

**CITY OF COSTA MESA
PROFESSIONAL SERVICES AGREEMENT
WITH
ADVANTEC CONSULTING ENGINEERS, INC.**

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is made and entered into this 3rd day of April, 2018 ("Effective Date"), by and between the CITY OF COSTA MESA, a municipal corporation ("City"), and ADVANTEC CONSULTING ENGINEERS, INC., a California corporation ("Consultant").

WITNESSETH:

A. WHEREAS, City proposes to utilize the services of Consultant as an independent contractor to develop traffic signal infrastructure and timing improvements in connection with the Fairview Road Traffic Signal Coordination Project, as more fully described herein; and

B. WHEREAS, Consultant represents that it has that degree of specialized expertise contemplated within California Government Code section 37103, and holds all necessary licenses to practice and perform the services herein contemplated; and

C. WHEREAS, City and Consultant desire to contract for the specific services described in Exhibit "A" (the "Project") and desire to set forth their rights, duties and liabilities in connection with the services to be performed; and

D. WHEREAS, no official or employee of City has a financial interest, within the provisions of sections 1090-1092 of the California Government Code, in the subject matter of this Agreement.

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

1.0. SERVICES PROVIDED BY CONSULTANT

1.1. Scope of Services. Consultant shall provide the professional services described in the City's Request for Proposals ("RFP"), attached hereto as Exhibit "A," and Consultant's Response to City's RFP ("Consultant's Proposal"), attached hereto as Exhibit "B," both incorporated herein by this reference.

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

1.3. Performance to Satisfaction of City. Consultant agrees to perform all the work to the complete satisfaction of the City and within the hereinafter specified. Evaluations of the work will be done by the City Manager or his or her designee. If the quality of work is not satisfactory, City in its discretion has the right to:

- (a) Meet with Consultant to review the quality of the work and resolve the matters of concern;
- (b) Require Consultant to repeat the work at no additional fee until it is satisfactory; and/or
- (c) Terminate the Agreement as hereinafter set forth.

1.4. Warranty. Consultant warrants that it shall perform the services required by this Agreement in compliance with all applicable Federal and California employment laws, including, but not limited to, those laws related to minimum hours and wages; occupational health and safety; fair employment and employment practices; workers' compensation insurance and safety in employment; and all other Federal, State and local laws and ordinances applicable to the services required under this Agreement. Consultant shall indemnify and hold harmless City from and against all claims, demands, payments, suits, actions, proceedings, and judgments of every nature and description including attorneys' fees and costs, presented, brought, or recovered against City for, or on account of any liability under any of the above-mentioned laws, which may be incurred by reason of Consultant's performance under this Agreement.

1.5. Non-Discrimination. In performing this Agreement, Consultant shall not engage in, nor permit its agents to engage in, discrimination in employment of persons because of their race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military or veteran status, except as permitted pursuant to section 12940 of the Government Code.

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

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

1.8. Confidentiality. Employees of Consultant in the course of their duties may have access to financial, accounting, statistical, and personnel data of private individuals and employees of City. Consultant covenants that all data, documents, discussion, or other information developed or received by Consultant or provided for performance of this Agreement are deemed confidential and shall not be disclosed by Consultant without written authorization by City. City shall grant such authorization if disclosure is required by law. All City data shall be returned to City upon the termination of this Agreement. Consultant's covenant under this Section shall survive the termination of this Agreement.

2.0. COMPENSATION AND BILLING

2.1. Compensation. Consultant shall be paid in accordance with the fee schedule set forth in Exhibit "C," attached hereto and made a part of this Agreement by this reference (the "Fee Schedule"). Consultant's total compensation shall not exceed Two Million Sixty-Six Thousand Four Hundred Thirty-Five Dollars (\$2,066,435.00).

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

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

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

3.0. TIME OF PERFORMANCE

3.1. Commencement and Completion of Work. Unless otherwise agreed to in writing by the parties, the professional services to be performed pursuant to this Agreement shall commence within five (5) days from the Effective Date of this Agreement. Said services shall be performed in compliance with the Project Schedule set forth in Consultant's Proposal. The Project Schedule may be amended by mutual agreement of the parties. Consultant agrees that the start of the operations and monitoring phase requires a written notice to proceed from City staff. Failure to commence work in a timely manner and/or diligently pursue work to completion may be grounds for termination of this Agreement.

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

4.0. TERM AND TERMINATION

4.1. Term. This Agreement shall commence on the Effective Date and continue for a period of four (4) years, ending on April 2, 2022, unless previously terminated as provided herein or as otherwise agreed to in writing by the parties.

4.2. Notice of Termination. The City reserves and has the right and privilege of

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

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

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

5.0. INSURANCE

5.1. Minimum Scope and Limits of Insurance. Consultant shall obtain, maintain, and keep in full force and effect during the life of this Agreement all of the following minimum scope of insurance coverages with an insurance company admitted to do business in California, rated "A," Class X, or better in the most recent Best's Key Insurance Rating Guide, and approved by City:

- (a) Commercial general liability, including premises-operations, products/completed operations, broad form property damage, blanket contractual liability, independent contractors, personal injury or bodily injury with a policy limit of not less than One Million Dollars (\$1,000,000.00), combined ~~single limits, per occurrence.~~ If such insurance contains a general aggregate limit, it shall apply separately to this Agreement or shall be twice the required occurrence limit.
- (b) Business automobile liability for owned vehicles, hired, and non-owned vehicles, with a policy limit of not less than One Million Dollars (\$1,000,000.00), combined single limits, per occurrence for bodily injury and property damage.
- (c) Workers' compensation insurance as required by the State of California. Consultant agrees to waive, and to obtain endorsements from its workers' compensation insurer waiving subrogation rights under its workers' compensation insurance policy against the City, its officers, agents, employees, and volunteers arising from work performed by Consultant for the City and to require each of its subcontractors, if any, to do likewise under their workers' compensation insurance policies.

- (d) Professional errors and omissions ("E&O") liability insurance with policy limits of not less than One Million Dollars (\$1,000,000.00), combined single limits, per occurrence and aggregate. Architects' and engineers' coverage shall be endorsed to include contractual liability. If the policy is written as a "claims made" policy, the retro date shall be prior to the start of the contract work. Consultant shall obtain and maintain, said E&O liability insurance during the life of this Agreement and for three years after completion of the work hereunder.

5.2. Endorsements. The commercial general liability insurance policy and business automobile liability policy shall contain or be endorsed to contain the following provisions:

- (a) Additional insureds: "The City of Costa Mesa and its elected and appointed boards, officers, officials, agents, employees, and volunteers are additional insureds with respect to: liability arising out of activities performed by or on behalf of the Consultant pursuant to its contract with the City; products and completed operations of the Consultant; premises owned, occupied or used by the Consultant; automobiles owned, leased, hired, or borrowed by the Consultant."
- (b) Notice: "Said policy shall not terminate, be suspended, or voided, nor shall it be cancelled, nor the coverage or limits reduced, until thirty (30) days after written notice is given to City."
- (c) Other insurance: "The Consultant's insurance coverage shall be primary insurance as respects the City of Costa Mesa, its officers, officials, agents, employees, and volunteers. Any other insurance maintained by the City of Costa Mesa shall be excess and not contributing with the insurance provided by this policy."
- (d) Any failure to comply with the reporting provisions of the policies shall not affect coverage provided to the City of Costa Mesa, its officers, officials, agents, employees, and volunteers.
- (e) The Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

5.3. Deductible or Self Insured Retention. If any of such policies provide for a deductible or self-insured retention to provide such coverage, the amount of such deductible or self-insured retention shall be approved in advance by City. No policy of insurance issued as to which the City is an additional insured shall contain a provision which requires that no insured except the named insured can satisfy any such deductible or self-insured retention.

5.4. Certificates of Insurance. Consultant shall provide to City certificates of insurance showing the insurance coverages and required endorsements described above, in a form and content approved by City, prior to performing any services under this Agreement. The certificates of insurance shall be attached hereto as Exhibit "D" and incorporated herein by this reference.

5.5. Non-Limiting. Nothing in this Section shall be construed as limiting in any way,

the indemnification provision contained in this Agreement, or the extent to which Consultant may be held responsible for payments of damages to persons or property.

6.0. GENERAL PROVISIONS

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

6.2. Representatives. The City Manager or his or her designee shall be the representative of City for purposes of this Agreement and may issue all consents, approvals, directives and agreements on behalf of the City, called for by this Agreement, except as otherwise expressly provided in this Agreement.

Consultant shall designate a representative for purposes of this Agreement who shall be authorized to issue all consents, approvals, directives and agreements on behalf of Consultant called for by this Agreement, except as otherwise expressly provided in this Agreement.

6.3. Project Managers. City shall designate a Project Manager to work directly with Consultant in the performance of this Agreement.

Consultant shall designate a Project Manager who shall represent it and be its agent in all consultations with City during the term of this Agreement. Consultant or its Project Manager shall attend and assist in all coordination meetings called by City.

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

IF TO CONSULTANT:

ADVANTEC Consulting Engineers, Inc.
1200 Roosevelt
Irvine, CA 92620
Tel: (949) 861-4999
Attn: Carlos Ortiz

IF TO CITY:

City of Costa Mesa
77 Fair Drive
Costa Mesa, CA 92626
Tel: (714) 754-5017
Attn: Jennifer Rosales

Courtesy copy to:

City of Costa Mesa
77 Fair Drive
Costa Mesa, CA 92626
Attn: Finance Dept. | Purchasing

6.5. Drug-Free Workplace Policy. Consultant shall provide a drug-free workplace by complying with all provisions set forth in City's Council Policy 100-5, attached hereto as Exhibit "E" and incorporated herein by reference. Consultant's failure to conform to the requirements set forth in Council Policy 100-5 shall constitute a material breach of this Agreement and shall be cause for immediate termination of this Agreement by City.

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

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

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

6.9. Indemnification and Hold Harmless. Consultant agrees to defend, indemnify, hold free and harmless the City, its elected officials, officers, agents and employees, at Consultant's sole expense, from and against any and all claims, actions, suits or other legal proceedings brought against the City, its elected officials, officers, agents and employees arising out of the performance of the Consultant, its employees, and/or authorized subcontractors, of the work undertaken pursuant to this Agreement. The defense obligation provided for hereunder shall apply without any advance showing of negligence or wrongdoing by the Consultant, its employees, and/or authorized subcontractors, but shall be required whenever any claim, action, complaint, or suit asserts as its basis the negligence, errors, omissions or misconduct of the Consultant, its employees, and/or authorized subcontractors, and/or whenever any claim, action, complaint or suit asserts liability against the City, its elected officials, officers, agents and employees based upon the work performed by the Consultant, its employees, and/or authorized subcontractors under this Agreement, whether or not the Consultant, its employees, and/or authorized subcontractors are specifically named or otherwise asserted to be liable. Notwithstanding the foregoing, the Consultant shall not be liable for the defense or indemnification of the City for claims, actions, complaints or suits arising out of the sole active negligence or willful misconduct of the City. This provision shall supersede and replace all other indemnity provisions contained either in the City's specifications or Consultant's Proposal, which shall be of no force and effect.

6.10. Independent Contractor. Consultant is and shall be acting at all times as an independent contractor and not as an employee of City. Consultant shall have no power to incur any debt, obligation, or liability on behalf of City or otherwise act on behalf of City as an agent. Neither City nor any of its agents shall have control over the conduct of Consultant or any of Consultant's employees, except as set forth in this Agreement. Consultant shall not, at any time, or in any manner, represent that it or any of its agents or employees are in any manner

agents or employees of City. Consultant shall secure, at its sole expense, and be responsible for any and all payment of Income Tax, Social Security, State Disability Insurance Compensation, Unemployment Compensation, and other payroll deductions for Consultant and its officers, agents, and employees, and all business licenses, if any are required, in connection with the services to be performed hereunder. Consultant shall indemnify and hold City harmless from any and all taxes, assessments, penalties, and interest asserted against City by reason of the independent contractor relationship created by this Agreement. Consultant further agrees to indemnify and hold City harmless from any failure of Consultant to comply with the applicable worker's compensation laws. City shall have the right to offset against the amount of any fees due to Consultant under this Agreement any amount due to City from Consultant as a result of Consultant's failure to promptly pay to City any reimbursement or indemnification arising under this paragraph.

6.11. PERS Eligibility Indemnification. In the event that Consultant or any employee, agent, or subcontractor of Consultant providing services under this Agreement claims or 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 the City, Consultant shall indemnify, defend, and hold harmless City 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 City.

Notwithstanding any other agency, state or federal policy, rule, regulation, law or ordinance to the contrary, Consultant and any of its employees, agents, and subcontractors providing service under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any claims to, any compensation, benefit, or any incident of employment by City, including but not limited to eligibility to enroll in PERS as an employee of City and entitlement to any contribution to be paid by City for employer contribution and/or employee contributions for PERS benefits.

6.12. Cooperation. In the event any claim or action is brought against City relating to Consultant's performance or services rendered under this Agreement, Consultant shall render any reasonable assistance and cooperation which City might require.

6.13. Ownership of Documents. All findings, reports, documents, information and data including, but not limited to, computer tapes or discs, files and tapes furnished or prepared by Consultant or any of its subcontractors in the course of performance of this Agreement, shall be and remain the sole property of City. Consultant agrees that any such documents or information shall not be made available to any individual or organization without the prior consent of City. Any use of such documents for other projects not contemplated by this Agreement, and any use of incomplete documents, shall be at the sole risk of City and without liability or legal exposure to Consultant. City shall indemnify and hold harmless Consultant from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from City's use of such documents for other projects not contemplated by this Agreement or use of incomplete documents furnished by Consultant. Consultant shall deliver to City any findings, reports, documents, information, data, in any form, including but not limited to, computer tapes, discs, files audio tapes or any other Project related items as requested by City or its authorized representative, at no additional cost to the City.

6.14. Public Records Act Disclosure. Consultant has been advised and is aware that this Agreement and all reports, documents, information and data, including, but not limited to, computer tapes, discs or files furnished or prepared by Consultant, or any of its subcontractors,

pursuant to this Agreement and provided to City may be subject to public disclosure as required by the California Public Records Act (California Government Code section 6250 *et seq.*). Exceptions to public disclosure may be those documents or information that qualify as trade secrets, as that term is defined in the California Government Code section 6254.7, and of which Consultant informs City of such trade secret. The City will endeavor to maintain as confidential all information obtained by it that is designated as a trade secret. The City shall not, in any way, be liable or responsible for the disclosure of any trade secret including, without limitation, those records so marked if disclosure is deemed to be required by law or by order of the Court.

6.15. Conflict of Interest. Consultant and its officers, employees, associates and subconsultants, if any, will comply with all conflict of interest statutes of the State of California applicable to Consultant's services under this agreement, including, but not limited to, the Political Reform Act (Government Code sections 81000, *et seq.*) and Government Code section 1090. During the term of this Agreement, Consultant and its officers, employees, associates and subconsultants shall not, without the prior written approval of the City Representative, perform work for another person or entity for whom Consultant is not currently performing work that would require Consultant or one of its officers, employees, associates or subconsultants to abstain from a decision under this Agreement pursuant to a conflict of interest statute.

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

6.17. Prohibited Employment. Consultant will not employ any regular employee of City while this Agreement is in effect.

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

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

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

6.21. Headings. Paragraphs and subparagraph headings contained in this Agreement are included solely for convenience and are not intended to modify, explain or to be a full or accurate description of the content thereof and shall not in any way affect the meaning or interpretation of this Agreement.

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

6.23. Amendments. Only a writing executed by the parties hereto or their respective successors and assigns may amend this Agreement.

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

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

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

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

[Signatures appear on following page.]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by and through their respective authorized officers, as of the date first above written.

CONSULTANT

[Signature]

Signature

Leo Lee, CEO

[Name and Title]

Date: 5/7/18

[Redacted]
Social Security or Taxpayer ID Number

CITY OF COSTA MESA

[Signature]

Thomas Hatch
City Manager

Date: 5/17/18

ATTEST:

Brenda Green 5-21-18
Brenda Green
City Clerk



APPROVED AS TO FORM:

[Signature]
Thomas Duarte
City Attorney

Date: 5/15/18

APPROVED AS TO INSURANCE:

[Signature]
Ruth Wang
Risk Management

Date: 5/15/18

APPROVED AS TO CONTENT:

[Signature]
Jennifer Rosales
Project Manager

Date: 5/14/18

DEPARTMENTAL APPROVAL:

Raja Sethuraman

Raja Sethuraman
Public Services Director

Date: 5-17-18

APPROVED AS TO PURCHASING:

Cf for Colleen O'Donoghue Date: 5/17/18

Colleen O'Donoghue
Assistant Finance Director

EXHIBIT A
REQUEST FOR PROPOSALS

Submit one original, four (4) hard copies plus one electronic copy/flash drive of your proposal in sufficient detail to allow for thorough evaluation and comparative analysis. In the event of a conflict between the original and any hard copy or disk copy, the original shall control. Proposals must be received by the City of Costa Mesa no later than 5:00 pm on **Tuesday, February 20, 2018**. Proposals not received by the indicated time and date will not be accepted. No faxed copies or postmarks will be accepted in lieu of actual delivery.

Sincerely

A handwritten signature in blue ink, appearing to read 'Jennifer Rosales', with a long horizontal line extending to the right.

Jennifer Rosales
Transportation Services Manager

- c Raja Sethuraman, Public Services Director
Michael Sampson, Associate Engineer

FAIRVIEW ROAD SIGNAL SYNCHRONIZATION CORRIDOR

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INTRODUCTION

The City of Costa Mesa is requesting proposals to develop traffic signal infrastructure and coordination improvements for the Fairview Road corridor from Garden Grove Boulevard near the 22 Freeway in Santa Ana to Newport Boulevard in Costa Mesa. The project will include all intersections along Fairview Road with 34 signals within the Cities of Costa Mesa and Santa Ana. A project location map for this corridor is included in Exhibit A-1.

All the project corridors are funded in part by the Orange County Transportation Authority (OCTA) Project P Regional Traffic Signal Synchronization Project grant funds.

GENERAL SCOPE OF WORK

The general project scope of work includes:

TASK 1: PROJECT MANAGEMENT

- ❖ Coordinate monthly update meetings with Cities.

TASK 2: DEVELOP AND IMPLEMENT TRAFFIC SIGNAL SYNCHRONIZATION TIMING

- ❖ Assessment of traffic signals and arterial network conditions including signal phasing, traffic and pedestrian volumes, vehicle speeds, roadway capacity and operational efficiency.
- ❖ Providing a concise Design Report Memorandum for suggested ITS elements such as CCTVs, signal systems, communication network, etc; functionality of the interconnect system; and other relevant information.
- ❖ Modeling of arterial and intersection capacity/progression and joint preparation of signal analysis and coordination timing plans for the respective cities of Costa Mesa and Santa Ana (the Cities) review and approval.
- ❖ Implementation for the City of Costa Mesa.
- ❖ Fine-tuning of signal coordination plans for both Cities including compilation of Before/After Studies documenting project improvements, and annual assessment for 3 years.

TASK 3: ENGINEERING (PS&E), SYSTEM PROCUREMENT AND INTEGRATION

- ❖ Development of Project record drawings for the purchase of necessary traffic signal controllers, controller cabinets, traffic signal improvements, communication equipment, Closed Circuit Television Cameras (CCTV) and Intelligent Transportation System (ITS) equipment and elements. The proposal should include separate scope of service section for the work in each city for each specific corridor.
 - City of Costa Mesa - Work to be performed includes all necessary work for traffic signals within the City, including integration in the City of Costa Mesa's Traffic Management Center (TMC) and CENTRACS System. The preliminary equipment listing is included as Exhibit A-2.
 - City of Santa Ana – The installation and equipment listing are included as Exhibit A-2.
- ❖ Procurement of necessary traffic signal controllers, controller cabinets, traffic signal improvements, communication equipment, Closed Circuit Television Cameras (CCTV) and Intelligent Transportation System (ITS) equipment and elements.

TASK 4: CONSTRUCTION MANAGEMENT

- ❖ Coordination with Cities and any sub consultant for the installation and integration of any equipment needed to complete the project.

TASK 5: ONGOING OPERATION AND MAINTENANCE SERVICES

- ❖ Upon completion of Task 3, Two (2) years of Ongoing Operation and Maintenance Service shall be provided. These services shall include minor signal timing changes and consultation with respective City on any modifications along the corridor.

TASK 6: PROJECT REPORT

- ❖ A final report will be prepared summarizing “before” and “after” conditions identifying signal coordination benefits derived in corridor vehicle progression, including reduction in stops, delays, fuel consumption, exhaust emissions, improvement in individual intersection operations and will include the OCTA MOE Corridor Synchronization Performance Index (CSPI): Average Speed, Stops per Mile, and Greens per Red.

GENERAL WORK PROGRAM

Signal timing along the Fairview corridor requires updating to meet current traffic demands and patterns. The goals of the project are to update timing, coordinate the roadway between the jurisdictions and also to integrate the traffic signals, communication, and ITS components optimally at City’s TMC. The scope of work is developed to improve these conditions jointly with the neighboring cities. Improvements at the Caltrans signals will primarily be update timing and coordination.

- Existing field conditions and signal timing plans for intersection and corridor operations shall be evaluated and conditions documented. The consultant shall model, analyze and optimize individual intersection conditions and submit for review by the City, prior to analysis of arterial coordination studies. The Consultant shall use the latest version of Synchro 10 for the analysis. The intersection and arterial signal analysis and optimization approach and all software programs to be utilized by the Consultant shall be described in the proposal. New timings shall be developed, implemented, tested and refined to optimize signal coordination and vehicle progression. A minimum of five separate timing plans per intersection shall be prepared covering the AM peak period, PM peak period, midday, evening (if needed), and weekend. Full scale “draft” Time-Space Diagrams (500’ per inch horizontal/50 second per inch vertical) shall be prepared for each timing pattern and presented to each affected City on each corridor for review, with final diagrams prepared documenting final coordination timings. The timing study shall account for the network-wide coordination system and respective impact/benefits to cross street progression. Network traffic flow shall not be compromised.

The professional services scope of work is intended as a "Turnkey" project. All tasks shall be coordinated to effectively develop interrelated project elements, and tasks shall not be advanced until preliminary requirements are addressed and clear direction established. The consultant shall have total responsibility for the accuracy and completeness of all work and services required for this project. Quality Control shall be consistently and thoroughly applied throughout project development. Assigned QA/QC staff shall be technically well qualified to conduct the appropriate level of oversight, and demonstrate a concerted commitment to provide a high quality product.

Project development meetings shall be held monthly with concise written records prepared on all meetings and activities. The consultant will be responsible for all coordination with participating agencies, preparing meeting agendas, minutes and presentation materials. A project schedule shall be prepared itemizing all activities and subtasks to support project milestones. The schedule shall be in the form of a bar chart and show deliverables and other relevant data needed for the control of work. A copy of the schedule and monthly updates shall be furnished to the City Project Manager. The proposed scope of work is based on a Measure M2 Program P grant award received from OCTA. The

consultant shall retain detailed accounting records to fully meet OCTA accounting and audit oversight.

