COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

JAMES A. NOYES, Director

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P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: T-6

August 21, 2003

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, CA 90012

Dear Supervisors:

SAN GABRIEL VALLEY TRAFFIC SIGNAL FORUM
ADVANCED TRAFFIC MANAGEMENT SYSTEM IMPROVEMENT PROJECT
AWARD OF CONSULTANT SERVICES AGREEMENT
SUPERVISORIAL DISTRICTS 1 AND 5
3 VOTES

IT IS RECOMMENDED THAT YOUR BOARD:

Award and authorize the Director of Public Works, or his designee, to execute a consultant services agreement with TransCore ITS, Inc., to prepare a conceptual design for the San Gabriel Valley Traffic Signal Forum Advanced Traffic Management System Improvement Project. The agreement will be for a not-to-exceed fee of $1,124,200 to be financed with Metropolitan Transportation Authority (MTA) grant funds and Proposition C Local Return Fund matching funds.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

We are recommending that your Board award a consultant services agreement and authorize the Director of Public Works, or his designee, to execute the agreement with TransCore ITS, Inc., to prepare a conceptual design for a state-of-the-art traffic management system for the San Gabriel Valley area. The conceptual design will lay the foundation for the installation of a multijurisdictional advanced traffic control system for the corridor.

This project continues the work underway by Public Works in the field of intelligent transportation systems. The multijurisdictional advanced traffic control system referenced above involves the installation of two primary components: 1) an off-the-shelf traffic control system (TCS) and 2) the Countywide Information Exchange Network (IEN) software. The TCS provides for continuous monitoring of traffic conditions and traffic signal operations and builds upon the benefits achieved by the traffic signal synchronization projects currently underway by Public Works. The TCS will provide once-per-second monitoring of traffic signals. The monitoring of the traffic signals will provide agencies' engineering staff with immediate notification of signal malfunctions, which will enable faster and more efficient maintenance responses. It also enables traffic signal timing to be controlled and coordinated from remote workstations to adjust to actual traffic conditions. Currently, maintenance staff can only change traffic signal timing at the actual traffic signal location. The TCS will provide two-way communications and control functions between the traffic signal controllers and each affected agency.

The other primary component of this system is the IEN. Once the TCS has been installed in an agency, the IEN provides communications between each TCS, which allows for the exchange of arterial traffic data and information between the Cities, Caltrans, and Public Works. This information sharing will provide for the implementation of arterial traffic management strategies and coordinated traffic signal operations. It also enables the agencies to work together to reduce incident response time during incidents and emergencies. Lastly, it also includes the capability to monitor and control the operation of traffic signals between jurisdictions.

The implementation of this project is intended to expand the coverage area of the I-210 corridor project, for which your Board recently approved a supplemental agreement involving software modifications for the IEN. The successful implementation of this project will enable the local agencies in the San Gabriel Valley area to effectively monitor and control the arterial highway system within their jurisdictions and coordinate with the agencies in the subregion and Caltrans' freeway operations.

This agreement is for the conceptual design of this system only. The conceptual design will lay the foundation and outline the specific components and means of communications to be deployed in the future. The participating agencies include the County of Los Angeles and the Cities of Alhambra, Arcadia, Azusa, Baldwin Park, Bradbury, Covina, Duarte, El Monte, Glendora, Irwindale, La Puente, Monrovia, Montebello, Monterey Park, Pasadena, Rosemead, San Dimas, San Gabriel, San Marino, Sierra Madre, South El Monte, South Pasadena, Temple City, and West Covina.

The participating agencies and the MTA have designated Public Works as the lead agency to administer this project. The proposed project will improve mobility, relieve traffic congestion, and enhance air quality in accordance with the MTA's Long Range Transportation Plan.

Implementation of Strategic Plan Goals

These recommendations are consistent with the County Strategic Plan Goals of Service Excellence and Organizational Effectiveness as the contracting out of these efforts will enable the recommended work to be completed faster and more efficiently. These recommendations are also consistent with the County Strategic Plan Goal of Children and Families' Well-Being as the implementation of these actions will result in reduced traffic congestion and delay, improved mobility, and reduced vehicle emissions, thus improving the overall quality of life for the residents of the County of Los Angeles.

FISCAL IMPACT/FINANCING

There will be no impact to the County's General Fund. This project will be financed by Los Angeles County MTA 1995 Call for Projects, Proposition C Discretionary Grant Funds for the West San Gabriel Valley Traffic Signal Forum, and County matching funds included in the Fiscal Year 2003-04 Proposition C Local Return Fund budget. The MTA is providing approximately 88 percent of the funds and the County will finance the remaining 12 percent matching funds.

The recommended agreement for this project is for a not-to-exceed fee in the amount of $1,124,200, including $102,200 for unforeseen additional work that may arise during progress of the work. Additional work within this allowance will not be performed without prior written authorization from the Director of Public Works, or his designee. The additional funding includes costs for the detailed design and implementation of the project components.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

A consultant services agreement substantially similar to the enclosed agreement, which has been approved by County Counsel, will be used. The standard Board-directed clauses that provide for contract termination, renegotiation, and hiring qualified displaced County employees will be included.

As required by the Board, language has been incorporated into the agreement stating that the consultant shall notify its employees, and shall require each subconsultant to notify its employees, that they may be eligible for the Federal Earned Income Credit under the Federal income tax laws. The agreement also contains provisions requiring the consultant to comply with the Safely Surrendered Baby Law.

As requested by the Board on August 12, 1997, and as a threshold requirement for consideration of a contract award, TransCore ITS, Inc., is willing to consider Greater Avenues for Independence/General Relief Opportunity for Work Program participants for future employment.

TransCore ITS, Inc., is in full compliance with Los Angeles County Code Chapter 2.200 (Child Support Compliance Program) and Chapter 2.203 (Contractor Employee Jury Service Program).

ENVIRONMENTAL DOCUMENTATION

A finding of environmental impact is not required for consultant services agreements for design services.

CONTRACTING PROCESS

On October 25, 2001, a request for proposals was issued to 31 firms from a Public Works list of qualified consultants. Two firms responded to the request. An evaluation committee consisting of representatives from the Cities of Covina and Rosemead, the MTA, and Public Works civil engineering staff evaluated the proposals. The evaluation of the firms was based on technical expertise, proposed work plan, experience, personnel qualifications, and understanding of the work requirements. These evaluations were completed without regard to race, creed, color, or gender. Based on the review and evaluation of these proposals, the committee selected TransCore ITS, Inc., as the best qualified firm. The negotiated fees have been reviewed by Public Works and are considered reasonable for the services provided.

Participation by Community Business Enterprises in the project is encouraged through Public Works' CBE Outreach Program and the requirement that consultants demonstrate their good faith efforts to utilize CBEs. TransCore ITS, Inc., is aware of Public Works' CBE Outreach Program and its proposed CBE participation is on file with Public Works.

TransCore ITS, Inc.'s 3-year contracting history is on file with Public Works.

Public Works has evaluated and determined that the Living Wage Program (County Code Chapter 2.201) does not apply to the recommended agreement, as this agreement is for non-Proposition A services.

As requested by your Board on February 3, 1998, and to further increase consultant awareness of contracting opportunities with Public Works, a request for qualifications for these services was listed on the County Office of Small Business website. Enclosed is a copy of the website posting for your reference.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

There will be no impact on current County services or projects during the performance of the recommended consultant services.

CONCLUSION

At such time as this recommendation is approved, please return one copy of this letter to Public Works.

Respectfully submitted,

JAMES A. NOYES
Director of Public Works

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Enc.

cc: Chief Administrative Office
County Counsel
Department of Public Social Services (GAIN Program)
Metropolitan Transportation Authority (Renee Berlin)

Los Angeles County Office of Small Business

Your new Contract posting was Processed Successfully

Current Date: October 30, 2001

Current Time: 07:25:14AM

Please print this information for your records.

Los Angeles County, Office of Small Business
707 Wilshire Boulevard, 27th Floor
Los Angeles, California 90017
Tel: 213.430.5430 · 800.555.3815 · Fax: 213.895.6261

Department Name: Public Works
Category: Traffic Consulting
DocumentID/BidID: San Gabriel Valley
Description: San Gabriel Valley Traffic Signal Forum Advanced Traffic Management System
Open Date: 10/25/2001
Closing Date: 12/03/2001
Contact Name: Brian Soria
Phone: (626) 458-2588
Email Address: bsoria@dpw.co.la.ca.us
Web Reference Address: none
Details:
The Los Angeles County Department of Public Works is requesting proposals from qualified firms to provide for the development, design, and implementation of an Advanced Transportation Management System for various arterials in the San Gabriel Valley. A preproposal conference to answer questions concerning the project will be held on November 13, 2001 at 1:00 p.m., at the Department of Public Works, 900 South Fremont Ave., Conference Room D, Alhambra, CA 91803. Attendance is strongly encouraged.

CONSULTANT SERVICES AGREEMENT

THIS AGREEMENT is made and entered into this _____ day of _____, 2003

BY AND BETWEEN	County of Los Angeles, a body corporate and politic (hereinafter "County")
AND	TransCore ITS, Inc., a Delaware corporation , (hereinafter "Contractor" or "Consultant").

WHEREAS, County has determined that it is a matter of public convenience and necessity to engage the specialized services of a consultant for the San Gabriel Valley Traffic Signal Forum Advanced Traffic Management System Improvement; and

WHEREAS, California Government Code Section 31000 permits County's Board of Supervisors to contract for special services with persons specially trained and experienced to perform the services; and

WHEREAS, County has determined that County personnel are not available to provide certain engineering services required for development and design of the San Gabriel Valley Traffic Signal Forum Advanced Traffic Management System Improvement (hereinafter "Project"); and

WHEREAS, County has determined that it is necessary to engage the specialized services of an engineering consultant to provide the necessary plans, specifications, supporting data and technical expertise for the Project; and

WHEREAS, in response to County's Request for Proposals for the San Gabriel Valley Traffic Signal Forum Advanced Traffic Management System Improvement Project, Contractor has submitted its proposal to County and desires, and is prepared, to provide services to County for such Project; and

WHEREAS, Contractor is qualified in the design, development and implementation required for such Project; and

WHEREAS, Contractor (i) will review all the available data furnished by County pertinent to the Project; (ii) will exercise the ordinary care and skill expected of a practitioner in its profession acting under similar circumstances; and (iii) is willing to accept responsibility for performing the services set forth in this Agreement for the compensation and in accordance with the terms and conditions specified herein; and

WHEREAS, County and Contractor desire to enter into an agreement for consultant services for such Project.

NOW, THEREFORE, in consideration of the mutual promises, covenants and conditions set forth herein, County and Contractor agree as follows:

1. APPLICABLE DOCUMENTS

1.1. Interpretation

1.1.1. The provisions of this document along with Exhibits A and B and the Schedules and Attachments thereto, attached hereto, and Exhibits C and D incorporated herein by reference, all described in Paragraph 1.1.2 below, collectively form and throughout and hereinafter are referred to as the "Agreement".

1.1.2. In the event of any conflict or inconsistency in the definition or interpretation of any word, responsibility, schedule, or the contents or description of any task, subtask, deliverable, goods, service or other work, or otherwise between and/or among this document and/or the Exhibits, such conflict or inconsistency, shall be resolved by giving precedence first to this document as the body of this Agreement, and then to the Exhibits, and the Schedules and Attachments thereto, according to the following priority:

1. Exhibit A - Statement of Work;

2. Exhibit B - Schedule of Deliverables and Payments;
Attachment B.1 - Contractor's Applicable Hourly Rates;

3. Exhibit C - Contractor's Proposal for the San Gabriel Valley Traffic Signal Forum Advanced Traffic Management System Improvement Project (Incorporated by Reference);

4. Exhibit D - County's Request for Proposals for the San Gabriel Valley Traffic Signal Forum Advanced Traffic Management System Improvement Project (Incorporated by Reference).

1.2. Entire Agreement

The body of this Agreement, together with the Recitals and all Exhibits and Schedules and Attachments thereto, constitutes the complete and exclusive agreement between the parties and supersedes all previous and contemporaneous agreements, whether written or oral, and any and all communications and negotiations relating to the subject matter of this Agreement.

2. DEFINITIONS

The terms and phrases in this Paragraph 2 in quotes and with initial letter capitalized, where applicable, shall have the meaning set forth below when used in this Agreement throughout and hereafter.

2.1. Contract Sum

As used herein, the term "Contract Sum" shall mean the total monetary amount payable by County to Contractor hereunder, as set forth in Paragraph 4.1 (Maximum Contract Sum).

2.2. Contractor; Consultant

As used herein, the terms "Contractor" and "Consultant" shall mean TransCore ITS, Inc., a Delaware corporation.

2.3. Contractor's Project Manager

As used herein, the term "Contractor's Project Manager" shall have the meaning set forth in Paragraph 10.1 (Contractor's Project Manager).

2.4. Contractor's Staff

As used herein, the term "Contractor's Staff" shall mean the staff provided by Contractor and its subcontractors.

2.5. County

As used herein, the term "County" shall mean the County of Los Angeles, California.

2.6. County's Project Director

As used herein, the term "County's Project Director" shall have the meaning set forth in Paragraph 9.1 (County's Project Director).

2.7. County's Project Manager

As used herein, the term "County's Project Manager" shall have the meaning set forth in Paragraph 9.2 (County's Project Manager).

2.8. Day(s)

As used herein, the term "day(s)", whether singular or plural, shall mean calendar day(s) and not business or working day(s), unless otherwise expressly specified.

2.9. Deficiency; Deficiencies; deficiency; deficiencies

As used herein, the terms "Deficiency(ies)" and "deficiency(ies)", whether singular or plural, shall mean defect(s) in design, materials, or workmanship; error(s); omission(s); or deviation(s) from published and/or mutually agreed upon standards, specifications or any of the requirements set forth in this Agreement, including Exhibit A (Statement of Work), or in any County-approved deliverable.

2.10. Deliverable(s); deliverable(s)

As used herein, the terms "Deliverable(s)" and "deliverable(s)", whether singular or plural, shall mean items and/or services provided or to be provided by Contractor under this Agreement, including those identified as numbered deliverables in Exhibit A (Statement of Work) and Exhibit B (Schedule of Deliverables and Payments).

2.11. Department; DPW

As used herein, the terms "Department" and "DPW" shall mean County's Department of Public Works.

2.12. Director

As used herein, the term "Director" shall mean the Director of County's Department of Public Works or his/her authorized designee.

2.13. Effective Date

As used herein, the term "Effective Date" shall mean the date the Director issues a Notice to Proceed, which shall occur after the Agreement is approved by the County's Board of Supervisors.

2.14. Fiscal Year

As used herein, the term "fiscal year" shall mean the twelve (12) month period beginning July 1 and ending June 30 of the following year.

2.15. Project Schedule

As used herein, the term "Project Schedule" shall have the meaning set forth in Paragraph 14.5 (of this Agreement.

2.16. Project Team

As used herein, the term "Project Team" shall mean the employees assigned or to be assigned by Contractor to work on the Project, as set forth in Contractor's proposal. Members of the Project Team may be replaced pursuant to Paragraph 10.2.2 of this Agreement. The lead members of the Project Team shall be those individuals assigned by Contractor to oversee each component of the Project, as identified in Paragraph 10.2.3.

2.17. Schedule of Work

As used herein, the term "Schedule of Work" shall mean Exhibit B (Schedule of Deliverables and Payments). The Schedule of Work and all reports and other documentation developed pursuant to Exhibit A (Statement of Work) shall automatically become a part of this Agreement immediately upon their approval by County.

2.18. Statement of Work

As used herein, the term "Statement of Work" shall mean the work provided by Contractor pursuant to this Agreement identified in terms of Tasks, Subtasks and Deliverables as set forth in the San Gabriel Valley Traffic Signal Forum Advanced

Traffic Management System Improvement Project Scope-of-Services, attached hereto as Exhibit A (Statement of Work) with all Attachments thereto.

2.19. Subcontractor; Subconsultant

As used herein, the terms "Subcontractor" and "Subconsultant" shall mean any person, entity or organization to which Contractor proposes to delegate or has delegated any of its obligations or responsibilities hereunder in accordance with Paragraph 24 (Subcontracting).

2.20. Task; task; Subtask; subtask

As used herein, the terms "Task", "task", "Subtask" and subtask shall mean one of the major areas of work to be performed under this Agreement, including those identified as numbered tasks and subtasks in Exhibit A (Statement of Work) and Exhibit B (Schedule of Deliverables and Payments).

2.21. Working Day(s)

As used herein, the term "working day(s)", whether singular or plural, shall mean 8:00 a.m. to 5:00 p.m., Pacific Time, Monday through Friday, excluding County observed holidays.

3. TERM

3.1. General

The term of this Agreement shall commence on the Effective Date and shall continue in full force and effect until County has accepted all Deliverables required under this Agreement, unless sooner terminated or extended, in whole or in part, as provided in this Agreement (hereinafter "Term").

4. CONTRACT SUM

4.1. Maximum Contract Sum

The Contract Sum under this Agreement shall be the total monetary amount payable by County to Contractor for supplying all the tasks, subtasks, deliverables, goods, services and other work specified under this Agreement. All work completed by Contractor must be approved in writing by County. If County does not approve work in writing, no payment shall be due to Contractor for that work. Notwithstanding such limitation of funds, Contractor shall satisfactorily perform and complete all work required of Contractor under this Agreement.

The Contract Sum for this Agreement, including all applicable taxes, authorized by County hereunder, shall not exceed One Million One Hundred Twenty Four Thousand Two Hundred Dollars ($1,124,200), including One Hundred Two Thousand Two Hundred Dollars ($102,200) for Additional Services (as defined in Paragraph 6.5

(Additional Services)) which may be provided by Contractor during the term of this Agreement in accordance with Paragraph 6.5 (Additional Services).

4.2. County's Obligation for Future Fiscal Years

4.2.1. County's obligation may be limited if it is payable only and solely from funds appropriated for the purpose of this Agreement. Notwithstanding any other provision of this Agreement, County shall not be obligated for Contractor's performance hereunder or by any provision of this Agreement during any of County's future fiscal years unless and until the County's Board of Supervisors and the Board of Directors of the Los Angeles County Metropolitan Transportation Authority (hereinafter "MTA") appropriate funds for this Agreement in their respective budgets for each such future fiscal year. In the event that funds are not appropriated for this Agreement, then this Agreement shall terminate as of June 30 of the last fiscal year for which funds were appropriated or reduce the work provided hereunder in accordance with the funds appropriated. County shall notify Contractor in writing of any such non-appropriation of funds at the earliest possible date.

4.2.2. In the event that budget reductions occur in any fiscal year covered by this Agreement that may cause County to consider terminating this Agreement, County may attempt to renegotiate the terms of this Agreement to reduce the cost thereof in lieu of termination under the termination provisions of the Agreement.

4.2.3. Contractor will notify County when contract amount has been incurred up to seventy-five percent (75%) of the Contract Sum.

4.3. Cost of Living Adjustments

If Cost of Living Adjustments (hereinafter "COLA") are provided, County shall limit COLAs to the lesser of: (i) the average salary increase or decrease granted to County employees, or (ii) the increase or decrease from the previous fiscal year's U.S. Department of Labor Bureau of Labor Statistics' Urban Consumer Price Index (CPI) for Los Angeles-Riverside-Orange County, California. If the COLA is based on the CPI, the adjustment shall be based on the change in the CPI from the Effective Date to the time at which the COLA is to be made. In the event fiscal circumstances ultimately prevent County's Board of Supervisors from approving any increase in employee salaries for a fiscal year, Contractor will not receive a COLA for the Agreement period which coincides with that fiscal year.

5. INVOICES AND PAYMENTS

5.1. General

Contractor shall invoice County for all deliverables, tasks, subtasks, goods, services and other work which are specified in Exhibit A (Statement of Work) and Exhibit B (Schedule of Deliverables and Payments), which have been provided by Contractor and approved in writing by County pursuant to the terms of this Agreement. All invoices shall be subject to County's written approval pursuant to Paragraph 5.3 (County Approval of Invoices). Contractor shall prepare invoices in accordance with Paragraph 5.2 (Invoice

Detail) below using mutually agreeable formats for charges owed to Contractor by County as provided in Exhibit B (Schedule of Deliverables and Payments). No invoice prepared pursuant to this Paragraph 5 shall be delivered to County prior to the proper completion and delivery of the tasks, subtasks, deliverables, goods, services or other work as described in Exhibit A (Statement of Work) and Exhibit B (Schedule of Deliverables and Payments), for which payment is claimed.

All invoices under this Agreement shall be submitted to the following address:

Claudia Pirotton
Accounts Payable Section
County of Los Angeles Department of Public Works
Fiscal Division, 7th Floor
Attention: Jun Canlas
P.O. Box 1460
Alhambra, CA 91802-1460

5.2. Invoice Detail

Each invoice submitted by Contractor shall indicate, at a minimum:

A. The tasks, subtasks, deliverables, goods, services or other work as described in Exhibit A (Statement of Work) and Exhibit B (Schedule of Deliverables and Payments), for which payment is claimed.

B. The date of written approval of the tasks, subtasks, deliverables, goods, services or other work by County's Project Director.

C. For Task 1 (Project Management) of Exhibit A (Statement of Work) (hereinafter "Project Management Deliverable(s)"), the period for which payment is desired, the name, hourly rate and amount of hours worked by each Contractor or subcontractor employee performing work hereunder.

D. The amount due for each Deliverable in Exhibit B (Schedule of Deliverables and Payments); except that the amount for each of the Deliverables under Task 1 (Project Management) and Task 3 (Additional Services) shall not exceed the amount set forth in Exhibit B (Schedule of Deliverables and Payments).

E. The amount due under Task 1 (Project Management) of Exhibit A (Statement of Work), which shall be the lesser of: (i) the maximum amount for Task 1 as enumerated in Exhibit B (Schedule of Deliverables and Payments) or (ii) the total cost of work performed for the invoiced period. The total cost of work performed shall be calculated by multiplying the amount of hours worked by the applicable hourly rate(s) set forth in Attachment B.1 (Contractor's Applicable Hourly Rates) to Exhibit B (Schedule of Deliverables and Payments).

F. The amount due for the Deliverable under Task 3 (Additional Services) of Exhibit A (Statement of Work) shall be established pursuant to the procedures in

Paragraph 6.5 (Additional Services), including the retention of any Holdback Amounts (as defined in Paragraph 5.4), if applicable.

G. Indication of the applicable "Holdback Amount" (as defined in Paragraph 5.4) and the cumulative Holdback Amount accrued under the Agreement.

H. Indication of any applicable withholds or credits due to County under the terms of this Agreement, made known to Contractor at the time of invoice preparation.

Invoices shall be accompanied by an analysis of work completed for the invoice period. This analysis shall be prepared in a format satisfactory to County's Project Director.

5.3. County Approval of Invoices

All invoices submitted by Contractor for payment must receive the written approval of County's Project Director prior to any payment thereof. In no event shall County be liable or responsible for any payment prior to such written approval.

5.4. Holdbacks

County will hold back ten percent (10%) of the amount of each invoice (hereinafter "Holdback Amount") approved by County pursuant to Paragraph 5.3 (County Approval of Invoices). The cumulative amount of such holdbacks shall be due and payable to Contractor: (i) for Task 3 (Additional Services) of Exhibit A (Statement of Work), upon the timely final completion and County's written approval of applicable Additional Services successfully completed by Contractor under such Task 3 (Additional Services), and (ii) for all other Holdback Amounts, upon successful completion of Deliverable 2.10.2 (Final Conceptual Design) of Exhibit A (Statement of Work).

5.5. Payments

Payment to Contractor for each invoice shall be made in arrears for work performed, provided that: (i) Contractor is not in default under any provision of this Agreement, (ii) the work has been approved by County pursuant to Paragraph 6.4 (County Approval of Work), and (iii) Contractor has submitted the invoice in accordance with Paragraph 5.2 (Invoice Detail).

Subject to the preceding sentence, County will endeavor to pay each invoice amount, less the Holdback Amount, within thirty (30) days of County's Approval of such invoice, provided that the invoice has not been disputed in accordance with Paragraph 5.6 (Discrepancies) below.

5.6. Discrepancies

County's Project Director will review each invoice for any discrepancies and will, within fifteen (15) days of receipt thereof, notify Contractor of any discrepancies found upon such review and, if requested by County, submit a list of disputed charges. Contractor shall review the disputed charges and send a written explanation detailing the basis for

the charges within fifteen (15) days of receipt of County's notice of discrepancies and disputed charges. If County's Project Director does not receive a written explanation for the charges within such fifteen (15) day period, Contractor shall be deemed to have waived its right to justify the original invoice amount, and County, in its sole discretion, shall determine the amount due, if any, to Contractor and pay such amount in satisfaction of the disputed invoice, less the applicable Holdback Amount.

