

**THE CITY OF PHOENIX  
MINORITY-, WOMEN-OWNED, AND  
SMALL BUSINESS ENTERPRISE  
PROGRAM UPDATE STUDY**

*Final Report*

**SUBMITTED BY:**

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## **1.0 INTRODUCTION**

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## 1.0 INTRODUCTION

In June 2004, the City of Phoenix, Arizona (City), contracted with MGT of America, Inc. (MGT), in association with Fields & Brown, Attorneys at Law, to conduct a minority, women-owned business enterprise, and small business enterprise (M/WBE and SBE) program study update. The study consisted of fact finding to determine whether the minority and women-owned business enterprise (M/WBE) portion of the program had eliminated active discrimination; to determine the effects of past discrimination in City contracting, and to what extent; and to evaluate various options for future program development if discrimination existed

Governmental entities, like the City, have authorized disparity studies in response to the *City of Richmond v. J.A. Croson Co.*<sup>1</sup> decision to determine whether there is a compelling interest for remedial procurement programs. Also, recommendations from the results of the study are used to narrowly tailor any resulting program to specifically address findings of underutilization attributable to unfair business practices.

The City of Phoenix has demonstrated its commitment to advance economic growth of local businesses through the implementation of its M/WBE, DBE (as required by the U.S. Department of Transportation for grant recipients), SBE (a race- and gender-neutral program), and SBE Reserve Contracting Program for goods and supplies.

### 1.1 Objective

- The principal objective of this study was to determine if the City has a “compelling interest” in continuing a program to provide minority- and women-owned businesses (M/WBEs) greater opportunities to participate as the providers of construction, general services, and goods and supplies, and to determine if the evidence supports affirmative action under the applicable legal standards.

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<sup>1</sup> *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989).

This study was based on procurement and procurement-related activity occurring between fiscal years 2000 and 2004, inclusive.

The City intends to use the results of this analysis to establish participation goals and objectives for M/WBEs and SBEs in City procurement activity. This study will provide a factual predicate for narrowly tailored remedies.

## **1.2 Technical Approach**

MGT designed and implemented a methodology to incorporate the guidance provided by the courts. In conducting this study and preparing our recommendations, MGT followed a carefully designed work plan that allowed study team members to fully analyze availability, utilization, and disparity with regard to M/WBE and SBE participation. The final work plan consisted of, but was not limited to, the following major tasks:

- conducting a legal review;
- establishing data parameters and finalizing a work plan;
- reviewing policies, procedures, and programs;
- collecting data;
- conducting market area and utilization analyses;
- determining the availability of qualified firms;
- analyzing the utilization and availability data for disparity and statistical significance;
- conducting a telephone survey, and collecting and analyzing anecdotal information;
- conducting a statistically valid regression analysis;
- conducting disparity analyses of the relevant private sector market;
- identifying race- and gender-neutral and narrowly tailored race- and gender-based remedies;



- reviewing data pertaining to the City's small business size standard<sup>2</sup>; and
- preparing a final report for the study.

### **1.3 Report Organization**

This report is organized into the following sections, which provide the results of our analytical findings as to the utilization and availability of firms to perform work for the City. In addition to this introductory chapter, this report includes:

- Chapter 2.0 – an overview of the controlling legal precedents that impact remedial procurement programs.
- Chapter 3.0 – a review of the City's procurement policies and procedures and an analysis of its M/WBE program and race- and gender-neutral efforts .
- Chapter 4.0 – the methodology used to determine the City's relevant market area and statistical analysis of vendor utilization by the City and the availability of firms for procurement activities.
- Chapter 5.0 – a discussion of the levels of disparity for prime contractors and subcontractors and a review of the multivariate analysis.
- Chapter 6.0 – an analysis of anecdotal data collected from the telephone survey, personal interviews, focus groups, and public hearings.
- Chapter 7.0 – an analysis of the presence of disparity in the private sector and its effect on the ability of firms to win procurement contracts from the City.
- Chapter 8.0 – an analysis of the Small Business Enterprise program and its relative impact on M/WBEs.
- Chapter 9.0 – a summary of the findings and conclusions presented in this report.
- Chapter 10.0 - recommendations and commendations.

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<sup>2</sup> This review was conducted under a separate contract; therefore, it is not included in this report.

## **2.0 LEGAL REVIEW**

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## 2.0 LEGAL REVIEW

### 2.1 Introduction

This chapter provides legal background for the study. The material that follows in this chapter does not constitute legal advice to the City of Phoenix on minority business programs, affirmative action, or any other matter. Instead, the chapter provides a context for the statistical and anecdotal analysis that follows in subsequent chapters of this report.

The Supreme Court decision in *City of Richmond v. J.A. Croson Co.*<sup>1</sup> and later cases have established and applied the Constitutional standards for an affirmative action program.

This chapter identifies and analyzes those decisions, summarizing how courts evaluate the constitutionality of race-specific and gender-specific programs. Decisions of the Ninth Circuit, which includes Arizona, offer the most directly binding authority; but where those decisions leave issues unsettled, the review considers decisions from other circuits.

By way of a preliminary outline, the courts have determined that an affirmative action program involving governmental procurement of goods or services must meet the following standards:

- A remedial race-conscious program is subject to strict judicial scrutiny under the Equal Protection Clause of the Fourteenth Amendment to the United States Constitution.
- Strict scrutiny has two basic components: a compelling governmental interest in the program and narrow tailoring of the program.
- To survive the strict scrutiny standard, a remedial race-conscious program must be based on a compelling governmental interest.
  - “Compelling interest” means the government must prove past or present racial discrimination requiring remedial attention.
  - There must be a specific “strong basis in the evidence” for the compelling governmental interest.

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<sup>1</sup> City of Richmond v. J.A. Croson Co., 488 U.S. 469 (1989).

- Statistical evidence is preferred and possibly necessary as a practical matter; anecdotal evidence is permissible and can offer substantial support, but it probably cannot stand on its own.
- Program(s) designed to address the compelling governmental interest must be narrowly tailored to remedy the identified discrimination.
  - “Narrow tailoring” means the remedy must fit the findings.
  - The evidence showing compelling interest must guide the tailoring very closely.
  - Race-neutral alternatives must be considered first.
- A lesser standard, intermediate judicial scrutiny, applies to programs that establish gender preferences.
  - To survive the intermediate scrutiny standard, the remedial gender-conscious program must serve important governmental objectives and be substantially related to the achievement of those objectives.
  - The evidence does not need to be as strong and the tailoring does not need to be as specific under the lesser standard.

## **2.2 Standards of Review for Race-Specific and Gender-Specific Programs**

### **2.2.1 Race-Specific Programs: The Croson Decision**

*Croson* established the framework for testing the validity of programs based on racial discrimination. In 1983, the Richmond City Council adopted a Minority Business Utilization Plan (the Plan) following a public hearing in which seven citizens testified about historical societal discrimination. In adopting the Plan, the Council also relied on a study indicating that “while the general population of Richmond was 50 percent African American, only 0.67 percent of the city’s prime construction contracts had been awarded to minority businesses in the five-year period from 1978 to 1983.”<sup>2</sup>

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<sup>2</sup> Id. at 479-80.

The evidence before the Council also established that a variety of state and local contractor associations had little or no minority business membership. The Council relied on statements by a Council member whose opinion was that “the general conduct of the construction industry in this area, the state, and around the nation, is one in which race discrimination and exclusion on the basis of race is widespread.”<sup>3</sup> There was, however, no direct evidence of race discrimination on the part of the city in its contracting activities and no evidence that the city’s prime contractors had discriminated against minority-owned subcontractors.<sup>4</sup>

The Plan required the city’s prime contractors to subcontract at least 30 percent of the dollar amount of each contract to one or more minority-owned business enterprises (MBEs). The Plan did not establish any geographic limits for eligibility. Therefore, an otherwise qualified MBE from anywhere in the United States could benefit from the 30 percent set-aside.

J.A. Croson Company, a non-MBE mechanical plumbing and heating contractor, filed a lawsuit against the City of Richmond alleging that the Plan was unconstitutional because it violated the Equal Protection Clause of the Fourteenth Amendment. After a considerable record of litigation and appeals, the Fourth Circuit struck down the Richmond Plan and the Supreme Court affirmed this decision.<sup>5</sup> The Supreme Court determined that strict scrutiny is the appropriate standard of judicial review for MBE programs, so that a race-conscious program must be based on a compelling governmental interest and be narrowly tailored to achieve its objectives. This standard requires a firm evidentiary basis for concluding that the underutilization of minorities is a product of past discrimination.<sup>6</sup>

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<sup>3</sup> Id. at 480.

<sup>4</sup> Id.

<sup>5</sup> Id. at 511.

<sup>6</sup> Id. at 472,

### 2.2.2 Gender-Specific Programs

The Supreme Court has not addressed the specific issue of a gender-based classification in the context of a woman-owned business enterprise (WBE) program. *Croson* was limited to the review of an MBE program. In evaluating gender-based classifications, the Court has used "intermediate scrutiny," a lower standard of review less stringent than the "strict scrutiny" applied to race-based classifications. Intermediate scrutiny requires the government to demonstrate an important governmental objective and develop a program that bears a direct and substantial relation to achieving that objective.<sup>7</sup> Some federal courts have required that classifications based on gender satisfy an "exceedingly persuasive justification" test,<sup>8</sup> and in other contexts the Supreme Court may be inclined to raise the standard of review on matters of gender discrimination.<sup>9</sup> The intermediate scrutiny standard still applies to gender classifications in government contracting legislation.

Several courts have applied intermediate scrutiny to WBE programs and yet have found the programs to be unconstitutional.<sup>10</sup> Nevertheless, in *Coral Construction v. King County*, the Ninth Circuit upheld a WBE program under the intermediate scrutiny standard.<sup>11</sup> Even using intermediate scrutiny, the court in *Coral Construction* noted that some degree of discrimination must be demonstrated in a particular industry before a gender-specific remedy may be instituted in that industry. As the court stated, "The mere recitation of a benign, compensatory purpose will not automatically shield a gender-specific program from constitutional scrutiny."<sup>12</sup>

<sup>7</sup> *Mississippi University for Women v. Hogan*, 458 U.S. 718, 724 (1982); See also *Ensley Branch, NAACP v. Seibels*, 31 F.3d 1548, 1580 (11th Cir. 1994).

<sup>8</sup> *Mississippi University for Women*, 458 U.S. at 724 (1982); *Associated General Contractors of California v. City and County of San Francisco*, 813 F. 2d. 922 (9th Cir. 1987), petition dismissed, 493 U.S. 928 (1989). (AGCC I); *Michigan Road Builders Ass'n., Inc. v. Milliken*, 834 F. 2d. 583 (6th Cir. 1987).

<sup>9</sup> See, e.g., *United States v. Virginia*, 518 U.S. 515 (1996).

<sup>10</sup> See, e.g., *Engineering Contractors Ass'n of South Florida, Inc. v. Dade County*, 122 F.3d 895 (11<sup>th</sup> Cir 1997); *Builders Ass'n of Greater Chicago v. County of Cook*, 256 F.3d 642 (7<sup>th</sup> Cir 2001).

<sup>11</sup> 941 F.2d 910 (9<sup>th</sup> Cir 1991), cert. denied, 502 U.S. 1033 (1992).

<sup>12</sup> *Id.* at 932.

More recently, the Tenth Circuit, on the second appeal in *Concrete Works of Colorado v. City of Denver (Concrete Works IV)*,<sup>13</sup> approved the constitutionality of a WBE program based on evidence comparable to that supporting an MBE program that the court also upheld in the same decision. Unlike *Coral Construction*, then, *Concrete Works IV* offers no independent guidance to the level of evidence required to support a WBE program. Indeed, one court has questioned the concept that it might be easier to establish a WBE program than it is to establish an MBE program.<sup>14</sup>

### **2.2.3 An Overview of the Applicable Case Law**

Unfortunately, neither *Croson* nor *Coral Construction* found a compelling justification for a complete MBE program, and more recent decisions of the Ninth Circuit have not had to address the question squarely. *Croson* found the City of Richmond's evidence to be inadequate as a matter of law, and *Coral Construction* remanded the case for further findings of fact by the district court on the issue of the MBE program. Further, state appellate courts and federal trial courts in Arizona have not published opinions applying *Croson* locally to affirmative action in government contracting. Nevertheless, more recent cases in other federal circuits have addressed applications of the law that were not considered in *Croson* or *Coral Construction*. Thus, it becomes necessary to look to the decisions of other federal circuits to predict what level of evidence might be required to establish an affirmative action program.

The discussion in this review will also attend closely to the most relevant decisions in this exact area of government contracting. Justice O'Connor, distinguishing her majority opinion on affirmative action in law school admissions from her opinions in government contracting cases, wrote:

*Context matters when reviewing race-based governmental action under the Equal Protection Clause. . . . Not every decision influenced by race is*

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<sup>13</sup> 321 F.3d 950 (10<sup>th</sup> Cir. 2003).

<sup>14</sup> *Builders Ass'n of Greater Chicago*, 256 F.3d at 644.

*equally objectionable and strict scrutiny is designed to provide a framework for carefully examining the importance and the sincerity of the reasons advanced by the governmental decisionmaker for the use of race in that particular context.*<sup>15</sup>

The legal standard for affirmative action in government contracting has remained settled since the *Croson* decision, despite several notable developments in the application of that standard. Thus, it is best to follow the authoritative cases related to government contracting and not get drawn into extensive comparisons with other kinds of affirmative action cases.

Further, some caution must apply to relying on opinions of the federal district courts. The district courts make both findings of fact and holdings of law. As to holdings of law, the district courts are ultimately subject to rulings by their circuit courts. As to findings of fact, their decisions depend heavily on the precise record before them—in these cases frequently including matters such as evaluations of the credibility and expertise of witnesses. Such findings are not binding precedents outside their districts, even if they may indicate the kind of evidence and arguments that might succeed elsewhere. Since there are no published opinions of the District of Arizona applying *Croson* principles to M/WBEs in the contracting industry, reference to district court opinions will be carefully limited in this review.

Finally, the ways in which municipalities participate in national DBE programs is a specialized issue quite distinct from that of supporting municipal programs, even if the same kinds of evidence and same levels of review apply. In *Adarand Constructors, Inc. v. Peña*,<sup>16</sup> the Supreme Court did decide that federal DBE programs should be examined by the same strict scrutiny standard that *Croson* mandated for state and local programs. Nevertheless, cases considering national DBE programs have many important distinctions from cases

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<sup>15</sup> *Grutter*, 539 U.S. at 327.

<sup>16</sup> *Adarand Constructors, Inc. v. Peña*, 515 U.S. 200 (1995).



considering municipal programs, particularly when it comes to finding a compelling governmental interest.<sup>17</sup> The national DBE cases have somewhat more application in determining whether a local program is narrowly tailored, to be discussed in Section 2.6 below.

Thus, the majority of this review will be based on decisions of the federal circuit courts applying *Croson* to city or county programs designed to increase participation by M/WBEs in government contracting. That is not a large body of case law. While other cases are useful as to particular points, only three circuit court cases have reviewed strictly local M/WBE programs and given clear, specific, and binding guidance about the adequacy of a complete factual record including thorough, local disparity studies with at least some statistical analysis. Further, in one of the three directly applicable circuit court cases, the Third Circuit evaded the issue of compelling justification after lengthy discussion, holding that the Philadelphia M/WBE program was unconstitutional because the plan was not narrowly tailored.<sup>18</sup>

Ultimately, only two circuit court decisions since *Croson* have passed definitively on thorough, strictly local disparity studies: *Engineering Contractors Association of South Florida, Inc.*,<sup>19</sup> and *Concrete Works IV*.<sup>20</sup> In *Engineering Contractors*, the Eleventh Circuit ultimately upheld the district court finding that Dade County's disparity studies were not adequate to support an M/WBE program, at least in the face of rebuttal evidence.<sup>21</sup> By contrast, in *Concrete Works IV* the Tenth Circuit, after holding that the district court had used an improper standard for weighing the evidence, went on to evaluate the evidence and

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<sup>17</sup> See, e.g., *Adarand v. Slater*, 228 F.3d 1147 (10<sup>th</sup> Cir. 2000), cert. granted in part sub nom. *Adarand Constructors, Inc. v. Mineta*, 532 U.S. 941 (2001); cert. dismissed as improvidently granted, 534 U.S. 103 (2001); *Sherbrooke Turf v. Minnesota D.O.T.*, 345 F.3d 963 (8<sup>th</sup> Cir. 2003).

<sup>18</sup> *Contractors Association of Eastern Pennsylvania, Inc.*, 91 F.3d at 605.

<sup>19</sup> 122 F.3d 895.

<sup>20</sup> 321 F.3d 950.

<sup>21</sup> Compare *Cone Corp. v. Hillsborough County*, 908 F.2d 908 (11<sup>th</sup> Cir. 1990), an earlier decision of the Eleventh Circuit reversing summary judgment against an MBE program where more limited statistical evidence was found adequate to require a trial on the merits in the face of a relatively weak challenge.

determine that it was adequate as a matter of law to establish a compelling justification for Denver's program. The Supreme Court refused to hear the appeal in *Concrete Works IV*,<sup>22</sup> which refusal in itself has no precedential effect. The dissent to that denial, written by Justice Scalia with the Chief Justice joining, argues that these cases may mark a split in approach among the circuits that will need to be reconciled. While that may be so, the discussion of the issues below will reveal that for the most part the distinctions among these key cases are mostly matters related to the thoroughness of the factual record. On the whole, the cases provide fairly specific advice for conducting disparity studies and using them to implement affirmative action programs.

### **2.3 To Withstand Strict Scrutiny an MBE Program Must be Based on Thorough Evidence Showing a Compelling Governmental Interest in Remediating Discrimination**

For government contracting programs, courts have yet to find a compelling governmental interest other than remedying discrimination in the relevant marketplace. This result flows from settled law:

*In practice, the interest that is alleged in support of racial preferences is almost always the same—remediating past or present discrimination. That interest is widely accepted as compelling. . . . [T]he true test of an affirmative action program is usually not the nature of the government's interest, but rather the adequacy of the evidence of discrimination offered to show that interest.*<sup>23</sup>

The recent holding that other compelling interests may support affirmative action does not yet appear to have any application outside academic admissions cases.<sup>24</sup>

*Croson* identified two necessary factors for establishing racial discrimination sufficiently to demonstrate a compelling governmental interest in establishing an M/WBE

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<sup>22</sup> Case No. 02-1673, Nov. 17, 2003.

<sup>23</sup> *Engineering Contractors Ass'n of South Florida, Inc.*, 122 F.3d at 906 (citing *Ensley Branch NAACP v. Seibels*, 31 F.3d 1548, 1564 (11<sup>th</sup> Cir. 1994) (citations and internal quotation marks omitted)).

<sup>24</sup> *Grutter v. Bollinger*, 539 U.S. 306 (2003).

program. First, there needs to be identified discrimination in the relevant market.<sup>25</sup> Second, “the governmental actor enacting the set-aside program must have somehow perpetuated the discrimination to be remedied by the program,”<sup>26</sup> either actively or at least passively with “the infusion of tax dollars into a discriminatory industry.”<sup>27</sup>

Although the Supreme Court in *Croson* did not specifically define the methodology that should be used to establish the evidentiary basis required by strict scrutiny, the Court did outline governing principles. Lower courts have expanded the Supreme Court’s *Croson* guidelines and have applied or distinguished these principles when asked to decide the constitutionality of state, county, and city programs that seek to enhance opportunities for minorities and women. The applications of the *Croson* standard increasingly require very thorough disparity studies.

#### **2.4 Sufficiently Strong Evidence of Significant Statistical Disparities Between Qualified Minorities Available and Minorities Utilized Will Satisfy Strict Scrutiny and Justify a Narrowly Tailored M/WBE Program**

The Supreme Court in *Croson* stated that “where gross statistical disparities can be shown, they alone in a proper case may constitute *prima facie* proof of a pattern or practice of discrimination.”<sup>28</sup> But the statistics must go well beyond comparing the rate of minority presence in the general population to the rate of prime construction contracts awarded to MBEs. The Court in *Croson* objected to such a comparison, indicating that the proper statistical evaluation would compare the percentage of qualified MBEs in the relevant market to the percentage of total municipal construction dollars awarded to them.<sup>29</sup>

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<sup>25</sup> *Croson*, 488 U.S. at 492, 509-10.

<sup>26</sup> *Coral Construction*, 941 F.2d at 918.

<sup>27</sup> *Id.* at 922.

<sup>28</sup> *Croson*, 488 U.S. at 501, quoting *Hazelwood School Division v. United States*, 433 U.S. 299, 307-308 (1977).

<sup>29</sup> *Id.* at 501.

To meet this more precise requirement, courts have accepted the use of a disparity index.<sup>30</sup> The Supreme Court in *Croson* recognized statistical measures of disparity that compared the number of qualified and available M/WBEs to the rate of municipal construction dollars actually awarded to M/WBEs in order to demonstrate discrimination in a local construction industry.<sup>31</sup> The Ninth Circuit has stated, “In our recent decision [*Coral Construction*] we emphasized that such statistical disparities are ‘an invaluable tool’ in demonstrating the discrimination necessary to establish a compelling interest.”<sup>32</sup>

#### **2.4.1 Determining Availability**

To perform a proper disparity analysis, the government must determine “availability”—the number of qualified minority contractors willing and able to perform a particular service for the municipality. In *Croson*, the Court stated:

*Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality’s prime contractors, an inference of discriminatory exclusion could arise.*<sup>33</sup>

An accurate determination of availability also permits the government to meet the requirement that it “determine the precise scope of the injury it seeks to remedy” by its program.<sup>34</sup> Following *Croson*’s statements on availability, lower courts have considered how legislative bodies may determine the precise scope of the injury sought to be remedied by an MBE program. Availability statistics must be collected accurately and evaluated carefully. If the availability determination is too narrow, potential discrimination might be understated or dismissed as not significant enough to justify an affirmative action program. If the availability determination is too broad, disparities would be exaggerated, threatening the ability of the

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<sup>30</sup> See e.g., *Engineering Contractors Ass’n of South Florida, Inc.*, 122 F.3d at 914; *Concrete Works IV*, 321 F.3d at 964-69.

<sup>31</sup> *Croson*, 488 U.S. at 503-504.

<sup>32</sup> *Associated General Contractors of California, Inc. v. Coalition*, 950 F.2d 1401 (9th Cir. 1991) (AGCC II) (Citing *Coral Construction*, 941 F.2d at 918; see also, *Croson*, 488 U.S. at 509).

<sup>33</sup> *Croson*, 488 U.S. at 509 (emphasis added).

<sup>34</sup> *Id.*, 488 U.S. at 498.

study to withstand rebuttal. Nevertheless, the federal courts have not provided clear guidance on the best data sources or techniques for measuring M/WBE availability.

Different forms of data used to measure availability give rise to particular controversies. Census data have the benefit of being accessible, comprehensive, and objective in measuring availability. In *Contractors Association of Eastern Pennsylvania, Inc.*, the Third Circuit, while noting some of the limitations of census data, acknowledged that census data could be of some value in disparity studies. In that case, the City of Philadelphia's consultant calculated a disparity using data showing the total amount of contract dollars awarded by the city, the amount that went to MBEs, and the number of African American construction firms. The consultant combined these data with data from the Census Bureau on the number of construction firms in the Philadelphia Standard Metropolitan Statistical Area.<sup>35</sup> Despite the district court's reservations about mixing data sources, the Third Circuit appeared prepared to accept such data had it ruled on the showing of a compelling interest.

At least one commentator has suggested the use of bidder data to measure M/WBE availability,<sup>36</sup> but *Croson* does not require the use of bidder data to determine availability. In *Concrete Works*, in the context of the plaintiffs' complaint that the City of Denver had not used such information, the Tenth Circuit noted that bid information also has its limits. Firms that bid may not be qualified or able, and firms that do not bid may be qualified and able to undertake agency contracts.<sup>37</sup>

Moreover, not all contracts are let by competitive bids. Thus, there can be greater advantages in the use of vendor data, which is determined by identifying MBEs that have actually performed work for the governmental entity or that have expressed an interest in securing contracts by affirmatively registering with a local agency. Vendor data exclude

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<sup>35</sup> *Contractors Association of Eastern Pennsylvania, Inc.*, 91 F.3d at 604.

<sup>36</sup> G. LaNoe, "Who Counts? Determining the Availability of Minority Businesses for Contracting After *Croson*," 21 *Harvard Journal of Law and Public Policy* 793, 833 (1998).

<sup>37</sup> *Concrete Works II*, 36 F.3d at 89-90; *Concrete Works IV*, 321 F.3d at 983-84.

firms that lack ability or interest to provide goods or services to the governmental entity, while including firms that seek public contracting opportunities other than contracts that are competitively bid.

#### **2.4.2 Racial Classifications**

In determining availability, choosing the appropriate racial groups to consider becomes an important threshold interest.<sup>38</sup> In *Croson*, the Supreme Court criticized the City of Richmond's inclusion of "Spanish-speaking, Oriental, Indian, Eskimo, or Aleut persons" in the city's affirmative action program.<sup>39</sup> These groups had not previously participated in city contracting, and "the random inclusion of racial groups that, as a practical matter, may never have suffered from discrimination in the construction industry in Richmond suggests that perhaps the city's purpose was not in fact to remedy past discrimination."<sup>40</sup> To evaluate availability properly, data must be gathered for each racial group in the marketplace. The Federal Circuit has also required that evidence as to the inclusion of particular groups must be kept reasonably current.<sup>41</sup>

#### **2.4.3 Relevant Market Area**

Another central issue in availability analysis is the definition of the relevant market area. Specifically, the question is whether the relevant market area should be defined as the area from which a specific percentage of purchases is made, the area in which a specific percentage of willing and able contractors may be located, or the area determined by a fixed geopolitical boundary. If the relevant market area is not properly defined, it can artificially inflate or deflate M/WBE availability.

The Supreme Court has not yet established how the relevant market area should be defined, but some circuit courts have done so, including the Tenth Circuit in *Concrete Works*

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<sup>38</sup> Racial groups, as the term is used herein, include both racial and ethnic categories.

<sup>39</sup> *Id.*, 488 U.S. at 506.

<sup>40</sup> *Id.*

<sup>41</sup> *Rothe*, 262 F.3d at 1323.

*II*, the first appeal in the City of Denver litigation.<sup>42</sup> Concrete Works of Colorado, a non-M/WBE construction company, argued that *Croson* precluded consideration of discrimination evidence from the six-county Denver Metropolitan Statistical Area (MSA), so that Denver should use data only from within the City and County of Denver. The Tenth Circuit, interpreting *Croson*, concluded, “The relevant area in which to measure discrimination . . . is the local construction market, but that is not necessarily confined by jurisdictional boundaries.”<sup>43</sup> The court further stated:

*It is important that the pertinent data closely relate to the jurisdictional area of the municipality whose program we scrutinize, but here Denver’s contracting activity, insofar as construction work is concerned, is closely related to the Denver MSA.*<sup>44</sup>

The Tenth Circuit ruled that over 80 percent of Denver Department of Public Works construction and design contracts were awarded to firms located within the Denver MSA; therefore, the appropriate market area should be the Denver MSA, not the City and County of Denver alone.<sup>45</sup> Accordingly, data from the Denver MSA were “adequately particularized for strict scrutiny purposes.”<sup>46</sup> The current study is using an area that includes 75 percent or more of the Phoenix contracts.

#### **2.4.4 Firm Qualifications**

Another availability consideration is whether M/WBE firms are qualified to perform the required services. In *Croson*, the Supreme Court noted that although gross statistical disparities may demonstrate *prima facie* proof of discrimination, “when special qualifications are required to fill particular jobs, comparisons to the general population (rather than to the smaller group of individuals who possess the necessary qualifications) may have little

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<sup>42</sup> *Concrete Works IV*, 36 F.3d at 1520.

<sup>43</sup> *Id.*

<sup>44</sup> *Id.*

<sup>45</sup> *Id.*

<sup>46</sup> *Id.*

probative value.”<sup>47</sup> The Court, however, did not define the test for determining whether a firm is qualified.

Considering firm qualifications is important not only to assess whether M/WBEs in the relevant market area can provide the goods and services required, but also to ensure proper comparison between the number of qualified M/WBEs and the total number of similarly qualified contractors in the marketplace.<sup>48</sup> In short, proper comparisons ensure the required integrity and specificity of the statistical analysis. For instance, courts have specifically ruled that the government must examine prime contractors and subcontractors separately when the M/WBE program is aimed primarily at one or the other.<sup>49</sup>

#### **2.4.5 Willingness**

*Croson* requires that an "available" firm must not only be qualified but also be willing to provide the required services. In this context, it can be difficult to determine whether a business is willing. Courts have approved including businesses in the availability pool that may not be on the government's certification list. In *Concrete Works II*, Denver's availability analysis indicated that while most MBEs and WBEs had never participated in city contracts, "almost all firms contacted indicated that they were interested in municipal work."<sup>50</sup> In *Contractors Association of Eastern Pennsylvania, Inc.*, the Third Circuit explained, "In the absence of some reason to believe otherwise, one can normally assume that participants in a market with the ability to undertake gainful work will be 'willing' to undertake it."<sup>51</sup> The court went on to note:

*Past discrimination in a marketplace may provide reason to believe the minorities who would otherwise be willing are discouraged from trying to secure the work. . . . [I]f there has been discrimination in City contracting, it is to be expected that African American firms may be discouraged from applying, and the low numbers [of African American firms seeking to*

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<sup>47</sup> *Croson*, 488 U.S. at 501, citing *Hazelwood School Dist. v. United States*, 433 U.S. 299, 388, n.13 (1977).

<sup>48</sup> *Hazelwood School Dist.*, 433 U.S. 299.

<sup>49</sup> *Scott v. City of Jackson*, 199 F.3d 206, 218 (1999); *Contractors Association.*, 91 F.3d at 603.

<sup>50</sup> *Concrete Works II*, 36 F.3d at 1529.

<sup>51</sup> *Contractors Association of Eastern Pennsylvania, Inc.*, 91 F.3d at 603.



*prequalify for City-funded contracts] may tend to corroborate the existence of discrimination rather than belie it.<sup>52</sup>*

Even so, the strongest possible disparity study would also present information about the willingness of M/WBEs to perform the required services.

#### **2.4.6 Ability**

Another availability consideration is whether the firms being considered are able to perform a particular service. Those who challenge affirmative action often question whether M/WBE firms have the “capacity” to perform particular services.

The Eleventh Circuit accepted a series of arguments that firm size has a strong impact on “ability” to enter contracts, that M/WBE firms tend to be smaller, and that this smaller size, not discrimination, explains the resulting disparity.<sup>53</sup> By contrast, the Tenth Circuit in *Concrete Works II and IV* recognized the shortcomings of this treatment of firm size.<sup>54</sup> *Concrete Works IV* noted that the small size of such firms can itself be a result of discrimination.<sup>55</sup> The Tenth Circuit acknowledged the City of Denver’s argument that a small construction firm’s precise capacity can be highly elastic.<sup>56</sup> Under this view, the relevance of firm size may be somewhat diminished. Further, the Eleventh Circuit was dealing with a statute which itself limited remedies to M/WBEs that were smaller firms by definition.<sup>57</sup>

Nevertheless, any disparity study should address the issue of firm size as it affects capacity. It would currently seem imperative to perform regression analysis adjusting for the size of contracting businesses and to investigate further should the regression for size—or any other factors other than discrimination—seem to explain the disparities.

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<sup>52</sup> Id. at 603-04.

<sup>53</sup> Id. at 917-18, 924.

<sup>54</sup> *Concrete Works II*, 36 F.3d at 1528-29; *Concrete Works IV*, 321 F.3d at 980-92.

<sup>55</sup> *Concrete Works IV*, 321 F.3d at 980-84.

<sup>56</sup> *Concrete Works IV*, 321 F.3d at 981

<sup>57</sup> *Engineering Contractors Ass’n of South Florida, Inc.*, 122 F.3d at 917.

#### **2.4.7 Statistical Evidence of Discrimination in Disparity Studies**

While courts have indicated that anecdotal evidence may suffice without statistical evidence, no case without statistical evidence has been given serious consideration by any circuit court. In practical effect, courts require statistical evidence. Further, the statistical evidence needs to be held to appropriate professional standards.<sup>58</sup> For instance, the Eleventh Circuit in the Dade County case noted that disparity indices could be discounted by proper analysis of standard deviation.<sup>59</sup> Further, the interpretations of the studies must not assume discrimination has caused the disparities, but must account for alternative explanations of the statistical patterns.<sup>60</sup> The Third Circuit also indicated that statistics about prime contracting disparity had little if any weight when the eventual M/WBE program offered its remedies solely to subcontractors.<sup>61</sup>

The Eleventh Circuit addressed the role of statistical significance in assessing levels of disparity. Generally, disparity indices of 80 percent or higher—indicating close to full participation—are not considered significant.<sup>62</sup> The court referenced the Equal Employment Opportunity Commission’s disparate impact guidelines, which establish the 80 percent test as the threshold for determining a *prima facie* case of discrimination.<sup>63</sup> According to the Eleventh Circuit, no circuit that has explicitly endorsed using disparity indices has held that an index of 80 percent or greater is probative of discrimination, but they have held that indices below 80 percent indicate “significant disparities.”<sup>64</sup> The current study is using an index of 80 percent as the threshold for significant disparity.

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<sup>58</sup> *Contractors Association of Eastern Pennsylvania, Inc.*, 91 F.3d at 599-601.

<sup>59</sup> *Id.* at 910-17.

<sup>60</sup> *Id.* at 922.

<sup>61</sup> *Id.* at 599.

<sup>62</sup> *Engineering Contractors Ass’n of South Florida, Inc.*, 122 F.3d at 914.

<sup>63</sup> *Id.* at 914 (citing 29 C.F.R. § 1607.4D concerning the disparate impact guidelines and threshold used in employment cases).

<sup>64</sup> *Engineering Contractors Ass’n of South Florida, Inc.*, 122 F.3d at 914 (referencing the first appeal in *Contractors Ass’n of Eastern Pennsylvania, Inc.*, 6 F.3d at 1005, crediting disparity index of 4 percent; and *Concrete Works II*, 36 F.3d at 1524, crediting disparity indices ranging from 0 percent to 3.8 percent).

In support of the use of standard deviation analyses to test the statistical significance of disparity indices, the Eleventh Circuit observed that “social scientists consider a finding of two standard deviations significant, meaning there is about one chance in 20 that the explanation for the deviation could be random and the deviation must be accounted for by some other factor than chance.”<sup>65</sup> With standard deviation analyses, the reviewer can determine whether the disparities are substantial or statistically significant, lending further statistical support to a finding of discrimination. On the other hand, if such analysis can account for the apparent disparity, the study will have little if any weight as evidence of discrimination.

#### **2.4.8 Anecdotal Evidence of Discrimination in Disparity Studies**

Most disparity studies present anecdotal evidence along with statistical data. The Supreme Court in *Croson* discussed the relevance of anecdotal evidence and explained: “Evidence of a pattern of individual discriminatory acts can, if supported by appropriate statistical proof, lend support to a local government’s determination that broader remedial relief is justified.”<sup>66</sup> Although *Croson* did not expressly consider the form or level of specificity required for anecdotal evidence, the Ninth Circuit has addressed both issues.

Regarding the appropriate form of anecdotal evidence, the Ninth Circuit in *Coral Construction* noted that the record provided by King County was “considerably more extensive than that compiled by the Richmond City Council in *Croson*.”<sup>67</sup> The King County record contained affidavits of at least 57 minority or female contractors, each of whom complained in varying degrees of specificity about discrimination within the local construction industry. The *Coral Construction* court stated that the M/WBE affidavits “reflected a broad

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<sup>65</sup> *Engineering Contractors Ass’n of South Florida, Inc.*, 122 F.3d at 914 (citing *Peightal v. Metropolitan Dade County*, 26 F.3d 1545, 1556 n.16 (11<sup>th</sup> Cir. 1994) (quoting *Waisome v. Port Authority*, 948 F.2d 1370, 1376 (2d Cir. 1991)).

<sup>66</sup> *Croson*, 488 U.S. at 509.

<sup>67</sup> *Coral Construction*, 941 F.2d at 917.

spectrum of the contracting community" and the affidavits "certainly suggested that ongoing discrimination may be occurring in much of the King County business community."<sup>68</sup>

In *AGCC II*, the Ninth Circuit discussed the specificity of anecdotal evidence required by *Croson*.<sup>69</sup> Seeking a preliminary injunction, the contractors contended that the evidence presented by the City of San Francisco lacked the specificity required by both an earlier appeal in that case<sup>70</sup> and by *Croson*. The court held that the city's findings were based on substantially more evidence than the anecdotes in the two prior cases, and "they [were] clearly based upon dozens of specific instances of discrimination that are laid out with particularity in the record, as well as significant statistical disparities in the award of contracts."<sup>71</sup>

The court also ruled that the city was under no burden to identify specific practices or policies that were discriminatory.<sup>72</sup> Reiterating the city's perspective, the court stated that the city "must simply demonstrate the existence of past discrimination with specificity; there is no requirement that the legislative findings specifically detail each and every instance that the legislative body had relied upon in support of its decision that affirmative action is necessary."<sup>73</sup>

Not only have courts found that a municipality does not have to specifically identify all the discriminatory practices impeding M/WBE utilization, the Tenth Circuit in *Concrete Works IV* also held that anecdotal evidence collected by a municipality did not have to be verified.

The Court stated:

*There is no merit to the [plaintiff's] argument that witnesses' accounts must be verified to provide support for Denver's burden. Anecdotal evidence is nothing more than a witness' narrative of an incident told from the witness' perspective and including the witness' perceptions...Denver was not*

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<sup>68</sup> Id. at 917-18.

<sup>69</sup> *AGCC II*, 950 F.2d at 1414.

<sup>70</sup> *AGCC I*, 813 F.2d 922.

<sup>71</sup> *AGCC II*, 950 F.2d. at 1416. This evidence came from ten public hearings and "numerous written submissions from the public."

<sup>72</sup> Id. at 1410.

<sup>73</sup> Id. at 1416.

*required to present corroborating evidence and [the plaintiff] was free to present its own witnesses to either refute the incidents described by Denver's witnesses or to relate their own perceptions on discrimination in the Denver construction industry.*<sup>74</sup>

Lower courts have relied on anecdotal evidence to demonstrate the existence of past and present discrimination. Both the Ninth and Tenth Circuits (e.g., in *AGCC II* and *Concrete Works IV*) have indicated that while anecdotal evidence alone is generally not sufficient to prove discrimination, the combination of specific incidents of discrimination in conjunction with significant statistical disparities provides a strong basis in evidence for establishing discrimination sufficiently to justify a narrowly tailored race-conscious and gender-conscious program.

In *Coral Construction*, the Ninth Circuit addressed the use of anecdotal evidence alone to prove discrimination. Although King County's anecdotal evidence was extensive, the court noted the absence in the record of any statistical data in support of the program. Additionally, the court stated, "While anecdotal evidence may suffice to prove individual claims of discrimination, rarely, if ever, can such evidence show a *systemic pattern of discrimination necessary for the adoption of an affirmative action plan.*"<sup>75</sup> The court concluded, by contrast, that "the combination of convincing anecdotal and statistical evidence is potent."<sup>76</sup>

The current study includes 65 personal interviews, 2 public hearings, 1 focus group, and a substantial telephone survey.

## **2.5 The Governmental Entity or Agency Enacting an MBE Program Must Be Shown to Have Actively or Passively Perpetuated the Discrimination**

In *Croson*, the Supreme Court stated, "It is beyond dispute that any public entity, state or federal, has a compelling interest in assuring that *public* dollars, drawn from the tax

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<sup>74</sup> *Concrete Works IV*, 321 F.3d at 989.

<sup>75</sup> *Coral Construction*, 941 F.2d at 919 (emphasis added).

<sup>76</sup> *Id.*

contributions of all citizens, do not serve to finance the evil of *private* prejudice.”<sup>77</sup> *Croson* provided that the government “can use its spending powers to remedy private discrimination, if it identifies that discrimination with the particularity required by the Fourteenth Amendment.”<sup>78</sup> The government agency’s active or passive participation in discriminatory practices in the marketplace may show the compelling interest. Defining passive participation, *Croson* stated:

*Thus, if the city could show that it had essentially become a "passive participant" in a system of racial exclusion practiced by elements of the local construction industry, we think it clear that the city could take affirmative steps to dismantle such a system.*<sup>79</sup>

The Tenth Circuit decision in *Adarand* concluded that evidence of private sector discrimination provided a compelling interest for a DBE program.<sup>80</sup> Later cases have reaffirmed that the government has a compelling interest in avoiding the financing of private discrimination with public dollars.<sup>81</sup>

Relying on this language in *Croson* a number of local agencies have increased their emphasis on evidence of discrimination in the private sector. This strategy has not always succeeded. In the purest case, Cook County did not produce a disparity study but instead presented anecdotal evidence that M/WBEs were not solicited for bids in the private sector. Cook County lost the trial and the resulting appeal.<sup>82</sup> Similarly, evidence of private sector discrimination presented in litigation was found inadequate in the Fulton County, Philadelphia, and Dade County cases.<sup>83</sup> The Third Circuit has stated, in discussing low

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<sup>77</sup> *Coral Construction*, 941 F.2d at 922 (citing *Croson*, 488 U.S. at 492) (emphasis added).

<sup>78</sup> See *Croson*; see generally I. Ayres and F. Vars, “When Does Private Discrimination Justify Public Affirmative Action?” 98 *Columbia Law Review* 1577 (1998).

<sup>79</sup> *Croson*, 488 U.S. at 492.

<sup>80</sup> *Adarand v. Slater*, 228 F.3d 1147 (10<sup>th</sup> Cir 2000).

<sup>81</sup> *Associated General Contractors of Ohio, Inc. v. Drabik*, 214 F.3d 730, 734-35 (6<sup>th</sup> Cir. 2000). See also *Concrete Works II*, 36 F.3d at 1529. *Coral Construction*, 941 F.2d at 916; *AGC v. New Haven*, 791 F.Supp. 941, 947 (D.Conn. 1992).

<sup>82</sup> *Builders Association of Greater Chicago v. County of Cook*, 123 F. Supp. 2d 1087 (ND IL 2000); 256 F.3d 642 (7<sup>th</sup> Cir. 2001).

<sup>83</sup> *Webster v. Fulton County*, 51 F. Supp. 2d 1354 (ND GA 1999); *Contractors Ass’n of Eastern Pennsylvania, Inc.*, 91 F.3d at 602.; *Engineering Contractors Ass’n of South Florida, Inc.*, 122 F.3d at 914.

MBE participation in a local contractors association in the City of Philadelphia, that “racial discrimination can justify a race-based remedy only if the city has somehow participated in or supported that discrimination.”<sup>84</sup> Nevertheless, recently in *Concrete Works IV* the Tenth Circuit upheld the relevance of data from the private marketplace to establish a factual predicate for M/WBE programs.<sup>85</sup> That is, courts mainly seek to ensure that M/WBE programs are based on findings of active or passive discrimination in the government contracting marketplace, and not simply attempts to remedy general societal discrimination.

Courts also seek to find a causal connection between a statistical disparity and actual underlying discrimination. In *Engineering Contractors* one component of the factual predicate was a study comparing entry rates into the construction business for M/WBEs and non-M/WBEs.<sup>86</sup> The analysis provided statistically significant evidence that minorities and women entered the construction business at rates lower than would be expected, given their numerical presence in the population and human and financial capital variables. The study argued that those disparities persisting after the application of appropriate statistical controls were most likely the result of current and past discrimination. Even so, the Eleventh Circuit criticized this study for reliance on general census data and for the lack of particularized evidence of active or passive discrimination by Dade County, holding that the district court was entitled to find that the evidence did not show compelling justification for an M/WBE program.<sup>87</sup>

The Seventh Circuit has perhaps set a higher bar for connecting private discrimination with government action. The trial court in the Cook County case extensively considered evidence that prime contractors simply do not solicit M/WBEs as subcontractors and considered carefully whether this evidence on solicitation served as sufficient evidence of

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<sup>84</sup> *Contractors Ass’n of Eastern Pennsylvania, Inc.*, 91 F.3d at 602; see also *Webster*, 51 F. Supp. 2d 1354.

<sup>85</sup> *Concrete Works IV*, 321 F.3d at 69.

<sup>86</sup> *Engineering Contractors Ass’n of South Florida, Inc.*, 122 F.3d at 921-22.

<sup>87</sup> *Id.* at 922.

discrimination, or whether instead it was necessary to provide further evidence that there was discrimination in hiring M/WBE subcontractors.<sup>88</sup> The Seventh Circuit held that this evidence was largely irrelevant.<sup>89</sup> Beyond being anecdotal and partial, evidence that contractors failed to solicit M/WBEs on Cook County contracts was not the same as evidence that M/WBEs were denied the opportunity to bid.<sup>90</sup> Furthermore, such activities of contractors did not necessarily implicate the County as even a passive participant in such discrimination as might exist because there was no evidence the County knew about it.<sup>91</sup>

Interestingly, courts have been willing to see capital market discrimination as part of the required nexus between private and public contracting discrimination, even if capital market discrimination could arguably be seen as simply part of broader societal discrimination. In *Adarand v. Slater* the Tenth Circuit favorably cited evidence of capital market discrimination as relevant in establishing the factual predicate for the federal DBE program.<sup>92</sup> The same court in *Concrete Works IV* found that barriers to business formation were relevant insofar as this evidence demonstrated that M/WBEs are “precluded from the outset from competing for public construction contracts.”<sup>93</sup> Along related lines, the court also found a regression analysis of census data to be relevant evidence showing barriers to M/WBE formation.<sup>94</sup>

Finally, courts have come to different conclusions about the effects of M/WBE programs on the evidence itself. For instance, is M/WBE participation in public sector projects higher than on private sector projects simply because the M/WBE program increases M/WBE participation in the public sector, or is such a pattern evidence of private

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<sup>88</sup> *Builders Assn of Chicago v. Cook County*, 123 F.Supp. 1087 (ND IL 2000).

<sup>89</sup> *Builders Ass’n of Greater Chicago*, 256 F.3d at 645.

<sup>90</sup> *Id.*

<sup>91</sup> *Id.*

<sup>92</sup> *Adarand v. Slater*, 228 F.3d at 1169-70 (10<sup>th</sup> Cir 2000).

<sup>93</sup> *Concrete Works IV*, 321 F.2d at 977. The district court had rejected evidence of credit market discrimination as adequate to provide a factual predicate for an M/WBE program. *Concrete Works v. Denver*, 86 F.Supp. 2d 1042 (D Co. 2000) (*Concrete Works I*).

<sup>94</sup> *Id.* at 977.



sector discrimination? The Seventh Circuit raised the former concern in the recent Cook County litigation.<sup>95</sup> *Concrete Works IV*, on the other hand, expressly cited as evidence of discrimination that M/WBE contractors used for business with the City of Denver were not used by the same prime contractors for private sector contracts.<sup>96</sup> Is evidence of a decline in M/WBE utilization following a change in or termination of an M/WBE program relevant and persuasive evidence of discrimination? The circuit courts in *Concrete Works IV* and *Sherbrooke Turf* did find that such a decline in M/WBE utilization is evidence that prime contractors are not willing to use M/WBEs in the absence of legal requirements.<sup>97</sup> Other courts have not arrived at the same conclusion.<sup>98</sup>

## **2.6 To Withstand Strict Scrutiny, an MBE Program Must Be Narrowly Tailored to Remedy Identified Discrimination**

The discussion of compelling interest in the court cases has been extensive, but narrow tailoring may be the more critical issue. As David Strauss, a law professor at the University of Chicago, noted when the Supreme Court first ruled on *Adarand* in 1995:

*The requirement that an interest be “compelling” is seldom what defeats a statute; over the years, the Supreme Court has found an enormous range of government interests to be “Compelling.” It is the requirement that a measure be “necessary” or “narrowly tailored” that has proved difficult to satisfy. States seldom have a difficult time advancing some obviously important interest that is arguably or plausibly promoted by a challenged law. What makes strict scrutiny effective is that it is difficult to show that the measure is an especially good way of promoting that objective.*<sup>99</sup>

While Professor Strauss may understate the difficulty of showing a compelling interest in these cases, certainly many courts have held that even if a compelling interest for the M/WBE program can be found, the program has not been narrowly tailored.<sup>100</sup> Further,

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<sup>95</sup> *Builders Ass’n of Greater Chicago*, 256 F.3d at 645.

<sup>96</sup> *Concrete Works IV*, 321 F.3d at 984-85.

<sup>97</sup> *Concrete Works IV*, 321 F.3d at 985; *Sherbrooke Turf*, 345 F.3d at 973.

<sup>98</sup> See, e.g., *AGC v. Columbus*, 936 F. Supp. 1363 (SD Ohio 1996).

<sup>99</sup> David Strauss, “Affirmative Action and the Public Interest,” *Supreme Court Review* (1995), at 29-30.

<sup>100</sup> *Contractors Ass’n of Eastern Pennsylvania, Inc.*, 91 F.3d at 605; *Engineering Contractors Ass’n of South Florida, Inc.*, 122 F.3d at 926-929.

*Concrete Works IV*,<sup>101</sup> one of the most helpful cases in determining compelling interest, did not consider the issue of narrow tailoring. Instead, the Tenth Circuit held that the plaintiffs had waived any challenge to the original ruling of the district court<sup>102</sup> that the program was narrowly tailored.

Nevertheless, there are other sources of guidance on narrow tailoring. For instance, the federal courts have found that the DBE program established pursuant to federal regulations (49 CFR, Part 26) issued under The Transportation Equity Act (TEA-21) (1998) has been narrowly tailored to serve a compelling interest.<sup>103</sup> The federal courts had previously ruled that there was a factual predicate for the federal DOT DBE program, but that in its earlier versions the program was not narrowly tailored.<sup>104</sup> The more recent rulings provide some guidance as to what program configurations the courts will judge to be narrowly tailored.

Further, in *Coral Construction* the Ninth Circuit provided a relatively thorough analysis of narrow tailoring. Indeed, a number of cases that have not found programs to be narrowly tailored have nevertheless discussed carefully what would be required to prove narrow tailoring. Unfortunately, the courts have not agreed upon a single, specific and unique test for the narrow tailoring of government contracting programs.

Nevertheless, in a wider range of affirmative action cases, courts have identified the following elements of narrow tailoring:<sup>105</sup>

- the utilization of race-neutral alternatives;
- the relationship between remedial goals and availability;
- program flexibility;

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<sup>101</sup> *Concrete Works IV*, 321 F.3d at 992-93.

<sup>102</sup> *Concrete Works v. City of Denver*, 823 F.Supp. 821 (D.Colo. 1993).

<sup>103</sup> *Adarand v. Slater*, 228 F.3d 1147; *Sherbrooke Turf*, 345 F.3d 963.

<sup>104</sup> In 1998 in *Sherbrooke I* the Minnesota district court had ruled that while there was a compelling interest for the DBE program the program was not narrowly tailored. In 1996, before the new DBE regulations, the district court in Colorado, upon remand from the 1995 U.S. Supreme Court, had made a similar ruling in *Adarand v. Pena*.

<sup>105</sup> See *U.S. v. Paradise*, 480 U.S. 149, 171 (1987); *Rothe*, 262 F.3d at 1331 (citing *Paradise*).

- the relationship between the remedies and the beneficiaries of those remedies;
- the impact on innocent third parties; and
- limited duration.

In the interest of thoroughness, the discussion below will be arranged under these more general points.

### **2.6.1 Race-Neutral Alternatives**

Concerning race-neutral alternatives, the Supreme Court in *Croson* concluded that a governmental entity must demonstrate that it has evaluated the use of race-neutral means to increase minority business participation in contracting or purchasing activities. As the Ninth Circuit stated in *Coral Construction*, "Among the various narrow tailoring requirements, there is no doubt that consideration of race-neutral alternatives is among the most important."<sup>106</sup> There is little if any chance for a plan to succeed without addressing this requirement.

For example, the Eleventh Circuit criticized Dade County for assuming that race-based solutions were necessary to address race-based problems.<sup>107</sup> Certainly, strict scrutiny does not mandate that every race-neutral measure be considered and found wanting. As the Ninth Circuit stated in *Coral Construction*, "While strict scrutiny requires serious, good faith consideration of race-neutral alternatives, strict scrutiny does not require exhaustion of every possible such alternative."<sup>108</sup> For instance, in that case King County was not required to challenge state laws restricting its ability to alter bonding requirements. Nevertheless, in *Coral Construction* the Ninth Circuit found it important that King County had adopted a number of race-neutral measures to help overcome discrimination.<sup>109</sup>

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<sup>106</sup> *Coral Construction*, 941 F.2d at 922.

<sup>107</sup> *Engineering Contractors Ass'n of South Florida, Inc.*, 122 F.3d at 927-28. See also *Contractors Association of Eastern Pennsylvania, Inc.*, 91 F.3d at 609; *AGC v. Drabik*, 214 F.3d at 738.

<sup>108</sup> *Coral Construction*, 941 F.2d at 923; see also *AGCC II*, 950 F.2d at 1417.

<sup>109</sup> *Coral Construction*, 941 F.2d at 923.

In upholding the narrow tailoring of federal DBE regulations, the Tenth Circuit noted that under those regulations, “if a recipient can meet its overall goal through race-neutral means, it must implement its program without the use of race-conscious contracting measures, and enumerate a list of race-neutral measures.”<sup>110</sup> Those measures included “helping overcome bonding and financing obstacles, providing technical assistance, [and] establishing programs to assist start-up firms.”<sup>111</sup>

The current study will evaluate Phoenix’s small business assistance program as well as other technical and financial assistance programs available for all small businesses throughout Maricopa County.

### **2.6.2 Relationship of Goals to Availability**

Narrow tailoring under the *Croson* standard requires that remedial goals be in line with measured availability. Merely setting percentages without a carefully selected basis in statistical studies, as the City of Richmond did in *Croson* itself, has played a strong part in decisions finding other programs unconstitutional.<sup>112</sup>

By contrast, the courts have approved the goal-setting process for the DOT DBE program, as revised in 1999.<sup>113</sup> The approved DOT DBE regulations require that goals be based on one of several methods for measuring DBE availability.<sup>114</sup> Moreover, the approved regulations use built-in mechanisms to ensure that DBE goals are not set excessively high relative to DBE availability. For example, the approved DBE goals are to be set aside if the overall goal has been met for two consecutive years by race-neutral means. The approved DBE contract goals are were required to be reduced if overall goals have been exceeded with race-conscious means for two consecutive years. Circuit courts found these provisions

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<sup>110</sup> *Adarand v. Slater*, 228 F.3d. at 1179.

<sup>111</sup> *Id.*

<sup>112</sup> See, e.g., *Builders Ass’n of Greater Chicago*, 256 F.3d at 647.

<sup>113</sup> *Adarand v. Slater*, 228 F.3d at 1182; *Sherbrooke Turf*, 345 F.3d at 972.

<sup>114</sup> 49 CFR, Section 26, Part 45.

to be narrowly tailored, particularly when implemented according to thorough local disparity studies that carefully calculate the applicable goals.<sup>115</sup>

*Coral Construction* also noted with approval that King County set its percentages individually on large contracts according to the number of available MBEs and had chosen a relatively low percentage (5%) for contracts of under \$10,000—which percentage in turn was not absolute, but subject to further fact-specific considerations under a “bid preference” plan. Further, King County had carefully limited preferences for instances where it had evidence of discrimination against particular racial groups.<sup>116</sup>

### **2.6.3 Flexibility**

Programs achieve flexibility by using waivers and variable project goals to avoid merely setting a quota. *Croson* favorably mentioned the contract-by-contract waivers in the federal DBE DOT program.<sup>117</sup> Virtually all successful MBE programs have this waiver feature in their enabling legislation. For instance, King County's program permitted prime contractors to request a waiver of the MBE participation requirement when a non-MBE was the sole source of a good or service, or if no MBE was otherwise available or competitively priced. In addition, under the preference method, if no MBE was within 5 percent of the lowest bidder, a non-MBE was awarded the contract. Therefore, the Ninth Circuit concluded, "King County's MBE program is not facially unconstitutional for want of flexibility."<sup>118</sup>

Similarly, it is important that project goals not be set rigidly. For example, the DOT DBE program, as approved by federal circuit courts, has provided for extensive flexibility.<sup>119</sup> The approved DBE provisions set aspirational, not mandatory, goals, expressly forbade quotas, and used overall goals as simply a framework for setting local contract goals, if any,

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<sup>115</sup> *Sherbrooke Turf*, 345 F.3d at 973, 974.

<sup>116</sup> *Coral Construction*, 941 F.2d at 924.

<sup>117</sup> *Croson*, 488 U.S. at 489.

<sup>118</sup> *Coral Construction*, 941 F.2d at 925.

<sup>119</sup> *Adarand v. Slater*, 228 F.3d at 1182; *Sherbrooke Turf*, 345 F.3d at 972.

based on local data.<sup>120</sup> All of these factors have impressed the courts that upheld the constitutionality of the revised DOT DBE program.<sup>121</sup>

#### **2.6.4 Overinclusion**

Narrow tailoring also involves limiting the number and type of beneficiaries of the program. As noted above there has to be evidence of discrimination to justify a group-based remedy, and overinclusion of uninjured individuals or groups can endanger the entire program.<sup>122</sup> Federal DBE programs have succeeded in part because regulations covering DBE certification do not provide blanket protection to minorities.<sup>123</sup>

Critically, the MBE program must be limited in its geographical scope to the boundaries of the enacting government's marketplace. The Supreme Court indicated in *Croson* that a local agency has the power to address discrimination only within its own marketplace. One fault of the Richmond MBE programs was that minority firms were certified from around the United States.<sup>124</sup>

In *Coral Construction*, the Ninth Circuit concluded that the King County MBE program failed this part of the narrow tailoring test because the definition of MBEs eligible to benefit from the program was overbroad. The definition included MBEs that had no prior contact with King County if the MBE could demonstrate that discrimination occurred "in the particular geographic areas in which it operates."<sup>125</sup> This MBE definition suggested that the program was designed to eradicate discrimination not only in King County but also in the particular area in which a nonlocal MBE conducted business. In essence, King County's program

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<sup>120</sup> Id.

<sup>121</sup> Id.

<sup>122</sup> See, e.g., *Builders Ass'n of Greater Chicago*, 256 F.3d at 647.

<sup>123</sup> *Sherbrooke Turf v. Minnesota D.O.T.*, 345 F.3d 963, 972-73 (8th Cir. 2003).

<sup>124</sup> *Croson*, 488 U.S. at 508.

<sup>125</sup> Id.

focused on the eradication of societywide discrimination, which is outside the power of a state or local government. Since "the County's interest is limited to the eradication of discrimination within King County, the only question that the County may ask is whether a business has been discriminated against in King County."<sup>126</sup>

In clarifying an important aspect of the narrow tailoring requirement, the court defined the issue of eligibility for MBE programs as one of participation, not location. For an MBE to reap the benefits of an affirmative action program, the business must have been discriminated against in the jurisdiction that established the program.<sup>127</sup> As a threshold matter, before a business can claim to have suffered discrimination, it must have attempted to do business with the governmental entity.<sup>128</sup> It was found significant that "if the County successfully proves malignant discrimination within the King County business community, an MBE would be presumptively eligible for relief if it had previously sought to do business in the County."<sup>129</sup>

To summarize, according to the Ninth Circuit, the presumptive rule requires that the enacting governmental agency establish that systemic discrimination exists within its jurisdiction and that the MBE is, or attempted to become, an active participant in the agency's marketplace.<sup>130</sup> Since King County's definition of an MBE permitted participation by those with no prior contact with King County, its program was overbroad. By useful contrast, *Concrete Works II* held that the more extensive but still local designation of the entire Denver MSA constitutes the marketplace to which the programs may apply.<sup>131</sup>

### **2.6.5 Burden on Third Parties**

Narrow tailoring also requires minimizing the burden of the program on third parties. Waivers are one tool that serves this purpose. Another tool is the good faith compliance

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<sup>126</sup> Id.

<sup>127</sup> Id.

<sup>128</sup> Id.

<sup>129</sup> Id.

<sup>130</sup> Id.

<sup>131</sup> *Concrete Works II*, 36 F.3d at 1520.

provisions in the DBE regulations, by which prime contractors may avoid a goal if they attempted to comply in good faith.<sup>132</sup> The DOT DBE regulations have also sought to reduce the program burden on non-DBEs by avoiding DBE concentration in certain specialty areas,<sup>133</sup> and by allowing for the inclusion of nonminority DBEs in the DBE program. These features have gained the approval of the only circuit court to have discussed them at length as measures lowering impact on third parties.<sup>134</sup>

### **2.6.6 Program Duration**

Narrow tailoring requires some form of limit on program duration. In *Adarand v. Peña*, the Supreme Court wrote that a program should be "appropriately limited such that it will not last longer than the discriminatory effects it is designed to eliminate."<sup>135</sup> In *Webster v. Fulton County* the district court noted that the program it disapproved had been in place for 20 years with no contemplation of expiration.<sup>136</sup> There is yet no strong guidance on the nature of qualifying provisions for ending a program, but presumably the duration of the program must be narrowly tailored to fit the evidence of discrimination, which evidence in turn should be revised periodically.

Appellate courts have noted several possible mechanisms for limiting program duration: "sunset" provisions, required periodic review and reauthorization, required termination if goals have been met,<sup>137</sup> decertification of MBEs who achieve certain levels of success, or mandatory review of MBE certification at regular, relatively brief periods.<sup>138</sup> Governments thus have some duty to ensure that they update their evidence of discrimination regularly enough to review the need for their programs and to revise programs by narrowly tailoring them to fit the fresh evidence.<sup>139</sup>

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<sup>132</sup> 49 CFR, Section 26, Part 53.

<sup>133</sup> 49 CFR, Section 26, Part 33.

<sup>134</sup> *Adarand v. Slater*, 228 F.3d at 1182

<sup>135</sup> *Id.*, 515 U.S. at 238 (internal quotations and citations omitted).

<sup>136</sup> *Webster v. Fulton County*, 51 F.Supp.2d 1354, 1382 (N.D.Ga. 1999).

<sup>137</sup> *Sherbrooke*, 354 F.3d at 972

<sup>138</sup> *Adarand v. Slater*, 228 F.3d at 1179, 1180.

<sup>139</sup> *Rothe*, 262 F.3d at 1324 (commenting on the possible staleness of information after 7, 12, and 17 years).



The DOT DBE program has had a variety of provisions limiting duration. First, DBEs could participate in the program for only limited periods. Second, annual certification involving personal net worth and business size limitations have been required to ensure continued eligibility for the program. Third, a local program would be terminated if it should meet annual DBE goals for two years entirely through race-neutral means. Finally, the DBE program has been subject to periodic reauthorization. On the whole, these provisions satisfied the appellate courts in *Sherbrooke Turf*<sup>140</sup> and *Adarand v. Slater*<sup>141</sup> that the DOT DBE program was narrowly tailored as to duration, at least as of its 1999 version.<sup>142</sup> It is still an open question whether all of these provisions are necessary in every case. Governments must take care to limit the duration of M/WBE programs and of M/WBE contractor certifications along all these lines.

### **2.6.7 Summary**

Carefully reading the *Croson* decision, the Ninth Circuit in *Coral Construction* concisely identified the pertinent concerns in government contracting programs:

*The Supreme Court has identified several characteristics of a set-aside program which would suggest that a program was adequately restricted to remedying only prior discrimination within the jurisdiction. First, an MBE program should be instituted either after, or in conjunction with, race-neutral means of increasing minority business participation in public contracting. The second characteristic of a narrowly-tailored program is the use of minority utilization goals set on a case-by-case basis, rather than upon a system of rigid numerical quotas. Finally, an MBE program must be limited in its effective scope to the boundaries of the enacting jurisdiction.*<sup>143</sup>

Although this statement may not directly indicate all of the detail required by the full analysis contained in this section, it clearly indicates at least the minimum guidelines that any program must meet in the Ninth Circuit.

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<sup>140</sup> *Sherbrooke Turf*, 354 F.3d at 971-73.

<sup>141</sup> *Adarand v. Slater*, 228 F.3d at 1179-80.

<sup>142</sup> *Id.*

<sup>143</sup> *Coral Construction*, 941 F.2d at 922 (internal citations omitted).

## 2.7 Small Business Procurement Preferences

Small business procurement preferences have existed since the 1940s. The first small business program had its origins in the Smaller War Plants Corporation (SWPC) established during World War II.<sup>144</sup> The SWPC was established to channel war contracts to small business. In 1947, Congress passed the Armed Forces Procurement Act, declaring, "It is the policy of Congress that a fair proportion of the purchases and contracts under this chapter be placed with small business concerns."<sup>145</sup> Continuing this policy, the 1958 Small Business Act requires that government agencies award a "fair proportion" of procurement contracts to small business concerns.<sup>146</sup> The regulations are designed to implement this general policy.<sup>147</sup>

Section 8(b)(11) of the Small Business Act authorizes the SBA to set aside contracts for placement with small business concerns. The SBA has the power:

*to make studies and recommendations to the appropriate Federal agencies to insure that a fair proportion of the total purchases and contracts for property and services for the Government be placed with small-business enterprises, to insure that a fair proportion of Government contracts for research and development be placed with small-business concerns, to insure that a fair proportion of the total sales of Government property be made to small-business concerns, and to insure a fair and equitable share materials, supplies, and equipment to small-business concerns.*<sup>148</sup>

Every acquisition of goods and services anticipated to be between \$2,500 and \$100,000 is set aside exclusively for small business unless the contracting officer has a reasonable expectation of fewer than two bids by small businesses.<sup>149</sup>

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<sup>144</sup> See, generally, Thomas J. Hasty III, "Minority Business Enterprise Development and the Small Business Administration's 8(a) Program: Past, Present, and (Is There a) Future?" *Military Law Review* 145 (Summer 1994): 1-112.

<sup>145</sup> 10 U.S.C. § 2301 (1976).

<sup>146</sup> 15 USC 631(a).

<sup>147</sup> See 32 C.F.R. §§ 1-701.1 to 1-707.7.

<sup>148</sup> 15 U.S.C. § 637(b)(11).

<sup>149</sup> *Federal Acquisition Regulations* 19.502-2.

There has been only one constitutional challenge to the long-standing federal SBE programs. In *J.H. Rutter Rex Manufacturing v. United States*,<sup>150</sup> a federal vendor unsuccessfully challenged the Army's small business set-aside as in violation of the due process clause of the Fifth Amendment to the U.S. Constitution, as well as the Administrative Procedures Act and the Armed Forces Procurement Act.<sup>151</sup> The court held that classifying businesses as small was not a "suspect classification" subject to strict scrutiny. Instead the court ruled:

*Since no fundamental rights are implicated, we need only determine whether the contested socioeconomic legislation rationally relates to a legitimate governmental purpose... Our previous discussion adequately demonstrates that the procurement statutes and the regulations promulgated there under are rationally related to the sound legislative purpose of promoting small businesses in order to contribute to the security and economic health of this Nation.*<sup>152</sup>

A large number of state and local governments have maintained small business preference programs for many years.<sup>153</sup> No state or district court cases were found overturning a state and local small business reference program. One reason for the low level of litigation in this area is that there is no significant organizational opposition to SBE programs. There are no reported cases of AGC litigation against local SBE programs. And the legal foundations that have typically sued M/WBE programs have actually promoted SBE procurement preference programs as a race-neutral substitute for M/WBE programs.

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<sup>150</sup> 706 F.2d 702 (5<sup>th</sup> Cir 1983), cert denied, 464 U.S. 1008 (1983).

<sup>151</sup> Administrative Procedures Act, 5 U.S.C. §§ 552(a)(1)(E) (1976) and the "fair proportion" language of the Armed Forces Procurement Act, 10 U.S.C. § 2301 et seq. (1976), and the Small Business Act, 15 U.S.C. § 631 et seq. (1976).

<sup>152</sup> *J. H. Rutter Rex Manufacturing*, at 706 F.2d at 730 (*emphasis added*). See also *Dandridge v. Williams*, 397 U.S. 471 (1970).

<sup>153</sup> For example, Florida started a small business preference program in 1985 (FL St Sec. 287), Minnesota in 1979 (Mn Stat 137.31), New Jersey in 1993 (N.J.S.A 52:32-17).

## **2.8 Conclusion**

As summarized earlier, when governments develop and implement a contracting program that is sensitive to race and gender, they must understand the case law that has developed in the federal courts. These cases establish specific requirements that must be addressed so that such programs can withstand judicial review for constitutionality and prove to be just and fair. Under the developing trends in the application of the law, local governments must engage in specific fact-finding processes to compile a thorough, accurate and specific evidentiary foundation to determine whether there is in fact discrimination sufficient to justify an affirmative action plan. Further, local governments must continue to update this information and revise their programs accordingly.

While the Supreme Court has yet to return to this exact area of law to sort out some of the conflicts, the circuit courts have settled on the core standards. There are differences among the circuits in the level of deference granted to the finder of fact, but these differences do not appear to be profound. The differences in the individual outcomes have overwhelmingly been differences in the level of evidence, mostly concerning the rigor with which disparity studies have been conducted and then used as the foundation for narrowly tailored remedies. Ultimately, MBE and WBE programs can withstand challenges if local governments comply with the requirements outlined by the courts.

**3.0 ANALYSIS OF PURCHASING  
POLICIES, PROCEDURES, AND  
PROGRAMS**

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## **3.0 ANALYSIS OF PURCHASING POLICIES, PROCEDURES, AND PROGRAMS**

This chapter provides an overview of the City's purchasing and contracting methods as they pertain to M/WBE participation and the related SBE programs. This chapter also reviews the City's M/WBE programs. The City's M/WBE programs apply to construction contracts and the purchase of goods and services other than professional services. This chapter is organized into five sections:

- 3.1 Methodology for this chapter's review
- 3.2 M/WBE Participation Program, Purchasing Program, and Certification
- 3.3 M/WBE and SBE Construction Contracting and Subcontracting
- 3.4 M/WBE Procurement
- 3.5 Additional SBE Policies, Procedures, and Programs

### **3.1 Methodology**

This section discusses the steps taken to analyze and evaluate the City's contracting and purchasing policies, procedures, and programs. The analysis included the following steps:

- Review City contracting and purchasing manuals currently in use.
- Discuss with managers the changes that contracting and purchasing policies have undergone during the 1999-2004 time frame and the effects of these changes on the M/WBE programs.
- Interview key City contracting and purchasing officials and staff to determine how existing contracting and purchasing policies have been implemented.
- Summarize the salient points of the City's contracting and purchasing procedures and its M/WBE and SBE programs as they affect the City's utilization of M/WBEs.
- Review City ordinances, regulations, resolutions, and policies that guide the M/WBE programs and race- and gender-neutral programs.
- Discuss with appropriate personnel in the agencies the operations, policies, and procedures for M/WBE and SBE programs, including the changes over time of the M/WBE program in the City.

In completing the above tasks, MGT first reviewed the ordinances implemented as a result of the second-generation disparity study. Specifically, we evaluated the following ordinances:

- Phoenix City Code, Chapter 18, Article VI, effective June 11, 1999: The Minority Owned Business Enterprise, Woman Owned Business Enterprise, and Small Business Enterprise Participation Programs.
- Phoenix City Code, Chapter 18, Article VII, effective June 11, 1999: The Minority Owned Business Enterprise, Woman Owned Business Enterprise, and Small Business Enterprise Procurement Program.
- Amendments to Phoenix City Code, Chapter 18, Article VIII, effective June 11, 1999: Certification of Minority Owned Business Enterprises, Woman Owned Business Enterprises, and Small Business Enterprises.

We also reviewed the following documents that directly affect procurement, construction contracting and certification:

- The City of Phoenix Administrative Regulations 1.88 and 3.10.
- Operating Procedures for the Minority- and Woman-Owned and Small Business Enterprise Participation Programs with the respective Equal Opportunity Department Contract Compliance Section forms.
- The City's Certification Application packet.
- Economic Opportunity Department M/W/S/DBE Certification Outreach event schedule.
- Economic Opportunity Department M/W/S/DBE Program Customer Service Survey.
- Departmental Affirmative Action Plans for 2004-2005.
- Final Departmental Affirmative Action Plan Reports for 2003-2004, including supporting documentation.
- Departmental Organization Charts.
- Department Controlled Payments to Vendors for Goods and Services Report generated by Systems Applications and Products (SAP).
- City-Wide Goods and Services MBE/WBE Utilization by Department Payments made to Certified MBE/WBE Vendors for Goods, Professional, and Non-Professional Services.
- Sample requests for proposals and qualifications.
- Department purchasing training manuals.

We conducted tape recorded interviews of procurement managers in 32 city departments, and designed the interview instruments to determine each department's application of the City's ordinances, policies, programs, and procedures. The interviews lasted approximately one and one half hours. We asked each procurement manager to bring the following documents if applicable: departmental purchasing procedures, department organization chart, documentation of outreach efforts, and departmental goals for the utilization of M/WBEs and SBEs. City officials in all relevant City departments also provided additional documentation that their departments use to implement the ordinances.

