

**AGREEMENT FOR CONSULTANT SERVICES
BETWEEN
THE CITY OF SAN JOSE
AND
KIMLEY-HORN AND ASSOCIATES, INC.
FOR THE
SAN JOSE TRAFFIC LIGHT SYNCHRONIZATION PHASE II PROJECT**

THIS AGREEMENT is made and entered into this ____ day of _____ 2010, by and between the CITY OF SAN JOSE, a municipal corporation (hereinafter "CITY"), and KIMLEY-HORN AND ASSOCIATES, INC., a North Carolina corporation authorized to do business in the State of California (hereinafter "CONSULTANT").

RECITALS

The purpose for which this AGREEMENT is made, and all pertinent recitals, are listed on EXHIBIT A, entitled "RECITALS", which is attached hereto and incorporated herein.

THE PARTIES HEREBY AGREE AS FOLLOWS:

SECTION 1. SCOPE OF SERVICES.

CONSULTANT shall perform those services specified in detail in EXHIBIT B, entitled "SCOPE OF SERVICES", which is attached hereto and incorporated herein.

SECTION 2. TERM OF AGREEMENT.

The term of this AGREEMENT shall be from the date of execution by CITY to June 30, 2011 inclusive, subject to the provisions of SECTION 11 of this AGREEMENT. The Director of Transportation ("DIRECTOR") is authorized to extend the term of this AGREEMENT for a period of up to one (1) year as long as no other provision of this

AGREEMENT is modified. No such extension is valid unless authorized in writing by the DIRECTOR. Any such written authorization shall be attached to, and become part of this AGREEMENT.

SECTION 3. SCHEDULE OF PERFORMANCE.

The services of CONSULTANT are to be completed according to the schedule set out in EXHIBIT C, entitled "SCHEDULE OF PERFORMANCE", which is attached hereto and incorporated herein. Time is of the essence in this AGREEMENT.

SECTION 4. COMPENSATION.

The compensation to be paid to CONSULTANT, including both payment for professional services, reimbursable expenses and additional services, shall not exceed SIX HUNDRED SEVENTY-EIGHT THOUSAND Dollars (\$678,000). The rate and schedule of payment is set out in EXHIBIT D, entitled "COMPENSATION," which is attached hereto and incorporated herein.

SECTION 5. METHOD OF PAYMENT.

Each month, CONSULTANT shall furnish to the CITY a statement of the work performed for compensation during the preceding month. Such statement shall also include a detailed record of the month's actual reimbursable expenditures.

SECTION 6. INDEPENDENT CONTRACTOR.

It is understood and agreed that CONSULTANT, in the performance of the work and services agreed to be performed by CONSULTANT, shall act as and be an independent contractor and not an agent or employee of CITY; and as an independent contractor, CONSULTANT shall obtain no rights to retirement benefits or other benefits

which accrue to CITY's employees, and CONSULTANT hereby expressly waives any claim it may have to any such rights.

SECTION 7. ASSIGNABILITY.

The parties agree that the expertise and experience of CONSULTANT are material considerations for this AGREEMENT. CONSULTANT shall not assign or transfer any interest in this AGREEMENT nor the performance of any of CONSULTANT's obligations hereunder, without the prior written consent of CITY, and any attempt by CONSULTANT to so assign this AGREEMENT or any rights, duties or obligations arising hereunder shall be void and of no effect.

SECTION 8. INDEMNIFICATION.

CONSULTANT shall defend, indemnify and hold harmless CITY, its officers, employees and agents against all claims, losses or liability ("Claims") that arise out of, pertain to, or relate to the negligence (active or passive), recklessness, or willful misconduct of CONSULTANT, its officers, employees, subconsultants or agents, except to the extent any such Claims arise from the active negligence or willful misconduct of CITY, its officers, employees or agents. CONSULTANT obligations under this indemnification provision shall survive the expiration or termination of this AGREEMENT.

SECTION 9. INSURANCE REQUIREMENTS.

CONSULTANT agrees to have and maintain the policies set forth in EXHIBIT E, entitled "INSURANCE," which is attached hereto and incorporated herein. All policies, endorsements, certificates and/or binders shall be subject to approval by the Director of Human Resources or the Director's authorized designee ("Risk Manager") of the City of San Jose as to form and content. These requirements are subject to amendment or waiver if so approved in writing by the Risk Manager. CONSULTANT agrees to provide

CITY with a copy of said policies, certificates and/or endorsements before work commences under this AGREEMENT.

SECTION 10. NONDISCRIMINATION.

CONSULTANT shall not discriminate, in any way, against any person on the basis of race, sex, color, age, religion, sexual orientation, actual or perceived gender identity, disability, ethnicity, or national origin, in connection with or related to the performance of this AGREEMENT.

SECTION 11. TERMINATION.

- A. CITY shall have the right to terminate this AGREEMENT, without cause, by giving not less than seven (7) days' written notice of termination.
- B. If CONSULTANT fails to perform any of its material obligations under this AGREEMENT, in addition to all other remedies provided by law, CITY may terminate this AGREEMENT immediately upon written notice.
- C. DIRECTOR is empowered to terminate this AGREEMENT on behalf of CITY.
- D. In the event of termination, CONSULTANT shall deliver to CITY copies of all reports, documents, and other work performed by CONSULTANT under this AGREEMENT, and upon receipt thereof, CITY shall pay CONSULTANT for services performed and reimbursable expenses incurred to the date of termination.

SECTION 12. GOVERNING LAW.

CITY and CONSULTANT agree that the law governing this AGREEMENT shall be that of the State of California.

SECTION 13. COMPLIANCE WITH LAWS.

CONSULTANT shall comply with all applicable laws, ordinances, codes and regulations of the federal, state and local governments.

SECTION 14. ENVIRONMENTALLY PREFERABLE PROCUREMENT POLICY.

CONSULTANT agrees that, in the performance of this Agreement, CONSULTANT shall perform its obligations under the agreement in conformance with City Council Policy 4-6, Environmentally Preferable Procurement Policy. A description for environmentally preferable procurement and the Policy can be found on the CITY'S website at the following link: <http://www.sanjoseca.gov/esd/natural-energy-resources/epp.htm>.

Environmental procurement policies and activities related to the completion of work will include wherever practicable, but are not limited to:

- A. Use of recycled and/or recyclable products in daily operations (i.e. 30, 50, 100% PCW paper, chlorine process free; triclosan free hand cleaner, etc.)
- B. Use of Energy Star Compliant equipment.
- C. Vehicles and vehicle operations (i.e. Alternative Fuel, Hybrid, etc.)
- D. Internal waste reduction and reuse protocol(s).

- E. Water and resource conservation activities within facilities, including bans on individual serving bottled water and the use of compostable food service products, etc.

SECTION 15. CONFIDENTIAL INFORMATION.

All data, documents, discussions or other information developed or received by or for CONSULTANT in performance of this AGREEMENT are confidential and not to be disclosed to any person except as authorized by CITY, or as required by law.

SECTION 16. OWNERSHIP OF MATERIALS.

All reports, documents or other materials developed or discovered by CONSULTANT or any other person engaged directly or indirectly by CONSULTANT to perform the services required hereunder shall be and remain the property of CITY without restriction or limitation upon their use.

SECTION 17. WAIVER.

CONSULTANT agrees that waiver by CITY of any breach or violation of any term or condition of this AGREEMENT shall not be deemed to be a waiver of any other term or condition contained herein or a waiver of any subsequent breach or violation of the same or any other term or condition. The acceptance by CITY of the performance of any work or services by CONSULTANT shall not be deemed to be a waiver of any term or condition of this AGREEMENT.

SECTION 18. CONSULTANT'S BOOKS AND RECORDS.

