

Council Meeting of
December 16, 2008

Honorable Mayor and Members
of the City Council
City Hall
Torrance, California

Members of the Council:

**SUBJECT: Community Development - Implementation of the Intelligent Transportation System (ITS) Including Traffic Management Center (TMC)
Expenditure: \$479,650**

RECOMMENDATION

Recommendation of the Community Development Director that the City Council:

- Authorize the Mayor to execute and the City Clerk to attest to the Supply Agreement with Econolite Control Products, Inc. for implementation of ITS elements per Attachment A, in an amount not to exceed \$479,650 (\$206,350 City funds and \$273,300 LACDPW funds); and
- Authorize the Mayor to execute and the City Clerk to attest to the attached cooperative Agreement, Attachment B, with Los Angeles County Department of Public Works (LACDPW) to authorize the receipt of funds and appropriate the amount of \$273,300 from LACDPW.

Funding: \$155,000 from CIP-T19 (NTCIP System Upgrade); \$51,350 from Community Development Department - Transportation Planning Division Operating Budget; and \$273,300 from LACDPW, for the total cost of \$479,650.

BACKGROUND

In 1992, Metropolitan Transportation Authority (MTA), now known as Metro, adopted a 30-Year Integrated Transportation Plan. The Plan stressed the goal for an increase in mobility across jurisdictional boundaries, a reduction in congestion delays and improvement in air quality.

In 1993, Metro funded a Conceptual Design Study for the South Bay region to comply with the MTA 30-Year Plan. The Conceptual Design was regionally approved through the South Bay Cities Council of Government (SBCCOG).

Since 1995, the Los Angeles County Department of Public Work (LACDPW) has taken lead on behalf of the South Bay Cities and later the SBCCOG in filing applications and providing the local match funding for the South Bay Signal Synchronization Projects. City staff has been working with the SBCCOG and LACDPW to implement the South Bay Signal Synchronization Projects in Torrance. The South Bay Projects consists of two components: Traffic Signal Synchronization Project (TSSP); and Intelligent Transportation System (ITS).

TSSP projects consist of the design and construction of operational improvements; upgrade traffic signal equipment and time-base signal timing coordination, on identified arterial roadways.

ITS (Consists of Tier II & Tier III Improvements): Tier II consists of the design and implementation of field communication system to collect and transmit real time traffic information through Closed Circuit Television (CCTV) cameras and system detectors. Tier III consists of the design and implementation of non-field (Office) components such as the Traffic Management Center (TMC) and Traffic Control System (TCS) that will communicate with field elements.

ANALYSIS

The Community Development Department has been working with the LACDPW to implement the ITS system in Torrance. The ITS improvements currently under consideration are valued at approximately \$2.5 million dollars. LACDPW, through grants received from METRO, will be funding approximately \$2.3 million dollars and the City will be funding approximately \$206,350. Staff has been coordinating the implementation effort with General Services, Communication & Information Technology (CIT) and Public Works departments, which will ultimately operate and maintain the Intelligent Transportation Systems.

City of Torrance has been using Econolite traffic signal systems and equipment exclusively. Therefore, to ensure compatibility and better system integration, Econolite's Traffic Control System (*Centracs*) has been chosen for the City. The City will be lead agency on behalf of both the City and LACDPW for the ITS elements being implemented by Econolite. The attached Supply Agreement, Attachment A, valued at \$479,650, incorporates the proposal detailing the tasks and costs related to their implementation contract. The total Supply Agreement cost of \$479,650 entails \$206,350 funded by the City and \$273,300 funded by LACDPW.

The cooperative (Co-Op) Agreement with LACDPW, Attachment B, contains the remaining elements of the ITS, Tier II and Tier III, improvements to be overseen by the County. LACDPW will be lead agency on behalf of both the City and LACDPW for the remaining ITS elements being implemented through County contracts. The Co-Op Agreement value is \$902,575, which consists of \$206,386 funded by the City and \$696,189 funded by LACDPW. Under a separate construction contract, LACDPW will fully fund and install 7 CCTV camera systems at a cost of approximately \$1.2 million. The construction is anticipated to begin in the Spring of 2009.

The implementation of the ITS system will enhance the City's capability of monitoring and controlling City's own traffic signals by upgrading the current system and by adding additional signals on line. It will also allow staff to remotely view congestion, provide incident verification and response at intersections; to remotely identify and address traffic signal malfunctions.

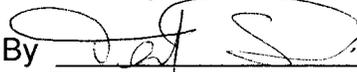
Installation of Communication hardwire will also be done by LACDPW under their contract. However, Anza Avenue is not part of the identified major arterials by Metro and LACDPW, yet is an important arterial in City of Torrance. As such, the City asked for Anza to be incorporated into the project under its own funding. In order to expedite the process and ensure the compatibility of the communication system, LACDPW has agreed to include Anza in their design and construction. Through the Co-Op Agreement, LACDPW will deduct \$132,087 from the total cost of SYSTEM (\$405,351) to be paid to the City. Therefore, City of Torrance will receive the balance of \$405,351, which will be \$273,300.

Traffic Management Center (TMC) will be located in the Public Works Department at the City Yard. It consists of a work station, and video wall to monitor, view and operate the traffic signals in Torrance. The design has been completed and the TMC will be constructed by the City under a separate contract. The estimated cost for the TMC is for the amount not to exceed \$100,000, which will be funded by LACDPW. Staff will bring back an item for the TMC at a later date.

Lastly, upon completion, the City will eventually take over the ownership and maintenance of the components being installed. The CIT Department will eventually need to incorporate the maintenance and replacement (O&M) costs for these elements. At this time, the CIT Department estimates the value of O&M for their elements to be approximately \$23,000 per year. All the impacted departments will be evaluating their O&M needs more closely and request incorporation into their annual operating budgets at a later date. For the time being, LACDPW has agreed to fund 4-years of maintenance of the Centracs systems being installed.

Respectfully submitted,

JEFFERY W. GIBSON
Community Development Director

By 
Ted Semaan, Manager
Transportation Planning, Development
Engineering & Records Division

CONCUR:


JEFFERY W. GIBSON
Community Development Director


LeRoy J. JACKSON
City Manager

- Attachments: A. Econolite Supply Agreement
- B. Co Agreement with LACDPW

SYSTEM SUPPLY AGREEMENT

THIS SYSTEM SUPPLY AGREEMENT (this "Agreement") is made and entered into on _____, by and between the City of Torrance, CA, 3031 Torrance Boulevard, Torrance California 90509, (hereinafter referred to as "Torrance"), and Econolite Control Products, Inc., a California corporation located at 3360 E. La Palma Avenue, Anaheim, California 92806 (hereinafter referred to as "Econolite").

I. RECITALS

- A. Econolite is a manufacturer and supplier of traffic control equipment, advanced traffic management systems and traffic controller firmware.
- B. Econolite, alone and in partnership with others, has developed proprietary software systems, including the communication and control system registered as "*Centracs*".
- C. Torrance desires to employ Econolite to develop, furnish, integrate and test hardware and software systems to provide a fully operational advanced traffic management system.

II. AGREEMENT AND SCOPE OF WORK

NOW, THEREFORE, the parties hereto agree as follows:

Econolite and Torrance, for the mutual consideration hereinafter set forth agree that the services shall conform to attached Exhibit A (Price Proposal dated 13 November, 2008) except where modified by this agreement.

In this scope of work, Econolite shall deliver the following materials and services on or before the delivery dates agreed to during the project kickoff meeting, provided Torrance has executed this Agreement on or before 23 January 2009.

A. System Hardware (\$45,900.00)

Econolite shall provide the *Centracs* system servers and workstations for configuration and setup. The hardware required consists of one (1) file / application server, one (1) communications server, three (3) workstations (desktops) and the associated peripherals and software identified in table 1 of the Exhibit A. Any existing computers acting as workstations must meet the minimum *Centracs* workstation requirements. Econolite shall provide hardware as defined in Exhibit A or better. Any incompatibilities of hardware not supplied by Econolite and not defined in the project scope shall be the responsibility of Torrance to resolve. Servers, workstations and associated peripherals shall be shipped to Econolite's Colorado Springs, CO facility at the expense of Torrance. The system hardware will be configured, software installed and system tested in our facility then shipped back to the project site at Torrance's expense.

An Econolite systems engineer will assist the City's MIS/IT personnel in coordinating the integration of the new *Centracs* system LAN with the Torrance LAN. Torrance will be responsible for LAN cabling installation, connection to the local area network, and/or any system/network analysis. All virtual private network connections and wide area network connections to the new

Centracs network are the domain and responsibility of Torrance MIS/IT personnel. Econolite will provide to Torrance documentation to assist in system configuration. All documentation provided to Torrance for system configuration shall be returned to Econolite completed within 30 days to ensure project schedules are not delayed. In the event documentation is delayed, Econolite shall not be held accountable for delays in the project resultant due to lack of documentation.

B. Communications

Torrance shall provide a fully tested and functional communications infrastructure. Econolite's scope of work for communications is limited to connecting to the LAN at the Traffic Operations Center (TOC) and at intersection termination points for controllers. Any additional communications integration shall be subject to additional billing at Econolite's option, not to exceed \$250.00 hour.

C. Field Equipment & Installation (\$157,083.00)

Field equipment upgrades and installation shall be performed according to Econolite's proposal dated 13 November 2008. During the project kickoff meeting, Econolite shall coordinate a field integration schedule to be agreed upon by Torrance. Torrance shall be responsible for identifying and coordinating traffic control at intersections that will require police direction or alternative traffic control methods. Should Torrance require advanced notice of fieldwork or an escort during fieldwork, it is incumbent upon Torrance to notify Econolite of advance notice guidelines and ensure escort resources are made available to Econolite.

D. Software Licenses, Integration, Testing & Training (\$154,250.00)

This item includes software license fees for one (1) *Centracs* File / Application server, one (1) Communications server, and up to three (3) workstations; licenses are not concurrent or transferable. All items have a one-year warranty. Remote access to *Centracs* through Terminal Services may reduce some workstation functionality. Computers remotely accessing *Centracs* must include Microsoft's Terminal Services Client Application (one license provided by Econolite). The Communications Server license covers up to 250 intersections operating from a single communications server computer (expandable beyond 250 intersections with additional software licenses and hardware).

Factory performance testing is performed at the Econolite facility. There, an Econolite team of engineers will assemble the system hardware, install the software, test the system components (using standard system test documents), prepare the system graphics for one (1) base map, up to ninety-one (91) standard intersection displays and document the final system (all hardware configurations). The base map will be developed from an appropriate map graphics file supplied by the Torrance in a file format compatible with the *Centracs* graphic editor (GIS files). In the event delivery of required graphics for the base map and/or intersection are delayed due in part to Torrance, final acceptance shall not be postponed and final payment due in accordance with prescribed payment schedule.

After completion of the Econolite standard system performance tests, the system will be disassembled, packed and shipped to the job site. A member of the Econolite system engineering team will arrive on site to unpack, reassemble and test the system. Onsite system integration

includes configuring and testing communications to the initial ninety-one (91) intersections. Performance of the system and the interconnect infrastructure will be conducted by communication testing. This proposal includes labor and expenses for one week for installation and intersection integration. All communications channels shall be tested by Torrance at least two weeks prior to the arrival of the System Integration team. Any additional time necessary to integrate intersections will be billed separately at \$250.00 per hour, plus travel expenses.

System training will be scheduled after the system engineering team has the system functionally operational. Training for this project shall consist of four (4) consecutive days of training, up to 32 hours, on the *Centracs* system. This will include instruction on system hardware, system operation, and system administration. Training will be conducted at City provided facilities for up to ten people.

Acceptance testing will consist of an operational demonstration to the customer of all major software components using a standard system acceptance test developed by Econolite.

E. System Maintenance Agreement (\$58,800.00)

Torrance shall receive Econolite's standard one-year product warranty with the *Centracs* system. The first year system maintenance agreement beyond after the standard warranty expires is included as part of this Agreement. Additional maintenance agreements may be purchased in one-year increments for the software. The cost for these annual system maintenance agreements shall be \$14,700.00 annually if purchased within the warranty period. Torrance shall purchase up to four (4) years of additional support within the warranty period for the stated price. ✓

F. Sychro Module (\$21,000.00)

Torrance shall receive Econolite's Sychro interface module as an included option to the *Centracs* system. The Sychro module shall function as set forth in Exhibit A, Sychro Module functional description.

This Agreement price includes the factory testing, software installation, hardware installation, configuration, equipment integration and training for the *Centracs* software in addition to field modifications and labor as defined in Exhibit A.

TOTAL AGREEMENT PRICE: \$ 459,448.00 ✓

III. DELIVERY SCHEDULE

Torrance shall provide graphics files, sample intersection displays, and system initialization forms within 30 calendar days of contract signing. Econolite shall provide the *Centracs* system in accordance with milestone schedule agreed to and defined during the project kickoff meeting with Torrance. Econolite anticipates the following timeline for each milestone (some milestones may run concurrently):

Accept proposal, finalize contract and sign – 30 days from delivery of final proposal
 Notice to Proceed (NTP) – 0 days
 Procurement of equipment – 120 days from NTP

Factory setup of central system – 30 days from delivery of hardware
 Installation of controllers / upgrades – 30 days from delivery of components to project site
 Integration of system – 1 week
 Training for central system – 1 week
 Acceptance testing – 3 days
 Project acceptance – 1 day

IV. PAYMENT TERMS

The materials and services listed under Section II above establish invoicing and payment milestones under this Agreement. Payment for all invoices shall occur within thirty (30) days. All computer equipment will be shipped F.O.B. Colorado Springs, Colorado, all cabinets, controllers and field components will be shipped F.O.B. Anaheim, CA.

Econolite shall not be liable for delays in delivery or in performance or failure to manufacture or deliver, due to (1) causes which are unavoidable or beyond its reasonable control, or (2) acts of God, acts of Torrance, acts of civil or military authority, fires, strikes or other labor disturbances, floods, epidemics, war, riot, delays in transportation, or (3) inability on account of causes beyond its reasonable control to obtain necessary labor, materials, components or manufacturing facilities. In the event of any such delay, the date of delivery or of performance shall be extended for a period equal to the time lost by reason of the delay. If the delay is due to causes other than attributable to Torrance, and is such that the delivery of services voids the essential period for this contract, Torrance may cancel this contract upon thirty (30) days written notice.

This Agreement is made subject to any federal, state or local allocations, priorities, restrictions or regulations now or hereafter in effect; or allocations imposed upon Econolite by Econolite's suppliers or for delays caused by failure of its supplier to deliver parts to Econolite.

The compensation set forth in this paragraph shall be the total compensation for hardware, software and services provided by Econolite, including all out of pocket expenses incurred.

Section II – A: System Hardware (\$49,700.00) includes taxes

Torrance shall pay 100% of System Hardware upon shipment and proper receipt of deliverables to Torrance.

Section II – C: Field Equipment & Installation (\$175,698.00) includes taxes

Torrance shall pay 100% of Field Equipment and Installation upon completion of all field equipment and/or modifications as defined in Exhibit A.

Section II – D: Software Licenses, Integration, Testing & Training (\$154,250.00)

Torrance shall pay 85% of Total System Price as defined in Section II upon completion of the signal system installation and integration.

Torrance shall pay 10% of the Total System Price as defined in Section II upon completion of the training requirement.

Torrance shall pay 5% of the Total System Price as defined in Section II upon completion of the acceptance test requirement.

Section II – E: System Maintenance Agreement (\$58,800.00)

Torrance shall pay 100% of the System Maintenance Agreement upon successful completion of the System Acceptance Test.

Section II – F: Synchro Module (\$21,000.00)

Torrance shall pay 100% of the Synchro module cost upon completion of the signal system installation and integration.

