



City of Palo Alto

City Council Staff Report

(ID # 10429)

Report Type: Consent Calendar

Meeting Date: 2/3/2020

Summary Title: Emergency Vehicle Traffic Signal Preemption System Contract

Title: Approval and Authorization for the City Manager or Designee to Execute an Emergency Vehicle Traffic Signal Preemption System (PL-19000) Contract With Trafficware as a Pilot Project in an Amount Not-to-Exceed \$597,500 for a Maximum of Four Years

From: City Manager

Lead Department: Fire

Recommendation

Staff recommends that Council approve and authorize the City Manager or his designee to execute the attached purchase of the Emergency.now feature with Trafficware (Attachment A) in an amount not to exceed \$597,500 for the Emergency Vehicle Traffic Signal Preemption System Pilot Project (PL-19000).

Background

The Emergency Vehicle Traffic Signal Preemption System Pilot (PL-19000) was approved as part of the FY2019 Adopted Capital Budget. This project will purchase a software feature for the City's current traffic management software package, Trafficware, to outfit 25 City intersections. The Emergency.now signal preemption feature will allow for adjustments to intersection traffic signals along the route of an emergency vehicle to reduce the impact of traffic on the travel time of emergency response vehicles.

This project was funded and anticipated to be expended in FY 2019, but because of a shortage of resources in the City's Purchasing Division, this project was not able to be awarded in FY 2019. As a result the project was delayed and the funding was approved by Council to be reappropriated to FY 2020 on October 21, 2019 ([CMR 10658](#)).

Discussion

Project Description

Staff recommends approval of the purchase of an additional feature to the City's current traffic management system for 25 intersections. The \$597,500 will be used to purchase the Emergency.now feature from Trafficware. This feature will be able to adjust traffic

signals at intersections along the route of an emergency vehicle, using priority signal operation well in advance of the arrival of the emergency vehicle. By the time the emergency vehicle reaches each intersection, it would potentially be relieved of traffic, allowing for safe and rapid progress.

The purchase is primarily for goods in the amount of \$485,000 for the license and installation of the Emergency.now feature, and for services in the amount of \$122,500 for a 3-year warranty and ongoing maintenance through 2023.

Sole Source Justification

This is the purchase of an optional feature for the City's current traffic management system. This is the only signal preemption option that would be compatible with the City's current traffic management system, Trafficware. It is also compatible with the City's existing Computer Aided Dispatch systems for seamless integration.

Timeline

The project is expected to be completed by Fall 2020, with ongoing maintenance continuing through 2023.

Stakeholder Engagement

No stakeholder engagement is required for this purchase.

Resource Impact

Funding is available in the Emergency Vehicle Traffic Signal Preemption System Pilot Project (PL-19000) as a result of Council's approval of the re-appropriation of funding for this project from FY 2019 to FY2020 on October 21, 2019 ([CMR 10658](#)).

If the results of the pilot are favorable and the project is recommended to continue, funding for future years of warranty and maintenance costs will be addressed as part of future budget processes in the Fire Department's operating budget, subject to Council's appropriation of funds.

Policy Implications

The proposed action is consistent with City policy.

Environmental Review

The recommendation in this report does not constitute a project requiring review under the California Environmental Quality Act (CEQA).

Attachments:

- ATTACHMENT A_Cubic Contract

**CITY OF PALO ALTO CONTRACT NO. C20175147
AGREEMENT BETWEEN THE CITY OF PALO ALTO AND
CUBIC CORPORATION AND SUBSIDIARIES, INCORPORATED, (DOING BUSINESS
AS CUBIC ITS, INC.)
FOR PROFESSIONAL SERVICES**

This Agreement is entered into as of the 3rd day of February, 2020, (“Agreement”) by and between the CITY OF PALO ALTO, a California chartered municipal corporation (“CITY”), and Cubic Corporation and Subsidiaries, Incorporated, (Doing Business As Cubic ITS, Inc.), a Texas Corporation, located at 522 Gillingham Lane, Sugar Land, Texas 77478 (“CONSULTANT”).

RECITALS

The following recitals are a substantive portion of this Agreement and are fully incorporated herein by this reference:

A. CITY intends to purchase, install and implement the Emergency Module software to integrate with the City’s central traffic management software system, entitled “ATMS”, to provide safer and quicker response times for emergency vehicles (“Project”) and desires to engage a consultant to conduct the installation, implementation, and software maintenance and technical support services in connection with the Project as detailed in this Agreement (the “Services”).

B. CONSULTANT has represented that it has the necessary professional expertise, qualifications, and capability, and all required rights, titles, licenses and/or certifications to provide the Services.

C. CITY in reliance on these representations desires to engage CONSULTANT to provide the Services as more fully described in Exhibit “A”, attached to and made a part of this Agreement.

NOW, THEREFORE, in consideration of the recitals, covenants, terms, and conditions, in this Agreement, the parties agree:

AGREEMENT

SECTION 1. SCOPE OF SERVICES. CONSULTANT shall perform the Services described at Exhibit “A” in accordance with the terms and conditions contained in this Agreement. The performance of all Services shall be to the reasonable satisfaction of CITY.

SECTION 2. TERM.

The term of this Agreement shall be from the date of its full execution through completion of the services in accordance with the Schedule of Performance attached at Exhibit “B” unless terminated earlier pursuant to Section 19 of this Agreement.

SECTION 3. SCHEDULE OF PERFORMANCE. Time is of the essence in the performance of Services under this Agreement. CONSULTANT shall complete the Services within the term of this Agreement and in accordance with the schedule set forth in Exhibit “B”, attached to and made a part of this Agreement. Any Services for which times for performance are not specified in this Agreement shall be commenced and completed by CONSULTANT in a reasonably prompt and timely manner based upon the circumstances and direction communicated to the CONSULTANT. CITY’s agreement to extend the term or the schedule for performance shall not preclude recovery of damages for delay if the extension is required due to the fault of CONSULTANT.

SECTION 4. NOT TO EXCEED COMPENSATION. The compensation to be paid to CONSULTANT for performance of the Services described in Exhibit “A” (also referred to herein as the “Basic Services”), and any reimbursable expenses specified in Exhibit “C”, shall not exceed Five Hundred Ninety Seven Thousand Five Hundred Dollars (\$597,500). CONSULTANT agrees to complete all Basic Services, including any specified reimbursable expenses, within this amount. Any work performed or expenses incurred for which payment would result in a total exceeding the maximum amount of compensation set forth herein shall be at no cost to the CITY.

SECTION 5. INVOICES. In order to request payment, CONSULTANT shall submit monthly invoices to the CITY describing the Services performed and the applicable charges (including, as applicable, an identification of personnel who performed the Services, hours worked, hourly rates, and any reimbursable expenses specified in Exhibit C) based upon Exhibit C. If applicable, the invoice shall also describe the percentage of completion of each task. The information in CONSULTANT’s payment requests shall be subject to verification by CITY. CONSULTANT shall send all invoices to the City’s Project Manager at the address specified in Section 13 (“Project Management”) below. The City will generally process and pay invoices within thirty (30) days of receipt.

SECTION 6. QUALIFICATIONS/STANDARD OF CARE. All of the Services shall be performed by CONSULTANT or under CONSULTANT’s supervision. CONSULTANT represents that it possesses the professional and technical personnel necessary to perform the Services required by this Agreement and that the personnel have sufficient skill and experience to perform the Services assigned to them. CONSULTANT represents that it, its employees and subconsultants, if permitted, have and shall maintain during the term of this Agreement all licenses, permits, qualifications, insurance and approvals of whatever nature that are legally required to perform the Services.

