

REQUEST FOR PROPOSALS

For

**THE COUNTYWIDE TRAVEL DEMAND MODEL UPDATE TO
IMPROVE MODELING TRUCK IMPACTS**

RFP A08-021

Issued by:

Alameda County Congestion Management Agency

August 29, 2008

RESPONSES DUE:

October 2, 2008

Alameda County Congestion Management Agency
1333 Broadway, Suite 220,
Oakland, CA 94612

Request for Proposals (A08-021)

**THE COUNTYWIDE TRAVEL DEMAND MODEL UPDATE TO IMPROVE
MODELING TRUCK IMPACTS FOR THE
ALAMEDA COUNTY CONGESTION MANAGEMENT AGENCY**

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The Countywide Travel Demand Model Update to Improve Modeling Truck Impacts For The Alameda County Congestion Management Agency

SECTION 1: OBJECTIVE AND BACKGROUND

1.1 Objective of the Study

The objective of the study is to enhance the Alameda Countywide Travel Demand Model to be able to better forecast truck travel and model truck impacts on the county roadway network, particularly congested corridors. The need to model truck activity in congested corridors is becoming more important as increasing levels of congestion and peak-spreading impact the cost of moving goods. Alameda County, the 7th largest county in California and located in the geographic center of the 9-county San Francisco Bay Area region, has 6 of the top ten most congested corridors in the Bay Area in 2007. The county is home to the Port of Oakland, one of the four busiest ports in the west coast, making freight transportation a large component of the existing and future transportation system. MTC's Regional Goods Movement Study for the San Francisco Bay Area estimates that about 80 percent of goods are moved by trucks. Interstates 880, 580, 238 and 680, located in Alameda County, are some of the significant inter-regional and intra-regional goods movement corridors in the Bay Area.

The ability to better forecast truck traffic and demand in congested corridors would allow better identification of improvements to address trucking needs, which could reduce overall congestion in heavily traveled corridors with competing demands. The study recommendations could be applied to similar congestion management settings where international, regional and local truck traffic in congested corridors is an issue.

1.2 Background details on the existing Countywide Travel Demand Model

The CMA's existing countywide travel demand model was last updated in March 2007. The model is expanded from the MTC's Regional Transportation Model (BAYCAST model) of 2005, and provides more detailed traffic analysis zones, road and transit networks and other details within Alameda County. The following are the key elements of the countywide model:

- The model now uses Cube software.
- The base year of the model is 2000 and forecast years are 2005, 2015 and 2030.
- Five time periods are included in the model: AM peak 1-hour; PM peak 1-hour; PM peak 2-hour; PM peak 4-hour; and Daily.
- The countywide model includes:

- 2,659 traffic analysis zones (TAZ), which include 1404 TAZs within Alameda County, 159 TAZs in buffer areas (52 in West Contra Costa County, 48 in South Contra Costa County, 26 in San Joaquin County, and 33 in Santa Clara County), and 1096 TAZs in the remainder of the Bay Area same as the MTC's RTAZs
- detailed road and transit networks and these networks are compatible with GIS. Road network includes, Freeways, Freeway ramps and metered ramps, State routes, Arterial streets, Collector streets that carry traffic through neighborhoods to adjacent neighborhoods, and Streets that are likely to be analyzed in a local traffic study
- the most recent 2000 census and ABAGs' Projections 2005 land use and socioeconomic data with input from the local jurisdictions. The model is being updated to include the Projections 2007 from ABAG and Ramp Metering details. The horizon years of the updated model will be 2000, 2005, 2015 and 2035. The update is expected to be completed by end of August 2008. The selected consultant will be working with this updated model.
- San Joaquin County as an internal area in the countywide model through buffer zones
- other Bay Area Counties in more detail by including or retaining MTC's Regional Traffic Analysis Zones (RTAZs) for these counties
- an expanded MTC's home-work mode choice model by including additional details on transit modes. Transit/walk access and Transit/drive access sub-modes are divided into further sub-modes: transit/walk access mode was divided into local bus, express bus including ferries, light rail, commuter rail and BART; transit/drive access mode into park/ride and kiss/ride.

