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**INTRODUCTION TO AND EXECUTIVE SUMMARY OF TEXAS DEPARTMENT OF
TRANSPORTATION STUDY 7-980**

by

Ray Marshall
Naomi Ledé
J. Jorge Anchondo
Jon Wainwright

Research Report 980-7F

Study Number 7-980
Disadvantaged Business Enterprise (DBE) Capacity Study

conducted for the

Texas Department of Transportation

by the

LYNDON B. JOHNSON SCHOOL OF PUBLIC AFFAIRS
CENTER FOR TRANSPORTATION RESEARCH
GRADUATE SCHOOL OF BUSINESS

THE UNIVERSITY OF TEXAS AT AUSTIN

May 1994

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IMPLEMENTATION STATEMENT

The legislative mandate of S.B. 352 provides TxDOT with an opportunity to use the information developed in this study to enhance its existing federally-required program and expand it to encompass all TxDOT contracting and procurement activities, whether funded with federal dollars or state dollars. This opportunity comes at an especially propitious moment in time, as the Department is in the process of disbursing over \$350 million per year in new transportation funds authorized under ISTEA. A quality expansion and enhancement of TxDOT's DBE program efforts will make a significant positive contribution to disadvantaged businesses in the state.

PREFACE

This report, entitled "Introduction to and Executive Summary of Texas Department of Transportation Study 7-980," is the seventh and final volume of the seven-volume "Disadvantaged Business Enterprise (DBE) Capacity Study." Study 7-980 was undertaken at the request of the Texas Department of Transportation in partial response to its obligations under Senate Bill 352, 72nd Texas State Legislature (Texas Revised Statutes, Article 6669C), to conduct a fact-finding study in support of a state-funds contracting and procurement program for businesses owned by minorities and women.

The authors have had joint responsibility for this study. To assist in carrying out the assignment, we recruited a number of economic, financial, business, legal, and policy experts from both the public and private sectors. We also gratefully acknowledge the assistance of several Texas universities in addition to The University of Texas at Austin that were involved in the data collection phase of this project. They are Texas Southern University, The University of Texas Pan-American, The University of Texas at San Antonio, The University of Texas at El Paso, The University of Texas of the Permian Basin, and The University of Texas at Arlington.

Prepared in cooperation with the Texas Department of Transportation.

DISCLAIMERS

The contents of this report reflect the views of the co-principal investigators, the research director, and the author of this volume, who are solely responsible for the facts and the accuracy of the data presented therein. The contents do not necessarily reflect the official views or policies of the Texas Department of Transportation. This report should be regarded strictly as preliminary.

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SUMMARY

Since the mid-1970s, the U.S. Department of Transportation has required state departments of transportation participating in the Federal-Aid Highway Program to take measures to ensure that minority-owned and women-owned businesses are provided equal access to contracting and subcontracting opportunities. In passing the *Surface Transportation Assistance Act of 1982*, Congress further required that this Disadvantaged Business Enterprise, or DBE, participation be no less than 10 percent of the total dollars expended under the act. The *Surface Transportation and Uniform Relocation Assistance Act of 1987* (STURAA) renewed the Federal-Aid Highway Program through 1991 and provided approximately \$80 billion in federal-aid funding for highway construction. The *Intermodal Surface Transportation Efficiency Act of 1991* (ISTEA) has recently renewed and extended the program through 1996 and is forecast to provide another \$100 billion in funding during that period.

The expenditure of at least 10 percent of these funds with certified Disadvantaged Business Enterprises, or DBEs, is an obligation of TxDOT under each of these acts. Although these federal legislative acts pertain only to projects funded (in whole or in part) with federal dollars, the 72nd Texas Legislature, in Senate Bill 352, Article 6669c, recently directed TxDOT to implement a similar minority and female business enterprise program for non-federally funded procurements as well.

The legislature further directed TxDOT to perform a fact-finding study related to the review, assessment, and institution of state-funds minority and female business enterprise program. The main impetus for the study was the U.S. Supreme Court's decision in *City of Richmond v. J.A. Croson*. In the *Croson* decision, the U.S. Supreme Court struck down the City of Richmond's Minority Business Enterprise (MBE) program, which mandated that its prime contractors subcontract at least 30 percent of construction contract dollars to minority-owned firms. In analyzing the case, the Supreme Court for the first time adopted a "strict scrutiny" standard for testing the legality of race-conscious affirmative action programs.

In this study, we developed statistical, anecdotal, and historical evidence regarding the ongoing effects of past and present race and gender discrimination on black, Hispanic, Native American, Asian and Pacific Islander, and women-owned businesses in Texas. We also conducted detailed mail surveys of persons with experience in or knowledge of the highway construction and maintenance industry in Texas. Additionally, we conducted careful reviews of other DBE legislation and programs in existence in Texas and elsewhere in the nation, and fact-finding studies conducted by other states subsequent to *Croson*. The results of the study show that historical, systemic, and institutionalized discrimination severely restricted minority access to sources of wealth and power and was a major factor accounting for the marginal status of minority businesses in the Texas economy. The evidence demonstrates that economic disparities between minorities and Anglos remain considerable. The gap is particularly wide with respect to business activities.

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PUBLIC POLICY AND PROMOTION OF MINORITY AND FEMALE BUSINESS DEVELOPMENT IN TEXAS HIGHWAY CONSTRUCTION AND MAINTENANCE

Since the mid-1970s, the U.S. Department of Transportation has required state departments of transportation participating in the Federal-Aid Highway Program to take measures to ensure that minority-owned and women-owned businesses are provided equal access to contracting and subcontracting opportunities. In passing the *Surface Transportation Assistance Act of 1982*, Congress further required that this Disadvantaged Business Enterprise, or DBE, participation be no less than 10 percent of the total dollars expended under the act. The *Surface Transportation and Uniform Relocation Assistance Act of 1987* (STURAA) renewed the Federal-Aid Highway Program through 1991 and provided approximately \$80 billion in federal-aid funding for highway construction. The *Intermodal Surface Transportation Efficiency Act of 1991* (ISTEA) has recently renewed and extended the program through 1996 and is forecast to provide another \$100 billion in funding during that period.

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The department selected the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin to conduct the research study. The LBJ School

research team was led by Dr. Ray Marshall, Mr. J. Jorge Anchondo, and Mr. Jon Wainwright. The study was initiated in June 1992 and concluded in May 1994. This executive summary and the six associated research reports constitute the final report of the LBJ School study team for this project, and are respectfully submitted to TxDOT for consideration.

The study developed statistical, anecdotal, and historical evidence regarding the ongoing effects of past and present race and gender discrimination on black, Hispanic, Native American, Asian and Pacific Islander, and women-owned businesses in Texas. We also conducted detailed mail surveys of persons with experience in or knowledge of the highway construction and maintenance industry in Texas. Additionally, we conducted careful reviews of other DBE legislation and programs in existence in Texas and elsewhere in the nation, and fact-finding studies conducted by other states subsequent to *Croson*.

The results of the study show that historical, systemic, and institutionalized discrimination severely restricted minority access to sources of wealth and power and was a major factor accounting for the marginal status of minority businesses in the Texas economy. The evidence demonstrates that economic disparities between minorities and Anglos remain considerable. The gap is particularly wide with respect to business activities.

Our mail survey of highway construction and maintenance firms produced evidence of virtually every identifiable form of business discrimination. Specific barriers encountered included denials of opportunity to bid, discrimination in bonding, discrimination in financing, exclusion from the "old boy" network in subcontracting, bid shopping, bid manipulation, price discrimination by suppliers, double standards in performance, limited access to private sector markets, slow payment, and non-payment. The specific industries where evidence shows discrimination against minority or female businesses include highway construction, highway maintenance, and professional architectural and engineering services.

The legislative mandate of S.B. 352 provides the TxDOT with an opportunity to use the information developed in this study to enhance its existing federally-required program and expand it to encompass all TxDOT contracting and procurement activities, whether funded with federal dollars or state dollars. This opportunity comes at an especially propitious moment in time, as the Department is in the process of disbursing over \$350 million per year in new transportation funds

authorized under ISTEA. A quality expansion and enhancement of TxDOT's DBE program efforts will make a significant positive contribution to disadvantaged businesses in the state.

The sections that follow will define and discuss the nature of economic discrimination, develop a rationale for minority and female business development programs, and outline the public policy options for establishing these programs. The remainder of the report outlines our main findings about the nature of business discrimination in Texas.

DISCRIMINATION

What is meant by discrimination and how important is discrimination as a factor impeding minority and female business enterprises? Clearly, racial discrimination is not the only factor affecting labor force and entrepreneurial equality, but it is an important factor. Race has historically determined where people live, their personal associates, the kinds of schools they attend, and the kinds of jobs they can get. There is abundant evidence, moreover, that minorities and women not only have inadequate access to jobs and business opportunities, but to work-based education and training as well. Nor can there be much doubt that these patterns have become institutionalized and self-perpetuating. Experience shows that positive interventions can break these cycles and cause minority children from very disadvantaged backgrounds to excel in school and life. But without these interventions very little is likely to happen. A major challenge for public policy is to institutionalize opportunity instead of discrimination. We shall see, however, that institutionalized patterns of exclusion require comprehensive approaches. In order to understand the reasons for this conclusion, we must clarify the nature, causes, and types of discrimination.

One cause of the controversy over discrimination, besides personal bias and interest, is differing concepts of what constitutes discrimination. Courts, scholars, and journalists use various terms to describe discrimination, though they almost never define the term. Moreover, some people confuse "bias" or "prejudice" with discrimination. Discrimination, however, is an *action*, while bias is an *attitude*. Discrimination might result from bias, but not necessarily. And in economic affairs, attitudes are more likely to result from behavior, rather than behavior from attitudes.

One of the most significant requirements for understanding discrimination is explaining why it occurs. There is very strong empirical and logical evidence that discrimination is based on a combination of status and economic motives. Discriminators seek to prevent people who are considered to be “inferior” from working in their occupations or industries on an equal or superior basis. Women and minorities historically have been considered by white males to be inferior, and therefore have been permitted to work with white males mainly in lower-status jobs or industry segments. It was acceptable for minorities or women to do the same work, or even to train young white males, as long as they did so in clearly subordinate positions and were denied the higher status jobs.

The second major factor involved in discrimination is the short-run economic advantage white male workers and businesses often derive by limiting the competition posed by blacks or women for jobs and other economic opportunities.

We have found it useful to define discrimination as either overt (i.e., based on conscious decisions to discriminate) or “institutional,” meaning that formerly overt forms of discrimination have become so entrenched and pervasive that no discriminator needs to make a conscious decision to perpetuate it. In Texas, for example, specific overt decisions were made to restrict minorities to certain geographic neighborhoods, occupations, and types of business. These patterns constrained the kinds of occupations and businesses blacks could realistically aspire to. Such institutionalized forms of discrimination became systemic and were not likely to be changed without concerted action by minority communities and conscious interventions by governments.

The evidence obtained in this study confirms the continuation of discrimination against minority contractors. Because their businesses are smaller and they are often inexperienced, minority owners face all the problems common to most small businesses, especially in securing adequate financing and bonding. But almost nobody denies the persistence of racial discrimination. First, even experienced and better financed minority contractors have difficulties acquiring contracts in the private sector, despite strenuous efforts to do so. Secondly, white prime contractors have made it very clear that they will not use minority subcontractors unless compelled to do so by DBE programs. There also is evidence that very few minority general contractors are able to become prime contractors on

large private jobs. The exceptions have only occurred where government officials have exerted constant pressure for these companies to use minority contractors.

There is, in addition, fairly well-documented discrimination by Texas financial institutions. Not only do minority businesses have more difficulty obtaining credit than similarly situated whites, but they also generally must have more collateral than whites. Minority contractors have, in addition, faced discrimination by suppliers, who often do not sell to minority contractors on the same terms as whites. Allegations of discrimination in bonding are also pervasive. Surety companies apparently have become important "gatekeepers" for the construction industry.

The prevailing attitude by white contractors, expressed in our Study Advisory Committee meetings by officials of their associations, is that minorities generally are disadvantaged not because of discrimination, but because they are not qualified to do the work. This attitude persists even where minorities are well educated, licensed, and have had long experience in the construction industry. Our survey found that TxDOT's minority contractors and subcontractors are actually better educated, on average, than their Anglo counterparts. Of course, minority contractors also face a Catch-22 situation: They can only gain experience and demonstrate their competence by obtaining contracts denied them because of discrimination. In the absence of DBE programs, it is unlikely that many of them would ever be able to demonstrate their competence and develop their capacities, a subject to which we now turn.

WHY MINORITY AND FEMALE BUSINESS DEVELOPMENT PROGRAMS ARE NEEDED

Special programs to develop DBEs must be based on a clear understanding of why these activities are in the public interest. As is true of many controversial subjects, however, there is a fair amount of confusion on this issue that should be dealt with in order both to gain greater public support for these programs and to clarify the alternatives available to policy makers.

We start with the assumption that the economic, political, and social health of any society depends heavily on access to economic and political power by all major racial, gender, and ethnic groups. Such access not only promotes social harmony,

but also stimulates competition, facilitates the development of human resources, and promotes economic efficiency.

There seems to be wide acceptance of the need to afford broad access to education and jobs, but less attention to the need for similar access to business opportunities. Some who support equal educational and employment opportunities nevertheless argue that business is different. Why, they ask, should we help make minorities or women rich with special programs to assist them in business success? There are several answers to this question. First, most minority and female business owners are not rich — many earn less than they would if they were full-time workers. Secondly, the same logic applies to discrimination in business as to education or employment. It is in the interest of every community to eliminate the discriminatory barriers to business formation, as well as to employment and education. Indeed, the courts have applied the same legal doctrines to employment and business discrimination cases, citing employment cases to support business decisions and vice versa. Third, business is a source of considerable economic and political power. To deny minorities and women access to this power on the basis of race or gender denies them full participation in the American system. Put another way, as long as minorities and women are denied access to business opportunities, the distribution of wealth, income, and power will continue to be unfair and even polarizing, with grave consequences for the economy, polity, and society.

Fourth, the disparities between minorities and whites are much greater in business than they are in other economic activities, even though these other disparities remain considerable. For example, the U.S. Census Bureau reports that in 1987, businesses owned by minorities accounted for 13.27 percent of all businesses in Texas, but only 5.14 percent of all business sales. Businesses owned by women accounted for 16.70 percent of all businesses in Texas, but only 10.33 percent of business sales.

Minority business development warrants special attention, in the fifth place, because these enterprises have had special problems as a result of social and economic changes since the 1960s. The geographic desegregation of minority populations has resulted in a loss of many affluent customers minority businesses had when markets were more segregated. Further losses have come about because of the penetration of larger, more competitive white businesses into minority

neighborhoods. Minority businesses also suffered from the movement of white-owned manufacturing firms out of the central city, where most minorities lived into suburban areas with few minority residents. These firms had previously provided employment for minority workers and, therefore, customers for minority businesses. Finally, minority businesses have historically been heavily concentrated in personal services and retail trade, which have declined rapidly, and have been underrepresented in wholesale trade and business services, which have shown faster growth.

Several factors cause the rapidly growing construction industry to be especially significant for minority business development. For one thing, minorities have a long tradition in this industry as laborers, skilled workers, and contractors. Moreover, the construction industry provides opportunity for upward occupational mobility, since workers commonly become managers and contractors. Construction also makes it possible to increase minority employment and income more effectively than is the case with most other minority businesses. As a result of its rapid growth during the 1970s and 1980s, construction has become a very important industry. Exclusion from this industry is therefore a serious problem for minority businesses.

Finally, minority and female business development programs are needed because there are no other effective remedies to deal with the deeply entrenched patterns of discrimination in construction and other business sectors. There are a number of reasons for this. First, it is very difficult to document the debilitating effects of discrimination in commercial transactions. This is so because the subjective and invisible nature of business decisions make it difficult to employ the techniques used to prove discrimination in such matters as employment, housing, and public accommodations. Business discrimination has not therefore attracted the same public attention as these other areas, and no federal laws specifically bar racial discrimination in private domestic commercial transactions between two business firms. The Constitution protects minority businesses from discrimination by federal, state, and local governments, and special legislation and executive orders bar discrimination in federal financial assistance or by government contractors, but there are no effective federal laws against discrimination in commercial transactions.

Because of the difficulties in applying general antidiscrimination measures to businesses, federal, state and local governments have used their purchasing power

as the most effective way to overcome the effects of, and to prevent, discrimination against minority businesses. The federal government adopted the set-aside approach after other so-called “race-neutral” approaches had failed to overcome the effects of discrimination in the construction industry.

For all of these reasons it is very important for state and local governments to use their economic, legislative, and moral powers to overcome the effects of past and present discrimination against women and minorities in business transactions.

RATIONALE FOR MINORITY BUSINESS DEVELOPMENT

The basic rationale for a race or gender conscious policy rests on three important propositions: (1) Minority and female businesses continue to suffer from overt, identifiable discrimination as well as from the impact of institutional discrimination. (2) Governments have compelling moral, social, economic, and political interests in combating business discrimination against individuals and groups for reasons unrelated to merit and ability. (3) Under present laws, there is no other effective way to remedy this discrimination or to prevent its continuation. The rest of this section enlarges on this basic rationale.

The specific rationale for minority and female business enterprise programs is as follows:

1) Even though size, experience, and other factors impede minority and female contractors, there is no doubt that discrimination in the private business sector continues to be a very important impediment to their development. Indeed, evidence from our TxDOT study shows minority business owners to be well educated relative to their white counterparts. In the absence of discrimination, moreover, many minority firms have adequate assets to grow much more than they have. In other words, the evidence shows that minority and female businesses face discriminatory barriers that do not impair the development of similarly situated white firms.

2) There is no doubt that DBE programs have helped minority businesses. Many minority contractors continue to get a large share of their business from public projects or where government requirements and pressures influence private contractors. We should note, however, that even with an effective DBE program, which provided a relatively large *number* of contracts for minorities, the median size of DBE contracts was much smaller than that going to majority contractors. The

median size of minority contracts was therefore a small fraction of that of their white counterparts. Because of discrimination by white customers, financial institutions, contractors, surety companies, suppliers, workers, and governments that do not have DBE programs, even highly qualified minority and female contractors have had great difficulty breaking into the private construction market.

3) Since there is no effective federal law against discrimination by private businesses or customers, without a DBE program, minority and female contractors are not likely to be able to develop. This conclusion is supported by what has happened in Richmond, where minority contractors got as little as 4 percent of the city's business after the Supreme Court invalidated that city's minority business set-aside program (compared with 30 percent when that program was in force). A DBE program is needed not just to overcome the effects of past discrimination, but to prevent future discrimination as well.

4) Some critics of minority and female business development activities argue that they are unnecessary because race-neutral programs can accomplish the same results without establishing objectionable racial classifications. The evidence is strong, however, that while so-called "race-neutral" policies are necessary to improve minority business development, they are not sufficient for that purpose. As noted earlier, the federal government adopted the minority business development program upheld by the Supreme Court in the *Fullilove* case because Congress concluded that such "race-neutral" programs had not worked. Nor is this surprising. All of these race-neutral programs (help with bonding and finances, technical assistance, training) operate mainly on the supply side of the market — they do nothing to ensure that there is a *demand* for the minority and female businesses' services. Since there is strong evidence of discrimination against them in the larger and more lucrative private sector, it is difficult to see how minority contractors can develop without public demand for their services.

5) Some critics of DBE programs argue that they constitute "discrimination in reverse." Affirmative action programs, according to these critics, are based on the false assumption that minorities should be represented in all occupations and industries in accordance with their share of the population, regardless of their capabilities and desires. Although we are strong advocates of affirmative action, defined as positive measures to include people who have been excluded, we do not think it reasonable to assume that minorities and women would be randomly

distributed among occupations and businesses in the absence of such measures. Discrimination is an important barrier, but other things are involved. By the same token, however, it is unreasonable to assume that discrimination is no longer a major factor impeding minority and female businesses, or that minorities and females would be as underrepresented as they are in the absence of discrimination. It seems equally clear to us that, without positive interventions to overcome the effects of discrimination, things are not likely to change very much.