Full payment of a submitted invoice by County shall indicate that no discrepancies were found for that invoice by County.

5.7. County's Right to Withhold Payment

Notwithstanding any other provision of this Agreement and in addition to the provisions of Paragraph 5.4 (Holdbacks) and any rights of County given by law or provided herein, County may, upon written notice to Contractor, withhold payment for any Deliverable while Contractor is in default hereunder, or at any time that Contractor has not provided a County-approved Deliverable which under the Schedule of Work is scheduled to be delivered prior to or concurrently with the Deliverable for which payment would otherwise be due and is withheld. County's right to withhold payment shall not be deemed to impair any claims that Contractor may have against County or Contractor's rights to assert such claims pursuant to Paragraph 42 (Dispute Resolution Procedure).

5.8. Credits to County

County shall be entitled to credits arising from Contractor's noncompliance with its obligations relating to any of the following deliverables:

1. Deliverable 2.1.2 – Stakeholders' Operational Objectives Report;

2. Deliverable 2.4.2 and 2.4.4 – Final Area Architecture Definition Report and Typical Local City Control Site Schematic Diagram;

3. Deliverable 2.3.1.2 – Final Initial SGV Traffic Forum Concept of Operations Report;

4. Deliverable 2.6.1 – ATMS Conceptual Design;

5. Deliverable 2.6.2 – Communications Conceptual Design;

6. Deliverable 2.6.3 – LCCS Conceptual Design;

7. Deliverable 2.6.4 – Integrated System Conceptual Design; and

8. Deliverable 2.7.2 – Final Operation and Maintenance Plan Report.

Such credits will be calculated according to the following rules:

A. Deliverables not properly completed within ten (10) working days of the deliverable due date, as specified in Exhibit B (Schedule of Deliverables and Payments), shall entitle County to a credit of ten percent (10%) of the cost of such Deliverable, as set forth in Exhibit B (Schedule of Deliverables and Payments).

B. The credit shall be increased by one percent (1%) of such cost each calendar day the deliverable is late beyond the ten (10) working days.

Deliverables shall not be considered late if their delay is due to circumstances above and beyond the control of Contractor, including but not limited to, the failure of County or other impacted jurisdictions to provide comments within the timeframes set forth in Exhibit B (Schedule of Deliverables and Payments). Adjustments to Deliverable due dates shall be negotiated with County's Project Director no later than five (5) working days prior to the due date of the Deliverable; provided that County shall have no obligation to agree to any adjustment except as necessary to address such circumstances above and beyond the control of Contractor. County may apply the full amount of any credit hereunder to offset and reduce any payments owing hereunder by County at any time by the full amount of such credit.

5.9. No Payment For Services Provided Following Expiration/Termination Of Agreement

Contractor shall have no claim against County for payment of any money or reimbursement, of any kind whatsoever, for any service provided by Contractor after the expiration or other termination of this Agreement. Should Contractor receive any such payment, it shall immediately notify County and shall immediately repay all such funds to County. Payment by County for services rendered after expiration/termination of this Agreement shall not constitute a waiver of County's right to recover such payment from Contractor. This provision shall survive the expiration or other termination of this Agreement.

6. WORK

6.1. General

Contractor shall on a timely basis provide, complete, deliver and implement all tasks, subtasks, deliverables, goods, services and other work set forth in this Agreement. Contractor shall perform such tasks, subtasks, deliverables, goods, services and other work in accordance with Exhibit A (Statement of Work), with all Attachments thereto, at the rates and in accordance with the schedule specified in Exhibit B (Schedule of Deliverables and Payments), with Schedules thereto.

6.2. Notice To Proceed

The work to be performed by Contractor pursuant to this Agreement shall commence after the occurrence of 1) the execution of this Agreement; 2) Contractor's delivery and filing with County of evidence of their insurance programs, along with significant endorsements required by this Agreement; and 3) the issuance of a written Notice to

Proceed by the Director. Upon commencement of such work, Contractor's right to compensation for such work shall accrue.

6.3. Acknowledgments On Work

6.3.1. The responsible employee of Contractor shall sign and stamp all plans, specifications, and data furnished by him/her and where appropriate, indicate his/her registration number. Contractor shall not place any notes, notices, or stamps or similar statements on the final plans and specifications submitted by Contractor pursuant to this Agreement which seek to disclaim or limit Contractor's responsibility in regards thereto.

6.3.2. Contractor shall provide the following notice required under Government Code Section 7550 on all documents and written reports:

> "Any document or written report prepared for or under the direction of a State or local agency, which is prepared in whole or in part by non-employees of such agency, shall contain the numbers and dollar amounts of all contracts and subcontracts relating to the preparation of such document or written report provided, however, that the total cost for work performed by non-employees of the agency exceeds Five Thousand Dollars ($5,000). The contract and subcontract numbers and dollar amounts shall be contained in a separate section of such document or written report. When multiple documents or written reports are the subject or product of the contract, the disclosure section may also contain a statement indicating that the total contract amount represents compensation for multiple documents or written reports."

6.4. County Approval of Work

All tasks, subtasks, deliverables, goods, services and other work provided by Contractor must be prepared and provided solely as specified under this Agreement and must receive the written approval of County's Project Director in order to qualify for payment. In no event shall County be liable or responsible for any payment prior to such written approval. The acceptance requirements for each deliverable shall be based upon the deliverable's conformance with the provisions of this Agreement. County's review and acceptance of Contractor's work shall not relieve Contractor of its responsibility for the accuracy of such work. If Contractor determines at any time that failure, delay, or inadequacy of performance of any of County's obligations hereunder may prevent or tend to prevent Contractor from completing any of Contractor's obligations in a timely manner, or may cause or tend to cause Contractor to incur additional or unanticipated costs or expenses, Contractor shall promptly so notify County using the procedures set forth in Paragraph 38 (Notice of Delays).

6.5. Additional Services

Upon the written request of County's Project Director made at any time and from time to time during the term of this Agreement, Contractor shall provide to County additional

services (hereinafter "Additional Services"), as set forth in Task 3 (Additional Services) of Exhibit A (Statement of Work). Contractor shall submit a scope of work for the requested Additional Services which shall include an amount payable by County, and a payment schedule, for such Additional Services (hereinafter in this Paragraph 6.5, "Scope of Work"). County will review each such Scope of Work and recommend and/or request any revisions thereto. If approved by County in writing and provided that the sum of all Additional Services provided by Contractor under this Agreement, including Additional Services under the approved Scope of Work, does not exceed One Hundred Two Thousand Two Hundred Dollars ($102,200), following such approval, County will issue a work order for the approved Scope of Work, to be signed by both County and Contractor. The total amount payable by County for all Additional Services provided by Contractor under this Agreement shall not exceed One Hundred Two Thousand Two Hundred Dollars ($102,200).

6.6. Unapproved Work

If Contractor provides any tasks, subtasks, deliverables, goods, services or other work to County, other than those specified in this Agreement, or if Contractor provides such items requiring County's prior approval without first having obtained such approval, the same shall be deemed to be a gratuitous effort on the part of Contractor and Contractor shall have no claim whatsoever against County therefor.

7. INDEMNIFICATION

Contractor shall indemnify, defend and hold harmless County, its Special Districts and their elected and appointed officers, employees, and agents (hereinafter in this Paragraph 7 "County") from and against any claims, demands, liabilities, losses, costs and expenses, including, but not limited to, defense costs and legal, accounting and other expert, consulting or professional fees, claims and lawsuits for damages, including, but not limited to, breach of contract, bodily injury, death, personal injury or property damage (including damage to property owned by or in the care, custody or control of Contractor) arising from, or connected with, Contractor's, Contractor's agents', employees' or subcontractors' acts or omissions, willful misconduct or negligent conduct, whether active or passive, in the performance of services or provision of products hereunder, including without limitation any workers' compensation suits, liability or expense arising from or connected with services performed by any person on behalf of Contractor, Contractor's agents, employees or subcontractors pursuant to this Agreement.

8. INSURANCE

8.1. General Insurance Requirements

Without limiting Contractor's indemnification of County, Contractor shall, during the term of this Agreement, provide and maintain, at its own expense, and shall require all of its subcontractors to maintain, the program(s) of insurance covering its operations hereunder, as provided in this Paragraph 8 below. Such insurance shall be primary to and not contributing with any other insurance or self-insurance programs maintained by

County. The General Liability Insurance and Automobile Liability Insurance shall both name the County of Los Angeles as an additional insured.

8.2. Insurance Coverage Requirements

8.2.1. Insurance Programs

8.2.1.1. General Liability Insurance (written on ISO policy from CG 00 01 or its equivalent) with limits of not less than the following:

General Aggregate	$2 million
Products/Completed Operations Aggregate	$1 million
Personal and Advertising Injury	$1 million
Property Damage	$1 million
Each Occurrence	$1 million

8.2.1.2. Automobile Liability Insurance (written on ISO policy form CA 00 01 or its equivalent) with a limit of liability of not less than $1 million for each accident. Such insurance shall include coverage for all "owned", "hired" and "non-owned" vehicles, or coverage for "any auto".

8.2.1.3. Workers' Compensation and Employers' Liability Insurance providing workers' compensation benefits, as required by the Labor Code of the State of California or by any other state, and for which Contractor is responsible. In all cases, the above insurance shall also include Employers' Liability coverage with limits of not less than the following:

Each Accident	$1 million
Disease - Policy Limit	$1 million
Disease - Each Employee	$1 million

8.2.1.4. Professional Liability

Insurance covering liability arising from any error, omission, negligent or wrongful act of Contractor, its officers or employees with limits of not less than $1 million per occurrence and $2 million aggregate. The coverage also shall provide an extended two (2) year reporting period commencing upon termination or cancellation of this Agreement.

8.2.2. Evidence of Insurance

Certificate(s) or other evidence of coverage satisfactory to County shall be delivered to:

Mr. Brian Soria
County of Los Angeles
Department of Public Works

Architectural Engineering Division
P.O. Box 1460
Alhambra, CA 91802-1460

prior to commencing services under this Agreement. Such certificates or other evidence shall, at a minimum:

1. Specifically identify this Agreement;

2. Clearly evidence all coverages required in this Agreement;

3. Contain the express condition that County is to be given written notice by mail at least thirty (30) days in advance of cancellation for all policies evidenced on the certificate of insurance;

4. Include copies of the additional insured endorsement to the commercial general liability policy, adding the County of Los Angeles, its Special Districts, its officials, officers and employees as insured for all activities arising from this Agreement; and

5. Identify any deductibles or self-insured retentions for County's approval. County retains the right to require Contractor to provide a bond guaranteeing payment of all such retained losses and related costs, including, but not limited to, expenses or fees, or both, related to investigations, claims administrations and legal defense. Such bond shall be executed by a corporate surety licensed to transact business in the State of California.

8.2.3. Insurer Financial Ratings

Insurance is to be provided by an insurance company acceptable to County with an A.M. Best rating of not less than A:VII, unless otherwise approved by County.

8.2.4. Notification of Incidents, Claims or Suits

Contractor shall report to County:

1. Any accident or incident relating to services performed under this Agreement which involves injury or property damage which may result in the filing of a claim or lawsuit against Contractor and/or County. Such report shall be made in writing within twenty-four (24) hours of occurrence.

2. Any third party claim or lawsuit filed against Contractor arising from or related to services performed by Contractor under this Agreement.

3. Any injury to a Contractor employee which occurs on County property. This report shall be submitted on a "County Non-employee Injury Report" to County's Project Director.

4. Any loss, disappearance, destruction, misuse or theft of any kind whatsoever of County property, monies or securities entrusted to Contractor under the terms of this Agreement.

8.2.5. Insurance Coverage Requirements for Subcontractors

All subcontractors performing work under this Agreement shall be subject to the insurance requirements of this Agreement, which shall be maintained at no cost to County. Contractor shall ensure that any and all subcontractors performing services under this Agreement meet the insurance requirements of this Agreement by either:

1. Contractor providing evidence of insurance covering the activities of subcontractors, or

2. Contractor providing evidence submitted by subcontractors evidencing that subcontractors maintain the required insurance coverage. County retains the right to obtain copies of evidence of subcontractor insurance coverage at any time.

8.3. Failure to Procure and Maintain Insurance

Failure by Contractor to procure and maintain the required insurance or to provide evidence of insurance coverage acceptable to County, shall constitute a material breach of this Agreement, upon which County may immediately terminate or suspend this Agreement. County, at its sole option, may obtain damages from Contractor resulting from such breach. Alternatively, County may purchase such required insurance coverage, and, without further notice to Contractor, deduct from the sums due to Contractor any premium costs advanced by County for such insurance.

9. ADMINISTRATION OF AGREEMENT - COUNTY

9.1. County's Project Director

9.1.1. County's Project Director for this Agreement shall be the following person or his/her designee:

Ms. Jane White
County of Los Angeles
Department of Public Works
Traffic and Lighting Division
P.O. Box 1460
Alhambra, CA 91802-1460

Telephone: (626) 300-4740
Fax: (626) 300-4736
E-mail: jwhite@ladpw.org

9.1.2. County will notify Contractor of any change in the name or address of County's Project Director.

9.1.3. County's Project Director will be responsible for ensuring that the objectives of this Agreement are met and for monitoring Contractor's compliance with this Agreement.

9.1.4. County's Project Director is not authorized to make any changes in any of the terms and conditions of this Agreement and is not authorized to further obligate County in any respect whatsoever.

9.1.5. County's Project Director shall have the right at all times to inspect any and all tasks, subtasks, deliverables, goods, services or other work provided by or on behalf of Contractor.

9.2. County's Project Manager

9.2.1. County's Project Manager be the following person or his/her designee:

Ms. Inez Yeung
County of Los Angeles
Department of Public Works
Traffic and Lighting Division
P.O. Box 1460
Alhambra, CA 91802-1460

Telephone: (626) 300-4734
Fax: (626) 300-4736
E-mail: iyeung@ladpw.org

9.2.2. County will notify Contractor of any change in the name or address of County's Project Manager.

9.2.3. County's Project Manager will be responsible for ensuring that the technical standards and requirements of this Agreement are met.

9.2.4. County's Project Manager is not authorized to make any changes in any of the terms and conditions of this Agreement and is not authorized to further obligate County in any respect whatsoever.

9.2.5. County's Project Manager will advise County's Project Director as to Contractor's performance with respect to requirements and technical standards.

9.2.6. County's Project Manager will interface with Contractor's Project Manager on a regular basis.

9.3. County Personnel

All County personnel assigned to this Agreement shall be under the exclusive supervision of County. Contractor understands and agrees that all such County personnel are assigned only for the convenience of County. Contractor hereby represents that its price,

project schedule and performance hereunder are based solely on the work of Contractor's personnel, except as otherwise expressly provided in this Agreement.

10. ADMINISTRATION OF AGREEMENT - CONTRACTOR

10.1. Contractor's Project Manager

10.1.1. Contractor's Project Manager shall be the following person, who shall be a full-time employee of Contractor:

Charles Dankocsik
35 South Raymond Avenue, Suite 200
Pasadena CA 91105-1931

Telephone: (626) 440-8343
Fax: (626) 584-9114
E-mail: chuck.dankocsik@transcore.com

10.1.2. Contractor's Project Manager shall be responsible for Contractor's performance of all its tasks, subtasks, deliverables, services and other work under this Agreement and ensuring Contractor's compliance with this Agreement.

10.1.3. Contractor's Project Manager shall be responsible for Contractor's day-to-day activities hereunder and for reporting to County in the manner set forth in Paragraph 10.3 (Reports by Contractor) and in Exhibit A (Statement of Work).

10.1.4. Contractor's Project Manager shall coordinate with County's Project Director and/or Project Manager, at the sole discretion of County's Project Director, on a regular basis.

10.2. Approval of Contractor's Staff

10.2.1. In fulfillment of its responsibilities under this Agreement, Contractor shall utilize, and permit utilization of, only staff fully trained and experienced, and as appropriate, licensed or certified in the technology, trades, tasks and subtasks required by this Agreement. Contractor shall supply sufficient staff to discharge its responsibilities hereunder in a timely and efficient manner.

10.2.2. County has the absolute right to approve or disapprove each member or proposed member of Contractor's key staff, including Contractor's Project Manager, prior to and during his/her performance of any work hereunder and prior to any proposed changes in Contractor's key staff, including Contractor's Project Manager or any lead member of Contractor's Project Team. County's Project Director may require the replacement of any member of Contractor's Staff performing, or offering to perform, work hereunder, including, but not limited to, Contractor's key staff. Such County requested changes shall occur within fifteen (15) days of County's request. Contractor shall provide County's Project Director with resumes of all proposed key staff substitutions and shall make such staff available for interview by County upon request of County's Project

Director. Contractor shall provide fifteen (15) days advance notice of any Contractor-initiated key staff changes.

10.2.3. Contractor also represents and warrants that it shall, to the maximum extent possible, take all necessary steps to ensure continuity over time of the membership of the group constituting Contractor's Staff, including, but not limited to, Contractor's Project Manager. Contractor shall promptly fill any staff vacancy with personnel having qualifications at least equivalent to those of the staff member(s) being replaced.

In the event Contractor should ever need to remove any key staff from performing work under this Agreement, Contractor shall provide County with adequate notice and work on a mutually agreeable transition plan so as to provide an acceptable replacement and ensure project continuity.

10.2.4. The following persons have been identified by Contractor as the lead members of its Project Team and are hereby approved as of the Effective Date by County in the following roles:

Jack Schneider (TransCore)	Systems Engineer
Marc Porter (MMA)	Deputy Project Manager
Jason Osaki (TransCore)	Communications Engineer

10.2.5. Contractor shall be responsible for any additional costs incurred by the replacement of personnel pursuant to Paragraphs 10.2.2 and 10.2.3 above. In no event shall such an occurrence result in an increase in compensation to be paid by County under this Agreement.

10.3. <u>Reports by Contractor</u>

In order to control expenditures and to ensure the reporting of all tasks, subtasks, deliverables, goods, services, and other work provided by Contractor, Contractor shall provide to County's Project Director with, a copy of County's Project Manager, monthly written reports as described in Exhibit A (Statement of Work), which shall include, but not be limited to, the following information:

A. Period covered by the report.

B. Summary of project status as of reporting date.

C. Tasks, subtasks, deliverables, goods, services and other work scheduled for the reporting period, which were not completed.

D. Tasks, subtasks, deliverables, goods, services and other work for the reporting period, which were completed.

E. Tasks, subtasks, deliverables, goods, services and other work completed in the reporting period, which were not scheduled.

F. Tasks, subtasks, deliverables, goods, services and other work to be completed in the next reporting period.

G. Issues to be resolved.

H. A list of outstanding issues and draft documents and a current status of those documents.

11. PROPRIETARY CONSIDERATIONS

11.1. County Materials

Contractor and County agree that all materials, designs, specifications, techniques, plans, reports, deliverables, data and any other information developed under this Agreement and all copyright, patent, trade secret and other proprietary rights therein, shall be the sole property of County (hereafter in this Paragraph 11, collectively, "County Materials"). Contractor hereby assigns and transfers to County all Contractor's right, title and interest in and to all such County Materials developed under this Agreement.

Notwithstanding such County ownership in the County Materials, Contractor may retain possession of all working papers prepared by Contractor under this Agreement. During and for a minimum of five (5) years subsequent to the term of this Agreement, County shall have the right to inspect any and all such working papers, make copies thereof and use the working papers and the information contained therein.

11.2. Transfer to County

Upon request of County, Contractor shall execute all documents requested by County and shall perform all other acts requested by County to assign and transfer to, and vest in County, all Contractor's right, title and interest in and to the County Materials, including, but not limited to, all copyright, patent and trade secret rights. County shall have the right to register all copyrights and patents in the name of the County of Los Angeles. Further, County shall have the right to assign, license, or otherwise transfer any and all County's right, title and interest, including, but not limited to, copyrights and patents, in and to the County Materials.

11.3. Copyright Notices

Contractor shall affix the following notice to all County Materials: "© Copyright 200_ (or such other appropriate date of first publication), County of Los Angeles. All Rights Reserved." Contractor shall affix such notice: (1) at the beginning and at the end of all source code, such that on storage media and on printouts, the notice appears with or near the title of each program; (2) continuously on all sign-on display screens; (3) on the title page of all system and user documentation; and (4) as otherwise may be directed by County.

11.4. Contractor's Obligations

Contractor shall protect the security of and keep confidential all County Materials obtained or produced under this Agreement. Further, Contractor shall use whatever security measures are necessary to protect all such County Materials from loss or damage by any cause, including fire and theft.

Contractor shall not reproduce, distribute or disclose to any person or entity any information identifying, characterizing, or relating to any risk, threat, vulnerability, weakness or problem regarding data security in County's computer systems, or to any safeguard, countermeasure or contingency plan, policy or procedure for data security contemplated or implemented by County without County's prior written consent.

During the term of this Agreement and for five (5) years thereafter, Contractor shall also maintain and provide security for all Contractor's working papers prepared under this Agreement.

11.5. Proprietary and Confidential

Any and all materials developed or originally acquired by Contractor outside the scope of this Agreement, (hereinafter "Contractor Materials") which Contractor desires to use hereunder and which Contractor considers to be proprietary or confidential, must be specifically identified by Contractor to County's Project Manager as proprietary or confidential and shall be plainly and prominently marked by Contractor as "PROPRIETARY" or "CONFIDENTIAL" on each appropriate page of any document containing such Contractor Materials.

11.6. County's Rights and Obligations

County shall protect the security and keep confidential, to the extent possible, as permitted by law, Contractor Materials that are proprietary and/or confidential. County agrees not to reproduce, distribute, or disclose to any non-County entities any such Contractor Materials that are proprietary and/or confidential without the prior written consent of Contractor, except as required by law or as specifically permitted pursuant to this Agreement. Notwithstanding the foregoing, it is expressly agreed that County may reproduce, distribute or disclose such proprietary and/or confidential Contractor Materials without Contractor's consent to other governmental or public agencies within Los Angeles County, provided that County acquires consent of such governmental or public agencies to the same obligations assumed by County to protect and keep confidential such Contractor Materials. Further, County shall use whatever security measures are reasonably necessary to protect all such Contractor's Materials from loss or damage by any cause, including, but not limited to, fire and theft.

11.7. No Obligation by County

Notwithstanding any other provision of this Agreement, County shall not be obligated to Contractor in any way under this Agreement for disclosure of:

A. Any of Contractor Materials that are proprietary and/or confidential which are not plainly and prominently marked with restrictive legends as required pursuant to Paragraph 11.5 (Proprietary and Confidential);

B. Any County Materials covered under Paragraph 11.3 (Copyright Notices); or

C. Any materials, which County is required to make under the California Public Records Act or otherwise by law.

11.8. Survival

The provisions of this Paragraph 11 shall survive the expiration or termination of this Agreement.

12. RECORDS AND AUDITS

12.1. Contractor shall maintain accurate and complete financial records of its activities and operations relating to this Agreement in accordance with generally accepted accounting principles. Contractor shall also maintain accurate and complete employment and other records relating to its performance of this Agreement. Contractor agrees that County, or its authorized representatives (who shall not be business competitors of Contractor, as reasonably determined by County), shall have access to and the right to examine, audit, excerpt, copy or transcribe any pertinent transaction, activity, or records relating to this Agreement during normal business hours. All such material, including, but not limited to, all financial records, time cards, and other employment records, and proprietary data and information, shall be kept and maintained by Contractor and shall be made available to County during the term of this Agreement and for a period of five (5) years thereafter unless County's written permission is given to dispose of any such material prior to such time. All such material shall be maintained by Contractor at a location in Los Angeles County, provided that if any such material is located outside Los Angeles County, then, at County's option, Contractor shall transport such material to a location in Los Angeles County or pay County for travel, per diem and other costs incurred by County to examine, audit, excerpt, copy or transcribe such material at such other location.

12.2. In the event that an audit is conducted of Contractor specifically regarding this Agreement by any Federal or State auditor, or by any auditor or accountant who is not an employee of Contractor, then Contractor shall file a copy of such audit report with County's Auditor-Controller within thirty (30) days of Contractor's receipt thereof, unless otherwise provided by applicable Federal or State law or under this Agreement. County shall make a reasonable effort to maintain the confidentiality of such audit report(s).

12.3. Failure on the part of Contractor to comply with the provisions of this Paragraph 12 shall constitute a material breach of this Agreement upon which County may terminate or suspend this Agreement.

