required by this Agreement so as to not prevent any of the parties to this Agreement from satisfying or paying the self-insured retention required to be paid as a precondition to the insurer's liability. Additionally, the certificates of insurance must note whether the policy does or does not include any self-insured retention and also must disclose the deductible.

During the period covered by this Agreement, only upon the prior express written authorization of Contract Administrator, Consultant may increase such deductibles or self-insured retentions with respect to VCTC, its officers, employees, agents, and volunteers. The Contract Administrator may condition approval of an increase in deductible or self-insured retention levels with a requirement that Consultant procure a bond, guaranteeing payment of losses and related investigations, claim administration, and defense expenses that is satisfactory in all respects to each of them.

**4.5.6 Subcontractors.** Consultant shall include all subcontractors as insureds under its policies or shall furnish separate certificates and certified endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

**4.5.7 Wasting Policy.** No insurance policy required by Section 4 shall include a “wasting” policy limit, with the exception of Consultant’s Professional Liability Insurance Policy.

**4.5.8 Variation.** VCTC may approve a variation in the foregoing insurance requirements, upon a determination that the coverage, scope, limits, and forms of such insurance are either not commercially available, or that VCTC’s interests are otherwise fully protected.

**4.6 Remedies.** In addition to any other remedies VCTC may have if Consultant fails to provide or maintain any insurance policies or policy endorsements to the extent and within the time herein required, VCTC may, at its sole option exercise any of the following remedies, which are alternatives to other remedies VCTC may have and are not the exclusive remedy for Consultant’s breach:

- a. Obtain such insurance and deduct and retain the amount of the premiums for such insurance from any sums due under the Agreement;
- b. Order Consultant to stop work under this Agreement or withhold any payment that becomes due to Consultant hereunder, or both stop work and withhold any payment, until Consultant demonstrates compliance with the requirements hereof; and/or
- c. Terminate this Agreement.

## **Section 5. INDEMNIFICATION AND CONSULTANT’S RESPONSIBILITIES.**

Consultant shall, to the fullest extent allowed by law, with respect to all Services performed in connection with this Agreement, indemnify, defend with counsel reasonably selected by VCTC, and hold harmless VCTC and its respective officials, officers, and employees from and against any and all losses, liability, claims, suits, actions, damages, and causes of action arising out of any personal injury, bodily injury, loss of life, or damage to property, or any violation of any federal, state, or municipal law or ordinance (“Claims”), arising, in whole or in part, out of Consultant’s performance pursuant to this Agreement, including claims arising out of the willful misconduct or negligent acts or omissions of Consultant or its employees, subcontractors, or agents. The foregoing obligation of Consultant shall not apply to the extent the injury, loss of life, damage to property, or violation of law is or was caused by the negligence or willful misconduct of VCTC or its officers, employees, agents, or volunteers.

**5.1 Insurance Not in Place of Indemnity.** Acceptance by VCTC of insurance certificates and endorsements required under this Agreement does not relieve Consultant from liability under this indemnification and hold harmless clause. This indemnification and hold harmless clause shall apply to any damages or

claims for damages whether or not such insurance policies shall have been determined to apply. By execution of this Agreement, Consultant acknowledges and agrees to the provisions of this Section and that it is a material element of consideration.

- 5.2 **PERS Liability.** In the event that Consultant or any employee, agent, or subcontractor of Consultant providing services under this Agreement is determined by a court of competent jurisdiction or the California Public Employees Retirement System (PERS) to be eligible for enrollment in PERS as an employee of VCTC, Consultant shall indemnify, defend, and hold harmless VCTC for the payment of any employee and/or employer contributions for PERS benefits on behalf of Consultant or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of VCTC.
- 5.3 **Third Party Claims.** With respect to third party claims against the Consultant, the Consultant waives any and all rights of any type of express or implied indemnity against the Indemnitees.

## **Section 6. STATUS OF CONSULTANT.**

- 6.1 **Independent Contractor.** At all times during the term of this Agreement, Consultant shall be an independent contractor and shall not be an employee of VCTC. VCTC shall have the right to control Consultant only insofar as the results of Consultant's services rendered pursuant to this Agreement and assignment of personnel pursuant to Subparagraph 1.3; however, otherwise VCTC shall not have the right to control the means by which Consultant accomplishes services rendered pursuant to this Agreement. Notwithstanding any other VCTC, state, or federal policy, rule, regulation, law, or ordinance to the contrary, Consultant and any of its employees, agents, and subcontractors providing services under this Agreement shall not qualify for or become entitled to, and hereby agrees to waive any and all claims to, any compensation, benefit, or any incident of employment by VCTC, including but not limited to eligibility to enroll in the California Public Employees Retirement System (PERS) as an employee of VCTC and entitlement to any contribution to be paid by VCTC for employer contributions and/or employee contributions for PERS benefits.
- 6.2 **Consultant Not an Agent.** Except as VCTC may specify in writing, Consultant shall have no authority, express or implied, to act on behalf of VCTC in any capacity whatsoever as an agent to bind VCTC to any obligation whatsoever.

## **Section 7. LEGAL REQUIREMENTS.**

- 7.1 **Governing Law.** The laws of the State of California shall govern this Agreement.
- 7.2 **Compliance with Applicable Laws.** Consultant and any subcontractors shall comply with all federal, state and local laws and regulations applicable to the performance of the work hereunder. Consultant's failure to comply with such law(s) or regulation(s) shall constitute a breach of contract.

- 7.3 Other Governmental Regulations.** To the extent that this Agreement may be funded by fiscal assistance from another governmental entity, Consultant and any subcontractors shall comply with all applicable rules, contractual obligations, and regulations to which VCTC is bound by the terms of such fiscal assistance program.
- 7.4 Licenses and Permits.** Consultant represents and warrants to VCTC that Consultant and its employees, agents, and any subcontractors have all licenses, permits, qualifications, and approvals, including from VCTC, of whatsoever nature that are legally required to practice their respective professions. Consultant represents and warrants to VCTC that Consultant and its employees, agents, any subcontractors shall, at their sole cost and expense, keep in effect at all times during the term of this Agreement any licenses, permits, and approvals that are legally required to practice their respective professions. In addition to the foregoing, Consultant and any subcontractors shall obtain and maintain during the term of this Agreement valid Business Licenses from VCTC.
- 7.5 Nondiscrimination and Equal Opportunity.** Consultant shall not discriminate, on the basis of a person's race, religion, color, national origin, age, physical or mental handicap or disability, medical condition, marital status, sex, gender expression, sexual orientation or any other protected class under local, state, or federal law, against any employee, applicant for employment, subcontractor, bidder for a subcontract, or participant in, recipient of, or applicant for any services or programs provided by Consultant under this Agreement. Consultant shall comply with all applicable federal, state, and local laws, policies, rules, and requirements related to equal opportunity and nondiscrimination in employment, contracting, and the provision of any services that are the subject of this Agreement, including but not limited to the satisfaction of any positive obligations required of Consultant thereby.

Consultant shall include the provisions of this Subsection in any subcontract approved by the Contract Administrator or this Agreement.

- 7.6 Contractor's Residency and Tax Withholding** Consultant declares that Consultant is a resident of the State of California in accordance with the California Franchise Tax Board form 590 ("Form 590"). Unless provided with valid, written evidence of an exemption or waiver from withholding, VCTC may withhold California taxes from payments to Consultant as required by law. Consultant shall obtain, and maintain on file for three (3) years after the termination of the Agreement, Form 590s from all subcontractors. Consultant accepts sole responsibility for withholding taxes from any non-California resident subcontractor and shall submit written documentation of compliance with Consultant's withholding duty to VCTC.

## **Section 8. TERMINATION AND MODIFICATION.**

- 8.1 Termination.** VCTC may cancel this Agreement at any time and without cause upon written notification to Consultant.

Consultant may cancel this Agreement for cause upon thirty (30) days' written notice to VCTC and shall include in such notice the reasons for cancellation.

In the event of termination without cause, Consultant shall be entitled to compensation for services satisfactorily performed up to the effective date of notice of termination; VCTC, however, may condition payment of such compensation upon Consultant delivering to VCTC all materials described in Section 9.1.

- 8.2 Extension.** VCTC may, in its sole and exclusive discretion, extend the end date of this Agreement beyond that provided for in Subsection 1.1. Any such extension shall require Consultant to execute a written amendment to this Agreement, as provided for herein. Consultant understands and agrees that, if VCTC grants such an extension, VCTC shall have no obligation to provide Consultant with compensation beyond the maximum amount provided for in this Agreement. Similarly, unless authorized by the Contract Administrator, VCTC shall have no obligation to reimburse Consultant for any otherwise reimbursable expenses incurred during the extension period.
- 8.3 Amendments.** The Parties may amend this Agreement only by a writing signed by all the Parties.
- 8.4 Assignment and Subcontracting.** VCTC and Consultant recognize and agree that this Agreement contemplates personal performance by Consultant and is based upon a determination of Consultant's unique personal competence, experience, and specialized personal knowledge. Moreover, a substantial inducement to VCTC for entering into this Agreement was and is the professional reputation and competence of Consultant. Consultant may not assign this Agreement or any interest therein without the prior written approval of the Contract Administrator. Consultant shall not assign or subcontract any portion of the performance contemplated and provided for herein, other than to the subcontractors noted in the proposal, without prior written approval of the Contract Administrator.
- 8.5 Survival.** All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating liability between VCTC and Consultant shall survive the termination of this Agreement.
- 8.6 Options upon Breach by Consultant.** If Consultant materially breaches any of the terms of this Agreement, VCTC's remedies shall include, but not be limited to, the following:
- 8.6.1 Immediately terminate the Agreement;
  - 8.6.2 Retain the plans, specifications, drawings, reports, design documents, and any other work product prepared by Consultant pursuant to this Agreement;
  - 8.6.3 Retain a different consultant to complete the work described in Exhibit A

not finished by Consultant; or

- 8.6.4 Charge Consultant the difference between the cost to complete the work described in Exhibit A that is unfinished at the time of breach and the amount that VCTC would have paid Consultant pursuant to Section 2 if Consultant had completed the work.

## **Section 9. KEEPING AND STATUS OF RECORDS.**

- 9.1 Records Created as Part of Consultant's Performance.** All reports, data, maps, models, charts, studies, surveys, photographs, memoranda, plans, studies, specifications, records, files, or any other documents or materials, in electronic or any other form, that Consultant prepares or obtains pursuant to this Agreement and that relate to the matters covered hereunder ("Work Product") shall be the property of VCTC. Consultant hereby agrees to deliver those documents to VCTC upon termination of the Agreement. It is understood and agreed that the Work Product prepared specifically for VCTC is not necessarily suitable for any future or other use. VCTC and Consultant agree that, until final approval by VCTC, all such Work Product is confidential and will not be released to third parties without prior written consent of both Parties except as required by law. However, notwithstanding the foregoing, and any provision to the contrary herein, intellectual property owned or created by any third party other than Consultant, its subconsultants, or VCTC ("Third-Party Content"), and inventions, improvements, discoveries, methodologies, models, formats, software, algorithms, processes, procedures, designs, specifications, findings, and other intellectual properties developed, gathered, compiled or produced by Consultant or its subconsultants prior to or independently of their performance of this Agreement ("Background IP"), including such Third-Party Content or Background IP that Consultant or its subconsultants may employ in its performance of this Agreement, or may incorporate into any part of the Work Product, shall not be the property of VCTC. Consultant, or its subconsultants as applicable, shall retain all rights, titles, and interests, including but not limited to all ownership and intellectual property rights, in all such Background IP.

Consultant, and its subconsultants as applicable, grant VCTC an irrevocable, non-exclusive, non-transferable, royalty-free license in perpetuity to use, reproduce, prepare derivative works based upon, distribute, disclose, derive from, perform, and display, such Background IP, but only as an inseparable part of, and only for the purpose intended by creation of, the Work Product. In the event the Work Product contains, or incorporates, any Third-Party Content, or derivative work based on such Third-Party Content, or any compilation that includes such Third-Party Content, Consultant shall secure all licenses to any such Third-Party Content, but only as an inseparable part of the Work Product, where such licenses are necessary for VCTC to utilize and enjoy Consultant's services and the Work Product for their intended purposes."



