

APPENDIX C.

Availability Survey

This appendix describes study team steps to analyze MBE/WBE availability for transportation construction and engineering work in California. It expands on the analysis presented in Section II, explaining:

- Overall approach;
- Sample frame;
- Questionnaire development;
- Survey execution and performance;
- Statistical confidence in results; and
- Potential limitations.

Overall Approach

BBC contracted with Customer Research International (CRI) to conduct a telephone survey of business establishments. The business establishments surveyed were those identified in a Dun & Bradstreet (D&B) database as doing work in fields closely related to transportation construction and engineering. Only business establishments located in California were included in the survey. The study team attempted to contact every listing in a relevant SIC code rather than draw a sample of listings from the D&B databases. CRI attempted to reach nearly 50,000 business listings. The study team completed surveys with 18,675 business establishments, almost one-half of the establishments with valid phone listings (about 10,000 listings were non-working, duplicate or wrong numbers). After screening for qualifications and interest in future transportation construction and design work, and other factors, BBC was able to analyze MBE/WBE availability based on a database of 3,398 firms.

Sample Frame

BBC developed a sample frame of business establishments based on a D&B database of establishments doing business in California. The study team determined business specializations that accounted for most transportation construction and engineering work. BBC then identified the 4-digit and 8-digit Standard Industrial Classification (SIC) codes best corresponding to that work. D&B provided the list of firms in California with primary lines of business within those SIC codes. (BBC could purchase a list of business establishments by 4- and 8-digit SIC codes but not NAICS codes.)

The study team did not expect every firm in these lines of business to be available for transportation construction or engineering work. In some fields, we anticipated that relatively few firms would perform this work. In the same vein, the study team did not design the survey effort so that each firm possibly performing transportation construction or engineering work would be called as part of the survey. To do so would require including business sectors marginally related to transportation construction and design. Some firms within the core lines of work encompassed in the survey are also either missing from the D&B database or might not respond to the survey effort. Finally, only firms with California locations were included in the survey.

For these reasons, the survey is not a complete census of all firms possibly available for transportation contracting work in California. The study team's goal was to develop unbiased estimates of the relative availability of MBE/WBEs among firms doing business in California within the lines of work principally involved in transportation contracting.

Identifying the relevant subindustries for Caltrans transportation contracting. BBC determined the types of firms involved in Caltrans transportation construction and engineering services by reviewing firms listed in Caltrans databases for construction and design contracts.

- From Caltrans Division of Engineering Services electronic data, BBC was able to identify firms bidding as prime contractors and first-tier subcontractors on Caltrans construction projects from 2002 to mid-2006. Although these electronic files lacked reliable contract dollar amounts, BBC was able to match names and addresses of these firms against the D&B database of California firms in order to reveal the 8-digit SIC codes for these firms. BBC also examined the types of suppliers and truckers involved in transportation construction.
- For engineering services, BBC identified relevant SIC codes for matched firms from a Caltrans Division of Procurement and Contracts (DPAC) database of prime consultants and select subconsultants receiving Caltrans engineering services and related contracts from 2002 through mid-2006.

The 8-digit SIC codes have been developed by D&B to provide more-precise definitions of firm specializations than the 4-digit SIC codes or the NAICS codes that have been prepared by the federal government. (Note that for some firms, D&B only has the less-specific 4-digit SIC code.) These SIC codes can be translated into NAICS codes as well.

Figure C-1, on the following page, lists the SIC codes for construction-related firms included in the telephone survey. Figure C-1 also identifies the number of business listings by major field in the D&B database. Figure C-2 on page 4, contains similar information for engineering-related fields.

List of establishments to be contacted. Each business establishment with the corresponding SIC code in California for which D&B had a phone number was included in the list purchased from D&B. There was no "sampling" of business establishments from the sample frame.

In the Scope of Services for the Caltrans study, BBC proposed to include 24,000 firms in the telephone survey. The actual survey encompassed many more business establishments. BBC purchased 49,276 listings of business establishments to be contacted as part of the Availability Survey. This includes 32,055 construction-related establishments and 17,221 engineering-related establishments.

Because D&B organizes its database by "business establishment," not by "firm," BBC purchased the business listings in that fashion. Therefore, multiple California locations for a single firm were obtained in the list of establishments to be called. The study team attempted to contact each establishment by telephone. (BBC's methods for consolidating information for multiple establishments into a single record for a firm are described later in this appendix.)

Figure C-1.
Subindustries surveyed in transportation construction fields

				Number of Business Establishments
Highway and street construction				2,434
1611-9901	General contractor, highway and street	1611-9902	Highway and street maintenance	
1611-0200	Surfacing and paving	1611-0205	Resurfacing contractor	
1611-0000	Highway and street construction	1611-0207	Gravel or dirt road construction	
1611-0203	Grading	1611-0102	Highway and street sign installation	
1611-0204	Highway and street paving contractor	1611-0100	Highway signs and guardrails	
1611-0202	Concrete construction: roads, highways	1611-0101	Guardrail construction, highways	
Bridge, tunnel and elevated highway construction				116
1622-0000	Bridge, tunnel and elevated highway	1622-9903	Tunnel construction	
1622-9901	Bridge construction	1622-9904	Viaduct construction	
1622-9902	Highway construction, elevated			
Water, sewer and utility lines				1,205
1623-0000	Water, sewer and utility lines	1623-0201	Cable laying construction	
1623-9906	Underground utilities contractor	1623-0103	Oil and gas pipeline construction	
1623-0302	Sewer line construction	1623-9901	Electric power line construction	
1623-9904	Pipeline construction	1623-9903	Pipe laying construction	
1623-0300	Water and sewer line construction	1623-9902	Manhole construction	
1623-0203	Telephone and communication line construction	1623-0101	Gas main construction	
1623-0303	Water main construction	1623-0301	Aqueduct construction	
Electrical work				9,713
1731-0000	Electrical work	1731-0200	Electronic controls installation	
1731-9903	General electrical contractor	1731-0302	Fiber optic cable installation	
1731-0300	Communications specialization	1731-0201	Computerized controls installation	
1731-0100	Electric power systems contractors	1731-0103	Standby or emergency power specialization	
1731-9904	Lighting contractor			
Concrete work				4,103
1771-0000	Concrete work	1771-0103	Gunite contractor	
1771-9901	Concrete pumping	1771-9905	Patio construction, concrete	
1771-0301	Blacktop (asphalt) work	1771-0102	Grouting work	
1771-9904	Foundation and footing contractor	1771-0303	Parking lot construction	
1771-0300	Driveway, parking lot and blacktop	1771-0201	Curb construction	
1771-9902	Concrete repair	1771-0202	Sidewalk contractor	
Structural steel erection				552
1791-0000	Structural steel erection	1791-9909	Storage tanks, metal: erection	
1791-9905	Iron work, structural	1791-9907	Precast concrete structural framing or panels, placing of	
1791-9902	Concrete reinforcement, placing of			
1791-9901	Building front installation, metal			
Water well drilling				370
1781-0000	Water well drilling			
1781-9902	Servicing, water wells			
Excavation work				1,843
1794-0000	Excavation work			
1794-9901	Excavation and grading, building construction			
Wrecking and demolition				480
1795-9902	Demolition, buildings and other structures	1795-9901	Concrete breaking for streets and highways	
1795-0000	Wrecking and demolition work			
1795-9903	Dismantling steel oil tanks			

Note: 8-digit SIC codes were developed by Dun & Bradstreet.