The Truck Model in the Countywide Travel Demand Model is based on MTC's Regional Model. It is not validated for truck counts. The Truck Model includes the following 4 classes of trucks:

- Very Small Trucks – 2 Axles with 4 Tires
- Small Trucks - 2 Axles with 6 Tires
- Medium Trucks – 3 Axles
- Large Trucks – 4+ Axles

SECTION 2: SERVICES TO BE PROVIDED

2.1 Project Management

The ACCMA will serve as project manager for this project. The selected consultant will contract with the ACCMA.

2.2 Budget

The CMA is seeking cost competitive proposals. The final budget will be negotiated with the selected consultant.

2.3 Scope of Work and Schedule

The scope of work presented below describes the work to be performed for the tasks related to the Countywide Transportation Model Update to Improve Modeling Truck Impacts in Congestion Management Settings.

Task 1: Refine scope of work

The consultant will meet with ACCMA staff to review and refine the objectives and scope of work. If necessary, the consultant will prepare a revised scope of work, budget and schedule. The draft scope of work will be presented to a Task Force established for this study and modified to respond to comments.

Deliverable: Revised objectives, scope of work, budget and schedule.

Task 2: Inventory of the State of Truck Demand Model Development and Application

Under this task, the state of truck and freight demand model development and how truck travel is being modeled in CMA settings will be reviewed and summarized. Sources for review would include US Department of Transportation, Federal Highway Administration (FHWA), Transportation Research Board (TRB), National Cooperative Highway Research Program (NCHRP), and the Freight Model Improvement Program. The breadth of the review should include work being done internationally and nationally with emphasis on regional and local applications of modeling truck travel. Truck and freight applications that allow better representation of truck demand and impacts in congested corridors will be of special interest. This step will assess the range of available techniques used in truck forecasting, focusing on regional models developed in areas similar to the congestion management settings. The task will also identify the pros and cons of the truck modeling methods or approaches reviewed for the model enhancement, application and forecasting purposes.

Deliverable: Technical Memorandum summarizing the state of truck demand model development and how truck travel is being modeled including popular techniques followed and the pros and cons of those techniques for use in this study.

Task 3: Identify Truck Demand Model Specifications for Application and Enhancements to the Alameda Countywide Travel Demand Model

Under this task, the type of enhancements needed for the Alameda Countywide Travel

Demand Model to be able to model forecast truck travel will be identified. The consultant will provide the CMA and the Task Force a matrix of the types of freight models (trip-based, commodity based, input output based, combination techniques etc.) to choose from based on the consultant's knowledge of appropriate techniques, availability of data, cost, and other resources. The inclusion of commodity information in this effort appears to be essential as commodity information drives freight transportation demand.

Considering that the Alameda County is home to expanding airport and seaport, and is served by freight transport by rail, it is important that the model include information about freight modes other than trucks. The truck freight forecasts will be dependant on the allocation of freight among all freight modes. Since trucks are also the primary intermodal connections between freight modes, the model will include information on the intermodal connections/trips made by trucks. The Port of Oakland and Oakland Airport, and if needed, the key intermodal transfer points will be considered as special generators in the model.

Based on MTC's Regional Goods Movement Study for the Bay Area, Alameda County has the biggest intercounty and intracounty commodity flow in the Bay Area, with over 34 million tons annually. Therefore, the model will also address these external, inter-regional and intra-regional truck trips on Alameda County roadways and identify the external areas such as San Joaquin Valley that needs to be included as part of the model.

Deliverable: Technical Memorandum identifying the truck modeling methods available and recommending the type of truck model to be developed to enhance the Countywide Travel Demand Model including model specification details.

Task 4: Identify Data Needs and Collect Data

This task would identify the data needs to support the modeling efforts identified in Task 3 and collect the identified data.

It is expected that primary data sources would be publicly available data, which could include Caltrans truck counts, Freeway Performance Measurement System (PEMS), California Highway Patrol (CHP), Port of Oakland, Airport and Truck Scales in Alameda County. Other public data sources on surveys such as 2002 Commodity Flow Survey, US Census Bureau could also be explored.