Consultants proposing on this project shall clearly demonstrate the ability and commitment to accelerate project completion with promptness and efficiency. Accordingly, the consultant shall commit all necessary resources to achieve expeditious completion. Firms considering proposal submittals are requested to have in-house technical expertise to fully and professionally address and facilitate all aspects of the project. The selected consulting firm shall maintain the same project manager throughout the duration of the project, as specified in the proposal and approved by the City.

The description of work defines the general project requirements. Associated tasks and provisions not specifically defined herein are requested to be fully addressed in the proposal. The tasks and fee shall reflect the mandatory combined elements for the overall project; route assessment, signal coordination, before and after studies, and address the equipment identified needs. All tasks shall be undertaken and complete within the proposed "Not to Exceed" contract fee.

PRESENTATION TO STAKEHOLDERS

The consultant will be required to present the results of the study for each City at a City Council Study Session and at the ITS Roundtable meetings at OCTA.

CONTENT OF PROPOSAL

It is requested that the following be submitted with your proposal:

- A narrative understanding of the project, any suggestions you might have to expedite the project or special concerns that the City should be advised of. Identify all tasks necessary to meet the intended project objective and achieve project completion within the proposal timeframes.
- Separate scope of services section for the task work to be performed for each respective jurisdictions of the corridor. Production of Plans, Specifications and Estimate shall conform to the details listed in **Exhibit B**, where the consultant proposes to produce plans. The approach should specifically address the manner in which the consultant plans to accomplish the work for each City. Sub-consultants and teams shall be listed on the proposal.
- A detailed schedule indicating stages of work, sub-tasks and timeframes for the corridor.
- An organization chart and staffing plan identifying personnel who will perform work for each specific corridor, a brief resume on each individual (one-page max per person) and recent projects they have worked on of similar type. Identify the project manager with a detailed resume and the individual authorized to negotiate the contract on behalf of the consulting firm.
- A listing of similar improvement projects that your firm has completed within the last five years. Information should include a description of work, year completed, cost, and agency/client name along with the agency contact person.
- The City may develop a short list and schedule interviews or make an award based on proposals alone.
- Commitment to comply with Professional Services Agreement requirements for the City of Costa Mesa and Insurance requirements, attached on **Exhibits C and D**. **If a Proposer has any exceptions or conditions to the Agreement, these must be submitted for consideration with the Proposal. Otherwise, the Proposer will be deemed to have accepted the form of Agreement.**

- Submittal of one original and four (4) hard copies plus one electronic copy/flash drive of your Proposal.
- The proposal may not be longer **than 20 pages**, excluding the attached resume pages.

FEE SCHEDULE

The fee schedule is to be submitted in a separate envelope. The fee schedule should show the hourly cost of personnel per task under each phase, with a total not-to-exceed amount for the project. The consultant’s fee schedule for the prime and sub-consultants should contain a breakdown of all cost components including labor base rate, other direct costs, overhead, and fees in compliance with the described scope, the attached General Specifications, and include all associated work required to achieve the project objective. It is requested that the fee, including meetings, reproduction, materials, and associated project expenses be itemized per the following General Fee Schedule format, though additional support details may be included.

PROPOSAL EVALUATION CRITERIA

Proposals will be evaluated on the basis of the response to all provisions of this RFP. The maximum score is 100 total possible points. The following criteria will be used for evaluation and comparison of proposals submitted.

- | | |
|---|-----------|
| ➤ Firm Qualifications (technical expertise, staff qualifications, etc.) | 25 points |
| ➤ Management Approach (methodology, quality control, etc.) | 25 points |
| ➤ Work Plan (delivery schedule, local knowledge, etc.) | 25 points |
| ➤ Overall Presentation (similar project experience, RFP compliance, etc.) | 25 points |

RIGHT TO REJECT ALL PROPOSALS

The City of Costa Mesa reserves the right to reject any or all proposals submitted, and no representation is made hereby that any contract will be awarded pursuant to this request for proposal, or otherwise. All costs incurred in the preparation of the proposal, in the submission of additional information, and/or in any other aspect of a proposal prior to the award of a written contract will be borne by respondent. The City will provide only the staff assistance and documentation specifically referred to herein and will not be responsible for any other cost or obligation of any kind that may be incurred by a respondent. All proposals submitted to the City of Costa Mesa in response to this request for proposals shall become the property of the City.

The City of Costa Mesa professional services standard agreement and sample certificate of insurance are included as Exhibits C and D. Should your firm be interested in submitting a proposal for this project, please forward to the City of Costa Mesa, Transportation Services Division, 4th floor City Hall, 77 Fair Drive, Costa Mesa, Ca 92628, **on or before 5:00 p.m. February 20, 2018**. No Faxed Copies; Postmarks will not be accepted in lieu of actual delivery.

FAIRVIEW ROAD CORRIDOR TRAFFIC SIGNAL COORDINATION PROJECT

PROJECT DESCRIPTION

The Fairview Road Corridor Traffic Signal Coordination Project will coordinate traffic signal timing and provide necessary upgrades to traffic signal infrastructure including necessary integration and technical improvements to monitor these signals in each respective City's Traffic Management system.

This corridor includes 34 signals between Garden Grove Blvd and Newport Blvd and runs 8.5 miles crossing the jurisdictions of Costa Mesa, Santa Ana and Caltrans. Caltrans controls three traffic signals within the project area serving on/off ramps of SR-22 and I-405. This corridor is a heavily travelled bus route and carries an average daily traffic volume of up to 43,000. Fairview Road is a north-south corridor starting in the northern end of the City of Santa Ana border as Fairview Street, crosses the Santa Ana River, crosses the I-405 Freeway and continues as a north-south route to Newport Boulevard in the City of Costa Mesa as Fairview Road. The street serves residential, recreational and commercial uses, including Centennial and Fairview Parks, Orange Coast College, and the Orange County Fairgrounds.

PROPOSED TIMING IMPLEMENTATION

A minimum of three (3) separate "post timing implementation" field studies shall be conducted for each timing plan to incrementally optimize progression by refining cycle lengths, offsets, phase sequences and split parameters in close consultation with City staff. A final report will be prepared summarizing "before" and "after" conditions identifying signal coordination benefits derived in corridor vehicle progression, including reduction in stops, delays, fuel consumption, exhaust emissions, improvement in individual intersection operations and will include the OCTA MOE Corridor Synchronization Performance Index (CSPI): Average Speed, Stops per Mile, and Greens per Red.

The manual input of new coordination timings and any adjustments recommended by the consultant shall be made by the consultant in Costa Mesa with direct supervision by the city staff. All timing input (initial and subsequent fine tunings) for Santa Ana traffic signal and traffic signal system will be made by Santa Ana city staff.

AGENCY ROLES AND RELATIONSHIPS

The City of Costa Mesa will serve as lead agency on the project and be responsible for project administration, contractual agreements and adherence to the budget. Direct oversight by the City of Santa Ana will be provided on all interrelated project elements.

GENERAL FEE SCHEDULE FORMAT

The format shows the general fee schedule format, though additional support details maybe included:

General Fee Schedule

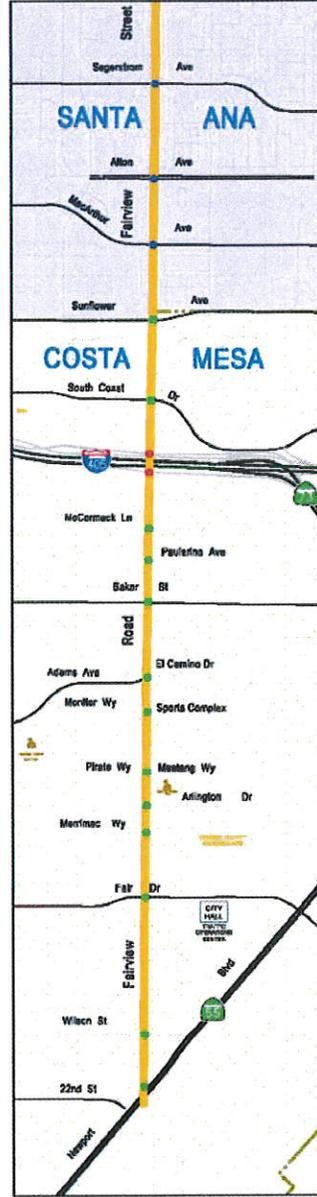
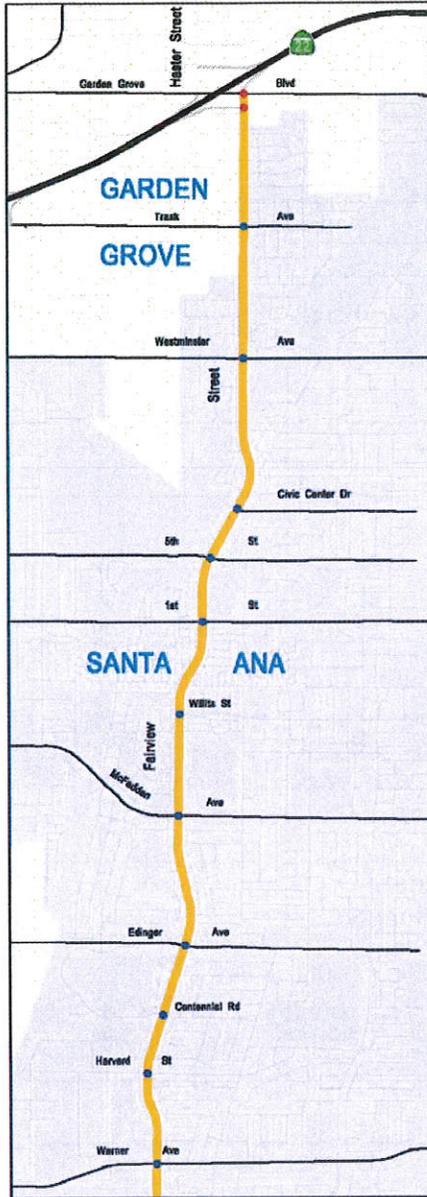
Phase	Tasks	Costs		
		City of Costa Mesa	City Of Santa Ana	Total
Primary Implementation	Project Administration			
	Develop and Implement			
	Before and After Study			
	Sub-Total			
	Design			
	System Improvements			
	Contingency			
	Construction Engineering			
	Sub-Total			
	Phase Total			
On-Going Maintenance & Operation	Ongoing Maintenance (2 Years): Monitoring			
	On Going Maintenance (2 Years): Communication & Detection Support			
	Phase Total			
Project Total				

All originals of plans, field notes, data and calculations, correspondence, reports, electronic files, etc., will be turned over to the City upon completion of work. Ten percent (10%) of the total contract fee will be withheld until final project documents are submitted to the City.

CONTRACT CHANGES

Any change in the scope of work resulting in a contract increase or decrease in fee shall be approved by the City in writing prior to commencement of any change in work. No fee adjustment will be allowed unless said prior approval is authorized exclusively in writing by the City, without exception.

EXHIBIT A-1 FAIRVIEW PROJECT MAP



- LEGEND:**
- Fairview Road/Fairview Street Corridor
 - City of Costa Mesa Traffic Signal
 - City of Santa Ana Traffic Signal
 - Caltrans Traffic Signal



EXHIBIT A-2

FAIRVIEW TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

The following list of work shall be accomplished for the project. The consultant may develop a set of plans, specifications and estimate for the following work to be accomplished through a competitive bid process. Or, the consultant may propose to manage and accomplish the work with consultant forces and with the use of subcontractors. Plans and record as-built drawings shall be produced in either case. Changes to the work and approach may be proposed based on traffic signal coordination studies and consultant's level of expertise. All work proposed shall be compatible with the City's current Traffic Management System and result in the following outcome at each signal.

Costa Mesa Project Improvement List

1. Fairview Rd at Sunflower Ave

GTT GPS Opticom Preemption, Clary UPS system with Batteries, and Econolite Autoscope Vision Video Detection

2. Fairview Rd at South Coast Dr

GTT GPS Opticom Preemption and Econolite Autoscope Vision Video Detection

3. Fairview Rd at McCormack Ln

GTT GPS Opticom Preemption

4. Fairview Rd at Paularino Ave

GTT GPS Opticom Preemption

5. Fairview Rd at Baker Rd

GTT GPS Opticom Preemption and Econolite Autoscope Vision Video Detection

6. Fairview Rd at Adams Ave

GTT GPS Opticom Preemption, Clary UPS system with Batteries, and Econolite Autoscope Vision Video Detection

7. Fairview Rd at Monitor Way

Signal Modification for NBLT and SBLT from Protected Permissive to Protected Left Turn, Replace cabinet with New Type P44 cabinet, Type II Service and Foundation, New Southern California Edison Service Fee, Clary UPS system with Batteries, GTT GPS Opticom Preemption, and Econolite Autoscope Vision Video Detection

8. Fairview Rd at Mustang Way

Replace cabinet with New Type P44 cabinet, Type II Service and Foundation, New Southern California Edison Service Fee, Clary UPS system with Batteries, GTT GPS Opticom Preemption, and Econolite Autoscope Vision Video Detection

9. Fairview Rd at Arlington Dr

Replace cabinet with New Type P44 cabinet, Type II Service and Foundation, New Southern California Edison Service Fee, Clary UPS system with Batteries, GTT GPS Opticom Preemption, Bosch MIC IP Staright 7000 HD PTZ Camera, and Econolite Autoscope Vision Video Detection

10. Fairview Rd at Merrimac Way

GTT GPS Opticom Preemption and Econolite Autoscope Vision Video Detection

11. Fairview Rd at Fair Dr

Replace cabinet with New Type P44 cabinet, Type II Service and Foundation, GTT GPS Opticom Preemption and Econolite Autoscope Vision Video Detection

12. Fairview Rd at Wilson Rd

GTT GPS Opticom Preemption and Econolite Autoscope Vision Video Detection

13. Fairview Rd at Newport Blvd

GTT GPS Opticom Preemption

14. Fair Dr at Loyola Rd

Econolite Cobalt controller and Copper Ethernet Switch (Etherwan EX73242-ABB w/ Hardened Power Supply and necessary jumper cables)

15. Fair Dr at Vanguard Way

Econolite Cobalt Controller Fiber Optic Ethernet Switch (Etherwan EX73242-ABB w/ Hardened Power Supply and necessary jumper cables)

16. Video Management Software and New Server

Upgrade video management software and provide compatible server hardware.

Santa Ana Project Improvement List

1. Fairview St & Task Ave

Replace cabinet w/ Type 332L cabinet, Type II Service and Foundation, Southern California Edison New Service Fee, Safetran ATC 2070C controller w/ Econolite ASC/3-LX Software, Fiber Optic Ethernet Switch (Etherwan EX71620-A0B w/ Hardened Power Supply and necessary jumper cables), Power Distribution Unit (APC-AP7900), Install 1-DLC in existing conduit for NB & SB System Detection

2. Fairview St & Edna Dr

Upgrade controller CPU to Safetran 2070-1C CPU Module (ATC Engine Board) w/ Econolite ASC/3-LX Software

3. Fairview St & Westminster Ave/17th St

Install 1-DLC in existing conduit and 1-Type E Loop for EB System Detection

4. Fairview St & Civic Center Dr

Upgrade controller CPU to Safetran 2070-1C CPU Module (ATC Engine Board) w/ Econolite ASC/3-LX Software

5. Fairview St & 5th St

Replace cabinet w/ Type 332L cabinet, Type II Service and Foundation, Southern California Edison New Service Fee, Safetran ATC 2070C controller w/ Econolite ASC/3-LX Software, Fiber Optic Ethernet Switch (Etherwan EX73242-ABB w/ Hardened Power Supply and necessary jumper cables), Power Distribution Unit (APC-AP7900)

6. Fairview St & 1st St

Replace cabinet w/ Type 332L cabinet, Type II Service and Foundation, Southern California Edison New Service Fee, Safetran ATC 2070C controller w/ Econolite ASC/3-LX Software, Replace CCTV w/ Axis Q6055-E PTZ Network Camera, Power Distribution Unit (APC-AP7900)

7. Fairview St & Willits St

Upgrade controller CPU to Safetran 2070-1C CPU Module (ATC Engine Board) w/ Econolite ASC/3-LX Software, Fiber Optic Ethernet Switch (Etherwan EX71620-A0B w/ Hardened Power Supply and necessary jumper cables)

8. Fairview St & McFadden Ave

Replace cabinet w/ Type 332L cabinet, Type II Service and Foundation, Southern California Edison New Service Fee, Safetran ATC 2070C controller w/ Econolite ASC/3-LX Software, Replace CCTV w/ Axis Q6055-E PTZ Network Camera, Power Distribution Unit (APC-AP7900), Fiber Optic Ethernet Switch (Etherwan EX71620-A0B w/ Hardened Power Supply and necessary jumper cables), Install 1-DLC in existing conduit and 1-Type E Loop for NB & SB System Detection

9. Fairview St & Edinger Ave

Replace cabinet w/ Type 332L cabinet, Type II Service and Foundation, Southern California Edison New Service Fee, Safetran ATC 2070C controller w/ Econolite ASC/3-LX Software, Replace CCTV w/ Axis Q6055-E PTZ Network Camera, Power Distribution Unit (APC-AP7900), Install 12-Single Mode Fiber Optic Cable in existing conduit (from Fairview/Edinger to Edinger/Mohawk), Install Corning PCH-04U (including connectors and trays) and terminate (2) 24-SMFO & 12-SMFO, Install Corning Splice Closure (including connectors and trays) and Splice (3) 24-SMFO & 12-SMFO, Fiber Optic Ethernet Switch (Etherwan EX73242-ABB w/ Hardened Power Supply and necessary jumper cables), Remove and Relocate existing Wireless Radio to Fairview/Willits (including new cable)

10. Fairview St & St Andrew Pl

Upgrade controller CPU to Safetran 2070-1C CPU Module (ATC Engine Board) w/ Econolite ASC/3-LX Software, Install 12-Single Mode Fiber Optic Drop Cable, Install Corning CCH-01U FDU (including connectors and trays) and terminate 12-SMFO, Install Corning Splice Closure (including connectors and trays) and Splice 24-SMFO & 12-SMFO, Fiber Optic Ethernet Switch (Etherwan EX71620-A0B w/ Hardened Power Supply and necessary jumper cables)

11. Fairview St & Harvard St

Upgrade controller CPU to Safetran 2070-1C CPU Module (ATC Engine Board) w/ Econolite ASC/3-LX Software, Replace CCTV w/ Axis Q6055-E PTZ Network Camera, Install 12-Single Mode Fiber Optic Drop Cable, Install Corning CCH-01U FDU (including connectors and trays) and terminate 12-SMFO, Install Corning Splice Closure (including connectors and trays) and Splice 24-SMFO & 12-SMFO, Fiber Optic Ethernet Switch (Etherwan EX71620-A0B w/ Hardened Power Supply and

necessary jumper cables), Remove and Relocate existing Wireless Radio to Fairview/Willits (including new cable), Install 1-DLC in existing conduit and 1-Type E Loop for NB & SB System Detection

12. Fairview St & Warner Ave

Upgrade controller CPU to Safetran 2070-1C CPU Module (ATC Engine Board) w/ Econolite ASC/3-LX Software, Replace CCTV w/ Axis Q6055-E PTZ Network Camera, Install 3" PVC Conduit (including necessary pull boxes) from Warner to Segerstrom, Install 24-Single Mode Fiber Optic, Install Corning PCH-04U FDU (including connectors and trays) and terminate (3) 24-SMFO, Fiber Optic Ethernet Switch (Etherwan EX73242-ABB w/ Hardened Power Supply and necessary jumper cables), Remove and Relocate existing Wireless Radio to Fairview/McFadden (including new cable)

13. Fairview St & Segerstrom Ave

Replace cabinet w/ Type 332L cabinet, Type II Service and Foundation, Southern California Edison New Service Fee, Safetran ATC 2070C controller w/ Econolite ASC/3-LX Software, Install 3" PVC Conduit (including necessary pull boxes) from Segerstrom to Alton, Install 24-Single Mode Fiber Optic, Install 12-Single Mode Fiber Optic in existing conduit (to Segerstrom/Susan), Install Corning CCH-01U FDU (including connectors and trays) and terminate 12-SMFO, Install Corning Splice Closure (including connectors and trays) and Splice 24-SMFO & 12-SMFO, Fiber Optic Ethernet Switch (Etherwan EX71620-A0B w/ Hardened Power Supply and necessary jumper cables), Remove and Relocate existing Wireless Radio at intersection and to Segerstrom/Greenville (including new cable), Power Distribution Unit (APC-AP7900), Install 1-DLC in existing conduit and 1-Type E Loop for NB & SB System Detection

14. Fairview St & Alton Ave

Replace cabinet w/ Type 332L cabinet, Type II Service and Foundation, Southern California Edison New Service Fee, Safetran ATC 2070C controller w/ Econolite ASC/3-LX Software, Install 3" PVC Conduit (including necessary pull boxes) from Alton to MacArthur, Install 24-Single Mode Fiber Optic, Install Corning CCH-01U FDU (including connectors and trays) and terminate 12-SMFO, Install Corning Splice Closure (including connectors and trays) and Splice 24-SMFO & 12-SMFO, Fiber Optic Ethernet Switch (Etherwan EX71620-A0B w/ Hardened Power Supply and necessary jumper cables), Power Distribution Unit (APC-AP7900)

15. Fairview St & MacArthur Blvd

Upgrade controller CPU to Safetran 2070-1C CPU Module (ATC Engine Board) w/ Econolite ASC/3-LX Software, Install Corning CCH-02U FDU (including connectors and trays) and terminate (2) 24-SMFO, Fiber Optic Ethernet Switch (Etherwan EX73242-ABB w/ Hardened Power Supply and necessary jumper cables), Remove and Relocate existing Wireless Radio to McFadden/Mohawk (including new cable)

¹ – Caltrans Signal

EXHIBIT B

PLANS, SPECIFICATIONS & ESTIMATES REQUIREMENTS

This phase includes the preparation of final plans and specifications necessary to construct the project. This task includes, but not limited to the following:

- A. Construction Documents** - Prepare design plans and profiles at 1" = 20' scale on standard 24" x 36" mylar. Electronic CAD files compatible with both AutoCAD 2014 (Costa Mesa) and Microstation V8i (Santa Ana) and other document files shall be delivered to City. Complete plans on mylar per City standards. Plans are to be fully detailed to advertise and construct the project. Work shall include:
1. Utilities - Perform all necessary research to establish precise location of all utilities and utility easements. Coordinate with all utility companies to determine the nature and location of all possible relocations and associated costs. Determine where interfaces with existing facilities will occur as a result of the construction of this project. Consult with affected utility companies requiring relocations, and resolve any conflicts, keeping City staff informed in writing, including the possibility of undergrounding utilities presently on poles along the project area. Comply with Caltrans "Manual on High and Low Risk Underground Facilities within Highway Rights-of-Way."
 2. If needed, prepare a Water Pollution Control Plan meeting recent City and State standards.
 3. Traffic control plans are required and must provide continuous driveway and pedestrian access at all times during the construction phase of the project. Traffic control plans shall identify each construction stage and sequence, provide adequate details on alternate detour routes, developed to minimize impacts to residents. It is intended that only one lane may be closed from 8:30am to 3:00pm during daytime hours.
 4. For budgeting purposes, submit to the City preliminary construction estimates and a monthly update of the estimates as design work progresses. Prepare final detailed construction quantity and cost estimate.
 5. Obtain final design approval from the City, and comply with all applicable requirements.
 6. Complete project contract documents and special provisions in a format consistent with current City projects and in conformance with State and Federal guidelines. A copy of the construction contract agreement will be furnished by the City.
 7. Prepare and submit two Resident Engineers files, containing at a minimum, final construction quantities and cost estimates with background calculation work sheets; Caltrans permit material and relative information.
 8. The Consultant will be requested to review and approve addenda and provide clarification to plans and specifications. Consultant shall attend the pre-construction meeting, and shall be available for consultation and assistance during construction of the project to clarify or explain items relating to the design. The consultant will also be responsible for preparation of final

asbuilt plans.