We should note, moreover, that there are vast differences between goals, like those contemplated by a TxDOT state-funds program, and "rigid quotas," though most critics of positive actions to include people who have been excluded refuse to see the distinction. Goals are sensible guides to program performance. Indeed, almost all successful businesses establish goals. Goals do not ignore qualifications or good faith efforts by program participants to achieve goals which they agree to try to meet as a condition of being awarded public contracts.

It is, however, disingenuous for critics to argue that DBE programs "are discrimination in reverse" because whites were not allowed to bid on that part of a state's business set aside for minorities and women who previously had been barred from almost all government and private business. In other words, whites can bid on all of the private and almost all of the public business, while a DBE program merely permits minorities and women to, for all practical purposes, bid on a part of the public work. Some critics will argue that everybody should be allowed to bid on all work. We agree; but until that time comes, DBE programs are needed to allow minority and female firms get established.

6) Some critics also argue that whites who have never discriminated are required to sacrifice for the benefit of minorities or women who have never been discriminated against. If, however, discrimination is as pervasive as we found it to be, it would be difficult to find a minority contractor who had not been discriminated against. This is particularly true of institutional discrimination, though our study also shows that overt discrimination continues to exist as well. A major question, of course, is whose responsibility is it to overcome institutional discrimination? We believe governments have a positive duty to combat all forms of discrimination and have the right to require private businesses to help with that important social objective.

But what about the damage that might be done to whites because of programs to overcome and prevent discrimination? This is an important question and deserves the kind of careful attention given it by the courts, which seem to have conditioned their support for affirmative action on the extent to which it deprives whites of preexisting rights. However, the courts have held—we think correctly—that whites might have to sacrifice some *potential* short-run gains in order to combat the more egregious forms of discrimination against minorities. It can be demonstrated that in the long run all groups gain from eliminating discrimination not based on merit or productivity. White contractors have, moreover, been the beneficiaries of less competition from excluded minorities, whether or not they are guilty of overt discrimination.

AMERICA IS BECOMING A MINORITY COUNTRY AND TEXAS IS BECOMING A MINORITY STATE

While discrimination against women and minorities has always damaged the nation's economic and social health, it will be an even more serious problem in the future. This is so because minorities are the fastest growing component of the nation's and the state's population, and minorities and women will constitute almost all of our future work force growth. Indeed, sometime around 2080, Anglos probably will become a minority of the U.S. population — even sooner within Texas' population. Texas' challenge, therefore, is to maximize the benefits of a multicultural, multiracial society. And these benefits are substantial: diversity, creativity, and a dynamism that could improve the quality of life for all Americans and the moral and economic power of the United States in an increasingly multiracial world. The dangers inherent in a racially and culturally diverse society have been substantiated by human history. It is highly unlikely that the United States will remain a prosperous and respected world power unless we avoid the kinds of racial and ethnic conflicts that can be fatal to any society. Racial harmony is, and will continue to be, an important determinant of a city's (nation's, county's, state's) economic progress and quality of life.

RACE-NEUTRAL MEASURES

TxDOT might also consider expanding its "race-neutral," disadvantaged business development programs. Any program should have a "race-neutral"

component to help all disadvantaged or small businesses. Such a program could furnish information, remove obstacles to contracting, provide management assistance, help gain better access and prices for supplies, and provide financial and bonding assistance. TxDOT staff might work with some professionals to explore the options on these matters. The state might also use its influence (together with financial institutions inclined to support such a venture) to establish revolving funds and work with bonding companies, banks, management consultants, and other groups to provide such assistance to disadvantaged businesses. A consortium of state agencies and local governments might join forces to establish one or more entities (financing, bonding, management assistance) to help minority or other eligible businesses.

Race-neutral approaches have a number of advantages. They are less objectionable to people who believe public policies should be "color blind." Secondly, most legal measures to combat discrimination work only on the demand side of transactions and do little to ensure that supply-side measures are available to make it possible for the victims of discrimination to take advantage of opportunities when discriminatory barriers are lowered. A comprehensive program combining demand side measures with race neutral approaches is therefore likely to be more effective than either demand or supply side measures working in isolation.

Race neutral measures have some disadvantages, however. For one thing, they are likely to be expensive, making it difficult for local governments with serious budgetary constraints to afford them. Indeed, this is why government contracting procedures have commended themselves to policy makers--they can be powerful weapons to achieve public purposes with minimal budget costs.

Secondly, some jurisdictions are prohibited by law from waiving bonding or relaxing other legal requirements for disadvantaged contractors.

The most serious objection to these "race-neutral" approaches, however, is that, standing alone, they are not likely to be very effective. Demand is a powerful driver of economic activities. Because of strong obstacles to the development of nontraditional businesses, it is unreasonable to expect minority entrepreneurs to incur the financial risks involved unless there is a better chance they will have a market than is presently the case. Governments have, in fact, long performed this "assured demand" function for fledgling white-owned businesses in such industries as airlines, communications, and other new and innovative businesses.

The inadequacies of these race-neutral activities prompted the federal government to establish the minority set-asides in the 1977 Public Works Employment Act (PWEA). The challenge to the PWEA program led to the *Fullilove* decision, in which the Supreme Court upheld the federal program.

RACE-CONSCIOUS MEASURES

Because of the persistence of deeply entrenched discrimination in the private sector and the inadequacies of race-neutral measures, positive action must be taken by governments at every level to combat institutional and overt discrimination. Governments have well-established rights and obligations to use their powers, including contracting and purchasing, to achieve compelling governmental interests. The Supreme Court has upheld the exercise of the federal government's right to use its contracting power to promote minority business development. The High Court, however, has greatly restricted the use of this power by state and local governments. This section explores the options for race conscious remedies by local governments in the aftermath of the *Croson* decision.

Meet the *Croson* Requirements

A state or local jurisdiction's first race-conscious option is to reestablish a DBE program that meets the *Croson* (and state court) standards. These standards include identifying discrimination in the market to which the DBE program is to be applied. Although the *Croson* decision is not clear about the kind of proof needed to meet this standard, we believe any reasonable standard can be met. The Court's "strict scrutiny" standard requires that racial classifications be supported by a "compelling interest" and be "narrowly tailored" to ensure that the classification fits that interest. The compelling interest is to remedy identified discrimination in a particular sector or industry. Statistical evidence cannot be based on general population statistics, but must relate to particular sectors. Narrow tailoring of remedies under *Croson* is supposed to ensure that the means selected to remedy discrimination closely fit the ends. This standard is applied to official racial classifications to ensure that these classifications are not used as subterfuges for illegal discrimination or "racial politics."

There is ample statistical documentation that minority and women-owned businesses in Texas have nothing like equitable participation in the State's business

activities (see Research Report 980-4 and 980-5). We also have established evidence of a strong record of historical discrimination (see Research Report 980-6). The persistence of discrimination is highlighted by our mail survey responses that provide anecdotal evidence of specific and identifiable discrimination in Texas (see Research Report 980-5). Even though no federal law prohibits discrimination by businesses against other businesses, state and local governments themselves are prohibited from discriminating in their own public works programs. It would therefore seem reasonable to assume that state and local governments have a duty not to be a party to nor perpetuate private sector business discrimination in their jurisdictions.

As a result of the *Croson* decision, proof of discrimination apparently requires some way to estimate the extent to which minority contractors have been discriminated against. In her decision in *Croson*, Justice Sandra Day O'Connor suggests that this measurement should start by determining the proportion of minority firms among all firms available to deliver goods and services. The difference between that proportion and the proportion of contract dollars actually awarded to minority firms would be the shortfall subject to remedial actions. This ratio also can be used to establish the annual goal for minority participation in the program; the Supreme Court has made it clear that goals cannot be set on the basis of general population statistics. As noted, we have calculated these ratios on the basis of the best data available and find that minorities and women in Texas come nowhere near parity.

The *Croson* decision also held that the remedy chosen to eliminate the shortfall must be "narrowly tailored" to offset "identified" discrimination.

There are several aspects of "narrow tailoring." One is to limit the program to the groups shown to have been adversely affected by the discrimination a DBE program is designed to remedy. In Texas, however, all of the major racial and ethnic groups that appear in the federal definition of a DBE are represented in both the general and the business populations of Texas. These groups include Blacks, Hispanics, Asian and Pacific Islanders, and Native Americans. In 1990, Texas had the third largest Black population in the United States, the second largest Hispanic population, the fourth largest Asian and Pacific Islander population, and the eighth largest Native American population. Most Native Americans in Texas, however, are

American Indians rather than Alaska Natives. The evidence of discriminatory barriers developed in this study was found to extend to all these groups.

Secondly, the program must cover only those sectors or industries where discrimination has been "identified."

Third, the program should have a "logical stopping point" limited to the time period required to overcome the identified shortfall in minority participation. The Court did not elaborate on the nature of this time period, but we believe it should be when minority and female contractors are able to maintain their business operations in keeping with their capacities on the same basis as their comparable white counterparts. Using our definition of discrimination, this would be when opportunity is as institutionalized as discrimination is now. In the case of Texas and TxDOT, it is clear that this condition is some distance in the future. Because they are discriminated against in the private sector, very few of Texas' minority contractors could survive without special help on the demand side. This does not mean, as a practical matter, however, that minority contractors should remain in the program indefinitely. It probably would be useful, in addition, to establish some definite time limitation to review the program to determine if it is still necessary, as is done under the federal Voting Rights Act of 1965. It probably likewise would be useful to establish a rating system to determine whether participating minority and female contractors are taking satisfactory advantage of the program's assistance to become independent. It should be stressed, however, that a time limit on participation in the program for an individual contractor should not imply that minority graduates can no longer contract with the state. After graduation — in, say, 9 years (the federal limit — minority and female contractors should be able to participate on the same basis as their white competitors.

If TxDOT elected to use a numerical goal, it would need to estimate the number of years required to reach a given numerical objective. For example, if it were determined that 25 percent of contract dollars was the proportion that should be *sustained* before the program could be discontinued, it would be necessary to have a *larger* objective (say, 35–40 percent) for each year before the date the program is discontinued. This would allow for attrition and accelerate the discontinuation date.

The *Croson* decision implies that narrow tailoring might also require a minority and female business development program to restrict participation to

minorities in the geographic areas where discrimination has been identified. The *Croson* decision implied that a program would not be considered to be “narrowly tailored” if a minority anywhere in the country had priority over local citizens regardless of race. This, however, would seem to be an impractical requirement because markets in industries like construction have very different geographic scopes.

It also seems unreasonable, moreover, to require that *each participant* prove specific overt examples of discrimination in a particular market in order to be eligible for participation in a DBE program. The *Croson* decision implied that this standard might be required when it criticized the Richmond ordinance because it did not consider whether the particular MBE seeking the preference had actually been discriminated against in the past. Experience shows, however, that combating pervasive institutionalized discrimination on a case-by-case basis is very expensive, time consuming, and uncertain. We therefore believe a more systematic approach is required if institutional discrimination is to be reduced.

There is considerable expert opinion that meeting the requirements of *Croson* is feasible. In the federal courts so far, differentiating a state or local DBE law from the Richmond law struck down in *Croson* appears to require a combination of stronger evidence and smaller, more limited programs.

Compliance Review Rating System as a Condition of Contract

Another alternative to meeting the *Croson* requirements would be for TxDOT and other state agencies to require all contractors not to discriminate in employment or contracting and to file compliance reports in advance of contracting as a condition of being a “responsible and responsive” bidder. Contracting officers could make judgments in awarding contracts on the basis of a contractors’ past performance. New contractors could detail their plans to provide equal opportunity to minorities and women or could present binding agreements with minority contractors. Established contractors could submit evidence of their records in providing equal opportunity to minority or female contractors and employees. Extra credit might be given to prime contractors who provided various kinds of assistance to eligible minority or female contractors. The point is that state officials could develop a list of desirable practices that could be used as evidence that firms

had not discriminated. These factors could be weighted and credited in awarding contracts. The pre-contract review rating system (CRRS) has several advantages:

1. It would create positive incentives for companies not to discriminate and could even create competition among companies to eliminate discriminatory barriers. It would create a positive requirement not to discriminate, not a "race specific" classification which would have to meet the *Croson* standards of strict scrutiny and narrow tailoring.

2. The CRRS approach would affect the private (not just the public) sector. As noted, in most jurisdictions the public contracting sector is less lucrative, smaller, and has more administrative encumbrances and slower cash flow than the private sector. Minority and female contractors are not likely to really have equal opportunity, therefore, until they have equal access to the private sector.

3. A compliance review rating process would be more equitable because it could provide discretion for contracting officers as to how much weight to attach to the status and record of a particular contractor. More credit, for example, could be given to a firm that helped struggling minority firms than those that dealt only with well established firms. Similarly, a "Black" firm that had suffered more discrimination could be given greater weight than a firm headed by, say, an Anglo female who had suffered less discrimination. The point is that compliance reviews permit discretion to achieve greater equity among contractors.

4. The compliance review rating approach would also make it possible to more precisely target a state's residents, smaller firms, or businesses with other desirable attributes.

5. The compliance review approach also has some legal and enforcement advantages:

First, it is easier to deny a firm a contract because of a discriminatory record than to cancel a contract when a firm breaches its agreement not to discriminate. It is often inconvenient for the government to cancel a contract for needed goods and services, especially if, as in many federal cases, the contracting agency gives higher priority to the goods and services than to the elimination of discrimination.

Second, the compliance rating approach would shift the legal advantage of the subjective judgment factor from discriminating firms and organizations to the contracting agencies. State governments apparently have more authority under current Supreme Court rulings to make discrimination illegal than they do to have a

DBE preference program. Outlawing discrimination likewise probably would have greater public acceptance. As noted, it is very difficult to prove discrimination in business transactions, which is one reason these practices have not been as well documented as discrimination in employment or in the use of public facilities. There are so many subjective factors involved in a decision to contract with (or purchase from) one firm rather than another that a discriminatory intent can be concealed by more legitimate considerations and is therefore difficult to prove. Of course, contractors who were denied contracts could still argue that they were denied contracts for illegal or unconstitutional reasons, but this would be difficult to prove, especially when a contract compliance process maintained a high level of integrity and scrupulously followed procedural due process. The contracting authority could proceed on the basis of objective evidence of performance, thus avoiding the need to show intent. Of course, contractors could be given an opportunity to show what they had done to try to work with minority or female businesses. The contracting authority and the courts could determine if these were good faith efforts. In any event, this might shift the initial burden of proof from program administrators to plaintiffs who wanted to challenge it. If plaintiffs met this burden, MBE program administrators would then have the burden of justifying their decisions.

Third, the contract compliance review process probably could avoid legal challenges much better than a goals program designed to meet the stringent *Croson* requirements. The compliance process would apply to all contractors, minority and nonminority alike, and need not involve an explicit set aside or "racial classification."

The main disadvantage of the compliance rating process is that it would not entail a strict or explicit numerical set aside. However, the total minority and female business development program (i.e., race neutral plus race conscious) components could establish explicit or implicit goals. We believe explicit goals are logically defensible in view of the persistence of discrimination in the business sector, the absence of effective remedies, and the difficulties involved in disentangling discrimination from the other motives for business decisions. Opponents of race-conscious remedies have succeeded in branding set-asides as "rigid quotas" which the present Supreme Court is unlikely to permit. Even with a more supportive court, goals would be translated into outcomes only if there were qualified minority

or female contractors available to perform the work. A combination of nondiscrimination clauses and race-neutral remedies thus probably has a better chance of both surviving a legal challenge and effectively combating present and continuing discrimination. With a compliance review system, contract compliance officials would have more control over the process and therefore could help see to it that minority and female contractors were helped in a variety of ways, not just in receiving contracts.

Another disadvantage of the CRRS process is that compliance officers will have to maintain accurate information on contractors and would need some method to determine the validity of compliance statements. This probably would not be a very serious problem, although a reliable data system is essential to any effective antidiscrimination program. Some authorities recommend the creation of a national independent data base and rating system that could be used by contracting agencies. While such a rating system would simplify the compliance review process, we do not believe Texas state agencies have to wait for such a national system to initiate a pre-contract rating process.

Of course, public officials could develop a comprehensive program that included set-asides conforming to the *Croson* requirements, race-neutral remedies, and the CRRS. This option has not only the advantage of comprehensiveness, but also probably would be more viable: If one part were invalidated, the others could continue.

CONCLUSIONS

Discrimination in business transactions is deeply rooted in the American economy. There can be no doubt that this form of discrimination inflicts serious damage on the society, polity, and economy. Governments have a responsibility to improve public understanding of the seriousness of this problem and to take positive steps to resolve it. These positive steps must include public education, specifically outlawing this form of discrimination, using governments' purchasing power to help those who are being discriminated against (while rewarding those who do not discriminate), and developing race-neutral programs to help all small businesses.

The remainder of this volume provides an executive summary and outline of each of the six individual research reports prepared for this study. These six

reports, taken together, provide most of the elements that we believe are necessary to meet the *Crosor* requirements.

RESEARCH REPORT 980-1: LEGAL STANDARDS FOR THE ESTABLISHMENT AND IMPLEMENTATION OF A STATE-FUNDS DBE PROGRAM BY TXDOT

This report, entitled “Legal Standards for the Establishment and Implementation of a State-Funds Disadvantaged Business Enterprise Program by the Texas Department of Transportation,” is Volume I of the seven-volume “Disadvantaged Business Enterprise (DBE) Capacity Study.” The study was undertaken at the request of the Texas Department of Transportation in response to its obligations under Senate Bill 352, 72nd Texas State Legislature (Texas Revised Statutes, Article 6669C) to conduct a fact-finding study in support of a state-funds contracting and procurement program for businesses owned by minorities and women.

The report provides a detailed examination of the requirements of the Supreme Court’s recent *Croson* decision. It explores how the constitutional standards differ between federal and state or local DBE programs. It provides an in-depth examination of how the *Croson* standards have been applied to date by lower courts. Finally, it outlines the basic framework that we believe is required to establish constitutionally sound and economically effective DBE initiatives. This framework includes laying the factual foundation necessary to establish a compelling state interest through the development of statistical and anecdotal evidence as well as the consideration of race- and gender-neutral alternatives.

OVERVIEW

In 1991, the 72nd Texas Legislature adopted Senate Bill No. 352, codified as Article 6669C, Texas Revised Statutes, which mandated that the Texas Department Highways and Public Transportation (now denominated the Texas Department of Transportation, or TxDOT) establish a disadvantaged business enterprise (DBE) program. Specifically, the legislature required that TxDOT “set and strive to meet annual goals for the awarding of all state or federally funded contracts, including construction, maintenance, supply, and service contracts to disadvantaged businesses.”¹ Although the legislature spoke of both state and federally funded

¹ Art. 6669C, sec. 2(A).

contracts, the only effect of the statute was to require a DBE program for state-funded contracts because TxDOT was already required by the U.S. Department of Transportation to operate a DBE goals program for the expenditure of federal funds.¹

Further, the legislature required TxDOT to undertake a research initiative to “assess the availability of disadvantaged businesses in the state.”² More specifically, TxDOT was directed to “attempt to identify disadvantaged businesses in the state that provide or have the potential to provide supplies, materials, equipment, or services to the Department.”³ In addition, the legislature directed TxDOT to “give disadvantaged businesses full access to the contract bidding process” and “inform and offer assistance to disadvantaged businesses regarding the Department’s contract bidding process and identify barriers to participation by disadvantaged businesses in” this process.⁴

Presumably in an effort to draw as much as possible on past experience and existing DBE procedures in the realm of federally funded contracts, the legislature also stated that “Contract goals shall approximate the federal requirement on federal money used in highway construction and maintenance, consistent with applicable state and federal laws.”⁵ The existence of this statement in the legislation necessitates that all interested parties clearly understand the different constitutional status of federal and state (or local) DBE programs. The last phrase of the sentence, as well as

¹ 49 CFR Part 23. These U.S. Department of Transportation regulations implement section 106(c) of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (STURAA), in which Congress specified that, except to the extent that the Secretary of Transportation determines otherwise, at least 10% of highway funds appropriated to states be expended with small business concerns owned and controlled by socially and economically disadvantaged individuals. The definition of such businesses is taken from section 8(d) of the Small Business Act. There is a rebuttable presumption that women, Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, and Asian-Indian Americans are within the “socially and economically disadvantaged” category. 49 CFR 23.62.