Source: BBC Research and Consulting from Dun & Bradstreet Marketplace, 2006.

Figure C-1. (continued)
Subindustries surveyed in transportation construction fields

				Number of Business Establishments
Asphalt paving mixtures and blocks				127
2951-0000	Asphalt and paving mixtures and blocks			
2951-0201	Asphalt and asphaltic paving mixtures (not from refineries)			
Construction sand and gravel				129
1442-0000	Construction sand and gravel	1442-0102	Construction sand mining	
1442-0201	Gravel mining	1442-0100	Sand mining	
1442-0101	Common sand mining	1442-0200	Gravel and pebble mining	
Ready-mixed concrete				525
3273-0000	Ready-mixed concrete			
All trucking				9,544
4212-0000	Local trucking, without storage	4213-9902	Building materials transport	
4213-0000	Trucking, except local	4213-9905	Heavy machinery transport, local	
4212-9905	Dump truck haulage	4212-0202	Petroleum haulage, local	
4213-9904	Heavy hauling, nec	4213-9908	Liquid petroleum transport, non-local	
4212-9907	Hazardous waste transport	4212-9904	Draying, local: without storage	
4212-0201	Liquid haulage, local	4212-0200	Liquid transfer services	
4212-9908	Heavy machinery transport, local	4212-9912	Steel hauling, local	
4213-9909	Mobile homes transport			
Heavy construction equipment rental				887
7353-0000	Heavy construction equipment rental	7353-0101	Oil field equipment, rental or leasing	
7353-9901	Cranes and aerial lift equipment, rental or leasing	7353-0100	Oil equipment rental services	
7353-9902	Earth moving equipment, rental or leasing	7353-0102	Oil well drilling equipment, rental or leasing	

Note: 8-digit SIC codes were developed by Dun & Bradstreet.

Source: BBC Research and Consulting from Dun & Bradstreet Marketplace, 2006.

Figure C-2.
Subindustries surveyed in transportation engineering fields

SIC Code	SIC description	Number of Business Establishments	SIC Code	SIC description	Number of Business Establishments
0711-9906	Soil testing services	29	8731-0302	Environmental research	161
0781-0201	Landscape architects	717	8733-0201	Archeological expeditions	27
0781-0000	Landscape counseling and planning	418	8734-0000	Testing laboratories	591
7389-0200	Inspection and testing services	642	8734-0300	Pollution testing	25
7389-0800	Mapmaking services	29	8734-9909	Soil analysis	27
7389-0801	Mapmaking or drafting, including aerial	36	8734-0301	Hazardous waste testing	23
8711-0000	Engineering services	4,457	8741-9902	Construction management	885
8711-9903	Consulting engineering	2,403	8742-0402	Construction project management	267
8711-0402	Civil engineering	1,070	8742-0410	Transportation consultant	231
8711-9905	Electrical or electronic engineering	600	8744-9904	Environmental remediation	79
8711-0404	Structural engineering	568	8748-9905	Environmental consultant	1,674
8711-0401	Building construction consultant	343	8748-0200	Urban planning and consulting services	252
8711-0400	Construction and civil engineering	197	8748-0204	Traffic consultant	88
8711-9901	Acoustical engineering	68	8999-0700	Earth science services	186
8711-0101	Pollution control engineering	31	8999-0701	Geological consultant	159
8712-0101	Architectural engineering	304			
8713-0000	Surveying services	634			

Note: 8-digit SIC codes were developed by Dun & Bradstreet.

Source: BBC Research and Consulting from Dun & Bradstreet Marketplace, 2006.

Questionnaire Development

Development of survey instrument. The study team drafted a telephone survey to collect business information from transportation construction and engineering firms. Before this survey was used in the field, Caltrans staff reviewed the survey instrument, and it was tested in a pilot survey. The basic survey document for construction firms is provided in Figure C-5 at the end of this appendix. The survey was slightly modified for certain groups of firms based on line of work in order to use the terms commonly employed in those fields. For example, the words “prime consultant” and “subconsultant” were substituted for “prime contractor” and “subcontractor” when surveying engineering-related firms.

A fax version of the survey was also developed. This version was faxed or e-mailed to firm owners or managers initially contacted by telephone who requested that a survey be faxed or e-mailed to them. They then returned the survey to BBC via fax or e-mail.

Survey structure. The telephone and fax/e-mail surveys included the following sections. Note that each area of questions was asked of all firms. Interviewers did not know ownership status when calling a firm. (Beginning on page 14, Figure C-5 reproduces the survey instrument in its entirety.)

Identification of purpose. The survey began by identifying the California Department of Transportation as the survey sponsor and describing the purpose of the study (identifying firms doing transportation construction or engineering work in California).

Verification of correct firm name. The interviewer verified that he or she had reached the correct business, and if not, inquired about the correct contact information for that business. When the firm name was not correct, interviewers asked if the respondent knew how to contact the company. The BBC study team followed up with the desired company based on the new contact information (see areas “X” and “Y” of the Availability Survey in Figure C-5).

Performance of transportation construction or engineering work. Firms were asked, “First, I want to confirm that your firm does work related to transportation construction, maintenance or design. Is this correct?” Interviewers continued with firms responding “yes” to this question (Question A1). BBC instructed interviewers that “doing work” included trying to sell this work.

Verification of for-profit business status. The interviewer also asked whether the organization was a for-profit business as opposed to a government or not-for-profit entity (Question A2). Interviewers continued with firms responding “yes” to this question.

Confirmation of main line of business. Firms were asked to confirm industry classification from the D&B database (Question A3). Firms seeking to change or clarify this description were then asked to identify their main line of business (Question A4). (After the survey was complete, BBC coded the new information on main line of business into appropriate SIC codes.)

Sole location, or multiple locations. Because the study team surveyed business establishments, business owners and managers were asked if they had other locations in California (Questions A5–A6). They were also asked if the establishment was an affiliate or subsidiary of another firm (Questions A8–A9). (A discussion of how BBC consolidated this information into a single response for a firm is presented later in this appendix.)

Past bids or work with Caltrans, local governments and the private sector. The survey inquired about bids for or work on past Caltrans, local government and private sector transportation projects. This area of questions asked whether the firm had bid or worked as a prime contractor or as a subcontractor or supplier (Questions B1–B12).

Qualifications and interest in future transportation work. Firm representatives were asked about their qualifications and interest in future transportation work. The survey questions asked whether they were qualified and interested in work for Caltrans and/or local governments. Separate questions asked about qualifications and interest in this work as a prime contractor and/or as a subcontractor (Questions B13–B14).

Largest contracts. Interviewers asked firms to identify the largest transportation-related contract or subcontract they had been awarded in California in the past five years. They were also asked about the largest contract or subcontract that they had bid on in California in the past five years (Questions D2–D4).