9. The selected consultant shall include all additional items necessary to achieve completion and approval of the final design plans and specifications.

EXHIBIT C

PROFESSIONAL STANDARD SERVICES AGREEMENT

**CITY OF COSTA MESA
PROFESSIONAL SERVICES AGREEMENT
WITH**

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is made and entered into this ___ day of _____, 20__ ("Effective Date"), by and between the CITY OF COSTA MESA, a municipal corporation ("City"), and _____, a [state] [type of entity] ("Consultant").

WITNESSETH:

A. WHEREAS, City proposes to utilize the services of Consultant as an independent contractor to _____, as more fully described herein; and

B. WHEREAS, Consultant represents that it has that degree of specialized expertise contemplated within California Government Code section 37103, and holds all necessary licenses to practice and perform the services herein contemplated; and

C. WHEREAS, City and Consultant desire to contract for the specific services described in Exhibit "A" (the "Project") and desire to set forth their rights, duties and liabilities in connection with the services to be performed; and

D. WHEREAS, no official or employee of City has a financial interest, within the provisions of sections 1090-1092 of the California Government Code, in the subject matter of this Agreement.

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

1.0. SERVICES PROVIDED BY CONSULTANT

1.1. Scope of Services. Consultant shall provide the professional services described in the City's Request for Proposals ("RFP"), attached hereto as Exhibit "A," and Consultant's Response to City's RFP ("Consultant's Proposal"), attached hereto as Exhibit "B," both incorporated herein by this reference.

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

1.3. Performance to Satisfaction of City. Consultant agrees to perform all the work to the complete satisfaction of the City and within the hereinafter specified. Evaluations of the work will be done by the City Manager or his or her designee. If the quality of work is not satisfactory, City in its discretion has the right to:

- (a) Meet with Consultant to review the quality of the work and resolve the matters of concern;
- (b) Require Consultant to repeat the work at no additional fee until it is satisfactory; and/or
- (c) Terminate the Agreement as hereinafter set forth.

1.4. Warranty. Consultant warrants that it shall perform the services required by this Agreement in compliance with all applicable Federal and California employment laws, including, but not limited to, those laws related to minimum hours and wages; occupational health and safety; fair employment and employment practices; workers' compensation insurance and safety in employment; and all other Federal, State and local laws and ordinances applicable to the services required under this Agreement. Consultant shall indemnify and hold harmless City from and against all claims, demands, payments, suits, actions, proceedings, and judgments of every nature and description including attorneys' fees and costs, presented, brought, or recovered against City for, or on account of any liability under any of the above-mentioned laws, which may be incurred by reason of Consultant's performance under this Agreement.

1.5. Non-Discrimination. In performing this Agreement, Consultant shall not engage in, nor permit its agents to engage in, discrimination in employment of persons because of their race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military or veteran status, except as permitted pursuant to section 12940 of the Government Code.

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

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

1.8. Confidentiality. Employees of Consultant in the course of their duties may have access to financial, accounting, statistical, and personnel data of private individuals and employees of City. Consultant covenants that all data, documents, discussion, or other information developed or received by Consultant or provided for performance of this Agreement are deemed confidential and shall not be disclosed by Consultant without written authorization by City. City shall grant such authorization if disclosure is required by law. All City data shall be returned to City upon the termination of this Agreement. Consultant's covenant under this Section shall survive the termination of this Agreement.

2.0. COMPENSATION AND BILLING

2.1. Compensation. Consultant shall be paid in accordance with the fee schedule set forth in Exhibit "C," attached hereto and made a part of this Agreement by this reference (the "Fee Schedule"). Consultant's total compensation shall not exceed _____ Dollars (\$ _____,00).

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

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

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

3.0. TIME OF PERFORMANCE

3.1. Commencement and Completion of Work. The professional services to be performed pursuant to this Agreement shall commence within five (5) days from the Effective Date of this Agreement. Failure to commence work in a timely manner and/or diligently pursue work to completion may be grounds for termination of this Agreement.

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

4.0. TERM AND TERMINATION

4.1. Term. This Agreement shall commence on the Effective Date and continue for a period of _____ months, ending on _____, 20____, unless previously terminated as provided herein or as otherwise agreed to in writing by the parties.

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

4.3. Compensation. In the event of termination, City shall pay Consultant for reasonable costs incurred and professional services satisfactorily performed up to and including the date of City's written notice of termination. Compensation for work in progress shall be prorated based on the percentage of work completed as of the effective date of termination in accordance with the fees set forth herein. In ascertaining the professional services actually rendered hereunder up to the

effective date of termination of this Agreement, consideration shall be given to both completed work and work in progress, to complete and incomplete drawings, and to other documents pertaining to the services contemplated herein whether delivered to the City or in the possession of the Consultant.

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

5.0. INSURANCE

5.1. Minimum Scope and Limits of Insurance. Consultant shall obtain, maintain, and keep in full force and effect during the life of this Agreement all of the following minimum scope of insurance coverages with an insurance company admitted to do business in California, rated "A," Class X, or better in the most recent Best's Key Insurance Rating Guide, and approved by City:

- (a) Commercial general liability, including premises-operations, products/completed operations, broad form property damage, blanket contractual liability, independent contractors, personal injury or bodily injury with a policy limit of not less than One Million Dollars (\$1,000,000.00), combined single limits, per occurrence. If such insurance contains a general aggregate limit, it shall apply separately to this Agreement or shall be twice the required occurrence limit.
- (b) Business automobile liability for owned vehicles, hired, and non-owned vehicles, with a policy limit of not less than One Million Dollars (\$1,000,000.00), combined single limits, per occurrence for bodily injury and property damage.
- (c) Workers' compensation insurance as required by the State of California. Consultant agrees to waive, and to obtain endorsements from its workers' compensation insurer waiving subrogation rights under its workers' compensation insurance policy against the City, its officers, agents, employees, and volunteers arising from work performed by Consultant for the City and to require each of its subcontractors, if any, to do likewise under their workers' compensation insurance policies.
- (d) Professional errors and omissions ("E&O") liability insurance with policy limits of not less than One Million Dollars (\$1,000,000.00), combined single limits, per occurrence and aggregate. Architects' and engineers' coverage shall be endorsed to include contractual liability. If the policy is written as a "claims made" policy, the retro date shall be prior to the start of the contract work. Consultant shall obtain and maintain, said E&O liability insurance during the life of this Agreement and for three years after completion of the work hereunder.

5.2. Endorsements. The commercial general liability insurance policy and business automobile liability policy shall contain or be endorsed to contain the following provisions:

- (a) Additional insureds: "The City of Costa Mesa and its elected and appointed boards, officers, officials, agents, employees, and volunteers are additional insureds with respect to: liability arising out of activities performed by or on behalf of the Consultant pursuant to its contract with the City; products and completed operations of the Consultant; premises owned, occupied or used by the Consultant; automobiles owned, leased, hired, or borrowed by the Consultant."
- (b) Notice: "Said policy shall not terminate, be suspended, or voided, nor shall it be cancelled, nor the coverage or limits reduced, until thirty (30) days after written notice is given to City."
- (c) Other insurance: "The Consultant's insurance coverage shall be primary insurance as respects the City of Costa Mesa, its officers, officials, agents, employees, and volunteers. Any other insurance maintained by the City of Costa Mesa shall be excess and not contributing with the insurance provided by this policy."
- (d) Any failure to comply with the reporting provisions of the policies shall not affect coverage provided to the City of Costa Mesa, its officers, officials, agents, employees, and volunteers.
- (e) The Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

5.3. Deductible or Self Insured Retention. If any of such policies provide for a deductible or self-insured retention to provide such coverage, the amount of such deductible or self-insured retention shall be approved in advance by City. No policy of insurance issued as to which the City is an additional insured shall contain a provision which requires that no insured except the named insured can satisfy any such deductible or self-insured retention.

5.4. Certificates of Insurance. Consultant shall provide to City certificates of insurance showing the insurance coverages and required endorsements described above, in a form and content approved by City, prior to performing any services under this Agreement. The certificates of insurance shall be attached hereto as Exhibit "E" and incorporated herein by this reference.

5.5. Non-Limiting. Nothing in this Section shall be construed as limiting in any way, the indemnification provision contained in this Agreement, or the extent to which Consultant may be held responsible for payments of damages to persons or property.

6.0. GENERAL PROVISIONS

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

6.2. Representatives. The City Manager or his or her designee shall be the representative of City for purposes of this Agreement and may issue all consents, approvals, directives and agreements on behalf of the City, called for by this Agreement, except as otherwise expressly provided in this Agreement.

Consultant shall designate a representative for purposes of this Agreement who shall be authorized to issue all consents, approvals, directives and agreements on behalf of Consultant called for by this Agreement, except as otherwise expressly provided in this Agreement.

6.3. Project Managers. City shall designate a Project Manager to work directly with Consultant in the performance of this Agreement.

Consultant shall designate a Project Manager who shall represent it and be its agent in all consultations with City during the term of this Agreement. Consultant or its Project Manager shall attend and assist in all coordination meetings called by City.

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

IF TO CONSULTANT:

Tel: _____
Attn: _____

IF TO CITY:

City of Costa Mesa
77 Fair Drive
Costa Mesa, CA 92626
Tel: (714) 754-
Attn: _____

Courtesy copy to:

City of Costa Mesa
77 Fair Drive
Costa Mesa, CA 92626
Attn: Finance Dept. | Purchasing

6.5. Drug-Free Workplace Policy. Consultant shall provide a drug-free workplace by complying with all provisions set forth in City's Council Policy 100-5, attached hereto as Exhibit "F" and incorporated herein by reference. Consultant's failure to conform to the requirements set forth in Council Policy 100-5 shall constitute a material breach of this Agreement and shall be cause for immediate termination of this Agreement by City.

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

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

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

6.9. Indemnification and Hold Harmless. Consultant agrees to defend, indemnify, hold free and harmless the City, its elected officials, officers, agents and employees, at Consultant's sole expense, from and against any and all claims, actions, suits or other legal proceedings brought against the City, its elected officials, officers, agents and employees arising out of the performance of the Consultant, its employees, and/or authorized subcontractors, of the work undertaken pursuant to this Agreement. The defense obligation provided for hereunder shall apply without any advance showing of negligence or wrongdoing by the Consultant, its employees, and/or authorized subcontractors, but shall be required whenever any claim, action, complaint, or suit asserts as its basis the negligence, errors, omissions or misconduct of the Consultant, its employees, and/or authorized subcontractors, and/or whenever any claim, action, complaint or suit asserts liability against the City, its elected officials, officers, agents and employees based upon the work performed by the Consultant, its employees, and/or authorized subcontractors under this Agreement, whether or not the Consultant, its employees, and/or authorized subcontractors are specifically named or otherwise asserted to be liable. Notwithstanding the foregoing, the Consultant shall not be liable for the defense or indemnification of the City for claims, actions, complaints or suits arising out of the sole active negligence or willful misconduct of the City. This provision shall supersede and replace all other indemnity provisions contained either in the City's specifications or Consultant's Proposal, which shall be of no force and effect.

6.10. Independent Contractor. Consultant is and shall be acting at all times as an independent contractor and not as an employee of City. Consultant shall have no power to incur any debt, obligation, or liability on behalf of City or otherwise act on behalf of City as an agent. Neither City nor any of its agents shall have control over the conduct of Consultant or any of Consultant's employees, except as set forth in this Agreement. Consultant shall not, at any time, or in any manner, represent that it or any of its agents or employees are in any manner agents or employees of City. Consultant shall secure, at its sole expense, and be responsible for any and all payment of Income Tax, Social Security, State Disability Insurance Compensation, Unemployment Compensation, and other payroll deductions for Consultant and its officers, agents, and employees, and all business licenses, if any are required, in connection with the services to be performed hereunder. Consultant shall indemnify and hold City harmless from any and all taxes, assessments, penalties, and interest asserted against City by reason of the independent contractor relationship created by this Agreement. Consultant further agrees to indemnify and hold City harmless from any failure of Consultant to comply with the applicable worker's compensation laws. City shall have the right to offset against the amount of any fees due to Consultant under this Agreement any amount due to City from Consultant as a result of Consultant's failure to promptly pay to City any reimbursement or indemnification arising under this paragraph.

6.11. PERS Eligibility Indemnification. In the event that Consultant or any employee, agent, or subcontractor of Consultant providing services under this Agreement claims or 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 the City, Consultant shall indemnify, defend, and hold harmless City 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 City.

Notwithstanding any other agency, state or federal policy, rule, regulation, law or ordinance to the contrary, Consultant and any of its employees, agents, and subcontractors providing service under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any claims to, any compensation, benefit, or any incident of employment by City, including but not limited to eligibility to enroll in PERS as an employee of City and entitlement to any contribution to be paid by City for employer contribution and/or employee contributions for PERS benefits.

6.12. Cooperation. In the event any claim or action is brought against City relating to Consultant's performance or services rendered under this Agreement, Consultant shall render any reasonable assistance and cooperation which City might require.

6.13. Ownership of Documents. All findings, reports, documents, information and data including, but not limited to, computer tapes or discs, files and tapes furnished or prepared by Consultant or any of its subcontractors in the course of performance of this Agreement, shall be and remain the sole property of City. Consultant agrees that any such documents or information shall not be made available to any individual or organization without the prior consent of City. Any use of such documents for other projects not contemplated by this Agreement, and any use of incomplete documents, shall be at the sole risk of City and without liability or legal exposure to Consultant. City shall indemnify and hold harmless Consultant from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from City's use of such documents for other projects not contemplated by this Agreement or use of incomplete documents furnished by Consultant. Consultant shall deliver to City any findings, reports, documents, information, data, in any form, including but not limited to, computer tapes, discs, files audio tapes or any other Project related items as requested by City or its authorized representative, at no additional cost to the City.

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

6.15. Conflict of Interest. Consultant and its officers, employees, associates and subconsultants, if any, will comply with all conflict of interest statutes of the State of California applicable to Consultant's services under this agreement, including, but not limited to, the Political Reform Act (Government Code sections 81000, *et seq.*) and Government Code section 1090. During the term of this Agreement, Consultant and its officers, employees, associates and subconsultants shall not, without the prior written approval of the City Representative, perform work for another person or entity for whom Consultant is not currently performing work that would require

Consultant or one of its officers, employees, associates or subconsultants to abstain from a decision under this Agreement pursuant to a conflict of interest statute.

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

6.17. Prohibited Employment. Consultant will not employ any regular employee of City while this Agreement is in effect.

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

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

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

6.21. Headings. Paragraphs and subparagraph headings contained in this Agreement are included solely for convenience and are not intended to modify, explain or to be a full or accurate description of the content thereof and shall not in any way affect the meaning or interpretation of this Agreement.

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

6.23. Amendments. Only a writing executed by the parties hereto or their respective successors and assigns may amend this Agreement.

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

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

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

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

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by and through their respective authorized officers, as of the date first above written.

CONSULTANT

Signature

Date: _____

Name and Title

Social Security or Taxpayer ID Number

CITY OF COSTA MESA

[Name]
[Mayor or City Manager]

Date: _____

CONSULTANT

Signature

Date: _____

Name and Title

Social Security or Taxpayer ID Number

ATTEST:

Brenda Green
City Clerk

APPROVED AS TO FORM:

Thomas Duarte
City Attorney

Date: _____

APPROVED AS TO INSURANCE:

Ruth Wang
Risk Management

Date: _____

APPROVED AS TO CONTENT:

[Name]
Project Manager

Date: _____

DEPARTMENTAL APPROVAL

[Name]
[Title]

Date: _____

APPROVED AS TO PURCHASING:

Stacy Daugherty
Finance Director

Date: _____

EXHIBIT D

SAMPLE CERTIFICATE OF INSURANCE

CERTIFICATE OF INSURANCE		DATE (MMDDYY)
PRODUCER	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
INSURED	INSURERS AFFORDING COVERAGE	
	INSURER A:	
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

SER. LTR.	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MMDDYY)	POLICY EXPIRATION DATE (MMDDYY)	LIMITS
	GENERAL LIABILITY COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC				EACH OCCURRENCE \$ FIRE DAMAGE (Per one fire) \$ MED EXP (Per one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COM/CP AGG \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS				COMBINED SINGLE LIMIT (Per accident) \$ BODILY INJURY (Per person) \$ MEDICAL INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN AUTO ONLY: EA ACC \$ AGG \$
	EXCESS LIABILITY <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE <input type="checkbox"/> RETENTION				EACH OCCURRENCE \$ AGGREGATE \$ \$ \$
	WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY				<input type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER P.L. EACH ACCIDENT \$ P.L. DISEASE - EA EMPLOYEE \$ P.L. DISEASE - POLICY LIMIT \$
	OTHER				
DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENTS/SPECIAL PROVISIONS					

CERTIFICATE HOLDER	ADDITIONAL INSURED: INSURER LETTER	CANCELLATION
City of Costa Mesa Attention: Engineering 77 Fair Drive Costa Mesa CA 92626		SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL UNDERTAKE TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE

IMPORTANT

If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

DISCLAIMER

The Certificate of Insurance on the reverse side of this form does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.

NAMED INSURED:
POLICY NO.:



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED - DESIGNATED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

BUSINESS LIABILITY COVERAGE FORM

C. Who is an insured in the BUSINESS LIABILITY COVERAGE FORM is amended to include as an insured the person or organization shown in the Declarations but only with respect to liability arising out of the operations of the named insured.

For losses covered under the BUSINESS LIABILITY COVERAGE of this policy this insurance is primary to other valid and collectible insurance which is available to the person or organization shown in the Declarations as an Additional Insured.

City of Costa Mesa & it's elected & appointed boards, officers, agents & employees are named as Additional Insured.

77 FAIR DRIVE
COSTA MESA, CA 92626

** Sample **

Form SS 04 49 05 93 Printed in U.S.A. (NS)

Copyright, Hartford Fire Insurance Company, 1993

JS 7/10



CITY OF COSTA MESA

CALIFORNIA 92628-1200

P.O. Box 1200

FROM THE OFFICE OF THE TRANSPORTATION SERVICES MANAGER

February 14, 2018

**SUBJECT: REQUEST FOR PROPOSALS ADDENDUM NO. 1 – FAIRVIEW ROAD
TRAFFIC SIGNAL COORDINATION PROJECT**

Dear Consultant:

An updated tentative schedule of events for the RFP process is provided below.

Tentative Schedule of Events from Issuance of the RFP to Award of Contract:

- RFP Distributed January 19, 2018
- Deadline for Written Questions February 13, 2018 @ 5:00 p.m.
- Proposals Due February 20, 2018 @ 5:00 p.m.
- ***Consultant Interviews (if needed) February 26, 2018***
- Consultant Selection February 27, 2018
- City Council Approval March 20, 2018

All other items in the Request for Proposals remain unchanged.

Sincerely,

JENNIFER ROSALES, P.E., PTOE
Transportation Services Manager

c: Raja Sethuraman, Public Services Director
Michael Sampson, Project Manager

EXHIBIT B
CONSULTANT'S PROPOSAL



PROPOSAL FOR

City of Costa Mesa FAIRVIEW ROAD TRAFFIC SIGNAL COORDINATION PROJECT

Date: February 20, 2018



February 20, 2018

City of Costa Mesa
Transportation Services Division
 77 Fair Drive
 Costa Mesa, CA 92628
 ATTN: Michael Sampson, Associate Engineer

Subject: Request for Proposal for Fairview Road Traffic Signal Coordination Project

Dear Mr. Sampson,

ADVANTEC Consulting Engineers, Inc. (ADVANTEC) is pleased to submit our proposal to provide the City of Costa Mesa with professional services to develop and implement optimized signal timing, as well as prepare plans, specifications and estimates (PS&E), and provide project and construction management for the Fairview Road Traffic Signal Coordination Project.

ADVANTEC is a professional Certified Disadvantaged Business Enterprise (DBE) and Small Business (SBE) consulting firm providing planning, engineering, construction management and inspection, and technology services for public transportation and planning Agencies. Our name more than implies our focus to implement **ADVANCEMENTS in TECHNOLOGY** in our professional services, thus

providing **innovative solutions** that meet the needs of our clients and the public they serve. Our senior Traffic and Intelligent Transportation Systems (ITS) leadership team has **over 300 years** combined professional experience providing professional services to public agencies throughout California. Our clients rely on this experience as we continue the company's founding principle of providing professional services with the best value and quality, on time and within budget performance since we began our business in 1998. ADVANTEC is a professional engineering firm specializing in intelligent transportation systems, traffic engineering, transportation planning, active transportation, civil engineering, and electrical engineering experience in California. ADVANTEC has provided planning, design, and construction support services for various citywide and countywide ITS projects throughout California.

Your Primary Contact:

Mr. Carlos Ortiz, PE, TE, PTOE
Project Director
 ADVANTEC Consulting
 Engineers, Inc.
 1200 Roosevelt
 Irvine, CA 92620
cortiz@advantec-usa.com
 Phone No.: 949-861-4999
 Fax No.: 949-502-5522

For this project, we assembled a team of highly qualified subconsultants, including:

- **Crosstown Electrical & Data, Inc.** – responsible for procurement and installation of signal improvements and communication elements.
 Mr. Dave Heermance
 5454 Diaz Street, Irwindale, CA 91706
 Ph: (626) 813-6693 Fax: (626) 813-0192
- **Counts Unlimited, Inc.** – responsible for collection of traffic counts and travel time studies.
 Mr. Abe Campos
 PO Box 1178, Corona, CA 92878
 Ph: (951) 268-6268 Fax: (951) 268-6267

Our team for this project includes professionals with many years of signal synchronization and ITS implementation experience - with extensive experience involving multi-jurisdictional projects.

