APPENDIX D.
Procedures for Estimating MBE/WBE Availability

This appendix discusses BBC's approach to developing dollar-weighted estimates of relative MBE/WBE availability.

Procedures for Determining MBE/WBE Availability

"Firms," not "business establishments," are the unit of analysis for the availability calculations. BBC applied two types of screening of firms to be counted in the MBE/WBE availability analysis: Fundamental criteria that a firm must meet to be considered in the analysis (regardless of the contract), and criteria that a firm must meet to be considered for a particular contract.

Screening of firms to be considered in the availability analysis for any contract. A firm must meet the following criteria to be counted in the MBE/WBE availability analysis for any contract element.

- Be a for-profit business, not a public agency or not-for-profit organization;
- Have a location in California;
- Be identified by Dun & Bradstreet (D&B) as operating in mid-2006 within a main line of business related to transportation construction and engineering work;
- Have a working phone number and someone who will answer the phone or return a phone call;
- Have an owner or manager who is willing to take part in the availability survey and be able to complete the survey in English;
- Confirm that the firm does perform work related to transportation construction, maintenance or design;
- Confirm that the firm has a main line of business within one of the areas of focus of the availability analysis;
- Have performed or bid on past Caltrans, local government or private sector transportation construction or engineering contracts in the past five years;
- Have been in business during the year in which the contract began; and
- Have answered the survey questions that asked whether the firm was minority- or women-owned and controlled (any firm not answering this question was excluded from the availability analysis).

The study team considered one additional measure to screen firms before considering them available for specific Caltrans contracts or for local agency contracts. Interviewers asked, "Now, thinking about future transportation work, is your company qualified and interested in working with Caltrans and local governments in California?" The only firms considered in the MBE/WBE availability analysis

for Caltrans contracts were firms responding "yes" to both or "yes" to just Caltrans work. The only firms considered as available for local agency work were firms responding "yes" to both or "yes" to just local agency work.

Additional screening to be considered for a specific Caltrans or local agency contract or subcontract. MBE/WBE availability for a particular set of contracts is determined contract-by-contract for each element of each contract (the prime portion, subcontract portions, trucking and supply portions, etc.) and then dollar-weighted to determine overall availability.

Firms are counted as available for some prime contracts or subcontracts and not for others depending upon the characteristics of the contract element and the characteristics of the firm, as described below.

For each contract element, the study team's analysis identifies:

- Agency (Caltrans or local agency);
- Location (one of 12 regions based on Caltrans district, or North Region or Central Region for certain engineering contracts);
- Contract role (prime contractor and subcontractor, including supplier and trucker);
- Size of the contract role for subcontractor elements and size of the entire contract for prime contractor elements;
- Date that contract began; and
- Work specialty.

Agency. A firm must respond that it is qualified and interested in Caltrans work or local agency work to meet the Agency criterion (discussed above).

Location. Firm owners and managers were asked whether or not their firm could be involved in transportation projects within 12 regions of California that correspond to the Caltrans districts. A firm meets the location criterion if it reports that it could be involved in any county within the region in which the work was located. (BBC applied this assumption as 80 percent of the firms surveyed that were counted as available for transportation construction or engineering work reported that they can work in every county of their home region).

Caltrans information for engineering contracts in the North and Central Regions do not identify the district in which the work was conducted. Therefore, any firm available for work anywhere within these regions are assumed to work in any district within the region.

Contract role. To meet the "prime contractor" contract role criterion, the firm must have been awarded or bid on past transportation work as a prime contractor. This can be on Caltrans, local agency or private sector contracts. A firm must have been awarded or submitted bids or quotes as a subcontractor to meet the "subcontractor" test. Similar tests apply for "trucking" and for "supplier."

Size of contract or subcontract element. To be counted as available for subcontract elements, a firm must have been awarded or bid on a past contract or subcontract of similar or greater size to that for the contract element. For prime contract elements, a firm must have been awarded or bid on a past contract or subcontract of similar or greater size to the entire contract amount.

Contract date. To be counted as available for a contract element (both prime contract or subcontract elements), a firm must report an establishment date during or prior to the year in which that prime contract began. Firms that could not recall or did not report an establishment date were presumed to have been founded before the study period and therefore were included in the count of available firms because of firm age.

Work specialty. Each work element in a contract is assigned a "work specialty code." This code is based on the main line of work of the firm that actually performed that work element. To be counted as available within a "work specialty," a firm must have the same work specialty code. The code for each firm is based on the description of the main line of business confirmed or identified by the firm owner or manager (the D&B SIC code for the firm or the line of work identified by the firm in Availability Survey). In some cases, the work specialty code of a contract element was outside the core areas that were studied in the Availability Survey. These specialty areas were coded as other construction, other construction supply, other construction equipment and other professional services. Firms in these "other" specialty areas that were surveyed in the availability analysis are used as a proxy for these "other" firms when determining relative MBE/WBE availability for these contract elements.