V. PAYMENTS EARNED

Torrance acknowledges that the rights of Econolite in and to the consideration payable by Torrance under Section II are absolute and unconditional upon completion of the discrete tasks set forth in said Section of this Agreement, notwithstanding that the payment dates may be set at a time later in the future than the performance date.

In the event of default by Torrance and Torrance failing to cure such default within thirty (30) days from receiving Econolite's written notice of Torrance default, Econolite shall be entitled, at its option, to upon written notice to Torrance, declare all unpaid payments, plus all other amounts payable by Torrance, hereunder, to be immediately due and payable, discounted, to the then present value (using an interest rate equal to that of a comparable treasury note at the date this Agreement was accepted by the Econolite). The remedies referred to or set forth herein shall be cumulative and any single or partial exercise of any remedy shall not preclude any other or further exercise thereof or of any other remedy.

VI. SALES AND SIMILAR TAXES

Econolite's price includes sales, use, excise or similar taxes. The amount of any present or future sales, use, excise, or other tax applicable to the sale or use of the equipment hereunder shall be paid by Torrance, or in lieu thereof Torrance shall provide Econolite with a tax exemption certificate acceptable to taxing authorities.

VII. CANCELLATION AND "HOLD" CHARGES

Torrance may cancel, place a "stop notice" or delay the completion of performance of Econolite upon 30 days written notice in advance to Econolite. In the event of any such action, Torrance shall make payment to Econolite of reasonable and proper cancellation charges, and/or appropriate costs associated with the delay and/or "holds". In addition to the purchase price as agreed upon herein, Torrance agrees to make payments to Econolite for labor and materials expended (including overhead and G & A costs) directly attributable to the delays, "holds" or cancellation caused by Torrance. Torrance may cancel this order, if after written notice to Econolite and thirty (30) days to cure, Econolite fails to fulfill in a timely manner its obligations under this agreement.

VIII. STANDARD WARRANTY

Econolite warrants to Torrance that all software and equipment to be delivered hereunder will be free from defects in material or workmanship and will be of the kind and quality designated or specified by Econolite herein. This warranty shall apply only to defects appearing within one year from the date of shipment by Econolite for software products and two years from the date of shipment by Econolite for hardware products

manufactured by Econolite. All other equipment not manufactured by Econolite carries the manufacturer's standard warranty. If Econolite installs the Econolite manufactured equipment, software or supplies technical directions of installation by contract, the warranty period shall run from the completion of installation, provided same is not unreasonably delayed by Torrance.

If the Econolite manufactured equipment delivered hereunder does not meet the above warranty, and if Torrance promptly notifies Econolite in writing, Econolite shall thereupon correct any defect, including non-conformance with the specifications, either (at its option) by repairing any defective or damaged parts of the equipment, or by making available at Econolite's plant necessary replacement parts.

Torrance will return the defective product to Econolite, at Econolite's expense. Econolite shall repair or replace the defective item and return it to Torrance, shipping costs prepaid.

The foregoing warranty is exclusive and in lieu of all other warranties whether written, oral, implied or statutory. NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR PURPOSE SHALL APPLY. Econolite does not warrant any equipment of other manufacture designated by Torrance.

Econolite shall supply to Torrance, in a timely manner, any software revisions of the standard *Centracs* software modules to correct "bugs" or deficiencies, which would appear within one (1) year from the date of final acceptance of the standard *Centracs* traffic management system.

IX. REPRESENTATIONS

Non-infringement - Econolite represents that to the best of its knowledge the technology embodied in the products sold herein does not infringe upon a United States patent or United States copyright in effect as of the Effective Date.

Authority - Each party represents as follows: (a) that it has full power and authority to execute, deliver and perform its obligations under this Agreement; (b) that there are no actions, proceedings or investigations pending or, to the best of each party's knowledge, threatened against such party which may in any manner whatsoever materially affect the enforceability of this Agreement or the rights, duties and obligations of the parties hereunder; and (c) that the execution, delivery and performance of this Agreement will not constitute a breach or default under any agreement, law or court order under which such party is a party to or may be bound or affected by or which may affect the rights, duties and obligations hereunder.

No Other Representations - Each party acknowledges and agrees that it is relying on no representation of the other party except as expressly set forth herein.

X. LIMITATION OF LIABILITY

Except for negligence and/or intentional acts, Econolite's liability on any claim for loss or damage arising out of, connected with, or resulting from this Agreement, or from the performance or breach thereof, or from the design, manufacture, sale, delivery, resale, installation, technical direction of installation, inspection, repair, operation or use of any equipment covered by or furnished under this contract shall be limited to the Total System Price. In no event, whether as a result of breach of contract or warranty or alleged negligence, shall Econolite be liable for special or consequential damages including but not limited to loss of profits or revenue,

loss of use of the equipment, or any associated equipment, cost of capital, downtime costs, or claims of customers of Torrance for such damages.

Econolite will not be liable for any claims or back charges on behalf of Torrance arising out of this contract unless they are made immediately and supported in writing within thirty (30) days of the date on which Torrance becomes aware of same, giving full details, including costs incurred, if any. Claims not presented within such time limit shall be deemed to have been waived by Torrance. Econolite will be given reasonable opportunity and access to investigate the merits of such claims or back charges and its liability limited as above.

XI. INDEMNIFICATION

Notwithstanding the limitations on liability imposed under Section, "Limitation of Liability" hereof, Econolite shall indemnify, defend and hold harmless Torrance and its officers, agents and employees, or any of them from any and all claims, actions, suits, liability, loss, costs, expenses, reasonable attorneys' fees and costs of litigation damages of any nature whatsoever, by any reason of or arising out of any negligent or intentional act or omission of Econolite, its officers, agents, employees, or any of them relating to or arising out of the performance of this Agreement; excepting only those actions, claims, liabilities, obligations, judgments, expenses or damages arising out of the sole negligence of the Torrance.

If a final judgment is rendered against the Torrance, its officers, agents, employees and/or any of them, or jointly against Torrance and Econolite and their respective officers, agents and employees, or any of them, Econolite shall satisfy the same to the extent that such judgment was due to Econolite's negligent acts or omissions with the following provisions:

Econolite shall provide a defense to the Torrance indemnities or at the Torrance's option reimburse the Torrance indemnities their costs of defense, including reasonable attorneys' fees, incurred in defense of such claims; and

Econolite shall promptly pay any final judgment or portion thereof rendered against the Torrance.

XII. LICENSES

Econolite grants to Torrance for exclusive use in Torrance, a fully paid non-exclusive, non-transferable *Centracs* software license for one (1) File / Applications server, one (1) Communications Server and up to three (3) workstations. The Communications Server license covers up to 250 intersections operating from a single server computer (expandable beyond 250 intersections with additional software licenses and hardware). As such, Torrance shall be entitled to:

1. Use the licensed programs but only in machine-readable form on licensed computers.
2. Use the support material supplied but only as required to support the use of the Licensed programs
3. Make only as many back up copies of the Licensed programs in machine readable form as required to support the use of the Licensed programs on each computer. All back up copies must include the copyright notice in the original form as it appears on the licensed programs.

Torrance may not copy, modify, adapt, merge, disassemble, decompile or distribute the software, its documentation or create derivative works based upon the software. None of the support material in human readable form included with the licensed programs may be copied in any way. Torrance may print any screen the software will allow, however, no copyright notices may be removed from the printing.

The licensed programs and support material included with this Agreement are confidential information that is the property of Econolite. The licensed programs, program concepts or any of the support materials shall not be made available to any other party or organization without the written consent of Econolite.

Title to all intellectual property rights including patent, trademark, copyright and trade secret rights and title to all ownership rights and all copies of and all media bearing the Licensed programs, support materials and program concept shall remain in Econolite.

XIII. CONFIDENTIAL INFORMATION

Confidential Information - In the performance of this Agreement or in contemplation thereof, the parties and their respective employees and agents may have access to private or confidential information owned or controlled by the other party and such information may contain proprietary details and disclosures. All information and data identified in writing as proprietary or confidential by either party ("Confidential Information") and so acquired by the other party or its employees or agents under this Agreement or in contemplation thereof shall be and shall remain the disclosing party's exclusive property. The recipient shall use all reasonable efforts (which in any event shall not be less than the efforts the recipient takes to ensure the confidentiality of its own proprietary and other confidential information) to keep, and have its employees and agents keep, any and all "Confidential Information" confidential, and shall not copy, publish or disclose it to others, nor authorize its employees, agents or anyone else to copy or disclose it to others without the disclosing party's written approval; nor shall the recipient make use of the "Confidential Information" except for the purposes of executing its obligations hereunder, and (except as provided for herein) shall return the Confidential Information and data to the first party at its request. Torrance's duty to maintain confidentiality as described hereunder shall be subject to the laws of the State of California.

Excluded Information - The foregoing conditions will not apply to information or data which is, or which becomes generally known to the public by publication or by any means other than a breach of duty on the part of the recipient hereunder, is information previously known to the recipient, is information independently developed by or for the recipient or is information generally released by the owning party without restriction.

Right to Injunctive Relief - Because of the unique nature of the Confidential Information, the parties agree that each party may suffer irreparable harm in the event that the other party fails to comply with any of its obligations under this Article, and that monetary damages may be inadequate to compensate either party for such breach. Accordingly, the parties agree that either party will, in addition to any other remedies available to it at law or in equity, be entitled to seek injunctive relief to enforce the terms of this Article.

XIV. SOFTWARE UPDATES & NEW FEATURES

Software updates for the basic *Centracs* system are included in the annual system upgrade or through scheduled software releases during the warranty period or active system support agreement period. New software development for additional features beyond the basic *Centracs* software for other agencies, or as part of Econolite's ongoing research and development shall be offered to Torrance at a fixed, quoted price, not to exceed pricing for an agency of comparable size, architecture and integration. The offer shall remain firm for 90 days from the date of the offer.

XV. COMPLIANCE WITH ALL LAWS

Econolite shall, at its sole expense, comply with all of the requirements of City Torrance's, County, State and Federal laws now in force pertaining to this Agreement, and shall faithfully observe in all activities relating to or growing out of this Agreement all ordinances, statutes, rules or regulations now in force.

XVI. INDEPENDENT CONTRACTOR

This Agreement calls for the performance of services of Econolite as an independent contractor. Econolite is not an agent or employee of Torrance for any purpose and is not entitled to any of the benefits provided by Torrance to its employees. This Agreement shall not be construed as forming a partnership or any other association with Econolite other than that of an independent contractor.

XVII. INSURANCE AND BONDS

Econolite shall maintain for the duration of this contract the following types of insurance:

- a) Automobile liability insurance (minimum \$2.5 Million)
- b) Commercial general liability insurance (minimum \$2.5 Million)
- c) Worker's compensation insurance (per state requirement)

The insurance required hereunder shall be primary and maintained until all work required and all material to be supplied under the terms of this Agreement is satisfactorily completed as evidenced in writing by an authorized representative of Torrance. Econolite shall add the City of Torrance as an additional insured.

XVIII. EXECUTION

This Agreement is effective upon execution. It is the product of negotiation and all parties are equally responsible for the authorship of this Agreement.

XIX. NOTICES

The notices relative to this Agreement shall be given in writing and shall be personally served, sent by registered mail or faxed with telephone confirmation by addressee that it was received. The parties shall be addressed as follows, or at any other address designated by notice:

Econolite: Econolite Control Products, Inc.
 3360 E. La Palma
 Anaheim, CA 92806

Attention: Roy Howard
 Project Manager
 Phone: 719-471-9866
 Fax: 719-471-9063
 E-mail: rhoward@econolite.com

And

Torrance: City Clerk
 City Of Torrance
 3031 Torrance Boulevard
 Torrance, CA 90509-2970
 Fax (310)618-2931

CC: Sepideh Sedadi
 Traffic Engineering Associate
 E-mail: SSedadi@tornet.com

XX. FORUM

Any lawsuit pertaining to any matter arising under, or growing out of this Agreement shall be instituted in the State of California.

XXI. ASSIGNMENT

This Agreement shall not be assigned by any party, or any party substituted, without prior written consent of Torrance and Econolite.

XXII. MERGER AND MODIFICATION

No supplement, modification or amendment of this Agreement or waiver of the provisions thereof shall be binding unless executed in writing by Torrance and Econolite. No waiver of any of the provisions of this Agreement shall be deemed, or shall constitute, a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver.

XXIII. ATTORNEYS' FEES

In the event any action in law or equity, arbitration or other proceeding is brought for the enforcement of this Agreement or in connection with any of the provisions of this Agreement, the prevailing party shall be entitled to its attorneys' fees and other costs reasonably incurred in such action or proceeding.

XXIV. COUNTERPARTS

This Agreement may be executed in counterparts, each of which shall be deemed an original and all of which shall constitute one and the same instrument.

XXV. OTHER MATTERS

Severability - In the event any of the provisions of this Agreement shall, for any reason, be held void or unenforceable, the remaining provisions shall remain in full effect and shall control.

Invalidity - Any provisions of this Agreement prohibited by the law of any state shall, as to said state, be ineffective to the extent of such prohibition without invalidating the remaining provisions of this Agreement.

Force Majeure - Should any obligation of either party hereunder (except with respect to timely payment of invoices) be delayed by events beyond such party's control, including but not limited to, natural or man-made

disasters, strikes, government actions or regulations, failure of a third party to comply or conform or inability to obtain labor or materials through it's regular sources, that party's time for performance shall be extended by the period of delay upon approval by Torrance.

Absence of Third Party Beneficiary Rights - Except as otherwise provided in this Agreement, no provision of this Agreement is intended, nor shall be interpreted, to provide or create any third party beneficiary rights or any other rights of any kind in any affiliate or subsidiary, and all provisions hereof shall be personal solely between the parties hereto.

Headings - Article and Section headings are included solely for convenience, are not to be considered a part of this Agreement nor are they intended to be full and accurate descriptions of the contents thereof.

Survival - The following provisions shall survive the expiration, cancellation or early termination of this Agreement: Articles 3, 5, 6, 7, 8, 9, and 10 and any other provision which by its nature shall survive the expiration, cancellation or early termination of this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this AGREEMENT to be executed by their respective officers, duly authorized, by ECONOLITE on _____, 2008, and by the CITY OF TORRANCE on _____, 2008.

ECONOLITE CONTROL PRODUCTS, INC.

ATTEST:

By _____
Jeff Spinazze - Senior Vice President, Sales

By _____
Notary

CITY OF TORRANCE:
A Municipal Corporation

ATTEST:

By _____
Frank Scotto, Mayor

By _____
Sue Herbers, City Clerk

APPROVED AS TO FORM:

JOHN L. FELLOW III
City Attorney

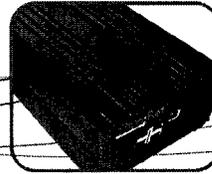
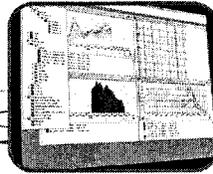
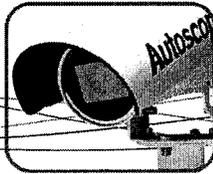
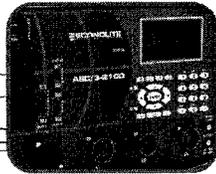
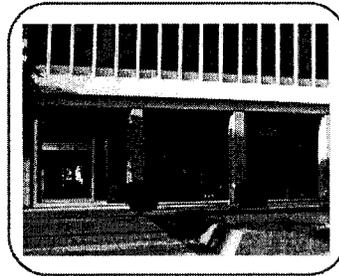
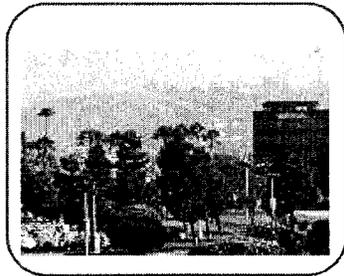
By _____
Heather K. Whitham, Deputy City Attorney

Attachments: Exhibit A: Econolite Proposal dated 13 November, 2008

City of Torrance, California

CENTRACS

**Advanced Traffic Management
System Proposal**



Prepared By:

ECONOLITE

3360 East La Palma Avenue
Anaheim, CA 92806

(714) 630-3700
www.econolite.com

13 November 2008



An ECONOLITE Group Company

13 November 2008

Ms. Sepideh Sedadi
Traffic Engineering Associate
City of Torrance
3031 Torrance Blvd
Torrance, CA 91509

Dear Ms. Sedadi,

Econolite Control Products, Inc is pleased to offer the City of Torrance a proposal for our *Centrac*[®] Advanced Traffic Management System, in support of the City's Central System Software upgrade project.