- 9.2 Consultant's Books and Records.** Consultant shall maintain any and all ledgers, books of account, invoices, vouchers, canceled checks, and other records or documents evidencing or relating to charges for services or expenditures and disbursements charged to VCTC under this Agreement for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to the Consultant to this Agreement.
- 9.3 Inspection and Audit of Records.** Any records or documents that Section 9.2 of this Agreement requires Consultant to maintain shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of VCTC. Under California Government Code Section 8546.7, if the amount of public funds expended under this Agreement exceeds ten thousand (\$10,000.00), the Agreement shall be subject to the examination and audit of the State Auditor, at the request of VCTC or as part of any audit of VCTC, for a period of three (3) years after final payment under the Agreement.
- 9.4 Records Subject to CPRA.** All responses to a Request for Proposals (RFP), invitation to bid issued by VCTC, or submitted to VCTC as part of the performance of this Agreement become the exclusive property of VCTC. At such time as VCTC selects a bid or proposal, all proposals received become a matter of public record, and shall be regarded as public records. Records that are submitted to VCTC that are plainly marked as "Confidential," "Business Secret" or "Trade Secret" may be withheld from disclosure. VCTC shall not be liable or in any way responsible for the disclosure of any such records, proposals or portions thereof, if Consultant has not plainly marked it as a "Trade Secret" or "Business Secret," or if disclosure is required under the Public Records Act.

Although the California Public Records Act recognizes that certain confidential trade secret information may be protected from disclosure, VCTC may not be in a position to establish that the information that a prospective bidder or Consultant submits is a trade secret. If a request is made for information marked "Trade Secret" or "Business Secret," and the requester takes legal action seeking release of the materials it believes does not constitute trade secret information, by submitting a proposal, Consultant agrees to indemnify, defend and hold harmless VCTC, its agents and employees, from any judgment, fines, penalties, and award of attorney's fees awarded against VCTC in favor of the party requesting the information, and any and all costs connected with that defense. This obligation to indemnify survives VCTC's award of the Agreement. Consultant agrees that this indemnification survives as long as the trade secret information is in VCTC's possession, which includes a minimum retention period for such documents.

## **Section 10 MISCELLANEOUS PROVISIONS.**

- 10.1 Attorneys' Fees.** If a Party to this Agreement brings any action, including arbitration or an action for declaratory relief, to enforce or interpret the provision of this Agreement, the prevailing Party shall be entitled to reasonable attorneys' fees in addition to any other relief to which that Party may be entitled. The court

may set such fees in the same action or in a separate action brought for that purpose.

- 10.2 **Venue.** In the event that either Party brings any action against the other under this Agreement, the Parties agree that trial of such action shall be vested exclusively in the state courts of California in the County of Ventura or in the United States District Court for the Central District of California.
- 10.3 **Severability.** If a court of competent jurisdiction finds or rules that any provision of this Agreement is invalid, void, or unenforceable, the provisions of this Agreement not so adjudged shall remain in full force and effect. The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.
- 10.4 **No Implied Waiver of Breach.** The waiver of any breach of a specific provision of this Agreement does not constitute a waiver of any other breach of that term or any other term of this Agreement.
- 10.5 **Successors and Assigns.** The provisions of this Agreement shall inure to the benefit of and shall apply to and bind the successors and assigns of the Parties.
- 10.6 **Use of Recycled Products.** Consultant shall prepare and submit all reports, written studies and other printed material on recycled paper to the extent it is available at equal or less cost than virgin paper.
- 10.7 **Conflict of Interest.** Consultant may serve other clients, but none whose activities within the corporate limits of VCTC or whose business, regardless of location, would place Consultant in a “conflict of interest,” as that term is defined in the Political Reform Act, codified at California Government Code Section 81000, *et seq.* Consultant shall not employ any VCTC official in the work performed pursuant to this Agreement. No officer or employee of VCTC shall have any financial interest in this Agreement that would violate California Government Code Sections 1090, *et seq.*

Consultant hereby warrants that it is not now, nor has it been in the previous twelve (12) months, an employee, agent, appointee, or official of VCTC. If Consultant was an employee, agent, appointee, or official of VCTC in the previous twelve (12) months, Consultant warrants that it did not participate in any manner in the forming of this Agreement. Consultant understands that, if this Agreement is made in violation of Government Code §1090, *et seq.*, the entire Agreement is void and Consultant will not be entitled to any compensation for services performed pursuant to this Agreement, including reimbursement of expenses, and Consultant will be required to reimburse VCTC for any sums paid to the Consultant. Consultant understands that, in addition to the foregoing, it may be subject to criminal prosecution for a violation of Government Code § 1090 and, if applicable, will be disqualified from holding public office in the State of California.

- 10.8 Solicitation.** Consultant agrees not to solicit business at any meeting, focus group, or interview related to this Agreement, either orally or through any written materials.
- 10.9 Contract Administration.** This Agreement shall be administered by VCTC Executive Director Martin Erickson ("Contract Administrator"). All correspondence shall be directed to or through the Contract Administrator or his or her designee.
- 10.10 Notices.** All notices and other communications which are required or may be given under this Agreement shall be in writing and shall be deemed to have been duly given (i) when received if personally delivered; (ii) when received if transmitted by telecopy, if received during normal business hours on a business day (or if not, the next business day after delivery) provided that such facsimile is legible and that at the time such facsimile is sent the sending Party receives written confirmation of receipt; (iii) if sent for next day delivery to a domestic address by recognized overnight delivery service (e.g., Federal Express); and (iv) upon receipt, if sent by certified or registered mail, return receipt requested. In each case notice shall be sent to the respective Parties as follows:

Consultant  
Steven Bradley, PE / Iteris Legal Department  
Regional Vice President / VP Legal  
1700 Carnegie Avenue, Suite 100  
Santa Ana, CA 92705

VCTC  
Martin Erickson, Executive Director  
Ventura County Transportation Commission  
751 E. Daily Drive, Suite 420  
Camarillo, CA 93010

- 10.11 Integration.** This Agreement, including the scope of work attached hereto and incorporated herein as Exhibits A, B, and C represents the entire and integrated agreement between VCTC and Consultant and supersedes all prior negotiations, representations, or agreements, either written or oral pertaining to the matters herein. In the event of a conflict between this Agreement and any of the Exhibits. This Agreement shall control. In the event of a conflict between Exhibit A and the subsequent Exhibits, Exhibit A shall control.

**10.12**

Exhibit A – Scope of Services  
Exhibit B – Consultant's Proposal  
Exhibit C – Cost Proposal

- 10.13 Counterparts.** This Agreement may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one agreement.

- 10.14 Construction.** The headings in this Agreement are for the purpose of reference only and shall not limit or otherwise affect any of the terms of this Agreement. The parties have had an equal opportunity to participate in the drafting of this Agreement; therefore any construction as against the drafting party shall not apply to this Agreement.
- 10.15 No Third Party Beneficiaries.** This Agreement is made solely for the benefit of the Parties hereto with no intent to benefit any non-signatory third parties.

The Parties have executed this Agreement as of the Effective Date.

VCTC

CONSULTANT

\_\_\_\_\_  
Martin R. Erickson, Executive Director

\_\_\_\_\_

Approved as to Form:

\_\_\_\_\_  
Steve Mattas, General Counsel

## **EXHIBIT A SCOPE OF WORK**

### **Task 1: Data Collection**

Consultant shall review and evaluate the existing model, including all inputs, sub-model outputs, network files and model parameters. The Consultant shall coordinate with VCTC partner agencies to collect land use, demographic and transportation project data. Consultant shall gather and update model with data from a variety of sources, including the American Community Survey, travel surveys, and transportation big-data products provided by VCTC.

Consultant shall contact SCAG to gather all available data for the VCTM update and ensure reasonable consistency with the current SCAG regional model. Maintaining consistency with the SCAG regional model is a key consideration.

It should be noted that previous updates to the VCTM were assisted by SCAG's Sub-Regional Model Development Tool (SMDT), which SCAG no longer supports.

#### ***Deliverables by March, 2025***

- *Data needs requirements*
- *Collated datasets for model development*

### **Task 2: Land Use Assumptions**

The VCTM utilizes a pre-processing model (LUtoSED\_Conversion.xlsxm) to allow input of land use-based scenarios, as opposed to the original SCAG model which relies solely on socio-economic inputs. Land use assumptions are provided to SCAG by local jurisdictions and may be available for use to update the VCTM. Consultant in consultation with VCTC shall validate the land use assumptions with local jurisdictions where necessary. The Consultant may propose additional updates or modifications to the land use pre-processing model and land use data structure.

#### ***Deliverables by May 2025***

- *Updated land use to socio-economic data conversion preprocessing excel model.*

### **Task 3: Model Variables, Parameters & Modules**

Model variables including but not limited to trip generation rates, splitting factors, and special generators have not been reviewed since the previous update. Consultant shall review and analyze these model variables in consultation with VCTC.

Consultant shall review and update parameters as needed to bring fixed model assumptions up to date, such as opportunity cost of travel delay, fuel cost, telework assumptions, etc. Model parameters will be updated in consultation with SCAG to ensure consistency with the regional model program.

The Consultant shall update the transit module, including updating the transit network files with new route information. The transit module will be calibrated using transit surveys, passenger trip data and origin-destination survey data collected from Ventura County transit agencies.

VCTM must be able to reasonably estimate commercial truck trip generation, distribution and network impacts. The Consultant shall leverage VCTC big data resources and other sources of data to update the VCTM commercial trucking module.

#### ***Deliverables by May 2025***

- *An updated model with model variables, modules, and parameters validated to Ventura County travel patterns.*

#### **Task 4: 2024 Base Year Model**

Consultant shall update and validate the model base year to 2024, including AM peak, PM Peak and off-peak capabilities. The 2024 base year model network shall be developed in consultation with VCTC staff, SCAG staff and VCTC's Transportation Technical Advisory Committee (TTAC). Consultant's validation shall utilize observed count data from recent city/county count program, digital count data such as Caltrans Performance Measurement System (PeMS) or other acceptable sources. Model validation must meet all state and Federal guidelines, conform to industry best practices and is expected to largely reflect the current model validation and calibration methodology.

VCTC will also provide the Consultant access to data from SCAG's regional Streetlight license and VCTC's ClearGuide license to supplement development and validation data. Access to big data sources provides the opportunity to validate the model in extra dimensions, such as speeds, trip distribution, non-motorized travel, etc. Consultant shall meet and confer with SCAG to ensure consistency with the regional model.

#### ***Deliverables by September 2025***

- *A calibrated and validated base year traffic model.*
- *Updated Model Validation documentation, included in the Model Development and Validation Report.*

#### **Task 5: 2050 Forecast Year Model**

Consultant shall develop a 2050 Forecast Model, including AM peak, PM Peak and off-peak capabilities, with up to three growth scenarios. The variations in the 2050 growth scenarios are intended to give VCTC the option to test alternate land use patterns and project scenarios.

Consultant shall update the future scenario network, incorporating the most recent list of RTP/FTIP projects programmed in Ventura County. The Consultant shall work with local jurisdictions to develop a 2050 land use scenario consistent with adopted city and County general plans. The forecast model shall incorporate the most recent demographic and socio-economic projections from SCAG. The Consultant shall consult SCAG and the technical literature to make defensible parameter assumptions for the future model scenario.

#### ***Deliverables by September 2025***

- *A 2050 forecast model incorporating up to three land-use growth scenarios*

### **Task 6: Post-Processing Models**

Consultant shall review all VCTM post-processing models and automated output macro embedded spreadsheets. Consultant shall update the post-processing models where necessary and make suggestions to VCTC for improvements. The Consultant may propose alternative modules for data post-processing or modifications to better serve stakeholder needs.

Outputs from the VCTM post-processing models are the most common stakeholder data request. A key consideration for the project is providing accessibly data and metrics in an interpretable format which supports VCTC partner agency workflows.

#### ***Deliverables by November 2025***

- *Updated spreadsheets and macros from previous model, with updated capabilities as necessary*
- *Newly developed dashboard for model results*

### **Task 7: Installation**

Consultant shall install and configure the base year and forecast year model on the VCTC model server. Consultant shall run the updated model on VCTC's server to test performance, verify functionality of all post-processing models, and ensure the update runs error free.

#### ***Deliverables by March 2026***

- *Software and model installed on one or two machines at VCTC offices depending on software package selected.*
- *A complete model run will be compared on VCTC machines and on Iteris machines to ensure reliability of forecasts.*

### **Task 8: Stakeholder Engagement & Meetings**

The Consultant in consultation with VCTC shall develop a plan to inform stakeholders about the project, gather stakeholder comments, and collect data from local jurisdictions.

The Consultant shall conduct meetings as needed with VCTC staff and at a minimum, two (2) with SCAG staff, four (4) with VCTC's Transportation Technical Advisory Committee (TTAC), and one (1) meeting with VCTC Board to present final product and findings.

#### ***Deliverables (schedule TBD)***

- *Project agendas, materials, and meeting minutes for each of the proposed meetings*

### **Task 9: Update Documentation**

The Consultant shall provide full model documentation including but not limited to, a description of model structure, TAZs, inputs, variables, trip generation rates, validation methodology and



results. Consultant will provide two hard bound copies of all documentation, as well as one electronic copy.

The consultant shall prepare user manuals specific to the VCTM and in addition to standard software application documentation. Consultant will provide two hard bound copies of all documentation as well as one electronic copy.