We interviewed the following departments:

- Aviation
- Budget & Research
- City Auditor
- City Clerk
- City Council
- City Manager
- Civic Plaza
- Community & Economic Development
- Development Services
- Engineering & Architectural Services
- Equal Opportunity
- Finance
- Fire
- Housing
- Human Services
- Information Technology
- Law
- Library
- Municipal Court
- Neighborhood Services
- Office of Arts & Culture
- Parks and Recreation
- Personnel
- Planning
- Police
- Public Defender
- Public Information Office
- Public Works
- Public Transit
- Retirement Systems
- Street Transportation
- Water Services

The following sections summarize our review of the policies, procedures, and practices listed above and the information gathered from the interviews.

### **3.2 M/WBE Participation Program, M/WBE Procurement Program, and M/WBE Certification**

Arizona state procurement law permits municipalities to establish their own procurement rules, which the City has done. This review addresses these City ordinances and operating procedures.



The Phoenix City Code, Chapter 18, sets out the M/WBE program in three separate articles: Article VI, governing construction contracting; Article VII, governing procurement; and Article VIII, governing certification. The ordinances outline the programs and assign duties to specific persons or departments. Administrative Regulation 1.88 (AR 1.88) and the Minority and Woman Owned Business Enterprise Operating Procedures (Operating Procedures) outline in detail the programs defined in the three ordinances.

### **3.2.1 Administrative and Operating Procedures**

Pursuant to the recommendations of the second-generation disparity study, the City codified its Minority and Woman-Owned Business Enterprise Disparity Program as AR 1.88. AR 1.88 establishes procedures to implement Phoenix City Code Chapter 18, Articles VI, VII, and VIII in these areas:

- Administrative Responsibilities
- Minority and Woman-Owned Business Enterprise Certification
- Annual M/WBE Goal Setting Process
- Subcontracting Project Goals
- Construction Bid Opening Procedures and Process
- Waiver Requests
- M/WBE Goals Compliance
- M/WBE Price Bid Incentive
- Small Business Development Program
- Reports
- Violation of Policy
- Effective Date

In addition to AR 1.88 the City implemented the Operating Procedures, designed to assist in implementing AR 1.88. The Operating Procedures delineate responsibility for the administration of AR 1.88 by assigning specific responsibilities to various departments. In the area of procurement, discussed in Section 3.4 below, an additional AR, AR 3.10, adds further administrative structure.

### **3.2.2 Administrative Responsibilities**

The Equal Opportunity Department chairs the Business Enterprise Team that consists of staff from EOD, EASD, CED, and Finance. The committee meets weekly and reports

directly to a Deputy City Manager. The Business Enterprise Team reviews program work plans, shares information on data collection efforts, and reports on program publicity and outreach.

In addition to the internal administrative function, there are two committees that provide public input and outreach to the M/WBE Construction Subcontracting Participation Program. According to AR 1.88 the Program Oversight Committee is composed of six members: two members nominated by the City, two members nominated by the Arizona Chapter of the Associated General Contractors of America, and two members nominated by the National Association of Minority Contractors or other established M/WBE construction contractor organizations. Also, the Human Relations Commission Business Development Committee meets every other month with members of the Business Enterprise Team to receive program updates and provide community input into the program.

**3.2.2.1 Minority and Woman-Owned Business Enterprise Certification**

Under AR 1.88, EOD certifies minority and woman-owned businesses eligible to participate in the City's disparity program. EOD reviews certification applications and all required documentation, conducts an on-site review at the applicant's place of business, and makes the final determination of the applicant's eligibility.

Last fiscal year, EOD received 427 new applications for certification. When EOD receives a completed application, it assigns an EOD Program Assistant to the file. The Assistant ensures that the application is complete and the applicant has submitted all required documentation. Under the Operating Procedures, EOD returns any applications missing critical documents to the applying firm, requesting resubmission within 14 days. The program assistant also calls the applicant to help solicit the missing information.

Once EOD receives all required information, an Equal Opportunity Specialist completes a desk audit to ensure that the business meets the City's eligibility standards for

location, control, ownership, size, expertise and viability. If an application does not meet these eligibility standards, EOD sends the applicant a certified letter stating this decision.

If the desk audit indicates that the applicant meets, on the surface, the basic criteria, EOD schedules on-site visit at the business. During an on-site visit, a certification staff member interviews the qualifying principal to verify ownership and operations. After completing an on-site report, the investigating certification staff member conducts a thorough final review and recommends whether to approve the application. Another certification staff member then conducts a second review of the complete application packet. If the first two reviewers come to different decisions, a supervisor makes the final determination. Once granted, certification is good for one year, valid from the date of approval.

To help firms file for certification, the City offers 14 certification workshops per year at varied times and locations. The workshops provide an opportunity for business owners to ask questions and receive assistance in completing the application process. EOD advertises these workshops on the City's public information station, in minority newspaper publications and through the small business resource line. In addition to the workshops, EOD staff is available throughout the week for appointments and walk-in consultations, and firms may submit questions via the EOD Web site.

**3.2.2.2 Appeal, Decertification, and Recertification**

If EOD denies the certification, the applicant may appeal the decision by notifying EOD in writing of its wish to appeal. The City Auditor Department manages the hearing process for certification appeals. The City Auditor appoints a hearing officer who hears the appeal and issues a decision. The hearing officer sends the decision to the appealing party via certified mail and notifies EOD. If the officer reverses the decision and grants certification, the effective date is the date of the original application. Decisions issued by the hearing officer are binding upon all parties, subject to right of appeal as provided by other law. No businesses appealed certification denials during fiscal year 2003-2004.

A.R. 1.88 allows a third party to challenge an enterprise's certification by submitting verifiable information in writing that questions or shows proof that a certified M/WBE firm does not qualify for certification. The EOD Director determines whether to reexamine the enterprise's certification. If EOD decides to reexamine certification, it notifies the enterprise and conducts an investigation. EOD may also initiate a certification challenge if it receives new, verifiable information that raises a question whether a certified enterprise remains eligible for certification. If EOD determines that an enterprise is no longer eligible for certification, EOD sends the enterprise the reexamination findings and reasons for decertification. The enterprise may appeal the decision using the same procedures as those for denial of certification. Twenty-nine firms were denied certification or decertified during the 2003 fiscal year.

To maintain an existing certification, a firm must submit an annual recertification application along with updated documentation prior to their expiration date. Within the 2003 fiscal year, 768 firms applied for recertification. A previously certified firm that allows its certification to lapse may reapply at any time. If EOD is notified and receives the required documents within three months after the expiration date, no new file is required. After three months the file is archived and the firm must complete the certification process in its entirety. If a firm voluntarily requests removal from certification, it may reapply at any time. Firms that are denied certification may not reapply for six months after the denial decision. Firms that are involuntarily decertified may not reapply for certification sooner than 12 months after decertification.

### **3.2.2.3 Certification Listing**

Once it certifies a firm, EOD places the business in the on-line directory for Minority and Women-Owned and Small Businesses. As of June 30, 2004, there were 799 certified M/WBE and SBE firms. The M/W/SBE directory allows businesses to be searched by business category, business type or business name. For searches by business category or

business type, information is also available by certification type—minority, women, small, or disadvantaged business enterprise. A search within business category or business type will provide a listing of companies with the type of business, company name, application type (MBE, WBE, SBE, or DBE), certification date, and certification expiration date. Further company details include the services the company provides as well as its contact name, ethnicity, address, and phone number.

#### **3.2.2.4 Evaluation of the Certification Process**

EOD has two processes to evaluate the service provided to business owners. First, every June it issues approximately 1,000 surveys, allowing vendors to rate areas such as the staff, the certification workshops and the application itself. The average return rate for the survey is 20 to 30 percent. EOD also conducts a public forum to solicit anecdotal feedback on the certification process. Vendors have raised issues like the "cumbersome" application process and the need to complete different certification applications for the city and the federal government. Language barriers also concern several vendors. Many vendors in the area are Spanish-speaking, and they express concern that the services provided may not accommodate their needs as fully as they would like. For example, during the study period (1999-2004) there were Spanish DBE certification forms. However, at the time of the anecdotal interviews, DBE forms were no longer provided in Spanish.

EOD also hosts orientation meetings for newly certified businesses to educate these businesses on obtaining contracts with City departments.

### **3.3 M/WBE and SBE Construction Contracting and Subcontracting**

EASD contracts for City construction services. At the conclusion of the Second Generation Disparity Study, the City procured construction services exclusively by a design-bid-build or low-bid method of contracting. The City now uses four different methods for procuring construction services: design-bid-build (low bid); construction manager at risk

(CM@Risk); design-build one-step and two-step; and job-order contracting one-step and two-step processes. AR 1.88 and the Operating Procedures, both of which set out subcontracting procedures, apply only to a low-bid contracting process and do not govern any of the other four contracting processes. The City has prepared a draft administrative regulation, AR 3.25, which addresses procurement of public works construction. AR 3.25 outlines the various methods used for procuring construction services and professional services on public works contracts. The City uses Administrative Procedures 2.2, 2.3, 2.12, 2.13 and 2.14 to establish uniform procedures for all processes other than low-bid. All five administrative procedures are in draft form. This section outlines the current M/WBE subcontracting program and any barriers the program creates for M/WBE participation in public works contracts.

Because procedures for SBE subcontracting are virtually the same as those for M/WBE subcontracting, this section will also refer to SBE procedures.

### **3.3.1 Annual Goal-Setting Process**

AR 1.88 provides that EOD and EASD establish proposed aspirational annual MBE and WBE utilization subcontracting goals. EASD chairs the goal-setting committee (Goals Committee), which sets annual aspirational goals as well as individual construction project goals. The Goals Committee membership includes two EOD representatives—one Certification staff member and one EOD contract compliance (Contract Compliance) staff member.

According to AR 1.88, the Goals Committee recommends the annual goal based on the availability of M/WBEs that can participate in projected subcontracting opportunities. The Operating Procedures provide more detailed information on the goal setting process. According to the Operating Procedures, the Goals Committee sets the goal by using relative availability, calculated by dividing the number of available M/WBE contractors by the overall number of available contractors.

To determine overall availability, EASD reviews the plan holders' lists to identify contractors in the local market "ready, willing and able" to perform on projects that EASD expects to put up for bid in the upcoming fiscal year. Then EASD identifies "ready, willing, and able" M/WBE construction subcontractors by using the City of Phoenix M/WBE Certification Directory. EASD eliminates an M/WBE from the pool if the firm has not obtained plans, bid, or performed on a City contract. EASD divides the number of available M/WBE contractors by the number of all available contractors to produce an availability percentage.

Next, EOD adjusts the availability percentage to establish a more attainable goal. EOD calculates the previous two-year M/WBE "required" and "achieved" subcontractor utilization on completed projects. The total percentage achieved is subtracted from the total percentage required, providing what is called the "total" race- and gender-neutral percentage (though in fact it is a differential percentage). EASD subtracts the "total" race- and gender-neutral differential percentage from the original availability percentage. EASD uses the final figure to draft the Aspirational Annual Minority and Women-Owned Business Enterprise Utilization Goal Memorandum, which includes not only race- and gender-specific goals but also race- and gender-neutral goals. As authorized by AR 1.88, the City Manager then determines whether to subdivide the annual goal into utilization goals for specific race and gender groups.

The City seeks to meet its goal through both race-neutral and race-conscious means. As set out in AR 1.88, the City meets the race-neutral component of the goal through outreach, education and other appropriate efforts likely to encourage and promote contracting and subcontracting by minority and woman-owned enterprises, among others. The City seeks to achieve the race-conscious component by setting M/WBE utilization goals on public works projects.

The chart set out in **Exhibit 3-1** reflects the City's aspirational goals and achievements for the M/WBE program from 1999–2000 to 2004–2005.

The procedure for establishing SBE aspirational goals uses steps that are identical to those used for setting M/WBE goals, using SBEs rather than M/WBEs in the applicable calculations.

**EXHIBIT 3-1  
CITY OF PHOENIX  
ANNUAL ASPIRATIONAL GOALS FOR MINORITY-OWNED BUSINESS ENTERPRISE  
AND WOMEN-OWNED BUSINESS ENTERPRISES AND ACHIEVED PARTICIPATION  
FOR M/WBE UTILIZATION  
1999-2000 TO 2004-2005**

<b>FY</b>	<b>1999-2000</b>	<b>2000-2001</b>	<b>2001-2002</b>	<b>2002-2003</b>	<b>2003-2004</b>	<b>2004-2005</b>
Required	N/A	12.8%	13.4%	11.1%	13.0%	12.9%
Achieved	10.8%	12.9%	12.2%	14.63%	9.4%	TBD

Source: City of Phoenix, Engineering and Architectural Services Department

**3.3.2 Pre-Bid Procedures**

The appropriate department (Aviation, EASD, Streets, Water Services, Transit, or Public Works) schedules pre-bid meetings and publicizes the meeting date and location in the call for bids. EOD creates a pre-bid memorandum that summarizes the M/W/SBE project goals and provides information for locating certified M/W/SBEs. EOD distributes the memorandum to all contractors attending the pre-bid meeting. EOD Contract Compliance staff, if in attendance, explains the M/WBE bid requirements and answers contractors' questions.

**3.3.3 Bid Opening Procedures**

The following discussion outlines the bid opening procedures for construction contracts as they relate to M/W/SBE contracting. It is important to note that these procedures apply mainly to low-bid contracting and have little application to the other four contracting methods used by the City.

First, EASD verifies that each project bidder has submitted a bidder's statement of M/WBE utilization or a waiver packet with its bid. In the statement, the bidder lists the MBEs and WBEs that will provide services, the scope of work they will perform and the dollar



amount of contracts from each entity. The statement also needs to show that the bidder's total proposed MBE and WBE contract dollars equal or exceed the total required MBE and WBE goals. If SBE goals apply, the bidder must also submit a bidder's statement of proposed SBE utilization. The SBE utilization form includes the same components as the M/WBE utilization form.

EASD forwards informal bid results and copies of each statement to EOD Contract Compliance. All proposed M/W/SBE firms must submit a Letter of Intent to Perform as a Subcontractor/Supplier to the respective prime contractors. Prime contractors must submit the signed letters to EASD by 5:00 p.m. on the day following the bid opening.

EOD Contract Compliance staff reviews the informal bids, calculates the proposed M/W/SBE utilization percentage, and makes a determination of bidder responsiveness to the M/WBE and SBE requirements. Contract Compliance records the proposed percentage on the Verification of M/WBE Proposed Subcontracting Form and verifies that each prime bidder has complied with the City's affirmative action program and that each M/W/SBE subcontractor is certified by the City of Phoenix. In addition, EOD Contract Compliance reviews letters of intent to perform from subcontractors and suppliers for consistency with the Statement of Proposed Utilization and for the signature of the M/WBE or SBE subcontractor. EOD then sends EASD a memorandum summarizing the responsiveness of bidders with the M/WBE and SBE bid requirements including the letters of intent and the forms for verification of M/W/SBE proposed subcontracting. EASD determines whether the bid is responsive and eligible for award based on all bid specification requirements.

If the apparent low bidder files a waiver request, the Waiver Review Committee schedules a meeting at which the bidder may explain the request and its supporting evidence. The Waiver Review Committee is chaired by EASD and has two representatives from EOD—one Certification staff member and one Contract Compliance staff member. The committee reviews the testimony and evidence under the criteria in the ordinance, outlined

on the Subcontracting Goals Waiver Review Form, to determine whether the bidder made a good faith effort to meet the required M/W/SBE goals. Each committee member completes the Subcontracting Goals Waiver Review Form, and EASD prepares a recommendation for the City Engineer. The bidder receives written notice of the Waiver Committee's decision, and EASD sends a copy of the letter to EOD Contract Compliance and EOD Certification.

**3.3.4 Other Construction Methods**

The administrative procedures provide for specific alternatives to the design-bid-build process. Those methods, CM@Risk, Design-Build One-Step, Design-Build Two-Step, and Job-Order Contracting, will be discussed at this point before moving on to preconstruction procedures.

**3.3.4.1 CM@Risk, Design-Build One-Step Process, Design-Build Two-Step Process**

Three administrative procedures govern these alternative methods for procuring construction services. First, Administrative Procedure (AP) 2.12 establishes the CM@Risk process. Second, AP 2.13 establishes a uniform procedure for the Design-Build One-Step process. Third, AP 2.14 establishes a uniform procedure for the Design-Build Two-Step process. For the most part, these APs set out identical procedures.

The first step of the selection process requires the requesting department to submit a Request for Services (RFS) form to the City Engineer for approval. The RFS includes the following information: project description, requested construction method, project number, council district number, project location, selection process, estimated firm "notice to proceed" date, estimated construction start date, estimated cost of construction, construction completion date, fiscal year for project funding, funding source, name of requesting department, project manager and required signatures.

After the City Engineer approves the RFS, the contracts administration section will advertise the project in the EASD newsletter. EASD publishes the newsletter at least

monthly and distributes it by e-mail to firms on the subscribers list. Firms can subscribe to the newsletter at no cost. The requesting department may also request that EASD send the advertisement to a separate list of contractors. Finally, the advertisement is placed in a newspaper of general circulation. The advertisement requests statements of qualifications from firms interested in the project(s) advertised.

A selection committee evaluates the statements of qualifications received in the CM@Risk and Design-Build One-Step processes. The selection committee may not have more than seven members. The panel members include but may not be limited to the following: representatives of the requesting department, the EASD contracts specialist, EASD project management staff and a contractor community representative. At least one member of the panel must be a registered architect or engineer.

Both kinds of contracts generally use the following evaluation criteria: general information; experience and qualification of the prime firm; approach to and understanding of the project; principal office location; local office work role; and current/recent workload with the City of Phoenix. In addition, CM@Risk criteria include the experience and qualifications of firm members, while those for the Design-Build One-Step process include the qualifications of the project team.

The AP notes that the City Engineer is responsible for distributing work as evenly as possible, and therefore qualified firms not engaged in work with the City should generally receive preference over qualified firms with significant current or recent city work. Specific criteria and points vary according to the needs of the project, so the requesting department representative and Contracts Specialist determine these criteria by the time of advertising. Furthermore, agencies may use alternate scoring methods if EASD deems such criteria to be appropriate for a specific project.

The selection committee selects the firms based either on the statements of qualifications alone or on a combination of the statements of qualifications and interviews.

Once the selection committee decides on a firm or team, it forwards the recommendation to the City Engineer for approval. The City Engineer discusses any selection concerns with the director of the client department. When the City Engineer has approved the final selection, contract negotiations begin. In the Design-Build One-Step process, M/WBE and SBE participation goals are established on a project-specific basis before the design builder prepares the guaranteed maximum price proposal. If negotiations with the selected firm are unsuccessful, the City may then either begin negotiations with the next most highly rated firm or re-advertise the project.

According to EASD, because CM@Risk projects include the design of the project, there is no basis for establishing project goals prior to completion of the design; therefore, confirmed compliance with M/WBE subcontracting goals is not part of the selection criteria for CM@Risk projects. The reference to M/WBE contracting in AP 2.12 is the following statement:

*The EASD strongly encourages the use of minority and woman owned business enterprises and small business enterprises certified with the City to provide professional services. Contracts Administration staff takes the following approach to achieve M/W/SBE participation:*

- A. The Statement of Qualifications includes consideration of the utilization of M/WBE subcontractors.*
- B. Contractors are reminded throughout the selection process that the City has a strong commitment to M/WBE participation. A reminder of M/W/SBE participation is included in pre-submittal conferences.*
- C. The selected contractor will be required to meet the M/W/SBE subcontractor goals for established construction services.*

The selection process in the Design-Build Two-Step process is the same as in the CM@Risk and Design-Build One-Step processes through submission of the statement of qualifications. In the Design-Build Two-Step process, once the selection committee reviews and evaluates the statement of qualifications, the committee identifies three qualified firms to proceed to the second step of the selection process. During the second step, the qualified firms are issued an RFP for the final design and construction of the project. Each of the

three firms is asked to submit a written response and to participate in a formal interview presentation. Each RFP response is evaluated on conceptual design and performance specifications. Before the RFP due date, a pre-proposal meeting is conducted with the qualified firms and selection panel members to answer questions on the RFP and the selection process.

No scores are carried forward from the statement of qualifications process to the RFP evaluation. The three firms begin the RFP process on equal footing. Each firm separately submits a price proposal and a technical proposal. In applying the scoring method, the selection committee separately evaluates and scores each qualified firm's technical proposal before the price proposal is opened. Evaluation of the price proposals takes place at the conclusion of the formal interview and is conducted by the Deputy City Engineer.

Final selection is based on a combination of price, schedule, and other technical criteria included in the RFP. Additional RFP requirements include bid surety and participation goals for M/WBEs and SBEs. No proposal will be read unless it is accompanied by bid surety in an amount that represents approximately 10 percent of the project's estimated construction budget. The selected firm must subcontract work to M/WBEs and SBEs at or above the percentage identified in the goals.

**3.3.4.2 Job-Order Contracting One-Step Process and Two-Step Process**

AP 2.2 establishes the Job-Order Contracting One-Step process for procuring construction services. AP 2.3 establishes the Job-Order Contracting Two-Step process for procuring construction services. The selection processes are almost identical. The two processes are used for different types of construction projects. Job-Order Contracting of both kinds is used for smaller projects like maintenance, renovation, and minor construction. EASD contacts the client departments to determine the number and size of smaller projects the departments expect to undertake and groups those projects into one job-order contract to be

completed throughout the year by the selected firm. According to EASD, an M/W/SBE goal is set for the entire annual contract and then is met during the course of the contract as a whole.

### **3.3.5 Project Goal-Setting Process**

The Goals Committee is responsible for setting project goals on public works contracts bid by the City. The goal setting process for the various procurement methods is as follows, with adjustments in particular kinds of projects as described below. EASD completes an M/WBE Subcontracting Goals Recommendation Form. The purpose of the form is to divide the contracting project into potential subcontracting trade areas. The form has the following sections:

- ***the description***, which includes each trade area of the project that may have subcontracting opportunities;
- ***the dollar amount***, which provides the dollar figure for each trade area;
- ***the percentage of dollar amount***, representing the percentage of the total project dollars for each trade area;
- ***MBE***, which includes a complete list of the MBEs certified in each subcontracting area; and
- ***WBE***, which includes a complete list of the WBEs certified in each subcontracting area.

A similar document, the SBE Subcontracting Goals Recommendation Form, is completed for small business enterprises, using the same sections but with an SBE section listing certified SBEs in place of the MBE and WBE sections.

A representative of EASD completes the M/WBE Subcontracting Goals Recommendation Form. Each subcategory that has at least three certified firms is included in the overall percentage.

According to interviewees from EASD, the goal is set using the following formula. First, MBE and WBE availability percentages are calculated separately. To determine the MBE availability percentage, EASD takes the total number of available MBEs and divides it by the total number of available firms. An MBE is considered available if it is certified by the

City and has been active in the bid process during the previous 24 months. A firm is included in the overall availability percentage if it holds the required license or has been active in the bid process in the past 24 months. Once the availability percentage is calculated, it is multiplied by the total cost of the project to calculate the dollars that should go to MBEs. The dollars for trade areas with less than three certified MBEs are multiplied by the MBE percentage of availability to produce an adjusted MBE dollar amount based upon availability. The adjusted MBE dollar amount is then subtracted from the original MBE dollar amount. Finally, the overall project goal percentage is computed by dividing the adjusted MBE dollars by the total project cost. The same adjustment process is used for setting proposed goals for WBEs and SBEs.

Once the EASD representative has determined proposed MBE, WBE and SBE goals, the Goals Committee meets to discuss those figures and ultimately set the project goals. The Goals Committee may adjust those goals based upon its knowledge of the contracting patterns in the various trade areas.

#### **3.3.5.1 Goal Setting in CM@Risk Projects**

The construction manager for CM@Risk projects also attends the Goals Committee meetings and also helps set the ultimate project goal, but according to EASD the goal has never been adjusted down based upon the input of the construction manager. An overall project goal is set, and that goal is divided into MBE, WBE and SBE components.

The established goals are set out in the CM@Risk Contract. The construction management firm is aware of the goals before the final contract negotiations and begins obtaining bids before that meeting. The bids are discussed during final contract negotiations. To date no waivers have been granted on CM@Risk projects. In fact, according to EASD the construction management firms have proposed to exceed the goals on many CM@Risk projects. EASD, however, expressed concerns that by the end of the project it has no

information whether the goals have been met. EASD does not track whether subcontracting payments are actually made; that is the responsibility of Contract Compliance.

### **3.3.6 Reports and Waivers**

EASD maintains a database that tracks required M/WBE and SBE utilization spending and proposed M/WBE and SBE utilization spending. The database tracks each project bid, the required utilization dollars based on the set project goals and the proposed utilization dollars based on what the contractor proposes to complete.

EASD also tracks waiver information. The report tracks each project on which firms requested waivers and includes the project name, the construction company, the original goal, whether the request was for a full or partial waiver, whether the waiver was granted or denied, the new proposed goal and the reason for the request. According to a Memo dated April 22, 2003, EASD has heard 13 waiver requests since January 2000. Eleven requests were for partial waivers and two requests were for full waivers.

Of the 13 requests, 5 were denied and 8 were approved. EASD analyzed the requests and concluded that the reasons given for waivers were that the lowest M/WBE bid was 20 percent higher than the lowest non M/WBE subcontract bid, that M/WBEs did not respond to solicitations, and that larger contracts yield a larger scope of work that available M/WBEs are unable to perform. According to the memo, EASD has planned to address the requests for waivers in the following ways to increase utilization:

- EASD plans to modified language in the bid specifications to clarify and simplify procedures for general contractors to meet M/W/SBE goals.
- EASD plans to set realistic goals based on availability to achieve the predetermined annual goal.
- EASD plans to conduct post interviews with contractors who filed waiver requests to emphasize the importance of achieving M/W/SBE goals.
- EASD plans to sponsor construction networking days and other events to encourage and facilitate subcontracting between general contractors and smaller construction firms.



**3.3.7 Preconstruction Procedures**

After the City Council approves the contract award, EASD submits a Council Action by Award Date Sheet to EOD Contract Compliance. The sheet shows the base bid, the council award, the council award date, contact information for the prime contractor and all M/WBE subcontractors, required M/WBE subcontract amounts and percentages and proposed M/WBE subcontract amounts and percentages.

EOD enters the information from this sheet into the Contract Compliance database. Each M/WBE subcontractor receives a notification letter and Verification of Subcontractor Participation Form from EOD. EOD also sends a letter of notification to the prime contractor along with copies of the letters sent to M/WBE subcontractors. Then EOD receives and files completed Verification of Subcontractor Participation forms.

The department (Aviation, EASD, Streets, Water Services, Transit or Public Works) then schedules a preconstruction meeting, inviting Contract Compliance staff. Contract Compliance compiles a preconstruction packet explaining compliance with the M/WBE goal requirement. The contents of the packet and meeting are discussed below.

Two preconstruction memoranda are distributed summarizing compliance monitoring procedures outlined in the contract, deadlines for submission of M/WBE utilization reports, requirements for M/WBEs to perform and manage the work on their subcontract and penalties for lack of good faith in attempting to achieve required M/WBE goals. Before or at the preconstruction meeting, prime contractors also must sign two letters of assurance documenting that the contractors are committed to meeting or exceeding established M/WBE goals. EOD explains how M/WBE utilization will be counted toward the required goals. Within 15 days of the notice to proceed, prime contractors submit copies of all M/WBE subcontracts to Contract Compliance.

**3.3.8 Participation and Completion Procedures**

Prime contractors must submit a Monthly Statement of M/WBE Utilization with each pay request as well as a Monthly Statement of SBE Utilization. These statements must indicate the amount paid to each M/WBE and SBE firm, including firms that were not used during the pay period. Pay requests cannot be processed unless contractors attach these monthly statements. When prime contractors receive payment from the City, they must pay subcontractors for work performed during the pay period. Prompt payment provisions require that prime contractors pay subcontractors within seven calendar days after receiving payment.

The monthly statements of M/WBE and SBE Utilization are forwarded to EOD Contract Compliance. Contract Compliance reviews the prime contractor's progress and contacts the contractor if the M/WBE or SBE participation is not consistent with the proposed goals.

In addition to reviewing monthly utilization statements, Contract Compliance conducts on-site visits for at least half of projects awarded based on the following guidelines. Contract Compliance randomly selects projects for review and observes M/W/SBE subcontractors performing work at the site to determine whether equipment used by M/W/SBE firms is owned or leased by the M/W/SBE. Contract Compliance may conduct interviews with prime contractor and M/W/SBE employees as well. Once Contract Compliance completes an on-site visit, its staff must complete an On-Site Monitoring of M/W/SBE Firms form.

If a prime contractor needs to reduce the scope of work performed by an M/W/SBE or the amount of an M/W/SBE's contract, the prime contractor must contact Contract Compliance in writing for approval prior to making adjustments. Further, contractors should report any performance issues or disagreements with M/WBE firms to Contract Compliance.

### **3.4 M/WBE Procurement**

Two administrative regulations address procurement. AR 3.10, the general procurement policy, outlines the process for purchasing goods and services at all dollar levels throughout city procurement. AR 1.88 includes a section outlining the M/WBE vendor bid price incentive program used to increase M/WBE participation in goods and services contracts. In addition, the Operating Procedures supplement AR 1.88, addressing the bid price incentive program procedures and providing instruction on implementing the AR. This section outlines both ARs and the Operating Procedures as they relate to the procurement.

Within the fiscal year ending in 2003, 252 M/WBE firms or 68 percent of certified goods and services providers won contracts with the City. These transactions account for \$17.8 million of the City's total of \$421.4 million.

#### **3.4.1 M/WBE Vendor Bid Price Incentive**

According to AR 1.88, the City will apply a bid price incentive to bids, proposals, and quotations for goods and general services from certified M/WBE firms located in Maricopa County. The bid price incentive is 5 percent for contracts up to \$250,000 in annual value and 2.5 percent for contracts from \$250,000 to \$500,000. According to AR 1.88 the bid price incentive program works as follows:

- The incentive applies to any bid, proposal or quote received from a certified MBE or WBE on a contract valued less than \$500,000.
- The formula is "the dollar amount of the M/WBE's bid, quote or proposal is multiplied by the applicable bid price incentive percentage (2.5 or 5 percent)." The result of this calculation is subtracted from the M/WBE's bid. The resulting sum is compared to the lowest non-M/WBE bid.
- If an M/WBE firm is declared the low bidder as a result of the price incentive program M/WBE certification must be confirmed.
- If the cost of the bid price incentive reaches \$35,000 during any fiscal year, the City Manager notifies the City Council to consider whether to continue the incentive during the remainder of that fiscal year.

The five-year summary set out as **Exhibit 3-2** shows the number of firms benefiting from the bid price incentive.

For fiscal year 2003-2004, M/WBE firms received \$392,945 for goods and services because of the bid price incentive program, with all the dollars spent on contracts of less than \$250,000. The additional cost to the city under this program was \$8,904. However, **Exhibit 3-3** sets out a five-year comparison of the total dollars spent with the total dollars awarded to M/WBEs for purchasing of goods and services.

The Operating Procedures also address the bid price incentive program, but they only outline procedures for the Finance Department and EOD. The Operating Procedures provide no listed responsibilities for any other department under the bid price incentive program, even though AR 1.88 requires that all purchases under \$500,000 use the bid price incentive.

Both AR 1.88 and AR 3.10 apply to the procurement of goods and services. AR 3.10 is the comprehensive procurement procedure for all commodities and services purchased by the City of Phoenix (Procurement Policy) and has been in effect since July 1, 2003. Nevertheless, AR 3.10 does not directly reference AR 1.88. The next section will outline the requirements of AR 3.10 and compare it to AR 1.88 and the Operating Procedures to determine if inconsistencies exist. As will be discussed, there were several inconsistencies in the procurement area.

**EXHIBIT 3-2  
CITY OF PHOENIX  
NUMBER OF FIRMS BENEFITTING FROM MINORITY-OWNED BUSINESS  
ENTERPRISE AND WOMEN-OWNED BUSINESS ENTERPRISE  
BID PRICE INCENTIVES  
1999-2000 TO 2003-2004**

<b>FY</b>	<b>1999-2000</b>	<b>2000-2001</b>	<b>2001-2002</b>	<b>2002-2003</b>	<b>2003-2004</b>
No. of Firms	40	29	26	55	20

Source: City of Phoenix, Finance Department

**EXHIBIT 3-3  
CITY OF PHOENIX  
TOTAL COST OF BIDS AND SERVICES COMPARED WITH COST OF BIDS AND  
SERVICES AWARDED TO MINORITY-OWNED BUSINESS ENTERPRISES AND  
WOMEN-OWNED BUSINESS ENTERPRISES  
1999-2000 TO 2003-2004**

FY	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004
Total Goods & services Spent in Millions	\$303.2	\$351.2	\$384.1	\$398.4	\$421.4
M/WBE Goods & Services in Purchasing in Millions	\$18.6 (6.15%)	\$19.8 (5.64%)	\$15.1 (3.94%)	\$17.1 (4.30%)	\$17.8 (4.23%)

Source: City of Phoenix, Finance Department

**3.4.2 Procurement Policy**

The Procurement Policy was produced by an independent team that reviewed all aspects of the general procurement process and developed two levels of procurement processes split according to dollar value. Additional guidelines apply in other areas, such as public works, telecommunication and federally funded procurements. All City departments use the Procurement Policy for the purchase of goods and services.

Several general guidelines permeate the procurement process. City Council approval is required for commodities and services of \$40,000 or greater. For commodities and services less than \$40,000, a department director, function head, or a delegate of either is required to approve purchases and contracts.

In addition to approving purchases, department directors are responsible for implementing sufficient internal controls and review procedures within their organization. Controls must be written, readily available and sufficient to ensure proper delegation of duties

**3.4.3 Procurement of Less Than \$40,000**

**3.4.3.1 Petty Cash Purchases (\$100 or less)**

The Procurement Policy delegates authority to departments to purchase incidental and nonrecurring goods and services costing less than \$100. Departments may make such petty cash purchases only when all of the following conditions are met:

- the item is not carried in Central Stores warehouse stock;
- the item is not purchased on a current city contract;
- the total cost is not more than \$100; and
- the item represents an infrequent, unusual or emergency expenditure.

If the purchase is over \$100, the City Controller must approve the purchase. Further, purchases may not be “split” in order to stay under the \$100 maximum.

The Procurement Policy states that for petty cash purchases the use of Minority, Women, Small, and Disadvantaged Business Enterprises (M/W/S/DBEs) is encouraged whenever practical, considering fair pricing and competitive quality. Departments should refer to the EOD on-line directory for a listing of M/W/S/DBEs to identify potential vendors.

The Procurement Policy does not refer to AR 1.88 or its application of the bid price incentive program to petty cash purchases. Departments making petty cash purchases often do not use M/W/S/DBEs. Further, the policy for using these firms is loose, allowing departments to be less rigid in their application of the program. Moreover, according to AR 1.88 the City is to apply a bid price incentive to all bids, proposals, and quotations from certified MBE or WBE firms located in Maricopa County for goods and general services received up to \$500,000. Under AR 1.88, the bid price incentive for petty cash purchases should be 5 percent. The Operating Procedures do not address departmental responsibilities for applying the bid price incentive to petty cash purchases.

We interviewed 32 departments and asked representatives of each whether it applied the bid incentive to petty cash purchases. Overwhelmingly, departments indicated that they

did not apply the bid incentive, and most departments indicated a belief that the bid incentive was not supposed to apply to petty cash purchases.

**3.4.3.2 Departmental Purchase Orders (\$1,000 or less)**

The Procurement Policy delegates authority to departments to purchase goods and services costing \$1,000 or less using departmental purchase orders (DPOs). Each department has the authority and responsibility to establish DPO purchasing policies and review departmental purchases. The departments have varying purchasing policies. Some departments do not have their own written policies but rather use AR 3.10 and AR 1.88 as their policies. Other departments have extensive policies, outlining procedures in each category of purchasing.

The DPO price must be fair and documented. To ensure a fair price, the Procurement Policy provides that a department may use one of three options: obtain at least three written or verbal quotes; compare the price with prices paid within a reasonable amount of time in the past; or compare the price with published price lists or advertised prices.

All departments using DPOs are to ascertain that the vendor has complied with the reporting requirements of the affirmative action program ordinance listed in City Code, Chapter 18, Article V. Departments may verify vendors' affirmative action compliance by using EOD's on-line Business Relations section. Departments are not to purchase from non-compliant vendors unless the vendor is a "sole source," exempting the purchase from the affirmative action compliance requirements.

The Procurement Policy states that departments are responsible for supporting the City's M/W/S/DBE programs by using M/W/S/DBEs whenever practical, considering fair pricing and competitive quality. According to the Procurement Policy, departments should give M/W/S/DBEs ample opportunity to compete for DPO purchases, and they should consult the EOD on-line directory to check the certification status of vendors. EOD's Business Relations section is responsible for reviewing DPOs periodically to ensure

compliance with City Code and affirmative action plans. Significantly, neither AR 1.88 nor the Operating Procedures outline the steps departments should use in supporting the City's M/WBE program.

As was the case with petty cash purchases, the Procurement Policy does not directly reference the bid price incentive program or its application to departmental purchases. As a result, the departments provided different answers to questions about applying the bid price incentive program to DPOs. For example, some departments applied the 5 percent bid incentive to DPOs; other departments applied a 2.5 percent bid incentive; some departments did not apply a bid incentive at all.

We also found inconsistencies in the process for soliciting bids apparently resulting from a lack of sufficiently clear guidance. Although there does not appear to be an applicable written policy, all city departments obtain quotes from at least three vendors for DPOs, as they would under the City's policy for purchase requisitions (see below). The departments are not consistent, however, in obtaining quotes from M/WBEs. The Procurement Policy does not require a department to obtain a bid or quote from an M/W/S/DBE firm for a DPO purchase. Nor is there any such requirement within AR 1.88 or the Operating Procedures.

Understandably, the department purchasing policies thus vary in their support for utilizing M/W/S/DBE firms. For example, some departments obtain at least one of the three quotes from a certified M/WBE; some departments obtain at least two quotes from a certified M/WBE; some departments obtain all three quotes if possible from M/WBEs. This inconsistency most likely occurs because the Procurement Policy does not provide instruction in this area and does not reference a document for such instruction.

One last area of concern is vendor payment. Departments stated that vendors often have difficulty complying with the policy requiring an original invoice. This requirement makes the process seem cumbersome, and in some instances may delay payment. The



overall length of the payment process hurts smaller businesses, for which cash flow is a constant concern.

There have been attempts to provide consistency in departmental purchasing as it relates to M/WBE utilization. For example, EOD provides a template for the annual affirmative action plans required of all departments. The template includes these mandatory objectives:

- review of M/WBEs in departmental purchasing;
- attendance at quarterly business liaison meetings;
- creation of department brochures for M/WBE business fairs; and
- employee performance review ratings on commitment to supporting the City's M/WBE program.

Departments can also choose additional objectives in two other discretionary areas, spending objectives and outreach efforts. Points are assigned to the mandatory and discretionary objectives. Each department's director is evaluated in part according to the department's ability to meet the objectives in the affirmative action plan.

Several of the mandatory objectives help to provide consistency in departmental purchases. For instance, each department has a designated business liaison who attends quarterly meetings held by EOD. The business liaison is often the person responsible for departmental purchases. Each quarterly meeting includes opportunities for selected M/WBEs to introduce their companies to individuals with purchasing authority. The quarterly meetings also provide departments the opportunity to interact and share information. Further, creating departmental brochures for M/WBE business fairs helps the departments publicize the type of services they require from potential vendors.

Finally, department directors receive performance review ratings based in part on the department score received on the affirmative action plan. This encourages the department directors to promote the goals in the affirmative action plan. Nevertheless, several other

department employees who work directly with procurement are not being evaluated based upon compliance with the departmental affirmative action plan.

The discretionary objective concerning outreach efforts helps as well. Most of the departments have extensive outreach efforts. The business liaisons often attend trade fairs offered by the City and by other small and minority business service providers throughout Maricopa County. All departments indicated that business liaisons would follow up after meeting a new vendor and provide the vendor's information to the buyer for that department.

On the other hand, the objective requiring review of M/WBE use in departmental purchasing, while in theory a positive idea, is difficult for departments to execute in the most effective way. Besides reporting the figures for the affirmative action plans, there is no regular departmental review of the number of M/W/S/DBEs contacted for bids or awarded contracts. Some departments use periodic memoranda to address areas of opportunity for M/W/S/DBE purchasing and encourage purchasing agents to utilize M/W/S/DBE firms in these areas.

To review departmental spending, departments use an SAP report generated by the Finance Department that provides information on vendors used, total dollars spent, and total dollars spent with minority- or woman-owned businesses. Most departments track the utilization of M/W/S/DBEs either manually or through this SAP reporting. The report includes payments for items, such as memberships and subscriptions, that are not competitive in nature and do not have multiple sources. Inclusion of these payments potentially skews the departments' utilization figures. While this report in some instances is the only tracking of M/WBE utilization maintained by departments, the Finance Department did not originally design the report for that purpose, which may explain some of the data source issues.

***3.4.3.3 Purchase Requisitions (Between \$1,000 and \$40,000)***

Departments use purchase requisitions to request purchases costing between \$1,000 and \$40,000 and involving nonprofessional services, capital outlay, and commodities. The

department must prepare the purchase requisition (in SAP or by hand on a printed form), obtain department approval, and submit the document to the purchasing department (Purchasing).

Purchasing selects all vendors in this category. For purchases between \$1,000 and \$5,000, the assigned purchasing buyer must contact at least three vendors for a verbal or written price. However, according to Purchasing, in nearly all cases written quotes are obtained. If there are not three potential sources, Purchasing must record the lack of competition and document that the price is fair and reasonable. For purchases between \$5,000 and \$40,000, Purchasing issues a written Request for Quotations (RFQ) including terms and conditions. The RFQ is sent to known suppliers by fax, mail or e-mail, and it is publicized through the Phoenix Chamber of Commerce's Bid Source system. A vendor is not eligible to participate in the purchasing or bidding process unless it complies with the affirmative action requirements specified in Article V of Chapter 18 of the City Code. Ultimately, Purchasing will award the contract to the lowest bidder.

Although Purchasing uses the above method for purchases costing between \$1,000 and \$40,000, departments often submit a suggested list of vendors and quotes to the buyer. Often the department will contact a vendor before writing the specifications. While such contact helps departments write better specifications, this practice also allows some vendors greater access to information about departments' potential needs and could cause specifications to be written in ways that favor the cooperating vendors. During anecdotal interviews, several business owners expressed frustration regarding this practice, indicating a belief that bid specifications are often written favorably toward certain vendors.

Again, there are no specific written requirements outlining the buyers' responsibilities for soliciting bids or quotes from M/W/S/DBE firms. Purchasing does expect each buyer to seek bids or quotes from M/W/S/DBE firms, and each buyer's performance review is directly affected by individual M/W/S/DBE utilization. Buyers maintain their own lists of bidders.

Generally, requests for quotations come from buyers on those lists. There are no specified written guidelines concerning how vendors get placed on individual buyer's lists, but according to Purchasing vendors are asked to register for a comprehensive bidder's mailing list maintained by Purchasing. According to Purchasing, buyers use the comprehensive mailing list to develop individual buyer's lists for particular procurements. It also appears that once a vendor submits a quotation the vendor is typically placed on the applicable list of bidders.

Purchasing conducts several outreach efforts. Purchasing maintains an open vendor hour every Wednesday when vendors can come in and discuss the services they provide with the buyer who actually purchases those services.

#### **3.4.4 Procurements of \$40,000 and Greater**

This section defines the regulation for the procurement of commodities, nonprofessional services and contracts where the value of the original contract is to be \$40,000 and greater. Departments use a purchase requisition to request a purchase by completing the document in SAP or by hand on a printed form. The department director approves the form and submits it to Purchasing for approval and placement into the bidding process. Competitive sealed bidding is used for all purchases unless Purchasing decides to use an existing government contract.

The bidding process begins with Purchasing issuing an Invitation for Bids (IFB) or Request for Proposals (RFP), both of which include a purchase description and all contractual terms and conditions applicable to the procurement. Purchasing gives public notice of the IFB or RFP a reasonable time before the opening of the bids or proposals. Bidders and vendors must comply with the City affirmative action requirements specified in City Code Chapter 18, Article V, to be eligible for consideration.

After the bids are opened, Purchasing tabulates all bids or proposals. If appropriate, the department or function will evaluate the bids or proposals and make recommendations.

Purchasing reviews any such recommendations and submits its recommendation to the City Manager.

Purchasing may authorize exceptions to the selection process under special circumstances, such as sole source purchases, time restraints, an unusual project or service, or an existing agreement. The department director, function head or delegate must prepare a letter of exception to the Deputy Finance Director explaining the reason for the request. The Deputy Finance Director must file any letter of exception in the appropriate purchasing file.

Following selection of a vendor or bidder, Purchasing negotiates the contract, prepares the request for council action, and obtains City Council approval. Upon approval, Purchasing ensures that the contract is properly executed, dated and distributed. Departments and functions remain responsible for inspecting and receiving goods as well as resolving vendor discrepancies. Purchasing may offer assistance, if requested.

Purchasing monitors contract performance in cooperation with the department or function. If there are any perceived problems, the department or function must give Purchasing timely notice. Further, the department or function must refer any contractual changes to Purchasing for resolution.

**3.4.5 Other M/WBE Procurements**

**3.4.5.1 Requirements Contracts**

AR 3.10 delegates authority to departments and functions to purchase goods and non-professional services using requirements contracts established or approved by Purchasing. These contracts are agreements established to provide for recurring purchases from the same supplier for a specified period. A requirements contract Summary Manual listing all current requirements contracts is available on the City's Intranet site.

Departments must submit estimated quantity requirements and stay within their requirements. Departments that have not submitted any estimates may not place orders against an existing contract without approval from Purchasing.

Purchasing monitors the provisions of the requirements contracts to ensure contractors' compliance. Problems with contractor performance are submitted to Purchasing for resolution.

During the procurement interviews, the departments frequently mentioned the office supply requirement contract with Office Depot. To the extent that the requested items are on the Office Depot contract, departments are required to purchase those items from Office Depot. During interviews, several departments indicated that office supplies make up the most substantial area of departmental purchases, and that the Office Depot requirement contract lowers their department M/WBE utilization.

***3.4.5.2 Central Stores Requisitions***

The Central Stores Warehouse maintains a stock of common and frequently used goods such as office supplies, tools, uniforms, and cleaning materials. All departments and functions should order directly from the Central Stores Warehouse and use the stocked items. A catalog of available items is available on the City's Intranet site.

The warehouse provides a centralized location for departments to fulfill their needs, but it limits opportunities for minority- and woman-owned businesses. Further, the vendors contracted by the Central Stores Warehouse are larger entities that are able to secure goods at a price cheaper than prices at smaller entities such as M/W/S/DBE firms. Several procurement directors indicated during interviews that their departments would have increased M/W/S/DBE participation if they were not required to purchase from the Central Stores Warehouse.

**3.4.5.3 Emergency Purchases**

Emergency purchases are defined as purchases of goods or services needed when the public health, safety, or welfare are endangered, when the City is exposed to serious cost consequences if immediate action is not taken, or when a department or function identifies an immediate and critical operational need.

Purchasing handles all emergency purchases made during regular business hours, Monday through Friday, 8:00 a.m. to 5:00 p.m. Purchasing has the discretion to make the purchase or delegate the authority to the requesting department or division. If the requested purchase price is \$40,000 or greater, the department director or function head must obtain the Deputy City Manager's approval prior to the purchase. If an emergency requires a purchase during non-business hours or holidays, the authorized department head or function director must approve the purchase. A Requisition noted as "EMERGENCY" must be submitted to Purchasing with a brief explanation.

**3.5 Additional SBE Policies, Procedures and Programs**

This section presents further information about the City's Small Business Enterprise (SBE) Participation Program. Although the SBE program is not an affirmative action program, it functions as an important<sup>1</sup> race- and gender-neutral effort to increase participation by M/WBEs.

**3.5.1 The Small Business Development Program**

AR 1.88, which establishes many procedures for M/WBE programs, also addresses the Small Business Development Program (SBDP) and applies many of the same procedural methods using SBE criteria. The Community and Economic Development Department (CED) is responsible for administering the SBDP.

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<sup>1</sup> See Chapter 8.0 for SBE utilization discussion.

The SBDP assists small businesses with technical assistance, capital assistance, business training and networking. The program is designed to be race and gender neutral and to offer assistance to all Phoenix-based small businesses. According to AR 1.88, SBDP services include the following:

- ***Business consulting services through the Management and Technical Assistance (MTA) Program:*** The MTA program provides assistance in the following areas: business plan writing, marketing, accounting, finance and loan packaging, organizational development, human resources planning, information systems, quality control, and public and private procurement.
- ***Capital assistance programs:*** The EXPAND program assists Phoenix businesses in obtaining loans from eligible local financial institutions. EXPAND provides additional collateral, up to 50 percent of a loan amount in some cases. The amount of the collateral enhancement can range as high as \$150,000. There is no ceiling on the loan amount. Loans can be for virtually any legitimate business purpose. Jobs creation or jobs preservation is an essential element of any request for EXPAND assistance. With EXPAND, the successful applicant/borrower is able to receive a loan and the lender is in a more secure collateral position.
- ***Retention, expansion and outreach visitations:*** CED staff members conduct site visits at targeted businesses to provide support.
- ***Small Business Hotline information referral service:*** CED staff field calls and provide information to businesses.
- ***Small business training and networking events:*** The SBDP offers four major trade fairs, procurement workshops, and home-based business seminars.
- ***Referral assistance to businesses interested in City procurement:*** CEDD staff members refer businesses to various City departments' small business assistance agencies.

### **3.5.2 SBE Procedures Related to Certification**

Though of course the criteria differ, the processes applicable to M/WBEs, as discussed in Sections 3.2.2.1 and 3.2.2.2 above, are virtually the same as those used for SBE certification procedures, including certification denial, decertification, recertification, and appeals.



The main differences in procedure stem from the differences in criteria. Business owners seeking SBE certification must file a personal financial statement and personal tax return with the certification application. During the preliminary audit, EOD certification staff reviews the application for information including legal status of firm, ownership, business location and residency status. Enterprises must meet standards for size and owner net worth, as defined by the Small Business Administration. EOD verifies this information by reviewing a personal financial statement and income tax return provided by the applicant. In addition, the business must have been in continuous operation for at least two years, have day-to-day operations controlled by an owner with a background in the firm's major business field, be located in Maricopa County, and be owned by a qualified individual as defined by Chapter 18, Article VI, Section 18-101.R of the Phoenix City Code.

**3.5.3 Small Business Enterprise Contracting**

As addressed above in Section 3.3, SBE contracting procedures are virtually the same as those used for M/WBE contracting.

**3.5.4 Small Business Enterprise Reserve Contract Program**

In accordance with Phoenix City Ordinance No.G-4181, Purchasing reserves selected procurement opportunities for competition only among city-certified SBE firms in Maricopa County. The SBE reserve contract program began with a pilot program in 2002 utilizing printing requisitions under \$2,500. In November 2002, the program was expanded to include all commodity requisitions under \$5,000. Later, the program expanded again in mid-fiscal year 2003 to its current level of \$25,000 for the purchase of goods and general nonprofessional services.

EOD provides a current monthly list of certified SBE firms eligible for the program. Purchasing uses this list to identify specific categories of goods and services that can be provided by at least three certified SBE firms. EOD only reserves contracts when there are a sufficient number of certified firms. The qualified SBE firms must be ready, willing and able

to provide materials or services in connection with a specific contract before EOD will reserve any procurement for SBE competition.

For reserve contracts, the City uses the same procurement solicitation and award procedures as it uses for standard City contracts for the purchase of goods and services under \$25,000, except that the normal bid incentive for certified SBE firms is no longer necessary and so does not apply. The SBE procurement manager, in conjunction with the Deputy Finance Director, determines which procurement actions to reserve exclusively for competition between certified SBE firms. The SBE procurement manager reviews the current listings of eligible firms for the type of goods or services sought and provides this information to Purchasing's SBE buyer. When Purchasing receives purchase requests, the SBE buyer and the SBE procurement manager determine whether to reserve the procurement for SBE participation.

The main factors for this determination include the type of procurement and whether there are three or more certified SBE firms for each need within the procurement. Purchase categories that typically have a sufficient number of certified SBEs include computer supplies and equipment, promotional items, and printing.

If the procurement is reserved, the SBE procurement manager provides the SBE buyer with the names of three or more SBE firms that should be invited to respond. Procurements for SBE reserve contracts are not advertised, nor is the Phoenix Chamber of Commerce Bid Source system notified regarding the procurement.

After the RFQ is released, the SBE buyer contacts each SBE firm that has been invited to participate and confirms its intent to respond. If a firm does not intend to respond, the SBE buyer will then determine whether there are sufficient bidders for the procurement to continue as a reserve contract. If the SBE buyer receives fewer than three bid responses, the procurement is immediately cancelled, and the RFQ is processed through normal procurement procedures. The reserve contract program has faced a continuing challenge in

developing a sufficient number of qualified SBE firms in a variety of trades. In the program's initial stages, many contracts were cancelled because fewer than three firms responded to bids. While the number of certified SBE firms has increased slightly, few contracts are reserved for SBEs.

Upon completion of the solicitation process, the SBE buyer reviews the results with the SBE procurement manager before issuing a purchase order. When the buyer enters the purchase into SAP, the buyer notes that the purchase was made under the SBE Reserve Contract Program.

The SBE procurement manager maintains a record of all reserve purchases and monitors the program. A monthly report is generated tracking the amounts awarded to SBE firms as a result of the program. Report details include the cumulative amounts awarded to SBE firms, the identity of participating vendors and the commodity or general service descriptions for each transaction.

In its first full year at the \$25,000 level, the City spent \$421,717 through the reserve contract program, with a total of 73 contracts awarded.

**4.0 RELEVANT MARKET AREA,  
UTILIZATION, AND  
AVAILABILITY ANALYSES**

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## **4.0 RELEVANT MARKET AREA, UTILIZATION, AND AVAILABILITY ANALYSES**

This study for the City of Phoenix documents and analyzes the participation of minority, women, and nonminority businesses in the City's procurements and contracting for July 1, 1999, through June 30, 2004. This chapter describes the City's relevant market areas and analyzes the utilization and availability of minority, women, and non-M/WBE firms. In addition, this chapter summarizes the findings from the City's Second-Generation Disparity Study<sup>1</sup> conducted by MGT in 1999 and compares the results of the current analyses to help determine whether minority, women, or non-M/WBE businesses were underutilized or overutilized.

This chapter consists of the following sections:

- 4.1 Methodology Overview
- 4.2 Construction
- 4.3 General Services
- 4.4 Goods and Supplies
- 4.5 Conclusions

### **4.1 Methodology Overview**

This section presents an overview of the methodology for the collection of data and analysis of market areas, utilization, and availability of minority-, woman-, and nonminority-owned firms. The descriptions of business categories and minority- and woman-owned business enterprise (M/WBE) classifications are also presented in this section.

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<sup>1</sup> Included analyses on all construction, general services contracts, and purchases of commodities made between January 1, 1993, and December 31, 1997.

#### **4.1.1 Business Categories**

Three business categories were used in the study process to delineate the City's relevant market areas and in the analysis of utilization of M/WBE and nonminority firms:

- construction
- general services; and
- goods and supplies.

These categories were classified based on the account codes and text descriptions used by the City's financial system, the SAP system. Each purchase, contract, and payment was classified into one of the above categories based on the account descriptions, which were verified by appropriate City employees familiar with the system and types of transactions made. The definitions used to group the purchases, contracts, and payments were as follows.

##### **Construction:**

Any construction-related services, including, but not limited to:

- major/heavy construction services;
- light/maintenance construction services;
- other related construction services; and
- general contractors.

##### **General Services:**

Any service that is labor intensive and not professional or construction related, including, but not limited to:

- maintenance services;
- janitorial services;
- lawn services and landscaping;
- employment services; and
- printing services.

##### **Goods and Supplies:**

Equipment and consumable items purchased in bulk, or a deliverable product including, but not limited to:

- equipment and parts;
- chemicals;
- paper products; and
- office supplies.

Contracts/purchase orders that were classified as any of the following were excluded from this study:

- leases for real estate, insurance payments, banking transactions, salaries, refunds, petty cash, and certificate of deposits, since these records represent administrative items;
- fringe benefits such as payments for food, parking, or conference providers/fees;
- government disbursements, including nonprofit local organizations, state agencies, and federal agencies; and
- contracts/purchase orders that the City requested to be excluded.

#### **4.1.2 M/WBE Classifications**

In this study, businesses classified as M/WBEs were firms that were at least 51 percent owned and controlled by members of one of five<sup>2</sup> groups: African Americans, Hispanic Americans, Asian Americans, Native Americans, and nonminority women.

These groups were defined according to the United States Census Bureau as follows:

- **African Americans:** U.S. citizens or lawfully admitted permanent residents having an origin in any of the black racial groups of Africa.
- **Hispanic Americans:** U.S. citizens or lawfully admitted permanent residents of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish or Portuguese cultures or origins regardless of race.
- **Asian Americans:** U.S. citizens or lawfully admitted permanent residents who originate from the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.
- **Native Americans:** U.S. citizens or lawfully admitted permanent residents who originate from any of the original peoples of North America and who maintain cultural identification through tribal affiliation or community recognition.
- **Nonminority Women:** U.S. citizens or lawfully admitted permanent residents who are non-Hispanic white females. Minority women were included in their respective minority category.

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<sup>2</sup> MGT's City of Phoenix Second-Generation Disparity Study classified M/WBE firms into four categories (as opposed to the current five classifications). The categories were as follows: African American, Hispanic American, Asian and Native American, and nonminority women-owned firms.

#### **4.1.3 Collection and Management of Data**

To determine the most appropriate data for our use in the analysis of the City's procurement activity and to identify data sources, MGT conducted interviews with key staff knowledgeable about the City's procurement processes. The decision was made by City personnel and MGT that Engineering & Architectural Services Department (EASD) contract data was to be used for construction projects. Procurement data for all other procurement would be extracted electronically from the SAP system. It was determined that all prime contract data would be extracted electronically from the SAP system, and any available subcontract information would be identified from the City's Equal Opportunity Department (EOD) electronic data, EASD electronic data, and EASD project files.

#### **Contract and Subcontract Data Collection**

MGT began the process of collecting the City's contracts by developing a master list (provided by the City) to identify the contracts and projects that were awarded during the study period. The initial master list was composed of one database and one hard copy log that are maintained by EASD. Ultimately, the City and MGT made the decision that the master contract list would be comprised from the Finance and EASD. The following electronic files were combined to create the master contract list:

- EASD CIP Contract Detail Report electronic data extract: A report that is maintained by EASD and generated by the City's SAP system. This report lists construction and A & E contracts.
- CReference Report: An electronic list of projects let during the study period. This was generated by EASD and IT staff.
- SAP electronic data extract: This system is maintained by the City's Finance Department. It contains procurement data, as well as Construction and A & E.

Each electronic list contained, but was not limited to, the following information on most (not all) contracts contained in the list:



- name of firm awarded the contract;
- award amount of the contract;
- award date of the contract; and
- a description of the contract.

Hard copy construction files were pulled by MGT and the on-site data collection team directly to obtain additional subcontractor information. The City systematically maintains minority subcontractor data, MGT and the data collection staff tried to obtain nonminority subcontractor information from the City Clerk's Records Management Department and EASD City Clerk's Records Management Department. The City does not systematically maintain complete information on all subcontractors; however, some subcontractor information was derived from the files.

The hard copy data were collected by MGT staff and a subcontracted data collection team. MGT staff, who were trained and experienced in disparity study data collection techniques, trained the subcontractor data collection team. This ensured efficient and detailed compilation of the required data fields. The contract data were then placed into an MGT database for further analysis.

At the culmination of data collection, MGT provided four tables to the City's project director and departmental supervisors for approval. The first table identified all of the contracts and payments that were received electronically from the various departments visited. The second table contained a master vendor list, which was compiled from several sources. (Sources to be discussed in next section). This list was used as a basis for determining vendor availability. The remaining two tables consisted of electronic and hard copy bidder and subcontractor data collected during on-site visits to various departments.

The City was asked to give necessary approvals and/or provide further documentation of the tables within a time period agreed upon by MGT and City of

Phoenix officials. City personnel reviewed and suggested the modifications to MGT and the changes were noted in the database used for analyses.

The City of Phoenix provided documentation for a total of 1,332 construction contracts/projects to be analyzed, and approved the exclusion of contracts where data could not be found. The City approved MGT's use of data from the EASD databases in cases where MGT was not able to review the hard copy file, and all critical fields were present in the City's electronic databases. An MGT comparison between the City's EASD Record Management City Clerk databases and the information that was reviewed by MGT in the hard copy files revealed that the City's databases were a highly reliable source of contract data.

**Availability (Vendor) Data Collection**

Determining the availability of firms is a critical element in developing disparity analyses. MGT used several sets of data to determine the percentage of firms that are ready and willing to do work for the City of Phoenix, depending on the type of work performed by the vendor.

For the purposes of this study, MGT defines primes and subcontractors as firms that (1) have performed prime or subcontract work for the City in the past; (2) have bid on prime contract work for the City in the past; (3) are registered with any of the associations listed below; or (4) are construction, general services, or goods and supplies firms that were in the City's SAP system. These firms are defined as available contractors because they have either performed work or have indicated their willingness to perform work for the City of Phoenix. MGT also used other availability analyses, including census data and bidder availability for comparison purposes, which will be referenced throughout this chapter.

MGT used data gathered from several sources to develop a master list of firms. Various agencies, M/WBE lists, and trade associations within the state were also used to further identify the business category and ethnicity of firms. A list of all entities and business associations contacted is shown below. Additional vendors, aside from those provided by the organizations listed below, include those from the City's departments that maintained internal vendor lists.

- Arizona Contractors Association, Inc.
- Arizona Department of Commerce
- Arizona Department of Transportation
- Arizona Hispanic Chamber of Commerce
- Arizona Minority Business Development Center
- Asian Chamber of Commerce
- Arizona Chapter of Associated General Contractors
- Chinese Chamber of Commerce
- City of Phoenix M/WBE Certified Vendor List
- City of Tucson M/W/DBE Vendor List
- Grand Canyon Minority Supplier Development Council
- Greater Phoenix Black Chamber of Commerce
- Greater Phoenix Chamber of Commerce
- Korean Chamber of Commerce
- National Association of Minority Contractors
- Native American Chamber of Commerce
- North Phoenix Chamber of Commerce
- City of Phoenix Vendors

MGT was successful in collecting vendor information from the following sources:

- Arizona Hispanic Chamber of Commerce
- Arizona Department of Commerce M/WBE Vendor List
- City of Phoenix Equal Opportunity Department Vendor List
- Grand Canyon Minority Supplier Development Center (MSDC) Certified MBEs List
- Tucson MBE Directory Vendor List
- City of Phoenix Outreach Letter
- City of Phoenix Engineering & Architectural Services Vendor List
- City of Phoenix Community Economic Development Vendor List
- InfoUSA Marketing Associates

The vendors in the City's SAP system provided the basis for the master vendor database. In addition, the listing of M/WBE firms that had been utilized by the City were used to further assist in the identification of a firm's ethnicity. MGT then added firms from

the sources mentioned above that were not already in the Master Vendor Database.

Firms considered to be available vendors included:

- vendors who won contracts;
- vendors identified from the individual departments, government agencies, and trade associations;
- vendors who bid on contracts; and
- vendors utilized as subcontractors for primes on City contracts.

Again, the agency, trade association, and M/WBE lists were also used to identify the ethnicity and business category of firms already in the master vendor database. MGT excluded from the study the names of any firms that met the criteria for exclusion listed earlier in the chapter. Once the data were collected and entered or transferred into the MGT database, the data were processed as follows:

- The county in which the vendor operated was identified by matching ZIP codes with a ZIP code database of counties. (MGT maintains a ZIP code database containing all United States ZIP codes.) For those firms without addresses and services, MGT used a CD-ROM of yellow pages and the Internet to identify vendor address and service type.
- Records not pertinent to the study were eliminated.

Approximately 33,490 firm records of the approximately 58,320 were excluded from the availability analyses, which translates to approximately 57.4 percent excluded from the study. The most common reasons for exclusion were:

- duplicate vendor records (i.e., unique vendors who appeared in multiple vendor databases provided by the City);
- no business category (i.e., vendors who were not utilized, a business type was not provided, or a business type could not be identified from their name);
- incomplete address (could not determine county);
- nonprofit agencies, associations, or councils;
- governmental agencies, including schools and universities;

- travel-related businesses, including hotels, car rental, and conference fees;
- real estate; and
- periodicals, media, utilities, postage, hospital, and no longer in business.

The 24,830 remaining vendors make up the total master vendor table, which was used to calculate availability, although true availability must be considered a function of the factors related to capacity previously discussed in the availability methodology.

**Verification Reports**

Initially, the City distributed letters to firms that were believed to have been awarded contracts during the study period. Letters were distributed to approximately 116 prime contractors in order to obtain subcontractor participation information. (See **Appendix C** for a list of contractors). In addition, MGT distributed letters and verification reports to 352 firms that were awarded contracts by the City, based on the contract database that was compiled from EASD and the City's SAP system. The verification reports requested that the prime contractor verify:

- prime contractor ethnicity and gender;
- the prime contract dollar amount and award date;
- services provided; and
- name, ethnicity, services provided by, and amount paid to any subcontractors.

The prime contractor was also asked to edit and correct the data included in the verification report and provide any additional subcontracting information not listed in the report. (See **Appendix B** for a copy of the request letter and verification report.)

During the week of November 5, 2004, MGT mailed 352 verification reports directly to vendors. This mailout consisted of 9,475 contracts (individual reports) awarded to 352 unique firms. awarded contracts by the City. Of the 9,475 individual

reports mailed, approximately 165 of the 352 mailings were returned<sup>3</sup> unopened due to address problems. Of the 187 mailings that were received, changes and corrections noted in the verification reports by the respondents were incorporated into the data analyzed in this report.

**Data for Analysis**

The total number of records<sup>4</sup> analyzed for the five-year study period is shown below in **Exhibit 4-1**. The number of records are calculated from the contract and purchase order databases compiled by MGT staff with cooperation from the City. The exhibit shows the number of contracts or payments made for each of the three business categories, not taking into account the relevant market area calculations.<sup>5</sup>

**EXHIBIT 4-1  
CITY OF PHOENIX  
NUMBER OF ANALYZED RECORDS\*  
FISCAL YEARS 2000 THROUGH 2004**

<b>Business Category</b>	<b>No. of Records</b>
Construction	1,322
General Services	3,930
Goods and Supplies	70,716

Source: MGT developed a contract and purchase order database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

\* Construction, general services, and goods and supplies use award data from the City's SAP system.

**4.1.4 Market Area Methodology**

In order to establish the appropriate geographic boundaries for the statistical analysis, market areas were determined for each of the business categories included in the study. First, the overall market area was determined, and then the relevant market area was established.

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<sup>3</sup> The returned packages have been noted in the database and have been stored in a filing cabinet located in the City's Equal Opportunity Department.

<sup>4</sup> The tables used for analysis are organized into rows (records) and columns (fields).

<sup>5</sup> There were approximately 593 purchase orders identified as Professional Services, 759 purchase orders identified as Architectural & Engineering, and 1,561 contracts identified as Architectural & Engineering/Professional Services that were not analyzed for the purpose of this study.

**Overall Market Area**

A United States county is the geographical unit of measure selected for determining market area. The use of counties as geographical units is based on the following considerations:

- The courts have accepted counties as a standard geographical unit of analysis in conducting equal employment opportunity and disparity analysis.
- County boundaries are externally determined and, hence, are free from any researcher bias that might result from any arbitrary determinations of boundaries of geographical units of analysis.
- Census and other federal and state data are routinely collected and reported by County.

The counties that constituted the City of Phoenix's overall market area were determined by evaluating the total dollars expended by the City in each business category. The results were then summarized by county according to the location of each firm that provided goods or services to the City of Phoenix.

**Relevant Market Area**

The relevant market area was determined for each business category. The first step was to total the dollars awarded in each county according to business category. The counties were listed according to the number of firms awarded contact dollars, and then by the dollar amounts awarded. Succeeding counties were added, as needed, until at least 75 percent of the total dollars was included.

The use of the "75 percent rule" for market area determination is generally accepted in antitrust cases. In another relevant case, the court accepted less than 100 percent of data when it was reasonable to assume that the missing data would not significantly change the results of the analysis.<sup>6</sup>

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<sup>6</sup> James C. Jones v. New York County Human Resources Administration, 528 F.2d 696 (.2d Cir. 1976).

The data used to determine the overall and relevant market areas for the City's business categories follow:

- number of individual firms;
- percentage of total firms;
- total dollars;
- percentage of total dollars;
- number of contract/purchase orders/payments; and
- percentage of contract/purchase orders/payments.

#### **4.1.5 Utilization Methodology**

Using final contract amounts awarded and paid to prime contractors and actual paid awards to subcontractors, MGT calculated the percent of contract and subcontract dollars within the relevant market area. Utilization of subcontractors was based on those prime contracts that had subcontracting activity. MGT analyzed the percent of contract dollars for each M/WBE classification per fiscal year at the prime contracting and subcontracting level.

M/WBE and non-M/WBE utilization analysis includes the firms located within the relevant market areas. Construction, general services, and goods and supplies firm utilization was derived from the City's financial system for activity occurring between July 1, 1999, and June 30, 2004. In addition, construction firm utilization was based on the data provided by the City's Engineering and Architectural Services Department (EASD). Using these data sources, MGT calculated the percentage of total dollars awarded to M/WBEs and non-M/WBEs during the relevant time period. The numbers in the utilization charts to follow reflect the combined contract and project numbers for construction; therefore the utilization of prime contractors is based on the amounts awarded and paid to primes. The utilization of subcontractors was based on identified prime contracts that had subcontractor activity. The number of actual purchase orders for general services and goods and supplies reflect the overall total of the purchase orders awarded.



**4.1.6 Availability Methodology**

To evaluate disparate impact, if any, we must identify available M/WBEs in the relevant market area by each business category. This determination, referred to as *availability*, has been an issue in recent court cases. Specifically if the availability of minority and women firms is overstated or understated, a distortion of the disparity determination will result. This distortion occurs because the quantitative measure of disparity is a direct ratio between utilization and availability.

To determine availability, several methodologies have been used, including census data, vendor data, and bidder data. Bidder data has been criticized as being too narrow. The use of census data has been criticized because it does not consider whether minority and women contractors actually are willing, available, or able to perform contracts. The use of vendor data is a more appropriate methodology since it excludes firms that are uninterested or unable to provide goods and services to the locality, as we have stated. Vendor data are determined by identifying M/WBEs that have actually performed work for the locality or have expressed an interest in securing contracts. For our analysis we used vendor data as the basis of the availability analysis. All of the data were then compiled into the MGT Master Vendor Database for analysis.

MGT's Master Vendor Database comprised of 24,830 individual firms.<sup>7</sup> A summary of the total number of firms in the database by business category, the number of firms in the relevant market area, and the number of utilized firms in the relevant market area is shown in **Exhibit 4-2**. In the exhibit, firms that were available to provide goods or services in more than one business category are included in each respective business category where the firm can perform work for the City. Therefore, the figures in **Exhibit 4-2** may be greater than the total number of individual firms in the Master Vendor Database.

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<sup>7</sup> These firms include firms that are available to do architectural and engineering, construction, general (other) services, goods and supplies, and professional services.

**EXHIBIT 4-2  
CITY OF PHOENIX  
AVAILABILITY OF FIRMS BY BUSINESS CATEGORY  
FISCAL YEARS 2000 THROUGH 2004**

<b>BUSINESS CATEGORY*</b>	<b>NO. OF TOTAL FIRMS</b>	<b>NO. OF RELEVANT MARKET AREA FIRMS</b>	<b>NO. OF RELEVANT MARKET AREA FIRMS UTILIZED</b>
Construction	3,738	2,885	181
General Services	6,528	4,613	855
Good & Supplies	9,509	6,369	2,953

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

\* Includes firms that may be available to conduct work in several fields, such as architecture and engineering and construction. In such an instance, the individual firm was counted in the applicable categories.

## **4.2 Construction**

This section presents the City's relevant market area analysis for construction award amounts, and the utilization and availability analysis of M/WBEs and non-M/WBEs as construction firms. The following analyses<sup>8</sup> contain a market area analysis, a utilization of vendors for contracts awarded by the City, and an availability analysis.

### **4.2.1 Relevant Market Area Analysis**

Approximately \$1.64 billion was spent by the City on construction over the five-year study period. **Exhibit 4-3** shows the location of firms awarded construction contracts by County of domicile and dollar amount. The relevant market area for the City's construction contracts awarded consists of one county: Maricopa County, Arizona. Approximately \$1.30 billion (79.29%) of the \$1.64 billion in total construction awards went to firms in the relevant market area. A total of 1,255 contracts (94.93%) were awarded to 181 (86.60%) firms within the relevant market area. Overall, 1,322 construction contracts were awarded to 209 individual firms.

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<sup>8</sup> These analyses exclude any projects that were located and considered to be federally funded construction contracts. Based on those projects that were identified, approximately \$252.8 million has been excluded for the purpose of this study.