² Art. 6669C, sec. 2(B).

³ Id., sec. 2(C).

⁴ Id.

⁵ Id., sec. 2(A). This provision of Art. 6669C also presumably evidences a legislative intent to adopt the federal definition of a DBE, as summarized in footnote 2.

the fact that the legislature ordered an availability study, indicates that the legislature recognized this difference, but it is of such paramount importance that it warrants emphasis.

LAYING THE FACTUAL FOUNDATION

Statistical Evidence

Just as the Supreme Court specified in *Croson*, lower federal courts have required the establishment of a substantial factual predicate as a starting point for determining whether any type of race- or gender-conscious contracting program is constitutional. Although the Supreme Court indicated that this predicate may be proved by showing prior discrimination by the contracting agency itself, one lower court dictates caution in such a case. If this is a significant part of the factual foundation for a DBE goals program, the court is likely to find that the program fails the narrow tailoring requirement unless attempts have first been made to eradicate the in-house problems.

The foundation is normally laid by statistical evidence of a substantial disparity between DBE availability and utilization, plus substantial anecdotal evidence showing actual instances of discrimination by contractors against subcontractors. Both types of evidence are necessary, and both must be drawn solely from within the contracting agency's geographical jurisdiction. The statistical evidence must be drawn from relevant populations—non-minority and DBE firms that do or potentially would do business with the contracting agency. Thus, in our present study we should limit our statistical evidence to firms that do business within the state of Texas.

There are various possible ways to measure DBE capacity (or availability). The easiest and most obvious way is to count the number of relevant DBE firms. When determining whether a disparity exists, the number of relevant DBE firms may be calculated as a percentage of the total number of relevant firms (DBE plus non-DBE), this percentage then being compared with the percentage of total contract dollars that have been awarded to DBEs during the period of time being examined. Dividing the former percentage by the latter percentage produces a disparity index. If this index is 1.0, there is no disparity. As it decreases, the evidence of disparity increases. The only problem with the disparity index as a basis for inferring prior

discrimination is that it simply shows that, on the average, DBEs are smaller than non-DBEs. However, if this index is strikingly low, thus showing a tremendous disparity between the average market share of DBE and non-DBE firms, there is probably a basis for inferring discrimination.

The case for inferring discrimination from the index will be far stronger if there is some other statistical evidence buttressing the index, especially if the evidence suggests why DBE firms have a significantly lower average market share than non-DBE firms. An attempt might be made, for example, to examine the index in a sample of DBE and non-DBE firms that have been in business for roughly the same length of time. If the index is low in this sample, this result does tell us that the reason for lower average DBE market shares is not that they are just newer firms. This provides a stronger basis for inferring that DBEs are not competing in a truly honest market.

In a similar vein, the inferential power of the disparity index would be greater if a sample of DBEs and non-DBEs from roughly the same size group (such as those within the federal government's small business definition) were compared. If there is a gross disparity in the amount of TxDOT business between these two comparably-sized groups, an inference of discrimination in TxDOT contracting (or probably subcontracting) would be much stronger. If the federal definition of small business proved unworkable, an initial decision would have to be made about how to measure size. Government contract revenues obviously would not be an appropriate measure. If possible, net worth, number of employees, or other measures could be combined.

Additionally, the inference that DBEs do not compete in an honest, unbiased market would be strengthened by statistical evidence showing that most of the business they get derives from the DBE program, and that they have been unable to gain a comparable share of business in the relevant private sector. This tends to show that, without the race- or gender-conscious program for government contracts, they would be getting a far smaller share of that government business than they should be getting. Indeed, if a DBE program is being renewed rather than initiated, and the disparity study shows that presently DBEs are receiving a commensurate share of government contract dollars, it may be absolutely necessary for renewal of the program to demonstrate that gross disparities still exist in the private sector. Again,

this suggests that they would not be getting their fair share of government contracts without the DBE program.

Anecdotal Evidence

The anecdotal evidence must show actual instances of institutional and/or overt discrimination. Obviously, the more of this evidence that can be collected, the stronger is the factual foundation for the DBE program. The factual foundation also will be stronger if claims of discrimination made during interviews or in survey responses are further investigated to determine whether the claims have substance. It may or may not be possible in a given case to verify the claim of discrimination, but a good faith effort should be made. There is a chance that a court might reject anecdotal evidence consisting of claims of discrimination when there has not even been an effort to verify those claims by further inquiry. To the extent feasible, the gathering of anecdotal evidence should include interviews and surveys of DBE principals, minority individuals who once ran DBEs but have now gone out of business, as well as principals and employees at non-DBE firms. It is important for the study to use interviews to obtain the views of nonminority-owned companies, as well as minority-owned ones. Present and former agency personnel obviously must be interviewed, as well.

Although referred to as anecdotal because it seeks to identify specific stories of discrimination, evidence gathered by surveys must follow sound statistical principles. The survey process actually must be so statistically sound that the term "anecdotal" is really misdescriptive. Again, however, there is a practical reason for using the term anecdotal for this evidence despite the fact that it will be inadequate if truly anecdotal in the scientific sense. Great care must be exercised in constructing the sampling technique; both sample size and response rate are extremely important. In addition, any follow-up conducted to increase the response rate and sample size must be done in such a way as to not interfere with the randomness of the original sampling effort.

Interviews of those in the DBE and non-DBE business communities must also be conducted in a systematic fashion to ensure that the evidence gathered is cross-sectionally representative in terms of geographic areas, product and service markets, firm size, and other relevant characteristics. Although the interviews cannot meet the same statistical standards as the surveys, the design and implementation of

the interviewing process should pay attention to the same basic principles as are applied to the surveys and to the gathering of other statistical evidence. In sum, the more scientifically sound is the process for gathering “anecdotal” evidence, the more probative it will be.

GENERAL PRINCIPLES OF NARROW TAILORING

As discussed earlier in describing and analyzing the *Croson* decision, narrow tailoring entails a number of requirements:

a. The DBE program must not be a true “set-aside;” that is, it must not set an inflexible percentage of contracts or contract dollars that must be awarded to DBEs. This means that a “sheltered market” approach, even if used as an adjunct to a flexible goals program, is probably illegal.

b. A “goals” program must be exactly that, not a set-aside in disguise. In other words, it must be very flexible. An overall annual goal is permissible, but should be reviewed at least annually. Moreover, adequate flexibility probably requires that individual goals must be set for each contract, based on a particularized examination of DBE availability for the type of work called for in the project to be contracted.

c. Flexibility also requires realistic waiver provisions when the prime contractor can demonstrate that it made a good faith effort to fulfill the goal on a project and can plausibly explain the reasons for its failure to do so. When delineating the requirements that a contractor must meet to receive a “good faith efforts” waiver, it is permissible to require that a contractor must have taken affirmative action to advertise and otherwise reach out to find qualified DBEs. Clearly, however, the requirements for meeting such a waiver requirement must be an integral part of the entire program that was communicated to all potential bidders no later than the time when the request for bids or proposals was first announced by the contracting agency.

d. Some courts have indicated that a “bid preference” system, in which a DBE bid is treated as being the lowest if it is within a certain percentage of the true lowest bid, is less problematic constitutionally than a percentage goals program. In the case of subcontracts, however, the flexible goals approach is to be preferred to bid preferences in most cases. Unless the bid preference is very low, this seems to be less flexible and more burdensome for non-minority firms, and certainly more costly to

taxpayers, than a well-constructed flexible goals program. In prime contracting, however, which is governed by a "low-bid" system and is only indirectly affected by a flexible goals program for subcontracts, a bid preference system may be necessary means of breaking down discriminatory private sector barriers. This would indeed be the case if the evidence shows that discrimination against DBEs by private sector non-minority firms has inhibited their ability to be the lowest responsive and responsible bidder on prime contracts. The strongest point of a bid preference system, of course, is its simplicity. It is very easy to administer, and requires fewer agency personnel to administer. This simplicity might save enough money in administrative personnel costs, if the bid preference not too large, to offset the higher cost to taxpayers of automatically raising the cost of some projects.

e. A narrowly tailored goals program must be limited to those racial or ethnic groups (and women) who are actually represented in the state's business population and for which there is a factual foundation in the form of evidence of prior discrimination. In Texas, however, all of the major racial and ethnic groups that appear in the federal definition of a DBE are represented in both the general and the business populations of Texas. These groups include Blacks, Hispanics, Asian and Pacific Islanders, and Native Americans. In 1990, Texas had the third largest Black population in the United States, the second largest Hispanic population, the fourth largest Asian and Pacific Islander population, and the eighth largest Native American population. Most Native Americans in Texas, however, are American Indians rather than Alaska Natives.

f. The DBE goals program should have a specific duration, i.e., a sunset provision, subject to review and consideration at a specified later time for either abandonment or renewal. The problems of renewing one that apparently has worked well were discussed earlier. If the program has produced a situation in which substantial disparities no longer exist, but the agency wishes to renew it because of the belief that disparities will reappear if the program is discontinued, the agency must be prepared to demonstrate that substantial disparities still exist in the private sector, that provable instances of actual discrimination are continuing to exist, or both.

g. The DBE goals program must have a "graduation" provision for DBEs; that is, an objective standard such as annual revenues threshold that, when reached, causes the particular DBE to no longer be eligible for any type of preference.

RACE- AND GENDER-NEUTRAL ALTERNATIVES

Another part of the narrow tailoring requirement that is sufficiently important to be treated separately is the *Crosson* demand that race- or gender-neutral alternatives must have been tried as a prerequisite to the use of race- or gender-conscious measures. The strongest evidence, of course, would show that neutral measures had been attempted for several years prior to the implementation of a DBE goals program and had failed to achieve the desired results. Race- and gender-neutral measures must also be included in the present program, whether or not such neutral measures had been attempted in the past. Thus, any DBE program proposed for TxDOT should not only include various neutral measures, but also should attempt to document any measures that have been employed in prior years. Moreover, if possible, an attempt should be made to document such neutral measures (such as DBE or general small business outreach and training programs) that have been employed by other state and local government agencies that may have reached those who do or potentially might do business with TxDOT.

When many people speak of neutral measures, they seem to be referring to any measures aimed at the supply side, that is, measures aimed at increasing the supply of DBEs. Although supply-side measures aimed at DBEs are important, and should be included, they are not truly neutral if targeted only at minorities and women. To be really neutral, these measures need to be aimed at small businesses regardless of whether they are owned by minority individuals, women, or white males. In reality, there should be supply-side programs for both DBEs and for small business people generally.

There are many possible kinds of race- and gender-neutral measures. All require significant resources, and it has to be understood that an agency may not have the money to do everything that it would in a world of unlimited resources. These measures include, but are not limited to:

- a. Well-publicized statewide outreach programs of various types that are intended to inform individuals and small businesses of the type of work TxDOT contracts for, how to do business with TxDOT (including how to fill out all the forms), and who to contact at TxDOT for specific assistance in preparing necessary documentation and otherwise complying with technical requirements.

b. Training (probably contracted out to community colleges or other established institutions) in the fundamentals of running a business. The fundamentals of accounting, asset and cash-flow management, personnel management, and relevant business laws and tax laws should be included. It also might be wise to inform small businesses, including DBEs, about some of the employee leasing companies that can handle the payroll (including all of the required deductions, so as to keep the firm out of payroll-related trouble), workers compensation and other insurance and benefits coverage, and other personnel tasks. Although there are a number of good, reputable employee leasing companies, there are also some bad ones that may take the firm's money but not take care of paying for employee benefits. Thus, the use of such a company may be an excellent idea for many small businesses, but care must be exercised in selecting one.

c. Aside from business-specific training, in some areas of the state it may be worthwhile to contract for broader educational programs. An actual or potential small business owner who speaks only Spanish, or at least very little English, is quite unlikely to succeed, much less reach his potential, in business (for TxDOT or otherwise). The same can be said of others who, even if they are not Spanish speakers, are virtually illiterate in written English. This may be beyond TxDOT's responsibility or capability, but TxDOT could play an instrumental role in getting state government as a whole more involved in such an effort. The Texas economy could only benefit. Indeed, the entire Texas economy also would benefit from a more broadly targeted business-training effort as described above in b.

d. If it is feasible to divide a large project into a number of small parts without substantially undermining efficiency, such a measure could make it much easier for small businesses in general, including DBEs, to compete successfully for TxDOT contract work.

e. An effort should be made to determine whether bonding, insurance, or other requirements are more burdensome than they absolutely have to be. Do bonds have to be as large as they are? Is retainage necessary in the presence of a performance bond? Are requirements that may have been relevant in the past still relevant today? If it is determined that some of these requirements could be relaxed, especially for small businesses (including DBEs), without exposing the state to a much greater financial risk, such action should be taken. Another possibility is to reduce or waive the bonding requirement for a small business when the agency is

otherwise convinced that the company can do the work well, but couple this waiver or reduction with a contractual provision specifying that default or unsatisfactory performance by the firm will result in its being barred from further TxDOT work for a substantial period of time (say, one or two years, or perhaps longer).

f. Although the state cannot lend money to DBEs or other small businesses, creative avenues for helping such firms overcome financing barriers should be investigated. It might be possible, for example, for TxDOT (or the state government as a whole) to work out arrangements with banks that would provide the banks with some type of benefit (such as preferences in receiving deposits of state-funds) in return for relaxing loan requirements for small businesses that are trying to do business with the state. Changes in state law might be necessary to accomplish any such plan. Obviously, such an effort could be constrained by federal liquidity and other banking regulations, but the idea should at least be given some consideration. Also, consideration should be given to working out such arrangements with non-bank institutions that could serve a role in financing but that are not subject to restrictive banking regulations.

g. TxDOT (or any other state or local government contracting agency) must make a meaningful attempt to identify any current policies or practices within the agency that erect barriers to contracting by DBEs and other small businesses and, to the extent feasible, remove these barriers. Extensive in-person interviews of agency personnel are likely to be necessary in order to fully identify such barriers.

h. The agency also should attempt to identify actual discrimination in bonding, financing, or other services ancillary to contracting, and take whatever steps necessary (even adopting new regulations or proposing new legislation if necessary) to remedy that discrimination.

RESEARCH REPORT 980-2: STATE AND NATIONAL REVIEW OF DBE LEGISLATION, PROGRAMS, AND AVAILABILITY-DISPARITY STUDIES

This report, entitled "State and National Review of Disadvantaged Business Enterprise Legislation, Programs, and Availability-Disparity Studies," is Volume II of the seven-volume "Disadvantaged Business Enterprise (DBE) Capacity Study."

The report contains three principal sections. The first part of the report describes the extent of utilization efforts and legislation currently in place across Texas—at the local and regional levels of government. The second part details the state-funds DBE programs in existence nationwide and also includes an exploratory analysis focusing on DBE efforts aimed at persons with disabilities. Part three surveys the efforts in other states to undertake an availability/disparity study, discussing relevant issues in detail. Taken together, these three analyses provide an extensive overview of minority- and woman-owned business enterprise initiatives elsewhere in the State of Texas and in other states and state departments of transportation.

INTRODUCTION

Research Report 980-2 provides a national review of state DBE legislation, programs, and disparity studies, as well as a survey of Texas local governments' DBE policies. Covering distinct yet closely related subject areas, these reports present a wide spectrum of policies and proscriptions, ranging from an almost complete lack of government DBE initiatives outside major urban areas in Texas, fearfulness and confusion upon the part of state and city procurement policies in the aftermath of *Croson*, and a sometimes confused if rather standard approach by most consultants and experts to conducting disparity studies.

STATEWIDE SURVEY OF TEXAS LOCAL GOVERNMENT DBE PROGRAMS

This section presents the findings of an extensive survey of local government agencies in Texas. This survey was undertaken to gather information on DBE legislation (such as local ordinances) and programs, to collect minority- and women-owned business utilization reports, and to assess the extent of the demand for the services of DBEs among these public agencies.

The research team conducted a survey of 650 of the largest cities, all counties, and selected independent school districts (ISDs) and water districts in Texas. In all, 868 public entities in Texas were contacted—including 192 cities, 252 counties, seventy school districts, and 356 water districts. The survey and telephone follow-up generated a 75 percent response rate.

Of the 868 government entities contacted, only thirty-two (4 percent) had legislation regarding DBEs. Eighteen (2 percent) of those thirty-two were local, non-federal-aid programs. The remaining fourteen entities operated programs that received joint funding from the federal government, usually the U.S. Department of Transportation. Many of these programs originated as a result of federal contract compliance alone and did not apply to the government's locally-funded contracts and purchases.

Of the 160 large cities (greater than 100,000 population) responding to our survey, only twenty (13 percent) had any type of DBE legislation or program. Of the twenty programs identified, nine (45 percent) existed solely due to federal contract compliance requirements. Only eleven large cities (55 percent) possessed legislation pertaining to non-federal-aid projects.

Of the 196 county governments responding to our survey, only five, or less than 3 percent, reported some type of DBE legislation or program. In contrast to large city sponsored programs however, four of the five programs found were locally initiated rather than being initiated in response to federal contract compliance requirements.

Of the 48 ISDs contacted in our survey (the ten largest from each of the seven study regions), only three (6 percent) reported any type of DBE legislation or program. All three programs identified were locally, rather than federally, initiated.

Overall, only the seven largest cities in Texas—Houston, Dallas, San Antonio, El Paso, Austin, Fort Worth, and Beaumont—applied specific goals to their program. These cities generally had larger goals assigned to DBE procurement than the minimum federal goal of 10 percent. However, outside of these seven cities, along with a few school districts, counties, and scattered other authorities in contiguous areas, no enforceable goals programs operate in Texas for non-federal-aid contracts. Indeed, many of the representatives from governments without legislation whom we contacted told us they did not know what a DBE or a HUB was.

The research team contacted the largest cities and school districts in Texas—the most likely to have legislation pertaining to DBEs. Based on the survey responses, it is very likely that the smaller governments that were not contacted have limited or no programs or legislation.

Several government contacted were found to have only a policy statement or a short paragraph in their purchasing rules mentioning that minority and women-owned firms will be given the maximum opportunity to compete for contracts and purchases. These governments, the survey found, have no goals and limited outreach, if any.

Some evidence was found in the survey indicating that several government entities in Texas probably had more active DBE legislation in the past, that because of the *Croson* decision had to be revised, narrowed, or repealed. A few examples are illustrative of this phenomenon. The City of Fort Worth had to repeal its program and conduct a disparity study to meet the *Croson* requirements. Another example is Travis County, which had a program that had DBE contracting and purchasing goals but was repealed and replaced with a very limited “interim” resolution that does not set any goals. The City of Abilene reported not having any DBE legislation or programs, although it is matter of record that they passed legislation in 1984 encouraging minority procurement (City of Abilene, Resolution 12-1984).

Overall, the survey found very limited enactment of DBE legislation of any kind in Texas at the local and regional government levels. The survey indicates that few governments in Texas are aware of DBE issues or seeking the participation of DBEs in their contracting and purchasing. The survey also indicates a reasonably strong impact on the development of DBE programs from federal DBE requirements. Finally, the survey shows a general lack of interest and attention to this matter at the local level—perhaps due in part to a lack of knowledge and understanding of minority and women’s issues with respect to business enterprise.

NATIONWIDE SURVEY OF STATE-OPERATED DBE PROGRAMS (WITH AN EXPLORATORY ANALYSIS REGARDING BUSINESSES OWNED BY PERSONS WITH DISABILITIES)

The second part of the report, “Nationwide Survey of State-Operated DBE Programs (with an Exploratory Analysis Regarding Businesses Owned by Persons with Disabilities),” collected basic information about DBE programs nationwide

while also focusing on particular aspects of these programs for the disabled entrepreneur.