In some cases, the work specialty code could not be identified beyond general construction or engineering work. Availability for those work elements was based on all firms that do prime or subcontracting work (for construction versus engineering contracts). The firms counted as available for that contract element were also subject to other screening (location, etc.).

Dollar-Weighting Across Contracts

The process described above relates to determining relative MBE/WBE availability for a specific contract element. To develop an availability figure pertaining to many different contracts, BBC weighted the MBE/WBE availability for a contract element by the dollars awarded or paid for that contract element. Availability determined for large prime contracts and subcontracts received greater weight than availability determined for smaller prime contracts and subcontracts when determining overall availability for a set of contract elements.

For illustration, if BBC were determining overall MBE/WBE availability for $1 million in subcontracts comprised of one $500,000 subcontract, one $300,000 subcontract and one $200,000 subcontract, the availability for the $500,000 subcontract would receive a weight of 0.5, the $300,000 subcontract would receive a weight of 0.3 and the $200,000 subcontract would receive a weight of 0.2. If MBE/WBE availability for the $500,000 subcontract was 10 percent, the MBE/WBE availability for the $300,000 subcontract was 20 percent and the MBE/WBE availability for the $200,000 subcontract was also 20 percent, then overall MBE/WBE availability for this set of subcontracts would be 15 percent (0.5 times 10 percent plus 0.3 times 20 percent plus 0.2 times 20 percent).

The Availability and Disparity Study examines transportation construction and engineering contracts awarded by Caltrans directly and by local governments receiving federal or state funds through Caltrans. These contracts involve both prime contractors and subcontractors ("prime consultants" and "subconsultants" for transportation engineering contracts). The balance of this appendix reviews the data Caltrans currently collects and maintains for these contracts and the additional data collection the study team undertook to complete the MBE/WBE availability analysis.

Collection of Contract Information

The study team collected contract information for Caltrans construction and engineering contracts; Local Assistant contracts (both design and construction phases); and the State Route 125 project.

Construction contracts. BBC collected Caltrans construction contract information for the period of January 1, 2002 through December 31, 2006 or late-2006 from the following sources:

- Bid summary database;
- Request to Sublet forms (Form 1201);
- Substitution of subcontractor information (also on Form 1201); and
- Final report of utilization (Form 2402F).

After extensive review of these data sources, the study team determined that the Request to Sublet (1201) forms provided the most reliable and comprehensive information.

The Request to Sublet form lists the prime contractor and all the subcontractors they plan to use that will receive payments in excess of one-half of one percent of the total contract amount. The prime contractor also lists dollar amount estimates for each subcontractor. Caltrans uses this form to make sure that primes perform at least 50 percent of the work, a requirement in state law. (Certain specialty subcontracting is not counted against the subcontracting limit but still reported on this form.) Because all subcontractors need to be listed regardless of DBE status, this form is suitable for identifying the size of each subcontract at time of award.

Caltrans does not maintain a database for Request to Sublet information. Although some information is present at Caltrans Headquarters, the requests to sublet generally are kept in hard copy form in the contract files for each construction contract. These files are typically found in each Caltrans district. Certain districts that serve as regional headquarters sometimes consolidate information from other districts in their region.

The BBC study team went to Caltrans district offices to attempt to locate 1201 Forms for each Caltrans construction contract from January 1, 2002 through December 31, 2006. Once the form for a contract was located, the study team made photocopies of the forms. The study team used the Bid Summary database on Caltrans construction contracts as a master list of contracts to aid in locating the appropriate construction contract file and 1201 Form. When a construction contract file was not immediately available from district files, Caltrans staff assisted in locating the files. Once a construction file was located, nearly every file contained a 1201 Form. Following the collection of forms from all districts, the study team entered information directly from these forms into an electronic database that recorded contract number, funding source, and location of work, as well as each prime and subcontracting firm's name, address, DBE status, and contract-specific payment amounts.

According to state law, any prime contractor wishing to substitute a subcontractor or make substantial changes to the work to be performed by a subcontractor must obtain approval from Caltrans prior to making this change. (Prior to May 1, 2006, Caltrans' DBE program had similar requirements when substituting a DBE.) The prime contractor must submit a separate 1201 Form for the substituting subcontracting firm in order to comply with this requirement. The study team collected 1201 Forms pertaining to substitution of subcontractors at the same time and in the same fashion as described above.