**EXHIBIT 4-3  
CITY OF PHOENIX  
CONSTRUCTION  
RELEVANT MARKET AREA ANALYSIS  
FISCAL YEARS 2000 THROUGH 2004**

County, <sup>1</sup> State	# of Contracts	% of Contracts	# of Firms	% of Firms	Dollars	% of Dollars	Cum% <sup>2</sup>
<b>MARICOPA, AZ</b>	<b>1,255</b>	<b>94.93%</b>	<b>181</b>	<b>86.60%</b>	<b>\$1,303,770,880.59</b>	<b>79.29%</b>	<b>79.29%</b>
PIMA, AZ	13	0.98%	4	1.91%	\$41,149,751.64	2.50%	2.50%
DALLAS, TX	3	0.23%	2	0.96%	\$161,860,319.78	9.84%	9.84%
YAVAPAI, AZ	6	0.45%	2	0.96%	\$20,338,638.00	1.24%	1.24%
SAN MATEO, CA	5	0.38%	1	0.48%	\$45,263,166.00	2.75%	2.75%
ORANGE, CA	4	0.30%	1	0.48%	\$15,610,412.28	0.95%	0.95%
STEARNS, MN	11	0.83%	1	0.48%	\$13,416,096.81	0.82%	0.82%
SAINT LOUIS, MO	1	0.08%	1	0.48%	\$10,281,472.36	0.63%	0.63%
KING, WA	1	0.08%	1	0.48%	\$7,737,397.00	0.47%	0.47%
DENVER, CO	4	0.30%	1	0.48%	\$7,156,941.00	0.44%	0.44%
ANOKA, MN	2	0.15%	1	0.48%	\$4,748,572.54	0.29%	0.29%
SALT LAKE, UT	4	0.30%	1	0.48%	\$3,697,976.36	0.22%	0.22%
LEWIS AND CLARK, MT	1	0.08%	1	0.48%	\$2,965,254.75	0.18%	0.18%
ALAMEDA, CA	1	0.08%	1	0.48%	\$2,826,000.00	0.17%	0.17%
LANCASTER, NE	1	0.08%	1	0.48%	\$800,000.00	0.05%	0.05%
SAN DIEGO, CA	1	0.08%	1	0.48%	\$726,267.22	0.04%	0.04%
JACKSON, MO	1	0.08%	1	0.48%	\$666,207.00	0.04%	0.04%
FRESNO, CA	1	0.08%	1	0.48%	\$377,009.00	0.02%	0.02%
YELLOWSTONE, MT	1	0.08%	1	0.48%	\$363,684.58	0.02%	0.02%
WASHINGTON, UT	1	0.08%	1	0.48%	\$338,960.76	0.02%	0.02%
YOLO, CA	1	0.08%	1	0.48%	\$134,397.51	0.01%	0.01%
FRANKLIN, OH	2	0.15%	1	0.48%	\$95,392.25	0.01%	0.01%
COOK, IL	1	0.08%	1	0.48%	\$46,341.38	0.00%	0.00%
LOS ANGELES, CA	1	0.08%	1	0.48%	\$11,200.00	0.00%	0.00%
<b>Total</b>	<b>1,322</b>	<b>100.00%</b>	<b>209</b>	<b>100.00%</b>	<b>\$1,644,382,338.81</b>	<b>100.00%</b>	

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Counties above the line are included in the relevant market area.

<sup>2</sup> Cumulative total of percentage of dollars in the market area.

**4.2.2 Utilization Analysis**

M/WBE and non-M/WBE utilization analysis includes the firms located within the relevant market areas. The utilization was derived from information contained in the City's financial system (SAP) for activity occurring between July 1, 1999, and June 30, 2004. Using these data from SAP, MGT calculated the percentage of total dollars awarded to M/WBEs and non-M/WBEs during the relevant time period. The numbers in the utilization charts that follow reflect the combined awards and payments made to vendors in race, ethnicity, and gender category. Please refer to **Appendix G** for a

summary of the number of prime construction contracts awarded. This summary presents the findings by fiscal year for the average and maximum dollars awarded.

MGT analyzed the construction dollars awarded by the City to M/WBE and non-M/WBE prime contractors and subcontractors located in the relevant market area. The utilization analysis results are presented by fiscal year, dollar amount of the contract, number of contracts awarded, and individual firms according to race/ethnicity/gender classifications.

**Exhibit 4-4** presents the utilization analysis of prime construction contractors in the City's relevant market area based on total dollars awarded.<sup>9</sup> M/WBEs received approximately 7.02 percent of the construction dollars awarded to prime contractors in the relevant market area during the relevant time period. Approximately \$1.30 billion were spent by the City for construction in the relevant market area, with roughly \$91.5 million awarded to M/WBEs, as shown in **Exhibit 4-4**. Non-M/WBE-owned firms received about 93 percent (approximately \$1.2 billion) of the construction dollars awarded. During FY2000–FY2001, M/WBEs received slightly more than 12 percent (approximately \$27.7 million out of \$201.6 million) of the award dollars making that year the most successful for M/WBEs in winning prime contracts. During FY2002-FY2003, M/WBEs received approximately 4.14 percent (approximately \$16.6 million out of \$384.8 million) of the award dollars, therefore making M/WBEs least successful in winning contracts during this fiscal year.

Nonminority women-owned firms received the most award dollars among the M/WBE firms. Nonminority women-owned firms received approximately 62.5 percent (\$57.2 million out of \$91.5 million) of the dollars awarded to M/WBEs, while Asian American-owned firms received approximately 4 percent (\$3.7 million out of \$91.5

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<sup>9</sup> Construction services are procured through four procurement methods: low bid (design-bid-build), CM@Risk, design build one step and two step; and job order contracting one step and two step processes. Please refer to Chapter 3.0, Section 3.3 for more detail.

million) of the dollars awarded to M/WBEs. The following are additional findings regarding prime contractor utilization.

- The utilization of M/WBEs ranged from 6.14 percent in FY2002-FY2003 to 25.88 percent in FY2003-FY2004.
- Within the M/WBE category, nonminority women-owned firms were awarded the most dollars in each fiscal year.

**EXHIBIT 4-4  
CITY OF PHOENIX  
CONSTRUCTION UTILIZATION ANALYSIS OF PRIME CONTRACTORS IN THE  
RELEVANT MARKET AREA  
DOLLARS AND PERCENTAGE OF TOTAL DOLLARS AWARDED  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Dollars Awarded <sup>2</sup>
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$
FY1999-2000	\$0.00	0.00%	\$5,049,483.64	2.78%	\$0.00	0.00%	\$1,900,808.00	1.05%	\$6,795,069.26	3.74%	\$13,745,360.90	7.57%	\$167,828,157.47	92.43%	\$181,573,518.37
FY2000-2001	\$0.00	0.00%	\$8,310,849.57	3.63%	\$758,852.84	0.33%	\$0.00	0.00%	\$18,619,767.80	8.12%	\$27,689,470.21	12.08%	\$201,564,295.30	87.92%	\$229,253,765.51
FY2001-2002	\$0.00	0.00%	\$8,028,237.70	3.47%	\$2,676,851.72	1.16%	\$0.00	0.00%	\$9,278,278.88	4.02%	\$19,983,368.30	8.65%	\$211,105,769.39	91.35%	\$231,089,137.69
FY2002-2003	\$0.00	0.00%	\$5,487,700.17	1.37%	\$0.00	0.00%	\$0.00	0.00%	\$11,110,621.71	2.77%	\$16,598,321.88	4.14%	\$384,754,171.67	95.86%	\$401,352,493.55
FY2003-2004	\$0.00	0.00%	\$1,803,209.92	0.69%	\$235,000.00	0.09%	\$0.00	0.00%	\$11,433,455.13	4.39%	\$13,471,665.05	5.17%	\$247,030,300.42	94.83%	\$260,501,965.47
<b>Total</b>	<b>\$0.00</b>	<b>0.00%</b>	<b>\$28,679,481.00</b>	<b>2.20%</b>	<b>\$3,670,704.56</b>	<b>0.28%</b>	<b>\$1,900,808.00</b>	<b>0.15%</b>	<b>\$57,237,192.78</b>	<b>4.39%</b>	<b>\$91,488,186.34</b>	<b>7.02%</b>	<b>\$1,212,282,694.25</b>	<b>92.98%</b>	<b>\$1,303,770,880.59</b>

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total dollars paid annually to prime contractors.

<sup>2</sup> Total dollars awarded to vendors is currently based on the original award amount, as well as any associated change orders.

**Exhibit 4-5** depicts the utilization analysis of prime construction contractors in the City’s relevant market area based on total payments. Prime contractors were paid approximately 66 percent of total dollars awarded. Of the approximately \$861.2 million paid to prime contractors, M/WBEs received approximately 8.9 percent of the \$76.7 million.

M/WBEs were paid approximately 83.8 percent of dollars awarded (\$76.7 million out of \$91.5 million) for construction projects, whereas non-M/WBEs were paid approximately 64.7 percent (\$784. 5 million out of \$1.2 billion) of the total dollars awarded.

**EXHIBIT 4-5  
CITY OF PHOENIX  
CONSTRUCTION UTILIZATION ANALYSIS OF PRIME CONTRACTORS IN THE  
RELEVANT MARKET AREA  
DOLLARS AND PERCENTAGE OF TOTAL PAYMENTS  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Payments Made <sup>2</sup>
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$
FY1999-2000	\$0.00	0.00%	\$5,045,990.93	2.79%	\$0.00	0.00%	\$1,900,808.00	1.05%	\$6,657,647.21	3.68%	\$13,604,446.14	7.52%	\$167,385,825.04	92.48%	\$180,990,271.18
FY2000-2001	\$0.00	0.00%	\$8,270,713.57	3.69%	\$754,304.87	0.34%	\$0.00	0.00%	\$17,098,420.25	7.63%	\$26,123,438.69	11.65%	\$198,028,518.60	88.35%	\$224,151,957.29
FY2001-2002	\$0.00	0.00%	\$7,132,328.93	3.38%	\$2,439,030.26	1.16%	\$0.00	0.00%	\$9,039,428.63	4.29%	\$18,610,787.82	8.83%	\$192,144,402.57	91.17%	\$210,755,190.39
FY2002-2003	\$0.00	0.00%	\$3,934,651.42	1.72%	\$0.00	0.00%	\$0.00	0.00%	\$10,075,966.54	4.41%	\$14,010,617.96	6.14%	\$214,315,257.47	93.86%	\$228,325,875.43
FY2003-2004	\$0.00	0.00%	\$190,988.10	1.12%	\$0.00	0.00%	\$0.00	0.00%	\$4,208,690.68	24.75%	\$4,399,678.78	25.88%	\$12,601,970.25	74.12%	\$17,001,649.03
<b>Total</b>	\$0.00	0.00%	\$24,574,672.95	2.85%	\$3,193,335.13	0.37%	\$1,900,808.00	0.22%	\$47,080,153.31	5.47%	\$76,748,969.39	8.91%	\$784,475,973.93	91.09%	\$861,224,943.32

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total payments made annually to prime contractors. Payments are based on contracts awarded in the relevant market area during the study period.

<sup>2</sup> Total dollars paid to vendors.

**Exhibits 4-6 and 4-7** show the utilization by the number of prime construction contracts awarded and the number of construction firms used during the study period. In **Exhibit 4-6**, we show that 1,255 contracts were awarded in the relevant market area, with approximately 80.2 percent (1,006) of the contracts going to nonminority firms. M/WBEs received approximately 20 percent (249) of the contracts awarded, and firms owned by nonminority women were the most successful M/WBE group in terms of the number of awarded City contracts. African American-owned firms were not utilized on the prime contractor level during the study period.

Please note that MGT is defining a contract as one contract and one unique project number. The City may have several unique project numbers associated to one unique contract number. Therefore, MGT and the City agreed to group one unique contract number and the associated unique project number as one contract for purposes of this study. All awards and payments made to the grouped contract and project number were combined into one record in the database to return a more accurate representation of the City's procurement. The number of contracts awarded by the City is presented in the chart below.

The following details a summary of additional findings.

- African American-owned firms were not awarded any construction contracts on the prime level during the relevant study period;
- Hispanic American-owned firms averaged approximately \$409,707 per prime construction contract during the relevant study period, which translates to 70 contracts awarded at an overall total of \$28.7 million;
- Asian American-owned firms averaged approximately \$917,676 per prime construction contract, which translates to 4 contracts awarded for an overall total of \$3.7 million;
- One Native American-owned firm was awarded a prime construction contract valued at \$1.9 million during the relevant study period; and
- Nonminority women-owned firms averaged approximately \$362,261 per prime construction contract during the relevant study period, which translates to 158 contracts awarded at an overall total of \$57.2 million.

**EXHIBIT 4-6  
CITY OF PHOENIX  
CONSTRUCTION  
NUMBER OF PRIME CONTRACTS AWARDED  
IN THE RELEVANT MARKET AREA  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Contracts
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#
FY1999-2000	0	0.00%	8	4.35%	0	0.00%	1	0.54%	25	13.59%	34	18.48%	150	81.52%	184
FY2000-2001	0	0.00%	18	6.47%	4	1.44%	0	0.00%	56	20.14%	78	28.06%	200	71.94%	278
FY2001-2002	0	0.00%	34	8.56%	15	3.78%	0	0.00%	32	8.06%	81	20.40%	316	79.60%	397
FY2002-2003	0	0.00%	7	2.81%	0	0.00%	0	0.00%	24	9.64%	31	12.45%	218	87.55%	249
FY2003-2004	0	0.00%	3	2.04%	1	0.68%	0	0.00%	21	14.29%	25	17.01%	122	82.99%	147
<b>Total Contracts</b>	0	0.00%	70	5.58%	20	1.59%	1	0.08%	158	12.59%	249	19.84%	1,006	80.16%	1,255

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).  
<sup>1</sup> Percentage of Total Contracts.

In **Exhibit 4-7**, we show that 28 unique M/WBE firms participated in City construction projects at the prime contractor level. In comparison, 153 non-M/WBE-owned firms were utilized during the study period. The following details a summary of findings.

- Eleven Hispanic American-owned firms were awarded 70 prime construction contracts.
- Two Asian American-owned firms were awarded 4 prime construction contracts.
- One Native American-owned firm was awarded 1 prime construction contract.
- Fourteen nonminority women-owned firms were awarded 158 prime construction contracts.



**EXHIBIT 4-7  
CITY OF PHOENIX  
CONSTRUCTION  
NUMBER OF INDIVIDUAL PRIME CONTRACTORS  
IN THE RELEVANT MARKET AREA  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Unique Vendors
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#
FY1999-2000	0	0.00%	5	6.41%	0	0.00%	1	1.28%	10	12.82%	16	20.51%	62	79.49%	78
FY2000-2001	0	0.00%	5	6.76%	1	1.35%	0	0.00%	9	12.16%	15	20.27%	59	79.73%	74
FY2001-2002	0	0.00%	4	5.97%	2	2.99%	0	0.00%	7	10.45%	13	19.40%	54	80.60%	67
FY2002-2003	0	0.00%	4	6.15%	0	0.00%	0	0.00%	5	7.69%	9	13.85%	56	86.15%	65
FY2003-2004	0	0.00%	3	5.56%	1	1.85%	0	0.00%	8	14.81%	12	22.22%	42	77.78%	54
<b>Total Unique Vendors Over Five Years<sup>2</sup></b>	0	0.00%	11	6.08%	2	1.10%	1	0.55%	14	7.73%	28	15.47%	153	84.53%	181

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Vendors.

<sup>2</sup> The Total Vendors counts a vendor only once for each year the firm receives work. Since a vendor could be used in multiple years, the total unique vendors for the entire study period may not equal the sum of all years.

**Exhibit 4-8** shows 21 contracts the City awarded in excess of \$10 million. Six of those contracts were awarded outside of the relevant market area, Maricopa County, Arizona. Ten out of the 21 contracts were CM@Risk contracts; the remaining 11 were considered to be competitively bid, lump sum construction contracts.<sup>10</sup> Large construction projects of more than \$10 million were awarded three out of four times via CM@Risk procurement method during the study period. In FY2002-FY2003, the two largest contracts were awarded via CM@Risk, one in the relevant market area and the largest awarded outside the relevant market area. The total contracts for this table equals approximately \$736.1 million, CM@Risk contracts total \$532 million (72%) and competitively bid (low bid) contracts total \$204.1 million (28%).

<sup>10</sup> The exhibit refers to these type of contracts as Contractual Construction contracts.

**EXHIBIT 4-8  
CITY OF PHOENIX  
CONSTRUCTION CONTRACTS\* OVER \$10 MILLION  
CONTRACTS BY YEAR, COUNTY, AMOUNT, PROJECT DESCRIPTION,  
AND CONTRACT TYPE  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Year	County, State	Project Description	Contract Type	Award Amount
FY2002 - FY2003	DALLAS, TX	Consolidated Rental Car Facility-2	CM@Risk	\$160,000,000.00
FY2002 - FY2003	MARICOPA, AZ	Unified Plant 01 Construction-1	CM@Risk	\$105,200,000.00
FY2003 - FY2004	MARICOPA, AZ	West Convention Center Expansion-1	CM@Risk	\$80,000,000.00
FY2002 - FY2003	MARICOPA, AZ	SHIA T-4 S2 Concourse Design-1	CM@Risk	\$52,000,000.00
FY2002 - FY2003	SAN MATEO, CA	TGen & IGC-1	Contractual Construction	\$38,220,000.00
FY2001 - FY2002	MARICOPA, AZ	Union Hills WTP-160 MGD Sed Basin-3	CM@Risk	\$37,157,367.97
FY2003 - FY2004	MARICOPA, AZ	Common Cabling System-2	CM@Risk	\$31,000,000.00
FY2000 - FY2001	MARICOPA, AZ	Influent Pipe Upgrade-3	Contractual Construction	\$29,737,495.00
FY1999 - FY2000	MARICOPA, AZ	Deer Valley WTP-Solids Project-C	Contractual Construction	\$29,113,844.13
FY2002 - FY2003	MARICOPA, AZ	North Transfer Station-1	CM@Risk	\$25,325,004.00
FY1999 - FY2000	MARICOPA, AZ	EAST ECONOMY PARKING DECK-C	Contractual Construction	\$20,816,430.99
FY2001 - FY2002	YAVAPAI, AZ	91st Ave WAS Thickening Facilities-2	Contractual Construction	\$17,974,832.00
FY2003 - FY2004	MARICOPA, AZ	North Gateway Pump Stn and Force Main-5	CM@Risk	\$15,400,000.00
FY2003 - FY2004	MARICOPA, AZ	Symphony Hall Remodel-2	CM@Risk	\$14,300,000.00
FY2000 - FY2001	MARICOPA, AZ	91st Ave Support System Upgrades-C	Contractual Construction	\$12,912,704.00
FY2000 - FY2001	ORANGE, CA	40 MGD Booster-South Mtn Reservoir-C	Contractual Construction	\$12,051,324.87
FY2000 - FY2001	MARICOPA, AZ	Laveen Lift Station-75th Ave/Southern-C	Contractual Construction	\$11,962,869.93
FY2002 - FY2003	PIMA, AZ	Sewr Rehab/Replcmnt I-10/I-17 Intrchn-1	CM@Risk	\$11,647,628.09
FY2002 - FY2003	MARICOPA, AZ	Pecos Park-3	Contractual Construction	\$10,634,091.58
FY1999 - FY2000	MARICOPA, AZ	Steele Indian School Park-1	Contractual Construction	\$10,358,766.58
FY2000 - FY2001	SAINT LOUIS, MO	South Mountain Tunnel-35Ave to 43Ave-C	Contractual Construction	\$10,281,472.36

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

\* More than \$177.2 million have been excluded from this table due to the projects having at least \$1 dollar in federal funds; thereby considered by the City as being federally funded.

Note: This table includes contracts that have been awarded outside the relevant market area. Furthermore, contracts that have been requested to be excluded based on feedback received from the City are not presented in this table or in the actual analyses.

**Threshold Analysis**

MGT analyzed the utilization of M/WBE construction firms by examining construction contracts awarded in the four dollar ranges shown below:

- contracts \$250,000 or under;
- contracts between \$250,001 and \$500,000;
- contracts between \$500,001 and \$1 million; and
- contracts greater than \$1 million.

The utilization of M/WBE and non-M/WBE firms for each dollar category is shown in Exhibits 4-9 and 4-10. As Exhibits 4-9 and 4-10 illustrated, M/WBEs received

approximately 24.9 percent of contract award dollars for contracts valued at \$250,000 or less and 18.75 percent of contract award dollars for contracts valued between \$500,001 and \$1 million. M/WBE participation decreased in the highest dollar range—contracts of \$1 million or more— where M/WBE participation dropped to approximately 4.45 percent.

**Construction Contracts Awarded \$250,000 and Less**

The City awarded 718 contracts from fiscal year 2000 through 2004 on construction contracts valued at \$250,000 or less, which translates to approximately 57.2 percent of all prime contracts awarded during the study period. As illustrated in **Exhibits 4-9** and **4-10**, M/WBE firms received approximately 25 percent of award dollars (or \$13.7 million) in this category. Nonminority women-owned firms were the most utilized within the M/WBE category, receiving 13.5 percent of the contract award dollars (or \$7.8 million). Hispanic American-owned firms were next at 8.2 percent of the contract award dollars (or \$4.5 million). Non-M/WBE firms received approximately 75.1 percent of the award dollars (or \$41.2 million). Of the 718 contracts that were awarded within this category, approximately 23 percent (or 167 contracts) went to M/WBEs. Firms owned by Asian Americans were awarded 18 construction contracts, while nonminority women-owned firms were awarded 102 contracts.

**Construction Contracts Awarded between \$250,001 and \$500,000**

The City awarded 166 construction contracts between \$250,001 and \$500,000 dollar range during the study period, thus approximately 13.2 percent of the contracts awarded during the study period. Nonminority women-owned firms were the most utilized M/WBE category, receiving more than 13 percent of the contracts (or 23 contracts awarded in this category). Non-M/WBE firms received approximately 81 percent of the contracts (or 135 contracts) for this category. Hispanic American-owned firms were awarded approximately 4.53 percent of the contract dollars (or \$2.68 million)

within this dollar range, and Asian American-owned firms were awarded less than 1 percent of the contract dollars (or approximately \$364,749) awarded.

**Construction Contracts Awarded between \$500,001 and \$1 million**

The City awarded 135 contracts between \$500,001 and \$1 million range during the study period, therefore approximately 10.7 percent of the contracts awarded during the study period. Nonminority women-owned firms were the most utilized in the M/WBE category, receiving approximately 12 percent of the contracts (or 16 contracts) awarded in this category. Non-M/WBE firms received slightly more than 81 percent of the contracts (or 110 contracts) for this category. M/WBEs were awarded the most dollars in this category, receiving approximately 18.8 percent of the dollars (or \$48.5 million). Nonminority women-owned firms awarded the highest percentage of dollars within the M/WBE category at 11.2 percent (or \$11 million).

**Construction Contracts Awarded Over \$1 million**

The City awarded 236 contracts valued over \$1 million during the study period. Approximately 18.8 percent of the contracts awarded in the relevant market area during the study period. Of these contracts awarded, approximately 26 (11.02%) went to M/WBE firms, which included 17 contracts to nonminority women-owned firms, 7 contracts to Hispanic American-owned, and 1 contract to Asian American and Native American-owned firms each. Based on contract dollars awarded, nonminority women-owned firms received 2.84 percent (or approximately \$31 million), while Asian American-owned firms received less than 1 percent (or approximately \$1.5 million) of the dollars awarded.

**EXHIBIT 4-9  
CITY OF PHOENIX  
CONSTRUCTION  
THRESHOLD ANALYSIS OF PRIME CONTRACTORS  
DOLLARS AND PERCENTAGE OF TOTAL DOLLARS  
IN THE RELEVANT MARKET AREA  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Thresholds	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Dollars Awarded
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$
Less than or Equal to \$250,000	\$0.00	0.00%	\$4,485,450.11	8.17%	\$1,787,568.03	3.26%	\$0.00	0.00%	\$7,395,885.79	13.47%	\$13,668,903.93	24.89%	\$41,248,489.31	75.11%	\$54,917,393.24
Between \$250,001 and \$500,000	\$0.00	0.00%	\$2,679,516.21	4.53%	\$364,748.54	0.62%	\$0.00	0.00%	\$7,822,069.78	13.22%	\$10,866,334.53	18.36%	\$48,314,360.28	81.64%	\$59,180,694.81
Between \$500,001 and \$1 million	\$0.00	0.00%	\$7,402,689.40	7.53%	\$0.00	0.00%	\$0.00	0.00%	\$11,025,048.25	11.22%	\$18,427,737.65	18.75%	\$79,849,981.15	81.25%	\$98,277,718.80
Greater than 1 million	\$0.00	0.00%	\$14,111,825.28	1.29%	\$1,518,387.99	0.14%	\$1,900,808.00	0.17%	\$30,994,188.96	2.84%	\$48,525,210.23	4.45%	\$1,042,869,863.51	95.55%	\$1,091,395,073.74
<b>Total</b>	\$0.00	0.00%	\$28,679,481.00	2.20%	\$3,670,704.56	0.28%	\$1,900,808.00	0.15%	\$57,237,192.78	4.39%	\$91,488,186.34	7.02%	\$1,212,282,694.25	92.98%	\$1,303,770,880.59

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total dollars awarded annually to prime contractors.

**EXHIBIT 4-10  
CITY OF PHOENIX  
CONSTRUCTION  
THRESHOLD ANALYSIS OF PRIME CONTRACTORS  
NUMBER AND PERCENTAGE OF TOTAL CONTRACTS  
IN THE RELEVANT MARKET AREA  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Thresholds	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Contracts Awarded
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#
Less than or Equal to \$250,000	0	0.00%	47	6.55%	18	2.51%	0	0.00%	102	14.21%	167	23.26%	551	76.74%	718
Between \$250,001 and \$500,000	0	0.00%	7	4.22%	1	0.60%	0	0.00%	23	13.86%	31	18.67%	135	81.33%	166
Between \$500,001 and \$1 million	0	0.00%	9	6.67%	0	0.00%	0	0.00%	16	11.85%	25	18.52%	110	81.48%	135
Greater than 1 million	0	0.00%	7	2.97%	1	0.42%	1	0.42%	17	7.20%	26	11.02%	210	88.98%	236
<b>Total</b>	0	0.00%	70	5.58%	20	1.59%	1	0.08%	158	12.59%	249	19.84%	1,006	80.16%	1,255

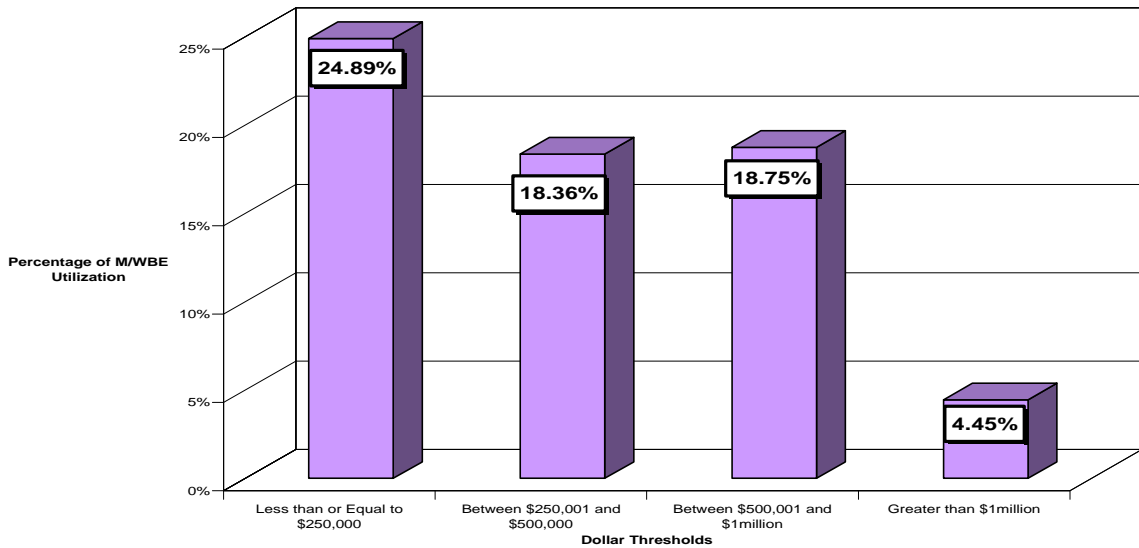
Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total contracts awarded annually to prime contractors.

**Construction Contract dollar ranges**

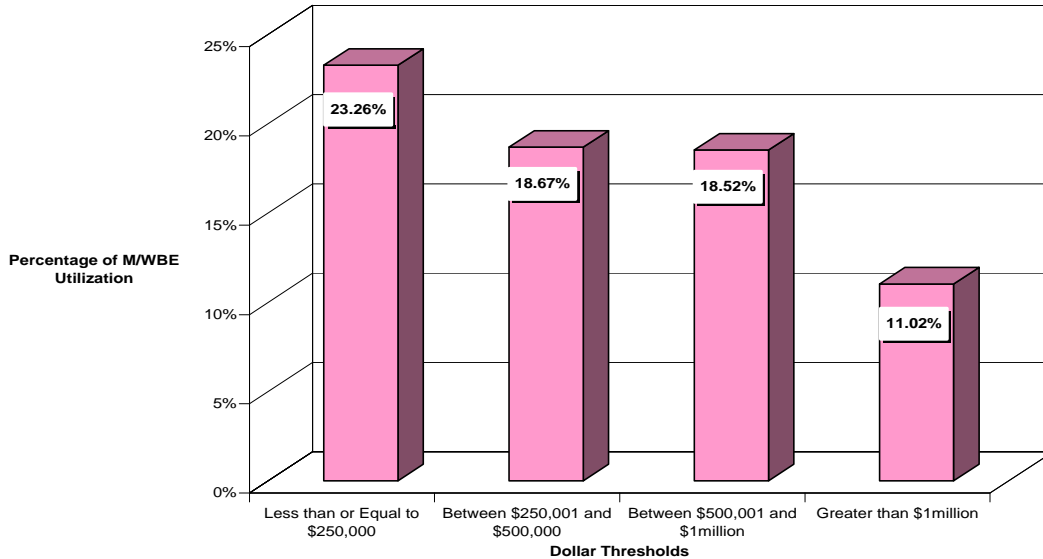
Exhibits 4-11 and 4-12 show a graphical comparison of the dollar ranges for the utilization of M/WBEs and illustrate how M/WBE firms fared as number of contracts awarded and size of contract increased. Overall, M/WBEs' share was 7.02 percent of the total dollars awarded. M/WBEs were awarded the highest share of dollars at contracts valued at \$25,000 or less. M/WBEs share was 19.84 percent of the total number of contracts. M/WBEs were awarded 11.02 percent of the contracts greater than \$1 million, thus being the lowest share during the study period.

**EXHIBIT 4-11  
CITY OF PHOENIX  
UTILIZATION OF M/WBE PRIME CONSTRUCTION CONTRACTORS  
WITHIN CONTRACT DOLLAR RANGES  
BASED ON TOTAL PRIME CONTRACT DOLLARS  
FISCAL YEARS 2000 THROUGH 2004**



Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

**EXHIBIT 4-12  
CITY OF PHOENIX  
UTILIZATION OF M/WBE PRIME CONSTRUCTION CONTRACTORS  
WITHIN CONTRACT DOLLAR RANGES  
BASED ON TOTAL NUMBER OF CONTRACTS  
FISCAL YEARS 2000 THROUGH 2004**



Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

**Subcontractor Analysis**

As stated in Section 4.1.3, MGT collected subcontractor data from the hard copy files and electronic data that were maintained by EOD, EASD, and the City Clerk. In addition, the City sent out correspondence letters to prime contractors requesting data/information on the utilization of M/WBE and non-M/WBE subcontractors. MGT also sent out verification reports to prime contractors to obtain and/or verify the information that was collected and to identify any subcontractors we did not have in the database. Although the City has relatively complete data on M/WBE subcontractors, there were limited data available related to nonminority male subcontracting. The utilization analysis presented below is based on the hard copy and electronic data, as well as correspondence letters and verification reports. The data presented below is only for

payments that MWBE subcontractors actually received, as opposed to proposed MWBE subcontracting plans. In addition, it should be noted that these data are heavily weighted towards M/WBEs because those were the data most readily available. We also present analysis based on estimated total subcontracting dollars. Please refer to **Appendix I** for a summary of the number of subcontractor construction contracts awarded. This summary presents the findings by fiscal year for the average and maximum dollars awarded.

The analysis of subcontractor utilization based on subcontract dollars awarded within the prime contractor relevant market area is shown in **Exhibit 4-14**. During the study period, all ethnic groups were utilized as a subcontractor at some level. Of the \$56.7 million in M/WBE subcontracts, the largest fraction went to firms owned by Hispanic Americans (44.8%) and nonminority women (39.2%). Asian American-owned firms were the least utilized, receiving 0.3 percent of the subcontract dollars. The percentage of construction dollars for the utilization of M/WBE subcontractors fluctuated from fiscal years 2000 through 2004. In fact, in FY2000–FY2001, the City of Phoenix experienced its highest utilization of M/WBE subcontractors, with over \$20.2 million dollars awarded to M/WBE firms in construction subcontracts.

The \$56.7 million in MWBE subcontracts constituted 4.35 percent of total construction dollars in the City's relevant market area, Maricopa County, Arizona. In the 1999 Phoenix Disparity Study MGT found that MWBE subcontractor spending on Phoenix construction projects was about \$13.8 million, 1.06 percent of spending on construction projects in the Phoenix relevant market.



**EXHIBIT 4-14  
CITY OF PHOENIX  
CONSTRUCTION  
UTILIZATION ANALYSIS OF SUBCONTRACTORS  
IN THE RELEVANT MARKET AREA  
DOLLARS AND PERCENTAGE OF TOTAL DOLLARS AWARDED  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Total
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$
FY1999-2000	\$1,210,807.78	7.12%	\$6,079,669.22	35.75%	\$9,569.55	0.06%	\$3,458,367.94	20.33%	\$6,248,956.12	36.74%	\$17,007,370.61
FY2000-2001	\$282,078.86	1.40%	\$11,626,653.17	57.53%	\$182,833.78	0.90%	\$1,681,182.56	8.32%	\$6,437,525.45	31.85%	\$20,210,273.82
FY2001-2002	\$915,531.60	7.81%	\$5,186,873.74	44.23%	\$0.00	0.00%	\$315,105.31	2.69%	\$5,309,002.27	45.27%	\$11,726,512.92
FY2002-2003	\$607,971.45	8.73%	\$2,277,886.52	32.70%	\$0.00	0.00%	\$291,787.19	4.19%	\$3,789,350.93	54.39%	\$6,966,996.09
FY2003-2004	\$130,806.00	15.42%	\$263,323.00	31.03%	\$0.00	0.00%	\$0.00	0.00%	\$454,363.00	53.55%	\$848,492.00
<b>Total</b>	<b>\$3,147,195.69</b>	<b>5.54%</b>	<b>\$25,434,405.65</b>	<b>44.81%</b>	<b>\$192,403.33</b>	<b>0.34%</b>	<b>\$5,746,443.00</b>	<b>10.12%</b>	<b>\$22,239,197.77</b>	<b>39.18%</b>	<b>\$56,759,645.44</b>

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Dollars Awarded to M/WBE firms.

<sup>2</sup> The Total Dollars Awarded is the actual amount given subcontractors.

Because of the incomplete data related to subcontracting, we provide in **Exhibit 4-15** an analysis of subcontracting utilization based on a subcontracting level of 32.4 percent. M/WBE subcontractor spending as a percentage of total subcontractor spending can be estimated based on standard levels of subcontracting in Arizona construction. Census data indicates that on average 32.4 percent of construction is subcontracted in the state of Arizona (as high as 56.7 percent for building construction).<sup>11</sup>

Assuming that City construction has the same percentage levels of subcontracting as does construction in Arizona as a whole, this implies that there was a total of \$422.4 million in construction subcontracting on City projects over the study period. Based on this estimate MWBE subcontracting was 13.4 percent<sup>12</sup> of total subcontracting on City projects over the study period. Applying the same methodology to the 1999 Phoenix

<sup>11</sup> US Census Bureau, *Arizona, 1997 Economic Census, Construction, Geographic Area Series, Construction* (March 2000), at 9-10.

<sup>12</sup> Actual M/WBE subcontractor spending divided by estimated subcontractor spending: \$56.7 million/\$422.4 million.

Disparity Study, MWBE subcontracting was 8.83 percent of total subcontracting on City projects over the calendar years (CY) CY1993-CY1997 study period. However, because these percentages of subcontractor utilization for both study periods are based on estimates of nonminority subcontractor utilization, the results should be treated with caution.

Using actual payment data from the previously discussed sources, actual MWBE subcontracting was considerably less than proposed MWBE subcontracting. City of Phoenix prime contractors projected spending \$86.9 million with MWBE subcontractors over the study period. Actual MWBE subcontractor spending was \$30.2 million (34.7%) less than project MWBE subcontractor spending. A list of subcontracts analyzed as well as projected MWBE subcontractor spending is included in **Appendix H**.

**EXHIBIT 4-15  
SUBCONTRACTOR UTILIZATION  
BASED ON OVERALL LEVEL OF SUBCONTRACTING  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Year	Total Construction \$ <sup>1</sup>	Subcontract Dollars <sup>2</sup>	African American	Hispanic American	Asian American	Native American	Nonminority Women	M/WBE Total
FY1999-2000	\$181,573,518.37	\$ 58,829,819.95	2.06%	8.18%	0.02%	5.88%	10.62%	28.91%
FY2000-2001	\$229,253,765.51	\$ 74,278,220.03	0.38%	15.53%	0.25%	2.26%	8.67%	27.21%
FY2001-2002	\$231,089,137.69	\$ 74,872,880.61	1.22%	3.99%	0.00%	0.42%	7.09%	15.66%
FY2002-2003	\$401,352,493.55	\$ 130,038,207.91	0.47%	2.70%	0.00%	0.22%	2.91%	5.36%
FY2003-2004	\$260,501,965.47	\$ 84,402,636.81	0.15%	0.06%	0.00%	0.00%	0.54%	1.49%
<b>Total</b>	<b>\$ 1,303,770,880.59</b>	<b>\$ 422,421,765.31</b>	<b>0.75%</b>	<b>6.02%</b>	<b>0.05%</b>	<b>1.36%</b>	<b>5.26%</b>	<b>13.44%</b>

<sup>1</sup> Percent of Total Dollars Awarded to Prime Contractors.

<sup>2</sup> Based on 32.4 percent construction subcontractor utilization.

<sup>3</sup> Based on 32.4 percent construction subcontractor utilization.

**Exhibits 4-16** through **4-17** show the breakdown of the number of subcontracts and utilization of individual subcontractors that participated on the City of Phoenix construction projects. Out of the 702 MWBE subcontracts awarded during the study period, over 88.1 percent went to Hispanic and nonminority women-owned firms. Of the 702 MWBE subcontracts awarded during the study period, 143 unique M/WBE

subcontractors were utilized. Nonminority women-owned firms experienced the highest utilization, with 55 individual firms utilized throughout the study period. Of the unique number of subcontractors, Asian American- and Native American-owned firms experienced the lowest utilization, with 2 and 10 firms, respectively.

**EXHIBIT 4-16  
CITY OF PHOENIX  
CONSTRUCTION  
UTILIZATION ANALYSIS OF SUBCONTRACTORS  
NUMBER OF SUBCONTRACTS IN THE RELEVANT MARKET AREA  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Total
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#
FY1999-2000	15	6.17%	93	38.27%	2	0.82%	6	2.47%	94	38.68%	210
FY2000-2001	8	2.96%	114	42.22%	2	0.74%	16	5.93%	115	42.59%	255
FY2001-2002	12	7.02%	73	42.69%	0	0.00%	7	4.09%	60	35.09%	152
FY2002-2003	7	7.07%	26	26.26%	0	0.00%	5	5.05%	33	33.33%	71
FY2003-2004	3	11.54%	6	23.08%	0	0.00%	0	0.00%	5	19.23%	14
<b>Total Subcontracts</b>	<b>45</b>	<b>5.56%</b>	<b>312</b>	<b>38.57%</b>	<b>4</b>	<b>0.49%</b>	<b>34</b>	<b>4.20%</b>	<b>307</b>	<b>37.95%</b>	<b>702</b>

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Subcontracts.

**EXHIBIT 4-17  
CITY OF PHOENIX  
CONSTRUCTION  
UTILIZATION ANALYSIS OF SUBCONTRACTORS  
NUMBER OF UNIQUE SUBCONTRACTORS IN THE RELEVANT MARKET AREA  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Total
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#
FY1999-2000	8	10.13%	30	37.97%	1	1.27%	5	6.33%	35	44.30%	79
FY2000-2001	6	7.79%	33	42.86%	1	1.30%	6	7.79%	31	40.26%	77
FY2001-2002	8	10.67%	31	41.33%	0	0.00%	5	6.67%	31	41.33%	75
FY2002-2003	4	7.84%	20	39.22%	0	0.00%	4	7.84%	23	45.10%	51
FY2003-2004	4	26.67%	6	40.00%	0	0.00%	0	0.00%	5	33.33%	15
<b>Total Unique Vendors Over Five Years<sup>2</sup></b>	16	11.19%	60	41.96%	2	1.40%	10	6.99%	55	38.46%	143

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Vendors.

<sup>2</sup> The Total Unique Vendors counts a vendor only once for each year the firm receives work. Since a vendor could be used in multiple years, the total unique vendors for the entire study period may not equal the sum of all years.

**4.2.3 Availability**

As stated in sections 4.1.3 and 4.1.6, availability for construction was derived from those firms that (1) have provided construction or construction-related services for the City in the past; (2) have submitted bids for construction projects for the City in the past; and (3) are registered with any of the agencies listed in section 4.1.3; or (5) it could be determined that they were construction firms. In addition, all firms that met the qualifications stated above are considered subcontractors available to perform construction work for the City.

The availability analysis is based on firms that were located within the relevant market area. As shown in **Exhibit 4-18**, approximately 21 percent (or 604 firms) available to do business with the City were M/WBEs. Nonminority women-owned firms

**EXHIBIT 4-18  
CITY OF PHOENIX  
CONSTRUCTION  
AVAILABILITY OF PRIME CONTRACTORS  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

	African Americans <sup>1</sup>		Hispanic Americans <sup>1</sup>		Asian Americans <sup>1</sup>		Native Americans <sup>1</sup>		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Firms
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
<b>Total</b>	48	1.66%	231	8.01%	29	1.01%	27	0.94%	269	9.32%	604	20.94%	2,281	79.06%	2,885

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).  
<sup>1</sup> Minority male and female firms are included in their respective minority classifications.

accounted for 9.32 percent (or 269 firms) of the available contractors, and Native American-owned firms accounted for less than 1 percent (or 27 firms). **Exhibit 4-19** shows subcontractor availability. Of the 3,545 available construction subcontractor firms, 776 were M/WBEs. Slightly more than 1 percent (or 37 firms) of available subcontractor firms are Native American, less than 1 percent (or 33 firms) of available subcontractor firms are Asian American, and 1.81 percent (or 64 firms) of available subcontractor firms are African American.

**EXHIBIT 4-19  
CITY OF PHOENIX  
CONSTRUCTION  
AVAILABILITY OF SUBCONTRACTORS  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

	African Americans <sup>1</sup>		Hispanic Americans <sup>1</sup>		Asian Americans <sup>1</sup>		Native Americans <sup>1</sup>		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Firms
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
<b>Total</b>	64	1.81%	301	8.50%	33	0.93%	37	1.04%	341	9.62%	776	21.90%	2,767	78.10%	3,543

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Minority male and female firms are included in their respective minority classifications.

**Second-Generation Study Comparison**

Overall, there was an increase of approximately 17.1 percent (\$1.40 billion to \$1.64 billion) in the total dollars awarded to prime contractors for construction projects let by the City. Based on the relevant market area, there was a decrease of less than 1

percent in the total dollars awarded to prime contractors for construction projects let by the City. The overall utilization of M/WBE-owned firms on the prime contractor level increased from 1.80 percent to 7.02 percent. During the previous study, Hispanic American-owned firms were the most utilized among M/WBEs at approximately 1.65 percent. Based on the current study, nonminority women-owned firms were the most utilized among M/WBEs at approximately 4.39 percent. While the overall utilization of M/WBE prime contractors increased, the overall utilization of African American prime contractors decreased from less than 1 percent during the second-generation study to not being utilized in the current study.

For the Second-Generation Study, MGT determined the available pool of vendors by using U.S. Bureau of Census data, Survey of Minority-Owned Business Enterprises (SMOBE), Survey of Women-Owned Business Enterprises (SWOBE), and County Business Pattern. The current study determined the pool of available construction firms based on the factors discussed in Sections 4.1.3 and 4.1.6. During the previous study, the overall estimated average availability<sup>13</sup> for prime contractors was approximately 706 total firms. Whereas, the current study presented approximately 2,885 firms that were available to conduct construction-related work on a prime contractors' level. In the previous study, an estimated average of 3,204 firms was available to do work on subcontractors' level. The current study presented approximately 3,545 available firms available to conduct work on a subcontractors' level..

#### **4.2.4 Analysis of Construction Bid Data**

**Exhibits 4-20** and **4-21** show bid data that MGT collected from the City's electronic data files. **Exhibit 4-20** illustrates the number and percentage of bids submitted over the study period. The number of bids analyzed does not include all

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<sup>13</sup> During the Second-Generation Study, MGT determined the available pool of vendors by using U.S. Bureau of Census data, Survey of Minority-Owned Business Enterprises (SMOBE), Survey of Women-Owned Business Enterprises (SWOBE), and County Business Patterns.

projects where bids might have been submitted. The bid data analyzed are for those projects where bid data information could be located and reported.

The dollar value of bids won for M/WBEs as shown in **Exhibit 4-20** was 6.68 percent of overall dollars analyzed. The overall dollar value awarded to M/WBEs for construction was more than \$11.8 million, or 29 awards. Of the bid data that was located, reported, and analyzed, non-M/WBE firms submitted 85.85 percent of the bids and were successful approximately 80.92 percent of the time. M/WBEs submitted approximately 14.2 percent of the bids and were successful approximately 18 percent of the time. Based on the dollar amount of bids awarded, nonminority women-owned firms were the most successful among M/WBE firms, being awarded 2.62 percent of the contract dollars awarded. Hispanic American-owned firms were the second most successful among M/WBE firms, being awarded 2.58 percent of the contract dollars awarded. Based on the bid analysis findings, non-M/WBE-owned firms were awarded more than \$166.1 million in contracts, or roughly 93 percent of the total bid dollars analyzed.

**EXHIBIT 4-20  
CITY OF PHOENIX  
CONSTRUCTION  
ANALYSIS OF BID DATA  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Work Type	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total # or \$
	# or \$	% <sup>1</sup>	# or \$	% <sup>1</sup>	# or \$	% <sup>1</sup>	# or \$	% <sup>1</sup>	# or \$	% <sup>1</sup>	# or \$	% <sup>1</sup>	# or \$	% <sup>1</sup>	
Number of Bids Submitted	1	0.10%	51	5.19%	15	1.53%	3	0.31%	69	7.03%	139	14.15%	843	85.85%	982
Number of Individual Bidders	1	0.82%	8	6.56%	2	1.64%	1	0.82%	10	8.20%	22	18.03%	100	81.97%	122
Number of Bid Contracts Awarded*	0	0.00%	9	5.92%	5	3.29%	0	0.00%	15	9.87%	29	19.08%	123	80.92%	152
Dollar Amount of Bid Contract	\$0.00	0.00%	\$4,599,102.15	2.58%	\$2,630,236.97	1.48%	\$0.00	0.00%	\$4,655,828.60	2.62%	\$11,885,167.72	6.68%	\$166,108,750.42	93.32%	\$ 177,993,918.14

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total bid.

Note: The number of bids submitted in the tables is not inclusive of all projects for which bids were submitted during the study period. The data shown above represent only those projects on which bid information was reviewed and reported.

**Exhibit 4-21** shows the number of bids submitted for projects of various dollar ranges. The data show that as the project value increases the number of bids submitted by M/WBEs begins to decrease. The exception is Hispanic American-owned firms that bid more in the greater than \$1 million category than in the projects valuing between \$500,001 and \$1 million, which translates into 11 bids and 9 bids, respectively. The data collected showed that M/WBEs submitted the most bids for projects valued between \$250,001 and \$500,000.

**EXHIBIT 4-21  
CITY OF PHOENIX  
CONSTRUCTION  
ANALYSIS OF BID DATA BY DOLLAR THRESHOLDS  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
NUMBER AND PERCENT OF BIDS SUBMITTED  
FISCAL YEARS 2000 THROUGH 2004**

Thresholds	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Bids Submitted
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#
Less than or Equal to \$250,000	1	0.49%	16	7.84%	8	3.92%	0	0.00%	24	11.76%	49	24.02%	155	75.98%	204
Between \$250,001 and \$500,000	0	0.00%	15	6.55%	3	1.31%	1	0.44%	32	13.97%	51	22.27%	178	77.73%	229
Between \$500,001 and \$1,000,000	0	0.00%	9	5.33%	3	1.78%	0	0.00%	7	4.14%	19	11.24%	150	88.76%	169
Greater than \$1,000,000	0	0.00%	11	2.89%	1	0.26%	2	0.53%	6	1.58%	20	5.26%	360	94.74%	380
<b>Total</b>	<b>1</b>	<b>0.10%</b>	<b>51</b>	<b>5.19%</b>	<b>15</b>	<b>1.53%</b>	<b>3</b>	<b>0.31%</b>	<b>69</b>	<b>7.03%</b>	<b>139</b>	<b>14.15%</b>	<b>843</b>	<b>85.85%</b>	<b>982</b>

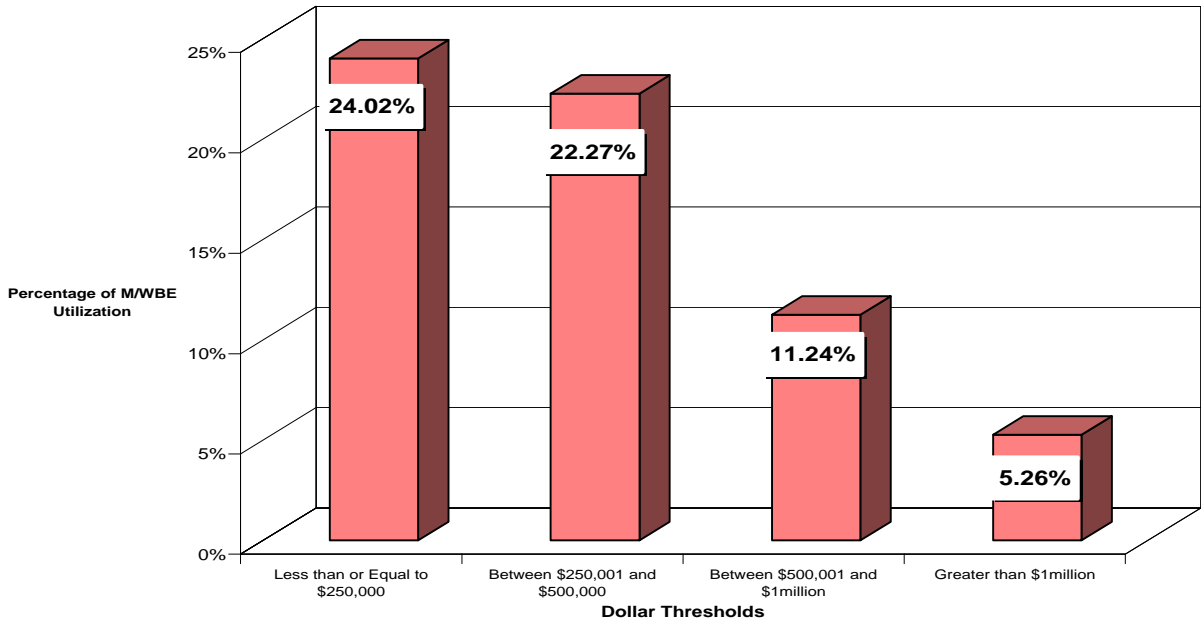
Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total bids submitted annually by prime contractors.

**Exhibit 4-22** shows a graphical comparison of the dollar ranges for bid participation of M/WBEs and illustrates how M/WBE-owned firms fared as the bid dollars rose. Overall, M/WBEs submitted 14 percent of the bids during the study period.



**EXHIBIT 4-22  
CITY OF PHOENIX  
CONSTRUCTION  
ANALYSIS OF BIDS SUBMITTED BY M/WBE FIRMS  
BY DOLLAR THRESHOLDS  
FISCAL YEARS 2000 THROUGH 2004**



Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

### **4.3 General Services**

The market area and utilization of M/WBEs and non-M/WBEs for the City's general services procurements are examined in this section. Subcontractor analyses were not performed for general services vendors because this business category does not typically involve subcontracting opportunities.

#### **4.3.1 Relevant Market Area Analysis**

As discussed in section 4.1.4, the relevant market area is determined by first adding the dollars awarded in each county according to business category. The counties were listed according to the number of firms awarded purchase order dollars, and then

by the dollar amounts awarded. Succeeding counties were added, as needed, until at least 75 percent of the total dollars were included.

**Exhibit 4-23** shows the relevant market area analysis for general services procurements by the City. During the study period, the City spent approximately \$35 million on general services purchases. There were three counties that fell within the relevant market area—Maricopa County, Arizona; Los Angeles County, California; and Cook County, Illinois. Approximately 80 percent of the overall purchases were made in these counties, representing more than \$26 million in general services procurements. Please refer to **Appendix P** for a summary of the number of purchase orders awarded for general services. This summary presents the findings by fiscal year for the average and maximum dollars awarded.

**EXHIBIT 4-23  
CITY OF PHOENIX  
GENERAL SERVICES  
RELEVANT MARKET AREA ANALYSIS  
FISCAL YEARS 2000 THROUGH 2004**

County, <sup>1</sup> State	# of Purchase Orders	% of Purchase Orders	# of Firms	% of Firms	Dollars	% of Dollars	Cum% <sup>2</sup>
MARICOPA, AZ	2,847	74.18%	799	70.33%	\$25,076,360.46	72.17%	72.17%
LOS ANGELES, CA	101	2.63%	27	2.38%	\$717,999.67	2.07%	2.07%
COOK, IL	119	3.10%	27	2.38%	\$614,759.16	1.77%	1.77%
<b>RELEVANT M.A. TOTAL</b>	<b>3,067</b>	<b>79.91%</b>	<b>853</b>	<b>75.09%</b>	<b>\$26,409,119.29</b>	<b>76.01%</b>	<b>76.01%</b>
ORANGE, CA	44	1.15%	19	1.67%	\$282,954.05	0.81%	0.81%
DALLAS, TX	37	0.96%	16	1.41%	\$312,370.65	0.90%	0.90%
PIMA, AZ	42	1.09%	13	1.14%	\$389,916.75	1.12%	1.12%
HENNEPIN, MN	18	0.47%	8	0.70%	\$118,948.85	0.34%	0.34%
SAN MATEO, CA	27	0.70%	7	0.62%	\$356,817.32	1.03%	1.03%
SAN FRANCISCO, CA	18	0.47%	6	0.53%	\$208,991.25	0.60%	0.60%
ALLEGHENY, PA	29	0.76%	6	0.53%	\$175,144.38	0.50%	0.50%
SANTA CLARA, CA	12	0.31%	6	0.53%	\$127,694.53	0.37%	0.37%
SAN DIEGO, CA	18	0.47%	6	0.53%	\$84,714.87	0.24%	0.24%
BROWARD, FL	10	0.26%	5	0.44%	\$62,101.07	0.18%	0.18%
SALT LAKE, UT	16	0.42%	5	0.44%	\$33,624.84	0.10%	0.10%
PINAL, AZ	10	0.26%	5	0.44%	\$27,392.85	0.08%	0.08%
BOULDER, CO	5	0.13%	5	0.44%	\$13,930.89	0.04%	0.04%
FAIRFAX, VA	20	0.52%	4	0.35%	\$479,691.19	1.38%	1.38%
PHILADELPHIA, PA	19	0.50%	4	0.35%	\$205,047.50	0.59%	0.59%
CLARK, NV	9	0.23%	4	0.35%	\$55,323.95	0.16%	0.16%
MIDDLESEX, MA	7	0.18%	4	0.35%	\$29,545.11	0.09%	0.09%
HARTFORD, CT	5	0.13%	4	0.35%	\$25,990.89	0.07%	0.07%
MECKLENBURG, NC	4	0.10%	4	0.35%	\$9,919.00	0.03%	0.03%
KING, WA	6	0.16%	4	0.35%	\$3,870.00	0.01%	0.01%
SAINT LOUIS CITY (CITY), MO	4	0.10%	4	0.35%	\$2,980.72	0.01%	0.01%
MILWAUKEE, WI	27	0.70%	3	0.26%	\$871,370.97	2.51%	2.51%
RAMSEY, MN	42	1.09%	3	0.26%	\$134,773.17	0.39%	0.39%
MERCER, NJ	5	0.13%	3	0.26%	\$130,742.96	0.38%	0.38%
RIVERSIDE, CA	8	0.21%	3	0.26%	\$85,622.39	0.25%	0.25%
YAVAPAI, AZ	5	0.13%	3	0.26%	\$68,719.29	0.20%	0.20%
HAMILTON, OH	6	0.16%	3	0.26%	\$49,925.82	0.14%	0.14%
SUFFOLK, NY	4	0.10%	3	0.26%	\$37,586.40	0.11%	0.11%
JOHNSON, KS	5	0.13%	3	0.26%	\$31,824.97	0.09%	0.09%
FRANKLIN, OH	6	0.16%	3	0.26%	\$16,243.61	0.05%	0.05%
WAKE, NC	5	0.13%	3	0.26%	\$12,885.53	0.04%	0.04%
HILLSBOROUGH, FL	3	0.08%	3	0.26%	\$8,532.85	0.02%	0.02%
NEVADA, CA	3	0.08%	3	0.26%	\$2,522.96	0.01%	0.01%
WEBER, UT	4	0.10%	2	0.18%	\$288,841.67	0.83%	0.83%
OTHER	288	7.50%	106	9.33%	\$3,590,071.03	10.33%	10.33%
<b>Total</b>	<b>3,838</b>	<b>100.00%</b>	<b>1,136</b>	<b>100.00%</b>	<b>\$34,745,753.57</b>	<b>100.00%</b>	

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Counties above the line are included in the relevant market area.

<sup>2</sup> Cumulative total of percentage of dollars in market area.

**4.4.2 Utilization Analysis**

M/WBE and non-M/WBE utilization analysis includes firms located within the relevant market area. The utilization was derived from information contained in the City's financial system for activity occurring between July 1, 1999, and June 30, 2004. Using this data source, MGT calculated the percentage of total dollars awarded to M/WBEs and non-M/WBEs during the relevant time period. The numbers in the utilization charts that follow reflect awards and payments made to vendors in each race, ethnicity, and gender category.

MGT analyzed the general services dollars awarded by the City to M/WBE and non-M/WBE vendors located in the relevant market area. The utilization analysis results are presented by fiscal year, dollar amount of POs/awards, number of POs awarded, and individual firms according to race/ethnicity/gender classifications. It also includes analysis of the amount of payments made to firms by race/ethnicity/gender classifications.

**Exhibit 4-24** presents the utilization analysis of general services firms in the City's relevant market area. According to the exhibit, M/WBEs received more than 19 percent of the general services procurements made by the City during the study period. This represented slightly more than \$5 million dollars out of over \$26.4 million in general services procurements.

**EXHIBIT 4-24  
CITY OF PHOENIX  
GENERAL SERVICES  
UTILIZATION ANALYSIS OF VENDORS IN THE RELEVANT MARKET AREA  
DOLLARS AND PERCENTAGE OF TOTAL DOLLARS AWARDED  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBEs Firms		Total Dollars Awarded
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	
FY1999-2000	\$85,947.31	2.01%	\$102,121.30	2.39%	\$49,405.03	1.16%	\$28,877.20	0.68%	\$410,243.63	9.61%	\$676,594.47	15.85%	\$3,591,180.34	84.15%	\$4,267,774.81
FY2000-2001	\$119,232.80	2.49%	\$181,302.91	3.78%	\$247,063.49	5.16%	\$49,504.54	1.03%	\$499,415.52	10.43%	\$1,096,519.26	22.89%	\$3,694,025.73	77.11%	\$4,790,544.99
FY2001-2002	\$67,741.54	1.13%	\$153,235.88	2.57%	\$127,852.12	2.14%	\$32,255.37	0.54%	\$194,471.56	3.26%	\$575,556.47	9.64%	\$5,395,689.43	90.36%	\$5,971,245.90
FY2002-2003	\$18,107.74	0.51%	\$292,316.69	8.27%	\$46,531.29	1.32%	\$0.00	0.00%	\$302,946.60	8.57%	\$659,902.32	18.68%	\$2,873,350.57	81.32%	\$3,533,252.89
FY2003-2004	\$41,433.61	0.53%	\$168,643.03	2.15%	\$96,745.98	1.23%	\$0.00	0.00%	\$1,729,722.08	22.05%	\$2,036,544.70	25.96%	\$5,809,756.00	74.04%	\$7,846,300.70
<b>Total</b>	<b>\$332,463.00</b>	<b>1.26%</b>	<b>\$897,619.81</b>	<b>3.40%</b>	<b>\$567,597.91</b>	<b>2.15%</b>	<b>\$110,637.11</b>	<b>0.42%</b>	<b>\$3,136,799.39</b>	<b>11.88%</b>	<b>\$5,045,117.22</b>	<b>19.10%</b>	<b>\$21,364,002.07</b>	<b>80.90%</b>	<b>\$26,409,119.29</b>

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total dollars awarded annually to prime contractors.

**Exhibit 4-25** details the actual payments made for general services procurements to M/WBE and non-M/WBE firms during the study period. Firms owned by M/WBEs have been paid approximately 81.9 percent of the dollars awarded (\$4.14 million paid out of \$5.05 million awarded), while overall the city has paid approximately 82.2 percent of the dollars awarded (\$17.6 million paid out of \$21.4 million awarded) for general services procurements. Of the M/WBE firms that provided general services to the City, Hispanic American and nonminority women-owned firms received the most payments—approximately 3.64 percent and 11.24 percent, respectively. African American-owned firms received roughly 1.4 percent of the payment dollars, and Native American-owned firms received less than 1 percent of payment dollars.

**EXHIBIT 4-25  
CITY OF PHOENIX  
GENERAL SERVICES  
UTILIZATION ANALYSIS OF VENDORS IN THE RELEVANT MARKET AREA  
DOLLARS AND PERCENTAGE OF TOTAL PAYMENTS  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBEs Firms		Total Payments Made
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	
FY1999-2000	\$78,496.94	1.92%	\$99,867.12	2.44%	\$41,732.91	1.02%	\$28,817.50	0.70%	\$400,049.32	9.77%	\$648,963.79	15.86%	\$3,443,801.20	84.14%	\$4,092,764.99
FY2000-2001	\$112,886.14	2.40%	\$181,098.36	3.85%	\$247,058.44	5.26%	\$49,444.64	1.05%	\$481,190.21	10.24%	\$1,071,677.79	22.80%	\$3,628,897.25	77.20%	\$4,700,575.04
FY2001-2002	\$63,412.04	1.10%	\$152,175.18	2.65%	\$120,734.87	2.10%	\$15,660.71	0.27%	\$194,510.34	3.39%	\$546,493.14	9.52%	\$5,196,585.50	90.48%	\$5,743,078.64
FY2002-2003	\$17,296.06	0.51%	\$275,475.24	8.09%	\$52,870.58	1.55%	\$0.00	0.00%	\$295,215.77	8.67%	\$640,857.65	18.83%	\$2,763,036.08	81.17%	\$3,403,893.73
FY2003-2004	\$31,189.10	0.90%	\$80,621.23	2.33%	\$46,879.78	1.35%	\$0.00	0.00%	\$1,068,562.45	30.88%	\$1,227,252.56	35.46%	\$2,233,489.27	64.54%	\$3,460,741.83
<b>Total</b>	<b>\$303,280.28</b>	<b>1.42%</b>	<b>\$789,237.13</b>	<b>3.69%</b>	<b>\$509,276.58</b>	<b>2.38%</b>	<b>\$93,922.85</b>	<b>0.44%</b>	<b>\$2,439,528.09</b>	<b>11.40%</b>	<b>\$4,135,244.93</b>	<b>19.32%</b>	<b>\$17,265,809.30</b>	<b>80.68%</b>	<b>\$21,401,054.23</b>

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Payments.

**Exhibit 4-26** shows the number of general services procurements made to firms in the relevant market area over the study period. Of the M/WBE-owned firms, nonminority women-owned firms were awarded the majority of the purchase orders with 486, or 15.85 percent of all the general services procurements awarded. Non-M/WBEs received approximately 73.9 percent of all purchase orders in this category. **Exhibit 4-27** shows the number of unique vendors awarded dollars for general services. Of the 853 unique vendors utilized during the study period, slightly more than 19 percent (164) of the utilized vendors were M/WBEs. Nonminority women- and Hispanic American-owned firms make up the majority of these firms, with 10.32 percent and 5.86 percent, respectively.

**EXHIBIT 4-26  
CITY OF PHOENIX  
GENERAL SERVICES  
NUMBER OF PURCHASE ORDERS AWARDED  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBEs Firms		Total Purchase Orders
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#
FY1999-2000	9	1.66%	25	4.62%	14	2.59%	5	0.92%	92	17.01%	145	26.80%	396	73.20%	541
FY2000-2001	11	1.88%	33	5.64%	16	2.74%	4	0.68%	96	16.41%	160	27.35%	425	72.65%	585
FY2001-2002	14	2.45%	32	5.60%	28	4.90%	3	0.53%	61	10.68%	138	24.17%	433	75.83%	571
FY2002-2003	6	1.03%	28	4.80%	13	2.23%	0	0.00%	102	17.50%	149	25.56%	434	74.44%	583
FY2003-2004	9	1.14%	31	3.94%	34	4.32%	0	0.00%	135	17.15%	209	26.56%	578	73.44%	787
<b>Total Purchase Orders</b>	<b>49</b>	<b>1.60%</b>	<b>149</b>	<b>4.86%</b>	<b>105</b>	<b>3.42%</b>	<b>12</b>	<b>0.39%</b>	<b>486</b>	<b>15.85%</b>	<b>801</b>	<b>26.12%</b>	<b>2,266</b>	<b>73.88%</b>	<b>3,067</b>

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Purchase Orders.

**EXHIBIT 4-27  
CITY OF PHOENIX  
GENERAL SERVICES  
NUMBER OF UNIQUE VENDORS AWARDED  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBEs Firms		Total Unique Vendors
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#
FY1999-2000	6	2.21%	17	6.27%	5	1.85%	3	1.11%	33	12.18%	64	23.62%	207	76.38%	271
FY2000-2001	7	2.55%	15	5.47%	7	2.55%	1	0.36%	33	12.04%	63	22.99%	211	77.01%	274
FY2001-2002	6	2.07%	17	5.86%	5	1.72%	2	0.69%	28	9.66%	58	20.00%	232	80.00%	290
FY2002-2003	4	1.29%	14	4.52%	6	1.94%	0	0.00%	35	11.29%	59	19.03%	251	80.97%	310
FY2003-2004	4	1.09%	22	5.99%	10	2.72%	0	0.00%	42	11.44%	78	21.25%	289	78.75%	367
<b>Total Unique Vendors Over Five Years<sup>2</sup></b>	<b>8</b>	<b>0.94%</b>	<b>50</b>	<b>5.86%</b>	<b>14</b>	<b>1.64%</b>	<b>4</b>	<b>0.47%</b>	<b>88</b>	<b>10.32%</b>	<b>164</b>	<b>19.23%</b>	<b>689</b>	<b>80.77%</b>	<b>853</b>

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Vendors.

<sup>2</sup> The Total Vendors counts a vendor only once for each year the firm receives work. Since a vendor could be used in multiple years, the total unique vendors for the entire study period may not equal the sum of all years.

**Threshold Analysis**

MGT analyzed the utilization of M/WBE general services firms by examining general services purchase orders awarded in specific dollar ranges shown below:

- purchase orders \$5,000 or under;
- purchase orders between \$5,001 and \$25,000;
- purchase orders between \$25,001 and \$39,999; and
- purchase orders \$40,000 and greater.

The utilization of M/WBE and non-M/WBE firms for each dollar category is shown in **Exhibits 4-28** and **4-29**. As **Exhibit 4-28** illustrates, M/WBEs received approximately 29 percent of purchase orders awarded in amounts of \$5,000 or less, and 15.76 percent of the purchase orders of \$40,000 or greater were awarded to M/WBEs. Overall, M/WBE participation decreased as the dollar range increased.

**General Services POs \$5,000 or Less**

From fiscal years 2000 through 2004, the City of Phoenix awarded 2,040 purchase orders for general services valued at of \$5,000 or under. **Exhibits 4-28** and **4-29** show M/WBE-owned firms received approximately 29 percent of award dollars in this category. Nonminority women-owned firms were the most utilized within the M/WBE category, receiving 17.62 percent of the purchase order award dollars. Hispanic American-owned firms were next at 5.60 percent of the purchase order award dollars. Non-M/WBE firms received approximately 71.04 percent of the award dollars. Nonminority women-owned firms received 380 of the purchase orders awarded in this category, while Native American-owned firms received four purchase orders in this category. Non-M/WBEs accounted for more than 70 percent of purchase orders awarded during the study period.

**General Services POs Awarded between \$5,001 and \$25,000**

As presented in **Exhibit 4-29**, there were 871 general services purchase orders awarded between \$5,001 and \$25,000 during the study period. Nonminority women-



owned firms were the most utilized M/WBE category, receiving more than 10 percent of the purchase orders awarded in this category. Non-M/WBE firms received 79.33 percent of the purchase orders in this category. According to **Exhibit 4-28**, slightly more than 80 percent of the award dollars were received by non-M/WBE-owned firms. Out of the \$9.5 million awarded in this category, Native American and African American-owned firms were awarded less than \$66,000 (or 0.69 percent of total dollars) and less than \$170,000 (or 1.78 percent of total dollars), respectively.

**General Services POs Awarded between \$25,001 and \$39,999**

The City of Phoenix awarded 74 purchase orders between the \$25,001 and \$39,999 range during the study period. Asian American-owned firms were not utilized in this category. Nonminority women-owned firms were the most utilized M/WBE category, receiving 8.11 percent of the purchase orders awarded in this category. Non-M/WBE firms received 83.78 percent of the purchase orders for this category. Slightly more than 5 percent of the purchase orders awarded in this category were received by firms owned by Hispanic Americans. Nonminority women-owned firms received approximately 8.7 percent of dollars awarded, whereas African American-owned firms received approximately 1.4 percent of the dollars awarded in this dollar range.

**General Services POs Awarded \$40,000 or Greater**

Eighty-two purchase orders were awarded by the City of Phoenix, amounting to approximately \$11 million dollars during the study period for this dollar range. Native American-owned firms were not utilized in this category. African American and Asian American-owned firms were each awarded one purchase order in this category. Non-M/WBEs were awarded 85.37 percent of the purchase orders in this category, which translates into approximately \$9.2 million in award dollars.

**EXHIBIT 4-28  
CITY OF PHOENIX  
THRESHOLD ANALYSIS OF GENERAL SERVICES VENDORS  
DOLLARS AND PERCENTAGE OF TOTAL DOLLARS  
IN THE RELEVANT MARKET AREA  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Thresholds	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBEs Firms		Total Dollars Awarded
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$
Less than or Equal to \$5,000	\$75,023.48	2.08%	\$202,017.55	5.60%	\$123,378.56	3.42%	\$8,615.35	0.24%	\$635,031.08	17.62%	\$1,044,066.02	28.96%	\$2,560,588.63	71.04%	\$3,604,654.65
Between \$5,001 and \$25,000	\$169,221.52	1.78%	\$405,635.54	4.27%	\$262,168.15	2.76%	\$65,048.54	0.69%	\$976,629.90	10.28%	\$1,878,703.65	19.78%	\$7,617,169.43	80.22%	\$9,495,873.08
Between \$25,001 and \$39,999	\$31,948.00	1.36%	\$122,769.72	5.21%	\$0.00	0.00%	\$36,973.22	1.57%	\$204,309.95	8.67%	\$396,000.89	16.81%	\$1,960,088.62	83.19%	\$2,356,089.51
\$40,000 and greater	\$56,270.00	0.51%	\$167,197.00	1.53%	\$182,051.20	1.66%	\$0.00	0.00%	\$1,320,828.46	12.06%	\$1,726,346.66	15.76%	\$9,226,155.39	84.24%	\$10,952,502.05
<b>Total</b>	<b>\$332,463.00</b>	<b>1.26%</b>	<b>\$897,619.81</b>	<b>3.40%</b>	<b>\$567,597.91</b>	<b>2.15%</b>	<b>\$110,637.11</b>	<b>0.42%</b>	<b>\$3,136,799.39</b>	<b>11.88%</b>	<b>\$5,045,117.22</b>	<b>19.10%</b>	<b>\$21,364,002.07</b>	<b>80.90%</b>	<b>\$26,409,119.29</b>

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total dollars awarded annually to general services vendors.