- A. CONSULTANT shall maintain any and all ledgers, books of account, invoices, vouchers, cancelled checks, and other records or documents evidencing or relating to charges for services, or expenditures and disbursements charged to

CITY for a minimum period of three (3) years, or for any longer period required by law, from the date of final payment to CONSULTANT pursuant to this AGREEMENT.

- B. CONSULTANT shall maintain all documents and records which demonstrate performance under this AGREEMENT for a minimum period of three (3) years, or for any longer period required by law, from the date of termination or completion of this AGREEMENT.
- C. Any records or documents required to be maintained pursuant to this AGREEMENT shall be made available for inspection or audit at no cost to CITY, at any time during regular business hours, upon written request by the City Attorney, City Auditor, City Manager, or a designated representative of any of these officers. Copies of such documents shall be provided to CITY for inspection at City Hall when it is practical to do so. Otherwise, unless an alternative is mutually agreed upon, the records shall be available at CONSULTANT's address indicated for receipt of notices in this AGREEMENT.
- D. Where CITY has reason to believe that such records or documents may be lost or discarded due to dissolution, disbandment or termination of CONSULTANT's business, CITY may, by written request by any of the above-named officers, require that custody of the records be given to CITY and that the records and documents be maintained in City Hall. Access to such records and documents shall be granted to any party authorized by CONSULTANT, CONSULTANT's representatives, or CONSULTANT's successor-in-interest.

SECTION 19. CONFLICT OF INTEREST.

CONSULTANT shall avoid all conflict of interest or appearance of conflict of interest in performance of this AGREEMENT.

SECTION 20. GIFTS.

- A. CONSULTANT is familiar with CITY's prohibition against the acceptance of any gift by a CITY officer or designated employee, which prohibition is found in Chapter 12.08 of the San Jose Municipal Code.

- B. CONSULTANT agrees not to offer any CITY officer or designated employee any gift prohibited by said Chapter.

- C. The offer or giving of any gift prohibited by Chapter 12.08 shall constitute a material breach of this AGREEMENT by CONSULTANT. In addition to any other remedies CITY may have in law or equity, CITY may terminate this AGREEMENT for such breach as provided in SECTION 11 of this AGREEMENT.

SECTION 21. DISQUALIFICATION OF FORMER EMPLOYEES.

CONSULTANT is familiar with the provisions relating to the disqualification of former officers and employees of CITY in matters which are connected with former duties or official responsibilities as set forth in Chapter 12.10 of the San Jose Municipal Code ("Revolving Door Ordinance"). CONSULTANT shall not utilize either directly or indirectly any officer, employee, or agent of CONSULTANT to perform services under this AGREEMENT, if in the performance of such services, the officer, employee, or agent would be in violation of the Revolving Door Ordinance.

SECTION 22. SPECIAL PROVISIONS.

Special provisions, if any, to this AGREEMENT are specified in EXHIBIT F, entitled, "SPECIAL PROVISIONS", which is attached hereto and incorporated herein.

SECTION 23. NOTICES.

All notices and other communications required or permitted to be given under this AGREEMENT shall be in writing and shall be personally served or mailed, postage prepaid and return receipt requested, addressed to the respective parties as follows:

To CITY: Joel Roque
City of San José
200 East Santa Clara St 8th Floor
San Jose, CA 95113

To CONSULTANT: Brian Sowers
Kimley-Horn and Associates, Inc.
6130 Stoneridge Mall Road, Suite 370
Pleasanton, CA 94588

Notice shall be deemed effective on the date personally delivered or, if mailed, three (3) days after deposit in the mail.

SECTION 24. VENUE.

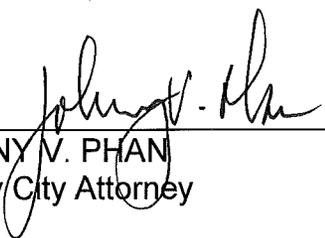
In the event that suit shall be brought by either party to this contract, the parties agree that venue shall be exclusively vested in the state courts of the County of Santa Clara, or if federal jurisdiction is appropriate, exclusively in the United States District Court, Northern District of California, San José, California.

SECTION 25. PRIOR AGREEMENTS AND AMENDMENTS.

This AGREEMENT, including all Exhibits attached hereto, represents the entire understanding of the parties as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This AGREEMENT may be modified only by a written amendment duly executed by the parties to this AGREEMENT.

WITNESS THE EXECUTION HEREOF on the day and year first hereinabove written.

APPROVED AS TO FORM:



JOHNNY V. PHAN
Deputy City Attorney

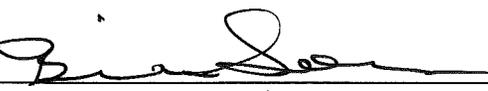
“CITY”

CITY OF SAN JOSE, a municipal corporation

By _____
Lee Price, MMC
City Clerk

“CONSULTANT”

KIMLEY-HORN AND ASSOCIATES, INC.,
a North Carolina corporation

By  3/9/10

BRIAN SOWERS
Vice President

KHACA
06

EXHIBIT A

RECITALS

WHEREAS, the CITY OF SAN JOSE desires to obtain consultant services for implementation of the San Jose Traffic Light Synchronization Phase II Project (hereinafter "PROJECT"); and

WHEREAS, these services involve the collection of data, conducting field observations, development of coordinated traffic signal timing plans, implementation and fine tuning of traffic signal timing plans, preparation of before and after studies, preparation of documentation, and provision of all other related items of work consistent with this AGREEMENT; and

WHEREAS, KIMLEY-HORN AND ASSOCIATES, INC. has the necessary professional expertise and skill to perform such services;

NOW, THEREFORE, the purpose of this AGREEMENT is to retain KIMLEY-HORN AND ASSOCIATES, INC. as CONSULTANT to CITY to perform those services specified in SECTION 1 of this AGREEMENT.

EXHIBIT B
SCOPE OF SERVICES

The PROJECT will involve the development and implementation of traffic signal timing plans along major commute corridors throughout San José. PROJECT area includes a total of 277 intersections.

This scope of services will provide for the development and implementation of coordination signal timing plans for these intersections.

CONSULTANT shall implement PROJECT to accomplish the following goals:

- Improve reliability, predictability, and efficiency of travel along arterial roads
- Improve the safety of motorists, pedestrians, and bicyclists
- Maintain or improve current level of transit signal priority within transit corridors
- Improve air quality through decreased motor vehicle emissions and fuel consumption

The scope of work for this PROJECT shall consist of CONSULTANT performing each of the following tasks for the successful implementation of PROJECT.

Task 1 - Detailed Workslope, Schedule, and Budget

A. **Administrative Meetings**

Within one (1) week of receiving the notice to proceed for this AGREEMENT, CONSULTANT shall schedule a Kick-Off Meeting with CITY to review and discuss the

scope of work, PROJECT schedule, and budget. CITY and CONSULTANT will review the proposed PROJECT approach and deliverables, and will set timetables for CONSULTANT deliverables, CITY review periods, scheduling of implementation, and other administrative details.

CONSULTANT is to provide a draft agenda for the Kick-Off Meeting to CITY Project Manager for review and comment a minimum of five (5) working days prior to the scheduled meeting. All CONSULTANT team members are required to attend the Kick-Off meeting in person at City Hall.

As CITY deems necessary, CONSULTANT shall meet with CITY prior to the analysis for each PROJECT corridor, and once after review of each set of signal timing plans to respond to CITY questions and to review CITY staff comments.

B. Preparation of Detailed Workslope, Schedule, and Budget (“DWSB”)

Within ten (10) working days of the Kick-Off Meeting, CONSULTANT shall provide an electronic copy of the DWSB for Tasks 1 and 2 for review and approval by CITY Project Manager. The DWSB shall conform to the scope of work as specified in this EXHIBIT B, maximum budget as specified in EXHIBIT D, “COMPENSATION”, and scheduled milestones as described in EXHIBIT C, “SCHEDULE OF PERFORMANCE”. The SCHEDULE shall include a time-line for each stage of the PROJECT, showing the anticipated date of PROJECT deliverables, PROJECT approval dates, and regular staff meetings.