#### ***Deliverables by December 2025***

- *A Draft Model Development and Validation Report in electronic format*
- *A Draft User's Guide in electronic format*
- *A Final Model Development and Validation Report in electronic format, along with 2 hard-bound copies*
- *A Final User's Guide in electronic format, along with 2 hard-bound copies*

#### **Task 10: Training**

The Consultant shall provide forty (40) hours of staff training for two (2) VCTC staff members to ensure familiarity with the model operation to test at minimum:

- Changes in network
- Changes in land use
- Perform select link/zone analysis
- Changes in transit operations
- Impacts of active transportation projects

#### ***Deliverables by March 2026***

- *A hands-on training course held for VCTC staff.*
- *A power-point presentation as well as an instruction manual will be developed prior to the course and included in the model documentation.*

#### **Task 11: Ongoing Model Support**

The Consultant shall provide ongoing model support to VCTC throughout the award term, a three (3) year period with two (2) one-year options, for a period of up to five (5) years. Model support includes maintaining VCTM on the VCTC model server, resolving model errors, training VCTC Staff, remote troubleshooting, performing ad hoc project scenario runs, and special projects as directed by VCTC staff. An estimated ten (10) of hours per month may be used for estimating purposes.

#### ***Deliverables:***

- *Deliverables will be determined on an as-needed basis, depending on requested support tasks*

**EXHIBIT B  
CONSULTANT'S PROPOSAL**

Electronic Copy



**iteris**<sup>®</sup>

In association with:



Moving smarter, together.



**Iteris' Proposal Response for:**  
Ventura County Transportation  
Model Update

Ventura County Transportation Commission

Submitted to:

November 1, 2024



11477-206.25

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213.488.0345  
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801 South Grand Avenue, Suite 750  
Los Angeles, CA 90017

01

## Cover Letter

November 1<sup>st</sup>, 2024

Andrew Kent  
Program Manager – Transportation Data & Services  
751 E. Daily Dr., Suite 420  
Camarillo, CA 93010

**Re: Proposal for Ventura County Transportation Model Update**

11477-206.25

Dear Mr. Kent:

**Iteris, Inc.** (Iteris) submits this proposal to the Ventura County Transportation Commission (VCTC) to provide consulting services for a comprehensive update of VCTM, the County's Travel Demand Model.

For more than 25 years, Iteris staff have completed major transportation and mobility studies throughout Ventura County. These included a wide variety of countywide and corridor projects led by VCTC, such as the US 101 Corridor HOV PAED and Communities Connected Comprehensive Multimodal Corridor Plan, Congestion Management Program, CEQA Adaptive Mitigation Program, Freight Study, as well as multiple local General Plan updates, travel demand models and Impact Fee programs for your local agencies.

VCTM is the undeniable and definitive technical tool that supports and links most, if not all the above mobility planning and design, land use, and environmental projects. For the past decade, Iteris has had the privilege to also serve as the On-call team for VCTC for all the VCTM development, update, and support efforts. [We do not take this trusted professional relationship, which has been developed over many years, for granted.](#)

It is again our strong desire to continue serving VCTC's travel demand forecasting needs with our expert, dependable, and long-tenured staff, who most intimately know every aspect of the VCTM and its features. However, we also recognize and understand that there is a need to incorporate fresh ideas, state-of-the-art techniques, new tools, and innovation into the overall model development process. Therefore, we have partnered with **Cambridge Systematics (CS)**, one of our national peers in the development of comprehensive travel demand models. CS has a long and extensive history in southern California with regional, countywide, subregional, and special application model development projects. As outlined in our scope, we propose a significant partnership and work-sharing with CS to provide the most innovative and value-added services through the creative collaboration of our two firms. We also propose a highly cooperative approach with the VCTC staff and all county stakeholders encouraging active communication to provide a genuinely practical and state-of-the-art product at the end of the process.

The Iteris senior leadership team of **Jennifer Emerson-Martin** and **Viggen Davidian**, with a long-proven history of serving Ventura County and VCTC, will manage and guide the model update process as Project Manager and Principal-in-Charge, respectively.

As we have in the past, Iteris pledges to work as a **True Partner** with VCTC, providing the following distinct advantages:

- **Unparalleled knowledge of VCTM, its strengths, constraints, and application needs**
- **Depth and availability of staff as enhanced by the combined forces of two modeling firms**
- **Creativity, innovation, and state-of-the-art model enhancements through collaboration and industry leadership**
- **Proven corporate stability, longevity, and dependability of service to VCTC**
- **In-depth knowledge and understanding of mobility needs and challenges in Ventura County**

As Regional Vice President, I Steven Bradley, am authorized to bind the company. Additionally, I attest that all information contained within this proposal is true and correct. This proposal is submitted subject to the successful negotiation of a mutually agreeable contract between Iteris and the VCTC. This proposal shall remain valid for a period of no less than 120 days from the date of submittal. Thank you for the opportunity to submit this proposal. Should you have any questions, please contact me at **(949) 270-9647** or [sdb@iteris.com](mailto:sdb@iteris.com), or the designated Project Manager Jennifer Emerson-Martin, at (509) 309-8581 or [jmartin@iteris.com](mailto:jmartin@iteris.com).

Sincerely,  
**Iteris, Inc.**



Steven Bradley, PE  
Regional Vice President, Mobility Professional Services

Contact Person:

Steven Bradley, PE  
Regional Vice President  
Santa Ana, CA 92705  
(949) 270-9647  
[sdb@iteris.com](mailto:sdb@iteris.com)



# 02

## Executive Summary

This executive summary provides VCTC with a summary of the **qualifications** of our team, along with the **benefits** of selecting our team, as requested in the RFP. In addition, we have also included a brief summary of the project’s goals and our proposed approach. This information is discussed and detailed throughout the various sections of this proposal but is also summarized here to provide highlights of our **goals** and **approach** for your consideration.

This proposal was developed with six primary goals in mind, which are summarized in the inset figure. Key activities for each goal will be discussed in more detail in our Project Understanding section. These goals define the primary purpose and need for the project. The project team, made up of both Iteris and Cambridge Systematics (CS) was put together specifically to support all project goals, and to provide VCTC with a team of industry experts.

Our team has an exceptional history of travel demand modeling within Ventura County and an extensive recent history in developing focused subregional models within southern California and nationally, as will be detailed in this proposal. Both Iteris and CS have a strong desire to work with VCTC in completing this model update. The **QUALIFICATIONS** of the Iteris Team are extensive, including Iteris’ development of the previous three VCTM models and extensive and widespread SB743 VMT analysis throughout Southern California. In addition to Iteris’ long-history, CS has developed the current Orange County Traffic Analysis Model (OCTAM), the San Bernardino Transportation Analysis Model Plus (SBTAM+), and the Imperial County Travel Model (ICTM), all of which were developed using the SCAG Regional RTP/SCS Travel Demand model without using the Subregional Model Development Tool (SMDT), which is no longer available for this model update. In summary, our combined team has unparalleled experience developing countywide models in southern California. Iteris and CS have a long and successful history of working together across all counties in southern California not only on travel demand modeling projects, but also on regional and subregional multimodal corridor plans and infrastructure planning and development efforts. Our joint senior leadership team of Jennifer Emerson-Martin, Viggen Davidian, and Sean McAtee have a combined over 80 years of experience in project development and management specific to major travel demand modeling efforts.

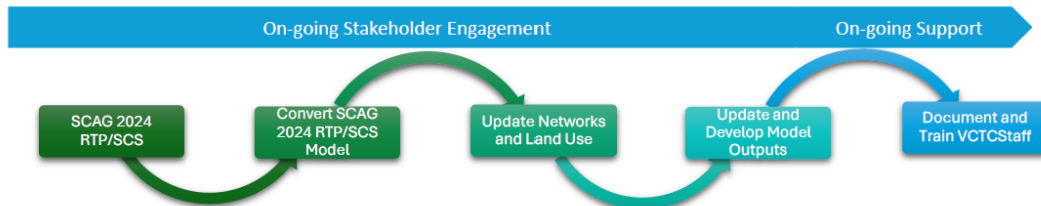
While the qualifications of our team illustrate our long history and dedication to travel demand modeling in Ventura County as well as across the region, the **BENEFITS** of selecting the Iteris Team are equally important. Not only do we maintain a long history of supporting VCTC, but we also maintain a deep understanding of future model application needs. Our team can literally hit the ground running with no learning curves on technology, process or content. Not only can we update the model to meet industry standards, but we also know what improvements the model needs to meet future planning activities, and emerging trends, focusing on the immediate next 5 years. We understand that the model needs to be used to analyze both the capacity and development projects in the support of VMT analysis. We appreciate that the model needs to be usable for county-wide Transportation Planning efforts in the most practical way, including the future update to CTP. We also know the model needs to be able to be usable for the analysis of potential new transportation funding sources, including a county-wide gas tax. Another major benefit of our proposal is the extensive depth and availability of staff for this assignment as enhanced by the combined forces of our two major firms with modeling expertise to ensure timely and accurate response to all project needs. Finally, our combined team will provide creativity, innovation and state-of-the-art model enhancements through collaboration and technical industry knowledge of our senior leadership team.

- Update Base Year and Future Year
- Improve Ease of Use
- Engage Stakeholders
- SB743 VMT Analysis
- Support Countywide Transportation Planning
- On-going Model Support

The **PROJECT APPROACH** for the Iteris Team is to provide VCTC with a practical and usable tool, utilizing staff which are immediately available to work with VCTC on this project. There are three key components to the project approach which the Iteris Team feels will provide the most benefit to VCTC:

- ❖ **Begin the process with the SCAG 2024 RTP/SCS model to update the converted model with networks using the current VCTM validated dataset, while remaining a trip-based model**
- ❖ **Update the current software version (TransCAD 6) to a more recent version**
- ❖ **Develop two separate forecast year 2050 model scenarios (one fiscally constrained year and one fully built-out planned scenario)**

These key project components will be completed using a streamlined approach through five technical steps, all of which will be supported fully by coordination with VCTC and stakeholders, as discussed in the scope of work. The technical steps are illustrated in the following figure and discussed further in our project approach.



Overall, the two biggest benefits that Iteris provides are a long history of developing and supporting the model in Ventura County, along with the recent extensive model development work completed by CS across Southern California. **The end product of this project will be a user-friendly trip-based travel demand model that supports upcoming and future planning efforts in Ventura County.**



# 03

## Understanding of Scope of Work/Approach

The current VCTM has been an effective working tool for many years and was most recently updated in 2020 to a base year of 2016. As it is now 2024, that base year must be updated to be more current. Additionally, the forecast year of the current model is 2045, and was developed over a decade ago. Most recent socioeconomic data forecasts show a reduction in the anticipated growth in Ventura County necessitating review and revisions to the long-range forecasts. The current model has been used to support multiple county-wide projects, including US-101 HOV PA/ED, US-101 Communities Connected Plan, a Goods Movement Study as well as the multiple local general plans and land use development projects which have used the VCTM to complete SB743 VMT analysis.

This proposal was developed with a focus on the following six major goals, as illustrated in Figure 1.

Figure 1 – Project Goals

Update Base Year and Future Year	<ul style="list-style-type: none"> <li>Update the base year from 2016 to 2019, and update the forecast year from 2040 to 2050</li> <li>Validate the base year using updated count and other available information</li> <li>Create a fiscally constrained and planned (buildout) forecast year</li> </ul>
Improve Ease of Use	<ul style="list-style-type: none"> <li>Decrease model runtime</li> <li>Decrease model size for ease of transfer</li> <li>Develop model dashboard analysis</li> </ul>
Engage Stakeholders	<ul style="list-style-type: none"> <li>Engage stakeholders while developing solutions</li> <li>Present technical improvements to TTAC for input</li> </ul>
SB743 VMT Analysis	<ul style="list-style-type: none"> <li>Update current SB743 VMT procedures for county-wide analysis</li> <li>Develop off-the-shelf user-friendly SB743 VMT analysis</li> </ul>
Support Countywide Transportation Planning	<ul style="list-style-type: none"> <li>Update the forecast year model to be consistent with the current CTP</li> <li>Ensure the developed model can be used for upcoming policy development</li> </ul>
On-going Model Support	<ul style="list-style-type: none"> <li>Continue current on-going model support for VCTC</li> <li>Provide as-needed training during and after the development of the model</li> </ul>

### Project Understanding

Ventura County has a long history and track record in the development and application of travel demand forecasting models. The original VCTM was developed in 1992 utilizing the Tranplan software and was updated for land-use inputs and networks in 1997. VCTM was updated by Iteris in 2009 as part of a more comprehensive update effort of the original model and had the distinction of being one of the first county-wide models developed in TransCAD software in southern California. It also included, for the first time, a mode choice component as one of its main enhancements over the original model. Most recently, Iteris updated the base year VCTM model year to 2016 to be consistent with the regional forecasts in 2020.