Econolite has led the traffic management industry for 75 years and will continue to for years to come; Econolite would like to make the City of Torrance part of that future! We look forward to the opportunity to work with the City on this exciting project.

Due to our extensive experience in software development, integration, implementation, and product training, we are confident we will be able to meet the timeline, needs, and requirements of the City to deploy this Advanced Traffic Management System.

Thank you for considering the *Centrac* system for this important project. Please feel free to contact us if you require additional information.

Sincerely,
ECONOLITE CONTROL PRODUCTS, INC.

Jeff Spinazze
Senior Vice President, Sales
JSpinazze@econolite.com



3360 E. La Palma Ave ♦ Anaheim, CA 92806-2856 ♦ PH: (714) 630-3700 ♦ FAX: (714) 630-7123 P.O. Box 6150 ♦ Anaheim, CA 92816-0150 ♦ www.econolite.com



Contents

Executive Summary.....	4
Introduction	4
Proposed Solution Overview	4
Milestones	5
Summary	5
Econolite.....	6
Overview	6
Our Story	6
Team Overview	6
Project Scope & Technical Proposal.....	7
General Scope	7
Communications Scope.....	8
System Communications Layout	9
Project Equipment Requirements.....	10
Servers, Computers, and Auxiliary Equipment.....	10
Hardware Equipment List	10
Field Equipment	15
Traffic Cabinet Equipment	20
Project Tasks	25
Pricing.....	27
Price Summary	27
Detailed Pricing	27
Optional Items (Add to base price)	28
Pricing Terms and Conditions.....	28
Appendix.....	29
Description of Advanced Traffic Management Software	29
Optional - SYNCHRO Interface	35
Optional - Closed Circuit Television (CCTV).....	36
Software Maintenance.....	37
Software Warranty.....	37
Software Licenses	38
References	38

Executive Summary

Introduction

Econolite Control Products, Inc. (Econolite) is a premiere provider of transportation management systems technology and offers the City of Torrance our *Centracs*[®] (*Centracs*) system and associated integration services for the City's new Advanced Traffic Management System (ATMS). Econolite draws from over 75 years of experience in the transportation management industry resulting in *Centracs*, an ATMS, perfectly suited to provide the City of Torrance with an improved traffic management environment. The tools provided by our *Centracs* software will allow for better coordination, improved monitoring, and more efficient intersection timing and management, resulting in shorter transit times for the driving public. In the effort to reduce emissions, save tax dollars, ensure safety, and improve the commuting experience, many cities across the nation are switching to Advanced Traffic Management Systems. As an industry leader with proven experience, Econolite wishes to be the City of Torrance's provider of choice for their traffic solution needs.

Econolite understands the needs of the City and will guide city personnel through each stage of the project, ensuring the successful integration and initialization of the Advanced Traffic Management System software. Econolite coordinates projects with the City's schedule and timeline in mind. As such, we appoint a project manager to each project, thus ensuring the City receives outstanding service throughout the project lifecycle. After integration is complete, our team of professionals will be available for the City's technical and support needs.

Proposed Solution Overview

Econolite is confident that our *Centracs* ATMS system meets or exceeds the requirements and expectations of the City. As such, Econolite proposes the following traffic management solution:

- Econolite shall provide the *Centracs* ATMS in accordance with the defined specifications set forth in this document to be installed on servers and workstations provided by Econolite.
- Econolite shall provide ASC/3 controllers to replace existing ASC/2 controllers and firmware/component upgrades for the City's existing ASC/2S controllers.
- Econolite will use existing communications and new communications installed by Systems Integrated, LLC (wireless field network design and integration contractor) as part of the County of Los Angeles Department of Public Works, Traffic and Lighting Division (the County) communications deployment contract.

MILESTONES

In order to provide the products and services required for the City of Torrance ATMS project, Econolite has identified milestones that will be met as part of the project scope of work. To facilitate the best possible integration experience for the City, Econolite provides a Project Manager who will oversee the project schedule and deliverables. Upon notice to proceed, the Econolite Project Manager will host a project kickoff meeting with city personnel. This kickoff meeting will ensure all deliverables are communicated, expectations are clear and schedules agreed upon. Based upon previous system integration efforts, Econolite expects this integration project to proceed according to the following milestones:

- **Notice to Proceed (NTP)** – Econolite will use the date of the official NTP letter from the City.
- **Kickoff Meeting** – During the kickoff meeting, the Project Manager and Account Manager will confirm deliverables, schedules and communications structure.
- **Procurement** – After all components are verified and approved during the kickoff meeting, components will be ordered.
- **Product Delivery** – Standard lead times plus shipping shall apply to the delivery schedule of all products. The City will be provided updates on estimated delivery times as product completion dates are forecasted.
- **Field Modifications (if required)** – Econolite will deploy technicians and/or subcontractors to perform all necessary cabinet and controller modifications or installations. Communications modifications and equipment are the sole responsibility of the City, County or their integrator/contractor.
- **Integration** – Econolite's systems integration team will arrive on-site to unpack, assemble, and integrate the central hardware and software.
- **System Acceptance Testing** – System acceptance testing will be performed by the Econolite integration team in conjunction with City personnel. Acceptance test procedures will be provided to the City for review at the project kickoff meeting.
- **Project Closure** – Upon successful completion/signature of the system acceptance test and after all deliverables have been met, Econolite will send final notice of project closure. At the option of Econolite and the City, the Econolite Project Manager will conduct a final review meeting.

SUMMARY

The power and sophistication of Econolite's *Centracs* system, along with the backing of a company with years of experience and technical expertise, offers true value to the City of Torrance. The investment by the City for labor, equipment, licenses, and support will be \$70,872.00. The investment for the County for this project will be \$388,576.00. The total project investment is \$459,448.00.

Econolite

Overview

Econolite Control Products, Inc. has been in business since 1933. Our headquarters and main office is located at 3360 East La Palma Avenue Anaheim, CA 92806, U.S.A. Econolite has several satellite offices across the country in addition to offices in Mexico and Canada. Econolite is a United States-based, privately held company that employs approximately 300 valued team members and supports over a thousand traffic management agencies globally.

Our Story

For 75 years, Econolite has been an innovator of transportation management solutions which include advanced traffic controllers (NEMA & ATC/2070), Aries[®], *icons*[®], and PYRAMIDS[®] traffic management systems, *Autoscope* video vehicle detection systems, arterial systems masters, vehicle and pedestrian signals, traffic control cabinets, traffic data collection and network security solutions, and a full line of transportation maintenance services. Econolite is committed to employing advanced technologies that reduce traveler time, ease congestion, enhance transit operations, provide safer mobility, and improve quality of life.

As a traffic control equipment supplier, Econolite has been involved in a wide variety of projects since 1933. These projects range from supplying equipment for intersections to providing custom engineering, equipment integration, installation, and testing of multi-intersection/agency systems. Econolite has over 5,000 arterial systems in operation controlling in excess of 100,000 intersections. Additionally, Econolite has over 60,000 wide area video vehicle detection systems being utilized in intersection and freeway applications. Econolite touts several innovations including the development of the first digital controller, introduction of the first microprocessor-based controller, the first widespread application of closed loop arterial control systems, installation of the first NEMA TS2 Type 1 cabinet assembly, introduction of the first wide area video vehicle detection system using multiple camera inputs, and support of the NTCIP protocol. In addition to its proprietary product development, Econolite also provides custom hardware and software development to create innovative solutions for specific customer requirements.

Econolite offers a unique blend of capabilities and experience combined with a dedicated and professional staff. Econolite is committed to the application of new technology for the safe and efficient movement of goods and people.

Team Overview

Econolite employs only the finest, experienced professionals to ensure exemplary service and products. Econolite is known within the traffic management industry as a leader in technology advancements and the pinnacle of customer service.

Econolite provides an Account Manager acting as a project management liaison, a cadre of field technicians with years of experience, and a Project Manager for overall project coordination and oversight. In addition to the project team members who will regularly interact with the City, Econolite has an entire support team of seasoned professionals to provide additional support as

needed. This team includes, Software Quality Assurance, Controller and Systems Product Management, Quality Assurance and Inspection, and System Software Engineers.

Project Scope & Technical Proposal

General Scope

This proposal and associated pricing includes software, equipment, and services required for the deployment of the *Centracs* Advanced Traffic Management System (ATMS) to the City of Torrance. Econolite will provide the *Centracs* software to be installed by Econolite, on Econolite-provided computers that meet the minimum specifications as defined in Table 1, "Computer/Server Hardware Equipment List". Econolite will also provide controller and cabinet upgrades, traffic operations center equipment and integration services as defined in this proposal.

According to documentation provided to Econolite, the City currently has 85 intersections operating under an *Aries*[®] Closed-Loop system and 5 intersections operating as stand-alone intersections, totaling 90 intersections for *Centracs* integration. The existing intersections are comprised of the following types of controllers:

1. ASC/2S-2100 – 77 each
2. ASC/2-2100 – 5 each
3. ASC/3 – 8 each

Econolite proposes to implement *Centracs* in two phases as determined by available funding; Phase One paid for by the County and Phase Two paid for by the City. Ninety (90) intersections will be integrated into the traffic management system. Econolite will upgrade the field hardware as specified, install the ATMS software, integrate 90 intersections into the proposed ATMS, and provide systems training and acceptance testing. This proposal also includes a one-year Software Maintenance Agreement (See Price Summary section for more details). Additional Software Maintenance Agreements can be purchased in one-year increments.

Communications Scope

According to the information provided to Econolite, the ATMS servers are to be located at the City Yard. The extent of Econolite communication integration will be to connect new ASC/3 controllers and existing ASC/2S controllers to the communications terminal points at each intersection and to connect the *Centracs* System to the existing LAN at the City Yard using Ethernet communications.

Communications channels shall be set up in the ATMS and Econolite recommends no more than eight (8) controllers exist on a single channel. With Ethernet communications, these channels can co-exist on a single switch port. Econolite will coordinate with the City IT department on IP addressing for all IP addressable equipment.

It is Econolite's understanding based upon discussion with the City and County that a third-party contractor will be used for communications installation and configuration. The City will be responsible for all communications interconnect. Econolite will work closely with the contractor, when required, to ensure communications meet the technical requirements of the central system. Econolite requires four weeks notice of communications completion prior to software installations to ensure all intersections are tested fully.

NOTES: *It is very important that the lines used to communicate between the field and the proposed traffic control system be dedicated to the ATMS and that the system communications not be shared with other users.*

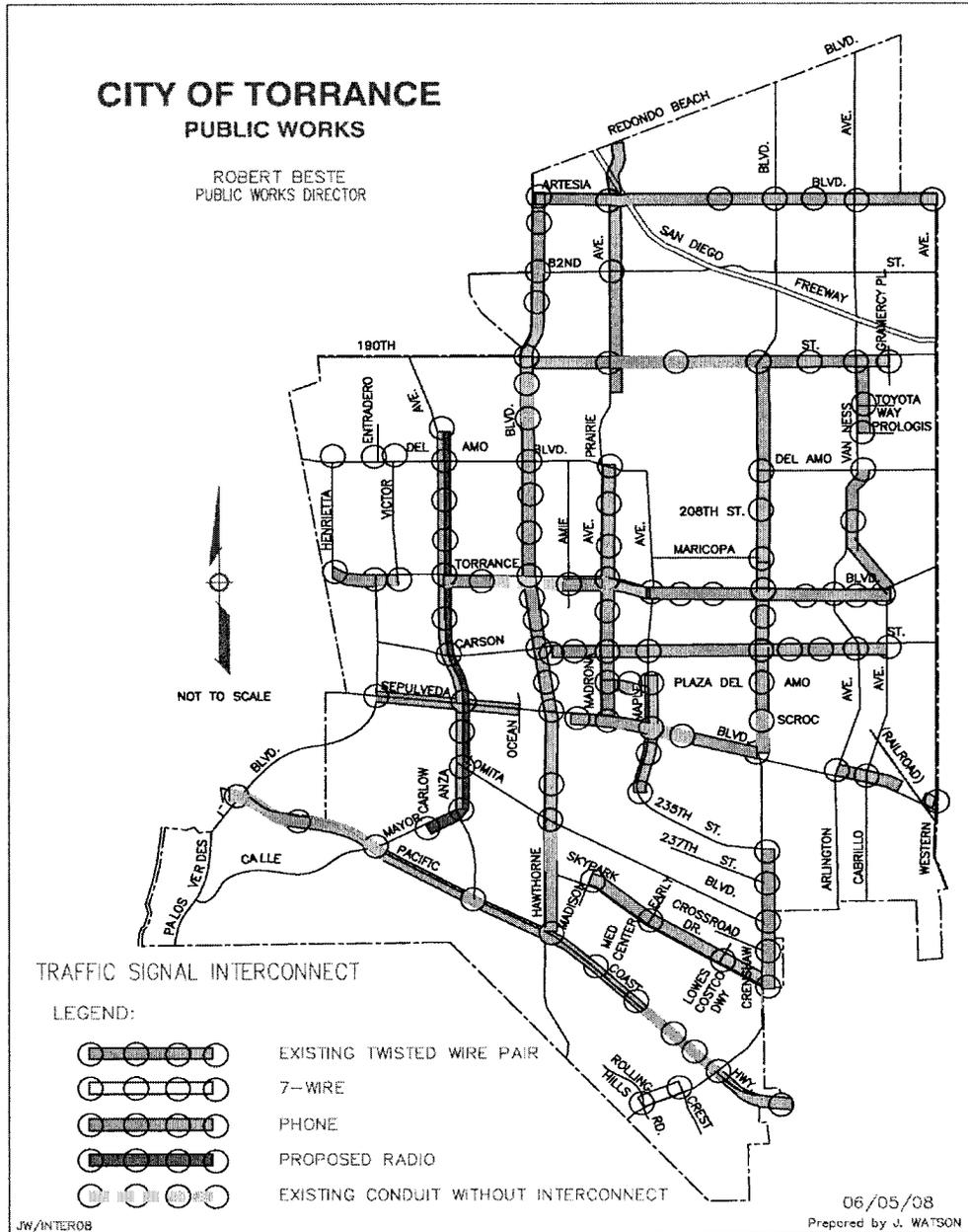
The City, and/or its contractors, shall be responsible for testing all the existing communications interconnect for proper connectivity and conductance. This scope is based on information provided to Econolite.

Any repair/replacement effectively delaying the project shall be added to the proposed project schedule. The City shall not withhold payment for work performed for material on hand due to unforeseen communications issues, which are not directly related to Econolite equipment, or work.

All interconnect channels must be tested to 100% compliance of less than 50ms round-trip latency from "central" to each field device and back again.