C. Establish Signal Timing Criteria

Upon approval of the DWSB, CONSULTANT may, at the discretion of CITY, schedule a meeting with CITY staff to discuss some of the elements associated with the implementation of signal timing plans developed for the PROJECT.

Some of the topics that may be discussed include CITY'S perspective on signal timing, phase sequencing options (use of lead/lag, and similar issues), pedestrian timing considerations, cross street delay tolerances, bandwidth versus delay objectives, free versus coordinated operation, use of advanced detection systems, transit signal priority, and other signal timing features associated with this PROJECT.

D. Basis of Signal Timing Report

Based on the above meeting, CONSULTANT shall summarize the discussions into a draft technical memorandum. After CITY reviews and approves the draft, CONSULTANT shall address any comments and incorporate any revisions requested by CITY. The memorandum will serve as the basis and criteria for the signal timing effort and shall be incorporated in the Final Evaluation Technical Memorandum.

E. Project Status Reports/Documentation

CONSULTANT shall prepare and submit monthly written PROJECT status reports to CITY. These reports shall document expenditures and work completed within the last month, work projected for the next period, issues to be resolved, and any additional

information required from CITY. This report will be the basis of discussion during monthly PROJECT staff meetings with CITY.

Deliverables for Task 1: Final Detailed Workslope, Schedule, and Budget, including:

- Project Kick-Off Meeting with CITY staff to initiate the development of a DWSB
- Draft DWSB. After CITY reviews and approves the draft, CONSULTANT shall submit a final DWSB incorporating all changes requested by CITY
- Technical Memorandum - Basis of Signal Timing Report
- Invoice by the 20th of each month during the term of the AGREEMENT

Task 2 — Analysis of Existing Conditions

CONSULTANT will collect and analyze all information necessary to thoroughly understand and document existing traffic conditions in the PROJECT area and enable them to develop optimal time-of-day traffic signal coordination plans and transit signal priority plans.

A. Traffic Data Collection

If available, CONSULTANT shall collect existing timing sheets, existing coordination plans, traffic signal record drawings, aerial photos, maps, and the past three years of collision information from CITY.

CONSULTANT shall collect all traffic, pedestrian, and bicycle volume data as approved by CITY to re-time the traffic signals identified in EXHIBIT B-1 or B-2: List of Signalized Intersections to Re-Time. At all PROJECT locations, the data to be collected shall

include turning movement counts for each left turning, u-turning, through and right turning movement for each leg of the intersection along with the number of pedestrians crossing each leg of the intersection.

CONSULTANT shall collect weekday data for all intersections in EXHIBIT B-1 and B-2: List of Signalized Intersections to Re-Time for the AM (7:00 AM to 9:00 AM), Midday (11:30 AM to 1:30 PM), and PM peak periods (4:00 PM to 6:00 PM) at 15-minute intervals for a total of six hours. Data collected for each peak period shall occur on the same day for each intersection.

Weekday traffic counts shall be performed on a Tuesday, Wednesday or Thursday only. Unless otherwise specified in EXHIBIT B-1 and B-2, data collection shall not occur during holidays or holiday weekends, school breaks, construction activities or adverse weather conditions such as drizzle, rain, hail, or snow.

All traffic data shall be collected no more than six (6) months prior to the scheduled implementation date for each corridor. CITY and CONSULTANT shall agree to an implementation schedule to be developed by CONSULTANT prior to commencing any work.

If traffic counts cannot be collected due to adverse weather conditions, the PROJECT schedule may be adjusted to account for any delays. It shall be the responsibility of CONSULTANT to make every reasonable effort to identify delays due to weather. CITY shall provide CONSULTANT a schedule of Arena and other known major events or construction activities in the Downtown Area so that no counts are scheduled during

those times. Any counts that occur during these identified periods will be rejected and not compensated. Any recounts performed shall be at no cost to CITY.

In addition, CONSULTANT shall collect seven-day 24-hour mechanical, bi-directional mid-block volume counts, at 15 minute intervals, at up to twenty (20) critical locations along the PROJECT corridors. These locations are to be proposed by CONSULTANT and approved by CITY and will help determine traffic signal re-timing plan implementation times.

All traffic volume data shall be submitted in digital format to CITY.

B. Travel Time Runs

CONSULTANT shall conduct a floating car study for each PROJECT corridor before the new signal timing plans are implemented. Prior to the travel time runs, CONSULTANT shall review the corridors with CITY and the methodology for collecting the data. CONSULTANT shall conduct the before study such that holidays, school breaks, events, construction activities, or unfavorable weather conditions such as drizzle, rain, hail or snow, do not impact the studies. A minimum of six (6) travel time runs in each direction shall be conducted for the entire length of each PROJECT corridor during the AM, midday, and PM peak periods, and on the same day of the week. The travel time data shall be summarized for each corridor and include the average travel time, intersection stops, intersection delay time, speed, and distance traveled.

C. Before Study

CITY will meet with CONSULTANT to share past experiences about each corridor including known traffic conditions and timing parameter restrictions.

CONSULTANT shall review collision history for each PROJECT intersection to identify patterns that are susceptible to correction through signal timing.

CONSULTANT shall make field observations on weekdays for each intersection to observe typical traffic patterns during the weekday peak periods for which coordination plans will be developed. CONSULTANT will note factors that are expected to affect signal progression including, but not limited to: oversaturated vehicle movements, uneven lane distribution, presence of trucks and buses, high-volume unsignalized intersections, parking maneuvers, presence of transit facilities to evaluate any breakdown of an existing corridor which will help in identifying appropriate Time-of-Day plans for the new signal timing plans.

CONSULTANT shall review current actuated settings and detector locations for each PROJECT intersection to identify opportunities to minimize delay during non-coordinated periods and enhance pedestrian and bicyclist safety. The analysis shall include, but not be limited to, review of minimum and maximum green times, yellow and red times, pedestrian timing, gap, extension, reduction settings, and phase sequencing. CONSULTANT shall also investigate the feasibility of implementing conditional service for protected left-turn movements.

CONSULTANT shall conduct field review on weekdays during each of the study periods by the staff that will be developing the signal modeling work. Field review shall consist of driving each corridor to observe general traffic flow conditions and reviewing each intersection's operation to understand queuing and split demand issues.

CONSULTANT shall collect additional field information during weekday peak periods for which coordination plans will be developed to assist with the signal timing study. This information shall include:

- Effects of transit signal priority settings on vehicular and transit traffic at locations equipped with transit signal priority
- Existing lane geometry, physical roadway features, posted speed limits, and crosswalk lengths
- Existing signal phasing
- Other roadway conditions, such as on-street parking locations, bus stop locations, truck traffic
- Saturation flow rates for typical and atypical movements
- Pedestrian queues
- Early release times for typical and atypical intersections
- Initial lost times for typical and atypical intersections
- Representative flow profile for critical intersections
- Travel speeds between intersections and along the corridor

CONSULTANT shall use Synchro traffic modeling software to develop a traffic model for each corridor and calibrate the model based on existing signal timing settings and field observations of existing conditions.

CONSULTANT will calculate existing measures of effectiveness, including delay, number of stops, travel time, and emissions. Emissions shall be calculated using both the software's built-in emissions model and the latest emission reduction calculation methodology adopted by the Bay Area Air Quality Management District.

CONSULTANT shall summarize and submit the results of the existing conditions analysis into a draft technical memorandum to CITY for review and input. After CITY reviews and approves the draft, CONSULTANT shall incorporate any changes requested by CITY.