Travel across the entire region (and county) has gone through noticeable changes in the past four years primarily due to the COVID-19 pandemic as well as economic and land use development changes. These changes affected the travel choices, patterns of workers, and the population in general, both throughout the day and the peak hour commuting periods. Additionally, Ventura County has seen a reduction in the anticipated growth, presenting a need to revise future year travel forecasts. With changes in the regional growth and transportation conditions; updates to the Southern California Association of Governments (SCAG), and the Regional Transportation Plan (RTP) model; as well as advancements in the travel demand modeling technology and application of big data sources, the time has come for another comprehensive update of the VCTM.

The countywide model update must be consistent with the local and regional land use projection and the transportation network of the forecast year. There are several other important reasons why the model needs to be updated, including the following:

- **Land Use to Socioeconomic Data Conversion:** The current VCTM is, and the updated VCTM from this effort, will be built on the SCAG regional RTP/SCS travel demand model, which generates trips based on the socioeconomic data. The cities within Ventura County all maintain a land-use based general plan, meaning that the land use forecasts will need to be converted to socioeconomic data for use in the model. The previous effort completed by Iteris developed a land use to socioeconomic conversion tool, which was updated multiple times throughout the years based on the better availability of data, and understanding of the tool's outputs. While this tool was useful for years, this project will present an opportunity to update the tool to a more user-friendly application for use in the updating model.
- **New Infrastructure or Roadway Upgrades:** Any introduction of new roads, transit systems, or the closure of existing infrastructures can influence the travel modes as well as routes. The model update will ensure that the current and future transportation infrastructure is represented in the model accurately.
- **Active Transportation:** Active transportation, both for recreation and primary mode of travel, is important for a significant portion of the population of Ventura County. The current VCTM has a built-in estimating algorithm for non-motorized passengers based on a calculated mixed-use density factor. The current update will build upon that activity, and refine the analysis based on the available data.
- **CEQA Analysis:** The current model processor for CEQA analysis (which includes VMT by speed bin as well as total VMT, VHT, and VHD by geography by time of day) needs to be reviewed for consistency, and ease of use of the data for stakeholders based on experience preparing environmental analysis. Additionally, an SB743 VMT analysis tool was developed which generates VMT by jurisdiction and TAZ, and the data from this tool was used for the ArcGIS Online webmap as illustrated on VCTC's website.
- **Transit-Oriented Development:** Due to the restriction on available developable land within Ventura County, development of denser and transportation-friendly areas is planned. This includes transit-oriented developments (TODs) around major bus and rail transit stations, as well as mixed-use developments in urban downtowns. The updated VCTM will include the ability to capture travel from these areas.
- **Special Generators:** There are many special generators within Ventura County, including Port Hueneme, the naval base, and other recreational and commercial areas. The current VCTM attempts to capture these generators within the land use calculators, and this model update will review additional methods for capturing the unique travel characteristics of major special generators.
- **Big Data:** Multiple big data sources are available to VCTC for this model update and should be leveraged to improve the understanding of current post-COVID-19 travel in the County. Data sources including the ClearGuide® and StreetLight applications will be used to provide the link level counts (to supplement the count database), and large area origin-destination patterns (to refine the inter-regional travel patterns). Both data sources will greatly refine the travel forecasts in the region.
- **Technological Advancements:** The rise of ridesharing, electric vehicles, and telecommuting changes how people travel. This update will capture those changes and incorporate them into the model to ensure that the model is relevant, accurate, and useful for planning and decision-making.
- **Model Output Reporting:** Travel models produce extensive outputs that are not always user-friendly and that can be difficult to interpret and use. To address this concern in the current VCTM, Iteris developed a series of scripts that process and export outputs in formats that facilitate the efficient use of model results. These scripts generate files using the forecast model volumes and turning movement volumes. Scripts also provide automated mapping of number of lanes, functional classification, volumes, and volume-to-capacity ratios. These outputs are notably useful in practice and will be updated based on the feedback from VCTC and the TTAC, to continue to meet VCTC's needs.

Following the development of the fully updated model, the Iteris Team understands this is an opportunity to provide hands-on training for VCTC staff and continue providing on-going model support to VCTC in future years. The on-going model support Iteris provided to VCTC until June of this year (2024), was a great opportunity to maintain the VCTM and update the VCTM as needed, most recently during the development of the Countywide Transportation Plan. In the most recent on-call support effort, Iteris maintained the VCTM on the VCTC model server, making transfer of files straight forward and efficient when providing troubleshooting and support for required project scenario model runs.

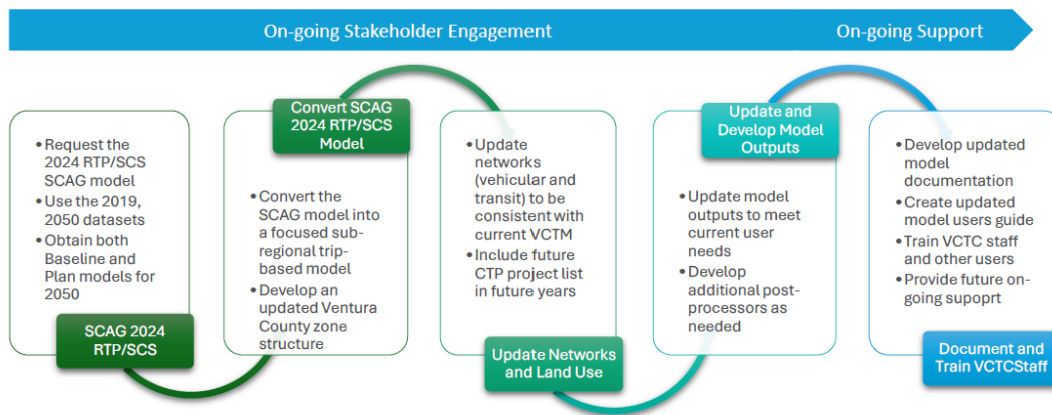
### Project Approach

The Iteris Team’s work plan is built around a solid understanding of the requirements needed to develop a focused travel demand model for Ventura County. Having first-hand knowledge of the current model, and with team members who have first-hand similar experience converting the current SCAG model to San Bernardino’s current model, the Iteris Team is able to immediately assist the VCTC in understanding the required enhancements to model applications to meet the current planning needs of VCTC. The greatest components to the project approach that the Iteris Team is proposing include:

- ❖ **Begin the process with the SCAG 2024 RTP/SCS model and update the converted model with networks using the current VCTM validated dataset**
- ❖ **Develop two separate forecast year 2050 model scenarios (one fiscally constrained year and one fully built-out planned scenario)**
- ❖ **Pending agreement from VCTC, update the current software version (TransCAD 6) to a more recent version of the TransCAD software (e.g., TransCAD 9 or 10)**

The project approach for this update can be summarized into five conceptual steps, as illustrated in **Figure 2**. These steps will be supported by coordination with VCTC and stakeholders, as discussed in the scope of work.

Figure 2 – Technical Approach Steps



Since Ventura County is located within the six-county SCAG region, the VCTM is required to be consistent with the current regional practices. The VCTM will be developed with a calibrated and validated 2019 base year and a pair of 2050 forecast year scenarios, including both a fiscally constrained and fully planned 2050 scenario. In addition to building the base year, interim year, and future year models, the team will leverage experience of developing enhanced model outputs including automated arterial volume, and intersection turning movement data and plots as well as a post-processing capability.

Iteris keenly recognizes the importance of face time and keeping open dialog between the technical team and VCTC staff and stakeholders. Keeping an open dialog will help ensure a good understanding of stakeholder requirements and needs and their feedback will assist the Iteris Team in developing a more user-friendly product and less of a “black-box” feeling that can sometimes be associated with travel demand models.

Furthermore, we will identify and mitigate potential risks through proactive monitoring, regular assessments, and open communication with the staff. Throughout the model update process, we will hold regular meetings to evaluate progress and address any risks/challenges immediately. In addition, Iteris will create contingency plans for risks/challenges identified during assessments. For instance, having a secondary source of data in lieu of primary source will help avoid project delays. By adopting this proactive and systematic approach, Iteris will deliver a high-quality travel demand model that meets the needs of Ventura County.

It is anticipated that the proposed scope of work can be completed within a 12-to-14-month schedule following notice to proceed.

### Scope of Work

The following sections describe our general approach to providing VCTC with high-quality and relevant travel demand model development and modeling support services. In a few locations, we have added additional tasks which we believe will add value to the project.

### Task 1: Data Collection

The Iteris Team will review and evaluate the existing VCTM, including all inputs, subarea-model outputs, network files and model parameters. As the developers of the current model, we are keenly familiar with all necessary model inputs and outputs, and we appreciate and understand the technical requirements and amount of time necessary to update them. Throughout the data collection procedure, Iteris will prioritize collaboration with local stakeholders and agencies to ensure that all the relevant data is considered.

A data collection needs assessment and discussion of data availability will be part of the initial stakeholder outreach and meetings as part of Task 8. Prior to stakeholder outreach the team will identify countywide data from VCTC or other publicly available data sources such as PeMS and other CALTRANS traffic counts that could be used in model development and model calibration/validation. The data review will include the availability of census data, traffic count data, travel surveys, and transportation big data, as well as SCAG socio-economic forecasts. SCAG’s recent demographic workshop in September 2024 confirmed the ongoing trend of reduced and sometimes even negative population growth in parts of the SCAG region and in Ventura County and Los Angeles County in particular. Obtaining the latest socioeconomic forecast will be key to understanding future growth and traffic patterns.

The team will coordinate with VCTC partner agencies to determine available data including land use and traffic count data. Review of available bus transit and other public transportation ridership data (including Metrolink and Pacific Surfliner) will be reviewed as well as other potential data sources. Ensuring consistency with the SCAG regional model is discussed in more detail in Task 3. Meanwhile, using the most current SCAG model structure, future highway and transit networks, based on the Regional Transportation Plan project (list) as well as the latest SED forecasts initially will help ensuring the consistency with SCAG throughout the full model stream.

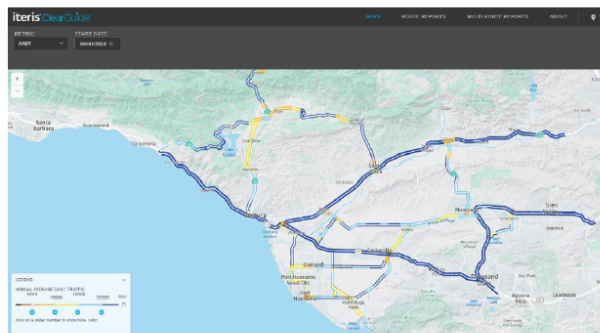
It should be noted that we intend to use the Iteris ClearGuide application, which VCTC maintains a current subscription to, to obtain AADT volumes across the region. This was an important portion of ClearGuide which was recently added to accommodate this project. The inset figure illustrates the AADT application within ClearGuide for Ventura County.

**Assumptions:**

- VCTC, SCAG and local jurisdictions will provide data as needed at no cost

**Deliverables:**

- Data needs requirement (list of data sources)
- Collated datasets for model development



## Task 2: Land Use Assumptions

The assumptions for land-use forecasting in the current VCTM were made before the COVID pandemic and recent population projections for the SCAG region, likely overstating growth. These assumptions will be revised for both the base year (2020) and the forecast year (2050). The current VCTM uses a pre-processor spreadsheet to convert land use into socioeconomic data, and local jurisdictions in Ventura County have provided this data for the 2020 and 2024 RTP/SCS updates.

Iteris will update the land-use pre-processor using the files from SCAG. While obtaining this data was challenging in 2017, it is anticipated that this effort will be more streamlined in this update, as some jurisdictions previously misunderstood the purpose and urgency of the request. Iteris will send a clear request to jurisdictions, including VCTC, along with detailed background information and the updated purpose of the request with a defined deadline.

The Iteris Team will analyze land use data for special trip generators and compare the data to previous assumptions. The team will also compare land use data by jurisdiction to the land use assumptions provided for the previous VCTC model update. An example from the last update was the Rincon Oil Field north of the City of Ventura, misclassified as standard industrial use. Iteris will make sure the land use assumptions are validated by the jurisdictions should there be any significant changes from the existing dataset.

As part of this update, Iteris plans to keep the land use allocation tool in Excel, allowing for continued flexibility of input modifications and a transparent process that leads to a high level of confidence in the results. During this update, there may be opportunities to further streamline the connection between the land use allocation spreadsheet and the travel model system as implemented in TransCAD. The figure below shows a screenshot of the current land use allocation tool. The inset figure is a screenshot of the current spreadsheet tool, which will serve as the starting point for this task.

### Assumptions:

- Land use data by Traffic Analysis Zone will be available from local jurisdictions.