**EXHIBIT 4-29  
CITY OF PHOENIX  
THRESHOLD ANALYSIS OF GENERAL SERVICES VENDORS  
NUMBER AND PERCENTAGE OF TOTAL PURCHASE ORDERS  
IN THE RELEVANT MARKET AREA  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Thresholds	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBEs Firms		Total Number Awarded
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#
Less than or Equal to \$5,000	33	1.62%	102	5.00%	78	3.82%	4	0.20%	380	18.63%	597	29.26%	1,443	70.74%	2,040
Between \$5,001 and \$25,000	14	1.61%	41	4.71%	26	2.99%	7	0.80%	92	10.56%	180	20.67%	691	79.33%	871
Between \$25,001 and \$39,999	1	1.35%	4	5.41%	0	0.00%	1	1.35%	6	8.11%	12	16.22%	62	83.78%	74
\$40,000 and greater	1	1.22%	2	2.44%	1	1.22%	0	0.00%	8	9.76%	12	14.63%	70	85.37%	82
<b>Total</b>	<b>49</b>	<b>1.60%</b>	<b>149</b>	<b>4.86%</b>	<b>105</b>	<b>3.42%</b>	<b>12</b>	<b>0.39%</b>	<b>486</b>	<b>15.85%</b>	<b>801</b>	<b>26.12%</b>	<b>2,266</b>	<b>73.88%</b>	<b>3,067</b>

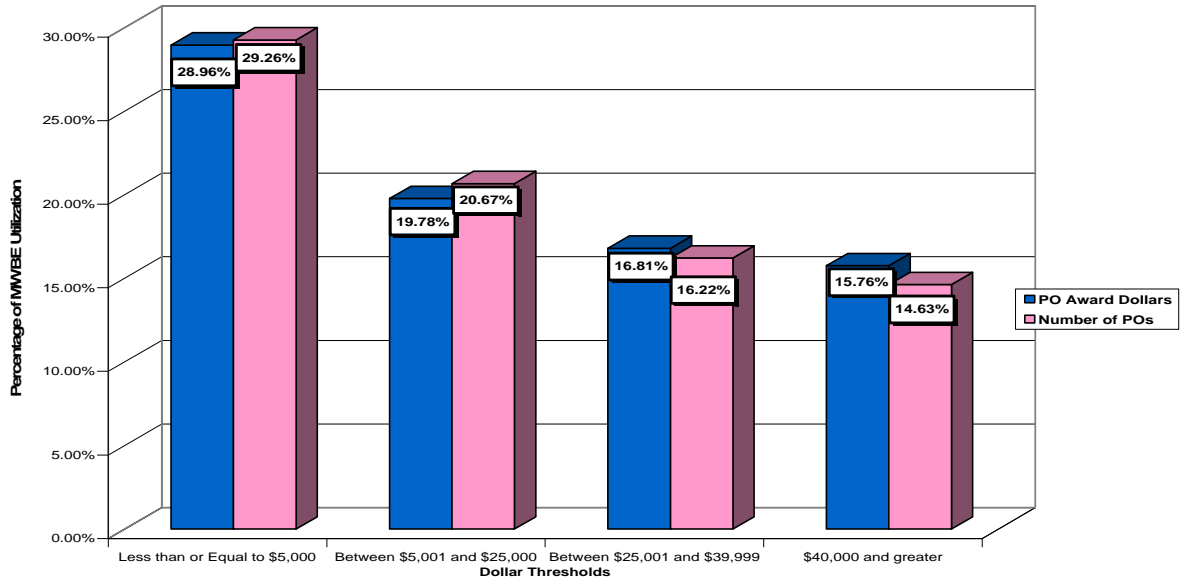
Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total number of purchase orders awarded annually to general services vendors.

**General Services POs dollar ranges**

Exhibit 4-30 shows a graphical comparison of the dollar ranges for the utilization of M/WBEs and illustrates how M/WBE firms fared as the number of purchase orders and award dollars rose. As the exhibit presents, M/WBEs were awarded the most purchase orders for projects valued at \$5,000 or less.

**EXHIBIT 4-30  
CITY OF PHOENIX  
UTILIZATION OF M/WBE GENERAL SERVICES VENDORS  
WITHIN CONTRACT DOLLAR RANGES  
BASED ON PURCHASE AWARD DOLLARS AND  
NUMBER OF PURCHASE ORDERS AWARDED  
FISCAL YEARS 2000 THROUGH 2004**



Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

**4.4.3 Availability**

As stated in section 4.1.3 and 4.1.6, availability for general services was derived from those firms that (1) have performed general services for the City in the past; (2) have submitted bids for general services projects for the City in the past; and (3) are registered with any of the agencies listed in section 4.1.3 and it could be determined that they were general services firms.

**Exhibit 4-31** shows the relative distribution of available general services vendors in the relevant market area. In the exhibit, we show that M/WBEs represented more than 31 percent of the available vendors (or 1,437 firms). Firms owned by nonminority women and Hispanic Americans accounted for the majority of available M/WBEs that provide general services. The majority of general services vendors were non-M/WBEs (or 68.85 percent of total vendors).

**EXHIBIT 4-31  
CITY OF PHOENIX  
GENERAL SERVICES  
AVAILABILITY OF GENERAL SERVICES VENDORS  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

	African Americans <sup>1</sup>		Hispanic Americans <sup>1</sup>		Asian Americans <sup>1</sup>		Native Americans <sup>1</sup>		Nonminority Women		M/WBE Subtotal		Non-M/WBEs Firms		Total Firms
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
<b>Total</b>	146	3.16%	264	5.72%	55	1.19%	13	0.28%	959	20.79%	1,437	31.15%	3,176	68.85%	4,613

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Minority male and female firms are included in their respective minority classifications.

**Second-Generation Study Comparison**

Overall, there was a decrease in the total dollars spent for general services procurements. The overall utilization of general services M/WBE-owned firms increased from 9.68 percent to 19.10 percent. Comparing the previous to the current study, nonminority women-owned firms were utilized the most at approximately 4.42 percent and 11.88 percent, respectively. The overall utilization of M/WBE general services firms increased, but the utilization of African American-owned general services firms decreased from 2.52 percent during the second-generation study to 1.26 percent in the current study. According to the previous study conducted by MGT, the overall estimated availability for general services firms was approximately 6,454. The current study shows approximately 4,613 firms available to provide general services work to the City.

#### **4.4 Goods and Supplies**

This section presents our analysis of the goods and supplies procurements for the City during the study period. The market area and utilization of M/WBEs and non-M/WBEs are examined in this section. As with previously mentioned general services, there are few subcontracting opportunities for goods and supplies procurements, so we have not included subcontract level analysis for goods and supplies procurements.

##### **4.4.1 Relevant Market Area Analysis**

As discussed in section 4.1.4, the relevant market area is determined by first adding the dollars awarded in each county according to business category. The counties were listed according to the number of firms awarded purchase order dollars, and then by the dollar amounts awarded. Succeeding counties were added, as needed, until at least 75 percent of the total dollars were included.

Over \$676 million were spent by the City of Phoenix on goods and supplies procurements. This amount represents 68,466 awards received by 4,530 vendors. The relevant market area represented 75.15 percent of the overall dollars, or approximately \$508 million. Slightly over 50 percent of the award dollars were to vendors in Maricopa County, Arizona. In addition to Maricopa County, ten other counties were determined to be in the relevant market area (counties in which at least 75 percent of contract dollars were spent). Please refer to **Appendix P** for a summary of the number of goods and supplies purchase orders awarded. This summary presents the findings by fiscal year for average and maximum dollars awarded.

**Exhibit 4-32** shows the location of all firms by county and dollar amount.

**EXHIBIT 4-32  
GOODS AND SUPPLIES  
RELEVANT MARKET AREA ANALYSIS  
FISCAL YEARS 2000 THROUGH 2004**

County, <sup>1</sup> State	# of Purchase Orders	% of Purchase Orders	# of Firms	% of Firms	Dollars	% of Dollars	Cum% <sup>2</sup>
MARICOPA, AZ	44,872	65.54%	2,194	48.43%	\$340,280,562.51	50.29%	50.29%
LOS ANGELES, CA	2,135	3.12%	218	4.81%	\$96,384,073.73	14.24%	14.24%
COOK, IL	2,810	4.10%	136	3.00%	\$10,853,194.16	1.60%	1.60%
ORANGE, CA	835	1.22%	86	1.90%	\$16,609,744.41	2.45%	2.45%
DALLAS, TX	1,151	1.68%	78	1.72%	\$8,908,483.96	1.32%	1.32%
SAN DIEGO, CA	334	0.49%	56	1.24%	\$4,149,219.14	0.61%	0.61%
PIMA, AZ	1,455	2.13%	54	1.19%	\$7,443,346.27	1.10%	1.10%
FULTON, GA	394	0.58%	40	0.88%	\$5,491,550.79	0.81%	0.81%
HENNEPIN, MN	252	0.37%	37	0.82%	\$5,781,426.90	0.85%	0.85%
KING, WA	124	0.18%	27	0.60%	\$10,507,684.10	1.55%	1.55%
MIDDLESEX, MA	78	0.11%	27	0.60%	\$2,084,689.15	0.31%	0.31%
<b>RELEVANT M.A. TOTAL</b>	<b>54,440</b>	<b>79.51%</b>	<b>2,953</b>	<b>65.19%</b>	<b>\$508,493,975.12</b>	<b>75.15%</b>	<b>N/A</b>
SANTA CLARA, CA	147	0.21%	27	0.60%	\$1,597,967.37	0.24%	0.24%
SALT LAKE, UT	578	0.84%	26	0.57%	\$3,254,533.22	0.48%	0.48%
HARRIS, TX	562	0.82%	24	0.53%	\$2,621,467.45	0.39%	0.39%
SAN BERNARDINO, CA	75	0.11%	19	0.42%	\$21,886,171.29	3.23%	3.23%
SAN FRANCISCO, CA	620	0.91%	19	0.42%	\$1,764,313.92	0.26%	0.26%
CUYAHOGA, OH	125	0.18%	19	0.42%	\$519,042.85	0.08%	0.08%
DENVER, CO	460	0.67%	18	0.40%	\$1,196,184.35	0.18%	0.18%
PINAL, AZ	117	0.17%	18	0.40%	\$469,794.96	0.07%	0.07%
HAMILTON, OH	55	0.08%	18	0.40%	\$466,313.90	0.07%	0.07%
MILWAUKEE, WI	236	0.34%	17	0.38%	\$5,670,099.98	0.84%	0.84%
SAINT LOUIS CITY (CITY), MO	191	0.28%	17	0.38%	\$2,566,686.79	0.38%	0.38%
SAN MATEO, CA	78	0.11%	17	0.38%	\$1,528,824.97	0.23%	0.23%
PHILADELPHIA, PA	148	0.22%	17	0.38%	\$820,229.94	0.12%	0.12%
ALAMEDA, CA	30	0.04%	17	0.38%	\$125,262.06	0.02%	0.02%
MECKLENBURG, NC	104	0.15%	16	0.35%	\$6,858,171.95	1.01%	1.01%
LAKE, IL	866	1.26%	16	0.35%	\$6,452,847.94	0.95%	0.95%
SUFFOLK, NY	31	0.05%	16	0.35%	\$381,781.61	0.06%	0.06%
BROWARD, FL	36	0.05%	15	0.33%	\$101,804.21	0.02%	0.02%
RIVERSIDE, CA	211	0.31%	14	0.31%	\$688,047.69	0.10%	0.10%
WAKE, NC	42	0.06%	13	0.29%	\$853,767.97	0.13%	0.13%
CLARK, NV	47	0.07%	13	0.29%	\$333,952.56	0.05%	0.05%
MULTNOMAH, OR	35	0.05%	13	0.29%	\$254,177.62	0.04%	0.04%
BERGEN, NJ	34	0.05%	13	0.29%	\$68,699.59	0.01%	0.01%
SAINT LOUIS, MO	49	0.07%	12	0.26%	\$10,568,978.59	1.56%	1.56%
SACRAMENTO, CA	24	0.04%	12	0.26%	\$1,127,801.68	0.17%	0.17%
FAIRFAX, VA	135	0.20%	12	0.26%	\$954,869.46	0.14%	0.14%
DOUGLAS, NE	109	0.16%	12	0.26%	\$656,218.92	0.10%	0.10%
ALLEGHENY, PA	287	0.42%	12	0.26%	\$589,581.84	0.09%	0.09%
VENTURA, CA	145	0.21%	12	0.26%	\$582,271.92	0.09%	0.09%
NEW HAVEN, CT	23	0.03%	12	0.26%	\$78,072.11	0.01%	0.01%
DU PAGE, IL	27	0.04%	12	0.26%	\$63,932.97	0.01%	0.01%
JACKSON, MO	56	0.08%	11	0.24%	\$728,739.71	0.11%	0.11%
FAIRFIELD, CT	133	0.19%	11	0.24%	\$564,369.62	0.08%	0.08%
NASSAU, NY	82	0.12%	10	0.22%	\$282,999.78	0.04%	0.04%
DANE, WI	75	0.11%	10	0.22%	\$218,466.79	0.03%	0.03%
JOHNSON, KS	64	0.09%	9	0.20%	\$2,382,675.41	0.35%	0.35%
ARAPAHOE, CO	60	0.09%	9	0.20%	\$1,449,672.88	0.21%	0.21%
HARTFORD, CT	59	0.09%	9	0.20%	\$825,583.94	0.12%	0.12%
OTHER	7,870	11.49%	1,010	22.30%	86,571,023	12.79%	12.79%
<b>Total</b>	<b>68,466</b>	<b>100%</b>	<b>4,530</b>	<b>100%</b>	<b>\$676,619,378.22</b>	<b>100%</b>	

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999– June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Counties above the line are included in the relevant market area.

<sup>2</sup> Cumulative total of percentage of dollars in market area.

**4.4.2 Utilization Analysis**

M/WBE and non-M/WBE utilization analysis includes firms located within the relevant market area. The utilization was derived from information contained in the City's financial system for activity occurring between July 1, 1999, and June 30, 2004. Using

**Relevant Market Area, Utilization, and Availability Analyses**

this data source, MGT calculated the percentage of total dollars awarded to M/WBEs and non-M/WBEs during the relevant time period. The numbers in the utilization charts to follow reflect the combined purchase orders for each business category.

This section discusses the utilization analysis of goods and supplies vendors located in the relevant market areas by the City during the study period. This analysis consists of an examination of the award dollars, payments, and numbers associated with goods and supplies procurements, by race/ethnicity/gender classifications, between fiscal years 2000 and 2004. **Exhibit 4-33** presents the utilization analysis of M/WBEs in the relevant market area. As the exhibit shows, approximately 12 percent of the goods and supplies purchases made during the study period were with M/WBE firms.

Conversely, nonminority firms represented just over 88 percent of the goods and supplies purchases. In dollar terms, non-M/WBE-owned goods and supplies firms received approximately \$448 million in business from the City compared to approximately \$60 million in business conducted with M/WBEs.

**EXHIBIT 4-33  
GOODS AND SUPPLIES  
UTILIZATION ANALYSIS OF VENDORS IN THE RELEVANT MARKET AREA  
DOLLARS AND PERCENTAGE OF TOTAL DOLLARS AWARDED  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBEs Subtotal		Non-M/WBEs Firms		Total Dollars Awarded
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$
FY1999-2000	\$146,859.43	0.13%	\$692,394.48	0.60%	\$5,817,496.49	5.03%	\$117,652.42	0.10%	\$5,216,867.87	4.51%	\$11,991,270.69	10.38%	\$103,578,939.97	89.62%	\$115,570,210.66
FY2000-2001	\$224,664.07	0.21%	\$432,220.01	0.40%	\$7,774,412.47	7.14%	\$4,178.08	0.00%	\$5,222,885.11	4.80%	\$13,658,359.74	12.55%	\$95,182,256.03	87.45%	\$108,840,615.77
FY2001-2002	\$138,056.28	0.11%	\$658,535.71	0.51%	\$6,621,386.40	5.16%	\$8,651.55	0.01%	\$4,530,226.20	3.53%	\$11,956,856.14	9.32%	\$116,389,857.04	90.68%	\$128,346,713.18
FY2002-2003	\$89,046.56	0.11%	\$618,335.81	0.79%	\$5,393,832.51	6.87%	\$4,360.55	0.01%	\$4,911,386.77	6.25%	\$11,016,962.20	14.03%	\$67,531,276.17	85.97%	\$78,548,238.37
FY2003-2004	\$81,720.68	0.11%	\$633,604.35	0.82%	\$6,553,898.82	8.49%	\$16,902.23	0.02%	\$4,203,815.85	5.45%	\$11,489,941.93	14.89%	\$65,698,255.21	85.11%	\$77,188,197.14
<b>Total</b>	\$680,347.02	0.13%	\$3,035,090.36	0.60%	\$32,161,026.69	6.32%	\$151,744.83	0.03%	\$24,085,181.80	4.74%	\$60,113,390.70	11.82%	\$448,380,584.42	88.18%	\$508,493,975.12

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999 - June 30, 2004 (FY2000 - FY2004).

<sup>1</sup> Percentage of total dollars awarded annually to prime contractors.

**Exhibit 4-34** presents the total payments made to M/WBEs and non-M/WBEs in the relevant market area. The City has paid approximately 91.7 percent (\$466.5 million paid out of \$508.5 million awarded) of the total dollars awarded for goods and supplies procurements. M/WBEs have been paid approximately 94.8 percent (\$57 million paid out of \$60.1 million awarded) of the total dollars awarded for this category.

**EXHIBIT 4-34  
GOODS AND SUPPLIES  
UTILIZATION ANALYSIS OF VENDORS IN THE RELEVANT MARKET AREA  
DOLLARS AND PERCENTAGE OF TOTAL PAYMENTS  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBEs Subtotal		Non-M/WBEs Firms		Total Payments Made
	\$	% <sup>†</sup>	\$	% <sup>†</sup>	\$	% <sup>†</sup>	\$	% <sup>†</sup>	\$	% <sup>†</sup>	\$	% <sup>†</sup>	\$	% <sup>†</sup>	\$
FY1999-2000	\$144,873.20	0.13%	\$689,501.73	0.60%	\$5,800,011.67	5.08%	\$117,094.54	0.10%	\$5,226,980.23	4.57%	\$11,978,461.37	10.48%	\$102,291,760.99	89.52%	\$114,270,222.36
FY2000-2001	\$224,281.22	0.21%	\$434,990.74	0.40%	\$7,780,225.53	7.18%	\$4,205.08	0.00%	\$5,231,634.68	4.83%	\$13,675,337.25	12.61%	\$94,737,861.81	87.39%	\$108,413,199.06
FY2001-2002	\$138,089.05	0.12%	\$659,564.36	0.56%	\$6,606,712.97	5.62%	\$8,524.44	0.01%	\$4,531,572.61	3.86%	\$11,944,463.43	10.17%	\$105,530,345.91	89.83%	\$117,474,809.34
FY2002-2003	\$89,469.40	0.11%	\$596,641.81	0.76%	\$5,381,236.50	6.86%	\$4,355.17	0.01%	\$4,916,560.66	6.27%	\$10,988,263.54	14.02%	\$67,406,314.55	85.98%	\$78,394,578.09
FY2003-2004	\$48,759.04	0.10%	\$487,923.01	1.02%	\$4,795,762.69	10.01%	\$7,039.74	0.01%	\$3,114,593.00	6.50%	\$8,454,077.48	17.64%	\$39,460,516.40	82.36%	\$47,914,593.88
<b>Total</b>	\$645,471.91	0.14%	\$2,868,621.65	0.61%	\$30,363,949.36	6.51%	\$141,218.97	0.03%	\$23,021,341.18	4.94%	\$57,040,603.07	12.23%	\$409,426,799.66	87.77%	\$466,467,402.73

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>†</sup> Percentage of Total Payments.

The total number of goods and supplies purchase orders made to firms in the relevant market area is shown in **Exhibit 4-35** where approximately 25 percent of these purchases were to M/WBE vendors. Nonminority women-owned firms received the most goods and supplies purchases among M/WBEs with 8,952 (16.44%), and Asian American-owned firms received the second highest share of M/WBE purchases with 3,559 (6.54%). Native American firms were the least utilized, receiving 22 purchases during the study period. **Exhibit 4-36** shows the number of unique vendors utilized for goods and supplies; approximately 12.2 percent of the firms utilized were M/WBEs.



**EXHIBIT 4-35  
GOODS AND SUPPLIES  
NUMBER OF PURCHASE ORDERS  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBEs Subtotal		Non-M/WBEs Firms		Total Purchase Orders
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#
FY1999-2000	85	0.94%	103	1.13%	645	7.11%	5	0.06%	1,414	15.58%	2,252	24.82%	6,823	75.18%	9,075
FY2000-2001	91	0.99%	102	1.10%	678	7.34%	2	0.02%	1,602	17.35%	2,475	26.81%	6,756	73.19%	9,231
FY2001-2002	70	0.73%	94	0.98%	664	6.93%	3	0.03%	1,651	17.23%	2,482	25.90%	7,101	74.10%	9,583
FY2002-2003	34	0.27%	184	1.45%	727	5.75%	4	0.03%	2,183	17.26%	3,132	24.76%	9,517	75.24%	12,649
FY2003-2004	37	0.27%	293	2.11%	845	6.08%	8	0.06%	2,102	15.11%	3,285	23.62%	10,623	76.38%	13,908
<b>Total Purchase Orders</b>	<b>317</b>	<b>0.58%</b>	<b>776</b>	<b>1.43%</b>	<b>3,559</b>	<b>6.54%</b>	<b>22</b>	<b>0.04%</b>	<b>8,952</b>	<b>16.44%</b>	<b>13,626</b>	<b>25.03%</b>	<b>40,820</b>	<b>74.97%</b>	<b>54,446</b>

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Purchase Orders.

**EXHIBIT 4-36  
GOODS AND SUPPLIES  
NUMBER OF UNIQUE VENDORS UTILIZED  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBEs Subtotal		Non-M/WBEs Firms		Total Unique Vendors
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#
FY1999-2000	5	0.43%	33	2.84%	18	1.55%	4	0.34%	83	7.13%	143	12.29%	1,021	87.71%	1,164
FY2000-2001	9	0.77%	30	2.57%	16	1.37%	2	0.17%	88	7.53%	145	12.41%	1,023	87.59%	1,168
FY2001-2002	14	1.15%	29	2.38%	19	1.56%	3	0.25%	97	7.96%	162	13.29%	1,057	86.71%	1,219
FY2002-2003	10	0.00%	38	0.00%	21	1.46%	3	0.21%	105	7.32%	177	12.33%	1,258	87.67%	1,435
FY2003-2004	10	0.00%	47	0.00%	21	1.37%	3	0.20%	119	7.75%	200	13.02%	1,336	86.98%	1,536
<b>Total Unique Vendors Over Five Years<sup>2</sup></b>	<b>25</b>	<b>0.85%</b>	<b>91</b>	<b>3.08%</b>	<b>38</b>	<b>1.29%</b>	<b>6</b>	<b>0.20%</b>	<b>201</b>	<b>6.81%</b>	<b>361</b>	<b>12.22%</b>	<b>2,592</b>	<b>87.78%</b>	<b>2,953</b>

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Vendors.

<sup>2</sup> The Total Vendors counts a vendor only once for each year the firm receives work. Since a vendor could be used in multiple years, the total unique vendors for the entire study period may not equal the sum of all years.

**Threshold Analysis**

MGT analyzed the utilization of M/WBE goods and supplies firms by examining goods and supplies purchase orders awarded in specific dollar ranges shown below:

- purchase orders \$5,000 or under;
- purchase orders between \$5,001 and \$25,000;
- purchase orders between \$25,001 and \$39,999; and
- purchase orders \$40,000 and greater.

The utilization of M/WBE and non-M/WBE firms for each dollar category is shown in **Exhibits 4-37** and **4-38**. As **Exhibit 4-37** illustrates, M/WBEs received more than 27 percent of purchase orders awarded in amounts of \$5,000 or less, and 6.01 percent of the purchase orders of \$40,000 or greater were awarded to M/WBEs. Overall, M/WBE participation decreased as the dollar range increased. In fact, M/WBE participation decreased significantly from 27.90 percent for purchase orders valued at \$5,000 or less to 6.01 percent for purchase orders valued at \$40,000 or greater.

**Goods and Supplies POs \$5,000 or Less**

For fiscal years 2000 through 2004, the City of Phoenix awarded 44,978 purchase orders on goods and supplies procurements of \$5,000 or less. As illustrated in these exhibits, M/WBE firms received approximately 27.90 percent of award dollars in this category. Nonminority women-owned firms were the most utilized M/WBE category, receiving slightly more than 18 percent of the purchase order award dollars. Native American-owned firms were the least utilized of the M/WBEs, receiving less than 1 percent of the purchase order award dollars. Non-M/WBE firms received approximately 72.10 percent of the award dollars. Nonminority women-owned firms received 7,934 of the purchase orders awarded in this category, while Native American-owned firms received 16 purchase orders in this category. Non-M/WBEs accounted for roughly 75 percent of purchase orders awarded during the study period.

***Goods and Supplies POs Awarded between \$5,001 and \$25,000***

As presented in **Exhibit 4-38**, there were 7,059 goods and supplies purchase orders awarded between the \$5,001 and \$25,000 range during the study period. Nonminority women-owned firms were the most utilized M/WBE category, receiving 12.93 percent of the purchase orders awarded in this category. Non-M/WBE firms received 73.88 percent of the purchase orders awarded for this category. According to **Exhibit 4-37**, approximately 75.84 percent of the award dollars were received by non-M/WBE-owned firms. Out of the approximately \$79.5 million awarded in this category, Native American and African American-owned firms were awarded 0.05 percent of the total dollars (or \$38,901.80 purchase order dollars) and 0.29 percent of total dollars (or \$230,121.86 purchase order dollars), respectively.

***Goods and Supplies POs Awarded between \$25,001 and \$39,999***

The City of Phoenix awarded 861 purchase orders between the \$25,001 and \$39,999 range during the study period. Asian American-owned firms were the most utilized among the M/WBE-owned firms, receiving more than 13 percent of the purchase orders awarded in this category. Non-M/WBE firms received approximately 79 percent of the purchase orders for this category. Approximately 21 percent of the award dollars in this category were received by firms owned by M/WBEs. Nonminority women-owned firms received approximately 6.5 percent of dollars awarded, while African American, Native American, and Hispanic American-owned firms each received less than 1 percent of the dollars awarded in the this dollar range.

***Goods and Supplies POs Awarded \$40,000 or Greater***

A total of 1,548 purchase orders were awarded by the City of Phoenix, amounting to more than \$351 million during the study period for this dollar range. Asian American-owned firms were the most utilized in this category, receiving 4.58 percent of the dollars

**Relevant Market Area, Utilization, and Availability Analyses**

awarded for goods and supplies procurements. African American and Native American-owned firms each were awarded one purchase in the goods and supplies category within this dollar range. Non-M/WBEs were awarded 86.30 percent of the purchase orders in this category.

**EXHIBIT 4-37  
CITY OF PHOENIX  
THRESHOLD ANALYSIS OF GOODS AND SUPPLIES VENDORS  
DOLLARS AND PERCENTAGE OF TOTAL DOLLARS  
IN THE RELEVANT MARKET AREA  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Thresholds	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBEs Subtotal		Non-M/WBEs Firms		Total Dollars Awarded
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$
Less than or Equal to \$5,000	\$332,133.22	0.65%	\$841,702.44	1.65%	\$3,774,928.04	7.38%	\$26,693.38	0.05%	\$9,292,324.91	18.17%	\$14,267,781.99	27.90%	\$36,880,162.39	72.10%	\$51,147,944.38
Between \$5,001 and \$25,000	\$230,121.86	0.29%	\$799,406.49	1.01%	\$8,741,829.44	11.00%	\$38,901.80	0.05%	\$9,398,700.76	11.82%	\$19,208,960.35	24.16%	\$60,290,730.43	75.84%	\$79,499,690.78
Between \$25,001 and \$39,999	\$30,002.82	0.11%	\$194,228.00	0.73%	\$3,562,919.09	13.30%	\$27,146.00	0.10%	\$1,737,315.99	6.49%	\$5,551,611.90	20.73%	\$21,233,332.98	79.27%	\$26,784,944.88
\$40,000 and greater	\$88,089.12	0.03%	\$1,199,753.43	0.34%	\$16,081,350.12	4.58%	\$59,003.65	0.02%	\$3,656,840.14	1.04%	\$21,085,036.46	6.01%	\$329,976,358.62	93.99%	\$351,061,395.08
<b>Total</b>	\$680,347.02	0.13%	\$3,035,090.36	0.60%	\$32,161,026.69	6.32%	\$151,744.83	0.03%	\$24,085,181.80	4.74%	\$60,113,390.70	11.82%	\$448,380,584.42	88.18%	\$508,493,975.12

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total dollars awarded annually to prime contractors.

**EXHIBIT 4-38  
CITY OF PHOENIX  
THRESHOLD ANALYSIS OF GOODS AND SUPPLIES VENDORS  
NUMBER AND PERCENTAGE OF TOTAL PURCHASE ORDERS  
IN THE RELEVANT MARKET AREA  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Thresholds	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBEs Firms		Total Number Awarded
	#	% <sup>†</sup>	#	% <sup>†</sup>	#	% <sup>†</sup>	#	% <sup>†</sup>	#	% <sup>†</sup>	#	% <sup>†</sup>	#	% <sup>†</sup>	#
Less than or Equal to \$5,000	289	0.64%	677	1.51%	2,473	5.50%	16	0.04%	7,934	17.64%	11,389	25.32%	33,589	74.68%	44,978
Between \$5,001 and \$25,000	26	0.37%	81	1.15%	820	11.62%	4	0.06%	913	12.93%	1,844	26.12%	5,215	73.88%	7,059
Between \$25,001 and \$39,999	1	0.12%	6	0.70%	115	13.36%	1	0.12%	58	6.74%	181	21.02%	680	78.98%	861
\$40,000 and greater	1	0.06%	12	0.78%	151	9.75%	1	0.06%	47	3.04%	212	13.70%	1,336	86.30%	1,548
<b>Total</b>	<b>317</b>	<b>0.58%</b>	<b>776</b>	<b>1.43%</b>	<b>3,559</b>	<b>6.54%</b>	<b>22</b>	<b>0.04%</b>	<b>8,952</b>	<b>16.44%</b>	<b>13,626</b>	<b>25.03%</b>	<b>40,820</b>	<b>74.97%</b>	<b>54,446</b>

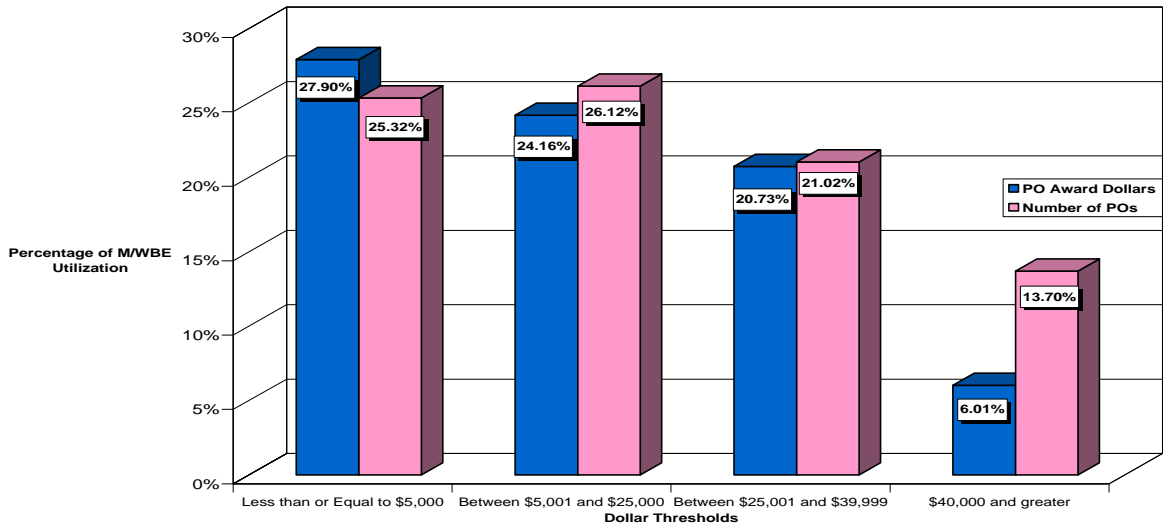
Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>†</sup> Percentage of total number of purchase orders awarded annually to prime contractors.

**Goods and Supplies POs dollar ranges**

**Exhibit 4-39** shows a graphical comparison of the dollar ranges for the utilization of M/WBEs and illustrates how M/WBE firms fared as the number of purchase orders awarded and award dollars rose.

**EXHIBIT 4-39  
CITY OF PHOENIX  
UTILIZATION OF M/WBE GOODS AND SUPPLIES VENDORS  
WITHIN CONTRACT DOLLAR RANGES  
BASED ON PURCHASE AWARD DOLLARS AND  
NUMBER OF PURCHASE ORDERS AWARDED  
FISCAL YEARS 2000 THROUGH 2004**



Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

**4.4.3 Availability**

As stated in section 4.1.3 and 4.1.6, availability for goods and supplies was derived from those firms that (1) have provided goods and supplies for the City in the past; (2) have submitted bids for goods and supplies for the City in the past; and (3) are registered with any of the agencies listed in section 4.1.3 and it could be determined that they were goods and supplies providers.

**Exhibit 4-40** shows the availability of goods and supplies contractors. Approximately 18.34 percent of the contractors available to do business with the City are M/WBEs. The majority of the M/WBE firms that were available to provide goods and supplies were nonminority women-owned firms at 11.76 percent, and Hispanic American-owned firms at 3.99 percent.

**EXHIBIT 4-40  
GOODS AND SUPPLIES  
AVAILABILITY OF PRIME VENDORS  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

	African Americans <sup>1</sup>		Hispanic Americans <sup>1</sup>		Asian Americans <sup>1</sup>		Native Americans <sup>1</sup>		Nonminority Women		M/WBEs Subtotal		Non-M/WBEs Firms		Total Firms
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
<b>Total</b>	54	0.85%	254	3.99%	100	1.57%	11	0.17%	749	11.76%	1,168	18.34%	5,201	81.66%	6,369

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Minority male and female firms are included in their respective minority classifications.

**Second-Generation Study Comparison**

Overall, there was a decrease in the total dollars spent for goods and supplies procurements. The overall utilization of goods and supplies M/WBE-owned firms increased from 2.46 percent to 11.82 percent. Based on the previous study, Asian and Native American-owned firms<sup>14</sup> were utilized the most at approximately .90 percent. The current study shows the utilization of Asian American and Native American-owned firms at 6.3 percent and .03 percent, respectively. The overall utilization of M/WBE goods and supplies firms increased, but the utilization of African American-owned goods and supplies firms decreased from .60 percent during the second generation study to .13 percent in the current study. According to the previous study conducted by MGT, the overall estimated availability for firms that provided goods and supplies was approximately 3,362. The current study shows approximately 6,369 firms available to provide goods and supplies to the City.

**4.4.4 Analysis of Goods and Supplies Bid Data**

**Exhibits 4-41** and **4-42** show bid data that MGT collected from the City's data files. **Exhibit 4-41** illustrates the number and percentage of bids submitted over the study period. The number of bids analyzed is not inclusive of all projects where bids

<sup>14</sup> MGT's City of Phoenix Second-Generation Disparity Study classified M/WBEs firms into four categories (as opposed to the current five classifications). The categories were as follows: African American, Hispanic American, Asian and Native American, and nonminority women-owned firms.

might have been submitted. The bid data analyzed are for those projects where this information could be located and reported. In addition, the analysis is based on bids that are directly associated with a purchase order that was awarded and further analyzed for this study. This analysis includes line item bidding where the vendor may bid on individual line items, as well as the actual bid.

The dollar value of bids won for M/WBEs as shown in **Exhibit 4-41** was 4.87 percent of overall dollars analyzed. The overall dollar value awarded to M/WBEs for goods and supplies procurements was \$3.61 million, representing 119 awards. Of the data analyzed, non-M/WBE firms submitted approximately 75.2 percent of the bids and were successful approximately 76 percent of the time. Based on the number of bids awarded, nonminority women-owned firms were the most successful among M/WBE firms, being awarded 20.20 percent of the purchase orders awarded, which translates into 3.45 percent of the award dollars. Overall, nonminority firms were awarded more than \$70.5 million in goods and supplies procurements, or roughly 95 percent of the total bid dollars analyzed.

**EXHIBIT 4-41  
CITY OF PHOENIX  
GOODS AND SUPPLIES  
ANALYSIS OF BID DATA\*  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Work Type	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total # or \$
	# or \$	% <sup>1</sup>	# or \$	% <sup>1</sup>	# or \$	% <sup>1</sup>	# or \$	% <sup>1</sup>	# or \$	% <sup>1</sup>	# or \$	% <sup>1</sup>	# or \$	% <sup>1</sup>	
Number of Bids Submitted	21	1.88%	50	4.47%	74	6.61%	2	0.18%	131	11.71%	278	24.84%	841	75.16%	1,119
Number of Individual Bidders	10	1.74%	21	3.66%	21	3.66%	2	0.35%	45	7.84%	99	17.25%	475	82.75%	574
Number of Bids Awarded	1	0.20%	3	0.61%	14	2.83%	1	0.20%	100	20.20%	119	24.04%	376	75.96%	495
Dollar Amount of Bid Purchase Order	\$17,068.80	0.02%	\$340,846.00	0.46%	\$664,400.89	0.90%	\$27,700.00	0.04%	\$2,558,061.95	3.45%	\$3,608,077.64	4.87%	\$70,503,333.24	95.13%	\$ 74,111,410.88

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Bid

Note: The number of bids submitted in the tables is not inclusive of all projects for which bids were submitted during the study period. The data shown above represent only those projects on which bid information was reviewed and reported.

\* The data presented includes vendors that may have been excluded from the study. Furthermore, the findings present vendors who may not be located within the relevant market area.



**Exhibit 4-42** shows the number of bids submitted for projects of various dollar ranges. The data show that as the project value increases the number of bids submitted by M/WBEs begins to increase. Among M/WBEs, Asian American-owned firms were the second in placing the highest number bids for goods and supplies. Overall, non-M/WBEs submitted approximately 75 percent of the bids reviewed during the study period.

**EXHIBIT 4-42  
CITY OF PHOENIX  
GOODS AND SUPPLIES  
ANALYSIS OF BID DATA BY DOLLAR THRESHOLDS  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

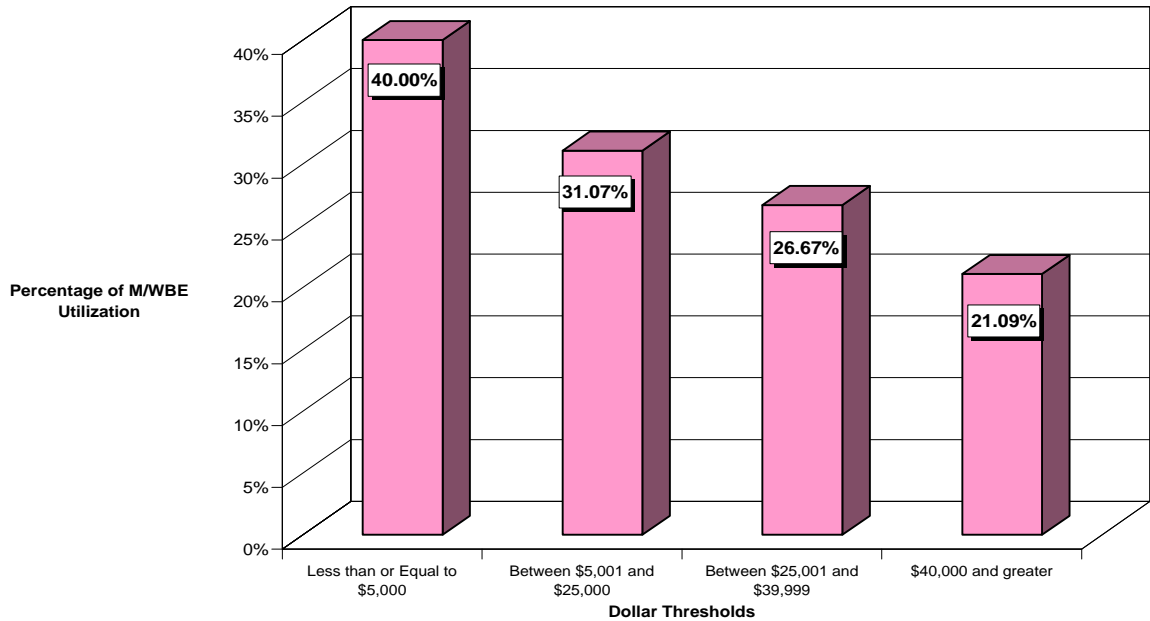
Thresholds	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Bids Submitted
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	
Less than or Equal to \$5,000	1	4.00%	2	8.00%	4	16.00%	0	0.00%	3	12.00%	10	40.00%	15	60.00%	25
Between \$5,001 and \$25,000	6	2.91%	15	7.28%	15	7.28%	0	0.00%	28	13.59%	64	31.07%	142	68.93%	206
Between \$25,001 and \$39,999	7	2.33%	15	5.00%	24	8.00%	2	0.67%	32	10.67%	80	26.67%	220	73.33%	300
\$40,000 and greater	7	1.19%	18	3.06%	31	5.27%	0	0.00%	68	11.56%	124	21.09%	464	78.91%	588
<b>Total</b>	<b>21</b>	<b>1.88%</b>	<b>50</b>	<b>4.47%</b>	<b>74</b>	<b>6.61%</b>	<b>2</b>	<b>0.18%</b>	<b>131</b>	<b>11.71%</b>	<b>278</b>	<b>24.84%</b>	<b>841</b>	<b>75.16%</b>	<b>1,119</b>

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total bids submitted annually by goods and supplies vendors.

**Exhibit 4-43** shows a graphical comparison of the dollar ranges for bid participation of M/WBEs and illustrates how M/WBE-owned firms fared as the bid dollars rose.

**EXHIBIT 4-43  
CITY OF PHOENIX  
GOODS AND SUPPLIES  
ANALYSIS OF BIDS SUBMITTED BY M/WBE FIRMS  
BY DOLLAR THRESHOLDS  
FISCAL YEARS 2000 THROUGH 2004**



Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

**4.5 Conclusions**

This chapter presented the results of our calculations of the relevant market areas and utilization and availability of firms for the construction, general services, and goods and supplies business categories. The following presents a summary of results previously discussed in this chapter.

**4.5.1 Relevant Market Area for Three Categories of Procurement**

The relevant market area in which at least 75 percent of Phoenix City dollars was spent during the five-year period for each business category included the following geographic locations:

- **Construction:** Maricopa County, Arizona.
- **General services:** Maricopa County, Arizona; Los Angeles County, California; and Cook County, Illinois.
- **Goods and supplies:** Maricopa County, Arizona; Los Angeles County, California; Cook County, Illinois; Orange County, California; Dallas County, Texas; San Diego County, California; Pima County, Arizona; Fulton County, Georgia; Hennepin County, Minnesota; King County, Wisconsin; and Middlesex County, Massachusetts.

**4.5.2 M/WBE Utilization—General Findings**

**Exhibits 4-44** and **4-45** summarizes the utilization analysis results presented in this chapter. For the current study, in the relevant market area, from fiscal years 2000 through 2004, total City procurement in dollars for M/WBE and non-M/WBE firms in the three categories of procurement for this study—prime construction, general services, and goods and supplies—was approximately 77.9 percent (\$1.84 billion) of total spending (\$2.36 billion) for the five-year period of the study. Overall spending with M/WBE firms was approximately 6.6 percent (\$156.6 million) of total spending (\$2.36 billion). The previous study showed total City procurement in dollars for M/WBE and non-M/WBE was approximately 84 percent (\$2.43 billion) of total spending (\$2.89 billion) for the five-year period of the study. M/WBE firms were approximately .8 percent (\$23.5 million) of total spending (\$2.89 billion). Thus, the overall utilization of M/WBE has substantially increased based on award dollars from the previous to current study.

As a percentage of total vendor utilization, in terms of dollars, the current study showed M/WBE utilization by the City fluctuated for the full five-year study period, ranging from 7.02 percent for prime contractor construction; 13.44 percent for

subcontractor construction; 19.10 percent for general services contractors; and 11.82 percent for goods and supplies contractors. The previous study showed M/WBE utilization by the City ranging from 1.80 percent for prime contractor construction to 2.86 percent for subcontractor construction to 9.68 percent for general services to 2.46 percent for commodities.

The City utilized only 784 unique M/WBE firms in the procurement categories for this study during the five-year study period 28 prime construction contractors; 231 subcontractor construction; 164 general services firms; and 361 goods and supplies firms. The previous study did not conduct a similar analysis.

**4.5.3 Utilization by Business Category—General Findings**

**Exhibit 4-45** shows that for prime construction contracts, the dollar amounts awarded to M/WBEs were less than those of nonminority-owned firms. As noted earlier in this chapter, approximately 7 percent of the total dollars awarded for prime construction projects were awarded to M/WBEs. Approximately, 1.8 percent of the total dollars were awarded to M/WBEs during the previous study. Therefore, the City has experienced a substantial increase in the utilization of M/WBEs on prime construction projects.

For general services, the dollars awarded to M/WBEs (\$5.05 million) was far less than dollars awarded to non-M/WBEs (\$21.4 million). M/WBEs were utilized at 19 percent, which in comparison to other business categories, fared better. In the previous study, M/WBEs received \$5.67 million of the dollars awarded, while non-M/WBEs were awarded \$52.89 million. Thus, M/WBEs were utilized at 9.68 percent. In comparison, M/WBE utilization has increased from 9.68 percent to 19 percent.

For goods and supplies, the dollar amounts awarded to M/WBEs (\$60.1 million) were drastically less than those awarded to non-M/WBEs (\$448.4 million). However,

based on the previous study, M/WBEs were awarded \$26 million as opposed to non-M/WBEs receiving \$1.04 billion. Therefore, in terms of utilization percentage, M/WBE utilization has significantly increased from 2.46 percent to 11.8 percent utilization

**EXHIBIT 4-44  
SUMMARY OF UTILIZATION PERCENTAGE OF DOLLARS  
M/WBE AND NON-M/WBE FIRMS  
BY BUSINESS CATEGORY  
STUDY PERIOD – JULY 1, 1999 – JUNE 30, 2004**

<b>Business Category</b>	<b>African American</b>	<b>Hispanic American</b>	<b>Asian American</b>	<b>Native American</b>	<b>Nonminority Women</b>	<b>M/WBE Firms</b>	<b>Non-M/WBE Firms</b>
Construction Prime Contractors	0.00%	2.20%	0.28%	0.15%	4.39%	7.02%	92.98%
Construction Subcontractors <sup>1</sup>	0.75%	6.02%	0.05%	1.36%	5.26%	13.44%	86.56%
General Services Contractors	1.26%	3.40%	2.15%	0.42%	11.88%	19.10%	80.90%
Goods and Supplies Contractors	0.13%	0.60%	6.33%	0.03%	4.74%	11.82%	88.18%

Source: Chapter 4.0, Analysis Results

<sup>1</sup> Based on 32.4 percent subcontractor utilization.

**EXHIBIT 4-45  
SUMMARY OF UTILIZATION DOLLARS  
M/WBE AND NON-M/WBE FIRMS  
BY BUSINESS CATEGORY  
STUDY PERIOD JULY 1, 1999 – JUNE 30, 2004**

<b>Business Category</b>	<b>African American</b>	<b>Hispanic American</b>	<b>Asian American</b>	<b>Native American</b>	<b>Nonminority Women</b>	<b>M/WBE Firms</b>	<b>Non-M/WBE Firms</b>
Construction Prime Contractors	\$0.00	\$28,679,481	\$3,670,705	\$1,900,808	\$57,237,193	\$91,488,186	\$1,212,282,694
Construction Subcontractors <sup>1</sup>	\$3,147,195.69	\$25,434,405.65	\$192,403.33	\$5,746,443.00	\$22,239,197.77	\$56,759,645.44	\$422,421,765.31
General Services Contractors	\$332,463	\$897,620	\$567,598	\$110,637	\$3,136,799	\$5,045,117	\$21,364,002
Goods and Supplies Contractors	\$680,347	\$3,035,090	\$32,161,027	\$151,745	\$24,085,182	\$60,113,391	\$448,380,584

Source: Chapter 4.0, Analysis Results

<sup>1</sup> Based on 32.4 percent subcontractor utilization.

**4.5.4 Unique M/WBE Vendors Utilized—General Findings**

For the five-year period of the study in prime contractor construction, in terms of unique vendors utilized, M/WBE vendor utilization was 15.47 percent (28 firms). Nonminority-women firms comprised approximately 50 percent (14 out of 28 firms) of the M/WBE firms utilized; therefore, being the most utilized within the M/WBE category.

For the five-year period of the study in subcontractor construction, in terms of unique vendors utilized, M/WBE vendor utilization was 70.79 percent (143 firms). Hispanic American-owned firms comprised about 41.9 percent (60 out of 143 firms) of the M/WBE firms utilized; thus being the most utilized within the M/WBE category.

For the five-year period of the study in general services, in terms of unique vendors utilized, M/WBE vendor utilization was 19.23 percent (164 firms). Nonminority-women firms comprised approximately 53 percent (88 out of 164 firms) of the M/WBE firms utilized; therefore, being the most utilized within the M/WBE category.

For the five-year period of the study in goods and supplies, in terms of unique vendors utilized, M/WBE vendor utilization was 12.22 percent (361 firms). Nonminority-women firms comprised approximately 55.6 percent (201 out of 361 firms) of the M/WBE firms utilized; therefore, being the most utilized within the M/WBE category.

#### **4.5.5 M/WBE Availability**

**Exhibit 4-46** shows the relative M/WBE availability calculated from MGT's Master Vendor database of available firms ranged from 20.94 percent for prime contractor construction firms to 21.89 percent for subcontractor construction firms to 31.15 percent of general services firms to 18.34 percent for goods and supplies firms.

Regarding M/WBE availability as a percentage of overall vendor availability, for prime construction category, based on a review of City vendor data, our analysis revealed the following levels of availability.

- African Americans 1.66%
- Hispanic Americans 8.01%
- Asian Americans 1.01%
- Native Americans 0.94%
- Nonminority Women 9.32%

Regarding M/WBE availability as a percentage of overall vendor availability, for subcontractor construction category, based on a review of City vendor data, our analysis revealed the following levels of availability.

**Relevant Market Area, Utilization, and Availability Analyses**

- African Americans 1.81%
- Hispanic Americans 8.49%
- Asian Americans 0.93%
- Native Americans 1.04%
- Nonminority Women 9.62%

Regarding M/WBE availability as a percentage of overall vendor availability, for general services contractors, based on a review of City vendor data, our analysis revealed the following levels of availability.

- African Americans 3.16%
- Hispanic Americans 5.72%
- Asian Americans 1.19%
- Native Americans 0.28%
- Nonminority Women 20.79%

Regarding M/WBE availability as a percentage of overall vendor availability, for goods and supplies contractors, based on a review of City vendor data, our analysis revealed the following levels of availability.

- African Americans 0.85%
- Hispanic Americans 3.99%
- Asian Americans 1.57%
- Native Americans 0.17%
- Nonminority Women 11.76%

**EXHIBIT 4-46  
SUMMARY OF AVAILABILITY  
M/WBE AND NON-M/WBE VENDORS  
BY BUSINESS CATEGORY  
STUDY PERIOD – JULY 1, 1999 – JUNE 30, 2004**

<b>Business Category</b>	<b>African American</b>	<b>Hispanic American</b>	<b>Asian American</b>	<b>Native American</b>	<b>Nonminority Women</b>	<b>M/WBE Firms</b>	<b>Non-M/WBE Firms</b>
Construction Prime Contractors	1.66%	8.01%	1.01%	0.94%	9.32%	20.94%	79.06%
Construction Subcontractors	1.81%	8.49%	0.93%	1.04%	9.62%	21.89%	78.11%
General Services Contractors	3.16%	5.72%	1.19%	0.28%	20.79%	31.15%	68.85%
Goods and Supplies Contractors	0.85%	3.99%	1.57%	0.17%	11.76%	18.34%	81.66%

Source: Chapter 4.0, Analysis Results

In the next chapter, Chapter 5.0, we will assess the data in terms of racial, ethnic, and gender disparities in vendor utilization for each of the M/WBE categories, comparing disparities in M/WBE utilization relative to their availability in the marketplace according to the same criteria for non-M/WBE utilization. From these analyses, conclusions are drawn regarding disparities in utilization of vendors according to race, ethnicity, and gender status by City entities that procured goods and services during the five-year study period.



## **5.0 DISPARITY ANALYSIS**

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## **5.0 DISPARITY ANALYSIS**

This chapter examines the issue of disparity within each business category of procurement. Disparity, in this context, is the analysis of the differences between the utilization of minority and woman-owned business enterprises (M/WBEs) and the availability of those firms in the relevant marketplace. Accordingly, MGT used disparity indices to examine whether M/WBEs received a proportional share of dollars based on the availability of M/WBEs in the relevant market area.

This chapter consists of three sections:

- Section 5.1 describes the methodology MGT used to test for the presence or absence of disparity in each of the business categories. The development and use of the disparity indices as well as corresponding t-tests are included in this section.
- Section 5.2 applies the disparity indices and t-tests to the business categories and determines the presence or absence of disparity in the City of Phoenix's procurement.
- Section 5.3 describes the methodology for MGT's telephone survey of the City's vendors and a multivariate regression analysis of the effects a selected demographic characteristics on 2003 company earnings for a sample of Phoenix vendors who participated in the survey.

### **5.1 Methodology**

MGT used the availability and utilization information presented in Chapter 4.0 of this report as the basis to determine if M/WBEs received a proportional share of awards and other procurements by the City. This determination is made primarily through the disparity index calculation which compares the availability of firms with the utilization of those firms. The disparity index also provides a value that can be given a commonly accepted substantive interpretation.

**5.1.1 Disparity Index**

MGT pioneered the use of disparity indices as a means of quantifying the disparity in utilization relative to availability. The use of a disparity index for such calculations is supported by several post-Croson cases, most notably *Contractors Association of Eastern Pennsylvania v. City of Philadelphia*.<sup>1</sup> Although a variety of similar indices could be utilized, MGT's standard for choosing its particular index methodology is that it must yield a value that is easily calculable, understandable in its interpretation, and universally comparable such that a disparity in utilization within M/WBE categories can be assessed with reference to the utilization of non-M/WBEs.

For this study, the ratio of the percentage of utilization to the percentage of availability multiplied by 100 serves as our measure of choice, as shown in the formula:

$$(1) \text{ Disparity Index} = \frac{\%U_{m_1p_1}}{\%A_{m_1p_1}} \times 100$$

Where:  $U_{m_1p_1}$  = utilization of M/WBE<sub>1</sub> for procurement<sub>1</sub>  
 $A_{m_1p_1}$  = availability of M/WBE<sub>1</sub> for procurement<sub>1</sub>

Due to the mathematical properties involved in the calculations, a disparity index value of 0.00 for a given race, ethnicity or gender category of firm indicates absolutely no utilization and, therefore, absolute disparity. An index of 100 indicates that vendor utilization is perfectly proportionate to availability for a particular group in a given business category, indicating the absence of disparity—that is, the proportion of utilization relative to availability one would expect, all things being equal. In general, firms within a business category are considered underutilized if the disparity indices are less than 100, and overutilized if the indices are above 100.

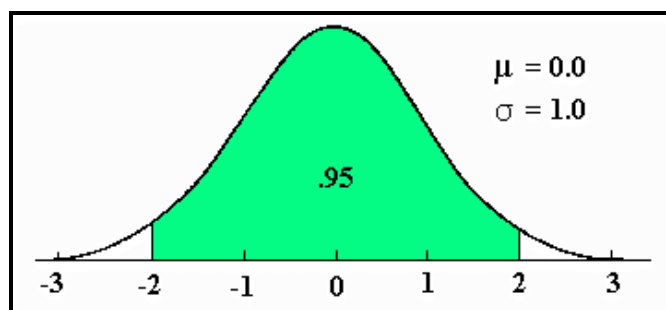
Since there is no standardized measurement to evaluate the levels of underutilization or overutilization within a procurement context, MGT has appropriated

<sup>1</sup> *Contractors Association of Eastern Pennsylvania, Inc. v. City of Philadelphia*, 91 F 3d at 603.

the Equal Opportunity Commission's (EEOC) "80 percent rule" in *Uniform Guidelines on Employee Selection Procedures*. In context of employment discrimination, an employment disparity ratio below 80 indicates a "substantial disparity" in employment. The Supreme Court has accepted the use of the 80 percent rule in *Connecticut v. Teal* (*Teal*), 457 U.S. 440 (1982), and in *Teal* and other affirmative action cases, the terms "adverse impact," "disparate impact," and "discriminatory impact" are used interchangeably to characterize values of 80 and below.

**5.1.2 T-Test**

In addition to the disparity index, MGT conducted t-tests to determine if statistically significant differences existed between utilization and availability in terms of contract or payment dollars or number of firms. The t value indicates whether or not the results found in the disparity index are what one would ordinarily expect to find given the attributes of the sampling distribution. Given the large sample sizes involved, the t distribution approaches a normal distribution. Because of the statistical properties of the normal distribution, 95 percent of all cases can be found within two standard deviations of the mean. Since t values can be positive or negative, it is necessary to determine the critical region of the distribution on each end of the distribution.



Based on the properties of the normal distribution, the critical values are  $+1.96$  and  $-1.96$  (the calculated values  $\pm$  two standard deviations of the mean). Any t value found between these critical t values is not significant enough for us to conclude that

there is disparity. For a conclusion of "statistical significance" to be reached, the t value must be either greater than +1.96 or less than -1.96. When such a t value is present, we can say with 95 percent certainty that disparity, as represented by either overutilization or underutilization, is actually present.

The previous discussion means that any t value less than or equal to -1.96 indicates that firms in a business category are underutilized in terms of contract dollars or contracts awarded. The relationship is said to be statistically significant. In other words, the fact that the t value is so extreme means that we can be sufficiently confident that the underutilization is severe enough to be considered a real phenomenon and not just a statistical artifact of the sampling distribution. In some cases, disparity is indicated by the disparity index but cannot be tested with a t-test due to the mathematical constraint of division by zero. This will occur when there is zero utilization because the utilization percentage is the denominator in the final calculation for the t-test value. Although these cases cannot be tested to be statistically significant, the existence of disparity can be inferred due to the prima facie evidence of zero utilization levels.

## **5.2 Disparity Indices and T-Test Results**

Tables showing disparity indices and t-test results for construction, general services, and goods and supplies are analyzed in this section. The tables are based on the utilization and availability of M/WBEs and non-M/WBEs in the City of Phoenix relevant market areas shown in Chapter 4.0.

### **5.2.1 Construction**

#### **Disparity Analysis of Construction Prime Contractors**

**Exhibit 5-1** shows the disparity indices for prime construction contractors. As can be seen in the exhibit, M/WBEs were significantly underutilized during the study period based on the availability of those firms in the relevant market area. Over the five-year

study period, non-M/WBE firms were overutilized. All M/WBEs were underutilized for construction prime contracts in each fiscal year analyzed except during FY1999-FY2000 and FY2001-FY2002. During FY1999-FY2000, Native Americans were overutilized, while all remaining M/WBEs were substantially underutilized as prime contractors for construction projects. During FY2001-FY2002, Asian Americans were overutilized, while African American, Hispanic American, Native American, and nonminority women-owned firms were substantially underutilized. The disparity index for non-M/WBEs over the five-year study period was 117.60, which indicates overall overutilization on the prime contractors' level for construction.

The t-test results for all five years of the study are shown in **Exhibit 5-2** for the construction business category indicate that the findings of underutilization for African American, Hispanic American, Native American, Asian American, and nonminority women-owned firms and the overutilization of non-M/WBE firms were statistically significant. In each of these cases, the t-tests indicate that other factors beyond normal occurrence must be considered as reasons for the respective underutilization and overutilization.

**EXHIBIT 5-1  
DISPARITY ANALYSIS OF CONSTRUCTION PRIME CONTRACTORS  
IN THE RELEVANT MARKET AREA  
BY RACE/ETHNICITY/GENDER CLASSIFICATION  
FISCAL YEARS 2000 THROUGH 2004**

M/WBE Classification	% of Contract Dollars <sup>1</sup>	% of Available Firms <sup>2</sup>	Disparity Index <sup>3</sup>	Disparate Impact of Utilization
<b>Fiscal Year 1999 - 2000</b>				
African Americans	0.00%	1.66%	0.00	* Underutilization
Hispanic Americans	2.78%	8.01%	34.73	* Underutilization
Asian Americans	0.00%	1.01%	0.00	* Underutilization
Native Americans	1.05%	0.94%	111.86	Overutilization
Nonminority Women	3.74%	9.32%	40.14	* Underutilization
Nonminority Firms	92.43%	79.06%	116.90	Overutilization
<b>Fiscal Year 2000 - 2001</b>				
African Americans	0.00%	1.66%	0.00	* Underutilization
Hispanic Americans	3.63%	8.01%	45.28	* Underutilization
Asian Americans	0.33%	1.01%	32.93	* Underutilization
Native Americans	0.00%	0.94%	0.00	* Underutilization
Nonminority Women	8.12%	9.32%	87.11	Underutilization
Nonminority Firms	87.92%	79.06%	111.20	Overutilization
<b>Fiscal Year 2001 - 2002</b>				
African Americans	0.00%	1.66%	0.00	* Underutilization
Hispanic Americans	3.47%	8.01%	43.39	* Underutilization
Asian Americans	1.16%	1.01%	115.24	Overutilization
Native Americans	0.00%	0.94%	0.00	* Underutilization
Nonminority Women	4.02%	9.32%	43.06	* Underutilization
Nonminority Firms	91.35%	79.06%	115.54	Overutilization
<b>Fiscal Year 2002 - 2003</b>				
African Americans	0.00%	1.66%	0.00	* Underutilization
Hispanic Americans	1.37%	8.01%	17.08	* Underutilization
Asian Americans	0.00%	1.01%	0.00	* Underutilization
Native Americans	0.00%	0.94%	0.00	* Underutilization
Nonminority Women	2.77%	9.32%	29.69	* Underutilization
Nonminority Firms	95.86%	79.06%	121.25	Overutilization
<b>Fiscal Year 2003 - 2004</b>				
African Americans	0.00%	1.66%	0.00	* Underutilization
Hispanic Americans	0.69%	8.01%	8.65	* Underutilization
Asian Americans	0.09%	1.01%	8.97	* Underutilization
Native Americans	0.00%	0.94%	0.00	* Underutilization
Nonminority Women	4.39%	9.32%	47.07	* Underutilization
Nonminority Firms	94.83%	79.06%	119.94	Overutilization
<b>All Fiscal Years</b>				
African Americans	0.00%	1.66%	0.00	* Underutilization
Hispanic Americans	2.20%	8.01%	27.47	* Underutilization
Asian Americans	0.28%	1.01%	28.01	* Underutilization
Native Americans	0.15%	0.94%	15.58	* Underutilization
Nonminority Women	4.39%	9.32%	47.08	* Underutilization
Nonminority Firms	92.98%	79.06%	117.60	Overutilization

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999, to June 30, 2004.

<sup>1</sup> The percentage of dollars is taken from the prime utilization exhibit previously shown in Chapter 4.0.

<sup>2</sup> The percentage of available contractors is taken from the availability exhibit previously shown in Chapter 4.0.

<sup>3</sup> The disparity index is the ratio of % utilization to % availability times 100.

\* An asterisk is used to indicate a substantial level of disparity – index below 80.00.

**EXHIBIT 5-2  
CITY OF PHOENIX  
TOTAL ALL YEARS  
CONSTRUCTION  
T-TEST ANALYSIS FOR PRIME CONTRACTORS  
BASED ON VENDOR DATA  
FISCAL YEARS 2000 THROUGH 2004**

M/WBE Classification	Firms Utilized <sup>1</sup>	T Value for Firms Utilized	% of Available Firms <sup>2</sup>	T Value for Available Firms
African Americans	0.00%	N/A *	1.66%	N/A *
Hispanic Americans	6.08%	-14.03 *	8.01%	-21.27 *
Asian Americans	1.10%	-4.84 *	1.01%	-7.34 *
Native Americans	0.55%	7.34 *	0.94%	11.12 *
Nonminority Women	7.73%	-8.53 *	9.32%	-12.94 *
Nonminority Firms	84.53%	19.30 *	79.06%	29.27 *

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999, to June 30, 2004.

<sup>1</sup> Percentage of related prime firms utilized within the relevant market area.

<sup>2</sup> Percentage of available firms in the relevant market area.

\* Statistically significant at the 0.05 level.

N/A denotes that the t-test cannot be applied in these cases due to the mathematical constraint of division by zero. This occurred because there is zero utilization in this category. Because the utilization percentage is the denominator in the final calculation for the t-test value, the existence of disparity can be inferred due to the prima facie evidence of zero utilization levels.

**Disparity Analysis of Construction Subcontractors**

Exhibit 5-3<sup>2</sup> shows that Native American-owned firms were overutilized as subcontractors during the study period. African American-, Hispanic American-, Asian American-, and nonminority women-owned firms were significantly underutilized during the study period. In fact, Asian American subcontractors were significantly underutilized in each fiscal year, thus resulting in significant underutilization based on all fiscal years analyzed. However, Native American-owned firms are being overutilized as subcontractors based on the current study.

<sup>2</sup> Although these calculations are based on estimates of nonminority subcontractor utilization, the disparity results would still hold for all ethnic groups if subcontracting was only 20 percent of the total project, instead of 32.4 percent, which is the average for the state of Arizona's construction projects.



**EXHIBIT 5-3  
DISPARITY ANALYSIS OF CONSTRUCTION SUBCONTRACTORS  
IN THE RELEVANT MARKET AREA  
BY RACE/ETHNICITY/GENDER CLASSIFICATION  
FISCAL YEARS 2000 THROUGH 2004**

M/WBE Classification	% of Subcontract Dollars <sup>1</sup>	% of Available Firms <sup>2</sup>	Disparity Index <sup>3</sup>	Disparate Impact of Utilization
<b>Fiscal Year 1999 - 2000</b>				
African Americans	2.06%	1.81%	114.00	Overutilization
Hispanic Americans	8.18%	8.49%	96.40	Underutilization
Asian Americans	0.02%	0.93%	1.75	* Underutilization
Native Americans	5.88%	1.04%	563.23	Overutilization
Nonminority Women	10.62%	9.62%	110.43	Overutilization
<b>Fiscal Year 2000 - 2001</b>				
African Americans	0.38%	1.81%	21.04	* Underutilization
Hispanic Americans	15.53%	8.49%	182.89	Overutilization
Asian Americans	0.25%	0.93%	26.44	* Underutilization
Native Americans	2.26%	1.04%	216.85	Overutilization
Nonminority Women	8.67%	9.62%	90.10	Underutilization
<b>Fiscal Year 2001 - 2002</b>				
African Americans	1.22%	1.81%	67.73	* Underutilization
Hispanic Americans	3.99%	8.49%	46.98	* Underutilization
Asian Americans	0.00%	0.93%	0.00	* Underutilization
Native Americans	0.42%	1.04%	40.32	* Underutilization
Nonminority Women	7.09%	9.62%	73.71	* Underutilization
<b>Fiscal Year 2002 - 2003</b>				
African Americans	0.47%	1.81%	25.90	* Underutilization
Hispanic Americans	2.70%	8.49%	31.79	* Underutilization
Asian Americans	0.00%	0.93%	0.00	* Underutilization
Native Americans	0.22%	1.04%	21.50	* Underutilization
Nonminority Women	2.91%	9.62%	30.29	* Underutilization
<b>Fiscal Year 2003 - 2004</b>				
African Americans	0.15%	1.81%	8.58	* Underutilization
Hispanic Americans	0.06%	8.49%	0.73	* Underutilization
Asian Americans	0.00%	0.93%	0.00	* Underutilization
Native Americans	0.00%	1.04%	0.00	* Underutilization
Nonminority Women	0.54%	9.62%	5.60	* Underutilization
<b>All Fiscal Years</b>				
African Americans	0.75%	1.81%	41.27	* Underutilization
Hispanic Americans	6.02%	8.49%	70.91	* Underutilization
Asian Americans	0.05%	0.93%	4.89	* Underutilization
Native Americans	1.36%	1.04%	130.34	Overutilization
Nonminority Women	5.26%	9.62%	54.73	* Underutilization

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999, to June 30, 2004.

<sup>1</sup> The percentage of dollars is taken from the subcontractor utilization (based on 32.4 percent) exhibit previously shown in Chapter 4.0.

<sup>2</sup> The percentage of available subcontractors is taken from the availability exhibit previously shown in Chapter 4.0.

<sup>3</sup> The disparity index is the ratio of % utilization to % availability times 100.

\* An asterisk is used to indicate a substantial level of disparity – index below 80.00.

**Exhibit 5-4** displays t-test results for all five years of the study. In general, t-test results of the proportional subcontractor utilization to availability were somewhat similar to findings of disparities in dollars earned by vendors for all ethnicity types reported in **Exhibit 5-3**: That is, as indicated by the associated negative and substantially significant t-values, in terms of numbers of firms utilized relative to their availability, all M/WBEs but African and Native American were substantially underutilized for the full five year period of the study

**EXHIBIT 5-4  
CONSTRUCTION  
T-TEST RESULTS FOR SUBCONTRACTORS**

<b>M/WBE Classification</b>	<b>Firms Utilized<sup>1</sup></b>	<b>T Value for Firms Utilized</b>	<b>% of Available Firms<sup>2</sup></b>	<b>T Value for Available Firms</b>
African Americans	4.80%	1.90	1.81%	3.97 *
Hispanic Americans	38.81%	11.25 *	8.49%	23.55 *
Asian Americans	0.29%	-5.18 *	0.93%	-10.84 *
Native Americans	8.77%	5.23 *	1.04%	10.96 *
Nonminority Women	33.93%	7.48 *	9.62%	15.65 *

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999, to June 30, 2004.

<sup>1</sup> Percentage of related subcontractor firms utilized within the relevant market area.

<sup>2</sup> Percentage of available firms in the relevant market area.

\* Statistically significant at the 0.05 level.

**Second-Generation Study Comparison**

Overall, all M/WBEs were substantially underutilized on prime contractors level during the previous and current study. The overutilization of non-M/WBEs decreased from a disparity index of 147.70 to 117.60. In the previous study, all M/WBE subcontractors were substantially underutilized. The current study shows that African American, Hispanic American, and nonminority women firms are still being substantially underutilized.

**Exhibits 5-5** and **Exhibit 5-6** present a summary comparison of the disparity findings from the second- and third-generation disparity studies. The tables are based on the utilization and availability of M/WBEs and non-M/WBEs in the City of Phoenix relevant market areas.

M/WBE utilization of prime contractors in construction rose from 1.80 percent to 7.02 percent. M/WBE utilization on construction subcontracting as a percentage of prime construction contracts rose from 2.86 percent to 4.35 percent. M/WBE utilization of subcontractors has increased from .23 percent to .75 for African American firms, 5.48 percent to 6.02 percent for Hispanic American firms, no utilization to .05 percent for Asian American firms, .47 percent to 1.36 percent for Native American firms, and 2.65 percent to 5.26 percent for nonminority women-owned firms.

**EXHIBIT 5-5  
CITY OF PHOENIX  
PRIME CONSTRUCTION CONTRACTORS  
SUMMARY OF DISPARITY ANALYSIS  
COMPARISON OF DISPARITY RATIOS BETWEEN 2004 STUDY AND 1999 STUDY**

	Percent of Prime Contract Dollars <sup>1</sup>		% of available firms <sup>2</sup>		Disparate impact of utilization	
	1999 STUDY	2004 STUDY	1999 STUDY	2004 STUDY	1999 STUDY	2004 STUDY
<b>African Americans</b>	0.01%	0.00%	0.34%	1.66%	* Underutilization	* Underutilization
<b>Hispanic American</b>	1.65%	2.20%	2.86%	8.01%	* Underutilization	* Underutilization
<b>Asian American</b>	-	0.28%	-	1.01%	-	* Underutilization
<b>Native American</b>	-	0.15%	-	0.94%	-	* Underutilization
<b>Asian &amp; Native American</b>	0.01%	-	3.81%	-	* Underutilization	-
<b>Nonminority Women</b>	0.13%	4.39%	26.50%	9.32%	* Underutilization	* Underutilization
<b>Non-M/WBES</b>	98.20%	92.98%	66.48%	79.06%	Overutilization	Overutilization

Source: City of Phoenix Second-Generation Disparity Study, Chapter 4.0, and City of Phoenix Third-Generation Disparity Study, Chapter 5.0.

<sup>1</sup> The percentage of dollars is taken from the prime utilization exhibit previously shown in Chapter 4.0.

<sup>2</sup> The percentage of available contractors is taken from the availability exhibit previously shown in Chapter 4.0.

\* An asterisk is used to indicate a substantial level of disparity – index below 80.00.

**EXHIBIT 5-6  
CITY OF PHOENIX  
CONSTRUCTION SUBCONTRACTORS  
SUMMARY OF DISPARITY ANALYSIS  
COMPARISON OF DISPARITY RATIOS BETWEEN 2004 STUDY AND 1999 STUDY**

	Percent of Subcontract Dollars <sup>1</sup>		% of Available Firms <sup>2</sup>		Disparate Impact of Utilization	
	1999 STUDY	2004 STUDY <sup>1</sup>	1999 STUDY	2004 STUDY	1999 STUDY	2004 STUDY
<b>African Americans</b>	0.23%	0.75%	1.00%	1.81%	* Underutilization	* Underutilization
<b>Hispanic American</b>	5.48%	6.02%	8.19%	8.49%	* Underutilization	* Underutilization
<b>Asian American</b>	0.00%	0.05%	0.00%	0.93%	-	* Underutilization
<b>Native American</b>	0.47%	1.36%	-	1.04%	-	Overutilization
<b>Asian &amp; Native American</b>	-	-	3.53%	-	* Underutilization	-
<b>Nonminority Women</b>	2.65%	5.26%	26.67%	9.62%	* Underutilization	* Underutilization

Source: City of Phoenix Second-Generation Disparity Study, Chapter 4.0, and City of Phoenix Third-Generation Disparity Study, Chapter 5.0.