The key strengths of the ADVANTEC team are:

1. Substantial recent experience with similar projects, such as:
 - a. City of Costa Mesa Fairview Road TSSP (31 intersections)
 - b. City of Lancaster Citywide Traffic Signal Coordination and Retiming (140 intersections);
 - c. City of Seal Beach TMC and ITS Upgrade Turnkey (Design-Build) Project (15 intersections)
 - d. OCTA Edinger Avenue TSSP and ITS implementation (33 intersections)
 - e. City of San Clemente TSSP and ITS design for four corridors (53 intersections)
2. Successful implementation of previous Fairview Road TSSP in 2013 gives us in-depth knowledge of Fairview corridor traffic patterns and City of Costa Mesa and Santa Ana's communications systems.
3. ADVANTEC has a 100% track record of completing projects on-time and within-budget. This track record applies towards over 600 projects for over 100 clients in the past 20 years;
4. Highly experienced Project Director and Project Manager with demonstrable track records for on-time and within budget performance;
5. Excellent working relationship with local cities, County and Caltrans in Orange County;

All work will be performed in our office located in the City of Irvine. As Chief Operating Officer of the company, I am fully authorized to make representations on behalf of ADVANTEC and certify that the information contained in this proposal is truthful, accurate, and complete at the time of submission of this proposal. The following proposal shall remain valid for a period of not less than 180 days of its submittal. I can be reached at the address and telephone number in this letterhead, and the following email address: cortiz@advantec-usa.com

ADVANTEC commits to comply with the Professional Services Agreement and Insurance requirements for the City of Costa Mesa. We acknowledge the receipt of Addendum No.1.

We are very excited about this opportunity to assist the City of Costa Mesa and Santa Ana on this project, and looking forward to establishing a mutually rewarding working relationship with both agencies. In closing, we thank you for the opportunity to offer our proposal for this effort to further enhance the quality of life in the cities of Costa Mesa and Santa Ana.

Sincerely,

ADVANTEC Consulting Engineers, Inc.



Carlos Ortiz, PE, TE, PTOE
Chief Operating Officer



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APPENDIX A – RESUMES



1. EXECUTIVE SUMMARY

1.1 Overview of Services

ADVANTEC Consulting Engineers is pleased to submit this proposal to the Cities of Costa Mesa and Santa Ana for signal synchronization and construction of ITS improvements along the Fairview Road corridor. This proposal provides our technical approach and key innovations to ensure success for this project. ADVANTEC has worked on Traffic Signal Synchronization Projects (TSSP) for OCTA since 2008, and we have also worked directly with several cities, including City of Costa Mesa. In the past 5 years, we have completed similar TSSPs, such as the Seal Beach Boulevard, Edinger Avenue, Jeronimo Road, Jeffrey Road, Avenida Hermosa, Camino De Los Mares, and **Fairview Road**. We have also worked on a Citywide Signal Synchronization project and Citywide ITS and Fiber Optic Communications upgrade project for the City of Lancaster. ADVANTEC has also been involved on Regional ITS Architecture Update projects for LA-METRO, SCAG, and a ITS Architecture Master Plan for Coachella Valley Association of Governments. We are, therefore, very familiar with the requirements of TSSP and ITS technology.

ADVANTEC possesses three important qualities that will make this project successful: expertise in signal synchronization; expertise in ITS's latest developments; and detailed operational knowledge of the corridor and City of Costa Mesa.

The following is an overview of our technical approaches and services:-

- Design and implementation of all equipment upgrades listed in the Request for Proposal (RFP) for: City of Costa Mesa and City of City of Santa Ana.
- ADVANTEC will provide an updated **Project-wide Communications Upgrade Map** that illustrates the existing and proposed communication network with supporting details that illustrates the connectivity from each City's TMC, communications hub(s) and communications between each intersection including existing and new equipment.
- Design, implementation and fine-tune of traffic signal timings for AM, MD, PM, evening peak periods, and weekend peak for entire corridor.
- **Addition of eight (8) intersections within a ¼ mile of Fairview Road along major east/west cross streets** to the SYNCHRO network for optimization to maintain cross coordination. A total of 42 traffic signals will be synchronized as part of this project.
- Build consensus among all jurisdictions relating to the traffic signal operation parameters, such as cycle lengths.
- Address and resolve local traffic operational issues such as special attractions, schools, construction activities, closely spaced intersections, heavily travelled intersections, pedestrian activities, need for bicycle clearance timing, and so on.
- Present the benefits of this project to City Council Study Sessions and OCTA Traffic Forum meeting.

1.2 Cost Savings

ADVANTEC's main objective on all our projects is to maximize the amount of improvements for our clients, while maintaining the project within budget and schedule. With this objective in mind, we proposed to manage this project in a "Design-Build" approach. Our cost proposal includes the deployment of all improvements and equipment as listed in the RFP. To minimize cost we propose to procure most equipment directly from vendors and manufactures, bypassing contractor's mark-up of 10% to 15%. However, we believe there is still room for additional cost savings through selection of alternative equipment vendors/manufacturers. If the Cities decide that our proposed cost for improvements is above the desired project budget, we could pursue the project as a "Design-Bid", which could further reduce costs.



2. QUALIFICATIONS, RELATED EXPERIENCE & REFERENCES

2.1 ADVANTEC Consulting Engineers – Prime Consultant

ADVANTEC Consulting Engineers, a California Corporation, is a consulting firm specializing in Civil, Traffic Engineering, and Intelligent Transportation Systems (ITS). ADVANTEC’s mission is to provide quality engineering to the community that would result in perceptible improvements towards the quality of life, safety, and efficiency of transportation.

Founded in 1998, ADVANTEC is a professional consulting firm specializing in planning, engineering and technology services. Our name stands for our focus to capture **ADVANCEMENTS in TECHNOLOGY** for the benefits of our clients, thus providing **innovative solutions** that meet the needs of our clients and the public they serve.



ADVANTEC has assisted over 110 local municipalities, regional transportation agencies and state governments in meeting their transportation and city engineering needs. We provide these solutions as part of our firm’s specialized areas of practice:

Civil Engineering Transportation Engineering

Traffic Engineering Municipal Engineering

Intelligent Transportation Systems Digital Video & Surveillance

This year marks the 20th Anniversary of ADVANTEC, and we have earned a reputation for responsiveness to the clients’ needs. In the past 20 years, we have a 100% on-time within-budget record on over 600 projects, serving over 100 satisfied clients, most of which are cities and public agencies. We maintain our reputation by upholding our firm’s high standards of quality, client service, and professional integrity.

Our unparalleled expertise has led to ADVANTEC to provide Traffic Engineering, Traffic Signal and ITS Design Services to public agencies throughout California, including: cities of Irvine, San Clemente, Seal Beach, Costa Mesa, Ontario, Chino Hills, Rancho Cucamonga, Colton, Rialto, Yucaipa, Lancaster, Los Angeles, Culver City, Anaheim, Inglewood, Irwindale, Yorba Linda, and Diamond Bar.

We have several offices to serve our clients and partners throughout California, as shown below.

<p><u>Orange County</u> 1200 Roosevelt Irvine, CA 92620 Ph: 949-861-4999</p>	<p><u>Los Angeles County</u> 21700 Copley Drive Diamond Bar, CA 91765 Ph: 909.860.6222</p>	<p><u>Inland Empire</u> 3200 E. Guasti Road Suite 100 Ontario CA 91761 Ph: 909.605.9300</p>	<p><u>Northern California</u> 1300 Clay Street Suite 600 Oakland, CA 94612 Ph: 510.282.2078</p>
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2.2 Subcontractors

ADVANTEC has placed great importance on the selection of a Project Team to meet the needs and project schedule of this important project for the City of Costa Mesa and Santa Ana. We are pleased to present our highly-qualified sub-consultants who will complement ADVANTEC’s in-house personnel and provide a “turnkey” solution to the City:

Crosstown Electrical and Data, Inc.

Crosstown is a California based electrical contractor specializing in the installation of fiber optic and wireless communication systems, and closed circuit television cameras. Crosstown is licensed to contract for all types of electrical work (C-10 License Number 756309). They are signatory with the local electrical union (IBEW Local 11), and have the resources to gear up rapidly should a contract require such action.



Crosstown has developed an in-house technical team who is highly proficient in the implementation, installation, integration and maintenance of fiber optic, video, wireless, and data communications systems and have established themselves as premier integrators and installers of Traffic, Transportation, and Public Works related communications and CCTV systems. Crosstown currently has 90 employees and has performed over 27 million dollars worth of work in the last fiscal year, and averaged over 20 million dollars per year over the past three years. Crosstown is financially strong, bondable, and have an excellent relationship with their banking facility.

Contact: Mr. Dave Heermance
5454 Diaz Street, Irwindale, CA 91706
Ph: (626) 813-6693 Fax: (626) 813-0192
dave@crosstowndata.com

Counts Unlimited, Inc.

Counts Unlimited, Inc. specializes in traffic data collection, and has been serving the Southern California area for the past 26 years. Their primary goal is to provide accurate and comprehensive traffic data collection services at a reasonable cost to the transportation engineering community throughout Southern California. Counts Unlimited is certified through the State of California as a Small Business Enterprise (SBE). Counts Unlimited Inc. is headquartered in Riverside, CA, with an experienced full-time staff of 15 employees, and a support staff of 25 employees.



Counts Unlimited has worked with ADVANTEC’s staff for the last six years, providing traffic counts and travel time study data. The most recent projects were Irvine Blvd TSSP in the City of Irvine where Counts Unlimited was responsible for collecting ADTs, Turning Movement Counts, and conducting travel time runs, during AM, Midday, PM and Saturday. Other recent projects in Orange County include: travel time runs, ADT and turning movement counts for OCTA-Kramer/Grand/Glassell TSSP; and travel time runs, ADT and turning movement counts for OCTA-Ball Road TSSP.

Contact: Mr. Abe Campos
PO Box 1178, Corona, CA 92878
Ph: (951) 268-6268 Fax: (951) 268-6267
counts@countsunlimited.com



2.3 Relevant Experience

ADVANTEC has been providing professional engineering services to many municipalities in Southern California. Projects with similar scope of work within the last 5 years are provided herein along with references. ADVANTEC has worked on ALL the major Regional Traffic Signal Synchronization projects in California, for San Bernardino Associated Governments (SANBAG), Orange County Transportation Authority (OCTA), Los Angeles County, Coachella Valley Association of Governments (CVAG), as well as Metropolitan Transportation Commission (MTC) of Bay Area.

ADVANTEC has performed projects involving traffic signal timing, synchronization, and hardware support services for over 80 agencies in Southern California, many of these projects involve multiple jurisdictions. **Table 2.1** summarizes our recent traffic signal synchronization, monitoring and system support experience locally.

Table 2.1 - ADVANTEC’s Traffic Signal Synchronization, Monitoring & Hardware Support Projects

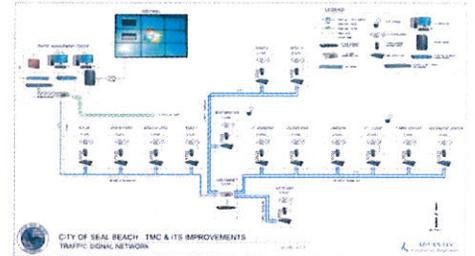
PROJECT	COUNTY	# INTS.	# AGENCIES	KEY FEATURES
Seal Beach Blvd TMC and ITS Upgrade (Design-Build)	Orange	15	2	Design and construction management of ITS upgrades, such as: fiber-optic backbone with connections to City Hall, Maintenance Yard and Police Department; TMC room with Video Wall matrix; and CCTV cameras. Included signal synchronization of Seal Beach Blvd.
Jeffrey Road Traffic Signal Synchronization	Orange	33	3	Migrated signals to Centrac system, modified 2070 controllers to ASC/3 firmware. Included signal synchronization of Jeffrey Road/University Drive during AM, Midday, PM, and weekend.
OCTA - Edinger Avenue Traffic Signal Synchronization (Design-Build)	Orange	38	5	Design-build of traffic signal and communications infrastructure; upgraded Comm. to Ethernet over Copper; installed Bluetooth monitoring devices.
San Clemente Traffic Signal Synchronization (ITS Design)	Orange	68	2	Design of Citywide Fiber Optic network as well as synchronization of 4 corridors. Implemented Intelight MaxView signal system with ATC X-2 controllers running Maxtime.
Fairview Road TSSP (Design-Build)	Orange	31	3	Design and installation of fiber-optic communications, wireless radio, CCTV cameras, new cabinets and signal controllers.
Lancaster Citywide Signal Synchronization	L.A.	140	2	Implementation through QuicNet and in field Type 170 controllers.
Santa Monica – Downtown synchronization timing	L.A.	40	1	Developed synchronization for downtown area, including timing for 12 “ped-scramble” intersections.
Culver City – Adaptive Traffic Control Study and Systems Manager.	L.A.	105	1	Assessment of Adaptive Traffic Control Systems & development of System Requirements and Concept of Operation. Assisted City during implementation and testing of Adaptive System.
SANBAG Tier 3 and 4 Traffic Signal System and Synchronization	San Bernardino	691	16	Design and implementation of wireless communications and synchronization of traffic signals at 691 intersections at 53 major arterials across 15 jurisdictions
DESIGN PROJECTS				
Lancaster Citywide Traffic Signal Communications and ITS upgrade	L.A.	-	-	Design of citywide fiber-optic communications network (35 miles) and backbone, including CCTV cameras, new central system and controllers.
Culver City Citywide CCTV system	L.A.	-	-	Design of citywide CCTV system, including fiber-optics network, replacement of old cameras, installation of high-definition cameras and Video Management System.



The following provides an overview of some of these projects ADVANTEC has performed recently:

City of Seal Beach - Traffic Management Center and ITS Infrastructure Upgrade

This Design-Build project consisted of designing and installation of new fiber-optic communications infrastructure, linking City Hall, Police Department and Public Works Yard, and design and construction of a Traffic Management Center. ADVANTEC managed construction and inspection, and procured, configured, and installed network switches and new signal controllers at each cabinet.



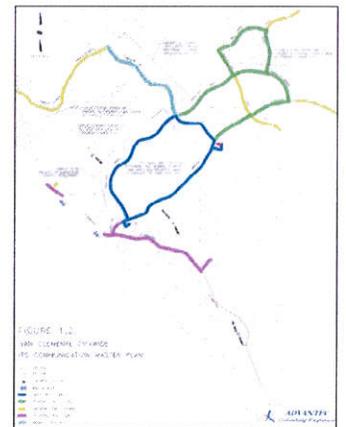
The scope of work included collecting traffic volumes and turning movement counts, including bike and pedestrian counts at all project intersections; analyzing this traffic data including collision data to develop optimized signal timing plans; implementing and fine-tuning the plans in the field; and conducting travel time surveys to analyze the performance of the new timing plans.

Project Staff: Jose Guedes, Ryan Miller, John Cox.

City of Seal Beach	Mr. Michael Ho, PE – Dep. Dir. of Pub. Works/City Engineer
	(562) 431-2527 ext. 1322 - mho@sealbeachca.gov
	Construction Cost: \$660,000
	Design Contract: \$230,000
	Years: 2014-2016

City of San Clemente - Advanced Traffic Management System Upgrade and Traffic Signal Communications Infrastructure Design

This project consisted of selection of new Traffic Signal Central System and controller equipment, and design of communications infrastructure for El Camino Real, Avenida Pico, Avenida Vista Hermosa, and Camino De Los Mares, consisting of Fiber Optic, Wireless, and Ethernet-over-copper links.



ADVANTEC also developed and implemented new synchronized traffic signal timing at 54 intersections along the four corridors with a goal of reducing travel times and stops, improving average travel speeds, and associated reduction in fuel consumption. The project was performed in two phases: Avenida Pico and El Camino Real, representing the system backbone, were included in Phase 1; and Avenida Vista Hermosa and Camino De Los Mares as part of Phase 2.

Total project construction cost was \$1.7 Million, which included replacement of traffic signal central system and controllers at 54 intersections, installation of conduit and fiber optics backbone between City Hall, City Yard and Engineering Building, installation of broadband radio system, and upgrade of copper interconnect to Ethernet over copper.

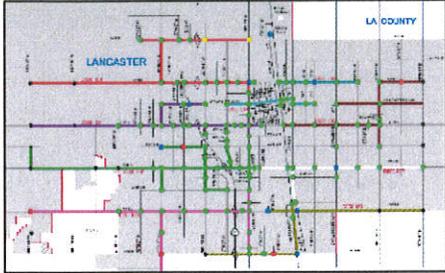
Project Staff: Jose Guedes, Ryan Miller, John Cox.

City of San Clemente	Mr. Tom Frank, PE – Transportation Manager
	(949) 361-6127 - FrankT@san-clemente.org
	Construction Cost: \$1.7 Million
	Design Contract: \$430,000
	Years: 2012-2015



City of Lancaster – Citywide Traffic Signal Synchronization Project

ADVANTEC prepared and implemented optimized signal timing plans for all 140 traffic signals within the City of Lancaster., ADVANTEC revised signal timing parameters based on latest CA-MUTCD, developed and implemented traffic signal timing and coordination plans for AM, Middy, PM, and weekend periods for 140 signalized intersections, in 16 corridors, including Caltrans off-ramps signals. Some of the tasks provided to the City of Lancaster included:

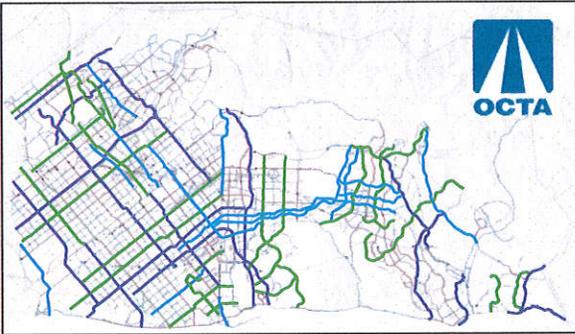


- Field inventory of all intersections, and accident analysis for not-protected left turn movements
- Development of Synchro model for all intersections within the City
- Development of optimized timing and Time-Space diagrams using Tru-Traffic software
- Implementation of timing at City’s central signal system
- Fine tuning based on field observations using GPS units, and performed Before and After Studies
- Prepared timing plans and Coordinated with Caltrans to implement / fine tune their traffic signals

Project Staff: Carlos Ortiz, Jose Guedes, Mark Esposito, Ryan Miller

City of Lancaster	Mr. Alan Perkins, Principal Traffic Engineering Technician (661) 723-5805 - aperkins@cityoflanaster.org Design Contract: \$322,000 Years:2016
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Regional Traffic Signal Synchronization Project - Orange County Transportation Authority - OCTA



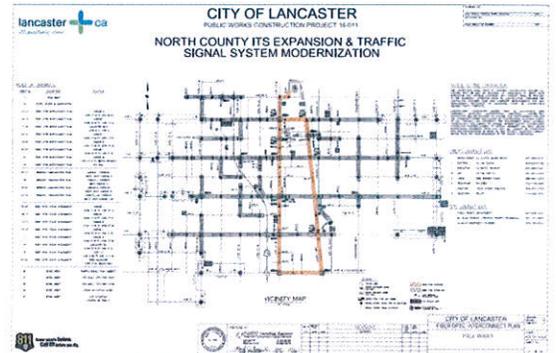
Project Information:
Owner: OCTA
Owner’s Project Manager:
Mr. Ron Keith , Project Manager
 550 S. Main Street, Orange, CA 92868
 (714) 560-5990
rkeith@octa.net
Project Type:
 Regional Signal Synchronization and Design-build for traffic signal and ITS improvements.
Value: \$5,100,000
Personnel Involved: Carlos Ortiz, Jose Guedes, Mark Esposito, Ryan Miller, John Cox

CORRIDOR	JURISDICTIONS	# INT.	YEAR
Jeronimo Road	Lake Forest, Mission Viejo	15	2014-2018
Edinger Avenue	Santa Ana, Fountain Valley, Westminster, Huntington B., CT	38	2013-2018
Jeffrey Road	Irvine, Newport Beach	33	2013-2016
Fairview Road	Costa Mesa, Santa Ana, Caltrans	31	2012-2016



City of Lancaster – Citywide Fiber Optics Communication and Signal System Upgrade

ADVANTEC developed plans, specifications and estimates for a citywide project that consisted of installation of 35 miles of fiber optics communications, wireless communication, CCTV cameras, and upgrade of controllers and traffic signal central system, for 140 signalized intersections.



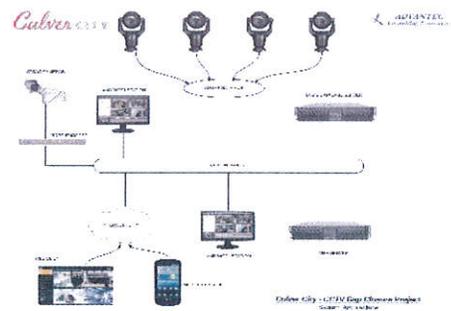
ADVANTEC also prepared an Evaluation Study to assist the City of Lancaster in selecting an Advanced Traffic Management System (ATMS), and to analyze the cost-effectiveness of deploying an Adaptive Traffic Control System (ATCS) at selected corridors. The goal of the Advanced Traffic Management System Evaluation Study was to facilitate the City of Lancaster’s decision on a technology that would fit their current and future needs, and could provide the highest return on investment.

Project Staff: Carlos Ortiz, Jose Guedes, Mark Esposito, Ryan Miller, John Cox, Leah Russell.

City of Lancaster	Mr. Trolis Niebla, P.E., City Engineer
	(661) 945-6860 - tniebla@cityoflanaster.org
	Construction Cost: \$3.8 Million
	Design Contract: \$430,000
	Year: 2017-2018

City of Culver City - Traffic Monitoring CCTV System Gap Closure Project

This project consisted of preparation of ITS Project Evaluation Report and preparation of bidding documents, construction drawings, and engineer’s construction cost estimates to implement High Definition (HD) digital Internet Protocol (IP) CCTV cameras at 18 locations, new Video Management System (VMS), and approximately four (4) miles of fiber optic communication cable, along with communication hub switching equipment and software, and new auxiliary equipment at the City Hall, Public Works City Yard, Fire Station No. 1, and designated offices within City Hall to view and manage the VMS. In addition, the project included the replacement of analog CCTV cameras at 14 locations and integrating all 32 CCTV cameras to the new VMS; and installation of new conduit for the City’s IT network system.



The HD IP CCTV cameras were designed to be Open Network Video Interface Forum (ONVIF) compliant. The upgraded communication system consists of managed Ethernet/IP switches on a gigabit fiber optic backbone. The project upgraded legacy fiber optic communications to Ethernet/IP, updated the City’s communication network topology and provided redundancy, and upgraded the City’s Traffic Management Center. ADVANTEC also provided Construction Support and Inspection Services.

Project Staff: Carlos Ortiz, John Dorado, Mark Esposito, John Cox.