The type of data to be collected will depend on which model enhancements are identified. Where possible, data collection will build on existing data sources. The type of data collected could include origin and destination, travel time, speed, time of day travel, truck trips by truck size, trip length, trip chaining, and truck counts to determine percentage of trucks compared to the total number of vehicles. Data on economic activity for traffic analysis zones over and above the data already included in the countywide travel demand model will be obtained, if needed.

As part of this task, the network for truck travel will be identified and relevant additional data on truck travel restrictions on the roadways will be identified, and collected.

Deliverable: Technical Memorandum identifying data needs, describing data collection process and locations, where data was collected and a database containing the data.

Task 5: Develop Methods to Enhance the Alameda Countywide Transportation Model to Model Truck Demand

As identified in Task 3 and using data collected under Task 4, selected components of the Alameda Countywide Transportation Model will be updated and enhanced to better model truck demand and impacts on Alameda County roadways. This could include improving the ability to model average trip length, frequency and time of day travel for trucks, but will focus on improving the ability to model truck demand in heavily congested corridors in Alameda County.

This task could also include details such as 1) reclassification of trucks in the Countywide Travel Demand Model into sub-categories based on the discussion with the Task Force; 2) economic activity information at the TAZ level; 3) aggregation of TAZs if needed to support available truck data; 4) updating the roadway network to ensure that it is consistent with the applicable truck restrictions on various Alameda County roadways and 5) developing a designated truck route map based on number 4 above and information gathered from the designated-truck route maps from the local jurisdictions.

Deliverable: Technical Memorandum summarizing model development and assumptions and an updated model with the ability to model truck impacts.

Task 6: Apply and Test Truck Demand Enhancements

Once the models are developed, they will be applied to selected corridors in Alameda County for testing and analysis . This will include validating and calibrating the model for truck travel based on the actual truck travel data available and documenting results. Performance measures including truck volume, travel time, speed and time of day travel will be developed. The measures will be applied to test outputs. These forecasted measures will be compared to actual data.

Deliverable: Technical Memorandum on validation and calibration and summarizing the results of the application.

Task 7: Documentation and Recommendations

This task includes documentation of the countywide model enhancements to forecast truck travel and model truck impacts including summarizing the results of all tasks. Recommendations will be developed and next steps identified. Using information from Task 2 on how other CMAs are modeling truck demand and what was learned in this application, recommendations for improving truck models in general Congestion Management settings will be developed for information sharing with other CMAs and regional agencies as appropriate.

Deliverable: Final Report summarizing recommendations, next steps, and applicability to general congestion management settings.

Task 8: Meetings

ACCMA staff will facilitate group discussions for the Task Force. Members of the consultant team are expected to be available as support to ACCMA staff during meetings throughout the study and may be called on to make presentations. This group will meet at regular intervals for the duration of the study to provide input and comment on the Model update process. Appropriate members of the consultant team should be available for all Task Force meetings as well as four additional meetings for presentations to ACTAC and/or the ACCMA Board of Directors. It is anticipated that over the 15 months study period, a total of 15 Task Force and ACTAC meetings will be required.

SECTION 3: SBE AND LBE REQUIREMENTS

ACCMA has adopted a Small Business Enterprise (SBE) Policy, pursuant to which the ACCMA encourages all prime contractors to utilize qualified SBE subcontractors on ACCMA projects, ACCMA promotes the direct purchase of goods from qualified SBEs by utilizing SBE vendors when such vendors are available and the price of the goods sought is reasonable, and, for professional services contracts, ACCMA seeks the utilization of qualified SBEs when such SBEs are available. All prime contractors are required to report on SBE usage during the term of each contract, using a form provided by ACCMA.

For purposes of ACCMA's SBE Policy, an SBE shall be a "small business" within the meaning of 13 CFR Part 121 and California Government Code Section 14837. In the event that the ACCMA's SBE Policy conflicts with any Federal, State or other funding source's programs, policies, regulations or requirements, ACCMA shall make the SBE Policy consistent with said funding source's programs, policies, regulations and requirements to the extent permissible by law. ACCMA's SBE Policy is neutral as to race, ethnicity, national origin, age, sex, religion, sexual orientation and other protected classes.