Deliverables for Task 2: Draft and Final analysis of Existing Conditions Technical Memorandum, including:

- Traffic count data in digital format
- Results of travel time runs for each corridor prior to implementation of new signal timing plans
- Technical memorandum summarizing the analysis of existing conditions
- Invoice by the 20th of each month during the term of the AGREEMENT

Task 3 – Development of Timing Recommendations

A. Timing Recommendations

Once the data pursuant to Task 2 of this Exhibit is completed and compiled by CONSULTANT, CONSULTANT shall utilize the data to recommend initial signal timing strategies. The recommendation should satisfy CITY goals set forth at the beginning of this Exhibit and satisfy signal timing criteria established on the Basis of Signal Timing Report.

For each intersection in each PROJECT corridor, CONSULTANT shall develop recommendations for optimal actuated settings, transit signal priority settings (if applicable), time-of-day coordination plans, and hours of coordinated operation. Development of such plans shall include analyses of signal grouping, phasing, cycle lengths, splits, and offsets.

CONSULTANT shall develop at least three (3) time-of-day plans for each intersection. The time-of-day plans shall be developed for the AM, Midday, and PM periods.

CONSULTANT shall summarize the timing recommendations in a draft technical memorandum to CITY for review and input. The memorandum shall also include a comparison of existing and proposed timings and a description of expected improvements. After CITY reviews and approves the draft, CONSULTANT shall address any comments and incorporate any changes requested by CITY.

B. Model Development and Calibration

CONSULTANT shall utilize the Synchro software for model development and calibration process. The model will be calibrated to reasonably match the observed field conditions.

The following are the common steps taken in the calibration process:

1. Degrees of saturation for typical movements will be compared with the existing conditions checked in the field. Volumes, saturation flow rates, lost times or signal timing data, as applicable, will be adjusted to achieve a reasonable match.
2. Maximum queue length will be checked against the actual field data for typical movements. Saturation flow rates, initial lost times or signal timing data, as applicable, will be adjusted to achieve a reasonable match.
3. Predicted average delay (sec/veh) will be compared with the field data for representative through and left-turn movements. Model predicted average speeds will be checked for the entire network versus the field measurements. Substantial differences between measured and predicated delays and travel times indicate input errors or invalid assumptions. Data input for saturation flow rates, initial lost times and signal timing data will be checked.

C. Cycle Evaluation and Timing Optimization

CONSULTANT shall apply various signal timing options as documented on the Basis of Signal Timing Technical Memorandum into the Synchro model to achieve optimum bandwidth along the study corridor.

Synchro optimization process will include an initial cycle evaluation and selection of the optimum cycle lengths and final split/offset optimization. Once the final Synchro model runs are completed, CONSULTANT shall summarize the signal timing parameters, critical performance measure information, and other relevant timing information and submit to CITY for review.

All reports shall be submitted to CITY for approval of simulation, cycle evaluation and optimization. CONSULTANT shall show green bands, phase numbers, split allocations and offsets for each intersection on time-space diagrams and other intersection reports generated by Synchro during the optimization process. This task shall be repeated if changes are made to the optimized timing during the fine-tuning process.

D. Submit Interim Timing and Meet with City

CONSULTANT shall present the results of the initial recommended timing and alternative model runs will be presented to CITY staff for review and comment. CONSULTANT shall meet with CITY to respond to questions and to receive input from CITY staff.

E. Final Timing Analysis

After CITY reviews the initial recommended Synchro model runs and time-space diagrams, CONSULTANT shall rerun the models with requested adjustments or modifications to finalize the modeling process.

Deliverables for Task 3: Draft and Final Recommendations Technical Memorandum, including:

- Preliminary Synchro Reports – Electronic files of the Synchro model runs for simulation, cycle evaluation, and optimization runs
- Optimized Synchro Reports – Electronic files of the Synchro model runs for final optimization runs
- Invoice by the 20th of each month during the term of the AGREEMENT

Task 4 — Implementation of Signal Timing

The final timing data will be prepared by CONSULTANT for the 2070 signal controller for all PROJECT locations. For each traffic signal, CONSULTANT shall submit two (2) sets of double-sided copies of 2070 Controller timing cards containing the optimized signal timings.

CONSULTANT shall enter optimized signal timing plans approved by CITY into CITY'S Transcore TCS database and implement the timing in the field. Implementation may be done in the field or from a central location, depending upon communication capabilities and CITY preferences.

Once the timing plans have been implemented in the field, CONSULTANT shall conduct field observations to fine-tune the timing so that it meets the needs of the current traffic volumes. Fine-tuning shall be conducted during times and days that are representative of the times and days for which coordination plans were developed. At intersections equipped with TSP capabilities, CONSULTANT shall make adjustments to TSP timing as necessary to balance the needs of both transit and vehicular

movements. CONSULTANT shall document any changes made to the signal timing plans. CONSULTANT shall make any necessary modifications to the timings based on concerns identified by CITY.

CITY will provide sample timing card cover sheets in VISIO (.vsd) format. CONSULTANT shall develop updated VISIO timing card cover sheets, whenever there is a change in the VISIO data due to results of field reviews (i.e., lane geometry, speed limits, crosswalk lengths, etc.) and/or due to the retiming effort (i.e., Corridor Name, Change in Operation, Corridor Limits, etc.) for the duration of PROJECT.

CONSULTANT shall resubmit two (2) sets of double-sided copies of 2070 Controller timing cards for these intersections with modified timing, and the updated VISIO timing card cover sheets.

It is anticipated that all project intersections will require signal re-timing. However, if CONSULTANT recommends that an intersection or corridor will perform better without coordination, CONSULTANT shall notify CITY immediately. CITY will approve or decline any such recommendations from CONSULTANT and any remaining budget shall be used to expand other tasks.

Deliverables for Task 4: Hard Copies of Revised Timing Sheets, including:

- Two (2) sets of 2070 Controller timing sheets for initial implementation
- Two (2) sets of 2070 Controller timing sheets for fine-tuned adjustments
- Invoice by the 20th of each month during the term of the AGREEMENT

Task 5 — Evaluation of Signal Timing

CONSULTANT shall conduct a final After Study for each corridor to field measure the improvements in corridor performance. A separate floating car study will be conducted for each PROJECT corridor to measure the corridor performance. Travel time studies will be conducted in each study corridor after the implementation of the new signal timing. The same weekday used for the Before Study of a corridor shall be used for the After Study of the corridor. CONSULTANT shall notify CITY prior to beginning the After Study for each corridor. The study shall be conducted within one (1) month of completing the fine-tuning of the corridor.

CONSULTANT shall conduct a minimum of six (6) runs in each direction for each corridor during the AM, midday, and PM peak periods, and on the same day of the week. The travel time data will be summarized for each corridor and include the average travel time, stops, total delay time, speed, and distance traveled. The After Study data will be compared to the Before Study to measure the improvement in corridor performance. CONSULTANT shall provide CITY with this data.

CONSULTANT will calculate effectiveness of the improved corridor considering factors including delay, number of stops, travel time, and emissions. Emissions shall be calculated using both Synchro software's built-in emissions model and the latest emission reduction calculation methodology adopted by the Bay Area Air Quality Management District.

CONSULTANT shall summarize the final timing plans that were implemented and the results of the evaluation in a Final Timings and Evaluation Technical Memorandum.

CONSULTANT shall update the Synchro traffic model to reflect final implemented timings.

Deliverables for Task 5: Final Timings and Evaluation Technical Memorandum, including:

- Final Synchro Reports – Electronic files of the Synchro model for finalized timings
- Results of travel time runs for each CORRIDOR after implementation of finalized signal timing plans
- Report summarizing the reduction in vehicle emissions, fuel savings and total cost savings

Additional Services

CONSULTANT may be requested by CITY in writing to perform additional services for intersections that are not listed in Exhibit B-1 or B-2. If such additional services are requested by CITY, CONSULTANT shall perform such services for each additional intersection as outlined in this Exhibit B and be paid upon completion of such services as set forth in Exhibit D.