All fifty states and Guam were sent questionnaires, thirty-nine of which were returned, for a 76 percent response rate. Twenty-three of the thirty-nine states (59 percent) responding reported having some type of DBE program in place. The survey found that Missouri administers only a partial program since it excludes state highway construction from goal setting. Six of the twenty-three states (26 percent) have operated strictly voluntary programs since the promulgation of *Croson*. One of the six, Michigan, lost a court challenge and is hesitant to take the necessary steps to implement a valid program. The reluctance of state officials to run afoul of the Court is evidenced by the fact that only three states to date—California, and Washington and Mississippi—have attempted to set overall M/WBE goals over the 10 percent benchmark. Further, sixteen states reported that they have never had any type of statute or legislation pertaining to minority- or women-owned business procurement. New Mexico was the only state adjacent to Texas appearing on the latter list.

The exploratory analysis on businesses owned by persons with disabilities has concentrated on identification of several types of information and data. There is ample precedent that businesses owned by persons with disabilities could participate in TxDOT's state procurements. Opportunities for disabled entrepreneurs currently, or will soon, exist in the following state departments of transportation: California, Connecticut, Illinois, Maryland, Michigan, Minnesota, and North Carolina. In addition, firms owned by persons with disabilities are participating in the federal DBE programs of state departments of transportation in Florida, Montana, New York, and Wisconsin. In Texas, no jurisdictions were identified that enable disabled-owned firms to qualify under their MBE/WBE programs. Likewise, in a limited nationwide search, no local government jurisdictions could be located which allowed participation. A number of state governments are providing training and/or meaningful financial assistance to encourage the development of well-run firms owned by persons with disabilities.

The data suggest that TxDOT should, and likely could, draw upon Texas businesses owned by persons with disabilities in its future procurements. Certainly, there are precedent and prior experiences in other state departments of transportation. This report also suggests a variety of outreach methods for TxDOT to

undertake in order to contact members of this increasingly recognized community. No information was obtained during this series of tasks that suggested that inclusion of persons with disabilities caused any new problems to either procurement officials or other minority- and women-owned businesses. Nor should there be any negative impact on TxDOT's current procurements from the Texas Industries for the Blind and Handicapped (TIBH) by allowing for-profit, disabled-owned firms to participate. With sensible, realistic goals and a proper phase-in period, TxDOT and businesses owned by persons with disabilities should both benefit.

A REVIEW OF STATE-OPERATED AVAILABILITY/DISPARITY STUDIES

The final chapter of Research Report 980-2, "A Review of State-Operated Availability/Disparity Studies," analyzes this form of investigation that has become increasingly common since *Croson*. Only statewide studies were reviewed. Municipal, county, school district, and other locally-sponsored studies were omitted in order to maximize the usefulness of the report to TxDOT. A fairly standard structure of legal analysis, availability, utilization, and disparity analyses, and anecdotal evidence collection obscures widely varying research methods, within both these categories and also other components of a complete, "Croson-proofed" study. This review describes the studies, critiques the methods employed, and discusses methodological issues as they relate to questions of discrimination and business opportunity. Although most studies at least adequately handle availability, utilization, and disparity issues, all avoid attempting to demonstrate the dynamic effects of social and economic forces upon the relatively narrow topic of government procurement.

The scope of work varied among studies—as much as twelve years of contract data were analyzed in Louisiana I and II, compared with two in New York, Minnesota, Florida, and North Carolina. The time allotted for contract performance also varied, from six months in North Carolina to three years in New York. The others generally took between twelve and eighteen months. It is no coincidence that the most comprehensive effort was mounted by New York. Only relatively cursory analyses can be performed in short periods of time.

Recommendations take on similar forms in these studies: 1) some type of bonding help for M/WBEs (some states refuse federal help); 2) division of large projects into several smaller ones; 3) more staff and power to enforcement agencies;

4) re-estimation of availability at periodic intervals; and 5) tailor goals to individual contracts; 5) sensitivity training for agency personnel. Most studies have no notion of program cost, except in terms of generalities. Only New York State's Appendix C gives serious thought to program implementation, offering serious suggestions for goal implementation, broadening participation, and program termination.

Unfortunately, other than for some superficial remarks about "graduation," for the most part little is said about viewing a goals program as a business incubator rather than a permanent preference. Nor is the dilemma of being certified to do business in an area also being a barrier to branching out into other areas given a thorough discussion. Even the New York effort, while unique among statewide efforts in its analysis of the "but-for" component of availability, still avoids discussing deep-seated problems affecting set-aside programs. It is true that some of these problems are outside the immediate control or even influence of particular state agencies. However, to the extent that education and training issues, for instance, are both relevant to self-employment and under the purview of the state government, then thorough consideration should be given as to how a comprehensive reform effort may be mounted. For example, those who complain that DBEs do not have the capacity to do business often are unwilling to see substandard and inaccessible technical education as relevant to the future supply of qualified M/WBEs. What is needed is a study that analyzes not only the availability, utilization, and disparity, but also attempts to demonstrate (not shy away from) the dynamic effects of social forces upon the relatively narrow topic of government procurement. Otherwise, the risk grows that the state will implement a program that fails to accomplish its long-term purpose.

RESEARCH REPORT 980-3: OUTREACH/AVAILABILITY DIRECTORIES OF DISADVANTAGED BUSINESS ENTERPRISES AND HISTORICALLY UNDERUTILIZED BUSINESSES

This report, entitled "Availability Directories of Certified and Potentially Certifiable Disadvantaged Business Enterprises (DBE) and Historically Underutilized Businesses (HUB)," is Volume III of the seven-volume "Disadvantaged Business Enterprise (DBE) Capacity Study."

The report contains two availability directories of minority-owned and women-owned businesses operating in Texas. Included with the directories are indexes, Standard Industrial Classification (SIC) bridge tables, and other instructions designed to enhance their usefulness. These directories have been customized to restrict coverage to firms that either can or potentially could provide highway construction and maintenance services as well as other services regularly procured by TxDOT, as required under S.B. 352.

INTRODUCTION

The first directory, referred to as the *DBE Availability & Outreach Directory*, focuses exclusively on firms providing highway construction and related goods and services. The second directory, referred to as the *HUB Availability & Outreach Directory*, focuses exclusively on firms providing other services regularly procured by TxDOT through its Equipment and Procurement division, D-4. Combined, these directories contain over 4,000 distinct entries in over forty business categories.

The purpose of this report is to provide TxDOT's Civil Rights Division with resources to assist it in identifying DBE and HUB firms with the potential to be brought in to the TxDOT procurement process. The resources provided in this report constitute a rich source of information on such businesses. Both directories contain firm listings subdivided by category of work and by geographic location. Each firm listing includes a business name and address information, work category information, and information regarding race, ethnicity, and sex. Each directory contains directions for use. Each directory also includes an electronic (machine-readable) version suitable for development into an outreach mailing list.

Because of the dynamic nature of business enterprise, even the best directories will eventually become outdated. This report provides two additional resources designed to compensate for this situation. First, the report includes the most up-to-date annotated bibliography of national, regional, statewide, and local DBE directories and listings available. Second, the report contains a comprehensive listing of the SIC codes that are economically related to highway construction and maintenance and to the other needs of the Department. Together, these two additional resources will allow the Civil Rights Division of TxDOT to customize its own in-house availability and outreach library as it sees fit.

Two caveats are appropriate: First, some of the firms in these two directories will already be familiar to the Department. Most, however, will not, and therefore will represent a new source of DBE firms with certification potential. Second, as there can be no guarantees that every firm listed in these directories is ready, willing, and able to provide the types of construction and other services required by the Department, it is obviously up to TxDOT to reach out to the listed firms and to make that determination for itself. Nevertheless, as we have just described, every effort has been made in the production of these directories to target the work categories as closely as possible to TxDOT's needs—in terms of both work category and geographic location.

THE DBE AVAILABILITY & OUTREACH DIRECTORY

To produce the DBE Availability & Outreach Directory, researchers from six Texas universities collected information on DBEs from throughout the state and nation. Fourteen distinct local, regional, state, and national listings of DBE and HUB firms were collected. From these fourteen listings, we culled a select group of firms operating in highway construction and other construction-related fields for inclusion in the directory.

With the exception of the City of Houston, each directory lists the company name, street address, city, state, zip code, contact person, phone number, minority status, and business description. Some directories provide additional business information, such as Standard Industrial Classification codes and geographic market area.

This chapter of the report also includes a comprehensive listing of SIC codes in which TxDOT interacts with the private sector. This listing will allow TxDOT to

more closely target its outreach efforts to be restricted to industrial categories with which the Department regularly does business.

THE HUB AVAILABILITY & OUTREACH DIRECTORY

To produce the HUB Availability & Outreach Directory researchers obtained and customized the centralized HUB vendor directory maintained for the State of Texas by the General Services Commission (GSC). The service class codes and class title included in the HUB directory are presented in detail within the body of the report. Also, for each class included in the report, specific item codes are presented in the rightmost column. These item codes represent the most detail available regarding the specific types of goods and services TxDOT procures within each class. Only those contractors and vendors indicating that they could provide the specific item codes listed were selected for inclusion in this directory.

These item codes were derived based on an analysis of TxDOT's services purchasing patterns over the last several years. Services purchase order data was examined for fiscal years 1991, 1992, and 1993, and the corresponding class and item codes were extracted for each purchase.

After the customized listing of TxDOT class-item codes had been developed, it was cross-referenced with the General Services Commission's 1992 HUB directory by class and item code. The resulting list of state-certified HUB firms was then sorted by class code to create the HUB Availability & Outreach Directory. This list contains more than 1,950 firms in twenty-eight distinct service categories. Each entry provides the firm's name, address, city, state, zip code, and telephone number. Also included with each record is the firm's state vendor identification number, minority and gender status, a business description, and a list of the specific item codes it provides within each class.

ANNOTATED BIBLIOGRAPHY OF MINORITY-OWNED AND WOMEN-OWNED BUSINESS DIRECTORIES

This chapter of the report presents an annotated bibliography of national, regional, statewide, and local DBE directories and listings available to the research team. The annotated bibliography provides each directory's geographic coverage, author(s), publication dates, ordering information, categories of work presented, and race/ethnicity/sex categories. An important purpose of this product is to aid

the Civil Rights Division's ability to keep its availability and outreach information current.

COMPREHENSIVE LISTING OF SIC INDUSTRIES RELEVANT TO TXDOT MISSION

The SIC system is the statistical classification standard underlying all federal economic statistics and most state and local economic statistics that are classified by industry. Drawing on the research team's extensive expertise and experience in economic and industrial research, this chapter of the report presents an assessment of all SIC codes that are economically associated with the procurement and contracting requirements of TxDOT, as outlined by the Department in its original Request for Proposals for Study 7-980 via Attachment No. 4. In many instances, one four-digit SIC code serves to encompass particular sub-category. In other instances, as many as eleven separate SIC codes were required to fully cover a sub-category. Overall, the Department interacts with industries representing all major divisions of the economy: agriculture; mining; construction; manufacturing; transportation, communications, and public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services.

RESEARCH REPORT 980-4: PARTICIPATION OF DBE FIRMS IN TXDOT CONTRACTING AND PROCUREMENT, 1985–1992

This report, entitled “Participation of Disadvantaged Business Enterprises in Texas Department of Transportation Contracting and Procurement, 1985–1992,” is Volume IV of the seven-volume “Disadvantaged Business Enterprise (DBE) Capacity Study.”

The report examines more than five years of Disadvantaged Business Enterprise (DBE) participation in TxDOT highway construction contracting, and presents DBE participation data calculated from the Department’s Subcontractor Monitoring System (SMS) for prime contracts and associated subcontracts. It provides a description of participation by minority-owned and women-owned businesses in the contracting and subcontracting processes associated with the construction and maintenance of highways by TxDOT, as well as its purchases of commodities, general services, and professional services.

INTRODUCTION

A comparative analysis of the information presented in Research Report 980-4 reveals important differences between DBE and non-DBE firms — and important similarities as well. The information presented provides a basis for assessing TxDOT’s DBE participation at selected intervals during the 1985–1992 period along several dimensions, including among others: (a) race and ethnicity, (b) sex, (c) prime contracts versus subcontracts, (d) source of funds, and (e) highway district. Considered in conjunction with appropriate measures of DBE availability, the information contained in this report provides a way to assess the extent to which disparities exist between DBE participation and DBE availability in highway construction contracting in Texas. Demonstrating the existence, significance, and importance of such disparities appears to be a key requirement of the U.S. Supreme Court in justifying the constitutionality of state-mandated race and sex-based contracting preference programs.

This report also shows that levels of DBE participation on federally and jointly funded contracts generally meet or exceed the 10 percent federal goal while participation levels on state-funded contracts have been far below 10 percent in all

but fiscal year 1992. However, participation in state-funded contracts has increased substantially over the period, reflecting, at least in part, the Department's decision to extend the federal goals to the state-portion of jointly funded federal-aid contracts. This upward trend may also reflect the efforts of the Texas Legislature during recent sessions to encourage TxDOT to extend its DBE program to state-funded highway contracts. Departmental officials estimate that they made the decision to extend the federal goals to the state-funds portion of jointly funded awards around mid-1991. However, the data indicate the change occurred around mid-1990. The Texas Sunset Advisory Commission, in its 1993 review of TxDOT, also reports that this change occurred prior to 1990.

DATA SOURCES AND RESEARCH METHODS EMPLOYED

The area of highway construction and maintenance represents TxDOT's principal mission. The direct pursuit of this mission comprises about 90 percent of the contracting and procurement spending the Department undertakes. This pattern applies to both appropriations and expenditures. Of the three data sources chosen for use in Research Report 980-4, two pertain to highway construction and maintenance exclusively. These are the Subcontractor Monitoring System (SMS) for prime contracts and associated subcontracts and the Federal Highway Administration (FHWA) DBE compliance reports. A third data source, however, affords a picture of DBE participation in the other areas of TxDOT procurement as well, such as the procurement of commodities and general services. This data is taken from the compliance reports required under the Texas Small Business Assistance Act of 1975 (TSBAA).

Overall, the SMS data was relied upon most heavily. The research team added supplementary fields to the SMS database in order to make it possible to calculate in both absolute and relative terms the number of contract awards and contract dollars going to (a) DBEs and non-DBEs and (b) among DBEs according to ethnicity, race, and/or sex. The resulting information could then be cross-tabulated by such factors as fiscal year, highway district, contractor, or funding source. The results from the analysis of the SMS data are grouped into four general areas: (1) prime contracting versus subcontracting opportunities, (2) participation among the various ethnic, race, and sex groups, (3) federal-aid contracting versus state-funds contracting, and (4) district level breakdowns.

OVERVIEW OF THE HIGHWAY CONSTRUCTION MARKET

Construction and maintenance of highways and streets constitute the single largest component of publicly owned construction contracting in the United States today, accounting for 22-23 percent of all new public construction each year. The U.S. Department of Transportation's Federal-Aid Highway Program funds roughly half of this amount, while the remainder comes generally from states and their component localities and municipalities. The *Surface Transportation and Uniform Relocation Assistance Act of 1987* (STURAA) renewed the Federal-Aid Highway Program, administered by the FHWA through 1991 and provided approximately \$80 billion in federal-aid funding for highway construction. The *Intermodal Surface Transportation Efficiency Act of 1991* (Public Law 102-240), or ISTEA, renewed and extended the federal-aid program through 1996, and is forecast to provide another \$100 billion in funding through 1996. The Federal-Aid Highway Program spends about \$14 billion per year and is, according to the U.S. Department of Commerce (1992, 5-10), "by far the largest public works program in the United States."

SUMMARY OF STATEWIDE DBE PARTICIPATION IN THE MARKET FOR HIGHWAY CONSTRUCTION IN TEXAS

The State of Texas, with its vast network of highways, bridges, and roads, has been a major recipient of federal highway funds. TxDOT received almost \$1 billion in federal-aid funding in FY89 and projects that it will receive more than \$1.3 billion in FY94 and FY95. During the period under study the federal government funded, on average, almost 43 percent of the prime contract dollars in the SMS database. Another 34 percent was funded jointly, and about 23 percent was funded exclusively with state monies. Overall of course, State monies constitute the Department's largest revenue source. The State Highway Fund provides, on average, \$1.8 billion per year. This accounts for approximately 57 percent of total departmental funding.

TxDOT spends approximately \$1.5 billion of its entire budget each fiscal year contracting with the private sector to build and maintain the State's surface transportation system. From this budget subcontracting amounts consistently to 23-24 percent of total contract dollars. The expenditure of at least 10 percent of its federal-aid funds with certified DBEs is an obligation of TxDOT under the STURAA

and ISTEA acts. U.S. Department of Transportation implementing regulations for the FHWA DBE program appear under Title 49, Code of Federal Regulations, Part 23. TxDOT is obligated to report its compliance with these regulations each quarter of the federal fiscal year by completing and submitting to the FHWA form *DOT F 4630* entitled "Quarterly Report of DBE Awards and Commitments."

Under the 1982 legislation of the federal-aid highway program, women-owned businesses (WBEs) were in a separate category from minority-owned businesses (MBEs) and had a separate percentage participation goal. In 1987, STURAA incorporated WBEs and MBEs into an overall DBE category with one overall percentage DBE goal. This combined system was maintained under ISTEA.

Principal DBE Prime Contracting Participation Findings at the Statewide Level

The total number of prime contracts awarded statewide during the FY88–FY91 period was 1,735, or about 434 awards per year. Of these 1,735 prime contracts DBE firms were low bidders on 6.5 percent, or 112. Thus, on average, DBEs received twenty-eight prime contracts annually during the period. In terms of dollars, TxDOT awarded almost \$5 billion in prime contracts between FY88 and FY91—averaging more than \$1.2 billion per year. The annual dollar amount of prime contract awards has fallen, however, in recent years. Total prime contract dollars fell 25 percent from over \$1.4 billion in FY88 to about \$1 billion by FY91. During the same period, DBE prime contract dollars fell by almost 50 percent, from \$29.9 to \$15.1 million. DBEs were low bidders on slightly more than \$101 million in SMS prime construction contracts—out of a total of more than \$6.7 billion. Thus, for the FY88–FY91 period, DBE prime contracts amounted to 1.6 percent of overall prime contract dollars.

There was significant variance in the number of prime contracts awarded each year, and DBE prime contractors experienced variances that were three times that for non-DBE primes. As with number of awards, DBE prime contract dollars exhibited greater relative variance during the period than did non-DBE prime contract dollars. These variance differentials in number and dollar amount of awards introduces relatively greater uncertainty for DBE primes as opposed to non-DBE primes. This likely worsens the relative competitive position of DBE firms.

Other significant differences between DBE prime contractors and non-DBE prime contractors are also apparent in the SMS database. First, the largest overall

prime contract awards during the period ranged between \$44.6 million and \$59.1 million, while the largest DBE prime contracts spanned a range from only \$2.5 million to \$4.2 million. Second, the average prime contract award during the period had a value of about \$3 million while the median contract had a value of just above \$1 million. In contrast, the average DBE prime contract had a value of slightly more than \$700,000 while the median DBE prime contract had a value of about \$350,000. A third difference of note is that DBE participation drops dramatically as the size class of the award rises. For example, DBEs won 23 percent of all prime contracts under \$100,000. Nineteen percent of all DBE prime awards were in the under \$100,000 range versus only 5 percent of prime awards overall. For awards greater than \$1 million, in contrast, DBE participation falls to just under 2.5 percent. Only 20 percent of all DBE awards fall in this range versus 51 percent overall. TxDOT awarded 290 contracts in the greater than \$5 million range during the period, but none of these awards went to DBE firms. This is significant because 65 percent of all prime contract dollars awarded by TxDOT fell in the greater than \$5 million dollar size class.