13. NOTICES

13.1. All notices or demands required or permitted to be given under this Agreement, unless otherwise specified, shall be in writing and shall be addressed to the parties at the following addresses and delivered: (i) by hand with signed receipt, (ii) by first-class registered or certified mail, postage prepaid, or (iii) by facsimile or electronic mail transmission followed within twenty-four (24) hours by a confirmation copy mailed by first-class registered or certified mail, postage prepaid. Notices shall be deemed given at the time of signed receipt in the case of hand delivery, three (3) days after deposit in the United States mail as set forth above, or on the date of facsimile or electronic mail transmission if followed by timely confirmation mailing. Addresses may be changed by either party by giving ten (10) days prior written notice thereof to the other party.

13.2. Director shall have the authority to issue all notices or demands which are required or permitted to be issued by County under this Agreement.

13.3. To County:

Jane White
County of Los Angeles
Department of Public Works
Traffic and Lighting Division
P.O. Box 1460
Alhambra, CA 91802-1460

Telephone: (626) 300-4740
Fax: (626) 300-4736
E-mail: jwhite@ladpw.org

13.4. To Contractor:

Charles Dankocsik
35 South Raymond Avenue, Suite 200
Pasadena CA 91105-1931

Telephone: (626) 440-8343
Fax: (626) 584-9114
E-mail: chuck.dankocsik@transcore.com

14. CHANGE NOTICES AND AMENDMENTS

14.1. No representative of either County or Contractor, including those named in this Agreement, is authorized to make any changes in any of the terms, obligations or conditions of this Agreement, except through the procedures set forth in this Paragraph 14.

14.2. County reserves the right to initiate changes to any portion of the work required under this Agreement and to any other provisions of this Agreement. All such changes and amendments shall be by the mutual agreement of the parties in accordance with Paragraphs 14.3 and 14.4.

14.3. For any change requested by County which does not affect the Statement of Work, term, Contract Sum, payments or any term or condition included in this Agreement, a Change Notice shall be prepared and executed by County's Project Director and Contractor's Project Manager.

14.4. Except as otherwise specified in this Agreement, for any change which affects the Statement of Work, term, Contract Sum, payments or any term or condition included in this Agreement, a negotiated Amendment to this Agreement shall be prepared and executed by County's Board of Supervisors and Contractor's authorized representative. Notwithstanding the foregoing, the Director may execute, on behalf of County, any Amendments affecting the Contract Sum or Statement of Work to the extent he is so authorized pursuant to County Code or State statute.

14.5. County and Contractor have agreed upon a project schedule for the work described in Exhibit B (Schedule of Deliverables and Payments) (hereinafter "Project Schedule"). Notwithstanding any other provision of this Paragraph 14, changes to the Project Schedule shall be made only upon mutual agreement in writing by County's Project Director and Contractor's Project Manager, provided that County's Project Director's and Contractor's Project Manager's agreement to alter the Project Schedule shall not prejudice either party's right to claim that such alterations constitute an Amendment to this Agreement that shall be governed by the terms of Paragraph 14.4 above.

14.6. Notwithstanding any other provision of this Paragraph 14, to the extent that extensions of time for Contractor performance do not impact either the Statement of Work or cost of this Agreement, County's Project Director, in his/her sole discretion, may grant Contractor extensions of time in writing for the work listed in Exhibit B (Schedule of Deliverables and Payments).

14.7. Notwithstanding any other provision of this Paragraph 14 or Paragraph 37 (Termination for Convenience), County's Director shall take all appropriate action to carry out any orders of County's Board of Supervisors relating to this Agreement, and, for this purpose, County's Director is authorized to: (i) issue written notice(s) of partial or total termination of this Agreement pursuant to Paragraph 37 (Termination for Convenience) without further action by County's Board of Supervisors and/or (ii) prepare and sign

Amendments to this Agreement which reduce the Statement of Work and the Contract Sum without further action by County's Board of Supervisors.

14.7.1. Such notices of partial or total termination shall be authorized under the following conditions:

A. Notices shall be in compliance with all applicable Federal, State and County laws, rules, regulations, ordinances, guidelines and directives.

B. Director shall obtain approval of County Counsel for any notice.

C. Director shall file a copy of all notices with the Executive Office of County's Board of Supervisors within fifteen (15) days after execution of each notice.

14.7.2. Such Amendments shall be authorized under the following conditions:

A. Notices shall be in compliance with all applicable Federal, State and County laws, rules, regulations, ordinances, guidelines and directives.

B. County's Board of Supervisors has appropriated sufficient funds for purposes of such Amendments.

C. Director shall obtain approval of County Counsel for any notice.

D. Director shall file a copy of all Amendments with the Executive Office of County's Board of Supervisors within fifteen (15) days after execution of each Amendment.

14.8. Facsimile

Except for the parties' initial signatures to this Agreement, which must be provided in "original" form and not by facsimile, County and Contractor hereby agree to regard facsimile representations of original signatures of authorized officials of each party, when appearing in appropriate places on the Change Notices prepared pursuant to this Paragraph 14 and received via communications facilities, as legally sufficient evidence that such original signatures have been affixed to Change Notices to this Agreement, such that the parties need not follow up facsimile transmissions of such documents by subsequent (non-facsimile) transmissions of "original" versions of such documents.

15. EQUIPMENT AND SUPPLIES

Contractor agrees to furnish all necessary equipment and supplies used in the performance of all services under this Agreement at Contractor's sole cost and expense.

16. COUNTY'S RESPONSIBILITY

County will make available drawings, specifications and other records available in County's Department of Public Works' files. Notwithstanding the foregoing, County does not represent the accuracy of the content of said materials.

17. RESTRICTIONS ON LOBBYING

Contractor, and each County lobbyist or County lobbying firm as defined in County Code Section 2.160.010, retained by Contractor, shall fully comply with County's Lobbyist Ordinance, County Code Chapter 2.160. Failure on the part of Contractor or any County lobbyist or County lobbying firm retained by Contractor to fully comply with County's Lobbyist Ordinance shall constitute a material breach of this Agreement, upon which County may immediately terminate or suspend this Agreement.

18. DISCLOSURE OF INFORMATION

18.1. Contractor shall not disclose any details in connection with this Agreement, including but not limited to any of its terms or conditions or any circumstances which occur during the performance of this Agreement, to any person or entity except as may be otherwise provided herein or required by law. In the event Contractor receives any court or administrative agency order, service of process or request by any person or entity (other than Contractor's professionals) for disclosure of any such details, Contractor shall immediately notify County's Project Director. Thereafter, Contractor shall comply with such order, process or request only to the extent required by applicable law. Notwithstanding the preceding sentence, to the extent permitted by law, Contractor shall delay such compliance and cooperate with County to obtain relief from such obligations to disclose until County shall have been given a reasonable opportunity to obtain such relief.

18.2. However, in recognizing Contractor's need to identify its services and related clients to sustain itself, County shall not inhibit Contractor from publishing its role under this Agreement under the following conditions:

A. Contractor shall develop all publicity material in a professional manner.

B. During the term of this Agreement, Contractor shall not, and shall not authorized another to, publish or disseminate any commercial advertisements, press releases, feature articles, or other materials using the name of County without the prior consent of County's Project Director, which consent shall not be unreasonably withheld.

C. Contractor may, without the prior written consent of County, indicate in its proposals and sales materials that it has been awarded this Agreement with County, provided that the requirements of this Paragraph 18 shall apply.

19. CONFIDENTIALITY

19.1. Contractor shall maintain the confidentiality of all its records, data and information, including, but not limited to, billings and County records, in accordance with all applicable Federal, State and County laws, regulations, ordinances, guidelines and directives relating to confidentiality. Contractor shall inform all of its officers, employees, and agents performing work hereunder of the confidentiality provisions of this Agreement and shall ensure that each of its officers, employees or agents performing work hereunder has executed, prior to commencing such work, Contractor's standard confidentiality and copyright assignment agreement, sufficient to bind such officer, employee or agent to the confidentiality and non-disclosure provisions of this Agreement. Contractor shall provide to County a copy of its standard confidentiality and copyright assignment agreement upon request. Notwithstanding the foregoing, Contractor shall have no obligation with respect to the disclosure of confidential information that can be established to have: (a) been known publicly; (b) become known publicly without fault on the part of Contractor without any obligation of confidentiality from a source lawfully having possession of such information; or (c) been disclosed pursuant to an order of a court of competent jurisdiction.

19.2. Contractor shall indemnify, defend and hold harmless County, its officers, employees and agents from and against any and all loss, damage, liability and expense arising from any disclosure of such records and information by Contractor, its officers, employees or agents, except for any disclosure authorized by this Paragraph 19.

19.3. Contractor acknowledges that a breach by Contractor of this Paragraph 19 may result in irreparable injury to County that may not be adequately compensated by monetary damages and that, in addition to County's other rights under this Paragraph 19 and at law in equity, County shall have the right to injunctive relief to enforce the provisions of this Paragraph 19.

20. WARRANTY

20.1. General Warranties

Contractor hereby represents and warrants that any tasks, subtasks, goods, services or other work provided or delivered by Contractor pursuant to this Agreement shall be free from any and all Deficiencies and shall meet the requirements set forth in Exhibit A (Statement of Work).

20.2. Correction of Deficiencies

Contractor shall promptly upon notice correct any and all non-conformances with Exhibit A (Statement of Work), Deficiencies, errors or omissions in any tasks, subtasks, deliverables, goods, services and other work provided or developed by Contractor pursuant to this Agreement during the term of this Agreement. The correction of all such non-conformances with Exhibit A (Statement of Work), Deficiencies, errors or omissions shall be at no additional cost to County.

20.3. Further Warranties

Contractor further represents, warrants, covenants and agrees that throughout the term of this Agreement:

A. Contractor shall strictly comply with the descriptions and specifications (including, but not limited to, deliverable documentation, performance capabilities, accuracy, completeness, characteristics, specifications, configurations, functions, requirements and standards applicable to professional software design meeting industry standards) set forth in this Agreement, including Exhibit A (Statement of Work).

B. All tasks, subtasks, deliverables, goods, services and other work shall be performed in a timely and professional manner by qualified personnel.

C. All tasks, subtasks, deliverables, goods, services and other work shall be completed in accordance with this Agreement, including the Project Schedule, deliverable documentation and manufacturer's specifications.

D. All data analysis and working papers generated by Contractor and under Contractor's control shall be available to County during the term of this Agreement and for a minimum period of five (5) years thereafter.

20.4. Breach of Warranty Obligations

In the event Contractor fails to timely perform its warranty obligations set forth in this Paragraph 20, then County may perform any required correction or other work and debit Contractor therefor at County's direct actual cost of outside labor and materials and County's burdened labor rates (including salary, employee benefits, and applicable reimbursement policies) to remedy any failure to conform to the provisions of this Agreement.

20.5. Warranty Pass-Through

Contractor shall assign to County to the fullest extent permitted by law or by this Agreement and shall otherwise ensure that the benefits of any applicable warranty or indemnity offered by any manufacturer of any product or service provided under this Agreement shall fully extend to and be enjoyed by County.

20.6. Disclaimer of Other Warranties

The express warranties, if any, contained in this Agreement are the sole and exclusive warranties provided by Contractor. Contractor specifically disclaims any other warranties, express or implied, including but not limited, to warranties of merchantability or fitness for a particular purpose, as well as any warranties alleged to have arisen from custom, usage or past dealings between the parties.

21. WARRANTY AGAINST CONTINGENT FEES

21.1. Contractor represents and warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon any agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by Contractor for the purpose of securing business.

21.2. For breach of this warranty, County shall have the right to terminate this Agreement for default and, at its sole discretion, deduct from the Agreement price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

22. PROHIBITION AGAINST ASSIGNMENT AND DELEGATION

Contractor shall not assign its rights and/or delegate its duties under this Agreement, whether in whole or in part, without the prior written consent of County, in its sole discretion, and any attempted assignment or delegation without such consent shall be null and void. For purposes of this Paragraph 22, County's consent shall require a written Amendment to this Agreement, which is formally approved and executed by both parties. Any payments by County to any approved delegatee or assignee on any claim under this Agreement, in consequence of any such consent, shall reduce dollar for dollar any claims which Contractor may have against County and shall be subject to set off, recoupment or other reduction for any claims which County may have against Contractor.

23. INDEPENDENT CONTRACTOR STATUS

23.1. This Agreement is by and between Contractor and County and is not intended, and shall not be construed, to create the relationship of agent, servant, employee, partnership, joint venture or association, as between Contractor and County. The employees and agents of one party shall not be, or be construed to be, the employees or agents of the other party for any purpose whatsoever. Contractor shall function as, and in all respects is, an independent contractor.

23.2. Contractor shall be solely liable and responsible for providing to, or on behalf of, all persons performing work pursuant to this Agreement, all compensation and benefits. County shall have no liability or responsibility for the payment of any salaries, wages, unemployment benefits, disability benefits, liability insurance, workers' compensation insurance and benefits, payroll taxes including Federal, State and local taxes, or other compensation, benefits or taxes for any personnel provided by or performing work on behalf of Contractor.

23.3. Contractor understands and agrees that all persons performing work pursuant to this Agreement are, for purposes of workers' compensation liability, the sole employees of Contractor and its subcontractors and not employees of County. Contractor and its subcontractors shall be solely liable and responsible for furnishing any and all workers' compensation benefits to any person as a result of any injuries arising from or connected with any work performed by or on behalf of Contractor pursuant to this Agreement.

23.4. Notwithstanding the provisions of this Paragraph 23, the employees and agents of Contractor shall, while on the premises of County, comply with all rules and regulation of the premises, including, but not limited to, security requirements.

24. SUBCONTRACTING

24.1. County has relied, in entering into this Agreement, on the reputation of and on obtaining the personal performance of Contractor itself. Consequently, no performance of this Agreement, or any portion thereof, shall be subcontracted by Contractor without the prior written consent of County as provided in this Paragraph 24. Any attempt by Contractor to subcontract any performance, obligation or responsibility under this Agreement without the prior written consent of County shall be null and void and shall constitute a material breach of this Agreement upon which County may immediately terminate this Agreement. Contractor shall notify all potential Subcontractors of the provisions of this Paragraph 24.

24.2. If Contractor desires to subcontract any portion of its performance, obligations or responsibilities under this Agreement, Contractor shall provide to County, in writing, a request for written approval to enter into the particular subcontract, which request shall include:

A. The reason(s) for the particular subcontract;

B. Identification of the proposed subcontractor and an explanation of why and how the proposed subcontractor was selected;

C. A detailed description of the work to be performed by the proposed subcontractor;

D. Confidentiality provisions applicable to the proposed subcontractor's officers, employees and agents, which would be incorporated into the subcontract; and

E. Any other information and/or certifications requested by County.

24.3. County will review Contractor's request to subcontract and determine, in its sole discretion, whether or not to consent to such request on a case-by-case basis.

24.4. Contractor shall indemnify, defend and hold harmless County, its officers, employees, and agents, from and against any claims, demands, liabilities, damages, costs, and expenses, including, but not limited to, reasonable defense costs and legal, accounting, or other expert consulting or professional fees in any way directly or indirectly arising from or related to Contractor's use of any subcontractor, including, without limitation, any officers, employees, or agents of any subcontractor, in the same manner as required for Contractor, its officers, employees, and agents, under this Agreement.

24.5. Notwithstanding any County consent to any subcontracting, Contractor shall remain fully responsible for any and all performance required of it under this Agreement, including, but not limited to, the obligation to properly supervise, coordinate and perform all work required hereunder. All subcontracts shall be made in the name of Contractor and shall not bind nor purport to bind County. Further, County approval of any subcontract shall not be construed to limit in any way Contractor's performance, obligations or responsibilities to County, nor shall such approval limit in any way any of County's rights or remedies contained in this Agreement. Additionally, County approval of any subcontract shall not be construed in any way to constitute the determination of the allowableness or appropriateness of any cost or payment under this Agreement.

24.6. County's consent to any subcontracting shall not waive County's right to prior and continuing approval of any and all personnel, including subcontractor employees, providing services under this Agreement. Contractor shall notify its subcontractors of this County's right prior to subcontractors commencing performance under this Agreement. Contractor shall ensure that any subcontractor personnel not approved in writing by County shall be immediately removed from the provision of any services under the particular subcontract or that other action is taken as requested by County.

24.7. Further, in the event that County consents to any subcontracting, such consent shall be subject to County's right to terminate, in whole or in part, any subcontract at any time upon written notice to Contractor when such subcontractor is deemed by County to be in material breach of its subcontract or this Agreement. County shall not be liable or responsible in any way to Contractor, to any subcontractor, or to any officers, employees or agents of Contractor or any subcontractor, for any claims, demands, damages, liabilities, losses, costs or expenses, including, but not limited to, defense costs and legal,

accounting and other expert, consulting or professional fees, in any way arising from or related to County's exercise of such rights.

24.8. In the event that County consents to any subcontracting, the subcontractor, on behalf of itself, its successors and administrators, shall assume and be bound by and shall be deemed to have assumed and agreed to be bound by each and all of the provisions of this Agreement and any amendment hereto.

24.9. The Director or his/her designee is hereby authorized to act for and on behalf of County pursuant to this Paragraph 24.9, including, but not limited to, consenting to any subcontracting.

24.10. Notwithstanding County's consent to any subcontracting, Contractor shall be solely liable and responsible for any and all payments and other compensation to all subcontractors and their officers, employees, agents and successors in interest for any services performed by subcontractors under this Agreement. County shall have no liability or responsibility whatsoever for any payment or other compensation for any subcontractors or their officers, employees, and agents.

24.11. In the event that County consents to any subcontracting, for each subcontract entered into by Contractor, Contractor shall deliver a fully executed copy of each subcontract entered into by Contractor to County's Project Director, immediately after the effective date of the subcontract, but in no event later than the date any work is performed under the subcontract, which subcontract at a minimum shall include provisions sufficient to bind each officer, employee or agent of the proposed subcontractor to the confidentiality and non-disclosure provisions of this Agreement.

24.12. In the event that County consents to any subcontracting, such consent shall apply to each particular subcontract only and shall not be, or be construed to be, a waiver of this Paragraph 24 or a blanket consent to any further subcontracting.

24.13. Notwithstanding the foregoing, County hereby agrees to a subcontract with Meyer, Mohaddes, Inc., identified by Contractor as a subcontractor in its proposal for this Agreement. Consequently, the subcontract with Meyer, Mohaddes, Inc is deemed approved by County as required by this Paragraph 24. However, all other requirements and obligations set forth in this Paragraph 24 shall apply to this subcontractor.

25. <u>COMPLIANCE WITH APPLICABLE LAWS</u>

25.1. Contractor's activities hereunder shall comply with all applicable Federal, State and local laws, rules, regulations, ordinances and directives, and all provisions required thereby to be included in this Agreement are hereby incorporated herein by reference. Contractor shall have up to fifteen (15) days to correct any noncompliance with County rules, regulations, ordinances and directives following written notice from County.

25.2. Contractor shall indemnify, defend and hold harmless County, its officers, employees and agents from and against any and all claims, demands, damages, liabilities, losses, costs and expenses, including, but not limited to, defense costs and legal, accounting and other

expert, consulting or professional fees, arising from or related to any violation on the part of Contractor, its employees, agents or subcontractors of any such laws, rules, regulations, ordinances or directives. Any legal defense pursuant to Contractor's indemnification obligations under this Paragraph 25.2 shall be conducted by Contractor and performed by counsel selected by Contractor and approved by County (which approval shall not be unreasonably withheld) in writing. Notwithstanding the preceding sentence, County shall have the right to participate in any such defense at its sole cost and expense, except that in the event Contractor fails to provide County with a full and adequate defense, as required by law or this Agreement, County shall be entitled to reimbursement for all such costs and expenses.

26. FAIR LABOR STANDARDS ACT

Contractor shall comply with all applicable provisions of the Federal Fair Labor Standards Act, and shall indemnify, defend and hold harmless County, its officers, employees and agents from any and all liability, including, but not limited to, wages, overtime pay, liquidated damages, penalties, court costs and attorneys' fees arising under any wage and hour law, including, but not limited to, the Federal Fair Labor Standards Act, for work performed by Contractor's employees for which County may be found jointly or solely liable.

27. ANTI-DISCRIMINATION AND COMPLIANCE WITH CIVIL RIGHTS LAWS

27.1. Contractor certifies and agrees that all persons employed by Contractor, its affiliates, subsidiaries and holding companies are, and will be, treated equally by Contractor without regard to or because of race, religion, ancestry, national origin, sex, age, physical or mental handicap, marital status, sexual orientation or political affiliation, in compliance with all applicable Federal and State anti-discrimination laws and regulations.

27.2. Contractor shall, pursuant to Section 4.32.010 et seq. of the Los Angeles County Code, comply with the provisions of the Contractor's EEO Certification included as part of Contractor's Proposal for the San Gabriel Valley Traffic Signal Forum Advanced Traffic Management System Improvement Project (Exhibit C).

27.3. Contractor shall ensure that applicants and employees are treated equally during employment, without regard to race, color, religion, ancestry, national origin, sex, age, physical or mental handicap, marital status, sexual orientation or political affiliation, in compliance with all applicable Federal and State anti-discrimination laws and regulations. Such action shall include, but is not limited to: employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

27.4. Contractor further certifies and agrees that it will deal with its subcontractors, bidders and vendors without regard to or because of race, religion, ancestry, national origin, sex, age, physical or mental handicap, marital status, sexual orientation or political affiliation,

except to the extent necessary to comply with applicable Federal and State anti-discrimination laws and regulations.

27.5. Contractor certifies that it, its affiliates, subsidiaries and holding companies are in compliance with all Federal, State, and local laws, including, but not limited to:

1. Title VII, Civil Rights Act of 1964;

2. Section 504, Rehabilitation Act of 1973;

3. Age Discrimination Act of 1975;

4. Title IX, Education Amendments of 1973, as applicable; and

5. Title 43, Part 17, Code of Federal Regulations, Subparts A & B,

and that no person shall, on the grounds of race, creed, color, national origin, political affiliation, marital status, sex, age, or handicap, be subject to discrimination as to any privileges or uses gained under this Agreement or under any project, program or activity supported by this Agreement.

27.6. Contractor shall allow County representatives access to its employment records during regular business hours to verify compliance with the provisions of this Paragraph 27 when so requested by County.

27.7. Contractor specifically recognizes and agrees that if County finds that any of the provisions of this Paragraph 27 have been violated, such violation shall, at the election of County, constitute a material breach of this Agreement upon which County may cancel, terminate or suspend this Agreement. While County reserves the right to determine individually that the anti-discrimination provisions of this Agreement have been violated, in addition, a determination by the California Fair Employment Practices Commission or the Federal Equal Employment Opportunity Commission that Contractor has violated Federal or State anti-discrimination laws or regulations shall constitute a finding by County that Contractor has violated the anti-discrimination provisions of this Agreement.

27.8. The parties agree that in the event Contractor is found to have violated the anti-discrimination provisions of this Agreement, and that such discrimination was directly associated with the performance of services provided hereunder, County may require, pursuant to Los Angeles Code Section 4.32.010(E), that Contractor pay the sum of Five Hundred Dollars ($500) for each such violation in lieu of canceling, terminating or suspending this Agreement, as liquidated damages are extremely difficult to ascertain or calculate precisely. County and Contractor specifically agree that the aforesaid amount shall be imposed as liquidated damages, and not as a forfeiture or penalty. In the alternative, County may elect to terminate this Agreement pursuant to Paragraph 36 (Termination for Default).

28. EMPLOYMENT ELIGIBILITY VERIFICATION

28.1. Contractor warrants that it fully complies with all Federal and State statutes and regulations regarding employment of aliens and others and that all its employees performing services hereunder meet the citizenship or alien status requirements contained in Federal and State statutes and regulations.

28.2. Contractor shall obtain, from all employees performing work under this Agreement, prior to commencing work hereunder, all verifications and other documentation of employment eligibility status required by Federal and State statutes and regulations as they currently exist and as they may be hereafter amended. Contractor shall retain such documentation for all covered employees for the period prescribed by law.

28.3. Contractor shall indemnify, defend and hold harmless County, its officers, employees and agents from and against any and all claims, demands, damages, liabilities, losses, costs and expenses, including but not limited to defense costs and legal, accounting and other expert, consulting or professional fees, arising out of or in connection with any employer sanctions and any other liability which may be assessed against Contractor or County in connection with any alleged violation of Federal or State statutes or regulations pertaining to the eligibility for employment of persons performing services under this Agreement. Any legal defense pursuant to Contractor's indemnification obligations under this Paragraph 28 shall be conducted by Contractor and performed by counsel

selected by Contractor and approved by County in writing, which approval shall not be unreasonably withheld. Notwithstanding the foregoing, County shall have the right to participate in any such defense, at its sole cost and expense, except that in the event Contractor fails to provide County with a full and adequate defense, as required by law or this Agreement, County shall be entitled to reimbursement for all such costs and expenses.