All of the services to be furnished by CONSULTANT under this agreement shall meet the professional standard and quality that prevail among professionals in the same discipline and of similar knowledge and skill engaged in related work throughout California under the same or similar circumstances.

SECTION 7. COMPLIANCE WITH LAWS. CONSULTANT shall keep itself informed of and in compliance with all federal, state and local laws, ordinances, regulations, and orders that

may affect in any manner the Project or the performance of the Services or those engaged to perform Services under this Agreement. CONSULTANT shall procure all permits and licenses, pay all charges and fees, and give all notices required by law in the performance of the Services.

SECTION 8. ERRORS/OMISSIONS. CONSULTANT is solely responsible for costs, including, but not limited to, increases in the cost of Services, arising from or caused by CONSULTANT's errors and omissions, including, but not limited to, the costs of corrections such errors and omissions, any change order markup costs, or costs arising from delay caused by the errors and omissions or unreasonable delay in correcting the errors and omissions.

SECTION 9. COST ESTIMATES. If this Agreement pertains to the design of a public works project, CONSULTANT shall submit estimates of probable construction costs at each phase of design submittal. If the total estimated construction cost at any submittal exceeds ten percent (10%) of CITY's stated construction budget, CONSULTANT shall make recommendations to CITY for aligning the PROJECT design with the budget, incorporate CITY approved recommendations, and revise the design to meet the Project budget, at no additional cost to CITY.

SECTION 10. INDEPENDENT CONTRACTOR. It is understood and agreed that in performing the Services under this Agreement CONSULTANT, and any person employed by or contracted with CONSULTANT to furnish labor and/or materials under this Agreement, shall act as and be an independent contractor and not an agent or employee of CITY.

SECTION 11. ASSIGNMENT. The parties agree that the expertise and experience of CONSULTANT are material considerations for this Agreement. CONSULTANT shall not assign or transfer any interest in this Agreement nor the performance of any of CONSULTANT's obligations hereunder without the prior written consent of the city manager. Consent to one assignment will not be deemed to be consent to any subsequent assignment. Any assignment made without the approval of the city manager will be void.

SECTION 12. SUBCONTRACTING.

Option A: No Subcontractor: CONSULTANT shall not subcontract any portion of the work to be performed under this Agreement without the prior written authorization of the City Manager or designee.

Option B: Subcontracts Authorized: Notwithstanding Section 11 ("Assignment") above, CITY agrees that subconsultants may be used to complete the Services. The subcontractors/subconsultants authorized by CITY to perform work on this Project are:

CONSULTANT shall be responsible for directing the work of any subcontractors/subconsultants and for any compensation due to subcontractor/subconsultants. CITY assumes no responsibility whatsoever concerning compensation. CONSULTANT shall be fully responsible to CITY for all acts and omissions of a subcontractor/subconsultant. CONSULTANT shall change or add subcontractors/subconsultants only with the prior approval of the City Manager or designee.

SECTION 13. PROJECT MANAGEMENT. CONSULTANT will assign Marshall Cheek as the CONSULTANT's Project Manager to have supervisory responsibility for the performance, progress, execution of the Services and to represent CONSULTANT during the day-to-day work on the Project. If circumstances cause the substitution of the CONSULTANT's Project Manager, project coordinator, or any other of CONSULTANT's key personnel for any reason, the appointment of a substitute Project Manager and the assignment of any key new or replacement personnel will be subject to the prior written approval of the CITY's Project Manager. CONSULTANT, at CITY's request, shall promptly remove CONSULTANT personnel who CITY finds do not perform the Services in an acceptable manner, are uncooperative, or present a threat to the adequate or timely completion of the Project or a threat to the safety of persons or property.

CITY's Project Manager is Amber Cameron, Senior Management Analyst, Fire Department, 250 Hamilton Avenue, Palo Alto, CA 94303, Telephone: (650) 329-2374. The CITY's Project Manager will be CONSULTANT's point of contact with respect to performance, progress and execution of the Services. CITY may designate an alternate Project Manager from time to time.

SECTION 14. INTELLECTUAL PROPERTY; DATA. Upon delivery, all work product, including without limitation, all writings, drawings, plans, reports, specifications, calculations, documents, other materials and copyright interests developed under this Agreement as unique to this engagement with CITY shall be and remain the exclusive property of CITY without restriction or limitation upon their use. CONSULTANT makes no representation of the suitability of the work product for use in or application to circumstances not contemplated by the scope of work.

14.1 **Intellectual Property Rights in the Software.** CONSULTANT retains all right, title, and interest in and to the software to be provided by CONSULTANT to CITY and its Authorized Users pursuant to this Agreement as detailed in Exhibit A ("Scope of Services")(the "Software"). This Agreement does not grant CITY any intellectual property license or rights in or to the Software or any of its components or any Documentation (defined below) except those expressly granted herein. CITY recognizes that the Software and its components and the Documentation are protected by copyright and other laws. "Documentation" means the technical publications relating to the use of the SaaS, such as reference, installation, administrative and programmer or user manuals, made available by Contractor to CITY.

14.2 **Grant of License to the Software.** CONSULTANT hereby grants to CITY a limited, non-exclusive, non-transferable term license to use, access and benefit from the Software in fulfilling the CITY's public mission during the term of this Agreement. The license granted to CITY hereunder includes the right to provide to the CITY's Authorized Users access to the Software in accordance with this Agreement. "Authorized User" means all persons holding a valid ID and password issued by the CITY pursuant to this Agreement.

14.3 **Ownership of Data; Grant of License to City Data.** The parties acknowledge and agree that CITY owns the City data, content, documents, materials and other information, in any format or media, collected, stored, imported or inputted into, or gathered by, the Software,

including without limitation data from third parties (“City Data”); that the CITY has a right to control, access and retrieve City Data at any time during the term of the Agreement, in computer-readable format. The CITY hereby grants to CONSULTANT and its subcontractors, if any, the limited, non-exclusive, non-transferable, revocable rights to access and use City Data during the term of this Agreement solely for the purposes of performing CONSULTANT’s obligations to CITY hereunder and supporting CITY’s use of the Software hereunder, and as is otherwise expressly permitted under this Agreement. This Agreement does not grant CONSULTANT or its subcontractors any intellectual property license or rights in or to the City Data except those expressly granted herein. Upon termination or expiration, if any City Data is in the possession of the CONSULTANT, CONSULTANT and CITY shall work together to provide CITY with a copy of City Data in mutually-agreed computer-readable format(s). CITY shall have the option to choose from one of several methods to obtain a copy of City Data. Once such data has been provided to CITY, CONSULTANT shall use industry-standard secure means of destruction or erasure of any City Data remaining in its possession and, at the CITY’s request, certify the same.

SECTION 15. AUDITS. CONSULTANT will permit CITY to audit, at any reasonable time during the term of this Agreement and for three (3) years thereafter, CONSULTANT’s records pertaining to matters covered by this Agreement. CONSULTANT further agrees to maintain and retain such records for at least three (3) years after the expiration or earlier termination of this Agreement.

SECTION 16. INDEMNITY.

16.1. To the fullest extent permitted by law, CONSULTANT shall protect, indemnify, defend and hold harmless CITY, its Council members, officers, employees and agents (each an “Indemnified Party”) from and against any and all demands, claims, or liability of any nature, including death or injury to any person, property damage or any other loss, including all costs and expenses of whatever nature including attorneys fees, experts fees, court costs and disbursements (“Claims”) resulting from, arising out of or in any manner related to performance or nonperformance by CONSULTANT, its officers, employees, agents or contractors under this Agreement, regardless of whether or not it is caused in part by an Indemnified Party.