<sup>1</sup> The percentage of dollars is taken from the subcontractor utilization (based on 32.4 percent).

<sup>2</sup> The percentage of available contractors is taken from the availability exhibit previously shown in Chapter 4.0.

\* An asterisk is used to indicate a substantial level of disparity – index below 80.00.

**5.2.5 General Services**

Based on the overall disparity indices shown in **Exhibit 5-7**, African American, Hispanic American, and nonminority women firms were substantially underutilized. Conversely, non-M/WBEs, Asian American, and Native American firms were overutilized as indicated by the disparity index. As shown in **Exhibit 5-8**, the results of the t-test indicate the underutilization/overutilization of African American, Hispanic American, Asian American, nonminority women-owned, and non-M/WBE firms was statistically significant.

**EXHIBIT 5-7  
DISPARITY ANALYSIS OF GENERAL SERVICES VENDORS  
IN THE RELEVANT MARKET AREA  
BY RACE/ETHNICITY/GENDER CLASSIFICATION  
FISCAL YEARS 2000 THROUGH 2004**

<b>M/WBE Classification</b>	<b>% of Purchase Order Dollars<sup>1</sup></b>	<b>% of Available Firms<sup>2</sup></b>	<b>Disparity Index<sup>3</sup></b>	<b>Disparate Impact of Utilization</b>
<b>Fiscal Year 1999 - 2000</b>				
African Americans	2.01%	3.16%	63.63	* Underutilization
Hispanic Americans	2.39%	5.72%	41.81	* Underutilization
Asian Americans	1.16%	1.19%	97.09	Underutilization
Native Americans	0.68%	0.28%	240.10	Overutilization
Nonminority Women	9.61%	20.79%	46.24	* Underutilization
Nonminority Firms	84.15%	68.85%	122.22	Overutilization
<b>Fiscal Year 2000 - 2001</b>				
African Americans	2.49%	3.16%	78.64	* Underutilization
Hispanic Americans	3.78%	5.72%	66.13	* Underutilization
Asian Americans	5.16%	1.19%	432.56	Overutilization
Native Americans	1.03%	0.28%	366.69	Overutilization
Nonminority Women	10.43%	20.79%	50.15	* Underutilization
Nonminority Firms	77.11%	68.85%	112.00	Overutilization
<b>Fiscal Year 2001 - 2002</b>				
African Americans	1.13%	3.16%	35.84	* Underutilization
Hispanic Americans	2.57%	5.72%	44.84	* Underutilization
Asian Americans	2.14%	1.19%	179.58	Overutilization
Native Americans	0.54%	0.28%	191.68	Overutilization
Nonminority Women	3.26%	20.79%	15.67	* Underutilization
Nonminority Firms	90.36%	68.85%	131.25	Overutilization
<b>Fiscal Year 2002 - 2003</b>				
African Americans	0.51%	3.16%	16.19	* Underutilization
Hispanic Americans	8.27%	5.72%	144.56	Overutilization
Asian Americans	1.32%	1.19%	110.46	Overutilization
Native Americans	0.00%	0.28%	0.00	* Underutilization
Nonminority Women	8.57%	20.79%	41.24	* Underutilization
Nonminority Firms	81.32%	68.85%	118.12	Overutilization
<b>Fiscal Year 2003 - 2004</b>				
African Americans	0.53%	3.16%	16.68	* Underutilization
Hispanic Americans	2.15%	5.72%	37.56	* Underutilization
Asian Americans	1.23%	1.19%	103.42	Overutilization
Native Americans	0.00%	0.28%	0.00	* Underutilization
Nonminority Women	22.05%	20.79%	106.04	Overutilization
Nonminority Firms	74.04%	68.85%	107.55	Overutilization
<b>All Fiscal Years</b>				
African Americans	1.26%	3.16%	39.78	* Underutilization
Hispanic Americans	3.40%	5.72%	59.39	* Underutilization
Asian Americans	2.15%	1.19%	180.26	Overutilization
Native Americans	0.42%	0.28%	148.66	Overutilization
Nonminority Women	11.88%	20.79%	57.13	* Underutilization
Nonminority Firms	80.90%	68.85%	117.50	Overutilization

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999, to June 30, 2004.

<sup>1</sup> The percentage of dollars is taken from the prime utilization exhibit previously shown in Chapter 4.0.

<sup>2</sup> The percentage of available contractors is taken from the availability exhibit previously shown in Chapter 4.0.

<sup>3</sup> The disparity index is the ratio of % utilization to % availability times 100.

\* An asterisk is used to indicate a substantial level of disparity – index below 80.00.

**EXHIBIT 5-8  
GENERAL SERVICES  
T-TEST RESULTS FOR GENERAL SERVICES FIRMS**

<b>M/WBE Classification</b>	<b>Firms Utilized<sup>1</sup></b>	<b>T Value for Firms Utilized</b>	<b>% of Available Firms<sup>2</sup></b>	<b>T Value for Available Firms</b>
African Americans	0.94%	-9.47 *	3.16%	-11.61 *
Hispanic Americans	5.86%	-7.10 *	5.72%	-8.71 *
Asian Americans	1.64%	3.65 *	1.19%	4.48 *
Native Americans	0.47%	-1.18	0.28%	-1.44
Nonminority Women	10.32%	-15.25 *	20.79%	-18.71 *
Nonminority Firms	80.77%	16.97 *	68.85%	20.81 *

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999, to June 30, 2004.

<sup>1</sup> Percentage of related prime contract dollars awarded to firms within the relevant market area.

<sup>2</sup> Percentage of available firms in the relevant market area.

\* Statistically significant at the 0.05 level.

**Second-Generation Study Comparison**

Based on the previous study, Hispanic American, Asian and Native American, and nonminority women-owned firms were substantially underutilized as general services contractors, whereas African American and nonminority firms were overutilized. Conversely, in the current study, general services firms owned by Asian Americans and Native Americans were overutilized. Furthermore, African Americans were substantially underutilized.

**Exhibit 5-9** presents a summary comparison of the disparity findings from the second and third generation disparity studies. The tables are based on the utilization and availability of M/WBEs and non-M/WBEs in the City of Phoenix relevant market areas. M/WBE utilization on prime contracts in general services rose from 9.68 percent to 19.10 percent.

**EXHIBIT 5-9  
CITY OF PHOENIX  
GENERAL SERVICES VENDORS  
SUMMARY OF DISPARITY ANALYSIS  
COMPARISON OF DISPARITY RATIOS  
BETWEEN 2004 STUDY AND 1999 STUDY**

	Percent of Prime Contract Dollars <sup>1</sup>		% of available firms <sup>2</sup>		Disparate impact of utilization	
	1999 STUDY	2004 STUDY	1999 STUDY	2004 STUDY	1999 STUDY	2004 STUDY
African Americans	2.52%	1.26%	1.18%	3.16%	Overutilization	* Underutilization
Hispanic American	0.75%	3.40%	5.22%	5.72%	* Underutilization	* Underutilization
Asian American	-	2.15%	-	1.19%	-	Overutilization
Native American	-	0.42%	-	0.28%	-	Overutilization
Asian & Native American	1.99%	-	4.29%	-	* Underutilization	-
Nonminority Women	4.42%	11.88%	31.80%	20.79%	* Underutilization	* Underutilization
Non-M/WBES	90.32%	80.90%	57.51%	68.85%	Overutilization	Overutilization

Source: City of Phoenix Second-Generation Disparity Study, Chapter 4.0, and City of Phoenix Third-Generation Disparity Study, Chapter 5.0

<sup>1</sup> The percentage of dollars is taken from the prime utilization exhibit previously shown in Chapter 4.0.

<sup>2</sup> The percentage of available contractors is taken from the availability exhibit previously shown in Chapter 4.0.

\* An asterisk is used to indicate a substantial level of disparity – index below 80.00.

**5.2.7 Goods and Supplies**

As goods and supplies vendors, M/WBEs were substantially underutilized during the study period, except firms owned by Asian American. Firms owned by non-M/WBEs and Asian Americans were overutilized on an overall basis. The disparity indices are presented in **Exhibit 5-10**.

**Exhibit 5-11** shows the t-test results for goods and supplies vendors. The results suggest that the under/overutilization is statistically significant for all categories. As discussed in Chapter 4.0, analyses of the utilization of subcontractors were not applicable for general services and goods and supplies.

**EXHIBIT 5-10  
DISPARITY ANALYSIS OF GOODS AND SUPPLIES VENDORS  
IN THE RELEVANT MARKET AREA  
BY RACE/ETHNICITY/GENDER CLASSIFICATION  
FISCAL YEARS 2000 THROUGH 2004**

M/WBEs Classification	% of Contract Dollars <sup>1</sup>	% of Available Firms <sup>2</sup>	Disparity Index <sup>3</sup>	Disparate Impact of Utilization
<b>Fiscal Year 1999 - 2000</b>				
African Americans	0.13%	0.85%	14.99	* Underutilization
Hispanic Americans	0.60%	3.99%	15.02	* Underutilization
Asian Americans	5.03%	1.57%	320.60	Overutilization
Native Americans	0.10%	0.17%	58.94	* Underutilization
Nonminority Women	4.51%	11.76%	38.38	* Underutilization
Nonminority Firms	89.62%	81.66%	109.75	Overutilization
<b>Fiscal Year 2000 - 2001</b>				
African Americans	0.21%	0.85%	24.35	* Underutilization
Hispanic Americans	0.40%	3.99%	9.96	* Underutilization
Asian Americans	7.14%	1.57%	454.93	Overutilization
Native Americans	0.00%	0.17%	2.22	* Underutilization
Nonminority Women	4.80%	11.76%	40.80	* Underutilization
Nonminority Firms	87.45%	81.66%	107.09	Overutilization
<b>Fiscal Year 2001 - 2002</b>				
African Americans	0.11%	0.85%	12.69	* Underutilization
Hispanic Americans	0.51%	3.99%	12.87	* Underutilization
Asian Americans	5.16%	1.57%	328.58	Overutilization
Native Americans	0.01%	0.17%	3.90	* Underutilization
Nonminority Women	3.53%	11.76%	30.01	* Underutilization
Nonminority Firms	90.68%	81.66%	111.05	Overutilization
<b>Fiscal Year 2002 - 2003</b>				
African Americans	0.11%	0.85%	13.37	* Underutilization
Hispanic Americans	0.79%	3.99%	19.74	* Underutilization
Asian Americans	6.87%	1.57%	437.35	Overutilization
Native Americans	0.01%	0.17%	3.21	* Underutilization
Nonminority Women	6.25%	11.76%	53.17	* Underutilization
Nonminority Firms	85.97%	81.66%	105.28	Overutilization
<b>Fiscal Year 2003 - 2004</b>				
African Americans	0.11%	0.85%	12.49	* Underutilization
Hispanic Americans	0.82%	3.99%	20.58	* Underutilization
Asian Americans	8.49%	1.57%	540.78	Overutilization
Native Americans	0.02%	0.17%	12.68	* Underutilization
Nonminority Women	5.45%	11.76%	46.31	* Underutilization
Nonminority Firms	85.11%	81.66%	104.23	Overutilization
<b>All Fiscal Years</b>				
African Americans	0.13%	0.85%	15.78	* Underutilization
Hispanic Americans	0.60%	3.99%	14.97	* Underutilization
Asian Americans	6.32%	1.57%	402.82	Overutilization
Native Americans	0.03%	0.17%	17.28	* Underutilization
Nonminority Women	4.74%	11.76%	40.28	* Underutilization
Nonminority Firms	88.18%	81.66%	107.98	Overutilization

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999, to June 30, 2004.

<sup>1</sup> The percentage of dollars is taken from the prime utilization exhibit previously shown in Chapter 4.0.

<sup>2</sup> The percentage of available contractors is taken from the availability exhibit previously shown in Chapter 4.0.

<sup>3</sup> The disparity index is the ratio of % utilization to % availability times 100.

\* An asterisk is used to indicate a substantial level of disparity – index below 80.00.



**EXHIBIT 5-11  
GOODS AND SUPPLIES  
T-TEST RESULTS FOR MATERIALS AND SUPPLIES FIRMS**

<b>M/WBEs Classification</b>	<b>Firms Utilized<sup>1</sup></b>	<b>T Value for Firms Utilized</b>	<b>% of Available Firms<sup>2</sup></b>	<b>T Value for Available Firms</b>
African Americans	0.85%	-45.58 *	0.85%	-15.59 *
Hispanic Americans	3.08%	-102.72 *	3.99%	-35.14 *
Asian Americans	1.29%	45.58 *	1.57%	15.59 *
Native Americans	0.20%	19.30 *	0.17%	6.60 *
Nonminority Women	6.81%	-77.15 *	11.76%	-26.39 *
Nonminority Firms	87.78%	47.10 *	81.66%	16.11 *

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999, to June 30, 2004.

<sup>1</sup> Percentage of related subcontract dollars awarded to firms within the relevant market area.

<sup>2</sup> Percentage of available firms in the relevant market area.

\* Statistically significant at the 0.05 level.

**Second-Generation Study Comparison**

African American, Hispanic American, Native American,<sup>3</sup> and nonminority women remained underutilized in providing goods and supplies to the City. By contrast, Asian Americans were overutilized in the current study, while being substantially underutilized in the previous study. The overutilization of non-M/WBEs remained consistent between in the current and previous study.

**Exhibit 5-12** presents a summary comparison of the disparity findings from the second and third generation disparity studies. The tables are based on the utilization and availability of M/WBEs and non-M/WBEs in the City of Phoenix relevant market areas. M/WBE utilization on prime contracts in goods and supplies rose from 2.46 percent to 11.82 percent.

<sup>3</sup> MGT's City of Phoenix Second-Generation Disparity Study classified M/WBEs firms into four categories (as opposed to the current five classifications). The categories were as follows: African American, Hispanic American, Asian and Native American, and nonminority women-owned firms.

**EXHIBIT 5-12  
CITY OF PHOENIX  
GOODS AND SUPPLIES VENDORS  
SUMMARY OF DISPARITY ANALYSIS  
COMPARISON OF DISPARITY RATIOS  
BETWEEN 2004 STUDY AND 1999 STUDY**

	Percent of Contract Dollars <sup>1</sup>		% of available firms <sup>2</sup>		Disparate impact of utilization	
	1999 STUDY	2004 STUDY	1999 STUDY	2004 STUDY	1999 STUDY	2004 STUDY
African Americans	0.60%	0.13%	0.75%	0.85%	* Underutilization	* Underutilization
Hispanic American	0.61%	0.60%	3.03%	3.99%	* Underutilization	* Underutilization
Asian American	-	6.32%	-	1.57%	-	Overutilization
Native American	-	0.03%	-	0.17%	-	* Underutilization
Asian & Native American	0.90%	-	3.44%	-	* Underutilization	-
Nonminority Women	0.35%	4.74%	31.36%	11.76%	* Underutilization	* Underutilization
Non-M/WBES	97.54%	88.18%	61.43%	81.66%	Overutilization	Overutilization

Source: City of Phoenix Second-Generation Disparity Study, Chapter 4.0, and City of Phoenix Third- Generation Disparity Study, Chapter 5.0

<sup>1</sup> The percentage of dollars is taken from the prime utilization exhibit previously shown in Chapter 4.0.

<sup>2</sup> The percentage of available contractors is taken from the availability exhibit previously shown in Chapter 4.0.

\* An asterisk is used to indicate a substantial level of disparity – index below 80.00.

**5.3 Multivariate Regression Analysis**

Whereas Sections 5.1 through 5.2 reported findings of disparity and nondisparity related to the utilization of vendors in the City procurement activities according to selected race, ethnicity, and gender categories, this section reports findings from a telephone survey of a sample of 507 vendors representative of Phoenix’s vendors in the three business categories examined in the study to assess race, ethnicity, and gender effects on the vendor revenue during the calendar year 2003. To determine these effects, MGT applied a multivariate regression model to survey findings.

There are two key questions for consideration in this analysis. Do minority and woman-owned firms tend to earn significantly less revenue than firms owned by nonminority males? If "yes" are their lower revenues due to their race or gender status or to other factors?

Case law and social science research provide some guidance for addressing these questions. From research literature, in addition to race and gender, we know that other factors, such as firm capacity, owner experience, and education bear a relation to a firm's gross revenues. When multiple factors come into play, sometimes a multivariate statistical analysis can improve our understanding of more complex relationships among factors affecting company earnings. In this study, we employ linear regression to analyze variables, including race and gender that can affect a firm's success.

### **5.3.1 An Overview of Multivariate Regression and Description of the Analytical Model**

The goal of this analysis was to examine the influence of selected company and business characteristics—especially owner race and gender—on 2003 gross revenues<sup>4</sup> reported by 507 companies that participated in a telephone survey administered October 25-29, 2004. A statistical regression model was used to examine the relationships between company gross revenues and the presence or absence of “selected company characteristics.” For this study “gross revenue” was the dependent variable, or the variable to be explained by the presence, absence, or strength of the “selected characteristic” variables, known as “independent” or “explanatory” variables.

Since disparity analysis is an established domain of research, the selection of independent variables for this study was made with reference to an extensive review of disparity study research literature. Most economic studies of discrimination are based on a seminal work of Nobel Prize recipient Gary Becker, “The Economics of Discrimination.”<sup>5</sup> Becker was the first to define discrimination in financial and economic terms. Since Becker, labor economists, and statistical researchers including Blinder and

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<sup>4</sup> Calendar year 2003 gross revenues as reported by the interviewee.

<sup>5</sup> Becker, Gary. 1971, second edition. “The Economics of Discrimination.” The University of Chicago Press, Chicago, p. 167.

Oaxaca, Corcoran and Duncan, Gwaltney and Long, Reimers, Saunders, Darity and Myers, Hanushek, Hirsch, Topel and Blau, and others, have employed company earnings, or revenue, as the dependent variable in race and gender discrimination analysis.<sup>6</sup> Comparable worth studies have also utilized regression models with gross revenues as the dependent variable for policy analysis<sup>7</sup> and the U.S. Department of Commerce employs regression analysis (included in 48 CFR 19) to establish price evaluation adjustments for small disadvantaged businesses in Federal procurement programs.<sup>8</sup> In each approach "gross revenue" is an analog of both firm capacity as well as an estimate of utilization (e.g., mean share of contracting dollars).

### **The Regression Model Variables**

Bates<sup>9</sup> used at least five general determinants, including firm capacity, managerial ability, manager/owner experience, and demographic characteristics such as race and gender to statistically explain variations among the gross revenues of firms. These are elaborated below in terms of the dependent/independent variable relationship regression seeks to resolve.

### **Dependent Variable**

For this analysis the dependent variable (the variable to be explained by the independent variables in the model) was defined as "firm 2003 gross revenues." Ideally, this variable is measured as the exact dollar figure for gross revenues. However, years of experience in conducting information and opinion surveys with companies indicate that firms tend to be resistive to the idea of releasing precise dollar figures, but more

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<sup>6</sup> "Race and Gender Discrimination Across Urban Labor Markets," 1996. Ed. Susan Schmitz. Garland Publishers, New York, New York, p. 184.

<sup>7</sup> Gunderson, Morley. 1994. "Male-Female Wage Differentials and Policy Responses." In "Equal Employment Opportunity: Labor Market Discrimination and Public Policy," pp. 207 - 227.

<sup>8</sup> "Federal Acquisition Regulations for Small Disadvantaged Businesses; Notice and Rules." June 30, 1998. Memorandum for Office of Federal Procurement Policy, Economic and Statistics Administration, Department of Commerce.

<sup>9</sup> Bates, Timothy. "The Declining Status of Minorities in the New York City Construction Industry." Reprinted from *Economic Development Quarterly*, Vol. 12., No. 1, February 1998, pp. 88-100.

responsive when inquiries about earnings are presented as a dollar range. Accordingly, to encourage greater participation in this study's telephone survey, 10 company gross revenue categories were defined, ranging from Category 1, "less than \$100,000" to Category 10, "more than \$10,000,000." For the regression analysis, the rank of each revenue category (1 through 10) was used as the revenue data observations for each firm.

**Independent (Characteristic) Variables**

The independent (i.e., explanatory) variables were those characteristics hypothesized as contributing to the variation in the dependent variable (2003 gross revenues). For this study, independent variables included:

- *Number of full-time employees*—The more employees a company has, the greater product volume it is likely to produce to generate higher revenues.
- *Owner's years of experience*—The longer a company owner has been in a particular business, the more likely it is that the owner has knowledge of how to acquire contracts and the skills and experience to be successful in business.
- *Owner's level of education*—The research literature consistently reports a positive relationship between education and level of income.
- *Age of Company*—Generally, a company's longevity is an indicator of both success and owner managerial ability.
- *Race/Ethnic group/gender of firm owners*—The proposition to be tested is whether there is a statistically significant relationship between race/ethnicity/gender of minority firm owners and firm revenue. In the analysis, the category Nonminority Male served as a reference group against which all other race and gender groups were compared.

Finally, since companies tend to be organized around a business concentration (e.g., construction, general services, and goods and supplies), type of business was introduced as a moderator variable to determine if the model, given adequate sample

size, behaved differently as a predictor of gross revenue when respondents' line of business was considered.

Participants' responses to the telephone survey provided the data to examine the relative importance of these factors. The operational relationship between these constructs (i.e., firm capacity, capability, experience, race, and gender) and measures derived from survey items is presented in **Exhibit 5-13**.

**EXHIBIT 5-13  
MODEL CONSTRUCTS, VARIABLES, AND MEASURES  
FOR THE ANALYSIS OF WORKING  
WITH CITY OF PHOENIX**

<b>Model Constructs</b>	<b>Variables</b>	<b>Measures</b>
<i>Capacity</i>	Number of Employees	Number of Full-time and Part-time Employees reported
<i>Owner's Managerial Ability</i>	Owner's Education	Level of Education (from "some high school" to "postgraduate degree")
	Owner's Experience	Years of Experience
	Company Age	2004 minus Reported "year of establishment"
<i>Demographics</i>	M/WBE Groups	African American-, Hispanic American-, Asian American-, Native American-, Nonminority Woman- and Nonminority Male-owned Firms,

Source: City of Phoenix telephone survey data methodology.

Inclusion of the race/gender variable for individual M/WBE groups—African Americans, Hispanic Americans, Asian Americans, Native Americans, and Nonminority Women—permitted examination of the influence of minority status on the dependent variable, revenue, both by individual group and as a general category (i.e., M/WBE), controlling for the effects of the other independent variables.

**Exploring Variable Relationships: How Regression Analysis Works**

Multiple regression analysis permits simultaneous examination not only of the effects on the dependent variable of *all* independent variables in the multivariate model, but also the effect of each, unique variable (i.e., "controlling" for the effects of the other independent variables in the equation). The effect of each predictor (independent) variable on the dependent variable is expressed as the magnitude of the change in the

dependent variable (y) for each unit change in the independent variable (x) plus an “error term.” Since the independent variable is never a perfect predictor of the dependent variable—that is, X is expressed as an imperfect predictor of Y such that one unit change in X **never** leads to one unit change in Y—the “error term,” e, is postulated to acknowledge the residual change in the value of Y that X cannot explain.

The goal in sound regression modeling, therefore, is to minimize residual values associated with the independent variables and to maximize their explanatory power. In other words, a good model that seeks to explain what causes revenue earnings, in this case, will hypothesize a combination of independent variables, based on solid findings established in research, having sufficient explanatory power to account for case-by-case differences in company revenue, while minimizing that portion of variation in revenue values that the independent variable cannot explain (i.e., minimizing the difference between Y values predicted by the X's in the model and *actual* Y values).

**Assessing the General Model and the Effect of Individual Independent Variables**

There are several statistical litmus tests in regression analysis to assess a model's explanatory power. For example, one can refer to the model's goodness of fit, also known as the coefficient of determination. Put simply, the coefficient of determination for a model assesses the degree to which the model maximizes the explanatory power of the independent variables and minimizes prediction error relative to the dependent variable; that is, the degree to which the model maximizes the closeness of actual dependent variable values and the dependent variable values predicted by the regression model. The coefficient of determination (measured in regression as  $R^2$ ) permits us to make a judgment about the combined effect on the dependent variable of all the independent variables in a model.

**Assessing Variables in the Model**

As suggested earlier, in a model with multiple independent, or predictor, variables, the effect of each individual independent variable is expressed as the expected change in the dependent variable ( $y$ ) for each unit change in the independent variable ( $x$ ), holding constant (or controlling for) the values of all the other independent variables (i.e., the effect on  $Y$  of the other  $X$ 's in the equation). When  $X$  and  $Y$  values are plotted on a graph, linear regression attempts to find a straight line of best fit (also known as the least-squares line) that minimizes the differences between actual  $Y$  and predicted  $Y$  values as a function of  $X$ . The slope of this line represents the statistical relationship between the predicted values of  $Y$  based on  $X$ .

The point at which this regression line crosses the  $Y$  axis (otherwise known as the constant) represents the predicted value of  $Y$  when  $X = 0$ . If the effect of  $X$  on  $Y$  is determined to be statistically significant (e.g., a significance level of  $p < 0.05$  asserts that the calculated relationship between  $X$  and  $Y$  could occur due to chance only 5 times in 100), it can be asserted that  $X$  may indeed play a role in determining the value of  $Y$  (in the case of this study, company revenues). For example, if the slope coefficient of the variable representing one of the specific racial groups is determined to be statistically significant, then, all other things being equal, the hypothesis that race of the owner of a firm affects the annual revenue of the firm has only a 5 percent chance of being false. In disparity research, theory asserts that the negative effect of race on revenue earnings associated with being a minority-owned business is likely a product of discrimination.



### 5.3.2 Multivariate Regression Model

Mathematically, the multivariate linear regression model is expressed as:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + \dots + e$$

Where: Y = annual firm gross revenues.

$\alpha$  = the constant, representing the value of Y when  $X_1 = 0$

$\beta$  = coefficient representing the magnitude of  $X_1$ 's effect on Y

X = the independent variables, such as capacity, experience, managerial ability, race and gender.

$\varepsilon$  = the error term, representing the variance in Y unexplained by  $X_i$

This equation describes the hypothesized relationship between the dependent variable and the independent variables and was used to test the hypothesis that there is no difference in 2003 revenue earnings for M/WBE firms when compared with nonminority male-owned firms. Traditionally, the hypothesis of no difference (known as the null hypothesis) is represented as:  $H_0 : Y_1 = Y_2$

We can reject the null hypothesis if the analysis indicates that race and gender have been found to affect firm revenue (i.e.,  $H_1 : Y_1 \neq Y_2$ , the alternate hypothesis). Results are statistically significant if it is determined that the probability of achieving this difference due to chance was less than 5 in 100 (i.e.,  $p < .05$ ).

### 5.3.3 Multivariate Regression Model Results

The regression model tested the effects of selected demographic and business characteristic variables on revenue earnings elicited from firms participating in the study, according to the following categories:<sup>10</sup>

1 = Up to \$50,000	4 = \$300,001 to \$500,000	7 = \$3,000,001 to \$5,000,000
2 = \$50,001 to \$100,000	5 = \$500,001 to \$1 million	8 = \$5,000,001 to \$10 million
3 = \$100,001 to \$300,000	6 = \$1,000,001 to \$3 million	9 = Over \$10 million

<sup>10</sup> Despite the ordinal nature of the dependent variable, findings are reported based on a linear regression analysis; specifically, OLS. Menard (1995) notes this as an acceptable and common practice, "particularly when the dependent variable has five or more [ordered] categories.....Since this [OLS] is probably the easiest approach for readers to understand, sometimes other approaches are tried, just to confirm that the use of OLS does not... distort the findings." In this case, the nine categories of revenue were also analyzed using ordered Logit (SPSS 11.5), with nearly identical findings to those achieved with OLS with respect to magnitude of effect of the independent variables and both sign and significance. For further discussion, see Menard, S., "Applied logistic regression analysis," ([Sage university papers series. Quantitative applications in the social sciences; no. 07-106](#)), Thousand Oaks, Calif. : Sage Publications, 1995.

The tests for multicollinearity among independent variables and variance inflation due to outlier observations revealed no substantive problems with the data.<sup>11</sup> Initial analyses also determined that one independent variable, *Percent of Business in the Private Sector*, made no substantive contribution to the model, and was, therefore, removed. These adjustments yielded values for the variable listed in **Exhibit 5-14**.

**EXHIBIT 5-14  
CITY OF PHOENIX TELEPHONE SURVEY DATA  
RESULTS OF REGRESSION ANALYSIS**

Coefficients			
	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
(Constant)	4.670	0.444	
<b>African Americans (n=31)</b>	-0.905	0.448	-0.098
<b>Hispanic Americans (n=75)</b>	-0.710	0.328	-0.112
Asian Americans (n=30)	-0.621	0.448	-0.066
Native Americans (n=12)	-0.106	0.690	-0.007
Nonminority Females (n=187)	-0.456	0.254	-0.097
Company Age	0.028	0.010	0.138
Number of Employees	0.001	0.000	0.142
Some College	-0.439	0.327	-0.082
College Degree	0.212	0.318	0.043
Post College Degree	-0.089	0.344	-0.017
Owner's Years of Experience	0.016	0.011	0.072
Construction	0.003	0.346	0.001
Professional Services	-0.810	0.309	-0.177
Operation Services	-0.871	0.394	-0.123

Source: Phoenix telephone survey.  
**Bold** type indicates statistically significant results ( $p \leq .05$ ).

**Results**

- The model testing the effects of the variables listed in **Exhibit 5-14** on revenue reported by companies participating in the telephone

<sup>11</sup> Multicollinearity refers to excessive intercorrelation among the independent variables in a multiple regression model, which obscures the effect of each on the dependent variable to the extent that they behave as one variable and may measure two highly correlated components of the same theoretical factor. Outliers are observations in a data set that are substantially different from the bulk of the data, perhaps because of a data entry error or some other cause that would reasonable explain a data anomaly.

survey explained 12.2 percent of the variance of the revenue variable ( $F = 4.567$ ,  $df = 14$ ,  $p \leq .000$ ).

- When controlling for the effects of variables related to company capacity and ownership level of education (i.e., nonracial demographic characteristics), revenue earned in 2003 by minority-owned companies participating in the survey were significantly different, as a function of their minority status, from earnings of their non-M/WBE firm counterparts.
- The lower gross revenue levels earned in 2003 for African Americans and Hispanic Americans findings was found to be statistically significant.

### **Results (continued)**

- Among the company characteristics variables, other than race and sex, revenue for all groups increased as a function of company age, number of employees, level of education, and the business category construction, but decreased as a function of business category and general services.
- Firms whose ownership possessed college degree educated tended to earn significantly more than firms whose owners possessed less than a college degree and surprisingly, those that had post graduate education.
- Earnings were positively related to the owner's experience in the field, but were minimally affected by number of years the firm had been in existence and unaffected by a firm's number of employees.

### **Deriving Predicted Revenue for Race/Gender/Ethnicity Categories**

To derive predicted revenue categories for each race/ethnicity/gender group, values from **Exhibit 5-14** were inserted into the regression model. The following equation illustrates how predicted revenue would be calculated for an MBE in all business categories<sup>12,13</sup>

*Gross Revenues = 4.670 – MBE (see **Exhibit 5-13** categories for the various races) + .028 Company Age + .001 Number of Employees - .439 Some College + .212 College Degree - .089 Post College Degree + .016 Owner's Experience + Business Category Adjustment (see **Exhibit 5-13** categories).*

<sup>12</sup> To derive coefficients for the race, ethnicity, and gender categories, the "Non-M/WBE" category was used as the reference variable, coded as value "0."

<sup>13</sup> To derive coefficients for the business type categories—Professional Services, Goods & Commodities, and General services—a combined business type category (Goods & Commodities/General services) was used as the reference variable, coded as value "0."

**Exhibit 5-15** reports predicted 2003 gross revenue by M/WBE category and business type. For instance, to derive the predicted gross revenue categories values in **Exhibit 5-15** for an African American in Professional Services (calculated as revenue category 1: up to \$50,000), holding all other variables constant, from **Exhibit 5-14**, we would add the value of the constant (4.670) to the coefficient value for African Americans 8(-.905) and the coefficient value for Professional Services (-0.810) to obtain a predicted value of 2.96 (rounded to 3, representing the category "\$100,001 to \$300,000").

From **Exhibit 5-15**, we can make the following observations:

- Controlling for the effect of other company characteristics such as age of company, number of employees, and owner's education, when earnings for the three business type categories were aggregated, African American-owned firms' earnings were significantly lower than earnings for their M/WBE counterparts.
- Among the three business categories, firms in the construction category posted higher earnings than firms in the other categories (\$300,000 to \$500,000).
- Among the three business categories, firms in the general services category posted lower earnings than firms in the other categories (\$100,000 to \$300,000).

**EXHIBIT 5-15  
GROSS REVENUE CATEGORIES BY RACE/ETHNICITY/GENDER**

Race/Ethnicity/Gender	Overall	Professional Services	Construction	Other Services
Nonminority Males <i>n</i> =156	4	4	5	4
<b>African Americans <i>n</i>=31</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>3</b>
<b>Hispanic Americans <i>n</i>=75</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>3</b>
Asian Americans <i>n</i> =30	2	3	4	3
Native Americans <i>n</i> =12	3	4	5	4
Nonminority Females <i>n</i> =187	2	3	4	3

Source: City of Phoenix Telephone Survey Data and MGT of America, Inc. calculations using SPSS. **Bold** type indicates statistically significant results ( $p \leq .05$ ).

Gross Revenue Categories:		
1 = Up to \$50,000	4 = \$300,001 to \$500,000	7 = \$3,000,001 to \$5 million
2 = \$50,001 to \$100,000	5 = \$500,001 to \$1 million	8 = \$5,000,001 to \$10 million
3 = \$100,001 to \$300,000	6 = \$1,000,001 to \$3 million	9 = Over \$10 million

### **Summary of Findings**

As an aggregated group, M/WBE firms responding to the telephone survey earned significantly less revenue in 2003 than their non-MWBE counterparts. In general, it is to be anticipated that a firm's revenue might be related positively to such variables as a firm's number of employees, managerial experience, company age, and level of education. In this survey, although the company age and the experience in field by primary owner bore positively on 2003 earnings, the owner's education level carried more statistical weight.

In any case, the findings of the telephone survey? indicating general disparity in earnings between M/WBEs and non-M/WBEs? are similar to the findings of the disparity analyses, which also indicated a general underutilization of M/WBEs in City procurement.

### **5.4 Conclusions**

This chapter used disparity indices to compare the availability and utilization findings from Chapter 4.0. The disparity indices for each of the business categories indicate whether there is disparity for each ethnic or gender group, and the ensuing t-test depicts the statistical significance of these disparity results.

The underutilization was statistically significant for the following categories:

- African American, Hispanic American, Asian American, Native American, and nonminority women prime contractors for construction projects;
- African American, Hispanic American, Asian American, and nonminority women subcontractors for construction projects;
- African American, Hispanic American, and nonminority women-owned general services firms; and
- African American, Hispanic American, Native American, and nonminority women-owned goods and supplies firms.

The multivariate regression analyses support the above findings of disparity for the different M/WBE groups and provide evidence that the disparity is due, in part, to a firm's race and/or gender status. For African Americans and Hispanic Americans, there was a statistically significant finding of disparity for gross revenue levels in 2003.

After adjusting for impact of non-M/WBE factors, such as number of employees, age of company, owner's experience, and owner's education level, the analyses showed that Black and Hispanic firms earned significantly lower 2003 revenues than similar nonminority male firms. The consistency of the lower 2003 revenues of M/WBE firms for both the all-industries analyses and for African American and nonminority women groups among the different industry grouping analyses further strengthens the evidence that the disparities are due, at least in part, to the race and/or gender status of the firms.

## **6.0 ANECDOTAL ANALYSIS**

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## 6.0 ANECDOTAL ANALYSIS

This chapter describes the results of the analysis of anecdotal information for the City of Phoenix Disparity Study. The collection and analysis of anecdotal data are performed to determine whether underutilization of minority and women-owned firms is the result of objective, nonbiased bidding and purchasing procedures or the result of discriminatory practices. Anecdotal evidence is designed to explain and interpret statistical findings.

Courts have ruled that the combination of disparity findings and anecdotal evidence provides the best evidence demonstrating the existence of historical discriminatory practices.<sup>1</sup> Unlike other chapters in this report, anecdotal analysis does not rely solely on quantitative data. Anecdotal analysis also utilizes qualitative data to describe the context of the examined environment as well as the climate in which all businesses and other relevant entities applicable to our study operate.

The following sections present MGT's approach used in the collection of anecdotal data, the methods employed in the collection of those data, and the quantitative and qualitative results of the data collected. This chapter is organized into the following sections:

- 6.1 Methodology
- 6.2 Telephone Survey Demographics
- 6.3 Personal Interview Demographics
- 6.4 Procurement Process
- 6.5 Subcontracting
- 6.6 Discrimination
- 6.7 M/WBE Program
- 6.8 Conclusions

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<sup>1</sup> *Coral Construction v. King County*, 941 F2d at 917-18 (9<sup>th</sup> Circuit, 1991);



## **6.1 Methodology**

Our experience conducting disparity studies has shown that anecdotal data collected through multiple methods provide more comprehensive information than methodologies using a single-pronged approach. For this reason, we used the combination of a telephone survey, a focus group, public hearings, and face-to-face interviews to collect anecdotal information and to identify issues that were common to businesses in the market area. We were also able to draw inferences from these data as to the prevalence of obstacles perceived as limiting the participation of minority-owned and woman-owned business enterprises (M/WBEs) in City procurement transactions. Given the importance of anecdotal evidence by the courts, we approach the collection and analysis of anecdotal data with the same methodological rigor given to quantitative data analysis.

The focus of the investigation of anecdotal information was to understand and evaluate the respondents' experiences in conducting business with the City and in the private sector. We solicited participation and responses from businesses that have done or attempted to do business with the City between the years 1999 and 2004.

With the telephone survey (Appendix D), we reached a broader segment of the population in a more cost-effective and time-efficient manner than possible through face-to-face interviews. However, the face-to-face interviews—which are structured settings where an interviewer uses an interview guide (Appendix E) to solicit input from participants—provided more latitude for additional information gathering on issues that are unique to the respondents' experiences.

### **6.1.1 Telephone Survey**

During the month of October 2004, we surveyed firms listed in the master vendor database to solicit responses from business owners and representatives about their

firms and their experiences doing business in the City of Phoenix. We attempted to collect data in proportion to the distribution of M/WBEs and non-M/WBEs in the relevant market area. Our statistical model showed that we needed approximately 364 responses to achieve a confidence interval of 95 percent with a 5 percent margin of error. To this end, we attempted to contact business owners or knowledgeable representatives from over 15,429 or 60 percent of the 25,738 firms in our master vendor database. This outreach effort equated to roughly 60 percent of the firms listed in the master vendor database. We spoke with owners and representatives from 507 firms.

In assessing the sufficiency of results, disparity study surveys commonly face sample size limitations, especially in the case of attempting to gather a representative sample from minority populations where low minority population numbers are present. (For example, Native American-owned business populations in most municipalities are insufficient in number to permit a valid and representative sample). This problem is compounded when analyses are stratified further by business type. Insufficient sample sizes can pose problems for the statistical confidence one can have in the results. Although MGT's goal is to report data samples that can satisfy the 95 percent confidence level, this does not mean that data should not be reported when lower survey participation levels reduce confidence intervals slightly, especially when due diligence has been exercised in attempting to meet the 95 percent standard.

**Exhibit 6-1** reports the disposition of the telephone canvassing efforts.

**EXHIBIT 6-1  
CITY OF PHOENIX  
DISPOSITION OF TELEPHONE CALLS**

Result	Number
Firms Called	15,429
<i>Incorrect Telephone Number</i>	1,551
<i>No Answer</i>	0
<i>Refused or Uninterested</i>	1,455
Completed Interviews	507

\*132 vendors stated they did not do business with the City of Phoenix. Remaining vendors either did not complete the entire survey and/or owners/managers were not available to take the call (not out and out refusal)."

Section 6.2 of this chapter provides demographic data about the participants in the telephone survey and the firms they represented.

**6.1.2 Personal Interviews**

MGT conducted personal interviews with owners and representatives of firms located in Maricopa County, Arizona. The candidates were selected from MGT's master vendor database.

The scope of work for this study included interviews with 65 firms that were willing to let a representative provide anecdotal data in a face-to-face setting. Over 150 firms were contacted about participating in the process. Confirmation letters from MGT and letters of thanks from the City's Equal Opportunity Department were faxed to all firms that agreed to be interviewed. A total of 73 interviews were scheduled over four weeks. Seven cancellations occurred at the time of the interview, resulting in 66 completed interviews. One interviewee did not want his results reported.

The interviews were conducted at the business owner's office or at a location designated by the business owner. They ranged in length from 15 minutes to two hours. The interviewer requested that each interview be tape-recorded. All but one participant agreed to allow the interviewer to tape-record the interview. The prepared guide used during the interviews included a range of questions concerning the firm's basic business operations, size, and structure, the firm's experiences conducting business with the City,

its business experiences in the public and private sector, and any instances of discrimination experienced by the firm while attempting to do business in Maricopa County.

The interviewers were trained on objective interview techniques and made no attempt to prompt or guide responses from the participants, although follow-up questions were asked if clarification or additional information was needed. At the conclusion of the interview, the interviewer asked participants to sign an affidavit attesting that their responses to the interview questions were, to the best of their knowledge, true and accurate reflections of their experiences with the City.

MGT experienced notable resistance to participating in the interviews from African American business owners. Several African American business owners were concerned that their responses might not be confidential or that the study would not result in positive program changes. Generally, Hispanic owners were willing and interested participants in the interviews. Most Native American business owners expressed concern that the study would not result in positive program changes, but in general they were not hesitant to participate in the process. MGT received very little response from the Asian business community. Women owners (both white and minority) were generally more willing to participate in interviews than male owners.

### **6.1.3 Focus Group**

MGT conducted one focus group with owners of firms and representatives of small business service providers located in Maricopa County, Arizona. The participants were selected through telephone contacts, postings placed in city buildings, and advertisements placed in local newspapers. The Equal Opportunity Department placed ads in several minority publications and Phoenix publications of general circulation. MGT

also contacted small business service providers to solicit their participation from both the service providers and the participation business owners served by the providers.

The focus group was held at a City facility. MGT received confirmations from 16 individuals but, only 8 attended. Each individual was provided a written questionnaire to obtain information concerning the firm's experience in attempting to do business with the City and their business experiences in the public and private sectors. After the questionnaires were completed, the facilitator typed questions that were viewed by the participants on an overhead projector. The participants typed their responses into a computer program that allowed all participants to read all responses. Follow-up questions were generated based on the responses.

#### **6.1.4 Public Hearings**

MGT conducted two public hearings with owners and representatives of firms located in Maricopa County, Arizona. The hearings were advertised through telephone contacts, postings placed in city buildings and advertisements placed in local newspapers. Advertisements organized by the Equal Opportunity Department were placed in several minority publications and Phoenix newspapers of general circulation. Small business service providers were contacted solicit their participation as hearing panelists and to ask their assistance in soliciting participation by the business owners served by the providers.

The first public hearing was held at the Burton Barr Central Library on Thursday, October 28, 2004, from 4:00 p.m. until 6:30 p.m. The second hearing was held in the City Council Chambers on Friday, October 29, 2004 from 8:00 a.m. until 10:00 a.m. Individuals who attended the hearings were asked to sign an attendance sheet. Twelve individuals signed the attendance sheet for the October 28th hearing, but MGT

estimates that 25 individuals actually attended the hearing. Thirty-four individuals signed the attendance sheet for October 29<sup>th</sup> hearing.

Both hearings had one facilitator and a hearing panel. The facilitator received testimony from the participants and asked follow-up questions. The hearing panel received the testimony and asked questions for purposes of clarification. The hearing panel was composed of a representative of the following organizations: Grand Canyon Minority Supplier Development Council, Arizona Minority Business Development Center, Arizona Chapter of Associated General Contractors, Arizona Chapter, National Association of Women Business Owners, Associated Minority Contractors of America, and the Black Chamber of Commerce.

Individuals who wished to provide testimony were asked to complete a speaker request card with their business owners' name, business name, business address, telephone number, and e-mail address. The individuals were also asked to indicate whether the firms were certified with the City of Phoenix and whether the firms had attempted to do business with the City of Phoenix between 1999 and 2004. Six individuals provided testimony during Thursday's hearing and eight individuals provided testimony during Friday's hearing.

## **6.2 Telephone Survey Demographics**

**Exhibit 6-2** provides a profile of those businesses that participated in the telephone survey. Business owners and representatives who participated in the telephone survey represented mainly professional services firms (48%) or construction firms (22%). Participants from firms providing services other than those listed in the questionnaire accounted for 15 percent of firms that responded. Equipment and supplies firms were 11 percent of those surveyed.

Fewer than half of the firms (40%) surveyed were in business before 1990. Over half of the firms were established after 1991. Non-M/WBEs tended to be older firms, in that 32 percent had been in business since 1980, whereas only 9 percent of the M/WBEs had been in operation for that period of time. In each M/WBE category, the greater number of firms commenced operations between 1991 and 2000.

A majority of the business owners of the surveyed firms had some college education, attained a college degree, or completed postgraduate studies. This was true for 83 percent of the business owners in each category. Firms that participated in the telephone survey generally employed 10 or fewer persons. The participant firms generated varying levels of revenue resulting in a good cross section for our data analysis. **Exhibit 6-2** provides an overview of the demographics for the telephone survey participants.

### **6.3 Personal Interview Demographics**

The personal interview guide used in interviewing businesses included questions designed to establish a business profile for each business. Interviewers gathered information concerning the primary line of business, ethnicity of owner, organizational status, number of employees, year business established, gross revenues, and level of education.

We interviewed 65 business owners and representatives. The ownership of the firms was African American (15 firms), woman (22 firms), nonminority (8 firms), Hispanic American (13), Native American (5), and Asian American (2). (**Exhibit 6-3**) 45 of the responding firms were incorporated (69.2%) and 33 employed 10 or fewer workers. 43 firms indicated annual earnings of \$1 million or less. Most firms (44 of 65) had been established after 1990. (**Exhibit 6-4**)

**EXHIBIT 6-2  
CITY OF PHOENIX  
TELEPHONE SURVEY  
SELECTED DEMOGRAPHICS**

Demographic	Race/Ethnicity or Gender of Business Owner							TOTAL
	African American	Hispanic American	Asian American	Native American	Woman	Total M/WBE	Total Non-M/WBE	
<i># responses</i>	31	75	32	12	187	337	155	492
<i>Company's primary line of business</i>								
Construction Services	6%	35%	25%	33%	14%	20%	26%	22%
Professional Services	58%	44%	47%	25%	53%	50%	43%	48%
Operation Services	13%	0%	6%	0%	4%	4%	3%	4%
Equipment and Supplies	16%	7%	6%	8%	12%	11%	12%	11%
Other	6%	15%	16%	33%	16%	15%	15%	15%
<i>Length of Establishment</i>								
1970 or earlier	0%	3%	3%	17%	3%	3%	17%	8%
1971 to 1980	3%	9%	0%	0%	6%	6%	14%	8%
1981 to 1990	13%	12%	25%	17%	28%	22%	26%	24%
1991 to 2000	58%	52%	44%	58%	44%	48%	35%	44%
Since 2000	26%	24%	22%	8%	19%	20%	8%	17%
<i>Highest Level of Owner's Education</i>								
Some High School	0%	4%	0%	0%	3%	2%	3%	2%
High School Graduate	0%	9%	0%	8%	7%	7%	10%	8%
Trade or Technical School	3%	1%	0%	25%	3%	3%	3%	3%
Some College	29%	36%	13%	17%	22%	25%	19%	23%
College Degree	26%	31%	31%	25%	35%	33%	32%	32%
Graduate Degree	42%	15%	47%	17%	28%	28%	29%	28%
Not Applicable/No Response	0%	4%	3%	8%	2%	2%	6%	3%
<i>Number of full-time employees</i>								
0 to 10	77%	68%	66%	67%	76%	73%	62%	70%
11 to 25	23%	13%	25%	17%	13%	15%	16%	16%
26 to 50	0%	9%	0%	17%	5%	5%	12%	7%
51 to 100	0%	8%	3%	0%	4%	4%	7%	5%
Over 100	0%	1%	0%	0%	1%	1%	4%	2%
<i>Gross Revenues</i>								
\$50,000 or less	13%	12%	9%	8%	12%	12%	3%	9%
\$50,000 but less than \$100,000	23%	20%	9%	0%	10%	13%	5%	11%
\$100,000 but less than \$300,000	23%	23%	19%	17%	22%	22%	19%	21%
\$300,000 but less than \$500,000	16%	7%	16%	17%	12%	12%	13%	12%
\$500,000 but less than \$1 million	13%	11%	13%	17%	13%	13%	16%	14%
\$1 million but less than \$3 million	3%	7%	22%	25%	13%	12%	17%	14%
\$3 million but less than \$5 million	3%	7%	3%	0%	2%	3%	6%	4%
\$5 million but less than \$10 million	0%	5%	0%	8%	3%	3%	6%	4%
Over \$10 million	6%	7%	3%	8%	10%	8%	9%	8%
Not Available/No Response	0%	3%	0%	0%	2%	1%	7%	3%
<i>Owner's Years of Direct Experience in Primary Line of Business</i>								
5 or less	0%	8%	9%	0%	5%	6%	3%	5%
6 to 10	23%	13%	6%	25%	13%	14%	4%	11%
11 to 20	42%	36%	44%	25%	40%	39%	31%	37%
21 to 30	35%	27%	16%	17%	32%	29%	30%	29%
31 to 40	0%	9%	16%	25%	7%	9%	25%	14%
41 to 50	0%	7%	3%	0%	2%	3%	3%	3%
Over 50	0%	0%	0%	0%	0%	0%	1%	0%

Source: MGT Telephone Survey of Businesses in October 2004.



**EXHIBIT 6-3  
CITY OF PHOENIX  
PERSONAL INTERVIEWS\*  
SELECTED DEMOGRAPHICS**

Category	African American		Hispanic American		Asian American		Native American		Nonminority Women		Nonminority Male	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
<b>Organizational Structure</b>												
Sole Proprietorship	0	0.00%	3	23.08%	2	100.00%	0	0.00%	4	20.00%	1	12.50%
Partnership												
Corporation	13	86.67%	7	53.85%	0		5	100.00%	13	65.00%	7	87.50%
Other	2	13.33%	3	23.08%	0		0	0.00%	3	15.00%	0	
<b>Total Responding</b>	<b>15</b>	<b>100.00%</b>	<b>13</b>	<b>100.00%</b>	<b>2</b>	<b>100.00%</b>	<b>5</b>	<b>100.00%</b>	<b>20</b>	<b>100.00%</b>	<b>8</b>	<b>100.00%</b>
<b>Gross Revenues</b>												
Less \$100,000	5	35.71%	4	30.77%	2	100.00%	0	0.00%	5	22.73%	0	0.00%
\$100,001 to \$500,000	4	28.57%	3	23.08%	0	0.00%	2	40.00%	4	18.18%	1	12.50%
\$500,001 to \$1 million	1	7.14%	4	30.77%	0	0.00%	1	20.00%	6	27.27%	1	12.50%
\$1,000,001 to \$3 million	3	21.43%	1	7.69%	0	0.00%	1	20.00%	4	18.18%	3	37.50%
\$3,000,001 to \$5 million	1	7.14%	1	7.69%	0	0.00%	1	20.00%	2	9.09%	1	12.50%
\$5,000,001 to \$10 million	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	4.55%	0	0.00%
More than \$10 million	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	25.00%
<b>Total Responding</b>	<b>14</b>	<b>100.00%</b>	<b>13</b>	<b>100.00%</b>	<b>2</b>	<b>100.00%</b>	<b>5</b>	<b>100.00%</b>	<b>22</b>	<b>100.00%</b>	<b>8</b>	<b>100.00%</b>
<b>Number of Employees</b>												
0	2	14.29%	2	16.67%	2	100.00%	0	0.00%	1	5.00%	0	0.00%
1 - 10	7	50.00%	6	50.00%	0	0.00%	3	60.00%	10	50.00%	2	25.00%
11-50	2	14.29%	4	33.33%	0	0.00%	2	40.00%	9	45.00%	3	37.50%
51-75	2	14.29%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	12.50%
Over 75	1	7.14%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	25.00%
<b>Total Responding</b>	<b>14</b>	<b>100.00%</b>	<b>12</b>	<b>100.00%</b>	<b>2</b>	<b>100.00%</b>	<b>5</b>	<b>100.00%</b>	<b>20</b>	<b>100.00%</b>	<b>8</b>	<b>100.00%</b>

Source: MGT Personal Interviews of Businesses in October and November 2004.

\* These data detail the number of respondents and not the total number of interviewees. Therefore, the total number of respondents may not equal the total number of interviewees.

**EXHIBIT 6-4  
CITY OF PHOENIX  
PERSONAL INTERVIEWS\*  
YEARS IN BUSINESS**

Years	African American		Hispanic American		Asian American		Native American		Nonminority Women		Nonminority Male	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
Prior to 1940	0		0		0		0		0		0	
1940-1949	0		0		0		0		0		0	
1950-1959	0		0		0		0		0		0	
1960-1969	0		1	7.69%	0		0		0		0	
1970-1979	1	6.67%	0		1	50.00%	0		3	15.79%	1	12.50%
1980-1989	4	26.67%	0		0		1	20.00%	4	21.05%	2	25.00%
1990-1999	4	26.67%	7	53.85%	1	50.00%	3	60.00%	9	47.37%	4	50.00%
2000-2003	6	40.00%	5	38.46%	0		1	20.00%	3	15.79%	1	12.50%
<b>Total Responding</b>	<b>15</b>	<b>100.00%</b>	<b>13</b>	<b>100.00%</b>	<b>2</b>	<b>100.00%</b>	<b>5</b>	<b>100.00%</b>	<b>19</b>	<b>100.00%</b>	<b>8</b>	<b>100.00%</b>

Source: MGT Personal Interviews of Businesses in October and November 2004.

\* These data detail the number of respondents and not the total number of interviewees. Therefore, the total number of respondents may not equal the total number of interviewees.

## **6.4 Procurement Process**

### **6.4.1 Survey Results**

In the normal course of human experience, entrepreneurs face a number of challenges when establishing and operating a business enterprise. Once formed, businesses may encounter factors that prevent it from being selected for a contracting opportunity. In this section, we review participant responses concerning procurement barriers they faced and the factors that frequently prevented them from winning contracts or purchase orders. Questions in the telephone survey were designed to gather business owner perceptions about the City's procurement process and their experiences doing business with the City. The responses from the participant firms are presented in **Exhibit 6-5**.

Analysis of the responses showed that for the most part firms chose to respond to questions about barriers to doing business with the City of Phoenix. Across the board, about 10 percent of the survey participants had no response to questions about procurement requirements or other aspects of doing business with the City of Phoenix. However, the firm representatives who had no response to these questions agreed to participate in the survey and continued through completion of the inquiries. They simply chose not to answer these questions.

Of the M/WBE respondents who responded to our questions about barriers to doing business, key issues noted were as follows:

- size of contracts (27%);
- availability and accessibility of information about pending projects (25%);
- limited information received on pending projects (25%);
- time allotted to prepare bids and quotes (24%);
- expenses associated with bid preparation (24%);

- design-build (23%);
- prequalification requirements (19%);
- insurance (17%); and
- bid specifications (17%).

The areas where there was the biggest gap in the percentage of M/WBE expressing concern and non-M/WBEs was on:

- contracts being too expensive to bid (9% difference);
- design-build (9% difference); and
- financing (8% difference).

#### **6.4.2 Results from the Focus Group, Interviews, and Public Hearings**

##### **Incumbent Firms**

A number of vendors expressed concerns about advantages that vendors with existing City contracts have in the procurement process. One participant in a focus group felt that the main barrier they faced was, “The relationships that the buyer for my commodity has had for several years with other vendors.” Interview participants shared the following comments regarding firms with existing City contracts:

“I submitted a bid on a big price project and they gave it to a company up in Utah that actually came here to Phoenix and did the work and I am [doing] here in Arizona. But when I inquired, they told me that because the company has been doing business with them for 20 years that they didn’t trust anybody else and they just weren’t ready to venture into another area with a company who may or may not be able to accommodate their needs. “

— *African American female-owned firm*

“They give out that contracting opportunity to the same national company for so long, it's a standing joke in our industry about, well, there is no real work at the airport because a specific contracting officer keeps giving the job to the same national firm, and then, and when she does that, you can say, well, your contracting officer, you want to be sure it's a national firm. They have a big history, let's keep going with them. That national firm went bankrupt. They are out of business. The employees of that firm are managing the job. They are now working with the City of Phoenix, and they are making sure that that job is staying in the same loop, but because it's hidden in a little area of the corner of the City, it's not under the glare of the big A&E newsletter.”

— *WBE firm at October 2004 public hearing*

**EXHIBIT 6-5  
CITY OF PHOENIX  
TELEPHONE SURVEY  
BARRIERS TO DOING BUSINESS**

Barriers to Obtaining Work	Race/Ethnicity or Gender of Business Owner							TOTAL
	African American	Hispanic American	Asian American	Native American	Woman	Total M/WBE	Non-M/WBE	
# responses	31	75	32	12	187	337	155	492
Pre-qualification requirements								
Yes	26%	23%	19%	17%	17%	19%	16%	18%
No	71%	73%	66%	67%	74%	73%	74%	73%
No Response	3%	4%	9%	17%	9%	8%	11%	9%
Performance Bond requirements								
Yes	19%	21%	13%	17%	13%	16%	14%	15%
No	71%	76%	69%	67%	75%	74%	75%	74%
No Response	10%	3%	13%	17%	12%	10%	12%	11%
Financing								
Yes	26%	23%	6%	8%	8%	13%	5%	10%
No	71%	73%	75%	75%	82%	78%	85%	80%
No Response	3%	4%	13%	17%	10%	9%	10%	9%
Insurance requirements								
Yes	19%	24%	25%	8%	13%	17%	12%	15%
No	77%	72%	56%	75%	79%	75%	79%	76%
No Response	3%	4%	13%	17%	9%	8%	10%	9%
Bid specifications too rigid								
Yes	16%	19%	13%	0%	18%	17%	19%	17%
No	81%	76%	72%	83%	72%	74%	68%	72%
No Response	3%	5%	9%	17%	10%	8%	14%	10%
Limited time given to prepare bid package or quote								
Yes	29%	29%	19%	17%	22%	24%	19%	23%
No	68%	67%	63%	67%	68%	67%	70%	68%
No Response	3%	4%	13%	17%	9%	8%	12%	9%
Limited information received on pending projects								
Yes	26%	29%	16%	17%	25%	25%	21%	24%
No	71%	67%	66%	67%	66%	66%	67%	67%
No Response	3%	4%	13%	17%	10%	8%	12%	10%

**EXHIBIT 6-5 (Continued)  
CITY OF PHOENIX  
TELEPHONE SURVEY  
BARRIERS TO DOING BUSINESS**

Barriers to Obtaining Work	Race/Ethnicity or Gender of Business Owner							TOTAL	
	African American	Hispanic American	Asian American	Native American	Woman	Total M/WBE	Non-M/WBE		
Knowledge of contracting policies and procedures	Yes	32%	24%	16%	17%	14%	18%	21%	19%
	No	61%	73%	69%	67%	77%	74%	68%	72%
	No Response	6%	3%	9%	17%	9%	7%	12%	9%
Lack of experience	Yes	13%	13%	6%	17%	11%	12%	12%	12%
	No	84%	84%	78%	67%	79%	80%	79%	80%
	No Response	3%	3%	9%	17%	10%	8%	10%	9%
Lack of personnel	Yes	16%	16%	16%	8%	16%	15%	17%	16%
	No	81%	81%	69%	75%	75%	77%	75%	76%
	No Response	3%	3%	9%	17%	9%	7%	8%	8%
Contract too large	Yes	32%	33%	19%	33%	24%	27%	23%	25%
	No	65%	63%	63%	50%	67%	65%	68%	66%
	No Response	3%	4%	13%	17%	9%	8%	10%	9%
Double standards for inspections led to exclusion from future contracts	Yes	6%	7%	6%	0%	2%	4%	7%	5%
	No	81%	87%	69%	83%	83%	82%	77%	81%
	No Response	13%	7%	19%	17%	15%	13%	16%	14%
Contract too expensive to bid	Yes	35%	29%	19%	17%	21%	24%	15%	21%
	No	61%	68%	56%	67%	68%	66%	73%	68%
	No Response	3%	3%	19%	17%	11%	9%	12%	10%
Design-build format puts project out of reach for my company	Yes	26%	27%	10%	33%	23%	23%	14%	20%
	No	45%	59%	67%	58%	61%	59%	66%	62%
	No Response	29%	15%	23%	8%	16%	17%	20%	18%

Source: MGT Telephone Survey of Business Firms in October 2004.

“They are calling the same testing [firms] over and over.”

*Question:* Are the companies they are calling majority owned?

*Answer:* Absolutely.

*Question:* Why do you think they are doing that?

*Answer:* Because they don't want to change.”

—*Hispanic male-owned firm*

“Yes, having 30 years experience and not getting city jobs is unfair. My engineer and I went down to the park and worked with the landscape architect and the engineer didn't show up for 3 hours. He took us in and we got 10 minutes to look at the plans. He wasn't friendly. We got a hold of the landscape architect and then the civil design engineer and brought out the fact about the streetlights. We didn't even get selected for an interview. They told me because they don't know you. They've never called any of my references.”

—*Native American female-owned firm*

### **Competing with Large Companies**

There was also a general sense expressed that it was far easier for larger companies to secure City contracts. Some of this was simply due to the size of the project. Typical comments from M/WBEs regarding competing with large companies were:

“They sometimes trust the bigger companies before they will use a smaller company.”

—*Hispanic male-owned firm*

“I think that, you know, that they're so quick to say you're too small instead of giving you the opportunity to demonstrate your capabilities and to show them what you can do. Obviously, I would not—if I felt that I was too small, I wouldn't even make an effort to pursue any of it, the projects. I want an opportunity and I know my work is good. It is quality work. And I feel that I wasn't too small to go through their certification process. So I don't feel that I am too small to take on any project that they may grant me with.”

—*WBE firm*

”The system is set up where only large corporations can participate in the game. You know, a small Mom and Pop store don't have a chance.”

—*African American male-owned firm*

### Specifications and Qualifications

There were some comments about the specifications and qualifications process on occasion being developed in a manner that resulted in a tilting of the procurement process towards certain groups of firms. For example, MGT was told:

“Number one, projects continue to be engineered, specifying sole source or near sole source products that only one or two non-M/W/SBE companies are capable of providing. It's being done despite the fact that there are other products that can meet and exceed those specifications, and it eliminates M/W/SBE participation in that particular section of a project when that's allowed to occur. If the City makes [a] decision and doesn't provide an 'or equal,' they'll eliminate several vendors like us because we won't be permitted to provide an 'or equal' solution for it. Again that's despite the fact that there are numerous manufacturers and integrators who can provide equal or better systems for the application.”

—*Speaker representing several woman-owned firms at  
October 2004 public hearing*

“I know that there were at least a couple of groups of ethnic minority contractors that joined together to try and be one of the general contractors. Again, they were not short listed in the process and were deemed not to be qualified. And I think we've got to ask the question, 'Why?' And at what point will our minority contractors, even when they team their resources together, be qualified to have a chance to even be on the short list to submit a hard bid number?”

—*Speaker representing several minority-owned firms at  
October 2004 public hearing*

“The larger contractors are bundled. There is no recourse. They promise to maintain to minority business goals. This is the level we are discriminated against. The larger contractors get the job and they promise to hire W/MBEs and they don't.”

—*Native American male-owned firm*

*Question:* Is the prequalification problematic?

*Answer:* It's ridiculous. ADOT, you do one test, you get accredited for, you only get to do that one test. Each technician has to be certified with their criteria.

*Question:* Have you completed that process?

*Answer:* Yes. It cost us \$65,000 and we have only done \$5,000 worth of work. The “on call contract” is for one year and a renewal for another year. We got approved January 1, 2004, and we didn't get a call for three months until we went down there and said, “Why are you not calling us for work?” They said you didn't call us. They were supposed to

notify me of work. I'm not asking to be given work, I just want the opportunity to bid on it like everyone else."

—*Hispanic American male-owned firm*

### **Disseminating Information**

Firms generally were satisfied with the level of outreach by the City. A number of firms spoke positively about outreach and networking events organized by the City. Some firms complained about the timeliness of bid information. One Hispanic male-owned firm stated that his primary obstacle to doing work with the City was "being provided information as far as opportunities." Some of the concerns expressed by M/WBE vendors regarding bid information included:

"E-mails, you get the engineering newsletter but 20,000 people get that. That's not just a minority outreach. "

—*Hispanic American female-owned firm*

"Information [has not been] timely. Invitations [are] given on Friday and bids were due the following Monday before ten in the morning."

—*African American female-owned firm*

"I don't think enough people know who I am, or that I'm out there, that would know that they could pick me, so in some ways yes, just because they have no way of knowing who I am or what I do. And recently the City has put a Web site together, and that's been really cool, and I've gotten a couple of calls off of that recently, now that that's getting people up and going to see who's registered with the City of Phoenix and if they have small business status or whatever, and that's been very good."

—*WBE-owned firm*

"My primary concern, however, I've called a number of times to find out how is it that a person in my type of business can get connections to have a forum with, have an opportunity to meet potential individuals in the organization who might be able to use and hire my services. None exists."

—*WBE firm at October 2004 public hearing*

"I think some of the proposals that come out restrict the number of pages, and restrict you from photographs, and restrict you from a whole lot of extra stuff, and that helps some of us."

—*WBE firm at October 2004 public hearing*



### **Construction Manager at Risk and Design Build**

The biggest concern expressed by construction contractors involved Construction Manager at Risk (CM@Risk), Design Build, and the difficulties these procurement methods posed to obtaining work. Comments such as the following were common:

“The only one that I can’t put in for is CM@Risk. They are going more toward that. You have to be a contractor with the state and you have to do engineering. I can’t afford the insurance for that. The very large contractors and consultants are bidding those jobs. I have more than the insurance required from Phoenix. The City told me because the people choosing the firms don’t know you, you need to try to get on with a big consultant as a subconsultant. The large consultants don’t share the wealth that is almost impossible. The wall that you run into is if you don’t know the project engineers then you don’t get the work.”

—*Native American female-owned firm*

“We lost our bidding opportunities when it moved to CM@Risk and you can’t get into the market. I tried everything. I meet with everybody. I tried everything. It was our first year in 13 years where we had a loss.”

—*50/50 WBE /nonminority male owned firm*

“[CM@Risk]...is so difficult for the average/small company because you have to have a very strong history of that particular type of work plus the bonding it really eliminates the small business. “

—*Native American female-owned firm*

### **Bonding and Insurance**

The majority of firms interviewed mentioned bonding and insurance as a problem. Many M/WBEs believed that the City’s bonding requirements were prohibitive. These participants also felt that some of the insurance requirements were high given the low likelihood of securing City work. Comments such as the following were common:

“Bonding - Problem with most. She spoke with her bonding company yesterday she said its worse then it’s ever been. Small company has a pile of money in the company and extremely strong before a bonding company will even look at you. That’s the major problem.”

—*Native American female-owned firm*

## 6.5 Subcontracting Experience

### 6.5.1 Survey Results

We included questions in the telephone survey that asked about respondent experiences subcontracting to other firms on City projects and on jobs in the private sector. Three key issues emerged from these inquiries. Representatives were most concerned about instances where bids or quotes were submitted to prime contractors and the potential subcontractor received no response; firms were concerned about feeling pressure to lower bids or quotes; and were concerned about payments being delayed. Of the M/WBEs who responded to our questions about barriers to doing business, key issues noted were as follows:

- no response to bid/quote (44%);
- pressured to lower bid/quote (32%); and
- a group of payments issues: payment delayed (36%), untimely release of retainage (22%) and not paid per contract (20%).

There were no significant differences in subcontractor experiences between M/WBE and non-M/WBE firms as expressed in responses to the survey.

**Exhibit 6-6** summarizes participant responses to questions about firm subcontractor experiences.

**EXHIBIT 6-6  
CITY OF PHOENIX  
TELEPHONE SURVEY  
EXPERIENCES AS SUBCONTRACTOR**

Experience as a Subcontractor	Race/Ethnicity or Gender of Business Owner							TOTAL
	African American	Hispanic American	Asian American	Native American	Woman	Total M/WBE	Non-M/WBE	
# responses	31	75	30	12	187	335	156	491
Provided bid/quote, no response								
Yes	48%	47%	47%	42%	41%	44%	43%	43%
No	32%	41%	37%	58%	48%	44%	38%	42%
No Response	19%	12%	17%	0%	11%	12%	19%	14%

**EXHIBIT 6-6 (continued)  
CITY OF PHOENIX  
TELEPHONE SURVEY  
EXPERIENCES AS SUBCONTRACTOR**

Experience as a Subcontractor	Race/Ethnicity or Gender of Business Owner							TOTAL	
	African American	Hispanic American	Asian American	Native American	Woman	Total M/WBE	Non-M/WBE		
Asked to be a front for a nonminority firm	Yes	3%	9%	13%	8%	3%	6%	3%	5%
	No	81%	80%	77%	92%	88%	84%	81%	84%
	No Response	16%	11%	10%	0%	9%	10%	16%	12%
Pressured to lower quote or bid	Yes	19%	32%	40%	58%	32%	32%	31%	32%
	No	61%	57%	47%	42%	59%	57%	57%	57%
	No Response	19%	11%	13%	0%	9%	10%	12%	11%
Paid less than negotiated amount in contract	Yes	13%	19%	10%	17%	11%	13%	15%	14%
	No	71%	72%	77%	83%	80%	77%	71%	75%
	No Response	16%	9%	13%	0%	10%	10%	14%	11%
Dropped from the project after prime contract award	Yes	16%	15%	17%	17%	12%	13%	11%	13%
	No	68%	73%	73%	83%	79%	76%	74%	75%
	No Response	16%	12%	10%	0%	10%	10%	15%	12%
Completed the job, payment delayed	Yes	32%	39%	50%	25%	33%	36%	35%	35%
	No	52%	51%	40%	75%	57%	54%	51%	53%
	No Response	16%	11%	10%	0%	10%	10%	14%	12%
Completed the job, never paid	Yes	16%	24%	17%	8%	14%	16%	16%	16%
	No	68%	67%	73%	92%	76%	74%	71%	73%
	No Response	16%	9%	10%	0%	10%	10%	13%	11%
Performed different and less work than specified	Yes	19%	17%	20%	17%	17%	18%	13%	16%
	No	65%	73%	70%	83%	72%	72%	73%	72%
	No Response	16%	9%	10%	0%	11%	10%	14%	12%

**EXHIBIT 6-6 (continued)  
CITY OF PHOENIX  
TELEPHONE SURVEY  
EXPERIENCES AS SUBCONTRACTOR**

Experience as a Subcontractor	Race/Ethnicity or Gender of Business Owner							TOTAL
	African American	Hispanic American	Asian American	Native American	Woman	Total M/WBE	Non-M/WBE	
Held to higher standards than other subs								
Yes	13%	21%	20%	17%	6%	12%	11%	12%
No	68%	65%	53%	83%	82%	75%	71%	73%
No Response	19%	13%	27%	0%	11%	13%	19%	15%
Was not paid as specified in the contract or payment schedule								
Yes	13%	29%	20%	25%	18%	20%	21%	20%
No	65%	59%	60%	75%	67%	65%	60%	63%
No Response	23%	12%	20%	0%	15%	15%	19%	16%
Untimely release of retainage								
Yes	26%	31%	20%	25%	19%	22%	24%	23%
No	58%	60%	67%	75%	71%	67%	62%	65%
No Response	16%	9%	13%	0%	11%	11%	14%	12%

Source: MGT Telephone Survey of Business Firms in October 2004.

**6.5.2 Results from the Focus Group, Interviews, and Public Hearings**

**Inadequate Good Faith Efforts**

Several subcontractors complained that M/WBE utilization was not real and primes did not carry out good faith efforts. A Native American male complained about prime contractors “contacting minority and listing them on the sheet and not hiring them.”

Other interviewees told MGT:

“They say that they contact you and they don’t.”

—Native American female-owned firm

“There’s been—without mentioning names—there have been prime contractors that have won jobs from the City or elsewhere because they commit to a blank percentage of minority contracts in order to get the job and then they come back and say, ‘Well, we couldn’t find people that qualified the way we were looking for them.’ So it’s back to the good old boy network and they give the work right back to the same people.”

—Participant in October 2004 focus group

*Question:* Do you think the prime contractors don't do that to other ethnicities like subcontractors?