### Deliverables:

- Updated land use to socioeconomic data conversion preprocessing excel model

## Task 3: Model Variables, Parameters & Modules

As mentioned in the project approach, the Iteris Team proposes to update the VCTM by adapting the most recent SCAG model. Iteris team member CS, has experience adapting the SCAG model for subregional use, having created subregional models for several jurisdictions within the SCAG region. This approach removes the need for the discontinued subregional model development tool (SMDT), while also producing a more flexible and robust model system and continuing to result in a **trip-based** model, which is familiar to VCTC.

The TransCAD version is proposed to be updated to a more recent TransCAD version, which will be more user friendly and can improve model run times

Our proposed approach also ensures that the **model variables and parameters** start with the most recently calibrated values from the regional model. The Iteris Team will evaluate and adapt these parameters during the update process, adjusting them as needed to improve model calibration and validation for trips to, from, and within Ventura County. The list of variables and parameters is extensive, and will include at a minimum, trip generation rates, cost of travel, fuel cost, and telework.



The Iteris Team’s proposed approach will provide VCTC with the benefit of the latest SCAG datasets and procedures, without relying on the discontinued subregional model development tool. Through applications elsewhere in the region, we have also developed an approach that significantly reduces run times and streamlines model input files. The updated VCTC model will run in hours rather than days.

In addition to updating model parameters, VCTC will benefit from incorporation of the most current modules as implemented and updated by SCAG, along with updates and customization to best represent Ventura County. Highlights include:

- An updated **mode choice model** that accounts for transit and non-motorized travel. Development of this model will begin with a review of the transit network in Ventura County, ensuring that transit service is accurately represented in the model. We also recommend replacing the regional SCAG mode choice model with a revised implementation developed by team member CS. This improved mode choice model program runs more quickly than the regional model, can be better tailored to model transit use patterns in Ventura County, and features automatic calibration tools. The resulting mode choice model will be validated to several data sources, including transit ridership data, on-board survey data, and origin-destination data.
- A **trip distribution** step that utilizes a destination-choice model. Destination-choice models are an extension of the previously used gravity model approach and can better capture effects of changing transportation networks and land use patterns over time. They account for transit when determining where people travel and consider variables such as household income in the trip distribution step.
- A **freight module** to assess commercial vehicle activity. Recent studies in Ventura County illustrated a need for understanding and estimating commercial truck trip generation, distribution, and capacity impacts. Iteris Team member CS recently assisted SCAG in updating the regional freight model and can use this experience to adapt the latest regional freight model for Ventura County. It is important to note that the recent VCTC Freight Mobility Study found significant underestimation of heavy vehicles on SR-118 which has implication for overall freight flow analysis in the County as well as assessment of roadways such as Santa Clara Avenue, Rose Avenue, and Vineyard Avenue.
- The ability to run **select link/zone analysis** that can be viewed interactively through the model’s built-in dashboard.
- Evaluation of **active transportation** projects through two mechanisms. First, the model will include non-motorized travel in the updated mode choice model. In addition, the model will support planning techniques such as mapping of short trip density, which can be useful in prioritizing active transportation projects.

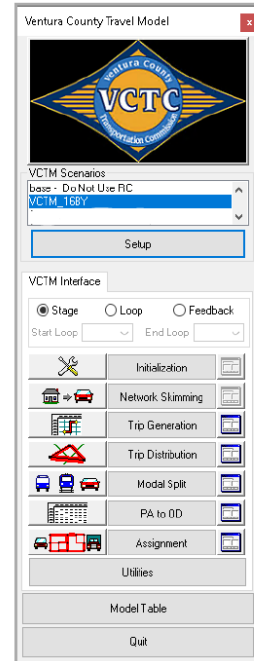
In addition to updating model parameters, the model user interface and associated resource files (scripts) will be updated. The inset figure illustrates the current VCTM user interface, which can be tailored to meet the needs of current model users, based on feedback from VCTC and project stakeholders.

**Assumptions:**

- It is assumed that the recently collected passenger trip data, transit survey summary, and origin-destination survey data collected from Ventura County transit agencies will be available to the project team prior to beginning this task.
- SCAG will provide VCTC with access to the most recently adopted SCS/RTP model, as they have recently done for other member agencies.

**Deliverables:**

- An updated model with model variables, modules, and parameters validated to Ventura County travel patterns.



**Task 4: 2020 (2019) Base Year Model**

The base year of the current VCTM is 2016, and the base year model for the updated VCTM will be 2019 rather than 2020 to ensure consistency with the regional SCAG model. We understand that the task title is 2020 base year and we are proposing a

base year of 2019. The purpose for the regional 2019 base year has to do with the pre-pandemic conditions availability of data. It is the current regional practice to use a base year of 2019 in place of 2020. The primary reason for the recommendation and use of 2019 as a base year is directly related to the data for validation, in which counts and speeds and trip distribution data would be inaccurate in 2020, and 2019 represents the most recent existing pre-pandemic conditions.

The AM peak period, PM peak period, and off-peak capabilities of the existing model will be maintained, and the model development will be performed in coordination with VCTC staff, SCAG staff, and VCTC’s Transportation Technical Advisory Committee (TTAC).

To ensure the model network accurately reflects existing conditions, Iteris will conduct a comprehensive review of the current transportation network, including roadways, transit routes, and bike/pedestrian facilities. After a thorough review, we will make necessary adjustments to the model network to incorporate these findings, ensuring that it reflects current conditions and accurately represents the operational characteristics of the transportation system.

The base VCTM year will be calibrated to the model variables in Task 3, and validation will be completed utilizing the most recently observed count data. Count sources are anticipated to include local jurisdiction databases, County count program, Caltrans PeMS, and the VCTC ClearGuide application, which was recently updated to include traffic counts to be used for this model update effort. Additionally, data from VCTC’s SCAG Streetlight license could be used to assess broad origin-destination travel patterns to, from, and within the county.

All validation activities will be completed in accordance with all regional, national, state, VCTC, and FHWA validation guidelines and requirements. Nationally promulgated standards, primarily the *FHWA Travel Model Improvement Program (TMIP) Model Validation and Reasonableness Checking Manual*, will be used to verify model reasonable performance on validation criteria. The Second Edition of the Reasonableness Checking Manual was developed in 2010 by CS under contract to FHWA and serves as the leading guidance on travel model validation throughout the nation.

**Assumptions:**

- Count data will be provided where available by VCTC and local jurisdictions
- VCTC will provide the Iteris Team with access to their ClearGuide and Streetlight datasets.

**Deliverables:**

- A calibrated and validated base year traffic model.
- Updated Model Validation documentation, included in the Model Development and Validation Report

**Task 5: 2050 Forecast Year Model**

The forecast year 2050 VCTM model will be based on the calibrated model variables from the updated 2020 base year model from Task 4. The AM peak, PM peak, and off-peak capabilities of the existing model will be maintained. The network definitions for the forecast year will be developed based on coordination with VCTC staff, including any capacity adjustments required to regional freeways or local arterials, with the starting point being the recently completed County-wide Transportation Plan project list.

The 2050 network will be based on either the SCAG 2050 baseline or plan network pending discussion with VCTC staff on the most appropriate assumptions outside of Ventura County. A baseline 2050 land-use forecast will be incorporated into the most currently available SCAG demographic forecasts. Up to two alternative land use scenarios will be developed in coordination with VCTC, the TTAC and local jurisdictions.

The forecast year models will be documented in the Model Development and Validation Report.

As an **OPTIONAL** task as a part of Task 5, we would encourage VCTC to discuss the development of an interim year model. The interim year for the SCAG region is 2035 and could assist VCTC in prioritizing an implementation plan for CTP projects within the immediate 10 years.

**Assumptions:**

- SCAG 2050 demographic forecasts will provide the baseline forecast land-use growth scenario
- Regional projects outside of Ventura County will be obtained directly from the SCAG RTP/SCS forecast year model

**Deliverables:**

- 2050 Forecast models incorporating up to three land-use growth scenarios.
- OPTIONAL 2035 Interim Year Scenario

**Task 6: Post-Processing Models**

Throughout the development of the current VCTM, Iteris worked hand-in-hand with VCTC on determining what automated output spreadsheets and plots would be useful for local planning efforts. To date, the following were developed:

- Automated plotting for:
  - Time period (all five time periods) Volume/Capacity plots including volumes for each City, District, and TIMF District, as well as the entire County
  - Network plots, including number of lanes, functional classification, and posted speed for each City, District, and TIMF District, as well as the entire County
- Automated spreadsheet analysis for:
  - Zone-Based VMT for air quality analysis for each time of the five periods, for each City, District, and TIMF District as well as the entire County
  - Zone-Based VMT for SB743 analysis for daily trips for each City, the unincorporated County, and the entire County
  - Mode Split
  - Auto Occupancy
  - Turn Movement ICU analysis for defined intersections

The previously developed spreadsheets and plotting capabilities will be updated in the model update, and additional functionality will be developed based on engagement with current model stakeholders and users.

In addition to improving existing capabilities, Iteris Team member CS will provide VCTC with a new dashboard functionality built into the VCTM. This dashboard provides interactive access to maps, charts, and tables associated with each model run. Capabilities include visual comparisons between different model scenarios, interactive viewing results of a select link and node analysis results, and creation of volume bandwidth maps. The figure below illustrates example outputs for dashboard reports that we anticipate developing for VCTM.



**Assumptions:**

- One of the meetings with the TTAC will discuss functionality of model outputs, and a decision will be made on dashboard capabilities based on agreed-upon level of effort with VCTC





**Deliverables:**

- Project agendas, materials, and meeting minutes for each of the proposed meetings

**Task 9: Update Documentation**

Iteris and CS will work together throughout the project to develop documentation of the updated VCTM. The documentation will begin with a **Model Development and Validation Report** that documents all aspects of the modeling process, including a description of the model structure and methodology, assumptions, development steps, network and zonal inputs, model variables, and model calibration and validation methodology and results.

A **User’s Guide** will also be developed and will be targeted to the hands-on modeler and model developers, the text and language used within the report will be understandable to both novice and experienced modelers alike.

Draft reports (one for each document) will be circulated to VCTC for review, and one set of consolidated comments will be incorporated into the Final Documentation. An electronic version of the report will be developed and delivered, along with two hard bound copies of each document.

Both team members have developed model documentation and user’s guides for many regional, subregional and local models, including the current VCTM, SBTAM+, OCTAM, ITAM, City of Simi Valley, City of Camarillo, City of Santa Barbara, and others. We have developed clear outlines for these documents with illustrations that explain the step-by-step modeling process. The model documentation clearly states all steps taken in developing the model and is used for both technical and non-technical audiences.



**Assumptions:**

- It is assumed that the feel and style of the current model documentation reports is acceptable to VCTC and will provide the starting point for this effort.

**Deliverables:**

- A Draft Model Development and Validation Report in electronic format
- A Draft User’s Guide in electronic format
- A Final Model Development and Validation Report in electronic format, along with 2 hard-bound copies
- A Final User’s Guide in electronic format, along with 2 hard-bound copies

**Task 10: Training**

The Iteris Team members have extensive experience in providing modeling training courses which explain the modeling process and the benefits of using a model (such as internal consistency between different model runs), as well as model limitations. The knowledge of both model benefits and model limitations combined with experience and professional judgement are crucial to the interpretation of the model results.

The training course that Iteris will develop for VCTC will be specifically tailored to provide VCTC staff with extensive familiarity with the model tool, and the understanding of how the model pieces fit together, and the sensitivities of the model. Our proposal includes **40 hours** of training.

At a minimum, the course will include training of the following “How To” activities:

- **Roadway and Transit Networks:** A detailed hands-on activity of modifying roadway and transit networks. Roadway networks will include instruction on how to split links, modify geometries, and edit attributes of the links and node

layers. Modifying transit networks will be inclusive of editing transit routes, stops, and transit route operations (e.g. headways and fees).

- **Land Use Input Tool:** A detailed explanation and hands-on experience in modifying land use inputs for various project types using the updated land use to SED tool.
- **Mode Choice:** In depth instruction on use of the mode choice tool and its inputs, allowing VCTC staff to use this tool with confidence when evaluating transit and non-motorized projects.
- **Performance Evaluation Tools:** Instruction related to performance evaluation tools and descriptions of how and when to apply model outputs to project evaluations. Training on evaluation tools will include, at a minimum, select link/zone analysis, screenline analysis, and intersection turning movement reporting. Training will cover use of the new model dashboard that will provide standardized mapping of model outputs.

**Assumptions:**

- It is assumed that formal meeting courses will be recorded, and can be shared on the VCTC website (or desired location) as instruction videos

**Deliverables:**

- A hands-on training course held for VCTC staff.
- A power-point presentation as well as an instruction manual will be developed prior to the course and included in the model documentation.