System Communications Layout

Figure 1. Intersection Communications Layout



Project Equipment Requirements

Servers, Computers, and Auxiliary Equipment

In order to meet the project requirements, one (1) communications server, one (1) file/applications server, three (3) workstation computers (laptops or desktops), and the central peripherals as required for equipment setup and installation (switches, printers, etc...) shall be provided by Econolite. Econolite will provide the equipment and software as detailed in Table 1 below. Should the City choose to provide the servers, workstations, and peripherals to Econolite, they must meet the minimum requirements below and shipping to the Colorado Springs facility shall be the responsibility of the City. Econolite recommends allowing our engineering team to approve hardware and software prior to these being procured by the City.

The system hardware will be configured, software installed and tested in our Colorado Springs, CO R&D facility. An Econolite systems engineer will assist Torrance's MIS/IT personnel in integrating the new *Centracs* system LAN with the City's LAN. All virtual private network connections and wide area network connections to the new *Centracs* network are the domain and responsibility of the City's MIS/IT personnel. Econolite engineering can provide network configuration diagnostics or design assistance if required to integrate the new *Centracs* network to the City's existing network, at a rate of \$250.00 per hour.

Hardware Equipment List

Table 1. Hardware Requirements

PE 2950 File/App Server (1)	
Base Unit:	Quad Core Intel Xeon L5410 2x6MB Cache, 2.33GHz, 1333MHz FSB, PE2950
Processor:	Quad Core Intel Xeon 2nd Processor L5410, 2x6MB Cache 2.33GHz, 1333MHz FSB, PE2950 (311-8656)
Memory:	4GB 667MHz (2x2GB), Dual Ranked DIMMs (311-7168)
Keyboard:	Optical Two-Button Mouse USB, Black (310-8172)
Keyboard:	Keyboard, USB, Black (310-8360)
Video Card:	LOM NICs are TOE Ready (430-2968)
Video Memory:	Riser with 3 PCIe Slots for PowerEdge 2950 (320-4607)
Hard Drive:	146GB 15K RPM Serial-Attach SCSI 3Gbps 3.5-in HotPlug HardDrive (341-3031)
Hard Drive Controller:	PERC6i SAS RAID Controller, 2x4 Connectors, Int, PCIe, 256MB cache, x6 Bkpl (341-5734)
Floppy Disk Drive:	No Floppy Drive for x6 Backplane (341-3685)
Operating System:	Windows Server 2003 R2 Standard Edition with SP2 Includes 5 CALs (420-7118)

City of Torrance / Los Angeles County
CENTRACS ATMS Proposal

NIC:	ONBOARD BROADCOM 5708 1GBE NETWORKING (430-1764)
Modem:	Dell Remote Access Card, 5th Generation for PowerEdge Remote Management (313-3923)
CD-ROM or DVD-ROM Drive:	24X IDE CD-RW/DVD ROM Drive for PowerEdge 2950 (313-3934)
Sound Card:	Bezel for PE 2950 (313-3920)
Speakers:	1x6 Backplane for 3.5-inch Hard Drives (311-7936)
Documentation Diskette:	Electronic Documentation and OpenManage DVD Kit (310-7415)
Additional Storage Products:	146GB 15K RPM Serial-Attach SCSI 3Gbps 3.5-in HotPlug HardDrive (341-3031)
Feature	Integrated SAS/SATA RAID 5, PERC 6/i Integrated (341-5723)
Feature	Universal Sliding Rapid/Versa Rails, includes Cable Management Arm (310-7412)
Service:	Dell Hardware Warranty Plus Onsite Service Inital YR (984-1399)
Service:	Basic Enterprise Support: Business Hrs 5X10 Next Business Day Onsite Service Post Problem Diagnosis Init YR (970-4070)
Service:	Dell Hardware Warranty, Extended Year(s) (984-1417)
Service:	Basic Enterprise Support: Business Hrs 5X10 Next Business Day Onsite Service Post Problem Diagnosis 2YR Ext (960-8162)
Service:	BASIC Enterprise Support: Business Hrs 5x10 Hardware Only Tech Phone Support, 3Yr, Declined Software Support (960-8192)
Service:	DECLINED CRITICAL BUSINESS SERVER OR STORAGE SOFTWARE SUPPORT PACKAGE-CALL YOUR DELL SALES REP IF UPGRADE NEEDED (990-0569)
Installation:	On-Site Installation Declined (900-9997)
Misc:	Energy Smart Redundant Power Supply with Y-Cord (310-9908)
Misc:	146GB 15K RPM Serial-Attach SCSI 3Gbps 3.5-in HotPlug HardDrive (341-3031)
Misc:	Power Cord, NEMA 5-15P to C14, 15 amp, wall plug, 10 feet / 3 meter (310-8509)
Misc:	146GB 15K RPM Serial-Attach SCSI 3Gbps 3.5-in HotPlug HardDrive (341-3031)
Misc:	146GB 15K RPM Serial-Attach SCSI 3Gbps 3.5-in HotPlug HardDrive (341-3031)
	5-pack of Windows Server 2003 User CALs (Standard or Enterprise) (420-5609)
	Microsoft SQL Server 2005 Standard (5 CAL),OEM, NFI (420-5698)
	Microsoft SQL Server 2005 Standard,5 Additional User Licenses,OEM,NF (420-5704)

City of Torrance / Los Angeles County
CENTRACS ATMS Proposal

PE 1950 Communications Server (1)	
Base Unit:	Quad Core Xeon E5410 Processor 2x6MB Cache, 2.33GHz, 1333MHz FSB, PE1950 (223-4546)
Processor:	Quad Core Xeon E5410 2nd Processor, 2x6MB Cache 2.33GHz, 1333MHz FSB, PE1950 (311-7953)
Memory:	4GB 667MHz (4X1GB), Dual Ranked Fully Buffered DIMMs (311-6154)
Keyboard:	Optical Two-Button Mouse USB, Black (310-8172)
Keyboard:	Keyboard, USB, Black (310-8360)
Video Card:	LOM NICs are TOE Ready (430-2968)
Video Memory:	Riser with 2 PCIe Slots for PowerEdge 1950 (320-4648)
Hard Drive:	146GB 15K RPM Serial-Attach SCSI 3Gbps 3.5-in HotPlug HardDrive (341-3031)
Hard Drive Controller:	PERC6i SAS RAID Controller 2x4 Connectors, Int, PCIe 256MB Cache (341-5781)
Operating System:	Windows Server 2003 R2 Standard Edition with SP2 Includes 5 CALs (420-7118)
NIC:	Dual Embedded Broadcom NetXtreme II 5708 Gigabit Ethernet NIC (430-1762)
Modem:	Dell Remote Access Card, 5th Generation for PowerEdge Remote Management (313-3936)
CD-ROM or DVD-ROM Drive:	24X IDE CD-RW/DVD ROM Drive for PowerEdge Servers, All OS (313-3918)
Sound Card:	Bezel for PE 1950 (313-3937)
Speakers:	1x2 Backplane for 3.5-inc Hard Drives (311-7958)
Documentation Diskette:	Electronic Documentation and OpenManage DVD Kit (310-7962)
Additional Storage Products:	146GB 15K RPM Serial-Attach SCSI 3Gbps 3.5-in HotPlug HardDrive (341-3031)
Feature	Integrated SAS/SATA RAID 1 PERC 6/i Integrated/SAS6/iR (341-5776)
Feature	Sliding Rapid/Versa Rails and Cable Management Arm, Universal (341-3090)
Service:	Dell Hardware Warranty Plus Onsite Service Initial YR (984-1519)
Service:	Basic Enterprise Support: Business Hrs 5X10 Next Business Day Onsite Service Post Problem Diagnosis Init YR (970-3410)
Service:	Dell Hardware Warranty, Extended Year(s) (984-1528)
Service:	Basic Enterprise Support: Business Hrs 5X10 Next Business Day Onsite Service

City of Torrance / Los Angeles County
CENTRACS ATMS Proposal

	Post Problem Diagnosis 2YR Ext (960-7292)
Service:	BASIC Enterprise Support: Business Hrs 5x10 Hardware Only Tech Phone Support, 3Yr, Declined Software Support (960-7322)
Misc:	Energy Smart Redundant Power Supply with Y-Cord (310-9933)
Misc:	Power Cord, NEMA 5-15P to C14, 15 amp, wall plug, 10 feet / 3 meter (310-8509)
T5400 Workstation (3)	
Base Unit:	Dell Precision T5400 Mini Tower, Quad Core Xeon Proc E5405, 2.00GHz, 2X6MB L2 Cache 1333MHz (223-4710)
Memory:	2GB, DDR2 ECC SDRAM Memory 667MHz, 2X1GB, Dell Precision T5400 (311-7684)
Keyboard:	Entry Level, USB, No Hot Keys keyboards, Dell Precision Workstations (310-7949)
Monitor:	Dell UltraSharp 1908FP Flat Panel with Height Adjustable Stand, 19.0 Inch VIS, OptiPlex Precision and Latitude (320-5292)
Video Card:	Dual nVidia, Quadro FX 570 256MB dual DVI, Graphics Card Dell Precision T3400 (320-5872)
Hard Drive:	160GB SATA 3.0Gb/s, 7200RPM Hard Drive with 8MB DataBurst Cache, Dell Precision T7400/5400 (341-5352)
Hard Drive Controller:	C1 All SATA Hard Drives Non- RAID for 1 Hard Drive Dell Precision T5400 (341-5335)
Floppy Disk Drive:	3.5inch, 1.44MB, Floppy Drive Dell Precision 490/690 Factory Install (341-3690)
Operating System:	WINDOWS XP PRO SP2 with Windows Vista Business License Dell Precision, English, Factory Install (420-6978)
Mouse:	New Dell USB 2 Button Optical Mouse with Scroll, Black Precision (310-9602)
NIC:	Broadcom NetXtreme 10/100/1000 Gigabit Ethernet controller PCI Express, Dell Precision 490/690 (430-1680)
TBU:	Desktop Chassis Configuration Dell Precision T3400 (313-5873)
CD-ROM or DVD-ROM Drive:	16XDVD AND 16XDVD+/-RW, Data Only, Dell Precision T5400 (313-5940)
CD-ROM or DVD-ROM Drive:	Roxio Creator Dell Edition, 9.0 Dell Precision (420-7980)
CD-ROM or DVD-ROM Drive:	Cyberlink Power DVD 8.0, with Media, Dell Precision (420-8857)
Sound Card:	Sound Blaster X-Fi XtremeMusic(D), w/Dolby Digital 5.1 WINXP, Dell Precision T7400/5400 (313-5882)

City of Torrance / Los Angeles County
CENTRACS ATMS Proposal

Speakers:	Dell AS501 black Sound Bar for UltraSharp Flat Panel Displays for Optiplex, Precision, Latitude (313-4028)
Documentation Diskette:	Resource DVD contains Diagnostics and Drivers for Dell Precision T5400 (313-5659)
Bundled Software:	WINDOWS XP STICKER, OPTI/PWS/LAT/INSP/DIM (466-2909)
Service:	Basic Support: Next Business Day Parts and Labor Onsite Response 2 Year Extended (984-1262)
Service:	Dell Hardware Warranty Plus Onsite Service Extended Year(s) (988-8368)
Service:	Basic Support: Next Business Day Parts and Labor Onsite Response Initial Year (984-7900)
Service:	Dell Hardware Warranty Plus Onsite Service Initial Year (988-8357)
Installation:	Standard On-Site Installation Declined (900-9987)
	Vista Premium Downgrade Relationship Desktop (310-9161)
Quantity	Central System Peripherals & Misc.
1	Cisco 16 port 10/100 LAN Managed Switch
1	Telephone Surge Prot. 4-port
1	5 Foot LAN cable
3	Microsoft Office Software package
5	McAfee Anti-Virus software
3	ISO Power Bar
5	5 year ProSupport for IT and NBD onsite Dell Warranty
1	HP LaserJet 4250n - B/M
1	USB External hard drive with backup software
1	KVM Switch
1	15FP, 1U Rack Console with Rapid Rails, 15" TFT LCD, 83 key mini-keyboard

Field Equipment

The system will require all ASC/2S controllers be upgraded to the ASC/2 NTCIP Level 1B Ethernet capable software and installation of an Ethernet telemetry module. All other NEMA controllers will be replaced with ASC/3 NTCIP Level 2 Ethernet capable controllers.

The upgrade of ASC/2S controller firmware to the latest NTCIP Level 1B version and installation of an Ethernet telemetry modules, installation of the new ASC/3 controllers shall be the responsibility of Econolite.

Table 2. Existing Equipment and Upgrade Requirements

Zone Name	Int#	I Street	Cross Street	Existing Controller	Required Upgrade
Crenshaw (North)	1.01	Crenshaw	208th	ASC/2S	Ethernet
	1.02	Crenshaw	Maricopa	ASC/2S	Ethernet
	1.03	Crenshaw	El Dorado	ASC/2S	Ethernet
	1.04	Crenshaw	Carson	ASC/2S	Ethernet
	1.05	Crenshaw	Plaza Del Amo	ASC/2S	Ethernet
	1.06	Crenshaw	SCROC	ASC/2S	Ethernet
	1.07	Crenshaw	Sepulveda	ASC/2S	Ethernet
	1.08	Carson	Plaza Del Amo	ASC/2S	Ethernet
	1.09	Carson	El Prado	ASC/2	ASC/3
	1.10	Carson	Alrington	ASC/2	ASC/3
	1.11	Carson	Cabrillo	ASC/2S	Ethernet
	1.12	Carson	Abalone	ASC/2S	Ethernet
Madrona	2.01	Madrona/Prairie	Del Amo	ASC/2S	Ethernet
	2.02	Madrona	Spencer	ASC/2S	Ethernet
	2.03	Madrona	Emerald	ASC/2S	Ethernet
	2.04	Torrance	Amie	ASC/2S	Ethernet
	2.05	Torrance	Madrona	ASC/2S	Ethernet
	2.06	Torrance	Maple	ASC/2S	Ethernet
	2.07	Madrona	Fashion Way	ASC/2S	Ethernet
	2.08	Carson	Del Amo Circle Blvd	ASC/2S	Ethernet

City of Torrance / Los Angeles County
CENTRACS ATMS Proposal

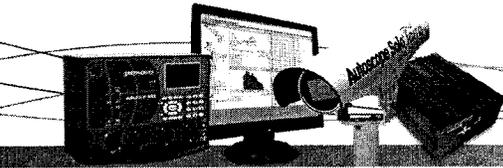
Zone Name	Int#	I Street	Cross Street	Existing Controller	Required Upgrade
	2.09	Carson	Del Amo Circle Blvd East	ASC/2S	Ethernet
	2.10	Carson	Madrona	ASC/2S	Ethernet
	2.11	Carson	Maple	ASC/2S	Ethernet
	2.12	Madrona	Plaza Del Amo	ASC/2S	Ethernet
	2.13	Plaza Del Amo	Madrona Marsh Nature Center	ASC/3	None
Torrance (East)	3.01	Torrance	Hickory	ASC/2S	Ethernet
	3.02	--(unassigned)--			
	3.03	Torrance	Crenshaw	ASC/2	ASC/3
	3.04	Torrance	Cota	ASC/3	None
	3.05	Torrance	Arlington	ASC/3	None
	3.06	Torrance	Sartori	ASC/2S	Ethernet
	3.07	Torrance	Van Ness	ASC/3	None
	3.08	Van Ness	Dominguez	ASC/2S	Ethernet
	3.09	Van Ness	Del Amo	ASC/3	None
	3.10	--(unassigned)--			
	3.11	--(unassigned)--			
	3.12	Torrance	Fern	ASC/2S	Ethernet
Anza	4.01	Anza	Calle Mayor	ASC/2S	Ethernet
	4.02	Anza	Lomita	ASC/2	ASC/3
	4.03	Anza	226th	ASC/2S	Ethernet
	4.04	Anza	Sepulveda	ASC/2S	Ethernet
	4.05	Anza	Carson	ASC/2S	Ethernet
	4.06	Anza	Lenore	ASC/2S	Ethernet
	4.07	Anza	Torrance	ASC/2S	Ethernet
	4.08	Anza	Emerald	ASC/2S	Ethernet
	4.09	Anza	Spencer	ASC/2S	Ethernet