EXHIBIT B-1

PHASE 1 – LIST OF SIGNALIZED INTERSECTIONS TO RE-TIME

INTERSECTION NAME	CORRIDOR
ALAMEDA & NIMITZ FR S	The Alameda
ALAMEDA & JULIAN ST	The Alameda
ALAMEDA & NEWHALL ST	The Alameda
ALAMEDA & LENZEN AV	The Alameda
ALAMEDA & HEDDING ST	The Alameda
ALAMEDA & MARTIN AV/RACE ST	The Alameda
ALAMEDA & NAGLEE ST/TAYLOR ST	The Alameda
ALAMEDA & NIMITZ FR N	The Alameda
BLOSSOM HILL RD & WEST VALLEY FR W	Blossom Hill Rd E
BLOSSOM HILL RD & ENTRADA CEDROS/W. VALLEY FRWY	Blossom Hill Rd E
BLOSSOM HILL RD & SNELL AV	Blossom Hill Rd E
BLOSSOM HILL RD & SUNRISE PLAZA DW	Blossom Hill Rd E
BLOSSOM HILL RD & JUDITH ST	Blossom Hill Rd E
BLOSSOM HILL RD & EAGLES LN	Blossom Hill Rd E
BLOSSOM HILL RD & LEAN AV	Blossom Hill Rd E
BLOSSOM HILL RD & POUGHKEEPSIE RD	Blossom Hill Rd E
BLOSSOM HILL RD & CAHALAN AV	Blossom Hill Rd E
BESWICK DR & BLOSSOM HILL RD	Blossom Hill Rd E
BLOSSOM HILL RD & INDIAN AV	Blossom Hill Rd E
BLOSSOM HILL RD & CHESBRO AV	Blossom Hill Rd E
BRANHAM LN & SNELL AV	Snell Av
BRANHAM LN & BRANHAM PLAZA DW	Snell Av
BRANHAM LN & PARK ARCADIA DR/RUE LYON	Snell Av
TAYLOR ST & THIRTEENTH ST	Taylor St
TAYLOR ST & TENTH ST	Taylor St
ELEVENTH ST & TAYLOR ST	Eleventh St
ELEVENTH ST & ST JOHN ST	Eleventh St
ELEVENTH ST & JULIAN ST	Eleventh St
ELEVENTH ST & JACKSON ST	Eleventh St
ELEVENTH ST & EMPIRE ST	Eleventh St
ELEVENTH ST & SAINT JAMES ST	Eleventh St
SAINT JAMES ST & TENTH ST	Tenth St
EMPIRE ST & TENTH ST	Tenth St
JACKSON ST & TENTH ST	Tenth St
SAINT JOHN ST & TENTH ST	Tenth St
JULIAN ST & TENTH ST	Tenth St
BRANHAM LN & PEARL AV	Branham Ln
BRANHAM LN & NARVAEZ AV	Branham Ln
BRANHAM LN & VISTAPARK DR	Branham Ln
BRANHAM LN & MONTEREY RD	Monterey Rd
SANTA CLARA ST & SECOND ST	Santa Clara St
FIRST ST & SANTA CLARA ST	First St

ELEVENTH ST & SANTA CLARA ST	Eleventh St
ALMADEN AV & SANTA CLARA ST	Santa Clara St
GUADALUPE FR & SANTA CLARA ST	Santa Clara St
SAN PEDRO ST & SANTA CLARA ST	Santa Clara St
FIFTH ST & SANTA CLARA ST	Santa Clara St
SANTA CLARA ST & THIRTEENTH ST	Santa Clara St
SANTA CLARA ST & TENTH ST	Santa Clara St
NINTH ST & SANTA CLARA ST	Santa Clara St
ALMADEN BL/NOTRE DAME AV & SANTA CLARA ST	Santa Clara St
SANTA CLARA ST & SIXTH ST	Santa Clara St
SANTA CLARA ST & SEVENTH ST	Santa Clara St
SANTA CLARA ST & THIRD ST	Santa Clara St
MONTEREY RD & UMBARGER RD	Monterey Rd
MONTEREY RD S & TULLY RD	Monterey Rd
MONTEREY RD & SKYWAY DR	Monterey Rd
LEWIS RD & MONTEREY HW	Monterey Rd
EDENVIEW DR & MONTEREY RD	Monterey Rd
CHYNOWETH AV/ROEDER RD & MONTEREY RD	Monterey Rd
MONTEREY RD & SENTER RD	Monterey Rd
FEHREN DR & MONTEREY RD	Monterey Rd
MONTEREY RD & SOUTHSIDE DR	Monterey Rd
CAPITOL EX & MONTEREY RD N	Monterey Rd
CAPITOL EX & MONTEREY RD S	Monterey Rd
CURTNER AV/TULLY RD & MONTEREY RD	Curtner Av
COLEMAN AV & HEDDING ST	Coleman Av
AIRPORT BL & COLEMAN AV	Coleman Av
COLEMAN RD & MCKENDRIE ST	Coleman Av
COLEMAN AV & TAYLOR ST	Coleman Av
AVIATION DR/FMC RD & COLEMAN AV	Coleman Av
COLEMAN AV & NEWHALL ST/NIMITZ FR N	Coleman Av
AUTUMN ST & COLEMAN AV	Coleman Av
COLEMAN AV & SAN JOSE MKT DW	Coleman Av
COLEMAN AV & NEWHALL DR	Coleman Av
SANTA TERESA BL & THORNWOOD DR	Guadalupe Fy/W. Valley Fy/Santa Teresa Bl
FOURTH ST & SAN CARLOS ST	Fourth St
FOURTH ST & REED ST	Fourth St
FOURTH ST & SAN FERNANDO ST	Fourth St
FOURTH ST & WILLIAM ST	Fourth St
FOURTH ST & SAN SALVADOR ST	Fourth St
FOURTH ST & PASEO DE SAN ANTONIO	Fourth St
REED ST & THIRD ST	Third St
THIRD ST & WILLIAM ST	Third St
SAN SALVADOR ST & THIRD ST	Third St
SAN FERNANDO ST & THIRD ST	Third St
PASEO DE SAN ANTONIO & THIRD ST	Third St
SAN CARLOS ST & THIRD ST	Third St
KEYES ST & TENTH ST	Keyes St
KEYES ST & SENTER RD	Keyes St

ELEVENTH ST & KEYES ST	Keyes St
KEYES ST & SEVENTH ST	Keyes St
NEEDLES DR & SENTER RD	Senter Rd
BURKE ST & SENTER RD	Senter Rd
SENER RD & WOOL CREEK DR	Senter Rd
ALMA AV & SENTER RD	Senter Rd
PHELAN AV & SENTER RD	Senter Rd
SENER RD & UMBARGER RD	Senter Rd
SENER RD & TULLY RD	Senter Rd
LEWIS RD & SENTER RD	Senter Rd
FELDSPAR DR & SENTER RD	Senter Rd
PARROTT ST & SENTER RD	Senter Rd
SANTA CLARA ST & TWENTY FOURTH ST	Santa Clara St
SANTA CLARA ST & TWENTY SIXTH ST	Santa Clara St
FIFTEENTH ST & SANTA CLARA ST	Santa Clara St
SANTA CLARA ST & TWENTY EIGHTH ST	Santa Clara St
SANTA CLARA ST & TWENTY FIRST ST	Santa Clara St
SANTA CLARA ST & SEVENTEENTH ST	Santa Clara St
NINETEENTH ST & SANTA CLARA ST	Santa Clara St