Geographic areas. Interviewers asked a series of questions to identify the geographic areas in which the firm could work. These geographic areas included counties and regions of the state that correspond to Caltrans districts (Questions C3–C16).

Ownership. Firms were asked whether they were at least 51 percent owned and controlled by women and/or minorities (Questions E1–E3).

Certification. All firms were asked if they were certified as a DBE and whether they were certified as a small business enterprise by the State of California (Questions E4–E5).

Business background. Several questions collected information on age of the firm (Question D4), 2005 revenues and number of employees (Questions F1–F6). For firms with multiple establishments in California, the survey also asked about revenue and employee numbers for all of these locations.

Comments about the marketplace and doing business with Caltrans. Near the end of the survey, interviewers asked two open-ended questions concerning general insights on the marketplace (Question G1) and fairness of Caltrans prime contractor contracting practices (Question G2).

Contact information. The survey concluded by collecting complete contact information for the establishment (Questions H1–H6).

Survey Execution and Performance

Interviewers. BBC contracted with Customer Research International (CRI) to conduct the telephone survey. BBC held a training session with interviewers at CRI offices in San Marcos, Texas before starting these interviews. CRI programmed and conducted the interviews and provided daily reports on results. BBC instructed CRI to make up to at least five attempts to reach a person at each phone number. This design is intentionally persistent to minimize non-response.

BBC instructed CRI staff to identify and interview an available company representative such as the owner, manager, chief financial officer or other key official who could answer questions about the company's line of business, past contracts, financial and employment figures, interest in work with various clients, and ownership status. The survey was conducted in fall 2006. BBC collected faxed or e-mailed survey responses through December 2006.

Survey performance. The survey process began with a very large number of D&B business listings for organizations in California in certain lines of work potentially related to transportation construction and engineering. At the end of the survey analysis process, firms reporting that they are available for, had bid on, or had performed transportation construction or engineering work were included in the database used for the availability analysis.

Valid business listings. Some of the business listings purchased from D&B were:

- Duplicate numbers (1,335 listings);
- Non-working phone numbers (4,814 listings); or
- Wrong numbers for the desired businesses (3,216 listings that could not be reached through follow-up calls).

Figure C-3, on the following page, shows how the beginning set of 49,276 listings was reduced to 39,911 because of these factors. Some non-working phone numbers and some wrong numbers for the desired businesses reflect firms going out of business or changing their names and phone numbers between the time that D&B listed them in its database and the time when the study team attempted to contact them.

Figure C-3 also shows the final disposition of the 39,911 business establishments that CRI attempted to contact:

- Slightly more than one-third of these business establishments could not be reached after a minimum of five phone calls (14,221 establishments). Call-backs to these business establishments were made at different times of day and different days of the week in order to maximize response.
- About 5 percent of these business establishments could not provide a staff member to answer the survey after a minimum of five phone calls (2,096 establishments).
- Surveys were only conducted in English. About 2 percent of these business establishments could not communicate with the interviewer due to language barriers (790 establishments).
- Four percent refused to participate in the interview (1,731 establishments).
- About 6 percent asked the study team to send the survey via fax or e-mail but did not successfully obtain the fax or e-mail (after multiple attempts) or received the survey but did not return a completed survey to BBC (2,398 establishments).

In sum, BBC obtained completed surveys from 18,675 business establishments, or about 47 percent of the business establishments with valid phone listings. This level of response to a business survey is relatively high. The very large number of responses and the high response rate add to the statistical validity of the study.

**Figure C-3.
Disposition of
attempts to survey
D&B business
listings**

Note:
* After multiple attempts to complete survey.

Source:
BBC Research & Consulting from 2006 Availability Survey.

	Number of Firms	Percent of Business Listings
Beginning List	49,276	
Less duplicate numbers	1,335	
Less non-working phone numbers	4,814	
Less wrong number/business	3,216	
Business listings contacted	39,911	
Less no answers*	14,221	35.63%
Less couldn't reach responsible staff member*	2,096	5.25%
Less language barriers*	790	1.98%
Less refused to answer	1,731	4.34%
Less unreturned fax/e-mail*	2,398	6.01%
Firms that completed surveys	18,675	46.79%

Firms that report being available for transportation construction and engineering work. Among the D&B listings successfully contacted, only a portion is deemed available for any type of Caltrans or local government transportation construction and engineering work, as explained below:

- Two-thirds of the firms that completed a survey indicated they did not perform transportation construction, maintenance or design work (12,620 establishments). The survey ended when a business owner or manager reported that the business did not do this type of work.
- About 1 percent of the surveyed establishments were excluded because they were an organization other than a for-profit business (168 establishments). Non-profit and public sector agencies were not to be included in the survey as the availability analysis focuses on for-profit firms. The survey ended when a respondent reported that the establishment was something other than a for-profit business.
- About 1 percent of surveyed establishments indicated that they were involved in transportation construction, maintenance or design work but reported main lines of work that were well outside the scope of the Availability Survey (180 establishments). For example, some firms identified by D&B as highway construction or concrete firms reported in the survey that they did transportation construction-related work, but that their primary line of business was single family homebuilding or other specialty outside the scope of the study. CRI completed the full survey with these firms. Prior to analyzing results, BBC excluded them from the final data set.
- About 300 individual establishments of multi-location firms completed the survey. Prior to analyzing results, BBC collapsed responses from these multiple establishments into a single response (described below). This removed 183 survey records from the data set (1 percent of total completed surveys).

- Nearly 400 additional firms were eliminated from the count of firms available for Caltrans or local agency transportation projects because they said they were not interested in either prime contracting or subcontracting opportunities on such projects.
- Approximately 1700 firms who were interested in future projects in California were eliminated from the count of firms available for Caltrans and local agency transportation projects because they had never bid or received award for similar projects in any sector in California.
- Twenty firms were eliminated from the count of firms available for Caltrans and local agency work because they did not provide valid responses to the questions about geographic scope.

After these exclusions, the survey effort produced a database of 3,398 for-profit firms in California that were in the lines of business pertinent to the survey and reported they did work related to transportation construction, maintenance or design (see Figure C-4). This data set is large relative to data typically used in economic or other social science research.

Figure C-4.
Screening of completed business telephone interviews for possible inclusion in the availability analysis

Source:
 BBC Research & Consulting from
 2006 Availability Survey.

	Number of Firms	Percent of Business Listings
Firms that completed surveys	18,675	100.0%
Less no transportation work	12,620	67.6%
Less not a business	168	0.9%
Less line of work outside of scope	180	1.0%
Less multiple establishments	183	1.0%
Firms available for transportation work	5,524	29.6%
Less no interest in future work	398	
Less no past bid/award	1,708	
Less missing geographic scope	20	
Total	2,126	
Firms available for Caltrans and local agency work	3,398	

Study team identification and coding of responses from multi-location firms. Multiple responses from different establishments operating under the same firm name were combined into a single, summary case according to the following rules:

- If any of the establishments reported bidding or working on a contract within a particular sector, the firm summary for that variable was coded to an affirmative response for the corresponding sector;
- The types of work (prime contractor, subcontractor, supplier, trucker) that establishments reported were summed to a single variable, again corresponding to the appropriate sector; and
- If any establishment said that it was interested and able to work within one of the ten geographic regions (see part C of the survey instrument in Figure C-5), the firm summary reflected that geographic scope.