City of Culver City	Mr. Hong Wang, Senior Engineer
	(310) 253-5604 hong.wang@culvercity.org
	Construction Cost: \$3.8 Million
	Design Contract: \$430,000
	Year: 2016-2017



3. PROJECT STAFF

3.1 Project Team Qualifications

The ADVANTEC Team brings a group of highly specialized personnel with a defined work history on previous similar Traffic Signal Timing and Synchronization Projects. Our expert team is committed to the City of Costa Mesa success and will provide the appropriate technical expertise as required for this project. The proposed key team members are intended to serve in their respective roles throughout the duration of the agreement. ADVANTEC has proposed a local team comprised of professionals with **over 150 years of combined experience**. Our team members are experienced in delivering successful similar contracts to many agencies in southern California. Our organization chart, as shown on [Figure 3.1](#), illustrates the proposed organizational structure of our project team. Our team brings together all of the skills and expertise required to ensure satisfactory completion of all elements of the RFP.

For this project, **Mr. Jose Guedes, T.E.** will serve as our **Project Manager**. Mr. Guedes has performed many Traffic Signal Synchronization (TSS) and ITS improvement projects similar to this project, including the recent Citywide Signal Coordination and Citywide Fiber-optic Communications and Signal System Upgrade projects for City of Lancaster, Seal Beach Blvd TMC and ITS Upgrade. Mr. Guedes was also in charge of the largest synchronization study in California, to date, the San Bernardino Valley Coordinated Traffic Signal Timing System - Tier 3 and 4, with 690 traffic signals, grouped in 50 corridors, and involving 15 agencies, including cities, County and Caltrans. Mr. Guedes has over 27 years of experience, having worked 20 years with the City of Irvine, where he was in charge of signal synchronization projects and was the lead traffic engineer in charge of operations for the city's TMC managing 330 traffic signals. Since joining ADVANTEC in 2010, Mr. Guedes has successfully managed 23 TSS related projects, involving over 2,200 traffic signals, and with a total value of \$7.1 million. Mr. Guedes is a registered Traffic Engineer in the State of California.

Mr. Carlos Ortiz, P.E., T.E., P.T.O.E. will serve as **Project Director**. Mr. Ortiz has performed many Intelligent Transportation Systems (ITS) and TSS projects throughout southern California including projects for OCTA, Caltrans, County of Los Angeles, Coachella Valley Association of Governments (CVAG) and local cities. In addition, Mr. Ortiz is familiar with the City of Irvine traffic signal and signal communication system. Over his 28 years of experience, Mr. Ortiz has been involved on many traffic signal, signal communications, and signing and striping projects in the City of Irvine as part of public works and private developments. Mr. Ortiz has designed or managed over fifty traffic signals in the City of Irvine. Mr. Ortiz is a member of the Board and Past-President of the Institute of Transportation Engineers (ITE) Western District. Mr. Ortiz also serves on the Board at ITS California.

Mr. Tracy Moriya will serve as our **QA/QC Manager**. Mr. Moriya has over 28 years of experience in management and design of traffic engineering and transportation projects. His professional experience includes design of transportation systems, traffic signals, traffic signal communication systems (twisted pair, fiber optic, wireless), CCTV video communication design, roadway and highway lighting, traffic signal system design, signing and striping, stage construction/handling, traffic control. He is an expert in developing design plans, as well as municipal engineering for traffic signal systems, fiber optic interconnect, traffic control, signing and striping projects, street lighting design street lighting design projects.

Mr. Keith Rand, P.E., T.E. will serve as our **Signal Improvement Design and Construction Support Task Leader**, responsible for the preparation of the traffic signal modifications and interconnect design. Mr. Rand has over 24 years of experience, and possesses specialized expertise in traffic operations and safety evaluation, and he has recently completed the SR-91 Corridor Improvement Program (CIP) as the Design Manager through the end of construction and the opening of the express lanes in Riverside County. Additional areas of expertise include the preparation of plans, specifications and estimates for traffic signal, ITS, signing/striping, overhead signs, lighting, and traffic control designs.

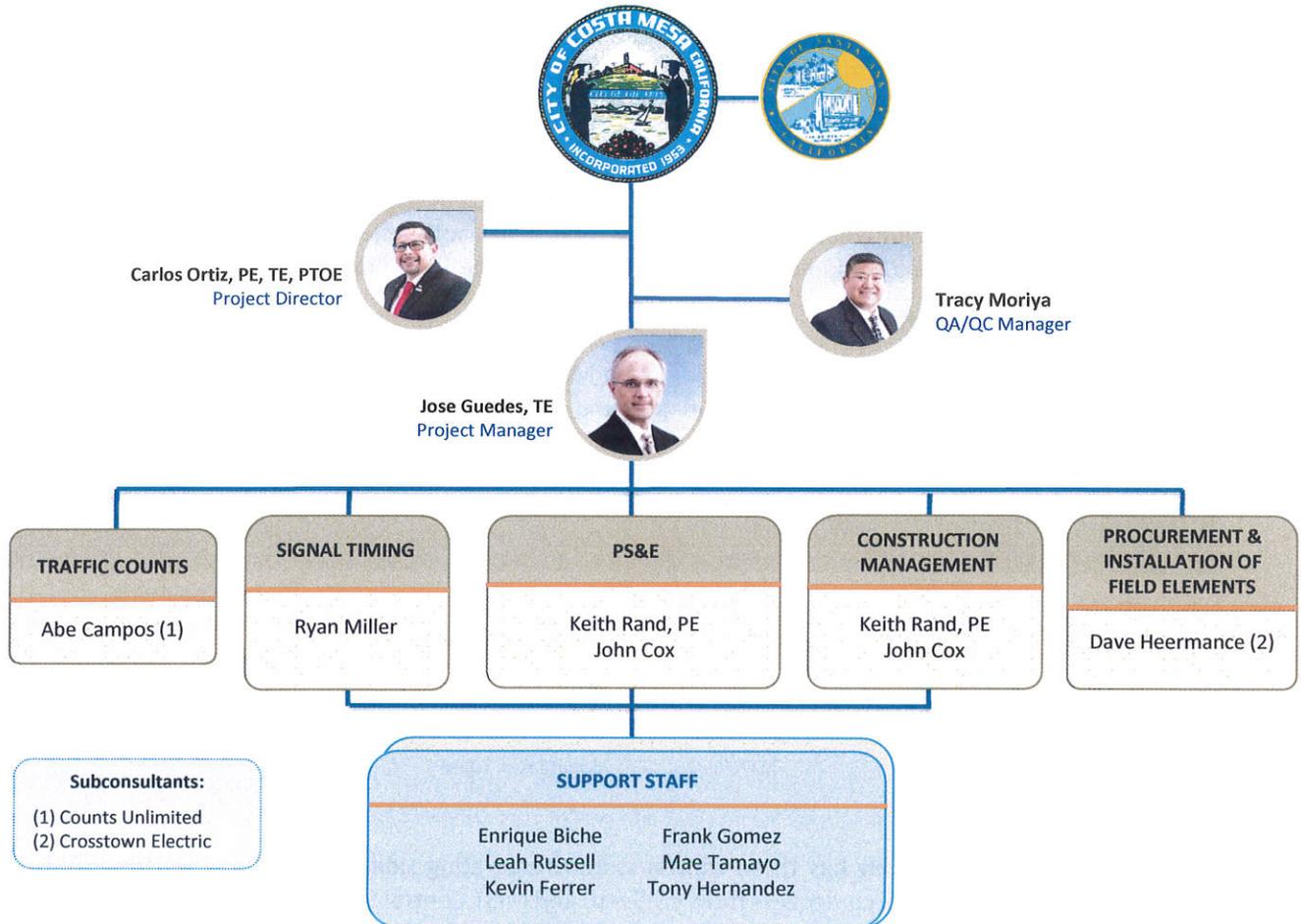


Mr. Ryan Miller will be our main **Supporting Engineer** for the **Traffic Signal Timing Task**. Mr. Miller is an engineer with 6 years of experience. He has previously worked with Mr. Guedes on similar projects for OCTA, and the cities of Irvine, San Clemente, Costa Mesa, Santa Monica and Lancaster. His traffic and design software experience includes Synchro, SimTraffic, Tru-Traffic, AutoCAD, Civil3D, and MicroStation.

Mr. John Cox will provide **communications design support** and **Construction Support**. Mr. Cox is a Systems Engineer for ADVANTEC and specializes in Intelligent Transportation Systems (ITS), Ethernet communication systems, closed circuit television (CCTV) systems, changeable message signs, wireless broadband Ethernet systems, traffic management center (TMC) systems integration, and various Advanced Traffic Management System hardware/software suites. Over seventeen years of experience in the transportation industry, John has been involved over thirty ITS and traffic engineering projects that include both planning, design, construction, maintenance and support. Mr. Cox has integrated and maintained such systems in support of centralized signal control deployments.

Detailed resumes of our key staff members are provided in **Appendix A**.

Figure 3.1 – Organizational Chart





4. WORK PLAN

4.1 Project Understanding

The primary purpose of this project is to prepare optimized signal synchronization plans for 34 signalized intersections along Fairview Road from Newport Boulevard, in the City of Costa Mesa, to SR-22 On-ramp, in the City of Santa Ana. The corridor traverses the Cities of Costa Mesa and Santa Ana, and Caltrans freeway ramps at I-405 and SR-22. The involved agencies desire to upgrade the hardware and communications infrastructure through this project, including:

- Fiber Optic communications
- Ethernet-over-Copper communications
- Upgrade signal controllers and cabinets
- Install GPS-based Pre-emption systems
- Install UPS Battery systems
- Install advanced Video Detection systems
- Install HD CCTV cameras with analytics
- Commission a new Video Management System
- Design and install Protected Left-Turn phasing
- Install fiber optic switches, enclosures, and distribution units
- Relocate Wireless Broadband Radios

Our ultimate goals in this project are to work hand-in-hand with the Cities of Costa Mesa and Santa Ana to:

- Reduce the travel time and delay with perceptible improvements, to reduce vehicle stops, and to reduce vehicle emissions thereby improving the air quality along the Fairview Rd. corridor; and
- Provide Cities the ability to monitor and observe traffic conditions, and adjust signal timings in real-time from their local traffic control centers.

To accomplish these goals, ADVANTEC will develop and implement traffic signal timing and coordination plans for AM, Mid-Day, PM, evening and weekend peak periods, and assist both cities in constructing all the necessary hardware and communications equipment to fulfill their needs to the fullest extent possible.

4.2 Existing Hardware

The Fairview Road corridor traverses the Cities of Costa Mesa and Santa Ana, with freeway ramps operated by Caltrans District 12. **Table 4.1** shows the existing traffic control systems that are being deployed along this corridor, and on Fair Drive.

Table 4.1 – Existing Traffic Control Hardware

Agency	Traffic Signal System	Controller Type	Communications Network	Desired Upgrades
Costa Mesa	MIST/VMS CENTRACS	ASC/3 820A	Fiber Optic/Copper	P-44 cabinets, Cobalt ATC controllers, Video Detection, GPS Preempt, Eth-over-Copper, HD CCTV, Video Mgmt. Sys.
Santa Ana	MIST	2070	Wireless + Fiber	Type 332L cabinets, 2070 ATC controllers, Fiber Optic Comm., HD CCTV, Detection upgrades, Wireless Radios

The City of Costa Mesa currently has three central systems operating side-by-side citywide. The City is in the process of migrating all its signal controllers from VMS-330 and MIST Central Systems to Centracs Advanced Traffic Management System (ATMS), and convert communication from copper interconnect to Fiber Optics or Ethernet-over-Copper. The City has already installed a 24-strand Fiber Optic cable along Fairview Road, from Wilson Street to Sunflower Avenue, and to City Hall via a Communications Hub at the N/E corner of Fairview & Fair. **This improvement was designed and constructed by ADVANTEC as part of the previous Fairview Road TSSP.** Controllers on Fair Drive are still connected by copper interconnect back to City Hall TMC.



As part of this project, the City of Costa Mesa wants to replace several cabinets (including Type II service and foundation) and new ATC controllers, install UPS/Battery Backup Systems, install advanced Video Detection, install HD CCTV camera, install GPS-based Preemption Systems, commission a new Video Management System, and install protected left-turn phasing. The City would also like to upgrade controllers from Multisonics 820A to Cobalt and provide Ethernet-over-Copper communications along Fair Drive.

The City of Santa Ana has deployed the MIST Central System citywide, coupled with Type 2070 controllers running Econolite ASC/3 software. The City has a hybrid communication system composed of copper interconnect, fiber optic links, and wireless Broadband radio. There are two Fiber Optic Hubs along Fairview Road: at Fairview/5th St, connecting easterly to Bristol’s Gigabit Trunk; and at Fairview/MacArthur, connecting easterly to the Bristol Trunk at south end of the system. These two hubs were connected, as part of previous Fairview Road project, by a combination of Wireless Broadband, and Ethernet-over-copper. In this manner, the City was able to operate a redundant communication network ring between Fairview Road and Bristol Street.

As part of the new Fairview Road project, the City of Santa Ana wants to upgrade cabinets and new ATC controllers (including Type II service and foundation), install Fiber Optic cable and conduit, install Ethernet Fiber switches, install HD CCTV cameras, upgrade vehicle detection and relocate existing wireless Broadband radios.

4.3 Corridor Characteristics and Technical Considerations

Fairview Road is a north-south, 4 to 6-lane corridor that extends approximately 8.5 miles, from Newport Boulevard in Costa Mesa to SR-22 freeway in Santa Ana. The corridor serves a mix of land uses: residential, office complexes, industrial, middle schools, high schools, Orange Coast College, O.C. Fair, and sports complex. High traffic generators such as the Orange Coast College, the O.C. Fairgrounds and Costa Mesa High School can be found at very close proximity, south of Interstate 405. Many high schools and middle schools are found adjacent to Fairview Road throughout the corridor.

Fairview Road carries daily traffic volumes of over 35,000 vehicles in most segments, reaching 46,000 between Baker Street. and Adams Avenue, and exceeding 53,000 near the I-405 freeway. Morning and afternoon peak traffic flows are predominantly directional, with southbound AM and Northbound PM showing highest traffic volumes and congestion. South of I-405, morning peak shows a significant amount of traffic flowing southbound from the I-405 freeway off-ramps towards Orange Coast College and Costa Mesa High school. PM peak traffic is very heavy in the northbound direction, with increasing congestion as Fairview Road approaches the freeway ramps at I-405 and SR-22.

To help Costa Mesa and Santa Ana evaluate the current traffic operations along this corridor, we have conducted travel time runs in each direction during the AM, Midday and PM peak periods during January 2018, using GPS and Tru-Traffic software to record travel times, average speed, stops, etc. **Table 4.2** shows the results in terms of Corridor Synchronization Performance Index (CSPI) for the entire corridor.

Table 4.2 – CSPI for Fairview Road – Existing Conditions in January 2018

Fairview Road Corridor - January 2018						
Period / Direction	Average Speed	Green/Red	Stops per mile	CSPI	CSPI Tier	
AM	NB	25.3	2.1	1.2	67.9	III
	SB	18.7	1.5	2.1	44.3	V
MD	NB	24.9	1.6	1.4	60.8	III
	SB	25.6	2.4	1.1	72.4	II
PM	NB	14.7	1.2	2.5	34.7	V
	SB	21.6	2.0	1.3	60.0	III



The results of our travel time survey show that Fairview Road currently operates at CSPI Tiers “II”, “III” and “V” throughout the day. During Midday, traffic flows with “Fair” (Tier III) to “Good Progression” (Tier II). The AM and PM results reflect the directional nature of the traffic with heavy flows for AM southbound and PM northbound. For the heavy traffic directions, the CSPI shows “Very Limited Progression” (Tier V), while the opposite directions operate at “Fair Progression” (Tier III).

The results presented in **Table 4.2** reflect the trend in corridor performance that ADVANTEC had quantified during the previous Fairview Road TSSP (2012 to 2016). **Table 4.3** shows the evolution of Fairview Road corridor performance, before and after the previous Fairview Road TSSP.

Table 4.3 – CSPI history for Fairview Road since 2012

Fairview Road		Before Study 2012	After Study 2013	Monitoring 2016	Test run January 2018
Period / Direction		CSPI Performance Level			
AM	NB	IV	II	IV	III
	SB	III	II	V	V
MD	NB	III	I	III	III
	SB	III	I	III	II
PM	NB	V	IV	V	V
	SB	IV	II	IV	III

After the implementation of new signal synchronization plans in 2013, and on the early stages of the Monitoring Phase, we noticed a steady increase in traffic volumes along the entire corridor, and an increase in the impact of freeway congestion on Fairview Road traffic flow. The increase in traffic volumes worsened congestion, which led to lower traffic flow speeds and more frequent stops along many segments of the Fairview Road corridor, being more pronounced in the AM and PM periods.

Based on our previous experience and on more recent observations, we have identified the following congestion patterns along the corridor as shown in **Table 4.4**:

Table 4.4 – Congestion patterns along Fairview Road

Segment: MacArthur Blvd to Garden Grove Blvd, City of Santa Ana		
AM	Southbound: Delays from McFadden to Edinger, especially at school start time. Increase in number of stops at 5 th Street caused by slower speeds due to congestion.	Northbound: Long queues and delay at Centennial and at Edinger, due to school traffic. Increase in number of stops from 1 st Street to 17 th Street, caused by slower speeds due to increased traffic volumes. Long delays and multiple stops near SR-22 ramp and Garden Grove Blvd, due to no coordination with ramp signals.
MD	Southbound: Extra stops at Alton Pkwy and at MacArthur Blvd, caused by Alton “Free” operation.	Northbound: Increase in number of stops at Civic Center Dr. due to slower speeds caused by increase in traffic volumes.



PM	Southbound: Increase in number of stops at 5 th Street, 1 st Street, McFadden, and Centennial due to slower speeds caused by increase in traffic.	Northbound: Increase in number of stops at Warner, Edinger, McFadden and 1 st Street, due to slower speeds caused by increase in traffic volumes. Heavy congestion from Civic Center Drive to 17 th Street, and from Trask to Garden Grove Blvd, requiring multiple cycle to pass the intersection.
Segment: Adams to Sunflower, City of Costa Mesa		
AM	Southbound: Stops at I-405 ramps. Increase in delay and queues from Sunflower to South Coast Drive, due to freeway congestion.	Northbound: Stops at I-405 ramps due to Caltrans ramps not being synchronized to Fairview corridor.
MD	Southbound: Stops at I-405 ramps (not synchronized to Fairview).	Northbound: Stops at Baker and at I-405 ramps.
PM	Southbound: Delay at South Coast Dr. Stops at I-405 ramps and at Baker.	Northbound: Stops at Baker and I-405 ramps. Slow speeds from South Coast Dr. to Sunflower, and long queues at Sunflower.
Segment: Wilson St to Monitor St, City of Costa Mesa		
AM	Southbound: Unexpected stops at Mustang/Pirate	Northbound: Unexpected stops at Fair Dr., due to Wilson St being in "Free" operation and also due to southbound left turn re-servicing.
MD	Southbound: Unexpected stops at Mustang/ Pirate, and Fair Drive.	Northbound: Unexpected stops at Fair Dr., due to southbound left turn re-servicing.
PM	Southbound: Delay at South Coast Dr. Stops at I-405 ramps and Baker.	Northbound: Stops at Baker and I-405 ramps. Slow speeds from South Coast Dr. to Sunflower, and long queues at Sunflower.

The CSPI results shown in **Table 4.3** and the congestion patterns identified in **Table 4.4** lead us to conclude that the current cycle lengths are not able to accommodate the increase in traffic volumes, and that the differences in cycle length between corridor segments create additional stops.

Based on our observations of the corridor and discussions with the local agencies, the following are some **technical considerations and resolutions** that will lead to success of this project:

Analyze freeway interchange influence: – Fairview Road provides access to three freeways: SR-55, I-405 and SR-22. Special consideration should be given to areas close to freeway access to avoid congestion that would block the arterial through lanes or back-up onto the freeway. The heavy directional flow of traffic during the peak hours can cause excessive queuing on or off the freeway ramps resulting in backup on the surface street. For these segments, ADVANTEC will use SimTraffic micro-simulation to analyze and ensure smooth synchronization in both directions, and to simulate the impact of ramp metering operations on queue spillback. We also recommend that the **Cities of Santa Ana and Costa Mesa consider entering into an agreement with Caltrans to synchronize freeway ramp signals, at I-405 and at SR-22, to Fairview Road corridor signals.**

Need to maintain cross-street coordination: – The project has an expressed objective to maintain network wide coordination. The City of Santa Ana has indicated to us that they have implemented synchronization plans along several of the east/west cross-arterials, and that they would like to maintain these plans. However, they understand the need to increase cycle lengths, and may be open to discuss it. ADVANTEC will consult all agencies involved, and build a consensus on how the existing coordination plans will be preserved or modified to achieve a mutually beneficial solution. ADVANTEC recommends that **City of Santa Ana consider an increase in cycle**



length along Fairview corridor, and eventually citywide, to provide additional green time for the congested intersection approaches. City of Costa Mesa should also consider matching cycle length north of I-405 freeway to any new cycle length implemented by City of Santa Ana. Table 4.5 shows current cycle lengths along Fairview Rd.

Table 4.5 - Current Cycle Lengths Along Fairview Rd

Agency	AM	MD	PM
Costa Mesa (north)	130	120	130
Costa Mesa (south)	110	110	110
Santa Ana	130	130	130
Caltrans (SR-22)	80	80	80
Caltrans (I-405)	60	60	60

Including Crossing TSSP corridors intersections within ¼ mile: Fairview Road crosses several existing E/W coordinated corridors which need to be taken into consideration while developing new synchronized timing parameters for Fairview Road. Any changes to the offsets and splits at the intersections of these corridors with Fairview corridor would upset E/W coordination. However, slight changes could be necessary to maintain even traffic flow in all directions. While synchronizing the traffic signals along Fairview Rd, it is important to maintain cross street traffic coordination, especially for those heavily travelled intersections within ¼ mile from Fairview Rd. **In this project, ADVANTEC will include, as a value-added service, heavily travelled intersections within ¼ mile from Fairview Rd. into the SYNCHRO model, and develop optimized signal timings for them as well.** This will ensure that the cities maintain east-west coordination of major arterials crossing Fairview Rd, an added benefit to the travelers. A total of 8 intersections will be added, as follows:

- | | |
|-----------------------------------|-------------------------------|
| 1. Sunflower Ave & Greenville St | 5. Edinger Ave & Sullivan St |
| 2. MacArthur Blvd & Greenville St | 6. McFadden Ave & Sullivan St |
| 3. Segerstrom Ave & Greenville St | 7. McFadden Ave & Mohawk Dr |
| 4. Warner Ave & Greenville St | 8. 1st St & Sullivan St |

Congested Locations: ADVANTEC identified a congested or heavily traveled segment of Fairview Road between Civic Center Drive and Westminster/17th Street in Santa Ana. During afternoon peak traffic, northbound drivers trying to reach SR-22 freeway have to merge from three to two lanes after passing Civic Center Dr. In addition, traffic signal timing at Westminster/17th St gives preference to east/west direction. This combination of reduced lanes and lower green timing causes traffic to back up, making drivers experience a two to three signal cycles delay. ADVANTEC will analyze critical locations and recommend special signal coordination programs, such as higher cycles for over-saturated conditions.