Despite no participation in the largest awards, TxDOT DBE prime contractors did win some moderately large contracts. For example, DBE firms won fifty-three prime contracts in the \$500,000-to-\$2.5 million range and eight awards in the \$2.5-million-to-\$5 million range. Together, these sixty-one contracts accounted for 43 percent of all DBE prime contract awards over the period. Clearly, these contracts demonstrate that at least some DBEs in the available TxDOT pool have demonstrated that they possess the capability and experience to win and successfully complete all but the largest TxDOT contracts. As the experience and track record of these firms grow and as more DBE firms join their ranks, one would expect to see more DBE awards in the medium large ranges and—to the extent artificial barriers to competition do not bar their participation—eventually begin to see DBEs become competitive for awards in the largest ranges.

Principal DBE Participation Subcontracting Findings at the Statewide Level

The total number of subcontract awards from FY88 to FY91 was 9,253, or an average of 1,784 awards per year. TxDOT primes awarded 4,369 subcontracts to DBE firms—an average of 842 subcontracts per year. Thus, DBEs received 47.2 percent of all subcontract awards. From FY88 to FY91 TxDOT prime contractors awarded over

\$1.2 billion in subcontracts, averaging over \$290 million per year. TxDOT DBE subcontractors won over \$671 million in awards—an average of \$129 million per year. During the study period the DBE share of all TxDOT dollars awarded grew strongly from 8.9 percent to 12 percent. The DBE share of subcontract dollars also grew from 39 percent in FY88 to 49.5 percent in FY91. It is important to note that the DBE share accounts for 10 percent of *all* TxDOT dollars and 43 percent of total *subcontract* dollars over the period. Thus, since subcontracting amounts consistently to 23 percent–24 percent of total highway contract dollars, in order for DBEs to receive a 10 percent share overall, they have to receive a 43 percent share of subcontracting dollars. This places a heavy burden on non-DBE subcontractors to bear the costs of the DBE program, while releasing those prime contractors—who receive 77 percent of all TxDOT contract dollars—from practically all direct competition with DBE firms.

Although the variance is also higher for DBE subcontract awards than for subcontract awards overall, the magnitude of the differential is far smaller than was the case for prime awards. This is an indication of much greater stability of DBEs in the market for TxDOT subcontracts than in that for prime contracts.

Other findings from the SMS database regarding DBE subcontractors and non-DBE subcontractors include the following. First, the largest overall subcontracts during the period were in the \$4.9 million to \$8.1 million range—only 10–20 percent the size of the maximum prime contract awards. In FY88 and FY90, the largest DBE subcontract awards were \$2.2 million and \$3.8 million, respectively—significantly lower than the overall largest subcontract awards in those years. In FY89 and FY91, however, the largest subcontract awards of \$8.1 million and \$4.9 million, respectively, went to a Hispanic-owned DBE firm. Second, the mean subcontract overall during the period ranged from \$152,000 to \$174,000. The mean DBE subcontract paralleled this range at somewhat lower levels, averaging about 90 percent the size of the average overall subcontract between FY88 and FY90. In FY91, however, the average DBE award was about 5 percent greater than the average overall subcontract award. These results contrast sharply with the size of prime DBE awards, which never amounted to more than 27 percent of the average overall prime award. With respect to basic summary statistics at least, DBE subcontractors are more difficult to distinguish from their non-DBE competitors than is the case concerning prime contractors. DBEs appear to participate significantly in TxDOT

subcontracting activities at all size levels except, importantly, the largest (contracts over \$5 million). In that category, DBEs received only one of nine awards during the study period (11 percent).

DBE Participation Findings at the Statewide Level by Gender, Race, and Ethnicity

The aggregate category “DBE,” although useful as a summary measure, obscures certain differences among DBE contractors that are important for the present analysis. Examination of DBE prime contract awards by ethnicity and race reveal two items of note. First is the dominance of Anglo female-owned firms among DBEs winning prime contracts, and second is the apparent lack of prime contract awards to firms owned by blacks, Asians, or Native Americans.

The SMS data show that DBE firms owned by Anglo females won slightly more than 67 percent of all DBE prime contract awards during the period under study. In terms of prime dollars awarded, again we find that Anglo female-owned DBEs command the largest share by far—more than 67 percent of the \$101.2 million DBE total and slightly more than one percent of the overall total. Also, Anglo females own the third through the eighth largest DBE primes in terms of total contract dollars. The largest DBE prime is, however, a male Native American-owned firm, while the second largest is a male Hispanic-owned firm. In addition, thirty-two awards, or 23 percent of the total, went to Hispanic-owned firms (male- or female-owned) for a total of \$22.5 million. This dollar amount is about 22 percent of the DBE total prime dollars and 0.33 percent of the overall total. Together these two DBE sub-groups received over 90 percent—or \$90 million—of the prime contracts awarded to DBEs. This represents about 5.6 percent of all prime contracts awarded during the period.

In contrast, all other types of DBE firms combined received less than 10 percent of all DBE prime contract awards. This amounts to about one-half of one percent of all prime contract awards. Black-owned firms won no prime contract awards in FY89 and FY91, and only one award each year in FY88 and FY90. From FY88 to FY91 Asian-owned firms received four awards and Native American-owned firms received only one. As with number of prime contract awards, the remaining DBE types obtained a much smaller portion of prime contract dollars as well—only 7 percent of the DBE total (about \$6.8 million). These latter firms’ share of the overall total—combined—was 0.1 percent. Prime contract dollars going to black-owned

DBEs never exceeded 0.07 percent in any given year during the period. For Asians and Native Americans, the figures are 0.06 percent and 0.22 percent, respectively.

Likewise, Anglo female DBEs, followed by Hispanic DBEs, dominate the field for subcontract awards. Together, these two groups won more than 85 percent of all DBE subcontract awards during the study period. Anglo females garnered an impressive 53.6 percent share of all DBE subcontract awards during the study period and a 25.3 percent share overall, for an average of 457 subcontracts per year. Hispanic DBEs received the second largest share of subcontract awards over the period with 1,410 awards—32.3 percent of DBE subcontract awards and 15.3 percent of total subcontract awards. Blacks received 300 awards during the study period—only 6.9 percent of DBE subcontracts and only 3.2 percent of subcontract awards overall. Native American DBEs received 129 subcontracts—3 percent of DBE awards and 1.4 percent of overall awards. Asian DBEs received the fewest numbers of subcontracts—sixty-six. This amounted to 1.5 percent of DBE awards and 0.7 percent of awards overall.

As with number of subcontract awards, Hispanic-owned DBEs and Anglo female-owned DBEs are the predominant DBE groups with respect to subcontract dollars. Together, these firms won 83 percent of all DBE subcontract dollars awarded. Hispanic DBEs garnered \$264 million during the FY88—FY91 period. This amounts to 51 percent of DBE subcontract dollars, 22.7 percent of total subcontract dollars, or 5.1 percent of total prime dollars. Five of the top ten subcontractors—measured by total dollars awarded—were DBEs. Four of these five were owned by Hispanic males. Three of these four Hispanic firms had average dollar award sizes that were much larger than overall averages. In FY89 and FY91 the largest overall subcontract awards—of \$8.1 million and \$4.9 million respectively—went to a Hispanic-owned DBE firm. Anglo female DBEs garnered \$161 million during the same period. This amounts to 31.2 percent of all DBE subcontract dollars, 13.8 percent of total subcontract dollars, or 3.2 percent of total prime dollars. Seven of the top ten subcontractors—measured by total number of awards—were DBEs. Six of these were Anglo female owned DBEs and one was Hispanic male owned. All six female DBEs had average dollar award sizes that were much smaller than overall averages.

Thus, there are important differences between Anglo female DBEs and Hispanic DBEs. The SMS data show clearly that Anglo female DBEs are performing,

on average, large numbers of relatively small contracts (in the areas of traffic control devices, fencing, landscaping, etc.), while Hispanic DBEs appear to be performing fewer, yet larger size contracts in the areas, for example, of major and minor structures. The remaining DBE sub-groups were awarded 7 percent of all subcontract dollars and 1.6 percent of total dollars awarded. Black-owned firms account for only 3 percent of subcontract dollars awarded—0.7 percent of highway construction dollars overall. Native American DBE participation is almost that of Blacks, accounting for 2.3 percent of subcontract dollars and 0.5 percent of total dollars. Asian and “Other” DBEs each accounted for less than 1 percent of subcontract dollars and 0.2 percent or fewer of total dollars awarded.

Findings from the FHWA Compliance Reports

An examination of the compliance reports filed each quarter with the FHWA allows the reader to examine DBE participation on federally-assisted highway construction and maintenance contracts more closely. The comparison of the SMS to the FHWA data allow further exploration of the similarities and the differences between federally-assisted contracts and state-funds contracts with respect to DBE participation. As with the SMS data, DBE prime contracting participation is far lower than DBE subcontracting participation. DBE prime contracts never exceeded 0.7 percent of total prime dollars during the period. In contrast, DBE subcontracts never fell below 8.1 percent and ranged as high as 15.1 percent in FY90. Further, WBE prime contractors do well compared to MBE prime contractors, while WBE subcontractors do less well than their MBE counterparts. WBE prime contractors won almost 48 percent of all federally-assisted DBE prime contract dollars awarded during the FY85–FY92. In contrast, WBE subcontractors during this period were awarded about 21 percent of all federally-assisted DBE subcontract dollars.

Research Report 980-4 also finds important differences between federally funded contracting and overall departmental contracting. First, DBE participation is higher in federally funded subcontracts than in non-federal DBE subcontracts while DBE prime contract participation in federally funded contracts is much lower than for non-federal DBE prime contracts. Another important difference is that the overall participation of WBEs is lower in federally funded contracts and subcontracts than for contracts overall. Whereas WBE dollars account for about 32 percent of all DBE dollars in the SMS data, they account for only between 20–27

percent in the FHWA data. Hispanic DBEs are the most successful by far as a group, followed by female Anglo DBEs. Hispanic DBEs received more than half of all DBE dollars annually during the period. WBEs in particular have seen their participation rise dramatically over the same period. During FY85 to FY87, for instance, WBE participation never exceeded 15 percent of total DBE participation, while it never fell below 20 percent after FY87. By FY92, the figure stood at 28.8 percent of the total. Other important similarities to the SMS data are that Black-owned DBEs usually ranked third behind Hispanics and Anglo women. Black DBEs have seen their share of total DBE dollars decline over the FY85 to FY92 period. While the share of DBE dollars going to Blacks never fell below 10 percent between FY85 and FY87, it never rose above 10 percent after FY87. Black-owned DBEs are generally followed by Native Americans and Asian/Pacific Islanders, with Pacific Asians usually having greater participation than Asian Indians.

The average federally assisted TxDOT prime contract during the FY85–FY92 period was worth \$2,668,450. In contrast, the average federally assisted DBE prime contract was worth only \$502,290. The average value of DBE prime contracts over the period has varied more than prime contract awards overall. Furthermore, during recent years the average size of DBE prime contracts fell steadily from FY85 until reaching its nadir in FY88 at \$117,627. This was well below average DBE subcontract sizes in that year. Average size has recovered somewhat since FY88, reaching \$728,759 in FY92. Total DBE prime contract dollars on federally assisted awards followed a pattern of decline and recovery over the period similar to that just described for *average* prime contract dollars, while the *number* of DBE prime contract awards fluctuated around a slight upward trend. These two trends combine to show that as total DBE prime contract dollars shrank between FY85 and FY88, TxDOT and its prime contractors tended to make *smaller* awards rather than *fewer* awards. As funding recovered after FY88, average size recovered only partially while the number of awards continued to grow moderately.

The FHWA reports also present information regarding the distribution of DBE contracts across various types of highway construction and maintenance work. This type of information is available only for the number of awards in each category and not for the dollar value of such awards. As such, nothing definitive can be said about which work categories are most lucrative for DBEs. We can define clearly, however, those work areas that have been most frequently encountered by DBEs

working for TxDOT over the years. The reports contain information regarding DBE participation in five major areas of work: (1) professional services, (2) construction, (3) materials and supplies, (4) equipment, and (5) other. In practice, however, almost all DBE participation occurs in construction and professional services. Few awards over the eight year period have been made to DBEs in the area of materials and supplies, and no awards have been made in the “equipment” or “other” categories. Furthermore, construction awards dominate professional service awards for DBEs—although this gap has lessened in recent years. WBEs won no federally assisted professional services contracts during the FY85–FY88 period.

DBE participation, with a few significant exceptions, appears to be fairly broadly distributed across nine different work areas shown on the FHWA compliance reports: grading and drainage, paving, structures/buildings, materials, equipment, trucking, traffic control, landscaping, and “other”. Over the entire FY85–FY92 period the areas of construction work with the highest number of DBE awards were “structures/buildings” and “other.” The same is true for MBEs but not for WBEs. For WBEs the two most frequently awarded areas of work were “traffic control” and “landscaping.” Almost 60 percent of all WBE awards during the period came from these two areas—as contrasted with only 8.9 percent for MBEs. MBE participation was fairly high in “traffic control” and quite low in “landscaping.” Nevertheless, “other” and “structures/buildings” were still important categories for WBEs—ranking third and fourth, respectively, out of nine areas. For MBEs, “grading & drainage,” “paving,” and “trucking” ranked third, fourth, and fifth, respectively. These three categories only accounted for 4–5 percent of WBE awards, however. The categories “materials” and “equipment” had low or non-existent participation for both MBEs and WBEs.

With respect to professional services, contracts involving the acquisition and disposition of right-of-way dominate the number of awards for all three groups—DBE, MBE, and WBE—accounting for over 90 percent of the total. Indeed, all federally assisted professional services contracts let to WBEs during the FY85–FY92 period have been in this category. Second, no professional services contracts have been awarded to any DBEs in the architectural or accounting fields. Finally, no engineering awards at all were made to MBEs in FY87, FY88, or FY89. In other years, the amount ranged from a low of 1 percent to a high of 20 percent.

Findings from the Texas Small Business Assistance Act of 1975 Compliance Reports

This final section of the report presents data from TxDOT's Small Business Assistance Act of 1975 (TSBAA) compliance reports. This widens the analysis of TxDOT spending patterns to encompass procurement areas other than highway contracting and subcontracting. The TSBAA reports cover the FY87 to FY91. They provide information on the number and dollar amount of departmental contract and procurement awards in all major procurement categories, and provide summaries according to small business status and DBE status. The categories covered include maintenance, professional services, commodities and other services, as well as highway construction.

TSBAA data clearly show the overwhelming importance of construction versus other procurement categories when measured according to award dollars. This is evident for overall departmental awards as well as minority and small business awards. According to the reports, spending on construction contracts and subcontracts over the period amounted to over 90 percent of total departmental procurement spending. Construction accounted for almost 89 percent of all procurements with minority-owned businesses and 84 percent of all procurements with small businesses. Furthermore, the average size of construction awards is much higher than for other types of departmental purchasing. The average construction contract during the period was valued at almost \$1.5 million. The average construction subcontract was valued at about \$134,000. In contrast, the average commodities-services purchase was less than \$900.

In stark contrast to small business and overall business participation, the TSBAA reports DBE participation in construction is much higher in subcontracting than in general contracting. This finding reinforces similar observations from other data sets presented in Research Report 980-4 regarding the disproportionate exclusion of DBE firms from general contracting and their consequent strong concentration in subcontracting. After construction, other important procurement areas (in descending order of importance) include maintenance, purchase of services, engineering contracts, and spot purchases. Maintenance spending is the second largest procurement area after construction for all types of businesses—large, small, and DBE. Over \$100 million of spending in the other three areas

occurred during the FY87–FY91 period—approximately 45 percent of all non-construction procurement.

Similar to the other data sets presented in Research Report 980-4, the TSBAA reports show that in the largest procurement categories, the average size of DBE construction awards fell well below comparable non-DBE procurements. The average DBE prime construction contract, for example, was less than 30 percent of the average value of prime construction contracts overall and less than 53 percent of the average value of prime construction contracts awarded to small businesses generally. The TSBAA reports show that DBE awards are smaller than average in the areas of maintenance and general services as well. In the case of professional engineering services, DBE contract awards were equal to the overall average. In the case of spot purchases of commodities, however, DBE averages were higher than overall. The average DBE spot purchase was \$191 compared to \$144 overall and \$130 for small businesses.

SUMMARY OF DBE PARTICIPATION FOR TXDOT HIGHWAY DISTRICTS

Texas, with almost 17 million residents, was the third most populous state in 1990, and is forecast to become second (surpassing New York) before 2000. From a geographic standpoint, Texas is already the second largest state in the nation. Like the heterogeneity of its population, Texas is characterized by great variety of geography, geology, weather and climate, and industry and economy.

Although each one contains about the same number of counties, TxDOT's twenty-four district offices reflect this diversity—from the Gulf Coast to the Trans-Pecos and from the Rio Grande Valley to the Great Plains. These districts differ significantly with respect to such important factors as land area, registered vehicles, and population. For example, the Houston district accounts for less than 3 percent of the state's land area, but contains 21.1 percent of its general population and 21.5 percent of its registered vehicles. The Houston, Dallas, San Antonio, and Fort Worth districts combined account for only 14 percent of the state's land area, but contain 55 percent of both the population and registered vehicles. In contrast, just seven districts contain almost 50 percent of the state's total land area but only 25 percent of the general population. Furthermore, some highway districts contain significantly larger or smaller shares of various racial and ethnic groupings than statewide averages would suggest. The Houston district, for example, contains almost one-

third of the state's black population and two-fifths of the Asian population, although it accounts for less than one-fifth of the Hispanic origin or Non-Hispanic Anglo populations. The Pharr district, on the other hand, contains only 0.09 percent of the black population, although it contains almost 17 percent of the Hispanic population and almost 5 percent of the Anglo population.

Obviously, examining the state's economic and public policy issues on a strictly statewide level would ignore important differences among the various regions of the state. Therefore, Research Report 980-4 contains a district level analysis that provides very specific information on DBE participation at the highway district level. Generally, the data shows that differences in highway contracting and subcontracting dollars awarded across districts are strongly and positively influenced by differences in the overall size of the population—as measured by either people, vehicles, or miles of road. In order to focus the analysis on any remaining influences, such as DBE program operation or discrimination, it is important to recognize and account for the strong influence exerted by these basic population factors.

Prime Contract Awards in the Districts—Number of Awards and Dollar Amounts

There were 1,735 prime highway construction contract awards—totaling almost \$5 billion—let by TxDOT in each of the state's fiscal years FY88 through FY91. Within each district, there are large annual variations in the number of prime awards received. As a percentage of total prime awards, however, each district's annual share was fairly stable during the FY88–FY91 study period. The Houston district awarded the largest number of prime contracts each year during the period, accounting for just under 20 percent of all awards. After Houston, six other districts consistently awarded large numbers of prime contracts during the period: San Antonio, Dallas, Austin, Fort Worth, Corpus Christi, and Pharr. These seven districts represent the largest metropolitan areas in the state, and accounted for almost 60 percent of all prime awards. At the other end of the spectrum, the seven smallest districts, from the standpoint of the number of prime contracts let during the study period, comprised just over 10 percent of total prime awards. In order of increasing size they are Childress, Paris, Lubbock, Brownwood, San Angelo, Amarillo, and El Paso.

This distribution generally holds true for prime contract dollars as well as prime contract awards. Houston, of course, is the most significant district from the standpoint of prime dollars awarded. Houston awarded more than \$1.7 billion in highway contracts during the study period. Houston has awarded annually between 28 percent and 41 percent of all prime dollars during the period. The Dallas district runs a distant second with a total of more than \$485 million awarded during the period. San Antonio ranks a close third with almost \$403 million, and Fort Worth a close fourth with over \$389 million. Together, these four districts account for over 60 percent of all prime contract dollars during the study period. Fewer than 17 percent of the state's highway districts award over 60 percent of the total prime dollars.