29. REDUCTION OF SOLID WASTE

Consistent with County's Board of Supervisors' policy to reduce the amount of solid waste deposited at County landfills, Contractor agrees to use recycled-content paper to the maximum extent possible for purposes of this Agreement.

30. WAIVER

No breach by Contractor of any provision of this Agreement can be waived unless done in writing. No waiver by County of any breach of any provision of this Agreement shall constitute a waiver of any other breach or of such provision. Failure of County to enforce at any time, or from time to time, any provision of this Agreement shall not be construed as a waiver thereof. The rights and remedies set forth in this Paragraph 30 shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Agreement.

Without limitation of the foregoing, County may deduct from amounts otherwise payable to Contractor hereunder County's damages for Contractor's breach of any provision hereof. The preceding sentence is intended only as a clarification of County's remedies in the event of breach, and shall not be deemed to impair any claims that Contractor may have against County or Contractor's rights to assert such claims pursuant to Paragraph 42 (Dispute Resolution Procedure).

31. GOVERNING LAW, JURISDICTION AND VENUE

This Agreement shall be governed by, and construed in accordance with, the laws of the State of California applicable to agreements made and to be performed within the State. Contractor hereby agrees and consents to the exclusive jurisdiction of the courts of the State of California for all purposes regarding this Agreement and further agrees and consents that the venue of any action brought by Contractor, on Contractor's behalf, or on the behalf of any subcontractor, which arises from this Agreement or is concerning or connected with work performed pursuant to this Agreement, shall be exclusively in the Los Angeles County, California. As with respect to claims that are subject to exclusive Federal subject matter jurisdiction, Contractor agrees and consents to the exclusive jurisdiction of the Federal District Court of the Central District of California.

32. VALIDITY AND SEVERABILITY

32.1. Validity

The invalidity, unenforceability or illegality of any provision of this Agreement shall not render the other provisions hereof invalid, unenforceable or illegal, unless the essential purposes of this Agreement shall be materially impaired thereby.

32.2. Severability

If any provision of this Agreement is adjudged void or invalid for any reason whatsoever, but would be valid if part of the wording thereof were deleted or changed, then such provision shall apply with such modifications as may be necessary to make it valid and effective. In the event that one or more of the provisions of this Agreement is found to be invalid, void, illegal, or unenforceable in any respect by any court of competent jurisdiction, such provision shall be deemed severable from the remainder of this Agreement, if practicable, and the validity, legality or enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

33. COUNTY RIGHTS

County may employ, either during or after performance of this contract, any right of recovery County may have against the Contractor by any means it deems appropriate including, but not limited to, set-off, action at law or in equity, withholding, recoupment, or counterclaim. The rights and remedies of County under this Agreement are in addition to any right or remedy provided by California law.

34. TERMINATION FOR IMPROPER CONSIDERATION

34.1. County may, by written notice to Contractor, immediately terminate the right of Contractor to proceed under this Agreement if it is found that consideration, in any form, was offered or given by Contractor, either directly or through an intermediary, to any County officer, employee or agent with the intent of securing the Agreement or securing favorable treatment with respect to the award, Amendment or extension of the Agreement or the making of any determinations with respect to Contractor's performance pursuant to this Agreement. In the event of such termination, County shall be entitled to pursue the same remedies against Contractor as it could pursue in the event of default by Contractor.

34.2. Contractor shall immediately report any attempt by a County officer or employee to solicit such improper consideration. The report shall be made either to County manager charged with the supervision of the employee or County's Auditor-Controller's Employee Fraud Hotline at (213) 974-0914 or (800) 544-6861.

34.3. Among other items, such improper consideration may take the form of cash, discounts, services, the provision of travel or entertainment, or tangible gifts.

35. TERMINATION FOR INSOLVENCY

35.1. County may terminate this Agreement immediately at any time following the occurrence of any of the following:

A. Insolvency of Contractor. Contractor shall be deemed to be insolvent if it has ceased to pay or has admitted in writing its inability to pay its debts for at least sixty (60) days in the ordinary course of business or cannot pay its debts as they become due, whether or not a petition has been filed under the United States Bankruptcy Code and whether or not Contractor is insolvent within the meaning of the United States Bankruptcy Code, provided that Contractor shall not be deemed insolvent if it has ceased in the normal course of business to pay its debts which are disputed in good faith and which are not related to this Agreement as determined by County;

B. The filing of a voluntary or involuntary petition to have Contractor declared bankrupt, where the involuntary petition is not dismissed within sixty (60) days;

C. The appointment of a Receiver or Trustee for Contractor; or

D. The execution by Contractor of a general assignment for the benefit of creditors.

35.2. The rights and remedies of County provided in this Paragraph 35 shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Agreement.

35.3. Contractor agrees that if Contractor as a debtor-in-possession, or if a trustee in bankruptcy, rejects this Agreement, County may elect to retain its rights under this Agreement, as provided under Section 365(n) of the United States Bankruptcy Code (11

United States Code, Section 365(n)). Upon written request of County to Contractor or the trustee in bankruptcy, as applicable, Contractor or such trustee shall allow County to exercise all of its rights and benefits under this Agreement including, without limitation, such Section 365(n), and shall not interfere with the rights and benefits of County as provided therein. The foregoing shall survive the termination or expiration of this Agreement for any reason whatsoever.

36. TERMINATION FOR DEFAULT

36.1. County may, by written notice to Contractor, terminate the whole or any part of this Agreement if, in the sole judgment of County's Project Director:

A. Contractor fails to perform or provide any task, subtask, deliverable, goods, service or other work within the times specified in this Agreement or any authorized extensions thereof; or

B. Contractor fails to demonstrate a high probability of timely fulfillment of the performance requirements under this Agreement; or

C. Contractor fails to perform or comply with any of the other provisions of this Agreement or materially breaches this Agreement; or

D. So fails to make progress as to endanger performance of this Agreement in accordance with its terms;

and does not cure such failure or fails to correct such material breach within a period of ten (10) days (or such longer period as County may authorize in writing) of receipt of written notice from County specifying such failure or breach, except that Contractor shall not be entitled to any cure period, and County may terminate immediately, in the event that Contractor's failure to perform or comply is not reasonably capable of being cured. If, pursuant to the preceding sentence, County has terminated this Agreement without providing a cure period and, subsequently, a final and binding determination is made that the default was capable of being cured, then the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to Paragraph 37 (Termination For Convenience).

36.2. In the event that County terminates this Agreement in whole or in part as provided in Paragraph 35 (Termination for Insolvency) or this Paragraph 36, then:

A. County shall have the right to procure, upon such terms and in such a manner as County may deem appropriate, goods, services and other work similar to those so terminated, and Contractor shall be liable to County for, and shall promptly pay to County by cash payment, any and all excess costs reasonably incurred by County, as determined by County, to procure and furnish such similar goods, services and other work;

B. Contractor shall continue the performance of this Agreement to the extent not terminated under the provisions of Paragraph 35 (Termination For Insolvency) of this Agreement or this Paragraph 36; and

C. Contractor shall transfer possession and deliver to County all completed work and work in process. It is expressly understood by and between the parties that Contractor cannot and will not provide any warranty of fitness for work in progress transferred pursuant to this Paragraph 36.

36.3. Force Majeure

Except with respect to defaults of any subcontractor(s), Contractor shall not be liable for any delays in the completion of work under this Agreement, if its failure to perform arises out of causes beyond the reasonable control and without any fault or negligence of Contractor, limited to acts of God or of the public enemy, acts of Federal or State governments in their sovereign capacities, fires, floods, earthquakes, epidemics, quarantine restrictions, strikes, freight embargoes and unusually severe weather; but in every case, the failure to perform must be beyond the reasonable control and without any fault or negligence of Contractor.

If the failure to perform is caused by the default of a subcontractor, and if such default arises out of causes beyond the reasonable control of both Contractor and subcontractor, and without any fault or negligence of either of them, Contractor shall not be liable for reasonable delays in the completion of work, unless the goods and/or services to be furnished by the subcontractor were obtainable from other sources in sufficient time to permit Contractor to meet the required performance schedule. Contractor agrees to use all reasonable commercial efforts to obtain such goods and/or services from other sources. As used in this Paragraph 36.3, the terms "subcontractor" and "subcontractors" mean subcontractor(s) at any tier.

Notwithstanding anything herein to the contrary, County shall not be liable for any additional costs incurred by Contractor or any subcontractor hereto arising out of or resulting from force majeure events.

36.4. If, after County has given notice of termination under the provisions of this Paragraph 36, it is determined by County that Contractor was not in default under the provisions of this Paragraph 36, or that the default was excusable under the provisions of this Paragraph 36, the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to Paragraph 37 (Termination For Convenience).

36.5. The rights and remedies of County provided in this Paragraph 36 shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Agreement.

37. TERMINATION FOR CONVENIENCE; SUSPENSION

37.1. Termination for Convenience.

37.1.1. This Agreement may be terminated, in whole or in part, permanently or from time to time, when such action is deemed by County to be in its best interest. Termination of work hereunder shall be effected by delivery to Contractor of a notice of termination specifying the extent to which performance of work is terminated and the date upon which such termination becomes effective. The date upon which such termination becomes effective shall be no less than ten (10) days after the notice is sent. In the event County has purported to terminate this Agreement for default by notice pursuant to Paragraph 36 (Termination for Default), and it has later been determined that Contractor was not in default, no additional notice shall be required upon such determination.

37.1.2. After receipt of a notice of termination, and except as otherwise directed by County, Contractor shall:

A. Stop work under this Agreement on the date and to the extent specified in such notice;

B. Complete performance of such part of the work as shall not have been terminated by such notice,

C. Transfer possession and deliver to County copies of completed work and work in process. It is expressly understood by and between the parties that Contractor cannot and will not provide any warranty of fitness for work in progress transferred pursuant to this Paragraph 37.1.2.

37.1.3. County and Contractor shall negotiate an equitable amount to be paid Contractor by reason of the total or partial termination of work pursuant to this Paragraph 37.1, which amount may include a reasonable allowance for profit on work completed and in progress, but shall not include any allowance on work terminated. County shall pay the agreed amount, provided that such amount shall not exceed the total funding obligated under this Agreement as reduced by the amount of payments otherwise made and as further reduced by the Agreement price of work terminated.

37.1.4. For a period of five (5) years after final settlement under this Agreement, Contractor shall make available to County, at all reasonable times, all its books, records, documents or

other evidence bearing on the costs and expenses of Contractor under this Agreement with respect to the termination of work hereunder. All such material shall be maintained by Contractor at a location in Los Angeles County, provided that if any such material is located outside Los Angeles County, then, at County's option, Contractor shall pay County for travel, per diem, and other costs incurred by County to examine, audit, excerpt, copy or transcribe such material at such other location.

37.2. Suspension.

37.2.1. County, at its convenience, and without further liability except as herein specified, may suspend this Agreement, in whole or in part, by written notice personally delivered to Contractor specifying the effective date and extent of the suspension.

37.2.2. Contractor shall immediately discontinue all services unless otherwise indicated by Director.

37.2.3. Upon request of Director, Contractor shall surrender and deliver to Director within seven (7) days from receipt of said request, all requested drawings, designs, specifications, notes, data, reports, estimates, summaries, or other information relative to the Project, whether complete or in process, as may have been accumulated by Contractor.

37.2.4. In the event the entire Agreement is suspended for longer than three (3) months, County shall pay Contractor demobilization expenses. Demobilization expenses are expenses directly attributable to temporarily suspending the work in progress, including the reasonable and actual cost of suspending any commitments for services not yet complete. County shall not be liable for demobilization expenses if only a portion of the Agreement is suspended.

37.2.5. In the event the entire Agreement is suspended for longer than three (3) months and Contractor is directed to remobilize within one calendar year of the effective date of the suspension, County shall pay reasonable and actual remobilization expenses directly attributable to restarting services hereunder and, at Contractor's option, Contractor and County shall renegotiate Contractor's fees for services remaining under this Agreement. If no agreement as to expenses and fees can be reached, this Agreement may be terminated for the County's convenience.

37.2.6. In the event the entire Agreement is suspended and the period of suspension exceeds one (1) calendar year, this Agreement may be deemed terminated for the convenience of County at the option of either party, upon written notice to the other party.

38. NOTICE OF DELAYS

In the event Contractor determines at any time that failure, delay, or inadequacy of performance of any of County's obligations hereunder may prevent or tend to prevent Contractor from completing any of Contractor's obligations in a timely manner, or may cause or tend to cause Contractor to incur additional or unanticipated costs or expenses, Contractor shall promptly following such determination (and without limiting Contractor's obligation of prompt notification, in any event within fifteen (15) days

following such determination), notify County's Project Director in writing, which notice shall specify in reasonable detail: 1) any alleged failure, delay, or inadequacy of performance by County, and; 2) to the best knowledge of Contractor after due inquiry and analysis, the estimated impact of such alleged failure, delay, or inadequacy on the performance of Contractor's obligations, including, but not limited to, any estimated delay and any estimated amount of additional or unanticipated costs or expenses that may be incurred. In the event that Contractor fails to fulfill any of its obligations in a timely manner as a direct result of a failure, delay, or inadequacy of performance of any of County's obligations after timely written notice to County by Contractor of such failure, delay, or inadequacy of performance, then the date for Contractor's completion of such obligation may be appropriately extended, as determined in the County's sole discretion. Contractor shall take all reasonable actions to mitigate or reduce any delays. In the event Contractor fails to notify County in writing of any alleged failure, delay, or inadequacy of performance in a timely manner as set forth in this Paragraph 38, Contractor shall not be entitled to rely upon such alleged failure, delay or inadequacy of performance for any purpose whatsoever, including, but not limited to, as a purported justification for either: 1) claiming that Contractor is entitled to receive any additional payments from County hereunder, or; (2) failing to fulfill any of Contractor's obligations in a timely manner. This Paragraph 38 shall not be interpreted or construed as expanding in any manner or to any extent the financial obligations of County under this Agreement.

39. CONFLICT OF INTEREST

39.1. No County employee whose position with County enables such employee to influence the award of this Agreement or any competing agreements, and no spouse or economic dependent of such employee, shall be employed in any capacity by Contractor or have any other direct or indirect financial interest in this Agreement. No officer or employee of Contractor, who may financially benefit from the performance of work hereunder, shall in any way participate in County's approval or ongoing evaluation of such work, or in any way attempt to unlawfully influence County's approval or ongoing evaluation of such work.

39.2. Contractor shall comply with all conflict of interest laws, ordinances and regulations now in effect or hereafter to be enacted during the term of this Agreement. Contractor warrants that it is not now aware of any facts which do or could create a conflict of interest. If a party hereafter becomes aware of any facts, which might reasonably be expected to create a conflict of interest, it shall immediately make full written disclosure of such facts to County. Full written disclosure shall include, but is not limited to, identification of all persons implicated and a complete description of all relevant circumstances.

40. DAMAGE TO COUNTY FACILITIES, BUILDINGS OR GROUNDS

40.1. Contractor shall repair, or cause to be repaired, at its own cost, any and all damage to County facilities, buildings or grounds caused by the negligent or intentional acts or omissions of Contractor or employees or agents of Contractor. Such repairs shall be

made immediately after Contractor has become aware of such damage, but in no event later than thirty (30) days after the occurrence.

40.2. If Contractor fails to make timely repairs, County may make any necessary repairs. All reasonable costs incurred by County, as determined by County, for such repairs shall be repaid by Contractor by cash payment upon demand, or without limitation of all County's other rights and remedies provided by law or under this Agreement, County may deduct such costs from any amounts due to Contractor from County, whether under this Agreement or otherwise.

41. EMPLOYMENT OF TARGETED FOR LAYOFF OR LAID-OFF COUNTY EMPLOYEES

Should Contractor, or any subcontractor performing more than $250,000 of the contract value, require additional or replacement personnel to perform services under this Agreement other than the performance of a skilled trade, Contractor shall give first consideration for such employment openings to qualified County employees who are targeted for layoff or qualified former County employees who are on a re-employment list during the term of this Agreement.

42. DISPUTE RESOLUTION PROCEDURE

42.1. Contractor and County agree to act promptly and diligently to mutually resolve any disputes which may arise with respect to this Agreement. All such disputes shall be subject to the provisions of this Paragraph 42. Time is of the essence in the resolution of disputes.

42.2. Contractor and County agree that the existence and details of a dispute notwithstanding, both parties shall continue without delay their performance hereunder, except for any performance which County, in its sole and absolute discretion, determines should be delayed as a result of such dispute. County shall continue to pay sums not in dispute during any such period of continued performance.

If Contractor fails to continue without delay its performance hereunder which County, in its sole and absolute discretion, determines should not be delayed as a result of such dispute, then any additional costs which may be incurred by Contractor or County as a result of Contractor's failure to continue to so perform shall be borne by Contractor, and Contractor shall make no claim whatsoever against County for such costs. Contractor shall promptly reimburse County for such Contractor costs, as determined by County, or County may deduct all such additional costs from amount due to Contractor from County, whether under this Agreement or otherwise.

If County fails to continue without delay to perform its responsibilities under this Agreement which County, in its sole and absolute discretion, determines should not be delayed as a result of such dispute, then any additional costs incurred by Contractor or County as a result of County's failure to continue to so perform shall be borne by County, and County shall make no claim whatsoever against Contractor for such costs. County

shall promptly reimburse Contractor for all such additional Contractor costs subject to the approval of such costs by County.

42.3. In the event of any dispute between the parties with respect to this Agreement, Contractor and County shall submit the matter to County's Project Director and Contractor's Project Manager for the purpose of endeavoring to resolve such dispute.

42.4. In the event that County's Project Director and Contractor's Project Manager are unable to resolve the dispute within a reasonable time not to exceed five (5) working days from the date of submission of the dispute, then the matter shall be immediately submitted to Contractor's Western Regional Manager (Michael Mauritz, P.E., and hereinafter referred to in this Paragraph 42 as "Regional Manager") and the Deputy Director of County's Department of Public Works (hereinafter in this Paragraph 42, "County's Deputy Director"). These persons shall have five (5) working days to attempt to resolve the dispute.

42.5. In the event that Contractor's Regional Manager and County's Deputy Director are unable to resolve the dispute within a reasonable time not to exceed five (5) working days from the date of submission of the dispute to them, the matter shall be immediately submitted to Contractor's Senior Vice President (Mike Holling, P.E.) and the Director. These persons shall have five (5) working days to attempt to resolve the dispute.

42.6. In the event that at these levels, there is not a resolution of the dispute acceptable to both parties, then each party may assert its other rights and remedies provided under this Agreement and/or its rights and remedies as provided by law.

42.7. All disputes utilizing this dispute resolution procedure shall be documented in writing by each party and shall state the specifics of each alleged dispute and all actions taken. The parties shall act in good faith to resolve all disputes. At all three (3) levels described in this Paragraph 42, the efforts to resolve a dispute shall be undertaken by conference between the parties' respective representatives, either orally, by face-to-face meetings, by telephone, or in writing by exchange of correspondence.

42.8. Notwithstanding any other provision of this Agreement, County's right to terminate this Agreement pursuant to Paragraph 35 (Termination for Insolvency), Paragraph 36 (Termination for Default), Paragraph 37 (Termination for Convenience), Paragraph 34 (Termination for Improper Consideration) or any other termination provision hereunder and County's right to seek injunctive relief to enforce the provisions of Paragraphs 11 (Proprietary Considerations) and 19 (Confidentiality) shall not be subject to this Dispute Resolution Procedure. The preceding sentence is intended only as a clarification of County's rights and shall not be deemed to impair any claims that Contractor may have against County or Contractor's rights to assert such claims after any such termination or such injunctive relief has been obtained.

43. <u>CONSIDERATION OF GREATER AVENUES FOR INDEPENDENCE OR GENERAL RELIEF OPPORTUNITY FOR WORK PROGRAM PARTICIPANTS FOR EMPLOYMENT</u>

Should Contractor require additional or replacement personnel after the Effective Date, Contractor shall give consideration for any such employment openings to participants of

the County's Department of Public Social Services' Greater Avenues for Independence (GAIN) or General Relief Opportunity for Work (GROW) Program who meet Contractor's minimum qualifications for the open position. County will refer GAIN/GROW participants by job category to Contractor.

In the event both laid-off County employees and GAIN/GROW participants are available for hiring, County employees shall be given first priority.

44. COUNTY'S RIGHT TO RENEGOTIATE

County reserves the right to renegotiate the terms of this Agreement to reduce Contractor's compensation in the event such reduction is necessary, in the sole discretion of County, to achieve County budget restrictions. It is understood that such renegotiations may include consideration of a corresponding reduction of the Agreement's Statement of Work or Project Schedule. Nothing in this Paragraph 44 is intended to diminish County's right to terminate this Agreement as provided herein.

45. COUNTY AUDIT SETTLEMENTS

If, at any time during or after the term of this Agreement, representatives of County conduct an audit of Contractor regarding the work performed under this Agreement, and if such audit finds that County's dollar liability for any such work is less than payments made by County to Contractor, then the difference, together with County's costs of audit, shall, at County's sole discretion, either (i) be repaid by Contractor to County by cash payment upon demand or, (ii) be deducted from any amounts due to Contractor from County, whether under this Agreement or otherwise, provided that such audit shall not affect the specified Agreement prices. If such audit finds that County's dollar liability for such work is more than the payments made by County to Contractor, then the difference shall be paid to Contractor by County, but in no event shall County's payments to Contractor exceed the Contract Sum identified in Paragraph 4 (Contract Sum).

46. SURVIVING PROVISIONS

The provisions of the following Paragraphs shall survive the expiration or termination of this Agreement for any reason:

5.7 County's Right to Withhold Payment
6.6 Unapproved Work
7. Indemnification
8. Insurance
11. Proprietary Considerations
12. Records and Audits
18. Disclosure of Information
19. Confidentiality
20. Warranty
25. Compliance with Applicable Laws
26. Fair Labor Standards
31. Governing Law, Jurisdiction and Venue

32. Validity and Severability
34 Termination for Improper Consideration
35. Termination for Insolvency
36. Termination for Default
37. Termination for Convenience
45. County Audit Settlements
54. Contractor Responsibility and Debarment
59. No Third Party Beneficiaries

47. CONTRACTOR'S WARRANTY OF ADHERENCE TO COUNTY'S CHILD SUPPORT COMPLIANCE PROGRAM

Contractor acknowledges that County has established a goal of ensuring that all individuals who benefit financially from County through contracts are in compliance with their court-ordered child, family and spousal support obligations in order to mitigate the economic burden otherwise imposed upon County and its taxpayers.

As required by County's Child Support Compliance Program (County Code Chapter 2.200) and without limiting Contractor's duty under this Agreement to comply with all applicable provisions of law, Contractor warrants that it is now in compliance and shall during the term of this Agreement maintain compliance with employment and wage reporting requirements as required by the Federal Social Security Act (42 USC Section 653(a)) and California Unemployment Insurance Code Section 1088.5, and shall implement all lawfully served Wage and Earnings Withholding Orders or County's Child Support Services Department Notices of Wage and Earnings Assignment for Child or Spousal Support, pursuant to Code of Civil Procedure Section 706.031 and Family Code Section 5246(b).

48. TERMINATION FOR BREACH OF WARRANTY TO MAINTAIN COMPLIANCE WITH COUNTY'S CHILD SUPPORT COMPLIANCE PROGRAM

Failure of Contractor to maintain compliance with the requirements set forth in Paragraph 47 (Contractor's Warranty of Adherence to County's Child Support Compliance Program) shall constitute a default by Contractor under this Agreement. Without limiting the rights and remedies available to County under any other provision of this Agreement, failure to cure such default within ninety (90) days of notice by County's Child Support Services Department shall be grounds upon which County's Board of Supervisors may terminate this Agreement pursuant to Paragraph 36 (Termination for Default).

49. CONTRACTOR'S ACKNOWLEDGMENT OF COUNTY'S COMMITMENT TO CHILD SUPPORT ENFORCEMENT

Contractor acknowledges that County places a high priority on the enforcement of child support laws and the apprehension of child support evaders. Contractor understands that it is County's policy to encourage all County contractors to voluntarily post County's "L.A.'s Most Wanted: Delinquent Parents" poster in a prominent position at Contractor's

place of business. County's Child Support Services Department will supply Contractor with the poster to be used.

50. NOTICE TO EMPLOYEES REGARDING THE FEDERAL EARNED INCOME CREDIT

Contractor shall notify its employees, and shall require each subcontractor to notify its employees, that they may be eligible for the Federal Earned Income Credit under the Federal income tax laws. Such notice shall be provided in accordance with the requirement set forth in Internal Revenue Service Notice 1015.