Pedestrian Activity: Pedestrian traffic is an important factor on Fairview Road, due to the many schools located near the corridor. ADVANTEC identified significant pedestrian activity at 12 of the 34 intersections along Fairview Rd. Overall, in the development of signal coordination, we have to manage the competing interests of providing continuous flow of traffic on the main street, providing adequate time for pedestrians to cross the street, and minimizing the wait time for side street traffic. ADVANTEC will analyze pedestrian counts at these intersections, and our timing plans will ensure that the pedestrian splits (walk + flashing don't walk time) are completely covered within the vehicle splits time so that coordination can still be maintained along the corridor.

Need for Special Plans and Traffic Responsive Operations: – Land uses that can cause off-peak traffic surges include schools, shopping centers, and event venues, such as the Orange County Fairgrounds. This results in inadequate amounts of green time for side streets during these periods and associated cycle failures. ADVANTEC will evaluate the use of Traffic Responsive Operations for traffic signals adjacent to these special land uses. Traffic Responsive can better manage sudden peaks in traffic caused by incidents or special events.



4.4 Scope of Work

The following scope of work expands upon the tasks outlined in the Request for Proposal (RFP). It illustrates our understanding and familiarity with this type of inter-agency project.

Task 1 – Project Management

ADVANTEC will prepare a detailed project schedule that provides specific project milestones for review and approval by the City of Costa Mesa, and all stakeholders. We will conduct a Project Kick-Off Meeting with Costa Mesa and Santa Ana, as well as monthly progress meetings with the Cities' Project Managers. In addition, we will also establish periodic meetings with project stakeholders to keep them apprised of the project's progress and to address key issues. ADVANTEC will prepare all meeting materials, including agendas, action items, graphics, presentation aides, and notes.

- ADVANTEC's PM and/or Project Director will attend and be an active presenter at OCTA's Traffic Forum, at Costa Mesa's and Santa Ana's City Council meetings, or other inter-governmental meetings.

Task 2 – Develop and Implement Traffic Signal Synchronization Timing

Task 2.1 - Data Collection

ADVANTEC will gather the following information from each of the local agencies:- Existing timing sheets, including coordination plans; As-built drawings, Aerial photos and maps; All planned or programmed roadway improvements; Signal timing and priority parameters, including pedestrian and bicycle timing, leading and lagging left-turn phasing, and conditional service, as well as the timing optimization software preference; Identification of critical intersections and intersections with heavy pedestrian crossings.

For the required traffic counts, our preliminary recommendations for number of locations are summarized as follows:

- 7-day 24-hour ADT counts: 17 locations
- Week-day Turning Movement Counts (AM, Midday, PM, and evening): 34 locations
- Week-end Turning Movement Counts (Saturday Midday): 34 locations
- School afternoon peak turning movement counts: 4 locations

Task 2.2 – Field Review

ADVANTEC will, at the beginning of the project, conduct field review of all the signalized intersections within the project limits. During the field review, we will gather pertinent data/information, such as:

- Roadway geometry and lane configurations
- Lengths of turn pockets
- Existing signal phasing and timing
- Speed limits
- Major sources/sinks of traffic
- Condition of existing traffic signal equipment

ADVANTEC will identify deficiencies of the existing traffic signal control and telemetry infrastructure, and will provide recommendations to correct such deficiencies. A report will be prepared containing all data collected during field review, including photos, summary of all planned and programmed improvements. A summary of existing deficiencies and recommended solutions will be presented in a concise Design Report Memorandum, with suggested ITS elements as HD CCTVs, Bluetooth/Wi-Fi, Performance Measurements, signal system and communications upgrades and other advanced upgrades such as Connected Vehicle (CV) technology.

- ADVANTEC will provide an updated **Project-wide Communications Upgrade Map** that illustrates the existing and proposed communication network with supporting details that illustrates the connectivity from the City's TMC, communications hub(s) and communications between each intersection including existing and new equipment.



Task 2.3 – Corridor ‘Before’ Study

ADVANTEC will conduct a ‘before’ field study, using a “floating car” survey. ADVANTEC will use a GPS receiver and Tru-Traffic software (version 10) to report the data. Five (5) floating car runs in each direction along the entire corridor will be performed during the AM, Midday, PM, evening and weekend peak periods. Results of the survey will be used to evaluate travel time, delay, and number of stops (measures of effectiveness), as well as OCTA’s CSPI values. ADVANTEC will prepare a memorandum that documents the results of the “Before Study” and the MOEs.

Task 2.4 – Signal Timing Optimization and Implementation

Using SYNCHRO (version 10), the following parameters will be used to develop a model of the network:

- Existing geometry of network, including distance between intersections, number of lanes, turn prohibitions, etc.
- AM, Mid-day, PM, and weekend peak turning movements at every intersection
- Existing phasing at each intersection, including any special treatment such as split-phasing, and lead-lag phasing
- Existing green splits, offsets, and cycle lengths

After the existing conditions model is set up and approved by all agencies, ADVANTEC will optimize the signal timings parameters, such as cycle lengths, splits, offsets. Special attention will be given to intersections that operate at poor levels of service (LOS D or worse) to identify possible improvements. Special techniques may be adopted such as:

- Lead-lead versus lead-lag phasing
- Half-cycle or other realistic harmonic cycle lengths for lightly traveled intersections, or double cycle lengths for heavily traveled intersections
- System breaks with different cycle lengths

Once developed, the SYNCHRO model results and database will be provided to the Cities for review. Upon review of the optimized signal timing by the agencies, a meeting will be conducted to discuss any comments. We will incorporate such comments into the signal timing plans, and resubmit to the all agencies.

Upon final approval of the optimized signal timing parameters, ADVANTEC will prepare signal timing plans in each city’s format. These timing sheets or plans will be forwarded to the respective agencies for approval. Upon receipt of any necessary corrections, the final timing sheet or plans will be prepared and delivered to each respective agency. The formats of the signal timing sheets for the different agencies are:

- City of Costa Mesa – Econolite ASC/3 and Cobalt format
- City of Santa Ana – Econolite ASC/3 format for Model 2070 controllers

ADVANTEC will implement, or assist City staff to implement the new signal timings. In addition, ADVANTEC will thoroughly check the results of the timing plans in the field during implementation to ensure that the signals are operating properly, and as intended. ADVANTEC will provide extensive field monitoring and fine-tuning of the signal timing by conducting a minimum of three (3) separate “post timing implementation” field studies for each timing plan to optimize progression by refining cycle lengths, offsets, phase sequences and splits in close consultation with City staff.

Task 2.5 – Corridor ‘After’ Study

ADVANTEC will conduct an ‘after’ field study following the same procedures as described in the Before Study, and the requirements set forth in the RFP. ADVANTEC will provide a synchronized video with the ‘before’ and ‘after’ travel time runs to augment the study, and will use the video for presentation to Cities’ officials. The synchronized video is taken inside the car during the ‘After Runs’, and is played concurrently with an animation on a map that represents the position of the car. This will facilitate ease of understanding of the time-space diagram by elected officials and lay-persons.



Task 3 – Engineering (PS&E), System Procurement and Integration

ADVANTEC will prepare plans, specifications and estimates for installation of all project improvements in the City of Costa Mesa and City of Santa Ana. A field review of existing equipment will be performed at all project intersections. To accurately depict the new signal and communication equipment on the project Record Drawings, we will ensure that the following fundamental design-base items are shown on our plans: conduit runs, pull box locations, proposed traffic signal and ITS equipment locations and any underground/overhead conflicting utility lines. Photo inventory of the interior of each signal cabinet will be taken to evaluate the capacity of the cabinet to receive the new equipment. For instance, we will evaluate the need for installing new shelves and/or racks.

ADVANTEC anticipates producing the following design sheets:

Agency	Costa Mesa	Santa Ana
Plan Sheet description:	Quantity	
Traffic Signal Modification (1:20 scale)	10	10
Communications Plan (1:40 scale)	2	3
Fiber Assignment Detail	-	1
Wireless Communications Plan (1:40 scale)	-	1
Communications HUB/Detail plans	1	1
Title Sheet	1	1
Total # sheets	14	17

After verifying existing field conditions, 1:40 scale and 1:20 scale improvement plans and traffic signal modification plans will be developed and submitted to lead agency Costa Mesa as part of ‘Draft’ and ‘Final’ submittals. Conduit installation plans will include utilities and laterals information, as provided by utility companies. Plans will be modified to reflect all agency comments during the PS&E process. In addition, ADVANTEC will submit plans and coordinate with Southern California Edison for approval and installation of new electrical service locations. If the Field Review analysis does not uncover any issues or deficiencies, then ADVANTEC will start hardware procurement at same time as plan design, helping to expedite the project timeline. Completed ‘As-Built’ plans will be delivered in electronic format to the City of Costa Mesa in AutoCAD DWG format and to the City of Santa Ana in MicroStation DGN format.

ADVANTEC will prepare traffic control plans, as necessary to accommodate the installation of signal hardware upgrades. ADVANTEC will also advise the City on how to maintain traffic flow during cabinet replacement, new communication conduit and fiber optic installation.

The work on the Synchronization tasks of the project will start at the same time as the signal improvement design and run in tandem to expedite the project. Preliminary tasks, such as field review, traffic counts, Before Study, and Base Synchro Model development can start soon after project kick-off.

Equipment procurement will be shared by ADVANTEC and Crosstown, as detailed in the following section. Installation and integration will be done by Crosstown and assisted by ADVANTEC’s staff.

Scope of Services for Hardware Implementation in City of Costa Mesa

ADVANTEC will prepare plans for installation of signal improvements in the City of Costa which will include installation of: GPS Pre-emption system, UPS Battery backup system, Video Detection, Protected Left-Turn



phasing, Type P-44 cabinet, Type II service, cabinet foundation, HD CCTV camera, new ATC controller, Ethernet-over-copper switch, and Video Management System.

- **ATC Controller upgrades** – Costa Mesa has requested the upgrade of new Econolite Cobalt ATC controllers at 2 locations. Econolite will supply and install Cobalt ATC controllers. ADVANTEC will provide timing sheets.
- **NEMA Cabinet upgrades** – City has requested replacement of 4 cabinets with new Type P-44 controller cabinets, including new Type II service and new foundation. Econolite will supply TS2 Type 2 cabinets and Crosstown will procure Type II service and install cabinets, Type II service, and foundation. Crosstown has assumed replacement of up to 25 feet of conduit for Southern California Edison (SCE) service upgrade. ADVANTEC will coordinate with SCE for installation and approval of new electrical service.
- **Video Detection** – Econolite will supply Autoscope Vision Video Detection for 10 intersections (a total of 40 cameras assumed). The exact number of cameras will be defined during the design phase. Crosstown will install video detection equipment and Econolite will configure the system.
- **GPS-based Preemption system** – ADVANTEC will procure equipment and installation of GTT GPS Opticom Preemption for 13 locations.
- **UPS Battery system** – ADVANTEC will procure and Crosstown will install Clary UPS systems with batteries (including side-mount cabinet) for 5 locations.
- **HD CCTV camera** – ADVANTEC will procure and Crosstown will install CCTV camera Bosch MIC IP Starlight 7000 HD PTZ at one location.
- **Ethernet Switch** – Crosstown will procure, install and configure Ethernet-over-Copper switches Etherwan model ED3575-622 with hardened power supply at 3 locations.
- **Video Management System** – ADVANTEC will work with city staff in the selection and commissioning of a new Video Management System. We will schedule presentations from three vendors to demonstrate their products. We will then develop evaluation criteria and a set of system requirements to assist City staff in the selection of the best system. ADVANTEC will procure equipment and installation of system.
- **Signal Modification to add Protected Left-Turn Phasing** – Crosstown will furnish and install the required signal modifications to provide for both northbound and southbound protected left-turn phasing at Fairview Rd/Monitor Way.

Scope of Services for Hardware Implementation in City of Santa Ana

ADVANTEC will prepare plans for installation of signal improvements in the City of Santa Ana, which will include installation of: Type 332L cabinets, Type II service, cabinet foundation, ATC 2070 Controllers, Fiber Optic Ethernet switches, smart Power Distribution Units, upgraded vehicle detection, HD CCTV cameras, Fiber Optic cable and conduit, Fiber Optic termination and splicing, and relocation of wireless Broadband Radio units.

- **Controller upgrades** – City of Santa Ana has requested the upgrade of 7 existing traffic signal controllers with new 2070-1C modules and replacement of old controllers with new Safetran ATC 2070C controllers. Econolite will supply and configure controllers and modules. ADVANTEC will provide timing sheets.
- **Cabinet upgrades** – City has also requested 7 new Type 332L cabinets, including new Type II service and new foundation. Econolite will supply new cabinets. Crosstown will procure Type II service and install cabinets, Type II service, and foundation. Crosstown has assumed replacement of up to 25 feet of conduit for Southern California Edison (SCE) service upgrade. ADVANTEC will coordinate with SCE for installation and approval of new electrical service.
- **Ethernet Switch** – Crosstown will procure, install and configure Fiber Ethernet switch Etherwan model EX71620-A0B at 7 locations, and Etherwan model EX73242-ABB at 4 locations.
- **Power Distribution Unit** – ADVANTEC will procure and Crosstown will install APC-AP7900 at 7 locations.
- **HD CCTV camera** – ADVANTEC will procure and Crosstown will install CCTV camera Axis Q6055-E PTZ Network camera at 5 locations.



- **Vehicle Detection** – Crosstown will install additional DLC cable for system detection at 5 locations.
- **3" Communication Conduit** – Crosstown will supply and install 6,800 feet of 3" PVC conduit, including necessary pull-boxes.
- **24-SMFO Fiber Optic cable** – Crosstown will supply and install 7,950 feet of 24-SMFO cable.
- **12-SMFO Fiber Optic cable** – Crosstown will supply and install 4,050 feet of 12-SMFO cable.
- **Fiber Optic termination and splicing** – Crosstown will supply Drop cables, Corning FDU's, Underground Splice Enclosures, connectors, and trays, and will splice and terminate fiber cables as described in RFP. ADVANTEC will supply fiber assignment details.
- **Relocation of Wireless Broadband Radio** – Crosstown will relocate existing wireless broadband radio and install new cable at 5 locations.

System Procurement

ADVANTEC will use Econolite and Crosstown to furnish and install hardware items. New communication conduit, fiber optic cable and equipment installation will be scheduled to occur first. ADVANTEC will perform preliminary planning to ensure that existing signal controllers are maintained on-line as long as possible during the new communication system cut-over. The new fiber optics system will be configured and tested prior to acceptance by the City.

Prior to start the procurement of hardware, ADVANTEC will perform a field review of existing communication infrastructure at all intersections. ADVANTEC will use the services of Crosstown to perform line-of-sight evaluations for all wireless Broadband antenna locations, and also to verify the conditions of existing Fiber Optic strands and Copper interconnect wires to identify any breakages or loss of signal. ADVANTEC will conduct a feasibility evaluation study to verify that the existing infrastructure is compatible and has the capability to interface with the new communication equipment and deliver the desired communication performance. The purpose of conducting both the testing and feasibility evaluation steps is not only to validate the agencies' original equipment upgrade wish-list, but to ensure that the right equipment is ultimately ordered for deployment. If the Field Review analysis and Feasibility Evaluation do not uncover any issues or deficiencies, then ADVANTEC will start hardware procurement.

System Integration

Crosstown will be the main Systems Integrator on this project with support provided by ADVANTEC. The deployment of the various ITS elements into one integrated system will be based on best practices. The sequence of activities that will integrate ITS components into sub-systems, and sub-systems into entire systems will be defined. Integration and verification are closely linked processes in which one follows the other until the entire system is ready for operational deployment.

Typically, the deployment of new ATC controllers will involve configure/set IP Address and VLAN assignment within the device and associated field equipment. Adding the ITS device to the central system is also required. ADVANTEC will make sure that new controllers are programmed with existing basic timing and integrated into the Centrac's ATMS and MIST system prior to the time of turn-on. This process will be similar for other ITS elements such as HD CCTV cameras, advanced Video Detection and other ITS systems integration.

Task 4 – Construction Management

We will coordinate with City staff, Crosstown and vendors for the installation and integration of any equipment needed to complete the project. ADVANTEC will inspect all field installation work on a daily basis, or as needed.

We will also be responsible for preparation of final as-built plans. Completed 'As-Built' plans will be delivered in electronic format to the City of Costa Mesa in AutoCAD .DWG format and to the City of Santa Ana in MicroStation .DGN format.



Task 5 – Ongoing Operation and Maintenance Services

ADVANTEC will provide continuing signal timing support and monitoring for a period of two (2) years after completion of the signal timing implementation, following the requirements set forth in the RFP. We will drive the corridor monthly to verify signal timing, and we will be available to respond to signal timing change requests from City staff. Our signal system technicians will be available to troubleshoot signal communications and operations. ADVANTEC will prepare a Technical Memorandum at the end of the 2 year monitoring phase to summarize the activities and revisions done to signal timing during this phase.

Task 6 – Project Report

ADVANTEC will prepare a Final Report with an executive summary following the requirements set forth by OCTA. The final report will summarize “before” and “after” conditions identifying signal coordination benefits derived in corridor vehicle progression, including reduction in stops, delays, fuel consumption, exhaust emissions, improvement in individual intersection operations and will include the OCTA MOE Corridor Synchronization Performance Index (CSPI): Average Speed, Stops per Mile, and Greens per Red.

5. PROJECT SCHEDULE

Our project schedule is presented below. We propose to complete the Primary Implementation Phase in 9 months, assuming a start date of late March. We would complete construction by end of August and implementation of signal synchronization by mid-November, before the holidays. Our Construction schedule takes into account the Orange County Fair happening mid-July to mid-August. The following is a brief schedule of the overall project.

PROPOSED PROJECT SCHEDULE																	
City of Costa Mesa		2018										2019		2020			
Fairview Road Traffic Signal Coordination Project		MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	...	DEC	JAN	...	DEC
TASK NO.	DESCRIPTION																
	Project Kick-off meeting	▲															
1	Project Management		■	■	■	■	■	■	■	■	■	■	■	■			
2	Develop and Implement Traffic Signal Synchronization Timing																
2.1	Data Collection		■	■													
2.2	Field Review		■	■													
2.3	Corridor 'Before Study'			■	■												
2.4	Signal Timing Optimization and Implementation			■	■	■	■	■	■	■	■						
2.5	Corridor 'After Study'									■	■						
3	Engineering (PS&E), System Procurement and Integration																
	PS&E			■	■												
	System Procurement		■	■	■	■											
	Integration			■	■	■	■	■	■								
	CONSTRUCTION - Costa Mesa				■	■	■	■	■	■							
	CONSTRUCTION - Santa Ana				■	■	■	■	■	■							
4	Construction Management			■	■	■	■	■	■								
5	Ongoing Operation and Maintenance Services																▶ 2 YEARS
6	Project Report																▶
	ADVANTEC's Proposed Schedule																



APPENDIX A RESUMES

Jose Guedes, TE

Project Manager

Jose Guedes is a senior engineer and the team leader in the Traffic Signal Synchronization practice for ADVANTEC. He has over 28 years experience in traffic forecast/modeling, traffic operations and engineering, including 18 years in traffic signal synchronization project management on over 2500 intersections.

Relevant Projects:

Irvine Boulevard Regional Traffic Signal Synchronization Project (Irvine, CA) – Project Manager. Project included signal synchronization of 28 signals along corridor, and implementation of new signal controllers into new Central System (Centracs). Project scope consisted of: calculation of new timing parameters (yellow clearance, pedestrian clearance, bicycle minimum green) in accordance to MUTCD; collection of 7-day ADT and turning movement counts; development of optimized synchronization timing plans for AM, Off-peak, Midday, PM and Evening periods; Before and After Study with video recording of travel runs; programming of new controllers; timing implementation and fine-tuning; and preparation of project final report. Project also included a two-year operation and monitoring phase, with monthly travel time surveys and synchronization timing monitoring.

Citywide Fiber Optics Communication and Signal System Upgrade (Lancaster, CA) – Project Manager. The City of Lancaster received two grants from LA-METRO to update its traffic signal system: The North County ITS Expansion Project and the Traffic Signal System Modernization Project. These two citywide projects consisted of preparation of Plans, Specifications and Estimates for installation of 35 miles of fiber optics communications, wireless communications, CCTV cameras, and upgrade of traffic signal central system and controllers for 140 signalized intersections. Project scope included: field inventory of all existing signal cabinets, tracing of existing copper interconnect and fiber optic cables between signal cabinets, measuring distances between pull boxes, inventory of Communication hub cabinets, and inventory of City Hall and City Yard traffic signal communications equipment.

Citywide Traffic Signal Coordination and Retiming (Lancaster, CA) – Project Manager. Project included citywide development of updated signal timing according to current CA-MUTCD, and development of new synchronization timing plans (AM, Midday, PM, and Saturday) for 140 signals and 16 corridors, and before/after analysis and report. A traffic collision analysis and operational recommendations were developed for left turn movements at all 140 signalized intersections.

Seal Beach Blvd TMC & ITS Improvements (Seal Beach, CA) - Project Manager. ADVANTEC provided City-wide Turnkey project for the design and integration of new city-wide TMC and ITS improvements. The design-build project included installation of over six miles of fiber optic cable, 2070 controller upgrades, new high definition CCTV cameras, and relocation and expansion of an existing Traffic Management Center (TMC). New fiber optic links were designed and furnished by ADVANTEC through Caltrans I-405 Freeway overcrossing to connect the Northern part of the City. In addition, the traffic network emphasizes a redundant self-healing fiber backbone ring complete with VLAN and Layer 3 network switching capabilities. The project links three remote City buildings and provides seamless IP services to each; City Hall (TMC), Police Department (HUB) and City Yard facilities. As part of the project, the City IT Department is further leveraging the new City-wide Fiber Optic backbone to provide IT network intra-building communication at a reduced cost to the City. ADVANTEC developed updated signal timing and signal synchronization (15 signals), and also designed and managed construction (Design-Build) of Traffic Management Center, Fiber-Optics communications network, and ITS upgrades.

Jeronimo Road Traffic Signal Synchronization and ITS Project (OCTA, Orange County, CA) - Project Manager. Funded by OCTA's Project P program, this project included development of signal synchronization (16 signals), and implementation of Ethernet-over-copper communications, cabinet and detection upgrades, and installation of pedestrian count-down modules within the cities of Lake Forest and Mission Viejo. Project also included a two-year operation and monitoring phase, with monthly travel time surveys and synchronization timing monitoring.



Registration:

Traffic Engineering, CA TR1861

Years of Experience: 28

Years with Firm: 8

Education:

M.S, Transportation Engineering, University of California, Irvine, 1990

B. S., Civil Engineering, Universidade de Sao Paulo, Brazil, 1986

Professional Affiliations:

Institute of Transportation Engineers (ITE)

Edinger Avenue Traffic Signal Synchronization and ITS Project (OCTA, Orange County, CA) - Project Manager. Funded by OCTA's Project P program, this project consisted of development of signal synchronization (38 signals) and implementation of wireless communication, Ethernet-over-copper, Fiber-Optics, Bluetooth-based performance measures, vehicle detection, and cabinet replacements within the cities of Huntington Beach, Westminster, Fountain Valley, and Santa Ana. Project also included a two-year operation and monitoring phase, with monthly travel time surveys and synchronization timing monitoring.