Except when there was a 50-year discrepancy among the individual in a set of establishments' self-reported founding dates, the firm summary variable matches the median founding date provided by the multiple establishments. The firm summary variables for contract sizes and California-wide revenue are equivalent to the largest dollar amounts indicated by any of its establishments. The summary number of firm employees in California is equal to the most common or the mean response of the multiple establishments. Finally, firms with multiple locations were recoded as woman- or minority-owned, DBE, or certified small businesses if the majority of duplicate establishments indicated such status.

Statistical Confidence in Results

BBC calculated confidence intervals for the MBE/WBE availability estimates. Because of the large sample relative to the population of firms, BBC employed a finite population correction factor in determining the standard errors and confidence intervals around these estimates from the Availability Survey. The 95 percent confidence interval for MBE/WBE availability across all industries and roles is +/- 0.6 percentage points.

Potential Limitations

The study team explored several possible limitations in its approach to estimating relative availability. These include:

- Assessing relative MBE/WBE availability and not providing a count of all firms available for transportation construction and engineering work;
- Use of a telephone survey of firms as an approach to determining relative MBE/WBE availability for a state DOT's contracts;
- Use of D&B as the sample frame;
- Selection of specific SIC codes to define the sample frame;
- Non-response bias; and
- Reliability of answers to survey questions.

Not providing a count of all firms available for Caltrans work. The purpose of the survey is to estimate the *percentage* of firms available for transportation construction and engineering work that are minority- and women-owned and controlled (i.e., "relative" MBE/WBE availability). The survey provides such information. The survey does not provide a comprehensive listing of every firm available for transportation work and should not be used as such.

Such a comprehensive listing is not possible because firms do not need to pre-qualify or pre-register to perform Caltrans transportation contracting work. Even if such a list existed, there could be firms available for Caltrans work that had not taken steps to place their business on the list.

The survey approach of measuring relative availability has been approved by federal courts (see, for example, the Seventh Circuit decision on *Northern Contracting*) when considering state implementation of the Federal DBE Program.¹ Use of a survey is recommended as an approach to measuring availability in the USDOT guidance on goal-setting.²

Use of a telephone survey. USDOT guidance for determining relative availability of DBEs mentions simply dividing the number of firms in an agency's DBE directory by the total firms in the marketplace, as reported in U.S. Census data. As another option, the USDOT suggests using a list of pre-qualified firms or a bidder list to analyze the relative availability of DBEs for an agency's contracts and subcontracts.

There are several reasons the study team rejected these approaches:

- Dividing a simple count of certified DBEs by a U.S. Census count of total firms does not provide the data on firm characteristics the study team desired for this Availability and Disparity Study. For example, the survey provides additional data on individual firms' qualifications and interest in transportation work.
- As mentioned previously, Caltrans does not typically pre-qualify firms to bid as prime contractors or subcontractors, especially for construction contracts. There is no comprehensive pre-qualification list.
- Although Caltrans has attempted to develop a bidder list, initial efforts have been relatively unsuccessful. Firms are not required to be on the Caltrans bidders list to compete for Department prime contracts and subcontracts.
- A "custom census" approach to measuring availability that starts with D&B data has been positively reviewed by the court cases involving DBE goal setting for state departments of transportation (see, for example, *Northern Contracting* in Appendix C).

The methodology applied in the Caltrans study takes this "custom census" approach and adds several layers of refinement in more precisely measuring MBE/WBE availability.

For all of these reasons, the study team selected use of a telephone survey.

¹ *N. Contracting, Inc. v. Illinois DOT*, 473 F.3d 715 (7th Cir. 2007)

² USDOT. *Tips for Goals Setting in the Disadvantaged Business Enterprise (DBE) Program* (<http://osdbu.dot.gov/?TabId=133>)

Use of D&B data as the sample frame. Dun & Bradstreet provides the most comprehensive private database of business listings in the United States. Even so, this database does not include all establishments operating in California:

- **New firms.** There can be a lag between formation of a new business and inclusion in the database. This means that the newest firms are underrepresented in the sample frame. Based on the firms successfully interviewed in the Availability Surveys, newly formed firms are more likely than older firms to be minority- or women-owned, which suggests that MBEs and WBEs might be underrepresented in the final database of surveyed firms.
- **Home-based businesses.** The D&B database is more likely to miss a business working out of the home than a firm with a distinct business office. Small, home-based firms are more likely than large firms to be minority- or women-owned, which again suggests that MBEs and WBEs might be underrepresented in the final survey data set.

Selection of specific SIC codes to define the sample frame. Defining an industry based on specific SIC codes (or NAICS codes) is a standard step when analyzing an economic sector. Government and private sector economic data are typically organized according to these industry codes. As with any such research, there are limitations when choosing the specific SIC codes to define the sample frame for an industry survey.

First, it was not possible for BBC to include all lines of work possibly related to transportation construction and engineering in the Availability Survey without surveying nearly every industry in California. In addition, the availability analysis and utilization analysis were conducted concurrently in this study. At the time the sample frame was developed in August 2006, BBC had limited information on the business specializations involved in Caltrans transportation construction and engineering work.

Both of these potential limitations have negligible effect on the availability analysis. Post-survey comparison of the SIC codes for firms receiving Caltrans prime contracts and subcontracts found that the lines of work included in the survey accounted for 85.6 percent of total dollars of Caltrans work from 2002 through 2006. Surveying firms in additional SIC codes would be unlikely to have a material effect on the availability estimates.

A further limitation to the use of SIC codes to classify businesses, or any other work type classification method, is that some SIC codes are imprecise and overlap with other business specialties. Even though BBC used D&B's own 8-digit SIC codes, D&B does not maintain a detailed 8-digit code for each firm in its database. In addition, businesses often span several types of work, even at the 4-digit SIC code level of specificity. This overlapping makes classifying businesses into a single line of business difficult and imprecise. When firm owners and managers were asked to identify primary lines of business, they often gave broad answers. For these reasons, BBC collapsed many of the SIC codes into broader work categories in the final database of firms available for transportation-related work. This presents a more accurate assessment of MBE/WBE availability by work field than possible at a finer level of detail. However, this approach sacrifices the ability to separate relatively narrow areas of expertise such as traffic control or guardrail work (which was not possible to obtain from the D&B information).

Non-response bias. Analysis of non-response bias considers whether firms not successfully surveyed are different from those successfully surveyed and included in the final data set for analysis. There are opportunities for non-response bias in any survey. The study team considered the potential for non-response bias due to:

- Survey sponsorship;
- Work specializations; and
- Language barriers.

Survey sponsorship and introduction. Interviewers introduced the survey by identifying Caltrans as the survey sponsor in order to encourage firms that performed transportation construction and engineering work to participate in the interview. Firms would be less likely to answer somewhat sensitive business questions asked by an interviewer unable to identify the sponsor of the survey. In fact, some firms asked to check with Caltrans to verify its sponsorship prior to answering the survey.