Clearly, the outcome of decisions made in the largest of districts, and Houston in particular, is going to have an enormous relative impact on the success of the Department's DBE initiatives. The distribution of prime awards and prime dollars across districts indicates that there is a positive relationship between a district's population size and the number of prime contract awards it receives. There is also an inverse relationship between a district's land area and the number of prime awards it receives. Thus, the districts receiving the largest number of prime awards, tend to receive the fewest awards per capita or per registered vehicle, but receive the most awards per square mile. The opposite applies to smaller districts—they receive the most awards per capita, but the least per square mile. Overall, the population effect strongly dominates the land area effect, but both are important to determining construction spending in a given district.

Turning to DBE prime contract participation at the district level, Research Report 980-4 shows that of the 1,735 prime awards made during the study period, DBEs received 112, or 6.5 percent. Houston, not surprisingly, was the most important district for DBE prime awards during the FY88–91 period, accounting for 26 percent of DBE prime awards. The Pharr district ranked a fairly close second, while the San Antonio and Dallas districts tied for a distant third. As was the case regarding the total number of DBE prime awards, the Pharr district topped the ranking for DBE prime contract dollars letting almost \$21 million in DBE prime dollars—over 13 percent of all prime dollars awarded by the district during the study period. Abilene ranked second, with \$7.5 million awarded—over 11 percent of that district's total prime dollars awarded. Houston and Dallas, each with about

\$6.5 million in prime DBE dollars, ranked third and fourth, respectively. Together, these four districts accounted for more than 50 percent of all DBE prime dollars.

Another way to look at DBE participation across districts is from a relative standpoint. When using relative measures one asks “what share of prime awards do DBE firms receive in each district?” Ranking districts according to this criterion yields results in contrast to those obtained by ranking DBE participation according to the absolute number of prime contracts or contract dollars received in each district.

Some of the state’s most important highway districts rank fairly low when measured by the proportion of their prime dollars being awarded to DBEs. Houston, by far the most influential of all districts, awarded less than one-half of one percent of its prime awards to DBEs. Dallas and San Antonio only awarded about 1 percent each of their prime dollars to DBE contractors. El Paso, Corpus Christi, Houston, and Austin all awarded less than 1 percent each. Austin’s share seems especially low at 0.04 percent. Fort Worth’s share was 0 percent. A similar picture emerges with respect to number of prime contract awards. The Houston district awarded only 8.5 percent its prime awards to DBE firms—ranking it only eighth among the twenty-four. Topping the relative ranking was the Pharr district. Pharr made 23 percent of all its prime awards to DBE firms during the study period. Following Pharr, are Bryan, Paris, Childress, and Abilene. Each of these districts awarded between 12 and 14 percent of their prime contracts to DBE firms during the period. Most of the largest districts fell much farther down the list in relative terms. Dallas, ranked thirteenth, awarded only 5.9 percent of its prime awards to DBEs. San Antonio ranked fourteenth with 5.8 percent, Corpus Christi ranked nineteenth with 2.2 percent, and Austin ranked twentieth with less than 1 percent. Fort Worth, Odessa, Brownwood, and Lubbock all tied for last with 0 percent each. If any of these largest of districts were to improve their DBE prime participation even marginally, it would have a profound impact on the overall prime DBE participation numbers.

DBE firms owned by Anglo females (WBEs) won 65.2 percent of all DBE prime awards during the study period. Almost 58 percent of these awards came from five districts: Houston (15), Bryan (8), Pharr (7), Dallas (6), and San Antonio (6). The distribution of awards is even more concentrated with respect to minority-owned DBE firms (MBEs). We also find even more districts that have made no prime

awards at all to MBEs over the period. Only thirty-nine of 112 awards during the FY88–91 period went to MBE firms—about 35 percent of the total. Houston is, again, the most important district with a total of fourteen MBE prime awards during the period. Pharr ranks a close second with thirteen. Together, these two districts account for almost 70 percent of all MBE prime awards.

TxDOT highway districts let only seven prime contract awards to DBEs owned by blacks, Asian/Pacific Islanders, or Native Americans during the four year study period. Blacks received two awards—one from the Lufkin district in FY88 and one from the Dallas district in FY90. These two contracts together totaled approximately \$1.4 million and were made to different firms (both male-owned). Asian/Pacific Islander-owned DBEs received four prime contracts during the period totaling almost \$1.4 million and were awarded to the same firm (male-owned). Only one award was made in FY91 to a Native American-owned DBE (female-owned) for roughly \$900,000.

Only one district awarded more than 10 percent of its prime dollars to MBEs—Pharr. The Pharr district awarded almost 12 percent of its prime dollars—almost \$19 million—to minority firms. Over 90 percent of these dollars went to Hispanic male-owned firms. After Pharr, the proportion of prime dollars awarded to MBE firms by district diminishes radically. Lufkin, the second-ranked district on this measure, awarded only 1.7 percent of its prime dollars to MBEs. Wichita Falls, number three, awarded only 1.4 percent. The next ten districts awarded less than 1 percent each. Twelve districts awarded nothing at all to MBE firms, including Bryan, Beaumont, and Fort Worth.

Subcontract Awards in the Districts—Number of Awards and Dollar Amounts

TxDOT prime contractors made 7,135 subcontract awards—approximately \$1.16 billion—during the FY88 to FY91 period, an average of almost 1,800 per year. The total number of dollars subcontracted dropped from \$319 million in FY88 to \$254 million in FY91. This represents a decline of more than 20 percent. A similar drop in prime contract dollars awarded by the Department over the same period, however, largely explains the drop in subcontract dollars. The Houston district alone was responsible for 1,958 subcontract awards during the period and accounting for about 27 percent of total subcontract dollars (\$394.1 million). Six more districts were responsible for another 38 percent of the total, or almost 2,694

subcontracts. These are Dallas (\$120.7 million), Fort Worth (\$112.1 million), San Antonio (\$81.1 million), Austin (\$76.6 million), Corpus Christi (\$29.5 million), and Pharr (\$33.1 million). These seven districts correlate precisely with those receiving the most prime contract awards during the same period.

Houston's importance was even stronger for DBE subcontractors, who received a total of \$516.9 million during the period. TxDOT's Houston contractors awarded 39.1 percent of its 1,958 subcontracts to DBEs, amounting to \$201.5 million during the period—39 percent of the DBE subcontract total. The next six most important districts for DBE subcontractors is the same as above except that Fort Worth ranks first while Dallas is second. Prime contractors in these six districts awarded almost 43 percent of all DBE subcontracts during the study period. Fort Worth, Dallas, and San Antonio each awarded around 300 DBE subcontracts; Austin and Corpus Christi, about 200 each; and Pharr, 161. San Antonio, with \$43 million, Dallas, with \$40.9 million, Fort Worth, with \$37.5 million, and Austin, with \$24.4 million, together awarded 28.2 percent of all DBE subcontracts for a total of almost \$146 million. As happened with subcontract dollars overall, these five districts awarded two-thirds of all DBE subcontract dollars.

Statewide, the average DBE subcontract award was \$153,576 during the FY88–FY91 study period. This was about 6 percent smaller than overall average subcontract award size. The average values of DBE subcontracts fluctuated substantially across districts. The Odessa district had the smallest average DBE subcontract award size—\$57,394, or less than 60 percent of Odessa's overall subcontract award size. Other districts with average DBE subcontract award sizes below \$100,000 included (from lowest to highest): Waco, Amarillo, San Angelo, Childress, Brownwood, Pharr, Corpus Christi, Atlanta, and Lufkin. The district with the largest average DBE award was Houston. Houston's average DBE subcontract award size was \$263,116. This is almost 31 percent larger than Houston's overall average subcontract award size. Lubbock also had an average DBE subcontract award size greater than \$200,000. In addition, Tyler, Beaumont, and El Paso had relatively high average DBE subcontract values of between \$175,000 and \$177,000.

Statewide, the average value of WBE subcontract awards is only 54 percent of the overall subcontract award average. In most districts, WBE participation is fueled by the performance of relatively large numbers of contracts at lower than average contract values. The highest average WBE subcontract awards were in the Paris

district. WBE awards in Paris were worth an average of \$157,932. Other districts with relatively high average WBE award sizes include Tyler at \$142,463, and Houston at \$120,030. Pharr had the lowest average WBE subcontract award sizes, for an average of just \$39,311. Other districts with relatively low average WBE award sizes included Yoakum, Corpus Christi, Wichita Falls, and Childress. Average values of MBE subcontracts were higher than for WBEs in most cases. Statewide, the average MBE subcontract award was worth \$230,806—almost 42 percent higher than the overall average subcontract value of \$162,727. Six districts had average MBE subcontract values greater than \$200,000. In descending order they are Dallas, Lubbock, Yoakum, El Paso, Tyler, and Fort Worth. The district with the smallest average value was Brownwood, with \$43,349, followed by Odessa, with \$52,912. Other districts with average values below \$100,000 include in descending order Childress, Amarillo, San Angelo, and Waco.

For Hispanic-owned DBEs, the districts with highest average subcontract award sizes included Beaumont, Houston, and Dallas. Relatively low average awards were recorded in Brownwood, Odessa, Atlanta, Waco, Childress, Lufkin, and San Angelo. For Black-owned DBEs, the districts with highest average subcontract award sizes included Houston, San Antonio, and Bryan. Relatively low average awards were recorded in Brownwood, Paris, El Paso, Yoakum, Odessa, San Angelo, Wichita Falls, Pharr, and Corpus Christi. For Asian and Pacific Islander-owned DBEs, the districts with highest average subcontract award sizes included Houston, Austin, San Antonio, and El Paso. Ten districts made no subcontract awards at such firms. Relatively low average awards were also recorded in Odessa, Lubbock, Waco, and Brownwood. For Native American-owned DBEs, the districts with highest average subcontract award sizes included Houston, Lubbock, Yoakum, Fort Worth, and Tyler. Six districts made no subcontract awards at such firms. Relatively low average awards were also recorded in San Antonio, Beaumont, Bryan, Lufkin, and Amarillo.

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RESEARCH REPORT 980-5: SELECTED RESULTS FROM THE SURVEY OF PRESENTLY AVAILABLE TXDOT HIGHWAY CONSTRUCTION AND MAINTENANCE FIRMS

This report, entitled "Selected Results from the Project 7-980 Survey of Available TxDOT Highway Construction and Maintenance Firms," is Volume V of the seven-volume "Disadvantaged Business Enterprise (DBE) Capacity Study."

The report presents the results of a survey of almost 900 TxDOT construction, maintenance and engineering firms that was conducted in the latter-half of 1993. For this report the research team conceived and designed a set of detailed survey instruments to provide much of the information that is crucial to meeting the new legal standards for race-conscious contracting and purchasing preference programs. The results of this survey allow TxDOT a better understanding of the key characteristics of the businesses they interact with. The surveys provide detailed information on variables such as ownership and control, educational background of the owners, most important areas of work, legal form of firm organization, company size, capacity, and potential. The surveys also provide detailed information regarding TxDOT contracting procedures and practices as well as private sector economic factors that affect the ability of contractors, subcontractors, professional services firms, and vendors to win contracts with the Department. Finally, these surveys elicited detailed information regarding the barriers to participation business owners perceive to be due to discrimination based on their race, ethnicity, gender, or disability.

SURVEY UNIVERSE, FRAMEWORK, AND RESPONSE RATES

The research team sent surveys to 2,870 TxDOT construction contractors and subcontractors in mid-July 1993. Construction is defined as (a) the construction of structures and facilities and (b) the maintenance, repair, and alteration of real property. All of these firms have registered with the Department's construction divisions (D-6, D-14), or the maintenance division (D-18), or both. Thus, the universe consisted of those firms included on one or more of the several specialized Departmental contractor lists published and current as of March 31, 1993. These lists included the following:

1. Prequalified Contractors (compiled by D-6);
2. Bidders Questionnaire Contractors (compiled by D-6);
3. Directory of Disadvantaged Business Enterprises (compiled by D-14);
4. Maintenance bidder list (compiled by D-18).

Using these lists, the research team grouped and coded firms into the following "control groups":

- A. DBE firms appearing in (3) and giving their work category as either "engineering" or "miscellaneous";
- B. DBE firms appearing in (3) and giving any other work category;
- C. "Prequalified" contractors from (1) not listed elsewhere as DBEs;
- D. "Bidders Questionnaire" contractors from (2) not listed elsewhere as DBEs;
- F. Non-MBE/Non-WBE maintenance bidders listed in (4);
- G. MBE/WBE maintenance bidders listed in (4).

Throughout this summary, control groups A through D will be referred to as "construction-oriented" and firms in groups F and G as "maintenance-oriented." Groups A, B, and G are considered to be "DBEs" and groups C, D, and F are considered to be "non-DBEs." Of the DBE control groups, the report considers groups A and B to be formally "certified" construction contractors and subcontractors and group G as informally certified maintenance contractors. The report sometimes refers to DBEs in group A as "professional engineering and related services" firms, those in group B as "construction" DBEs, and those in group G as "maintenance" DBEs.

The survey had a four-part format. The first section requested information regarding the basic economic and financial characteristics of each firm. These questions were designed to ascertain standard measurements of size and capability among firms, for both informational and comparative purposes. The second section was intended for those firms that have performed contracts for TxDOT or subcontracted with TxDOT prime contractors since 1987. A table listing numerous types of costs, procedures, and other potential and general obstacles to contracting was presented. A range of available responses gauged the effect of each entry upon procurement opportunities with TxDOT. These questions were designed to detect differences in perception of the bidding/contacting process amongst various types of TxDOT contractors. A third section of the survey was intended for all firms save publicly held corporations and was aimed at ascertaining the educational and

training backgrounds of business owners in the TxDOT availability pool. The information from this part of the survey allows comparisons among business owners with similar educational backgrounds and also allows for an extensive examination of any existing educational barriers to participation in highway construction. The final section requested information leading to the identification of any type of barrier to participation in TxDOT procurement opportunities that the respondent believed resulted from his or her race, ethnicity, sex, or disability.

Of the 2,870 firms surveyed for this study, 855 were returned for an overall response rate of 29.8 percent. Of this number, 496, or 58.0 percent, indicated they had worked for TxDOT or on TxDOT contracts at least once since 1987. Response rates were higher for the construction-oriented control groups than for the maintenance-oriented control groups. The responses are also slightly more heavily weighted towards DBEs than non-DBEs. DBEs accounted for 48.2 percent of survey respondents, although they constituted only 40.4 percent of the surveyed firms. Non-DBEs, while accounting for 59.6 percent of surveyed firms, accounted for only 51.8 percent of the respondents.

OVERVIEW OF TXDOT CONSTRUCTION AND MAINTENANCE CONTRACTOR POOL

A variety of questions were posed to the TxDOT contractors that participated in the survey. Selected results are presented in the present summary. For a more thorough tabulation the reader should refer to research report 980-5. Results presented here include those for contractor status, work area, legal form of organization, ownership and control, firm age, revenues and employment, and geographic market area.

Contractor Status

Firms were asked whether they usually worked as general construction contractors, construction subcontractors, maintenance contractors, or in some other capacity. The responses demonstrated that the division of the TxDOT availability pool, in the aggregate, is split between firms that identify as primarily general construction contractors (24.6 percent), construction subcontractors (28.7 percent), and maintenance prime contractors (30.2 percent). Another 16.2 percent identified as being equally employed among two or more of these categories. Less than 0.5

percent indicated they were primarily employed in some other capacity. Group C firms were predominantly general construction contractors while group B firms were predominantly construction subcontractors. Groups F and G contain a substantial share of firms that consider themselves construction-oriented rather than maintenance-oriented. Group D firms have a significant presence in all three main areas. This presence is stronger in construction subcontracting and maintenance prime contracting than in general construction contracting, however.

Approximately 42.3 percent of all strictly general construction contractors appear on the Prequalified Contractor listing (group C). An additional 44.5 percent of strictly general construction contractors come from the D-18 maintenance listing (groups F and G). Only 5.7 percent of strictly general construction contractors come from the Bidders Questionnaire listing (group D) and only 7.4 percent come from the Certified DBE Directory (groups A and B). Almost 53 percent of all construction subcontractors come from group B. Other groups with strong construction subcontractor participation include group F, group G, and group D. Only 3.4 percent of strictly construction subcontractors were group C firms. Almost 90 percent of the firms identifying as strictly maintenance prime contractors came from groups F (57.2 percent) and G (32.6 percent). Group D had the next highest share of maintenance contractors (6.1 percent), followed by group B (2.3 percent) and, finally, group C (1.9 percent).

Most Important Work Category

Construction-oriented firms were asked in the survey to indicate their most important work category. Asphalt paving, minor structures and miscellaneous concrete, earthwork, and base/sub-base work were each cited more than 100 times. Concrete paving, major structures, and hauling were all cited more than seventy-five times each. Underground/utility work and landscaping were each cited between fifty and seventy-five times. Fencing, materials supply, traffic control devices, and painting each appears twenty-five to fifty times. Illumination, rest areas, engineering, and truck owner/operator were cited least often as being important areas of work. Overall, the firms responding to this question cited eighteen different work areas a total of 1,180 times for an average of 3.0 work areas each. Over 34 percent listed one area of work exclusively. An additional 33 percent listed only two or three areas of work each. Only about 25 percent listed between

four and seven important work areas. Only about 3 percent listed eight or more distinct areas of work.

Maintenance-oriented firms were asked in the survey to indicate their most important work category. Mowing and landscape maintenance were each cited more than 100 times. Litter pickup, tree trimming/removal, and "other" were each cited between fifty and seventy-five times, while painting structures, concrete repair, guardrail repair, riprap repair, pavement maintenance, and bridge repair appeared fifteen to thirty times each. Cited least often as being important areas of work for the firm were pothole repair, sign maintenance, ditch cleaning, pavement marker repair, and street sweeping. Overall, the firms responding cited sixteen different work areas a total of 585 times for an average of about 2.2 work areas each. Over 43 percent listed one area of work exclusively. Another 35 percent listed only two or three areas of work each. An additional 15 percent listed between four and seven important work areas. Only about 3 percent listed eight or more distinct areas of work.

Legal Form of Organization

Several different legal forms of organization characterize the system of American business enterprise, in Texas as well as in the United States as a whole. Three general forms of organization in particular—the corporation, the partnership, and the individual proprietorship—account for over 99 percent of all business enterprises in the United States. Corporations tend to dominate the business enterprise landscape. Corporations constituted between 59 percent and 74 percent of all firms. Furthermore, corporations generate between 86–94 percent of all employment, 91–96 percent of all payroll, and 90–95 percent of all sales. The next largest grouping of firms is individual, or sole, proprietorships. Proprietorships accounted for between 19–33 percent of all firms in the census, but generated only between 3–11 percent of all employment, 2–6 percent of all payroll, and 2–7 percent of all sales. The third most significant legal form of organization is the partnership. Partnerships accounted for 5–7 percent of all firms, 3–4 percent of all employment, 2–3 percent of all payroll, and 2–3 percent of all sales. The prevalence of the corporate form is above average in the construction industries—and even more so in the heavy construction industries. The business services industry—which includes

engineering services, architectural service, and geotechnical services firms—also shows above average corporate presence.

The legal form of organization of available TxDOT firms conforms reasonably well to national patterns. Over 59 percent of the firms surveyed took the corporate form. Another 35 percent of firms were sole proprietorships, while 6 percent were partnerships. A significant fraction of all corporations were organized as “Subchapter S” or “small business” corporations. Almost 42 percent of firms responding were incorporated as ordinary corporations and 17 percent were incorporated as “Subchapter S” corporations, defined earlier. Very few corporations (less than 2 percent) responding to the survey indicated they were publicly owned. An additional 35 percent of firms were operated as sole proprietorships, and slightly less than 6 percent were partnerships. Rates of incorporation were highest for those firms in group C and lowest for those firms in group G. All groups except C also had substantial proportions of sole proprietorships as well as significant partnership activity. “Subchapter S” corporation status was near 20 percent for control groups A–D but was much lower (between 12 percent and 15 percent) for the groups F and G.