City of Torrance / Los Angeles County
CENTRACS ATMS Proposal

Zone Name	Int#	I Street	Cross Street	Existing Controller	Required Upgrade
	4.10	Anza	Del Amo	ASC/2S	Ethernet
	4.11	Anza	Halison	ASC/2S	Ethernet
	4.12	Torrance	Earl	ASC/2S	Ethernet
	4.13	Sepulveda	Palos Verdes	ASC/2S	Ethernet
	4.14	Torrance	Village	ASC/2S	Ethernet
	4.15	Sepulveda	Ocean	ASC/2S	Ethernet
Artesia	5.01	Artesia	Prairie	ASC/2S	Ethernet
	5.02	Artesia	I-405 (Caltrans)	170-type	Not Included
	5.03	Artesia	Yukon	ASC/2S	Ethernet
	5.04	Artesia	Crenshaw	ASC/2S	Ethernet
	5.05	Artesia	Casimir	ASC/2S	Ethernet
	5.06	Artesia	Van Ness	ASC/2S	Ethernet
	5.07	Artesia	Western	ASC/2S	Ethernet
Unassigned - 6					
Crenshaw (South)	7.01	Crenshaw	235th	ASC/2S	Ethernet
	7.02	Crenshaw	237th	ASC/2S	Ethernet
	7.03	Crenshaw	Lomita	ASC/2S	Ethernet
	7.05	Crenshaw	Crossroads	ASC/2S	Ethernet
	7.05	Crenshaw	Amsler/Skypark	ASC/2S	Ethernet
	7.06	Skypark	Lowe's/Costco Dwy	ASC/3	None
	7.07	Skypark	Medical Center	ASC/2S	Ethernet
	7.08	Skypark	Madison	ASC/2S	Ethernet
190th	8.01	190th	Prairie	ASC/2S	Ethernet
	8.02	190th	Mobil entrance	ASC/2S	Ethernet

City of Torrance / Los Angeles County
CENTRACS ATMS Proposal

Zone Name	Int#	I Street	Cross Street	Existing Controller	Required Upgrade
	8.03	190th	Crenshaw	ASC/2S	Ethernet
	8.04	190th	Honeywell	ASC/2	ASC/3
	8.05	190th	Van Ness	ASC/2S	Ethernet
	8.06	190th	Gramercy	ASC/2S	Ethernet
	8.07	Van Ness	195th	ASC/2S	Ethernet
	8.08	Prairie	182nd	ASC/2S	Ethernet
	8.09	Crenshaw	Del Amo	ASC/2S	Ethernet
	8.10	Van Ness	Prologis	ASC/2S	Ethernet
Unassigned - 9					
Sepulveda	10.01	Sepulveda	Hickory	ASC/2S	Ethernet
	10.02	Sepulveda	Maple	ASC/2S	Ethernet
	10.03	Sepulveda	Madrona	ASC/3	None
	10.04	Sepulveda	Del Amo Circle East / Madison	ASC/2S	Ethernet
	10.05	Maple	226th	ASC/2S	Ethernet
	10.06	Maple	Nadine Circle South	ASC/2S	Ethernet
	10.07	Maple	Plaza Del Amo	ASC/2S	Ethernet
Sepulveda (East)	11.01	Sepulveda	Arlington	ASC/2S	Ethernet
	11.02	Sepulveda	Cabrillo	ASC/2S	Ethernet
Torrance (West)	12.01	Torrance	Palos Verdes	ASC/3	None
	12.02	Torrance	Henrietta	ASC/2S	Ethernet
	12.03	Torrance	Victor	ASC/2S	Ethernet
	A	Crenshaw Blvd	166th Street	ASC/2S	Ethernet



City of Torrance / Los Angeles County
CENTRACS ATMS Proposal

Zone Name	Int#	I Street	Cross Street	Existing Controller	Required Upgrade
	B	Crenshaw Blvd	182nd Street	ASC/2S	Ethernet
	C	Crenshaw Blvd	Airport Drive	ASC/2S	Ethernet
	D	Lomita Blvd	Medical Center / Early Avenue	ASC/2S	Ethernet
	E	Lomita Blvd	Garnier Street	ASC/2S	Ethernet

Note: *According to the City's documentation the following controller upgrades are required:*

- 77 ASC/2S firmware and Ethernet upgrades
- 5 Controller replacements to ASC/3

Intersection 5.02 will be excluded from the system

Traffic Cabinet Equipment

The required cabinet equipment is defined in the chart below:

Table 3. Field Equipment List and Intersection Configurations

City of Torrance, CA Signalized Intersections			Video Location
Field Controller List and Intersection Equipment Configuration			
Int #	Intersection Main/Cross	Controller Type	
	CENTRAL Communications Requirements		
1.01	Crenshaw @ 208th	ASC/2S	
1.02	Crenshaw @ Maricopa	ASC/2S	
1.03	Crenshaw @ El Dorado	ASC/2S	
1.04	Crenshaw @ Carson	ASC/2S	YES
1.05	Crenshaw @ Plaza Del Amo	ASC/2S	
1.06	Crenshaw @ SCROC	ASC/2S	
1.07	Crenshaw @ Sepulveda	ASC/2S	YES
1.08	Carson @ Plaza Del Amo	ASC/2S	
1.09	Carson @ El Prado	ASC/2	
1.10	Carson @ Alrington	ASC/2	
1.11	Carson @ cabrillo	ASC/2S	
1.12	Carson @ Abalone	ASC/2S	
2.01	Madrona/Prairie @ Del Amo	ASC/2S	
2.02	Madrona @ Spencer	ASC/2S	
2.03	Madrona @ Emerald	ASC/2S	
2.04	Torrance @ Amie	ASC/2S	
2.05	Torrance @ Madrona	ASC/2S	YES
2.06	Torrance @ Maple	ASC/2S	
2.07	Madrona @ Fashion Way	ASC/2S	

City of Torrance / Los Angeles County
CENTRACS ATMS Proposal

City of Torrance, CA Signalized Intersections			Video Location
Field Controller List and Intersection Equipment Configuration			
Int #	Intersection Main/Cross	Controller Type	
2.08	Carson @ Del Amo Circle Blvd	ASC/2S	
2.09	Carson @ Del Amo Circle Blvd East	ASC/2S	
2.10	Carson @ Madrona	ASC/2S	YES
2.11	Carson @ Maple	ASC/2S	
2.12	Madrona @ Plaza Del Amo	ASC/2S	
2.13	Plaza Del Amo @ Madrona Marsh Nature Center	ASC/3	
3.01	Torrance @ Hickory	ASC/2S	
3.02	--(unassigned)--		
3.03	Torrance @ Crenshaw	ASC/2	YES
3.04	Torrance @ Cota	ASC/3	
3.05	Torrance @ Arlington	ASC/3	
3.06	Torrance @ Sartori	ASC/2S	
3.07	Torrance @ Van Ness	ASC/3	
3.08	Van Ness @ Dominguez	ASC/2S	
3.09	Van Ness @ Del Amo	ASC/3	
3.10	--(unassigned)--		
3.11	--(unassigned)--		
3.12	Torrance @ Fern	ASC/2S	
4.01	Anza @ Calle Mayor	ASC/2S	
4.02	Anza @ Lomita	ASC/2	
4.03	Anza @ 226th	ASC/2S	

City of Torrance / Los Angeles County
CENTRACS ATMS Proposal

City of Torrance, CA Signalized Intersections			Video Location
Field Controller List and Intersection Equipment Configuration			
Int #	Intersection Main/Cross	Controller Type	
4.04	Anza @ Sepulveda	ASC/2S	
4.05	Anza @ Carson	ASC/2S	
4.06	Anza @ Lenore	ASC/2S	
4.07	Anza @ Torrance	ASC/2S	
4.08	Anza @ Emerald	ASC/2S	
4.09	Anza @ Spencer	ASC/2S	
4.10	Anza @ Del Amo	ASC/2S	
4.11	Anza @ Halison	ASC/2S	
4.12	Torrance @ Earl	ASC/2S	
4.13	Sepulveda @ Palos Verdes	ASC/2S	
4.14	Torrance @ Village	ASC/2S	
4.15	Sepulveda @ Ocean	ASC/2S	
5.01	Artesia @ Prairie	ASC/2S	
5.02	Artesia @ I-405 (Caltrans)	170-type	
5.03	Artesia @ Yukon	ASC/2S	
5.04	Artesia @ Crenshaw	ASC/2S	YES
5.05	Artesia @ Casimir	ASC/2S	
5.06	Artesia @ Van Ness	ASC/2S	
5.07	Artesia @ Western	ASC/2S	
	6 - Not assigned		
7.01	Crenshaw @ 235th	ASC/2S	

City of Torrance / Los Angeles County
CENTRACS ATMS Proposal

City of Torrance, CA Signalized Intersections			Video Location
Field Controller List and Intersection Equipment Configuration			
Int #	Intersection Main/Cross	Controller Type	
7.02	Crenshaw @ 237th	ASC/2S	
7.03	Crenshaw @ Lomita	ASC/2S	
7.04	Crenshaw @ Crossroads	ASC/2S	
7.05	Crenshaw @ Amsler/Skypark	ASC/2S	
7.06	Skypark @ Lowe's/Costco Dwy	ASC/3	
7.07	Skypark @ Medical Center	ASC/2S	
7.08	Skypark @ Madison	ASC/2S	
8.01	190th @ Prairie	ASC/2S	
8.02	190th @ Mobil Entrance	ASC/2S	
8.03	190th @ Crenshaw	ASC/2S	YES
8.04	190th @ Honeywell	ASC/2	
8.05	190th @ Van Ness	ASC/2S	
8.06	190th @ Gramercy	ASC/2S	
8.07	Van Ness @ 195th	ASC/2S	
8.08	Prairie @ 182nd	ASC/2S	
8.09	Crenshaw @ Del Amo	ASC/2S	
8.10	Van Ness @ Prologis	ASC/2S	
	9 - Not assigned		
10.01	Sepulveda @ Hickory	ASC/2S	
10.02	Sepulveda @ Maple	ASC/2S	
10.03	Sepulveda @ Madrona	ASC/3	
10.04	Sepulveda @ Del Amo Circle East	ASC/2S	

City of Torrance / Los Angeles County
CENTRACS ATMS Proposal

City of Torrance, CA Signalized Intersections			Video Location
Field Controller List and Intersection Equipment Configuration			
Int #	Intersection Main/Cross	Controller Type	
	/ Madison		
10.05	Maple @ 226th	ASC/2S	
10.06	Maple @ Nadine Circle South	ASC/2S	
10.07	Maple @ Plaza Del Amo	ASC/2S	
11.01	Sepulveda @ Arlington	ASC/2S	
11.02	Sepulveda @ Cabrillo	ASC/2S	
12.01	Torrance @ Palos Verdes	ASC/3	
12.02	Torrance @ Henrietta	ASC/2S	
12.03	Torrance @ Victor	ASC/2S	
A	Crenshaw Blvd @ 166th Street	ASC/2	
B	Crenshaw Blvd @ 182nd Street	ASC/2S	
C	Crenshaw Blvd @ Airport Drive	ASC/2S	
D	Lomita Blvd @ Medical Center / Early Avenue	ASC/2S	
E	Lomita Blvd @ Garnier Street	ASC/2S	

Project Tasks

Task 1 – Project Management

Weekly Progress Reports – Updates shall be provided by the Project Manager or project liaison via predetermined communication methods as project milestones are met or project status changes.

Task 2 – Purchase Hardware and COTS (Commercially Available of the Shelf) Software

Hardware and COTS Software Specifications – Prior to hardware being procured for the project, the City shall review cut sheets and/or specifications to ensure hardware is acceptable for the City. All hardware, purchased by Econolite, will be of like performance or quality as prescribed in this proposal or better. If the City chooses to procure its own hardware, Econolite recommends that our engineering team verify compatibility of the equipment. The City will also be responsible for shipping any hardware, purchased from sources other than Econolite, to Econolite's Colorado Springs facility.

Delivery of Hardware – Once, the software is loaded and tested, all hardware will be inspected prior to shipping to the customer site, and will be inspected again upon arrival at the customer site. Inventory of all hardware will be documented to ensure all required hardware is accounted for.

Task 3 – Field & Hardware Upgrades

Field Communications Installation - The installation of field communications devices and verification of communications from the field to central shall be performed by the City, County or designated contractor/integrator. This work shall be performed prior to central system installation and integration. The City should notify Econolite as soon as possible with respect to the communications testing schedule; Econolite requires 4-weeks advance notice for scheduling its technicians.

Controller Cabinet Upgrades – Controller upgrades to Ethernet and NTCIP, and Econolite shall perform any other necessary cabinet modifications.

Task 4 – Central System Integration

Software Integration - Factory system operational testing is performed at the Econolite Colorado Springs, CO facility. An Econolite team of engineers will assemble the system hardware, install the software, test the system components (using standard system test documents), prepare the system graphics for one (1) base map and ninety (90) standard intersection displays, and document the final system (all hardware configurations). The base map will be developed from an appropriate graphics file supplied by the City of Torrance in a file format compatible with the *Centracs* graphic editor (GIS files). After completion of the Econolite standard system performance tests, the system will be disassembled, packed, and shipped to the job site. A

member of the Econolite system engineering team will arrive on-site (Traffic Management Center) to unpack, reassemble, and test the system.

On-site system integration includes configuring and testing communications to the identified intersection controllers. Performance of the system and the interconnect infrastructure will be conducted by performing communication testing to said intersections; remaining intersections (if any) can be integrated after system testing is completed. This proposal includes labor and expenses for one week of installation and intersection integration. All communications channels should be tested and cabinet installations should be completed prior to the arrival of the Econolite System Integration Team. Additional time or trips necessary to integrate the intersections will be billed separately at \$250.00 per hour, plus travel expenses.

Task 5 – Training

Training will be scheduled after the System Integration Team has the system functionally operational. Econolite's proposal for this project includes one session (consisting of 32 hours) on the *Centracs* system. This training will include instruction on system hardware, system operation, and system administration. Training will be conducted at the City traffic operations center for no more than ten (10) people. The training will be conducted on four consecutive days. Additional training may be requested by the City under a separate work order.

Task 6 – Documentation

Local Area Network Diagrams with MAC addresses and IP addresses – A spreadsheet of all intersections with MAC and IP addressed will be provided upon integration of the system.

Task 7 – Acceptance Testing Procedures

Performance testing of the system and the communications infrastructure is conducted by performing uploads, downloads, and status verification to the existing intersection controllers running NTCIP protocol compatible with *Centracs*. Final System Acceptance Testing will consist of an operational demonstration to the customer of all major software components using a standard system acceptance test developed by Econolite, which will be provided to the City at the project kickoff meeting.