EXHIBIT B-2

PHASE 2 – LIST OF SIGNALIZED INTERSECTIONS TO RE-TIME

INTERSECTION NAME	CORRIDOR
EASTRIDGE WY & TULLY RD	Tully Rd E
EASTRIDGE LN & TULLY RD	Tully Rd E
EVERGREEN COMMONS & TULLY RD	Tully Rd E
CAPITOL EX & TULLY RD	Tully Rd E
HURAN DR & TULLY RD	Tully Rd E
QUIMBY RD & TULLY RD	Tully Rd E
ALVIN AV/LANAI AV & TULLY RD	Tully Rd E
KING RD & SAN ANTONIO ST	King Rd
KING RD & LIDO WY	King Rd
HERMOCILLA WY/KAMMERER AV & KING RD	King Rd
HAVANA DR/OCALA AV & KING RD	King Rd
KING RD N & SINCLAIR FR	King Rd
KING RD & MARSH ST	King Rd
BISCAYNE WY/MIAMI DR & KING RD	King Rd
KING RD S & SINCLAIR FR	King Rd
KING RD & WAVERLY AV	King Rd
CUNNINGHAM AV & KING RD	King Rd
KING RD & MERCADO DW	King Rd
KING RD & VIRGINIA PL/VOLLMER WY	King Rd
KING RD & STORY RD	King Rd
BASCOM AV & CAMDEN AV	Bascom Av
BASCOM AV & HAMILTON AV	Bascom Av
BASCOM AV & MOORPARK AV	Bascom Av
BASCOM AV & SAN CARLOS ST/STEVENS CREEK BL	Bascom Av
BASCOM AV & HEDDING ST	Bascom Av
BASCOM AV & WEST VALLEY FR N	Bascom Av
BASCOM AV & WOODARD RD	Bascom Av
BASCOM AV & WEST VALLEY FR S	Bascom Av
BASCOM AV & NIMITZ FR N	Bascom Av
BASCOM AV & NAGLEE AV	Bascom Av
BASCOM AV & NIMITZ FR S	Bascom Av
BASCOM AV & RENOVA DR	Bascom Av
BASCOM AV & STOKES ST	Bascom Av
BASCOM AV & DOWNING AV	Bascom Av
BASCOM AV & PARKMOOR AV	Bascom Av
BASCOM AV & SCOTT ST	Bascom Av
BASCOM AV & UNION AV	Bascom Av
BASCOM AV N & FRUITDALE AV	Bascom Av
BASCOM AV & WHITE OAKS AV	Bascom Av
BASCOM AV & DRY CREEK RD	Bascom Av
BASCOM AV & CURTNER AV	Bascom Av
BASCOM AV & FOXWORTHY AV	Bascom Av

BASCOM AV & SAMARITAN DR	Bascom Av
BASCOM AV & CAMPBELL AV	Bascom Av
BASCOM AV & PRUNEYARD	Bascom Av
BASCOM AV & CAMPISI WY	Bascom Av
APRICOT AV & BASCOM AV	Bascom Av
ABORN RD & SAN FELIPE RD/WHITE RD	Aborn Rd
ABORN RD & NIEMAN BL	Aborn Rd
ABORN RD & BRIGADOON WY	Aborn Rd
ABORN RD & KETTMANN RD	Aborn Rd
ABORN RD & CAPITOL EX	Aborn Rd
CURTNER AV & MERIDIAN AV	Meridian Av
FOXWORTHY AV & MERIDIAN AV	Meridian Av
JACOB AV & MERIDIAN AV	Meridian Av
MERIDIAN AV & PORTOBELLO DR	Meridian Av
HILLSDALE AV & MERIDIAN AV	Hillsdale Av
HILLSDALE AV & KIRK RD	Hillsdale Av
HILLSDALE AV & JARVIS AV	Hillsdale Av
CHERRY AV & HILLSDALE AV	Hillsdale Av
BRANHAM LN & MERIDIAN AV	Meridian Av
BERRYESSA RD/SUNCREST AV & PIEDMONT RD	Piedmont Rd
PIEDMONT RD & SIERRA RD	Piedmont Rd
PENITENCIA CREEK RD & PIEDMONT RD	Piedmont Rd
NOBLE AV & PIEDMONT RD	Piedmont Rd
KING RD & TULLY RD	King Rd
ABORN RD & KING RD/SILVER CREEK RD	King Rd
KING RD & RIGOLETTO DR	King Rd
BARBERRY LN & KING RD	King Rd
ENESCO AV & KING RD	King Rd
BURDETTE DR & KING RD	King Rd
LEXANN AV & SILVER CREEK RD	King Rd
PARK AV & SANDRINGHAM WY	Park Av
PARK AV & RACE ST	Park Av
HANCHETT AV N/SHASTA AV S & PARK AV	Park Av
HEDDING ST & PARK AV	Park Av
NAGLEE AV & PARK AV	Park Av
MERIDIAN AV & PARK AV	Park Av
COLEMAN AV & BROKAW	Coleman Av
COLEMAN AV & REED	Coleman Av
COLEMAN AV / DELA CRUZ & MARTIN	Coleman Av
COLEMAN AV / DELA CRUZ & TECHNOLOGY	Coleman Av
LAMA WY & MERIDIAN AV	Meridian Av
STEVENS CREEK BL & VALLEY FAIR DW	Stevens Creek Bl
NIMITZ FR W & STEVENS CREEK BL	Stevens Creek Bl
CYPRESS AV & STEVENS CREEK BL	Stevens Creek Bl
STEVENS CREEK BL & WINCHESTER BL	Stevens Creek Bl
SANTANA ROW & STEVENS CREEK BL	Stevens Creek Bl
MONROE ST & STEVENS CREEK BL	Stevens Creek Bl
OLIN ST & WINCHESTER BL	Winchester Bl
OLSEN DR & WINCHESTER BL	Winchester Bl

JUNIPERO SERRA FR/TISCH WY & WINCHESTER BL	Winchester Bl
FOREST AV & WINCHESTER BL	Winchester Bl
HEDDING ST/PRUNERIDGE AV & WINCHESTER BL	Winchester Bl
DORCICH ST & WINCHESTER BL	Winchester Bl
DAVID AV & WINCHESTER BL	Winchester Bl
MAGLIOCCO DR & WINCHESTER BL	Winchester Bl
PAYNE AV & WINCHESTER BL	Winchester Bl
WILLIAMS RD & WINCHESTER BL	Winchester Bl
MOORPARK AV & WINCHESTER BL	Moorpark Av
DRY CREEK RD & MERIDIAN AV	Meridian Av
MERIDIAN AV & PARKMOOR AV	Meridian Av
AUZERAIS AV & MERIDIAN AV	Meridian Av
MERIDIAN AV & SADDLERACK ST	Meridian Av
LINCOLN AV & SAN CARLOS ST	San Carlos St
SAN CARLOS ST & SUNOL ST	San Carlos St
LEIGH AV/SHASTA AV & SAN CARLOS ST	San Carlos St
RACE ST & SAN CARLOS ST	San Carlos St
MERIDIAN AV & SAN CARLOS ST	San Carlos St
BUENA VISTA AV & SAN CARLOS ST W	San Carlos St
BELLEROSE DR/MACARTHUR AV & STEVENS CREEK BL	San Carlos St
LELAND AV/WABASH AV & SAN CARLOS ST	San Carlos St
BLOSSOM HILL RD & SANCHEZ DR	Blossom Hill Rd Mid
BLOSSOM HILL RD & CONISTON WY	Blossom Hill Rd Mid
AYRSHIRE DR & BLOSSOM HILL RD	Blossom Hill Rd Mid
BLOSSOM HILL RD & SANTA TERESA BL	Blossom Hill Rd Mid
BLOSSOM HILL RD & HILLVIEW AV	Blossom Hill Rd Mid
BLOSSOM HILL RD & RUSSO DR	Blossom Hill Rd Mid
BLOSSOM HILL RD & WINFIELD BL	Blossom Hill Rd Mid
BLOSSOM HILL RD & PLAZA WY	Blossom Hill Rd Mid
BLOSSOM HILL RD & THORNWOOD DR	Blossom Hill Rd Mid
BLOSSOM HILL RD & PLAYA DEL REY	Blossom Hill Rd Mid
ALMADEN EX & BLOSSOM HILL RD	Blossom Hill Rd Mid
BAYSHORE FR S & OAKLAND RD	Oakland Rd
BAYSHORE FR N & OAKLAND RD	Oakland Rd
GISH RD & OAKLAND RD	Oakland Rd
BERGER DR & OAKLAND RD	Oakland Rd
CORIE CT/SCHALLENBERGER RD & OAKLAND RD	Oakland Rd
COMMERCIAL ST & OAKLAND RD	Oakland Rd
ALMADEN EX & BRANHAM LN	Branham Ln
BLOSSOM HILL RD & CAMDEN AV	Blossom Hill Rd W
CAMDEN AV & KOOSER RD	Camden Av
CAMDEN AV & MERRILL LOOP	Camden Av
BRANHAM LN & JARVIS AV	Branham Ln
BRANHAM LN & CHERRY AV	Branham Ln
BRANHAM LN & LIZZIE LN/SPEAK LN	Branham Ln
CAMDEN AV & UNION AV	Camden Av/Hillsdale Av
UNION AV & WOODARD RD	Union Av
COLE DR/LOGIC DR & UNION AV	Union Av
CHARMERAN AV & UNION AV	Union Av