Jeffrey Rd./University Dr. Traffic Signal Synchronization and ITS Project (Irvine, CA) - Project Manager. Project included signal synchronization of 33 signals along corridor and 7 signals on cross-streets, and implementation of new signal controllers and Central System (Centracs). Project included signals in Irvine, Newport Beach and Caltrans. Project also included a two-year operation and monitoring phase, with monthly travel time surveys and synchronization timing monitoring.

Avenida Vista Hermosa and Camino Los Mares Traffic Signal Synchronization and ITS Project (San Clemente, CA) - Project Manager. Project consisted of signal synchronization (29 signals) and design of signal communication infrastructure, including Fiber-Optics, Wireless and Ethernet-over-Copper connections. Project developed and implemented timing plans for AM, Midday, PM and Weekend.

Avenida Pico and El Camino Real Traffic Signal Synchronization and ITS Project (San Clemente, CA) - Project Manager. Project included development of signal synchronization timing (39 signals), evaluation and selection of new Central Traffic Signal Systems, and design of citywide signal communication infrastructure, including Fiber-Optics, Wireless and Ethernet-over-Copper connections. Project developed and implemented timing plans for AM, Midday, PM and Weekend.

Fairview Rd Traffic Signal Synchronization Project (Costa Mesa, CA) - Project Manager. Design-Build project consisted of signal synchronization study (31 signals), installation of controllers, cabinets, CCTV cameras, fiber optic cable, wireless and Ethernet-over-copper communications within the cities of Costa Mesa and Santa Ana. Project also included a three-year operation and monitoring phase, with monthly travel time surveys and synchronization timing monitoring.

Magnolia Avenue Traffic Signal Synchronization and ITS Project (OCTA, Orange County, CA) - Project Manager. Project consisted of signal synchronization (54 signals) and implementation of new hardware and wireless communication infrastructure. Project included signals in the cities of Fullerton, Anaheim, Stanton, Fountain Valley, Westminster, and Huntington Beach.

Adaptive Traffic Control Systems

Adaptive Traffic Control System – Systems Manager and Construction Manager (Culver City, CA) - Senior Engineer. Project consisted of coordination and monitoring the progress of implementation of ATCS including setup, installation, system integration, testing and commissioning. Ensure that all functional requirements for Culver City's Adaptive Traffic Control System that are defined in the "Concept of Operations" and "System Requirements" reports are properly met and implemented. ADVANTEC also assisted the City to develop an IP address scheme, reviewed updated signal timing parameters provided by contractor that are compliant with the latest version of California's Manual on Uniform Traffic Control Devices (CAMUTCD), reviewed and approved shop drawings, acceptance test plans, commissioning schedule, training agenda, and other documentations provided by contractor, and participated in the acceptance testing to verify that the system and functional requirements were met.

Adaptive Traffic Control System Evaluation Study (Lancaster, CA) - Project Manager. Project consisted of preparing an Evaluation Study to assist the City of Lancaster in selecting an Advanced Traffic Management System (ATMS), and to analyze the cost-effectiveness of deploying an Adaptive Traffic Control System (ATCS) at selected corridors. Project included: defining City's objectives, set up system presentations and evaluation, identify candidate corridors, identify infrastructure improvements, perform cost/benefit analysis, and prepare study report.

Adaptive Traffic Control System - Functional Specifications (Culver City, CA) - Senior Engineer. Project included a technical review of current Adaptive Traffic Control Systems and review of City's existing infrastructure, development of cost-effective recommendations, preparation of Concept of Operations and System Requirements, development of Performance Specifications, preparation of request for proposal, development of Evaluation Scoring Criteria and assistance in evaluating adaptive system proposals.

Traffic Signal Synchronization and ITS

SANBAG Tier 3 & 4 Traffic Signal Synchronization (San Bernardino County, CA) - Project Manager. Jose was responsible for signal synchronization project consisting of approximately 700 signalized intersections and 15 separate jurisdictions in the

San Bernardino Valley. Managed the development, implementation, and fine tuning of new signal timing, working with each agency to monitor and fine-tune timing plans after field implementation.

Hollister Avenue Traffic Signal Synchronization (Goleta, CA) - Senior Engineer. Jose was responsible for development, implementation and field verification of signal timing and synchronization of new signals along Hollister Avenue and Storke Avenue.

Metropolitan Transportation Commission (MTC) - Program for Arterial Signal Synchronization (PASS) (South San Francisco, CA) – Project Manager. ADVANTEC was responsible for signal synchronization project along East Grand Ave, Airport Blvd, South Airport Blvd and El Camino Real (38 signals). Project developed and implemented timing plans for AM, Midday, PM and Weekend. Project included City and Caltrans' signals.

MTC - PASS program (Oakland, CA) - Project Manager. Jose was responsible for signal synchronization project along 14th Street, Oak Street, and 98th Avenue (41 signals). Project developed and implemented timing plans for AM, Midday, and PM. Project included City and Caltrans' signals.

MTC - PASS program - SR-82 - El Camino Real (Caltrans District 4, Santa Clara County, CA) - Project Manager. Project consisted of development and implementation of synchronization timing plans for AM, Midday, and PM periods along State Route 82 - El Camino Real (61 signals) in Santa Clara County. Project also included installation of GPS clocks at 50 locations.

Riverside Freeway Widening Project – Detour Signal Timing (Caltrans District 8, Riverside, CA) – Project Manager. Project consisted of development, implementation and monitoring of signal timing plans along the detour routes during construction of new bridges and access ramps for SR-91 freeway widening. Project included City of Riverside and Caltrans signals.

I-10/Riverside Avenue Interchange Project – Detour Signal Timing, SANBAG (San Bernardino County, CA) - Project Manager. Jose was responsible for development, implementation and monitoring of signal timing plans along the detour route and adjacent interchanges during construction of new freeway interchange.

Yorba Linda Boulevard Traffic Light Synchronization Project (TLSP), OCTA (Orange County, CA) – Project Manager. Project consisted of development of signal synchronization and implementation of hardware infrastructure within the cities of Yorba Linda, Anaheim, Placentia, Fullerton and Caltrans.

Beach Boulevard Traffic Light Synchronization Project (TLSP), OCTA (Orange County, CA) – Project Manager. Project consisted of development and implementation of signal synchronization along Beach Blvd (70 signals), and post-project timing monitoring and maintenance. Worked directly with Caltrans staff during Monitoring period to adjust timing plans as needed.

Transportation Management Center Operation - ITRAC (Irvine, CA) – Associate Engineer. Responsible for daily operation of TMC. Responded to residents' inquiries and complaints. Interfaced with city inspectors and police department to adjust signal timing and alleviate traffic congestion caused by lane closures due to road construction or traffic incidents. Managed traffic signal synchronization projects (TSSP). Developed and implemented signal synchronization along most corridors in the city. Oversaw the migration of VMS-330 system and 820-A controllers to ACTRA and Type 2070 controllers.

Carlos A. Ortiz, PE, TE, PTOE

Project Director

Mr. Ortiz has extensive experience managing Traffic Engineering and Intelligent Transportation System (ITS) projects for numerous agencies throughout California. He has worked on many complex projects and has the ability to resolve problems quickly and efficiently by drawing on his 29 years of experience, exclusively in the field of ITS and traffic engineering. **Mr. Ortiz has recently elected to serve at ITE International Board of Direction and to serve as International Director, representing ITE Western District. Mr. Ortiz is a member of the Board and Past-President of the Institute of Transportation Engineers (ITE) Western District. Mr. Ortiz also serves on the Board at ITS California, where he serves as the Outreach Committee Chair for Connected California Committee and ITS California.**

Relevant Projects:

Coachella Valley Association of Governments (CVAG) Regional Traffic Signal Synchronization (Coachella Valley, Riverside County, CA) - Project Manager. CVAG has embarked on a major effort to advance the development and implementation of Intelligent Transportation Systems Programs in the Coachella Valley with an emphasis in the development of a valley-wide traffic signal interconnect master plan and signal synchronization of new and existing signals on the regional arterials roads. The work consists of: CVAG Traffic Signal Interconnect Master Plan, System Engineering Management Plan (SEMP), Concept of Operations (ConOps) and Strategic Deployment Plan, System Requirements, Environmental, Preliminary Engineering, Systems Integrator Procurement and Design, System Implementation, Construction Management and Inspection, Traffic Signal Synchronization, Operations and Maintenance, and preparation of project website.

Kraemer Boulevard-Glassell Street-Grand Avenue Regional Traffic Signal Synchronization (RTSS) Project (Orange County, CA) - Project Manager. Mr. Ortiz was responsible for the 15-mile Kraemer Boulevard-Glassell Street-Grand Avenue (KGG) Regional Traffic Signal Synchronization (RTSS) project, which involves 61 traffic signals through four agencies including the Cities of Anaheim, Brea, Orange, Placentia and Santa Ana. The project also includes the preparation of fiber optic plans at different roadway segments, the design and upgrade of existing Traffic Management Centers (TMC) at the cities of Orange and Placentia, the procurement, installation, testing, and commissioning of new signal controllers, cabinets, closed circuit television (CCTV) cameras, fiber optic conduit and cable, and TMC hardware and software.

Ball Road Traffic Signal Synchronization Program (TSSP) Project (Orange County, CA) - Project Manager. Mr. Ortiz was responsible for the 11-mile Ball Road Traffic Signal Synchronization Program (TSSP) project, which involves 39 traffic signals through four agencies including the Cities of Buena Park, Anaheim, and Orange and Caltrans. The project included the preparation of fiber optic plans and installation of fiber optic, the procurement, installation, testing, and commissioning of new signal controllers, cabinets, Bluetooth travel management systems, closed circuit television (CCTV) cameras, and Econolite CENTRACS traffic management systems for the Cities of Anaheim and Orange.

Marguerite Parkway Traffic Signal Synchronization Program (TSSP) Project (Orange County, CA) - Project Manager. Mr. Ortiz was responsible for the synchronization of 32 traffic signals in the cities of Mission Viejo and San Juan Capistrano. The project consisted of reviewing the geometric layout, existing traffic signal equipment, signal synchronization related infrastructure and development of the model using Synchro software.

Los Angeles County Regional Intelligent Transportation Systems (ITS) Architecture Update - Project Manager. ADVANTEC has been selected by Metro to update the Los Angeles County Regional Intelligent Transportation Systems (ITS) Architecture. This project presents a forward-looking opportunity for regional stakeholders to revisit the architecture as a planning framework to support the next wave of ITS investments and Smart City initiatives that will shape mobility in LA County in the years to come. The LA County Regional ITS Architecture Update will consider AV/CV Deployments and it will address the needs of non-motorized users. ADVANTEC will promote the use of the Regional ITS Architecture by stakeholders.



Registration:

Civil Engineer, CA, C057535
Traffic Engineer, CA, 2025
Civil Engineer, AZ, 34333
Professional Traffic
Operations Engineer, US, 426

Years of Experience: 29

Education:

B.S., 1989, Civil Engineering,
California State Polytechnic
University, Pomona

Professional Affiliations:

**Board Member and
International Director (Elect),
ITE International**

**Board Member, ITS California
Partnership Chair, Connected
California, ITS California**

**Board Member and Past-
President, Institute of
Transportation Engineers,
Western District**

Tracy Moriya

QA/QC Manager

Tracy Moriya is a Principal in ADVANTEC with over 29 years of experience in management and design of traffic engineering and transportation projects. His professional experience includes design of transportation systems, traffic signals, Intelligent Transportation Systems (ITS), guardrail design, CCTV video communication design, roadway and highway lighting, traffic signal system design, signing and striping, stage construction/handling, traffic control. He is an expert in developing design plans, as well as municipal engineering for traffic signal systems, fiber optic interconnect, traffic control, signing and striping projects, street lighting design street lighting design projects.

Relevant Projects:

City of Anaheim Five (5) ITS Improvements Design Projects (Anaheim, CA) – Deputy Project Manager for PS&E design of ITS improvements along 5 major corridors: Ball Road West, State College Boulevard, Imperial Highway, Lincoln Avenue and Santa Ana Canyon Road. All the corridors are part of the City's ITS master plan to maximize the arterial system capacity and improve operational efficiency. The project's objective is to reduce the traffic congestion and negative impacts by using advanced technologies to operate the traffic signals and ITS efficiently and effectively. All projects involved development of engineering plans, specifications, and estimates (PS&E) for construction of CCTV cameras and tail circuits, SCOOT detectors, advanced detectors, Model 2070N controllers and cabinets upgrade, and fiber optic and twisted-pair communications network.

Lincoln Avenue, State College Boulevard, Imperial Highway, and Ball Road West Signal Improvement, CCTV Camera and Communication System Design Projects (Anaheim, CA) - All the corridors are part of the City's ITS master plan to maximize the arterial system capacity and improve operational efficiency. Deputy Project Manager on four separate traffic and ITS PS&E design projects, involving over 30 intersections, for the implementation of CCTV camera systems, fiber optic communications trunk-lines, 2070 controller upgrades, SCOOT detectors for adaptive traffic signal control, and traffic signal upgrades.

Pacific Avenue / Long Beach Boulevard Traffic Signal Synchronization Project (TSSP) and Signing/Striping (Los Angeles County, CA) - Project Manager for traffic signal upgrade designs for 15 intersections along Pacific Avenue / Long Beach Boulevard in the Cities of Lynwood and Compton, as well as Caltrans. The project tasks included data collection, field inventory, detailed recommendation, upgrading existing traffic signal, signal controller, controller cabinet equipment, vehicle and pedestrian detection, signal standards; and modifying roadway signing, striping and pavement markings. Performed quality control of all traffic signal modifications plans, and signing and striping plans. Also coordinated with the County and the local agencies for plan processing.

Avalon Boulevard Traffic Signal Synchronization Project and Signing/Striping (TSSP) (Los Angeles County, CA) – Project Manager for upgrading 31 traffic signals along Avalon Boulevard in the City of Carson, parts Los Angeles County and California Department of Transportation (Caltrans). This project with the County, is part of a traffic signal synchronization project, as a whole, traffic signal modifications and upgrades are necessary prior to synchronizing all project signals along Alondra Boulevard. Mr. Moriya Lead a team of design engineers to take field inventory along the corridor and prepared recommendations for the County and the City of Carson. ADVANTEC prepared plans, specification and estimates for the project. Performed quality control of all traffic signal modifications plans. Also, coordinated with the County and the local agencies for plan processing.



Years of Experience: 29

Years with Firm: 19

Education:

California State University Long Beach, Mathematics

University of Irvine, Mathematics

Professional Affiliations:

Vice President

Riverside/San Bernardino ITE (RSBITE)

Member, Institute of Transportation Engineers (ITE)

Professional Training:

Institute of Transportation Studies (ITS) Extension, Traffic signal design

University of California Extension, Street lighting design

Northwestern University Traffic Institute, Intersection & Channelization Design

Westech College, Microstation Intergraph PC Graphics and Computer Aided Drafting (CAD)

Keith Rand, PE, TE

Task Lead - Construction Management

Mr. Rand is Director of Operations with ADVANTEC's Diamond Bar location. Keith brings more than 24 years of specific technical experience and expertise in the areas of design build implementation, traffic and transportation engineering and planning, Intelligent Transportation Systems (ITS) planning and design, traffic signal design, and engineering design. His broad based experience in traffic and transportation engineering provides a solid foundation for both large scale and site specific transportation projects. He has planning, design and traffic operations experience on both small and large scale transportation projects, including design-build of large infrastructure projects, LRT and BRT project experience. Additionally, Keith has strong management and communications skills coordinating with multiple project team members and stakeholders. His experience also includes ITS planning and design of ATMS/ATIS plans, specifications and estimates for communication system design of CCTV cameras, changeable message signs, highway advisory radio and ramp metering elements.

Relevant Projects:

I-405 Express Lanes Design Build Project (OC405 Partners Joint Venture/OCTA – Santa Ana, Costa Mesa, Huntington Beach, CA) –Project Manager. Mr. Rand is responsible for coordination with the OC405 Partners Joint Venture for the Constructability Reviews focused on the electrical, Intelligent Transportation Systems (ITS), and electronic toll and traffic management systems (ETTM) infrastructure design submittals prepared by the Pacific Infrastructure 405 Designers Joint Venture. ADVANTEC prepared constructability reviews for lighting concept plan, temporary TMS capacity analysis, temporary TMS performance monitoring plan, temporary RMS/CCTV/TMS details, and several design packages encompassing over 200 design plans.

Riverside County Transportation Commission (RCTC), SR-91 Corridor Improvement Project (CIP) Design-Build (Corona, CA) - Traffic, Electrical/ITS & ETTM Manager. Managed the Traffic Team and the Electrical/ITS Team, including the Electronic Toll and Traffic Management (ETTM) infrastructure as part of the Atkinson-Walsh Joint Venture (AWJV). The project includes nearly 16 miles of freeway improvements, including the extension of OCTA's SR-91 Express Lanes from the County Line to I-15 by approximately 8 miles. Responsible for the traffic-, electrical-, ITS- and ETTM-infrastructure components of the project including movement of traffic, pavement delineation, signing, highway (including high mast) and local street lighting, traffic signals, Caltrans and City of Corona ITS communication system (fiber, RMS, TMS, CCTV, CMS and WVDS), and ETTM (lighting and sign illumination, fiber, CCTV and CMS infrastructure) design.

Orange County Transportation Authority (OCTA), SR-22 Design-Build (Orange, CA) - Project Engineer. Responsible for ITS/electrical concept design during proposal efforts with Granite-Myers-Rados. Responsibilities included Independent Technical Review (ITR) following Caltrans PS&E design of movement of traffic/detours, signing and pavement delineation, electrical sheets including traffic signals, highway lighting, communication, RMS, TMS, TCS, CCTV and CMS plans. Other involvement included coordination and review meetings between designers, contractors, and state and local agencies.

Orange County Transportation Authority (OCTA), Crown Valley Parkway Traffic Signal Synchronization Program (TSSP) (Orange County, CA) - URS Project Manager/Task Manager. Responsible for the Crown Valley Parkway TSSP project in south Orange County. Responsible for managing staff assignments that included detailed field review of 30 signalized intersections along Crown Valley Parkway between Pacific Coast Highway and Antonio Parkway. Prepared a detailed field review report documenting the findings and incorporating the data into a base Synchro network. Also conducted "before" corridor study travel time runs during weekday and weekend peak periods as part of the existing conditions analysis. Coordinated with cities of Dana Point, Mission Viejo and Laguna Niguel, as well as the County of Orange, to inspect and document existing conditions of the traffic signal cabinets.



Registration:

2000/Professional Civil Engineer/ CA/C60090 (Expires 6/30/2018)

2001/Professional Traffic Engineer/ CA/TR2103 (Expires 06/30/2017)

Years of Experience: 24

Years with Firm: 1

Education:

BS/Civil Engineering/1992/San Diego State University

Professional Affiliations:

Orange County Traffic Engineering Council (OCTEC) -

Board of Directors (2013-Present)

Institute of Transportation Engineers (ITE)

Intelligent Transportation Society of California (ITS-CA)

John T Cox IV

Systems Engineer

Mr. Cox is a Systems Engineer for ADVANTEC and specializes in Intelligent Transportation Systems, Communications, Fiber Optic technologies, Closed Circuit Television, Changeable Message Signs, Wireless Broadband Ethernet, Traffic Management Center systems integration and various Advanced Traffic Management System hardware/software suites. Over sixteen years of experience in the transportation industry, John has been involved in dozens of transportation and traffic engineering projects that include both design and execution of Traffic Signal, ITS, CCTV, CMS, TMS and Fiber Optic Communications having integrated and maintained such systems in support of centralized signal control deployments. Additionally, he has extensive background in the public sector, where he designed and maintained the Traffic Management Center for the City of Costa Mesa for over 10 years.

Relevant Projects:

Citywide Fiber Optics Communication and Signal System Upgrade (Lancaster, CA) – Systems Engineer. The City of Lancaster received two grants from LA-METRO to update its traffic signal system: The North County ITS Expansion Project and the Traffic Signal System Modernization Project. These two citywide projects consisted of preparation of Plans, Specifications and Estimates for installation of 35 miles of fiber optics communications, wireless communications, CCTV cameras, and upgrade of traffic signal central system and controllers for 140 signalized intersections. Project scope included: field inventory of all existing signal cabinets, tracing of existing copper interconnect and fiber optic cables between signal cabinets, measuring distances between pull boxes, inventory of Communication hub cabinets, and inventory of City Hall and City Yard traffic signal communications equipment.

ITS and TMC Improvement Project (Seal Beach, CA) - Lead Design Engineer. Citywide design-build turnkey project, Mr. Cox is responsible for the design and integration of multiple ITS improvements citywide; including installation of over six miles of fiber optic cable, 2070 IP based controllers, HD CCTV field upgrades and a newly designed Traffic Management Center (TMC) located at City Hall. The traffic network emphasizes a redundant self-healing fiber backbone ring complete with VLAN and Layer 3 network switching capabilities. The project links three remote City buildings and provides seamless IP services to each; City Hall (TMC), Police Department (HUB) and City Yard facilities. As part of the improvement project, the City IT Department is further leveraging the new City-wide Fiber Optic backbone to provide IT network intra-building communication at a reduced cost to the City.

Edinger Avenue Traffic Signal Synchronization and ITS Project (OCTA, Orange County, CA) - Systems Engineer. Funded by OCTA's Project P program, this project consisted of development of signal synchronization (38 signals) and implementation of wireless communication, Ethernet-over-copper, Fiber-Optics, Bluetooth-based performance measures, vehicle detection, and cabinet replacements within the cities of Huntington Beach, Westminster, Fountain Valley, and Santa Ana. Project also included a two-year operation and monitoring phase, with monthly travel time surveys and synchronization timing monitoring.

Avenida Vista Hermosa ITS Upgrade & Synchronization Project (San Clemente, CA) - Lead Design Engineer. Phase II of an ITS upgrade project including ITS improvements to approximately 24 intersections along Avenida Vista Hermosa and Camino de Los Mares. Design and installation of a hybrid communications system combining both fiber optic and Ethernet over copper, Mr. Cox is responsible for the completion of a self-healing ring for the citywide traffic signal network and integration of the advanced ATMS system. Other improvements include Wireless Broadband Ethernet back-haul communications to outlying areas and integration of NEMA ATC traffic signal controllers.



Registration:

IMSA Level II Technician

#BE-864-17

IMSA Work Zone Certified

#AA-86417

Corning Inc.

International Fiber Systems
(IFS)

Years of Experience: 17

Years with Firm: 5

Education:

Fullerton College
Engineering Technology

Rancho Santiago College
Project Management

Professional Affiliations:

International Municipal Signal
Association (IMSA)

Institution Traffic Engineers
(ITE)

Orange County Traffic
Engineers Council (OCTEC)

Intelligent Transportation
Systems California (ITS CA)

Ryan Miller

Task Leader - Signal Timing

Ryan Miller is an associate engineer with experience in traffic engineering studies, traffic operations, and ITS design. Ryan has five years of experience and has worked on multiple traffic signal synchronization studies. He is an expert in the use of Synchro, SimTraffic and Tru-Traffic software. His Traffic and Design software experience also includes: AutoCAD, Civil3D, and MicroStation.