51. COUNTY'S QUALITY ASSURANCE PLAN

County, or its agent, will evaluate Contractor's performance under this Agreement on not less than an annual basis. Such evaluation will include assessing Contractor's compliance with the terms, conditions and performance standards of this Agreement. Contractor deficiencies, which County determines are severe or continuing, and that may place performance of the Agreement in jeopardy if not corrected, will be reported to County's Board of Supervisors. The report will include improvement and/or corrective action measures taken by County and Contractor. If improvement does not occur consistent with the corrective action measures, County may, at its sole option, terminate this Agreement, in whole or in part, pursuant to Paragraph 36 (Termination for Default) or Paragraph 37 (Termination for Convenience) or impose other penalties as specified in this Agreement.

52. CONTRACTOR EMPLOYEE JURY SERVICE PROGRAM

52.1. Jury Service Program

This Agreement is subject to the provisions of County's ordinance entitled Contractor Employee Jury Service Program (hereinafter "Jury Service Program" or "Program") as codified in Sections 2.203.010 through 2.203.090 of the Los Angeles County Code (hereinafter sometimes "County Code").

52.2. Written Employee Jury Service Policy

52.2.1. Unless Contractor has demonstrated to County's satisfaction either that Contractor is not a "Contractor" as defined under the Jury Service Program (Section 2.203.020 of the County Code) or that Contractor qualifies for an exception to the Jury Service Program (Section 2.203.070 of the County Code), Contractor shall have and adhere to a written policy that provides that its Employees (as defined in Paragraph 52.2.2 below) shall receive from the Contractor, on an annual basis, no less than five (5) days of regular pay for actual jury service. The policy may provide that Employees deposit any fees received for such jury service with Contractor or that Contractor deduct from the Employee's regular pay the fees received for jury service.

52.2.2. For purposes of this Paragraph 52, "Contractor" means a person, partnership, corporation or other entity which has a contract with County or a subcontract with a County

contractor and has received, or will receive, an aggregate sum of $50,000 or more in any 12-month period under one or more County contracts or subcontracts. "Employee" means any California resident who is a full -time employee of Contractor. "Full- time" means forty (40) hours or more worked per week, or a lesser number of hours if: 1) the lesser number is a recognized industry standard as determined by County, or 2) Contractor has a long-standing practice that defines the lesser number of hours as full-time. Full-time employees providing short-term, temporary services of ninety (90) days or less within a 12-month period are not considered full-time for purposes of the Jury Service Program. If Contractor uses any subcontractor to perform services for County under this Agreement, the subcontractor shall also be subject to the provisions of this Paragraph 52. The provisions of this Paragraph 52 shall be inserted into any such subcontract agreement and a copy of the Jury Service Program shall be attached to the agreement.

52.2.3. If Contractor is not required to comply with the Jury Service Program when the Contract commences, Contractor shall have a continuing obligation to review the applicability of its "exception status" from the Jury Service Program, and Contractor shall immediately notify County if Contractor at any time either comes within the Jury Service Program's definition of "Contractor" or if Contractor no longer qualifies for an exception to the Program. In either event, Contractor shall immediately implement a written policy consistent with the Jury Service Program. County may also require, at any time during this Agreement and at its sole discretion, that Contractor demonstrate to the County's satisfaction that Contractor either continues to remain outside the Jury Service Program's definition of "Contractor" and/or that Contractor continues to qualify for an exception to the Program.

52.2.4. Contractor's violation of this Paragraph 52 may constitute a material breach of the Agreement. In the event of such material breach, County may, in its sole discretion, terminate this Agreement with Contractor and/or bar Contractor from the award of future County contracts for a period of time consistent with the seriousness of the breach.

53. VENDOR REGISTRATION WITH THE COUNTY OF LOS ANGELES

All potential bidders/proposers with the County of Los Angeles are required to register in WebVen and have a valid vendor number assigned to them. The vendor number is required by the Auditor-Controller and is necessary for any payments to be made to a contractor who is awarded a County project. Vendor registration can be done online at http://camisvr.co.la.ca./webven/ or by calling County's Internal Service Department Central Purchasing Vendor Relations Unit at (323) 267-2650. Contractor's payments under this Agreement will be delayed unless and until Contractor obtains a valid vendor number.

54. CONTRACTOR RESPONSIBILITY AND DEBARMENT

54.1. A responsible contractor is a contractor who has demonstrated the attribute of trustworthiness, as well as quality, fitness, capacity, and experience to satisfactorily

perform the contract. It is County's policy to conduct business only with responsible contractors.

54.2. Contractor is hereby notified that, in accordance with Chapter 2.202 of the County Code, if County acquires information concerning the performance of Contractor on this Agreement or other contracts which indicates that Contractor is not responsible, County may, in addition to other remedies provided in this Agreement, debar Contractor from bidding on County contracts for a specified period of time not to exceed three (3) years, and terminate any or all existing contracts Contractor may have with County.

54.3. County may debar Contractor if County's Board of Supervisors finds, in its discretion, that Contractor has done any of the following: (1) violated any term of a contract with County, (2) committed any act or omission which negatively reflects on Contractor's quality, fitness or capacity to perform a contract with County or any other public entity, or engaged in a pattern or practice which negatively reflects on same, (3) committed an act or offense which indicates a lack of business integrity or business honesty, or (4) made or submitted a false claim against County or any other public entity.

54.4. If there is evidence that Contractor may be subject to debarment, County's Project Director, or his/her designee, will notify Contractor in writing of the evidence which is the basis for the proposed debarment and will advise Contractor of the scheduled date for a debarment hearing before County's Contractor Hearing Board.

54.5. The Contractor Hearing Board will conduct a hearing where evidence on the proposed debarment is presented. Contractor and/or Contractor's representative shall be given an opportunity to submit evidence at that hearing. After the hearing, the Contractor Hearing Board shall prepare a proposed decision, which shall contain a recommendation regarding whether the Contractor should be debarred, and, if so, the appropriate length of time of the debarment. If Contractor fails to avail itself of the opportunity to submit evidence to the Contractor Hearing Board, Contractor may be deemed to have waived all rights of appeal.

54.6. A record of the hearing, the proposed decision and any other recommendation of the Contractor Hearing Board shall be presented to County's Board of Supervisors. The Board of Supervisors shall have the right to modify, deny or adopt the proposed decision and recommendation of the Contractor Hearing Board.

54.7. The terms and procedures of this Paragraph 54 shall also apply to subcontractors and consultants of Contractor performing working under this Agreement.

55. PROHIBITION FROM INVOLVEMENT IN BIDDING PROCESS

Contractor understands and agrees that neither it nor its subsidiaries shall be involved in any way in the bidding process on any Request for Proposal developed or prepared by or with assistance of Contractor's services rendered pursuant to this Agreement, either as a prime contractor or subcontractor, or as a contractor to any other prime contractor or subcontractor. Any such involvement by Contractor shall result in the rejection by County of the bid by the prime contractor in question.

56. GRATUITIES

It is improper for any County officer, employee, or agent to solicit consideration, in any form, from Consultant with the implication, suggestion, or statement that Consultant's provision of the consideration may secure more favorable treatment for Consultant in the award of the contract or that Consultant's failure to provide such consideration may negatively affect County's consideration of Consultant's submittal. Consultant shall not offer or give, either directly or through an intermediary, consideration, in any form, to a County officer, employee, or agent for the purpose of securing favorable treatment with respect to the award of the contract.

Consultant shall immediately report any attempt by a County officer, employee, or agent to solicit such improper consideration. The report shall be made either to County manager charged with the supervision of the employee, or to County Auditor-Controller's Employee Fraud Hotline at (213) 974-0914 or (800) 544-6861. Failure to report such a solicitation may result in Consultant's submittal being eliminated from consideration.

Among other items, such improper consideration may take the form of cash, discounts, service, the provision of travel or entertainment, or tangible gifts.

57. PROHIBITION AGAINST INDUCEMENT AND PERSUASION

57.1. Contractor and County agree that, during the term of this Agreement and for a period of one (1) year thereafter, neither party shall in any way intentionally induce or persuade any employee of one party to become an employee or agent of the other party.

57.2. Notwithstanding the foregoing, County shall be entitled to make offers of employment to employees of Contractor necessary or desirable to perform work described in this Agreement, in the event that: (i) County has the right to terminate this Agreement pursuant to Paragraph 35 (Termination for Insolvency), (ii) this Agreement is terminated by County due to Contractor's default pursuant to Paragraph 36 (Termination for Default), (iii) Contractor and County have followed the dispute resolution procedure set forth in Paragraph 42 (Dispute Resolution Procedure), and have otherwise exhausted other administrative remedies, if any, as determined by County, or (iv) Contractor either announces the withdrawal of support of, or otherwise no longer provides services County deems essential to, the ongoing support of the System.

57.3. The prohibition in this Paragraph 57 shall not apply to any hiring action initiated through a public announcement.

58. LICENSES, PERMITS, REGISTRATIONS, ACCREDITATIONS AND CERTIFICATES

Contractor shall obtain and maintain in effect during the term of this Agreement all licenses, permits, registrations, accreditations and certificates required by all Federal, State, and local laws, ordinances, rules, regulations, guidelines and directives, which are applicable to Contractor's services under this Agreement. Contractor shall further ensure that all of its officers, employees, agents and subcontractors who perform services

hereunder, shall obtain and maintain in effect during the term of this Agreement all licenses, permits, registrations, accreditations and certificates which are applicable to their performance hereunder. Upon request by County, Contractor shall provide to DPW a copy of any such license, permit, registration, accreditation and certificate required by all applicable Federal, State, and local laws, ordinances, rules, regulations, guidelines and directives.

59. NO THIRD PARTY BENEFICIARIES

Notwithstanding any other provision of this Agreement, Contractor and County do not in any way intend that any person or entity shall acquire any rights as a third party beneficiary of this Agreement, except that this provision shall not be construed to diminish Contractor's indemnification obligations hereunder.

60. CONTRACTOR PERFORMANCE DURING CIVIL UNREST AND DISASTER

Contractor recognizes that County provides services essential to the residents of the communities it serves, and that these services are of particular importance at the time of a riot, insurrection, civil unrest, natural disaster or similar event. Notwithstanding any other provision of this Agreement, full performance by Contractor during any riot, insurrection, civil unrest, natural disaster or similar event is not excused if such performance remains physically possible without related danger to Contractor's or subcontractors' employees and suppliers. During any such event in which the health or safety of any of Contractor's staff members would be endangered by performing their services on-site, such staff members may perform any or all of their services remotely. Failure to comply with this requirement shall be considered a material breach of this Agreement by Contractor, for which County may immediately terminate this Agreement.

61. AUTHORIZATION WARRANTY

Contractor represents and warrants that the person executing this Agreement or any Amendment thereto pursuant to Paragraph 14 (Change Notices and Amendments) for Contractor is an authorized agent who has actual authority to bind Contractor to each and every term, condition and obligation of this Agreement, and that all requirements of Contractor have been fulfilled to provide such actual authority.

62. MINIMUM AGE, LANGUAGE SKILLS AND LEGAL STATUS OF CONTRACTOR PERSONNEL

Contractor cannot assign employees under the age of eighteen (18) to perform work under this Agreement. All of Contractor's employees working at County facilities must be able to communicate in English. Contractor's employees must be United States citizens or legally present and permitted to work in the United States.

63. ARM'S LENGTH NEGOTIATIONS

This Agreement is the product of arm's length negotiations between Contractor and County. Consequently, each party has had the opportunity to receive advice from

independent counsel of its own choosing. This Agreement is to be interpreted fairly as between the parties and not strictly construed as against either party.

64. NON-EXCLUSIVITY

Nothing herein is intended nor shall be construed as creating any exclusive arrangement with Contractor. This Agreement shall not restrict County from acquiring similar, equal or like goods and/or services from other entities or sources.

65. ACCESS TO COUNTY FACILITIES

Contractor, its employees and agents, will be granted access to County facilities, subject to Contractor's prior notification to County's Project Director, or County's Project Manager, for the purpose of executing Contractor's obligations hereunder. Access to County facilities shall be restricted to normal business hours, 8:00 a.m. until 5:00 p.m., Pacific Time, Monday through Friday, County observed holidays excepted. Access to County facilities outside of normal business hours must be approved in writing in advance by County's Project Director, which approval shall not be unreasonably withheld. Contractor shall have no tenancy, or any other property or other rights, in County facilities. While present at County facilities, Contractor's personnel shall be accompanied by County personnel at all times, unless this requirement is waived in writing prior to such event by County's Project Director, or County's Project Manager.

66. COUNTY FACILITY OFFICE SPACE

In order for Contractor to perform services hereunder and only for the performance of such services, County may elect, subject to County's standard administrative and security requirements, to provide Contractor with office space and equipment, as determined at the discretion of the County's Project Director, at County facilities, on a non-exclusive use basis. County will also provide Contractor with reasonable telephone service in such office space for use only for purposes of this Agreement. County disclaims any and all responsibility for the loss, theft or damage of any property or material left at such County office space by Contractor.

67. PHYSICAL ALTERATIONS

Contractor shall not in any way physically alter or improve any County facility without the prior written approval of Director, County's Project Director and the Director of County's Internal Services Department, in their discretion.

68. CONTRACTOR'S OFFICES

Contractor's business offices are located at 35 South Raymond Avenue, Suite 200, Pasadena, CA 91105-1931. Contractor shall notify in writing Department of Public Works, P. O. Box 1460, Alhambra, CA 91802-1460, Attention: Ms. Jane White, of any change in its business address at least ten (10) calendar days prior to the effective date thereof.

69. STAFF PERFORMANCE WHILE UNDER THE INFLUENCE

Contractor shall use reasonable efforts to ensure that no employee of Contractor shall perform services hereunder while under the influence of any alcoholic beverage, medication, narcotic or other substance, which might impair his/her physical or mental performance.

70. TIME IS OF THE ESSENCE

Time is of the essence of this Agreement.

71. ASSIGNMENT BY COUNTY

This Agreement may be assigned in whole or in part by County, without the further consent of Contractor, to another Public Agency which agrees in writing to perform County's obligations under this Agreement.

72. CAPTIONS AND PARAGRAPH HEADINGS

Captions and Paragraph headings used in this Agreement are for convenience only and are not a part of this Agreement and shall not be used in construing this Agreement.

Exhibit A

SAN GABRIEL VALLEY TRAFFIC SIGNAL FORUM

ADVANCED TRAFFIC MANAGEMENT SYSTEM IMPROVEMENT PROJECT

Statement of Work

Final

Prepared for:
Los Angeles County
Department of Public Works

Prepared by:

TRANSCORE.
35 South Raymond Avenue
Suite 200
Pasadena, CA 91105

July 10, 2003

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PROJECT SCOPE

Project Phases

This document defines the Scope of Services for the San Gabriel Valley Traffic Signal Forum Advanced Traffic Management System Improvement Project (PROJECT). Work products described in this work statement will be completed and delivered by TransCore, ITS, Inc. (CONSULTANT), to the Los Angeles County Department of Public Works (County), in accordance with the terms of the Agreement. The following is an outline of the major phases of the PROJECT.

Phase 1: Preliminary/Conceptual Design
Phase 2: Detailed System Design
Phase 3: System Implementation
Phase 4: Construction Inspection Assistance
Phase 5: System Acceptance Testing
Phase 6: Documentation and As-Built Plans
Phase 7: Training
Phase 8: Start-Up and On-Going System Maintenance

This scope of services will apply to the Project Management and Preliminary/Conceptual Design responsibilities associated with Phase 1 of the PROJECT only. It is the County's intent to enter into supplemental agreement(s) with the CONSULTANT, and/or another contractor depending upon the outcome of the Preliminary/Conceptual Design Phase, for the remaining phases of this PROJECT.

Project Area

The San Gabriel Valley Traffic Signal Forum (SGV Traffic Forum) comprises the following project entities:

- Alhambra
- Baldwin Park
- Duarte
- Irwindale
- Montebello
- Rosemead
- San Marino
- South Pasadena
- Caltrans
- Arcadia
- Bradbury
- El Monte
- La Puente
- Monterey Park
- San Dimas
- Sierra Madre
- Temple City
- L.A. County
- Azusa
- Covina
- Glendora
- Monrovia
- Pasadena
- San Gabriel
- South El Monte
- West Covina
- MTA

Project Components

The primary PROJECT component includes the development of an Advanced Transportation Management System (ATMS) specifically designed to meet the needs and requirements of the SGV Traffic Forum There are four (4) major functional system elements of this PROJECT:

- Advanced Transportation Management System (ATMS)
  - Desired ATMS Functionality/Requirements
  - Traffic Control System (TCS)
  - Vehicle Detection System
  - Closed Circuit Television (CCTV) Surveillance
  - SGV Traffic Forum Sub-Regional TMC (to be located at the planned Los Angeles County Regional TMC)
  - Coordination with other Regional Systems/Projects
- Agency Monitoring/Control Workstation Site
- System Integration
- Communications System

Pursuant to this Agreement, the CONSULTANT shall complete Phase 1 for each of these four (4) functional system elements.

A major element of the system integration will be to integrate the Agency Control/Workstation sites and any new TCSs installed as part of this project with the County's Information Exchange Network (IEN). The IEN is a management tool that provides an interface to multiple TCSs and allows for information from these systems to be displayed on a common interface. The IEN allows for agencies to view traffic signal information from adjacent agencies to assist in traffic management decisions. Other elements of the IEN include tools for tracking incidents in the region and implementing response scenarios to adjust traffic signal timing at intersections that may be impacted by incidents on the freeway and surface street network.

Project Overview

In summary, the Preliminary/Conceptual Design Phase will include infrastructure requirements and conceptual design of the following elements:

- Targeted ATMS design/development throughout the SGV Traffic Forum to allow monitoring, controlling, and coordinating of traffic signal operations and Intelligent Transportation System (ITS) field devices between their respective field controllers and each affected Agency, two-way communications, and real-time database management
- Monitoring/control workstations located in the existing facilities of each municipality located in the SGV Traffic Forum
- Data and possible video link to the State of California Department of Transportation's (Caltrans) District 7 Transportation Management Centers (TMC)
- An interface and link with the proposed Los Angeles County Regional TMC and other proposed sub-regional TMCs to be located in the other Los Angeles County Traffic Forum areas
- A "tailored" version of the Countywide Information Exchange Network (IEN) to serve as the primary system integration element
- Communications system capable of supporting the recommended SGV Traffic Forum PROJECT elements (per this scope-of-services)

FUNCTIONAL SYSTEM ELEMENTS

Functional Element 1 – Advanced Transportation Management System (ATMS)

ATMS Overview

This element consists of the development, design, selection, and implementation of a complete inter-jurisdictional ATMS. The ATMS will include the hardware and software necessary to allow monitoring, controlling, and coordinating of traffic signal operations and ITS field devices to be installed throughout the SGV Traffic Forum project area. It will also allow for future expansion to monitor, control, and coordinate other ITS field devices. The ATMS will be operated and/or monitored from individual Agency workstations with traffic surveillance capabilities to detect and monitor signal status, traffic congestion and incidents, and display this information through a fully-integrated mapping function. The ATMS will also be able to detect equipment malfunctions, allowing the operator to initiate appropriate maintenance, operations, and/or other responses to traffic events and congestion either manually or automatically using an expert system application.

The SGV ATMS is intended to build upon the benefits achieved by the existing time based signal synchronization projects previously implemented by the County. When installed, the ATMS will allow for two-way communications, real-time database management, and control and monitoring functions between the traffic signal controllers and each affected Agency.

The ATMS is intended to allow the Agencies to control traffic signal operations from a remote location and monitor traffic signal operations for malfunctions. The operational and functional monitoring of traffic signals will enable Agencies to be provided with immediate notification of signal malfunctions resulting in faster and more efficient maintenance responses. The monitoring and control function will also provide an inter-jurisdictional data-sharing component to allow the implementation of arterial traffic management strategies. These strategies will be utilized to reduce incident response time during recurring and nonrecurring incidents, emergencies, malfunctions, and routine maintenance calls. The data-sharing component shall also include monitoring and control access protocols among the Agencies.

Desired ATMS Functionality/Requirements

The development of the ATMS for the SGV Traffic Forum requires a traffic management system operations plan that identifies existing and desired levels of operations, and then recommends the most suitable ATMS to meet those needs. Therefore, the CONSULTANT will be required to design, select, and implement a commercial-off-the-shelf (COTS) or other previously developed TCS software capable meeting this PROJECT's needs and requirements as well as interfacing with the Countywide IEN.

Because of its role as the System Manager for the design, development, and deployment of the Countywide IEN, the CONSULTANT will design/develop the SGV ATMS (and its associated TCS) targeted at the following functionality/requirements baseline at a minimum:

- Be operated and/or monitored from the SGV Traffic Forum sub-regional TMC (located at the planned Los Angeles County Regional TMC) and individual Agency workstation(s) proposed for each municipality (currently part of Countywide IEN requirements)

- Have traffic surveillance capability through detection and monitoring of signal status and traffic congestion and incidents, and display of this information through a fully-integrated mapping function (currently part of Countywide IEN requirements)
- Once-per-second monitoring and real-time control and synchronization of every signalized intersection in the SGV Traffic Forum study area via their existing/selected TCS (currently part of Countywide IEN requirements)
- Collect real-time traffic data and information and make it available at the corridor level (currently part of Countywide IEN requirements)
- Provide real-time incident detection/response capabilities (currently part of Countywide IEN requirements)
- Immediate notification of equipment malfunctions in order to provide faster and more efficient maintenance responses (currently part of Countywide IEN requirements)
- Provide local and regional level access, controls, and connections to other future sub-regional Traffic Forum TMCs, Caltrans District 7 TMC, and the planned Los Angeles County Regional TMC
- Provide each municipality with a workstation capable of controlling its jurisdiction's traffic signals, as well as the ability to monitor all signals within the Region (currently part of Countywide IEN requirements)
- Allow an individual Agency inter-jurisdictional communications, traffic data and/or analysis sharing, and localized control of adjacent jurisdictions' signals through cooperative efforts, pre-approved arrangements, and coordinated responses in the event of congestion, arterial incidents, special events, major incidents, and/or during non-peak hours and weekends (currently part of Countywide IEN requirements)
- Provide levels of security to restrict access to unauthorized users (currently part of Countywide IEN requirements)

The area covered by this project includes agencies that are included in other County Traffic Forums. Through these other projects previous analysis have been undertaken and in some cases systems have been deployed. The work performed under this contract will seek to not repeat the previous analysis, but rather to expand upon and further the work performed through these other projects. The work to be performed for each of the agencies is summarized below:

San Gabriel Valley Pilot Project Agencies

The analysis for these cities will focus on expanding the systems that have been previously recommended/deployed and will not include analysis of system components or communications. The expansion in these area will include the geographic include area outside the 210 Corridor that was part of the previous project. These agencies/areas are shown below:

- Arcadia
- Duarte
- Monrovia
- San Dimas
- Azusa
- Glendora
- Pasadena
- Baldwin Park
- Irwindale
- L.A. County

Pomona Valley Traffic Forum Agencies

The analysis for these agencies will focus on the integration of the TCSs recommended as part of

the Pomona Valley Forum with the IEN, and with the systems/components to be installed as part of this Project.

New Agencies

For agencies that were not part of the previous two projects the CONSULTANT will conduct the detailed analysis described in this scope of work. These 15 agencies are shown below:

- Alhambra
- El Monte
- Monterey Park
- San Marino
- South Pasadena
- Bradbury
- La Puente
- Rosemead
- Sierra Madre
- Temple City
- Covina
- Montebello
- San Gabriel
- South El Monte
- West Covina

Traffic Control System (TCS)

The SGV ATMS will become the cornerstone of the proposed traffic control system that results from these PROJECT findings. The CONSULTANT will perform an analysis for the jurisdictions in the SGV Traffic Forum with existing traffic control systems that have not had a similar analysis performed as part of a previous project. This analysis will seek to determine the "best" TCS scenarios that meet their individual needs and preferences (e.g., deploy new TCS, enhance/modify existing TCS, replace existing TCS, multi-Agency TCS operation, etc.) and this PROJECT's recommendations. Regardless of the selected TCS scenario for each Agency, the SGV ATMS will provide an interface and any required equipment to enable communication and ensure compatibility with the other Agencies in the SGV Traffic Forum and the Countywide IEN.