Transportation engineering contract data collection. The study team sought information on prime consultants and subconsultants performing engineering-related services for Caltrans from 2002 through 2006. The Caltrans Division of Procurement and Contracts (DPAC) maintains data on prime consultants receiving Caltrans contracts through this time period, but does not have complete information on subconsultants. Therefore, the DPAC data could only serve as a master list of engineering-related contracts for the study period.

Caltrans does not document information for DBE and non-DBE engineering subconsultants within any single form comparable to the 1201 Form that is completed for construction contracts. Individual districts do maintain information on prime consultants and subconsultants through consultant invoices sent to the district contract administrator. Because the source data come from invoices, the information pertains to prime consultants and both DBE and non-DBE subconsultants. Some districts enter this information into electronic databases. Because of the magnitude of this data collection effort, the study team collected district databases where available and developed a sampling strategy for districts that did not maintain electronic data.

Sampling methodology. The North Region (Districts 1, 2 and 3), District 4, District 11 and District 12 did not maintain or were unable to provide electronic files to document firm-specific payments for engineering contracts within the study period.

The study team sampled engineering contracts in these districts. For each district, the study team defined the sample frame to be all design consultant contracts listed in the DPAC database that were executed on or after January 1, 2002 and that were related to engineering contracts (including environmental consulting, landscape design, traffic studies, etc.).

After defining the sample frame, the study team selected the following engineering-related contracts for data collection:

- All contracts that did not receive federal funds;
- All federally-funded contracts executed after the May 1, 2006 transition to an all race-neutral DBE program;
- One out of every three remaining federally-funded contracts, selected sequentially based on contract number.

This generated a sample of 42 out of 88 total engineering contracts in the North Region and in Districts 4, 11, and 12. The study team worked with staff in each district to locate the contract information. The team successfully captured contract information for 34 of the 42 sampled contracts.

Data collection. Within those six districts that did not have or had not made available electronic files to track firm-specific payments for contracts during the study period, the study team collected prime and subconsultant payment information from task order invoices for each sampled contract. The study team conducted this data collection at district offices during fall 2006. This data collection project involved the entry of information about firms and payment amounts from every task order invoice submitted under a selected contract into a spreadsheet similar to the database developed by Central Region consultant services contract management staff.

District databases. Several districts (Central Region, District 7, District 8) possess spreadsheets or databases that track the firm-specific payment information contained on the task order invoices. The methods and the format of these spreadsheets vary slightly across these districts, but BBC determined that the data of interest to the utilization analysis were available for nearly all contracts from these districts. Data collection for those six districts with reliable and nearly exhaustive records of firm-specific spending also included follow-up requests from the study for similar electronic files for the remaining contracts for 2006.

Identification of location. Due to the centralized administration of consultant service contracts in the North and Central Regions for districts within those regions, it was not possible to determine the exact districts in which the region's contracted work was completed. As a result, the study team was unable to report district-specific engineering utilization for Districts 1, 2, 3, 5, 6, 9, or 10. Instead, the study team examined and reported utilization at the regional level.

Local Assistance contract data collection. Certain federal funds help reimburse costs of construction and engineering contracts directly awarded by Caltrans. Other federal funds administered by Caltrans go to local government transportation projects. Cities, counties and other local agencies award construction and engineering work to be reimbursed by Caltrans using federal and state monies. Where federal funds are used, the Federal DBE Program requires subrecipients to comply with the state department of transportation program approved by USDOT.

Caltrans does not currently maintain comprehensive information on the types of construction and engineering work involved in the federally-assisted contracts awarded by local agencies. In addition, firms available for these contracts may not be known to Caltrans, as local agencies perform the contracting functions.

Sampling methodology. Using an electronic database of Caltrans grants to local agencies for transportation design and construction work from 2002 to the present, the study team, working with staff in the Caltrans Division of Local Assistance, defined a sample of local agency projects for data collection. This database listed an agency and project identifier, the project-specific phases supported through the grant (design, construction, or right of way), and the source of the funds (federal or state) for all grants. For some of the grants, this database also listed the dollar amount, project date, date of award, and a location and work type description for a subset of the grants.

Using this information, the BBC study team excluded grants to projects with start dates prior to the study period and those that did not specify financial support for a construction or design phase. The study team retained grants to projects without project dates in the sample to avoid excluding valid cases. Next, the study team split the projects into two sample frames determined by funding source (state or federal) and sorted these two lists by the total amount of the project-specific grants. The study team eliminated projects with negative grant amounts on the advice of Local Assistance staff that these negative amounts likely reflected transfers of funds from previous grants back to the division.

Having defined separate sample frames for federally-assisted and state-administered project grants, the study team assigned each project grant to one of eight strata and sampled projects from within these groups. Federally-assisted grants to projects with dates after May 1, 2006 were assigned to a separate stratum. The remaining federally-assisted grants, including those to projects without a recorded project start date, were split into four strata based on the dollar amount of the grant: less than $1 million, $1 million to $2 million, $2 million to $5 million, and more than $5 million. State-administered grants to local agencies comprise the remaining three strata, again assigned according to dollar amount of the grant: less than $1 million, $1 million to $2 million, and more than $2 million.