16.2. Notwithstanding the above, nothing in this Section 16 shall be construed to require CONSULTANT to indemnify an Indemnified Party from Claims arising from the active negligence, sole negligence or willful misconduct of an Indemnified Party.

16.3. The acceptance of CONSULTANT’s services and duties by CITY shall not operate as a waiver of the right of indemnification. The provisions of this Section 16 shall survive the expiration or early termination of this Agreement.

SECTION 17. WAIVERS. The waiver by either party of any breach or violation of any covenant, term, condition or provision of this Agreement, or of the provisions of any ordinance or law, will not be deemed to be a waiver of any other term, covenant, condition, provisions, ordinance or law, or of any subsequent breach or violation of the same or of any other term, covenant, condition, provision, ordinance or law.

SECTION 18. INSURANCE.

18.1. CONSULTANT, at its sole cost and expense, shall obtain and maintain, in full force and effect during the term of this Agreement, the insurance coverage described in Exhibit "D". CONSULTANT and its contractors, if any, shall obtain a policy endorsement naming CITY as an additional insured under any general liability or automobile policy or policies.

18.2. All insurance coverage required hereunder shall be provided through carriers with AM Best's Key Rating Guide ratings of A-VII or higher which are licensed or authorized to transact insurance business in the State of California. Any and all contractors of CONSULTANT retained to perform Services under this Agreement will obtain and maintain, in full force and effect during the term of this Agreement, identical insurance coverage, naming CITY as an additional insured under such policies as required above.

18.3. Certificates evidencing such insurance shall be filed with CITY concurrently with the execution of this Agreement. The certificates will be subject to the approval of CITY's Risk Manager and will contain an endorsement stating that the insurance is primary coverage and will not be canceled, or materially reduced in coverage or limits, by the insurer except after filing with the Purchasing Manager thirty (30) days' prior written notice of the cancellation or modification. If the insurer cancels or modifies the insurance and provides less than thirty (30) days' notice to CONSULTANT, CONSULTANT shall provide the Purchasing Manager written notice of the cancellation or modification within two (2) business days of the CONSULTANT's receipt of such notice. CONSULTANT shall be responsible for ensuring that current certificates evidencing the insurance are provided to CITY's Chief Procurement Officer during the entire term of this Agreement.

18.4. The procuring of such required policy or policies of insurance will not be construed to limit CONSULTANT's liability hereunder nor to fulfill the indemnification provisions of this Agreement. Notwithstanding the policy or policies of insurance, CONSULTANT will be obligated for the full and total amount of any damage, injury, or loss caused by or directly arising as a result of the Services performed under this Agreement, including such damage, injury, or loss arising after the Agreement is terminated or the term has expired.

SECTION 19. TERMINATION OR SUSPENSION OF AGREEMENT OR SERVICES.

19.1. The City Manager may suspend the performance of the Services, in whole or in part, or terminate this Agreement, with or without cause, by giving ten (10) business days prior written notice thereof to CONSULTANT. Upon receipt of such notice, CONSULTANT will immediately discontinue its performance of the Services.

19.2. CONSULTANT may terminate this Agreement or suspend its performance of the Services by giving thirty (30) days prior written notice thereof to CITY, but only in the event of a substantial failure of performance by CITY.

19.3. Upon such suspension or termination, CONSULTANT shall deliver to the City Manager immediately any and all copies of studies, sketches, drawings, computations, and other data, whether or not completed, prepared by CONSULTANT or its contractors, if any, or given to CONSULTANT or its contractors, if any, in connection with this Agreement. Such materials will become the property of CITY.

19.4. Upon such suspension or termination by CITY, CONSULTANT will be paid for the Services rendered or materials delivered to CITY in accordance with the scope of services on or before the effective date (i.e., 10 days after giving notice) of suspension or termination; provided, however, if this Agreement is suspended or terminated on account of a default by CONSULTANT, CITY will be obligated to compensate CONSULTANT only for that portion of CONSULTANT's services which are of direct and immediate benefit to CITY as such determination may be made by the City Manager acting in the reasonable exercise of his/her discretion. The following Sections will survive any expiration or termination of this Agreement: 14, 15, 16, 17, 19.3, 19.4, 19.5, 20, 25, 27 and 28.

19.5. No payment, partial payment, acceptance, or partial acceptance by CITY will operate as a waiver on the part of CITY of any of its rights under this Agreement.

SECTION 20. NOTICES.

All notices hereunder will be given in writing and mailed, postage prepaid, by certified mail, addressed as follows:

To CITY: Office of the City Clerk
 City of Palo Alto
 Post Office Box 10250
 Palo Alto, CA 94303

With a copy to the Purchasing Manager

To CONSULTANT: Attention of the project director
 at the address of CONSULTANT recited above

SECTION 21. CONFLICT OF INTEREST.

21.1. In executing this Agreement, CONSULTANT covenants that it presently has no interest, and will not acquire any interest, direct or indirect, financial or otherwise, which would conflict in any manner or degree with the performance of the Services.

21.2. CONSULTANT further covenants that, in the performance of this Agreement, it will not employ subconsultants, contractors or persons having such an interest. CONSULTANT certifies that no person who has or will have any financial interest under this Agreement is an officer or employee of CITY; this provision will be interpreted in accordance with the applicable provisions of the Palo Alto Municipal Code and the Government Code of the

State of California.

21.3. If the Project Manager determines that CONSULTANT is a “Consultant” as that term is defined by the Regulations of the Fair Political Practices Commission, CONSULTANT shall be required and agrees to file the appropriate financial disclosure documents required by the Palo Alto Municipal Code and the Political Reform Act.

SECTION 22. NONDISCRIMINATION. As set forth in Palo Alto Municipal Code section 2.30.510, CONSULTANT certifies that in the performance of this Agreement, it shall not discriminate in the employment of any person due to that person’s race, skin color, gender, gender identity, age, religion, disability, national origin, ancestry, sexual orientation, pregnancy, genetic information or condition, housing status, marital status, familial status, weight or height of such person. CONSULTANT acknowledges that it has read and understands the provisions of Section 2.30.510 of the Palo Alto Municipal Code relating to Nondiscrimination Requirements and the penalties for violation thereof, and agrees to meet all requirements of Section 2.30.510 pertaining to nondiscrimination in employment.

SECTION 23. ENVIRONMENTALLY PREFERRED PURCHASING AND ZERO WASTE REQUIREMENTS. CONSULTANT shall comply with the CITY’s Environmentally Preferred Purchasing policies which are available at CITY’s Purchasing Department, incorporated by reference and may be amended from time to time. CONSULTANT shall comply with waste reduction, reuse, recycling and disposal requirements of CITY’s Zero Waste Program. Zero Waste best practices include first minimizing and reducing waste; second, reusing waste and third, recycling or composting waste. In particular, CONSULTANT shall comply with the following zero waste requirements:

- (a) All printed materials provided by CONSULTANT to CITY generated from a personal computer and printer including but not limited to, proposals, quotes, invoices, reports, and public education materials, shall be double-sided and printed on a minimum of 30% or greater post-consumer content paper, unless otherwise approved by CITY’s Project Manager. Any submitted materials printed by a professional printing company shall be a minimum of 30% or greater post-consumer material and printed with vegetable based inks.
- (b) Goods purchased by CONSULTANT on behalf of CITY shall be purchased in accordance with CITY’s Environmental Purchasing Policy including but not limited to Extended Producer Responsibility requirements for products and packaging. A copy of this policy is on file at the Purchasing Division’s office.
- (c) Reusable/returnable pallets shall be taken back by CONSULTANT, at no additional cost to CITY, for reuse or recycling. CONSULTANT shall provide documentation from the facility accepting the pallets to verify that pallets are not being disposed.