At this time, a Countywide TCS has not yet been determined by the County (although they are nearing the end of their selection process). The CONSULTANT believes that it is likely that the selected Countywide TCS would also satisfy the TCS requirements for the SGV Traffic Forum. This scenario will be evaluated at the same time as the other TCS scenarios (per above) under consideration in the systems alternatives analyses. In its role as the System Manager for the County's San Gabriel Valley Traffic Signal Synchronization Operation and Maintenance Pilot Project (SGVPP), the CONSULTANT, is already tasked to develop a command/data interface (CDI) that provides the interface between the selected County TCS and the Countywide IEN.

Vehicle Detection System

Another element of the ATMS is the establishment of a comprehensive vehicle detection system for the SGV Traffic Forum region. The ATMS will supplement the existing traffic signal detectors and collect real-time traffic data and information at key intersection locations where monitoring of traffic is critical to the movement of vehicles. The number, type, and location of system detectors will be determined by the CONSULTANT after careful consideration of the user needs, system functional requirements, and available budget.

Closed Circuit Television (CCTV) Surveillance

The ATMS will also include deployment of closed circuit television (CCTV) surveillance cameras to provide real-time video monitoring of traffic congestion and incidents. The ATMS will provide the capability to share video images amongst the affected Agencies to enhance incident detection, verification, and response capabilities. As with the TCS, provisions will be

made to allow inter-jurisdictional monitoring and control of video images amongst the Agencies. The number, type, and location of CCTV cameras will be determined by the CONSULTANT after careful consideration of the user needs, system functional requirements, and available budget.

SGV Traffic Forum Sub-Regional TMC

The sub-regional TMC will function as the SGV Traffic Forum's central communications hub by maintaining the required traffic signal database for workstation level signal control. In addition, the sub-regional TMC will be the SGV Traffic Forum's central clearinghouse of multi-modal data/information that provides the appropriate access, control, and dissemination capabilities to the affected Agencies. The sub-regional TMC will be capable of controlling the County's traffic signals, as well as monitoring all signals along the Corridor(s) that traverse its jurisdiction. Provisions will be made to allow an individual jurisdiction's signals to be controlled from the sub-regional TMC through pre-approved arrangements, and coordinated responses in the event of congestion, arterial incidents, special events, major incidents, and/or during non-peak hours and weekend.

This element consists of the development of functional and user requirements for the implementation of a sub-regional TMC for the SGV Traffic Forum, including the hardware, software, and any other equipment required to operate this TMC not included under the ATMS, Agency Monitoring/Control Workstation Site, System Integration, or Communications System component of this PROJECT. Please note that the site selection task is not included within this approach because the County has already determined that the SGV Traffic Forum sub-regional TMC will be located at the planned Los Angeles County Regional TMC. Therefore, this task includes the coordinated design and installation of the sub-regional TMC elements/equipment for the SGV Traffic Forum with the architects, consultants, and/or contractors for the Los Angeles County Regional TMC facility.

Coordination with Other Regional Systems/Projects

In addition to the SGV Traffic Forum Agencies, other County Traffic Forum projects, and other priority Southern California systems/projects, the CONSULTANT will take special consideration to coordinate its efforts in this PROJECT with and/or incorporate the findings of the following systems/projects:

- County Traffic Signal Synchronization Project (e.g., intersection and controller upgrades, signal timing adjustments, etc.)
- City of Alhambra Valley Boulevard Project (e.g., traffic signal improvements, vehicle detection system upgrades, CCTV installation, fiber-optic communications installation, etc.)
- San Gabriel Valley Council of Governments (SGVCOG) Alameda Corridor East (ACE) Project (e.g., ACE TMC, rail-vehicle traffic interface system, rail train tracking and control system, etc.)
- San Gabriel Valley Pilot Project (SGVPP) (e.g., Countywide IEN, communications system upgrade, etc.)
- Pomona Valley Traffic Forum (e.g., ATMS, special event management, ATIS, etc.)

Functional Element 2 – Agency Monitoring/Control Workstation Site

The CONSULTANT shall provide the conceptual design for the physical accommodations of a typical local city control site (LCCS). Normally, a LCCS will consist of a computer system and/or workstation located in each jurisdiction's City Hall (or other location) and will be fully capable of satisfying that jurisdiction's traffic management needs and the requirements of this PROJECT.

The CONSULTANT's conceptual design and preliminary specifications will include the following at a minimum:

- LCCS building facility/structure/space specifications
- Schematic floor plan
- Requirements (e.g., user, system, functional, performance, etc)
- Equipment and/or furnishings
- Hardware, computers, monitors, etc.
- Software programs, platforms, operating systems, etc
- Operations and maintenance (O&M) considerations
- Staffing needs
- Training

Please note that the references to the hardware and software components pertain to those items not mentioned in any other tasks in this PROJECT's scope-of-services but necessary to bring the each Agency's LCCS to full operation.

The CONSULTANT will draw upon the design work already conducted for the SGVPP, South Bay, and Pomona Valley Traffic Forums to incorporate schematic designs and Agency specific layouts so as to capitalize upon existing work products towards the end goal of expediting deployment.

With this baseline established, the CONSULTANT will then conduct an on-site inspection in order to identify preliminary sites/locations for each proposed City LCCS installation not included in a previous project. The CONSULTANT will then make recommendations on the necessary alterations to this workspace to provide the needed functionality.

For those Cities that are also part of the Pomona Valley Traffic Forum, the CONSULTANT will work with those Agencies and/or their Consultant to ensure that their initial LCCS design also is capable of providing the functionality needed for this PROJECT. In future phases, it is anticipated the CONSULTANT will install the LCCS for the affected Agencies.

The CONSULTANT will also develop the requirements for a Sub Regional TMC. While this facility is expected to be located within the County TMC it will have it own unique equipment and operational requirements.

Functional Element 3 – System Integration

Integration Options

All PROJECT components and system functional elements will be integrated in an open system architecture environment with common interfaces so that a seamless operating system is established. The CONSULTANT has already established an open system with common interface requirements within the Countywide IEN.

Therefore, once the SGV Traffic Forum user needs and system requirements are developed, the CONSULTANT will sit down with the County, the Los Angeles County Metropolitan Transportation Authority (MTA), and participating Agencies, and discuss two (2) deployment options that support the "roll-out" of the Countywide IEN to the SGV Traffic Forum.

> Option 1 – Incorporate "New" Requirements into IEN Software Upgrade(s). If the development of the requirements results in identifying enhanced functionality to the IEN, one option would be to carry out a more detailed design to identify how such "new" requirements could best be incorporated into the current version of the Countywide IEN and to incorporate those "upgrades" into future IEN software builds/releases.
>
> Option 2 – Implement Countywide IEN "As-Is". If it appears that the SGV Traffic Forum system requirements are substantially similar to what was developed for the SGVPP, a second deployment option would be to fast-track an "as-is" implementation of the Countywide IEN into the "remaining" SGV Traffic Forum Cities. This approach would be intended as an interim measure aimed at bringing immediate benefits and potential satisfaction to approximately 80% of the system requirements. This option achieves the MTA's goal of getting as much of the County as possible up to a common baseline of functionality as rapidly as possible. However, it would defer customization or enhancements to a later time—perhaps to a time when upgrades to several Traffic Forums (e.g., Pomona Valley, South Bay, I-5/Telegraph Road, etc.) could occur simultaneously.

Option 1 would obviously take longer to implement, but it would provide a mechanism for the County to obtain incremental upgrades that could flow back to areas like the SGV Traffic Forum. The CONSULTANT is prepared to support the County in carrying out either Option, based on the desires of the participating Cities.

Scope of Integration

Depending upon the selected Option, the CONSULTANT shall deliver, develop, and/or incorporate any new requirements (e.g., user, system. functional, interface, performance, etc.) into the Countywide IEN in order to develop the necessary software and/or interfaces to ensure integration/coordination with the following projects/systems at a minimum.

- PROJECT-recommended ATMS, workstations, LCCSs, communications, and integration systems
- Existing Agency server/client computer platforms
- Real-time monitoring "only" version of the SGV ATMS
- Complete information exchange between the SGV ATMS server and the following servers:

- Existing and planned Agency TCS, LCCS, and ATMS systems (e.g., other sub-regional Traffic Forum projects, Southern California Priority Corridor SHOWCASE, Alameda Corridor East project, etc.)
- Existing and planned TMCs (e.g., other SGV Traffic Forum Cities' TMCs, Caltrans District 7 TMC, Los Angeles County Regional TMC, etc.)
- Other potential stakeholders and users (e.g., transit and paratransit providers, law enforcement Agencies, travel information service providers, rideshare Agencies, etc.) that become a priority for the SGV Traffic Forum in the future
- Future ATIS elements

This PROJECT must establish the appropriate level of integration that provides the capability to interface with all local and regional transportation systems and related ITS elements in Southern California (per above).

Desired System Integration Functionality/Requirements

Because of its role as the System Manager for the design, development, and deployment of the Countywide IEN, the CONSULTANT will design/develop this PROJECT's system integration component targeted at the following functionality/requirements baseline at a minimum:

- Full communications support between the recommended ATMS server and traffic signal controllers (currently part of Countywide IEN requirements)
- Full communications support with field elements (except field master and local controllers) through field exchange protocols (currently part of Countywide requirements)
- Support, storage, retrieval, and report generation of historical data for all field components from ATMS client computers (currently part of Countywide IEN requirements)
- IEN integration across existing and newly developed packages
- Inter-Agency support across all aspects of the SGV ATMS through a number of tailor-made graphical user interfaces (GUIs) and map displays that will allow any operator to view/monitor the same information as their colleagues (currently part of Countywide IEN requirements)
- Full integration and compatibility with the L.A. Countywide Architecture

TCS Integration Aspects

In order to ensure integration across all of this PROJECT's components, the CONSULTANT will also develop traffic signal control user interface requirements. This work will expand upon work performed by the CONSULTANT as part of the SGVPP where we already developed a CDI for the City of Pasadena's Series 2000 system.

LCCS Integration Aspects

Each LCCS must be integrated with other SGV Traffic Forum LCCSs, the planned Los Angeles County TMC, and the Caltrans' District 7 TMC. This integration will occur through and be compatible with the Countywide IEN. The Countywide IEN will provide the necessary communications and data exchange infrastructure to support coordination between Agencies in the SGV Traffic Forum. The Countywide IEN has been designed to provide network support for the types of ITS elements and levels of data and control sharing under consideration for the SGV Traffic Forum region.

SHOWCASE Integration Aspects

As System Manager for the SGVPP, the CONSULTANT is currently developing software to allow Countywide IEN operators to view traffic congestion and incident data that is made available via SHOWCASE's LA/Ventura ATIS project. The hypothetical component that allows the Countywide IEN to extract data from SHOWCASE is called the "IEN/SHOWCASE Bridge". Once the IEN/SHOWCASE Bridge is established, the CONSULTANT will incorporate this system integration approach (as appropriate) within the SGV Traffic Forum.

GUI Integration Aspects

As System Manager for the SGVPP, the CONSULTANT has already developed all of the graphical user interfaces (GUIs) and/or screens for the Countywide IEN. Within this PROJECT, the CONSULTANT shall leverage that effort and those work products (to the extent possible) and generate (and/or deliver) top-level data flow diagrams (DFDs) for each GUI and/or screen and review the interface prototype with the users.

Standardized and user-friendly GUIs will also be developed (and/or delivered) by the CONSULTANT as part of this component that meet PROJECT needs/requirements as well as facilitate system expansion, operation, maintenance, and training. After PROJECT completion, the CONSULTANT will provide all developer tools and detailed instructions to enable Agency staff to modify the GUI screens to reflect future expansion and changes in their system (e.g., addition of signals, CCTV cameras, desired changes to database layouts, etc.).

System Integration Summary

The CONSULTANT will draw upon its experience and/or leverage (to the extent possible) the work already conducted for the Countywide IEN (per above) to design, develop, and incorporate this PROJECT's system integration component.

Functional Element 4 – Communications System

Communications Overview

The CONSULTANT understands that one of the most critical and costly elements of the SGV ATMS will be the communications network. Therefore, this element includes the design of a communications system capable of supporting the recommended inter-jurisdictional SGV ATMS, each Agency LCCS and/or workstation, the Countywide IEN, and other ATIS design elements as described within this PROJECT. The installation of a communications network is essential to support the traffic signal operating, monitoring, and controlling capabilities of the SGV ATMS and other PROJECT components so that information can be exchanged with other jurisdictions, stakeholders, and systems.

Scope of Communications System Coverage

The CONSULTANT's communications network design for the PROJECT will include three (3) separate communication networks used to support the County, Corridor, and local levels of the SGV ATMS and the sharing of all PROJECT data. This communications network must include links and/or provide for the following:

Local Level Communications Network. Two-way communications between the field infrastructure units (e.g., system detectors, intersection controllers, CCTV cameras, etc.) on arterials of regional significance, each jurisdiction's LCCS, and the traffic control and management systems in the operating Agencies within the SGV Traffic Forum Project.

Corridor Level Communications Network. Two-way communications between each SGV Traffic Forum jurisdiction's LCCS and the SGV Traffic Forum sub-regional TMC, the planned Los Angeles County Regional TMC, other SGVPP LCCSs and/or workstations, and those LCCSs within the Pomona Valley Traffic

County Level Communications Network. Two-way communications (as determined within this PROJECT's requirements) between the SGV Traffic Forum sub-Regional TMC and Caltrans' Freeway Management System (FMS), other Traffic Forums, and other existing and planned systems in Southern California outside the SGV Traffic Forum area.

Since the communications system will drive the capability of all PROJECT components, both present and future ITS elements must be considered in the design. Additional primary considerations must be the expandability of the communications system to include other potential stakeholders and users, system expansion to include additional signals, and the cost effectiveness of the system.

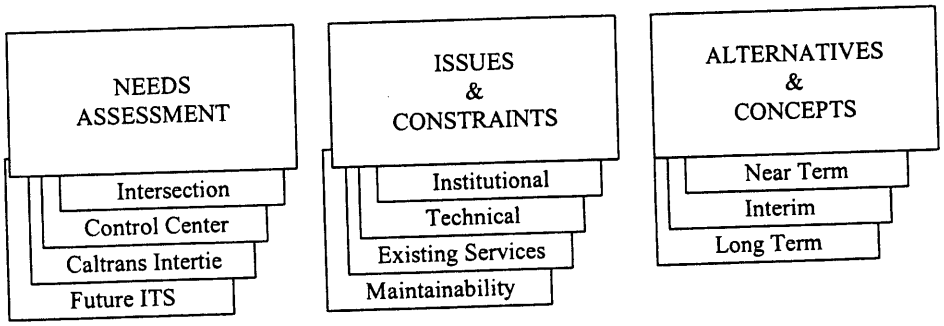
Communications Media Options

At this time, possible communications medium technology include, but are not limited to: twisted pair cable, leased telephone lines, CDPD, fiber optic cables, spread spectrum radio, very small aperture terminals, or a combination of the media described above.

Communications Approach

In the initial stage of the PROJECT, the CONSULTANT will conduct an analysis of the user needs and functional requirements of the communications system. Based on this analysis, the CONSULTANT will evaluate several alternative communication modes and recommend the most suitable for the PROJECT. In designing the communications system, the CONSULTANT will research and take advantage of opportunities to reuse existing or planned communications facilities.

The communications planning process that the CONSULTANT will undertake will result in the implementation of reliable communications networks to enable the SGV Traffic Forum Project's participating Agencies to effectively monitor and control the arterial highway system within their jurisdictions and coordinate with Caltrans freeway operations. The CONSULTANT's approach will includes a Needs Assessment, an determination of the priority Issues & Constraints, and the performance of an Alternatives and Concepts analysis.



Needs Assessment. The communications planning process starts with a complete understanding of the County's and other Agencies' needs. These will be identified during the initial stages of the PROJECT. Through these efforts, a clear understanding of the near- and long-term objectives of the County will be evaluated to determine the immediate and future communication needs that meet the requirements for a County Master Plan. With this understanding, the CONSULTANT will design and implement communications services that will not only adapt to the existing networks, but meet the requirements for future networks as well.

Issues and Constraints. The second phase is to identify and assess all issues and constraints that impose restrictions or limitations on the design of the communications network(s). The CONSULTANT will review and discuss with the multi-jurisdictional personnel existing, interim, and proposed communications services. The issues and constraints include, at a minimum: Federal Communications Commission (FCC) licensing, permits and policies, budgets, standards, technologies, existing communications compatibilities, and level of maintenance.

Alternative Concepts. The final phase is the development of alternative concepts for providing communications services to meet the needs of the PROJECT. During this phase, the CONSULTANT will assess various media, topology, technology, and architectures for the network. As previously noted, the CONSULTANT will compare each of the wire bound and wireless technologies. It is quite conceivable a recommendation could include a combination of technologies. However, it is important that any heterogeneous communications system developed is viewed as open and seamless to the information that flows across it. This will result in the preparation of the necessary documents for equipment procurement and installation.

The communications network media type and topology choices will be developed as part of the Communications Alternatives Analysis (Task 2.5.2). Some examples of the more important factors that influence the media type and topology choices include:

Application Requirements. Total bandwidth requirements to transport all applications starting with low speed once-per-second polling and high-speed video images at the local level moving up to and including transfer of high-speed video images and graphics at the regional level.

Existing Infrastructure. Availability of existing communications infrastructure, (i.e., conduit, cable, towers, etc.)

Operating Standards. Open, seamless, and transparent operation at all levels, meeting the requirement to be integrated with existing systems and support installation of future systems.

Operations and Maintenance Requirements. Life cycle costs including recurring usage fees, and maintenance costs.

Use of Previous Communications Analyses

As part of the SGVPP, the CONSULTANT is updating the communications analysis for that project. Primarily, this SGVPP task will serve to update the technologies and local communications network costs associated with a previous communications report prepared by the CONSULTANT (September 1997). The analysis to be performed is limited to the coverage areas, intersections, and operational strategies contained in the SGVPP area. Its focus is on the communication media, networks, and technologies used to support the SGVPP's TCS component; not the IEN since the IEN does not directly talk to traffic signal controllers. In order to successfully complete this effort, the CONSULTANT is reviewing existing communications network documentation, assessing Agency communications networks currently in-place, evaluating current communications technologies suitable for use with the Countywide TCS, and developing recommended communications architecture for the SGVPP project area.

The CONSULTANT's methodology for the development of communications network designs and implementation includes the use of the communications planning process and the previous analysis completed on the SGVPP and South Bay and Pomona Valley Traffic Forum projects. Being multi-jurisdictional projects with an almost identical set of communication system requirements, these efforts serve as an excellent model for this PROJECT. Therefore, the CONSULTANT will draw upon its experience and/or leverage (to the extent possible) the work already conducted (per above) to design, develop, and incorporate this PROJECT's communications system component

SPECIAL PROJECT PROVISIONS

Open Systems Architecture

Any recommendations made by the CONSULTANT for this PROJECT shall be for the implementation of "open systems" and shall be made after careful review of potentially suitable systems for use in the SGV Traffic Forum. This includes completed systems or systems currently under development in other Regional Traffic Forums.

Coordination with Other Projects/Systems

This PROJECT's recommendations shall occur in close coordination with other Regional ITS projects/systems including applicable Southern California Priority Corridor ITS Steering Committee Projects, Los Angeles/Ventura County ITS Coordinating Committee Projects, and Regional Traffic Forum Projects throughout Los Angeles County. This coordination is intended to ensure a seamless environment with a common interface – the Countywide IEN. The CONSULTANT shall build on previous work undertaken by these projects/systems and committees and, where applicable, use completed work products to avoid unnecessary work or duplication of effort in this PROJECT.

Project Scope

The CONSULTANT shall perform the tasks and subtasks for Phase 1 pertaining to the major ATMS and/or TCS system improvement components, LCCS and/or Agency monitoring/control workstation sites, functional and operational aspects of the sub-regional TMC, system integration aspects, and communications system components of the PROJECT and provide deliverables as described herein.

Project Deliverables

For each deliverable outlined in this CONTRACT, the CONSULTANT shall submit to the County "DRAFT" versions for review and comment. If the first draft is acceptable to the County, the County will distribute copies to all affected Agencies for review and comment prior to being returned to CONSULTANT for preparation of "FINAL" documents. If the first "DRAFT" submitted to the County is not acceptable to the County, it will be returned to the CONSULTANT until it is in a form acceptable for distribution to the affected Cities/Agencies.

The CONSULTANT will assemble comments provided from the various Agencies involved in the project. After assembling the comments, the CONSULTANT and County will review the comments, determine which comments should be incorporated and resolve any conflicting comments. The CONSULTANT shall address all Agency comments that have been agreed to during the review. If after further review, any Agency comment is not incorporated into a report it shall be discussed, either verbally or in writing, with the County and the author of the comment.

The CONSULTANT shall use the standard County software set forth below when preparing deliverables. The CONSULTANT shall provide deliverables in the appropriate file format (on CD-ROM and/or via e-mail) as follows:

- Microsoft Word – Word Processing
- Microsoft Excel – Spreadsheet
- Microsoft PowerPoint – Presentation Materials
- Microsoft Project – Project Management and Project Plan

Exhibit B (Schedule of Payments and Deliverables) of this CONTRACT provides the payment schedule for each deliverable ("DRAFT" and/or "FINAL") included in this CONTRACT. DRAFT and FINAL document deliverable(s) cannot be invoiced until approved and accepted by County's Project Director. Payment to Consultant shall be made after this approval. Invoice submittals by the CONSULTANT and payment of such by the County shall be made in accordance with this CONTRACT's Terms and Conditions as mutually agreed-upon between the CONSULTANT and the County.

PHASE 1 CONCEPTUAL DESIGN MASTER PLAN DRAFT SCOPE OF SERVICES

The CONSULTANT shall prepare the Conceptual Design report and concept design plans for each PROJECT component. This will be accomplished by understanding the needs of area stakeholders, by discussing traffic and operational issues with the cities, and by preparing detailed and comprehensive user and system functional requirements documents. Based upon these documents, the CONSULTANT shall perform an alternative analysis to select the best alternative to satisfy the identified user and functional needs and define the "concept of operations" for the San Gabriel Valley ITS project.

The recommendations from the alternative analysis will culminate in a Conceptual Design Master Plan document for each PROJECT component that will identify:

- Improvement locations
- The type of technology to be used
- The conceptual design and specifications
- A detailed description of the tasks involved with the implementation and installation of each PROJECT component
- Preliminary Cost estimates
- Operations and maintenance requirements

The Master Plan information will serve as the foundation for the Detailed Design Phase (Phase No. 2). It will also be used as a starting point for building consensus on a variety of institutional issues including cost sharing and possible funding sources for operating and maintaining the proposed improvements once they are in place.

The CONSULTANT shall complete the draft or final version (if a draft version is not to be completed for a specific task) of all deliverables for the tasks in this phase after receipt of the Notice to Proceed for this PROJECT from the Director.

Task 1: Project Management

The CONSULTANT shall provide a Project Manager who will act as the principal consultant contact for the DPW and other involved agencies. The designated Project Manager will be responsible for the completion of activities associated with the performance of this PROJECT, including the requirements and alternative analyses, system recommendation, conceptual design, and operations and maintenance and strategic plans. All required products must be delivered to DPW in a timely manner to the satisfaction of the DPW and the affected agencies. Additional responsibilities include management of project planning activities and the tracking of costs and resources associated with each aspect of the PROJECT.

The Project Manager shall oversee and participate in the day-to-day activities of the PROJECT and shall, therefore, have no concurrent assignments that would interfere with the successful and timely completion of the work related to the PROJECT.

Task 1.1: Project Coordination

The CONSULTANT shall coordinate technical design activities with the involved public and private agencies for each system component of this PROJECT. This will include, but not be limited to, the following list. It should be noted that this task would be billed on a "cost-plus" basis. For the purposes of developing a cost estimate, the number of meetings for each coordination effort area has been estimated.

1. Coordination with San Gabriel Valley Forum agencies throughout the conceptual design phase of this project (up to 20 meetings)
2. Coordination with public and private agencies involved with local and regional ITS projects including Caltrans, DPW, MTA, San Gabriel Valley agencies, and the Pomona Valley Forum cities to avoid duplication of effort in design and construction (up to 4 meetings).
3. Coordination with other regional and sub-regional projects which may affect this PROJECT, such as the Pomona Valley Traffic Forum, ACE, other San Gabriel Valley projects, and any other Southern California Priority Corridor projects, such as the Showcase Project (up to 10 meetings).
4. Coordination with the activities and projects of ITS Committees that may affect this PROJECT such as the Los Angeles/Ventura ITS Coordinating Committee, RIITS, and the Southern California ITS Priority Corridor Steering Committee (6 meetings).
5. Participation in peer group meetings with CONSULTANTS in other forums to help resolve compatibility issues (up to 5 meetings).
6. Participation in and providing technical input to the San Gabriel Valley Council of Governments (COG) committees when requested to help resolve institutional issues (up to 5 meetings).