*Answer:* I can't answer that. There have been incidents where I've been on the job site and the General won't talk to me, they will go to the white foreman and talk to the foreman. They say he is the owner of the company; you need to be talking to him. There is still a lot of that going on. I see colors, so does everybody else.

—Hispanic male-owned firm

### **Bid Shopping**

Bid shopping was mentioned by a significant number of interviewees. For instance, MGT was told:

*Question:* You would give a bid and it would get shopped?

*Answer:* Exactly.

*Question:* Were you told you were awarded the contract?

*Answer:* No.

*Question:* How often does that happen?

*Answer:* Half the time.”

—WBE firm

### **Subcontractor Payments**

Subcontractor payments were not a major focus of the interviews, but one speaker representing a number of contractors did express concern over retainage at the October 2004 public hearing:

*One topic in our trade or industry that I continue to come up with is retention payments. In the nature of our business, the contractors sometimes hold out a year or a year and a half. That's really hard on a small business. They could even close their doors. For the City of Phoenix, as we are working with those contractor relationships, if there is a way to help manage that—I can't imagine that the City doesn't pay for a year. The City is paying. Let's make sure their contractors are paying downstream, if there is a way to somehow manage that.*

—Representative for several women-owned firms

**6.6 Discrimination**

**6.6.1 Survey Results**

The telephone survey included questions about business owner experiences with discrimination directed toward them because of race, ethnicity, or gender. Most firms were of the opinion that discrimination was not a factor in the hindrances noted in the previous sections. Slightly less than 1 in 16 firms complained of discriminatory experiences while conducting business. Instances of discrimination were observed more by actions of an offender and verbal utterances than through any written form. .

The business representatives who complained of discrimination did not accuse the City of perpetrating the activity. They cited other entities. From the collective data of this study, we conclude that experiences with discriminatory activity occur in the private sector more so than in the public sector.

**Exhibit 6-7** shows the results of this inquiry.

**EXHIBIT 6-7  
CITY OF PHOENIX  
TELEPHONE SURVEY  
DISCRIMINATION**

Demographic	Race/Ethnicity or Gender of Business Owner						Total M/WBE	Non-M/WBE	TOTAL
	African American	Hispanic American	Asian American	Native American	Woman				
<b>Part A: Frequency of Discrimination</b>									
Experienced discrimination due to race, ethnicity or gender of the owner since 1997?									
Yes	19%	7%	6%	8%	5%	7%	5%	6%	
No	74%	91%	78%	92%	93%	89%	95%	91%	
No Response	6%	3%	16%	0%	3%	4%	0%	3%	
Number of Respondents	31	75	32	12	187	337	155	492	

**EXHIBIT 6-7 (Continued)  
CITY OF PHOENIX  
TELEPHONE SURVEY  
DISCRIMINATION**

Demographic	Race/Ethnicity or Gender of Business Owner							TOTAL
	African American	Hispanic American	Asian American	Native American	Woman	Total M/WBE	Non-M/WBE	
<b>Part B: Profile of Discrimination</b>								
<i>Form of discrimination</i>								
Verbally	6.45%	2.67%	3.13%	8.33%	3.21%	3.56%	1.94%	3.05%
Written	3.23%	0.00%	0.00%	0.00%	0.00%	0.30%	1.94%	0.81%
By action	9.68%	4.00%	3.13%	0.00%	1.60%	2.97%	0.65%	2.24%
<i>Total</i>	<i>19.35%</i>	<i>6.67%</i>	<i>6.25%</i>	<i>8.33%</i>	<i>4.81%</i>	<i>6.82%</i>	<i>4.52%</i>	<i>6.10%</i>
<i>Basis of discrimination</i>								
Owner's Race/Ethnicity	16.13%	5.33%	6.25%	8.33%	0.53%	3.86%	10.97%	6.10%
Owner's Gender	9.68%	1.33%	0.00%	0.00%	3.21%	2.97%	1.29%	2.44%
Time in Business	6.45%	0.00%	0.00%	8.33%	0.53%	1.19%	0.00%	0.81%
<i>Total</i>	<i>32.26%</i>	<i>6.67%</i>	<i>6.25%</i>	<i>16.67%</i>	<i>4.28%</i>	<i>8.01%</i>	<i>12.26%</i>	<i>9.35%</i>
<i>Time of occurrence</i>								
Pre-contract	4.81%	4.00%	3.13%	8.33%	2.67%	4.45%	3.23%	4.07%
Post contract	0.00%	2.67%	3.13%	0.00%	1.60%	1.78%	1.29%	0.41%
<i>Total</i>	<i>16.13%</i>	<i>6.67%</i>	<i>6.25%</i>	<i>8.33%</i>	<i>4.28%</i>	<i>6.23%</i>	<i>4.52%</i>	<i>4.47%</i>

Source: MGT Telephone Survey of Business Firms in October 2004.

**Perceptions of Business Attitudes, Business Practices, and M/WBEs**

Survey participants were asked to respond to a number of items regarding business attitudes and practices as they affected minority and nonminority businesses, reported in **Exhibit 6-8**. For most items, it is fair to say that there were differences in the views of M/WBE firm respondents and nonminority male firm respondents.

- 23 percent of M/WBEs and nearly 39 percent of African Americans who responded agreed that there was an informal network of prime and subcontractors in the City of Phoenix, compared with approximately 15 percent of nonminority male-owned firm respondents.
- 22 percent of M/WBE respondents believed that M/WBEs were victimized in both the private and public sectors by “double

standards,” compared with only 8 percent of nonminority male-owned firms.

- 30 percent of M/WBE respondents and 42 percent of African American firms agreed that it was a common practice for an M/WBE firm to be dropped by a prime after winning a contract, compared with roughly 13 percent of nonminority male-owned firm respondents.
- 35 percent of M/WBE respondents compared with 17 percent male-owned firm respondents agreed with the statement, “Some nonminority firms change their bidding procedures when not required to hire M/WBEs.”

**EXHIBIT 6-8  
CITY OF PHOENIX  
VENDOR TELEPHONE SURVEY BUSINESS ATTITUDES  
AND PRACTICES BY BUSINESS OWNER RACE/ETHNICITY AND GENDER**

Demographic	Race/Ethnicity or Gender of Business Owner							TOTAL
	African American	Hispanic American	Asian American	Native American	Nonminority Women	Total M/WBE	Non-M/WBE	
<i>There is an informal network of firms</i>								n=491
Strongly agree/Agree	39%	23%	27%	25%	20%	23%	15%	21%
Disagree/strongly disagree	48%	63%	47%	67%	55%	56%	61%	57%
Neutral/do not know	13%	15%	27%	8%	25%	21%	24%	22%
<i>Double standards in qualifications and performance make it more difficult for minority, small, emerging, or woman-owned businesses to win bids and contracts</i>								n=491
Strongly agree/Agree	39%	31%	23%	8%	17%	22%	8%	18%
Disagree/strongly disagree	42%	52%	63%	67%	58%	56%	57%	56%
Neutral/do not know	19%	17%	13%	25%	25%	22%	35%	26%
<i>Sometimes, a prime contractor will include a minority or woman subcontractor on a bid to meet the "good faith effort" requirement, then drop that company as a subcontractor after winning the award.</i>								n=491
Strongly agree/Agree	42%	31%	23%	33%	29%	30%	13%	25%
Disagree/strongly disagree	23%	37%	37%	42%	30%	32%	31%	32%
Neutral/do not know	35%	32%	40%	25%	41%	38%	56%	43%
<i>Some non-minority prime contractors change their bidding procedures when they are not required to hire minority-owned businesses as subcontractors</i>								n=491
Strongly agree/Agree	65%	35%	40%	50%	28%	35%	17%	29%
Disagree/strongly disagree	23%	45%	30%	17%	37%	36%	51%	48%
Neutral/do not know	13%	20%	30%	33%	35%	29%	32%	30%

Source: MGT Survey of Businesses, September 2004 to October 2004.



## **6.6.2 Results from the Focus Group, Interviews, and Public Hearings**

### **Perceptions of Discrimination**

Perceptions of discrimination cited by interviewees focused on stereotyping. For example, one African American male said in responding to the question of whether or not there was discrimination, “Absolutely! I would describe it as very subtle because like discrimination in this country has become very subtle.” Other statements of perceived discrimination were:

“Yes. [There is discrimination] Being judged, using stereotypes to judge us. Prejudged us before getting to know what work ethic is or professionalism.

—*African American male-owned firm*

“Yes, I was working for a general and he called up and said he did not want any Mexicans on this job. I was the head Mexican there the Superintendent for the company. I told the owner what the guy said. He said are you willing to go back out and work, I said yes. He sent me back on the job, the guy saw me and my crew (3 more Mexicans) the guy ran into the trailer and called and we got along fine. I’ve been called Wetback, brown like s\*\*t, dumb Mexican, little Mexican, my little Mexican friend. I’ve had to swallow a lot. They don’t understand.”

—*Hispanic American male- owned firm*

“Yes, I run into it [discrimination]. More often than not, I don’t. It’s much better now then 30 years ago.”

—*Native American female-owned firm*

### **Private Sector Discrimination**

There were mixed comments about discrimination in the private sector. On the one hand some M/WBEs preferred work in the private sector. On the other hand, as one African American female stated, the “private sector is awful. No consequences, no advocacy groups.” Other M/WBEs stated:

“As I and my other peers go to a larger contractor, and we're women owned because we represent women-owned status here, I think there's sometimes maybe that barrier right up, women owned status, small business, must not have that skill set, too tiny for us. So we have to get through that first. That's normal business, you know. We have to do that anyway, public or private. So that's just a cultural thing of the

construction community, very, you know male gender oriented kind of community that we have to get through.”

—*Speaker representing several woman-owned firms at October 2004 public hearing*

“Yes, private sector they hesitate because I am Latino, even if I am lower than the other guy. That happened when I first started, but now it doesn’t happen as much. There are a lot of Latino and Black workers out there”

—*Hispanic American male-owned firm*

*Question:* Do those instances happen more in the private sector or the public sector entities?

*Answer:* Mostly, in the private sector.”

—*Hispanic American male-owned firm*

“We don’t get used in the private [sector] at all.”

—*African American male-owned firm*

*Question:* Do you believe you were disqualified because of your race?

*Answer:* By *de facto*, yes. Specifically, had they not known who we were and looked at our qualifications compared to the others, no. It wasn’t an overt thing, but remember my premise, when I first walked up to the microphone. There [are] historic patterns of discrimination that continue to exist and will continue to exist until the institutional processes are changed dramatically.”

—*Speaker representing several minority owned firms at October 2004 public hearing*

“Well, just hearsay in the good old arena. They don’t like to see minority contractors. They say they’re inexperienced; they don’t have any money to work the project. And they make them look like they’re just not smart people, because they’re minorities, they’re inexperienced, and have no money.”

—*Hispanic female-owned firm*

“Oh, yeah, I’ve been harassed. Like if something is not going right on the project, I mean, I have a project superintendent, and in one instance I had a project manager from the general contractor who wanted to see me on the field. And I saw that he was trying to intimidate me and trying to degrade me to a point. He wanted to see me on the field. He didn’t like the fact that I was — that I had my people working under me, that I would do everything over the phone, that I would only show up in the meetings that I needed to be at, and he wanted me in the field. And I said, ‘No. That’s why I have a project manager and I’m not going to walk the field with you.’ And that’s when I felt that he was discriminating for both woman and minority. So when I refused to meet him on the field at 6:00 one morning, he stopped my tab. He stopped my payments and he made up all kinds of stupid stuff about my getting paid, so I went above

him. I went to the CSR of the company and I walked into his office and I let him know, "And you either pay me or you're going to hear from my attorney," and I got paid. So it can be kind of difficult, too. You've got to be able to push your way around."

—Hispanic American female-owned firm

### **Failing to Win Contracts When Low Bid**

A few contractors recalled being low bid and not winning the bid. These comments concerned bids on private sector projects, and subcontractor bids, as opposed to prime contracts awarded by the City. For example, MGT was told:

"It has happened to me once or twice. We found out that we were the low bidder, but received a contract and then we found out someone else was doing the work. We didn't actually get the contract, but we were told verbally that we would get the contract (told by prime). I believe that it was JCI (no longer in business). Another incident was the contract states you are going to do \$20,000 worth of work and you only do \$2,000 worth of work. That has happened a couple of times. "

— WBE firm

"Happened this year on a CM@Risk job...We were told we were low bidder, but told it was a million dollar project and it was given to the next highest bidder. I guess they thought we weren't big enough to handle the job.

*Question:* Did you follow-up with the city?

*Answer:* No, I talked to [the prime] on it.

*Question:* What happened when you discussed it with the prime?

*Answer:* They said they discussed it with the City representative for the project and they thought it was in the better interest of the city to give it to the larger company, they felt more comfortable with the company.

*Question:* Do you think that the decision was because you are a woman-owned company?

*Answer:* No, I think more because of the size of my company."

— WBE firm

### **Informal Networks**

Many interviewees expressed the view that there was an informal network that constituted a barrier to new and M/WBE firms. Many interviewees deemed this a natural part of business. Some representative comments were:

“Yes, there is an informal network. It's easy to do what has always been done so that— tradition, historical experience, budgetary constraints, and the relationships that develop from doing business with people. The decision-makers get to know the people that they are doing business with and they become friends or have a stronger relationship and it becomes harder to change or accept somebody different.”

— *African American male-owned firm*

“I can only give you an observation, and that is that I see very, very few black or obviously Hispanic minorities in management positions, in construction companies or construction management firms.”

—*Certified small business firm at October 2004 public hearing*

“Absolutely, there is in any business. The Engineering community is small and tight knit group. It is difficult to get into that network and get that comfort level. You have to get into that inner circle.

*Question:* Do you think that a company's inability to get into that network affects the amount of business they receive?

*Answer:* Yes.

— *Native American male-owned firm*

“I would describe it as a network that has been built up over time, that there are companies that are favored based on track record or other relations that have been developed through the years. And, again, for me, it gets back to human nature. You want to work with those you feel comfortable with.”

— *African American male-owned firm*

“That network abides by the city's rules and provides the right answers. They check the right boxes. Then they turn around and do it their way.”

— *Native American male-owned firm*

However, there was a different view from a 50/50 WBE/MBE male owned firm:

*No, I think the city has tried to avoid the good ole boy network. Have they been successful to some degree? Yes, because they clearly state, “Don't make phone calls, don't contact the Council, don't talk to any city folks about this project.” I think they have made an attempt to not participate. Many of our private agencies that we do business with won't even go to lunch with us, won't even accept a Christmas gift.*

## **6.7 M/WBE Program**

### **6.7.2 Results from the Focus Group, Interviews, and Public Hearings**

#### **M/WBE Program Consistency**

Most M/WBEs wanted the M/WBE program to continue. At the same time, there were a number of interviewees who felt that certification had been of no benefit to the business development of their firms. Others felt that that program had not been applied consistently. Some vendors commenting on the City M/WBE program stated:

“It seems to us that the M/W/SBE program has not been embraced by the City's individual departments. It's treated as a voluntary or optional program for them to use if they want to. The program people themselves have been awesome.”

—*Speaker representing several woman-owned firms at  
October 2004 public hearing*

“No. [The M/WBE program has had] no impact on white collar professions. Zero progress in that area.”

—*African American female owned company*

#### **Bid Preference Program**

A few vendors expressed concern about certain City officials neglecting to implement the City bid preference for M/WBEs. One nonminority female stated that the bid preference was forgotten, “Occasionally, but not often. Sometimes it is an oversight. Buyers forget about the 5 percent advantage. They just say I’m sorry. I understand that.” Similarly, a Native American female stated, “Yes, I have called and people told me I was a nickel over and this and this. I tell them you know there is that 5 percent. I shouldn’t have to inform them of the 5 percent. I think a lot of it is they didn’t know.”

#### **M/WBE Utilization in the Absence of Goals**

M/WBE respondents were generally pessimistic as to whether prime contractors would use M/WBE subcontractors in the absence of an M/WBE program, although there were some differences of opinion on this topic. On the one hand, some contractors did feel that established relationships would persist even in the event of M/WBE program

termination. On the other hand, as one Native American female stated, “No. No way. Absolutely no way with the six years experience I have.” Comments such as the following were common:

“No, they would not. Not using them now. They are not using them when the goals are in place.

*Question:* Do you get work from the primes on the private sector side?

*Answer:* No. The only reason they are calling is because they have to.”  
—*Native American male-owned firm*

“I think they feel it [M/WBE goals] is a hassle.”

*Question:* What gives you that impression?

*Answer:* I used to work for a prime contractor and I know the attitude I see a little bit of it when talking to a prime. In most cases it is an obligation and they are not really happy about it.”

— *WBE firm*

“I think if they have used minorities before than they would be more prone to use them again. If they haven’t experienced working with a minority business, then they are more prone to not use them.

*Question:* Why do you say that?

*Answer:* Prime contractors are reluctant to use minority owned businesses.

*Question:* Do you think that reluctance has anything to do with gender or race?

*Answer:* I think so.”

— *WBE firm*

## **6.8 Conclusions**

Overall, many of the concerns expressed by M/WBEs were also shared by non-M/WBEs in the telephone survey. The major concerns by M/WBE primes in the surveys were: information and expense of bidding, the size of contracts, and design-build. The major concerns of M/WBE subcontractors in the surveys were lack of response to bids,

bid shopping, and payment issues with primes. About 7 percent of M/WBEs reported discrimination in the survey. There were not a large number of specific incidents of discrimination by the City reported in the anecdotal testimony.

Major concerns in anecdotal testimony were: the advantages possessed by large and vendors with existing City contracts, construction management at risk, bid shopping, the impediments to opportunity resulting from informal networks, and discrimination in the private sector.

Although this chapter reports negative comments, most vendors did want the M/WBE program to stay in place and felt that the program was generally helpful when it was applied consistently. Most M/WBE vendors were skeptical of their ability to secure subcontracting work in the absence of the City M/WBE program.

**7.0 PRIVATE SECTOR  
UTILIZATION AND DISPARITY  
ANALYSES**

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## **7.0 PRIVATE SECTOR UTILIZATION AND DISPARITY ANALYSES**

Having already examined disparities in city procurement in Chapter 5.0, in this chapter we examine disparities in private sector M/WBE utilization by analyzing M/WBE utilization relative to availability in Maricopa County's relevant market to determine whether minority, women, or nonminority businesses are underutilized or overutilized in private sector commercial construction. (A separate analysis of disparities in the market for small business loans is contained in **Appendix AA**).

This chapter is composed of the following sections:

- 7.1 Rationale and Methodology
- 7.2 Utilization Analysis
- 7.3 Availability Analysis
- 7.4 Disparity Analysis
- 7.5 Comparison of City of Phoenix and Private Sector Utilization of M/WBE Contractors
- 7.6 Analysis of Race/Gender/Ethnicity Effects on Self-Employment and Earnings
- 7.7 Conclusions

### **7.1 Rationale and Methodology**

#### **Rationale**

*Croson* provided government that "can use its spending powers to remedy private discrimination, if it identifies that discrimination with the particularity required by the Fourteenth Amendment."<sup>1</sup> Government's active and passive participation in discriminatory practices in the marketplace may show the compelling interest. Findings of discrimination in the portions of the private sector economy that are subjects of the

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<sup>1</sup> See *Richmond v. Croson*, 488 U.S. 492 (1989).

disparity study can also show passive participation. In *Croson*, the Court stated, “A municipality has a compelling government interest in redressing not only discrimination committed by the municipality itself, but also discrimination committed by private parties within the municipality’s legislative jurisdiction, so long as the municipality in some way participated in the discrimination to be remedied by the program.”<sup>2</sup> The recent Court of Appeals decision in *Adarand* concluded that there was a compelling interest for a disadvantage business enterprise (DBE) program based primarily on evidence of private sector discrimination.<sup>3</sup> Consequently, private sector analysis of the business dynamics affecting M/WBEs in the marketplace addresses the issue of government’s “compelling interest” in redressing the presence of private sector discrimination.

### **Methodology**

#### **7.1.1 Data Collection for the Private Sector Analysis**

The purpose of this analysis was to compare the City of Phoenix’s construction contracting to that of the private sector contracting practices to determine if there were disparities in M/WBE utilization. To compare City and private sector procurement and private sector construction analysis, MGT relied primarily on City building permit data.<sup>4</sup> For the most reliable analysis, MGT contacted the City of Phoenix to obtain building permit data to use for comparison purposes. Appropriate permits are required for any building construction, alteration, or repair project involving new or changed uses of property (other than noncapital repairs).

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<sup>2</sup> *Croson*, 488 U.S. 46, 109 S. Ct. at 720-21, 744-45.

<sup>3</sup> *Adarand v. Slater*, 228 F.3d 1147 (10<sup>th</sup> Cir 2000).

<sup>4</sup> Data from two other sources—: Reed Construction Data (RCD) and *F.W. Dodge*—were also reviewed but proved to be incomplete for this analysis. Although RCD’s subcontract data was incomplete and unusable, Reed’s prime contracting data was sufficient for a prime contractor analysis (**Appendix V**), results of which are summarized briefly in this chapter.

Building permit data fields included:

- Permit number
- Contractor name
- Contractor number
- Contractor address—city, state, and ZIP code
- Project descriptions
- Job work category
- Permit cost

Data were provided in Excel spreadsheet format by the City's Development Services Department. To isolate only commercial construction projects as the focus of analysis, public sector and residential building permit records were eliminated. Permits were categorized by the City according to two categories: prime contracts and subcontracts. Since building permit data provided no contractor ethnicity information, MGT compared permit data to its Master Vendor Database to assign ethnicity to contractors issued building permits.

The data were classified as prime and subcontractor by the City staff maintaining the database. For the period from July 1, 1999, to June 30, 2004, 4,059 prime contractors received permits for a total of \$324 million in building projects. For construction subcontractors,<sup>5</sup> there were 5,277 records accounting for nearly \$58 million.

#### **7.1.2. Private Sector Disparity Analysis Methodology**

When data were compiled, an analysis was undertaken to determine the presence or absence of passive discrimination in the private sector to determine if there was evidence in data to support anecdotal comments summarized in Chapter 6.0 regarding difficulties experienced by M/WBEs in securing work on private sector projects. In later sections of this chapter, findings are presented in response to the following questions:

- Are there disparities in utilization of M/WBEs as prime contractors on commercial, private-sector construction projects?

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<sup>5</sup> Data were based on building permits that could be classified as being work relative to subcontractor work (i.e., light construction services).

- Are there disparities in utilization of M/WBEs as subcontractors on commercial private sector construction projects?
- Do M/WBE subcontractors that perform on City of Phoenix projects also perform on private sector jobs?
- How does the rate of M/WBE subcontractor utilization by prime contractors on City of Phoenix projects compare to the rate of such utilization on similar private sector projects?
- Are there disparities in the entry into the market and earnings from self-employment for women and minorities after controlling for significant personal characteristics that impact on entry into and earnings from self-employment?

### **7.1.3 Vendor Availability Methodology**

Since there are no vendor lists or bidder lists for private sector construction availability, MGT compared Maricopa County census data from the 1992 and 1997 SMOBE/SWOBE reports.<sup>6</sup> Although it was possible to proceed with an availability analysis, it is, however, noteworthy that the Census Bureau's data methodology changed from 1992 to 1997 for its SMOBE/SWOBE reports:

- The 1997 SMOBE/SWOBE consolidated all operations under the same ownership into one business irrespective of the number of company employer identification numbers (EIN); the 1992 SMOBE/SWOBE treated each separate EIN as a separate business. This method reduced the count of businesses in the 1997 SMOBE/SWOBE data.
- The 1997 SMOBE/SWOBE included businesses with 51 percent minority ownership as minority owned, whereas the 1992 SMOBE/SWOBE included firms with 50 percent minority ownership as a minority firm. This method reduced the count of minority firms in the 1997 SMOBE/SWOBE data.
- The 1997 SMOBE/SWOBE identified sole proprietors as those firms that filed an IRS Form 941, while the 1992 SMOBE/SWOBE identified sole proprietors based on the filings of IRS Schedule C. This method resulted in a decrease in the count of firms with paid employees in the 1997 SMOBE/SWOBE data.

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<sup>6</sup> Information from the 2002 SMOBE/SWOBE data will not be available from the Census Bureau until 2006.

## **7.2 Utilization Analysis: Findings**

This section reports utilization of M/WBE and non-M/WBE firms for construction services for the City within the Maricopa County relevant market area.

### **7.2.1 Prime Building Permits**

As **Exhibit 7-1** indicates, within the relevant market area, there were \$324 million in prime commercial construction building permits during the five-year study interval. For all categories of contractor, the average permit amount was \$79,808, compared with an average of \$24,283 for permits received by M/WBEs.<sup>7</sup> Of total dollars spent, M/WBEs received 2.44 percent (\$7.9 million) in prime commercial construction building permits and MBEs (i.e., excluding WBEs) received 2.03 percent (\$6.56 million). WBEs received \$1.33 million (or approximately 0.41 percent of the M/WBE total) in prime commercial building permits. When permit data was compared with Reed Construction Data (RCD), RCD recorded that M/WBEs won 1.02 percent of prime contract dollars.

Additional findings from the building permit data include:

- African American firms' overall prime building permit utilization in commercial construction during the study period was 0.07 percent.
- Hispanic American firms' overall prime building permit utilization in commercial construction during the study period was 1.23 percent.
- Asian American firms' overall prime building permit utilization in commercial construction during the study period was 0.74 percent.
- Native American firms' overall prime building permit utilization in commercial construction during the study period was 0.0 percent.
- Nonminority women firms' overall prime building permit utilization in commercial construction during the study period was 0.41 percent.

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<sup>7</sup> In the RCD data, the average prime project was \$998,038.

**EXHIBIT 7-1  
CITY OF PHOENIX  
BUILDING PERMIT DATA FOR NONPUBLIC WORKS PROJECTS  
IN THE RELEVANT MARKET AREA  
UTILIZATION ANALYSIS OF PRIME CONTRACTORS  
DOLLARS AND PERCENTAGE OF TOTAL DOLLARS  
BY RACE/ETHNICITY/GENDER CLASSIFICATION**

Total Dollars	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Nonminority Firms		Total Dollars Awarded
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$
2000	\$3,000.00	0.01%	\$5,000.00	0.02%	\$150,000.00	0.58%	\$0.00	0.00%	\$561,600.00	2.16%	\$719,600.00	2.77%	\$25,233,875.18	97.23%	\$25,953,475.18
2001	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$500.00	0.00%	\$14,930.00	0.01%	\$15,430.00	0.01%	\$152,217,191.80	99.99%	\$152,232,621.80
2002	\$195,891.84	1.22%	\$844,432.00	5.25%	\$0.00	0.00%	\$0.00	0.00%	\$240,474.00	1.49%	\$1,280,797.84	7.96%	\$14,804,866.03	92.04%	\$16,085,663.87
2003	\$22,451.00	0.03%	\$1,011,333.94	1.28%	\$591,320.80	0.75%	\$0.00	0.00%	\$487,530.00	0.62%	\$2,112,635.74	2.67%	\$76,880,857.51	97.33%	\$78,993,493.25
2004	\$0.00	0.00%	\$2,115,542.76	4.17%	\$1,647,961.60	3.25%	\$0.00	0.00%	\$23,868.00	0.05%	\$3,763,504.36	7.43%	\$46,914,065.76	92.57%	\$50,677,570.12
<b>Total</b>	\$221,342.84	0.07%	\$3,976,308.70	1.23%	\$2,389,282.40	0.74%	\$500.00	0.00%	\$1,328,402.00	0.41%	\$7,891,967.94	2.44%	\$316,050,856.28	97.56%	\$323,942,824.22

Source: Building permit data from Phoenix.

<sup>1</sup> Percentage of total dollars awarded annually to prime contractors.

**Exhibit 7-2** reports private commercial M/WBE prime contractor utilization by the number of building permits issued to unique (i.e., nonduplicated) vendors in the Maricopa County market area. In all, 49 M/WBE firms received 333 prime contract building permits, or 8.20 percent of the total of utilized firms. Of the M/WBE groups, 14 nonminority women-owned firms received 198 (4.88%) of prime building contracts.

From **Exhibit 7-2**, we can also observe that:

- 4 African American firms received 9 prime private-sector commercial building permits;
- 4 Asian American firms received 8 prime private-sector commercial building permits;
- 26 Hispanic American firms received 117 prime private-sector commercial building permits; and
- 1 Native American firm received 1 private-sector commercial building permit.

**EXHIBIT 7-2  
CITY OF PHOENIX  
BUILDING PERMIT DATA  
UTILIZATION ANALYSIS OF PRIME CONTRACTORS  
IN THE RELEVANT MARKET AREA  
NUMBER OF BUILDING PERMITS ISSUED  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Total Permits	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Nonminority Firms		Total Permits
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	
2000	3	0.49%	9	1.47%	1	0.16%	0	0.00%	23	3.76%	36	5.89%	575	94.11%	611
2001	0	0.00%	13	1.80%	0	0.00%	1	0.02%	27	3.74%	41	5.68%	681	94.32%	722
2002	2	0.26%	24	3.17%	0	0.45%	0	0.00%	38	5.01%	64	8.44%	694	91.56%	758
2003	3	0.35%	30	3.51%	2	0.23%	0	0.00%	57	6.67%	92	10.77%	762	89.23%	854
2004	1	0.09%	41	3.68%	5	0.45%	0	0.00%	53	4.76%	100	8.98%	1,014	91.02%	1,114
<b>Total</b>	<b>9</b>	<b>0.22%</b>	<b>117</b>	<b>2.88%</b>	<b>8</b>	<b>0.20%</b>	<b>1</b>	<b>0.02%</b>	<b>198</b>	<b>4.88%</b>	<b>333</b>	<b>8.20%</b>	<b>3,726</b>	<b>91.80%</b>	<b>4,059</b>

Source: City of Phoenix Building Permit Data.

<sup>1</sup> Percentage of Total Permits.

<sup>2</sup> Percentage of Total Vendors.

**EXHIBIT 7-2 (Continued)  
CITY OF PHOENIX  
BUILDING PERMIT DATA  
UTILIZATION ANALYSIS OF PRIME CONTRACTORS  
IN THE RELEVANT MARKET AREA  
NUMBER OF UNIQUE PRIME CONTRACTORS  
BY/RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Total Vendors	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Nonminority Firms		Total Vendors
	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	
2000	3	0.58%	9	1.75%	1	0.19%	0	0.00%	23	4.48%	36	7.02%	477	92.98%	513
2001	0	0.00%	13	2.10%	0	2.10%	1	0.16%	27	4.35%	41	6.61%	579	93.39%	620
2002	0	0.00%	24	3.34%	0	3.34%	0	0.00%	38	5.29%	62	8.62%	657	91.38%	719
2003	3	0.38%	30	3.76%	2	3.76%	0	0.00%	57	7.14%	92	11.53%	706	88.47%	798
2004	1	0.09%	41	3.88%	5	3.88%	0	0.00%	52	4.92%	99	9.37%	958	90.63%	1,057
<b>Unique Vendors</b>	<b>4</b>	<b>1.16%</b>	<b>26</b>	<b>7.56%</b>	<b>4</b>	<b>7.56%</b>	<b>1</b>	<b>0.29%</b>	<b>14</b>	<b>4.07%</b>	<b>49</b>	<b>14.24%</b>	<b>295</b>	<b>85.76%</b>	<b>344</b>

Source: City of Phoenix Building Permit Data.

<sup>1</sup> Percentage of Total Permits.

<sup>2</sup> Percentage of Total Vendors.

**7.2.2 Subcontract Building Permits**

**Exhibit 7-3** reports the utilization of M/WBE and non-M/WBE subcontractors. Overall, MBEs received \$1.87 million (3.24 %) in private sector commercial subcontract building permits, and nonminority women received 1.34 percent. The average M/WBE subcontractor building permit was valued at \$8,330.

Additional findings include:

- African American firms received \$256,000 in construction subcontract building permits, or 0.43 percent of the total commercial construction subcontract building permits dollars.
- Hispanic American received \$1.58 million in construction subcontract building permits, or 2.72 percent of the total commercial construction subcontract building permit dollars.
- Asian American firms received about \$42,640 in commercial construction subcontracting building permits, or 0.07 percent of the total.
- Native American firms did not receive any commercial construction subcontracting building permits.
- Women firms received about \$776,000 in commercial construction subcontracting building permits, or 1.34 percent of the total.
- Nonminority male-owned firms received 95.42 percent of all commercial construction subcontracting building permits.



**EXHIBIT 7-3  
CITY OF PHOENIX  
BUILDING PERMIT DATA  
UTILIZATION ANALYSIS OF SUBCONTRACTORS  
IN THE RELEVANT MARKET AREA  
DOLLARS AND PERCENTAGE OF TOTAL DOLLARS  
BY/RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Total Dollars	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Nonminority Firms		Total Dollars Awarded
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	
2000	\$14,000.00	0.08%	\$255,714.00	1.37%	\$0.00	0.00%	\$0.00	0.00%	\$381,870.00	2.05%	\$651,584.00	3.50%	\$17,985,443.85	96.50%	\$18,637,027.85
2001	\$0.00	0.00%	\$213,692.00	1.90%	\$42,640.00	0.38%	\$0.00	0.00%	\$127,000.00	1.13%	\$383,332.00	3.42%	\$10,836,183.00	96.58%	\$11,219,515.00
2002	\$13,000.00	0.18%	\$264,659.23	3.56%	\$0.00	0.00%	\$0.00	0.00%	\$23,000.00	0.31%	\$300,659.23	4.05%	\$7,127,331.68	95.95%	\$7,427,990.91
2003	\$228,684.21	4.65%	\$385,402.22	7.83%	\$0.00	0.00%	\$0.00	0.00%	\$241,400.00	4.90%	\$855,486.43	17.38%	\$4,067,465.48	82.62%	\$4,922,951.91
2004	\$0.00	0.00%	\$455,287.55	2.91%	\$0.00	0.00%	\$0.00	0.00%	\$2,586.00	0.02%	\$457,873.55	2.93%	\$15,181,557.04	97.07%	\$15,639,430.59
<b>Total</b>	<b>\$255,684.21</b>	<b>0.44%</b>	<b>\$1,574,755.00</b>	<b>2.72%</b>	<b>\$42,640.00</b>	<b>0.07%</b>	<b>\$0.00</b>	<b>0.00%</b>	<b>\$775,856.00</b>	<b>1.34%</b>	<b>\$2,648,935.21</b>	<b>4.58%</b>	<b>\$55,197,981.05</b>	<b>95.42%</b>	<b>\$57,846,916.26</b>

Source: City of Phoenix Building Permit Data.

<sup>1</sup> Percentage of total dollars awarded annually to prime contractors.

**Exhibit 7-4** reports private commercial M/WBE subcontractor utilization by the number of building permits issued to unique vendors in the Maricopa County relevant market, indicating that 31 M/WBE firms received 318 total building permits for commercial subcontracting work, 6.03 percent of the total. The average subcontract building permit value was \$10,962. but M/WBEs' average subcontract building permit value was \$8,330 compared with \$11,131 for nonminority male-owned firms. Other findings indicate that:

- 2 African American firms received 14 private sector building permits for commercial subcontracting work;
- 16 Hispanic American firms received 220 building permits for commercial subcontracting work;
- 1 Asian American firm received 1 private sector building permit for commercial subcontracting work;
- 1 Native American firm received 18 building permits for commercial subcontracting work;
- 10 nonminority women firms received 65 private sector building permits for commercial subcontracting work; and
- 246 nonminority male-owned firms received 93.97 percent of all commercial construction subcontracting building permits.

**EXHIBIT 7-4  
CITY OF PHOENIX  
BUILDING PERMIT DATA  
UTILIZATION ANALYSIS OF SUBCONTRACTORS  
IN THE RELEVANT MARKET AREA  
NUMBER OF BUILDING PERMITS ISSUED  
BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Total Permits	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Nonminority Firms		Total Permits
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	
2000	3	0.25%	71	5.97%	0	0.00%	10	0.84%	12	1.01%	96	8.07%	1,093	91.93%	1,189
2001	0	0.00%	67	4.66%	1	0.07%	2	0.04%	17	1.18%	87	6.05%	1,351	93.95%	1,438
2002	2	0.20%	23	2.34%	0	0.00%	2	0.20%	13	1.32%	40	4.06%	945	95.94%	985
2003	8	0.99%	26	3.23%	0	0.00%	0	0.00%	14	1.74%	48	5.96%	758	94.04%	806
2004	1	0.12%	33	3.84%	0	0.00%	4	0.47%	9	1.05%	47	5.47%	812	94.53%	859
<b>Total</b>	<b>14</b>	<b>0.27%</b>	<b>220</b>	<b>4.17%</b>	<b>1</b>	<b>0.02%</b>	<b>18</b>	<b>0.34%</b>	<b>65</b>	<b>1.23%</b>	<b>318</b>	<b>6.03%</b>	<b>4,959</b>	<b>93.97%</b>	<b>5,277</b>

Source: City of Phoenix Building Permit Data.

<sup>1</sup> Percentage of Total Permits

<sup>2</sup> Percentage of Total Vendors.

**EXHIBIT 7-4 (Continued)  
CITY OF PHOENIX  
BUILDING PERMIT DATA  
UTILIZATION ANALYSIS OF SUBCONTRACTORS  
IN THE RELEVANT MARKET AREA  
NUMBER OF UNIQUE SUBCONTRACTORS  
BY/RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Total Vendors	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Nonminority Firms		Total Vendors
	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	
2000	3	0.27%	71	6.40%	0	0.00%	10	0.90%	12	1.08%	96	8.65%	1,014	91.35%	1,110
2001	0	0.00%	67	5.12%	1	5.12%	2	0.15%	17	1.30%	87	6.65%	1,222	93.35%	1,309
2002	2	0.21%	23	2.46%	0	2.46%	2	0.21%	13	1.39%	40	4.28%	894	95.72%	934
2003	8	1.03%	26	3.36%	0	3.36%	0	0.00%	14	1.81%	48	6.20%	726	93.80%	774
2004	1	0.12%	33	4.11%	0	4.11%	4	0.50%	9	1.12%	47	5.86%	755	94.14%	802
<b>Unique Vendors</b>	<b>2</b>	<b>0.72%</b>	<b>16</b>	<b>5.78%</b>	<b>2</b>	<b>5.78%</b>	<b>1</b>	<b>0.36%</b>	<b>10</b>	<b>3.61%</b>	<b>31</b>	<b>11.19%</b>	<b>246</b>	<b>88.81%</b>	<b>277</b>

Source: City of Phoenix Building Permit Data.

<sup>1</sup> Percentage of Total Permits

<sup>2</sup> Percentage of Total Vendors.

**7.3 Availability Analysis: Findings**

Exhibits 7-6 and 7-7 display availability calculations for prime contractors and subcontractors, according to race/ethnicity/gender categories.

**7.3.1 Construction Prime Contractor Availability**

As Exhibit 7-6 indicates, nonminority male-owned firms comprised the majority of available prime contractor construction firms and M/WBEs constituted about 15.38 percent of the prime contractor firms, reported by M/WBE category as follows:

- African American firms, 0.43 percent;
- Asian American firms, 0.00 percent;
- Hispanic American firms, 4.44 percent;
- Native American firms, 0.82 percent; and
- Nonminority women firms, 9.69 percent.

**EXHIBIT 7-6  
CITY OF PHOENIX  
CONSTRUCTION CENSUS VENDORS SIC CODES 15 & 16  
BASED ON CENSUS DATA  
IN THE RELEVANT MARKET AREA  
CALENDAR YEAR 1997**

Total Dollars	African Americans <sup>1</sup>		Hispanic Americans <sup>1</sup>		Asian Americans <sup>1</sup>		Native Americans <sup>1</sup>		Nonminority Women <sup>2</sup>		M/WBE Subtotal		Nonminority Firms <sup>3</sup>		Total Firms <sup>4</sup>
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
1997	10	0.43%	103	4.44%	0	0.00%	19	0.82%	225	9.69%	357	15.38%	1,964	84.62%	2,321

Source: U.S. Bureau of the Census, 1997

NOTE: Details may not add to Total Firms due to rounding.

<sup>1</sup> Minority men and women firms are included in their respective minority classifications.

<sup>2</sup> The number of nonminority women firms was estimated by subtracting the number of minority women-owned firms from the census count of total women-owned firms.

<sup>3</sup> Number of nonminority firms derived by subtracting all M/W/DBE firms from total firms.

<sup>4</sup> Total firms derived from the U.S. Bureau of Census and County Business Patterns.

**7.3.2 Construction Subcontractor Availability**

At the subcontractor level, it can be seen from Exhibit 7-7 that nonminority male-owned firms comprised the majority of available subcontractor construction firms (83.29%). Total M/WBE availability, 16.71 percent, breaks down by M/WBE category as follows:

- African American firms, 0.48 percent;
- Hispanic American firms, 7.31 percent;
- Asian American firms, 0.26 percent
- Native American firms, 0.49 percent; and
- Nonminority women firms, 8.17 percent.

**EXHIBIT 7-7  
CITY OF PHOENIX  
CONSTRUCTION CENSUS VENDORS SIC CODES 15, 16, and 17  
AVAILABILITY OF SUBCONTRACTORS  
IN THE RELEVANT MARKET AREA  
BASED ON CENSUS DATA  
CALENDAR YEAR 1997**

Total Dollars	African Americans <sup>1</sup>		Hispanic Americans <sup>1</sup>		Asian Americans <sup>1</sup>		Native Americans <sup>1</sup>		Nonminority Women <sup>2</sup>		M/WBE Subtotal		Nonminority Firms <sup>3</sup>		Total Firms <sup>4</sup>
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
1997	37	0.48%	568	7.31%	20	0.26%	38	0.49%	635	8.17%	1,298	16.71%	6,472	83.29%	7,770

Source: U.S. Bureau of the Census, 1997

NOTE: Details may not add to Total Firms due to rounding.

<sup>1</sup> Minority men and women firms are included in their respective minority classifications.

<sup>2</sup> The number of nonminority women firms was estimated by subtracting the number of minority women-owned firms from the census count of total women-owned firms.

<sup>3</sup> Number of nonminority firms derived by subtracting all M/W/DBE firms from total firms.

<sup>4</sup> Total firms derived from the U.S. Bureau of Census and County Business Patterns.

## **7.4 Disparity Analysis**

As described in Chapter 5.0, disparity in vendor utilization by race, ethnicity, and gender categories is determined by comparing utilization by category to vendor availability by category in the relevant market area to derive a disparity index that tells us if an M/WBE category has been underutilized or overutilized.

### **7.4.1 Prime Contractor Building Permits**

**Exhibit 7-8** reports disparity indices for prime construction building permits based on census availability of vendors within the race, ethnicity, and gender categories. Overall, in City of Phoenix's relevant market area, all categories but Hispanic Americans were underutilized as prime contractors in private sector, commercial construction. From

**Exhibit 7-8**, we also find that:

- African American firms were substantially underutilized as prime contractors in the study, with a disparity index of 15.86.
- Hispanic American firms were substantially underutilized as prime contractors, with a disparity index of 27.66.

- Native American firms were substantially underutilized, with a disparity index of 0.02.
- Nonminority women firms were substantially underutilized, with a disparity index of 4.23.
- Nonminority male firms were overutilized, having a 115.30 disparity index.

**EXHIBIT 7-8  
CITY OF PHOENIX  
PRIVATE SECTOR CONSTRUCTION  
DISPARITY ANALYSIS OF PRIME CONTRACTORS  
IN THE RELEVANT MARKET AREA  
BASED ON CENSUS DATA  
FISCAL YEARS 2000 THROUGH 2004**

<b>M/WBE Classification</b>	<b>% of Contract Dollars<sup>1</sup></b>	<b>% of Available Firms<sup>2</sup></b>	<b>Disparity Index<sup>3</sup></b>	<b>Disparate Impact of Utilization</b>
<b>Fiscal Year 1999 - 2000</b>				
African Americans	0.01%	0.43%	2.68	* Underutilization
Hispanic Americans	0.02%	4.44%	0.43	* Underutilization
Asian Americans	0.58%	0.00%	N/A <sup>4</sup>	N/A <sup>4</sup>
Native Americans	0.00%	0.82%	0.00	* Underutilization
Nonminority Women	2.16%	9.69%	22.32	* Underutilization
Nonminority Firms	97.23%	84.62%	114.90	Overutilization
<b>Fiscal Year 2000 - 2001</b>				
African Americans	0.00%	0.43%	0.00	* Underutilization
Hispanic Americans	0.00%	4.44%	0.00	* Underutilization
Asian Americans	0.00%	0.00%	N/A <sup>4</sup>	N/A <sup>4</sup>
Native Americans	0.00%	0.82%	0.04	* Underutilization
Nonminority Women	0.01%	9.69%	0.10	* Underutilization
Nonminority Firms	99.99%	84.62%	118.17	Overutilization
<b>Fiscal Year 2001 - 2002</b>				
African Americans	1.22%	0.43%	282.65	Overutilization
Hispanic Americans	5.25%	4.44%	118.29	Overutilization
Asian Americans	0.00%	0.00%	N/A <sup>4</sup>	N/A <sup>4</sup>
Native Americans	0.00%	0.82%	0.00	* Underutilization
Nonminority Women	1.49%	9.69%	15.42	* Underutilization
Nonminority Firms	92.04%	84.62%	108.77	Overutilization
<b>Fiscal Year 2002 - 2003</b>				
African Americans	0.03%	0.43%	6.60	* Underutilization
Hispanic Americans	1.28%	4.44%	28.85	* Underutilization
Asian Americans	0.75%	0.00%	N/A <sup>4</sup>	N/A <sup>4</sup>
Native Americans	0.00%	0.82%	0.00	* Underutilization
Nonminority Women	0.62%	9.69%	6.37	* Underutilization
Nonminority Firms	97.33%	84.62%	115.02	Overutilization
<b>Fiscal Year 2003 - 2004</b>				
African Americans	0.00%	0.43%	0.00	* Underutilization
Hispanic Americans	4.17%	4.44%	94.07	Underutilization
Asian Americans	3.25%	0.00%	N/A <sup>4</sup>	N/A <sup>4</sup>
Native Americans	0.00%	0.82%	0.00	* Underutilization
Nonminority Women	0.05%	9.69%	0.49	* Underutilization
Nonminority Firms	92.57%	84.62%	109.40	Overutilization
<b>All Fiscal Years</b>				
African Americans	0.07%	0.43%	15.86	* Underutilization
Hispanic Americans	1.23%	4.44%	27.66	* Underutilization
Asian Americans	0.74%	0.00%	N/A <sup>4</sup>	N/A <sup>4</sup>
Native Americans	0.00%	0.82%	0.02	* Underutilization
Nonminority Women	0.41%	9.69%	4.23	* Underutilization
Nonminority Firms	97.56%	84.62%	115.30	Overutilization

Source: U.S. Census data 1997.

<sup>1</sup> The percentage of dollars is taken from the prime utilization exhibit previously shown in Chapter 4.0.

<sup>2</sup> The percentage of available contractors is taken from the availability exhibit previously shown in Exhibit 7-6.

<sup>3</sup> The disparity index is the ratio of % utilization to % availability times 100.

<sup>4</sup> Census data showed zero availability for Asian Americans

\* An asterisk is used to indicate a substantial level of disparity - index below 80.00.

**7.4.2 Subcontract Building Permits**

**Exhibit 7-9** reports disparity indices by race, ethnicity, and gender categories for subcontract building permits, based on vendor availability data, indicating that all M/WBE categories were underutilized for the overall study period. Further analysis shows that all of the M/WBE categories with the exception of Hispanic Americans were substantially underutilized. Other observations include the following:

- African American firms were substantially underutilized as subcontractors in the study, with a disparity index of 55.71.
- Hispanic American firms were substantially underutilized as subcontractors, with a disparity index of 57.03.
- Native American firms were also substantially underutilized as subcontractors, with a disparity index of 69.75.
- Nonminority women firms were substantially underutilized as subcontractors, with a disparity index of 15.07.
- Nonminority male firms were overutilized as subcontractors. The 112.82 disparity index for non-M/WBEs indicates that they were substantially overutilized.

**EXHIBIT 7-9  
CITY OF PHOENIX  
PRIVATE SECTOR CONSTRUCTION  
DISPARITY ANALYSIS OF SUBCONTRACTORS  
IN THE RELEVANT MARKET AREA  
BASED ON CENSUS DATA  
FISCAL YEARS 2000 THROUGH 2004**

M/WBE Classification	% of Contract Dollars <sup>1</sup>	% of Available Firms <sup>2</sup>	Disparity Index <sup>3</sup>	Disparate Impact of Utilization
<b>Fiscal Year 1999 - 2000</b>				
African Americans	0.25%	0.48%	52.99	* Underutilization
Hispanic Americans	5.97%	7.31%	81.69	Underutilization
Asian Americans	0.00%	0.26%	N/A <sup>4</sup>	N/A <sup>4</sup>
Native Americans	0.84%	0.49%	171.97	Overutilization
Nonminority Women	1.01%	8.17%	12.35	* Underutilization
Nonminority Firms	91.93%	83.29%	110.36	Overutilization
<b>Fiscal Year 2000 - 2001</b>				
African Americans	0.00%	0.48%	0.00	* Underutilization
Hispanic Americans	4.66%	7.31%	63.74	* Underutilization
Asian Americans	0.07%	0.26%	N/A <sup>4</sup>	N/A <sup>4</sup>
Native Americans	0.04%	0.49%	7.75	* Underutilization
Nonminority Women	1.18%	8.17%	14.47	* Underutilization
Nonminority Firms	93.95%	83.29%	112.79	Overutilization
<b>Fiscal Year 2001 - 2002</b>				
African Americans	0.20%	0.48%	42.64	* Underutilization
Hispanic Americans	2.34%	7.31%	31.94	* Underutilization
Asian Americans	0.00%	0.26%	N/A <sup>4</sup>	N/A <sup>4</sup>
Native Americans	0.20%	0.49%	41.52	* Underutilization
Nonminority Women	1.32%	8.17%	16.15	* Underutilization
Nonminority Firms	95.94%	83.29%	115.18	Overutilization
<b>Fiscal Year 2002 - 2003</b>				
African Americans	0.99%	0.48%	208.44	Overutilization
Hispanic Americans	3.23%	7.31%	44.13	* Underutilization
Asian Americans	0.00%	0.26%	N/A <sup>4</sup>	N/A <sup>4</sup>
Native Americans	0.00%	0.49%	0.00	* Underutilization
Nonminority Women	1.74%	8.17%	21.25	* Underutilization
Nonminority Firms	94.04%	83.29%	112.91	Overutilization
<b>Fiscal Year 2003 - 2004</b>				
African Americans	0.12%	0.48%	24.45	* Underutilization
Hispanic Americans	3.84%	7.31%	52.55	* Underutilization
Asian Americans	0.00%	0.26%	N/A <sup>4</sup>	N/A <sup>4</sup>
Native Americans	0.47%	0.49%	95.21	Underutilization
Nonminority Women	1.05%	8.17%	12.82	* Underutilization
Nonminority Firms	94.53%	83.29%	113.49	Overutilization
<b>All Fiscal Years</b>				
African Americans	0.27%	0.48%	55.71	* Underutilization
Hispanic Americans	4.17%	7.31%	57.03	* Underutilization
Asian Americans	0.02%	0.26%	N/A <sup>4</sup>	N/A <sup>4</sup>
Native Americans	0.34%	0.49%	69.75	* Underutilization
Nonminority Women	1.23%	8.17%	15.07	* Underutilization
Nonminority Firms	93.97%	83.29%	112.82	Overutilization

Source: U.S. Census data 1997.

<sup>1</sup> The percentage of dollars is taken from the prime utilization exhibit previously shown in Chapter 4.0.

<sup>2</sup> The percentage of available contractors is taken from the availability exhibit previously shown in Exhibit 7-7.

<sup>3</sup> The disparity index is the ratio of % utilization to % availability times 100.

<sup>4</sup> Census data showed zero availability for Asian Americans

\* An asterisk is used to indicate a substantial level of disparity - index below 80.00.

**7.5 Comparison of City of Phoenix and Private Sector Utilization of M/WBE Contractors**

When City of Phoenix and private-sector M/WBE subcontractor utilization was compared, it was found that the City utilized M/WBE vendors to a far greater extent—with the City utilizing 143 unique M/WBE subcontractors compared with only 31 unique M/WBE subcontractors utilized by private sector firms (See again **Exhibit 7-4**). City data indicated that M/WBE firms were utilized in 702 subcontracts totaling \$56.7 million. In the private sector, M/WBE firms accounted for 318 subcontract commercial building permits (6.03%) totaling \$2.64 million (4.58%).

In prime contracting, 28 M/WBE prime contractors were awarded 249 prime contracts by the City totaling \$91.5 million (or 7.02% of total spending), compared with 49 M/WBEs who received private sector construction contracts awards related to 333 building permits, or 8.20% of all building permits issued, totaling \$7.9 million (2.44%). (See again **Exhibits 7-1 and 7-2**).

**7.6 Analysis of Race/Gender/Ethnicity Effects on Self-Employment and Earnings**

This section analyzes the availability of minority, nonminority women, and nonminority male firms in five categories of private sector business activity in the City of Phoenix Consolidated Metropolitan Statistical Area (CMSA). The goal of this investigation is to examine the effects of race and gender, along with other individual economic and demographic characteristics, on individuals' participation in the private sector as self-employed business operators, and on their earnings as a result of their participation. Ultimately, we will compare these findings to the self-employment participation and earnings record of nonminority male business owners to determine if a



disparity in self-employment rates and earnings exists, and if it is attributable to racial/gender discrimination in the marketplace.

Data for this investigation are provided by the Public Use Microdata Samples (PUMS) data derived from the 2000 Census of Population and Housing, to which we apply appropriate regression statistics to draw conclusions. **Exhibit 7-10** presents a general picture of self-employment rates by race, median earnings, and sample sizes (n's) in the City of Phoenix CMSA, calculated from the Five Percent PUMS census sample.

**EXHIBIT 7-10  
PERCENTAGE SELF-EMPLOYED/1999 EARNINGS BY  
RACE/GENDER/ETHNICITY CATEGORY FOR CITY OF PHOENIX CMSA**

<b>Race/ Ethnicity/ Gender Category</b>	<b>Percent of the Population Self-Employed</b>	<b>1999 Sample Census (n)</b>	<b>1999 Median Earnings</b>
	<b>City of Phoenix CMSA</b>	<b>City of Phoenix CMSA</b>	<b>City of Phoenix CMSA</b>
Nonminority Males	16.38%	2,419	\$49,000.00
African American	6.36%	74	\$32,002.00
Hispanic American	5.62%	348	\$25,000.00
Asian American	10.94%	85	\$39,000.00
Native American	5.83%	35	\$27,000.00
Nonminority Women	7.33%	863	\$30,300.00
<b>Overall</b>	<b>10.84%</b>	<b>3,824</b>	<b>\$202,302.00</b>

Source: PUMS data from 2000 *Census of Population* and MGT of America, Inc., calculations using SPSS: statistical software package.

The next section discusses the research basis for this examination to lay the groundwork for a description of the models and methodologies to be employed. This will be followed by a presentation of findings regarding minority status effects on self-employment rates, self-employment earnings, and attribution of these differences to discrimination, per se.

**7.6.1 Self-Employment Rates and Self-Employment Earnings Analysis as an Analog of Business Formation and Maintenance**

Research in economics consistently supports the finding of group differences by race and gender in rates of business formation (see *Journal of Econometrics*, Vol. 61, Issue 1, devoted entirely to the econometrics of labor marked discrimination and segregation). For a disparity study, however, the fundamental question is, “How much of this difference is due to factors that would appear, at least superficially, to be related to group differences other than race, ethnicity, or gender, and how much is due to discrimination effects related to one’s race/ethnic/gender affiliation?”

We know, for instance, that most minority groups have a lower median age than do non-Hispanic whites (Census of Population and Housing, 2000, Public Use Microdata Samples).<sup>8</sup> We also know, in general, that the likelihood of being self-employed increases with age. (PUMS, 2000). When social scientists speak of nonracial group differences, they are referring to such things as, for example, general differences in religious beliefs, which might influence group attitudes toward contraception and, in turn, both birthrates and median age. A disparity study, therefore, seeks to examine these other important demographic and economic variables in conjunction with race and ethnicity, as they influence group rates of business formation, to determine if we can assert that discrimination against minorities is sufficiently present to demand public sector legal remedies such as affirmative action.

Questions about marketplace dynamics affecting self-employment—or, more specifically, the odds of being able to form one’s own business and then to excel (i.e., generate earnings growth)—are at the heart of disparity analysis research. Although early disparity studies generally focused on gross racial disparity, merely documenting

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<sup>8</sup> Hereafter referred to as PUMS 2000 as cited in *Concrete Works v. City and County of Denver*, 321 F.3 950 (10<sup>th</sup> Cir 2003).

disparity alone is insufficient for inferring discrimination effects, per se, without “parceling out” effects due to nondiscriminatory factors.

Moreover, to the extent that discrimination exists, it is likely to inhibit both the formation of minority business enterprise and the growth and profits of them. Consequently, earlier disparity study methodology and analysis failed to account for the effects of discrimination on minority self-employment in at least two ways: (1) they did not account adequately for the effects of discriminatory barriers minorities face up front in attempting to form businesses; and (2) they did not isolate and explain methodologically discrimination effects once minority businesses are formed.

The next section addresses these shortcomings, utilizing PUMS 2000 data derived from the 2000 U.S. Census to answer research questions about the effects of discrimination on self-employment and self-employment earnings.

#### **7.6.2 Research Questions, Statistical Models, and Methods**

Two general research questions were posed in the initial analysis:

- Are racial, ethnic, and gender minority groups less likely than nonminority males to be self-employed?
- Does race/gender/ethnicity status have an impact on individuals' earnings?

To answer these two questions, we employed two multivariate regression techniques, respectively: logistic regression and linear regression. To understand the appropriate application of these regression techniques, it is helpful to explore in greater detail the questions we are trying to answer. The dependent variables in questions one and two—that is, the phenomenon to be explained by influences such as age, race, gender, and disability status, for example (the independent or “explanatory” variables)—are, respectively: the probability of self-employment status (a binary, categorical variable based on two possible values: 0 = not self-employed/ 1 = self-employed); and 1999 earnings from self-employment (a continuous variable).

In our analysis, the choice of regression approach is based on the scale of the dependent variable (in question one, a categorical scale with only two possible values; and in question two, a continuous scale with many possible values). Because binary logistic regression can handle an analysis in which the dependent variable is categorical, it was employed for the analysis of question one.<sup>9</sup> To analyze question two, in which the dependent variable is continuous, we used simple linear regression.

### **7.6.3 Deriving the Logistic Regression Model from the Simple Linear Model**

The logistic regression model can be derived with reference to the simple linear regression model expressed mathematically as:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + \dots + e?$$

Where:

Y = a continuous variable (e.g., 1999 earnings from self-employment).

$\beta_0$  = the constant, representing the value of Y when  $X_1 = 0$

$\beta_1$  = coefficient representing the magnitude of  $X_1$ 's effect on Y

$X_1$  = the independent variables, such as age, human capital (e.g., level of education), availability of capital, race/ethnicity/gender, etc.

$\varepsilon$  = error term, representing the variance in Y unexplained by  $X_i$

This equation may be summarized as:

$$E(Y) = m = \sum_{k=1}^K b_k x_k$$

in which Y is the dependent variable and  $m$  represents the expected values of Y as a result of the effects of  $\beta$ , the explanatory variables. When we study a random distribution of Y using the linear model, we specify its expected values as a linear combination of K unknown parameters and the covariates or explanatory variables. When this model is applied to data in the analysis, we are able to find the statistical link between the dependent variable and the explanatory or independent variables.

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<sup>9</sup> Logistical regression, or Logit, models generate predicted probabilities that are almost identical to those calculated by a probit procedure, used in the Denver *Concrete Works* case. Logit, however, has the added advantage of dealing more effectively with observations at the extremes of a distribution. For a complete explanation, see *Interpreting Probability Models* (T.F. Liao, Text 101 in the Sage University series.)

Suppose we introduce a new term,  $h$ , into the linear model such that:

$$h = m = \sum_{k=1}^K b_k x_k$$

When the data are randomly distributed, the link between  $h$  and  $m$  is linear, and a simple linear regression can be used. However, to answer the first question, the categorical dependent variable was binomially distributed. Therefore, the link between  $h$  and  $m$  becomes  $h = \log[m/(1-m)]$  and logistic regression is utilized to determine the relationship between the dependent variable and the explanatory variables, calculated as a probability value (e.g., the probability of being self-employed when one is African American). The logistic regression model is expressed mathematically as:

$$\log[m/1(1-m)] = a + b_i X_n + e$$

Where:

- $(\mu/1-\mu)$  = the probability of being self-employed
- $\alpha$  = a constant value
- $\beta_i$  = coefficient corresponding to independent variables
- $X_n$  = selected individual characteristic variables, such as age, marital status, education, race, and gender
- $\varepsilon$  = error term, representing the variance in Y unexplained by  $X_i$

This model can now be used to determine the relationship between a single categorical variable (0 = not self-employed/1 = self-employed) and a set of characteristics hypothesized to influence the probability of finding a 0 or 1 value for the categorical variable. The result of this analysis illustrates not only the extent to which a characteristic can increase or decrease the likelihood that the categorical variable will be a 0 or a 1, but also if the effect of the influencing characteristics is positive or negative in relation to being self-employed.

#### **7.6.4 Results of the Analyses**

##### **7.6.4.1 Question 1: Are Racial, Ethnic, and Gender Minority Groups Less Likely Than Nonminority Males to be Self-Employed?**

To derive a set of variables known to predict employment status (self-employed; not self-employed), we used the PUMS 2000 Five Percent Sample data. Binary logistic regression was used to calculate the probability of being self-employed, the dependent variable, with respect to socioeconomic and demographic characteristics selected for their potential to influence the likelihood of self-employment. The sample for the analysis was limited to labor force participants according to the following criteria:

- residents of the City of Phoenix CMSA;
- self-employed individuals in construction, professional services, other services, architecture and engineering,<sup>10</sup> and goods and supplies;
- full-time employees (more than 35 hours a week);
- 18 years of age or older; and
- individuals employed in the private sector.

Next, we derived the following variables hypothesized as predictors of employment status (self-employed/not self-employed):

- ***Race and Sex:*** African American, Asian American, Hispanic American, Native American, nonminority women, nonminority males
- ***Availability of Capital:*** home ownership, home value, mortgage rate, unearned income, residual income
- ***Marital Status***
- ***Ability to speak English well***
- ***Disability status:*** From individuals' reports of health-related disabilities
- ***Age and Age<sup>2</sup>:*** squaring the age variable acknowledges the positive, curvilinear relationship between each year of age and earnings

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<sup>10</sup> Due to inadequate sample numbers for all races in the Architecture and Engineering PUMS 2000 data, A & E was merged with the Professional Services category.

- *Owner's level of education*
- *Number of individuals living in a household over the age of 65*
- *Number of children who are living in a household under the age of 18.*

#### **7.6.4.2 Analysis Results**

Binary logistic regression analysis provided estimates of the relationship between the independent variables described above and the probability of being self-employed in the four types of business industries. In **Exhibit 7-11**, odd ratios are presented by minority group reporting the effect of race/ethnicity/gender on the odds of being self-employed in 1999, holding all other variables constant. Full regression results on all the variables are presented in **Appendix U**.

The results indicate the following for the City of Phoenix CMSA:

- In all industries nonminority males were roughly twice as likely to be self-employed as African Americans, Hispanic Americans, and nonminority women.<sup>11</sup>
- A nonminority male was nearly six times as likely as Native Americans to be self-employed in professional services.
- Nonminority males were over three times as likely as Hispanic Americans to be self-employed in the goods and supplies services industry.
- African Americans were less likely to be self-employed than were nonminority males in all industries.
- In general, cell sizes for business type by race for Native Americans were of insufficient size to permit valid interpretations.

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<sup>11</sup> These likelihood characteristics were derived from Exhibit 7-11 by calculating the inverse of the reported odds ratios.

**EXHIBIT 7-11  
SELF-EMPLOYMENT ODDS RATIOS OF MINORITY GROUPS RELATIVE TO  
NONMINORITY MALES AFTER CONTROLLING FOR  
SELECTED DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS**

Race/Ethnic Group	All Industries	Construction	Professional Services	Other Services	Goods & Supplies
<b>City of Phoenix CMSA</b>					
African American	<b>0.464</b>	0.507	<b>0.318</b>	<b>0.704</b>	0.533
Hispanic American	<b>0.425</b>	<b>0.448</b>	<b>0.207</b>	<b>0.612</b>	<b>0.314</b>
Asian American	<b>0.642</b>	0.655	<b>0.490</b>	0.756	0.789
Native American	<b>0.434</b>	0.560	<b>0.156</b>	<b>0.552</b>	0.441
Nonminority Women	<b>0.407</b>	<b>0.527</b>	<b>0.202</b>	<b>0.809</b>	<b>0.553</b>

Source: PUMS data from 2000 *Census of Population* and MGT of America, Inc., calculations using SPSS.

Note: **Bold** indicates that the estimated odds ratio for the group was statistically significant. The A&E business industry was excluded from this analysis because of the lack of sufficient data.

**7.6.4.3 Question 2: Does Race/Gender/Ethnicity Status Have an Impact on Individuals' Earnings?**

To answer this question, we compared self-employed minority and women entrepreneur earnings to nonminority male's earnings in the City of Phoenix CMSA, controlling for or neutralizing the effect of other demographic and economic characteristics. That is, we were able to examine the earnings of self-employed individuals who have similar education levels, are of similar age, and so on, to enable earnings comparisons by race/gender/ethnicity.

To derive a set of variables known to predict earnings (the dependent variable) we used 1999 wages from employment for self-employed individuals, as reported in the PUMS 2000 Five Percent sample. These included:

- **Race and Sex:** African American, Asian American, Hispanic American, Native American, nonminority women, nonminority males
- **Availability of Capital:** homeownership, home value, mortgage rate, unearned income, residual income
- **Marital Status**
- **Ability to speak English well**
- **Disability status:** From individuals' reports of health-related disabilities



- **Age and Age<sup>2</sup>**: squaring the age variable acknowledges the positive, curvilinear relationship between each year of age and earnings
- **Owner's level of education**

**7.6.4.4 Analysis Results**

Results of the linear regression model estimating the effects of selected demographic and economic variables on self-employment earnings are reported in **Exhibit 7-12**. Each number (i.e., coefficient) in the exhibit represents a percent change in earnings. For example, the corresponding number for an African American in all industries is  $-.437$ , meaning that an African American will earn 43.7 percent less than a nonminority male when the statistical effects of the other variables in the equation are neutralized. Full regression results on all the variables are presented in **Appendix U**.

The results indicate the following:

- In the City of Phoenix CMSA, African Americans, Native Americans, and nonminority women reported significantly lower earnings in all business type categories.
- In the other services industry, African Americans, Hispanic Americans, and Native Americans reported significantly lower earnings than nonminority males in the City of Phoenix CMSA: 35.5 percent, 40.7 percent, and 58.3 percent, respectively.
- The most egregious affect on earnings elasticities can be found in construction for African Americans. In construction, African Americans earned 75.8 percent less than nonminority males.

**EXHIBIT 7-12  
EARNINGS ELASTICITIES OF MINORITY GROUPS RELATIVE TO NONMINORITY  
MALES AFTER CONTROLLING FOR  
SELECTED DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS**

<b>Race/Ethnic Group</b>	<b>All Industries</b>	<b>Construction</b>	<b>Professional Services</b>	<b>Other Services</b>	<b>Goods &amp; Supplies</b>
<b>City of Phoenix CMSA</b>					
African American	<b>-0.437</b>	<b>-0.758</b>	<b>-0.473</b>	<b>-0.355</b>	-0.403
Hispanic American	<b>-0.297</b>	-0.050	-0.254	<b>-0.407</b>	-0.239
Asian American	-0.139	-0.051	0.230	<b>-0.373</b>	-0.281
Native American	<b>-0.371</b>	-0.051	0.398	<b>-0.583</b>	-0.810
Nonminority Women	<b>-0.363</b>	<b>-0.233</b>	<b>-0.517</b>	<b>-0.294</b>	<b>-0.345</b>

Source: PUMS data from 2000 *Census of Population* and MGT of America, Inc., calculations using SPSS.

Note: **Bold** indicates that the estimated "elasticities" for the group were statistically significant. The A&E business industry was excluded from this analysis because of the lack of sufficient data.

**7.6.5 Disparities in Rates of Self-Employment: How Much Can Be Attributed to Discrimination?**

Results of the analyses of self-employment rates and 1999 self-employment earnings revealed general disparities between minority and nonminority self-employed individuals, whether their businesses were located in the City of Phoenix CMSA., or in other locations. **Exhibit 7-13** presents the results of these analyses.

Column A reports observed employment rates for each race/gender group, calculated directly from the PUMS 2000 data. To obtain values in columns B and C, we calculated two predicted self-employment rates using the following equation:

$$Pr ob(y = 1) = \sum_{k=1}^K (e^{b_k x_k} / 1 + e^{b_k x_k})$$

Where:

$Pr ob(y = 1)$  = represents the probability of being self-employed:

$b_k$  = coefficient corresponding to the independent variables used in the logistic regression analysis of self-employment probabilities

$x_k$  = the mean values of these same variables

The first of these predicted self-employment rate calculations (in column B) presents nonminority male self-employment rates as they would be if their characteristics (i.e.,  $x_k$ , or mean values for the independent variables) were applied to minority market structures (represented for each race by their  $b_k$  or odds coefficient values). The second self-employment rate calculation (in column C) presents minority self-employment rates as they would be if they were rewarded in a similar manner as nonminority males in the nonminority male market structure: that is, by multiplying the minority means (i.e., characteristics) by the estimated nonminority coefficients for both race and the other independent variables.

**EXHIBIT 7-13  
OBSERVED AND PREDICTED SELF-EMPLOYMENT RATES**

Business/Race Group	CITY OF PHOENIX CMSA				
	Observed Self-Employment Rates	White Characteristics and Own Market Structure	Own Characteristics and White Market Structure	Disparity Ratio (column A divided by column C)	Portion of Difference Due to Discrimination
	(A)	(B)	(C)	(D)	(E)
<b>Overall</b>					
Nonminority Males	0.1638	0.1638	0.1638	1.000	
African American	0.0636	0.0983	0.1296	0.4911	65.78%
Hispanic American	0.0562	0.0907	0.1378	0.4076	75.81%
Asian American	0.1094	0.1310	0.1955	0.5596	n/d
Native American	0.0583	0.0925	0.1361	0.4287	73.68%
Nonminority Women	0.0733	0.0873	0.1819	0.4030	n/d
<b>Construction</b>					
Nonminority Males	0.2128	0.2128	0.2128	1.000	
African American	0.0921	0.1359	0.1939	0.4751	84.33%
Hispanic American	0.0698	0.1221	0.1679	0.4156	68.61%
Asian American	0.1538	0.1689	0.2926	0.5258	n/d
Native American	0.0957	0.1481	0.2217	0.4314	n/d
Nonminority Women	0.1301	0.1405	0.2582	0.5037	n/d
<b>Professional Services</b>					
Nonminority Males	0.1816	0.1816	0.1816	1.000	
African American	0.0400	0.0902	0.1096	0.3651	49.11%
Hispanic American	0.0237	0.0605	0.1693	0.1400	92.20%
Asian American	0.0965	0.1324	0.2889	0.3341	n/d
Native American	0.0195	0.0464	0.1839	0.1059	n/d
Nonminority Women	0.0342	0.0592	0.1871	0.1827	n/d
<b>Other Services</b>					
Nonminority Males	0.1814	0.1814	0.1814	1.0000	
African American	0.1012	0.1561	0.1526	0.6634	64.06%
Hispanic American	0.0862	0.1385	0.1497	0.5757	66.71%
Asian American	0.1314	0.1658	0.1996	0.6584	n/d
Native American	0.0818	0.1267	0.1215	0.6734	39.84%
Nonminority Women	0.1491	0.1754	0.2030	0.7343	n/d
<b>Goods &amp; Supplies</b>					
Nonminority Males	0.0942	0.0942	0.0942	1.000	
African American	0.0350	0.0638	0.0559	0.6262	35.35%
Hispanic American	0.0221	0.0385	0.0650	0.3401	59.48%
Asian American	0.0778	0.0917	0.1009	0.7719	n/d
Native American	0.0270	0.0534	0.0618	0.4371	51.84%
Nonminority Women	0.0521	0.0660	0.1175	0.4439	n/d

Source: PUMS data from 2000 *Census of Population* and MGT of America, Inc. calculations using SPSS and Excel. n/d: no discrimination was found.

Using these calculations, we were able to determine a percentage of the disparities in self-employment between minorities and nonminority males attributable to discrimination by dividing the observed self-employment rate for a particular minority group (column A) by the predicted self-employment rate as it would be if minority groups faced the same market structure as nonminority males (column C). Next, we calculated the difference between the predicted self-employment rate as it would be if minority groups faced the same market structure as nonminority males and the observed self-employment rate for that minority group, and divided this value by the difference between the observed self-employment rate for nonminority males and the self-employment rate for a particular minority group. In the absence of discrimination this number is zero, which means disparities in self-employment rates between minority groups and nonminority males can be attributed to differences in group characteristics not associated with discrimination. On the other hand, as this value approaches 1.0, we are able to attribute disparities increasingly to discrimination in the marketplace.