### Task 11: Ongoing Model Support

Iteris has supported on-call modeling support for VCTC throughout the past two model updates. As a part of this proposal, Iteris would support a 3-year period, with two 1-year additional periods, which would total on-call modeling support for up to 5 (five) years.

On-call support is estimated at an average of 10 hours per month, acknowledging that in some months there may be no required time, and some months may require more than 10 hours of support. On-call support will include the following potential activities, as requested by VCTC:

- Network updates
- Land use input updates
- Model runs
- Updates to model documentation
- Development of straight-forward and standardized model performance measure reporting
- Training and support to VCTC staff on model setup, model use, model outputs and understanding, as well as TransCAD use
- Training of new staff in the event of personnel changes
- Maintaining the model server

Prior to these efforts occurring, Iteris will confirm the anticipated level of effort with VCTC.

**Assumptions:**

- It is assumed that the key on-call modeling staff will have access to the VCTC model machine through LogMeIn or other screen sharing software

**Deliverables:**

- Deliverables will be determined on an as-needed basis, depending on requested support tasks

# 04

## Schedule

Iteris proposes a 12-to-14-month schedule for this project's completion, which can begin immediately upon receipt of NTP from VCTC. The detailed schedule illustrated in **Figure 3** includes monthly status meetings, document deliverables, and major project milestones. The detailed schedule also accounts for continued discussions with SCAG and VCTC throughout the development of the model, ensuring consistency with regional modeling practices.

Based upon previous work, we believe the effort to obtain existing and future land uses from local jurisdictions will be significant. This schedule takes that into account and allows for nearly three (3) months to obtain and process that data within the land use to socioeconomic spreadsheet tool (from Task 2).

A more detailed project schedule in MS-Project software is provided in **Appendix B**. MS-Project will be used as a project management tool to help ensure that the project is meeting schedule goals.

Figure 3 – Schedule

2025 VCTC MODEL UPDATE	2025												2026		
TASK NAME	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR
Task 0 - Project Management	[Blue bar]														
Monthly Project Meetings	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Task 8 - Stakeholder Engagement and Meetings							↔			↔			↔		
VCTC TAC Meeting 1	↔			↔											
Kick off Meeting	↔														
SCAG Meetings	↔			↔											
Task 1 - Data Collection	[Blue bar]														
Task 2 - Land Use Assumptions	[Blue bar]														
Task 3 - Model Variable, Parameters and Modules	[Blue bar]														
Task 4 - 2020 Base Year Model	[Blue bar]														
Validated 2020 Model								●							
Task 5 - 2050 Forecast Year Model	[Blue bar]														
2050 Model Complete									●						
Task 6 - Postprocessing Models	[Blue bar]														
Task 7 - Installation	[Blue bar]														
Task 9 - Documentation														●	
Model Documents and User Guide														●	
Task 10 - Training															[Blue bar]
Task 11 - Ongoing Model Support (36 months)															[Orange bar]

# 05

## Cost Proposal

The cost proposal is provided in a separate sealed envelope as requested by the RFP. The cost estimate includes personnel names, classifications, hourly rates, overhead rates, services, and other items necessary to perform the tasks listed in the scope of work.

### Optional Tasks

An optional task as a part of Task 3 is the possibility of upgrading the modeling machine that VCTC maintains. While it is anticipated that the current machine should be adequate for the purposes of this effort, the machine was previously purchased in May of 2017 and processing speed could likely be greatly improved.

In the 2050 Future Year task (Task 5), an optional task was discussed of developing an interim year (2035) model scenario. This task was discussed as optional and is not included in the cost proposal.

# 06

## Experience

Over 70% of Iteris' ITS/Engineering and Planning projects represent repeat clients - a testament to Iteris' ultimate goal of client satisfaction.

Iteris is known within the transportation industry for our extensive experience, innovative solutions, and successful delivery of projects that align closely with this scope of work. With a robust track record of executing projects on time and within budget, we invite Ventura County to consult with the references provided, which speak to our qualifications and the high level of satisfaction among our clients. Over the past five years, Iteris has developed and applied multiple regional travel demand models throughout southern California. Iteris developed the current VCTM, City of Santa Barbara, City of Murrieta, City of Camarillo, City of Simi Valley, and City of Anaheim models. Iteris team member CS developed the current Imperial County model, San Bernardino County model, and the Orange County Traffic Analysis Model.

At Iteris our proven expertise in model updates is reflected in a series of strategic projects across various urban settings. In this section, we present key project examples that demonstrate our comprehensive approach to providing model updates, including a matrix illustrating project qualifications shown in **Table 1**.

**Table 1 – Project Qualifications Matrix**

PROJECT NAME AND LOCATION	Travel Demand Model Development	Data Collection and Analysis	Calibration and Validation	Model Output Tool Development	Model Training and Support
<b>Iteris, Inc.</b>					
TRAFFIC MODEL (VCTM) DEVELOPMENT AND ON-CALL SUPPORT Ventura County, CA	●	●	●	●	●
TRAVEL-DEMAND MODEL DEVELOPMENT AND ENVIRONMENTAL IMPACT REPORT City of Santa Barbara, CA	●	●	●	●	
US-101 HIGH OCCUPANCY VEHICLE (HOV) PA/ED Ventura County, CA		●	●	●	
CITY OF CAMARILLO TRAFFIC ANALYSIS MODEL Camarillo, CA	●	●	●	●	
CITY OF SIMI VALLEY TRAFFIC MODEL Simi Valley, CA	●	●	●	●	



PROJECT NAME AND LOCATION	Travel Demand Model Development	Data Collection and Analysis	Calibration and Validation	Model Output Tool Development	Model Training and Support
<b>Cambridge Systematics, Inc</b>					
SBCTA SAN BERNARDINO TRANSPORTATION ANALYSIS MODEL UPDATE PLUS San Bernardino, CA	●	●	●	●	●
OCTA Orange County Transportation Analysis Model Software Support Orange, CA	●	●	●	●	●
Alamo Area MPO Travel Demand Model Update On-Call Services San Antonio, TX	●	●	●	●	●

» VCTC TRAFFIC MODEL (VCTM) DEVELOPMENT AND ON-CALL SUPPORT  
Ventura County, CA

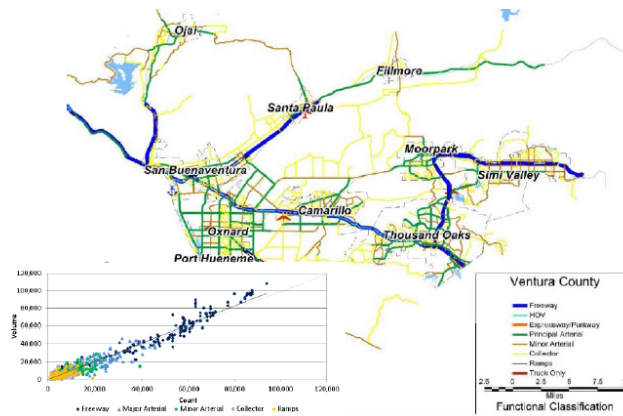


**Date**  
04/2016 –06/2024

**Budget**  
\$164,5000

**Key Personnel**

- Viggan Davidian (Project Director)
- Jennifer Emerson-Martin (Project Manager)
- Chris Devlin



Iteris completed the development of a county-wide traffic model for Ventura County, as a sub-area model based on the 2016 SCAG Regional Transportation Plan/Sustainable Communities Strategy Model. The project was the first in southern California to utilize the 2016 version of SCAG’s Sub-Regional Model Development Tool. A major component of the project was the development of a land use to socioeconomic data (population/employment) conversion module, as the current planning tool in Ventura County is land use, where the regional model trip generation is based on socioeconomic inputs. Other model components include completed transit validation, development of an active transportation module, standardized and automated model outputs (spreadsheets and plots). Outputs were developed for a variety of local geographies to support air quality analysis and VMT calculations to address SB743 requirements.

Iteris installed the model at VCTC and provided training to VCTC staff. Additionally, Iteris supported the update of the model to a base year of 2016, as well as multiple years of on-call support from 2018 through 2024. On-going support included model distribution, model improvements, model analysis, and modeling support for various project purposes in Ventura County per VCTC’s direction, including modeling supporting the recent Countywide Transportation Plan.



» TRAVEL-DEMAND MODEL DEVELOPMENT AND ENVIRONMENTAL IMPACT REPORT  
*City of Santa Barbara, CA*



**Date**  
 08/2021 – 06/2024

**Budget**  
 \$155,000

- Key Personnel**
- Vigen Davidian (Principal in Charge)
  - Jennifer Emerson-Martin (Lead Modeler)
  - Jin Eo



Iteris developed a focused travel-demand model for the City of Santa Barbara, to replace the current citywide model, as part of the City’s General Plan Update. The new model is a subarea model built off the Santa Barbara County Association of Governments (SBCAG) model. With this new model version, Iteris added greater functionality to better align with the needs of environmental analyses moving forward, such as a tool to calculate Vehicle Miles Traveled (VMT) and improved forecasts of heavy vehicle volume and types. The model base year is 2020 and the future year is 2035, which incorporates the City’s General Plan buildout land use. As part of the model process, Iteris provided support in the development of new City guidelines for CEQA Transportation Analysis, which included a process for screening out projects and a process for determining if a project would result in a significant transportation impact (using VMT as a metric). In addition to developing the new travel-demand model, Iteris prepared a comprehensive level of service (LOS) analysis of intersections throughout the City. The traffic analysis utilized post-processed traffic volumes from the new City model and included multiple lane reconfiguration scenarios to test for feasibility. Lastly, Iteris will be providing key traffic data to the City’s environmental consultant for completion of the General Plan Update EIR.

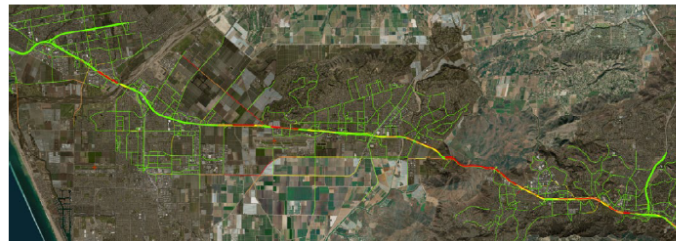
» US-101 HIGH OCCUPANCY VEHICLE (HOV) PA/ED  
*Ventura County, CA*



**Date**  
 06/2018 – on-going

**Budget**  
 \$454,000

- Key Personnel**
- Vigen Davidian (Project Manager)
  - Jennifer Emerson-Martin (Technical Lead)
  - Chris Devlin
  - Jin Eo



The Ventura County Transportation Commission (VCTC), in cooperation with Caltrans District 7, is advancing the development and implementation of the US-101 Improvement Project (Project). The study area extends between Moorpark Road and State Route (SR) 33 in Ventura County, California. The Project includes both directions of the freeway and traverses through the cities of Thousand Oaks, Camarillo, Oxnard, and Ventura from south to north. Iteris is the traffic modeling and forecasting consultant and completed an arterial intersection traffic operations analysis for part of the corridor. Traffic forecasting was completed using the VCTM travel demand model. The VCTM was used to develop inputs into the Traffic Operation Analysis Report (TOAR). Iteris also collected traffic volumes for the freeway mainline from Caltrans Performance Measurement System (PeMS) database. Travel model outputs were used to develop key regional travel statistics for the Project study area for environmental analysis and SB 743 compliance (to comply with the new California Environmental Quality Act (CEQA) Analysis requirements), including vehicle miles of travel (VMT), vehicle hours of travel (VHT), and average travel speeds for all project alternatives.

» SBCTA San Bernardino Transportation Analysis Model Update Plus  
San Bernardino, CA



**Date**  
05/09/2022-02/29/2024

**Budget**  
\$443,535

- Key Personnel**
- Gary Hamrick (Principal in Charge)
  - Sean McAtee (Project Manager)
  - Zeina Wafa (Deputy Project Manager)



**Project Summary**

For the San Bernardino County Transportation Authority (SBCTA), CS developed a new version of the San Bernardino Transportation Analysis Model. This new model was built on an entirely re-designed system developed to meet SBCTA's specific needs and to facilitate vehicle miles traveled analysis in the context of Senate Bill 743. The new model includes robust destination and mode choice models, traffic assignment, and embedded reporting and mapping systems. The model retains consistency with the parent Southern California Association of Governments' model while adding detail and functionality required to support local planning activities. The updated model was calibrated using household travel survey data and validated to both traffic counts and transit ridership data. The new system integrates with an online StoryMap that provides access to information about the model and model data.