Analysis of survey refusal rates suggests that sponsorship had an overwhelmingly positive effect on response rates. Only 4 percent of business listings potentially contacted refused to answer the survey.

Work specializations. Businesses in highly-mobile fields, such as trucking, may be more difficult to reach than firms more likely to work out of a fixed office (e.g., engineering firms). This suggests that survey response rates will differ by business specialization.

If all surveyed firms were simply counted to determine relative MBE/WBE availability, this would lead to estimates that relied too heavily on fields that could be easily contacted by telephone. This potential non-response bias is minimal in this study because the availability analysis compares firms within work fields before determining an MBE/WBE availability figure. In other words, the potential for trucking firms to be less likely to complete a survey is less important because the number of MBE/WBE trucking firms completing surveys is compared with total number of trucking firms, not all firms across all fields.

Language barriers. Caltrans contracting documents are in English and not other languages. The study team made the decision to only include businesses able to complete the survey in English in the availability analysis so to remove language barriers as a potential explanation for any differences in outcomes observed between MBE/WBEs and majority-owned firms.

Individuals who could not communicate in English well enough to complete the survey and could not locate another individual to answer survey questions in English were not captured in the survey research. Further investigation found that the majority of these spoke Spanish and a smaller proportion spoke an Asian language. Choosing to conduct the study in English and not translate it into other languages may have an effect on the relative number of Hispanic- and Asian-Pacific-owned firms that completed the survey.

Response reliability. Firm owners and managers were asked questions that may be difficult to answer, including firm revenues and employment. For this reason, the study team prompted them with D&B information for their establishment and asked them to confirm that information or provide more accurate estimates. Further, respondents were typically not asked to give absolute

figures for difficult questions such as firm revenues. Rather, they were given ranges of dollar figures or employment levels.

BBC explored reliability by analyzing consistency of survey responses for the firm revenues and firm employment questions. BBC found survey responses to these difficult questions to be internally consistent. Firms with smaller employee numbers reported revenues consistent with their employment levels.

Summary

The study team determined that a telephone survey of firms in California was a preferable approach to analyzing availability than relying on: (a) firm counts from the DBE directory and U.S. Census data; (b) pre-qualification lists, which is not a standard Caltrans practice; or (c) a bidders list, which has not yet been successfully implemented by Caltrans.

“Custom census” approaches to availability that begin with D&B data have been reviewed positively by federal courts. The study team’s methodology for analyzing MBE/WBE availability takes the previous custom census approach as a starting point and added several layers of additional screening when determining firms available for transportation construction and engineering work.

The availability analysis conducted for Caltrans represents the largest survey to date of potentially available firms conducted in any state or local government disparity study known to the study team. The study team attempted to complete surveys with all firms in California reported by D&B to have a primary line of business within transportation construction and engineering-related SIC codes. (There was no “sampling” from the sample frame in preparing the list of firms to be surveyed.) The study team attempted to contact nearly 50,000 business listings, about 10,000 of which were found to be invalid listings. A relatively high proportion of the remaining establishments were successfully contacted, and more than 18,000 business establishments completed the survey.

BBC examined several potential sources of non-response bias. It is possible that MBEs and WBEs were somewhat under-represented in the final database of available firms. However, BBC concludes that this potential under-representation of MBE/WBEs does not significantly affect the analyses.

Figure C-5. Survey Instrument

Hello. My name is [*interviewer name*] from Consumer Research International. We are calling for the California Department of Transportation. The Department is developing a comprehensive list of companies involved in transportation construction, maintenance, and design. Whom can I speak with to get the information we need from your firm?

After reaching an appropriately senior staff member, the interviewer should re-introduce the purpose of the survey and begin with questions.

X1. I have a few basic questions about your company and the type of work you do. Can you confirm that this is [*firm name*]?

1=RIGHT COMPANY

2=NOT RIGHT COMPANY

3=REFUSE TO GIVE INFORMATION

Y1. Can you give me any information about [*firm name*]?

1=Yes, same owner doing business under a different name

2=Yes, can give information about named company

3=Company bought/sold/changed ownership

4=No, does not have information

5=Refused to give information

Y1. ENTER NEW NAME

1=VERBATIM

Y2. Can you give me the phone number of [*firm name*]?

(ENTER UPDATED PHONE OF NAMED COMPANY)

1=VERBATIM

Y3. Can you give me the complete address or city for [*firm name*]?

INTERVIEWER - RECORD IN THE FOLLOWING FORMAT:

. STREET ADDRESS

. CITY

. STATE

. ZIP

1=VERBATIM

Y4. And what is the new name of the business that used to be [*firm name*]?

(ENTER UPDATED NAME)

1=VERBATIM

Y5. Can you give me the name of the owner or manager of the new business?

(ENTER UPDATED NAME)

1=VERBATIM

Y6. Can I have a telephone number for them?

(ENTER UPDATED PHONE)

1=VERBATIM

Y7. Can you give me the complete address or city for [*new firm name*]?

1=VERBATIM

Y8. Do you work for this new company?

1=YES - CONTINUE

2=NO - TERMINATE

A1. First, I want to confirm that your firm does work related to transportation construction, maintenance or design. Is this correct?

(NOTE TO INTERVIEWER) - such as, road, bridge or highway construction, guardrail installation, paving and striping work, supplying materials used on these projects, providing trucking or hauling services

(NOTE TO INTERVIEWER) - includes having done work or trying to sell this work

1=Yes

2=No - TERMINATE

A2. Let me confirm that [*firm name / new firm name*] is a business, as opposed to a non-profit organization, a foundation or a government office. Is that correct?

1=Yes, a business

2=No, other - TERMINATE

A3. Let me also confirm what kind of business this is. The information we have from Dun & Bradstreet indicates that your main line of business is [*SIC Code description*]. Is this correct?

(NOTE TO INTERVIEWER - IF ASKED, DUN & BRADSTREET OR D&B, IS A COMPANY THAT COMPILES BUSINESS INFORMATION THROUGHOUT THE COUNTRY)

1=Yes – SKIP TO A5

2=No

98=(DON'T KNOW)

99=(REFUSED)

A4. What would you say is the main line of business at [*firm name / new firm name*]?

(ENTER VERBATIM RESPONSE)

1=VERBATIM

A5. Is this the sole location for your business, or do you have offices in other locations?

1=Sole location – SKIP TO A8

2=Have other locations

98=(DON'T KNOW)

99=(REFUSED)

A6. How many other offices in California?

(ENTER NUMBER OF OFFICES)

(998 = DON'T KNOW)

(999 = REFUSED)

1=NUMERIC (1-999)

A7. Is your company headquartered in California?

1=Yes

2=No

98=(DON'T KNOW)

99=(REFUSED)

A8. Is your company a subsidiary or affiliate of another firm?

1=Independent – SKIP TO B1

2=Subsidiary of another firm

3=Affiliate

98=(DON'T KNOW)

99=(REFUSED)

A9. What is the name of your parent company?