#### **7.6.5.1 Analysis Results**

Examining the results reported in **Exhibit 7-13**, we found the following.

- Overall, comparing self-employed nonminority males with self-employed African Americans in the City of Phoenix CMSA, over half of the disparity in self-employment rates was attributable to race differences.
- Overall, comparing self-employed nonminority males with self-employed Hispanic Americans in the City of Phoenix CMSA, over two-thirds of the disparity in self-employment rates was attributable to race differences.
- Comparing self-employed nonminority males with self-employed African Americans in the City of Phoenix CMSA construction industry, over 80 percent of the disparity in self-employment rates was attributable to race differences.
- Comparing self-employed nonminority males with self-employed Hispanic Americans in the City of Phoenix CMSA professional industry, over 92 percent of the disparity in self-employment rates was attributable to gender differences.

### **7.6.6 Summary of Findings**

In general, findings from the PUMS 2000 data indicate that minorities were significantly less likely than nonminority males to be self-employed and, if they were self-employed, they earned significantly less in 1999 than did self-employed nonminority males. When self-employment rates were stratified by race and by business type, trends varied within individual race-by-type cells, but disparities persisted, in general, for African Americans, Hispanic Americans, and nonminority women. When group self-employment rates were submitted to MGT's disparity-due-to-minority-status analysis, findings supported the conclusion that disparities for these three groups (of adequate sample size to permit interpretation) were likely the result of different treatment in the marketplace due to race, gender and ethnicity.<sup>12</sup>

### **7.7 Conclusions**

This chapter provides evidence that disparity exists in the City of Phoenix Relevant Market Area. **Exhibit 7-14** provides a summary of the utilization of M/WBEs in private commercial construction in the Maricopa County relevant market in comparison with M/WBE utilization by the public sector as reported to MGT by the City of Phoenix and as derived from Reed Construction Data for prime contractors. Examining **Exhibit 7-14**, we find that M/WBE utilization was substantially higher in the public sector than in the private sector. Moreover, the public sector used more M/WBEs, particularly in proportion to its spending, than did the private sector commercial construction market.

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<sup>12</sup> Appendix U reports self-employment rates and earnings in greater detail by race- business type.

**EXHIBIT 7-14  
COMPARISON OF M/WBE UTILIZATION PERCENTAGE OF DOLLARS  
PRIVATE COMMERCIAL CONSTRUCTION  
AND CITY OF PHOENIX  
CALENDAR YEARS 2000 THROUGH 2004**

<b>BUSINESS CATEGORY / DATA SOURCE</b>	<b>African American</b>	<b>Hispanic American</b>	<b>Asian American</b>	<b>Native American</b>	<b>Nonminority Women</b>	<b>M/WBEs</b>	<b>Nonminority Firms</b>
<b>Prime Contractors</b>							
City of Phoenix Construction Prime Contractors	0.00%	2.20%	0.28%	0.15%	4.39%	7.02%	92.98%
Private Construction Prime Contractors (Building Permits)	0.07%	1.23%	0.74%	0.00%	0.41%	2.44%	97.56%
Private Construction Prime Contractors (Reed Construction)	0.00%	0.34%	0.00%	0.00%	0.67%	1.02%	98.98%
<b>Subcontractors</b>							
City of Phoenix Construction Subcontractors*	0.75%	6.02%	0.05%	1.36%	5.26%	13.44%	86.56%
Private Construction Subcontractors (Building Permits)	0.44%	2.72%	0.07%	0.00%	1.34%	4.58%	95.42%

Source: City of Phoenix, Public data, Private data, and Reed Construction Data.

\*Based on 32.4 percent subcontractor utilization.

In conclusion, findings indicate that there are still impediments to M/WBE utilization in the City of Phoenix relevant market area. These include disparities in entry to and earnings from self-employment by women and minorities after controlling for education, age, wealth, and other variables. This evidence is consistent with anecdotal comments from M/WBEs (Chapter 6.0) that utilization of M/WBEs as prime contractors, or as subcontractors by primes, is substantially below measures of M/WBE availability in the absence of M/WBE program goals.

## **8.0 SBE UTILIZATION AND AVAILABILITY ANALYSES**

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## **8.0 SBE UTILIZATION AND AVAILABILITY ANALYSES**

This chapter presents a comparison analysis of utilization for both overall prime construction contractors and certified small businesses for the five fiscal years analyzed. In addition, MGT conducted an analysis to present the utilization for overall prime construction projects awarded and prime construction projects awarded with SBE goals. This chapter also discusses the utilization of firms through the city's SBE Reserve program. Also, the utilization of certified small businesses that engage in the procurement of goods and supplies and general services is analyzed, as well as the availability of certified small businesses. This chapter consists of the following sections:

- 8.1 Overview
- 8.2 Construction Utilization Analysis
- 8.3 Goods and Supplies Utilization Analysis
- 8.4 General Services Utilization Analysis

### **8.1 Overview**

Based on recommendations from the 1999 Second-Generation Study, the City of Phoenix approved an ordinance that created a race- and gender-neutral Small Business Enterprise (SBE) program in addition to amending its M/WBE program. In June 2004, the City contracted with MGT to review the effectiveness of their programs. In October 2004, the City of Phoenix contracted with MGT to determine and provide to the City relevant facts and recommendations to allow the City to determine the feasibility of an increase in the current business size standard adopted by the City for certification of small businesses in construction, general services, and goods and supplies.

In November 2004, MGT presented to the City a Size Standard Feasibility draft report.<sup>1</sup> Salient findings from this report follow:

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<sup>1</sup> Contact the City of Phoenix for a complete copy of *Size Standard Feasibility Study, 2004*, MGT of America, Inc.



- The City follows federal guidelines in determining size standards for use in eligibility criteria to evaluate firms seeking to participate in the City's minority- and woman-owned business enterprise (M/WBE) program.
- In January 2004, the SBA increased the federal size standard threshold for most construction businesses to \$28.5 million in average annual receipts.
- According to the USDOT, they opted not to increase their corresponding size standard. The USDOT published regulations do not indicate a change in the size standard.
- The City of Phoenix did not increase the threshold limit for average annual receipts. The lack of an upward adjustment was cause for concern among formerly certified firms that were graduated from the M/WBE program, as well as advocacy groups.
- Data maintained by the City show that, of a total 1,800 participant firms, seven (fewer than .4%) were denied certification or graduated between January 1999 and June 2004 as a result of exceeding the \$17.4 million size standard thresholds.
- As of September 2004, only 22 firms (1.2%) were certified as construction related firms by the City.
- Based on anecdotal data from the business community, 10 firms have been excluded from participation in the City's M/WBE program using the current size standards.
- A total of 285 firms are certified with the City under the M/WBE program subject to the size standard criteria.
- There are 263 firms that perform in specialty trade areas that would not be impacted by a change in the general construction size standards.
- The City's current small business standards are sufficient to accommodate most firms that seek to participate in the City's programs.

A policy change such as this should reflect and address any identified findings in the local marketplace. To address this change, MGT conducted SBE utilization analysis, including threshold analysis of the same business categories as included in the M/WBE Disparity Study: construction, goods and supplies, and general services.

## **8.2 Construction Utilization Analysis**

M/WBE and SBE and non-M/WBE and non-SBE utilization analysis includes firms located within the relevant market areas. The utilization was derived from information contained in the City's financial system (SAP) for activity occurring between July 1, 1999, and June 30, 2004. The identification of SBE firms was based on the information contained in the City's Equal Opportunity Department (EOD) database. In addition, prime construction contracts that have an SBE goal were identified based on EOD data. Using these data sources, MGT calculated the percentage of total dollars awarded to M/WBEs and SBEs and non-M/WBEs and non-SBEs during the relevant time period. The numbers in the utilization charts that follow reflect the awards made to vendors in the race, ethnicity, and gender category.

### **8.2.1 Prime Contractor SBE Utilization Analysis**

**Exhibit 8-1** presents a comparison analysis of utilization for both overall prime construction contractors and SBE certified firms. Of the \$1.30 billion awarded to prime contractors in the relevant market area, approximately \$14.3 million (1%) were awarded to SBE certified firms. During the study period, of the \$14.3 million awarded to SBE certified firms, approximately 70 percent (\$9.9 million) of the dollars were awarded to M/WBEs. Of the SBE certified firms awarded prime construction projects, nonminority women were awarded slightly more than 41 percent (\$6.8 million) of the dollars awarded to M/WBEs. Nonminority-owned firms were awarded \$4.3 million of the \$14.3 million awarded to SBE firms. Asian American-owned firms were awarded 25.74 percent of the dollars awarded to M/W/SBEs, or \$3.60 million. Furthermore, Asian American-owned firms were awarded \$3.60 million from the City for prime construction projects during the study period, which translates into 100 percent of these award dollars going to Asian American firms certified as SBEs. Overall construction dollars to Native American firms came to approximately \$1.90 million during the study period; of this sum, there were no dollars awarded to Native American-owned firms certified as SBEs.

**EXHIBIT 8-1  
CITY OF PHOENIX CONSTRUCTION UTILIZATION ANALYSIS OF PRIME CONTRACTORS IN THE  
RELEVANT MARKET AREA  
COMPARISON OF OVERALL PRIME CONTRACT UTILIZATION TO  
SBE CERTIFIED UTILIZATION  
DOLLARS AND PERCENTAGE OF TOTAL DOLLARS  
BY RACE/ETHNIC/GENDER CLASSIFICATION  
JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Nonminority Firms		Total Dollars Awarded <sup>2</sup>	
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	
<b>FY1999-2000</b>																
Overall	\$0.00	0.00%	\$5,049,483.64	2.78%	\$0.00	0.00%	\$1,900,808.00	1.05%	\$6,795,069.26	3.74%	\$13,745,360.90	7.57%	\$167,828,157.47	92.43%	\$181,573,518.37	
SBE Certified	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$1,350,357.33	34.52%	\$1,350,357.33	34.52%	\$2,560,999.00	65.48%	\$3,911,356.33	
<b>FY2000-2001</b>																
Overall	\$0.00	0.00%	\$8,310,849.57	3.63%	\$758,852.84	0.33%	\$0.00	0.00%	\$18,619,767.80	8.12%	\$27,689,470.21	12.08%	\$201,564,295.30	87.92%	\$229,253,765.51	
SBE Certified	\$0.00	0.00%	\$0.00	0.00%	\$758,852.84	31.15%	\$0.00	0.00%	\$1,457,555.64	59.82%	\$2,216,408.48	90.97%	\$220,016.30	9.03%	\$2,436,424.78	
<b>FY2001-2002</b>																
Overall	\$0.00	0.00%	\$8,028,237.70	3.47%	\$2,676,851.72	1.16%	\$0.00	0.00%	\$9,278,278.88	4.02%	\$19,983,368.30	8.65%	\$211,105,769.39	91.35%	\$231,089,137.69	
SBE Certified	\$0.00	0.00%	\$376,891.00	9.98%	\$2,676,851.72	70.90%	\$0.00	0.00%	\$80,095.10	2.12%	\$3,133,837.82	83.01%	\$641,538.51	16.99%	\$3,775,376.33	
<b>FY2002-2003</b>																
Overall	\$0.00	0.00%	\$5,487,700.17	1.37%	\$0.00	0.00%	\$0.00	0.00%	\$11,110,621.71	2.77%	\$16,598,321.88	4.14%	\$384,754,171.67	95.86%	\$401,352,493.55	
SBE Certified	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$901,860.27	100.00%	\$901,860.27	
<b>FY2003-2004</b>																
Overall	\$0.00	0.00%	\$1,803,209.92	0.69%	\$235,000.00	0.09%	\$0.00	0.00%	\$11,433,455.13	4.39%	\$13,471,665.05	5.17%	\$247,030,300.42	94.83%	\$260,501,965.47	
SBE Certified	\$0.00	0.00%	\$0.00	0.00%	\$235,000.00	7.26%	\$0.00	0.00%	\$3,000,000.00	92.74%	\$3,235,000.00	100.00%	\$0.00	0.00%	\$3,235,000.00	
<b>All Fiscal Years</b>																
Overall	\$0.00	0.00%	\$28,679,481.00	2.20%	\$3,670,704.56	0.28%	\$1,900,808.00	0.15%	\$57,237,192.78	4.39%	\$91,488,186.34	7.02%	\$1,212,282,694.25	92.98%	\$1,303,770,880.59	
SBE Certified	\$0.00	0.00%	\$376,891.00	2.64%	\$3,670,704.56	25.74%	\$0.00	0.00%	\$5,888,008.07	41.29%	\$9,935,603.63	69.67%	\$4,324,414.08	30.33%	\$14,260,017.71	

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total dollars paid annually to prime contractors.

<sup>2</sup> Total dollars awarded to vendors is currently based on the original award amount, as well as any associated change orders.

**Exhibits 8-2 and 8-3** show a comparison for both the number of prime construction contracts and number of unique firms utilized during the study period for non-SBEs and SBEs. In **Exhibit 8-2**, we show that 1,255 contracts were awarded in the relevant market area, with 41 of these contracts being awarded to SBE certified firms. M/WBEs received approximately 76 percent of the contracts awarded to SBE certified firms. Asian American (48.8%) and nonminority women (24.4%) firms received the majority of the contracts awarded to M/WBEs in this category.

**EXHIBIT 8-2  
CITY OF PHOENIX CONSTRUCTION UTILIZATION ANALYSIS OF PRIME  
CONTRACTORS IN THE RELEVANT MARKET AREA  
COMPARISON OF OVERALL PRIME CONTRACTOR UTILIZATION TO  
SBE CERTIFIED PRIME CONTRACTOR UTILIZATION  
NUMBER OF CONTRACTS  
BY RACE/ETHNIC/GENDER CLASSIFICATION  
JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Contracts
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	
<b>FY1999-2000</b>															
Overall	0	0.00%	8	4.35%	0	0.00%	1	0.54%	25	13.59%	34	18.48%	150	81.52%	184
SBE Certified	0	0.00%	0	0.00%	0	0.00%	0	0.00%	5	83.33%	5	83.33%	1	16.67%	6
<b>FY2000-2001</b>															
Overall	0	0.00%	18	6.47%	4	1.44%	0	0.00%	56	20.14%	78	28.06%	200	71.94%	278
SBE Certified	0	0.00%	0	0.00%	4	44.44%	0	0.00%	3	33.33%	7	77.78%	2	22.22%	9
<b>FY2001-2002</b>															
Overall	0	0.00%	34	8.56%	15	3.78%	0	0.00%	32	8.06%	81	20.40%	316	79.60%	397
SBE Certified	0	0.00%	1	5.00%	15	75.00%	0	0.00%	1	5.00%	17	85.00%	3	15.00%	20
<b>FY2002-2003</b>															
Overall	0	0.00%	7	2.81%	0	0.00%	0	0.00%	24	9.64%	31	12.45%	218	87.55%	249
SBE Certified	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	4	100.00%	4
<b>FY2003-2004</b>															
Overall	0	0.00%	3	2.04%	1	0.68%	0	0.00%	21	14.29%	25	17.01%	122	82.99%	147
SBE Certified	0	0.00%	0	0.00%	1	50.00%	0	0.00%	1	50.00%	2	100.00%	0	0.00%	2
<b>All Fiscal Years</b>															
Overall	0	0.00%	70	5.58%	20	1.59%	1	0.08%	158	12.59%	249	19.84%	1,006	80.16%	1,255
SBE Certified	0	0.00%	1	2.44%	20	48.78%	0	0.00%	10	24.39%	31	75.61%	10	24.39%	41

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Contracts.

**Exhibit 8-3** shows that of the ten unique SBE certified firms utilized, 70 percent were identified as M/WBEs. Nonminority women-owned firms were the most utilized. In

comparison, three nonminority firms (30%) were identified as being certified as a SBE firm. SBEs represented approximately 5.5 percent (10 out of 181 unique vendors) of the unique vendors utilized for prime contractor construction work for the City during the study period. Moreover, approximately 25 percent (7 out of the 28 unique M/WBE vendors) of the unique M/WBEs utilized for prime construction projects were certified as SBEs.

**EXHIBIT 8-3  
CITY OF PHOENIX CONSTRUCTION UTILIZATION ANALYSIS OF PRIME  
CONTRACTORS IN THE RELEVANT MARKET AREA  
COMPARISON OF OVERALL PRIME CONTRACTOR UTILIZATION TO  
SBE CERTIFIED PRIME CONTRACTOR UTILIZATION  
NUMBER OF UNIQUE VENDORS BY RACE/ETHNIC/GENDER CLASSIFICATION  
JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Subtotal		Total Unique Vendors <sup>2</sup>
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	
<b>FY1999-2000</b>															
Overall	0	0.00%	5	6.41%	0	0.00%	1	1.28%	10	12.82%	16	20.51%	62	79.49%	78
SBE Certified	0	0.00%	0	0.00%	0	0.00%	0	0.00%	3	75.00%	3	75.00%	1	25.00%	4
<b>FY2000-2001</b>															
Overall	0	0.00%	5	6.76%	1	1.35%	0	0.00%	9	12.16%	15	20.27%	59	79.73%	74
SBE Certified	0	0.00%	0	0.00%	1	25.00%	0	0.00%	2	50.00%	3	75.00%	1	25.00%	4
<b>FY2001-2002</b>															
Overall	0	0.00%	4	5.97%	2	2.99%	0	0.00%	7	10.45%	13	19.40%	54	80.60%	67
SBE Certified	0	0.00%	1	16.67%	2	33.33%	0	0.00%	1	16.67%	4	66.67%	2	33.33%	6
<b>FY2002-2003</b>															
Overall	0	0.00%	4	6.15%	0	0.00%	0	0.00%	5	7.69%	9	13.85%	56	86.15%	65
SBE Certified	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	100.00%	2
<b>FY2003-2004</b>															
Overall	0	0.00%	3	5.56%	1	1.85%	0	0.00%	8	14.81%	12	22.22%	42	77.78%	54
SBE Certified	0	0.00%	0	0.00%	1	50.00%	0	0.00%	1	50.00%	2	100.00%	0	0.00%	2
<b>All Fiscal Years<sup>2</sup></b>															
Overall	0	0.00%	11	6.08%	2	1.10%	1	0.55%	14	7.73%	28	15.47%	153	84.53%	181
SBE Certified	0	0.00%	1	10.00%	2	20.00%	0	0.00%	4	40.00%	7	70.00%	3	30.00%	10

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Vendors.

<sup>2</sup> The Total Vendors counts a vendor only once for each year the firm receives work. Since a vendor could be used in multiple years, the total vendors for the entire study period may not equal the sum of all years.

**Threshold Analysis**

MGT analyzed the utilization of M/WBE construction firms that were certified as SBEs by examining construction contracts awarded in the four dollar ranges shown below:

- contracts \$250,000 or under;
- contracts between \$250,001 and \$500,000;
- contracts between \$500,001 and \$1 million; and
- contracts greater than \$1 million.

The utilization of M/WBE and SBE and non-M/WBE and non-SBE firms for each dollar category is shown in **Exhibits 8-4** and **8-5**. As illustrated, M/WBEs that were certified as SBEs received approximately 86.6 percent of contract award dollars for contracts valued at \$250,000 or less and all contract award dollars for contracts valued between \$500,001 and \$1 million. M/WBE participation decreased to the extent that in the highest dollar range—contracts of \$1 million or more—M/WBE participation dropped to approximately 63.8 percent.

**Construction Contracts Awarded of \$250,000 and Less**

The City of Phoenix awarded 26 contracts to SBE firms from fiscal year 2000 through 2004 on construction contracts valued at \$250,000 or less. As illustrated in **Exhibits 8-4** and **8-5**, M/WBE firms received approximately 86.6 percent of award dollars in this category. Asian American-owned firms were the most utilized within the M/WBE category, receiving 71.3 percent of the contract award dollars. Nonminority women-owned firms were next at 15.3 percent of the contract award dollars. Non-M/WBE firms received approximately 13.4 percent of the award dollars. Of the 26 contracts that were awarded within this category, approximately 80.8 percent went to M/WBEs. Firms owned by Asian Americans were awarded 18 construction contracts, whereas nonminority women-owned firms were awarded 3 contracts.

**Construction Contracts Awarded between \$250,001 and \$500,000**

There were nine construction contracts awarded to SBEs between the \$250,001 and \$500,000 dollar range during the study period. Nonminority women-owned firms were the most utilized M/WBE category, receiving more than 33 percent of the contracts awarded in this category. Non-M/WBE firms received approximately 44 percent of the

contracts for this category. Hispanic American-owned firms were awarded approximately 12.45 percent of the contract dollars within this dollar range, and Asian American-owned firms were awarded 12.05 percent of the contract dollars awarded.

**EXHIBIT 8-4  
CITY OF PHOENIX CONSTRUCTION THRESHOLD ANALYSIS OF PRIME  
CONTRACTORS FOR SBE CERTIFIED FIRMS  
DOLLARS AND PERCENTAGE OF TOTAL DOLLARS IN THE RELEVANT MARKET  
AREA BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Thresholds	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Dollars Awarded
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$
Less than or Equal to \$250,000	\$0.00	0.00%	\$0.00	0.00%	\$1,787,568.03	71.31%	\$0.00	0.00%	\$382,358.01	15.25%	\$2,169,926.04	86.56%	\$336,900.30	13.44%	\$2,506,826.34
Between \$250,001 and \$500,000	\$0.00	0.00%	\$376,891.00	12.45%	\$364,748.54	12.05%	\$0.00	0.00%	\$859,342.77	28.38%	\$1,600,982.31	52.88%	\$1,426,514.78	47.12%	\$3,027,497.09
Between \$500,001 and \$1 million	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$1,646,307.29	100.00%	\$1,646,307.29	100.00%	\$0.00	0.00%	\$1,646,307.29
Greater than \$1 million	\$0.00	0.00%	\$0.00	0.00%	\$1,518,387.99	21.45%	\$0.00	0.00%	\$3,000,000.00	42.38%	\$4,518,387.99	63.82%	\$2,560,999.00	36.18%	\$7,079,386.99
<b>Total</b>	\$0.00	0.00%	\$376,891.00	2.64%	\$3,670,704.56	25.74%	\$0.00	0.00%	\$5,888,008.07	41.29%	\$9,935,603.63	69.67%	\$4,324,414.08	30.33%	\$14,260,017.71

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total dollars awarded annually to prime contractors.

**EXHIBIT 8-5  
CITY OF PHOENIX CONSTRUCTION THRESHOLD ANALYSIS OF PRIME  
CONTRACTORS FOR SBE CERTIFIED FIRMS  
NUMBER AND PERCENTAGE OF TOTAL CONTRACTS IN THE RELEVANT  
MARKET AREA BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Thresholds	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Contracts Awarded
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#
Less than or Equal to \$250,000	0	0.00%	0	0.00%	18	69.23%	0	0.00%	3	11.54%	21	80.77%	5	19.23%	26
Between \$250,001 and \$500,000	0	0.00%	1	11.11%	1	11.11%	0	0.00%	3	33.33%	5	55.56%	4	44.44%	9
Between \$500,001 and \$1 million	0	0.00%	0	0.00%	0	0.00%	0	0.00%	3	100.00%	3	100.00%	0	0.00%	3
Greater than \$1 million	0	0.00%	0	0.00%	1	33.33%	0	0.00%	1	33.33%	2	66.67%	1	33.33%	3
<b>Total</b>	0	0.00%	1	2.44%	20	48.78%	0	0.00%	10	24.39%	31	75.61%	10	24.39%	41

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total contracts awarded annually to prime contractors.

**Construction Contracts Awarded between \$500,001 and \$1 million**

The City of Phoenix awarded three contracts between \$500,001 and \$1 million during the study period to SBE firms. Nonminority women-owned firms were the only firms utilized in the M/WBE category, receiving 100 percent of the contracts awarded in this category. Non-M/WBE firms certified as SBEs were not utilized for construction contracts within this dollar range.

**Construction Contracts Awarded Over \$1 million**

The City of Phoenix awarded three contracts to SBE firms valued over \$1 million during the study period. Of these contracts, two went to M/WBE firms, which included one contract to a nonminority women-owned firm and one contract to an Asian American-owned firm. Based on contract dollars awarded, nonminority women-owned firms received 42.4 percent (or approximately \$4.5 million), while Asian American-owned firms received 21.5 percent (or approximately \$1.5 million) of the dollars awarded to M/WBEs certified as SBEs.

**8.22 Prime Construction Contracts with SBE Goals Utilization Analysis**

The utilization of prime contractors for prime construction contracts overall and with SBE goals are reported in **Exhibits 8-6** through **8-8**. **Exhibit 8-6** details that of the \$1.30 billion awarded to prime contractors for constructions projects awarded by the City, approximately \$57.1 million were awarded with SBE goals. Approximately 84 percent of these dollars were awarded to nonminority-owned firms, which translates to \$47.9 million. Just over 16 percent of these dollars associated with prime construction contracts with SBE goals were awarded to M/WBE firms, with nonminority women-owned firms receiving the most in the award dollars at \$7.6 million, or 13.4 percent.



**EXHIBIT 8-6**  
**CITY OF PHOENIX CONSTRUCTION UTILIZATION ANALYSIS OF PRIME CONTRACTORS IN THE RELEVANT MARKET AREA**  
**COMPARISON OF OVERALL PRIME CONTRACT UTILIZATION TO PRIME CONTRACTS WITH SBE GOALS**  
**DOLLARS AND PERCENTAGE OF TOTAL DOLLARS**  
**BY RACE/ETHNIC/GENDER CLASSIFICATION**  
**JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Dollars Awarded <sup>2</sup>	
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	
<b>FY1999-2000</b>																
Overall	\$0.00	0.00%	\$5,049,483.64	2.78%	\$0.00	0.00%	\$1,900,808.00	1.05%	\$6,795,069.26	3.74%	\$13,745,360.90	7.57%	\$167,828,157.47	92.43%	\$181,573,518.37	
with SBE Goals	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	
<b>FY2000-2001</b>																
Overall	\$0.00	0.00%	\$8,310,849.57	3.63%	\$758,852.84	0.33%	\$0.00	0.00%	\$18,619,767.80	8.12%	\$27,689,470.21	12.08%	\$201,564,295.30	87.92%	\$229,253,765.51	
with SBE Goals	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	
<b>FY2001-2002</b>																
Overall	\$0.00	0.00%	\$8,028,237.70	3.47%	\$2,676,851.72	1.16%	\$0.00	0.00%	\$9,278,278.88	4.02%	\$19,983,368.30	8.65%	\$211,105,769.39	91.35%	\$231,089,137.69	
with SBE Goals	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$1,373,256.66	100.00%	\$1,373,256.66	
<b>FY2002-2003</b>																
Overall	\$0.00	0.00%	\$5,487,700.17	1.37%	\$0.00	0.00%	\$0.00	0.00%	\$11,110,621.71	2.77%	\$16,598,321.88	4.14%	\$384,754,171.67	95.86%	\$401,352,493.55	
with SBE Goals	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$5,276,831.75	14.04%	\$5,276,831.75	14.04%	\$32,318,621.75	85.96%	\$37,595,453.50	
<b>FY2003-2004</b>																
Overall	\$0.00	0.00%	\$1,803,209.92	0.69%	\$235,000.00	0.09%	\$0.00	0.00%	\$11,433,455.13	4.39%	\$13,471,665.05	5.17%	\$247,030,300.42	94.83%	\$260,501,965.47	
with SBE Goals	\$0.00	0.00%	\$1,519,880.80	8.40%	\$0.00	0.00%	\$0.00	0.00%	\$2,342,499.95	12.95%	\$3,862,380.75	21.35%	\$14,228,105.54	78.65%	\$18,090,486.29	
<b>All Fiscal Years</b>																
Overall	\$0.00	0.00%	\$28,679,481.00	2.20%	\$3,670,704.56	0.28%	\$1,900,808.00	0.15%	\$57,237,192.78	4.39%	\$91,488,186.34	7.02%	\$1,212,282,694.25	92.98%	\$1,303,770,880.59	
with SBE Goals	\$0.00	0.00%	\$1,519,880.80	2.66%	\$0.00	0.00%	\$0.00	0.00%	\$7,619,331.70	13.35%	\$9,139,212.50	16.02%	\$47,919,983.95	83.98%	\$57,059,196.45	

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total dollars paid annually to prime contractors.

<sup>2</sup> Total dollars awarded to vendors is currently based on the original award amount, as well as any associated change orders.

**Exhibit 8-7** shows a comparison of the overall number of contracts to the number of prime construction firms utilized. **Exhibit 8-8** presents the number of prime construction firms utilized to the number of contracts with SBE goals. As seen in **Exhibit 8-7**, 53 out of the 1,255 prime construction contracts awarded by the City during the study period had SBE goals. Approximately 91 percent of the prime construction contracts with SBE goals were awarded to nonminority-owned firms.

**EXHIBIT 8-7  
CITY OF PHOENIX CONSTRUCTION UTILIZATION ANALYSIS OF PRIME  
CONTRACTORS IN THE RELEVANT MARKET AREA  
COMPARISON OF OVERALL PRIME CONTRACTOR UTILIZATION  
TO PRIME CONTRACTS WITH SBE GOALS  
NUMBER OF CONTRACTS BY RACE/ETHNIC/GENDER CLASSIFICATION  
JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Contracts	
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	
<b>FY1999-2000</b>																
Overall	0	0.00%	8	4.35%	0	0.00%	1	0.54%	25	13.59%	34	18.48%	150	81.52%	184	
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	
<b>FY2000-2001</b>																
Overall	0	0.00%	18	6.47%	4	1.44%	0	0.00%	56	20.14%	78	28.06%	200	71.94%	278	
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	
<b>FY2001-2002</b>																
Overall	0	0.00%	34	8.56%	15	3.78%	0	0.00%	32	8.06%	81	20.40%	316	79.60%	397	
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	6	100.00%	6	
<b>FY2002-2003</b>																
Overall	0	0.00%	7	2.81%	0	0.00%	0	0.00%	24	9.64%	31	12.45%	218	87.55%	249	
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	7.14%	2	7.14%	26	92.86%	28	
<b>FY2003-2004</b>																
Overall	0	0.00%	3	2.04%	1	0.68%	0	0.00%	21	14.29%	25	17.01%	122	82.99%	147	
with SBE Goals	0	0.00%	1	5.26%	0	0.00%	0	0.00%	2	10.53%	3	15.79%	16	84.21%	19	
<b>All Fiscal Years</b>																
Overall	0	0.00%	70	5.58%	20	1.59%	1	0.08%	158	12.59%	249	19.84%	1,006	80.16%	1,255	
with SBE Goals	0	0.00%	1	1.89%	0	0.00%	0	0.00%	4	7.55%	5	9.43%	48	90.57%	53	

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Contracts.

In **Exhibit 8-8** we show that just over 14 percent of the prime construction contracts with SBE goals were awarded to M/WBE firms, with approximately 11 percent of these unique firms being utilized classified as WBE firms, or three unique firms. In

comparison, 24 non-M/WBE firms were utilized for construction contracts with SBE goals during the study period.

**EXHIBIT 8-8  
CITY OF PHOENIX CONSTRUCTION UTILIZATION ANALYSIS OF PRIME  
CONTRACTORS IN THE RELEVANT MARKET AREA  
COMPARISON OF OVERALL PRIME CONTRACTOR UTILIZATION  
TO PRIME CONTRACTS WITH SBE GOALS  
NUMBER OF UNIQUE VENDORS BY RACE/ETHNIC/GENDER CLASSIFICATION  
JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Unique Vendors <sup>2</sup>
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	
<b>FY1999-2000</b>															
Overall	0	0.00%	5	6.41%	0	0.00%	1	1.28%	10	12.82%	16	20.51%	62	79.49%	78
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
<b>FY2000-2001</b>															
Overall	0	0.00%	5	6.76%	1	1.35%	0	0.00%	9	12.16%	15	20.27%	59	79.73%	74
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
<b>FY2001-2002</b>															
Overall	0	0.00%	4	5.97%	2	2.99%	0	0.00%	7	10.45%	13	19.40%	54	80.60%	67
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	3	100.00%	3
<b>FY2002-2003</b>															
Overall	0	0.00%	4	6.15%	0	0.00%	0	0.00%	5	7.69%	9	13.85%	56	86.15%	65
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	10.53%	2	10.53%	17	89.47%	19
<b>FY2003-2004</b>															
Overall	0	0.00%	3	5.56%	1	1.85%	0	0.00%	8	14.81%	12	22.22%	42	77.78%	54
with SBE Goals	0	0.00%	1	8.33%	0	0.00%	0	0.00%	2	16.67%	3	25.00%	9	75.00%	12
<b>All Fiscal Years<sup>2</sup></b>															
Overall	0	0.00%	11	6.08%	2	1.10%	1	0.55%	14	7.73%	28	15.47%	153	84.53%	181
with SBE Goals	0	0.00%	1	3.57%	0	0.00%	0	0.00%	3	10.71%	4	14.29%	24	85.71%	28

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Vendors.

<sup>2</sup> The Total Vendors counts a vendor only once for each year the firm receives work. Since a vendor could be used in multiple years, the total vendors for the entire study period may not equal the sum of all years.

**Threshold Analysis**

MGT analyzed the utilization of M/WBE construction firms that were awarded prime construction contracts with SBE goals by examining construction contracts awarded in the four dollar ranges shown below:

- contracts \$250,000 or under;
- contracts between \$250,001 and \$500,000;
- contracts between \$500,001 and \$1 million; and
- contracts greater than \$1 million.

The utilization of M/WBE and non-M/WBE firms for each dollar category is shown in **Exhibits 8-9** and **8-10**. As illustrated, M/WBEs received approximately 5.23 percent of contract award dollars for contracts valued at \$250,000 or less and did not receive any award dollars for contracts valued between \$500,001 and \$1 million. M/WBE participation fluctuated to the extent that in the highest dollar range—contracts of \$1 million or more—M/WBE participation dropped to no utilization.

**Construction Contracts Awarded of \$250,000 and Less**

The City of Phoenix awarded 16 prime construction contracts to prime contractors with SBE goals from fiscal years 2000 through 2004 on construction contracts valued at \$250,000 or less. As illustrated in **Exhibits 8-9** and **8-10**, M/WBE firms received approximately 5.23 percent of award dollars in this category. Nonminority women-owned firms were the only firms utilized within the M/WBE category, receiving 100 percent of the contract award dollars. Non-M/WBE firms received approximately 94.77 percent of the award dollars. Of the 16 contracts that were awarded within this category, approximately 60.25 percent went to M/WBEs. Nonminority women-owned firms were awarded one contract within this dollar range.

**Construction Contracts Awarded between \$250,001 and \$500,000**

There were 11 prime construction contracts with SBE goals between the \$250,001 and \$500,000 dollar range during the study period. Non-M/WBE firms received 100 percent of the contracts for this category.

**Construction Contracts Awarded between \$500,001 and \$1 million**

The City of Phoenix awarded nine prime contracts with SBE goals between \$500,001 and \$1 million range during the study period. Nonminority women-owned firms

**EXHIBIT 8-9  
CITY OF PHOENIX CONSTRUCTION THRESHOLD ANALYSIS OF PRIME  
CONTRACTORS FOR PRIME CONSTRUCTION CONTRACTS WITH SBE GOALS  
DOLLARS AND PERCENTAGE OF TOTAL DOLLARS IN THE RELEVANT MARKET  
AREA BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Thresholds	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Dollars Awarded
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$
Less than or Equal to \$250,000	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$110,524.75	5.23%	\$110,524.75	5.23%	\$2,004,781.27	94.77%	\$2,115,306.02
Between \$250,001 and \$500,000	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$3,700,074.52	100.00%	\$3,700,074.52
Between \$500,001 and \$1 million	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$6,338,201.70	100.00%	\$6,338,201.70
Greater than \$1 million	\$0.00	0.00%	\$1,519,880.80	3.38%	\$0.00	0.00%	\$0.00	0.00%	\$7,508,806.95	16.72%	\$9,028,687.75	20.11%	\$35,876,926.46	79.89%	\$44,905,614.21
<b>Total</b>	\$0.00	0.00%	\$1,519,880.80	2.66%	\$0.00	0.00%	\$0.00	0.00%	\$7,619,331.70	13.35%	\$9,139,212.50	16.02%	\$47,919,983.95	83.98%	\$57,059,196.45

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total dollars awarded annually to prime contractors.

**EXHIBIT 8-10  
CITY OF PHOENIX CONSTRUCTION THRESHOLD ANALYSIS OF PRIME  
CONTRACTORS FOR PRIME CONSTRUCTION CONTRACTS WITH SBE GOALS  
NUMBER AND PERCENTAGE OF TOTAL CONTRACTS IN THE RELEVANT  
MARKET AREA BY RACE/ETHNICITY/GENDER CLASSIFICATIONS  
FISCAL YEARS 2000 THROUGH 2004**

Thresholds	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Contracts Awarded
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#
Less than or Equal \$250,000	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	6.25%	1	6.25%	15	93.75%	16
Between \$250,001 and \$500,000	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	11	100.00%	11
Between \$500,001 and \$1 million	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	9	100.00%	9
Greater than \$1 million	0	0.00%	1	5.88%	0	0.00%	0	0.00%	3	17.65%	4	23.53%	13	76.47%	17
<b>Total</b>	0	0.00%	1	1.89%	0	0.00%	0	0.00%	4	7.55%	5	9.43%	48	90.57%	53

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total contracts awarded annually to prime contractors.

were the most firms utilized in the M/WBE category, receiving 48.7 percent of the contracts awarded in this category. Non-M/WBE firms received approximately 41.3 percent of the dollars awarded in this category.

**Construction Contracts Awarded Over \$1 million**

The City of Phoenix awarded 17 prime construction contracts with SBE goals valued over \$1 million during the study period. Of these contracts, four went to M/WBE firms, which included three contracts to nonminority women-owned firms and one contract to Hispanic American-owned firms. Based on contract dollars awarded, nonminority women-owned firms received 16.72 percent (or approximately \$7.5 million), while Hispanic American-owned firms received 3.38 percent (or approximately \$1.5 million) of the dollars awarded to M/WBEs.

**8.2.3 Subcontractor Utilization Analysis for Prime Construction Contracts with SBE Goals**

**Exhibit 8-11** presents a utilization analysis of subcontractors for both overall subcontracts and subcontracts that were awarded based on prime contracts with SBE goals. Of the \$56.7 million awarded to M/WBE subcontractors in the relevant market area, approximately \$257,963 were awarded to M/WBE subcontractors based on prime construction contracts with SBE goals. Thus, only 0.5 percent of M/WBE subcontracting dollars were awarded through SBE goals. Nonminority women were awarded 34.10 percent of the dollars awarded to M/WBEs, while Hispanic American-owned firms were awarded approximately 48.8 percent of the dollars awarded to M/WBEs.

**EXHIBIT 8-11  
CITY OF PHOENIX CONSTRUCTION UTILIZATION ANALYSIS OF  
SUBCONTRACTORS IN THE RELEVANT MARKET AREA  
COMPARISON OF OVERALL SUBCONTRACTOR UTILIZATION TO  
SUBCONTRACTOR UTILIZATION ON CONTRACTS WITH SBE GOALS  
DOLLARS AND PERCENTAGE OF TOTAL DOLLARS  
BY RACE/ETHNIC/GENDER CLASSIFICATION  
JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Total
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$
<b>FY1999-2000</b>											
Overall	\$1,210,807.78	7.12%	\$6,079,669.22	35.75%	\$9,569.55	0.06%	\$3,458,367.94	20.33%	\$6,248,956.12	36.74%	\$17,007,370.61
with SBE Goals	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00
<b>FY2000-2001</b>											
Overall	\$282,078.86	1.40%	\$11,626,653.17	57.53%	\$182,833.78	0.90%	\$1,681,182.56	8.32%	\$6,437,525.45	31.85%	\$20,210,273.82
with SBE Goals	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00
<b>FY2001-2002</b>											
Overall	\$915,531.60	7.81%	\$5,186,873.74	44.23%	\$0.00	0.00%	\$315,105.31	2.69%	\$5,309,002.27	45.27%	\$11,726,512.92
with SBE Goals	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00
<b>FY2002-2003</b>											
Overall	\$607,971.45	8.73%	\$2,277,886.52	32.70%	\$0.00	0.00%	\$291,787.19	4.19%	\$3,789,350.93	54.39%	\$6,966,996.09
with SBE Goals	\$0.00	0.00%	\$151,808.00	97.17%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$151,808.00
<b>FY2003-2004</b>											
Overall	\$130,806.00	15.42%	\$263,323.00	31.03%	\$0.00	0.00%	\$0.00	0.00%	\$454,363.00	53.55%	\$848,492.00
with SBE Goals	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$106,145.00	80.72%	\$106,145.00
<b>All Fiscal Years</b>											
Overall	\$3,147,195.69	5.54%	\$25,434,405.65	44.81%	\$192,403.33	0.34%	\$5,746,443.00	10.12%	\$22,239,197.77	39.18%	\$56,759,645.44
with SBE Goals	\$0.00	0.00%	\$151,808.00	48.76%	\$0.00	0.00%	\$0.00	0.00%	\$106,145.00	34.10%	\$257,953.00

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of total dollars paid annually to prime contractors.

<sup>2</sup> Total dollars awarded to vendors is currently based on the original award amount, as well as any associated change orders.

**Exhibits 8-12 and 8-13** show the breakdown of the number of subcontracts and utilization of individual subcontractors that participated on the City of Phoenix overall construction projects and construction projects with SBE goals. There were seven total subcontracts based on SBE goals. Of the 702 subcontracts awarded to M/WBEs during the study period, 3 subcontracts were awarded based on prime construction contracts with SBE goals. Approximately 66.7 percent of these subcontracts awarded to M/WBEs went to Hispanic American-owned firms.

**EXHIBIT 8-12  
CITY OF PHOENIX CONSTRUCTION UTILIZATION ANALYSIS OF  
SUBCONTRACTORS IN THE RELEVANT MARKET AREA  
COMPARISON OF OVERALL SUBCONTRACTOR UTILIZATION TO  
SUBCONTRACTOR UTILIZATION ON CONTRACTS WITH SBE GOALS  
NUMBER OF SUBCONTRACTS BY RACE/ETHNIC/GENDER CLASSIFICATION  
JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Total
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	
<b>FY1999-2000</b>											
Overall	15	7.14%	93	44.29%	2	0.95%	6	2.86%	94	44.76%	210
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
<b>FY2000-2001</b>											
Overall	8	3.14%	114	44.71%	2	0.78%	16	6.27%	115	45.10%	255
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
<b>FY2001-2002</b>											
Overall	12	7.89%	73	48.03%	0	0.00%	7	4.61%	60	39.47%	152
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
<b>FY2002-2003</b>											
Overall	7	9.86%	26	36.62%	0	0.00%	5	7.04%	33	46.48%	71
with SBE Goals	0	0.00%	2	66.67%	0	0.00%	0	0.00%	0	0.00%	2
<b>FY2003-2004</b>											
Overall	3	21.43%	6	42.86%	0	0.00%	0	0.00%	5	35.71%	14
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	33.33%	1
<b>All Fiscal Years</b>											
Overall	45	6.41%	312	44.44%	4	0.57%	34	4.84%	307	43.73%	702
with SBE Goals	0	0.00%	2	66.67%	0	0.00%	0	0.00%	1	33.33%	3

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Subcontracts.

**Exhibit 8-13** shows the number of unique subcontractors utilized on prime construction contracts with SBE goals. Of the unique number of subcontractors utilized on prime construction contracts with SBE goals, two Hispanic American and one nonminority women-owned firms were the only firms among M/WBEs utilized.

**Threshold Analysis**

MGT analyzed the utilization of M/WBE subcontractors that were utilized on prime construction contracts with SBE goals by examining construction subcontracts awarded in the four dollar ranges shown below:

- subcontracts \$250,000 or under;
- subcontracts between \$250,001 and \$500,000;
- subcontracts between \$500,001 and \$1 million; and
- subcontracts greater than \$1 million.



**EXHIBIT 8-13  
CITY OF PHOENIX CONSTRUCTION UTILIZATION ANALYSIS OF  
SUBCONTRACTORS IN THE RELEVANT MARKET AREA  
COMPARISON OF OVERALL SUBCONTRACTOR UTILIZATION TO  
SUBCONTRACTOR UTILIZATION ON CONTRACTS WITH SBE GOALS  
NUMBER OF UNIQUE SUBCONTRACTORS  
BY RACE/ETHNIC/GENDER CLASSIFICATION  
JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Total
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#
<b>FY1999-2000</b>											
Overall	8	10.13%	30	37.97%	1	1.27%	5	6.33%	35	44.30%	79
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
<b>FY2000-2001</b>											
Overall	6	7.79%	33	42.86%	1	1.30%	6	7.79%	31	40.26%	77
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
<b>FY2001-2002</b>											
Overall	8	10.67%	31	41.33%	0	0.00%	5	6.67%	31	41.33%	75
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
<b>FY2002-2003</b>											
Overall	4	7.84%	20	39.22%	0	0.00%	4	7.84%	23	45.10%	51
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
<b>FY2003-2004</b>											
Overall	4	26.67%	6	40.00%	0	0.00%	0	0.00%	5	33.33%	15
with SBE Goals	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
<b>All Fiscal Years<sup>2</sup></b>											
Overall	16	11.19%	60	41.96%	2	1.40%	10	6.99%	55	38.46%	143
with SBE Goals	0	0.00%	2	66.67%	0	0.00%	0	0.00%	1	33.33%	3

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Vendors.

<sup>2</sup> The Total Vendors counts a vendor only once for each year the firm receives work. Since a vendor could be used in multiple years, the total vendors for the entire study period may not equal the sum of all years.

Based on the analysis conducted, all subcontracts within this category were valued at \$250,000 or under. Thus, the utilization of M/WBE for each dollar category is shown in **Appendix W** and **X**.

**8.2.4 Subcontractor Utilization Analysis for SBE Certified Firms**

**Exhibits 8-14** and **8-15** show the breakdown of the number of subcontracts and utilization of individual subcontractors and subcontractors certified as SBEs that participated on the City of Phoenix construction projects. Of the 702 subcontracts awarded to M/WBEs during the study period, 477 were subcontracts granted to SBE firms. Of the 477 subcontracts that were awarded to SBE firms, Hispanic Americans

were awarded 257 subcontracts, thus being awarded the most of any M/WBE category with 53.87 percent. The exhibit shows that 30 nonminority women-owned firms (35.71%) were certified as SBEs and 33 Hispanic American-owned firms (39.29%) were certified as SBEs.

**EXHIBIT 8-14  
CITY OF PHOENIX CONSTRUCTION UTILIZATION ANALYSIS OF  
SUBCONTRACTORS IN THE RELEVANT MARKET AREA  
COMPARISON OF OVERALL SUBCONTRACTOR UTILIZATION  
TO SBE CERTIFIED SUBCONTRACTOR UTILIZATION  
NUMBER OF SUBCONTRACTS BY RACE/ETHNIC/GENDER CLASSIFICATION  
JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Total
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#
<b>FY1999-2000</b>											
Overall	15	7.14%	93	44.29%	2	0.95%	6	2.86%	94	44.76%	210
SBE Certified	5	3.62%	77	55.80%	2	1.45%	4	2.90%	50	36.23%	138
<b>FY2000-2001</b>											
Overall	8	3.14%	114	44.71%	2	0.78%	16	6.27%	115	45.10%	255
SBE Certified	4	2.19%	96	52.46%	2	1.09%	15	8.20%	66	36.07%	183
<b>FY2001-2002</b>											
Overall	12	7.89%	73	48.03%	0	0.00%	7	4.61%	60	39.47%	152
SBE Certified	10	9.01%	66	59.46%	0	0.00%	7	6.31%	28	25.23%	111
<b>FY2002-2003</b>											
Overall	7	9.86%	26	36.62%	0	0.00%	5	7.04%	33	46.48%	71
SBE Certified	7	17.50%	16	40.00%	0	0.00%	2	5.00%	15	37.50%	40
<b>FY2003-2004</b>											
Overall	3	21.43%	6	42.86%	0	0.00%	0	0.00%	5	35.71%	14
SBE Certified	1	20.00%	2	40.00%	0	0.00%	0	0.00%	2	40.00%	5
<b>All Fiscal Years</b>											
Overall	45	6.41%	312	44.44%	4	0.57%	34	4.84%	307	43.73%	702
SBE Certified	27	5.66%	257	53.88%	4	0.84%	28	5.87%	161	33.75%	477

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Subcontracts.

In **Exhibit 8-15** we show that of the 143 M/WBE firms hired to conduct subcontractor work in the city’s construction projects, 80 firms were certified as SBEs. Of these 80 SBE certified firms, approximately 37.5 percent (or 30 unique firms) of the subcontractors that participated in city construction projects were identified as nonminority women owned-firms. The exhibit also shows that 33 Hispanic American-owned firms (41.25%) were certified as SBEs.

**EXHIBIT 8-15  
CITY OF PHOENIX CONSTRUCTION UTILIZATION ANALYSIS OF  
SUBCONTRACTORS IN THE RELEVANT MARKET AREA  
COMPARISON OF OVERALL SUBCONTRACTOR UTILIZATION  
TO SBE CERTIFIED SUBCONTRACTOR UTILIZATION  
NUMBER OF UNIQUE SUBCONTRACTORS  
BY RACE/ETHNIC/GENDER CLASSIFICATION  
JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Total #
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	
<b>FY1999-2000</b>											
Overall	8	10.13%	30	37.97%	1	1.27%	5	6.33%	35	44.30%	79
SBE Certified	4	8.70%	20	43.48%	1	2.17%	3	6.52%	18	39.13%	46
<b>FY2000-2001</b>											
Overall	6	7.79%	33	42.86%	1	1.30%	6	7.79%	31	40.26%	77
SBE Certified	3	5.88%	22	43.14%	1	1.96%	5	9.80%	20	39.22%	51
<b>FY2001-2002</b>											
Overall	8	10.67%	31	41.33%	0	0.00%	5	6.67%	31	41.33%	75
SBE Certified	7	13.21%	24	45.28%	0	0.00%	5	9.43%	17	32.08%	53
<b>FY2002-2003</b>											
Overall	4	7.84%	20	39.22%	0	0.00%	4	7.84%	23	45.10%	51
SBE Certified	4	14.81%	11	40.74%	0	0.00%	2	7.41%	10	37.04%	27
<b>FY2003-2004</b>											
Overall	4	26.67%	6	40.00%	0	0.00%	0	0.00%	5	33.33%	15
SBE Certified	1	20.00%	2	40.00%	0	0.00%	0	0.00%	2	40.00%	5
<b>All Fiscal Years<sup>2</sup></b>											
Overall	16	11.19%	60	41.96%	2	1.40%	10	6.99%	55	38.46%	143
SBE Certified	9	11.25%	33	41.25%	2	2.50%	6	7.50%	30	37.50%	80

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Subcontractors.

<sup>2</sup> The Total Unique Vendors counts a vendor only once for each year the firm receives work. Since a vendor could be used in multiple years, the total vendors for the entire study period may not equal the sum of all years.

**Threshold Analysis**

MGT analyzed the utilization of M/WBE construction firms certified as SBEs that were awarded subcontracts by examining construction subcontracts awarded in the four dollar ranges shown below:

- subcontracts \$250,000 or under;
- subcontracts between \$250,001 and \$500,000;
- subcontracts between \$500,001 and \$1 million; and
- subcontracts greater than \$1 million.

The utilization of M/W/SBE firms for each dollar category is **presented in Appendix Y and Z.**

**8.2.5 Availability**

**Exhibit 8-16** shows the availability of construction vendors that are certified as SBEs. Approximately 75 percent of the certified SBE firms available to do business with the city were M/WBEs. The majority of the M/WBE firms were nonminority women (43.1%) and Hispanic American-owned firms (20.9%).

**EXHIBIT 8-16  
CITY OF PHOENIX CONSTRUCTION  
AVAILABILITY OF PRIME CONTRACTORS FOR SBE FIRMS ONLY  
JULY 1, 1999 - JUNE 30, 2004**

	African Americans <sup>1</sup>		Hispanic Americans <sup>1</sup>		Asian Americans <sup>1</sup>		Native Americans <sup>1</sup>		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Firms
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
<b>Total</b>	15	4.62%	68	20.92%	9	2.77%	11	3.38%	140	43.08%	243	74.77%	82	25.23%	325

Source MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004). The certification of vendors has been provided by the City’s EOD department, which has been updated in MGT’s master vendor database.

<sup>1</sup> Minority male and female firms are included in their respective minority classifications.

The subcontractor availability analysis is based on SBE firms that were located within the relevant market area. As shown in **Exhibit 8-17**, approximately 78 percent (or 327 SBE firms) available to do business with the city were M/WBEs. Nonminority women accounted for 41.9 percent (or 175 SBE firms) of the available subcontractors, and Asian Americans accounted for approximately 2.9 percent (or 12 SBE firms).

**EXHIBIT 8-17  
CITY OF PHOENIX CONSTRUCTION  
AVAILABILITY OF SUBCONTRACTORS FOR SBE FIRMS ONLY  
JULY 1, 1999 - JUNE 30, 2004**

	African Americans <sup>1</sup>		Hispanic Americans <sup>1</sup>		Asian Americans <sup>1</sup>		Native Americans <sup>1</sup>		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Firms
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
<b>Total</b>	21	5.02%	103	24.64%	12	2.87%	16	3.83%	175	41.87%	327	78.23%	91	21.77%	418

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004). The certification of vendors has been provided by the City’s EOD department, which has been updated in MGT’s master vendor database.

<sup>1</sup> Minority male and female firms are included in their respective minority classifications.

### **8.3 Goods and Supplies Utilization Analysis**

This section presents our analysis of the overall goods and supplies procurements for the city compared to the procurements made through the SBE Goods and Supplies Reserve program. The utilization and availability of M/W/SBEs and non-M/W/SBEs are examined in this section. In addition, analysis of the overall goods and supplies procurements made to SBEs and all vendors engaged in the procurement of goods and supplies by the city are examined in this section.

M/W/SBE and non-M/W/SBE utilization analysis includes firms located within the relevant market areas. The utilization was derived from information contained in the city's financial system for activity occurring between July 1, 1999, and June 30, 2004. The identification of SBE firms was based on the information contained in the city's Equal Opportunity Department (EOD) database. Furthermore, goods and supplies purchase orders that were reserved for the SBE program were based on data provided by the city's Finance Department. Using these data sources, MGT calculated the percentage of total dollars awarded to M/WBEs and SBEs and non-M/WBEs and non-SBEs during the relevant time period. The numbers in the utilization charts that follow reflect the awards made to vendors in race, ethnicity, and gender category.

#### **8.3.1 Goods and Supplies Utilization Analysis via the SBE Reserve Program**

**Exhibit 8-18** details the utilization analysis of M/WBEs and SBEs and non-M/WBEs and non-SBEs in the relevant market areas. As the exhibit shows, of the \$508 million awarded, approximately \$142,000 were awarded for goods and supplies procurements based on the SBE Reserve program. Approximately 89 percent of the dollars for the SBE Reserve program were awarded to firms in the M/WBE category. Nonminority women-owned firms were awarded approximately 86 percent of the total

**EXHIBIT 8-18**  
**CITY OF PHOENIX GOODS AND SUPPLIES UTILIZATION ANALYSIS OF PRIME CONTRACTORS IN THE RELEVANT MARKET AREA**  
**FOR SBE GOODS AND SUPPLIES RESERVE PROGRAM**  
**TOTAL AWARD DOLLARS AND PERCENTAGE OF TOTAL DOLLARS**  
**BY RACE/ETHNIC/GENDER CLASSIFICATION**  
**JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Dollars Awarded	
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	
<b>FY1999-2000</b>																
Overall	\$146,859.43	0.13%	\$692,394.48	0.60%	\$5,817,496.49	5.03%	\$117,652.42	0.10%	\$5,216,867.87	4.51%	\$11,991,270.69	10.38%	\$103,578,939.97	89.62%	\$115,570,210.66	
SBE Reserve	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	
<b>FY2000-2001</b>																
Overall	\$224,664.07	0.21%	\$432,220.01	0.40%	\$7,774,412.47	7.14%	\$4,178.08	0.00%	\$5,222,885.11	4.80%	\$13,658,359.74	12.55%	\$95,182,256.03	87.45%	\$108,840,615.77	
SBE Reserve	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	
<b>FY2001-2002</b>																
Overall	\$138,056.28	0.11%	\$658,535.71	0.51%	\$6,621,386.40	5.16%	\$8,651.55	0.01%	\$4,530,226.20	3.53%	\$11,956,856.14	9.32%	\$116,389,857.04	90.68%	\$128,346,713.18	
SBE Reserve	\$3,046.11	41.51%	\$0.00	0.00%	\$799.94	10.90%	\$0.00	0.00%	\$2,328.49	31.73%	\$6,174.54	84.14%	\$1,163.91	15.86%	\$7,338.45	
<b>FY2002-2003</b>																
Overall	\$89,046.56	0.11%	\$618,335.81	0.79%	\$5,393,832.51	6.87%	\$4,360.55	0.01%	\$4,911,386.77	6.25%	\$11,016,962.20	14.03%	\$67,531,276.17	85.97%	\$78,548,238.37	
SBE Reserve	\$223.89	0.63%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$32,816.85	92.31%	\$33,040.74	92.94%	\$2,508.78	7.06%	\$35,549.52	
<b>FY2003-2004</b>																
Overall	\$81,720.68	0.11%	\$633,604.35	0.82%	\$6,553,898.82	8.49%	\$16,902.23	0.02%	\$4,203,815.85	5.45%	\$11,489,941.93	14.89%	\$65,698,255.21	85.11%	\$77,188,197.14	
SBE Reserve	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$0.00	0.00%	\$87,259.99	88.14%	\$87,259.99	88.14%	\$11,739.33	11.86%	\$98,999.32	
<b>All Fiscal Years</b>																
Overall	\$680,347.02	0.13%	\$3,035,090.36	0.60%	\$32,161,026.69	6.32%	\$151,744.83	0.03%	\$24,085,181.80	4.74%	\$60,113,390.70	11.82%	\$448,380,584.42	88.18%	\$508,493,975.12	
SBE Reserve	\$3,270.00	2.30%	\$0.00	0.00%	\$799.94	0.56%	\$0.00	0.00%	\$122,405.33	86.27%	\$126,475.27	89.14%	\$15,412.02	10.86%	\$141,887.29	

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004). The SBE Reserve Program contracts were provided by the City's Finance Department.

<sup>1</sup> Percentage of total dollars awarded annually to prime contractors.

dollars awarded to firms in the M/WBE category. Native American- and Hispanic American-owned firms were not utilized in the program for the procurement of goods and supplies. M/WBEs were awarded approximately .2 percent (or \$126,475 out of \$60.1 million) of their goods and supplies procurement through the city's SBE Reserve Program.

A comparison of the total number of goods and supplies purchase orders made to firms overall and through the SBE Reserve Program in the relevant market area is shown in **Exhibit 8-19**. Less than 1 percent (or 55 out of the 54,440 purchase orders) of the purchases made for goods and supplies was made to firms through the SBE Reserve Program. Of the 55 purchase orders awarded through the SBE Reserve Program, approximately 87.3 percent (or 48 purchase orders) were awarded to firms identified as M/WBEs. Nonminority women firms received the most purchase orders with 42, and African American firms received the second highest share of purchase orders, with 4.

**Exhibit 8-20** shows the number of unique utilized vendors for goods and supplies procurements to firms overall and through the SBE Reserve Program. Out of the 2,953 vendors utilized, 19 unique vendors were utilized for the procurement of goods and supplies through the SBE Reserve Program. About 84 percent of the firms that were utilized were classified as M/WBEs, which translates to 16 unique firms. Nonminority women-owned firms were the most utilized among this category, with 12 unique firms being utilized.

**EXHIBIT 8-19  
CITY OF PHOENIX GOODS AND SUPPLIES UTILIZATION ANALYSIS OF PIRME CONTRACTORS IN THE RELEVANT  
MARKET AREA  
FOR SBE RESERVE GOODS AND SUPPLIES PROGRAM  
AWARD DOLLARS AND CONTRACTS AS A PERCENTAGE OF  
NUMBER OF PURCHASE ORDERS  
BY RACE/ETHNIC/GENDER CLASSIFICATION  
JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Purchase Orders	
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	
<b>FY1999-2000</b>																
Overall	85	0.94%	103	1.14%	645	7.11%	5	0.06%	1414	15.58%	2,252	24.82%	6,822	75.18%		9,074
SBE Reserve	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	50.00%	2	50.00%	2	50.00%		4
<b>FY2000-2001</b>																
Overall	91	0.99%	102	1.11%	678	7.35%	2	0.02%	1602	17.36%	2,475	26.81%	6,755	73.19%		9,230
SBE Reserve	0	0.00%	0	0.00%	0	0.00%	0	0.00%	15	88.24%	15	88.24%	2	11.76%		17
<b>FY2001-2002</b>																
Overall	70	0.73%	94	0.98%	664	6.93%	3	0.03%	1651	17.23%	2,482	25.90%	7,101	74.10%		9,583
SBE Reserve	3	9.68%	0	0.00%	0	0.00%	0	0.00%	25	80.65%	28	90.32%	3	9.68%		31
<b>FY2002-2003</b>																
Overall	34	0.27%	184	1.46%	727	5.75%	4	0.03%	2183	17.26%	3,132	24.77%	9,514	75.23%		12,646
SBE Reserve	1	50.00%	0	0.00%	1	0.00%	0	0.00%	0	0.00%	2	100.00%	0	0.00%		2
<b>FY2003-2004</b>																
Overall	37	0.27%	293	2.11%	845	6.08%	8	0.06%	2102	15.11%	3,285	23.62%	10,622	76.38%		13,907
SBE Reserve	0	0.00%	0	0.00%	1	100.00%	0	0.00%	0	0.00%	1	100.00%	0	0.00%		1
<b>All Fiscal Years</b>																
Overall	317	0.58%	776	1.43%	3,559	6.54%	22	0.04%	8952	16.44%	13,626	25.03%	40,814	74.97%		54,440
SBE Reserve	4	7.27%	0	0.00%	2	3.64%	0	0.00%	42	76.36%	48	87.27%	7	12.73%		55

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004). The SBE Reserve Program contracts were provided by the City's Finance Department.

<sup>1</sup> Percentage of Total Purchase Orders.



**EXHIBIT 8-20**  
**CITY OF PHOENIX GOODS AND SUPPLIES UTILIZATION ANALYSIS OF PRIME CONTRACTORS IN THE RELEVANT MARKET AREA**  
**COMPARISON OF OVERALL UTILIZATION TO SBE RESERVED UTILIZATION**  
**NUMBER OF UNIQUE VENDORS BY RACE/ETHNIC/GENDER CLASSIFICATION**  
**JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Unique Vendors <sup>2</sup>
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	
<b>FY1999-2000</b>															
Overall	5	0.43%	33	2.84%	18	1.55%	4	0.34%	83	7.13%	143	12.29%	1,021	87.71%	1,164
SBE Reserve	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
<b>FY2000-2001</b>															
Overall	9	0.77%	30	2.57%	16	1.37%	2	0.17%	88	7.53%	145	12.41%	1,023	87.59%	1,168
SBE Reserve	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
<b>FY2001-2002</b>															
Overall	10	0.82%	29	2.39%	19	1.56%	3	0.25%	97	7.98%	158	13.00%	1,057	87.00%	1,215
SBE Reserve	2	50.00%	0	0.00%	0	0.00%	0	0.00%	1	25.00%	3	75.00%	1	25.00%	4
<b>FY2002-2003</b>															
Overall	10	0.70%	38	2.65%	21	1.46%	3	0.21%	105	7.32%	177	12.33%	1,258	87.67%	1,435
SBE Reserve	1	8.33%	0	0.00%	1	8.33%	0	0.00%	9	75.00%	11	91.67%	1	8.33%	12
<b>FY2003-2004</b>															
Overall	10	0.65%	47	3.06%	21	1.37%	3	0.20%	119	7.75%	200	13.02%	1,336	86.98%	1,536
SBE Reserve	0	0.00%	0	0.00%	1	11.11%	0	0.00%	6	66.67%	7	77.78%	2	22.22%	9
<b>All Fiscal Years<sup>2</sup></b>															
Overall	25	0.85%	91	3.08%	38	1.29%	6	0.20%	201	6.81%	361	12.22%	2,592	87.78%	2,953
SBE Reserve	2	10.53%	0	0.00%	2	10.53%	0	0.00%	12	63.16%	16	84.21%	3	15.79%	19

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004). The SBE Reserve Program contracts were provided by the City’s Finance Department.

<sup>1</sup> Percentage of Total Vendors.

<sup>2</sup> The Total Vendors counts a vendor only once for each year the firm receives work. Since a vendor could be used in multiple years, the total vendors for the entire study period may not equal the sum of all years.

**8.3.2 Goods and Supplies Utilization Analysis for SBE Certified Firms**

This section discusses the analysis of the utilization of M/WBEs and SBEs and non-M/WBEs and non-SBEs engaged in the goods and supplies in the relevant market areas by the city during the study period. The analysis consists of an examination of the dollar amounts associated with goods and supplies purchase orders, by race/ethnicity/gender classifications, between July 1, 1999, and June 30, 2004. **Exhibit 8-21** shows the utilization of M/WBEs and SBEs and non-M/WBEs and non-SBEs in the relevant market areas. As the exhibit shows, of the \$508.5 million awarded, approximately 8.8 percent of the dollars were awarded to SBEs, or \$44.6 million. Firms classified as M/WBEs were awarded slightly more than 98 percent of the dollars awarded to SBE firms. Among the firms classified as M/WBEs and SBEs, nonminority women- and Asian American-owned firms were utilized 35.7 percent and 59.6 percent, respectively.

As shown in **Exhibit 8-22**, just over 4 percent of the purchase orders awarded by the city were made to firms certified as SBEs; therefore, a total of 2,336 purchase orders (out of 54,440 purchase orders) were made to SBE firms engaged in the procurement of goods and supplies. Approximately 89.8 percent of these purchase orders were awarded to M/WBEs. Asian American-owned firms received the most M/WBE purchase orders with 1,481 (63.4%), and Hispanic American-owned firms received the second highest share of M/WBE purchase orders, with 545 purchase orders.

**EXHIBIT 8-21**  
**CITY OF PHOENIX GOODS AND SUPPLIES UTILIZATION ANALYSIS OF PRIME CONTRACTORS IN THE RELEVANT**  
**MARKET AREA**  
**COMPARISON OF OVERALL PRIME CONTRACTORS UTILIZATION**  
**TO SBE CERTIFIED UTILIZATION**  
**DOLLARS AND PERCENTAGE OF TOTAL DOLLARS**  
**BY RACE/ETHNIC/GENDER CLASSIFICATION**  
**JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Dollars Awarded <sup>2</sup>
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	
<b>FY1999-2000</b>															
Overall	\$146,859.43	0.13%	\$692,394.48	0.60%	\$5,817,496.49	5.03%	\$117,652.42	0.10%	\$5,216,867.87	4.51%	\$11,991,270.69	10.38%	\$103,578,939.97	89.62%	\$115,570,210.66
SBE Certified	\$61,243.83	0.00%	\$485,300.01	0.00%	\$4,845,292.10	0.00%	\$0.00	0.00%	\$3,224,345.11	0.00%	\$8,616,181.05	0.00%	\$175,240.63	0.00%	\$8,791,421.68
<b>FY2000-2001</b>															
Overall	\$224,664.07	0.21%	\$432,220.01	0.40%	\$7,774,412.47	7.14%	\$4,178.08	0.00%	\$5,222,885.11	4.80%	\$13,658,359.74	12.55%	\$95,182,256.03	87.45%	\$108,840,615.77
SBE Certified	\$27,009.34	0.00%	\$138,010.43	0.00%	\$6,261,304.91	0.00%	\$0.00	0.00%	\$3,612,607.16	0.00%	\$10,038,931.84	0.00%	\$95,007.83	0.00%	\$10,133,939.67
<b>FY2001-2002</b>															
Overall	\$138,056.28	0.11%	\$658,535.71	0.51%	\$6,621,386.40	5.16%	\$8,651.55	0.01%	\$4,530,226.20	3.53%	\$11,956,856.14	9.32%	\$116,389,857.04	90.68%	\$128,346,713.18
SBE Certified	\$61,682.45	0.69%	\$129,191.81	1.44%	\$5,524,494.35	61.66%	\$0.00	0.00%	\$3,154,023.79	35.20%	\$8,869,392.40	99.00%	\$89,989.61	1.00%	\$8,959,382.01
<b>FY2002-2003</b>															
Overall	\$89,046.56	0.11%	\$618,335.81	0.79%	\$5,393,832.51	6.87%	\$4,360.55	0.01%	\$4,911,386.77	6.25%	\$11,016,962.20	14.03%	\$67,531,276.17	85.97%	\$78,548,238.37
SBE Certified	\$27,817.30	0.35%	\$274,484.95	3.41%	\$4,271,294.34	53.03%	\$0.00	0.00%	\$3,351,578.16	41.61%	\$7,925,174.75	98.39%	\$129,480.92	1.61%	\$8,054,655.67
<b>FY2003-2004</b>															
Overall	\$81,720.68	0.11%	\$633,604.35	0.82%	\$6,553,898.82	8.49%	\$16,902.23	0.02%	\$4,203,815.85	5.45%	\$11,489,941.93	14.89%	\$65,698,255.21	85.11%	\$77,188,197.14
SBE Certified	\$24,396.58	0.28%	\$183,646.34	2.11%	\$5,694,105.61	65.56%	\$0.00	0.00%	\$2,595,641.93	29.88%	\$8,497,790.46	97.84%	\$187,706.16	2.16%	\$8,685,496.62
<b>All Fiscal Years</b>															
Overall	\$680,347.02	0.13%	\$3,035,090.36	0.60%	\$32,161,026.69	6.32%	\$151,744.83	0.03%	\$24,085,181.80	4.74%	\$60,113,390.70	11.82%	\$448,380,584.42	88.18%	\$508,493,975.12
SBE Certified	\$202,149.50	0.45%	\$1,210,633.54	2.71%	\$26,596,491.31	59.60%	\$0.00	0.00%	\$15,938,196.15	35.72%	\$43,947,470.50	98.48%	\$677,425.15	1.52%	\$44,624,895.65

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999 - June 30, 2004 (FY2000 - FY2004).

<sup>1</sup> Percentage of total dollars awarded annually to prime contractors.

**EXHIBIT 8-22**  
**CITY OF PHOENIX GOODS AND SUPPLIES UTILIZATION ANALYSIS OF PRIME CONTRACTORS IN THE RELEVANT MARKET AREA**  
**COMPARISON OF OVERALL PRIME CONTRACTORS UTILIZATION TO SBE CERTIFIED UTILIZATION**  
**NUMBER OF PURCHASE ORDERS BY RACE/ETHNIC/GENDER CLASSIFICATION**  
**JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Purchase Orders	
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	
<b>FY1999-2000</b>																
Overall	85	0.94%	103	1.14%	645	7.11%	5	0.06%	1,414	15.58%	2,252	24.82%	6,822	75.18%		9,074
SBE Certified	0	0.00%	0	0.00%	0	0.00%	0	0.00%	3	7.69%	3	7.69%	36	92.31%		39
<b>FY2000-2001</b>																
Overall	91	0.99%	102	1.11%	678	7.35%	2	0.02%	1,602	17.36%	2,475	26.81%	6,755	73.19%		9,230
SBE Certified	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	2.86%	1	2.86%	34	97.14%		35
<b>FY2001-2002</b>																
Overall	70	0.73%	94	0.98%	664	6.93%	3	0.03%	1,651	17.23%	2,482	25.90%	7,101	74.10%		9,583
SBE Certified	22	4.29%	0	0.00%	457	89.08%	0	0.00%	2	0.39%	481	93.76%	32	6.24%		513
<b>FY2002-2003</b>																
Overall	34	0.27%	184	1.46%	727	5.75%	4	0.03%	2,183	17.26%	3,132	24.77%	9,514	75.23%		12,646
SBE Certified	15	0.00%	545	0.00%	521	0.00%	0	0.00%	3	0.26%	1,084	94.18%	67	5.82%		1,151
<b>FY2003-2004</b>																
Overall	37	0.27%	293	2.11%	845	6.08%	8	0.06%	2,102	15.11%	3,285	23.62%	10,622	76.38%		13,907
SBE Certified	22	0.00%	0	0.00%	503	0.00%	0	0.00%	4	0.67%	529	88.46%	69	11.54%		598
<b>All Fiscal Years</b>																
Overall	317	0.58%	776	1.43%	3,559	6.54%	22	0.04%	8,952	16.44%	13,626	25.03%	40,814	74.97%		54,440
SBE Certified	59	2.53%	545	23.33%	1,481	63.40%	0	0.00%	13	0.56%	2,098	89.81%	238	10.19%		2,336

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Purchase Orders.

**Exhibit 8-23** shows the number of unique utilized vendors for goods and supplies procurements. Of the 131 SBEs utilized for goods and supplies procurements, over 87 percent were classified as M/WBEs. Nonminority women firms accounted for slightly more than 45 percent of the of these purchase orders.