SECTION 24. COMPLIANCE WITH PALO ALTO MINIMUM WAGE ORDINANCE. CONSULTANT shall comply with all requirements of the Palo Alto Municipal Code Chapter 4.62 (Citywide Minimum Wage), as it may be amended from time to time. In particular, for any employee otherwise entitled to the State minimum wage, who performs at least two (2) hours of work in a calendar week within the geographic boundaries of the City, CONSULTANT shall pay

such employees no less than the minimum wage set forth in Palo Alto Municipal Code section 4.62.030 for each hour worked within the geographic boundaries of the City of Palo Alto. In addition, CONSULTANT shall post notices regarding the Palo Alto Minimum Wage Ordinance in accordance with Palo Alto Municipal Code section 4.62.060.

SECTION 25. NON-APPROPRIATION

25.1. This Agreement is subject to the fiscal provisions of the Charter of the City of Palo Alto and the Palo Alto Municipal Code. This Agreement will terminate without any penalty (a) at the end of any fiscal year in the event that funds are not appropriated for the following fiscal year, or (b) at any time within a fiscal year in the event that funds are only appropriated for a portion of the fiscal year and funds for this Agreement are no longer available. This section shall take precedence in the event of a conflict with any other covenant, term, condition, or provision of this Agreement.

SECTION 26. PREVAILING WAGES AND DIR REGISTRATION FOR PUBLIC WORKS CONTRACTS

26.1 **This Project is not subject to prevailing wages.** CONSULTANT is not required to pay prevailing wages in the performance and implementation of the Project in accordance with SB 7 if the contract is not a public works contract, if the contract does not include a public works construction project of more than \$25,000, or the contract does not include a public works alteration, demolition, repair, or maintenance (collectively, 'improvement') project of more than \$15,000.

SECTION 27. MISCELLANEOUS PROVISIONS.

27.1 This Agreement will be governed by California law, without regard to its conflict of law provisions.

27.2 In the event that an action is brought, the parties agree that trial of such action will be vested exclusively in the state courts of California in the County of Santa Clara, State of California.

27.3 The prevailing party in any action brought to enforce the provisions of this Agreement may recover its reasonable costs and attorneys' fees expended in connection with that action. The prevailing party shall be entitled to recover an amount equal to the fair market value of legal services provided by attorneys employed by it as well as any attorneys' fees paid to third parties.

27.4 This Agreement, including all exhibits, constitutes the entire and integrated agreement between the parties with respect to the subject matter of this Agreement, and supersedes all prior agreements, negotiations, representations, statements and undertakings, either oral or written. This Agreement may be amended only by a written instrument, which is signed by the authorized representatives of the parties and approved as required under Palo Alto Municipal Code.

27.5. The covenants, terms, conditions and provisions of this Agreement will apply to, and will bind, the heirs, successors, executors, administrators, assignees, and consultants of the parties.

27.6 If a court of competent jurisdiction finds or rules that any provision of this Agreement is void or unenforceable, the unaffected provisions of this Agreement will remain in full force and effect.

27.7 All exhibits, addenda, appendices, attachments, and schedules (collectively, "exhibits") referred to in this Agreement are, by such reference, incorporated into this Agreement in full and deemed a part of this Agreement.

27.8 In the event of a conflict between the terms of this Agreement and the exhibits hereto or CONSULTANT's proposal (if any), the Agreement shall control. In the case of any conflict between the exhibits hereto and CONSULTANT's proposal (if any), the exhibits shall control.

27.9 If, pursuant to this Agreement with CONSULTANT, CITY shares with CONSULTANT any personal information as defined in California Civil Code section 1798.81.5(d) about a California resident ("Personal Information"), CONSULTANT shall maintain reasonable and appropriate security procedures to protect that Personal Information, and shall inform City immediately upon learning that there has been a breach in the security of the system or in the security of the Personal Information. CONSULTANT shall not use Personal Information for direct marketing purposes without City's express written consent.

27.10 CONSULTANT understands and agrees that, in connection with this Agreement, the CONSULTANT may have access to proprietary and/or confidential information which may be owned or controlled by the CITY, the disclosure of which to third parties may be damaging to the CITY, its employees or customers/residents. CONSULTANT also understands and agrees that the disclosure of such information may violate state and/or federal law and may subject the CONSULTANT to civil liability. Consequently, CONSULTANT agrees that all information disclosed by the CITY to the CONSULTANT shall only be used in the performance of this Agreement, unless disclosure is required by law or court order. CONSULTANT shall exercise the same standard of care to protect such information as is used to protect its own proprietary and/or confidential information and in no case less than a reasonable standard of care.

27.11 The provisions of all checked boxes in this Agreement shall apply to this Agreement; the provisions of any unchecked boxes shall not apply to this Agreement.

27.12 The individuals executing this Agreement represent and warrant that they have the legal capacity and authority to do so on behalf of their respective legal entities.

27.13 This Agreement may be signed in multiple counterparts, which, when executed by all the parties, shall together constitute a single binding agreement.

SECTION 28. EXHIBITS. Each of the following exhibits, if the check box for such exhibit is selected below, is hereby attached and incorporated into this Agreement by reference as though fully set forth herein:

- EXHIBIT "A": SCOPE OF SERVICES
- EXHIBIT "B": SCHEDULE OF PERFORMANCE
- EXHIBIT "C": COMPENSATION
- EXHIBIT "D": INSURANCE REQUIREMENTS
- EXHIBIT "E" ATMS SYSTEM MAINTENANCE & SUPPORT
- EXHIBIT "F" DESCRIPTION OF EMERGENCY MODULE

THIS AGREEMENT IS NOT COMPLETE UNLESS ALL SELECTED EXHIBITS ARE ATTACHED.

CONTRACT No. C20175147 SIGNATURE PAGE

IN WITNESS WHEREOF, the parties hereto have by their duly authorized representatives executed this Agreement effective as of the date first above written.

CITY OF PALO ALTO

City Manager

APPROVED AS TO FORM:

City Attorney or designee
(Required on Contracts over \$25,000)

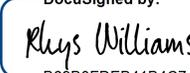
**CUBIC CORPORATION AND
SUBSIDIARIES, INCORPORATED,
(DOING BUSINESS AS CUBIC ITS,
INC.)**

Officer 1

DocuSigned by:
By: 
Name: Joseph Cuter

Title: VP and General Manager

Officer 2

DocuSigned by:
By: 
Name: Rhys Williams

Title: Treasurer

EXHIBIT “A” SCOPE OF SERVICES

CONSULTANT will integrate the CONSULTANT’s Emergency Module software into the City’s existing central traffic management software system entitled “ATMS” (contracted-for with CONSULTANT by separate agreement) covering twenty-five (25) intersections identified by the City and CONSULTANT will provide initial system configuration and other services, as detailed in this Scope of Services. This Scope of Services is applicable to the initial 25 intersections only.