1=ENTER NAME

98=(DON'T KNOW)

99=(REFUSED)

A9. ENTER NAME OF PARENT COMPANY

1=VERBATIM

B1. Next, I have a few questions about your company's role in transportation construction, maintenance or design work. During the past five years, has your company submitted [*a bid or qualifications, a proposal or a price quote*] for any part of a Caltrans project?

1=Yes

2=No – SKIP TO B3

98=(DON'T KNOW) – SKIP TO B3

99=(REFUSED) – SKIP TO B3

B2. Was that [a bid / a proposal] or price quote to work as [a prime contractor, a subcontractor, or a supplier? or a prime consultant or subconsultant?]

- | | |
|-------------------------------|------------------------------------|
| 1=Prime contractor/consultant | 10=(Supplier and Trucker) |
| 2=Subcontractor/consultant | 11=(Prime and Trucker) |
| 3=Supplier (or manufacturer) | 12=(Sub and Trucker) |
| 4=Prime and Sub | 13=(Prime, Supplier, and Trucker) |
| 5=Sub and Supplier | 14=(Sub, Supplier, and Trucker) |
| 6=Prime and Supplier | 15=(Prime, Sub, and Trucker) |
| 7=Prime, Sub, and Supplier | 16=(Prime, Sub, Supplier, Trucker) |
| 8=Trucker | 98=(DON'T KNOW) |
| | 99=(REFUSED) |

B3. During the past five years, has your company received an award for work [as a prime contractor or as a subcontractor or as a prime consultant or as a subconsultant] to any part of a Caltrans project?

- 1=Yes
- 2=No – SKIP TO B5
- 98=(DON'T KNOW) – SKIP TO B5
- 99=(REFUSED) – SKIP TO B5

B4. Was that an award to work as [a prime contractor, a subcontractor, or a supplier? / a prime consultant or subconsultant?]

- | | |
|-------------------------------|------------------------------------|
| 1=Prime contractor/consultant | 10=(Supplier and Trucker) |
| 2=Subcontractor/consultant | 11=(Prime and Trucker) |
| 3=Supplier (or manufacturer) | 12=(Sub and Trucker) |
| 4=Prime and Sub | 13=(Prime, Supplier, and Trucker) |
| 5=Sub and Supplier | 14=(Sub, Supplier, and Trucker) |
| 6=Prime and Supplier | 15=(Prime, Sub, and Trucker) |
| 7=Prime, Sub, and Supplier | 16=(Prime, Sub, Supplier, Trucker) |
| 8=Trucker | 98=(DON'T KNOW) |
| | 99=(REFUSED) |

B5. During the past five years, has your company submitted [a bid / qualifications, a proposal] or a price quote for any part of a city, county, or local agency transportation project in California?

1=Yes

2=No – SKIP TO B7

98=(DON'T KNOW) – SKIP TO B7

99=(REFUSED) – SKIP TO B7

B6. Was that [a bid / a proposal] or price quote to work as [a prime contractor, a subcontractor, or a supplier? / a prime consultant or subconsultant?]

1=Prime contractor/consultant

2=Subcontractor/consultant

3=Supplier (or manufacturer)

4=Prime and Sub

5=Sub and Supplier

6=Prime and Supplier

7=Prime, Sub, and Supplier

8=Trucker

10=(Supplier and Trucker)

11=(Prime and Trucker)

12=(Sub and Trucker)

13=(Prime, Supplier, and Trucker)

14=(Sub, Supplier, and Trucker)

15=(Prime, Sub, and Trucker)

16=(Prime, Sub, Supplier, Trucker)

98=(DON'T KNOW)

99=(REFUSED)

B7. During the past five years, has your company received an award for work [as a prime contractor or as a subcontractor / as a prime consultant or as a subconsultant] to any part of a city, county, or local transportation agency project in California?

1=Yes

2=No – SKIP TO B9

98=(DON'T KNOW) – SKIP TO B9

99=(REFUSED) – SKIP TO B9

B8. Was that an award to work as [a prime contractor, a subcontractor, or a supplier? / a prime consultant or subconsultant?]

- | | |
|-------------------------------|------------------------------------|
| 1=Prime contractor/consultant | 10=(Supplier and Trucker) |
| 2=Subcontractor/consultant | 11=(Prime and Trucker) |
| 3=Supplier (or manufacturer) | 12=(Sub and Trucker) |
| 4=Prime and Sub | 13=(Prime, Supplier, and Trucker) |
| 5=Sub and Supplier | 14=(Sub, Supplier, and Trucker) |
| 6=Prime and Supplier | 15=(Prime, Sub, and Trucker) |
| 7=Prime, Sub, and Supplier | 16=(Prime, Sub, Supplier, Trucker) |
| 8=Trucker | 98=(DON'T KNOW) |
| | 99=(REFUSED) |

B9. During the past five years, has your company submitted [a bid / qualifications, a proposal] or a price quote for any part of a private sector transportation project in California?

- 1=Yes
- 2=No – SKIP TO B11
- 98=(DON'T KNOW) – SKIP TO B11
- 99=(REFUSED) – SKIP TO B11

B10. Was that [a bid / a proposal] or price quote to work as [a prime contractor, a subcontractor, or a supplier? / a prime consultant or subconsultant?]

- | | |
|-------------------------------|------------------------------------|
| 1=Prime contractor/consultant | 10=(Supplier and Trucker) |
| 2=Subcontractor/consultant | 11=(Prime and Trucker) |
| 3=Supplier (or manufacturer) | 12=(Sub and Trucker) |
| 4=Prime and Sub | 13=(Prime, Supplier, and Trucker) |
| 5=Sub and Supplier | 14=(Sub, Supplier, and Trucker) |
| 6=Prime and Supplier | 15=(Prime, Sub, and Trucker) |
| 7=Prime, Sub, and Supplier | 16=(Prime, Sub, Supplier, Trucker) |
| 8=Trucker | 98=(DON'T KNOW) |
| | 99=(REFUSED) |

B11. During the past five years, has your company received an award for work [as a prime contractor or as a subcontractor / as a prime consultant or as a subconsultant] to any part of a private sector transportation project in California?

1=Yes

2=No – SKIP TO B13

98=(DON'T KNOW) – SKIP TO B13

99=(REFUSED) – SKIP TO B13

B12. Was that an award to work as [a prime contractor, a subcontractor, or a supplier? / a prime consultant or subconsultant?]

1=Prime contractor/consultant

2=Subcontractor/consultant

3=Supplier (or manufacturer)

4=Prime and Sub

5=Sub and Supplier

6=Prime and Supplier

7=Prime, Sub, and Supplier

8=Trucker

10=(Supplier and Trucker)

11=(Prime and Trucker)

12=(Sub and Trucker)

13=(Prime, Supplier, and Trucker)

14=(Sub, Supplier, and Trucker)

15=(Prime, Sub, and Trucker)

16=(Prime, Sub, Supplier, Trucker)

98=(DON'T KNOW)

99=(REFUSED)

B13. Now, thinking about future transportation work, is your company qualified and interested in working with Caltrans or local governments in California [a prime contractor? / a prime consultant?]