ACCMA has also adopted a Local Business Enterprise (LBE) Policy, pursuant to which the ACCMA encourages all prime contractors to utilize qualified LBE subcontractors on ACCMA projects. ACCMA promotes the direct purchase of goods from qualified LBEs by utilizing LBE vendors when such vendors are available and the price of the goods sought is reasonable, and, for professional services contracts, ACCMA seeks the utilization of qualified LBEs when such LBEs are available. All prime contractors are required to report on LBE usage during the term of each contract, using a form provided by ACCMA.

SECTION 4: RFP SUBMITTAL REQUIREMENTS

Proposal Contents

1. Your proposal should be limited to a total of 60 single-sided, 8.5" x 11 pages including resumes. Resumes should be included in an appendix.
2. The proposal shall be transmitted with a cover letter describing the firm's/team's interest and commitment to the proposed project. The letter shall state that the proposal shall be valid for a 90-day period and that staff proposed are available to begin work on this contract. The person authorized by the firm/team to negotiate a contract with ACCMA shall sign the cover letter and the letter should include the name, title, address and telephone number of the individual to whom correspondence and other contacts should be directed during the consultant selection process.

Address the cover letter as follows:

Beth Walukas, Manager of Planning
Alameda County CMA
1333 Broadway, Suite 220
Oakland, CA 94612
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Improve Modeling Truck Impacts

3. A *title page* showing the RFP subject, name of the proposer's firm including sub-consultants, local address, name and telephone number of contact person, and the date.
4. *Table of Contents*
5. *Overview and Summary.* This section should clearly convey the consultant's understanding of the nature of the work and the general approach to be taken.
6. *Work plan and Schedule.* This section should include a description of how each task of the project will be conducted, identification of deliverables, and schedule. The consultant should include additional details such as study deliverables, expected sequence of tasks and important milestones. The Work Plan should be in sufficient detail to demonstrate a clear understanding of the project.
7. *Management Approach.* This section should describe the consultant's approach to management of the work. If the proposal is a team effort, the distribution of work among the team members should be indicated. Projects on which the team has worked together in the past should be identified. This section should discuss the consultant's organization for this project, how the work assignments are structured, and the staffing. The staffing discussion should include the names and a brief summary of the qualifications of the key personnel. A chart showing the amount of time each key team member is devoting to the project should be included along with billing rates. The consultant shall describe the role of any subcontractors, with a description of the subcontractors' specific responsibilities. Discuss the firm/team's approach for completing the services for this project within budget.

The proposal should include a staffing plan and an estimate of the **total hours** detailed by position. The staffing plan should also identify the hours required to

complete each of the tasks listed in Section 2 above and the total hours for the overall project.

8. *Qualifications of the Team Members.* This section should include the resumes of the team members assigned to the project.

Qualifications of the Firm. This section should provide a short description of previous projects that significantly relate to the consultant's qualifications for this particular project. The description should identify the role of key personnel assigned to conduct the study. Provide a list of up to three former clients for whom the consultant firm has performed services similar to those described in this RFP, along with names and telephone numbers of persons who may be contacted as references. Similar information is required for any subcontractors included in the proposal. Key personnel are expected to be committed for the duration of the project. Replacement of key personnel will not be permitted without prior consultation with and approval of the ACCMA.

9. *Cost Proposal.* A cost proposal should be submitted in a **separate sealed envelope titled "The Countywide Travel Demand Model to Improve Modeling Truck Impacts Proposal."** The cost submittal should indicate the number of anticipated hours by the Project Manager and key personnel for the work described above, by task. The estimated level of hours for other staff can be summarized in general categories.

An original and (6) copies of the proposal and one electronic copy (CD) are due at the offices of the Alameda County CMA by 3:00 PM on October 2, 2008.

SECTION 5: SELECTION OF CONSULTANT

A panel representing the CMA and representatives from the local jurisdictions and regional partner agencies will review the written proposals submitted on time and considered complete. The panel will evaluate the proposals and select the best for an oral interview if necessary, at which time, the selected proposers will be requested to make a formal presentation. The panel will recommend one consultant from those interviewed. The CMA reserves the right to reject all proposals or suggest different team participants. The CMA has ultimate authority for the approval of the contract.