CONSULTANT will add its Emergency Module capability to the City’s ATMS software system that manages the traffic lights to connect to the City’s emergency dispatch system. This added software module will allow the City to change the green lights at intersections to a red signal to prevent traffic from getting in the way of emergency response vehicles. The Emergency Module software to be provided under this Agreement is more fully described in Exhibit F (“Description of Emergency Module”). The CONSULTANT will install the additional software module, integrate the two systems into one system, test it, and provide warranty, maintenance and support for three years after written acceptance by the City (as detailed in Exhibit C).

Any expansion of the system beyond the initial 25 intersections will require a separate scope of work via written amendment to this Agreement in accordance with Section 27.4 herein.

Task 1: Project Kickoff and System Design Meetings

After the project notice to proceed (“NTP”), CONSULTANT will conduct two meetings, one a project kickoff meeting, and the second a system design meeting with CITY technical staff. The kickoff meeting will review project scope, deliverables, scheduling and any administrative items. The system design meeting will focus on solving technical issues involving the computer-aided dispatch (“CAD”) and automated vehicle location (“AVL”) integration, coordination of software installation plans, as well as establishing baseline settings (System Settings Template) and rules to be implemented at each intersection with respect to the Emergency Module.

The City will identify the 25 intersections to receive the Emergency Module during this time.

Task 2: Emergency Module Installation

CONSULTANT will install the Emergency Module on the City’s existing servers. Installation of the software will be conducted online, remotely, downloaded electronically to CITY’s servers, per the “Project Assumptions” section below. This installation process will require the CITY’s ATMS system to be offline for up to eight (8) hours during the installation process. In addition to the software installation, CONSULTANT will also modify appropriate SQL database to support the Emergency Module. After the installation of software and modification of the SQL databases, CONSULTANT will perform a functional test and will submit the results to the City. After software installation, Emergency Module ATMS users will be able to be accessed from all City ATMS Client Applications.

Task 3: Traffic Controller Emergency Module

CONSULTANT’s field application engineer (“FAE”) will license the Emergency Module on all

City traffic controllers. Traffic controllers must operate CONSULTANT's V.76 Local Controller Software. The licensing process requires that the intersection be placed into "Flash" operations for up to 10 minutes while the software is relicensed. All 25 initial intersections will require controller relicensing. Any existing licenses on controllers (e.g., SynchroGreen) will remain in place. CONSULTANT's requests that a City technician accompany CONSULTANT's FAEs while intersections are placed into Flash operations.

Task 4: Emergency Module Configuration, Initial Test and Onsite Adjustments

CONSULTANT's Traffic Engineers will design Emergency Module settings for each of the 25 intersections. Settings will be based on a standard template established under Task 1, System Settings Template. Settings will then be entered and will be tested at each intersection. All testing will be performed remotely during off-peak hours. Minor deviations from templates may be performed if appropriate in order to satisfy the requirements of a non-standard intersection type.

Task 5: System Testing and Adjustments

This process will involve the City's emergency response personnel. CONSULTANT and City staff (Traffic Operations and Emergency Responders) will establish up to five (5) test routes and will test the system and response based on these routes. In addition to this onsite system testing, this will be an opportunity to adjust system settings for more optimal system operations. It is expected that up to one (1) week of onsite system testing and adjustments will be appropriate for this project. A system testing document will be provided at the end of this task noting tests performed and whether the test was successful.

Task 6: System Training

CONSULTANT will perform up to four (4) days of onsite system training. All training will primarily be hands on system training, as opposed to classroom style training. This training will better allow the City to see the type of adjustments required to obtain the desired response. In addition, CONSULTANT will also outline the system architecture as part of this project to better help the City understand how the Emergency Module obtains CAD and AVL data and makes the appropriate decisions.

Task 7: System Acceptance

CONSULTANT will prepare and submit final documentation and request official Project acceptance from the City. These documents will provide the City with details outlining how the system has been configured to meet CITY's needs. Upon Project acceptance by CITY, the system will be under warranty. The City's three (3) year warranty, system support and maintenance term will commence once the final acceptance has been received.

Task 8: System Warranty and System Support and Maintenance

Upon Project acceptance by CITY in writing (as detailed in Exhibit C), the system will be under warranty and CONSULTANT will provide system maintenance and technical support services as detailed in Exhibit E ("ATMS System Maintenance and Support"), for three (3) years from the date of written acceptance by City as provided for in Exhibit C ("Compensation") of this Agreement.

Project Assumptions

- Intergraph 9.2 CAD System will be utilized by the CITY and the traffic interface is enabled on the system.
- City Traffic Operations staff will accompany CONSULTANT personnel when intersections are put into “Flash” operations
- City Traffic Operations staff will be available to assist with system testing. It is expected that up to five (5) days of system testing may be required.
- CONSULTANT will install (as below) the Emergency Module software on the City’s existing ATMS system, run on the City’s servers.
- The CITY will facilitate any questions with the CAD system vendor, if requested.
- All training will be performed at the CITY’s facilities.
- Installation of all system software and initial system configuration will be performed remotely using the CITY’s existing virtual private network (“VPN”) and remote desktop (“RDP”) system.

**EXHIBIT “B”
SCHEDULE OF PERFORMANCE**

CONSULTANT shall perform the Services so as to complete each milestone within the number of days/weeks specified below. The time to complete each milestone may be increased or decreased by mutual written agreement of the project managers for CONSULTANT and CITY so long as all work is completed within the term of the Agreement. CONSULTANT shall provide a detailed schedule of work consistent with the schedule below within 2 weeks of receipt of the notice to proceed (“NTP”).

Milestones (Tasks per Appendix A)	Completion No. of Days/Weeks from NTP (or as otherwise specified below)
Task 1. Project Kickoff and System Design Meetings	30 days
Task 2. Emergency Module Installation	90 days
Task 3. Traffic Controller Emergency Module	90 days
Task 4. Emergency Module Configuration, Initial Test and Onsite Adjustments	120 days
Task 5. System Testing and Adjustments	150 days
Task 6. System Training	180 days
Task 7. System Acceptance	200 days
Task 8. Maintenance and Support	3 years from the date of acceptance in writing by City as detailed in Exhibit C

**EXHIBIT “C”
COMPENSATION**

The CITY agrees to compensate the CONSULTANT for the Services performed in accordance with the terms and conditions of this Agreement, and as set forth in the budget schedule below. Compensation shall be calculated based on the not to exceed budget amount for each task set forth below.

CONSULTANT shall perform the tasks and categories of work as outlined and budgeted below. The CITY’s Project Manager may approve in writing the transfer of budget amounts between any of the tasks or categories listed below provided the total compensation for Basic Services, including reimbursable expenses, and the total compensation for Additional Services (if any are specified herein) do not exceed the amounts set forth in Section 4 of this Agreement.

CONSULTANT shall invoice the CITY’s Project Manager after Tasks 1 through 7 are completed, and the system acceptance has been approved in writing by the CITY’s Project Manager. The CONSULTANT shall invoice the CITY’s Project Manager for Task 8 on an annual basis, commencing with the start date for system maintenance and support services which shall be the date on which system acceptance is approved in writing by the CITY’s Project Manager.