PRICING**PRICE SUMMARY**

Proposal pricing includes connecting 90 intersections either by Ethernet over copper or wireless Ethernet to the *Centracs* system. The main proposal also includes the following:

- *Centracs* Advanced Traffic Management System software and licensing
- *Centracs* Servers, Workstations and listed peripherals
- 1-year service agreement (begins after the first year warranty period is complete. Multiple years may be purchased at an additional cost)
- Field upgrade components and new controllers (as defined in hardware)

DETAILED PRICING

The following pricing is valid for 90 days from revision date of this proposal (front cover):

Table 4. Detailed Pricing

Item	Quantity	Unit Price	Extended Price	Comments
System Installation, Integration, Training	L.S.	\$154,250.00	\$154,250.00	
Field Hardware & Installation (Modifications/Upgrades)	L.S.	\$143,143.00	\$143,143.00	
Controller Replacements (5 - ASC/3)	L.S.	\$13,940.00	\$13,940.00	See Itemized Breakout below
Central System Components	L.S.	\$45,900.00	\$45,900.00	See table 1 \$15,000 City / \$30,900 County
Synchro Module	L.S.	\$21,000.00	\$21,000.00	
Annual Software Maintenance Agreement	4 years	\$14,700.00	\$58,800.00	(County)
City Project Investment			\$70,872.00 *	
County Project Investment			\$388,576.00 *	
Total Base System Price			\$459,448.00*	

*Price includes Taxes.



City of Torrance / Los Angeles County
CENTRACS ATMS Proposal

City & County Pricing Breakout

Table 5. City vs. County Price Breakout

Item	Total Price	County Pays	City Pays
Controllers (5 - ASC/3)	\$13,940.00	(4) \$11,152.00	(1) \$2,788.00
Field Hardware and Labor (Firmware & Ethernet upgrades cabinet modifications, cabling etc...)	\$143,143.00	(61) \$113,399.00	(16) 29,744.00
Total	\$ 157,083.00	\$124,551.00	\$32,532.00

Optional Items (Add to base price)

Table 6. Optional Components / Module Pricing

Optional Items	Quantity	Unit Price	Extended Price	Comments
CCTV Module Field equipment not included.	10 cameras	\$45,700.00	\$45,700 .00	

Seven (7) intersections are identified as proposed CCTV locations to be installed with necessary communications equipment for the optional CCTV module. They are as follows:

- | | |
|------------------------|--------------------------|
| 4. Artesia @ Crenshaw | 8. Carson @ Crenshaw |
| 5. 190th @ Crenshaw | 9. Carson @ Madrona |
| 6. Torrance @ Crenshaw | 10. Crenshaw @ Sepulveda |
| 7. Torrance @ Madrona | |

Pricing Terms and Conditions

Payment terms are as follows:

11. Hardware components are 100% payable, Net 30 days upon shipment
12. System integration and central software:
13. 85% due upon completion of system installation / integration
14. 10% due upon completion of training
15. 5% due upon completion of acceptance test
16. Shipments for computer equipment are FOB Colorado Springs, CO.
17. Shipments for all other equipment are FOB Anaheim, CA.
18. Shipping included.

Appendix

Description of Advanced Traffic Management Software

Centracs[®] Product Overview



Econolite's Advanced Transportation Management System (ATMS) provides a centralized integrated platform for traffic signal system control, information management, and graphical data display. The ATMS uses client/server architecture and distributed processing to achieve a flexible and scalable design. Processing in the system is distributed across multiple processors such that system functions are accomplished most effectively considering cost, communications implications, security/redundancy, and network interface capabilities. National and international standard protocols are used to the fullest extent practical, so that the system can adapt to changes in technology and increased functionality over time with minimal impact on individual system components. Intelligent change-driven interface protocols are used for distribution of real-time data among workstations, facilitating increased system performance, and multi-user responsiveness.

Furthermore, the system is extremely modular and scalable at all levels because of its distributed processing architecture. High system performance can be maintained when the system is expanded, because system software processes can be distributed across additional system processor components. The system software architecture does not require that a single central processor perform all real-time functions, as do many older mini-computer-based systems. This protects the agency's systems hardware/software investment and allows the system to be readily and incrementally expanded to handle any functions and features that may not be anticipated at this time.

As further described in the subsections that follow, Graphical User Interface (GUI) techniques and graphical information system components are an integral part of the system design. These elements form the basis of all user interactions with the system and its components and are integrated using standard software tools and protocols.

To ensure our ATMS will provide a long and useful service life for our customers, it has been developed using the latest software development tools and technologies. Taking advantage of a flexible Database model, the ATMS has been designed to allow for ease of support and configurability. From client (system user) workstations, users are able to perform transportation management, database management, and real-time traffic control and communications functions. The central server hardware supports communications with local controllers. Half or Full duplex communications media includes twisted pair and leased line cables, wireless, and single or multi-mode fiber optic cable.

The system supports traffic signal controllers that comply with the NTCIP 1202, Conformance Level 2 (NTCIP) protocol standards. Our total commitment to the NTCIP standard, and our continued involvement with the standards development process, puts Econolite in a unique

position to deliver a fully functional end-to-end communication system that can be maintained to the most current version of the standard.

All connected traffic signal controllers are polled by a communication server computer connected to the ATMS local area network. ATMS servers currently support once-per-second polling (depending on communication media utilized) of individual local intersection controllers interconnected by, multi-dropped on leased or Agency-owned twisted-pair wire, wireless, or fiber optic cable circuits. The typical system interface to a local intersection or channel of intersections is as follows: a Communications Server computer is connected to a controller via the provided interconnect (serial or Ethernet). The ATMS currently supports Econolite's *ASC/2S* controllers, *ASC/3*, and NEMA TS1/TS2 controllers, or *ATC 2070 (L or LN)* controllers running the Econolite *ASC/3-2070* firmware.

The ATMS architecture provides for modular cost effective expansion. The architecture consists of four main components: workstations, communications, traffic control, and database servers.

Graphical User Interface

The Graphic User Interface (GUI) provides a flexible and innovative workspace for the wide variety of ATMS users. Traffic system graphics display and control features are integrated into a single user workstation interface. Graphical symbols are employed to activate common system functions, such as traffic signal control mode changes, status reports, and data entry dialogs, from simple point-and-click operations on a map-based graphics display. Unlike the GUIs of many traditional transportation management systems that separate operator control and text reporting functions from graphics display functions, the GUI integrates these operations, allowing operators to freely move between contexts in an intuitive point-and-click manner.

All system actions are immediately visible in real-time on graphical and/or text-based status displays. Most GUI displays serve multiple purposes. For example, a map window may be displayed showing current system status plus traffic signal phase green status. The same graphics map can also play a role as a system device selection palate, enabling the operator to make a selection by pointing to a particular object (i.e. controller, CCTV camera, or other optional Intelligent Transportation System [ITS] components). When such a system object is selected, an object window or control panel and/or status window can be popped up for display as a separate window. If the proper access control privileges are granted, the operator may also exercise control of the device through graphical control panels.

A key element of the user experience is the GIS map interface and user configurability options. The user can specify where and how graphic icons are to appear and change based on status information. The map zooms and scrolls to show more or less detail for specific areas. The user can also click on any device icon(s) to bring up separate, more detailed displays or reports associated with that field device. Examples of detailed on-screen displays for one or more devices include: area, regional, or section maps (area, regional, or section maps require additional integration), dynamic site maps (e.g., intersection displays), live video feed (with optional CCTV module), event logs, historical status data, user-set parameters, etc. Extensive use is made of graphics and color to assist in interpretation of information presented to the user.

Default intersection graphics provide a standardized display that can be used to represent any intersection configuration. The display provides graphic representations for 16 phases (red, yellow, and green indications), 16 pedestrian movements (Hand and Man symbols), 16 overlaps (red, yellow, and green indications), and up to 32 detectors and Status symbols such as Communication Failure, Preemption, Coordinator Alarm, Manual Override, Detector Fault, and Cabinet Flash.

Most intersection graphics can be based on one of the many template graphics provided with the ATMS system. As with the default graphic, symbols are placed to represent each of the desired movements, detectors, and status indicators.

Custom graphics can also be provided with the system. These graphics are typically based on either an aerial photograph of the intersection or an actual CAD-type drawing. The resulting graphic display accurately indicates the intersection geometry, lane configuration, and other important elements. As with the template-based graphics, symbols are placed to represent each of the desired movements, detectors, and status indicators specifically for the desired intersection.

In addition to control and surveillance GUI screens and dialogs, formatted data entry screens allow for storing and editing parameter data for various system elements. For example, traffic controller data screens allow easy editing of local controller parameters and provide a mechanism for facilitating the uploading and downloading of these parameters to/from local controllers in the field. During system operation, user alerts are issued through the GUI in the form of pop-up message boxes.

The various GUI window sessions display a toolbar near the top border that contains buttons and other controls for creating document windows, setting session parameters, or invoking another action or activity that affects the entire session. Actions supported by and pertaining to a single window are evoked through that window's action bar or controlled internally within the window itself.

Control Modes

The main server computer(s) provides for system-wide signal database control, communications, coordination, and continuously monitoring system performance from the central location. The system is designed for unattended operations 24 hours per day, seven days a week, without requiring an operator to be logged on to the system. The central facility has the capacity for continuously monitoring and exercising plan selection control for all controllers. The central system monitors the operation of local controllers and automatically reports detected failures and malfunctions. With requisite licensing and interface equipment, any number of personal computer (PC) workstations may be attached to the Advanced Transportation Management system network, each having the capability to perform various functions including:

- Traffic control and management functions
- Historical data analysis
- Traffic engineering operations analysis

The system continuously transmits and receives status data from each intersection at least once-per-second via full duplex communications media. In addition, data parameter upload, download, and time/date communications requests are supported on a periodic request-driven basis.

The system distributes actual low-level traffic signal control responsibilities to the local intersection controller. Maintenance of coordination is handled locally and only requires that timing plan parameters be available at the controller and that controller firmware keeps an accurate time base. Local time base clocks are synchronized with the central system periodically via regularly scheduled time/date update communications functions.

When operating under centrally-selected Traffic Responsive (TR), Time-of-Day (TOD), or Manual modes, the communications system transfers to the local controller a plan number which specifies the selected plan of operation requested for that controller. Under TOD Local (Plan 0) mode, plan selection is handled locally by each controller's resident TOD/DOW schedule. Monitoring of local controller operations for malfunctions is performed continuously by the central system for all controllers communicating with the central system (regardless of current plan selection mode).

A minimum of 48 locally-stored coordination-timing plans (per the TS2 Standard), can be supported at each local controller (depending on controller capabilities). The Econolite *ASC/2* Series controllers provide 64 coordination plans (*ASC/3* provides 120 plans). Each plan consists of a cycle length, offset, and a split set. Timing plans also implement phase omits, phase calls, special function outputs, and phasing sequences as established by a local controller's plan based on parameter settings. Free, Flash, and local TBC control plans can also be commanded by a plan input.

System control modes are established and maintained by the system based on operator command, time-of-day schedule, and equipment status monitoring. Modes can be implemented at four levels: System, Zone, Section, and Controller.

Within the ATMS, control mode priorities are as follows (from highest to lowest priority):

- Manual Override (MAN)
- Time-of-Day/Day-of-Week (TOD/DOW)
- Traffic Responsive (TR)
- Local Default Control Mode (LOC)

A Failed mode is also supported by the system. Failed mode overrides any of the four basic operational modes described above.

Programmed Free and Flash operations are selected by invoking special plan numbers corresponding to these operations. Manual Override (MAN) plan selection can be implemented on a System, Zone, Section, or Controller basis. Controller Manual Override selection(s) takes precedence over Section-based selections which in turn take precedence over Zone or System-wide selections. It is possible for the operator to set independent termination time frame(s) for MAN mode selections at any level.

Local controllers will always fall back to a designated local TOD (LOC) mode when not being commanded into one of the other system control modes by the central. The controller will also fall back to this mode should the desired mode be TR and insufficient detector data is available to run in TR mode and no other central mode is available. The LOC mode will cause the controller to be in the Free state or to operate in a locally determined TOD/DOW plan depending on the local controller parameter settings.

Section Control

Controllers are assigned to groups called sections for plan implementation of Traffic Responsive, Time-of-Day, and Manual control. In addition, central flash can be commanded on a section-wide basis. Intersections may be configured in up to 256 control sections, each running Traffic Responsive, Time-of-Day, or manually selected timing plans. All sections operating on a common cycle length are automatically synchronized by virtue of the fact that they are referenced to the same master cycle timer.

Intersection Control

Normal operation will be for controllers to follow the central TOD, TR, Manual, or their local TOD/DOW schedules and implement plans stored locally at the controller.

System Time Reference Synchronization

The communications server functions periodically synchronize (user settable value) the local time clocks in each of the controllers they support. The server computer clocks are synchronized with each other using a standard protocol, Network Time Protocol, (NTP). The workstation clocks can also be synchronized using this protocol. A GPS receiver is typically included as part of the system hardware to allow all system clocks to be referenced to a traceable time source.

The cycle-reference time used by traffic controllers is a function of the traffic controller software. Per the TS2 standard, the beginning of main street green is defined as the local zero point.

Communications

The typical system interface is directly connected from the communications server computer's RS-232 serial port, to a modem via the provided interconnect, to the local controller. The ATMS can also be configured to communicate via Ethernet (TCP/IP) communications to each controller. The system can support fiber optics (multi or single mode), twisted pair, leased lines, and wireless communication modems. These media typically support a communications data rate of 9,600 to 19,200 bps or Ethernet. This allows each communications channel to support from 8-16 intersections (depending on interconnect type, modem performance, etc.). Direct full-time interconnect is required to connect the communications server computer to the local intersections in the field. The system software and license supports up to 50 intersections or other optional ITS devices. Additional communication server computer(s) and Software Licenses may be added to increase the capacity of the system by 250 devices each time a communication server computer is added. Communication channel capacity will vary based on the interconnect type deployed.

Communications Server

The communications server handles all system communications. The communications server supports NTCIP protocol to Econolite's *ASC/2* (legacy controller), *ASC/3* NEMA, or 2070 controllers. The communication process uses a polled-response type of communications to the intersection controllers. The communications server software handles all of the low-level communications functions necessary to interface with the various field controllers for traffic signal control, status monitoring, and data upload/download. Low-level functions include device polling, message input/output buffering, message sequencing and prioritization of tasks, error checking/correction, data filtering, and short-term data storage. This distributed processing architecture in the system relieves the traffic application/file server from performing these processing-intensive tasks and prevents these functions from becoming a bottleneck on the local area network.

The communications server serial ports (or Ethernet) interface directly with modems, which connect directly with all local intersections and ITS devices without the need for external interface devices (other than the appropriate field modem based on that channel at the server computer). All serial ports are typically configured for RS-232 asynchronous communications and support real-time full duplex, point-to-point, or multipoint configurations. Each RS-232 channel is separately configurable.

Local and Wide Area Network

The system uses client/server architecture and distributed processing to achieve a flexible and scalable system. Processing in the system is distributed across multiple processors such that system functions are accomplished most effectively considering cost, communications implications, security/redundancy, and network interface capabilities.

The system supports the concurrent use of multiple workstations over local, dial-up, and wide-area network connections. The number of workstations that can be connected is only limited by the capacity of the network and the system servers, which can be scaled up if necessary. Database integrity is ensured through the use of record locking, jurisdictional access, and user group permissions so that multiple operators cannot make simultaneous changes to the same intersection's database or access "other agency" databases. A password-based security system is used to log in, ensuring that unauthorized workstations that may be on the same network will not have access to the transportation system.

Econolite recommends that the ATMS operate on its own local area network. This eliminates possible problems with timely delivery of packets to the workstations. This is especially important during the display of real-time information on the map display.

Optional - SYNCHRO Interface

The ATMS system supports an optional interface to the SYNCHRO signal timing optimization software. This interface provides the ability to transfer Econolite *ASC/2S* or *ASC/3* controller phase and coordination data to/from SYNCHRO.