1=Yes (BOTH)

2=(YES, JUST CALTRANS)

3=(YES, JUST LOCAL GOVERNMENTS)

4=No

98=(DON'T KNOW)

99=(REFUSED)

B14. And what about [*as a subcontractor: / as a subconsultant:*] is your company qualified and interested in working with Caltrans and local governments in California?

- 1=Yes, (BOTH)
- 2=(YES, JUST CALTRANS)
- 3=(YES, JUST LOCAL GOVERNMENTS)
- 4=No
- 98=(DON'T KNOW)
- 99=(REFUSED)

C1. I now want to ask you about the geographic area your company serves. You are located in the [*California geographic region*]. Is that correct?

- 1=Yes – SKIP TO C4
- 2=No
- 98=(DON'T KNOW)
- 99=(REFUSED)

C2. In what county are you located?

(REFER TO COUNTY MASTER LIST)

C3. That means you're in the [*California geographic region*]. Thinking about potential transportation projects, could your company work throughout this region or only in part of the region?

- 1=Throughout the region – SKIP TO C6
- 2=Only in parts of region – SKIP TO C5
- 98=(DON'T KNOW) – SKIP TO C5
- 99=(REFUSED) – SKIP TO C6

C4. Thinking about potential transportation projects, could your company work throughout this region or only in part of the region?

- 1=Throughout the region – SKIP TO C6
- 2=Only in parts of region
- 98=(DON'T KNOW)
- 99=(REFUSED) – SKIP TO C6

C5a-bb. What parts of the [California geographic region]? Could your company work in [California geographic sub-region] ? (READ LIST - READ COUNTIES IF NECESSARY)

1 = Yes

2 = No

3 = Maybe

98 = (DON'T KNOW)

99 = (REFUSED)

C5a=Crescent City (Del Norte County)

C5b=Eureka (Humboldt County)

C5c=Fort Bragg (Mendocino County)

C5d=Clear Lake (Lake County)

C5e=Yuba City and Chico (Yuba, Sutter, Colusa, Glenn, Butte Counties)

C5f=Truckee (Nevada and Sierra Counties)

C5g=Sacramento and its suburbs (Sacramento/Yolo Counties)

C5h=Auburn, Placerville, and South Tahoe (El Dorado/Placer Counties)

C5i=Santa Rosa (Sonoma County)

C5j=Marin County (Marin County)

C5k=Napa-Fairfield (Solano and Napa Counties)

C5l=City of San Francisco (San Francisco County)

C5m=East Bay (Alameda and Contra Costa Counties)

C5n=South Bay (Santa Clara and San Mateo Counties)

C5o=Monterey, Salinas & Santa Cruz (Monterey, and Benitas, Santa Cruz Counties)

C5p=San Luis Obispo (San Luis Obispo County)

C5q=Santa Barbara (Santa Barbara County)

C5r=Stockton (San Joaquin, Amador, Stanislaus, Calaveras, Alpine, Tuolumne)

C5s=Merced (Merced and Mariposa Counties)

C5t=Fresno (Madera, Fresno, Kings, Tulare Counties)

C5u=Bakersfield (Kern County)

C5v=San Bernardino County

C5w=Riverside County

C5x=Los Angeles, Burbank, Long Beach, and Pomona (Los Angeles County)

C5y=Simi Valley, Oxnard, and Ventura (Ventura County)

C5z=Anaheim to San Clemente (Orange County)

C5aa=San Diego to Oceanside (San Diego County)

C5bb=Imperial Valley (Imperial County)

C5xx. OTHER - SPECIFY

1=VERBATIM

C6. Would your company work outside this region as well?

1=Yes

2=No – SKIP TO D1

98=(DON'T KNOW)

99=(REFUSED)

C7. North Coast, which extends from Eureka to the Oregon border. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C8. Shasta-Redding Area, which extends from Redding to the Oregon border. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C9. Sacramento-Tahoe Region, which extends through the Sacramento Valley to Lake Tahoe (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C10. San Francisco Bay Area, which extends from San Jose to Santa Rosa. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C11. Central Coast Region, which extends from Santa Barbara to Salinas. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C12. Central Valley, which extends from Bakersfield to Stockton. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C13. Bishop Region, which extends from Bishop to Mono Lake along the Nevada border. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C14. San Bernardino-Riverside Region, which includes San Bernardino and Riverside, east to Arizona. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C15. Los Angeles Basin, which extends from San Clemente to Ventura and east to Pomona and Palm Springs. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C16. San Diego Region, which extends from San Diego and Oceanside east to Arizona. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

1=Yes

2=No

98=(DON'T KNOW)

99=(REFUSED)

D1. About what year was your firm established?

(RECORD FOUR-DIGIT YEAR, I.E. '1977')

(9998 = DON'T KNOW)

(9999 = REFUSED)

1=NUMERIC (1600-2006)

D2. In rough dollar terms, what was the largest transportation-related contract or subcontract your company was awarded in California during the past five years?

(NOTE TO INTERVIEWER: INCLUDES CONTRACTS NOT YET COMPLETE)

(READ CATEGORIES IF NECESSARY)

1=\$100,000 or less

2=More than \$100,000 to \$500,000

3=More than \$500,000 to \$1 million

4=More than \$1 million to \$2 million

5=More than \$2 million to \$5 million

6=More than \$5 million to \$10 million

7=More than \$10 million to \$20 million

8=More than \$20 million

97=(NONE)

98=(DON'T KNOW)

99=(REFUSED)

D3. Was this the largest transportation-related contract or subcontract that your company [*bid / proposed*] on or submitted quotes for in California during the past five years?

1=Yes – SKIP TO D5

2=No

98=(DON'T KNOW) – SKIP TO D5

99=(REFUSED) – SKIP TO D5

D4. What was the largest transportation-related contract or subcontract that your company [*bid/proposed*] on or submitted quotes for in California during the past five years?

(READ CATEGORIES IF NECESSARY)

1=\$100,000 or less

2=More than \$100,000 to \$500,000

3=More than \$500,000 to \$1 million

4=More than \$1 million to \$2 million

5=More than \$2 million to \$5 million

6=More than \$5 million to \$10 million

7=More than \$10 million to \$20 million

8=More than \$20 million

97=(NONE)

98=(DON'T KNOW)

99=(REFUSED)

D5. [ASK ONLY IF B4=3, 5, 6, OR 7] Now thinking of all of your firm's locations, both within and outside of California, what would you estimate was the total amount your firm earned from supply work on Caltrans projects in 2005?

1=\$100,000 or less

2=More than \$100,000 to \$500,000

3=More than \$500,000 to \$1 million

4=More than \$1 million to \$2 million

5=More than \$2 million to \$5 million

6=More than \$5 million to \$10 million

7=More than \$10 million to \$20 million

8=More than \$20 million to \$50 million

9=More than \$50 million to \$75 million

10=More than \$75 million

97=(NONE)

98=(DON'T KNOW)

99=(REFUSED)

D6. [ASK ONLY IF B4=8] Now thinking of all of your firm's locations, both within and outside of California, what would you estimate was the total amount your firm earned from trucking work on Caltrans projects in 2005?