CURTNER AV & UNION AV	Union Av
FOXWORTHY AV & UNION AV	Union Av
MCLAUGHLIN AV & TULLY RD	McLaughlin Av
LUCRETIA AV/SHERLOCK DR & TULLY RD	Tully Rd W
GALVESTON AV & TULLY RD	Tully Rd W
TULLY RD & VALLEY HEALTH CENTER DW	Tully Rd W
SEVENTH ST & TULLY RD	Tully Rd W
TENTH ST & TULLY RD	Tully Rd W
LYNDALE AV & STORY RD	Story Rd E
HOME DEPOT DW & STORY RD	Story Rd E
BERRYESSA RD & FLICKINGER AV/JACKSON AV	Berryessa Rd
JACKSON AV & MCKEE RD	Jackson Av
BAYSHORE FR W & JULIAN ST E	McKee Rd
EL RANCHO VERDE DR & MCKEE RD	McKee Rd
KING RD & MCKEE RD	McKee Rd
CHECKERS DR & MCKEE RD	McKee Rd
BAYSHORE FR E & MCKEE RD	McKee Rd
MCKEE RD & THIRTY THIRD ST	McKee Rd
JULIAN ST & TWENTY EIGHTH ST	McKee Rd
JOSE FIGUERES AV & MCKEE RD	McKee Rd
CAPTITOL EX & STORY RD	Story Rd E
HOPKINS DR & STORY RD	Story Rd E
JACKSON AV & STORY RD	Story Rd E
LEEWARD DR & STORY RD	Story Rd E
MCGINNESS AV & STORY RD	Story Rd E
CAPITOL AV & MCKEE RD	McKee Rd
CHALLENGER AV & MCKEE RD	McKee Rd
MCKEE RD & WHITE RD	McKee Rd

EXHIBIT C

SCHEDULE OF PERFORMANCE

Phase 1 signals shall commence immediately upon execution of this AGREEMENT. Phase 2 signals shall not begin until authorized by CITY in writing. All tasks shall be completed on or before June 30, 2011, unless extended in writing by DIRECTOR as set forth in Section 2 of this AGREEMENT.

Phase 1 Signals

Tasks/Deliverables	Completion Date
Draft Workscope, Schedule, and Budget	April 9, 2010
City Review	April 16, 2010
Final Workscope, Schedule, and Budget (Del. 1)	April 23, 2010
Data Collection and Field Review	May 28, 2010
Draft Analysis of Existing Conditions Technical Memorandum (Del. 2A)	June 11, 2010
City Review	June 25, 2010
Final Analysis of Existing Conditions Technical Memorandum (Del. 2B)	July 2, 2010
Draft Signal Grouping and Cycle Lengths	July 16, 2010
Draft Recommendations Technical Memorandum (Del. 3A)	August 6, 2010
City Review	August 20, 2010
Final Recommendations Technical Memorandum (Del. 3B)	September 3, 2010
Timing Sheets (Del. 4)	Initiate September 7, 2010
Implementation and Fine-Tuning	Initiate September 14, 2010
Final Timings and Evaluation Technical Memorandum (Del. 5)	November 19, 2010

Phase 2 Signals

Tasks/Deliverables	Completion Date
Data Collection and Field Review	December 9, 2010
Draft Analysis of Existing Conditions Technical Memorandum (Del. 2A)	January 21, 2011
City Review	February 3, 2011
Final Analysis of Existing Conditions Technical Memorandum (Del. 2B)	February 10, 2011
Draft Signal Grouping and Cycle Lengths	February 24, 2011
Draft Recommendations Technical Memorandum (Del. 3A)	March 18, 2011
City Review	April 1, 2011
Final Recommendations Technical Memorandum (Del. 3B)	April 8, 2011
Timing Sheets (Del. 4)	Initiate April 9, 2011
Implementation and Fine-Tuning	Initiate April 12, 2011
Final Timings and Evaluation Technical Memorandum (Del. 5)	June 22, 2011

EXHIBIT D
COMPENSATION

CITY agrees to compensate CONSULTANT pursuant to the terms and conditions of this AGREEMENT.

The maximum amount of compensation to be paid to CONSULTANT under this AGREEMENT, including both payment for professional services, reimbursable expenses and additional services, shall not exceed SIX HUNDRED SEVENTY-EIGHT THOUSAND DOLLARS (\$678,000). The maximum amount of compensation including both payment for professional services and reimbursable expenses for all services specified in Exhibit B shall not exceed SIX HUNDRED FIFTY-FIVE THOUSAND DOLLARS (\$655,000). The maximum amount of compensation for Additional Services shall not exceed TWENTY-THREE THOUSAND DOLLARS (\$23,000). Any hours worked for which payment would result in a total exceeding the maximum amount of compensation set forth herein shall be at no cost to CITY.

Invoices

CONSULTANT shall, during the term of this AGREEMENT, be paid for services performed under this AGREEMENT based on a firm fixed price by deliverable as described below in Task Deliverables. After satisfactory completion of a deliverable and accepted by CITY, CONSULTANT shall submit the invoice to CITY identifying the project milestone or deliverable for which payment is sought after completion of the deliverable. CITY shall verify that the services covered by this invoice have been completed in accordance with the provisions of this AGREEMENT or notify

CONSULTANT within thirty (30) days of any services that it believes to be incomplete. Following deliverable acceptance, CITY shall pay CONSULTANT the amount charged on the invoice within thirty (30) days.

In the event that intersections under Phase 1 and/or Phase 2 are divided into multiple timing subgroups, deliverables will be submitted for each timing subgroup. Payment of such deliverables shall be based on the number of intersections within each completed timing subgroup as a percentage of total intersections within the Phase multiplied by the cost per deliverable as shown on the tables in Task Deliverables below.