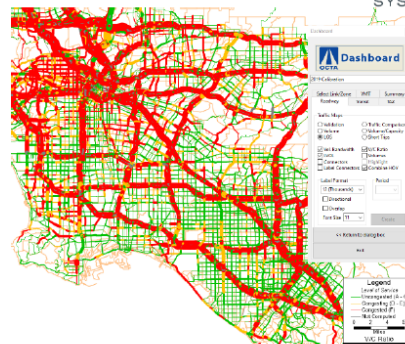
» OCTA Orange County Transportation Analysis Model Software Support  
Orange, CA



**Date**  
06/01/2021- 05/31/2024

**Budget**  
\$249,500

- Key Personnel**
- Sean McAtee – Project Manager
  - Mathew Trostle
  - Zeina Wafa



**Project Summary**

CS assisted the Orange County Transportation Authority (OCTA) in updating, improving, and maintaining their Transportation Analysis Model (OCTAM) for over 10 years. For this Transportation Analysis Model Software Support contract, tasks included updates to model components based on the Southern California Association of Governments' Household Travel Survey and onboard transit surveys conducted by OCTA. Census data, Highway Performance Monitoring System data, and traffic count data also were important data sources in estimation, calibration, and validation of updated model components. A series of training sessions, along with model documentation and a User's Guide, provided OCTA staff with a strong understanding of the updated model implementation. CS developed a new dashboard functionality that provides access to key data. The dashboard produces interactive maps to display detailed model results such as traffic and transit assignment results and generates an Excel summary report containing useful statistics and performance measures.

» Alamo Area MPO Travel Demand Model Update On-Call Services  
San Antonio, TX



**Date**

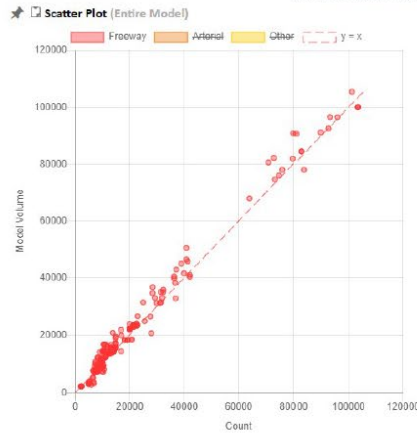
12/29/2023- 12/31/2025

**Budget**

\$449,999.98

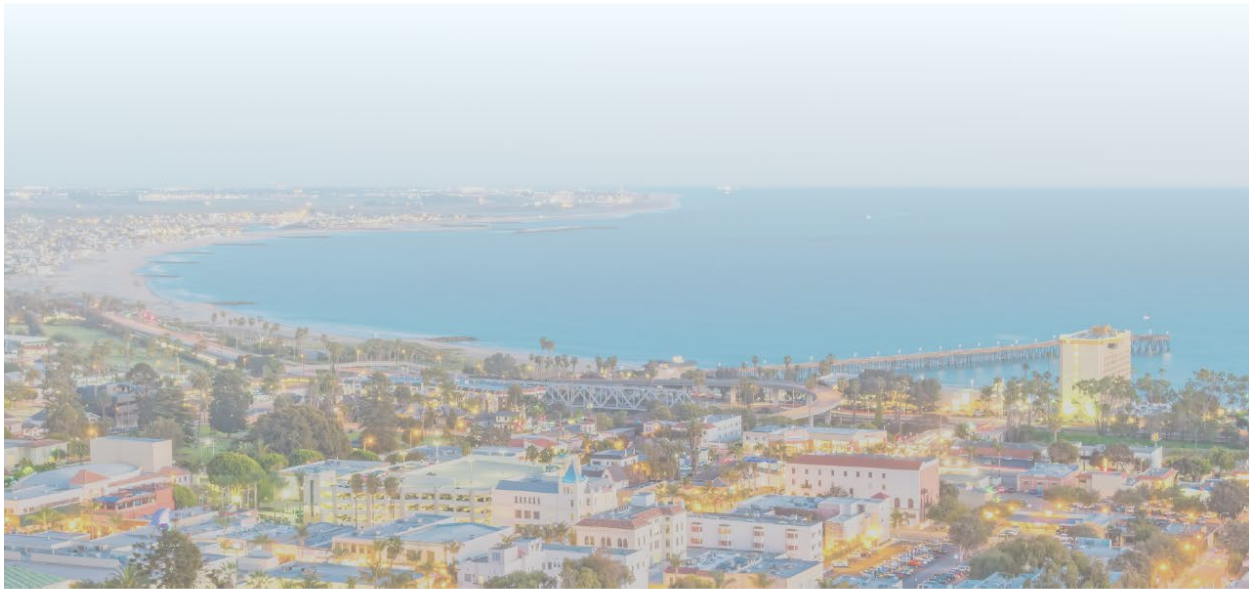
**Key Personnel**

- Sean McAtee – Principal in Charge
- Zeina Wafa – Project Manager
- Xinbo Mi – Deputy Project Manager
- Mathew Trostle



**Project Summary**

CS is leading a Travel Demand Model Update On-Call for the Alamo Area Metropolitan Planning Organization (MPO). The work involves developing base- and forecast-year socioeconomic and demographic data, expanding the modeling area boundary to include Medina County, analyzing the latest available survey data to update the different model components, calibrating the mode choice model using the latest transit onboard survey, validating the trip assignment results to available 2025 traffic counts and transit boardings, and integrating post-processing capabilities within the model to adjust forecast volumes based on the difference between base year volumes and observed traffic counts. The work also will involve assisting the MPO in developing in-house capabilities to determine air quality impacts of various combinations of proposed projects.



# 07

## Organizational Profile

### COMPANY OVERVIEW



**Tax Identification Number**  
95-2588496

**Form of Organization**  
C Corporation

**Number of Employees**  
460+

**Address**  
**Iteris, Inc.**  
801 S Grand Ave #750, Los Angeles, CA 90017

Iteris is the market leader in smart mobility infrastructure management since 1987. Iteris' 460+ staff have decades of expertise in traffic management, along with superior services and patented products to detect, measure, and manage traffic and vehicular performance, minimize traffic congestion, enhance safety, and empower Iteris clients with solutions to better manage their transportation networks.

Iteris team members are experts in the fields of transportation planning, traffic engineering, and ITS. Knowledge of these practice areas enables Iteris to provide comprehensive services ranging from initial traffic impact studies, transportation modeling, planning, systems engineering, and detailed design, through implementation and performance measurement/monitoring. Iteris combines the knowledge of transportation planners, transportation engineers, systems engineers, system integrators, and software engineers to offer an unmatched combination of talent and experience. Iteris develops and deploys innovative solutions that help agencies reduce traffic collisions, reduce traffic congestion, enhance transit use, and monitor and manage transportation networks.

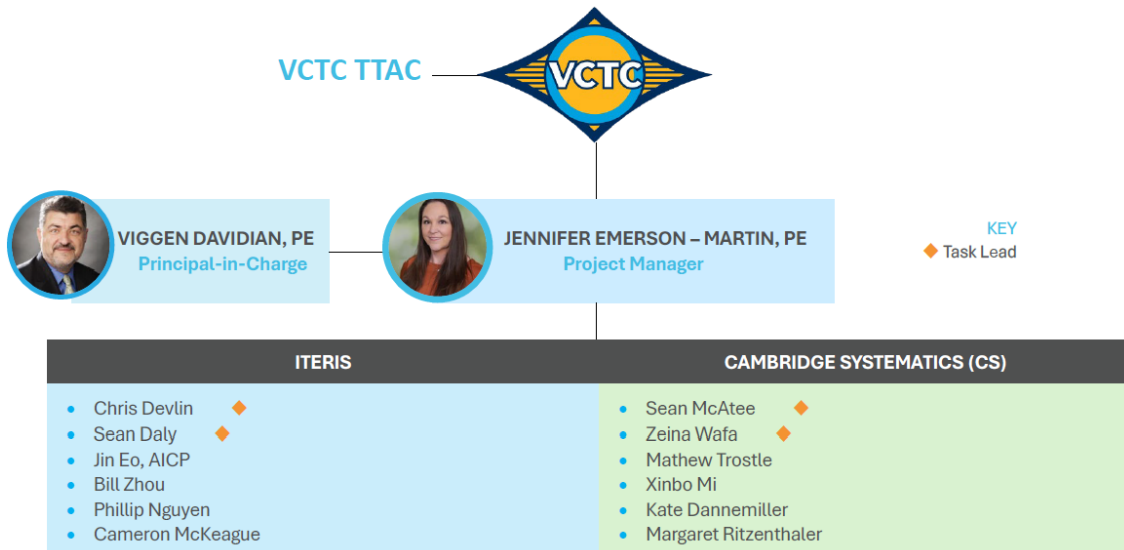
Proposer Contact Info		
Organization	Company Name	Iteris, Inc.
	Company Address	1700 Carnegie Ave., Suite 100, Santa Ana, CA 92705-5551
	Website	www.iteris.com
	Federal Tax ID Number	95-2588496
Authorized Representative	Name	Steven Bradley, PE
	Title	Regional Vice President
	Email Address	Sdb@iteris.com
	Phone Number	949-270-9647
Other Point of Contact (if required)	Name	Jennifer Emerson-Martin
	Title	Associate Vice President
	Email Address	martin@iteris.com
	Phone Number	509-309-8581

**PROJECT TEAM**

**Organizational Chart**

The organizational chart in **Figure 4** outlines the structure of our team. It shows the depth of project staff and the lead and support organization for each task. The model update requires substantial interaction between Iteris and CS who will each lead tasks based on the best suitability based on technical skills and project understanding

Figure 4 – Organizational Chart



Task #	Task Description	Lead	Support
1	Data Collection	Iteris	CS
2	Land Use Assumptions	Iteris	
3	Model Variable/Parameters	CS	Iteris
4	2020 Base Year Model	CS	Iteris
5	2050 Forecast Year Model	Iteris	CS
6	Post-processing Models	CS	Iteris
7	Installation	Iteris	
8	Stakeholder Engagement	Iteris	
9	Documentation	CS	Iteris
10	Training	Iteris	CS
11	Ongoing Support	Iteris	CS



## JENNIFER EMERSON - MARTIN, PE – Project Manager

Ms. Emerson-Martin serves as Associate Vice President for Iteris’ Mobility Consulting Solutions and has been with the firm since 2014. She has over 21 years of experience working in transportation forecasting and modeling, transportation planning, traffic engineering and analysis, traffic operations and management plans, and project management. Ms. Emerson-Martin is fluent with a variety of travel demand modeling software, traffic engineering software, and traffic analysis methods. She has national experience applying, modifying, and developing travel demand models for both large- and small- scale projects, and has experience in evaluating outputs for environmental analysis, air quality and noise impact analyses, SB743 VMT analysis, and traffic impact analyses. Ms. Emerson-Martin is highly skilled in travel model performance measure output, as well as developing model analysis tools for project efficiency. She currently serves as a company resource for projects which utilize both big-data analytics and traditional planning methods.

In addition, Ms. Emerson-Martin was the developer of the current VCTM, and has relevant and recent experience modeling both small and large projects within Ventura County, including being the task lead for the modeling for the US\_101 HOV PA/ED project, the US-101 Communities Connected Plan, the Freight Mobility Study, the City of Thousand Oaks General Plan, the City of Moorpark General Plan, and the City of Ventura General Plan. She was responsible for completing SB743 VMT analysis for a significant number of projects throughout the County, utilizing the current VCTM, so she is keenly familiar with the modeling needs within the County for future and upcoming projects.



**Education & Registrations**  
BS, Civil Engineering

**Civil Engineer (PE)**  
AK #11998, 2008  
WA #54719, 2017  
TX #128405, 2017  
NE #E17065, 2018  
ID #18578, 2019

**Location:**  
Spokane, WA

## Key Staff Bios

In the following pages are the key personnel who will be integral to the success of this project. Our team consists of highly qualified professionals with diverse expertise in engineering, project management, and technical disciplines. Each member brings a wealth of experience, a proven track record of delivering complex projects, and a commitment to excellence. The following resumes highlight their qualifications, relevant experience, and contributions that will ensure this project is executed efficiently, on time, and to the highest industry standards.

**Viggen Davidian, PE**  
Principal-in-Charge



**Registrations**  
Civil Engineer (PE)  
CA #36335, 1983  
**Education**  
MS, Civil Engineering  
(Transportation)  
**Location**  
Los Angeles, CA

Mr. Davidian serves as a Vice President for Iteris’ Mobility Consulting Solutions and has been with the firm since 1994. He has over 43 years of comprehensive project and management experience in transportation planning, traffic engineering design, and civil engineering, in both the private and public sectors. Mr. Davidian’s technical expertise includes comprehensive multi-modal area and corridor studies, traffic operations, travel demand forecasting, alternatives analyses, and environmental impact assessment for major highway and transit projects. He also specializes in the development of transportation performance measurement procedures and monitoring systems for local and regional agencies, as well as strategic master plans for transportation infrastructure development, prioritization, and financing. Mr. Davidian is a Fellow of Institute of Transportation Engineers and has served on the ASCE Los Angeles Section Board of Directors as Vice President.