Relevant Projects:

Downtown Traffic Signal Timing Study (Santa Monica, CA) - Ryan performed the signal timing coordination optimization for over 40 intersections in the closely spaced, downtown district. This also included adding pedestrian scramble phases at 12 locations.

Citywide Fiber Optics Communication and Signal System Upgrade (Lancaster, CA) – Engineer. The City of Lancaster received two grants from LA-METRO to update its traffic signal system: The North County ITS Expansion Project and the Traffic Signal System Modernization Project. These two citywide projects consisted of preparation of Plans, Specifications and Estimates for installation of 35 miles of fiber optics communications, wireless communications, CCTV cameras, and upgrade of traffic signal central system and controllers for 140 signalized intersections. Project scope included: field inventory of all existing signal cabinets, tracing of existing copper interconnect and fiber optic cables between signal cabinets, measuring distances between pull boxes, inventory of Communication hub cabinets, and inventory of City Hall and City Yard traffic signal communications equipment.

Traffic Signal Coordination and Retiming (Lancaster, CA) - As an associate engineer, Ryan optimized the signal timing and coordination for 149 signals for the city of Lancaster and Caltrans. He enhanced the existing Synchro base model and the models for each time period. He analyzed and updated the existing yellow and red clearance timing and pedestrian timing to current California MUTCD standards. He assisted with performing implementation and fine-tuning in the field. He also assisted with organizing the before and after travel time studies for 16 corridors.

Seal Beach Blvd TMC & ITS Improvements (Seal Beach, CA) - Project Manager. ADVANTEC provided City-wide Turnkey project for the design and integration of new city-wide TMC and ITS improvements. The design-build project included installation of over six miles of fiber optic cable, 2070 controller upgrades, new high definition CCTV cameras, and relocation and expansion of an existing Traffic Management Center (TMC). New fiber optic links were designed and furnished by ADVANTEC through Caltrans I-405 Freeway overcrossing to connect the Northern part of the City. In addition, the traffic network emphasizes a redundant self-healing fiber backbone ring complete with VLAN and Layer 3 network switching capabilities. The project links three remote City buildings and provides seamless IP services to each; City Hall (TMC), Police Department (HUB) and City Yard facilities. As part of the project, the City IT Department is further leveraging the new City-wide Fiber Optic backbone to provide IT network intra-building communication at a reduced cost to the City. ADVANTEC developed updated signal timing and signal synchronization (15 signals), and also designed and managed construction (Design-Build) of Traffic Management Center, Fiber-Optics communications network, and ITS upgrades.

Edinger Avenue Traffic Signal Synchronization and ITS Project (OCTA, Orange County, CA) – Assistant Engineer. Project consisted of development of signal synchronization (38 signals) and implementation of wireless communication, Ethernet-over-copper, Fiber-Optics, Bluetooth-based performance measures, vehicle detection, and cabinet replacements within the cities of Huntington Beach, Westminster, Fountain Valley, and Santa Ana. Mr. Miller developed the traffic modeling, using Synchro, for this corridor which stretches across 5 agencies and contains 38 intersections. Mr. Miller analyzed the existing conditions to determine system deficiencies, safety concerns, and any problematic operations/geometry.

Fairview Rd. Traffic Signal Synchronization Project (Costa Mesa, CA) - As an assistant engineer, he assisted with signal timing synchronization. Compared old and new pedestrian walk and clearance times using updated parameters from California MUTCD.



Registration:

Engineer-in-Training (CA)

Years of Experience: 5

Years with Firm: 5

Education:

B.S., Civil Engineering,
California State Polytechnic
University, 2009

Professional Affiliations:

Institute of Transportation
Engineers (ITE)

American Society of Civil
Engineering (ASCE)

Orange County Traffic
Engineers Committee (OCTEC)



public works
civil engineering
traffic engineering
traffic signal synchronization
intelligent transportation systems
transportation planning/design
landscape architecture
active transportation
connected vehicles
smart cities

1200 Roosevelt • Irvine, CA 92620 • Tel: (949) 861-4999
21700 Copley Drive, Suite 350 • Diamond Bar, CA 91765
455 S. Figueroa St., 31st Floor, Los Angeles, CA 90071
1300 Clay Street, Suite 600 • Oakland, CA 94612
3200 E. Guasti Rd., Suite 100 • Ontario, CA 91761
111 North Market Street, Suite 300 • San Jose, CA 95113
1008 W. Ave. M14, Suite A/D115 • Palmdale, CA 93551
506 Second Ave., Suite 1400 • Seattle, WA 98104

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EXHIBIT C
FEE SCHEDULE



Consultant: ADVANTEC CONSULTING ENGINEERS						
Prime/ Sub	Staffing (Position)	5.a - 2 Year Monitoring	5.b - 2 Year Comm & Detection Support	TOTAL HOURS	Hourly Rate	TOTAL PRICE
ADVANTEC	Project Director			46	\$ 260.00	\$ 11,960
ADVANTEC	Project Manager / QA/QC Manager/ PS&E Task Lead	96	24	736	\$ 200.00	\$ 147,200
ADVANTEC	Engineer	144		1130	\$ 120.00	\$ 135,600
ADVANTEC	Senior Technician		168	1190	\$ 110.00	\$ 130,900
ADVANTEC	Assistant Engineer	240		620	\$ 80.00	\$ 49,600
ADVANTEC	Administrative Support			40	\$ 60.00	\$ 2,400
STAFFING SUB-TOTAL		480	192	3762		\$ 477,660
		100	\$ 55,680	\$ 23,280		
Non-Staffing Resources				TOTAL UNITS	UNIT RATE	
Traffic Counts						
CountsUnlimited	7-day 24-hour Average Daily Traffic (ADT) counts			17	\$ 350.00	\$ 5,950.00
CountsUnlimited	Turn Movement Counts (AM, PM, Midday, Evening, and Saturday)			34	\$ 500.00	\$ 17,000.00
CountsUnlimited	Turn Movement Counts (PM School peak - 2 hours)			4	\$ 50.00	\$ 200.00
CountsUnlimited	Travel Time runs for Before Study			1	\$ 2,250.00	\$ 2,250.00
CountsUnlimited	Travel Time runs for After Study			1	\$ 2,250.00	\$ 2,250.00
Sub-total						\$ 27,650.00
City of Costa Mesa						
ADVANTEC	Furnish and install GTT GPS Opticom Preemption			13	\$ 9,484.00	\$ 123,292.00
ADVANTEC/Crosstown	Furnish and install Clary UPS system with Batteries			5	\$ 11,148.00	\$ 55,740.00
ADVANTEC/Crosstown	Furnish and install Econolite Autoscope Vision Video Detection			10	\$ 28,895.00	\$ 288,950.00
Crosstown	Furnish and install Signal Modification N/S from PPLT to Prot L			1	\$ 6,198.00	\$ 6,198.00
ADVANTEC/Crosstown	Furnish and install Type P44 cabinet, Type II service and found			4	\$ 37,859.00	\$ 151,436.00
ADVANTEC	SCE Service Fee			4	\$ 4,000.00	\$ 16,000.00
ADVANTEC/Crosstown	Furnish and install Bosch MIC IP Staright 7000 HD PTZ Camera			1	\$ 8,032.00	\$ 8,032.00
ADVANTEC	Furnish and install Econolite Cobalt controller			2	\$ 5,067.00	\$ 10,134.00
ADVANTEC/Crosstown	Furnish and install Copper Ethernet Switch (Etherwan ED3575-			3	\$ 2,582.00	\$ 7,746.00
ADVANTEC	Furnish and install Upgrade Video Management Software and			1	\$ 80,000.00	\$ 80,000.00
Sub-total						\$ 747,528.00
City of Santa Ana						
ADVANTEC/Crosstown	Furnish and install Type 332L Cabinet, Type II service, foundati			7	\$ 33,578.00	\$ 235,046.00
ADVANTEC	SCE Service Fee			7	\$ 4,000.00	\$ 28,000.00
Crosstown	Furnish and install Fiber Optic Ethernet Switch (Etherwan EX71			7	\$ 1,799.00	\$ 12,593.00
Crosstown	Furnish and install Fiber Optic Ethernet Switch (Etherwan EX73			4	\$ 3,203.00	\$ 12,812.00
ADVANTEC/Crosstown	Furnish and install Power Distribution Unit (APC-AP7900)			7	\$ 779.00	\$ 5,453.00
Crosstown	Furnish and install 1-DLC in existing conduit and Type E Loop f			1	\$ 20,680.00	\$ 20,680.00
ADVANTEC/Crosstown	Furnish and install Axis Q6055-E PTZ Network Camera			5	\$ 6,454.00	\$ 32,270.00
ADVANTEC	Furnish and install Safetran 2070-C CPU Module w/ ASC/3-LX			7	\$ 2,319.00	\$ 16,233.00
Crosstown	Furnish and install 12-Single Mode Fiber Optic Cable in existing			4050	\$ 2.60	\$ 10,530.00
Crosstown	Furnish and install Corning PCH-04U and terminate 24-SMFO			1	\$ 4,018.00	\$ 4,018.00
Crosstown	Furnish and install Corning Splice Closure and Splice fibers			5	\$ 1,844.00	\$ 9,220.00
Crosstown	Remove and Relocate existing Wireless Radios (including new			5	\$ 2,331.00	\$ 11,655.00
Crosstown	Furnish and install 12-Single Mode Fiber Optic Drop Cable,			2	\$ 667.00	\$ 1,334.00
Crosstown	Furnish and install Corning CCH-01U FDU and terminate 12-SI			4	\$ 1,341.00	\$ 5,364.00
Crosstown	Furnish and install 3" PVC Conduit (including necessary pull bc			6800	\$ 36.70	\$ 249,560.00
Crosstown	Furnish and install 24-Single Mode Fiber Optic			7950	\$ 2.90	\$ 23,055.00
Crosstown	Furnish and install Corning PCH-04U and terminate 24-SMFO			1	\$ 4,785.00	\$ 4,785.00
Crosstown	Furnish and install Corning CCH-02U FDU and terminate 24-SI			1	\$ 2,088.00	\$ 2,088.00
Sub-total						\$ 684,696.00
Contingency - City of Costa Mesa						\$ 67,278.00
Contingency - City of Santa Ana						\$ 61,623.00
NON-STAFFING SUB-TOTAL		\$ -	\$ -			\$ 1,588,775
		100	\$ 55,680	\$ 23,280	TOTAL	\$ 2,066,435

L.S. = Lump Sum

EXHIBIT D
CERTIFICATES OF INSURANCE

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

BLANKET ADDITIONAL INSURED

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM

The following is added to Paragraph c. in A.1., **Who Is An Insured**, of SECTION II – COVERED AUTOS LIABILITY COVERAGE in the BUSINESS AUTO COVERAGE FORM and Paragraph e. in A.1., **Who Is An Insured**, of SECTION II – COVERED AUTOS LIABILITY COVERAGE in the MOTOR CARRIER COVERAGE FORM, whichever Coverage Form is part of your policy:

This includes any person or organization who you are required under a written contract or agreement

between you and that person or organization, that is signed by you before the "bodily injury" or "property damage" occurs and that is in effect during the policy period, to name as an additional insured for Covered Autos Liability Coverage, but only for damages to which this insurance applies and only to the extent of that person's or organization's liability for the conduct of another "insured".

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

BLANKET WAIVER OF SUBROGATION

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM
BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM

The following replaces Paragraph **A.5., Transfer of Rights Of Recovery Against Others To Us**, of the **CONDITIONS** Section:

5. Transfer Of Rights Of Recovery Against Others To Us

We waive any right of recovery we may have against any person or organization to the extent

required of you by a written contract executed prior to any "accident" or "loss", provided that the "accident" or "loss" arises out of the operations contemplated by such contract. The waiver applies only to the person or organization designated in such contract.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

SCHEDULED ADDITIONAL INSURED (ARCHITECTS, ENGINEERS AND SURVEYORS)

This endorsement modifies insurance provided under the following:
COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

NAME OF PERSONS OR ORGANIZATIONS:

City of Costa Mesa
77 Fair Drive
Costa Mesa CA 92626

PROJECT/LOCATION OF COVERED OPERATIONS:

Re: Fairview Road Traffic Signal Coordination Project - The City of Costa Mesa and its elected and appointed boards, officers, officials, agents, employees and volunteers.

PROVISIONS

1. The following is added to SECTION II - WHO IS AN INSURED:

The person or organization shown in the Schedule above is an additional insured on this Coverage Part, but:

- a. Only with respect to liability for "bodily injury", "property damage" or "personal injury"; and
- b. If, and only to the extent that, the injury or damage is caused by acts or omissions of you or your subcontractor in the performance of "your work" to which the "written contract requiring insurance" applies, or in connection with premises owned by or rented to you.

The person or organization does not qualify as an additional insured:

- c. With respect to the independent acts or omissions of such person or organization
- d. For "bodily injury", "property damage" or "personal injury" for which such person or organization has assumed liability in a contract or agreement.

The insurance provided to such additional insured is limited as follows:

- e. This insurance does not apply to the rendering of or failure to render any "professional services".
- f. In the event that the Limits of Insurance of the Coverage Part shown in the Declarations exceed the limits of liability required by the "written contract requiring insurance", the insurance provided to the additional insured shall be limited to the limits of liability required by that "written contract requiring insurance". This endorsement does not increase the limits of insurance described in Section III - Limits Of Insurance.
- g. This insurance does not apply to "bodily injury" or "property damage" caused by "your work" and included in the "products-completed operations hazard" unless the "written contract requiring insurance" specifically requires you to provide such coverage for that additional insured, and then the insurance provided to that additional insured ap-

COMMERCIAL GENERAL LIABILITY

plies only to such "bodily injury" or "property damage" that occurs before the end of the period of time for which the "written contract requiring insurance" requires you to provide such coverage or the end of the policy period, whichever is earlier.

2. The following is added to Paragraph 4.a. of **SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS:**

The insurance provided to the additional insured shown in the Schedule above is excess over any valid and collectible other insurance, whether primary, excess, contingent or on any other basis, that is available to the additional insured for a loss we cover. However, if you specifically agree in the "written contract requiring insurance" that this insurance provided to the additional insured under this Coverage Part must apply on a primary basis or a primary and non-contributory basis, this insurance is primary to other insurance available to the additional insured which covers that person or organization as a named insured for such loss, and we will not share with the other insurance, provided that:

- (1) The "bodily injury" or "property damage" for which coverage is sought occurs; and
- (2) The "personal injury" for which coverage is sought arises out of an offense committed;

after you have signed that "written contract requiring insurance". But this insurance provided to the additional insured still is excess over valid and collectible other insurance, whether primary, excess, contingent or on any other basis, that is available to the additional insured when that person or organization is an additional insured under any other insurance.

3. The following is added to Paragraph 8., **Transfer Of Rights Of Recovery Against Others To Us, of SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS:**

We waive any right of recovery we may have against the additional insured shown in the Schedule above because of payments we make for "bodily injury", "property damage" or "personal injury" arising out of "your work" on or for the project, or at the location, shown in the Schedule above, performed by you or on your behalf, done under a "written contract requiring insurance" with that person or organization. We waive this right only where you have agreed to do so as part of the "written contract requiring insurance" with such person or organization signed by you before, and in effect when, the "bodily injury" or "property damage" occurs, or the "personal injury" offense is committed.

4. The following definition is added to the **DEFINITIONS** Section:

"Written contract requiring insurance" means that part of any written contract with the person or organizations shown in the Schedule above, under which you are required to include that person or organization as an additional insured on this Coverage Part, provided that the "bodily injury" and "property damage" occurs and the "personal injury" is caused by an offense committed:

- a. After you have signed that written contract;
- b. While that part of the written contract is in effect; and
- c. Before the end of the policy period.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
05/04/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Charmaine Lim Farmers Insurance Agency 20 Pacifica Suite 1450 Irvine CA 92618	CONTACT NAME: Elizabeth Martin	
	PHONE (A/C, No, Ext): 949-387-9999	FAX (A/C, No): 949-388-7580
	E-MAIL ADDRESS: Liz@FarmersAtSpectrum.com	
INSURED Advantec Consulting Engineers, Inc. 1200 Roosevelt Irvine CA 92620	INSURER(S) AFFORDING COVERAGE	
	INSURER A: Mid Century Insurance Company	NAIC # 21887
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INER LTR	TYPE OF INSURANCE	ADL SUBR INSR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	GENERAL LIABILITY COMMERCIAL GENERAL LIABILITY CLAIMS-MADE <input type="checkbox"/> OCCUR					EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMPROP AGG \$ \$
	GENERAL AGGREGATE LIMIT APPLIES PER: POLICY <input type="checkbox"/> PRO.JECT <input type="checkbox"/> LOC <input type="checkbox"/>					
	AUTOMOBILE LIABILITY ANY AUTO ALL OWNED AUTOS HIRED AUTOS SCHEDULED AUTOS NON-OWNED AUTOS					COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	UMBRELLA LIAB EXCESS LIAB OCCUR <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/>					EACH OCCURRENCE \$ AGGREGATE \$ \$
	DED <input type="checkbox"/> RETENTION \$ <input type="checkbox"/>					
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input type="checkbox"/>	N/A Y A09475420	11/12/2017	11/12/2018	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER EL EACH ACCIDENT \$ 1,000,000 EL DISEASE - EA EMPLOYEE \$ 1,000,000 EL DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Project Name: Fairview Road Traffic Signal Coordination Project

CERTIFICATE HOLDER	CANCELLATION 30 Day NOC/10 day for nonpayment of premium
City of Costa Mesa 77 Fair Dr Costa Mesa CA 92626	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE



WC 99 06 19

WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY INSURANCE POLICY

Named Insured : ADVANTEC CONSULTING ENGINEERS, INC.
: ADVANTEC CONSULTING ENGINEERING, INC.
: 1200 ROOSEVELT
: IRVINE CA 926203667

Effective Date 11/12/17

Agent
29-15-590

A0947-54-20 2017
Policy Number of the Company Policy Year

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT - BLANKET

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization for which you perform work under a written contract that requires you to obtain this agreement from us.

The additional premium for this endorsement shall be 3.0 % of the Workers' Compensation premium otherwise due for the state(s) listed below on such remuneration, subject to a minimum charge of _____.

All written contracts in the state(s) of.

CA

This endorsement is part of your policy. It supersedes and controls anything to the contrary. It is otherwise subject to all the terms of the policy.

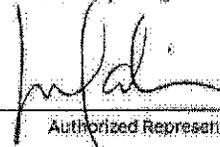
Countersigned 
Authorized Representative

EXHIBIT E

CITY COUNCIL POLICY 100-5

CITY OF COSTA MESA, CALIFORNIA

COUNCIL POLICY

SUBJECT	POLICY NUMBER	EFFECTIVE DATE	PAGE
DRUG-FREE WORKPLACE	100-5	8-8-89	1 of 3

BACKGROUND

Under the Federal Drug-Free Workplace Act of 1988, passed as part of omnibus drug legislation enacted November 18, 1988, contractors and grantees of Federal funds must certify that they will provide drug-free workplaces. At the present time, the City of Costa Mesa, as a sub-grantee of Federal funds under a variety of programs, is required to abide by this Act. The City Council has expressed its support of the national effort to eradicate drug abuse through the creation of a Substance Abuse Committee, institution of a City-wide D.A.R.E. program in all local schools and other activities in support of a drug-free community. This policy is intended to extend that effort to contractors and grantees of the City of Costa Mesa in the elimination of dangerous drugs in the workplace.

PURPOSE

It is the purpose of this Policy to:

1. Clearly state the City of Costa Mesa's commitment to a drug-free society.
2. Set forth guidelines to ensure that public, private, and nonprofit organizations receiving funds from the City of Costa Mesa share the commitment to a drug-free workplace.

POLICY

The City Manager, under direction by the City Council, shall take the necessary steps to see that the following provisions are included in all contracts and agreements entered into by the City of Costa Mesa involving the disbursement of funds.

1. Contractor or Sub-grantee hereby certifies that it will provide a drug-free workplace by:
 - A. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in Contractor's and/or sub-grantee's workplace, specifically the job site or location included in this contract, and specifying the actions that will be taken against the employees for violation of such prohibition;
 - B. Establishing a Drug-Free Awareness Program to inform employees about:

SUBJECT	POLICY NUMBER	EFFECTIVE DATE	PAGE
DRUG-FREE WORKPLACE	100-5	8-8-89	2 of 3

1. The dangers of drug abuse in the workplace;
 2. Contractor's and/or sub-grantee's policy of maintaining a drug-free workplace;
 3. Any available drug counseling, rehabilitation and employee assistance programs; and
 4. The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- C. Making it a requirement that each employee to be engaged in the performance of the contract be given a copy of the statement required by subparagraph A;
- D. Notifying the employee in the statement required by subparagraph 1 A that, as a condition of employment under the contract, the employee will:
1. Abide by the terms of the statement; and
 2. Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction;
- E. Notifying the City of Costa Mesa within ten (10) days after receiving notice under subparagraph 1 D 2 from an employee or otherwise receiving the actual notice of such conviction;
- F. Taking one of the following actions within thirty (30) days of receiving notice under subparagraph 1 D 2 with respect to an employee who is so convicted:
1. Taking appropriate personnel action against such an employee, up to and including termination; or
 2. Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health agency, law enforcement, or other appropriate agency;

SUBJECT	POLICY NUMBER	EFFECTIVE DATE	PAGE
DRUG-FREE WORKPLACE	100-5	8-8-89	3 of 3

- G. Making a good faith effort to maintain a drug-free workplace through implementation of subparagraphs 1 A through 1 F, inclusive.
2. Contractor and/or sub-grantee shall be deemed to be in violation of this Policy if the City of Costa Mesa determines that:
 - a. Contractor and/or sub-grantee has made a false certification under paragraph 1 above;
 - b. Contractor and/or sub-grantee has violated the certification by failing to carry out the requirements of subparagraphs 1 A through 1 G above;
 - c. Such number of employees of Contractor and/or sub-grantee have been convicted of violations of criminal drug statutes for violations occurring in the workplace as to indicate that the contractor and/or sub-grantee has failed to make a good faith effort to provide a drug-free workplace.
 3. Should any contractor and/or sub-grantee be deemed to be in violation of this Policy pursuant to the provisions of 2 A, B, and C, a suspension, termination or debarment proceeding subject to applicable Federal, State, and local laws shall be conducted. Upon issuance of any final decision under this section requiring debarment of a contractor and/or sub-grantee, the contractor and/or sub-grantee shall be ineligible for award of any contract, agreement or grant from the City of Costa Mesa for a period specified in the decision, not to exceed five (5) years. Upon issuance of any final decision recommending against debarment of the contractor and/or sub-grantee, the contractor and/or sub-grantee shall be eligible for compensation as provided by law.