**EXHIBIT 8-23  
CITY OF PHOENIX GOODS AND SUPPLIES UTILIZATION ANALYSIS OF PRIME  
CONTRACTORS IN THE RELEVANT MARKET AREA  
COMPARISON OF OVERALL PRIME CONTRACTORS UTILIZATION  
TO SBE CERTIFIED UTILIZATION  
NUMBER OF UNIQUE VENDORS BY RACE/ETHNIC/GENDER CLASSIFICATION  
JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Unique Vendors <sup>2</sup>	
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	
<b>FY1999-2000</b>																
Overall	5	0.43%	33	2.84%	18	1.55%	4	0.34%	83	7.13%	143	12.29%	1,021	87.71%		1,164
SBE Certified	3	6.38%	10	21.28%	4	8.51%	2	4.26%	23	48.94%	42	89.36%	5	10.64%		47
<b>FY2000-2001</b>																
Overall	9	0.77%	30	2.57%	16	1.37%	2	0.17%	88	7.53%	145	12.41%	1,023	87.59%		1,168
SBE Certified	5	9.26%	9	16.67%	7	12.96%	1	1.85%	25	46.30%	47	87.04%	7	12.96%		54
<b>FY2001-2002</b>																
Overall	10	0.82%	29	2.39%	19	1.56%	3	0.25%	97	7.98%	158	13.00%	1,057	87.00%		1,215
SBE Certified	9	14.75%	10	16.39%	4	6.56%	2	3.28%	29	47.54%	54	88.52%	7	11.48%		61
<b>FY2002-2003</b>																
Overall	10	0.70%	38	2.65%	21	1.46%	3	0.21%	105	7.32%	177	12.33%	1,258	87.67%		1,435
SBE Certified	5	7.58%	10	15.15%	7	10.61%	2	3.03%	33	50.00%	57	86.36%	9	13.64%		66
<b>FY2003-2004</b>																
Overall	10	0.65%	47	3.06%	21	1.37%	3	0.20%	119	7.75%	200	13.02%	1,336	86.98%		1,536
SBE Certified	6	7.89%	17	22.37%	6	7.89%	1	1.32%	34	44.74%	64	84.21%	12	15.79%		76
<b>All Fiscal Years<sup>2</sup></b>																
Overall	25	0.85%	91	3.08%	38	1.29%	6	0.20%	201	6.81%	361	12.22%	2,592	87.78%		2,953
SBE Certified	13	9.92%	29	22.14%	10	7.63%	3	2.29%	59	45.04%	114	87.02%	17	12.98%		131

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Vendors.

<sup>2</sup> The Total Vendors counts a vendor only once for each year the firm receives work. Since a vendor could be used in multiple years, the total vendors for the entire study period may not equal the sum of all years.

**8.3.3 Availability Analysis of SBE Certified Firms**

The availability analysis is based on firms that are identified as certified SBE firms that engaged in goods and supplies procurements. As shown in **Exhibit 8-24**, approximately 69 percent of the SBE firms available to do business with the city were classified as M/WBEs. The majority of the firms were owned by nonminority women (56.2%) and Hispanic Americans (8.2%).

**EXHIBIT 8-24  
CITY OF PHOENIX GOODS AND SUPPLIES  
AVAILABILITY OF PRIME CONTRACTORS  
FOR SBE CERTIFIED FIRMS ONLY  
JULY 1, 1999 - JUNE 30, 2004**

	African Americans <sup>1</sup>		Hispanic Americans <sup>1</sup>		Asian Americans <sup>1</sup>		Native Americans <sup>1</sup>		Nonminority Women		M/WBEs Subtotal		Non-M/WBEs Firms		Total Firms
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
<b>Total</b>	11	1.51%	60	8.22%	19	2.60%	3	0.41%	410	56.16%	503	68.90%	227	31.10%	730

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004). The certification of vendors has been provided by the City’s EOD department, which has been updated in MGT’s master vendor database.

<sup>1</sup> Minority male and female firms are included in their respective minority classifications.

**8.4 General Services Utilization Analysis**

M/WBE and SBE and non-M/WBE and non-SBE utilization analysis includes firms located within the relevant market areas. The utilization was derived from information contained in the city’s financial system<sup>1</sup> for activity occurring between July 1, 1999, and June 30, 2004. The identification of SBE firms was based on the information contained in the city’s Equal Opportunity Department (EOD) database. Using the data sources, MGT calculated the percentage of total dollars awarded to M/WBEs and SBEs and non-M/WBEs and non-SBEs during the relevant time period. The numbers in the utilization charts that follow reflect the combined awards and payments made to vendors in race, ethnicity, and gender category.

**8.4.1 General Services Utilization Analysis for SBE Certified Firms**

This section includes the utilization analysis of general services contractors that are SBEs and non-SBEs, which includes an analysis of the number of purchase orders awarded and number of individual firms by race/ethnicity/gender classifications. The utilization analysis is presented in **Exhibit 8-25**. As the exhibit shows, of the \$1.98 million awarded to SBEs, approximately 98.6 percent of these dollars were awarded to firms classified as M/WBEs.

**EXHIBIT 8-25**  
**CITY OF PHOENIX GENERAL SERVICES UTILIZATION ANALYSIS OF PRIME CONTRACTORS IN THE RELEVANT MARKET AREA**  
**COMPARISON OF OVERALL PRIME CONTRACTORS UTILIZATION TO SBE CERTIFIED UTILIZATION**  
**DOLLARS AND PERCENTAGE OF TOTAL DOLLARS**  
**BY RACE/ETHNIC/GENDER CLASSIFICATION**  
**JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Dollars Awarded <sup>2</sup>	
	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	% <sup>1</sup>	\$	
<b>FY1999-2000</b>																
Overall	\$85,947.31	2.01%	\$102,121.30	2.39%	\$49,405.03	1.16%	\$28,877.20	0.68%	\$410,243.63	9.61%	\$676,594.47	15.85%	\$3,591,180.34	84.15%	\$4,267,774.81	
SBE Certified	\$72,567.31	0.00%	\$48,338.33	0.00%	\$38,945.50	0.00%	\$23,657.38	0.00%	\$89,053.95	0.00%	\$272,562.47	0.00%	\$5,477.05	0.00%	\$278,039.52	
<b>FY2000-2001</b>																
Overall	\$119,232.80	2.49%	\$181,302.91	3.78%	\$247,063.49	5.16%	\$49,504.54	1.03%	\$499,415.52	10.43%	\$1,096,519.26	22.89%	\$3,694,025.73	77.11%	\$4,790,544.99	
SBE Certified	\$92,692.75	0.00%	\$152,469.80	0.00%	\$52,698.46	0.00%	\$49,504.54	0.00%	\$63,001.79	0.00%	\$410,367.34	0.00%	\$11,182.00	0.00%	\$421,549.34	
<b>FY2001-2002</b>																
Overall	\$67,741.54	1.13%	\$153,235.88	2.57%	\$127,852.12	2.14%	\$32,255.37	0.54%	\$194,471.56	3.26%	\$575,556.47	9.64%	\$5,395,689.43	90.36%	\$5,971,245.90	
SBE Certified	\$38,869.67	14.47%	\$65,720.38	24.47%	\$68,395.50	25.46%	\$32,255.37	12.01%	\$63,362.13	23.59%	\$268,603.05	100.00%	\$0.00	0.00%	\$268,603.05	
<b>FY2002-2003</b>																
Overall	\$18,107.74	0.51%	\$292,316.69	8.27%	\$46,531.29	1.32%	\$0.00	0.00%	\$302,946.60	8.57%	\$659,902.32	18.68%	\$2,873,350.57	81.32%	\$3,533,252.89	
SBE Certified	\$12,567.43	2.96%	\$212,928.36	50.08%	\$35,387.80	8.32%	\$0.00	0.00%	\$158,420.58	37.26%	\$419,304.17	98.62%	\$5,883.72	1.38%	\$425,187.89	
<b>FY2003-2004</b>																
Overall	\$41,433.61	0.53%	\$168,643.03	2.15%	\$96,745.98	1.23%	\$0.00	0.00%	\$1,729,722.08	22.05%	\$2,036,544.70	25.96%	\$5,809,756.00	74.04%	\$7,846,300.70	
SBE Certified	\$41,433.61	7.01%	\$80,099.90	13.56%	\$82,224.64	13.92%	\$0.00	0.00%	\$382,307.61	64.72%	\$586,065.76	99.21%	\$4,660.38	0.79%	\$590,726.14	
<b>All Fiscal Years</b>																
Overall	\$332,463.00	1.26%	\$897,619.81	3.40%	\$567,597.91	2.15%	\$110,637.11	0.42%	\$3,136,799.39	11.88%	\$5,045,117.22	19.10%	\$21,364,002.07	80.90%	\$26,409,119.29	
SBE Certified	\$258,130.77	13.01%	\$559,556.77	28.20%	\$277,651.90	13.99%	\$105,417.29	5.31%	\$756,146.06	38.11%	\$1,956,902.79	98.63%	\$27,203.15	1.37%	\$1,984,105.94	

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999 - June 30, 2004 (FY2000 - FY2004).

<sup>1</sup> Percentage of total dollars awarded annually to prime contractors.

Of the 801 purchase orders awarded to M/WBE firms for general services provided to the city, 337 (42%) of these purchase orders were awarded to firms certified as SBEs. As shown in **Exhibit 8-26**, approximately 41 percent of these purchase orders were awarded to nonminority women-owned firms (or 143 purchase orders), and 3.7 percent went to nonminority-owned firms (or 13 purchase orders). Slightly more than 11 percent (350 out of 3,067 purchase orders) were awarded to SBE firms.

**EXHIBIT 8-26  
CITY OF PHOENIX GENERAL SERVICES UTILIZATION ANALYSIS OF PRIME  
CONTRACTORS IN THE RELEVANT MARKET AREA  
COMPARISON OF OVERALL PRIME CONTRACTORS UTILIZATION  
TO SBE CERTIFIED UTILIZATION  
NUMBER OF PURCHASE ORDERS BY RACE/ETHNIC/GENDER CLASSIFICATION  
JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Purchase Orders	
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	
<b>FY1999-2000</b>																
Overall	9	1.66%	25	4.62%	14	2.59%	5	0.92%	92	17.01%	145	26.80%	396	73.20%		541
SBE Certified	6	11.76%	11	21.57%	12	23.53%	4	7.84%	17	33.33%	50	98.04%	1	1.96%		51
<b>FY2000-2001</b>																
Overall	11	1.88%	33	5.64%	16	2.74%	4	0.68%	96	16.41%	160	27.35%	425	72.65%		585
SBE Certified	6	9.52%	23	36.51%	11	17.46%	4	6.35%	11	17.46%	55	87.30%	8	12.70%		63
<b>FY2001-2002</b>																
Overall	14	2.45%	32	5.60%	28	4.90%	3	0.53%	61	10.68%	138	24.17%	433	75.83%		571
SBE Certified	11	18.03%	6	9.84%	20	32.79%	3	4.92%	21	34.43%	61	100.00%	0	0.00%		61
<b>FY2002-2003</b>																
Overall	6	1.03%	28	4.80%	13	2.23%	0	0.00%	102	17.50%	149	25.56%	434	74.44%		583
SBE Certified	5	7.69%	11	16.92%	9	13.85%	0	0.00%	37	56.92%	62	95.38%	3	4.62%		65
<b>FY2003-2004</b>																
Overall	9	1.14%	31	3.94%	34	4.32%	0	0.00%	135	17.15%	209	26.56%	578	73.44%		787
SBE Certified	9	8.18%	15	13.64%	28	25.45%	0	0.00%	57	51.82%	109	99.09%	1	0.91%		110
<b>All Fiscal Years</b>																
Overall	49	1.60%	149	4.86%	105	3.42%	12	0.39%	486	15.85%	801	26.12%	2,266	73.88%		3,067
SBE Certified	37	10.57%	66	18.86%	80	22.86%	11	3.14%	143	40.86%	337	96.29%	13	3.71%		350

Source: MGT developed a procurement and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Purchase Orders.

**Exhibit 8-27** shows the number of general services procurements awarded to SBE and non-SBE firms in the relevant market area over the five-year period. Over 92 percent (or 61 unique vendors) of the SBE firms utilized were classified as M/WBEs. Nonminority women- and Hispanic American-owned firms make up the majority of these firms, with 39.4 percent (or 26 firms) and 33.3 percent (or 22 firms), respectively.



**8.4.2 Availability of SBE Certified Firms**

Exhibit 8-29 shows the distribution of available general services vendors certified as SBEs. In the exhibit, we show that M/WBEs represented 70.03 percent of the available SBE firms. Firms owned by nonminority women accounted for the majority of M/WBEs at 57.4 percent.

**EXHIBIT 8-28  
CITY OF PHOENIX GENERAL SERVICES UTILIZATION ANALYSIS OF PRIME  
CONTRACTORS IN THE RELEVANT MARKET AREA  
COMPARISON OF OVERALL PRIME CONTRACTORS UTILIZATION  
TO SBE CERTIFIED UTILIZATION  
NUMBER OF UNIQUE VENDORS BY RACE/ETHNIC/GENDER CLASSIFICATION  
JULY 1, 1999 - JUNE 30, 2004**

Fiscal Years	African Americans		Hispanic Americans		Asian Americans		Native Americans		Nonminority Women		M/WBE Subtotal		Non-M/WBE Firms		Total Unique Vendors <sup>2</sup>
	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	
<b>FY1999-2000</b>															
Overall	6	2.21%	17	6.27%	5	1.85%	3	1.11%	33	12.18%	64	23.62%	207	76.38%	271
SBE Certified	4	13.33%	9	30.00%	3	10.00%	2	6.67%	11	36.67%	29	96.67%	1	3.33%	30
<b>FY2000-2001</b>															
Overall	7	2.55%	15	5.47%	7	2.55%	1	0.36%	33	12.04%	63	22.99%	211	77.01%	274
SBE Certified	5	20.83%	9	37.50%	2	8.33%	1	4.17%	6	25.00%	23	95.83%	1	4.17%	24
<b>FY2001-2002</b>															
Overall	6	2.07%	17	5.86%	5	1.72%	2	0.69%	28	9.66%	58	20.00%	232	80.00%	290
SBE Certified	4	19.05%	4	19.05%	3	14.29%	2	9.52%	8	38.10%	21	100.00%	0	0.00%	21
<b>FY2002-2003</b>															
Overall	4	1.29%	14	4.52%	6	1.94%	0	0.00%	35	11.29%	59	19.03%	251	80.97%	310
SBE Certified	3	15.00%	6	30.00%	2	10.00%	0	0.00%	7	35.00%	18	90.00%	2	10.00%	20
<b>FY2003-2004</b>															
Overall	3	0.82%	22	6.01%	10	2.73%	0	0.00%	42	11.48%	77	21.04%	289	78.96%	366
SBE Certified	3	9.09%	11	33.33%	5	15.15%	0	0.00%	13	39.39%	32	96.97%	1	3.03%	33
<b>All Fiscal Years<sup>2</sup></b>															
Overall	8	0.94%	50	5.86%	14	1.64%	4	0.47%	88	10.32%	164	19.23%	689	80.77%	853
SBE Certified	5	7.58%	22	33.33%	5	7.58%	3	4.55%	26	39.39%	61	92.42%	5	7.58%	66

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004).

<sup>1</sup> Percentage of Total Vendors.

<sup>2</sup> The Total Vendors counts a vendor only once for each year the firm receives work. Since a vendor could be used in multiple years, the total vendors for the entire study period may not equal the sum of all years.

**EXHIBIT 8-29  
CITY OF PHOENIX GENERAL SERVICES  
AVAILABILITY OF PRIME CONTRACTORS FOR SBE CERTIFIED FIRMS ONLY  
BASED ON VENDOR DATA  
JULY 1, 1999 - JUNE 30, 2004**

	African Americans <sup>1</sup>		Hispanic Americans <sup>1</sup>		Asian Americans <sup>1</sup>		Native Americans <sup>1</sup>		Nonminority Women		M/WBE Subtotal		Non-M/WBEs Firms		Total Firms
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
<b>Total</b>	50	5.43%	51	5.54%	9	0.98%	6	0.65%	529	57.44%	645	70.03%	276	29.97%	921

Source: MGT developed a master vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000–FY2004). The certification of vendors has been provided by the City’s EOD department, which has been updated in MGT’s master vendor database.

<sup>1</sup> Minority male and female firms are included in their respective minority classifications.

## **9.0 FINDINGS AND CONCLUSIONS**

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## **9.0 FINDINGS AND CONCLUSIONS**

This chapter presents the findings and conclusions resulting from the disparity study conducted for the City of Phoenix related to procurement of construction, general services, and goods and supplies. As a leader in the field, MGT has been careful to always remain cognizant of the applicable case law in this evolving area of jurisprudence. As such, the overriding concern of MGT during this study was strict adherence to the specific dictates the courts have required where racial, ethnic, or gender preferences are used by state and local governments in their decision-making process. As detailed in Chapter 2.0 of our study, in the *Croson* decision the United States Supreme Court extended strict judicial scrutiny to state and local affirmative action programs that use racial or ethnic criteria as a basis for decision-making.

The courts have also indicated that for a race-based or gender-based preference program to be maintained there must be a clear evidentiary foundation established for the continuation of the programs. Generally, this evidence should also have been reviewed as part of the implementing jurisdiction's decision-making process related to the race-conscious program in order for it to be relevant in any subsequent legal action. Thus, MGT presents our summary of findings and conclusions to the City for your deliberative review and discussion. Recommendations for addressing the findings presented in this chapter follow in Chapter 10.0.

### **9.1 Objectives and Design of the Study**

The principal objectives of this study were to determine the amount of minority and nonminority women business participation that exists in the procurement of construction, general services, and goods and supplies; and to determine if the evidence supports

affirmative action under the applicable legal standards. First and foremost, our study sought to address the following issue:

- Is there a disparity between (a) the number of M/WBE firms that are qualified to perform contracts with the City; and (b) the utilization by the City of these firms in contracting and procurement?

If, and only if, a disparity is found, MGT then moves forward to ascertain from the accumulated data the following issues:

- Is any such disparity the product of past race, ethnic, or gender discrimination or is the apparent discrimination attributable to other race-neutral factors?
- Based on the nature and extent of the discrimination, can such disparity be ameliorated through nonrace, nonethnic, or nongender means or programs open to all vendors?
- If it is determined that the appropriate remedy involves the utilization of racial, ethnic, or gender criteria in decision-making, how should the program be narrowly tailored to remedy the effects of past discrimination while staying within constitutional guidelines?

Examination of post-*Croson* decisions provides us with not only more clarity on the lower courts' application of *Croson*, but also provides some guiding principles. Several principles have emerged, or in some instances been reconfirmed, as follows.

- The absence of a complete factual predicate study adopted by the relevant agency can lead to the judicial suspension of an M/WBE program.<sup>1</sup>
- Relying exclusively on either anecdotal evidence or statistical deviations alone to prove discrimination will not suffice in the post-*Croson* era.<sup>2</sup>
- Post-*Croson* disparity studies based exclusively on numerical “head counting” without reference to qualifications will not be sufficient to prove discrimination.<sup>3</sup>
- There seems to be more focus on anecdotal evidence of specific discrimination in some recent court decisions. The collection and analysis of such anecdotal evidence should include holding public meetings within the community, interviewing both minority and

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<sup>1</sup> See, e.g., *Scott v Jackson*, 1999 U.S. App. LEXIS 33621 *Bilbo Freight Lines v. Morales*, CA No. H-93-3808 (SD Texas 1996); *Associated Utility Contractors v. Baltimore*, Civil No. AMD 98-4060, \_\_\_F.3d\_\_(D.Md. 2000).

<sup>2</sup> *Coral Construction Company, et al. v. King County*, 961 F.2d 910 (9th Cir. 1991).

<sup>3</sup> *AGC v. Drabik*, 214 F.3d 730, 762 (6<sup>th</sup> Cir 2000).

nonminority business associations and representatives, and conducting surveys of both minority and nonminority governmental personnel and business representatives. The specificity and verification of examples of past discrimination are important components of a disparity study.<sup>4</sup>

- Recent developments in court cases involving federal DBE programs provide important insight on the design of local M/WBE programs. In January 1999, the United States Department of Transportation (USDOT) published its final DBE rule in Title 49, Code of Federal Regulations, Part 26 (49 CFR 26). In the latest round of the DBE litigation, the courts found the new DBE regulations to be narrowly tailored.<sup>5</sup>
- Analysis of disparities in the private sector can serve as a key element of the factual predicate supporting an M/WBE program. In *Croson*, the court stated, "A municipality has a compelling government interest in redressing not only discrimination committed by the municipality itself, but also discrimination committed by private parties within the municipality's legislative jurisdiction, so long as the municipality in some way participated in the discrimination to be remedied by the program."<sup>6</sup> In *Concrete Works IV* the Court of Appeals upheld the relevance of data from the private marketplace to the establishment of a factual predicate for M/WBE programs.<sup>7</sup>

Within the context of the above requirements, MGT designed its study to meet the following conditions:

- an in-depth review of the City's contracting, purchasing, and M/WBE statutes, policies, procedures, and practices;
- a qualitative analysis of evidence as to whether there exists a history or pattern of behavior demonstrating that the City has declined or refused to award contracts to minorities or women that cannot be explained by any nonracial or nongender factors;
- a rigorous review of the City's contracting records and files;
- specific identification of firms by name, address, and types of services that are ready, willing, and able to conduct business with the City;
- personal interviews with City staff, M/WBEs, prime contractors, and subcontractors;

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<sup>4</sup> *AGC v. Columbus*, 936 F. Supp. 1363 (SD Ohio 1996), overturned on procedural grounds.

<sup>5</sup> *Adarand v. Slater*, 228 F.3d 1147 (10<sup>th</sup> Cir 2000), *Sherbrooke Sodding v. MDOT* (2001 US Dist Lexis 19565) (November 14, 2001), *Gross Seed v. Nebraska Department of Roads*, Case No. 4:00CV3073 (NB 2002), *Western States Paving v. Washington DOT*, Case No. C00-5204-RBL (WA 2003).

<sup>6</sup> *Croson*, 488 U.S. 46, 109 S.Ct. at 720-21, 744-45.

<sup>7</sup> *Concrete Works IV*, at 69.

- identification of specific problems that affect both minority-owned and nonminority women-owned business enterprises and other firms in their attempts to obtain City contracts and subcontracts;
- presentation of data on disparities, if any, in the private sector commercial construction market;
- identification of those race- and gender-neutral remedies for each identified problem; and
- identification of narrowly tailored race- and gender-specific remedies to correct specific problems.

## **9.2 Statistical Analyses Findings**

The following subsection presents findings and recommendations based on the review presented in Chapters 4.0 and 7.0.

### **FINDING 9-1: Relevant Market**

The relevant market area where at least 75 percent of the dollars were spent during the five-year period for each work type category is:

- **Construction** – Maricopa County, Arizona
- **General Services** – Maricopa County, Arizona; Los Angeles County, California; and Cook County, Illinois
- **Goods and Supplies** – Maricopa County, Arizona; Los Angeles County, California; Cook County, Illinois; Orange County, California; Dallas County, Texas; San Diego County, California; Pima County, Arizona; Fulton County, Georgia; Hennepin, Minnesota; King, Washington; and Santa Clara, California

### **FINDING 9-2: Disparity in M/WBE Utilization**

As **Exhibit 9-1** indicates, M/WBEs were substantially underutilized by the City of Phoenix in each of the procurement categories:

- Construction Prime Contractors: African Americans, Hispanic Americans, Asian Americans, Native Americans, nonminority women
- Construction Subcontractors: African Americans, Hispanic Americans, Asian Americans, nonminority women
- Other Services: African Americans, Hispanic Americans, nonminority women
- Goods and Supplies: African Americans, Hispanic Americans, Native Americans, nonminority women

**EXHIBIT 9-1**  
**CITY OF PHOENIX**  
**SUMMARY OF DISPARITY ANALYSIS FOR**  
**EACH BUSINESS CATEGORY BY RACE/ETHNICITY/GENDER CLASSIFICATIONS**  
**JULY 1, 1999 – JUNE 30, 2004**

City of Phoenix Classification	% of Contract Dollars <sup>1</sup>	% of Available Firms <sup>2</sup>	Disparity Index <sup>3</sup>	Disparate Impact of Utilization
<b>Construction Prime Contractors</b>				
African Americans	0.00%	1.66%	0.00	* Underutilization
Hispanic Americans	2.20%	8.01%	27.47	* Underutilization
Asian Americans	0.28%	1.01%	28.01	* Underutilization
Native Americans	0.15%	0.94%	15.58	* Underutilization
Nonminority Women	4.39%	9.32%	47.08	* Underutilization
Nonminority Firms	92.98%	79.06%	117.60	Overutilization
<b>Construction Subcontractors<sup>4</sup></b>				
African Americans	0.75%	1.81%	41.27	* Underutilization
Hispanic Americans	6.02%	8.49%	70.91	* Underutilization
Asian Americans	0.05%	0.93%	4.89	* Underutilization
Native Americans	1.36%	1.04%	130.34	Overutilization
Nonminority Women	5.26%	9.62%	54.73	* Underutilization
<b>General Services Prime Contractors</b>				
African Americans	1.26%	3.16%	39.77	* Underutilization
Hispanic Americans	3.40%	5.72%	59.38	* Underutilization
Asian Americans	2.15%	1.19%	180.22	Overutilization
Native Americans	0.42%	0.28%	148.63	Overutilization
Nonminority Women	11.88%	20.79%	57.12	* Underutilization
Nonminority Firms	80.90%	68.85%	117.51	Overutilization
<b>Goods and Supplies Prime Contractors</b>				
African Americans	0.13%	0.85%	15.78	* Underutilization
Hispanic Americans	0.60%	3.99%	14.97	* Underutilization
Asian Americans	6.32%	1.57%	402.82	Overutilization
Native Americans	0.03%	0.17%	17.28	* Underutilization
Nonminority Women	4.74%	11.76%	40.28	* Underutilization
Nonminority Firms	88.18%	81.66%	107.98	Overutilization

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY 2000–FY 2004).

<sup>1</sup> The percentage of dollars is taken from the prime utilization exhibit previously shown in Chapter 4.0.

<sup>2</sup> The percentage of available contractors is taken from the availability exhibit previously shown in Chapter 4.0.

<sup>3</sup> The disparity index is the ratio of % utilization to % availability times 100. An asterisk is used to indicate a substantial level of disparity - index below 80.00.

<sup>4</sup> Disparity ratios for construction subcontracting are calculated based on estimates of nonminority subcontracting utilization. For further details see Chapter 4.0.



### **FINDING 9-3: Threshold Analysis**

M/WBE utilization was substantially stronger for small size contracts than for larger size contracts:

- M/WBE utilization was 24.9 percent for construction prime contracts under \$250,000, and 4.5 percent for construction prime contracts over \$250,000;
- M/WBE utilization was 28.9 percent for general service prime contracts under \$5,000, and 15.8 percent for general service prime contracts over \$40,000; and
- M/WBE utilization was 27.9 percent for goods prime contracts under \$5,000, and 6.0 percent for goods prime contracts over \$40,000.

Contracts over \$10 million constituted over 45 percent of total City construction contract awards. Over 32 percent of total City construction contract awards were awarded through the CM@Risk method of procuring construction services.

### **FINDING 9-4: Comparison with 1999 Disparity Study**

The data did show significant increases in the absolute and relative value of M/WBE utilization since the 1999 Phoenix Disparity Study, as indicated by the following:

- M/WBE construction prime contractor utilization grew from about \$13.8 million (1.06%) to \$76.7 million (8.9%).
- M/WBE construction subcontractor utilization grew from about \$13.8 million (1.0% of total construction spending) to \$56.7 million (4.3% of total construction spending).
- M/WBE general services utilization grew in percentage term from about 9.7 percent (\$5.7 million) to 19.1 percent (\$5.0 million).
- M/WBE goods and supplies utilization grew from about \$26.2 million (2.4%) to \$60.1 million (11.8%).

### **FINDING 9-5: M/WBE Utilization in the City SBE Program**

There was strong M/WBE utilization in the City SBE program. Over 92.9 percent of dollars in the SBE program went to M/WBEs in construction subcontracting and over 89.1 percent of dollars in the SBE program went to M/WBEs in Goods and Supplies. Firms that were certified as both M/WBEs and SBEs were awarded \$98.1 million in contract dollars from the City. (**Exhibit 9-2**)

However, the SBE program itself was not a significant factor in M/WBE utilization. Contracts with SBE subcontract goals accounted for only 0.55 percent (\$311,312) of

total M/WBE utilization in construction subcontracting and 0.07 percent of the total dollar value of construction subcontracting. The SBE reserve program accounted for only 0.24 percent (\$141,887) of total M/WBE utilization in Goods and Supplies and for 0.03 percent of the total dollar value of Goods and Supplies contracts.

**EXHIBIT 9-2  
SUMMARY M/WBE UTILIZATION IN THE SBE PROGRAM  
PERCENTAGE OF TOTAL SPENDING  
JULY 1, 1999 - JUNE 30, 2004**

	Construction Prime Contractors		Construction Subcontractors		Goods and Supplies Contractors		General Services Contractors	
	\$	%	\$	%	\$	%	\$	%
M/WBE Firms On Construction Contracts With SBE Goals	NA	NA	\$311,312	0.07	NA	NA	NA	NA
M/WBE Firms On Goods & Services Contracts In SBE Reserve Program	NA	NA	NA	NA	\$141,887	0.03%	NA	NA
Firms Certified As Both M/WBE & SBE	\$14,260,017	1.09%	\$37,268,126	8.82%	\$44,624,895	8.78%	\$1,984,105	7.51%

Source: Chapter 8.0

**FINDING 9-6: Disparities in Self-Employment and Revenue Earnings**

In general, findings from the U.S Bureau of the Census Public Use Micro Sample (PUMS) 2000 data indicate that there were disparities in entry into and earnings from self-employment by women and minorities after controlling for education, age, wealth, and other variables. When self-employment rates were stratified by race and by business type, trends varied within individual race-by-type cells, but disparities persisted, in general, for African Americans, Hispanic Americans, and nonminority women. When group self-employment rates were submitted to MGT's analysis of disparity due to minority status, findings supported the conclusion that disparities for these three groups (of adequate sample size to permit interpretation) were likely the result of some customer discrimination; that is, an unwillingness on the part of some sectors of the private marketplace to do business with firms owned by women and minorities.

**FINDING 9-7: Regression Analysis**

Self-employment findings were supported by analyses of MGT's telephone survey of vendors. After adjusting for impact of non-M/WBE factors, such as number of employees, age of company, owner's experience, and owner's education level, the analyses showed that M/WBE firms had significantly lower 2003 revenues than similar nonminority male firms. The consistency of the lower 2003 revenues of M/WBE firms for both the all-industries analyses and for African American and nonminority women groups among the different industry grouping analyses further strengthens the evidence that the disparities are due, at least in part, to the race and/or gender status of the firms.

**FINDING 9-8: Private Sector Utilization in the Phoenix Construction Industry**

This section provides evidence that disparity exists in the City of Phoenix relevant market area. **Exhibit 9-3** provides a summary of the utilization of M/WBEs in private commercial construction in the Maricopa County relevant market in comparison with M/WBE utilization by the public sector and Reed Construction Data for prime contractors. M/WBE utilization was substantially higher for the public sector than for the private marketplace. Moreover, the public sector used many more M/WBEs, particularly in proportion to its spending, than did the private sector commercial construction market. The City used 235 M/WBE subcontractors on City construction projects, whereas the private sector used only 31 M/WBE subcontractors in the data analyzed.

**EXHIBIT 9-3  
CITY OF PHOENIX  
UTILIZATION ANALYSIS FOR PRIVATE SECTOR CONSTRUCTION**

BUSINESS CATEGORY / DATA SOURCE	African American	Hispanic American	Asian American	Native American	Nonminority Women	M/WBEs	Nonminority Firms
<b>Prime Contractors</b>							
City of Phoenix Construction Prime Contractors	0.00%	2.20%	0.28%	0.15%	4.39%	7.02%	92.98%
Private Construction Prime Contractors (Building Permits)	0.07%	1.23%	0.74%	0.00%	0.41%	2.44%	97.56%
Private Construction Prime Contractors (Reed Construction)	0.00%	0.34%	0.00%	0.00%	0.67%	1.02%	98.98%
<b>Subcontractors</b>							
City of Phoenix Construction Subcontractors*	0.75%	6.02%	0.05%	1.36%	5.26%	13.44%	86.56%
Private Construction Subcontractors (Building Permits)	0.44%	2.72%	0.07%	0.00%	1.34%	4.58%	95.42%

Source: City of Phoenix Building Permits, Reed Construction Data, Utilization Analysis in Chapter 4.0 and Chapter 7.0.  
\*Based on 32.4 percent subcontractor utilization.

**FINDING 9-9: Disparities in Loan Denials**

An econometric analysis of small business lending in the region containing Phoenix from the National Survey of Small Business Finance found evidence of disparities in loan denial rates for Hispanics after controlling for variables representing firm assets and creditworthiness, raising an inference of discrimination in lending.<sup>8</sup>

**FINDING 9-10: Anecdotal Evidence**

The following subsection presents findings based on the review presented in Chapter 6.0.

<sup>8</sup> Appendix AA in the report. There were not enough of other minority firms in the sample to report statistically significant results for Blacks, Asians, and Native Americans. Disparities in loan denial rates for women were not statistically significant.

### **9.2.1 Perceptions of Discrimination**

About 7 percent of the 337 M/WBE respondents reported discrimination in the survey. There were not a large number of specific incidents of discrimination by the City reported in either the anecdotal testimony or survey responses. The primary concern regarding discrimination in the anecdotal testimony was the impediments to opportunity resulting from informal networks and discrimination in the private sector.

### **9.2.2 Barriers to Doing Work with the City**

Major concerns in anecdotal testimony regarding barriers to work with the City were the advantages possessed by large and incumbent vendors, insurance and bonding costs, and CM@Risk. Of the M/WBEs who responded to our telephone questions about barriers to doing business, key issues noted were as follows:

- size of contracts (27% of M/WBE respondents);
- availability and accessibility of information about pending projects (25% of M/WBE respondents);
- limited information received on pending projects (25% of M/WBE respondents);
- time allotted to prepare bids and quotes (24% of M/WBE respondents);
- expenses associated with bid preparation (24% of M/WBE respondents);
- design-build (23% of M/WBE respondents);
- prequalification requirements (19% of M/WBE respondents);
- insurance (17% of M/WBE respondents); and
- bid specifications (17% of M/WBE respondents).

### **9.2.3 Experiences as a Subcontractor**

Major concerns in anecdotal testimony regarding experience as a subcontractor were bid shopping and inadequate good faith efforts by prime contractors. Of the M/WBEs who responded to our telephone questions about experiences as a subcontractor, key issues noted were as follows:

- no response to bid/quote (44% of M/WBE respondents);
- pressured to lower bid/quote (32% of M/WBE respondents); and
- a group of payments issues: payment delayed (36% of M/WBE respondents), untimely release of retainage (22% of M/WBE respondents) and not paid per contract (20% of M/WBE respondents).

**FINDING 9-11: Passive Participation**

Although the City has improved M/WBE subcontractor participation since the 1999 Disparity Study, there still remains significant disparity between the utilization and availability of M/WBE subcontractors. MGT concluded from the statistical analysis in Chapter 4.0 that available M/WBE subcontractors in the relevant market area are significantly underutilized. Moreover, based on the qualitative evidence in Chapter 6.0 and the quantitative private sector evidence in Chapter 7.0, an inference of discriminatory exclusion from private sector construction can be drawn. Detailed econometric evidence also supports the claim that customer discrimination against M/WBEs persists even after controlling for both individual and firm characteristics. This combined evidence suggests that absent affirmative measures the City would be a passive participant in a pattern of exclusion of M/WBE subcontracting firms.

**9.3 Conclusions**

Utilization of female and minority firms by the City did improve during the five-year period of this study both in relative and absolute terms. Substantial disparities did remain in some areas. Disparities in firm revenue and in entry into and earnings from self-employment were also evident after controlling for firm characteristics. M/WBEs faced higher barriers in the private sector than in City of Phoenix procurement.

## ***10.0 RECOMMENDATIONS***

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## **10.0 RECOMMENDATIONS**

This chapter presents recommendations and commendations resulting from the disparity study conducted for the City of Phoenix related to procurement of construction services, general services, and goods and supplies. The following recommendations are grounded in an exhaustive review of other M/WBE programs around the United States and extensive case law reviewing these programs and their accompanying statutes and regulations.

Recommendations have been crafted to address both shortfalls in the City's M/WBE utilization and to offer lessons learned and insights from other M/WBE programs around the country in an effort to satisfy the constraints imposed by recent case law governing M/WBE programs. The extensive recommendations that follow provide a menu of options for the City to consider. Some recommendations will not have applicability to certain aspects of City procurement because of restrictions in state law (for example, competitive bidding requirements for construction contracts of a certain size). Commendations are also provided to acknowledge those positive efforts by the City towards greater inclusion of M/WBEs in City procurement.

### **10.1 Recommendations and Commendations**

#### **10.1.1 M/WBE Program Recommendations**

##### **COMMENDATION AND RECOMMENDATION 10-1: Annual Aspirational M/WBE Goals**

The City should be commended for the growth in M/WBE utilization since the 1999 Disparity Study. This study provides evidence to support the establishment of a moderate program to promote M/WBE utilization. This conclusion is based primarily on substantial statistical disparities in current M/WBE utilization, substantial disparities in the private marketplace, evidence of discrimination in business formation and revenue earned from self-employment, and some anecdotal evidence of discrimination. The City should tailor its minority participation programs to remedy each of these specific disparities.

The City should be commended for its efforts to establish flexible annual aspirational goals rooted in its own estimates of M/WBE availability. **Exhibit 10-1** provides guidance on setting initial annual goals for an M/WBE program. These M/WBE goals by business category (excluding professional services) are annual goals, not rigidly set project goals.

**EXHIBIT 10-1  
RECOMMENDED RACE- AND GENDER-SPECIFIC ANNUAL ASPIRATIONAL  
GOALS FOR EACH BUSINESS CATEGORY BY RACE/ETHNICITY/GENDER  
CLASSIFICATION**

<b>Business Category by M/WBE Classification</b>	<b>% of Contract Dollars<sup>1</sup></b>	<b>% of Available Firms<sup>2</sup></b>	<b>Disparity Index Goal - 80.0</b>
<b>Construction Prime Contractors</b>			
African Americans	0.00%	1.66%	1.33%
Hispanic Americans	2.20%	8.01%	6.41%
Asian Americans	0.28%	1.01%	0.80%
Native Americans	0.15%	0.94%	0.75%
Nonminority Women	4.39%	9.32%	7.46%
<b>Construction Subcontractors<sup>3</sup></b>			
African Americans	0.75%	1.81%	1.44%
Hispanic Americans	6.02%	8.49%	6.79%
Asian Americans	0.05%	0.93%	0.74%
Native Americans	1.36%	1.04%	0.83%
Nonminority Women	5.26%	9.62%	7.70%
<b>General Services Prime Contractors</b>			
African Americans	1.26%	3.16%	2.53%
Hispanic Americans	3.40%	5.72%	4.58%
Asian Americans	2.15%	1.19%	0.95%
Native Americans	0.42%	0.28%	0.23%
Nonminority Women	11.88%	20.79%	16.63%
<b>Goods and Supplies Prime Contractors</b>			
African Americans	0.13%	0.85%	0.68%
Hispanic Americans	0.60%	3.99%	3.19%
Asian Americans	6.32%	1.57%	1.26%
Native Americans	0.03%	0.17%	0.14%
Nonminority Women	4.74%	11.76%	9.41%

Source: MGT developed a contract and vendor database for the City of Phoenix from July 1, 1999–June 30, 2004 (FY2000 - FY2004).

<sup>1</sup> The percentage of dollars is taken from the prime utilization exhibit previously shown.

<sup>2</sup> The percentage of available contractors is taken from the availability exhibit previously shown.



**COMMENDATION AND RECOMMENDATION 10-2: Narrowly Tailored M/WBE Program**

Recent developments in court cases involving federal DBE programs provide important insight regarding the design of local M/WBE programs. In January 1999, the United States Department of Transportation (USDOT) published its final DBE rule in Title 49, Code of Federal Regulations, Part 26 (49 CFR 26). In the course of several cases involving the DBE program, the courts found the new DBE regulations to be narrowly tailored.<sup>1</sup> The federal DBE program features listed in **Exhibit 10-2** are important to this characterization of a narrowly tailored remedial procurement preference program. In particular, the DOT DBE regulations provide a variety of measures that put race- and gender-neutral techniques first and then use race- and gender-conscious project goals as a supplemental device when race- and gender-neutral techniques are found inadequate to reduce disparity in DBE (or M/WBE) utilization.

**EXHIBIT 10-2  
NARROWLY TAILORED M/WBE/DBE PROGRAM FEATURES**

	<b>Narrowly Tailored Goal-Setting Features</b>	<b>DBE Regulations</b>
1.	The City should not use M/WBE quotas.	49 CFR 26(43)(a)
2.	The City should use race- or gender-conscious set-asides only in extreme cases.	49 CFR 26(43)(b)
3.	The City should meet the maximum amount of M/WBE goals through race-neutral means.	49 CFR 26(51)(a)
4.	The City should use M/WBE project goals only where race-neutral means are not sufficient.	49 CFR 26(51)(d)
5.	The City should use M/WBE project goals only where there are subcontracting possibilities.	49 CFR 26(51)(e)(1)
6.	If the City estimates that it can meet the all M/WBE aspirational goals with race-neutral means, then the City should not use M/WBE project goals.	49 CFR 26(51)(f)(1)
7.	If it is determined that the City is exceeding its M/WBE aspirational goals, then the City should reduce the use of M/WBE project goals.	49 CFR 26(51)(f)(2)
8.	If the City exceeds M/WBE aspirational goals with race-neutral means for two years, then the City should not set M/WBE project goals the next year.	49 CFR 26(51)(f)(3)
9.	Net worth requirements to determine social and economic disadvantage.	49 CFR 26(67)
10.	If the City exceeds M/WBE aspirational goals with project goals for two years then the City should reduce use of M/WBE project goals the next year.	49 CFR 26(51)(f)(4)
11.	If the City uses M/WBE project goals, then the City should award only to firms that made good faith efforts.	49 CFR 26(53)(a)
12.	The City should give bidders an opportunity to cure defects in good faith efforts.	49 CFR 26(53)(d)

<sup>1</sup> *Adarand v. Slater*, 228 F.3d 1147 (10<sup>th</sup> Cir 2000), *Sherbrooke Sodding v. MDOT* (2001 US Dist Lexis 19565) (November 14, 2001), *Gross Seed v. Nebraska Department of Roads*, Case No. 4:00CV3073 (NB 2002), *Western States Paving v. Washington DOT*, Case No. C00-5204-RBL (WA 2003).

Along similar lines, the City of Jacksonville recently implemented a hybrid program by establishing a declining schedule of race-conscious targets.<sup>2</sup> In the first program year, Jacksonville proposes to meet 70 percent of its M/WBE goal with race-conscious means; the second year, 50 percent; and the third year, 25 percent. At the end of the three-year period, the program is to be evaluated.

The City M/WBE program is already narrowly tailored in a number of aspects, including the rejection of quotas, the absence of race-conscious set-asides, use of good faith efforts modeled on the DOT good faith effort requirements, project goals based on individual project review and linked to M/WBE availability, and bidder rights to cure good faith efforts. The City should take more steps to further refine its M/WBE program along the lines suggested in the DOT DBE regulations—in particular items 3 through 10 in **Exhibit 10-2** above. A checklist of existing City satisfaction of narrow tailoring requirements is located in **Appendix BB**.

### **10.1.2 Recommendations for M/WBE Prime Contractor Utilization**

#### **RECOMMENDATION 10-3: Contract Sizing**

Contract size was an issue mentioned in surveys of and interviews with M/WBEs as a barrier to doing business with the City. The utilization analysis in Chapter 4.0 of this report also found that disparities in M/WBE utilization were most pronounced for larger contract size. The City should concentrate its efforts on issuing contracts in smaller dollar amounts, thus expanding the opportunities that smaller M/WBE firms have to do business with the City of Phoenix. Suggested criteria to be utilized and reviewed in determining whether projects can be divided included multiple locations within one project, size and complexity of the procurement, similarity of goods and services procured, and safety. This list is not exhaustive. As recommended in the Office of Management and Budget (OMB) *Contract Bundling Report*, the City should consider limiting the use of contract bundling to those instances where there are considerable and measurable benefits such as decreased time in acquisition, at least 10 percent in cost savings, or improved contract terms and conditions.<sup>3</sup>

#### **RECOMMENDATION 10-4: Promoting M/WBE Collaboration**

If contract size cannot be reduced to match M/WBE capacity, the City should look for instances in which M/WBE capacity can be increased to match contract size. M/WBE capacity can be increased by encouraging joint ventures among M/WBEs. For example, in Oregon the Northeast Urban Trucking Consortium, a organization composed of seven M/WBE independent trucking firms with 15 trucks, joined together to win a \$2 million trucking contract. M/WBE collaboration can be encouraged by citing consortium examples in EOD newsletters and increasing outreach for projects where such collaboration may be effective.

The City may also cautiously encourage joint ventures between M/WBEs and nonminority firms on large-scale projects. For example, the City of Atlanta encourages establishment of joint ventures on large projects over \$10 million,<sup>4</sup> where economically

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<sup>2</sup> City of Jacksonville, Executive Order No. 04-02.

<sup>3</sup> Office of Management and Budget, "Contract Bundling—A Strategy for Increasing Federal Contracting Opportunities for Small Business" (October 2002).

<sup>4</sup> City of Atlanta Ordinance Sec. 2-1450 and Sec. 2-1451.

feasible, to ensure prime contracting opportunities for all businesses, including certified M/WBEs. This type of joint venture poses potential illicit “front” risks, and the City must examine these joint ventures carefully.

**RECOMMENDATION 10-5: Department Purchase Orders**

All City departments obtain quotes from at least three vendors for Department Purchase Orders (DPOs). The departments are not consistent, however, in obtaining quotes from M/WBEs. A.R. 3.10 does not require a department to obtain a bid or quote from M/WBE, SBE, or DBE firms for a DPO purchase. Nor is there any such requirement within A.R. 1.88 or the Operating Procedures. The department purchasing policies thus vary in their support for utilizing M/WBE and SBE firms. For example, some departments obtain at least two quotes from certified M/WBEs; some departments obtain all three quotes if possible from M/WBEs.

The City should establish uniform procedures for department solicitation of M/WBE, SBE, or DBE bids or quotes. If the City does establish uniform departmental purchasing policies, such procedures should be included.

**RECOMMENDATION 10-6: Debriefings**

A number of M/WBEs complained about a lack of information on projects and lack of understanding as to why they are not securing opportunities with the City when their bids or proposals for City business have been rejected. The City should increase the frequency of debriefing sessions after contract awards are made, particularly for those projects where there is sufficient M/WBE availability to compete for and win contracts.

**COMMENDATION 10-7: Prompt Payment**

The State of Arizona has a prompt payment statute that requires owners to pay contractors on projects covered by the statute on a 21-day billing cycle.<sup>5</sup> The owner must make payment to the contractor within fourteen days after the billing is certified. Each contractor on projects covered by the statute must pay its subcontractor or material suppliers within seven days of receiving payment, for a total of 28 days after the prime submits the payment application.

**RECOMMENDATION 10-8: Bidder Rotation**

The City should consider a system of bidder rotation, which would include majority and M/WBE firms. Some political jurisdictions use bidder rotation schemes to limit habit purchases from majority firms and to ensure that M/WBEs have an opportunity to bid along with majority firms. As things stand now, buyers in the Finance Department maintain their own lists of bidders. There are no specified written guidelines concerning how vendors are placed on individual buyer lists. Currently, Purchasing maintains a comprehensive bidder’s mailing list from which buyers develop their individual bidder lists.

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<sup>5</sup> Arizona Revised Statutes 34-221(c).

The City of Indianapolis, Fairfax County, Virginia, and Miami-Dade County use bid rotation to encourage M/WBE utilization. Miami-Dade uses small purchase orders for the Community Business Enterprise program and rotates on that basis. In addition, Miami-Dade County utilizes an Equitable Distribution Program, whereby a pool of qualified architecture and engineering (A&E) professionals are rotated awards of county miscellaneous A&E services as prime contractors and subcontractors.

DeKalb County, Georgia, has used a form of bidder rotation called a bidder box system to promote M/WBE utilization. This system selects a group of bidders from the list of county registered vendors to participate in open market procurements. Under the bidder rotation system, the buyer identifies the commodity or service by entering an item box number. Using this item box, the computer selects five or six firms. The lowest responsible bidder is awarded the contract. M/WBEs were afforded an increased number of bid opportunities than would ordinarily be the case with a sequential selection process.

### **COMMENDATION AND RECOMMENDATION 10-9: Performance Reviews**

The City should be commended for establishing performance review ratings for Department directors based in part on the Department's scores on the affirmative action plan. The City should also require employees with procurement authority to be evaluated on their M/WBE and SBE utilization as part of their performance review. The City should also ensure that all personnel with purchasing power are fully trained concerning the City's M/WBE program and conform with the program requirements when they solicit bids and make purchases.

#### **10.1.3 Recommendations for M/WBE Subcontractor Utilization**

### **RECOMMENDATION 10-10: Project Goal Setting for M/WBE Subcontractor Utilization**

To determine availability of M/WBE construction subcontractors, the City Engineering and Architectural Services Department (EASD) eliminates an M/WBE from the pool if the firm has not obtained plans, bid, or performed on a City contract. There is no similar policy eliminating non-M/WBE businesses from the pool. Thus, when M/WBE availability is divided by general availability, the resulting percentage is artificially depressed.

The City should use consistent practices for determining availability. The City should calculate its availability for annual goals using parallel formulas for producing both the numerator and the denominator. Either the City should not eliminate M/WBE firms from the availability pool if a firm did not obtain plans, bid, or perform on a City contract, or the City should remove all firms from the availability pool on those grounds.

### **RECOMMENDATION 10-11: Requirement Contract Goals**

The City has an office supply requirement contract and other requirement contracts. Departments are required to purchase items from the contracted list. Departments indicated that office supplies make up the substantial area of departmental purchases and the contract lowers their department M/WBE utilization. The City should consider placing good faith effort M/WBE goals on requirements contracts. M/WBE goals on requirement contracts could be satisfied by flexible vendor supplier efforts such as the

vendor reporting its use of M/WBE firms for travel, or other services, as well as subcontracting a portion of the requirements contract itself.

**COMMENDATION AND RECOMMENDATION 10-12: Commercial Antidiscrimination Rules**

The City has an antidiscrimination provision covering the employment practices of vendors that do business with the City.<sup>6</sup> The City does not have a commercial antidiscrimination provision covering contracting practices.

Some courts have noted that putting in place antidiscrimination rules is an important component of race-neutral alternatives.<sup>7</sup> Nationally, some agencies have adopted requirements to ensure that their procurement is not discriminatory (e.g., San Diego, Seattle, and Charlotte).

A complete antidiscrimination policy would provide for:

- a mechanism whereby complaints may be filed against firms that have discriminated in the marketplace;
- due process, in terms of an investigation by agency staff;
- a hearing process before an independent hearing examiner;
- an appeals process to the agency manager and ultimately to a court;
- a mechanism whereby complaints may be filed against firms that have discriminated in the marketplace; and
- imposition of sanctions, including:
  - disqualification from bidding with the agency for up to five years;
  - termination of all existing contracts; and
  - referral for prosecution for fraud.

**10.1.4 Recommendations for SBE Program**

**COMMENDATION AND RECOMMENDATION 10-13: Small Business Enterprise Program**

Phoenix should be commended for its SBE program, setting SBE subcontracting goals, its use of the race-neutral small business reserve program, and the strong M/WBE utilization in the Phoenix SBE program. A strong SBE program is at the center of maintaining a narrowly tailored program to promote M/WBE utilization. It is certainly conceivable that a larger portion of City M/WBE utilization can be achieved through the City's SBE program.

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<sup>6</sup> Code of the City of Phoenix Section 18-5(A)-5.

<sup>7</sup> *Engineering Contractors v. Dade County*, 943 F.Supp 1546 (SD Fla 1996).

Larger M/WBE utilization through the SBE program can be achieved by increasing the scope of contracts placed in the SBE program, applying SBE goals to more contracts, applying the bid incentive to SBE contracts, and changing the SBE size standard (discussed below). Further guidance on SBE programs can come from features of the other SBE programs around the United States, including:

- setting SBE goals for contracts (City of Charlotte);<sup>8</sup>
- setting department goals for SBE utilization (City of Charlotte SBE program);
- making SBE utilization part of department performance review (City of Charlotte SBE program);
- rejecting bids for bidder noncompliance with the SBE program (City of Charlotte SBE program); and
- imposing mandatory subcontracting clauses where such clauses would promote SBE and M/WBE utilization, and be consistent with industry practice (City of San Diego Subcontractor Outreach Program).<sup>9</sup>

#### **RECOMMENDATION 10-14: HUBZones**

Another variant of an SBE program provides incentives for SBEs located in distressed areas. For example, under the 1997 Small Business Reauthorization Act, the federal government started the federal HUBZone program. A HUBZone firm is a small business that is: (1) owned and controlled by U.S. citizens; (2) has at least 35 percent of its employees who reside in a HUBZone; and (3) has its principal place of business located in a HUBZone.<sup>10</sup>

The same preferences that can be given to SBEs can be given to HUBZone firms. The City of New York has a HUBZone type program providing subcontracting preferences to small construction firms (with less than \$2 million in average revenue) that either perform 25 percent of their work in economically distressed areas or for which 25 percent of their employees are economically disadvantaged individuals.<sup>11</sup>

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<sup>8</sup> A description of the Charlotte SBE program can be found at [www.charmeck.org/Departments/Economic+Development/Small+Business/Home.htm](http://www.charmeck.org/Departments/Economic+Development/Small+Business/Home.htm).

<sup>9</sup> San Diego as part of its Subcontractor Outreach Program (SCOPE) has mandatory outreach, mandatory use of subcontractors, and mandatory submission of an outreach document. Whether a contract has subcontracting is determined by the engineer on the project.

<sup>10</sup> 13 C.F.R. 126.200 (1999). The State of California provides a 5 percent preference for a business work site located in state enterprise zones and an additional 1-4 percent preference (not to exceed \$50,000 on goods and services contracts in excess of \$100,000) for hiring from within the enterprise zone. (Cal Code Sec 4530 *et seq.*) Minnesota's bid preferences are limited to small businesses operating in high unemployment areas.

<sup>11</sup> New York Administrative Code § 6-108.1. For a description of the New York local business enterprise program see <http://www.nyc.gov/html/sbs/html/lbe.html>. Miami-Dade has a Community Workforce Program that requires all Capital Construction Projects contractors to hire 10 percent of their workforce from Designated Target Areas (which include Empowerment Zones, Community Development block grant Eligible Block Groups, Enterprise Zones and Target Urban Areas) in which the Capital Project is located. (Miami Ordinance 03-237.)

HUBZone programs can serve as a vehicle for encouraging M/WBE contract utilization. Nationally, there are 5,357 female and minority HUBZone firms, representing 56.2 percent of total HUBZone firms.<sup>12</sup> In the Phoenix MSA there are 46 women and minority HUBZone firms (107 in the state of Arizona), representing 64.8 percent of total HUBZone firms in the city.

### **10.1.5 Business Development Recommendations**

#### **RECOMMENDATION 10-15: Bonding**

Lack of bonding was often cited by small construction firms in interviews as the reason for not pursuing government contracting opportunities. Many M/WBEs have worked in residential or private construction that does not always require bonding, or as subcontractors who were bonded under the prime contractor. A small business surety assistance program should provide technical assistance to small firms, track subcontractor utilization by ethnicity, coordinate existing financial as well as management and technical assistance resources, and provide for quality surety companies to participate in the bonding program.

Some examples of bonding programs from other agencies include:

- Allegheny County, Pennsylvania, has a bonding program in which participants are preapproved for up to \$100,000 in bonding on a maximum of two projects within the county. Approved firms must attend monthly business development sessions covering financial management, taxes, marketing, and credit management. Firms are allowed to participate in the program for up to 18 months. Amwest Surety Insurance Company issues the bonds. Allegheny County guarantees the bonds through the Industrial Development Authority and Community Development Block Grant (CDBG) funds.
- The Contractor Assistance Program (CAP) in the Lambert Airport Expansion in St. Louis assesses bonding readiness by evaluating the company's bond history, recent gross receipts, financial wherewithal, banking ties, and past job performance. CAP's bonding specialist then focuses assistance in areas of company weaknesses as well as bond applications, the firm's financial controls, and reporting tools.

More comprehensive bonding programs are found at the state level. Although the City does not have the resources that a state has for such a program, the City should collaborate with any such initiatives that the State of Arizona or a consortium of local agencies might undertake. Examples of state bonding programs include:

- The State of Maryland, through its Surety Bonding Program, assists small contractors in bonding with government and public utility contracts that require bid, performance, and payment bonds. Maryland Small Business Development Financing Authority (MSBDF) has the authority to directly issue, bid, performance, or

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<sup>12</sup> Based on the SBA pro-net database located at <http://pro-net.sba.gov/pro-net/search.html>.

payment bonds up to \$750,000. MSBDFA can also guarantee up to 90 percent of a surety's losses on bid, performance, or payment bonds up to \$900,000. This assistance is available to firms that have been denied bonds, but have not defaulted on loans or financial assistance from MSBDFA.

- The North Carolina Department of Transportation (NCDOT), through its supportive services contract, has funded a DBE Pilot Bonding Assistance Program since 2000. The bonding program is open to any DBE that holds or is in the process of obtaining an NCDOT contract. The program is for bid, payment, and performance bonds of up to \$1 million. The program is administered through the U.S. DOT Office of Small and Disadvantaged Business Utilization, the Minority Business Resource Center, and participating sureties.
- The State of Ohio Minority Business Bonding Program provides a maximum bond amount of \$1 million per company. The premium rates are determined by the Ohio Department of Development's Office of Minority Financial Incentives on a case-by-case basis. The maximum premium is 2 percent of the penal sum of the bond. There is no charge for bid bonds if the bid is unsuccessful.

#### **RECOMMENDATION 10-16: Insurance**

Complaints about the high cost of insurance on public projects constituted a major concern in the anecdotal interviews. The Port Authority of New York and New Jersey uses a Contractor Insurance Program (CIP), a form of wrap-up insurance under which the Port Authority provides various insurance coverages to approved on-site contractors and subcontractors for construction contracts. In particular, the Port Authority buys and pays the premiums on public liability insurance (\$25 million per occurrence), builders' risk insurance, and workers' compensation and employers' liability insurance. In general, the CIP can reduce an owner's project costs by an average of 1 to 2 percent compared to traditional contractor procured insurance programs. The Port Authority CIP does help alleviate barriers from insurance costs to M/WBE participation in Port Authority construction projects.

#### **COMMENDATION and RECOMMENDATION 10-17: Access to Capital**

The City should be commended for its efforts to improve the access to capital to M/WBEs, in particular the EXPAND program (described in Chapter 3.0). Other examples of lending assistance programs from other agencies include the following.

- Linked deposit programs are vehicles for providing lower interest rates on loans for small and minority business, nonprofits, and housing development. Agencies use linked deposit programs to subsidize lower rates for business and housing loans by accepting a lower rate on their deposits with participating financial institutions. For example, for the past ten years the New York City Linked Deposit program has provided two-year financing at reduced rates to small and minority businesses, making loans of up to \$10 million to



certified M/WBEs and SBEs that have been awarded agency contracts. To participate, service businesses must have fewer than 100 employees and not be dominant in their field of operation. Firms eligible for a 3 percent interest rate reduction on loans include businesses located in either economic development zones or highly distressed areas, defense companies, and certified M/WBEs.<sup>13</sup>

- The Maryland Small Business Development Finance Authority (MSBDFA) offers financing for M/WBEs through the following programs:
  - The Contract Financing Program, which provides loan guarantees and direct working capital and equipment loans to socially or economically disadvantaged businesses that have been awarded public contracts.
  - The Equity Participation Investment Program, which provides direct loans, equity investments, and loan guarantees to socially or economically disadvantaged-owned businesses in franchising, in technology-based industries, and for business acquisition.
  - The Long-Term Guaranty Program, which provides loan guarantees and interest rate subsidies.
- In the State of Florida Loan Mobilization Program, minority firms awarded a state contract can qualify for a state-backed loan of between \$5,000 and \$250,000 for project-specific purposes.

Although the City of Phoenix is not in a position to marshal the same level of resources that a state can, the City may consider joint ventures with other local governments as well as the State of Arizona to implement similar initiatives in the access to capital.

#### **COMMENDATION AND RECOMMENDATION 10-18: Management and Technical Services**

The City should be commended for its current efforts in providing management and technical services to small and M/WBE firms securing contracts with Phoenix agencies, primarily through the Community Economic Development Department. These efforts have included a variety of workshops on certification and how to do business with the City.

These efforts could be strengthened by contracting with an outside management and technical assistance provider to provide needed technical services, particularly in the area of loans and bonding. Such a contract should be structured to include providing incentives to produce results, such as the number of M/WBEs being registered as qualified vendors with the City and the number of M/WBEs graduating from subcontract work to prime contracting.

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<sup>13</sup> Montgomery County, Maryland, and Chicago are other agencies with noteworthy linked deposit programs.

For example, the Port Authority of New York and New Jersey has a three-year fee-for-service contract with the Regional Alliance for Small Contractors capped at \$275,000.<sup>14</sup> Previously, the contract was a flat grant, but it was changed to a fee-for-service arrangement to reward creative uses of financial resources. The Regional Alliance also supports the Loaned Executive Assistance Program (LEAP) that provides hands-on consultants to evaluate the ability of small firms to undertake agency contracts and recommend needed changes.

The City of Austin has a Development Assistance Services (DAS) Program. The program targeted African American contractors due to the City's underachievement of the 2.6 percent African American construction participation goal. Training and assistance is provided by Business Resource Consultants, a for-profit firm that serves as the program manager and overseer of the day-to-day operations of the delivery of program services. A team of professional firms specializing in construction management and business and contract law provides consulting services to DAS clientele. Local trade associations and construction networks partner, collaborate, and provide oversight and advocacy for the program. The City of Austin Department of Small and Minority Business Resources serves as the Contract Administrator.

DAS is funded by City of Austin General Fund Budget, along with in-kind services and contributions from professionals in construction, engineering, architecture, business law, and marketing and volunteer services from major construction companies, trade associations, and the general public.

DAS has developed seven prime contractors from 1998 to 2004; generated \$14.5 million in prime contract awards and \$16.2 million in subcontract awards; created 131 new jobs (full and part time); maintained 50 jobs; and served over 350 small, minority, and women business enterprises on a monthly basis through the delivery of interactive group training sessions, one-on-one technical assistance, and weekly "Bid Briefs."

#### **10.1.4 Equal Opportunity Department Office**

#### **COMMENDATION AND RECOMMENDATION 10-19: M/WBE Certification**

The present size standard for the City certification is \$250,000 personal net worth for SBEs and average annual revenue range from \$4 million to \$30 million for M/WBEs, based on federal DOT and SBA size standards.<sup>15</sup> Seven M/WBEs have graduated from the program under the present size standard. On an annual basis the largest construction subcontracts, the primary focus of the M/WBE program, have ranged from \$1.8 million to \$15.3 million.

The City should be commended for having objective size standards based on the DOT and SBA small business criteria in place. The federal case law and the DOT DBE regulations point to the use of size standards and net worth requirements as one factor in the narrow tailoring of remedial procurement programs.

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<sup>14</sup> The Regional Alliance was started in 1989. For general background on the Regional Alliance see Timothy Bates, "Case Studies of City Minority Business Assistance Programs," report for the U.S. MBDA, September 1993.

<sup>15</sup> Chapter 18, City of Phoenix Code and City of Phoenix Administrative Regulation 1.88 Revised, June 26, 2002.

Size standards for remedial procurement programs face a dilemma. If the size standard is placed too high, large firms crowd out new firms. If the size standard is placed too low, then too many experienced firms lose the advantages of the remedial program. The City should consider adopting a two-tier standard and a net worth requirement for M/WBE and SBE certification. Both the State of New Jersey and the federal government use a two-tier size standard. In this scheme there are separate size standards for small businesses and emerging small businesses. For large projects the State of New Jersey carves out portions of the contract for both tiers of small business. Thus, a single solicitation requires that the prime spend a certain percentage of the contract with small firms and another percentage with emerging small firms. Along related lines the federal government sets aside contracts for bidding only among small firms and other contracts may be set aside for bidding only by emerging small firms.

Enforcement of certification is also essential. There was some anecdotal testimony provided by vendors about the persistence of “fronts” (firms representing themselves as M/WBEs without satisfying the necessary requirements). In the City of Chicago, for example, as part of the decertification process vendors who misrepresent M/WBE participation are prevented from doing business with the City for up to three years.

#### **COMMENDATION and RECOMMENDATION 10-20: M/WBE Program Data Management**

At present, prime contractors are required to list all subcontractors and the value of their subcontracts, including M/WBE firms, in their bid submissions. The City is still behind in some aspects of its tracking of M/WBE spending. In particular,

- the City does not have a good source of subcontractor availability data; and
- certain procurement methods have special compliance issues. For example, there does not appear to be a mechanism to ensure that the M/WBE and SBE goals are met for Job-Order contracts. For these purchases, an M/WBE and SBE goal is set for the entire annual contract and then is met during the course of the contract as a whole; but EASD cannot verify that these goals are being met. Also, on CM@Risk projects, EASD expressed concerns that by the end of the project it has no information whether the set project subcontracting goals were met.

It is imperative for the City to closely monitor the utilization of all businesses by race, ethnicity, and gender over time to determine whether the SBE program has the potential to eliminate race and gender disparities without applying specific race and gender goals.

Availability analysis requires a good data source, such as in centralized bidder registration systems for prime vendors and contractors. These are becoming increasingly common. For future availability analysis, it is also equally important to identify not only the number of prime vendors but also the number of subcontractors available. Because the City does not collect these data, it is limited in the type of availability analysis it can conduct. In order for Phoenix to accurately monitor an SBE program and assist the City in future availability analyses, Phoenix should require all contractors to submit a list of all subcontractors contacted in preparation of their bid

package. The list of potential subcontractors should include the proposed service and bid amount. The data will allow the City to identify with accuracy the number of actual subcontractors available. These data should be analyzed and reviewed at least annually, and the M/WBE program adjusted according to review results.

Ideally, the City data management should rest upon Internet-based data tracking. The services and software should help monitor utilization, availability, and disparity of M/WBEs and SBEs in the clients' procurement process while adhering to current case law. There are a number of software and service providers that offer a Web-based application developed for the management, tracking and reporting of an agency's awards/commitments and payments to Small, Minority, Women and Disadvantaged Business Enterprises. Such a system would assist in the acquisition of subcontracting data, reduce the costs of disparity analysis, facilitate EOD time management of its staff, and shift focus of EOD staff from certification to contract compliance.

**COMMENDATION and RECOMMENDATION 10-21: M/WBE and SBE Outreach**

The City should be commended for providing M/WBE and SBE outreach workshops and seminars. There are several vehicles by which City outreach efforts can be strengthened.

- The City should work with EASD and the Finance Department on providing more forecasts of business opportunities to SBE and M/WBE vendors.
- The City should partner with federal procurement efforts to market to M/WBE firms in the region.
- City agencies can feature M/WBEs and SBEs in employee newsletters to promote firm awareness.
- The effectiveness of M/WBE and SBE outreach can be improved by classifying businesses into three categories:
  - Category A: Firms that are new to government contracting. These firms should be directed to the Procurement Technical Assistance Center (PTAC), the Small Business Development Center (SBDC), and the Minority Business Development Center (MBDC). The EOD should not duplicate PTAC, SBDC, or MBDC services.
  - Category B: Firms that are familiar with government contracting in general but not with the particular agency. These firms should be handled via an enhanced Web site that answers routine questions and quarterly group seminars.
  - Category C: Firms that already have government contracts and are looking for more specific assistance. Some agencies allow for new businesses to have 15-minute presentations of corporate capabilities to program managers. The City can also provide

unsuccessful bidders with feedback and brief M/WBEs and SBEs on quality assurance standards.

**COMMENDATION AND RECOMMENDATION 10-22: M/WBE Policy Documentation**

The report found some inconsistency in documentation and application of procurement policies and procedures as they relate to M/WBE utilization. For example:

- Each department has the authority and responsibility to establish DPO purchasing policy and review departmental purchases. The departments have varying purchasing policies. Some departments do not have their own written policies, but rather use A.R. 3.10 and A.R. 1.88 as their policies. Other departments have extensive policies, outlining procedures in each category of purchasing.
- There are no specific written requirements outlining the responsibilities of buyers in the Finance Department for soliciting bids or quotes from M/WBEs, SBEs, and DBEs.

The City should establish uniform departmental purchasing policies that include procedures that must be followed by all departments. The uniform purchasing policies should include the requirements of the bid price incentive and uniform procedures for department solicitation of M/WBE, SBE, or DBE bids or quotes. Each department should be allowed to supplement the uniform departmental purchasing policies to address specific department purchasing needs so long as the supplemental information is consistent with the uniform departmental purchasing policy.

**COMMENDATION and RECOMMENDATION 10-23: M/WBE Web site**

The City of Phoenix should be commended for the information that is on its Web site, including business opportunities, uniform certification application, M/WBE program description, SBE program description, M/WBE ordinance, EOD description directory of certified firms, bid opportunities, how to do business information, and information on the loan programs. Other agencies have put the following information on their M/WBE Web sites: bid tabulations, status of certification applications, direct links to on-line purchasing manuals, capacity and experience data on certified firms, and forecasts of business opportunities to M/WBE vendors.

The City should review some of the novel forms of outreach on the Internet employed by other agencies across the nation. For example, the Illinois Department of Transportation (IDOT) established a *Contractor Marketplace* electronic bulletin board that allows prime and subcontractors to post information on bid opportunities and solicitations of M/WBE subcontractors.<sup>16</sup> IDOT is planning to give subcontractors and suppliers the ability to transmit quotes to prime contractors in specific work categories. The IDOT *Contractor Marketplace* also posts a *Small Contracts List* and *Pay Items* on-line. This procedure facilitates contractor identification of bid opportunities from the detailed Pay Item reports. Likewise, the Regional Alliance of Small Contractors Opportunities Clearinghouse in New York provides a Web-based forum for small contractors to interact with large construction firms and public development agencies.

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<sup>16</sup> <http://www.dot.state.il.us/const/wrkat.html>.

### **COMMENDATION AND RECOMMENDATION 10-24: Oversight Committee**

The City established an Oversight Committee for its M/WBE program following the 1999 Disparity Study. The Oversight Committee has been composed of representatives from the City, the Association of General Contractors, and organizations of female and minority contractors.<sup>17</sup>

The City should be commended for establishing an Oversight Committee for its M/WBE program. The necessity of closely monitoring the narrow tailoring of the City M/WBE program may lead to difficult discussions of the future of M/WBE utilization by the City. It is essential that major stakeholders are a part of discussions about the City M/WBE program. Consequently, the City should continue the work of the Oversight Committee and provide vehicles for public input into the deliberations of the Oversight Committee in the review of any reforms of the City M/WBE program.

### **RECOMMENDATION 10-25: Equal Opportunity Department**

At present, EOD tracks M/WBE utilization and certification. The EOD should develop additional measures to gauge the effectiveness of its efforts. Possible measures include:

- growth in the number of M/WBEs winning their first award from the City;
- growth in percentage of M/WBE utilization by the City;
- growth in M/WBE prime contracting;
- growth in M/WBE subcontractors to prime contractors;
- number of firms that receive bonding;
- number of firms that successfully graduate from the M/WBE program;
- number of “graduated” firms that successfully win City projects;
- percentage of M/WBE utilization for contracts not subject to competitive bidding requirements;
- growth in the number of M/WBEs utilized by the City;
- number of joint ventures involving M/WBEs; and
- largest contract won by an M/WBE.

These measures should be integrated into a “balanced scorecard.” The balanced scorecard model of management engineering seeks to align an organization with its strategy by identifying key initiatives necessary to realize that strategy and mobilize the

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<sup>17</sup> Art. VI, 18-106 (D) pg. 417.42 Supp. 6-30-99.

organization's staff. Using measures and targets, the scorecard creates feedback loops that evaluate an agency's progress against that strategy.

The scorecard for the public sector is composed of five perspectives: the value/benefit perspective, the customer perspective, the financial perspective, the internal process perspective, and the human resource/learning perspective.<sup>18</sup> A scorecard can then be constructed as follows in **Exhibit 10-3**.

**EXHIBIT 10-3  
SAMPLE BALANCED SCORECARD**

<b>Perspective</b>	<b>Goal</b>	<b>Measure</b>	<b>Target</b>	<b>Initiative</b>
Value/Benefit				
Financial				
Customer				
Internal Process				
HR/Learning				

These elements can then be combined into a “strategy map” that would provide a checklist for the strategy of minority business development for the City of Phoenix.<sup>19</sup>

<sup>18</sup> For the public sector minority business development programs the value/benefit component is the value of minority business development to the City; the financial perspective would be the cost of minority business development programs (including their social costs); the customer perspective would include perspective of minority businesses and other minority business development agencies; the internal process perspective would be the process of achieving the goals of minority business development; and the HR/learning perspective would involve staff development.

<sup>19</sup> Further details on the application of strategy maps to the public sector can be found in Robert Kaplan and David Norton, “Strategy Maps: Converting Intangible Assets into Tangible Outcomes” (2004).