The SYNCHRO interface provides the ability to save controller phasing and timing data in the Universal Traffic Data Format (UTDF). Once saved in this format, the data can be imported and opened in the SYNCHRO application for off-line analysis and optimization.

The SYNCHRO interface also provides the ability to import SYNCHRO timing plan data saved in the UTDF format into the native *ASC/2S* or *ASC/3* controller format for use within the system. After transfer to the *ASC/2S* or *ASC/3* controller database, the new timings can be downloaded to the local controller by the ATMS operator.

The SYNCHRO interface is not part of the basic system and requires additional licensing. Pricing for this module has been included.

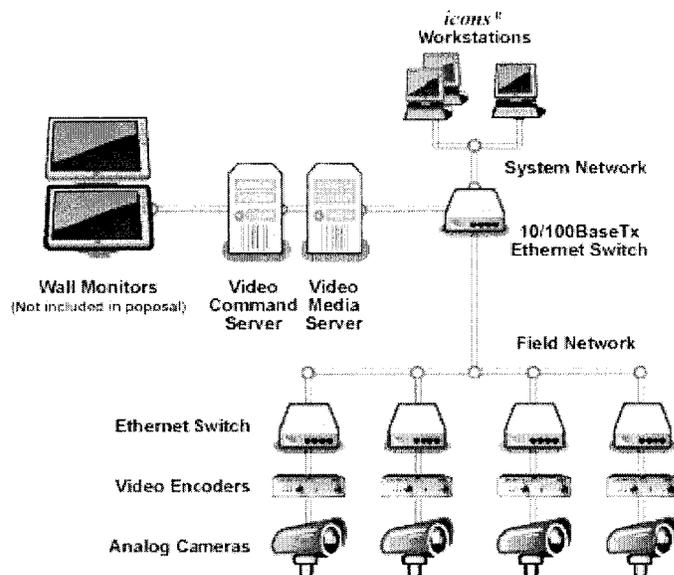
Note: *The SYNCHRO Module support in the ATMS is current to SYNCHRO 6. SYNCHRO 7 support is limited to the ability of the ATMS to import UTDF files, download the applicable data to the the ATMS database, the intersections, and to export the data back out to UTDF files. Optimal SYNCHRO compatibility will be achieved through importing and exporting files using the SYNCHRO 6, UTDF-formatted files.*

The SYNCHRO Module does not include the actual SYNCHRO program. This must be purchased separately by the county from Trafficware Inc.

Optional - Closed Circuit Television (CCTV)

The optional CCTV-IP module consists of video servers (Interactive Media Server and Command Server) and video server software packages that provide integrated system-wide distributed video and camera management over local and wide-area IP networks, and is licensed for up to 10 cameras (other license quantities are available). The Media Server's purpose is to retrieve the video from the field and make the video available to workstation desktops. The Command Server is responsible for retrieving the video from the Media Server and "pushing" the video display to the wall monitors.

Example - CCTV Configuration



Multiple video images can be multiplexed on a single monitor, using a single client license. Additional cameras may be added by increasing the camera licenses. Likewise, extra monitors can be added to the video wall by increasing the Command Server client licenses.

This CCTV module takes advantage of the latest developments in streaming video technology and is based on an advanced Interactive Media Server. Video is encoded at the source using low-cost digital encoders or

IP cameras from vendors such as Axis, VCS, and Pelco. Most of these encoders offer the ability to set the image size, quality, and frame rate. The Interactive Media Server then manages and distributes the encoded video, allowing transmission of the video to multiple viewing clients simultaneously. Access to the CCTV-IP module is controlled by privileges associated with operator IDs. All cameras connected to the system are represented by objects on the system map. Using the CCTV-IP module, system operators at any workstation on the system's network can click on a camera object on the system base map and view video from that camera and control the camera position (pan, tilt, and zoom). Fixed camera images, such as those from video detectors, can also be viewed.

Note: *At this time the CCTV-IP module supports Pelco cameras together with video encoders from Axis, VCS, and Pelco (PelcoNet).*

Software Maintenance

Econolite prides itself on providing premiere customer service. As such, we do not have a maximum time frame for support work. We will be able to access your system to provide troubleshooting and upgrades, with the provision that we are permitted a VPN connection by the City's IT department. Econolite shall meet all other requirements for the maintenance task as follows:

Software Warranty

Econolite Control Products, Inc. (Econolite) warrants the software components licensed to the original purchasing agency (Purchaser) for a period of one (1) year from date of customer acceptance, if Econolite installs the software or supplies technical direction or installation by contract. The warranty period shall run from the completion of installation, provided same is not unreasonably delayed by the Purchaser. Econolite is responsible for warranting the software in accordance to published software specifications. Econolite is not responsible for non-conformance caused by negligence, acts of God, or use of software in a manner not originally intended.

If the software delivered hereunder does not meet the above warranty, and if the Purchaser promptly notifies Econolite, Econolite shall thereupon correct any defect, including non-conformance with published software specifications, either (at our option) by correcting defective software or modifying the software to meet specifications. The liability of Econolite under this warranty for any loss or damage, whether the claim is based on contract or negligence, shall not in any case exceed the cost of correcting defects in the equipment as herein provided and, upon the expiration of the warranty period, all such liability shall terminate. The foregoing shall constitute the exclusive remedy of the Purchaser and the exclusive liability of Econolite.

THE EXPRESS WARRANTY SET FORTH IS A LIMITED WARRANTY AND IS THE ONLY WARRANTY MADE BY ECONOLITE. ECONOLITE MAKES AND PURCHASER RECEIVES NO OTHER EXPRESS WARRANTY AND NO IMPLIED WARRANTIES. ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED. THE STATED EXPRESS WARRANTY IS IN LIEU OF ALL LIABILITIES OR OBLIGATIONS OF ECONOLITE FOR DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE SALE, DELIVERY, OPERATION, OR USE OF THE GOODS.

The warranties set forth herein shall be void if the software has been (1) altered outside of Econolite's facilities, (2) subjected to misuse, negligence, or operated in other than normal and proper use and service, or (3) installed or adjusted in a manner not in accordance with Econolite's instructions. This warranty does not extend to software not developed by Econolite. Econolite has the sole right to determine whether or not an item is covered under our warranty policy.

Software Licenses

This item includes software license fees for one (1) *Centracs* package and three (3) workstations. Each communications server license covers up to 50 intersections operating from a single communications server computer.

References

Current *Centracs* ATMS Locations

By purchasing an *Centracs* system, the City will become part of the satisfied Econolite customer family. Econolite is dedicated to building lasting relationships with our customers and that attitude has created a solid customer base across the globe, as seen below in our ever-growing customer list.

Table 7. Operational Centracs Systems (Worldwide)

Akron	OH	U.S.	Ontario	CA	U.S.
Auburn	WA	U.S.	Redwood City	CA	U.S.
Bellingham	WA	U.S.	Rio Rancho	NM	U.S.
Burlington County	NJ	U.S.	San Leandro	CA	U.S.
Danville	VA	U.S.	Southgate	CA	U.S.
Denver	CO	U.S.	Springfield	IL	U.S.
Englewood	CO	U.S.	St. Cloud	MN	U.S.
Englewood	OH	U.S.	Westminster	CO	U.S.
Espanola	NM	U.S.	Barbados	W.I.	INTL
Gahanna	OH	U.S.	Riyadh	K.S.A.	INTL
Gilbert	AZ	U.S.	Regina	SK	Canada
Greenville	NC	U.S.	Richmond	BC	Canada
Indianapolis	IN	U.S.	Victoria	BC	Canada
King County	WA	U.S.	Burnaby	BC	Canada
Lake County	IL	U.S.	Ft. McMurray	AB	Canada
Littleton	CO	U.S.	Kelowna	BC	Canada
Mesa	AZ	U.S.	Oakville	ON	Canada

A G R E E M E N T

THIS AGREEMENT made and entered into by and between the CITY OF TORRANCE, a municipal corporation in the County of Los Angeles, hereinafter referred to as CITY, and the COUNTY OF LOS ANGELES, a political subdivision of the State of California, hereinafter referred to as COUNTY.

W I T N E S S E T H

WHEREAS, CITY desires to procure Traffic Signal Control System Software and Hardware according to the payment schedule as described in Attachment A of this AGREEMENT, which work is hereinafter referred to as SYSTEM; and

WHEREAS, use of SYSTEM requires that a communication link be established between a remote location and the CITY'S traffic signals listed in Attachment B (herein after referred to as CITY TRAFFIC SIGNALS); and

WHEREAS, on September 18, 2007, COUNTY executed an amendment with Systems Analysis & Integration, Inc. for the expansion of a communication system (herein after referred to as "COMMUNICATIONS"); and

WHEREAS, COUNTY'S agreement for COMMUNICATIONS includes a provision for placement at specified CITY TRAFFIC SIGNALS as denoted in Attachment B; and

WHEREAS, COUNTY will provide COMMUNICATIONS at 72 intersections at no cost to CITY, which work is hereinafter referred to as COUNTY COMMUNICATIONS; and

WHEREAS, CITY desires to pay for the installation of communications at 18 intersections, which work is hereinafter referred to as CITY COMMUNICATIONS; and

WHEREAS, SYSTEM AND COMMUNICATIONS are hereinafter collectively referred to as PROJECT; and

WHEREAS, the total cost of PROJECT is currently estimated to be Nine Hundred Two Thousand Six Hundred and 00/100 Dollars (\$902,600);

WHEREAS, the cost of PROJECT will be shared between CITY and COUNTY as shown in Attachments A and B.

WHEREAS, COUNTY has obtained Metropolitan Transportation Authority grant funds of Four Hundred Five Thousand Four Hundred and 00/100 Dollars (\$405,400) for the cost of SYSTEM and Two Hundred Ninety Thousand Nine Hundred and 00/100 Dollars (\$290,900) for the cost of COUNTY COMMUNICATIONS; and

WHEREAS, CITY will fund the cost of SYSTEM at 17 intersections in the amount of Seventy Four Thousand Three Hundred and 00/100 Dollars (\$74,300) and CITY COMMUNICATIONS at 18 intersections in the amount of One Hundred Thirty Two Thousand One Hundred and 00/100 Dollars (\$132,100); and

WHEREAS, PROJECT is consistent with the scope of work for traffic improvements within CITY pursuant to Memorandum of Understanding No. 494-246-4-115-95/P002356A between COUNTY and the MTA; and

WHEREAS, PROJECT is located and will be utilized entirely within the jurisdictional limits of CITY; and

WHEREAS, PROJECT is of general interest to CITY and COUNTY; and

WHEREAS, CITY will administer the procurement of the SYSTEM; and

WHEREAS, COUNTY will administer the design, procurement and installation of COMMUNICATIONS for SYSTEM; and

WHEREAS, the cost of SYSTEM, includes the costs of traffic signal controller upgrades, procurement administration of the Traffic Signal Control System Software and Hardware, and system installation, integration and acceptance testing, and all other work and materials necessary to complete SYSTEM in accordance with the approved conceptual plan, as more fully set forth herein; and

WHEREAS, the cost of COMMUNICATIONS includes the unit cost for the design, procurement and installation of equipment as determined by the County's executed agreement, with Systems Analysis & Integration, Inc. for COMMUNICATIONS; and

WHEREAS, the term JURISDICTION, as referred to in this AGREEMENT, shall be defined as the area within the jurisdictional boundary of each governmental entity which is a party to this AGREEMENT; and

WHEREAS, such a proposal is authorized and provided for by the provisions of Section 6500 et seq. of the Government Code and Section 1680-1684 of the California Streets and Highways Code.

NOW, THEREFORE, in consideration of the mutual benefits to be derived by CITY and COUNTY and of the promises herein contained, it is hereby agreed as follows:

(1) CITY AGREES:

- a. To finance CITY'S share of the cost of PROJECT, estimated to be Two Hundred Six Thousand Four Hundred and 00/100 Dollars (\$206,400) as specified in Attachments A and B.
- b. To administer the procurement contract for SYSTEM.
- c. If needed, to advertise SYSTEM for bids, to inform COUNTY of the content of the bids received, to award the contract after approval by COUNTY, and to administer the procurement contract.
- d. To administer the procurement and deployment of SYSTEM in accordance with all regulations and requirements of MTA relating to the expenditure of Proposition C Local Return funds and Proposition C twenty-five percent (25%) Discretionary funds. CITY'S records for SYSTEM shall be open to inspection and subject to audit and reproduction by the COUNTY and MTA, or any of their duly representatives. CITY financial records shall be retained for a period of not less than five (5) years after final payment to contractor(s) for SYSTEM. CITY shall maintain all other records pursuant to this agreement permanently. Said records shall include, but not be limited to, engineering plans, as-built drawings, contractor agreements, and insurance records, in accordance with paragraph (1) f. below.
- e. To furnish COUNTY with information on all contract change orders for SYSTEM and obtain COUNTY'S prior approval of all such contract change orders, subject to paragraph (2) c., below.
- f. To ensure that COUNTY and all officers and employees of COUNTY are named as additional insured parties under Contractor's General Liability and automobile insurance policies for any vendor(s) utilized by CITY for procurement of SYSTEM.
- g. To furnish COUNTY, within one hundred twenty (120) calendar days after final acceptance of SYSTEM and not later than sixty (60) calendar days prior to the funding lapsing date of the MTA grant funds, a final accounting of the actual total SYSTEM costs, including an itemization of actual unit costs and actual contract quantities; and all labor, equipment, material, consultant services, indirect, and miscellaneous costs; and other administrative and overhead costs required for CITY'S performance as specified in paragraph (1) b., above.
- h. To submit an invoice to COUNTY in a not-to-exceed amount of Two Hundred Seventy Three Thousand Three Hundred and 00/100 Dollars (\$273,300) which includes the cost for SYSTEM minus the cost of CITY

COMMUNICATIONS within 30 days of the adoption of this agreement by COUNTY, subject to paragraph (3) l., below.

- i. To obtain and grant to COUNTY any necessary temporary right of way within CITY for installation of COMMUNICATIONS at no cost to COUNTY.
- j. To issue COUNTY a no-fee permit (s) authorizing COUNTY to install COMMUNICATIONS within CITY highway right of way.
- k. Upon completion of PROJECT: 1) to accept full, complete, and sole ownership of, and responsibility for, operations and maintenance of, the PROJECT; and 2) to be solely responsible to maintain in good condition and at CITY expense all improvements constructed as part of PROJECT.
- l. To prepare the necessary environmental documents and make the required environmental findings for SYSTEM.

(2) COUNTY AGREES:

- a. To secure and obtain MTA grant funds to be used to finance the cost of SYSTEM and COUNTY COMMUNICATIONS.
- b. To deposit with CITY, following execution of this AGREEMENT and upon submittal of an invoice by CITY pursuant to paragraph (1) h. above, Two Hundred Seventy Three thousand Three Hundred and 00/100 Dollars (\$273,300), which represents COUNTY'S share of SYSTEM minus CITY'S share of COMMUNICATIONS, by utilizing MTA grant funds and COUNTY matching funds subject to paragraph (2) c., below. The actual cost of PROJECT is to be determined by a final accounting of PROJECT cost.
- c. To review bids, the proposed award amount for PROJECT, and any change orders for PROJECT and provide written approval, or other response, within twenty (20) calendar days of presentation by CITY. COUNTY'S approval may not be withheld unreasonably. If COUNTY'S response is not received within said twenty (20) calendar days, CITY may proceed with PROJECT or change orders.
- d. To authorize CITY to represent COUNTY in all negotiations pertaining to the advertisement of SYSTEM for bids, award, and administration of the contract, and in all things necessary and proper to complete SYSTEM.
- e. To administer the installation of COMMUNICATIONS in accordance with all regulations and requirements of MTA relating to the expenditure of Proposition C Local Return funds and Proposition C Twenty-five Percent

(25%) Discretionary funds and Memorandum of Understanding No. 494-246-4-115-95/P002356A between COUNTY and the MTA.