BUDGET SCHEDULE	NOT TO EXCEED AMOUNT
Task 1 (Project Kickoff and System Design Meetings) Module Intersection Database development, \$1,000 per intersection for 25 intersections.	\$25,000
Task 2 (Emergency Module Installation) Emergency module remote integration and installation on Palo Alto servers.	\$30,000
Task 3 (Traffic Controller Emergency Module) Emergency module license, initial fee of \$305,000 and per intersection fee of \$5,000 for each of the 25 intersections.	\$430,000
Task 4 (Emergency Module Configuration, Initial Test and Onsite Adjustments)	\$0.00 (included in Task 3 cost)
Task 5 (System Testing and Adjustments)	\$0.00 (included in Task 3 cost)
Task 6 (System Training)	\$0.00 (included in Task 3 cost)

Task 7 (System Acceptance)	\$0.00 (included in Task 3 cost)
Task 8 (System Maintenance and Support for Three Years from written acceptance by City)	\$112,500 (\$37,000/yr for 3 years)
Sub-total Basic Services	\$597,500
Total Basic Services	\$597,500
Maximum Total Compensation	\$597,500

EXHIBIT "D" INSURANCE REQUIREMENTS

CONTRACTORS TO THE CITY OF PALO ALTO (CITY), AT THEIR SOLE EXPENSE, SHALL FOR THE TERM OF THE CONTRACT OBTAIN AND MAINTAIN INSURANCE IN THE AMOUNTS FOR THE COVERAGE SPECIFIED BELOW, **AFFORDED BY COMPANIES WITH AM BEST'S KEY RATING OF A-:VII, OR HIGHER, LICENSED OR AUTHORIZED TO TRANSACT INSURANCE BUSINESS IN THE STATE OF CALIFORNIA.**

AWARD IS CONTINGENT ON COMPLIANCE WITH CITY'S INSURANCE REQUIREMENTS, AS SPECIFIED, BELOW:

REQUIRED	TYPE OF COVERAGE	REQUIREMENT	MINIMUM LIMITS	
			EACH OCCURRENCE	AGGREGATE
YES YES	WORKER'S COMPENSATION EMPLOYER'S LIABILITY	STATUTORY STATUTORY		
YES	GENERAL LIABILITY, INCLUDING PERSONAL INJURY, BROAD FORM PROPERTY DAMAGE BLANKET CONTRACTUAL, AND FIRE LEGAL LIABILITY	BODILY INJURY	\$1,000,000	\$1,000,000
		PROPERTY DAMAGE	\$1,000,000	\$1,000,000
		BODILY INJURY & PROPERTY DAMAGE COMBINED.	\$1,000,000	\$1,000,000
YES	AUTOMOBILE LIABILITY, INCLUDING ALL OWNED, HIRED, NON-OWNED	BODILY INJURY	\$1,000,000	\$1,000,000
		- EACH PERSON	\$1,000,000	\$1,000,000
		- EACH OCCURRENCE	\$1,000,000	\$1,000,000
		PROPERTY DAMAGE	\$1,000,000	\$1,000,000
		BODILY INJURY AND PROPERTY DAMAGE, COMBINED	\$1,000,000	\$1,000,000
YES	PROFESSIONAL LIABILITY, INCLUDING, ERRORS AND OMISSIONS, MALPRACTICE (WHEN APPLICABLE), AND NEGLIGENT PERFORMANCE	ALL DAMAGES	\$1,000,000	
YES	THE CITY OF PALO ALTO IS TO BE NAMED AS AN ADDITIONAL INSURED: CONTRACTOR, AT ITS SOLE COST AND EXPENSE, SHALL OBTAIN AND MAINTAIN, IN FULL FORCE AND EFFECT THROUGHOUT THE ENTIRE TERM OF ANY RESULTANT AGREEMENT, THE INSURANCE COVERAGE HEREIN DESCRIBED, INSURING NOT ONLY CONTRACTOR AND ITS SUBCONSULTANTS, IF ANY, BUT ALSO, WITH THE EXCEPTION OF WORKERS' COMPENSATION, EMPLOYER'S LIABILITY AND PROFESSIONAL INSURANCE, NAMING AS ADDITIONAL INSUREDS CITY, ITS COUNCIL MEMBERS, OFFICERS, AGENTS, AND EMPLOYEES.			

I. INSURANCE COVERAGE MUST INCLUDE:

- A. A PROVISION FOR A WRITTEN THIRTY (30) DAY ADVANCE NOTICE TO CITY OF CHANGE IN COVERAGE OR OF COVERAGE CANCELLATION; AND
- B. A CONTRACTUAL LIABILITY ENDORSEMENT PROVIDING INSURANCE COVERAGE FOR CONTRACTOR'S AGREEMENT TO INDEMNIFY CITY.
- C. DEDUCTIBLE AMOUNTS IN EXCESS OF \$5,000 REQUIRE CITY'S PRIOR APPROVAL.

II. CONTACTOR MUST SUBMIT CERTIFICATE(S) OF INSURANCE EVIDENCING REQUIRED COVERAGE AT THE FOLLOWING URL: <https://www.planetbids.com/portal/portal.cfm?CompanyID=25569>.

III. ENDORSEMENT PROVISIONS, WITH RESPECT TO THE INSURANCE AFFORDED TO "ADDITIONAL INSUREDS"

A. PRIMARY COVERAGE

WITH RESPECT TO CLAIMS ARISING OUT OF THE OPERATIONS OF THE NAMED INSURED, INSURANCE AS AFFORDED BY THIS POLICY IS PRIMARY AND IS NOT ADDITIONAL TO OR CONTRIBUTING WITH ANY OTHER INSURANCE CARRIED BY OR FOR THE BENEFIT OF THE ADDITIONAL INSUREDS.

B. CROSS LIABILITY

THE NAMING OF MORE THAN ONE PERSON, FIRM, OR CORPORATION AS INSURED UNDER THE POLICY SHALL NOT, FOR THAT REASON ALONE, EXTINGUISH ANY RIGHTS OF THE INSURED AGAINST ANOTHER, BUT THIS ENDORSEMENT, AND THE NAMING OF MULTIPLE INSURED, SHALL NOT INCREASE THE TOTAL LIABILITY OF THE COMPANY UNDER THIS POLICY.

C. NOTICE OF CANCELLATION

1. IF THE POLICY IS CANCELED BEFORE ITS EXPIRATION DATE FOR ANY REASON OTHER THAN THE NON-PAYMENT OF PREMIUM, THE CONSULTANT SHALL PROVIDE CITY AT LEAST A THIRTY (30) DAY WRITTEN NOTICE BEFORE THE EFFECTIVE DATE OF CANCELLATION.
2. IF THE POLICY IS CANCELED BEFORE ITS EXPIRATION DATE FOR THE NON-PAYMENT OF PREMIUM, THE CONSULTANT SHALL PROVIDE CITY AT LEAST A TEN (10) DAY WRITTEN NOTICE BEFORE THE EFFECTIVE DATE OF CANCELLATION.

VENDORS ARE REQUIRED TO FILE THEIR EVIDENCE OF INSURANCE AND ANY OTHER RELATED NOTICES WITH THE CITY OF PALO ALTO AT THE FOLLOWING URL:

<HTTPS://WWW.PLANETBIDS.COM/PORTAL/PORTAL.CFM?COMPANYID=25569>

OR

HTTP://WWW.CITYOFPALOALTO.ORG/GOV/DEPTS/ASD/PLANET_BIDS_HOW_TO.ASP

EXHIBIT E
ATMS SYSTEM MAINTENANCE AND SUPPORT

CONSULTANT will provide CITY with ATMS traffic management system maintenance and technical support as described in this exhibit for the CONSULTANT's ATMS traffic management system including the integrated Emergency Module licensed to CITY pursuant to this Agreement.