Vendor Responsibilities:

1.1.1: Up to 50 meetings as identified above. A document listing the meetings conducted with agencies (meeting type, date, brief description, and agency contact).

Task 1.2: Attend Project Meetings/Make Project Presentations

The CONSULTANT shall attend PROJECT meetings with DPW, MTA, Caltrans, and affected agencies or organizations as deemed necessary by the DPW to accomplish the tasks and subtasks of this phase. These meetings shall include conducting monthly status meetings with the County to review project progress, discuss any issues that are impeding work on the progress and review work to be performed in the upcoming month.

Project status meetings shall be held with DPW on a monthly basis. As part of these meetings, TransCore will provide a project status report (see Task 1.4) that will provide information on the overall project status, work items completed during the past month, and work to be performed during the upcoming month. As part of this task, TransCore shall also maintain an Action Item list. This list will be updated as part of each progress meeting to identify which action items have been completed, and new issues that have arisen and Action Items to be performed. The CONSULTANT shall prepare meeting minutes for any PROJECT meetings and distribute a copy to meeting participants. Meeting minutes shall summarize each discussion and Action Item.

The CONSULTANT will also be required to make technical presentations, including the use of

presentation materials and the distribution of handouts, as needed at San Gabriel Valley Forum meetings (e.g., Project Kick-Off, Concept-of-Operations/Requirements stage, System Design Alternatives, etc.), San Gabriel Valley COG meetings, DPW staff meetings, and any other meetings as requested by the DPW or the affected agencies. The CONSULTANT shall obtain prior approval from the DPW on any presentation and handout materials to be distributed at any technical presentation of the PROJECT. The DPW shall be provided with a copy of the distributed materials.

Vendor Responsibilities:

1.2.1: Up to 5 presentations of materials with handouts. A document listing the presentations conducted with agencies.
1.2.2: Up to 10 project status meeting minutes.

Task 1.3: Create Project Web Page

The CONSULTANT shall create a new Internet web page for this project consistent with DPW Web Development Standards. The CONSULTANT will initiate the process by using the information/materials included within the existing private project intranet site – the SGVPP Early Deployment Project (EDP) web pages – as a starting point. From this template, the CONSULTANT will update/customize the web pages to fit this project. Please note that the CONSULTANT does not intend to place the existing EDP web pages on the Internet.

The CONSULTANT will then work with County staff to place the new SGV Traffic Forum web pages onto an Internet site that is accessible by the public. The SGV Traffic Forum web pages will be housed either on the DPW's Internet site (Intelligent Transportation System) or the CONSULTANT's Internet web site with a link from the DPW's site (TBD).

The CONSULTANT shall update the SGV Traffic Forum web pages by either providing the DPW with zip files or using File Transfer Protocols (FTP). Direct access to this web page from the DPW's web site would be provided via a hyperlink. Prior to updating the web page, the CONSULTANT shall submit to the DPW for review and approval the screen layout of the web page and all sub-pages.

The primary web page shall contain a brief description of the project. The description shall contain, at a minimum, information on the project limits, the involved agencies, the project objectives, and the DPW and CONSULTANT contact persons for the project. The web page shall also contain sub-pages with additional project information as follows:

Documents Sub-Page

This page shall contain downloadable, electronic files of all draft and final deliverables.

The CONSULTANT shall be responsible for reviewing/updating the web site monthly, at a minimum. As part of the monthly update, the CONSULTANT shall placed the monthly progress status reports, prepared as part of Task 1.4, onto the website. Prior to each update of the web page or sub-pages, the CONSULTANT shall obtain approval from the DPW for the information to be posted.

Vendor Responsibilities:

1.3.1: Screen layout of the web page and sub-pages.
1.3.2: Update web site monthly (at a minimum).

Task 1.4: Prepare Project Reports

The CONSULTANT shall prepare and submit written monthly progress reports and a final report to the DPW detailing the status of work being performed by the CONSULTANT. These reports shall be in a form acceptable to the MTA as part of its Quarterly Narrative Report. The reports shall include, but not be limited to:

- A narrative of the tasks accomplished in that month
- A review of any incomplete tasks and the reasons why they were not completed
- An outline of the tasks anticipated to be accomplished in the next month
- A summary of problems which occurred during the month
- Any anticipated problems
- An updated PROJECT schedule
- A list of outstanding issues and deliverables
- The current status of those issues and deliverables
- An invoice as required by this Agreement
- A summary of the percent completion for each task of the PROJECT.

The CONSULTANT shall also prepare claims, invoices, billings, and other financial information for review and approval by the DPW, as required by the Agreement.

Vendor Responsibilities:

1.4.1: Monthly progress reports and final report. Update the website to include the monthly progress status reports.
1.4.2: Financial reports, billings, and invoices.

Task 2: Preliminary/Conceptual Design

Task 2.1: Identify Stakeholder Objectives

The CONSULTANT shall identify primary agency stakeholders and potential participating stakeholders and users and their operational objectives relative to the major system functional elements of the PROJECT and future ITS elements to be integrated into the system.

It is envisioned that the project stakeholders will include the following:

- Los Angeles County DPW
- Caltrans
- MTA
- Subregional Transit Agencies
- Special Event Generators
- Local Cities (24)

The CONSULTANT shall schedule and conduct PROJECT pre-design meetings with each of the primary agency stakeholders and potential participating stakeholders for the purpose of, but not limited to:

1. Identifying primary agency stakeholders for the operation and management of the system and other potential participating stakeholders and users that could benefit from the PROJECT
2. Identifying agency and stakeholder operational objectives and user and system functional performance requirements
3. Obtaining design standards
4. Obtaining pertinent plans and status of any project which may affect this PROJECT
5. Obtaining information on the agencies existing traffic signal control systems and related infrastructure (detectors, communications networks, etc.). This information will be gathered during the meeting with the local agency, and if required through additional meetings and information requests.

An initial meeting will be held individually with each agency so that there can be a focus on the needs and operational characteristics of the individual agency. A report of each meeting will be compiled. The report shall contain a summary of the traffic signal infrastructure, any traffic control system deficiencies, a description of potential upgrades to the city's infrastructure and system, and transit availability as identified by local agencies, transit agencies, and Caltrans.

Deliverables:

2.1.1: 15 Draft Stakeholders' Operational Objectives Report.
2.1.2: 15 Final Stakeholders' Operational Objectives Report.

Task 2.2: System Needs Report

Using the material gathered during the previous task, the CONSULTANT will develop the San Gabriel Valley Forum System Needs Report. This report will summarize the information from the individual agencies and provide a comprehensive description of needs that the project should address. These needs will be broken down into the following categories:

- Traffic Management System Needs – Includes needs with existing traffic management systems deployed in the project area. These needs will include information such as outdated systems, inadequate coverage of systems, and outdated or inadequate control equipment.
- Traffic Surveillance Needs – Includes areas where improved traffic surveillance capabilities, including system detection and video surveillance are required. Will also include needs associated with existing traffic monitoring equipment and identification of locations with recurring congestion that may benefit from enhanced surveillance.
- Communications Needs – Includes those areas where needs such as a lack of a communications infrastructure, or inadequate communications infrastructure exists to support traffic management and traffic surveillance deployment.
- System Integration Needs – Includes those needs that impact the integration of traffic management systems. These may include institutional needs as well as physical infrastructure needs.

As part of this report, the CONSULTANT will assign an initial prioritization for the needs in each category. This prioritization will be limited to a "High, Medium, Low" rating and will be based on a high-level assessment of each need and its impact to traffic management in the region.

Deliverables:

2.2.1: Draft ATMS System Needs Report.
2.2.2: Final ATMS system Needs Report.

Task 2.3: Operational Concept and System Requirements

Task 2.3.1: Concept-of-Operations

The Consultant shall prepare a San Gabriel Valley Traffic Forum Concept of Operations (ConOps) document. The ConOps documents the problem space, goals, objectives, and vision for the SGV Traffic Forum from multiple points of view. The ConOps describes the way the individual projects and systems will interact with each other to meet the goals and objectives of the overall project. The ConOps document will serve the following wide range of program purposes:

- Identifies the issues that the various systems are to address; this is sometimes call the "Problem Space" identification and understanding.
- Roadmap on the ordering and/or concurrency of the way systems will be developed.
- Aid in the development of optional systems that may not have been envisioned.
- Documents stakeholder requirements, ideas, notions and expectations of the system (e.g. User Requirements).
- Identifies different levels of operation, and provides guidance and direction on how the systems should be operated.
- Validates the system when completed (e.g. was the RIGHT system built?).

The ConOps will identify the expected operational requirements, and expected benefits that agencies can receive depending on the level of involvement that the agency is willing to commit to the operations of their system. System operations will be defined at three different levels including:

- Level 1 – Agency which does not operate any traffic control signals and is provided with an IEN workstation to monitor traffic signal operations
- Level 2- Agency that manages and operates its own traffic control signals (typically 8 AM – 5 PM operations)
- Level 3 – Agency that manages it own traffic control signals, as well as manages other ATMS elements such as CCTV cameras, CMS signs, other agency(ies)' traffic control signals, etc. (typically maintain 24/7 TMC operations)

This definition of operational requirements, and benefits will be developed at a high-level so that the participating agencies can be provided with a view of the different levels that the system can be operated at, and the benefits associated with each level of operation. As part of the ConOps development, the CONSULTANT, working with the County, will make an initial determination of the operations level of each of the agencies involved in the project.

To facilitate the development of the ConOps the CONSULTANT will conduct a "Day-in-the-Life" exercise with different agencies. The purpose of this exercise is to observe how agencies conduct their day-to-day business to help determine how their operations can be improved. The CONSULTANT will conduct up to three separate Day in the Life studies with different agencies to be determined at a later date. The selected agencies will be determined based on different factors including agency staff size, the number of intersections they manage, and their operations (e.g. hands-on operations versus a hands-off operation). To the extent possible, the CONSULTANT will conduct a "Day-in-the-Life" exercise with one (1) SGV agency from each of the three (3) levels identified above.

The ConOps will be written in a fashion that is easily understood by all of the stakeholders of the system, not full of technical jargon. The initial ConOps should be considered a living document and not "chiseled in stone". As the project progresses through the requirements and architecture, technical and institutional tradeoffs will often necessitate the modification of the ConOps document until the final high level requirements and architecture is completed. At this time the ConOps may be considered a configuration item along with the requirements and architecture.

Deliverables:

2.3.1.1: Draft Initial SGV Traffic Forum Concept of Operations Report.
2.3.1.2: Final Initial SGV Traffic Forum Concept of Operations Report.

Task 2.3.2: ATMS User Requirements

The CONSULTANT shall prepare a User Requirements document that will define the user operational and functional requirements of the ATMS and include those aspects of the PROJECT related to the overall integration of the systems in the PROJECT and in the region. These documents will identify the system users and the desired system operations and functions. The document shall be complete, comprehensive, and provide enough information needed to proceed to the next task (System Functional Requirements). This document shall include, but not be limited to, the following information:

- Data collection
- Future ITS elements
- Information exchange
- Level of control
- Modes of operation
- Security/access
- Inter-jurisdictional requirements
- O&M requirements
- Staffing and training requirements
- Cost requirements
- Public outreach

The CONSULTANT shall utilize any pertinent information obtained from other projects where appropriate, for this PROJECT in order to avoid duplication of effort and unnecessary additional work and expense.

Deliverables:

2.3.2.1: Draft ATMS User Requirements Report.
2.3.2.2: Final ATMS User Requirements Report.

Task 2.3.3: ATMS Functional Requirements

Based on the user requirements, the CONSULTANT shall prepare a System Functional Requirements document. This document shall identify the system functional requirements as it relates to the PROJECT user needs.

These requirements shall also contain recommendations on upgrades to the existing vehicle

detection systems including the installation of new system detectors as necessary for full implementation of the ATMS and integrated systems. This document shall be complete, comprehensive, and provide enough information to proceed to the next tasks (Area Architecture, Alternative Analysis and Conceptual Design). The system functional requirements shall address, but not be limited to, the following requirements:

- Needs/requirements of existing systems;
- System performance;
- Equipment and technology;
- Interoperability;
- Expandability to provide additional ITS elements;
- Implementation costs;
- Operations;
- Maintenance;
- System Interface;
- Reliability;
- National and International Standards, such as National Transportation Communications for ITS Protocol (NTCIP); and
- Scalability.

The CONSULTANT shall utilize any pertinent information obtained from other projects, such as the other DPW ITS Forum projects, the SGV IEN and ACE where appropriate, for this PROJECT in order to avoid duplication of effort and unnecessary additional work and expense.

Deliverables:

2.3.3.1: Draft ATMS Functional Requirements Report.
2.3.3.2: Final ATMS Functional Requirements Report.

Task 2.3.4: Local Agency Workstation Site Requirements

In this task, the CONSULTANT will develop the user needs and system functional requirements of the Local Agency Workstation Sites. Based on this information, the CONSULTANT will evaluate various solutions and recommend the most suitable for the San Gabriel Valley Forum agencies.

The CONSULTANT will utilize completed work products from projects such as the South Bay Part 3, I-5/Telegraph Road, Pomona Valley Traffic Forum, and I-105 Corridor to define the functional requirements. The CONSULTANT shall modify these typical requirements based on the input received from the Forum Agencies, and requirements gathered from previous tasks and field reviews.

These deliverables shall identify the needs and concerns of the Forum agencies with respect to the functional requirements. They shall also document the requirements for the exchange of traffic information as well as incident response coordination between the San Gabriel Valley Forum agencies and the expandability to include other Agencies.

It is envisioned that two (2) separate categories of user and functional requirements will be generated as follows:

- Category 1 – Consists of Agencies that currently do not have a dedicated traffic signal control system within their jurisdiction nor do they plan to deploy one.
- Category 2 – Consists of Agencies that currently have a traffic signal control system or have plans to deploy one within their jurisdiction in the near term.

Within each category, generalized user and functional requirements will be developed which are meant to describe the overall requirements for a typical Agency within each category. Specific requirements per Agency will not be developed at this time.

User Requirements

The CONSULTANT shall develop user requirements, which define the user operational and functional requirements. This task will identify the typical system users and the desired system operation and function for the proposed workstation hardware, software, physical layout, and furnishings for the typical local city traffic signal control site. The physical structure and furnishings for each local city traffic signal control site are not included at this time. This task shall be complete and provide sufficient information needed to proceed to the next task (Functional Requirements). It shall include, but not be limited to, the operational and functional needs associated with the following:

- Traffic signal monitoring and control
- Inter-jurisdictional coordination
- Typical ITS field elements associated with this PROJECT (CCTV, HAR, CMS, etc.)
- Graphical user interfaces
- Interfacing with other jurisdictions and TMCs
- Multi-modal information access (data sharing/information exchange)
- Generalized location (e.g., City Hall, Maintenance Yard, etc.)
- Video displays
- Hours of operation
- High-level O&M requirements
- Data sharing and information exchange

Functional Requirements

Based on the user requirements, the CONSULTANT shall develop typical functional requirements by category that define the system operational and functional requirements. This task will identify the required high-level system functions and operations for the proposed TMCs' hardware, software, physical layout, and furnishings for the typical local city traffic signal control sites. This task shall also identify the system functional requirements for any component not identified under any other task but is required to provide a fully functional TMC (in the case of Category 2 locations) or deployment of the local workstation element. This task shall be comprehensive and provide enough information to proceed to the next task (System Architecture). It shall include, but not be limited to, the following requirements:

- Function
- General space requirements
- General staffing and training
- Computer system

- System performance
- Equipment and technology
- Interoperability
- General implementation costs
- Operational considerations
- Computer system maintenance
- System Interface(s)
- Reliability
- Flexibility
- Extensibility

Deliverables:

2.3.4.1: Draft Typical Local City Traffic Signal Control Site Facility and Computer System Requirements Report.

2.3.4.2: Final Typical Local City Traffic Signal Control Site Facility and Computer System Requirements Report.

Task 2.3.5: Sub Regional TMC Requirements

In this task, the CONSULTANT will develop the user needs and system functional requirements of the Sub Regional TMC. Based on this information, the CONSULTANT will evaluate various solutions and recommend the most suitable alternative for the operation of the Sub regional TMC.

These deliverables shall identify the needs and concerns of the County with respect to the functional requirements. They shall also document the requirements for the exchange of traffic information as well as incident response coordination between the San Gabriel Valley Forum agencies and the Sub Regional TMC.

User Requirements

The CONSULTANT shall develop user requirements, which define the user operational and functional requirements. This task will identify the system users and the desired system operation and function for the proposed workstation hardware, software, physical layout, and furnishings for the Sub Regional TMC. The physical structure and furnishings for the Sub Regional TMC are not included at this time. This task shall be complete and provide sufficient information needed to proceed to the next task (Functional Requirements). It shall include, but not be limited to the operational and functional needs associated with the following:

- Traffic signal monitoring and control
- Inter-jurisdictional coordination
- ITS field elements associated with this PROJECT (CCTV, HAR, CMS, etc.)
- Graphical user interfaces
- Interfacing with other jurisdictions and TMCs
- Multi-modal information access (data sharing/information exchange)
- Location
- Video displays
- Hours of operation

- O&M requirements
- Data sharing and information exchange

Functional Requirements

Based on the user requirements, the CONSULTANT shall develop functional requirements that define the system operational and functional requirements. This task will identify the required system functions and operations for the proposed Sub Regional TMCs' hardware, software, physical layout, and furnishings. This task shall also identify the system functional requirements for any component not identified under any other task but is required to provide a fully functional TMC. This task shall be comprehensive and provide enough information to proceed to the next task (System Architecture). It shall include, but not be limited to, the following requirements:

- Function
- Staffing and training
- Computer system
- System performance
- Equipment and technology
- Interoperability
- Implementation costs
- Operational considerations
- Computer system maintenance
- System Interface(s)
- Existing infrastructure
- Reliability
- Flexibility
- Extensibility

Deliverables:

2.3.5.1: Draft Typical Sub Regional TMC Facility and Computer System Requirements Report.

2.3.5.2: Final Typical Sub Regional TMC Facility and Computer System Requirements Report.

Task 2.3.6: Integration System User Requirements

The CONSULTANT shall prepare a User Requirements document that defines the transportation system integration user operational and functional requirements. This document will identify the system users and the desired system operation and function with respect to system integration. The development of these requirements shall use the existing COUNTY Information Exchange Network (IEN) as the basis for the integration system and shall focus on the definition of any enhancements or modifications required to the IEN to meet the user needs. This document shall be complete, comprehensive, and provide enough information needed to proceed to the next task (System Functional Requirements). This document shall include, but not be limited to, the following:

- Operational requirements
  - Data collection

  - Future ITS elements
  - Information exchange
  - Level of control
  - Modes of operation
- Security
- Functional requirements
- Inter-jurisdictional requirements
- Maintenance requirements
- Staffing and training requirements
- Cost requirements
- Public relations/political considerations

The CONSULTANT shall utilize any pertinent information obtained from other projects, such as ACE and the East San Gabriel Valley Pilot Project where appropriate, for this PROJECT in order to avoid duplication of effort and unnecessary additional work and expense.

Deliverables:

2.3.6.1: Draft Integration System User Requirements Report.
2.3.6.2: Final Integration System User Requirements Report.

Task 2.3.7: Integration System Functional Requirements

The CONSULTANT shall prepare a Transportation Integration System Functional Requirements document by applying the integration system user requirements to meet the needs of this PROJECT. This document shall identify the integration system functional requirements as they relate to the system integration user needs. This document shall be complete, comprehensive, and provide enough information to proceed to the next tasks (System Architecture, Alternative Analysis and Conceptual Design) and shall include, but not be limited to, the following requirements:

- System performance
- Interface requirements between system components
- Interface protocol standards
- Interface requirements between systems within and outside the forum area
- Equipment and technology
- Availability of technology
- Interoperability
- Expandability
- Implementation costs
- Operation
- Maintenance
- Existing infrastructure
- Reliability
- Flexibility
- Extensibility

Deliverables:

2.3.7.1: Draft Integration System Functional Requirements Report.
2.3.7.2: Final Integration System Functional Requirements Report.

Task 2.3.8: Communications User and Functional Requirements

The CONSULTANT shall obtain the information needed to identify the communications system user and functional requirements. This may require follow-up visits to individual cities and agencies to discuss issues and concerns. This will also require field reviews to verify existing communications infrastructure. As part of this task, the CONSULTANT shall take into account any applicable information gathered on other San Gabriel Valley projects including the IEN and ACE Projects.

Based on the input received from the agencies, prior reports, and requirements gathered from previous tasks and field reviews, the CONSULTANT shall prepare a Communications System User and Functional Requirements Report. This document shall identify the needs and concerns of the Forum agencies with respect to the communications infrastructure. This report shall also document the Forum's communications requirements based on the transportation system design. This document shall include, but not be limited to, data communications requirements for any recommended system and component included in this system such as the following:

- City work stations/control sites
- Future ITS field elements, such as CCTV, HAR, and CMS
- Integration system requirements
- Non transportation-related issues
- Public relations issues
- O&M issues
- Expandability
- Bandwidth requirement
- Reliability
- Redundancy
- Diversity
- Performance requirements
- Communications system access points
- Potential bottlenecks and weak links
- Resource and cost sharing

Deliverables:

2.3.8.1: Draft Communications User and Functional System Requirements Report.
2.3.8.2: Final Communications User and Functional System Requirements Report.

Task 2.4: System Architecture

The CONSULTANT shall develop an overall system architecture showing the inter-relationship between the major functional areas to be included within the project. This architecture will serve as a high-level system design and will show the data flows between the functional areas. The system architecture will also provide a high-level view of how the individual agencies fit together and how the agencies interact with the County, Caltrans and other area-wide stakeholders. In addition, individual architectures for each of the major areas shall be developed in accordance with the following:

ATMS

The Architecture definition of the ATMS shall include, identifying the elements included within the ATMS, the overall functionality of the system, data flows between ATMS elements, and definition of the ATMS interface requirements.

Communications

The Architecture definition of the communications system shall include, but not be limited to, the definition of interface requirements to other system elements, and the definition of the overall system functionality.

Local City Control Site

The Architecture definition of a local city control site shall include the definition of the overall functionality of the local control workstations, and the definition of system interfaces including user interfaces and interfaces to other project elements. The CONSULTANT shall also develop a typical workstation control center layout diagram.

Sub Regional TMC

The Architecture definition of the Sub Regional TMC shall include the definition of the overall functionality of this facility, how this facility will interact with the proposed County TMC and local workstation sites, the definition of system interfaces including user interfaces, and interfaces to other project elements.

Integrated Systems

The Architecture definition of the transportation integration system shall include definition of system interfaces including user interfaces and interfaces to other project elements, and the definition of the overall system functionality.

Deliverables:

2.4.1: Draft Area Architecture Definition Report.
2.4.2: Final Area Architecture Definition Report.
2.4.3: Draft Typical Local City Control Site Schematic Diagram.
2.4.4: Final Typical Local City Control Site Schematic Diagram.

Task 2.5: Alternative Analysis

Task 2.5.1: ATMS Analysis

Based on the User and Functional Requirements, the CONSULTANT shall perform an alternative analysis to evaluate different ATMS and vehicle detection systems, where necessary, for use in the Forum area. The CONSULTANT's review shall include but not be limited to; existing ATMS owned or being developed by the County and affected Agencies for use in this traffic forum to determine if they can meet the user and functional requirements as identified in the previous tasks. The CONSULTANT will use the findings of the commercial-off the-shelf (COTS) traffic control system analyses and reports currently being completed by other sub-regional traffic signal forum projects as the primary input for this task. Once this review is complete, the CONSULTANT shall update this report to meet the specific requirements of the San Gabriel Valley region as defined in previous tasks.

Additionally, the CONSULTANT shall include in the analysis any ATMS that were not part of the initial evaluation, which warrant further investigation. If there are no existing ATMS that warrant further investigation, the CONSULTANT shall submit a letter to the COUNTY indicating such. Additionally, the CONSULTANT shall also identify any new suppliers of systems, any new systems provided by the surveyed suppliers that would be candidates for analysis, or any upgrades to previously surveyed systems that would be chosen for further evaluation. CONSULTANT will conduct a preliminary assessment of each system.

As part of the analysis the CONSULTANT shall examine how the different system elements comply with NTCIP. This evaluation should include the current schedule for providing NTCIP compliance and the level of compliance (if any) to be provided. The use of NTCIP will be provided as a guideline to the County for them to assess as to whether it should be incorporated into the project, not as a mandatory requirement for the ATMS. Providing this information on the "state-of-the art" of NTCIP will allow for the County to make informed decisions as to where, how, or when NTCIP should be incorporated into the project.