Ownership and Control

When considering the ownership and control of firms by detailed race, ethnicity, and sex composition of ownership, all control groups were included except group A. Group A firms were excluded since no comparable group of non-DBE professional engineering services firms was available to be surveyed. Of the 855 firms surveyed, seven reported that they were publicly owned companies. These firms were excluded from the ownership and control calculations. Of the 848 privately held firms, 45.1 percent were 51 percent or more owned and controlled by Anglo males, and an additional 20.6 percent were owned and controlled by Anglo females. Of all the female-owned firms in the sample, 85.0 percent were Anglo-owned (175/206). Altogether, Anglo-owned and controlled firms made up almost 66 percent of the entire sample. Minority-owned firms accounted for 34.3 percent of the sub-sample (291/848). Together, minority-owned firms and female-owned firms constituted 55.0 percent of the entire sample.

Hispanic-owned firms constituted the largest subgroup of minority-owned firms, accounting for 16.6 percent of all firms in the overall sample. The second

largest subgroup was Black-owned firms, constituting 11.2 percent of firms in the sample. Native American-owned firms were the third largest minority group with 2.8 percent, followed by Asian and Pacific Islander-owned firms with 2.4 percent, and "other" minority-owned firms with 1.3 percent. Male-owned Anglo firms outnumbered female-owned Anglo firms by a ratio of 2.2:1. The corresponding numbers for minority-owned firms are three to four times higher. For example, male-owned Hispanic firms outnumbered female-owned Hispanic firms by a ratio of 9.8:1 while male-owned Black firms outnumbered female-owned Black firms by a ratio of 7.6:1.

Firm Age

Younger firms tend to be smaller firms and vice-versa. Younger and/or smaller firms also tend to go out of business at a higher rate than older and/or larger firms. On the other hand, younger and/or smaller firms tend to grow at a faster rate than their older counterparts, and they also tend to be more innovative on a per employee basis. Previous research also suggests that younger and/or smaller firms create a disproportionately large share of the nation's new jobs each year. All survey participants were asked when their firm was established. The survey found that the oldest firms constituted the largest category in for each group. Approximately 77 percent of group C firms were in this category. For groups D and F the figure was approximately 50 percent. The minority-owned and female-owned control groups (A, B, G) had relatively lower percentages of firms over ten years old than their nonminority counterparts—with figures of 34.8 percent, 40.7 percent, and 32.2 percent, respectively. Overall, 46.5 percent of firms surveyed reported they were more than ten years old.

Although all groups exhibit a similar pattern of increasing concentrations of firms in the older age categories *within any given control group*, the three nonminority groups of firms (C, D, F) all appear to be substantially older than the three minority groups (A, B, G). Consequently, minority-owned firms and female-owned firms will tend to be over represented at the younger end of the age spectrum. Only 4.8 percent of male Anglo-owned firms were less than one year old while 57.9 percent were more than ten years old. In contrast, only 33.7 percent of female Anglo-owned firms, 29.0 percent of Black-owned firms, 42.6 percent of Hispanic-owned firms, 45.0 percent of Asian/Pacific Islander-owned firms, and 41.7 percent of Native

American-owned firms were more than ten years old. Black-owned firms and female-owned firms are relatively younger than Hispanic-owned firms, Asian/Pacific Islander-owned firms, or Native American-owned firms. With the exception of Asian/Pacific Islander-owned firms, male-owned firms are generally older than female-owned firms. These results also hold true when contractor status has been controlled for as well as race, ethnicity, and sex. Over 67.1 percent of Anglo-owned general construction contractors are more than ten years old versus only 55.6 percent for Hispanics and only 23.1 percent for Blacks. Among construction subcontractors, 52.1 percent of Anglo-owned firms are more than ten years old versus only 37.0 percent for Hispanics and 32.3 percent for Blacks. Concerning maintenance prime contractors, 41.7 percent of Anglo-owned firms were more than ten years old compared to 30.4 percent for Hispanics, and 21.7 percent for Blacks.

Revenues and Employment

A number of questions were included in the survey to gauge revenues and employment of the highway construction industry in Texas. All surveyed businesses were asked to indicate the ranges into which their annual revenues and employment fell. Firms were also asked to estimate how their revenues and employment have grown in recent years, and what portion of their revenues were generated by private sector work as opposed to public sector work. Gross revenues and full-time paid employment are two of the most commonly used indicators of firm size. The two measures are usually highly correlated. This means that firms with higher revenues tend to have higher employment, and vice-versa. The age of the firm also tends to be positively correlated with both of these measures of business size. Judged by these two measures, there are vastly more small business enterprises in the United States than large ones. Businesses with more than 500 employees are commonly defined as "large" businesses while those with employment of 20–499 are commonly defined as "small" businesses. Firms with less than 20 employees are considered to be "very small" businesses. For the nation as a whole and over all industries, very small businesses account for 87.2 percent of all firms, small businesses for 12.4 percent, and large businesses for 0.4 percent. In the heavy and highway construction industry, 80.1 percent of all firms nationally are classified very small. An additional 19.6 percent of firms in this industry are classified small while only 0.4 percent are

classified as large. Compared to all firms in all industries nationwide, heavy construction appears to have, on average, about the same number of large firms, significantly more small firms, and fewer very small firms. Overall, surveyed firms were broadly distributed across all revenue ranges—indicating a diverse mixture of large, small, and very small firms. About 13.6 percent of surveyed firms indicated annual revenues were less than \$25,000. An additional 15.4 percent of TxDOT firms had revenues falling in the \$25,000 to \$99,999 range. In the \$100,000 to \$500,000 range, the figure was 25.9 percent. An additional 32.5 percent had annual revenues in the \$500,000 to \$5,000,000 range. Finally, almost 13 percent of TxDOT firms reported gross annual revenues in excess of \$5 million.

The survey shows that group C firms, on average, are substantially larger than their counterparts in other control groups. Of the 101 group C firms responding, all reported gross annual revenues in excess of \$500,000 and 65.4 percent reported revenues in excess of \$5,000,000. Other construction-oriented control groups were not as prevalent in the highest revenue categories. For group B firms, 59.4 percent reported revenues in excess of \$500,000 and only 7.7 percent reported revenues exceeding \$5,000,000. For group D firms, 54.7 percent reported revenues in excess of \$500,000 while only 7.4 percent reported revenues exceeding \$5,000,000. For group A firms, 43.9 percent reported revenues in excess of \$500,000 but less than 1 percent reported revenues exceeding \$5,000,000. Maintenance-oriented firms—DBE and non-DBE alike—are on average smaller than construction-oriented firms. For non-DBE maintenance firms, only 29.0 percent reported revenues in excess of \$500,000 and only 7.4 percent reported revenues exceeding \$5,000,000. For group G firms, only 20.3 percent reported revenues in excess of \$500,000 while only 2.7 percent reported revenues exceeding \$5,000,000. An even larger share of maintenance contractors is concentrated in the lower revenue ranges than construction contractors.

Approximately 16.2 percent of Anglo-owned firms had revenues in excess of \$5 million. An additional 21.7 percent had revenues in the \$1 million to \$5 million range. Only 1.1 percent of Black-owned firms had revenues in excess of \$5 million and only 2.1 percent had revenues between \$1 million and \$5 million. For Hispanics the respective figures are 4.4 percent and 22.8 percent. For Asian/Pacific Islander-Owned firms the respective figures are 5.3 percent and 21.1 percent. For Native American-owned firms the respective figures are 4.2 percent and 41.7 percent. At the other end of the revenue range a similar pattern prevails. Approximately 36.3

percent of Anglo-owned firms had annual gross revenues less than \$200,000. For Blacks the figure is 69.2 percent. For Hispanics the figure is 39.5 percent. For Asian/Pacific Islanders the figure is 36.8 percent. For Native American-owned firms the figure is 20.8 percent.

The second major indicator of firm size is employment. The vast majority of business enterprises employ fewer than 500 persons, and that most employ fewer than twenty persons. Few firms in the TxDOT availability pool had 500 or more employees—consistent with business enterprise nationally. Groups A, D, and G reported no firms at all in this range while groups B, C, and F reported 0.7 percent, 7.9 percent, and 1.1 percent, respectively. Across all control groups only 1.4 percent of firms fell into this category. Small business enterprises accounted for 27.6 percent, and very small businesses for an additional 71.0 percent, of all surveyed firms, for an overall total of 98.6 percent. Group G firms had the highest concentration of very small firms, followed—in order—by groups F, A, B, D, and C. Only 13.8 percent of group C firms were classified as very small. Group C, however, had the highest concentration of small businesses, followed—in order—by groups D, B, A, F, and G. General construction contractors constitute the largest firms. Over 5.8 percent of such firms are classified as large businesses according to their employment figures. Only about 1 percent of maintenance contractors, none of the construction subcontractors, and none of the businesses reporting equal combinations of contractor status categories qualified as large businesses. General contractors had the highest share of small businesses—50.6 percent. This compares to a 9.9 percent small business share for maintenance contractors and a 27.5 percent share for construction subcontractors.

Overall 1.2 percent of firms qualified as large, 27.3 percent as small, and 71.5 percent as very small. The survey found that 1.5 percent of Anglo-owned firms and 2.1 percent of male-owned Anglo firms qualified as large. Almost 1.2 percent of male-owned Black firms qualified as large. None of the other minority-owned firms (with the exception of the “other minority” category) and no female-owned firms of any race or ethnicity (including Anglo) had any firms qualifying as large. Black-owned firms also had the largest share of very small firms, 88.3 percent, versus 77.8 percent for Hispanics, 75.0 percent for Asian and Pacific Islanders, 67.2 percent for Anglos, and 62.5 percent for Native Americans. Native Americans had the largest share of small businesses, 37.5 percent, compared to 31.4 percent for Anglos, 25.0

percent for Asian/Pacific Islanders, 22.2 percent for Hispanics, and only 10.6 percent for Blacks.

Public Sector versus Private Sector as a Source of Contracts

Firms were asked to estimate the percentage of their annual revenue over the prior three years came from public sector contracts versus private sector contracts. The report shows that there appears to be a tendency—on average—for firms in the TxDOT availability pool to be either strongly dependent on the public sector for revenues or strongly dependent on the private sector for revenues. Relatively few firms reported ranges indicating they were substantially dependent on both sectors. This tendency holds, at least roughly, regardless of whether the data are observed by control group, contractor status, race/ethnicity, or sex.

The prequalified construction contractors (group C) stand out strongly for their heavy reliance on the public sector. Fully 70.3 percent of firms in this group reported that public sector contracts or subcontracts provided 75 percent–100 percent of their revenues over the three years prior to the survey. Certified construction DBEs (group B) also exhibited a high degree of reliance on the public sector, but much less than prequalified construction contractors (group C). Approximately 47.5 percent of group B firms relied on the public sector for more than 75 percent of their work. Bidders Questionnaire contractors (group D) rely on the private sector more heavily than do prequalified construction firms (group C) or certified DBE firms (group B). About 23.1 percent of these firms generate more than 75 percent of their work in the private sector. Maintenance-oriented firms are also much less reliant on the public sector than many of their construction-oriented counterparts in the TxDOT availability pool. Only 28.4 percent of group F firms and 21.2 percent of group G firms indicated that the public sector provided more than 75 percent of their businesses in the three years prior to the survey. Overall, the report found that general construction contractors are much more reliant on public sector work than construction subcontractors who, in turn are slightly more reliant on public sector work than maintenance contractors.

Black-owned firms appeared to have the heaviest relative dependence on public sector contracting opportunities. Approximately 31.5 percent of Blacks indicated that the public sector provided more than 75 percent of their businesses in the three years prior to the survey. This compares to a rate of 24.7 percent for

Anglos, 21.3 percent for Hispanics, 20.1 percent for Asian and Pacific Islanders, and 17.4 percent for Native Americans. Only slight differences were found for women versus men. At the other end of the spectrum, significant shares of firms in all ethnic categories also indicated were highly dependent on the private sector.

Geographic Extent of Market

Overall, between 43–45 percent of the firms responding to the survey reported the capacity to serve at least multi-county area (e.g., a particular highway district). An additional 14–15 percent of firms in the survey reported the capacity to serve a regional area (e.g., several contiguous highway districts). An additional 25–28 percent reported they served a statewide or larger market. On average only about 14 percent reported serving only a county-wide or a city-wide market. Prequalified construction contractors are relatively more prevalent in the larger markets. Maintenance contractors were more likely than construction contractors to be limited to a city-wide or county-wide market—DBE maintenance firms even more so. Similar patterns prevailed according to contractor status. General contractors and subcontractors tend to serve larger markets than maintenance contractors.

ECONOMIC IMPACTS ON CONTRACTING WITH TXDOT

Survey respondents were asked to indicate whether they had ever performed work for TxDOT or on TxDOT contracts. Overall, 496 of the 855 firms responding (58.0 percent) answered “yes” to this question. The control group with the highest proportion of “yes” responses was group C—the prequalified construction contractors—with 94.1 percent. Only 5.9 percent of this group reported that they had never worked on TxDOT contracts. Other construction-oriented firms had much lower proportions of “yes” responses than group C firms. About 69.0 percent of group B firms (certified construction-oriented DBEs) and 67.7 percent of group D firms (Bidders Questionnaire contractors) indicated they have worked for TxDOT before. Additionally, about 55.9 percent of group A (certified DBE engineering firms) reported working previously for TxDOT or on TxDOT contracts. Maintenance-oriented firms as a whole have much less prior experience working for the Department. Only 50.7 percent of group F firms and only 34.0 percent of group G firms had worked previously on TxDOT projects. Among maintenance-oriented firms, DBEs appear to have much less prior experience—on average—than non-

DBEs. The survey also found that more general construction contractors have previous experience with TxDOT than construction subcontractors who, in turn, have more experience with TxDOT than maintenance contractors. General contractors indicated having prior experience in 65.3 percent of cases. Construction subcontractors reported prior experience in 58.5 percent of cases. Maintenance contractors reported prior experience with TxDOT in 52.6 percent of cases.

The survey asked firms to identify the most helpful and most harmful economic factors affecting their ability to win work from TxDOT or TxDOT contractors. For prequalified construction contractors (group C), bonding requirements was cited most frequently as being most helpful. Previous dealings with the Department and ease in obtaining price quotes from suppliers were also listed frequently in this regard. Group C firms indicated they enjoyed cost advantages in bonding, supplier relations, financing, other types of insurance, and skilled labor. Group C firms also indicated they enjoyed TxDOT-related advantages with regard to prior experience with the Department, monthly payments, prequalification requirements, and large project size. Bidders Questionnaire firms (group D) listed almost an identical set of helpful factors as the prequalified construction firms—although in slightly different order of importance. The only factor not also identified by group C firms was the monthly payment schedule from TxDOT prime contractor. The only factor not also identified by group D firms was cost of skilled labor. Both reflect the larger proportion of subcontractors in the group D pool than the group C pool.

In contrast to groups C and D—the certified DBE firms (groups A and B) presented a significantly different list of factors that they perceived as helping their ability to obtain TxDOT contracts. Specifically, factors related to the DBE program hold three of the top five positions for both groups. Significant proportions of firms in these two groups also indicated that other DBE program requirements and the race, ethnicity, or sex of the owner(s) of the business were helpful in obtaining contracts. No factors related to the DBE program appeared in the top ten list of most helpful factors for group C or group D firms. Another area in which certified DBEs contrast with construction-oriented non-DBEs is in their opinion of the helpfulness of membership in various trade or professional associations. Group B firms rated these factors fifth and tenth in importance, respectively. Group A firms ranked them fifth and sixth. In contrast, group C firms ranked these two factors eleventh and

fifteenth while group D firms ranked them eleventh and twelfth. Remaining factors listed by groups A and B as helpful have much in common with those identified by firms in groups C and D. For example, all firms indicated that previous dealings with the Department were helpful to obtaining future work.

With respect to harmful economic factors, both prequalified construction contractors and Bidders Questionnaire contractors ranked DBE factors as three of the top five most harmful to their ability to procure contracts with the Department. Both groups had significant proportions of firms that believed their race, ethnicity or sex and/or their inability to certify as a DBE harmed or eliminated their chances to work for TxDOT. These firms also identified several cost-related factors and several TxDOT-related factors that they believed harmed their chances as well. These include retainage on monthly payments, length of notification on bonding, bidding, and insurance requirements, and cost of equipment. Some of the cost-related factors and TxDOT-related factors identified by these group C and D firms as harmful were identified by other businesses in the same groups as helpful. This indicates there is a concentration of firms at one end of the spectrum for which these factors are a disadvantage while there is a concentration at the other end for which they provide an advantage. This type of "bipolar" distribution is not inconsistent with other findings in research report 980-5 regarding, for example, firm age, annual revenues, and full-time employment. Factors that fell into this area included large project size, workers' compensation insurance, and prequalification requirements.

The cost factors most often cited by group B firms as harmful were bonding requirements, equipment costs, workers' compensation insurance, skilled labor costs, and materials costs. For group A the most often cited cost factors were insurance requirements other than bonding and workers' compensation, cost of materials, workers' compensation insurance, and financing. TxDOT-controlled factors cited most often by group B firms as harmful were retainage on monthly payments, length of notification on bonding requirements, large project size, prequalification requirements, and monthly payment schedule from TxDOT primes. For group A firms the factors cited most often were large project size, retainage, length of notice on insurance requirements, and length of notice on bid deadlines. As with group C and D firms, certain factors identified as harmful by some DBEs were identified as helpful by other DBEs. These factors include, for

example, large project size, workers' compensation insurance, and length of notification on insurance requirements.

Maintenance-oriented firms (groups F and G) cited a variety of factors as helpful to their ability to obtain work from the Department. Group F firms cited cost advantages such as ease in obtaining quotes from suppliers, cost of materials, and cost of skilled labor. They also cited TxDOT-related advantages such as length of notice on bid deadlines, monthly payment schedules from TxDOT and TxDOT primes, and prequalification requirements. Interestingly, the race, ethnicity, and/or sex of the owner(s) was frequently cited as helpful by group F firms. Group F firms also frequently cited trade and/or professional association membership as helpful to them in obtaining TxDOT work. For group G firms, previous dealings with TxDOT was cited most frequently. Also cited frequently by group G firms was certification as a DBE and DBE program requirements. Other cost advantages cited by group G firms included ease in obtaining quotes from suppliers, workers' compensation insurance, and other insurance. Other TxDOT-related advantages cited included monthly payment schedule from TxDOT primes, prequalification requirements, and length of notice on bid deadlines. Group G firms also frequently cited membership in professional association—but not trade associations—as helpful to them in obtaining TxDOT work. Both groups cited length of notification on bonding requirements, large project size, length of notification on insurance requirements, and workers' compensation insurance as the most harmful factors to their ability to obtain TxDOT work. Bonding requirements, other insurance requirements, retainage, and equipment costs were also cited by both groups as being harmful. Group F firms also identified DBE program requirements and materials among the top ten most harmful factors. Group G firms also included financing costs and prequalification requirements among the top ten most harmful factors to their business.

PERCEIVED DISCRIMINATORY BARRIERS TO PARTICIPATION IN THE TXDOT CONTRACTING PROCESS

The DBE firms in the survey (control groups A, B, and G) were asked to identify any barriers to their participation in the highway construction industry in Texas that they had met with and which they believed were due primarily to race, ethnicity, gender, or disability. Firms indicated whether a specific barrier was

encountered: (a) never, (b) seldom, (c) occasionally, (d) frequently, or (e) almost always. The report focused only on those barriers cited as occurring either “frequently” or “almost always.” Alleged institutional and/or individual actions inhibiting participation were grouped into three areas: (1) barriers imposed by financial institutions, bonding institutions, professional and/or trade associations, or input suppliers; (2) barriers imposed by TxDOT and/or its employees; and (3) barriers imposed by TxDOT contractors or subcontractors. In each of these areas, a list presented a number of barriers specific to that area. In all instances, substantial numbers of DBE firms alleged the presence of numerous discriminatory barriers. Many of these barriers originated in the financing and bonding sectors of the industry. Private contractors were also identified as imposing discriminatory barriers in numerous instances. TxDOT was identified least often as a major source of barriers.