MAINTENANCE AND SUPPORT SCOPE and RESPONSIBILITIES

ATMS System maintenance and support covers the following products and services during the term of the Agreement:

- 1) Free software upgrade to the latest full version of ATMS core system software (including without limitation the integrated Emergency Module) at the beginning of the term of the Agreement via remote access, with three years of maintenance. CONSULTANT and CITY will work together to schedule a mutually acceptable time for such installation;
- 2) Free software updates (all .dot releases) of the **ATMS** core system software via remote access.
 - a. In its first year since the release of ATMS 2.0, CONSULTANT has released two .dot releases of ATMS. CONSULTANT expects that pace to be roughly the same on a going-forward basis but may vary the times for release depending on which additional features are included. .dot release may also include technical updates to the MicrosoftTM and other technology standards used in ATMS.
 - b. CONSULTANT and CITY will work together to schedule a mutually acceptable time for such installation.
- 3) A yearly system "health check" on the IT environment in which ATMS software resides and recommendations to improve system performance. CITY will provide remote access to its system so that CONSULTANT may complete the "health check."
- 4) Designated and priority support from CONSULTANT's ATMS systems support group
- 5) Telephone support:
Times: 7:00am to 7:00pm (Central Time)
Days: Monday to Friday except for holidays recognized by CONSULTANT

COVERAGE

Maintenance and support services will be provided for the following core and/or optional system software modules :

Emergency Responder Module

EXCLUSIONS

ATMS maintenance does not cover commercial off the shelf (COTS) software by third parties that may be required for correct system function, computer hardware, communications hardware of field equipment.

START OF MAINTENANCE AND SUPPORT SERVICES

Provision of software system maintenance and support services begins immediately upon written acceptance by the CITY as provided in Exhibit C ("Compensation") of this Agreement and shall continue for three (3) years thereafter. CONSULTANT will provide a quotation for renewal at least 60 days prior to the expiration of the three-year maintenance and support term. If CITY does not renew the maintenance and support services, software updates and prioritized support will end immediately upon the end of the three-year maintenance and support term.

EXHIBIT F
DESCRIPTION OF EMERGENCY MODULE

What is the ATMS Emergency Module?

The Emergency Module is an ATMS software module that integrates with your computer-aided dispatch system to provide safer and quicker response times for emergency vehicles. With the development of the Emergency Module, Trafficware pioneered the concept of combining automated vehicle location (AVL) and computer aided dispatch (CAD) systems with a proven advanced traffic management system—our ATMS. The result is an economical emergency response solution, with performance options and features that cannot be satisfied with standard emergency vehicle preemption (EVP)

Because the Emergency Module is ATMS based, it has visibility and control of the entire route from the moment the emergency vehicle leaves the garage. With this global perspective, the Emergency Module is able to adjust intersection signal timing along the route using priority signal operation well in advance of the arrival of the emergency vehicle. By the time the emergency vehicle reaches each intersection, traffic has been reduced at the approach, allowing for safe and rapid progression through the intersection. The result is a safer solution, that allows for faster response times and lessens the potential of conflicts with vehicles along the emergency route.

In addition to safer and quicker response times, because the system uses priority signal operation, it also maintains traffic signal coordination, and minimizes the impact to vehicles that are not traveling along the emergency (priority) route. One of the most common complaints associated with standard EVP is that once the emergency vehicle exits the intersection, the intersection operations take several minutes to recover and resume normal operations. These events are known as “transition events” and typically occur when intersections are preempted to immediately service emergency vehicles by an optical or standard GPS type of preemption request. In these events, intersections are preempted only a short distance from the intersection and the immediate service can be quite disruptive. With Trafficware’s Emergency Module, the request for service for the emergency vehicle is known well in advance of the vehicle approaching the intersection, and the system can program less invasive signal timing changes to first ensure a clearer route for the emergency vehicle, but also lessen the disruption to all vehicles at the intersection and maintain traffic signal coordination.

The Emergency Module has several benefits over standard EVP and is designed to:

- Leverage existing infrastructure and integrate existing systems (CAD, AVL, etc.)
- Clear traffic from intersections & roadways before emergency vehicles arrive.
- Achieve faster emergency response times, minimizing conflicts along a route.
- Minimize the impact to surrounding traffic.



EXHIBIT F
DESCRIPTION OF EMERGENCY MODULE

How Does the Emergency Module Work?

There are five (5) basic steps to understanding the functionality of Trafficware’s Emergency Response Module for ATMS. The first step in the process is that the ATMS system and Emergency Module must receive a route from the agency’s computer aided dispatch (CAD) system. This information contains the prescribed emergency vehicle route and GIS information related to this route. Next, vehicle information is obtained from the CAD or automated vehicle location (AVL) device (typically GPS-based) onboard the emergency vehicle. This information contains the vehicle heading and speed information. Based on the route, vehicle heading and speed, this information can be overlaid on top of the known traffic signal locations and phasing within the ATMS GIS database. From there the Emergency Module calculates estimated times of arrival to each intersection along the route, and begins retiming traffic signals to “flush” vehicles along the emergency route to facilitate clear approaches as the emergency vehicle arrives at each intersection. A summary of this process is summarized and illustrated on the following pages:

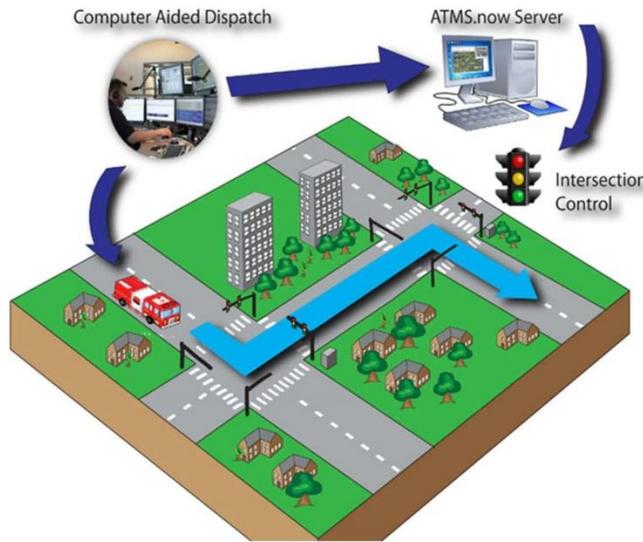


Figure 1 - Summary of Emergency Module Interface with CAD System

EXHIBIT F
DESCRIPTION OF EMERGENCY MODULE

Page 4

Step 1: 911 dispatch initiates a response



Figure 2 - Emergency Event

During this phase, the emergency response operator (911 dispatch) enters the emergency event. The event’s location must be known, and it is important that the operator correctly enters the event address/location as accurately as possible.