Viggen oversees Iteris’ capabilities and resources in Multi-modal Transportation Strategic Plans and Travel Demand Forecasting. He has over 30 years of extensive project management and leadership experience with major efforts in Ventura County including regional, corridor level, local agency, and most relevant to this effort travel demand forecasting projects.

**Chris Devlin**  
Task Lead



**Education**

MSc, Transportation Planning and Engineering

**Location**

Santa Ana, CA

Mr. Devlin has served as a Senior Manager of Iteris’ Mobility Consulting Solutions since 2013. He has 32 years of experience in transportation planning and has managed and participated in a wide variety of transportation studies. These include travel demand forecasting studies, travel surveys, traffic impact studies, parking studies, and corridor studies. Mr. Devlin is an experienced travel demand forecaster, having helped maintain and run over twenty different traffic models throughout the world. He is proficient in several modeling packages including TransCAD, Cube and emme. He has developed model outputs to support the economic, financial and environmental analysis of major highway, transit and aviation projects and well as developing VMT statistics for CEQA requirements. Mr. Devlin is also proficient in the use of Geographic Information Systems (GIS) for problem-solving, analysis, and presentation of results. He has designed and run GIS training courses specifically for Transportation Planners, including the design and coding of GIS utilities and scripts. Mr. Devlin has also performed several large-scale transportation surveys from the survey design stage, data collection, data cleaning, database population, and reporting understandable results.

**Jin Eo, AICP**  
Modeler Specialist



**Education**

MS, Urban and Regional Planning

**Location**

Santa Ana, CA

Ms. Eo serves as an Engineer for Iteris’ Mobility Consulting Solutions and has been with the firm since 2019. She has over 9 years of experience working in the fields of transportation planning with specific experience as a traffic modeler and analyst. Ms. Eo supports the modeling and transportation planning facets of Iteris’ Mobility group. She has experience applying and developing regional and local transportation models using TransCAD and PTV VISUM. She is proficient at and able to conduct advanced-level analysis and visualization using GIS. Additionally, she is skilled at using traffic analysis tools such as PeMS, Synchro, PTV Vistro, and Streetlight data. She also has experience with working with the current VCTM model.

**Sean Daly, AICP, PTP**  
Senior Manager



**Education**

MCP, City Planning

**Location**

Covington, LA

Mr. Daly is a Senior Manager for Iteris’ Mobility Consulting Solutions. He has 21 years of public sector and professional consulting experience in transportation planning and has been with Iteris since 2006. Sean’s approach to planning puts people first to ensure access and connectivity rather than barriers and isolation. He is supported by Iteris’ focus to bring professional planning services to his clients through a broad array of knowledge, expertise, and experience. He has worked extensively in Ventura County for several successful projects.

**Sean McAtee**  
Travel Demand Modeler Sr. III  
(Principal)



**Education**

B.S., Civil Engineering

**Location**

Denver, CO

Sean McAtee is a Travel Demand Modeler Sr. III (Principal) of Cambridge Systematics (CS) with over 20 years of experience in travel model development and application. He works with trip-based and activity-based travel models throughout the country. He has developed and applied travel models in large regions such as Southern California and the New York City Metropolitan Area; for State departments of transportation (DOT) including Colorado, California, and Michigan; and for numerous cities and metropolitan planning organizations (MPO). He has developed methods of utilizing passively collected data from various sources in the model development and calibration process and has created visualization and dashboard tools that help make use of model results more efficient and intuitive.

**Zeina Wafa**

**Travel Demand Modeler Sr. I**  
(Sr. Associate)



**Education**

M.S., Transportation

**Location**

Austin, TX

Zeina Wafa is a Senior Associate Travel Demand Modeler at Cambridge Systematics, Inc. (CS) with 10 years of professional experience in travel demand modeling, data analysis, and transportation systems planning. She has worked on numerous TransCAD trip-based travel demand model development and update projects including for the Alamo Area Metropolitan Planning Organization (MPO), El Paso MPO, Orange County Transportation Authority, San Bernardino County Transportation Authority, Colorado Department of Transportation (DOT), and the Southeast Michigan Council of Governments. Other projects have involved performing ridership and revenue forecasts, updating model components, running alternatives analyses runs, and analyzing transit boarding activity. Zeina’s model application work includes master transportation plans, as well as planning and environmental linkages studies and freight plans.

**Mathew Trostle**

**Travel Demand Modeler Mid I**  
(Associate)



**Education**

M.S., Civil Engineering  
(Transportation Systems)

**Location**

Denver, CO

Mathew Trostle is a Travel Demand Modeler Mid I (Associate) at Cambridge Systematics, Inc. (CS) with a background in travel model development and application, data analysis, geographic information system analysis, and transportation safety planning. He has experience in development and application of trip-based and activity-based travel demand models. Mr. Trostle also has made contributions in data validation, network coding, data visualization, and alternatives analysis for numerous travel-demand forecasting projects from statewide model development to subarea modeling and corridor studies.

**Xinbo Mi**

**Travel Demand Modeler Mid I**  
(Associate)



**Education**

M.S., Aerospace Engineering

**Location**

Evansville, IN

Xinbo Mi is a Travel Demand Modeler Mid I (Associate) at Cambridge Systematics, Inc. (CS) with six years of experience in travel demand modeling, microsimulation modeling, big data analytics, and customized tool development. He is dedicated to making effective, efficient and user-friendly models, and building tools to automate repetitive labor-intensive procedures. Xinbo also serves as a board member for the Zephyr Foundation for Advancing Travel Analysis. Prior to joining CS in the Fall of 2023, he served as a Senior Transportation Engineer at the Evansville Metropolitan Planning Organization (MPO).





# 08

## References

The following table presents contact and contract information for three clients for which we have provided similar services.

<b>Reference 1</b>	<b>Company</b>	Ventura County Transportation Commission
	<b>Project Manager</b>	Andrew Kent
	<b>Phone Number</b>	(805) 642-1591 Ext: 102
	<b>Project Description</b>	<p>Iteris completed the development of a county-wide traffic model for Ventura County, as a sub-area model based on the 2016 SCAG Regional Transportation Plan/Sustainable Communities Strategy Model. The project was the first in southern California to utilize the 2016 version of SCAG’s Sub-Regional Model Development Tool. A major component of the project was the development of a land use to socioeconomic data (population/employment) conversion module, as the current planning tool in Ventura County is land use, where the regional model trip generation is based on socioeconomic inputs. Other model components include completed transit validation, development of an active transportation module, standardized and automated model outputs (spreadsheets and plots). Outputs were developed for a variety of local geographies to support air quality analysis and VMT calculations to address SB743 requirements.</p> <p>Iteris installed the model at VCTC and provided training to VCTC staff. Additionally, Iteris supported the update of the model to a base year of 2016, as well as multiple years of on-call support from 2018 through 2024. On-going support included model distribution, model improvements, model analysis, and modeling support for various project purposes in Ventura County per VCTC’s direction, including modeling supporting the recent Countywide Transportation Plan.</p>
	<b>Project Start and End Dates</b>	04/2016 - 06/2024

<b>Reference 2</b>	<b>Company</b>	City of Santa Barbara
	<b>Project Manager</b>	Jessica Grant
	<b>Phone Number</b>	(805) 897-2542
	<b>Project Description</b>	<p>Iteris developed a focused travel-demand model for the City of Santa Barbara, to replace the current citywide model, as part of the City’s General Plan Update. The new model is a subarea model built off the Santa Barbara County Association of Governments (SBCAG) model. With this new model version, Iteris added greater functionality to better align with the needs of environmental analyses moving forward, such as a tool to calculate Vehicle Miles Traveled (VMT) and improved forecasts of heavy vehicle volume and types. The model base year is 2020 and the future year is 2035, which</p>

incorporates the City’s General Plan buildout land use. As part of the model process, Iteris provided support in the development of new City guidelines for CEQA Transportation Analysis, which included a process for screening out projects and a process for determining if a project would result in a significant transportation impact (using VMT as a metric). In addition to developing the new travel-demand model, Iteris prepared a comprehensive level of service (LOS) analysis of intersections throughout the City. The traffic analysis utilized post-processed traffic volumes from the new City model and included multiple lane reconfiguration scenarios to test for feasibility. Lastly, Iteris will be providing key traffic data to the City’s environmental consultant for completion of the General Plan Update EIR.

	<b>Project Start and End Dates</b>	08/2021 – 06/2024
<b>Reference 3 (for Cambridge Systematics)</b>	<b>Company</b>	San Bernardino County Transportation Authority
	<b>Project Manager</b>	Ginger Koblasz, Senior Planner
	<b>Phone Number</b>	(909) 884-8276
	<b>Project Description</b>	CS developed the 2019 base year San Bernardino Transportation Analysis Model (SBTAM Plus). Moving away from the SCAG Sub-regional Model Development Tool (SMDT), the new model uses a custom model user interface designed to meet SBCTA’s specific needs and to facilitate vehicle miles traveled analysis in the context of Senate Bill 743. The new modeling system includes a mapping dashboard and interactive summary reporting tool that summarizes outputs from the four-step model in a concise and digestible manner. CS also delivered short topical training videos that SBCTA staff and other stakeholders can reference while working with the model.
	<b>Project Start and End Dates</b>	05/2022 - 02/2024

**Exhibit C**  
**COST PROPOSAL**

05

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# Cost Proposal

November 1<sup>st</sup>, 2024

Andrew Kent  
Program Manager – Transportation Data & Services  
751 E. Daily Dr., Suite 420  
Camarillo, CA 93010

**Re: Proposal for Ventura County Transportation Model Update**

Dear Mr. Kent:

Iteris, Inc. (Iteris) is pleased to submit the enclosed fee proposal to provide the Ventura County Transportation Model Update. This cost proposal is submitted in conjunction with our proposal response for the same services. The total proposed fee for all tasks is **\$370,910**. On the following page, in **Table 1**, you will find the breakdown of the cost information as a not-to-exceed time and materials cost broken down by task. Estimated staff hours by task and team member are also provided for your consideration. The total cost proposal can be further broken down by type of service as follows:

- \$2,010 in Travel Mileage and Travel-related Expenses
- \$283,110 in Model Development Labor
- \$87,800 in Post Model Development On-Going Model Support

This fee proposal is submitted subject to the successful negotiation of a mutually agreeable contract between Iteris and the Ventura County Transportation Commission.

Thank you for the opportunity to submit our proposal. Iteris looks forward to assisting the city on this important project. Please contact me at (949) 270-9647 or [sdb@iteris.com](mailto:sdb@iteris.com), the designated Project Manager Jennifer Emerson-Martin, at (509) 309-8581 or [jmartin@iteris.com](mailto:jmartin@iteris.com).

Sincerely,  
**Iteris, Inc.**



Steven Bradley, PE  
Regional Vice President, Mobility Professional Services

**Contact Person:**

Steven Bradley, PE  
Regional Vice President  
Santa Ana, CA 92705  
(949) 270-9647  
[sdb@iteris.com](mailto:sdb@iteris.com)

Table 1 – Cost Proposal

Task	Task Description	Iteris										Cambridge Systematics					Total Labor Hours	Total ODC	Total Cost	
		Staff Hours Per Category										Cambridge								
		Principal	Senior Trans II	Senior Trans I	Assoc Trans	Asset Trans	Admin	Principal	Senior Modeler I	Senior Modeler II	Modeler									
\$320	\$280	\$220	\$180	\$150	\$120	\$325	\$280	\$200	\$165											
0	Project Management	4	40								8	4	16					\$0	72	\$18,220
1	Data Collection	4	16		20	40		40						8				\$0	88	\$17,240
2	Land Use Assumptions		10	40	30	40												\$0	120	\$25,200
3	Model Variables		20									40	40	80				\$0	180	\$44,600
4	2020 Base Year Model		40	20		120						30	20	80	40			\$0	350	\$70,550
5	2050 Forecast Year Model		20	10		20						10	20	20	40			\$0	100	\$22,250
6	Post-Processing and Outputs		20			20							40	20	40			\$0	140	\$28,200
7	Installation			8	4													\$0	12	\$3,000
8	Stakeholder Engagement /Meetings	20	40						20									\$0	80	\$20,400
9	Documentation	4	20		20				20			4	20					\$0	88	\$19,700
10	Training		24									4	20					\$0	48	\$12,740
11	Ongoing Model Support (average 10 hours /month for 3 years)	16	180						80			40	40					\$0	356	\$87,800
ODC	Travel (Meal and Other Travel Costs)																	\$2,010	-	\$2,010
<b>Total Hours &amp; Labor Cost</b>		<b>48</b>	<b>438</b>	<b>74</b>	<b>70</b>	<b>360</b>	<b>8</b>	<b>132</b>	<b>224</b>	<b>180</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>\$2,010</b>	<b>1,634</b>	<b>\$370,910</b>