- f. To ensure that CITY and all officers and employees of CITY are named as additional insured parties under the construction Contractor's General Liability and automobile insurance policies for any vendor(s) utilized by County and City in connection with PROJECT.

(3) IT IS MUTUALLY UNDERSTOOD AND AGREED AS FOLLOWS:

- a. COUNTY'S contribution shall only pay for those eligible items of work included in the MTA'S Bus Speed Improvements Program guidelines.
- b. The cost of SYSTEM, as referred to in this AGREEMENT, shall consist of the costs of procurement, and the Traffic Signal Control Software and hardware and system installation, integration and acceptance testing, and all other work and materials necessary to complete SYSTEM in accordance with the approved conceptual plan and shall include currently effective percentages added to total salaries, wages, and equipment costs to cover overhead, administration, and depreciation in connection with any or all of the aforementioned items.
- c. The cost of PROCUREMENT, as referred to in this AGREEMENT, shall consist of all necessary work prior to advertising of SYSTEM for bids and shall include currently effective percentages added to total salaries, wages, and equipment costs to cover overhead, administration, and depreciation in connection with any and all of the aforementioned items.
- d. Within 60 days of completion of SYSTEM, CITY shall transmit a final accounting to COUNTY. If net cost of SYSTEM, based upon the final accounting of said items, is less than COUNTY'S payments, as set forth in paragraph (2) b., above, CITY shall refund the difference to COUNTY within 90 calendar days of CITY's transmittal of final accounting to COUNTY.
- e. During implementation of SYSTEM, CITY shall furnish an inspector or other representative to perform the functions of an inspector. COUNTY may also furnish, at no cost to CITY, a Consultant or other representative to assist in the integration of SYSTEM. COUNTY shall have no obligation to inspect SYSTEM and no liability shall be attributable to the COUNTY as a result of COUNTY'S inspection or failure to inspect. Said consultant(s) and inspectors shall cooperate and consult with each other, but the orders of CITY inspector to the contractor or any other person in charge of construction shall prevail and be final, and the CITY inspector shall be responsible for the proper inspection of SYSTEM as needed.

- f. During installation of COMMUNICATIONS, COUNTY shall furnish an inspector or other representative to perform the functions of an inspector. CITY may also furnish, at no cost to COUNTY, an inspector or other representative to inspect installation of COMMUNICATIONS. CITY shall have no obligation to inspect the COMMUNICATIONS during installation of COMMUNICATIONS and no liability shall be attributable as a result of CITY'S inspection or failure to inspect during installation of COMMUNICATIONS. Said consultant(s) and inspectors shall cooperate and consult with each other, but the orders of COUNTY inspector to the contractor or any other person in charge of construction shall prevail and be final, and COUNTY inspector shall be responsible for the proper inspection of COMMUNICATIONS as needed.
- g. COUNTY shall not be liable for any costs for SYSTEM that does not conform to the regulations and requirements of MTA, as referred to in paragraph (1) d., above.
- h. The financial obligations of COUNTY pursuant to this AGREEMENT are expressly conditioned upon COUNTY obtaining reimbursement from the MTA pursuant to Memorandum of Understanding Number 494-246-4-115-95/P002356A between COUNTY and the MTA.
- h. This AGREEMENT may be amended or modified only by mutual written consent of COUNTY and CITY. Amendments and modifications of a non-material nature may be made by the mutual written consent of the parties.
- i. Any correspondence, communication, or contact concerning this AGREEMENT shall be directed to the following:

CITY : City Clerk
 City Of Torrance
 3031 Torrance Boulevard
 Torrance, CA 90509-2970
 Fax (310)618-2931

COUNTY: Ms. Gail Farber
 Director of Public Works
 County of Los Angeles
 Department of Public Works
 P.O. Box 1460
 Alhambra, CA 91802-1460

- j. Neither COUNTY nor any officer or employee of COUNTY shall be responsible for any damage or liability occurring by reason of any act or omission on the part of CITY under or in connection with any work, authority,

or jurisdiction delegated to, assumed by, or determined to be the responsibility of CITY under this AGREEMENT. It is also understood and agreed that, pursuant to Government Code, Section 895.4, CITY shall fully indemnify, defend, and hold COUNTY harmless from any liability imposed for injury (as defined by Government Code, Section 810.8) occurring by reason of any act or omission on the part of CITY under or in connection with any work, authority, or jurisdiction delegated to or determined to be the responsibility of CITY under this AGREEMENT. Where liability for injury (as defined by Government Code, Section 810.8) is sought to be imposed under Section 830, et seq., of the Government Code for a dangerous condition of property owned by or under the control of CITY, CITY shall fully defend, indemnify, and hold COUNTY harmless from any and all liability arising from such dangerous condition.

- k. Neither CITY nor any officer or employee of CITY shall be responsible for any damage or liability occurring by reason of any act or omission on the part of COUNTY under or in connection with any work, authority, or jurisdiction delegated to or determined to be the responsibility of COUNTY under this AGREEMENT. It is also understood and agreed that, pursuant to Government Code Section 895.4, COUNTY shall fully indemnify, defend, and hold CITY harmless from any liability imposed for injury (as defined by Government Code, Section 810.8) occurring by reason of any act or omission on the part of COUNTY under or in connection with any work, authority, or jurisdiction delegated to or determined to be the responsibility of COUNTY under this AGREEMENT.
- l. It is understood and agreed that the provisions of Assumption of Liability Agreement No. 32717 between CITY and COUNTY, adopted by the Board of Supervisors on December 27th, 1977, and currently in effect, are inapplicable to this AGREEMENT.

//
 //
 //
 //
 //
 //
 //
 //

IN WITNESS WHEREOF, the parties hereto have caused this AGREEMENT to be executed by their respective officers, duly authorized, by the CITY OF TORRANCE on _____, 2008, and by the COUNTY OF LOS ANGELES on _____, 2008.

COUNTY OF LOS ANGELES

By _____
Director of Public Works

APPROVED AS TO FORM:

RAYMOND G. FORTNER, JR.
County Counsel

By _____
Deputy

CITY OF TORRANCE:
A Municipal Corporation

By _____
Frank Scotto, Mayor

ATTEST:

By _____
Sue Herbers, City Clerk

APPROVED AS TO FORM:

JOHN L. FELLOW III
City Attorney

By _____
Heather K. Whitham, Deputy City Attorney

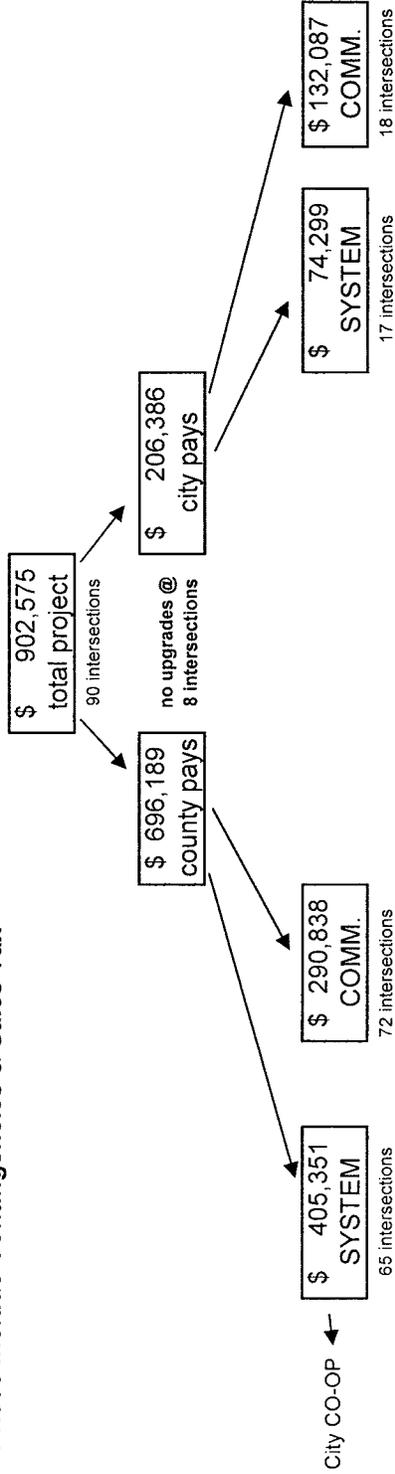
Attachments: Exhibit A: System Deliverables and payments
 Exhibit B: Communications

P:\t\pub\WPFILES\FILES\TRA\CO-OP AGREEMENTS\ITS\Torrance TCS Package\Torrance ITS Co-Op Agm_Final.DOC

Summary of Cost for City of Torrance TCS & Communications

	SYSTEM* (from Econolite)	COMMUNICATIONS (from Larry)
COUNTY		
Includes Central System Servers & Workstations (\$30,900)	\$ 405,351	\$ 290,838
TORRANCE		
Includes Synchro Module (\$21,000) AND Central System Servers & Workstations (\$15,000)	\$ 74,299	\$ 132,087
TOTAL	\$ 479,650	\$ 422,925
		\$ 902,575

* Prices include Contingencies & Sales Tax



System Cost cover 82 intersection UPGRADES (8 are not needed)
Communications Cost cover 90 intersections

Attachment B

City of Torrance COMMUNICATIONS

N/S Street	E/W Street	City Funded	City Funded (Cost)	County Funded	County Funded (Cost)
Abalone Ave.	Carson St.			x	\$ 2,500
Amie Ave.	Torrance Blvd.			x	\$ 2,500
Anza Ave.	Calle Mayor	x	\$ 10,417		
Anza Ave.	Lomita	x	\$ 10,417		
Anza Ave.	226th St.	x	\$ 10,417		
Anza Ave.	Sepulveda Blvd.			x	\$ 10,417
Anza Ave.	Carson St.	x	\$ 10,417		
Anza Ave.	Lenore	x	\$ 10,417		
Anza Ave.	Torrance Blvd.	x	\$ 10,417		
Anza Ave.	Emerald St.	x	\$ 10,417		
Anza Ave.	Spencer St.	x	\$ 10,417		
Anza Ave.	Del Amo Blvd.	x	\$ 10,417		
Anza Ave.	Halison	x	\$ 10,417		
Arlington Ave.	Carson			x	\$ 2,500
Arlington Ave.	Torrance Blvd.			x	\$ 2,500
Arlington Ave.	Sepulveda Blvd.	x	\$ 10,417		
Cabrillo	Sepulveda Blvd.			x	\$ 2,500
Cabrillo	Carson St.			x	\$ 2,500
Cabrillo/Van Ness	Torrance Blvd.			x	\$ 2,500
Casimir	Artesia Blvd.			x	\$ 2,500
Cota	Torrance Blvd.			x	\$ 2,500
Crenshaw Blvd.	208th			x	\$ 2,500
Crenshaw Blvd.	Maricopa			x	\$ 2,500
Crenshaw Blvd.	El Dorado			x	\$ 2,500
Crenshaw Blvd.	Carson St.			x	\$ 2,500
Crenshaw Blvd.	Plaza Del Amo			x	\$ 2,500
Crenshaw Blvd.	SCROC			x	\$ 2,500
Crenshaw Blvd.	Sepulveda Blvd.			x	\$ 10,417
Crenshaw Blvd.	Torrance Blvd.			x	\$ 2,500
Crenshaw Blvd.	Artesia Blvd.			x	\$ 10,417
Crenshaw Blvd.	235th			x	\$ 10,417
Crenshaw Blvd.	237th			x	\$ 2,500
Crenshaw Blvd.	Lomita			x	\$ 10,417
Crenshaw Blvd.	Crossroads			x	\$ 2,500
Crenshaw Blvd.	Skypark/Amsler			x	\$ 10,417
Crenshaw Blvd.	190th			x	\$ 2,500
Crenshaw Blvd.	Del Amo Blvd.			x	\$ 2,500
Crenshaw Blvd.	166th St			x	\$ 10,417
Crenshaw Blvd.	182nd St			x	\$ 10,417
Crenshaw Blvd.	Airport Dr			x	\$ 10,417
Del Amo Circle Blvd.	Carson St.			x	\$ 2,500
Del Amo Circle East	Carson St.			x	\$ 2,500
Del Amo Circle East	Sepulveda Blvd.			x	\$ 10,417
Earl	Torrance Blvd.			x	\$ 2,500
El Prado	Carson St.			x	\$ 2,500
ExxonMobil	190th St.			x	\$ 2,500
Fern	Torrance Blvd.			x	\$ 2,500
Garnier St	Lomita Blvd.			x	\$ 10,417
Gramercy Pl.	190th St			x	\$ 2,500
Henrietta	Torrance Blvd.	x	\$ 2,500		
Hickory	Torrance Blvd.			x	\$ 2,500
Hickory	Sepulveda Blvd.			x	\$ 2,500
Honeywell	190th St.			x	\$ 2,500
Lowe's/Costco	Skypark	x	\$ 2,500		
Madison	Skypark	x	\$ 2,500		
Madrona	Spencer St.			x	\$ 2,500

Attachment B

City of Torrance COMMUNICATIONS

N/S Street	E/W Street	City Funded	City Funded (Cost)	County Funded	County Funded (Cost)
Madrona	Emerald St.			x	\$ 2,500
Madrona	Torrance Blvd.			x	\$ 2,500
Madrona	Fashion Way			x	\$ 2,500
Madrona	Carson St.			x	\$ 2,500
Madrona	Plaza Del Amo			x	\$ 2,500
Madrona	Sepulveda Blvd.			x	\$ 2,500
Madrona Marsh	Plaza Del Amo	x	\$ 2,500		
Maple	Torrance Blvd.			x	\$ 2,500
Maple	Carson St.			x	\$ 2,500
Maple	Sepulveda Blvd.			x	\$ 2,500
Maple	226th St.			x	\$ 2,500
Maple	Nadine Circle S			x	\$ 2,500
Maple	Plaza Del Amo			x	\$ 2,500
Medical Center	Skypark	x	\$ 2,500		
Medical Center/Early Ave	Lomita Blvd.			x	\$ 10,417
Ocean	Sepulveda Blvd.			x	\$ 10,417
Palos Verdes	Sepulveda Blvd.	x	\$ 2,500		
Palos Verdes	Torrance Blvd.	x	\$ 2,500		
Plaza Del Amo	Carson St.			x	\$ 2,500
Prairie	Artesia Blvd.			x	\$ 2,500
Prairie	190th St.			x	\$ 2,500
Prairie	182nd St.			x	\$ 2,500
Prairie/Madrona	Del Amo Blvd.			x	\$ 2,500
Sartori	Torrance Blvd.			x	\$ 2,500
Van Ness	Dominguez			x	\$ 2,500
Van Ness	Del Amo Blvd.			x	\$ 2,500
Van Ness	Artesia Blvd.			x	\$ 2,500
Van Ness	190th St.			x	\$ 2,500
Van Ness	195th St./Toyota Way			x	\$ 2,500
Van Ness	ProLogis			x	\$ 2,500
Victor	Torrance Blvd.			x	\$ 10,417
Village Ln.	Torrance Blvd.			x	\$ 2,500
Western	Artesia Blvd.			x	\$ 2,500
Yukon Ave.	Artesia Blvd.			x	\$ 2,500
			\$ 132,087		\$ 290,838
	TWP Intersections	7	\$ 17,500	58	\$ 145,000
	Radio Intersections	11	\$ 114,587	14	\$ 145,838
	Agency's Grand Total	18	\$ 132,087	72	\$ 290,838
	Grand Total	\$422,925			