In order to maximize the sample's total share of Caltrans federal and state grant dollars going to local agencies, the BBC study team sampled a large proportion of those projects in the larger grant strata and smaller shares of those projects in the smaller grant strata. Figure D-1 enumerates the number of project phases in each strata and the number of these that were included in the sample.

Figure D-1.
Sampling and sample weights for local assistance projects

	State-funded contracts	Federally-assisted contracts	
	2002-2006	Before May 1, 2006	After May 1, 2006
More than $5 million	Sampled every project: 171 Received completed information for: 78 Sample weight: 2.19	Sampled all projects: 153 Received completed information for: 107 Sample weight: 1.43	Sampled every project: 36 Received completed information for: 25 Sample weight: 1.44
$2 to $5 million		Sampled: 44 of 195 Received completed information for: 32 Sample weight: 6.09	
$1 to $2 million	Sampled: 74 of 110 Received completed information for: 34 Sample weight: 3.23	Sampled: 41 of 303 Received completed information for: 27 Sample weight: 11.22	
Less than $1 million	Sampled: 112 of 1,439 Received completed information for: 66 Sample weight: 21.8	Sampled: 62 of 2,479 Received completed information for: 44 Sample weight: 56.34	

Source: BBC Research and Consulting.

Data collection. Having defined the sample of grants and project phases for data collection, the BBC study team and Caltrans Local Assistance staff developed a letter of introduction and an individualized data request form for submission to every agency included in the sample.

With follow-up and assistance from District Local Assistance Engineers, the BBC study team received valid information for 413 of the 693 project phases included in the original sample. The number of complete responses from each stratum is reported in Figure D-1. Because of the sampling design (obtaining a relatively large sample of the largest Local Assistance contracts), the information received from local agencies represented an estimated 42 percent of the total dollars of Local Assistance projects during this time frame.

The compiled information indicated if the local agency contracted out construction and design services, and if so, the anticipated or actual payment amounts to all prime contractors and subcontractors involved in these project phases. The study team manually entered this information from the request forms into a separate Local Assistance database.

Sample weights. BBC applied the sample weights in Figure D-1 according to the strata from which the Local Assistance contract was sampled. For example, utilization information for a federally-funded contract awarded after May 1, 2006 received a weight of 1.44 while utilization information for a $3 million federally-funded contract prior to May 2006 received a weight of 6.09. (These weights only applied to Local Assistance contracts.)

State Route 125 project data collection. The State Route 125 South (SR 125) project in southern San Diego County is an 11-mile corridor of new four-lane controlled-access highway/toll road between State Route 905 (SR 905) and State Route 54 (SR 54). The total budget for all phases of the project is $644 million, which is funded through various private and public resources.

The project is being designed and constructed under a franchise agreement between Caltrans and South Bay Expressway (SBX), formerly California Transportation Ventures (CTV). The latter entity is a private consortium selected by Caltrans in 1990 to develop the project with Caltrans providing oversight. Otay River Constructors (ORC) is the prime contractor design-builder.

During the study period, ORC began the two primary construction sub-projects of the SR 125 project. The "Gap Connector" sub-project includes the northern 1.5 miles of the toll road and the freeway-to-freeway interchange at SR 54 and is publicly funded with a combination of federal monies and local sales tax funds. The remaining 9 miles of construction comprise the "Toll Road" sub-project and are funded by a mix of private financing and a direct federal loan through the U.S. Department of Transportation's TIFIA program in TEA-21. Staff at SBX informed BBC that contracts for these sub-projects were completed during the spring of 2003.

Given the use of federal dollars in support of this project, the Federal DBE Program was in place for these sub-projects. Caltrans District 11 staff monitor and report compliance of the DBE Program on the "Gap Connector" and the "Toll Road" sub-projects.

Caltrans District 11 staff issued data requests on behalf of BBC and received several items in response from ORC and SBX. ORC submitted a hard-copy spreadsheet that detailed payment information for both the "Gap Connector" and "Toll Road" construction elements. This spreadsheet listed each subcontracting firm that had received work and sub-project-specific dollar amounts paid or anticipated. SBX provided electronic copies of the invoice payment requests from Otay River Constructors, which indicated sub-project-specific amounts paid through December 2006.

The study team entered firm names, addresses, and sub-project-specific payment amounts from these hard-copy spreadsheets and invoices into a separate SR 125 database. The study team calculated firm-specific payment amounts for the entire SR 125 project and analyzed these as payments under one large contract.