- | | |
|--|--|
| 1=\$100,000 or less | 8=More than \$20 million to \$50 million |
| 2=More than \$100,000 to \$500,000 | 9=More than \$50 million to \$75 million |
| 3=More than \$500,000 to \$1 million | 10=More than \$75 million |
| 4=More than \$1 million to \$2 million | 97=(NONE) |
| 5=More than \$2 million to \$5 million | 98=(DON'T KNOW) |
| 6=More than \$5 million to \$10 million | 99=(REFUSED) |
| 7=More than \$10 million to \$20 million | |

E1. My next questions are about the ownership of the business. A business is defined as woman-owned if more than half - that is, 51 percent or more - of the ownership and control is by women. By this definition, is [*firm name / new firm name*] a woman-owned business?

- 1=Yes
- 2=No
- 98=(DON'T KNOW)
- 99=(REFUSED)

E2. A business is defined as minority-owned if more than half - that is, 51 percent or more - of the ownership and control is African American, Asian, Hispanic, Native American or another minority group. By this definition, is [*firm name / new firm name*] a minority-owned business?

- 1=Yes
- 2=No – SKIP TO E4
- 3=(OTHER GROUP - SPECIFY)
- 98=(DON'T KNOW)
- 99=(REFUSED)

E2. OTHER GROUP - SPECIFY

- 1=VERBATIM

E3. Would you say that the minority group ownership is mostly African American, Asian-Pacific American, Subcontinent Asian American, Hispanic American, or Native American?

1=African-American

2=Asian Pacific American (persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia(Kampuchea),Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Common-wealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kirbati, Juvalu, Nauru, Federated States of Micronesia, or Hong Kong)

3=Hispanic American (persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race)

4=Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians)

5=Subcontinent Asian American (persons whose Origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka)

6=(OTHER - SPECIFY)

98=(DON'T KNOW)

99=(REFUSED)

E3. OTHER - SPECIFY

1=VERBATIM

E4. Is your firm certified as a small business enterprise by the State of California or other agency?

1=Yes

2=No

3=(OTHER - SPECIFY)

98=(DON'T KNOW)

99=(REFUSED)

E4. OTHER - SPECIFY

1=VERBATIM

E5. Is your firm certified as a Disadvantaged Business Enterprise (DBE)?

1=Yes

2=No

3=(OTHER - SPECIFY)

98=(DON'T KNOW)

99=(REFUSED)

E5. OTHER - SPECIFY

1=VERBATIM

F1. Dun & Bradstreet indicates that your company has about [number] employees working out of just your location. Is that a fairly accurate average thinking about all of 2005?

(INCLUDES EMPLOYEES WHO WORK AT THAT LOCATION AND THOSE WHO WORK FROM THAT LOCATION)

1=Yes – SKIP TO F3

2=No

98=(DON'T KNOW)

99=(REFUSED) – SKIP TO F3

F2. About how many employees did you have working out of just your location, on average, over the course of last year?

(RECORD NUMBER OF EMPLOYEES)

1=NUMERIC (1-999999999)

F3. Dun & Bradstreet lists the annual gross revenue of your company, just considering your location, to be [dollar amount]. Is that accurate for 2005?

1=Yes – SKIP TO F5

2=No

98=(DON'T KNOW)

99=(REFUSED) – SKIP TO F5

F4. Roughly, what was the gross revenue of your company, just considering your location, in 2005? Would you say . . . (READ LIST)

- | | |
|---------------------------------|---------------------------------|
| 1=Less than \$200,000 | 7=\$10 Million - \$24.9 Million |
| 2=\$200,000 - \$499,999 | 8=\$25 Million - \$49.9 Million |
| 3=\$500,000 - \$999,999 | 9=\$50 Million or more |
| 4=\$1 Million - \$2.49 Million | 98=(DON'T KNOW) |
| 5=\$2.5 Million - \$4.9 Million | 99=(REFUSED) |
| 6=\$5 Million - \$9.9 Million | |

F5. For 2005, about how many employees did you have, on average, for all of your California locations?

- 1=(ENTER RESPONSE)
98=(DON'T KNOW)
99=(REFUSED)

F5. RECORD NUMBER OF EMPLOYEES

- 1=VERBATIM

F6. Roughly, what was the gross revenue of your company, for all of your California locations in 2005? Would you say. (READ LIST)

- | | |
|---------------------------------|---------------------------------|
| 1=Less than \$200,000 | 7=\$10 Million - \$24.9 Million |
| 2=\$200,000 - \$499,999 | 8=\$25 Million - \$49.9 Million |
| 3=\$500,000 - \$999,999 | 9=\$50 Million or more |
| 4=\$1 Million - \$2.49 Million | 98=(DON'T KNOW) |
| 5=\$2.5 Million - \$4.9 Million | 99=(REFUSED) |
| 6=\$5 Million - \$9.9 Million | |

G1. Finally, we're giving business owners and managers an opportunity to offer general insights on your industry, including how difficult it is to start or expand your business and to [bid / propose] on and win work. As you're thinking, be sure to consider any issues related to Caltrans and local government projects in California. What thoughts do you have to offer on these topics?

1=VERBATIM (PROBE FOR COMPLETE THOUGHTS)

G2. Caltrans is looking for ways to improve its contracting practices and those of its prime [contractors / consultants] to ensure that they are open and fair. Do you have any thoughts or suggestions?

1=VERBATIM (PROBE FOR COMPLETE THOUGHTS)

G3. Would you be willing to participate in a follow-up interview about any of these issues?

1=Yes

2=No

98=(DON'T KNOW)

99=(REFUSED)

H1. Just a few last questions. What is your name and position at [firm name / new firm name]?

(RECORD FULL NAME)

1=VERBATIM

H2. What is your position?

1=Receptionist

2=Owner

3=Manager

4=CFO

5=CEO

6=Assistant to Owner/CEO

7=Sales manager

8=Office manager

9=(OTHER - SPECIFY)

99=(REFUSED)

H2. OTHER - SPECIFY

1=VERBATIM

H3. For purposes of a receiving any Caltrans materials, is your mailing address [*firm address*]:

1=Yes

2=No

98=(DON'T KNOW)

99=(REFUSED)

H4. What mailing address should Caltrans use to get any materials to you?

1=VERBATIM

H5. What fax number should Caltrans use to get any materials to you?

1=ENTER FAX

97=(NO FAX NUMBER)

98=(DON'T KNOW)

99=(REFUSED)

H5. ENTER FAX NUMBER

1=NUMERIC (1000000000-9999999999)

H6. What e-mail address should Caltrans use to get any materials to you?

1=ENTER E-MAIL

97=(NO EMAIL ADDRESS)

98=(DON'T KNOW)

99=(REFUSED)

H6. (RECORD EMAIL ADDRESS) (VERIFY ADDRESS LETTER BY LETTER: EXAMPLE: 'John@CRI-RESEARCH.COM' SHOULD BE VERIFIED AS: J-O-H-N-at-C-R-I-hyphen-R-E-S-E-A-R-C-H-dot-com)

1=VERBATIM