A ranked listing of most frequently cited barriers to participation is presented above as table 1.1. The “code” appearing next to each barrier indicates the institutional source: financial institutions, bonding agencies, private contractors, or government employees.

Hispanic-owned firms (male and female alike) reported encountering severe discriminatory barriers with greater frequency than Anglo-owned female firms but with less frequency than Black-owned firms. However, the percentages of Black-owned firms reporting that they came across these barriers either “frequently” or “almost always” were dramatically higher than for other types of DBEs. All DBEs reported that the most severe discrimination was issuing from the financial and bonding sectors of the industry.

The barriers cited most frequently as being a severe problem were more often institutional than overt in nature. However, a significant number of allegations of overt discrimination—for example, personal harassment based on ethnicity or sex—did arise. Frequent personal harassment was encountered more often by Blacks than by other types of DBEs. In this survey, 17 percent of Black firms reported frequent personal harassment by personnel of financial or bonding institutions, 14 percent reported frequent personal harassment by private contractors, and 8 percent reported frequent personal harassment by TxDOT personnel.

Table 1.1: Barriers To Participation Resulting Directly From Race, Ethnicity, Or Sex, Control Groups A, B, and G Combined

Code	Description	Rank
1	Excessive Collateral Requirements	1
1	Higher Bonding Rates	2
1	Refusal Of Consideration For Bonding or Insurance	3
1	Requests For Co-Signature	4
3	Bid Shopping/Peddling To Majority Contractors	5
1	Refusal Of Consideration For Bank Loans	6
1	Change Of Loan Application Status After Face To Face Meeting	7
3	Request For Use Of DBE Firm In Name Only To Fulfill DBE Goal	8
1	Disbelief Of Asset Ownership	9
1	Higher Insurance Rates	10
3	Double Standards Of Performance	11
3	Delayed Or Partial Payments	12
2	Withdrawal Of Award After Face-To-Face Meeting	13
2	Late/No Notice Of Bid Opportunities	14
3	Failure To Send Notice Of Subcontracting Opportunities	15
3	Late/Misleading Notices	16
3	Bid Shopping/Peddling After Contract Signed	17
1	Insistence On Cash Payment	18
2	Rejection Of Valid Bids	19
3	Withdrawal Of Award After Face-To-Face Meeting	20
3	Unfair Evaluation, Leading Towards Removal From Job	21
2	Tougher Than Normal Inspections	22
1	Higher Price Quotes From Suppliers	23
1	Inordinate Time Required To Establish Credit	24
2	Misleading Information Regarding Certification	25
3	Arbitrary Termination Of Existing Contract	26
3	Rejection Of Low Bids	27
2	Misleading Information Regarding Bid Requirements	28
1	Inability To Bid On Gov't Contracts Due To Manufacturer Bias	29
2	Changing Bid Criteria	30
1	Personal Harassment	31
3	Personal Harassment	32
2	Refusal To Accept Bids	33
1	Refusal Of Admission To Professional Association	34
1	Refusal Of Admission To Trade Association	35
2	Personal Harassment	36
1	Refusal Of Manufacturer To Do Business	37
1	Withdrawal Of Distribution Agreement After Ethnicity Discovered	38

Source: Lyndon B. Johnson School of Public Affairs, 1994

Legend for "Code"

1. Actions By Financing Institutions, Bonding Institutions, Professional And/Or Trade Associations, Or Suppliers.
2. Actions By Government Employees.
3. Actions By Private Contractors Or Subcontractors

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RESEARCH REPORT 980-6: THE HISTORICAL ROLE OF MINORITIES IN THE ECONOMIC DEVELOPMENT OF TEXAS, WITH SPECIAL ATTENTION TO THE CONSTRUCTION INDUSTRIES

This report, entitled "Historical Overview of the Role of Minorities in the Economic Development of Texas, with a Special Emphasis on the Texas Construction Industry," is Volume VI of the seven-volume "Disadvantaged Business Enterprise (DBE) Capacity Study."

This report serves as an overview of Texas economic history, concentrating on forces shaping access to business opportunities in areas of work relevant to the TxDOT. The analysis provides a base for understanding how economic trends and fluctuations and historical legacies affect the contemporary business situation. More thorough analysis of recent occupational and earnings data, in conjunction with a focus on educational endowments, shall render a complete picture of those factors which have a direct impact upon rates of entrepreneurship across groups, especially in construction-related fields. Recent survey results concerning educational background shall shed light upon current higher education data. Results strengthen the case that historical discrimination has had deleterious economic effects for minorities and women. The historical analysis generates conclusions that could lead to recommendations for combating deeply entrenched barriers to participation.

INTRODUCTION

A society—or any integral part of a society and its institutions—that wishes to construct and implement programs aimed at narrowing disparities between groups and overcoming obstacles erected by past discrimination should have a thorough understanding of the historical forces that shape the present situation. That is, understanding the past is necessary to understanding the present. When the purpose of affirmative action programs is expressly economic, such as expediting the development of minority business communities (or historically underutilized businesses), then it is imperative that the society's economic history be well-known in order to fathom the existence of barriers to entry into the marketplace. Given that Texas has the third largest population of states in the United States, when one of its largest public agencies—the Texas Department of Transportation—needs to

construct a program which will allocate a fair share of contracts to disadvantaged business enterprises, then this agency must operate from an accurate portrayal of the economic history of the state in order to facilitate the implementation of a just and constitutional program. Such a portrayal should identify historical sources of economic and social disadvantages burdening members of a group. With these exigencies in mind, a relatively brief account of the economic history of Texas is presented here, bearing in mind that non-market forces help shape the present as well.

While the focus of the overview is on the role of minorities in the economic development of the state, it begins with an account of the aggregate economic forces operating in Texas throughout its history, but especially in the past century, in order to place the proper perspective upon the experience of minority business enterprise. After an analysis of the major trends including production, population, and urbanization in the state, it concentrates upon some aspects of the experience of African-Americans and Mexican-Americans of Texas. It looks not only at the economic roles played by these groups in the development of Texas, but also at the obstacles to their advancement erected both by social customs and public policy. A special emphasis on the status of minorities in construction and construction related fields is woven into the body of the overview. It emphasizes the slow, uneven march of minorities and women toward improved opportunity over most of the course of Texas history while recognizing both the significant advances made and the difficulties which remain during the civil rights era.

PART ONE: TRENDS AND CHANGES IN THE TEXAS ECONOMY

As an integral part of the Southern regional economy for roughly the first 100 years as a state, Texas experienced a static system of low prices and high levels of production, which made it difficult to raise productivity or develop human capital. Because unskilled industrial positions in the North were often filled by immigrants after the Civil War, the large unskilled labor force in the South, including the emancipated slaves, felt no Northern pull. Further, the South experienced a high rate of natural population increase which constantly augmented the labor force. As a result, techniques and wages in both agriculture and industry remained backward.

Aggregate statistics prove beyond doubt that Texas, and the South in general, experienced a tremendous transition to an urban, industrialized economy from 1933

to 1970 due to the phenomenal stimulus provided by World War II, and by the expansion of defense-related industries and construction after the war. Although agriculture maintained its importance in the Texas economy, manufacturing, lead by the petrochemical industry, resulted in the growth of urban areas like Houston, Beaumont, and Corpus Christi and the significant movement of large numbers of racial and ethnic groups to the cities.

The New Deal's administration of agricultural payments (for non-planting) to planters, combined with the demands of the wartime industry and the push for mechanization following it, saw a definite decline in the agricultural labor industry in Texas, culminating in the outmigration of huge numbers of blacks from the rural areas to the cities and other states. The long term effects of the chain of events put in motion by the federal programs of the 1930s culminated in the integration of the southern regional economy into the national economy, at least by the 1980s, as well as in the rise of per capita living standards. While leaders of southern states have been proud of the advancement of the region, it bears repeating that much of it was propelled by the phenomenal displacement and out-migration of a large segment of its population.

The patterns set in the post-war generation continue into today, with one major exception: manufacturing income and employment is on the decline, in Texas as well as in the nation. While manufacturing nationwide began to slip (relatively) as a source of personal income in the 1960s, Texas manufacturing began a slow relative decline in the 1970s before plummeting from 15.27 percent of state personal income to 11.85 percent in 1990, a level not seen since 1950. Income from the service sector ballooned both nationally and in Texas during the 1980s, contributing nearly a fifth of personal income in both cases.

Highway construction patterns also generally followed national patterns, with employment peaking in the late 1960s, declining precipitously for the next fifteen years to 1982 before recovering from the recessionary trough in 1987. In 1987, highway and bridge construction in Texas was a three billion dollar industry consisting of 821 firms with payrolls, or 6.76 percent of the U.S. total for these firms.

However, the integration of Texas into the national economy has had its limits, with per capita income levels at the same relative position in 1990 as it was in 1970. Income gains for the large minority groups have essentially stagnated. Given that black income was 50 percent of white income in 1960, racial income inequality

remains a long term problem. For Mexican Americans, data problems and undercounts have plagued the Census over the years, precluding a strictly similar comparison.

PART TWO: OCCUPATIONAL DISTRIBUTIONS BEFORE 1970

Systematic treatment of the occupational distributions among minorities, particularly characteristics of minority business owners in Texas, are sporadic at best. It was difficult to obtain information about the characteristics, the extent and location of business enterprises owned by black, Mexican, or a Women-owned business enterprises throughout the history of Texas, we can trace the historical patterns of opportunities facing Texas minorities, allowing us to approximate an accurate portrayal of the role of minorities in the economic development of the state.

African Americans

This section examines briefly what the economic consequences of slavery were (and are) for black Texans. Overall, of course, the vast majority of slaves throughout the South were engaged in the cultivation of cotton. Additionally, many slaves were trained as craftsmen, mainly to work on plantations or to be rented out, while others provided domestic and personal service. However, due to white fear of educated slaves and their insurrectional potential, laws were passed forbidding employment in jobs requiring literacy.

After the Civil War blacks were marginalized in the industrial sector, thus remaining largely unskilled, although the typical white unskilled worker could expect to move up over time. Moreover, mutual animosity deepened as white labor kept black labor out of unions while white employers used blacks as strikebreakers. In the 1930s, newly-imposed seniority systems of unions formalized customary job segregation. The consequent inferior access to on-the-job-training (whether through custom or seniority systems) precluded the acquisition of skills and thus reinforced the disadvantages of inferior education.

Although various manufacturing sectors grew in employment during the 1960's, as did services, blacks were more highly concentrated in declining industries (using old technology) than in higher-growth sectors- another result of job segregation. In addition, the number of blacks working in agriculture decreased,

while domestic service still led as the major employer of urban blacks, followed by manufacturing and construction.

Moreover, broad categories on an industry basis hide occupational disparities. For instance, within an industry African Americans and Mexican Americans were more likely to be at the bottom of the occupational ladder. Few minorities were engineers, architects, or supervisors, in 1960.

Access to public service jobs was minimal as well. Blacks were concentrated in road maintenance and shop work. While blacks regularly applied for both clerical and engineering positions, "not outspoken discrimination" but rather "custom" or "tacit agreement" prevented the hiring of African Americans.

Mirroring a survey of black business enterprise undertaken for Houston in 1954, almost all of the Negro-owned businesses in Texas cities—mostly retail and service—were in the Negro-dominated areas. While white-owned firms did business in predominantly black areas, "past" discrimination limited Negro businessmen to Negro areas.

Having inferior access to capital, most Negro businessmen had to rely upon their own savings for start-up capital and had insufficient funds for operating expenses. The financing opportunities to black business remained stark in 1969. With little business ownership in the largest cities and the utter absence of black-owned businesses in small towns as well, modern prospects for black business enterprise start with a decided disadvantage.

Since apprenticeship was the main avenue to higher-paying skilled jobs in the trades, and even to managerial positions, the policy of racial exclusion followed in the South generally and Texas particularly was extremely deleterious to the appearance of minority craftsmen in the short run and contractors in the long run. Couple this with the long history of racial segregation and the inferior quality of higher education for minorities (let alone vocational training) in Texas, then it is no surprise that there was an *apparent* lack of "qualified" minority contractors.

Mexican Americans

Between 1836 and 1900 Anglos dispossessed and expelled the many established Mexican ranch families through confiscatory raids and dubious legal proceedings, thus ending the traditional ranch society.

The transition from ranch society to commercial farming came in the first two decades of the twentieth century when the profitability of irrigation farming changed the economy of South Texas. Railroads and telephones penetrated deep South Texas in the early 1900s, thus allowing large landowners to divide their land into plots and sell them to farmers from the Midwest.

The newcomers—of which there were thousands—did not heed previous social customs of recognizing class differences among the Tejanos. Ultimately the two cultures erupted in the border troubles of 1915-1917, whereby hundreds if not thousands of Texas Mexicans were killed—mostly by Texas Rangers.

The main occupation among Mexicans southwest of San Antonio was migrant work—temporary wage labor. In the citrus growing regions of the Lower Valley, the labor force was mixed, with most tenants being Anglo. Thus, South Texas was dependent upon Mexican labor.

However, small Anglo farmers and townspeople were fearful of the influence of Mexicans in their society and the tremendous influx of immigration from Mexico. The spread of cotton, sheep, and especially vegetable farming constituted the economic pull upon Mexican labor. Class differences divided Anglos on the question of immigration, but all agreed to exclude Mexicans from industry and relegate them to the fields. Stiff resistance to school integration or even the provision of education followed.

The end of European immigration through restriction elevated Mexicans to primary status as cheap labor for Anglo farmers and capitalists, especially as blacks began to leave rural Texas for the cities and out-of-state following World War I. Often farmer-dominated counties attempted to use labor controls of dubious legality to keep migrants—of whatever nativity—from traveling to northern states.

In larger cities such as San Antonio, Mexican workers before 1941 were primarily unskilled laborers who faced many of the same obstacles as did black workers: namely, exclusionary craft unions, job and school segregation, thus relegating them to mainly unskilled positions. In municipal employment Mexicans could only obtain common laborer positions. Upward mobility at this time was indeed rare.

The industrialization and urbanization trends affecting Texas and stimulated by World War II made their mark upon the Mexican-American community as well. The War attracted thousands of Mexicans to Texas cities. Though the War

temporarily lifted industrial segregation restrictions, after the war segregation was back in full force, provoking the formation of the American G.I. Forum for the promotion of civil rights for Texas Mexicans.

Evidence supports the notion that the first generation of minority workers following the Second World War experienced minimal progress. Moreover, occupational progress for minorities between 1940 and 1960 seems to have been real but slow.

Obstacles facing Mexican workers at the State Employment Service included referral outside of stated occupation, denigration of wartime occupational experience, and overt discrimination. Few employers seemed to be willing to hire Texas Mexican sales and clerical workers. Minority craftsmen were frozen out of most jobs since most craftsmen were hired out of union halls instead of the Employment Service. Overall, Anglos had a much higher chance of being referred to jobs within their trade category.

Nevertheless, fundamental changes have occurred in the employment patterns of Texas Mexicans, just as with African Americans, in the past several decades, especially during the 1960s. Although there was a dramatic drop in agricultural workers, there has been an increase in the number of people described as craftsmen, and over a 300 percent increase in the number of Mexican American professionals and technicians. However, the number of proprietor/managers declined by 40 percent in the same period.

The intergenerational occupational mobility in the 1960s was not matched by income gains. Mexican Americans were taking less well-paid jobs in the white collar occupations. Also, large gains in education levels did not translate into proportional advances within and between occupations. Furthermore, the pace with which Mexican Americans closed the occupational (and income) gaps between 1970 and 1980 slowed considerably.

PART THREE: POST-1970 OCCUPATIONAL DATA AND THE CONSTRUCTION INDUSTRY

This section of research report 980-6 analyzes the occupational data sets drawn from the 1970, 1980, and 1990 editions of *Job Patterns for Minorities and Women in Private Industry*, published by the EEOC. These data sets allow us to discover employment trends across and within industrial categories. We concentrate on the

structure of the construction data, comparing the results with an all-industry average. Additionally, published reports of the Texas Advisory Committee to the U.S. Commission on Civil Rights were consulted, providing a portrait of the state in 1977.

The purpose of analyzing employment data by occupation is simple. Subcontractors have historically been craftsmen who have gone into business, while general contractors (especially since 1950) first obtained engineering degrees, complemented with some amount of business management courses, before entering the field. Thus knowing the levels and trends of minority group employment in the skilled crafts, managerial, and professional occupations furnishes a rough idea of the future availability of minority and women owned firms, especially since white craftsmen have rarely worked for minority contractors. An initial analysis of selected data from the survey of TxDOT construction and maintenance contractors, conducted during the summer of 1993, serves to complement the analysis of EEOC data. The portrait drawn this compliments the discussion of both training and higher education contained in the last section of research report 980-6.

The post-1970 occupational data on the construction industry demonstrates that extreme patterns of occupational segregation continue to exist in the Texas construction industry for minorities and women. Each group has made some progress in certain categories, but for the most part stubborn disparities seem to be closing slowly. For minorities, the crafts remain the main avenue to respectable employment, whereas the situation in white collar occupations remains stifling. For Anglo women, improvement has occurred at the professional level, but craft representation remains near zero. In terms of the generalizations mentioned at the beginning of the section, all groups, especially Anglo women, potentially have better opportunities at entering the construction business from the managerial end, whereas minorities seem to have a better shot at becoming subcontractors. Also, an initial treatment of data from the survey of TxDOT contractors presented in research report 980-5 supports the hypothesis, reflected in the EEOC general construction data, that prime contracting remains the preserve of white males, especially engineers, while subcontracting experiences tough competition among all groups.

PART FOUR: MINORITY EDUCATIONAL OPPORTUNITIES

The major explanatory factor left out to this point has been the question of education. What has been minority access to all levels of education in the history of Texas, what has the quality of education been, and what is the current status quo? Moreover, what has been the access to training in construction-oriented crafts and the penetration of civil engineering programs across the state.? Once these questions are answered, perhaps then the prospects of improved economic opportunities can be fully addressed.

Nowhere do the two main minority groups of Texas share such a common experience as in the history of educational segregation. For this reason, their experiences are presented jointly in research report 980-6, while making note of any differences. In general, access to educational facilities within a state and region notorious for its underinvestment in human capital has been extremely limited during the course of most of the state's history. Improved opportunities were won slowly and only with Herculean effort by members of the minority communities, aided by the more favorable constitutional interpretation of federal courts beginning in the 1950s and by the civil rights legislation of the 1960s. The painful course of the struggle is summarized briefly in order convey the disadvantaged position of minority business enterprise.

Training programs in Texas highway construction have been operative for over 20 years. Historically, vocational training provided by schools has been inadequate for all groups and worse for minorities. While it is difficult to measure the efficacy of the programs sponsored by the Associated General Contractors (AGC), it seems apparent that the number of skilled Hispanic workers continues to grow, possibly creating a large pool of future contractors. Training efforts, taken at face value, are a bright spot for the industry. However the obstacles faced particularly by minorities in the state's educational system remain as dogged as ever. Higher education especially has seen little progress during the 1980s. Moreover, despite a long history of training efforts, the ranks of the better-paid occupations in the Texas construction industry remain Anglo-dominated.

It is sometimes alleged that there is a lack of qualified construction contractors among minority- and women-owned firms. If there is a relative lack of such firms, research report 980-6 suggests that this is at least partially explained by more than 100 years of legal exclusion from educational opportunities—and

consequently job opportunities. These realities stifled any emergence of truly competitive DBE firms at least until the 1970s. Even if one were to assume—contrary to what has been documented in research report 980-6—that access to business and engineering training has been equal over the last twenty-five years, it is our opinion that generations of human and institutional behavior are not so quickly and easily overcome. On a more positive note, one can be encouraged by some of the aggregate statistics presented in research report 980-6 showing that there are reasonably large numbers of qualified minorities in the construction community. A well-researched, implemented, and administered state-funds DBE goals program could focus on further developing the capabilities and capacity of these existing and potential entrepreneurs. Such efforts could only help to enhance minority progress in highway construction in Texas.