- i. CONSULTANT shall attach to the invoices provided to the DIRECTOR, with a description of the work performed to verify the amounts being charged by CONSULTANT.
- ii. All charges contained in the monthly invoices shall be consistent with the terms and conditions set forth in this Section and AGREEMENT.
- iii. Payment for Professional Services:

CITY agrees to compensate CONSULTANT for professional services performed pursuant to the terms and conditions of this AGREEMENT for the specific team members specified below. CONSULTANT shall complete the services herein using the staff identified in the following table and provide CITY with written notification of new personnel assigned to this PROJECT. Such new personnel shall not be added without the prior written consent of CITY.

Key Staff Assignments

Name	Classification	Assignment
Brian Sowers	P6	Project Manager
James West	P8	Principle-in-Charge
Michael Mowery	P5	QC/QA, Fine-tuning
Ali Syed	P3	Data Collection, Analysis, Fine-tuning
Anirban Pal	P4	Data Collection/Field Observation, Timing Analysis
Nikita Petrov	P2	Data Collection/Field Observation, Timing Analysis
Sara Klaiber	P2	Data Collection/Field Observation
Ben Huie	P2	Data Collection/Field Observation
Other Engineers & Analyst Assistance (TBD)	P1-P4	Data Collection/Observation, Timing Analysis

Task Deliverables

Subject to the terms and conditions set forth in this Subsection, the maximum compensation for professional services and reimbursable expenses to be paid to CONSULTANT for each deliverable required under Section 2 of this AGREEMENT shall be as follows:

Phase 1 Signalized Intersections to Be Re-timed per Exhibit B-1

Deliverables	COST
1. Final Detailed Workslope, Schedule, and Budget	\$13,000.00
2A. Draft Analysis of Existing Conditions Technical Memorandum	\$91,000.00
2B. Final Analysis of Existing Conditions Technical Memorandum	\$26,000.00
3A. Draft Recommendations Technical Memorandum	\$39,000.00
3B. Final Recommendations Technical Memorandum	\$26,000.00
4. Revised Timing Sheets	\$26,000.00
5. Final Timings and Evaluation Technical Memorandum	\$39,000.00
Total	\$260,000.00

Phase 2 Signalized Intersections to Be Re-timed per Exhibit B-2

Deliverables	COST
1. Final Detailed Workslope, Schedule, and Budget	\$19,750.00
2A. Draft Analysis of Existing Conditions Technical Memorandum	\$138,250.00
2B. Final Analysis of Existing Conditions Technical Memorandum	\$39,500.00
3A. Draft Recommendations Technical Memorandum	\$59,250.00
3B. Final Recommendations Technical Memorandum	\$39,500.00
4. Revised Timing Sheets	\$39,500.00
5. Final Timings and Evaluation Technical Memorandum	\$59,500.00
Total	\$395,000.00

CONSULTANT may be requested by CITY to perform additional services pursuant to Exhibit B at intersections not listed in Exhibit B-1 or B-2. If additional services are requested, CONSULTANT shall be compensated upon completion of such services based on the following payment up to the maximum compensation authorized in this AGREEMENT.

Additional Services

Unit of Measure	Unit Cost	Maximum Amount
Per Signalized Intersection	\$2,300	\$23,000

The DIRECTOR may, in the DIRECTOR's sole discretion, adjust the amounts allocated to each of the deliverables set forth above in the Schedule of Payment, provided that such adjustments do not exceed the total compensation to be paid under the AGREEMENT. To be effective, all adjustments to the Schedule of Payment must be in writing. All such written adjustments shall be attached to this AGREEMENT and shall become part of this AGREEMENT.

EXHIBIT E

INSURANCE

CONSULTANT, at CONSULTANT'S sole cost and expense, shall procure and maintain for the duration of this AGREEMENT insurance against claims for injuries to persons or damages to property which may arise from, or in connection with, the performance of the services hereunder by CONSULTANT, its agents, representatives, employees or subcontractors.

A. Minimum Scope of Insurance

Coverage shall be at least as broad as:

1. The coverage provided by Insurance Services Office Commercial General Liability coverage ("occurrence") Form Number CG 0001; and
2. The coverage provided by Insurance Services Office Form Number CA 0001 covering Automobile Liability. Coverage shall be included for all owned, non-owned and hired automobiles.
3. Workers' Compensation insurance as required by the California Labor Code and Employers Liability insurance; and
4. Professional Liability Errors and Omissions insurance for all professional services.

There shall be no endorsement reducing the scope of coverage required above unless approved by the City's Risk Manager.

B. Minimum Limits of Insurance

CONSULTANT shall maintain limits no less than:

1. Commercial General Liability: \$1,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit; and
2. Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury and property damage; and
3. Workers' Compensation and Employers' Liability: Workers' Compensation limits as required by the California Labor Code and Employers Liability limits of \$1,000,000 per accident; and

4. Professional Liability Errors and Omissions: \$2,000,000 Aggregate Limit.

C. Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to, and approved by CITY's Risk Manager. At the option of CITY, either; the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects CITY, its officer, employees, agents and contractors; or CONSULTANT shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses in an amount specified by the CITY's Risk Manager.

D. Other Insurance Provisions

The policies are to contain, or be endorsed to contain, the following provisions:

1. Commercial General Liability and Automobile Liability Coverages

- a. The City of San Jose, its officers, employees, agents and contractors are to be covered as additional insureds as respects: Liability arising out of activities performed by or on behalf of, CONSULTANT; products and completed operations of CONSULTANT; premises owned, leased or used by CONSULTANT; and automobiles owned, leased, hired or borrowed by CONSULTANT. The coverage shall contain no special limitations on the scope of protection afforded to CITY, its officers, employees, agents and contractors.

- b. CONSULTANT's insurance coverage shall be primary insurance as respects CITY, its officers, employees, agents and contractors. Any insurance or self-insurance maintained by CITY, its officers, employees, agents or contractors shall be excess of CONSULTANT's insurance and shall not contribute with it.

- c. Any failure to comply with reporting provisions of the policies by CONSULTANT shall not affect coverage provided CITY, its officers, employees, agents, or contractors.

- d. Coverage shall state that CONSULTANT's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

- e. Coverage shall contain waiver of subrogation in favor of the City of San Jose, its officers, employees, agents and contractors

2. Workers' Compensation and Employers' Liability

Coverage shall contain waiver of subrogation in favor of the City of San Jose, its officers, employees, agents and contractors

3. All Coverages

Each insurance policy required by this AGREEMENT shall be endorsed to state that coverage shall not be suspended, voided, canceled, or reduced in limits except after thirty (30) days' prior written notice has been given to CITY, except that ten (10) days' prior written notice shall apply in the event of cancellation for non-payment of premium.

E. Duration

1. Commercial General Liability, Professional Liability and Pollution Liability coverages shall be maintained continuously for a minimum of five (5) years after completion of work under this AGREEMENT.
2. If any of such coverages are written on a claims-made basis, the following requirements apply:
 - a. The policy retroactive date must precede the date work commenced under this AGREEMENT.
 - b. If the policy is cancelled or non-renewed and coverage cannot be procured with the original retroactive date, CONSULTANT must purchase an extended reporting period equal to or greater than five (5) years after completion of work under this AGREEMENT.

F. Acceptability of Insurers

Insurance is to be placed with insurers acceptable to CITY's Risk Manager.

G. Verification of Coverage

CONSULTANT shall furnish CITY with certificates of insurance and with original endorsements affecting coverage required by this AGREEMENT. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf.

Proof of insurance shall be either emailed in pdf format to: Riskmgmt@sanjoseca.gov, or mailed to the following postal address (or any subsequent email or postal address as may be directed in writing by the Risk Manager):

City of San Jose – Human Resources

Risk Management
200 East Santa Clara St., 2nd Floor Wing
San Jose, CA 95113-1905

G. **Subcontractors**

CONSULTANT shall include all subcontractors as insured under its policies or shall obtain separate certificates and endorsements for each subcontractor.

EXHIBIT F
SPECIAL PROVISIONS

There are no special provisions.