Each proposal will be evaluated according to the following criteria:

- Consultant's understanding of the purpose and requirements of the project.
- Quality of the Work Plan
- Experience of the key personnel assigned
- Qualifications of the consultant firm
- Staffing Plan including person hours

Interviews will be held on the date specified in Section 6 below. The Project Manager and Key Personnel should attend the interview. The specific composition of the evaluation /

interview panel will not be revealed prior to the interviews. Costs for travel expenses and proposal preparation shall be borne by the consultants.

Once the top firm/team has been determined, ACCMA staff will start contract negotiations with firm/team. If contract negotiations are not successful, the second ranked firm/team may be asked to negotiate a contract with ACCMA, etc. Provided the negotiations are proceeding well, the ACCMA may elect to initiate a portion of the work scope with a Notice to Proceed (NTP), prior to execution of the contract.

SECTION 6: SELECTION PROCESS DATES

September 12, 2008: All questions pertaining to this RFP should be emailed Liz Brazil **no later than Friday, September 12, 2008** at the following email address: lbrazil@accma.ca.gov. Responses to the material questions received by 3:00 p.m. on this date will be provided at the pre-proposal meeting.

September 18, 2008: A **Pre-proposal Meeting** will be held at **2:00 p.m.** at the ACCMA offices on **Thursday, September 18, 2008**. Attendance is optional.

October 2, 2008: **Proposals are due no later than 3:00 p.m. on Thursday, October 2, 2008** at the offices of the Alameda County Congestion Management Agency, 1333 Broadway, Suite 220, Oakland, CA 94612. ***Late submittals will not be accepted.***

October 13 & 20, 2008: If necessary, interviews for consultant selection will be held during the weeks of October 13 or October 20, 2008.

All questions pertaining to this RFP should be emailed to Liz Brazil, Contracts Administrator at the following email address: lbrazil@accma.ca.gov. All such emails must include the subject line "ACCMA RFP A08-021 Question:" and then the stated question in the body of the email. ACCMA will be unable to provide individual responses, and ACCMA will not respond to questions posed by any means other than email. Responses to all questions submitted by the above deadline that may have a material impact on the proposal will be provided to all attendees of the pre-proposal meeting discussed above, and will also be posted on the ACCMA website: www.accma.ca.gov.

SECTION 7: GENERAL CONDITIONS

A. Limitations

This RFP does not commit the Alameda County CMA to award a contract or to pay any costs incurred in the preparation of a proposal in response to this RFP.

B. Rejection of Proposals

The Alameda County CMA reserves the right to reject any or all proposals.

C. Award

All finalists may be required to participate in negotiations and to submit such price; technical or other revisions of their proposals as may result from negotiations. Accordingly, each initial proposal should be submitted on the most favorable terms from a price and technical viewpoint.

D. Workscope Modifications

The ACCMA reserves the right to request changes to the staffing and/or scope of services contained in any of the proposals and to enter negotiations with any of the proposers regarding their submittal.

E. Contract

A sample contract is shown in Attachment 1. It is expected that the terms of the contract will be acceptable to the consultant.

F. Non - Discrimination

Contractors shall not discriminate on the basis of race, color, national origin, sex, or physical disability in the performance of ACCMA contracts.

G. Levine Act

Selected consultants will be required to disclose on the record any contribution of more than \$250.00 which they have made to an ACCMA Board member within the twelve-month period preceding the submittal deadline of this RFP. This applies to your company, any member of your team, any agents for you or other team members and to the major shareholders of any closed corporation, which is part of your team. If you have made a contribution which needs to be disclosed you must provide written notice of the date, amount and receipt of the contribution(s) to the ACCMA Executive Director, Dennis Fay. This information will need to be provided before the ACCMA can approve any contract.

SECTION 8: LISTS OF FIRMS THAT RECEIVED THIS RFP

See Attachment 2 for the list of firms that received this RFP.

Attachments:

- Attachment 1 – ACCMA Sample Contract
- Attachment 2 – List of firms that received notification of this RFP

Attachment 1 – ACCMA Sample Contract

Attachment 2 – List of firms that received notification of this RFP