A comparison matrix shall be prepared to determine the benefits and limitations of each system to be evaluated. This analysis will address, at minimum, the following:

- Conformance to user requirements
- Conformance to functional requirements
- Software requirements
- Hardware requirements
- Intersection control equipment
- Communications requirements
- System performance
    - Present
    - Future
- Estimated capital cost
- Estimated O&M life cycle costs
- Liability and risk
- Maturity of technology
- Adaptability
- Interface requirements and ability

- Licensing issues
  - Ownership
  - Cost
- Staffing and training
- Expandability
- Flexibility
- Control processes
- Interoperability
- System support capabilities
- System Maintenance Requirements
- System readiness

The CONSULTANT shall include in its criteria for analysis that any required equipment shall be readily available, current state-of-the-art, off-the-shelf, and manufactured from well-established and reputable suppliers.

The alternatives analysis for the ATMS will be performed for up to 15 separate Agencies/areas. The alternatives analysis will not be repeated for Agencies/areas that have already been analyzed as part of a previous project. For the new analysis to be performed, the analysis will be tailored to meet the needs of the specific Agencies/areas and identify the specific options that are applicable for that Agency/area.

As part of the analysis, the high-level design developed as part of task will be updated to reflect the implementation alternatives for each Agency/area. The refined design will be used to help identify the potential alternatives and ensure that the analysis meets the needs of individual Agencies. Where applicable, the alternatives analysis shall also examine the possibility of developing multi-jurisdictional systems to meet the needs of many Agencies. These multi-jurisdictional systems may take the form of incorporating Agency-owned signal into a larger County-owned TCS, or a separate system that is installed to serve two or three Agencies.

With respect to the detection systems, the analysis shall comprise a comparison of technologies and identification of functionality rather than an evaluation of specific products from individual suppliers. It is anticipated that the selected system will be a hybrid system, consisting of a combination of numerous detection system types. The selected system will also likely be based upon the requirements of the component for which detection is required or desired.

For CCTV systems, the alternatives analysis will examine potential locations, equipment requirements and operations alternatives with regards to individual CCTV systems for each Agency versus a multi-jurisdictional system to support multiple Agencies.

The development of this PROJECT component shall consider any known effective means of satisfying the user and functional requirements and should clearly indicate which requirements, if any, cannot be met by each system or technology evaluated. The completed analysis should show that the recommended system is the most effective, reliable, and economical system available.

Deliverables:

2.5.1.1: Draft ATMS Alternative Analysis Document.
2.5.1.2: Final ATMS Alternative Analysis Document.

Task 2.5.2: Communications Alternative Analysis

Based on the user and functional requirements, the CONSULTANT shall perform an alternative analysis that will evaluate several different communication alternative for use in the Forum area. It is anticipated that the selected system will be a hybrid system, consisting of a combination of numerous communication types. The selected system will likely be also based upon the requirements of the component for which communication is required or desired. These elements will be combined in the most reliable, economical, and efficient way.

The analysis will be performed on two levels. The first level of the analysis will be conducted to address the communications networks necessary for the individual cities/traffic control systems to be deployed in the forum area. It is anticipated that up to 15 local analyses will be conducted.

As part of this analysis the high-level design developed in as part of the architecture task will be refined to represent the needs of the individual agencies. The first-level analysis will focus on the specific requirements of each of the agencies/systems and evaluate specific alternatives and develop agency specific recommendations. The analysis will include all of the field devices including traffic control signals, detectors and video surveillance as required.

The second level will include a forum-wide communications analysis to investigate the communications needs to integrate the individual agencies/systems in the forum onto an integrated communications network.

A comparison matrix shall be prepared to determine the benefits and limitations of each system. This analysis will address, at minimum, the following:

- Hardware requirements
- Bandwidth requirements
- Data transfer requirements
- Estimated capital cost
- Estimated O&M life cycle costs
- Liability and risk
- System performance
- How well it satisfies current and future needs
- Maturity of technology
- Staffing and training requirements
- Availability
- Expandability
- Flexibility
- Control processes
- Potential bottlenecks and weak links
- Reliability
- Marketing potential

Additionally, the CONSULTANT shall include in its criteria for analysis that any required equipment shall be readily available, current state-of-the-art, off the-shelf, and manufactured from well-established and reputable suppliers. In addition, the analysis shall include an estimation of the impacts in terms of additional bandwidth requirements imposed on the communications system through the deployment of NTCIP compliant systems.

Deliverables:

2.5.2.1: Draft Communication System Alternative Analysis Report.
2.5.2.2: Final Communication System Alternative Analysis Report.

Task 2.5.3: Local City Control Site and Computer Systems Alternative Analysis

The CONSULTANT shall identify any local Agency traffic signal control site locations requiring physical alterations to meet the typical control site design characteristics. The first step of this task will be to conduct site visits with up to 15 Agencies to review the space that may be used to house a LCCS. As part of these site visits, CONSULTANT will meet with the Agency to discuss available space, operations and maintenance needs, and costs. It is envisioned that the proposed site visits and information request for this task may be combined with other data collection efforts within the overall project. Once the interviews are complete, each Agency will be placed into one of three categories:

- Level 1 – Agencies which only desire to have a local workstation, whereby another Agency will be operating local signalized intersections
- Level 2 – Agencies which currently have a traffic signal control system
- Level 3 – Agencies that currently have a traffic signal control system as well as other ITS related devices

Generalized alternatives will be developed for each level and alternative layouts will describe the amount of equipment to be deployed at each LCCS level (e.g., workstation, TCS hardware, etc.). Once complete, a text description for each location will be prepared which identifies a recommended approach for deployment of the LCCS. The recommended approach will be further clarified within the conceptual design task (Task 2.6). As part of this analysis, the CONSULTANT shall develop a report that presents the space requirements for each of the Agencies, recommendations on how that space can be provided within existing facilities, and estimated costs for any building modifications. Schematic layouts will be provided for the recommended approach within the conceptual design.

Deliverables:

2.5.3.1: Draft Local City Control Site and Computer Systems Analysis Report
2.5.3.2: Final Local City Control Site and Computer Systems Analysis Report

Task 2.5.4: Prepare Recommendations

The CONSULTANT shall prepare a comprehensive list of recommendations resulting from the architecture definition and analysis work carried out in the previous tasks. The areas to be addressed shall be:

ATMS

Based upon the results of the ATMS Alternatives Analyses and careful consideration of the variables involved, the CONSULTANT shall prepare detailed technical recommendations for the best ATMS(s) to be used in the Forum area. The recommended ATMS may involve the replacement and/or maintenance and integration of any existing traffic control systems. This working paper shall include a comprehensive discussion on why the particular system was selected and a discussion of the methodology used to make the recommendation.

The CONSULTANT shall also prepare recommendations regarding the placement and technology used to provide vehicle detection and video surveillance. The recommendations for these technologies shall include information on how the technologies will be integrated with the ATMS, and the LCCS.

Recommendations shall be for the development of "open systems" and shall include a review of potentially suitable systems for use in this forum. This development shall occur in close coordination with projects such as ACE, any applicable Southern California Priority Corridor ITS Steering Committee Projects, Los Angeles/Ventura County ITS Coordinating Committee Projects, and Regional Traffic Forum Projects throughout Los Angeles County to ensure a seamless environment with a common interface.

Communications

Based upon the results of the Communication System Alternative Analysis and careful consideration of the variables, the CONSULTANT shall prepare a detailed technical recommendation for the best Communication System to be used in the Forum. This report shall include a comprehensive discussion on why this combination of communication elements was selected and a discussion of the methodology used to make the recommendation.

Sub Regional TMC

The CONSULTANT shall develop recommendations for incorporating the Sub Regional TMC into the County TMC. These recommendations shall include providing a site schematic showing the layout of the Sub regional TMC, equipment requirements. Additionally, the recommendations shall outline any operational characteristics that need to be incorporated into the Sub regional TMC.

Local City Control Site

Based on the results of the Local City Traffic Signal Control Site and Computer Systems Alternative Analyses, and careful consideration of the variables involved, the CONSULTANT shall recommend local city traffic signal control sites and computer systems to be implemented with this PROJECT. This report shall include a comprehensive discussion on why these elements were selected and a discussion of the methodology used to make the recommendation.

The recommendation made by the CONSULTANT shall consider known effective means of satisfying the functional requirements. Once the preliminary site selections have been reviewed and approved by the affected jurisdictions, then the CONSULTANT shall recommend the best local city traffic signal control sites, including any necessary local city traffic signal control site computer systems not previously covered herein.

The CONSULTANT shall document the process including a general discussion on why the particular sites were selected and a comprehensive discussion on why the particular systems were selected and the methodology used to make the recommendation.

Integrated Systems

The CONSULTANT shall prepare the technical recommendations for the Transportation Integration System component and its associated modules. These recommendations shall include modifications and enhancements to be made to the COUNTY IEN to provide the required level of integration.

Deliverables:

2.5.4.1: Draft Systems Recommendation Report
2.5.4.2: Final Systems Recommendation Report

Task 2.6: Conceptual Design Report

At the completion of the previous tasks of the PROJECT, the CONSULTANT shall prepare a detailed, comprehensive Conceptual Design report for the PROJECT elements accompanied by an Executive Summary report.

This Conceptual Design Report shall include maps, graphs, and subsystem technical reports summarizing the final conceptual recommendations for each system and be in a form detailed enough such that it can be used as the foundation for the detailed design.

The CONSULTANT will also be required to account for system elements in other consultant contracts that may affect CONSULTANT'S system design. This report will be concise and easily understandable by non-technical personnel. The areas to be addressed by the Conceptual Design are as follows:

ATMS

The CONSULTANT shall prepare the Conceptual Design of the selected ATMS, CCTV systems, vehicle detection system and its associated components as agreed upon by the DPW, MTA, and the affected agencies. This Conceptual Design shall consist of a detailed and comprehensive technical working paper defining the system architecture, interface, software, hardware requirements and the overall functionality of the system. This document will also include the conceptual design of the computer system hardware, and any associated peripherals, software, and software modules for the complete ATMS.

The Conceptual Design shall identify the amount, type (technology), and location of the vehicle detectors that forms part of the Vehicle Detection System. Additionally CCTV locations and technology shall be defined.

In addition to the items indicated above, the Conceptual Design report shall include, but not be limited to, a configuration management plan, construction staging plans, and cut over plans (if necessary) showing the transition from any existing system(s) to the new system for each PROJECT component.

The CONSULTANT will also be required to account for system elements in other consultant contracts that may affect CONSULTANT'S system design. The Conceptual Design Document shall be in a form and detailed enough such that it can be used as the foundation for the Detailed Design Phase.

Communications

The CONSULTANT shall prepare the Conceptual Design of the selected Communication System and any associated components required to make the system operational, as agreed upon by the DPW, MTA, and the affected agencies. This Conceptual Design shall consist of a detailed and comprehensive technical working paper defining the system architecture, interface requirements, and the overall functionality of the system.

The Conceptual Design shall provide for two-way communications between field controllers and office personnel. The CONSULTANT will also be required to account for system elements in other consultant contracts, which may affect CONSULTANT'S system design. This Conceptual Design document shall be in a form and detailed enough such that it can be used as the foundation for the detailed design.

In addition to the items indicated above, the Conceptual Design shall include, but not be limited to, a configuration management plan, construction staging plans, and cut over plans (if necessary) showing the transition from the existing to the new system for each system component.

Local City Control Site

The CONSULTANT shall prepare the Conceptual Design for each local city control site, including associated equipment, furnishings and computer system(s) as agreed upon by the DPW, MTA, and the affected agencies as part of previous tasks. This Conceptual Design report shall consist of a comprehensive technical working paper defining preliminary site locations and space requirements, system architecture, staffing, training, and interface requirements, and the overall functionality of each computer system and typical local city control site. Recommendations on necessary alterations to these proposed workspaces to provide the needed functionality shall also be provided.

The CONSULTANT will also be required to account for other computer and component system requirements, such as those involved with other projects and elements in other consultant contracts which contracts that may affect CONSULTANT'S design.

In addition to the items indicated above, the Conceptual Design shall include, but not be limited to, a configuration management plan, and cut over plans (if necessary) showing the transition from the existing to the new system for each system component.

This Conceptual Design document shall be in a form and detailed enough such that it can be used as the foundation for the detailed design.

Integrated Systems

The CONSULTANT shall prepare the Conceptual Design of the Transportation Integration System component and it's associated modules. This design shall use the existing COUNTY Information Exchange Network (IEN) as the baseline for the design and shall identify modifications/enhancements that will need to be made to this software to support the San Gabriel Valley Forum. Potential modifications to the IEN may include the integration of additional traffic control systems, additional corridor servers, and CCTV video and control.

This Conceptual Design shall consist of a detailed and comprehensive technical working paper defining the system architecture, interface requirements, the overall functionality of the system. The CONSULTANT will also be required to account for system elements in other consultant contracts that may affect CONSULTANT'S system design.

Recommendations made by the CONSULTANT shall be for the development of "open systems" to potentially integrate with other regional systems. This includes completed systems or systems currently under development in other traffic corridors. This development shall occur in close coordination with, any applicable Southern California Priority Corridor ITS Steering Committee Projects, Los Angeles/Ventura County ITS Coordinating Committee Projects, and Regional Traffic Forum Projects throughout Los Angeles County to insure a seamless environment with a common interface.

In addition to the items listed above, the Conceptual Design shall include, but not be limited to, a configuration management plan, construction staging plans, and cut over plans (if necessary) showing the transition from the existing to the new system for each system component.

Deliverables:

2.6.1: ATMS Conceptual Design
2.6.2: Communications Conceptual Design
2.6.3: LCCS Conceptual Design
2.6.4: Integrated System Conceptual Design
2.6.5: Draft Conceptual Design Report (including Executive Summary)

Task 2.7: Operations and Maintenance Plan

The CONSULTANT will be required to develop an Operations and Maintenance (O&M) plan for the proposed Conceptual Design of the PROJECT that provides a detailed breakdown of the total O&M costs for the proposed system conceptual design.

This task is not envisioned to develop individual O&M plans for each and every Agency within the project boundaries. Rather, it is envisioned that the O&M plan will cover four (4) varying levels of operational scenarios:

- Level 1 – Agencies which do not have a traffic signal control system
- Level 2a – Agencies which have a current traffic signal control system but are planning to upgrade
- Level 2b – Agencies which do not have a current local traffic signal control system but are planning to deploy one
- Level 3 – Agencies which currently have a local traffic signal control system in addition to other existing ITS devices

At a minimum, the O&M plan should consider the required personnel skill levels and staffing costs, and the re-curring and life cycle costs for capital facilities and space, equipment, material, supplies, procurement, and installation for the following:

- Recommended staffing plan (time of day, days of week) for operating and managing agency workstations and software systems.
- Traffic signal control system and system loops infrastructure maintenance
- Maintenance of other ITS field devices
- Periodic operating system and software version upgrades
- Periodic computer hardware replacement
- Hardware and software technical support and maintenance
- Computer database maintenance
- Computer system configuration management
- Telecommunications infrastructure operation and maintenance
- Map database maintenance
- Employee training
- Additional building maintenance, operations or communication costs to operate the agency and stakeholder work stations

The costs shall be presented in annual terms, with total costs and breakdowns by level, and in a clear and an easily understandable format, including graphs and charts, if necessary. The plan should be in a form that can be easily interpreted by both technical and non-technical personnel, such as city administrators and maintenance personnel. This plan shall also include a preliminary discussion on possible cost and resource sharing options, if any.

Deliverables:

2.7.1: Draft Operation and Maintenance Plan Report
2.7.2: Final Operation and Maintenance Plan Report

Task 2.8: Conceptual Design Workshop

At the completion of the Conceptual Design and O&M Plan, the CONSULTANT will conduct a Conceptual Design workshop with the project stakeholders. The purpose of this workshop will be to present the project recommendations, design elements and operational requirements with the goal of achieving stakeholder consensus. This workshop will be a ½ day meeting at a facility to be provided by the County.

Deliverables:

2.8.1: Conceptual Design Workshop including presentation material and handouts

Task 2.9: City Concurrence

Based upon the results of previous tasks, the CONSULTANT shall, with the assistance of the County, San Gabriel Valley Forum agencies, and other agencies as appropriate, obtain city concurrence on the proposed Conceptual Design and the Operations and Maintenance Plan. The CONSULTANT shall conduct meetings with the primary agencies to discuss the approval process and gain concurrence from these agencies on the proposed Conceptual Design. These meetings will be conducted after the draft of each document has been prepared. This will allow for comments to be incorporated into the final documents.

Deliverables:

2.9.1: A meeting conducted with San Gabriel Valley agencies
2.9.2: A binding letter/resolution with each San Gabriel Valley agency indicating concurrence with the plan and commitment to the overall project

Task 2.10: Final Conceptual Design Report

The CONSULTANT shall modify the Conceptual Design Report based upon comments to the O&M Report and produce a Final Conceptual Design Report that will define the final system design and be in a form that will enable the initiation of Task 3, Detailed Design.

As part of the Final Conceptual Design Report, the CONSULTANT shall prepare a PROJECT Budget indicating the anticipated use of funds. This PROJECT Budget shall include, but not be limited to:

- An estimated cash flow chart by quarter
- A breakdown of expenditures by task and subtask (to the extent known)

Also as part of the Final Conceptual Design Report, the CONSULTANT shall prepare a PROJECT Schedule detailing the anticipated start and end dates of each task and subtask. The PROJECT Schedule shall include, but not be limited to:

- PROJECT milestones
- Schedule of deliverables
- PROJECT duration
- Critical path

The PROJECT Schedule should also include appropriate agency review periods for each document and work product so as to provide a realistic estimation of the PROJECT's duration.

An Executive Summary shall accompany this report.

Deliverables:

2.10.1: Draft Final Conceptual Design Report (including Executive Summary)

2.10.2: Final Conceptual Design Report (including Executive Summary)

Task 3: Additional Services

The CONSULTANT, upon receipt of each County-approved Scope of Work for Additional Services, shall proceed with such Additional Services in accordance with and within the time frames specified in such Scope of Work. Upon completion of the Additional Services, County will examine the work completed and/or test the Developed Software and identify any Deficiencies found. CONSULTANT shall re-perform the Additional Services to County's satisfaction until the Additional Services contain no Deficiencies, in which case the Additional Services shall be deemed successfully completed.

Deliverables:

9.1: Successfully Completed Additional Services

TRANSCORE.

Exhibit B

SCHEDULE OF DELIVERABLES AND PAYMENTS

The following table presents TransCore's Cost Proposal and Schedule for the San Gabriel Valley Traffic Signal Forum Advanced Traffic Management Improvement Project for the Los Angeles County Department of Public Works (the County). This Cost proposal and Schedule were developed based on the Statement of Work (Exhibit A) that was prepared for the project, dated 7/10/03. The items listed in the following table reflect the project deliverables, and will also serve as the basis for submitting invoices. These costs and schedule are based on TransCore and the County coming to mutually agreeable contract terms. It is anticipated that the work related to Task 1, Program Management will be reimbursed on a time and materials (T&M) basis in accordance with the rates shown in Attachment B.1, and that all other tasks will be performed on a firm fixed price (FFP) basis.

Project Costs & Schedule per Task/Deliverable

Task/Deliverable	Value (Labor & Directs)	Sched. End Date (Weeks from NTP)
1. Project Management	$133,000	55
2.1.1 Draft Stakeholders' Operational Objectives Report	$36,400	---
2.1.2 Final Stakeholders' Operational Objectives Report	$15,600	8
2.2.1 Draft ATMS System Needs Report	$16,800	---
2.2.2 Final ATMS System Needs Report	$7,200	10
2.3.1.1 Draft Initial SGV Traffic Forum Concept of Operations Report	$19,600	---
2.3.1.2 Final initial SGV Traffic Forum Concept of Operations Report	$8,400	10
2.3.2.1 Draft ATMS User Requirements Report	$7,000	---
2.3.2.2 Final ATMS User Requirements Report	$3,000	12
2.3.3.1 Draft ATMS Functional Requirements Report	$7,000	---
2.3.3.2 Final ATMS Functional Requirements Report	$3,000	12
2.3.4.1 Draft Typical Local City Traffic Signal Control Site Facility and Computer System Requirements Report	$24,500	---
2.3.4.2 Final Typical Local City Traffic Signal Control Site Facility and Computer System Requirements Report	$10,500	12
2.3.5.1 Draft Typical Sub regional TMC Facility and Computer System Requirements Report	$12,600	---
2.3.5.2 Final Typical Sub regional TMC Facility and Computer System Requirements Report	$5,400	14
2.3.6.1 Draft Integration System User Requirements Report	$7,000	---
2.3.6.2 Final Integration System User Requirements Report	$3,000	15
2.3.7.1 Draft Integration System Functional Requirements Report	$7,700	---
2.3.7.2 Final Integration System Functional Requirements Report	$3,300	15
2.3.8.1 Draft Communications System User and Functional Requirements Report	$15,400	---
2.3.8.2 Final Communications System User and Functional Requirements Report	$6,600	16

TRANSCORE.

2.4.1 & 2.4.3 Draft Area Architecture Definition Report and Typical Local City Control Site Schematic Diagram	$44,100	---
2.4.2 and 2.4.4 Final Area Architecture Definition Report and Typical Local City Control Site Schematic Diagram	$18,900	**22**
2.5.1.1 Draft ATMS Alternatives Analysis	$28,000	---
2.5.1.2 Final ATMS Alternatives Analysis	$12,000	25
2.5.2.1 Draft Communications Alternatives Analysis Report	$38,500	---
2.5.2.2 Final Communications Alternatives Analysis Report	$16,500	**25**
2.5.3.1 Draft Local City Control Site and Computer System Analysis Report	$46,900	---
2.5.3.2 Final Local City Control Site and Computer System Analysis Report	$20,100	**24**
2.5.4.1 Draft Systems Recommendation Report	$23,100	---
2.5.4.2 Final Systems Recommendation Report	$9,900	27
2.6.1 ATMS Conceptual Design	$101,000	**35**
2.6.2 Communications Conceptual Design	$63,000	**32**
2.6.3 LCCS Conceptual Design	$44,000	28
2.6.4 Integrated System Conceptual Design	$21,000	28
2.6.5 Draft Conceptual Design (including Executive Summary)	$19,000	37
2.7.1 Draft Operation and Maintenance Plan Report	$67,200	---
2.7.2 Final Operation and Maintenance Plan Report	$28,800	**44**
2.8.1 Conceptual Design Workshop	$13,000	45
2.9.1 Letters/Resolutions Indicating City Concurrence	$12,000	48
2.10.1 Draft Final Conceptual Design Report (including Executive Summary)	$27,500	---
2.10.2 Final Conceptual Design (including Executive Summary)	$14,500	55
3. Additional Services	$102,200	---
TOTAL	**$$1,124,200**	

Note: Standard County deliverable period: 2 weeks. **Bolded** dates have 3-week County review. TransCore will finalize deliverable 1 week after review.

TRANSCORE.

Attachment B.1 – Contractor's Applicable Hourly Rates

TransCore		
Person	**Position**	**Rate**
Chuck Dankocsik	Project Manager	$132
Michael Mauritz	Responsible Officer	$179
Robert Rausch	Chief Engineer	$205
Bill Skillas Various	Senior ITS Engineer	$179
Ron Mikalson Various	ITS Engineer	$153
Jeff Mayo Jason Osaki Various	Senior Systems Engineer	$142
Jack Schneider Various	Systems Engineer	$105
Michael Bayer Blake Hansen Various	Senior Engineer	$99
Aaron Cloward Various	Junior Engineer	$83
Marcy Dorsey Various	CAD/Graphics	$72
Sharon Turnbo Andrea Munoz Various	Clerical Support	$72

Meyer, Mohaddes Associates		
Person	**Position**	**Rate**
Marc Porter	Deputy Project Manager	$133
Abbas Mohaddes	Quality Control	$252
Various	Senior Engineer	$159
Various	Engineer	$110
Various	CAD/Graphics	$87
Various	Support	$72

EXHIBIT C - CONTRACTOR'S PROPOSAL FOR THE SAN GABRIEL VALLEY TRAFFIC SIGNAL FORUM ADVANCED TRAFFIC MANAGEMENT SYSTEM IMPROVEMENT PROJECT

[TO BE ATTACHED]

EXHIBIT D - COUNTY'S REQUEST FOR PROPOSALS FOR THE SAN GABRIEL VALLEY TRAFFIC SIGNAL FORUM ADVANCED TRAFFIC MANAGEMENT SYSTEM IMPROVEMENT PROJECT

[TO BE ATTACHED]