Step 2: Emergency routes are determined by CAD system (multiple units)

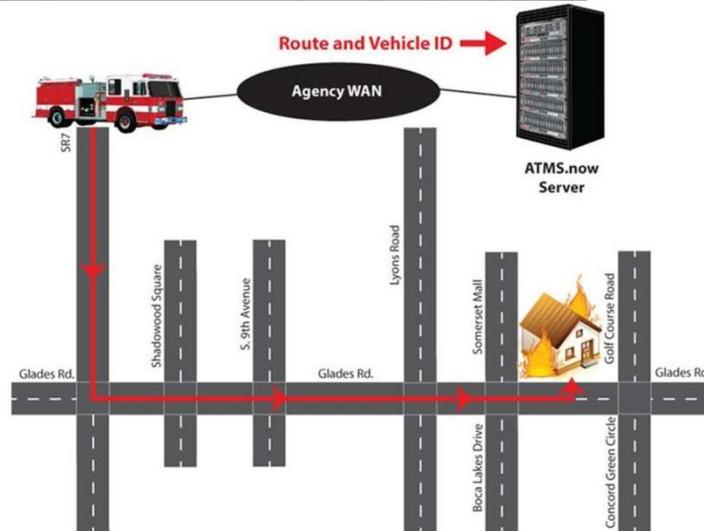


Figure 3 - Assignment of Priority Route

EXHIBIT F
DESCRIPTION OF EMERGENCY MODULE

During this step, the CAD system provides emergency vehicles a route to the event (shown in red above). This route will contain graphical information systems (GIS) data that describe the route. Additionally, during this step all emergency vehicle heading and speed information is transmitted. The transmission of the heading and speed data is persistent and will continue to be sent and updated until the emergency vehicle reaches the event, or the pursuit of the event is cancelled by the emergency vehicle operator.

Step 3: Emergency Module selects signalized intersections

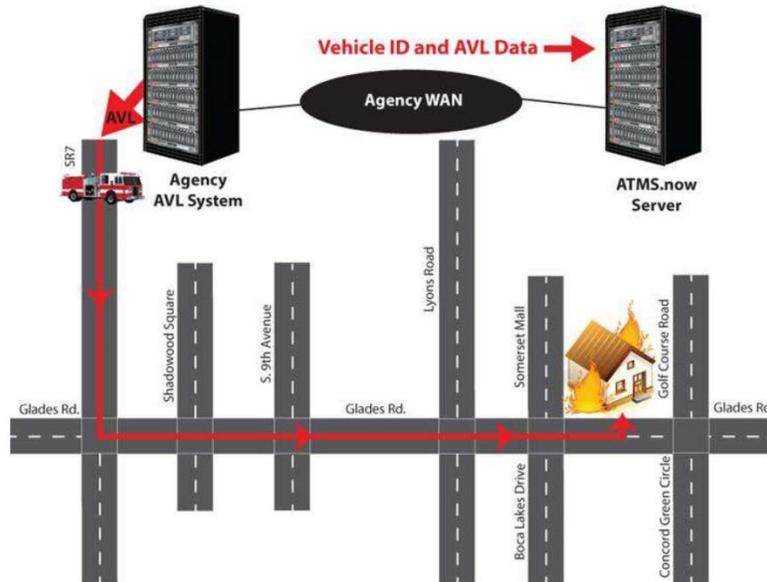


Figure 4 – Selection of Impacted Traffic Signals

Based on the route selected by the CAD system, as well as emergency vehicle heading and speed data, ATMS identifies the impacted traffic signals along the route and obtains the allowable settings and options to reprogram the traffic signal timings. The signal timing options for the Emergency Module include several tiers of settings, based on the required aggressiveness to facilitate emergency vehicle operations. If the emergency vehicle is closer to the intersection, such as the first vehicle along a route, the traffic signal setting changes may be more aggressive and resemble a standard preemption, whereas intersections that are along the route and currently further away may only require minor phase split timing adjustments. Split timing adjustments may entail adding time to the movements along the priority route and removing timing from movements that are not along the priority route. The goal will be to maintain traffic signal coordination, regardless of the required aggressiveness. All Emergency Module settings are adjustable and can be modified at any time based on observations or preferences.

EXHIBIT F
DESCRIPTION OF EMERGENCY MODULE

Step 4: The Emergency Module communicates with both CAD application and AVL system. Controller algorithm uses estimated time of arrival (ETA) to determine actions (adjust timing).

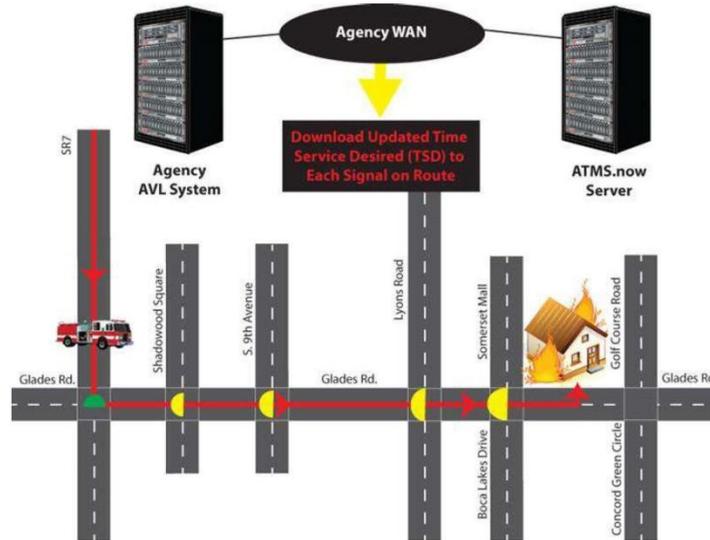


Figure 5 - Estimation and Update of ETAs

As the emergency vehicle traverses the route, ETA are continually recalculated based on the vehicle’s changing heading and speed obtained from the AVL system. Based on this information, the Emergency Module re-evaluates the aggressiveness of the signal timings along the emergency route for appropriateness and either maintains the aggressiveness or modifies settings to better accommodate the emergency vehicle and help ensure a clear route. During this step, if the emergency vehicle changes its heading from what is expected, and the route recalculates, ATMS will obtain the modified route and retime signals as best as possible along this new route. Additionally, if the route is cancelled, signal timing changes will stop, and the signal will resume operations utilizing normal signal settings, generally within one cycle.

Step 5: Service is complete when emergency vehicle passes through an intersection

After the emergency vehicle arrives at the event, the Emergency Module will ensure that all traffic signal timings along the traverse route revert to normal operations. Generally, all traffic signal timings will revert to normal operations within one cycle after the vehicle exits the intersection. The added benefit of the Emergency Module is that the residual impact to vehicles that are not along the emergency route are minimized.

EXHIBIT F
DESCRIPTION OF EMERGENCY MODULE

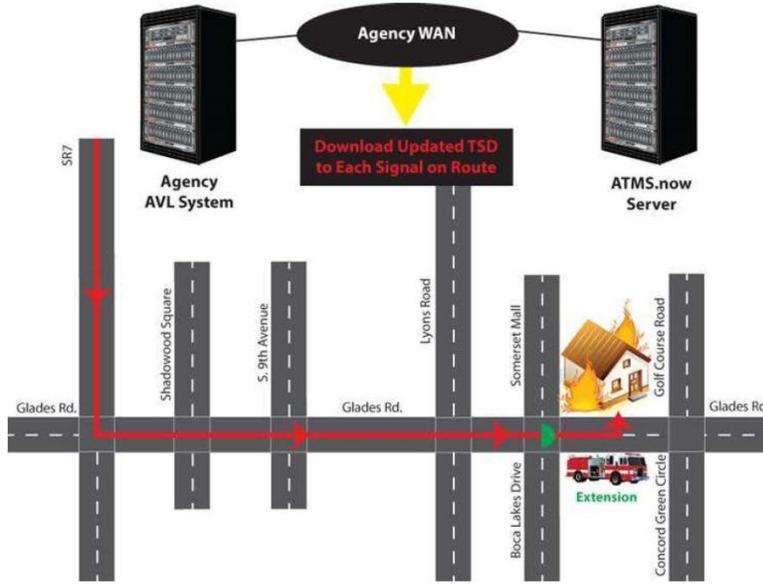


Figure 6 - Completion of the Route